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.

Mitchell School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	5500 Kingsessing Ave. Philadelphia, Pa 19143	Enrollment Grade Range	547 '00-08'
Phone/Fax	215-727-2160 / 215-727-2218	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Mitchell	Turnaround Model	Turnaround

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**33.98%**	**$15,934,147**	**$46,896,487**
Building	34.77 %	$15,770,876	$45,352,938
Grounds	10.58 %	$163,271	$1,543,549

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,331,418
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$3,321,900
Windows (Shows functionality of exterior windows)	34.24 %	$555,076	$1,620,900
Exterior Doors (Shows condition of exterior doors)	212.04 %	$276,713	$130,500
Interior Doors (Classroom doors)	131.96 %	$416,873	$315,900
Interior Walls (Paint and Finishes)	74.84 %	$1,130,962	$1,511,100
Plumbing Fixtures	01.85 %	$22,503	$1,216,800
Boilers	00.00 %	$0	$1,680,300
Chillers/Cooling Towers	49.20 %	$1,084,009	$2,203,200
Radiators/Unit Ventilators/HVAC	115.21 %	$4,457,749	$3,869,100
Heating/Cooling Controls	132.68 %	$1,612,026	$1,215,000
Electrical Service and Distribution	89.17 %	$778,468	$873,000
Lighting	06.03 %	$188,094	$3,121,200
Communications and Security (Cameras, Pa System and Fire Alarm)	32.90 %	$384,576	$1,169,100

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

S137001;Mitchell

Final

Site Assessment Report

February 1, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	90,000
Year Built:	1915
Last Renovation:	
Replacement Value:	$46,896,487
Repair Cost:	$15,934,146.79
Total FCI:	33.98 %
Total RSLI:	64.42 %

Description:

Facility Assessment

July 14th, 2015

School District of Philadelphia

Mitchell Elementary School

5500 Kingsessing Avenue

Philadelphia, PA 19143

90,000 SF / 696 Students / LN 01

GENERAL

Mr. Dave Loftus, Facility Area Coordinator Ms. Stephanie Andrewlewitz, provided input to the Parsons Assessment team on current problems

mainly in the mechanical systems, and the Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history.

The 4 story, 90,000 square foot building was originally constructed in 1915, with a pre-cast modular construction library added in approximately 1970 and refurbished in 2012. The building has a one level basement.

ARCHITECHURAL/STRUCTURAL SYSTEMS

The main building rests on concrete foundations and bearing walls that are showing some signs of settlement or damage with exposed steel reinforcement in basement. The main structure consists typically of cast-in-place concrete columns, beams and concrete, one way ribbed slab. The main roof structure consists of concrete one-way slab supported by main structural frame. Roofing is built-up application in very good condition, replaced in 2012. The building envelope is masonry with face brick and limestone. Parapet wall arches have been braced to roof. Elevations are heavily enhanced with stonework around entrances and windows. In general, masonry and stonework is in good condition. All elevations are face brick and stone. The original windows were replaced in early 1990s with extruded aluminum, double hung windows, Lexan Plexiglas with insect/security screens. All windows are generally in poor condition with heavy hazing. Exterior doors are hollow metal in poor condition and failing. Public access doors have granite stoops and stairs; service doors have concrete stoops and stairs. Generally, the building is not accessible per ADA requirements due to first floor- grade separation with no ramps or lifts.

Main building partition wall types include plastered ceramic hollow blocks. Structural beam in auditorium balcony is sagging and needs repair. Interior doors are a mix of rail and stile wood doors and solid core doors with lites; some glazed with matching wood frame transom and lites, some metal frame with hollow metal ranging from good to poor condition. Doors leading to exit stairways are hollow metal doors and frames in fair condition. Fittings include: toilet accessories in good condition; composite plastic and hollow metal toilet partitions, not ADA compliant, generally in good condition; handrails and ornamental metals, generally in fair condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in fair condition. Stair construction is generally concrete in fair condition and metal stairs in service areas in fair condition. Main stair railings are cast iron balusters with wood handrail in fair condition.

The interior wall finishes are generally painted plaster or brick with glazed brick wainscot in stairways and corridors, ceramic tile and base in toilets and wood panel wainscot in auditorium. Generally, paint is in fair to poor condition with some plaster deterioration in stairways, auditorium, classrooms and storage areas. Flooring is generally hardwood in classrooms, and auditorium in fair condition in need of refinishing; vinyl tile in some classrooms, gym, cafeteria, and office areas in good condition with missing tiles in some areas; ceramic tile in some toilets in very good condition; and patterned and bare concrete in other toilets, basement level, corridors and stairways. Concrete flooring in toilets do not slope well toward floor drain and need repair and leveling. Wood base is typically in fair-good condition. Ceilings are generally suspended acoustic tile in classrooms, corridors, and office areas in fair condition with some damaged tiles; acoustic tile on structural concrete in cafeteria is in poor condition and needs replaced with suspended ceiling system. Ceilings in basement, gym, auditorium, toilets, and maintenance areas are painted plaster with some exposed, painted structure; generally in good condition.

The building has no elevators.

Institutional and Commercial equipment includes: stage equipment, generally in fair condition. Other equipment includes kitchen equipment (heat and serve only), generally in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and offices, generally in fair to good condition; window shades/blinds, generally in fair condition; fixed auditorium seating is beyond service life and failing damaged and missing seats.

MECHANICAL SYSTEMS

All bathroom plumbing fixtures in the main building have been replaced with modern low flow equipment. Fixtures in the restrooms on each floor consist of floor mounted flush valve water closets, wall hung urinals, and rim mounted lavatories with wheel handle faucets. The fixtures should provide reliable service for the next 15-20 years. The annex building has two wall mounted water closets and rim mounted lavatory. These are outdated and should be replaced as part of a total remodel of the annex building.

Drinking fountains in the corridors are wall hung, accessible, with integral refrigerated coolers. They are within their service life and should not need replacing within 10-15 years. Annex drinking fountain is floor standing, non-accessible type with integrated cooler. It is out dated and nonfunctional and needs replacement.

A service sink is available in the corridor on each floor for use by the janitorial staff. Service sinks are aged and cosmetically worn, but include new serviceable supply valves with vacuum breakers. The kitchen has a two compartment, stainless steel sink with lever operated faucets. There is no sanitization system. Sinks will not require replacement within 10 years.

A 3" city water service enters the building from 55th Street side through a single check valve backflow preventer and a 2" meter on the basement level in the cafeteria dining area behind a wire mesh cage. The water service should be upgraded to include a double backflow preventer valve. A double check valve backflow preventer is installed on the makeup line to the boilers. The domestic hot and cold water distribution piping shows surface corrosion in most visible areas, and it is well beyond its service life and should be replaced due to age and to eliminate joints made with lead solder.

A 75 gallon vertical tank type, gas-fired water heater installed in 2011 supplies hot water for domestic use. The unit is located in the boiler room. It is equipped with a T&P relief valve and a circulation pump. The water heater is within its service life and should provide reliable service for the next 20-25 years. The library addition has a small electric water heater installed before 2000. When the building piping is replaced, the hot water circulation lines should be extended to serve the library sink and this water heater removed. There is a small electric water heater for the annex building that is severely rusted and should be replaced when the entire building is remodeled. A water softener located in the boiler room supplies conditioned water to the boilers.

The sanitary sewer piping is cast iron with hubless fittings joined with banded couplings. Visual external inspection of the piping shows it in good condition however the principal reported there were problems with odor throughout the school, and during inspection the odor was noticeable on second and third floors of the building. Plumbing fixture traps are older than the sewer piping and their connections could be a source of the odor. The system should be investigated and repaired as needed.

Roof drains run through threaded galvanized steel pipe in piping chases inside the building. The age is unknown, but there is no visible evidence of this system leaking and it should be serviceable for 10 – 15 more years.

Low pressure steam is generated at 15 lbs/sq. in. or less by two 6,695 MBH (200 HP) Easco horizontal, three pass, fire tube boilers installed in 2002. Each boiler is equipped with a John Zink Co. burner operated on natural gas. Combustion air makeup is supplied by louvers equipped with motorized dampers. Gas service enters the building from the 56th Street side of the property. The gas train serving each boiler has venting of the regulators and dual solenoid valves with venting of the chamber between. The boilers have been maintained well, but a visual inspection of one open for cleaning showed no plugged tubes. The condensate receiver tank and boiler feed pump assembly are located in the boiler room. Each pump is piped to a single boiler with a cross-over connection at the pump outlets. Make up water from the water softener enters the steam system at the condensate tank. These boilers should operate reliably for the next 10 – 15 years.

Steam piping is steel with welded and threaded connections. The condensate piping is steel with threaded fittings. Steam and condensate piping mains from the basement level run up through the building to the terminal units on all four levels and 3 air handlers in the basement. The distribution piping is of unknown age and heavily rusted. The District should budget for replacing this piping over the next 5 years.

The building heat for the classrooms, dining area, gym, and auditorium was originally primary hot air ducts fed from three air handlers in the basement and secondary steam radiators. Other spaces like toilet rooms, hallways, and mechanical rooms have only radiators. Toilet rooms have exhaust vents ducted to rooftops exhaust fans, and hallways have transfer ducts from the classrooms. The air handlers include primary and secondary steam heat coils and air washers in between. The air washers no longer operate. Many rooms have ducts blocked. Current operation is to use the radiators as primary heat supply and the ducts as secondary when needed. Most radiators and steam coils are original, but some have been replaced with finned tube units. All these units are aged and finned tube units show physical damage. They should all be replaced with new finned tube steam unit heaters. The annex building is heated by electric unit vents which should be removed when the building is remodeled and replaced with heat pump unit vents.

School office has window air conditioning units that have surpassed their expected service life. Installing three 75 ton air-cooled direct expansion condensing units on the roof with evaporators installed in the basement air handlers will supply more reliable air conditioning for the entire building with a much longer service life. The library has refrigerated air supplied from a ceiling mounted chilled beam running the length of the room. The annex building also has two window unit air conditioners that should be removed as well during remodeling.

Mechanical ventilation is provided by three air handlers in the basement. The air handlers are original to the building and should be replaced with modern equipment including heating, cooling, humidification, and dehumidification sections to supply the building ducts. The uninsulated metal portions of the existing ductwork should be replaced with insulated ducts including automatic controls. Building exhaust from the attic plenum is controlled by automatic louvers in the attic below the roof top gravity vents.

Toilet rooms are vented by exhaust ducts leading to roof mounted fans. The exhaust system is inadequate because odors were present on second and third floors during the inspection and building workers mentioned odors as well. These fans are probably manually controlled from an electrical panel, and they might not have been turned on. There may be other problems with the system and it should be investigated and repaired or upgraded if needed.

The kitchen has no cooking equipment and doesn't require an exhaust hood.

The entire building has manual thermostats for steam unit control. The supply and exhaust ducts have manual dampers for air flow control. These controls should be converted to DDC. Building exhaust and intake louvers have automatic controls. Steam control valves on air handlers have been replaced with automatic valves as well. Existing automatic controls should remain serviceable for at least 10 years. A building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve operations and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

The school building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. An outdoor, engine driven, fire pump system may be required depending on the available city water pressure.

The building does not have a standpipe system.

ELECTRICAL SYSTEMS

A 90 KVA pole mounted transformer on Kingsessing Avenue and an overhead secondary conductors supported from the building exterior walls serve this building. The electrical service entrance is located in the fan room which houses the utility main disconnect switch and utility metering. Many other electrical distribution equipment is also housed in the fan room, including the Fire Alarm Panel, phase convertor transformers, building main power distribution panelboard, and several safety switches. The existing service is too old and has far exceeded its 30 year useful life. It has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The electrical service entrance should be upgraded, using the present utility pole, and adding a new transformer in a pit outside the building on Kingsessing Avenue. The new service will be 480V/277V, 3 phase power, approximate 1600 Amperes and will occupy the same space of the existing fusible service entrance switchboard. The switchboard would feed a 480V Motor Control Center (MCC) and HVAC equipment and a 480V 3 phase to 120V/208V 3 phase step-down, 300KVA transformer to feed receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles. These panelboards and associated wiring have exceeded the end of their useful life and are undersized to absorb new loads. The entire distribution system needs to be replaced with new 208/120 volt, 3 phase panelboards and new wiring. The raceway is mainly conduits run above the ceiling. Panel-board's doors are corridor are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor on in areas where students are present must be provided with lockable devices.

There number of receptacles in classrooms is inadequate. Teachers use extension cords. . The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Classrooms, corridors and cafeteria are illuminated with recessed mounted fluorescent fixtures with T-8 lamps. The restrooms and boiler room are illuminated with surface mounted commercial/industrial fluorescent fixtures with T-8 lamps. The auditorium is illuminated with architectural pendant mounted fixture with incandescent lamp, incandescent lamps should be replaced with compact fluorescent type. The gymnasium at the basement is illuminated with surface fluorescent fixtures with T-12 lamps. Fixtures in the gym and basement should be retrofitted with T-8 lamps.

A tap ahead of the main disconnect switch serves the fire alarm control panel (FACP).The Fire Alarm system is manufactured by S.H. COUCH INC The system is approximate 30 years old. The present Fire Alarm system does not meet current code. Fire alarm system is tested every day in the morning. Provide a new addressable fire alarm system.

The present telephone system is adequate.

An independent and separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately for most part. The obsolete, non-functional devices should be removed from all rooms.

Each classroom is provided with 12" round clock/speaker assembly. Per Building Engineer the system does not work. Provide a wireless, battery operated clock system. Bell system is not required since teachers take the students to the next classroom

There is not television system.

The security system consists of CCTV cameras at each corridor and motion sensors at each exit door at the first floor. The surveillance monitor is located in the principal's office.

The emergency power system consists of a gas powered generator, manufactured by Onan. The present emergency power system serves the corridor lights, exit signs, fire tower, and stairways. The gas powered generator, already exceeds its useful service life and should be replaced with an outdoor diesel powered generator.

There was an adequate UPS in the IT room.

The emergency lighting is obtained via selected lighting fixtures in corridors and stairs. Exit signs are located at each exit door and corridors and are connected to the school emergency system.

This is accomplished with air terminals mounted on the chimney. A study needs to be conducted to verify the air terminals provide the proper coverage.

The stage lighting controller is old and has exceeded its service life. Theatrical lighting are ON/OFF from local panel-board. The entire system should be replaced.

The system is local/portable equipment. Provide an up to date sound system

GOUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Playground area on NW side is asphalt paving in good condition with damaged and missing fall protection surface. Parking for staff vehicles in South corner (accessible from 56th St.) and other yard areas are concrete paving in fair condition. Chain link fence surrounding south and east sides of the site is in fair condition. Aluminum fence surrounding north and east sides of the site are in good condition but are not sufficient as a security measure. Landscaping is extremely limited on site.

Accessibility: the building does not have accessible entrance, and accessible routes. None of the toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. None of the doors in the building have ADA required door handles.

The school parking lot is poorly illuminated at least 6 pole mounted fixtures are required for security.

CCTV cameras around the building perimeter and parking lot are provided.

Outdoor loud speaker are provided in front of the parking/playground area.

RECOMMENDATIONS

- Repair structural beams in basement – damaged concrete and exposed reinforcement
- Replace Plexiglas windows - hazed
- Provide ADA compliant exterior door hardware at one entrance
- Replace exterior doors – beyond service life and failing
- Repair, patch and paint structural beam in auditorium balcony – sagging
- Repair or replace rusted, dented, scratched doors and frames
- Provide ADA lever handle lock/latchsets on interior doors
- Provide new toilet partitions and toilet accessories including grab bars for accessibility
- Install new ID signage
- Replace railing in stairways with code compliant
- Patch & paint plaster walls – damaged (50% of plaster wall surface)
- Refinish hardwood flooring (40% of wood flooring incl. auditorium, balcony, and stage)
- Repair uneven floors in toilet rooms – poor slope causing drainage problem
- Replace VCT floor tiles - missing
- Patch & paint plaster ceilings – damaged (20% plaster/painted ceiling surface)
- Replace acoustic ceiling tiles - discolored or damaged (10% of suspended ceiling area)
- Replace acoustic ceiling in cafeteria with suspended ceiling - failing
- Install elevator for accessibility (location TBD)
- Replace auditorium seats - broken, missing, failing
- Replace playground fall protection system – damaged and missing
- Provide ADA compliant ramp at one entrance (location TBD)
- Replace two water closets and one lavatory in annex building as part of complete remodel.
- Replace drinking water fountain with accessible unit in annex building as part of complete remodel.
- Install double backflow prevention valve at city water supply connection.
- Replace the existing copper domestic water piping due to age and corrosion. Extend hot water circulation loop to library and remove auxiliary water heater.
- Repair plumbing fixture connections to sewer drain pipes as needed to eliminate odors.
- Replace the existing steam and condensate distribution piping due to age and corrosion.

- Replace the existing steam heat units in rooms due to age, damage, and corrosion.
- Remove electric unit vents and window unit air conditioners from annex building and replace with new heat pump unit vents as part of complete remodel.
- Remove the window air conditioning units and install three 75 ton air-cooled systems on the lower roofs near the mechanical rooms to supply more reliable air conditioning to the entire building with a much longer service life.
- Replace three original air handlers with modern units including heating, cooling, humidification, and dehumidification sections.
- Replace original uninsulated metal ducts with insulated ducts.
- Repair or upgrade toilet room exhaust systems to eliminate odors throughout the building.
- Replace the manual controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency including a building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with outside, engine driven, packaged fire pump system if needed.
- Provide new service, 480V/277V, 3 phase power, approximate 1600 Amperes and will occupy the same space of the existing fusible service entrance switchboard.
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (12) 208/120V.
- The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each. Approximate 512 receptacles.
- Provide a new addressable fire alarm system. Approximate 120 devices.
- Provide a clock system with wireless, battery operated clocks. Approximate 50 clocks.
- Provide an outdoor diesel powered generator. Approximate 100KW
- Prepare a study to determine if the air terminals installed in the chimney provide the proper coverage to the school.
- Provide the auditorium with dimming and theatrical lighting.
- Provide the auditorium with a sound system.
- The school parking lot is poorly illuminated at least 6 pole mounted fixtures are required for security.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S137001		

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.

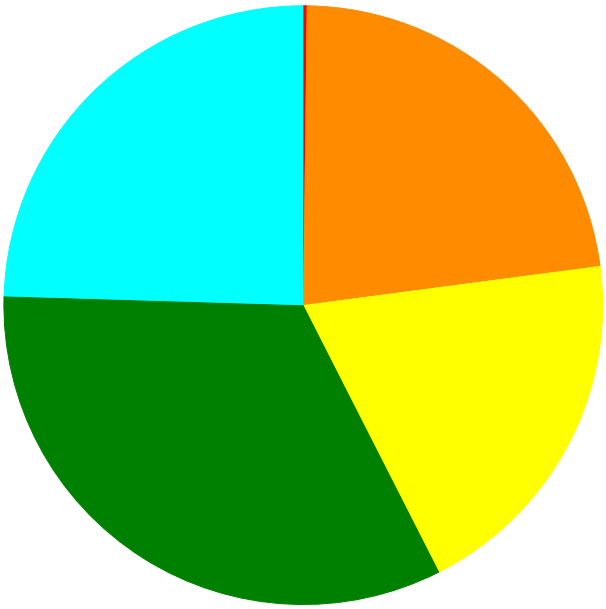
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.39 %	$6,831.97
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	38.99 %	16.40 %	$831,789.10
B30 - Roofing	85.00 %	0.00 %	$0.00
C10 - Interior Construction	33.56 %	19.99 %	$441,452.09
C20 - Stairs	37.00 %	53.23 %	$67,545.12
C30 - Interior Finishes	49.24 %	42.72 %	$2,090,106.26
D10 - Conveying	0.00 %	486.80 %	$670,322.07
D20 - Plumbing	44.65 %	34.60 %	$635,862.62
D30 - HVAC	100.58 %	71.75 %	$7,183,066.94
D40 - Fire Protection	105.71 %	177.49 %	$1,287,490.18
D50 - Electrical	124.86 %	30.84 %	$1,631,481.35
E10 - Equipment	44.17 %	20.49 %	$293,594.70
E20 - Furnishings	105.00 %	329.33 %	$631,333.86
G20 - Site Improvements	20.05 %	2.10 %	$25,425.97
G40 - Site Electrical Utilities	27.43 %	41.53 %	$137,844.56
Totals:	**64.42 %**	**33.98 %**	**$15,934,146.79**

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)
B137001;Mitchell	90,000	34.77	$10,251.44	$3,477,728.01	$3,122,513.72	$5,252,300.41	$3,908,082.68
G137001;Grounds	76,300	10.58	$19,486.34	$143,784.19	$0.00	$0.00	$0.00
Total:		**33.98**	**$29,737.78**	**$3,621,512.20**	**$3,122,513.72**	**$5,252,300.41**	**$3,908,082.68**

Deficiencies By Priority



1 - Response Time (< 2 yr) - $29,737.78
2 - Response Time (2-3 yrs) - $3,621,512.20
3 - Response Time (3-4 yrs) - $3,122,513.72
4 - Response Time (4-5 yrs) - $5,252,300.41
5 - Response Time (> 5 yrs) - $3,908,082.68

Budget Estimate Total: $15,934,146.79

Executive Summary

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

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Function:	Elementary School
Gross Area (SF):	90,000
Year Built:	1915
Last Renovation:	
Replacement Value:	$45,352,938
Repair Cost:	$15,770,876.26
Total FCI:	34.77 %
Total RSLI:	65.88 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B137001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S137001		

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	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.39 %	$6,831.97
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	38.99 %	16.40 %	$831,789.10
B30 - Roofing	85.00 %	0.00 %	$0.00
C10 - Interior Construction	33.56 %	19.99 %	$441,452.09
C20 - Stairs	37.00 %	53.23 %	$67,545.12
C30 - Interior Finishes	49.24 %	42.72 %	$2,090,106.26
D10 - Conveying	0.00 %	486.80 %	$670,322.07
D20 - Plumbing	44.65 %	34.60 %	$635,862.62
D30 - HVAC	100.58 %	71.75 %	$7,183,066.94
D40 - Fire Protection	105.71 %	177.49 %	$1,287,490.18
D50 - Electrical	124.86 %	30.84 %	$1,631,481.35
E10 - Equipment	44.17 %	20.49 %	$293,594.70
E20 - Furnishings	105.00 %	329.33 %	$631,333.86
Totals:	**65.88 %**	**34.77 %**	**$15,770,876.26**

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.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$1,656,000
A1030	Slab on Grade	$7.73	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$695,700
A2010	Basement Excavation	$6.55	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$589,500
A2020	Basement Walls	$12.70	S.F.	90,000	100	1915	2015	2052	37.00 %	0.60 %	37		$6,831.97	$1,143,000
B1010	Floor Construction	$75.10	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$6,759,000
B1020	Roof Construction	$13.88	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$1,249,200
B2010	Exterior Walls	$36.91	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$3,321,900
B2020	Exterior Windows	$18.01	S.F.	90,000	40	1990	2030		37.50 %	34.24 %	15		$555,075.84	$1,620,900
B2030	Exterior Doors	$1.45	S.F.	90,000	25	1990	2015	2042	108.00 %	212.04 %	27		$276,713.26	$130,500
B3010105	Built-Up	$37.76	S.F.	35,117	20	2012	2032		85.00 %	0.00 %	17			$1,326,018
B3020	Roof Openings	$0.06	S.F.	90,000	20	2012	2032		85.00 %	0.00 %	17			$5,400
C1010	Partitions	$17.91	S.F.	90,000	100	1915	2015	2052	37.00 %	0.00 %	37			$1,611,900
C1020	Interior Doors	$3.51	S.F.	90,000	40	1980	2020		12.50 %	131.96 %	5		$416,872.68	$315,900
C1030	Fittings	$3.12	S.F.	90,000	40	1990	2030		37.50 %	8.75 %	15		$24,579.41	$280,800
C2010	Stair Construction	$1.41	S.F.	90,000	100	1915	2015	2052	37.00 %	53.23 %	37		$67,545.12	$126,900
C3010230	Paint & Covering	$13.44	S.F.	90,000	10	2010	2020		50.00 %	93.50 %	5		$1,130,962.48	$1,209,600
C3010232	Wall Tile	$3.35	S.F.	90,000	30	1990	2020		16.67 %	0.00 %	5			$301,500
C3020412	Terrazzo & Tile	$75.52	S.F.	4,500	50	1916	1966	2020	10.00 %	0.00 %	5			$339,840

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020413	Vinyl Flooring	$9.68	S.F.	13,500	20	2000	2020		25.00 %	7.84 %	5		$10,251.44	$130,680
C3020414	Wood Flooring	$22.27	S.F.	36,000	25	1990	2015	2042	108.00 %	18.80 %	27		$150,737.16	$801,720
C3020415	Concrete Floor Finishes	$6.18	S.F.	36,000	50	1980	2030		30.00 %	283.26 %	15		$630,190.16	$222,480
C3030	Ceiling Finishes	$20.97	S.F.	90,000	25	2000	2025		40.00 %	8.90 %	10		$167,965.02	$1,887,300
D1010	Elevators and Lifts	$1.53	S.F.	90,000	35				0.00 %	486.80 %			$670,322.07	$137,700
D2010	Plumbing Fixtures	$13.52	S.F.	90,000	35	1995	2030		42.86 %	1.85 %	15		$22,503.49	$1,216,800
D2020	Domestic Water Distribution	$1.68	S.F.	90,000	25	1950	1975	2042	108.00 %	397.01 %	27		$600,276.62	$151,200
D2030	Sanitary Waste	$2.90	S.F.	90,000	25	1995	2020		20.00 %	5.01 %	5		$13,082.51	$261,000
D2040	Rain Water Drainage	$2.32	S.F.	90,000	30	1950	1980	2027	40.00 %	0.00 %	12			$208,800
D3020	Heat Generating Systems	$18.67	S.F.	90,000	35	2002	2037		62.86 %	0.00 %	22			$1,680,300
D3030	Cooling Generating Systems	$24.48	S.F.	90,000	30	1916	1946	2047	106.67 %	49.20 %	32		$1,084,009.09	$2,203,200
D3040	Distribution Systems	$42.99	S.F.	90,000	25	1916	1941	2042	108.00 %	115.21 %	27		$4,457,748.83	$3,869,100
D3050	Terminal & Package Units	$11.60	S.F.	90,000	20	1916	1936	2037	110.00 %	2.80 %	22		$29,282.82	$1,044,000
D3060	Controls & Instrumentation	$13.50	S.F.	90,000	20	1916	1936	2037	110.00 %	132.68 %	22		$1,612,026.20	$1,215,000
D4010	Sprinklers	$7.05	S.F.	90,000	35	1916	1951	2052	105.71 %	202.91 %	37		$1,287,490.18	$634,500
D4020	Standpipes	$1.01	S.F.	90,000	35			2052	105.71 %	0.00 %	37			$90,900
D5010	Electrical Service/Distribution	$9.70	S.F.	90,000	30	1916	1946	2047	106.67 %	89.17 %	32		$778,468.10	$873,000
D5020	Lighting and Branch Wiring	$34.68	S.F.	90,000	20	1916	1936	2042	135.00 %	6.03 %	27		$188,093.95	$3,121,200
D5030	Communications and Security	$12.99	S.F.	90,000	15	1916	1931	2032	113.33 %	32.90 %	17		$384,576.01	$1,169,100
D5090	Other Electrical Systems	$1.41	S.F.	90,000	30	1916	1946	2047	106.67 %	220.92 %	32		$280,343.29	$126,900
E1020	Institutional Equipment	$4.82	S.F.	90,000	35	1980	2015	2020	14.29 %	67.68 %	5		$293,594.70	$433,800
E1090	Other Equipment	$11.10	S.F.	90,000	35	2000	2035		57.14 %	0.00 %	20			$999,000
E2010	Fixed Furnishings	$2.13	S.F.	90,000	40	1970	2010	2057	105.00 %	329.33 %	42		$631,333.86	$191,700
								Total	**65.88 %**	**34.77 %**			**$15,770,876.26**	**$45,352,938**

System Notes

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

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

Note: 80% - Paint & Covering
20% - Wall Tile (glazed block and ceramic)

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

Note: 5% - Terrazzo & Tile
15% - Vinyl Flooring
40% - Wood Flooring
40% - Concrete Floor Finishes

System: D5010 - Electrical Service/Distribution — This system contains no images

Note: There are (4) phase converters from 240V to 120/208V. The ratings are (1) 75KVA, and (3) 25KVA

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:	**$15,770,876**	**$0**	**$0**	**$0**	**$0**	**$3,815,811**	**$0**	**$0**	**$0**	**$0**	**$2,790,011**	**$22,376,698**
*** 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	$6,832	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,832**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$555,076	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$555,076**
B2030 - Exterior Doors	$276,713	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$276,713**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$416,873	$0	$0	$0	$0	$402,836	$0	$0	$0	$0	$0	**$819,709**
C1030 - Fittings	$24,579	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$24,579**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

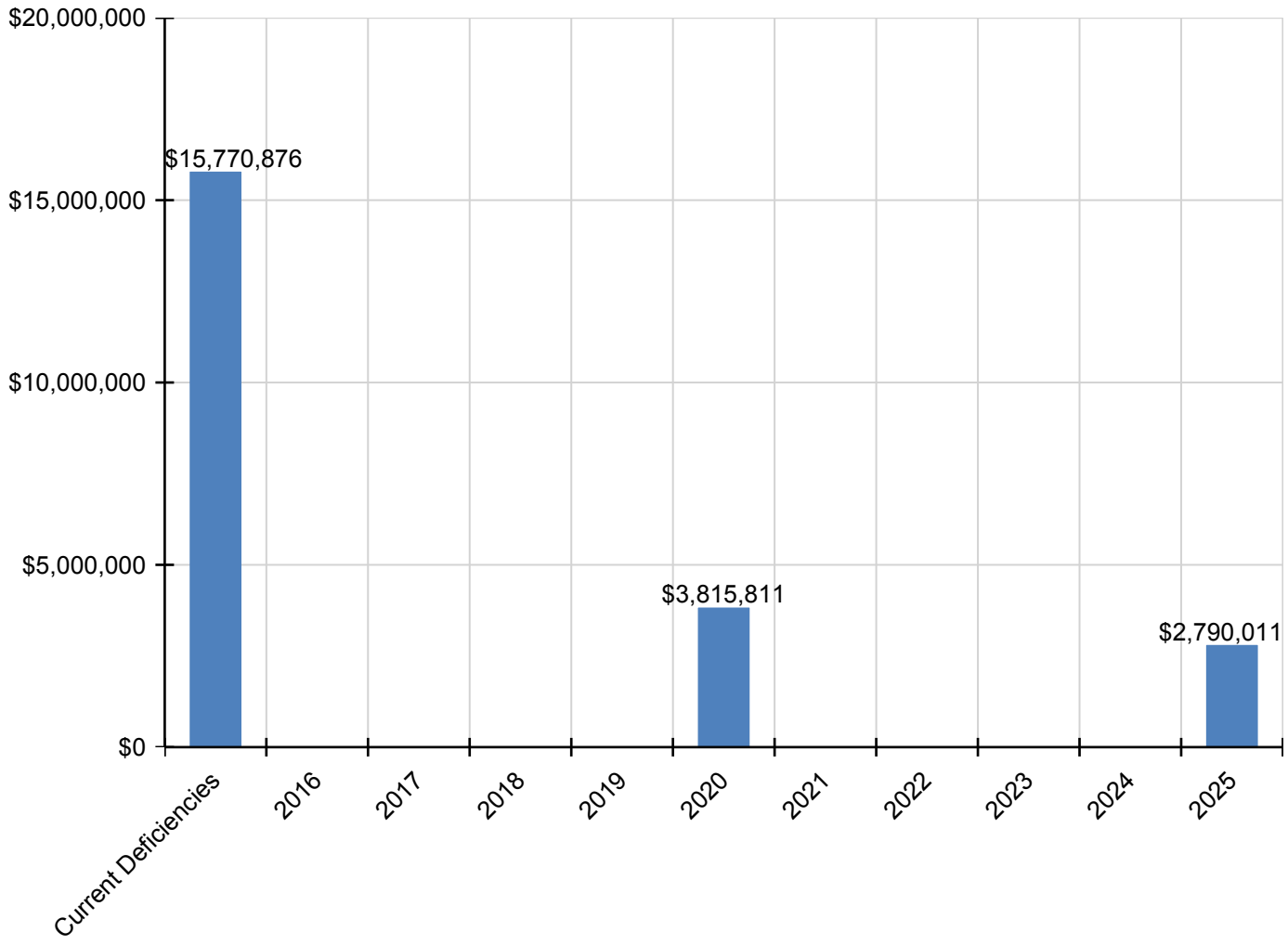
C2010 - Stair Construction	$67,545	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$67,545**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$1,130,962	$0	$0	$0	$0	$1,542,484	$0	$0	$0	$0	$0	**$2,673,446**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$384,473	$0	$0	$0	$0	$0	**$384,473**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$433,364	$0	$0	$0	$0	$0	**$433,364**
C3020413 - Vinyl Flooring	$10,251	$0	$0	$0	$0	$166,643	$0	$0	$0	$0	$0	**$176,895**
C3020414 - Wood Flooring	$150,737	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$150,737**
C3020415 - Concrete Floor Finishes	$630,190	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$630,190**
C3030 - Ceiling Finishes	$167,965	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,790,011	**$2,957,976**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$670,322	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$670,322**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$22,503	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$22,503**
D2020 - Domestic Water Distribution	$600,277	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$600,277**
D2030 - Sanitary Waste	$13,083	$0	$0	$0	$0	$332,828	$0	$0	$0	$0	$0	**$345,910**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,084,009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,084,009**
D3040 - Distribution Systems	$4,457,749	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,457,749**
D3050 - Terminal & Package Units	$29,283	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$29,283**
D3060 - Controls & Instrumentation	$1,612,026	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,612,026**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,287,490	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,287,490**
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	$778,468	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$778,468**
D5020 - Lighting and Branch Wiring	$188,094	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$188,094**
D5030 - Communications and Security	$384,576	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$384,576**
D5090 - Other Electrical Systems	$280,343	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$280,343**

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	$293,595	$0	$0	$0	$0	$553,182	$0	$0	$0	$0	$0	**$846,777**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$631,334	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$631,334**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

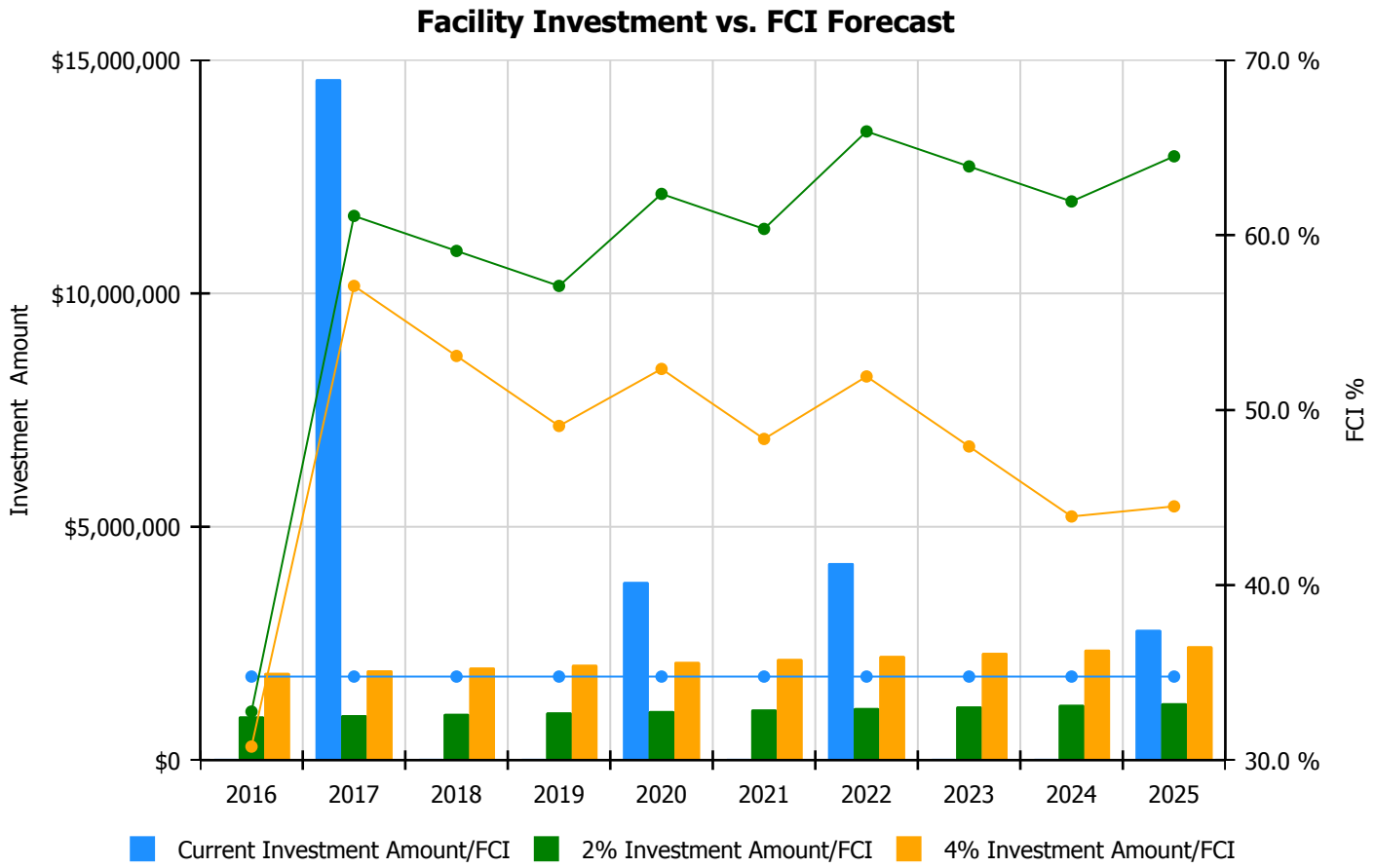
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

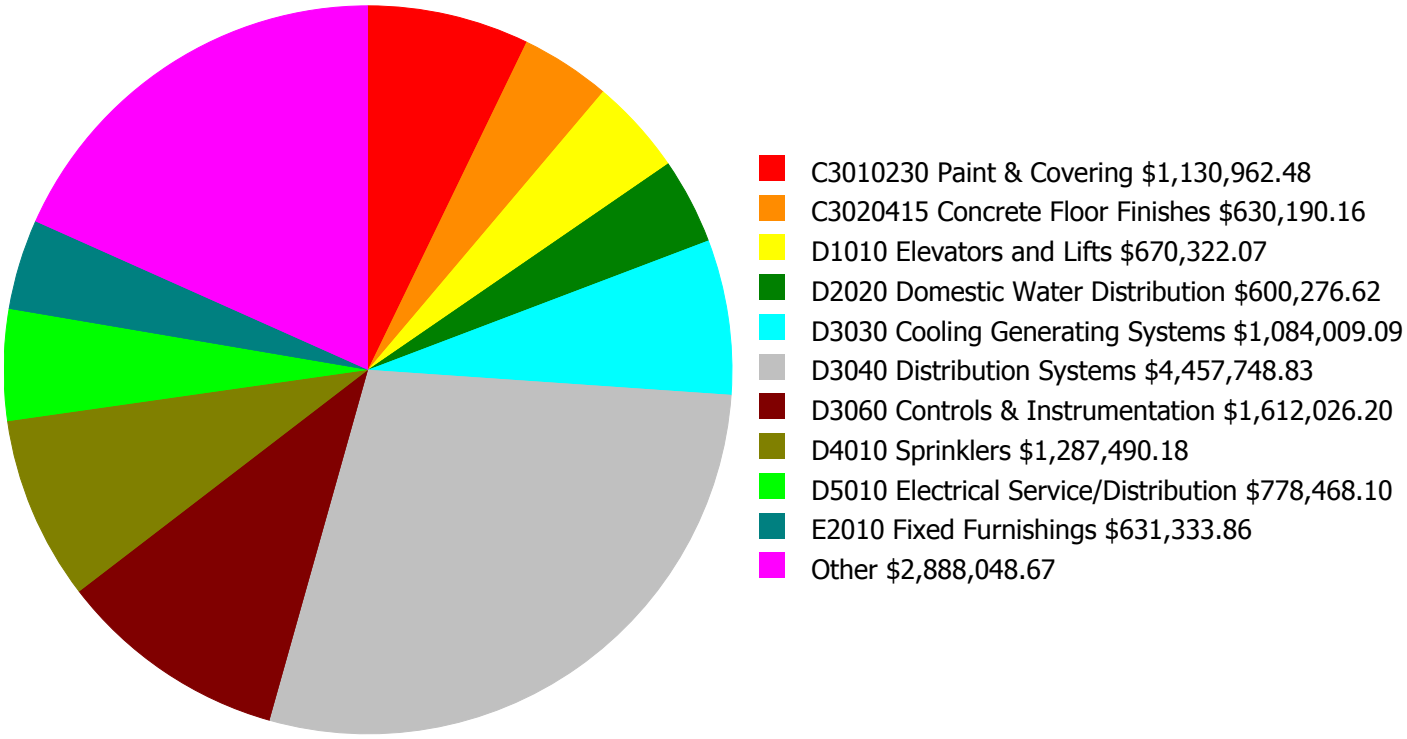
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 34.77%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$934,271.00	32.77 %	$1,868,541.00	30.77 %
2017	$14,588,332	$962,299.00	61.09 %	$1,924,597.00	57.09 %
2018	$0	$991,168.00	59.09 %	$1,982,335.00	53.09 %
2019	$0	$1,020,903.00	57.09 %	$2,041,805.00	49.09 %
2020	$3,815,811	$1,051,530.00	62.35 %	$2,103,059.00	52.35 %
2021	$0	$1,083,076.00	60.35 %	$2,166,151.00	48.35 %
2022	$4,222,551	$1,115,568.00	65.92 %	$2,231,136.00	51.92 %
2023	$0	$1,149,035.00	63.92 %	$2,298,070.00	47.92 %
2024	$0	$1,183,506.00	61.92 %	$2,367,012.00	43.92 %
2025	$2,790,011	$1,219,011.00	64.50 %	$2,438,022.00	44.50 %
Total:	**$25,416,704**	**$10,710,367.00**		**$21,420,728.00**	

Deficiency Summary by System

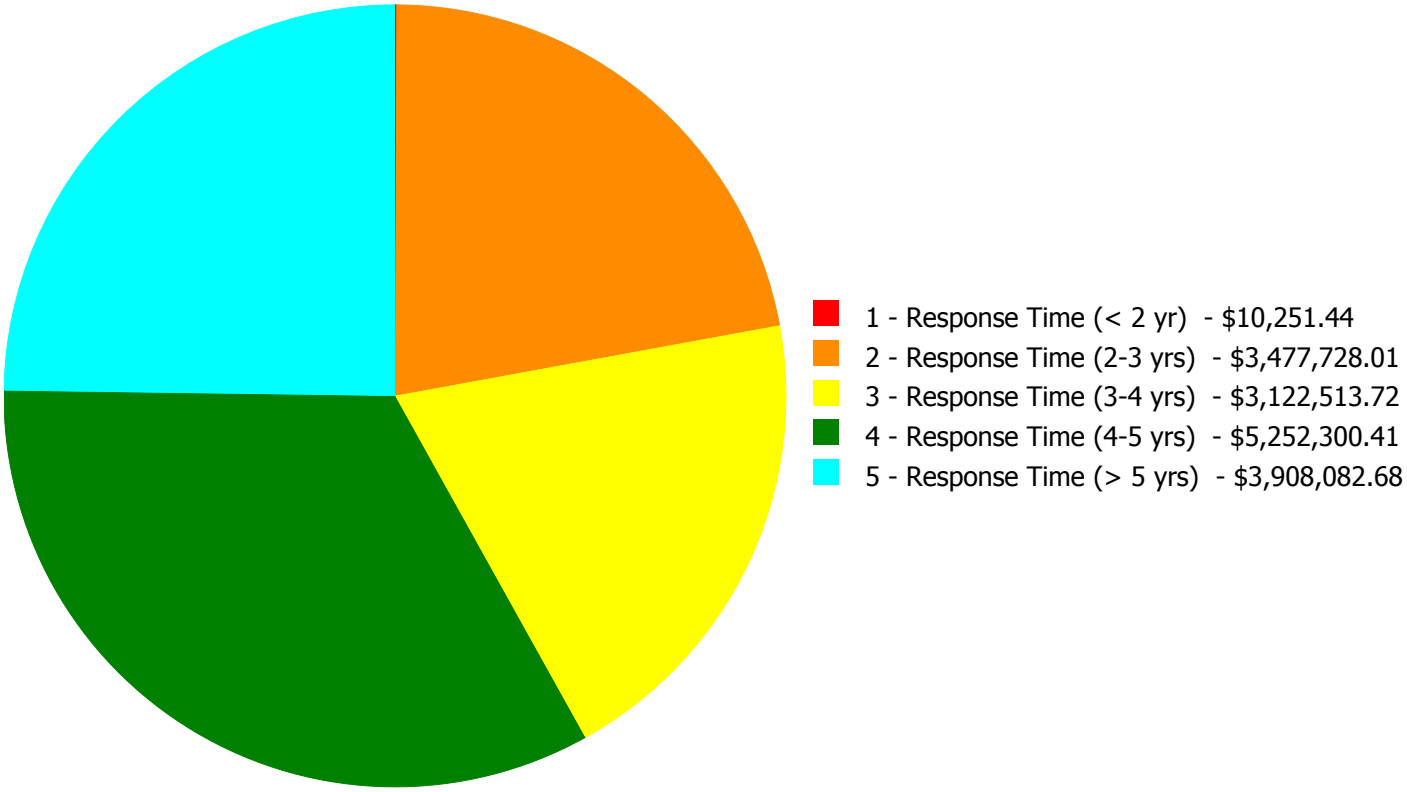
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $15,770,876.26

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: $15,770,876.26

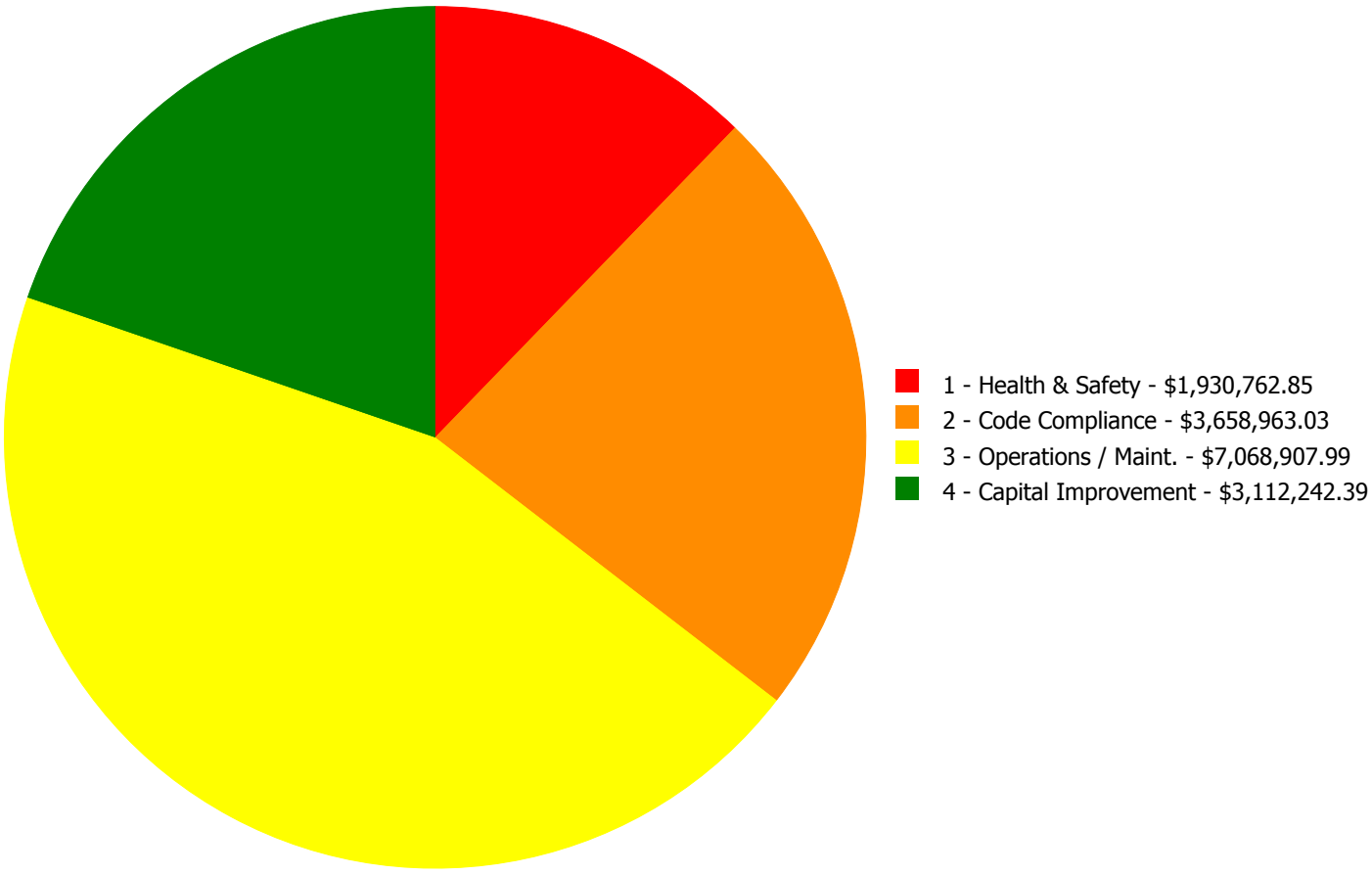
Deficiency By Priority Investment Table

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
A2020	Basement Walls	$0.00	$6,831.97	$0.00	$0.00	$0.00	$6,831.97
B2020	Exterior Windows	$0.00	$0.00	$0.00	$555,075.84	$0.00	$555,075.84
B2030	Exterior Doors	$0.00	$276,713.26	$0.00	$0.00	$0.00	$276,713.26
C1020	Interior Doors	$0.00	$44,525.56	$372,347.12	$0.00	$0.00	$416,872.68
C1030	Fittings	$0.00	$9,778.55	$0.00	$14,800.86	$0.00	$24,579.41
C2010	Stair Construction	$0.00	$67,545.12	$0.00	$0.00	$0.00	$67,545.12
C3010230	Paint & Covering	$0.00	$0.00	$1,130,962.48	$0.00	$0.00	$1,130,962.48
C3020413	Vinyl Flooring	$10,251.44	$0.00	$0.00	$0.00	$0.00	$10,251.44
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$150,737.16	$0.00	$150,737.16
C3020415	Concrete Floor Finishes	$0.00	$630,190.16	$0.00	$0.00	$0.00	$630,190.16
C3030	Ceiling Finishes	$0.00	$4,725.64	$0.00	$163,239.38	$0.00	$167,965.02
D1010	Elevators and Lifts	$0.00	$670,322.07	$0.00	$0.00	$0.00	$670,322.07
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$22,503.49	$0.00	$22,503.49
D2020	Domestic Water Distribution	$0.00	$7,395.49	$0.00	$592,881.13	$0.00	$600,276.62
D2030	Sanitary Waste	$0.00	$13,082.51	$0.00	$0.00	$0.00	$13,082.51
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,084,009.09	$1,084,009.09
D3040	Distribution Systems	$0.00	$141,897.27	$1,298,848.48	$192,929.49	$2,824,073.59	$4,457,748.83
D3050	Terminal & Package Units	$0.00	$0.00	$0.00	$29,282.82	$0.00	$29,282.82
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,612,026.20	$0.00	$1,612,026.20
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,287,490.18	$0.00	$1,287,490.18
D5010	Electrical Service/Distribution	$0.00	$778,468.10	$0.00	$0.00	$0.00	$778,468.10
D5020	Lighting and Branch Wiring	$0.00	$188,093.95	$0.00	$0.00	$0.00	$188,093.95
D5030	Communications and Security	$0.00	$357,815.07	$26,760.94	$0.00	$0.00	$384,576.01
D5090	Other Electrical Systems	$0.00	$280,343.29	$0.00	$0.00	$0.00	$280,343.29
E1020	Institutional Equipment	$0.00	$0.00	$293,594.70	$0.00	$0.00	$293,594.70
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$631,333.86	$0.00	$631,333.86
	Total:	$10,251.44	$3,477,728.01	$3,122,513.72	$5,252,300.41	$3,908,082.68	$15,770,876.26

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: $15,770,876.26

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: C3020413 - Vinyl Flooring

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace VCT

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $10,251.44

Assessor Name: System

Date Created: 08/05/2015

Notes: Replace VCT floor tiles - missing

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

System: A2020 - Basement Walls

Location: Basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete - pick the appropriate repair and insert the SF of wall area

Qty: 50.00

Unit of Measure: S.F.

Estimate: $6,831.97

Assessor Name: System

Date Created: 08/11/2015

Notes: Repair structural beams in basement – damaged concrete and exposed reinforcement

System: B2030 - Exterior Doors

Location: Entrances

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 30.00

Unit of Measure: Ea.

Estimate: $273,219.62

Assessor Name: System

Date Created: 08/11/2015

Notes: Replace exterior doors – beyond service life and failing

System: B2030 - Exterior Doors

Location: TBD

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $3,493.64

Assessor Name: System

Date Created: 08/04/2015

Notes: Provide ADA compliant hardware at one entrance (location TBD)

System: C1020 - Interior Doors

Location: Throughout

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 80.00

Unit of Measure: Ea.

Estimate: $44,525.56

Assessor Name: System

Date Created: 08/04/2015

Notes: Provide ADA lever handle lock/latchsets on interior doors

System: C1030 - Fittings

Location: Toilets

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 10.00

Unit of Measure: Ea.

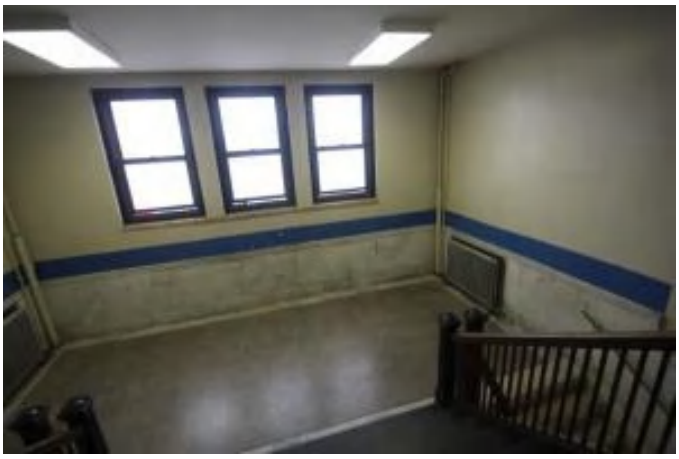
Estimate: $9,778.55

Assessor Name: System

Date Created: 08/11/2015

Notes: Provide new toilet partitions and toilet accessories including grab bars for accessibility

System: C2010 - Stair Construction



Location: Stairways

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 400.00

Unit of Measure: L.F.

Estimate: $67,545.12

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace railing in stairways with code compliant

System: C3020415 - Concrete Floor Finishes

Location: Toilet rooms

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Repair spalled concrete floor surface

Qty: 9,000.00

Unit of Measure: S.F.

Estimate: $630,190.16

Assessor Name: System

Date Created: 08/11/2015

Notes: Repair uneven floors in toilet rooms – poor slope causing drainage problem

System: C3030 - Ceiling Finishes

Location: Balcony

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair structural ceiling support

Qty: 20.00

Unit of Measure: S.F.

Estimate: $4,725.64

Assessor Name: System

Date Created: 08/11/2015

Notes: Repair, patch and paint structural beam in auditorium balcony – sagging

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: TBD

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $670,322.07

Assessor Name: System

Date Created: 08/05/2015

Notes: Install elevator for accessibility (location TBD)

System: D2020 - Domestic Water Distribution

Location: Dining room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace pipe and fittings

Qty: 2.00

Unit of Measure: L.F.

Estimate: $7,395.49

Assessor Name: System

Date Created: 08/10/2015

Notes: Install double backflow prevention valve at city water supply connection.

System: D2030 - Sanitary Waste

Location: Toilet rooms

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Replace damaged sanitary piping (per LF)

Qty: 50.00

Unit of Measure: L.F.

Estimate: $13,082.51

Assessor Name: System

Date Created: 08/10/2015

Notes: Repair plumbing fixture connections to sewer drain pipes as needed to eliminate odors.

System: D3040 - Distribution Systems

Location: Toilet rooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace utility set exhaust fan (5 HP)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $141,897.27

Assessor Name: System

Date Created: 08/10/2015

Notes: Repair or upgrade toilet room exhaust systems to eliminate odors throughout the building.

System: D5010 - Electrical Service/Distribution

Location: Basement fan room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $433,333.72

Assessor Name: System

Date Created: 07/30/2015

Notes: Provide new service, 480/277V, 3 phase power, approximate 1600Amperes and will occupy the same space of the existing fusible service entrance switchboard.

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical Distribution System (U)

Qty: 12.00

Unit of Measure: Ea.

Estimate: $345,134.38

Assessor Name: System

Date Created: 07/30/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Approximate (12) 208/120V.

System: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add wiring device

Qty: 512.00

Unit of Measure: Ea.

Estimate: $188,093.95

Assessor Name: System

Date Created: 07/30/2015

Notes: Provide to the teacher's whiteboard wall and the opposite of it with double compartment surface raceways and the other two walls with duplex outlets. Approximate 512 receptacles.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $222,554.22

Assessor Name: System

Date Created: 07/30/2015

Notes: Provide a new addressable fire alarm system.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Obsolete
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Add/Replace Clock System or Components
Qty: 50.00
Unit of Measure: Ea.
Estimate: $135,260.85
Assessor Name: System
Date Created: 07/30/2015

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

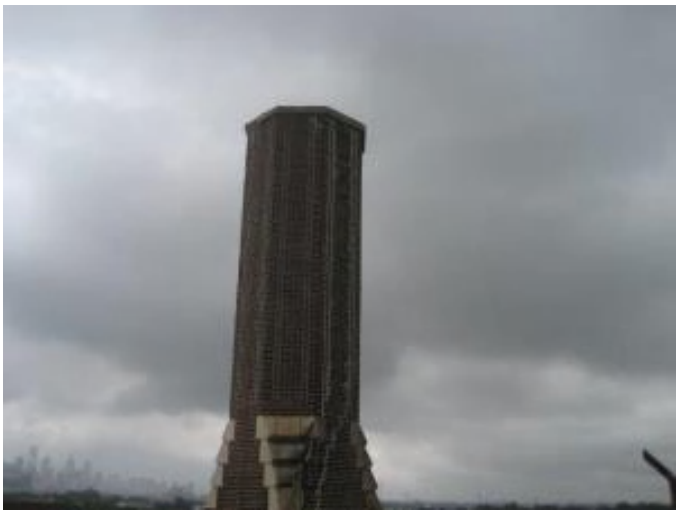
System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: Basement
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $256,093.47
Assessor Name: System
Date Created: 07/30/2015

Notes: Provide a new gas powered generator. Approximate 100KW

System: D5090 - Other Electrical Systems



Location: Roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: $24,249.82

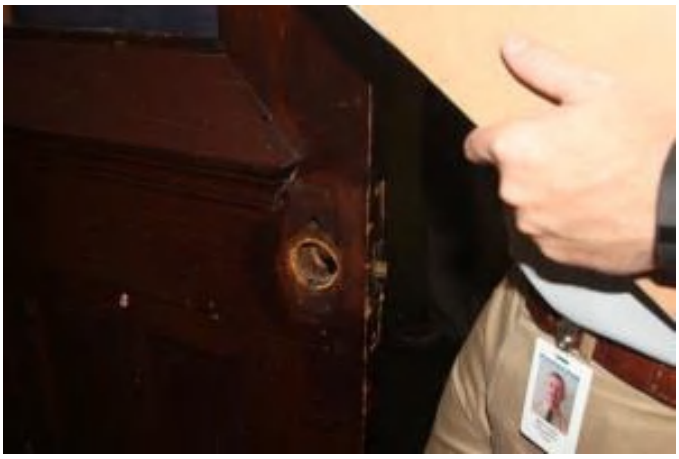
Assessor Name: System

Date Created: 07/30/2015

Notes: Prepare a study to determine if the air terminals installed in the chimney provide the proper coverage to the school.

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

System: C1020 - Interior Doors



Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 80.00

Unit of Measure: Ea.

Estimate: $372,347.12

Assessor Name: System

Date Created: 08/11/2015

Notes: Repair or replace rusted, dented, scratched doors and frames

System: C3010230 - Paint & Covering

Location: Throughout

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 160,000.00

Unit of Measure: S.F.

Estimate: $1,130,962.48

Assessor Name: System

Date Created: 08/05/2015

Notes: Patch paint plaster walls – damaged (50% of plaster wall surface)

System: D3040 - Distribution Systems

Location: Entire 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: 90,000.00

Unit of Measure: S.F.

Estimate: $851,433.52

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the existing steam and condensate distribution piping due to age and corrosion.

System: D3040 - Distribution Systems

Location: Basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Install / replace HVAC unit for Auditorium (800 seat).

Qty: 800.00

Unit of Measure: Seat

Estimate: $447,414.96

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the original air handler serving the auditorium.

System: D5030 - Communications and Security

This deficiency has no image.

Location: Auditorium
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Add/Replace Sound System
Qty: 1.00
Unit of Measure: LS
Estimate: $26,760.94
Assessor Name: System
Date Created: 07/31/2015

Notes: Provide the auditorium with a sound system.

System: E1020 - Institutional Equipment

Location: Auditorium
Distress: Obsolete
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Add/Replace Stage Theatrical Lighting System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $293,594.70
Assessor Name: System
Date Created: 07/31/2015

Notes: Provide the auditorium with dimming and theatrical lighting.

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

System: B2020 - Exterior Windows

Location: Throughout

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace double slider windows

Qty: 110.00

Unit of Measure: Ea.

Estimate: $555,075.84

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace Plexiglas windows - hazed

System: C1030 - Fittings

Location: Throughout

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 120.00

Unit of Measure: Ea.

Estimate: $14,800.86

Assessor Name: System

Date Created: 08/04/2015

Notes: Install new ID signage

System: C3020414 - Wood Flooring

Location: Auditorium, balcony, classrooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 14,000.00

Unit of Measure: S.F.

Estimate: $150,737.16

Assessor Name: System

Date Created: 08/05/2015

Notes: Refinish hardwood flooring (40% of wood flooring incl. auditorium, balcony, and stage)

System: C3030 - Ceiling Finishes

Location: Throughout

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 7,200.00

Unit of Measure: S.F.

Estimate: $94,493.38

Assessor Name: System

Date Created: 08/05/2015

Notes: Patch paint plaster ceilings – damaged (20% plaster/painted ceiling surface)

System: C3030 - Ceiling Finishes

Location: Throughout

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 5,400.00

Unit of Measure: S.F.

Estimate: $34,810.52

Assessor Name: System

Date Created: 08/05/2015

Notes: Replace acoustic ceiling tiles - discolored or damaged (10% of suspended ceiling area)

System: C3030 - Ceiling Finishes

Location: Cafeteria

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 2,250.00

Unit of Measure: S.F.

Estimate: $33,935.48

Assessor Name: System

Date Created: 08/05/2015

Notes: Replace acoustic ceiling in cafeteria with suspended ceiling - failing

System: D2010 - Plumbing Fixtures

Location: Annex

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: 2.00

Unit of Measure: Ea.

Estimate: $14,924.30

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace two water closets and one lavatory in annex building as part of complete remodel.

System: D2010 - Plumbing Fixtures

Location: Annex

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and Replace Water Fountains - without ADA new recessed alcove

Qty: 1.00

Unit of Measure: Ea.

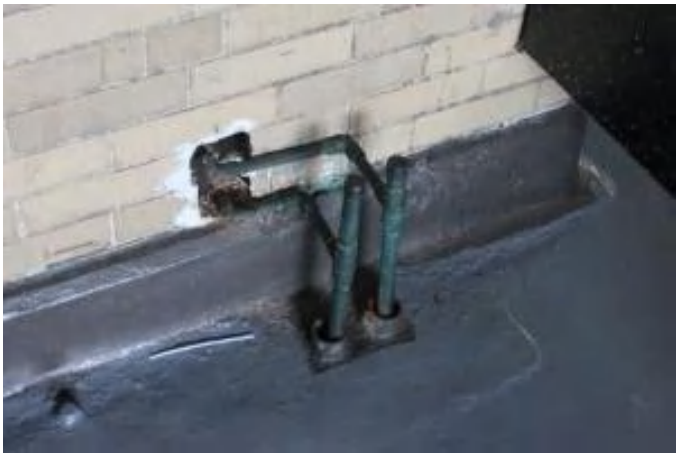
Estimate: $7,579.19

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace drinking water fountain with accessible unit in annex building as part of complete remodel.

System: D2020 - Domestic Water Distribution



Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 117,000.00

Unit of Measure: S.F.

Estimate: $592,881.13

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the existing copper domestic water piping due to age and corrosion. Extend hot water circulation loop to library and remove auxiliary water heater.

System: D3040 - Distribution Systems

Location: classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 440.00

Unit of Measure: L.F.

Estimate: $177,558.23

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the existing steam radiators in the classrooms with finned tube due to age, damage, and corrosion.

System: D3040 - Distribution Systems

Location: Basement

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Replace thermal duct insulation - per 100 SF

Qty: 350.00

Unit of Measure: S.F.

Estimate: $15,371.26

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace original uninsulated metal ducts with insulated ducts.

System: D3050 - Terminal & Package Units

Location: Annex

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Install ductless split system for equipment room

Qty: 2.00

Unit of Measure: Ea.

Estimate: $29,282.82

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove electric unit vents and window unit air conditioners from annex building and replace with new heat pump unit vents as part of complete remodel.

System: D3060 - Controls & Instrumentation

Location: Entire building

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 90,000.00

Unit of Measure: S.F.

Estimate: $1,612,026.20

Assessor Name: System

Date Created: 08/10/2015

Notes: Upgrade the manual controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency including a building automation system (BAS) with communication interface to the preferred system in use throughout the District.

System: D4010 - Sprinklers

This deficiency has no image.

Location: Entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 90,000.00

Unit of Measure: S.F.

Estimate: $1,287,490.18

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a fire protection sprinkler system with outside, engine driven, packaged fire pump system if needed.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 700.00

Unit of Measure: Ea.

Estimate: $631,333.86

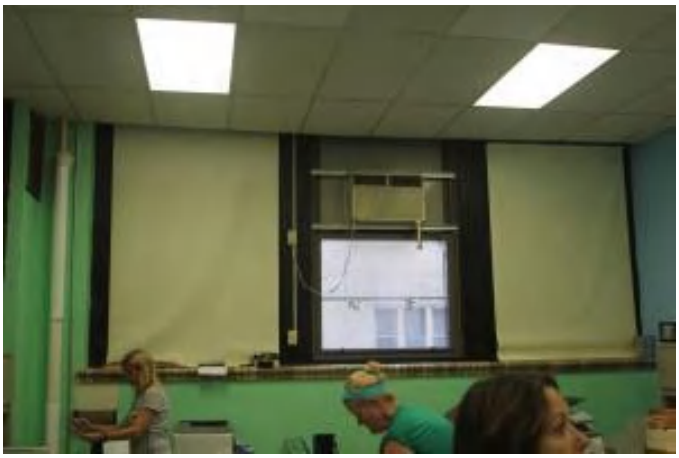
Assessor Name: System

Date Created: 08/05/2015

Notes: Replace auditorium seats - broken, missing, failing

Priority 5 - Response Time (> 5 yrs):

System: D3030 - Cooling Generating Systems



Location: Roof tops

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+75KSF)

Qty: 67,500.00

Unit of Measure: S.F.

Estimate: $1,084,009.09

Assessor Name: System

Date Created: 08/10/2015

Notes: Install 225 ton air conditioning systems to provide more reliable and efficient air conditioning to the entire building and remove window unit air conditioners.

System: D3040 - Distribution Systems

This deficiency has no image.

Location: classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide classroom FC units and dedicated OA ventilation system. (20 clsrms)

Qty: 34.00

Unit of Measure: Room

Estimate: $2,824,073.59

Assessor Name: System

Date Created: 09/09/2016

Notes: Replace the obsolete ventilation system for the classrooms with fan coil units and a dedicated OA unit.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, packaged scotch marine, fire tube, gross output, #2 oil, 15 PSI steam, 6696 MBH, 200 H.P.	2.00	Ea.	Boiler room	A.L. Eastmond & Sons	ESP 200	11642		35	2002	2037	$148,561.00	$326,834.20
D3020 Heat Generating Systems	Boiler, packaged scotch marine, fire tube, gross output, #2 oil, 15 PSI steam, 6696 MBH, 200 H.P.	2.00	Ea.	Boiler room	A.L. Eastmond & Sons	ESP 200	11643		35	2002	2037	$148,561.00	$326,834.20
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 40,000 CFM	3.00	Ea.	Basement fan rooms					25	1916	2045	$151,511.80	$499,988.94
D5010 Electrical Service/Distribution	Switchboards, main fusible switch, 3 pole, 4 wire, 120/208, 120/240 V, 600 amp, incl fuse	1.00	Ea.	Basement fan room					30	1956	2017	$6,986.25	$7,684.88
												Total:	**$1,161,342.22**

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):	76,300
Year Built:	1915
Last Renovation:	
Replacement Value:	$1,543,549
Repair Cost:	$163,270.53
Total FCI:	10.58 %
Total RSLI:	21.64 %

Description:

Attributes:

General Attributes:

Bldg ID:	S137001	Site ID:	S137001

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	20.05 %	2.10 %	$25,425.97
G40 - Site Electrical Utilities	27.43 %	41.53 %	$137,844.56
Totals:	**21.64 %**	**10.58 %**	**$163,270.53**

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.	0	30	1990	2020		16.67 %	0.00 %	5			$0
G2020	Parking Lots	$7.65	S.F.	0	30	2010	2040		83.33 %	0.00 %	25			$0
G2030	Pedestrian Paving	$11.52	S.F.	76,300	40	1980	2020		12.50 %	2.89 %	5		$25,425.97	$878,976
G2040	Site Development	$4.36	S.F.	76,300	25	2000	2025		40.00 %	0.00 %	10			$332,668
G4020	Site Lighting	$3.58	S.F.	76,300	30	1995	2025		33.33 %	50.46 %	10		$137,844.56	$273,154
G4030	Site Communications & Security	$0.77	S.F.	76,300	30				0.00 %	0.00 %				$58,751
								Total	**21.64 %**	**10.58 %**			**$163,270.53**	**$1,543,549**

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.

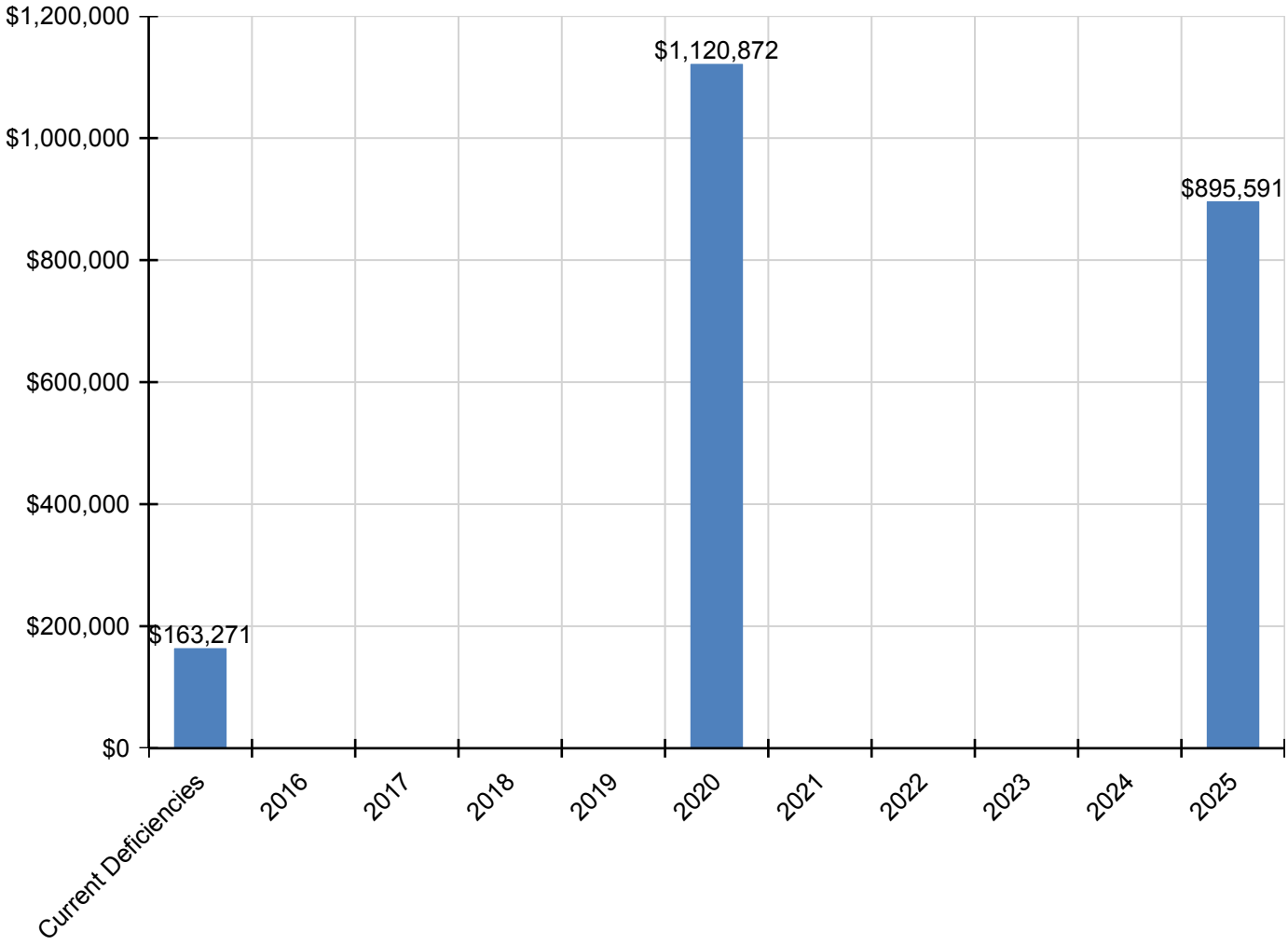
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$163,271**	**$0**	**$0**	**$0**	**$0**	**$1,120,872**	**$0**	**$0**	**$0**	**$0**	**$895,591**	**$2,179,734**
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	$25,426	$0	$0	$0	$0	$1,120,872	$0	$0	$0	$0	$0	**$1,146,298**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$491,786	**$491,786**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$137,845	$0	$0	$0	$0	$0	$0	$0	$0	$0	$403,805	**$541,650**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

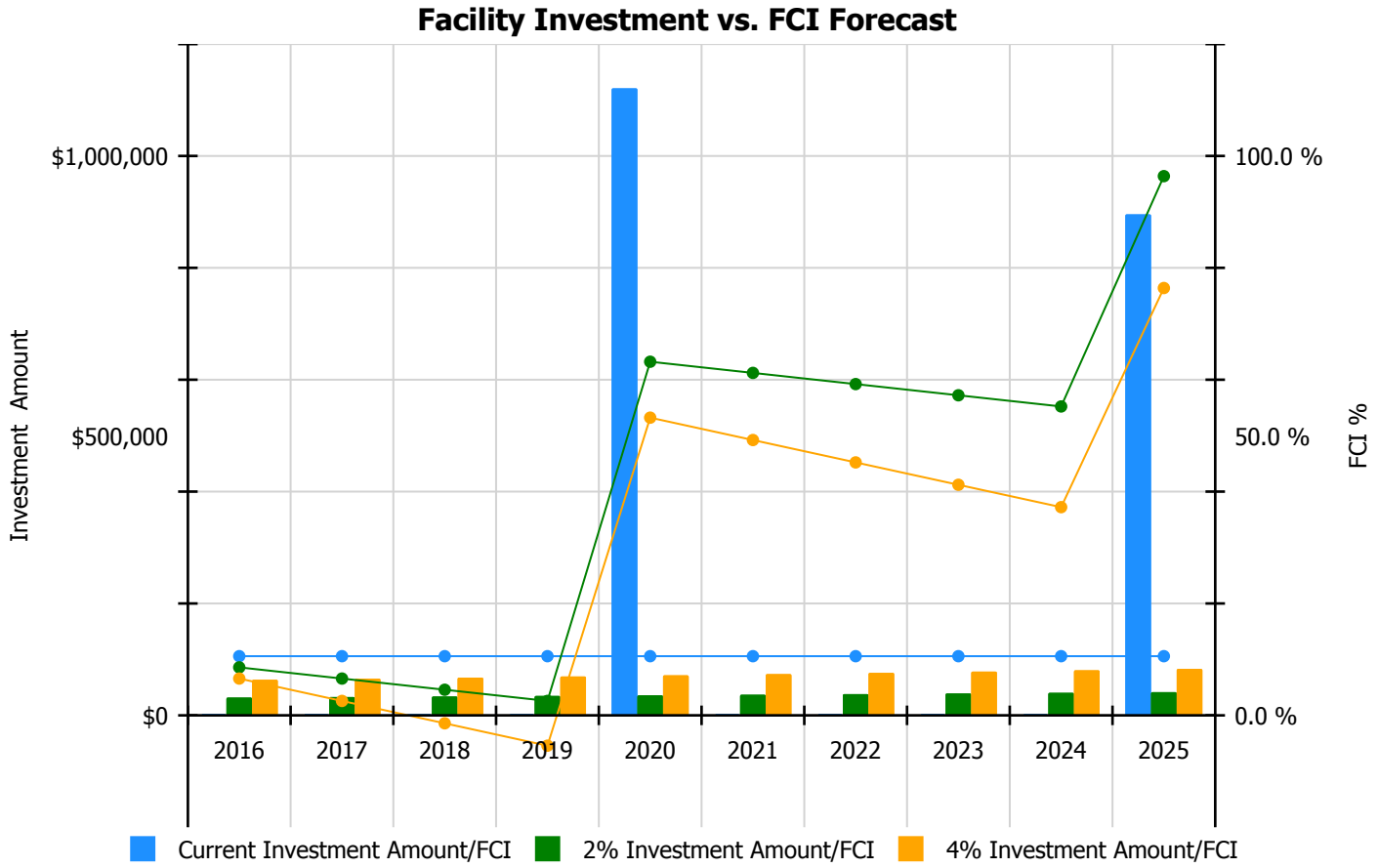
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

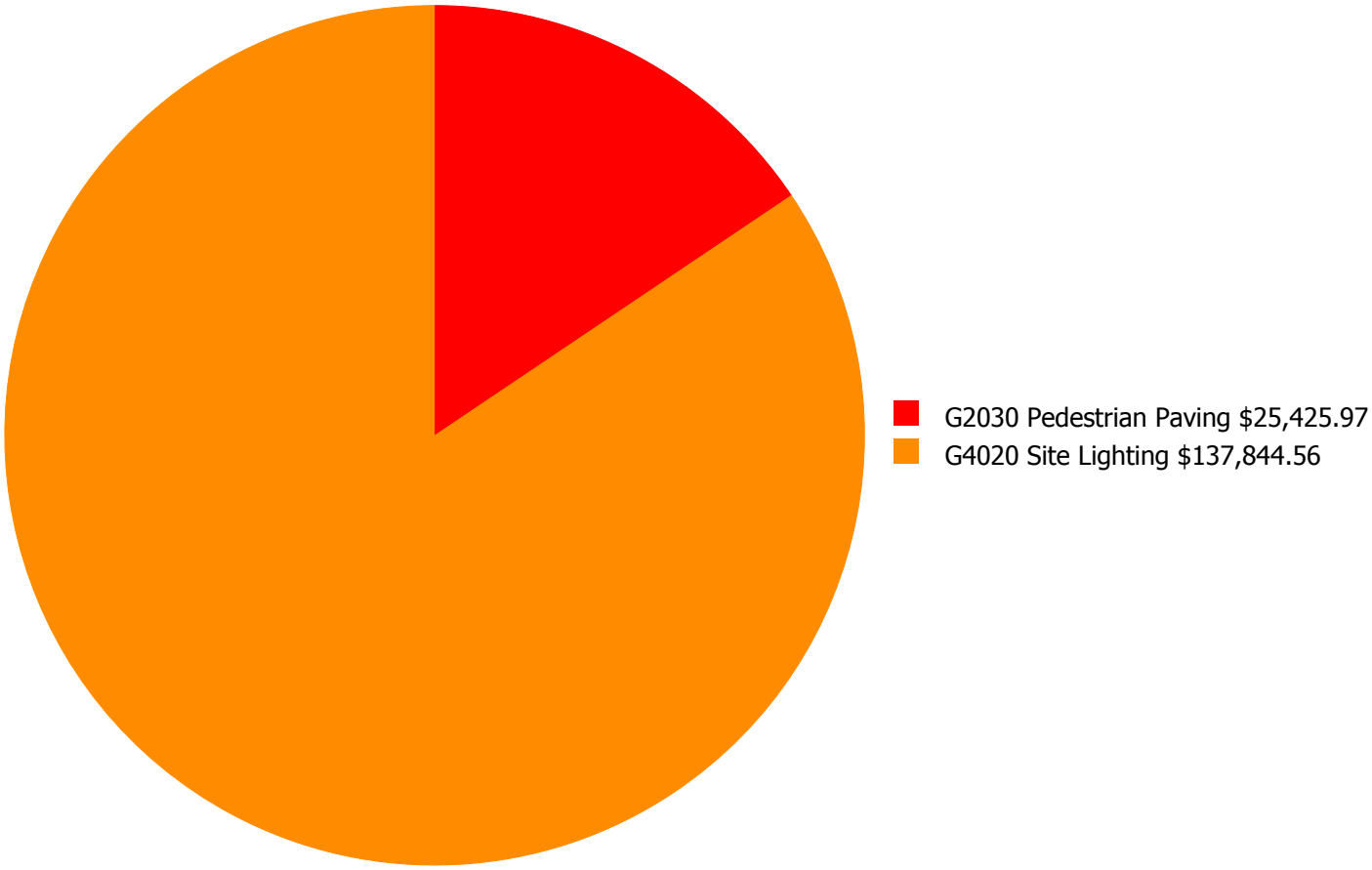
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 10.58%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$31,797.00	8.58 %	$63,594.00	6.58 %
2017	$0	$32,751.00	6.58 %	$65,502.00	2.58 %
2018	$0	$33,734.00	4.58 %	$67,467.00	-1.42 %
2019	$0	$34,746.00	2.58 %	$69,491.00	-5.42 %
2020	$1,120,872	$35,788.00	63.22 %	$71,576.00	53.22 %
2021	$0	$36,862.00	61.22 %	$73,723.00	49.22 %
2022	$0	$37,967.00	59.22 %	$75,935.00	45.22 %
2023	$0	$39,106.00	57.22 %	$78,213.00	41.22 %
2024	$0	$40,280.00	55.22 %	$80,559.00	37.22 %
2025	$895,591	$41,488.00	96.39 %	$82,976.00	76.39 %
Total:	**$2,016,463**	**$364,519.00**		**$729,036.00**	

Deficiency Summary by System

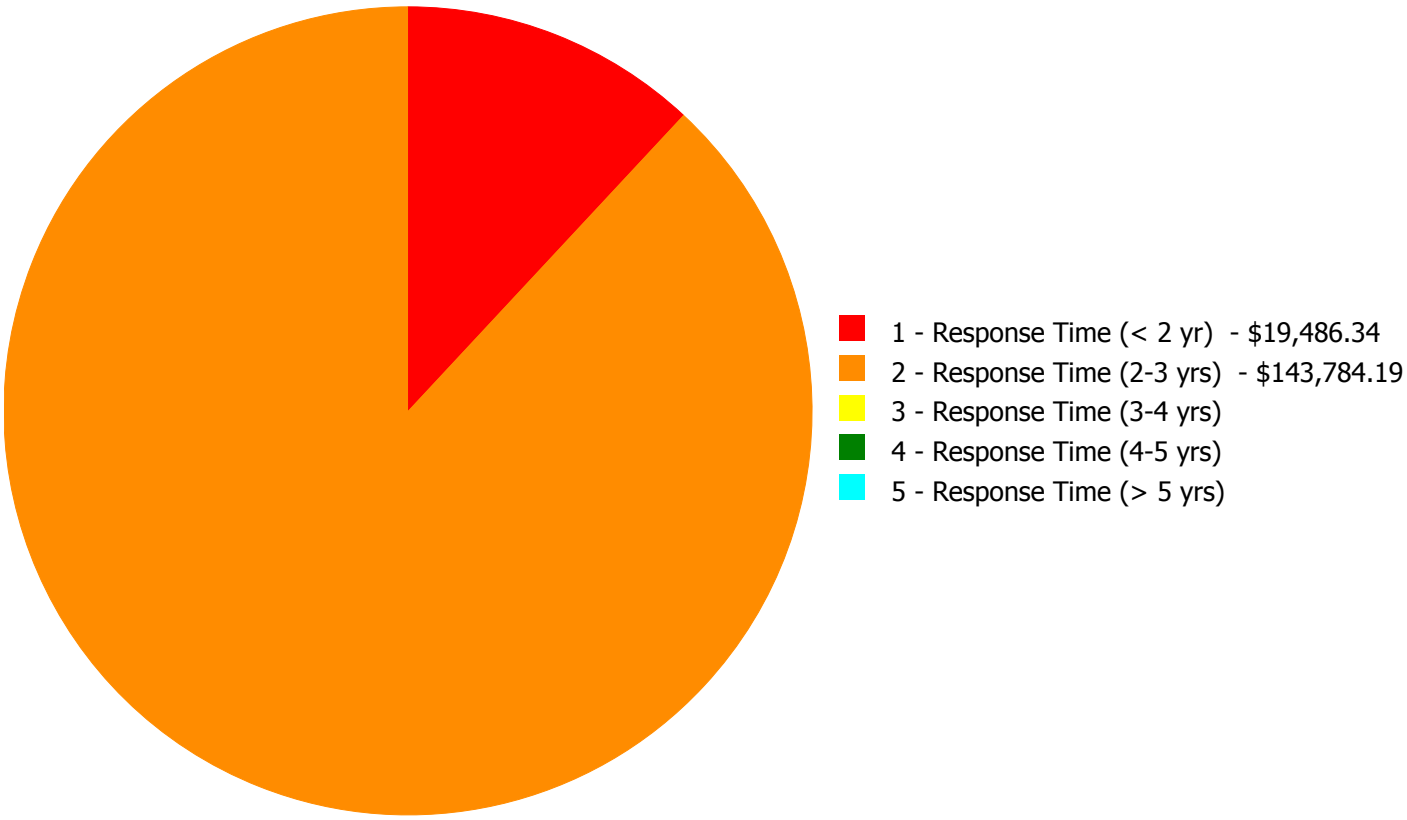
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $163,270.53

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: $163,270.53

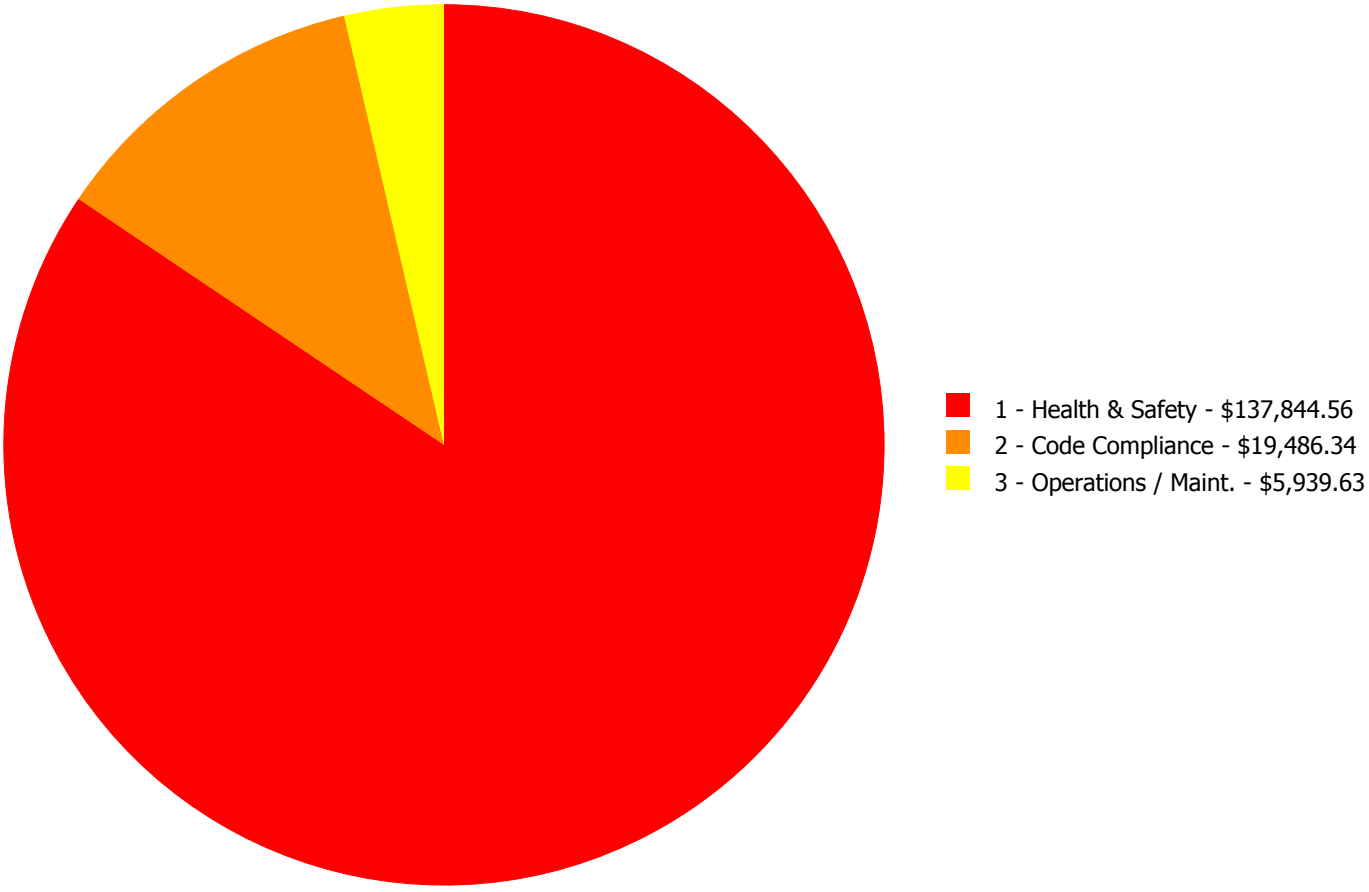
Deficiency By Priority Investment Table

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	$19,486.34	$5,939.63	$0.00	$0.00	$0.00	$25,425.97
G4020	Site Lighting	$0.00	$137,844.56	$0.00	$0.00	$0.00	$137,844.56
	Total:	$19,486.34	$143,784.19	$0.00	$0.00	$0.00	$163,270.53

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: $163,270.53

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

Location: Entrance

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: 15.00

Unit of Measure: L.F.

Estimate: $19,486.34

Assessor Name: Ben Nixon

Date Created: 08/05/2015

Notes: Provide ADA compliant ramp at one entrance (location TBD)

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

System: G2030 - Pedestrian Paving

Location: Play yard

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: 300.00

Unit of Measure: S.F.

Estimate: $5,939.63

Assessor Name: Ben Nixon

Date Created: 08/05/2015

Notes: Replace playground fall protection system – damaged and missing

System: G4020 - Site Lighting

Location: Parking Lot

Distress: Security Issue

Category: 1 - Health & Safety

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

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

Qty: 6.00

Unit of Measure: Ea.

Estimate: $137,844.56

Assessor Name: Ben Nixon

Date Created: 07/30/2015

Notes: The school parking lot is poorly illuminated at least 6 pole mounted fixtures are required for security

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