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.

Tilden School

Governance	DISTRICT	Report Type	Middle
Address	6601 Elmwood Ave.	Enrollment	371
	Philadelphia, Pa 19142	Grade Range	'05-08'
Phone/Fax	215-492-6454 / 215-492-6128	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Tilden	Turnaround Model	School Redesign Initiative

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	**20.88%**	**$49,135,274**	**$235,360,751**
Building	20.94 %	$18,648,942	$89,048,117
Grounds	15.13 %	$527,553	$3,486,600

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,639,976
Exterior Walls (Shows condition of the structural condition of the exterior facade)	01.25 %	$99,345	$7,936,132
Windows (Shows functionality of exterior windows)	00.00 %	$0	$3,879,242
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$262,846
Interior Doors (Classroom doors)	02.19 %	$13,914	$636,268
Interior Walls (Paint and Finishes)	09.31 %	$267,233	$2,871,364
Plumbing Fixtures	30.29 %	$742,456	$2,450,811
Boilers	00.00 %	$0	$0
Chillers/Cooling Towers	50.60 %	$2,245,253	$4,437,563
Radiators/Unit Ventilators/HVAC	45.85 %	$3,573,159	$7,792,926
Heating/Cooling Controls	92.95 %	$2,274,748	$2,447,186
Electrical Service and Distribution	94.09 %	$1,654,480	$1,758,348
Lighting	04.49 %	$282,141	$6,286,548
Communications and Security (Cameras, Pa System and Fire Alarm)	33.96 %	$799,684	$2,354,736

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

S101001;Bartram and Tilden

Final

Site Assessment Report

January 30, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	451,273
Year Built:	1937
Last Renovation:	
Replacement Value:	$235,360,751
Repair Cost:	$49,135,274.17
Total FCI:	20.88 %
Total RSLI:	67.86 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S101001		

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	37.67 %	0.00 %	$0.00
A20 - Basement Construction	38.95 %	1.06 %	$68,723.85
B10 - Superstructure	38.45 %	0.00 %	$0.00
B20 - Exterior Enclosure	38.53 %	9.31 %	$2,932,173.10
B30 - Roofing	77.58 %	0.00 %	$0.00
C10 - Interior Construction	36.67 %	7.78 %	$928,143.02
C20 - Stairs	39.36 %	6.66 %	$45,236.64
C30 - Interior Finishes	77.54 %	11.89 %	$2,838,700.80
D10 - Conveying	67.55 %	11.06 %	$68,878.73
D20 - Plumbing	70.53 %	52.70 %	$4,677,938.54
D30 - HVAC	105.77 %	49.48 %	$23,162,504.88
D40 - Fire Protection	96.34 %	193.11 %	$7,023,977.04
D50 - Electrical	105.96 %	18.58 %	$4,929,365.69
E10 - Equipment	71.60 %	4.15 %	$297,862.42
E20 - Furnishings	105.00 %	170.02 %	$1,634,216.26
G20 - Site Improvements	66.37 %	7.26 %	$196,199.73
G40 - Site Electrical Utilities	33.33 %	42.32 %	$331,353.47
Totals:	**67.86 %**	**20.88 %**	**$49,135,274.17**

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)
B101001;Bartram	270,000	20.98	$277,648.73	$4,652,716.41	$7,202,736.86	$12,512,519.50	$5,313,157.38
B113001;Tilden	181,273	20.94	$108,717.95	$6,290,294.20	$3,596,378.86	$881,175.95	$7,772,375.13
G101001;Grounds	180,000	15.13	$0.00	$391,946.48	$135,606.72	$0.00	$0.00
Total:		**20.88**	**$386,366.68**	**$11,334,957.09**	**$10,934,722.44**	**$13,393,695.45**	**$13,085,532.51**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $386,366.68
2 - Response Time (2-3 yrs) - $11,334,957.09
3 - Response Time (3-4 yrs) - $10,934,722.44
4 - Response Time (4-5 yrs) - $13,393,695.45
5 - Response Time (> 5 yrs) - $13,085,532.51

Budget Estimate Total: $49,135,274.17

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:	High School
Gross Area (SF):	270,000
Year Built:	1939
Last Renovation:	
Replacement Value:	$142,826,034
Repair Cost:	$29,958,778.88
Total FCI:	20.98 %
Total RSLI:	60.39 %

Description:

Facility Assessment
July 16th and 17th, 2015

School District of Philadelphia
Bartram High School
2401 S. 67th Street
Philadelphia, PA 19142

270,000 SF / 1,706 Students / LN 01

Mr. Dave Loftus, Facility Area Coordinator, provided input to the Parsons Assessment Team on planned renovation/addition projects. Mr. Wayne Brown Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history.

The following is what transpired in our meeting with the Principal, Mr. Muhammad Abdul-Mubdi

1. Collateral damages of the roof leakage
2. The cage on the roof will be removed
3. The 4th floor abandoned classroom will be repaired and utilized
4. The principal emphasize in the effective use of the space
5. No enough power outlets in the classrooms
6. The Principal indicated that there are several doors that cannot be opened with the school's keys.

7. Convert the abandoned building in car body shop and culinary arts classrooms.

The Bartram High School building is located at 2401 S. 67th St. in Philadelphia, PA. The 5 story, 270,000 square foot building was originally constructed in 1939 and is configured as a main hallway with an “A”, “B”, and “C” wing. The building has some unused classroom space and an unused rooftop play yard area on the fifth level (identified as “4th floor”) and a one level basement (identified as “ground floor”).

STRUCTURAL / EXTERIOR CLOSURE

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement or damage. The main structure consists typically of cast-in-place concrete columns, beams and concrete, one way ribbed slab. The roof structure consists of concrete one-way slab supported by main structural frame. Roofing is built up application in process of complete replacement and lightweight concrete covered play yard area in fair condition. The building envelope is typically masonry and concrete with face brick. Elevations are enhanced with decorative stonework around entrances. In general, masonry is in good condition and re-pointing is in progress throughout building. Brick face has been replaced on some portions of fifth level of building. The original windows were replaced in early 1980s 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 typically hollow metal in fair to good condition. Public access doors and 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.

Partition wall types include: plastered ceramic hollow block in good condition; CMU block in good condition; and metal stud and gypsum board in good condition. Interior doors are a combination of hollow metal and wood frames with and without transoms, with rail and stile wood doors, solid core wood doors with lites, and hollow metal doors. Doors and frames range in condition greatly with 20% needing replacement. Doors leading to exit stairways are hollow metal doors and frames in fair condition. Interior doors do not have lever type handles. Fittings include: toilet accessories in fair to good condition; wood and marble toilet partitions in good condition; hollow metal toilet partitions in poor condition; marble shower partitions in poor condition; wood storage shelving in good condition; metal lockers in locker rooms and hallways in fair condition; and handrails and ornamental metals, generally in fair condition. Toilet partitions and accessories are not ADA accessible. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition. Stair construction is generally concrete treads, risers, and nosing in good condition; concrete with marble treads, risers and nosing in auditorium balcony stairway in good condition; and metal stairs in basement in good condition. Stair railings are cast iron balusters with wood handrail in fair condition, not code compliant.

The interior wall finishes include: painted plaster, brick, and gypsum in good condition; glazed brick wainscot in stairways, corridors, toilets, kitchen, gyms and training areas, and locker rooms in good condition; marble wainscot in entry and office hallways, auditorium entrance, and auditorium balcony stairway in good condition; and marble surrounds in locker room shower areas in poor condition. Painted plaster is damaged and in need of repair in multiple locations. Flooring includes hardwood in classrooms, gym and auditorium in good condition with some refinished; terrazzo tile in toilets, entry and office hallway, and auditorium entrance in very good condition; concrete in corridors, stairways, utility and service areas in good condition; food grade tile in kitchen in good condition; and vinyl floor in classrooms, offices and storage areas in fair to good condition with some damaged areas and some VAT areas remaining. Wood base is typically in fair-good condition. Ceiling finishes include: suspended acoustic ceilings in corridors, classrooms, offices, and storage areas in good condition with some damaged tiles; direct mounted acoustic tile in basement corridors and weight room in poor condition; painted plaster in auditorium and locker rooms in poor condition with extensive damages; and exposed, painted structure in gyms, service areas and toilets in good condition. Boys and girls locker rooms have been abandoned and are used as storage.

The building has one elevator serving 4 floors and is beyond service life.

Commercial and Institutional equipment includes: security equipment at entrance; stage equipment in fair condition, and medical exam equipment in good condition. Other equipment includes: garbage compaction equipment in good condition; and food service equipment in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair to good condition; window shades/blinds, generally in good condition; fixed auditorium seating generally in fair condition with some damaged and missing seats.

MECHANICAL SYSTEMS

Plumbing fixtures throughout the building are a mixture of original and replacements of various ages. Fixtures in the restrooms on each floor consist of wall hung flush valve water closets, urinals and lavatories with non-mixing faucets. Flush valves are installed in pipe chases. Individual toilet rooms include floor mounted water closets. Overall, toilet room fixtures are in good condition and will remain serviceable for another 10-15 years. Multiple classrooms have wall mounted lavatories in good condition which will not need replacement within 10 years.

Life skills classroom and teachers lounge include two basin, stainless steel, rim mounted kitchen sinks with mixing faucets. The cafeteria kitchen includes a 3 basin dish washing sink with sanitation chemical injection system, a two basin cooking sink, a single basin cooking sink, and two lavatories, all stainless steel. Laboratory sinks in biology, chemistry, and art classrooms are serviceable, and science rooms also have a safety shower and eye washes. Service sinks are located on each floor in janitor closets. All these sinks are in serviceable condition and should have 10-20 year useful life remaining.

The boys and girls locker rooms have the original shower systems still existing, however they are obsolete and are not used. Both shower rooms should be completely remodeled and upgraded before being returned to use.

Drinking fountains are wall mounted in hallway alcoves. They are non-accessible wall hung without integral refrigerated coolers. Their age is unknown, and many fountain locations are empty. Drinking fountains should replaced with accessible fountains with integral coolers and be installed where missing.

A 4" city water service enters the building in the basement of the middle wing outside the corridor leading to the boiler room. The meter and valves are located in a small utility room on the basement level behind the boiler room. There is a double backflow preventer on the meter line and bypass line also. There is a two pump pressure booster without a pneumatic expansion tank. One pump was running at the time of inspection. All the lines and fitting look very good with no signs of corrosion. They should be serviceable for 15-20 years. The domestic soldered copper hot and cold water distribution piping is not original however its age is unknown. The domestic water distribution piping should be serviceable for the next 15 years or more.

In the boiler room, two 100 gallon, vertical tank, gas-fired, direct vent water heater installed in 2009 supply hot water for domestic use. A third water heater provides hot water to the kitchen. They are equipped with a T&P relief valve and a circulation pump. The water heaters should provide reliable service for the next 10 years.

The sanitary sewer piping is soldered copper, threaded galvanized steel, cast iron with banded fittings, and plastic installed at various unknown times. The building does not have a sewage ejector. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain water drainage piping includes threaded galvanized steel and bell-and-spigot iron pipe. It runs from the roof inside the building and no evidence of leakage is present. The roof does not have overflow drains. There are multiple sumps in the basement for ground water collection. However due to age, the rain water drainage system should be examined like the sanitary system.

The building was originally constructed with unit ventilators for the classrooms, finned tube steam units and cast iron radiators for hallways, toilet rooms, and other small spaces, and multiple air handlers for gymnasiums, auditorium, etc.

Steam is generated for the building and also the neighboring junior high by 4 HB Smith, 25 section, model 650 Mills, cast iron boilers. Two boilers are needed to heat both schools. Each boiler has a capacity of 10,850 MBH (325 HP) burning either fuel oil or natural gas in Power Flame burners. They were all installed in 2010. Only two boilers are operative. One has a cracked rear section, and another has a leaking seal at Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner controls provide full modulation with electronic ignition, digital flame sensing, and compressed air atomization on oil. Burner oil pumps are loose and not driven by the fan motor. There is a no pressure booster on the incoming high pressure (1 psi) gas service. The oil supply to the burners comes from two pumps that circulate the fuel oil through two 20,000 gallon storage tank installed inside the building adjacent to the boiler room. One pump was running at the time of the inspection, and the engineer stated the other pump was inoperative. There is a water softener on the makeup water supply line, but the engineer stated make up water was untreated due to large steam leaks. Steam traps were replaced in 2009. A chemical injection system at the condensate tanks was empty of chemicals. Two condensate receiver tanks in the boiler room are equipped with 3 pumps each and four feedwater lines, one to each boiler. Four of the six feedwater pumps leak and need rebuilding. With repairs the boilers should have 20 years useful life remaining. If another boiler or feed pump fails before repairs are complete, the steam system will not have sufficient capacity to heat the buildings.

There is no central cooling generating system for the entire building. Chillers with a 750 ton combined capacity should be installed to provide chilled water to unit ventilators and air handlers.

There are eight air handlers throughout the building. They typically include primary and secondary steam heating coils with an air wash section in between. They are all original equipment and obsolete. The air washers have been disabled and partially removed. None of them have belt guards for the fan motors. They contain cast iron steam coils which are aged and inefficient. They should all be replaced or rebuilt including heating, cooling, humidification, and dehumidification sections as well as digital controls and variable speed drives.

Many of the original building exhaust fans in attic spaces have been abandoned in place. New roof exhaust fans have been installed in the past decade. These fans are in good condition and should last at least 10 more years.

Steam and condensate system piping is steel with flanged and threaded connections. Steam and condensate piping mains from the basement level run up through the building to the terminal units and air handlers on all floors. There is also a steam line for the neighboring junior high and its condensate line returns to collection tank and transfer pump in the basement next to the boiler room. The age of the steam piping system is unknown, and the building engineer stated there were large leaks. The steam distribution piping should be replaced when other HVAC equipment served by it is renovated.

The building does not currently have hydronic piping, but a complete hydronic system should be installed to connect chillers to unit ventilators and air handlers.

The kitchen cooking appliances have stainless steel, commercial grease hoods connected to an exterior duct leading to 3 draft fans on the roof. The exterior exhaust ducting shows signs of weathering, but should not need replacement for 10 years.

There are multiple 3 ton split unit air conditioners for network equipment rooms. Many classrooms and offices also have window unit air conditioners. All the window units have exceeded their useful life. These air conditioners should be removed when central hydronic cooling is installed and unit ventilators are replaced.

Unit ventilators provide heating and ventilation for the majority of the classrooms. The unit ventilators are original to the building and have greatly exceeded their useful life. The outdoor air intake for these units is though original openings in the building façade. They have finned tube steam sections and no cooling coils. These units should be replaced with modern unit ventilators including heating and cooling capability.

Finned tube steam units were installed before 1988 and many radiators are original equipment. They are rusted and have no automatic controls. These are well past their expected lifespan.

The building shows evidence of pneumatic controls at some point in the past, however steam units have been converted to manual control valves. The air compressor in the boiler room is inoperative because it runs continuously and over pressurized according to the building engineer, so even if pneumatic controls remained they would be inoperative. The compressor should be repaired. Unit ventilators, air handlers, etc. should be replaced with digitally controlled units. A building automation system should be installed to integrate control of all building HVAC systems. Numerous temperature and pressure gauges on the steam system are broken, and should be replaced.

The school building has standpipes, but it does not have sprinklers. Sprinklers should be installed with an outdoor, engine driven fire pump package if needed.

ELECTRICAL SYSTEMS

A transformer vault at the school basement is housing a utility company owned, single phase, floor mounted, 2 sets of (3) 250KVA- 13.8KV -120/208V transformers, they are powered via two medium voltage feeders 131 and 135. Transformers are to be removed since they contain PCB. The secondary of the transformers terminated in a double ended (Main-Tie-Main) service entrance switchgear rated 2500Amperes, 120/208V. The double ended switchgear is manufactured by Penn Panel &Box Company and has exceeded its useful service life.

During the assessment the school was powered from one set of transformers since the tie-breaker was closed. Building engineer informed us that the electrical service and the service entrance switchgear are going to be replaced and upgraded within the next two years. The construction kick-off meeting will happen during the month of July.

Distribution System and Raceway System-There are 120/208V panelboards in each floor for lighting and receptacles. These panelboards and associated wiring have exceeded the end of their useful life. Building Engineer informed us that the entire electrical distribution system is going to be replaced/upgraded in the next two years. Several vertical/horizontal raceways have been already installed.

Approximate 70% of the classrooms are provided with inadequate number of receptacles. Building Engineer was not sure, if the scope of work of the electrical service /distribution system upgrade includes the addition of receptacles outlets in the classrooms. Therefore two receptacles should be added in each wall of classrooms and other purpose rooms.

Lighting- Corridors are provided with recessed and surface mounted fluorescent fixtures. Most of the classrooms are provided with surface mounted fluorescent fixtures with exception of the science classrooms which are provided with modern, up/down fluorescent fixtures. The boys and girls gymnasium are provided with HID pendant mounted fixtures. Most of the building has outdated lighting lamps. During the assessment, lighting fixtures were in process to be re-lamped. Fixtures are to be provided with T-8 lamps.

The present Fire Alarm system is manufactured by General Electric Edwards EST approximate 5 years old. The fire alarms system provides the corridors/gymnasium and auditorium with audio/visual devices, smoke detectors and pull station. Classrooms are not provided with audio/visual devices. Provide fire alarm system audio/visual devices in each classroom.

The present telephone system is adequate.

Public Address/Intercom/Paging – 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.

The present clocks are not functioning properly. Provide a new clock system. The present bell system is working.

There is not television system is the school.

The present security system consists of CCTV cameras in the building corridor, auditorium and main entrance doors. There are approximate 110 CCTV cameras in the building. The Building Engineer reports the security system is working properly.

The present emergency power system is provided by a gas powered generator. Generator was installed in 1993 rated 31KVA 120/208V. Generator is undersize and it has already exceeded its useful service life. Provide a new emergency power system, outdoor, diesel powered, rated 300KW.

There is adequate UPS in the IT room.

The emergency lighting is obtained with selected lighting fixtures connected to the emergency power. Emergency lighting fixtures are located in the auditorium, corridors, girls/boys gymnasium and stairways. Exit lighting is located at the corridors and each exit door.

The school is not provided with Lightning Protection System. A study needs to be conducted to determine if the school requires lightning protection system.

The school is provided with two traction power elevators. Elevator motors are approximately 10 years old. The elevator controller is old and should be replaced.

Theatrical lighting and dimming control- The theatrical lighting are ON/OFF from an old dimming control panel. Provide a new dimming control system.

The auditorium is provided with a sound system manufactured by Furman. The system looks not older than 5 years old.

GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Asphalt paving with parking on North side and between each wing of the main building is in good condition and accessed via 66th St. Metal fence surrounding site is in fair condition and not sufficient for security. Landscaping on SW (entrance) side of the site and is mature and in good condition.

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 present Site Lighting System is provided by wall mounted lighting fixtures. However, there is not enough lighting. Provide 12 pole mounted lighting fixtures for security.

The present Site Video Surveillance System is adequate. CCT cameras are located at the building perimeter.

Site Paging - The present Site Paging System is adequate.

RECOMMENDATIONS

- Replace Plexiglas windows – hazed
- Provide ADA compliant exterior door hardware at one entrance
- Repair or replace rusted, dented, scratched doors and frames (20% of interior doors)
- Provide ADA lever handle lock/latchsets on interior doors
- Provide new toilet partitions and toilet accessories including grab bars for accessibility
- Replace hollow metal toilet partitions – beyond service life and failing
- Install new ID signage
- Replace railing in stairways with code compliant components
- Repair and repaint interior plaster walls (30% of plaster wall surface)
- Replace damaged and mismatched VCT floor tiles (10% of vinyl areas)
- Replace damaged VAT floor tiles with VCT (5% of vinyl areas)
- Replace carpet – worn and beyond service life
- Replace acoustic ceiling tiles – discolored, damaged/missing (10% of suspended ceiling area)
- Replace direct mounted acoustic ceiling in corridors and weight room with suspended ceiling - failing
- Repair and repaint plaster ceilings (50% of plaster ceiling surface)
- Replace auditorium seats – beyond service life and failing
- Provide ADA compliant ramp at one entrance (location TBD)
- Replace site fencing to secure property

MECHANICAL

- Remove original shower systems in boys and girls locker rooms and replace with modern facilities.
- Replace aged drinking fountains with accessible fountains with integrated coolers.
- Inspect sanitary sewer system to determine specific repair requirements due to age.
- Inspect rain water drainage piping to determine specific repair requirements due to age.
- Repair two boilers with water and steam leak.
- Rebuild four boiler feed water pumps.
- Repair one fuel oil pump.
- Install 750 ton combined capacity chillers to provide cooling for entire building, including hydronic piping and pumps.
- Rebuild or replace 8 air obsolete and inefficient handlers including adding new cooling sections.
- Replace steam piping due to age and reported failure when steam terminal equipment is renovated.
- Replace classroom ventilators with new units including cooling coils, and remove window unit air conditioners.
- Replace finned tube steam units and radiators due to age and damage.
- Repair building air compressor.
- Replace broken instrumentation in boiler room.
- Install fire sprinkler system including engine driven fire pump package if needed.

ELECTRICAL

- Install minimum two receptacles in each wall of class rooms and other purpose rooms. A two-compartment surface mounted raceway should be provided in the computer lab for data and power. Approximate 300 receptacle outlets

- Provide fire alarm system audio/visual devices in each classroom. Approximate 360
- Provide a new clock system. Approximate 150 clocks.
- Provide a new emergency power system, outdoor, diesel powered, rated 300KW.
- Elaborate a study to determine if the school requires lightning protection system.
- The elevator controllers are old. Provide a new elevator controllers
- Provide a new dimming control system.
- Provide 12 pole mounted lighting fixtures for security

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B101001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S101001		

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	24.00 %	0.00 %	$0.00
A20 - Basement Construction	24.00 %	0.00 %	$0.00
B10 - Superstructure	24.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	19.53 %	14.60 %	$2,832,827.96
B30 - Roofing	100.00 %	0.00 %	$0.00
C10 - Interior Construction	21.24 %	6.16 %	$460,803.81
C20 - Stairs	26.32 %	10.67 %	$45,236.64
C30 - Interior Finishes	73.45 %	12.82 %	$1,836,441.19
D10 - Conveying	105.71 %	19.93 %	$68,878.73
D20 - Plumbing	51.20 %	40.42 %	$2,119,481.15
D30 - HVAC	104.42 %	50.17 %	$15,069,344.18
D40 - Fire Protection	96.05 %	203.78 %	$4,434,689.82
D50 - Electrical	110.11 %	11.38 %	$1,805,384.64
E10 - Equipment	71.43 %	6.83 %	$293,594.70
E20 - Furnishings	105.00 %	172.51 %	$992,096.06
Totals:	**60.39 %**	**20.98 %**	**$29,958,778.88**

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	$27.30	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$7,371,000
A1030	Slab on Grade	$5.17	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$1,395,900
A2010	Basement Excavation	$4.36	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$1,177,200
A2020	Basement Walls	$9.91	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$2,675,700
B1010	Floor Construction	$85.34	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$23,041,800
B1020	Roof Construction	$14.39	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$3,885,300
B2010	Exterior Walls	$43.20	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$11,664,000
B2020	Exterior Windows	$27.52	S.F.	270,000	40	1980	2020		12.50 %	38.03 %	5		$2,825,840.68	$7,430,400
B2030	Exterior Doors	$1.16	S.F.	270,000	25	1995	2020		20.00 %	2.23 %	5		$6,987.28	$313,200
B3010105	Built-Up	$37.76	S.F.	81,472	20	2015	2035		100.00 %	0.00 %	20			$3,076,383
B3020	Roof Openings	$0.06	S.F.	270,000	30	2015	2045		100.00 %	0.00 %	30			$16,200
C1010	Partitions	$21.05	S.F.	270,000	100	1939	2039		24.00 %	0.00 %	24			$5,683,500
C1020	Interior Doors	$3.76	S.F.	270,000	40	1980	2020		12.50 %	35.24 %	5		$357,792.08	$1,015,200
C1030	Fittings	$2.90	S.F.	270,000	40	1980	2020		12.50 %	13.16 %	5		$103,011.73	$783,000
C2010	Stair Construction	$1.18	S.F.	270,000	100	1939	2039		24.00 %	14.20 %	24		$45,236.64	$318,600
C2020	Stair Finishes	$0.39	S.F.	270,000	30	1995	2025		33.33 %	0.00 %	10			$105,300
C3010230	Paint & Covering	$13.44	S.F.	270,000	10	2005	2015	2025	100.00 %	24.43 %	10		$886,692.37	$3,628,800
C3010232	Wall Tile	$3.37	S.F.	270,000	30	1939	1969	2039	80.00 %	0.00 %	24			$909,900

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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 $
C3020411	Carpet	$7.30	S.F.	21,600	10	2005	2015	2027	120.00 %	153.30 %	12		$241,720.42	$157,680
C3020412	Terrazzo & Tile	$75.52	S.F.	21,600	50	1939	1989	2039	48.00 %	0.00 %	24			$1,631,232
C3020413	Vinyl Flooring	$9.68	S.F.	78,300	20	1995	2015	2037	110.00 %	20.09 %	22		$152,306.71	$757,944
C3020414	Wood Flooring	$22.27	S.F.	67,500	25	2005	2030		60.00 %	0.00 %	15			$1,503,225
C3020415	Concrete Floor Finishes	$0.97	S.F.	81,000	50	2005	2055		80.00 %	0.00 %	40			$78,570
C3030	Ceiling Finishes	$20.97	S.F.	270,000	25	2005	2030		60.00 %	9.82 %	15		$555,721.69	$5,661,900
D1010	Elevators and Lifts	$1.28	S.F.	270,000	35	1980	2015	2052	105.71 %	19.93 %	37		$68,878.73	$345,600
D2010	Plumbing Fixtures	$13.52	S.F.	270,000	35	1939	1974	2027	34.29 %	8.67 %	12		$316,543.16	$3,650,400
D2020	Domestic Water Distribution	$1.68	S.F.	270,000	25	1980	2005	2027	48.00 %	0.00 %	12			$453,600
D2030	Sanitary Waste	$2.32	S.F.	270,000	30	1939	1969	2047	106.67 %	217.45 %	32		$1,362,091.17	$626,400
D2040	Rain Water Drainage	$1.90	S.F.	270,000	30	1939	1969	2047	106.67 %	85.94 %	32		$440,846.82	$513,000
D3020	Heat Generating Systems	$18.67	S.F.	270,000	35	2010	2045		85.71 %	4.17 %	30		$209,959.59	$5,040,900
D3030	Cooling Generating Systems	$24.48	S.F.	270,000	30	1939	1969	2047	106.67 %	57.50 %	32		$3,800,523.21	$6,609,600
D3040	Distribution Systems	$42.99	S.F.	270,000	25	1939	1964	2042	108.00 %	95.25 %	27		$11,056,152.00	$11,607,300
D3050	Terminal & Package Units	$11.60	S.F.	270,000	20	1939	1959	2037	110.00 %	0.00 %	22			$3,132,000
D3060	Controls & Instrumentation	$13.50	S.F.	270,000	20	1939	1959	2037	110.00 %	0.07 %	22		$2,709.38	$3,645,000
D4010	Sprinklers	$7.05	S.F.	270,000	35	1939	1974	2052	105.71 %	232.98 %	37		$4,434,689.82	$1,903,500
D4020	Standpipes	$1.01	S.F.	270,000	35	1939	1974	2025	28.57 %	0.00 %	10			$272,700
D5010	Electrical Service/Distribution	$9.70	S.F.	270,000	30	1939	1969	2047	106.67 %	0.00 %	32			$2,619,000
D5020	Lighting and Branch Wiring	$34.68	S.F.	270,000	20	1939	1959	2037	110.00 %	2.64 %	22		$247,098.37	$9,363,600
D5030	Communications and Security	$12.99	S.F.	270,000	15	1939	1954	2032	113.33 %	30.73 %	17		$1,077,821.43	$3,507,300
D5090	Other Electrical Systems	$1.41	S.F.	270,000	30	1939	1969	2047	106.67 %	126.21 %	32		$480,464.84	$380,700
E1020	Institutional Equipment	$4.82	S.F.	270,000	35	2005	2040		71.43 %	22.56 %	25		$293,594.70	$1,301,400
E1090	Other Equipment	$11.10	S.F.	270,000	35	2005	2040		71.43 %	0.00 %	25			$2,997,000
E2010	Fixed Furnishings	$2.13	S.F.	270,000	40	1939	1979	2057	105.00 %	172.51 %	42		$992,096.06	$575,100
								Total	**60.39 %**	**20.98 %**			**$29,958,778.88**	**$142,826,034**

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 & Coverings
20% Wall Tile (glazed block/tile)

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

Note: 8% - Carpet
8% - Terrazzo & Tile
29% - Vinyl Flooring
25% - Wood Flooring
30% - Concrete Flooring

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

Note: 1- 45KVA, K13 conversion 1 to 1 transformer and 1- step up transformer 30KVA 208V-480V

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:	**$29,958,779**	**$0**	**$0**	**$0**	**$0**	**$12,167,717**	**$0**	**$0**	**$0**	**$0**	**$5,923,285**	**$48,049,781**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$2,825,841	$0	$0	$0	$0	$9,475,257	$0	$0	$0	$0	$0	**$12,301,098**
B2030 - Exterior Doors	$6,987	$0	$0	$0	$0	$399,393	$0	$0	$0	$0	$0	**$406,380**
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	$357,792	$0	$0	$0	$0	$1,294,585	$0	$0	$0	$0	$0	**$1,652,377**
C1030 - Fittings	$103,012	$0	$0	$0	$0	$998,483	$0	$0	$0	$0	$0	**$1,101,494**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

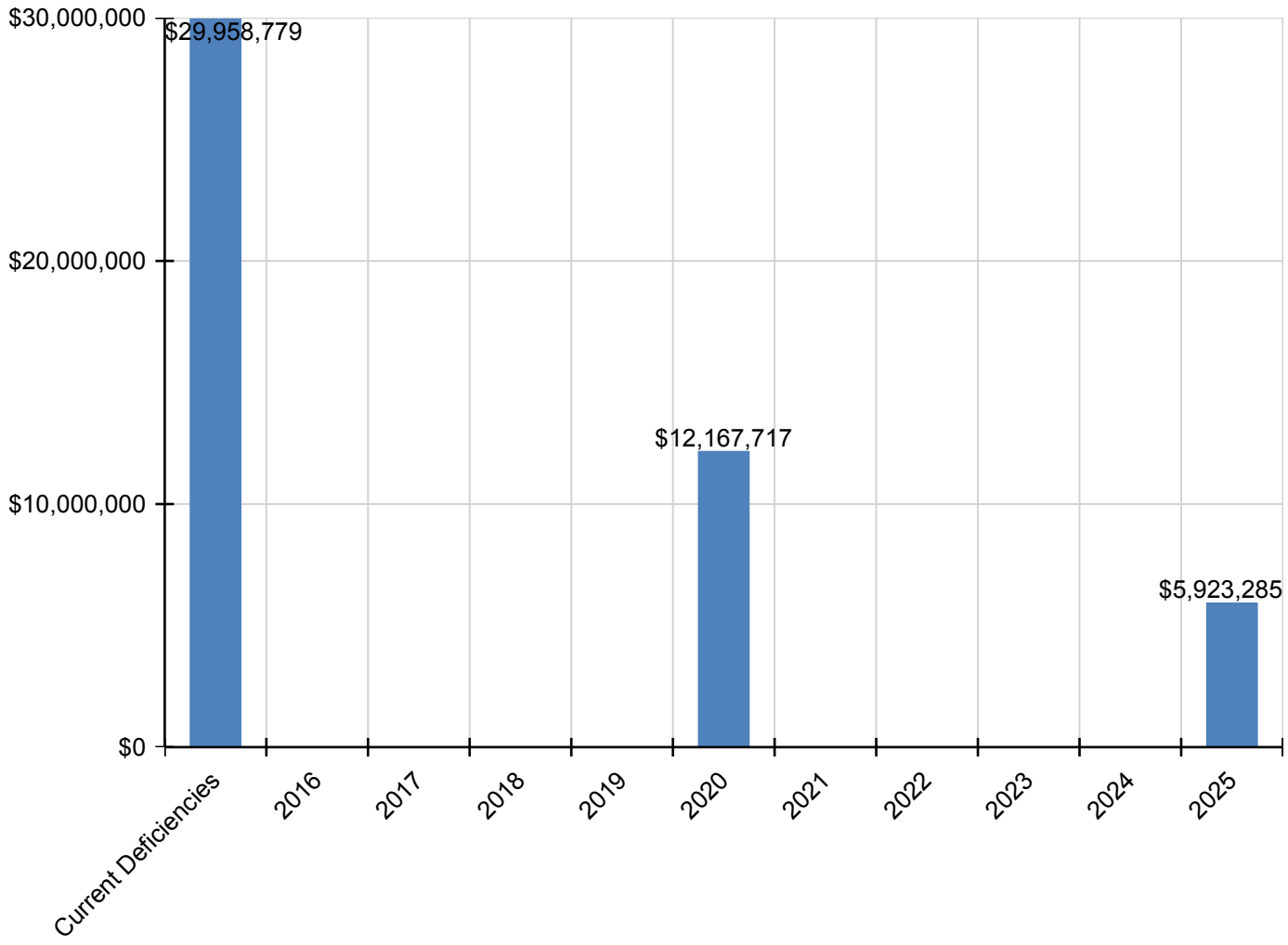
C2010 - Stair Construction	$45,237	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$45,237**
C2020 - Stair Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$155,666	**$155,666**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$886,692	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,364,484	**$6,251,177**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$241,720	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$241,720**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$152,307	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$152,307**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$555,722	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$555,722**
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	$68,879	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$68,879**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$316,543	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$316,543**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$1,362,091	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,362,091**
D2040 - Rain Water Drainage	$440,847	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$440,847**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$209,960	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$209,960**
D3030 - Cooling Generating Systems	$3,800,523	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,800,523**
D3040 - Distribution Systems	$11,056,152	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,056,152**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$2,709	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,709**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$4,434,690	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,434,690**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$403,135	**$403,135**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5020 - Lighting and Branch Wiring	$247,098	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$247,098**

D5030 - Communications and Security	$1,077,821	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,077,821**
D5090 - Other Electrical Systems	$480,465	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$480,465**
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	$0	$0	$0	$0	$0	$0	**$293,595**
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	$992,096	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$992,096**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

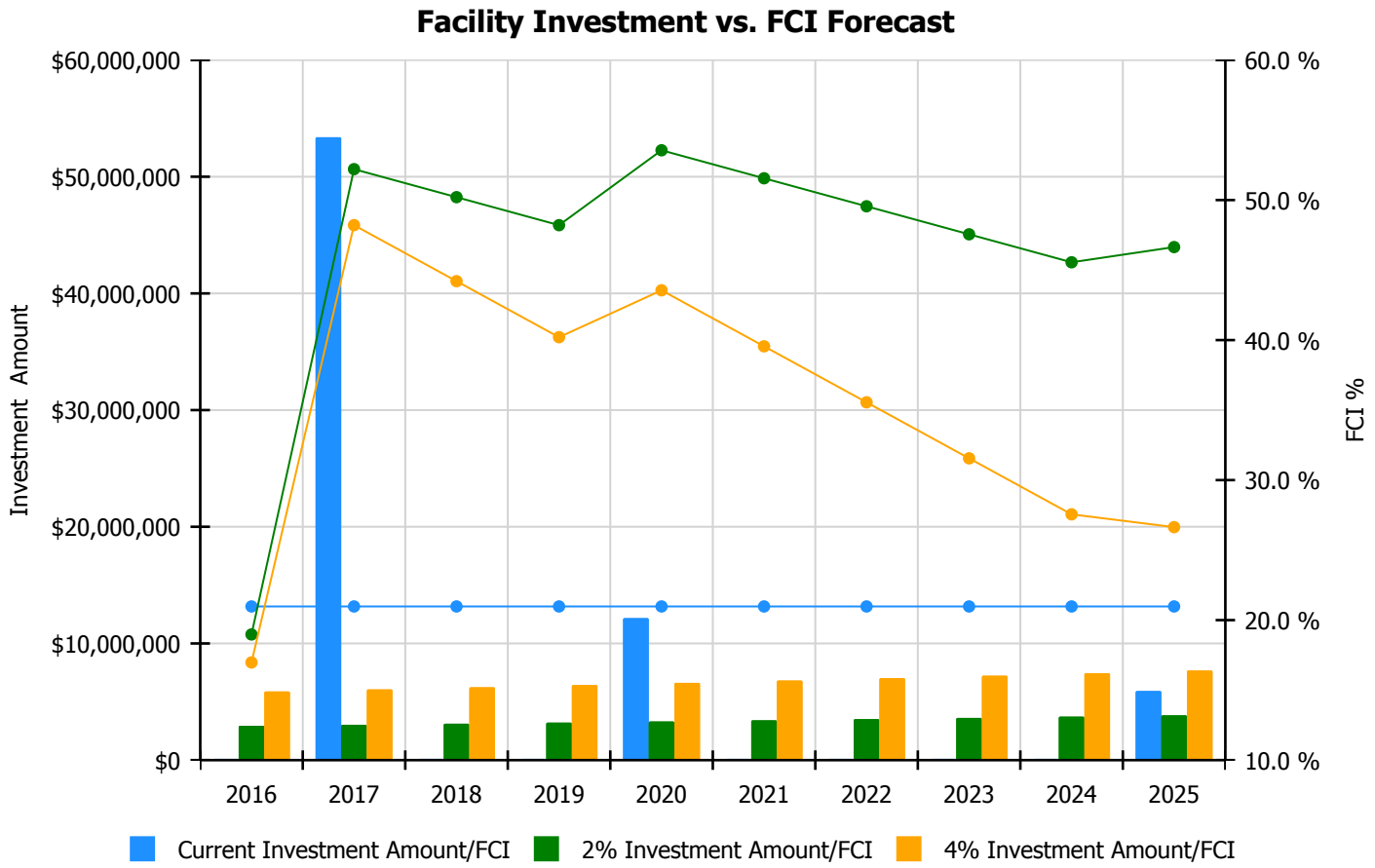
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

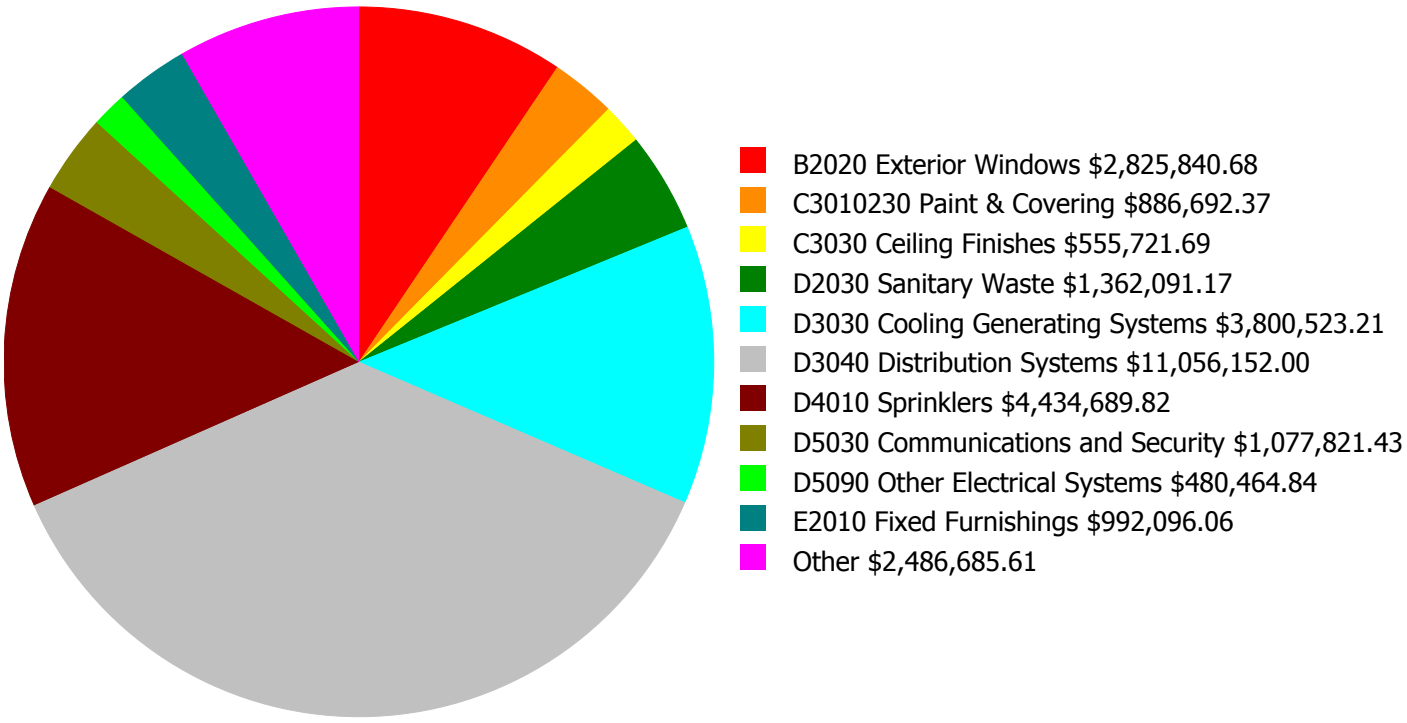
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 20.98%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$2,942,216.00	18.98 %	$5,884,433.00	16.98 %
2017	$53,382,468	$3,030,483.00	52.21 %	$6,060,966.00	48.21 %
2018	$0	$3,121,397.00	50.21 %	$6,242,795.00	44.21 %
2019	$0	$3,215,039.00	48.21 %	$6,430,078.00	40.21 %
2020	$12,167,717	$3,311,490.00	53.55 %	$6,622,981.00	43.55 %
2021	$0	$3,410,835.00	51.55 %	$6,821,670.00	39.55 %
2022	$0	$3,513,160.00	49.55 %	$7,026,320.00	35.55 %
2023	$0	$3,618,555.00	47.55 %	$7,237,110.00	31.55 %
2024	$0	$3,727,112.00	45.55 %	$7,454,223.00	27.55 %
2025	$5,923,285	$3,838,925.00	46.64 %	$7,677,850.00	26.64 %
Total:	**$71,473,470**	**$33,729,212.00**		**$67,458,426.00**	

Deficiency Summary by System

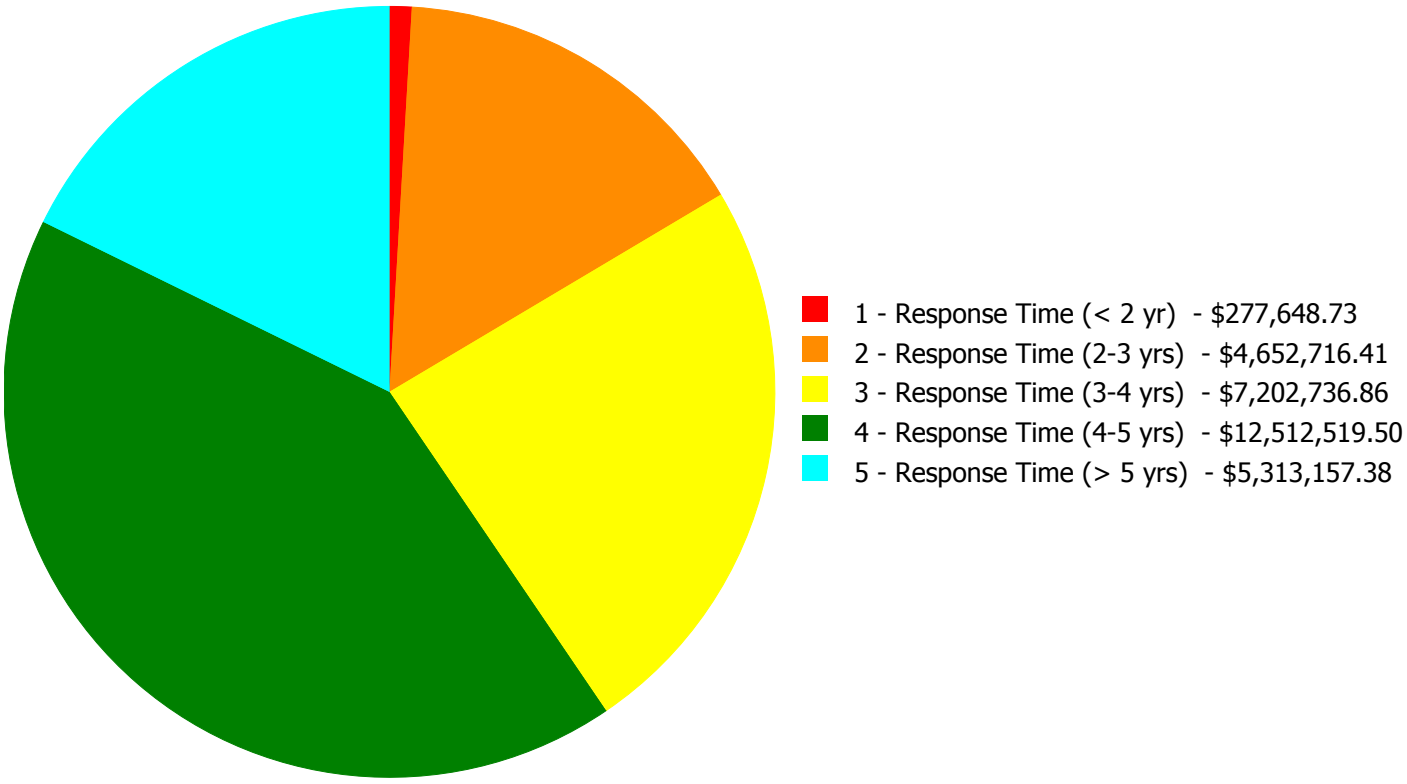
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $29,958,778.88

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: $29,958,778.88

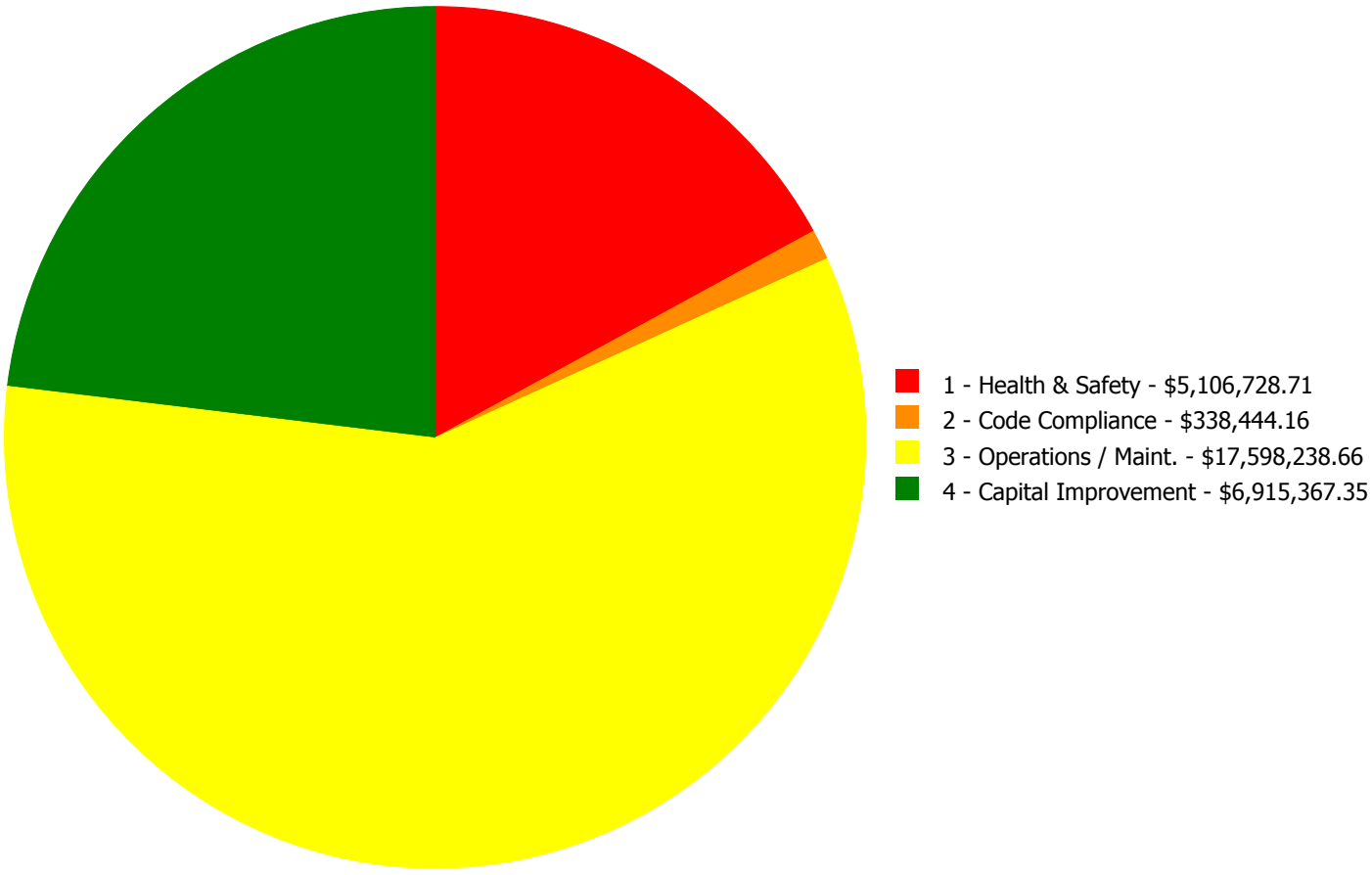
Deficiency By Priority Investment Table

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
B2020	Exterior Windows	$0.00	$0.00	$0.00	$2,825,840.68	$0.00	$2,825,840.68
B2030	Exterior Doors	$0.00	$6,987.28	$0.00	$0.00	$0.00	$6,987.28
C1020	Interior Doors	$0.00	$115,766.45	$242,025.63	$0.00	$0.00	$357,792.08
C1030	Fittings	$0.00	$61,106.64	$41,905.09	$0.00	$0.00	$103,011.73
C2010	Stair Construction	$0.00	$45,236.64	$0.00	$0.00	$0.00	$45,236.64
C3010230	Paint & Covering	$0.00	$0.00	$886,692.37	$0.00	$0.00	$886,692.37
C3020411	Carpet	$0.00	$241,720.42	$0.00	$0.00	$0.00	$241,720.42
C3020413	Vinyl Flooring	$0.00	$53,462.50	$98,844.21	$0.00	$0.00	$152,306.71
C3030	Ceiling Finishes	$118,116.74	$0.00	$437,604.95	$0.00	$0.00	$555,721.69
D1010	Elevators and Lifts	$0.00	$0.00	$68,878.73	$0.00	$0.00	$68,878.73
D2010	Plumbing Fixtures	$0.00	$180,117.74	$0.00	$136,425.42	$0.00	$316,543.16
D2030	Sanitary Waste	$0.00	$1,362,091.17	$0.00	$0.00	$0.00	$1,362,091.17
D2040	Rain Water Drainage	$0.00	$440,846.82	$0.00	$0.00	$0.00	$440,846.82
D3020	Heat Generating Systems	$156,822.61	$46,401.41	$0.00	$0.00	$6,735.57	$209,959.59
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$3,800,523.21	$3,800,523.21
D3040	Distribution Systems	$0.00	$0.00	$0.00	$9,550,253.40	$1,505,898.60	$11,056,152.00
D3060	Controls & Instrumentation	$2,709.38	$0.00	$0.00	$0.00	$0.00	$2,709.38
D4010	Sprinklers	$0.00	$0.00	$4,434,689.82	$0.00	$0.00	$4,434,689.82
D5020	Lighting and Branch Wiring	$0.00	$247,098.37	$0.00	$0.00	$0.00	$247,098.37
D5030	Communications and Security	$0.00	$1,077,821.43	$0.00	$0.00	$0.00	$1,077,821.43
D5090	Other Electrical Systems	$0.00	$480,464.84	$0.00	$0.00	$0.00	$480,464.84
E1020	Institutional Equipment	$0.00	$293,594.70	$0.00	$0.00	$0.00	$293,594.70
E2010	Fixed Furnishings	$0.00	$0.00	$992,096.06	$0.00	$0.00	$992,096.06
	Total:	$277,648.73	$4,652,716.41	$7,202,736.86	$12,512,519.50	$5,313,157.38	$29,958,778.88

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: $29,958,778.88

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: C3030 - Ceiling Finishes

Location: Locker rooms, auditorium
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Repair and resurface plaster ceilings - 2 coats plaster
Qty: 9,000.00
Unit of Measure: S.F.
Estimate: $118,116.74
Assessor Name: System
Date Created: 08/13/2015

Notes: Repair and repaint plaster ceilings (50% of plaster ceiling surface)

System: D3020 - Heat Generating Systems

Location: Boiler room
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Repair boiler
Qty: 1.00
Unit of Measure: Ea.
Estimate: $156,822.61
Assessor Name: System
Date Created: 08/10/2015

Notes: Repair two boilers with water and steam leak.

System: D3060 - Controls & Instrumentation

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace temperature, pressure gauges (enter estimate)

Qty: 15.00

Unit of Measure: Ea.

Estimate: $2,044.19

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace broken instrumentation in boiler room.

System: D3060 - Controls & Instrumentation

Location: Boiler room

Distress: Maintenance Required

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace temperature, pressure gauges (enter estimate)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $665.19

Assessor Name: System

Date Created: 08/10/2015

Notes: Repair building air compressor.

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

System: B2030 - Exterior Doors

Location: Entrance

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: 2.00

Unit of Measure: Ea.

Estimate: $6,987.28

Assessor Name: System

Date Created: 08/13/2015

Notes: Provide ADA compliant exterior door hardware at one entrance

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: 208.00

Unit of Measure: Ea.

Estimate: $115,766.45

Assessor Name: System

Date Created: 08/13/2015

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

System: C1030 - Fittings

Location: Toilets

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace toilet partitions

Qty: 20.00

Unit of Measure: Ea.

Estimate: $51,328.09

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace hollow metal toilet partitions – beyond service life and failing

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: 08/13/2015

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

System: C2010 - Stair Construction

Location: Stairs

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: 250.00

Unit of Measure: L.F.

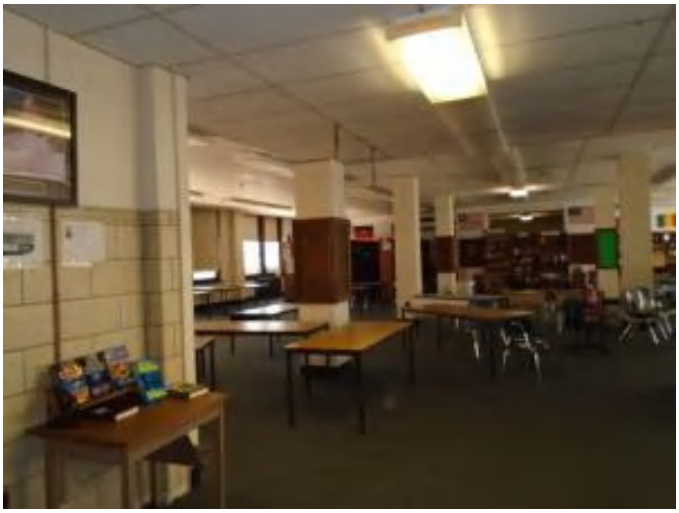
Estimate: $45,236.64

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace railing in stairways with code compliant components

System: C3020411 - Carpet



Location: IMC, music, offices

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 21,600.00

Unit of Measure: S.F.

Estimate: $241,720.42

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace carpet – worn and beyond service life

System: C3020413 - Vinyl Flooring

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 3,525.00

Unit of Measure: S.F.

Estimate: $53,462.50

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace damaged VAT floor tiles with VCT (5% of vinyl areas)

System: D2010 - Plumbing Fixtures

Location: Basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace shower valve and shower head including disruption and replacement of finishes

Qty: 80.00

Unit of Measure: Ea.

Estimate: $180,117.74

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove original shower systems in boys and girls locker rooms and replace with modern facilities.

System: D2030 - Sanitary Waste

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+300KSF)

Qty: 310,000.00

Unit of Measure: S.F.

Estimate: $1,362,091.17

Assessor Name: System

Date Created: 08/10/2015

Notes: Inspect sanitary sewer system to determine specific repair requirements due to age.

System: D2040 - Rain Water Drainage

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace rain water drainage piping - based on +- 30 KSF roof area on 3-4 story building - insert the SF of roof area to be drained

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $440,846.82

Assessor Name: System

Date Created: 08/10/2015

Notes: Inspect rain water drainage piping to determine specific repair requirements due to age.

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Rebuild pump, inline HHW (1 HP)

Qty: 4.00

Unit of Measure: Ea.

Estimate: $46,401.41

Assessor Name: System

Date Created: 08/10/2015

Notes: Rebuild four boiler feed water pumps.

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: 300.00

Unit of Measure: Ea.

Estimate: $247,098.37

Assessor Name: System

Date Created: 08/07/2015

Notes: Install minimum two receptacles in each wall of class rooms and other purpose rooms. A two-compartment surface mounted raceway should be provided in the computer lab for data and power. Approximate 300 receptacle outlets

System: D5030 - Communications and Security

Location: Entire Building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 2 - Response Time (2-3 yrs)
Correction: Add fire alarm device
Qty: 360.00
Unit of Measure: Ea.
Estimate: $672,038.89
Assessor Name: System
Date Created: 08/07/2015

Notes: Provide fire alarm system audio/visual devices in each classroom. Approximate 360

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: 150.00
Unit of Measure: Ea.
Estimate: $405,782.54
Assessor Name: System
Date Created: 08/07/2015

Notes: Provide a new clock system. Approximate 150 clocks.

System: D5090 - Other Electrical Systems

Location: Basement
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $456,215.02
Assessor Name: System
Date Created: 08/07/2015

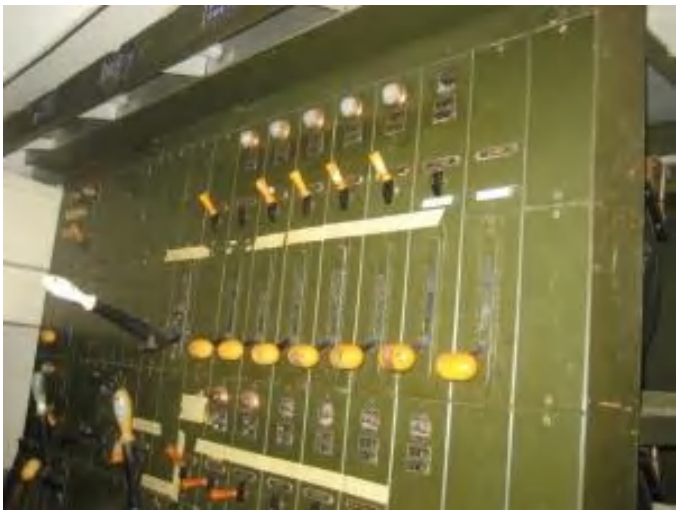
Notes: Provide a new emergency power system, outdoor, diesel powered, rated 300KW.

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: 08/07/2015

Notes: A study needs to be conducted to determine if the school requires lightning protection system.

System: E1020 - Institutional Equipment



Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $293,594.70

Assessor Name: System

Date Created: 08/07/2015

Notes: Provide a new dimming control system.

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

System: C1020 - Interior Doors

Location: Throughout

Distress: Damaged

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: 52.00

Unit of Measure: Ea.

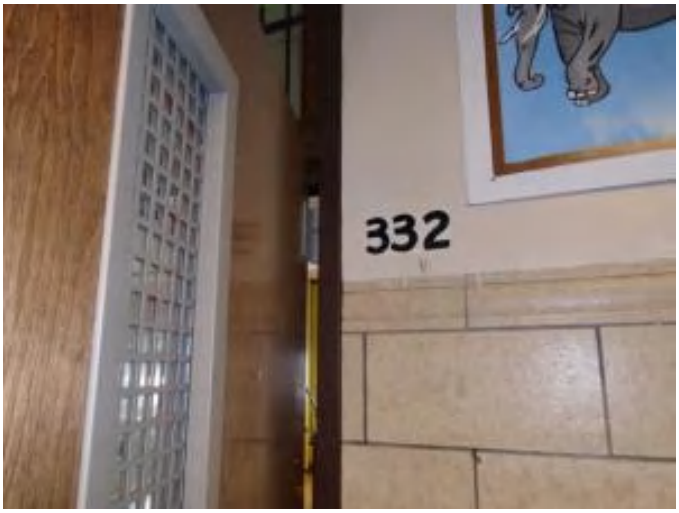
Estimate: $242,025.63

Assessor Name: System

Date Created: 08/13/2015

Notes: Repair or replace rusted, dented, scratched doors and frames (20% of interior doors)

System: C1030 - Fittings



Location: Throughout

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 300.00

Unit of Measure: Ea.

Estimate: $41,905.09

Assessor Name: System

Date Created: 08/13/2015

Notes: Install new ID signage

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: 103,500.00

Unit of Measure: S.F.

Estimate: $886,692.37

Assessor Name: System

Date Created: 08/13/2015

Notes: Repair and repaint interior plaster walls (30% of plaster wall surface)

System: C3020413 - Vinyl Flooring

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 8,225.00

Unit of Measure: S.F.

Estimate: $98,844.21

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace damaged and mismatched VCT floor tiles (10% of vinyl areas)

System: C3030 - Ceiling Finishes

Location: corridors, weight room

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 27,000.00

Unit of Measure: S.F.

Estimate: $342,898.48

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace direct mounted acoustic ceiling in corridors and weight room with suspended ceiling - failing

System: C3030 - Ceiling Finishes

Location: Throughout

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 15,000.00

Unit of Measure: S.F.

Estimate: $94,706.47

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace acoustic ceiling tiles – discolored, damaged/missing (10% of suspended ceiling area)

System: D1010 - Elevators and Lifts

Location: Elevator Machine room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Upgrade passenger elevator cab and controls

Qty: 1.00

Unit of Measure: Ea.

Estimate: $68,878.73

Assessor Name: System

Date Created: 08/07/2015

Notes: The elevator controllers are old and should be replaced.

System: D4010 - Sprinklers

This deficiency has no image.

Location: Entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 310,000.00

Unit of Measure: S.F.

Estimate: $4,434,689.82

Assessor Name: System

Date Created: 08/10/2015

Notes: Install fire sprinkler system including engine driven fire pump package if needed.

System: E2010 - Fixed Furnishings

Location: Auditorium, balcony

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1,100.00

Unit of Measure: Ea.

Estimate: $992,096.06

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace auditorium seats – beyond service life and failing

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

System: B2020 - Exterior Windows

Location: Throughout

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Remove and replace double slider windows

Qty: 560.00

Unit of Measure: Ea.

Estimate: $2,825,840.68

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace Plexiglas windows – hazed

System: D2010 - Plumbing Fixtures

Location: Corridors

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: 18.00

Unit of Measure: Ea.

Estimate: $136,425.42

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace aged drinking fountains with accessible fountains with integrated coolers.

System: D3040 - Distribution Systems

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 150,000.00

Unit of Measure: S.F.

Estimate: $6,617,537.84

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace classroom ventilators with new units including cooling coils.

System: D3040 - Distribution Systems

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 310,000.00

Unit of Measure: S.F.

Estimate: $2,932,715.56

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace steam piping due to age and reported failure when steam terminal equipment is renovated.

Priority 5 - Response Time (> 5 yrs):

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $6,735.57

Assessor Name: System

Date Created: 08/10/2015

Notes: Repair one fuel oil pump.

System: D3030 - Cooling Generating Systems

This deficiency has no image.

Location: Entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+250KSF)

Qty: 250,000.00

Unit of Measure: S.F.

Estimate: $3,800,523.21

Assessor Name: System

Date Created: 08/10/2015

Notes: Install 750 ton combined capacity chillers to provide cooling for entire building.

System: D3040 - Distribution Systems

Location: Fan rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 30,000.00

Unit of Measure: Ea.

Estimate: $1,505,898.60

Assessor Name: System

Date Created: 01/19/2016

Notes: Replace obsolete AHUs and radiators to restore heat and ventilation for large spaces

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
D2020 Domestic Water Distribution	Pump, pressure booster system, variable speed, base, controls, starter, duplex, 100' head, 400 GPM, 7-1/2 H.P., 4" discharge	1.00	Ea.	Basement utility room					25	2005	2030	$51,870.00	$57,057.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	4.00	Ea.	Boiler room	Smith	650 Mills			35	2010	2045	$161,965.00	$712,646.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	4.00	Ea.	Boiler room	Smith	650 Mills			35	2010	2045	$161,965.00	$712,646.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	4.00	Ea.	Boiler room	Smith	650 Mills			35	2010	2045	$161,965.00	$712,646.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	4.00	Ea.	Boiler room	Smith	650 Mills			35	2010	2045	$161,965.00	$712,646.00
D3040 Distribution Systems	Air-handling unit, built-up, horizontal/vertical, constant volume, single zone, 34,000 CFM, with cooling/heating coil section, filters, mixing box	1.00	Ea.	Fan rooms					25	1939	2042	$89,512.50	$98,463.75
D5010 Electrical Service/Distribution	Switchboards, no main disconnect, 4 wire, 120/208 V, 3000 amp, incl CT compartment, excl CT's or PT's	1.00	Ea.	Basement electrical room	Penn Panel & box co	Switchboard			30	1939	2017	$12,792.60	$14,071.86
												Total:	**$3,020,176.61**

Executive Summary

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

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:	Middle School
Gross Area (SF):	181,273
Year Built:	1927
Last Renovation:	
Replacement Value:	$89,048,117
Repair Cost:	$18,648,942.09
Total FCI:	20.94 %
Total RSLI:	80.19 %

Description:

Facility Assessment
August 20th, 2015

School District of Philadelphia
William T. Tilden Middle School
6601 Elmwood Avenue
Philadelphia, PA 19142

181,273 SF / 1,197 Students / LN 01

Mr. Dave Loftus FAC, provided input to the assessment team on current problems. Mr. Walt Johnson Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Johnson has been in the school for the last 5 years.

The 6 story, 181,273 square foot building was originally constructed in 1926. The building has a multi-level basement and sub-basements with gyms.

ARCHITECHURAL/STRUCTURAL SYSTEMS

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement damage. The main structure typically consists of cast-in-place concrete columns, beams, and concrete one way ribbed slab. Basement walls are developing cracks and have some areas of brick deterioration due to chronic water intrusion. The main roof structure consists of concrete one-way slab supported by main structural frame. Main roofing is built up application in good condition with light weight concrete on rooftop play yard area in good condition. Roofing over both gyms is metal truss construction with asphalt shingles in very good condition. Parapet wall capstone joints are in need of re-caulking. The building envelope is typically masonry and concrete with face brick in fair condition with

a large vertical crack developing on the south side of building in need of repair. Elevations are enhanced with decorative stonework around entrances and windows. Expansion joints between basement walls and exterior sidewalk are allowing water intrusion and need repair. The windows were replaced in 2010 with extruded aluminum, double hung sliding windows with insect/security screens and are in very good condition. Exterior doors are typically hollow metal in good condition. Public access doors have granite stoops and stairs. The building is accessible via access ramp on the northwest corner.

Partition walls include plastered ceramic hollow blocks with small areas of CMU gypsum board added in recent years. The majority of interior doors were replaced in 2015 are generally wood frame with solid core wood doors with transoms in very good condition. Closet and storage room doors inside classrooms are in good condition but in need or updated latchsets to match new doors for key control. Doors leading to exit stairways are hollow metal frames and doors in fair condition. Most interior doors have updated pull handles. Fittings include: toilet accessories in good condition; composite plastic and marble toilet partitions in good condition; fixed metal lockers in fair condition, and handrails and ornamental metals, generally in fair condition. Toilet partitions and accessories are not ADA accessible. Interior identifying signage is typically vinyl stickers on wall or door surfaces in fair condition. Stair construction is generally concrete with cast iron nosing in fair condition. Stair railings are cast iron balusters and wood railing in good condition.

The interior wall finishes include: painted plaster with tile or glazed brick wainscot in corridors, stairs, kitchen, gyms, lockers, fire towers, and some classrooms in good condition; and wood panel wainscot in auditorium and balcony in good condition. Paint is generally in good condition with some small damaged area throughout. The 5th floor is in need of complete repair and repainting. Flooring includes patterned or bare concrete in stairways, corridors, toilets, lockers and basement service areas in good condition with some floor leveling needed in toilets; carpet in one classroom in poor condition; hardwood in most classrooms, auditorium, balcony and stage in good condition; vinyl in office areas, cafeteria, storage, IMC and some classrooms in fair condition with some damaged areas needing replaced; and stone, tile, or terrazzo tile in kitchen and grand entry in good condition. Both gyms have rubber protection coated concrete in good condition. Ceiling finishes include: suspended acoustic tile system in classrooms, corridors, office areas and basement storage area in varying condition with some beyond service life and in need of replacement or demolition; direct mounted acoustic ceiling tiles in cafeteria in poor condition and should be replaced with suspended ceiling; and painted plaster or structural concrete in toilets, stairways, auditorium, 5th floor, grand entry, and basement areas in good condition. Both gyms have painted steel structure in poor condition in need of repainting and replacing acoustic panels.

The building has three elevators serving all floors and is accessible via the 1st floor entrance ramp.

Commercial and Institutional equipment includes: security equipment and laundry equipment in good condition, gym equipment in fair condition, and stage equipment in poor condition with damaged curtains needing replaced. Other equipment includes: food service equipment in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair to good condition; window shades/blinds in good condition; fixed bench seating in locker rooms in fair condition; and fixed auditorium seating for 842 generally in poor condition with damaged and missing seats that are beyond service life.

MECHANICAL SYSTEMS

Plumbing fixtures are a mixture of original and replacement equipment, are in poor condition, and approximately 50% need replacement. Water closets include both floor and wall mounted with exposed flush valves. Wall hung and floor mounted urinals have also have exposed flush valves. Bathroom and classroom lavatories are largely enamel on cast iron but include vitreous porcelain as well. Most lavatories have separate valves and spigots for hot and cold water. Many flush and faucet valves leak and approximately 75% need replacement. The entire 5th floor toilet rooms (men's, boys', girls') are completely out of service having had flush valves removed from fixtures.

The kitchen includes a commercial, floor standing, stainless steel, four basin wash sink without grease trap and with chemical sanitation system. It is in good condition and will not need replacement within 10 years. Life skills, staff kitchen, and parent resource center rooms have stainless steel, rim mounted, residential kitchen sinks. They have single lever controlled mixing faucets. They are all functional with at least 5 years useful life remaining.

There is a plastic laundry sink installed in a science room on the fourth floor. It is in good condition including its supply and drain and will not need replacement within 5 years. Life skills and parent resource center rooms have clothes washers and driers. Hot and cold water supply pipes have shutoff valves at the hose connections.

Housekeeping closets on each floor and the cafeteria dining room have single basin service sinks. Service sinks are cast iron with integral traps and short spigot mixing faucets with vacuum breakers. Service sinks are heavily worn with chipped enamel and rust. They should all be replaced due to age.

The gymnasium male and female locker rooms have shower facilities, but they are not presently used, because the showers do not work, according to the principal. The shower rooms need complete renovation if they are to be returned to use.

Drinking fountains include porcelain, cast iron, and stainless steel. They are located in hallways on each floor. They are all beyond their service life and not ADA compliant, most are damaged and not fully functional, and several do not work at all. Fountains throughout the building should be replaced with accessible fountains with integral coolers.

Domestic water distribution piping is primarily soldered copper but also includes threaded galvanized steel. Corrosion or rust is present on most visible piping. Water service enters the building along 66th Street at the north corner of the building in the basement. A 4" compound water meter is located along the northwest side of the boiler room and it was flowing constantly at the time of the assessment. There is a failed block valve on the disconnected water line to the air washer in the west corner fan room that was leaking water onto the floor and into a drain located near the air washer section of the AHU. At the center rear of the

basement, near the base of the trash chute, running water could be heard but not seen (due to construction debris blocking access), and even though it was raining at the time, a broken pipe was suspected not rainwater infiltration. The building engineer was unaware of the running water until notified of it by the assessment team. These failures indicate the entire domestic water supply piping has exceeded its useful life and should be completely replaced.

The building has a single water pressure booster pump with a 10 HP motor. The pump was inoperative, however pressure was sufficient to supply top floor fixtures at low flow conditions. There is no hydropneumatic storage tank. The pump should be replaced with a two pump system including storage tank.

Hot water is provided by a single Paloma model PH-24M-DN gas burning tankless water heater, manufactured in 2002. Hot water supply to the kitchen and upper floors is insufficient. There is a pipe mounted circulation pump installed before 2000. The heater and pump have both exceeded their useful service life and should be replaced. The hot water storage tank was manufactured in 2011, and should have 25 years life remaining.

Sanitary waste piping is threaded galvanized steel pipe and appears to be original to the building. Some plumbing fixtures on the basement level back up with sewage and have done so for at least the past 5 years according to the engineer. The sanitary waste pipes should be replaced with cast iron.

Rain water discharge piping is the original threaded galvanized steel pipe in service for 90 years. Visible areas of the pipe show rust and extensive repairs with cast iron hubless pipe with banded connections. There is a ground water sump with a single pump in the basement. The building engineer stated the basement floors flood. Consequently, the system should be inspected more thoroughly and repaired as needed. A second sump pump should be added for redundancy.

The building was originally heated by coal burning boilers supplying steam to radiators everywhere and also to 3 basement air handlers feeding ducts to class rooms, cafeteria, gyms, and auditorium. The building no longer has its own boilers and receives steam from Bartram High School. The air handlers are obsolete and non-functional. Heat is now solely supplied by radiators and ventilation by opening windows. The school principal stated the building was too cold in winter.

The building does not have any boilers. The original boilers have been removed. Steam is supplied to Tilden from Bartram High School through a 16 inch pipe.

The incoming gas service enters the building from 66th Street along the north east side of the school through a 2 inch line. The gas meter is located in the basement in the building engineer's office.

The building does not have any central cooling generation. There are 14 window unit air-conditioners for offices, IMC, and some classrooms. A mini-split system provides cooling for the computer network equipment room. In total, the building currently has approximately 30 tons cooling capacity. A central air conditioning system should be installed with 450 ton capacity.

The original ventilation system in the building still exists but it is unused due to age, lack of maintenance, and air handler failure. The basement has 3 fan rooms with the original air handlers, including primary heating coils, air washers, fans, and secondary heating coils. Heating coils are cast iron, approximately 9 feet tall and 11 feet wide. Fans are belt drive with 15 HP, 8 pole, 3 phase electric motors. They are all entirely obsolete and should be replaced with new units including heating, cooling, humidification, and dehumidification sections. Horizontal distribution ducts in the basement are painted uninsulated sheet metal with manual control dampers for system balancing. These ducts should be replaced with insulated ducts with automatic dampers when the HVAC system is renovated. Vertical ducts supplying air to classrooms are built from clay tile building block. The typical size is 2 feet by 2 feet. They enter the classrooms at the original ceiling level, and some outlets are partially blocked by new drop ceilings. Some have diverters to direct the air flow, but there are no grilles to prevent foreign object entry into the ducts. Classroom exhaust ducts are similar clay tile block construction and lead from floor level up to the attic plenums where there were manual dampers to adjust flow to individual rooms. Exhaust ducts also lack grilles to prevent entry. The principal stated the lack of grilles was a problem, and grilles should be installed when the system is renovated. Three air handlers in the basement provided air flow to sheet metal ducts which connected to built-in ducts leading up to classrooms, to the auditorium main level and balcony under-floor plenums, and to the basement gyms. Attic plenums have return ducts leading back to the basement fan rooms and roof top gravity vents for building exhaust. The fan rooms have ground level fresh air intake rollup doors and also rollup doors on the recirculation ducts. The doors are presently unused, appear to be inoperable, and should be replaced.

The cafeteria kitchen has a fume hood exhaust fan system, including fire suppression, for the stove and other fuel burning appliances. The outside heater and vent unit for the kitchen is located above it at the back of the rooftop gym. The principal stated the exhaust fan does not run. It should be repaired to comply with building code for fuel burning appliances. The staff kitchen has a gas burning range, and there is no exhaust hood for it, so it should be removed and the gas line shutoff or removed. The clothes dryers in the life skills and parent resource center rooms do not have exhaust vents. Vents should be installed.

The only functioning distribution system in the building is the steam system. Steam and condensate pipes are steel pipe with threaded, welded, and flanged connections. The 16" steam supply line from Bartram enters the building basement from the northwest side and then heads to the attic through a pipe chase next to the elevator and old chimney. Steam pipes lead down to radiators on all floors. Condensate pipes return to the basement and a single collection tank. The piping age is unknown, but the system functions poorly. The condensate pipe trough in the basement has standing water in it, and its sump pump has failed. There is a condensate collection tank in the basement with a vacuum system on it, but the vacuum system is non-functional, likely due to air leaks into condensate pipe. The tank has two pumps to return condensate to the Bartram High School boilers. The entire steam and condensate piping should be replaced.

All the rooms and hallways in the building are heated by radiators. Most radiators are cast iron, but some spaces have threaded steel pipe or modern finned copper tube units. They are equipped with manually adjustable angle globe valves and thermostatic steam traps. Radiators were originally the secondary heating system with primary heat supplied to each room through the built-in ductwork and plenums. Radiators are beyond their expected service life and many are missing guards. They should all be replaced with modern convection units.

There is no existing control system for overall HVAC operation. The principal stated the building needed better steam control because it is too cold in winter. There is evidence of a prior pneumatic control system, but steam control valves on radiators have all been replaced with manually adjusted angle globe valves. A building

automation system should be installed as part of overall system upgrades to integrate all new components. There is an inoperable duplex air compressor in the basement. The air compressor will not be needed when the building is converted to electronic control.

The building does not have a fire protection sprinkler system. There are dry standpipes with multiple fire department connections. A sprinkler system with quick response type heads should be installed. A fire pump may be required depending on the available city water pressure.

ELECTRICAL SYSTEMS

An underground feeder from Bartram HS electrical switchgear serves this school. The existing electrical equipment is located at the basement and is estimated to have a rating of 600A, 120/208V. The existing electrical equipment is old and has exceeded its useful service life. The existing electrical equipment has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. This school needs to be provided with its own service entrance switchgear. The new service will be 480V/277V, 3 phase power, approximate 2500 Amperes and will be located in the vicinity of the existing electrical service. The new electrical service would feed a 480V Motor Control Center (MCC) and HVAC (Heating, Ventilation and Air Conditioning) equipment, and a 480V 3 phase to 120V/208V 3 phase 500KVA step-down transformer to feed receptacles, lighting and other smaller loads.

There are panel-boards in each floor for lighting and receptacles. These panel-boards and associated wiring have exceeded the end of their useful life and are undersized to absorb additional loads. They need to be replaced. Panel-board's doors at corridors are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor or in areas where students are present must be provided with lockable devices.

The number of receptacles in 80% of the classrooms are inadequate most of them do not work. Teachers use extension cords. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Most of the classrooms, corridors, stairways, offices are illuminated with recessed mounted fluorescent fixtures, with T-8 lamps. The auditorium is illuminated with surface mounted architectural fixture with incandescent lamps. The Gymnasium is illuminated with High Intensity Discharge (HID), surface mounted fixtures. Replace auditorium incandescent lamps with compact fluorescent lamps.

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

The present telephone system is adequate.

An independent and separate PA system does not exist, or is not working. School uses the telephone systems for public announcement. System is working adequately for most part.

The present clocks are old and difficult to find parts and repair. Replace clock system with wireless, battery operated, clock system.

There is not television system.

The security system consists of motion detectors at the first floor main entrances with key pad at the visitor entrance. There are not CCTV cameras in the building interior. Provide CCTV cameras

The emergency power system consists of a gas powered generator, manufactured by Generac 30KW/37.5KVA, 120/208V. The present emergency power system serves the fire towers, corridor, exit signs, auditorium, and stairways. The gas powered generator is approximately 10 years old and is expected to provide 10 more years of useful service life. For future loads and emergency power requirements provide a roof mounted diesel powered 150KW generator.

There is adequate UPS in the IT room.

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

The lightning protection is obtained with air terminals mounted on the school chimney. A study should be conducted to determine if the existing lightning system provide the proper protection to the school building.

The school has three traction power elevator rated 10HP at 240V. Elevator controller and motor are approximately 10 years old and are expected to provide 10 more years of useful service life. Elevator is not connected to the school emergency system. We have access to elevator 3 only, access to the other elevators was not safe.

The stage theatrical lighting is composed of projector and strip light and they are controlled by Leviton Macro system dimming panel.

There is a local sound system. The present sound system is adequate.

GROUNDS SYSTEMS

The site surrounds the building on all four sides and includes Bartram High School. Yard area on the south and west sides is asphalt paving in fair condition with some cracks developed. Metal and chain link fence surrounding yard is in fair condition but is lacking vehicle gates to provide security. Basketball court in yard is in very good condition. Landscaping is limited to mature trees and grass along 66th St. and Elmwood Ave. in good condition.

Accessibility: the building has an accessible entrance, and accessible routes. Toilets are not equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Most of the doors in the building have lever type or pull door handles.

The school perimeter is illuminated with wall mounted High Intensity discharge (HID) lighting fixtures.

There are not CCTV cameras around the building perimeter. Provide CCTV cameras.

There are not wall mounted loud speaker facing the parking lot/playground area. They are not required.

RECOMMENDATIONS

Repair basement walls – water damaged

Re-caulk capstone joints on parapet wall – allowing water intrusion

Repair masonry – vertical crack on south side

Repair expansion joint between building and exterior sidewalk – allowing water intrusion

Replace latch sets on classroom storage rooms – no keys or master keys

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

Repair and paint interior plaster walls – damaged (10% of plaster area and entire 5th floor)

Level and repair concrete floors in toilets – not sloped to drain

Replace damaged VAT with VCT – (5% of vinyl floor area)

Demo suspended ceiling in basement – damaged and not used

Replace suspended acoustic tile ceiling system – beyond service life (50% of suspended ceiling)

Paint structural steel ceiling and replace acoustic panels in gyms

Replace stage equipment – damaged curtains

Replace auditorium seats – failing and beyond service life

Repair cracks in asphalt paving

Install vehicle access gates for site security

MECHANICAL

Replace 40% of water closets, 32 each.

Replace 50% of urinals, 15 each.

Replace 60% of lavatories, 36 each.

Replace (additional) 25% of flush valves, 28 each.

Replace (additional) 25% of faucet valves, 15 each.

Replace 12 service sinks due to age, wear, and rust.

Completely renovate male and female shower rooms, 16 shower heads per room.

Replace drinking fountains with ADA compliant fountains including integral coolers, 12 pairs.

Replace domestic water supply piping.

Replace domestic water booster system including hydro-pneumatic storage tank.

Replace domestic water heater and circulation pump, to provide sufficient hot water to cafeteria kitchen.

Replace sanitary waste piping.

Inspect rain water drain pipe and repair as needed.

Install 2 sump pumps for ground water collection and condensate trough.

Install 450 ton capacity central air-conditioning system.

Remove obsolete original air handlers and replace with modern equipment, including insulated ducts and new airflow control dampers and doors, and replace radiators.

Repair cafeteria kitchen fume hood exhaust fan. (Code compliance.)

Install vents for clothes dryers in life skills and parent resource center rooms. (Code compliance.)

Replace steam and condensate pipe system including steam traps and condensate pumps.

Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

Install a fire protection sprinkler system. A fire pump may be required depending on the available city water pressure.

ELECTRICAL

Provide a new electrical service 480V/277V, 3 phase power, approximate 2500 Amperes and will be located in the vicinity of the existing electrical service.

Replace the entire distribution system with new panels and new wiring/conduits. Approximate (30) 208/120V panel boards.

Provide (2)25FT of surface raceways with receptacles spaced 24” on center and 4 wall mount receptacles per classroom. Approximate 768

Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 250 devices

Add CCTV cameras to provide a full coverage of the building interior. Approximate 85 CCTV cameras

Provide 150KW, roof mounted, and diesel powered generator.

Prepare a study to determine if the existing lightning system provide the proper protection to the school building.

Provide outdoor CCTV cameras for complete coverage of the building perimeter. Approximate 8 cameras

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B113001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S101001		

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	61.00 %	0.00 %	$0.00
A20 - Basement Construction	61.00 %	2.63 %	$68,723.85
B10 - Superstructure	61.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	69.05 %	0.82 %	$99,345.14
B30 - Roofing	35.30 %	0.00 %	$0.00
C10 - Interior Construction	62.64 %	10.51 %	$467,339.21
C20 - Stairs	61.00 %	0.00 %	$0.00
C30 - Interior Finishes	83.68 %	10.50 %	$1,002,259.61
D10 - Conveying	20.00 %	0.00 %	$0.00
D20 - Plumbing	98.42 %	70.43 %	$2,558,457.39
D30 - HVAC	108.19 %	48.23 %	$8,093,160.70
D40 - Fire Protection	96.76 %	177.22 %	$2,589,287.22
D50 - Electrical	99.79 %	29.32 %	$3,123,981.05
E10 - Equipment	71.85 %	0.15 %	$4,267.72
E20 - Furnishings	105.00 %	166.30 %	$642,120.20
Totals:	**80.19 %**	**20.94 %**	**$18,648,942.09**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$23.16	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$4,198,283
A1030	Slab on Grade	$5.17	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$937,181
A2010	Basement Excavation	$4.36	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$790,350
A2020	Basement Walls	$10.05	S.F.	181,273	100	1926	2026	2076	61.00 %	3.77 %	61		$68,723.85	$1,821,794
B1010	Floor Construction	$85.94	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$15,578,602
B1020	Roof Construction	$9.26	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$1,678,588
B2010	Exterior Walls	$43.78	S.F.	181,273	100	1926	2026	2076	61.00 %	1.25 %	61		$99,345.14	$7,936,132
B2020	Exterior Windows	$21.40	S.F.	181,273	40	2010	2050		87.50 %	0.00 %	35			$3,879,242
B2030	Exterior Doors	$1.45	S.F.	181,273	25	2000	2025		40.00 %	0.00 %	10			$262,846
B3010105	Built-Up	$37.76	S.F.	34,338	20	2000	2020		25.00 %	0.00 %	5			$1,296,603
B3010140	Shingle & Tile	$38.73	S.F.	8,585	20	2010	2030		75.00 %	0.00 %	15			$332,497
B3020	Roof Openings	$0.06	S.F.	181,273	30	2000	2030		50.00 %	0.00 %	15			$10,876
C1010	Partitions	$17.91	S.F.	181,273	100	1926	2026	2076	61.00 %	13.51 %	61		$438,757.14	$3,246,599
C1020	Interior Doors	$3.51	S.F.	181,273	40	2015	2055		100.00 %	2.19 %	40		$13,914.24	$636,268
C1030	Fittings	$3.12	S.F.	181,273	40	1987	2027		30.00 %	2.59 %	12		$14,667.83	$565,572
C2010	Stair Construction	$1.41	S.F.	181,273	100	1926	2026	2076	61.00 %	0.00 %	61			$255,595
C3010230	Paint & Covering	$12.66	S.F.	181,273	10	2015	2025		100.00 %	11.64 %	10		$267,232.80	$2,294,916
C3010232	Wall Tile	$3.18	S.F.	181,273	30	1987	2017	2025	33.33 %	0.00 %	10			$576,448

Site Assessment Report - B113001;Tilden

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 $
C3020412	Terrazzo & Tile	$75.52	S.F.	9,064	50	1975	2025		20.00 %	0.00 %	10			$684,513
C3020413	Vinyl Flooring	$9.68	S.F.	54,382	20	1975	1995	2037	110.00 %	7.83 %	22		$41,238.17	$526,418
C3020414	Wood Flooring	$22.27	S.F.	72,509	25	2000	2025		40.00 %	0.00 %	10			$1,614,775
C3020415	Concrete Floor Finishes	$0.97	S.F.	45,318	50	2000	2050		70.00 %	130.27 %	35		$57,262.46	$43,958
C3030	Ceiling Finishes	$20.97	S.F.	181,273	25	1987	2012	2042	108.00 %	16.74 %	27		$636,526.18	$3,801,295
D1010	Elevators and Lifts	$1.53	S.F.	181,273	35	1987	2022		20.00 %	0.00 %	7			$277,348
D2010	Plumbing Fixtures	$13.52	S.F.	181,273	35	1927	1962	2052	105.71 %	30.29 %	37		$742,456.18	$2,450,811
D2020	Domestic Water Distribution	$1.68	S.F.	181,273	25	1958	1983	2042	108.00 %	200.82 %	27		$611,586.90	$304,539
D2030	Sanitary Waste	$2.52	S.F.	181,273	30	1927	1957	2047	106.67 %	175.41 %	32		$801,299.55	$456,808
D2040	Rain Water Drainage	$2.32	S.F.	181,273	30	1927	1957	2027	40.00 %	95.85 %	12		$403,114.76	$420,553
D3020	Heat Generating Systems	$18.67	S.F.		0				0.00 %	0.00 %				$0
D3030	Cooling Generating Systems	$24.48	S.F.	181,273	30			2047	106.67 %	50.60 %	32		$2,245,253.14	$4,437,563
D3040	Distribution Systems	$42.99	S.F.	181,273	25	1927	1952	2042	108.00 %	45.85 %	27		$3,573,159.18	$7,792,926
D3050	Terminal & Package Units	$11.60	S.F.	181,273	20	1927	1947	2037	110.00 %	0.00 %	22			$2,102,767
D3060	Controls & Instrumentation	$13.50	S.F.	181,273	20	1927	1947	2037	110.00 %	92.95 %	22		$2,274,748.38	$2,447,186
D4010	Sprinklers	$7.05	S.F.	181,273	35			2052	105.71 %	202.61 %	37		$2,589,287.22	$1,277,975
D4020	Standpipes	$1.01	S.F.	181,273	35	1927	1962	2027	34.29 %	0.00 %	12			$183,086
D5010	Electrical Service/Distribution	$9.70	S.F.	181,273	30	1927	1957	2047	106.67 %	94.09 %	32		$1,654,479.86	$1,758,348
D5020	Lighting and Branch Wiring	$34.68	S.F.	181,273	20	1927	1947	2037	110.00 %	4.49 %	22		$282,140.92	$6,286,548
D5030	Communications and Security	$12.99	S.F.	181,273	15	1927	1942	2025	66.67 %	33.96 %	10		$799,683.68	$2,354,736
D5090	Other Electrical Systems	$1.41	S.F.	181,273	30	1927	1957	2047	106.67 %	151.68 %	32		$387,676.59	$255,595
E1020	Institutional Equipment	$4.82	S.F.	181,273	35	1975	2010	2052	105.71 %	0.49 %	37		$4,267.72	$873,736
E1090	Other Equipment	$11.10	S.F.	181,273	35	2000	2035		57.14 %	0.00 %	20			$2,012,130
E2010	Fixed Furnishings	$2.13	S.F.	181,273	40	1975	2015	2057	105.00 %	166.30 %	42		$642,120.20	$386,111
								Total	**80.19 %**	**20.94 %**			**$18,648,942.09**	**$89,048,117**

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

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

Note: 5% - Terrazzo & Tile
30% - Vinyl Flooring
40% - Wood Flooring
25% - Concrete Floor Finishes

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:	**$18,648,942**	**$0**	**$0**	**$0**	**$0**	**$1,653,430**	**$0**	**$375,212**	**$0**	**$0**	**$11,513,411**	**$32,190,995**
*** 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	$68,724	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$68,724**
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	$99,345	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$99,345**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$388,567	**$388,567**
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	$1,653,430	$0	$0	$0	$0	$0	**$1,653,430**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$438,757	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$438,757**
C1020 - Interior Doors	$13,914	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$13,914**
C1030 - Fittings	$14,668	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$14,668**

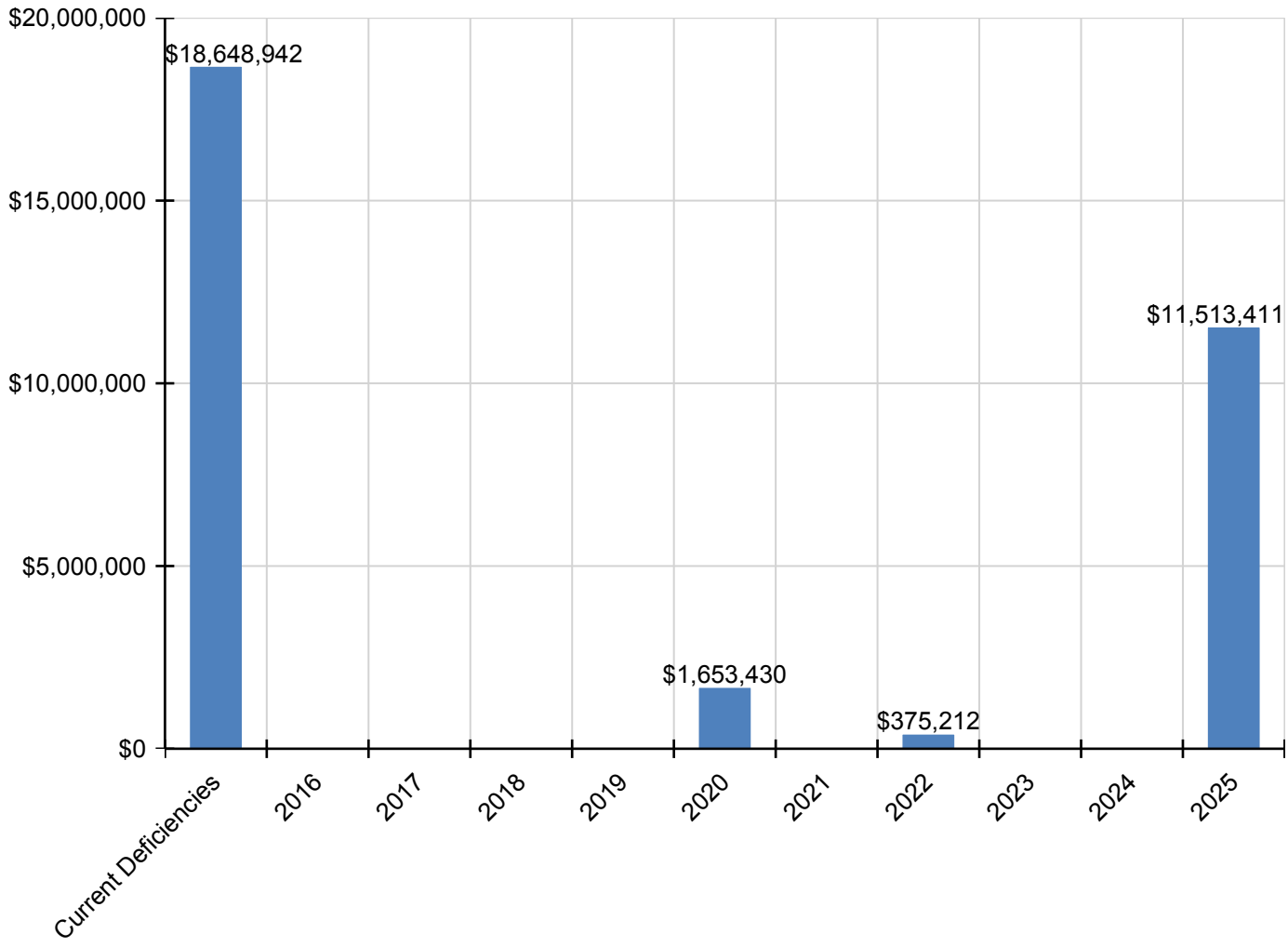
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$267,233	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,392,593	**$3,659,826**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$852,168	**$852,168**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,011,922	**$1,011,922**
C3020413 - Vinyl Flooring	$41,238	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$41,238**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,387,136	**$2,387,136**
C3020415 - Concrete Floor Finishes	$57,262	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$57,262**
C3030 - Ceiling Finishes	$636,526	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$636,526**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$375,212	$0	$0	$0	**$375,212**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$742,456	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$742,456**
D2020 - Domestic Water Distribution	$611,587	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$611,587**
D2030 - Sanitary Waste	$801,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$801,300**
D2040 - Rain Water Drainage	$403,115	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$403,115**
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	$2,245,253	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,245,253**
D3040 - Distribution Systems	$3,573,159	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,573,159**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$2,274,748	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,274,748**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$2,589,287	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,589,287**
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	$1,654,480	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,654,480**
D5020 - Lighting and Branch Wiring	$282,141	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$282,141**
D5030 - Communications and Security	$799,684	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,481,026	**$4,280,709**

D5090 - Other Electrical Systems	$387,677	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$387,677**
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	$4,268	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,268**
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	$642,120	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$642,120**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

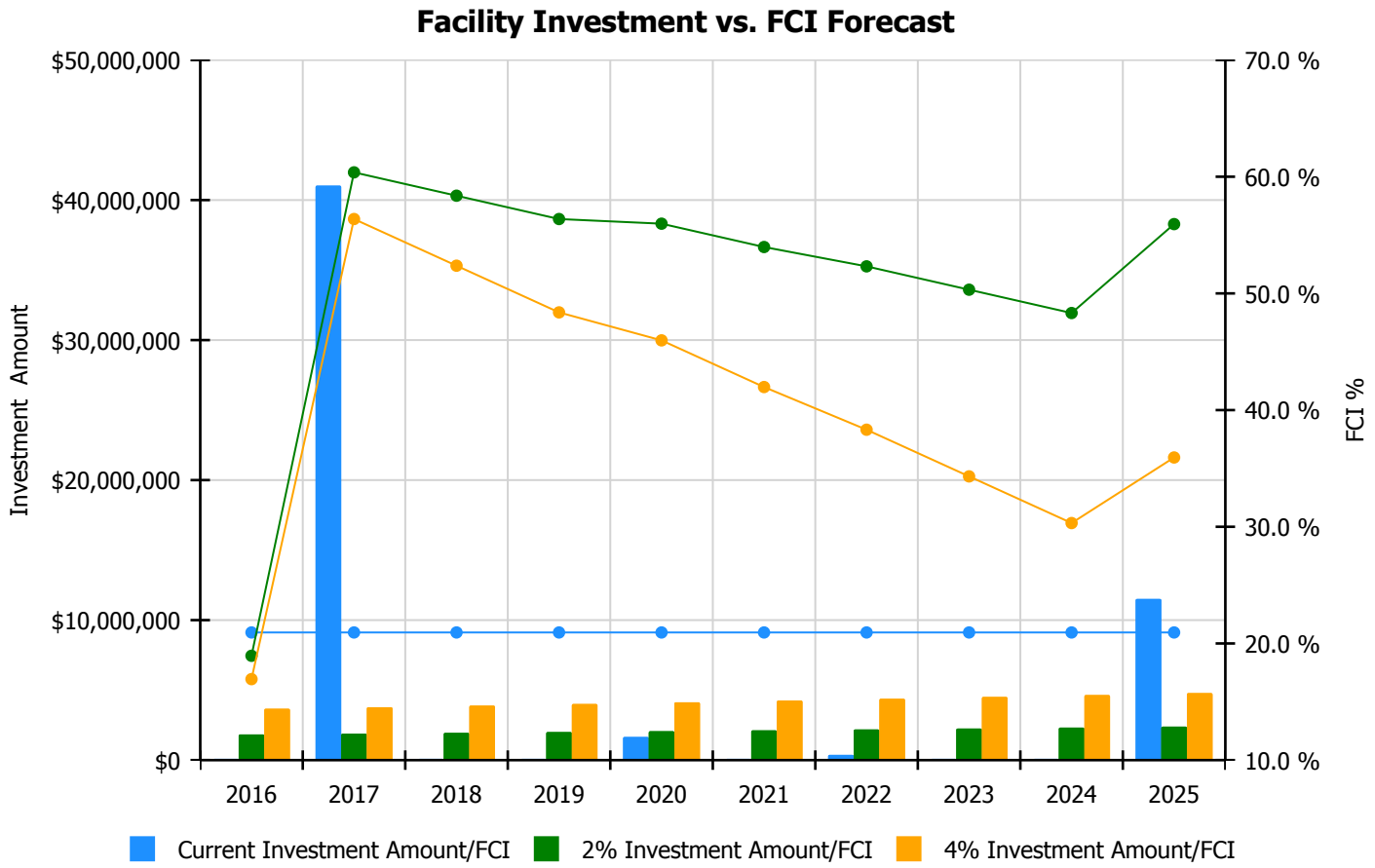
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

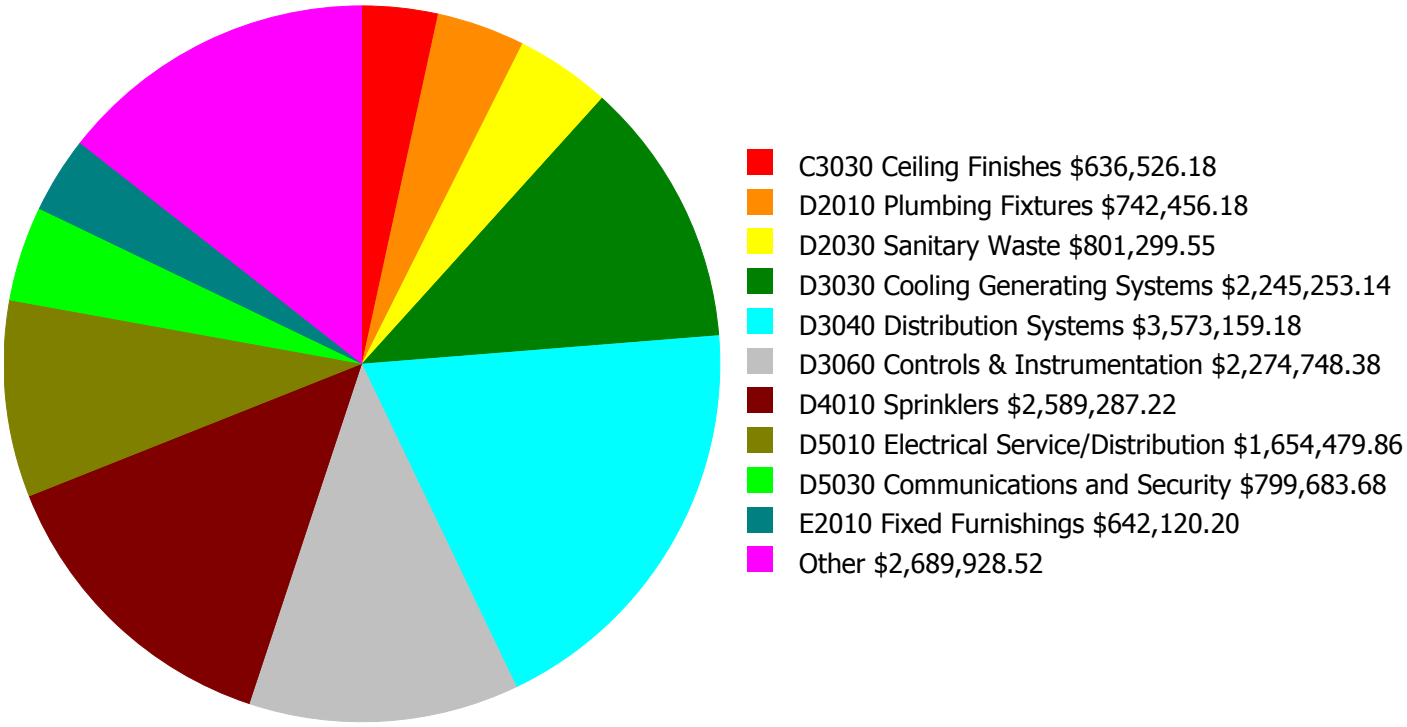
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 20.94%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,834,391.00	18.94 %	$3,668,782.00	16.94 %
2017	$41,029,762	$1,889,423.00	60.37 %	$3,778,846.00	56.37 %
2018	$0	$1,946,106.00	58.37 %	$3,892,211.00	52.37 %
2019	$0	$2,004,489.00	56.37 %	$4,008,978.00	48.37 %
2020	$1,653,430	$2,064,623.00	55.98 %	$4,129,247.00	45.98 %
2021	$0	$2,126,562.00	53.98 %	$4,253,124.00	41.98 %
2022	$375,212	$2,190,359.00	52.32 %	$4,380,718.00	38.32 %
2023	$0	$2,256,070.00	50.32 %	$4,512,140.00	34.32 %
2024	$0	$2,323,752.00	48.32 %	$4,647,504.00	30.32 %
2025	$11,513,411	$2,393,464.00	55.94 %	$4,786,929.00	35.94 %
Total:	**$54,571,815**	**$21,029,239.00**		**$42,058,479.00**	

Deficiency Summary by System

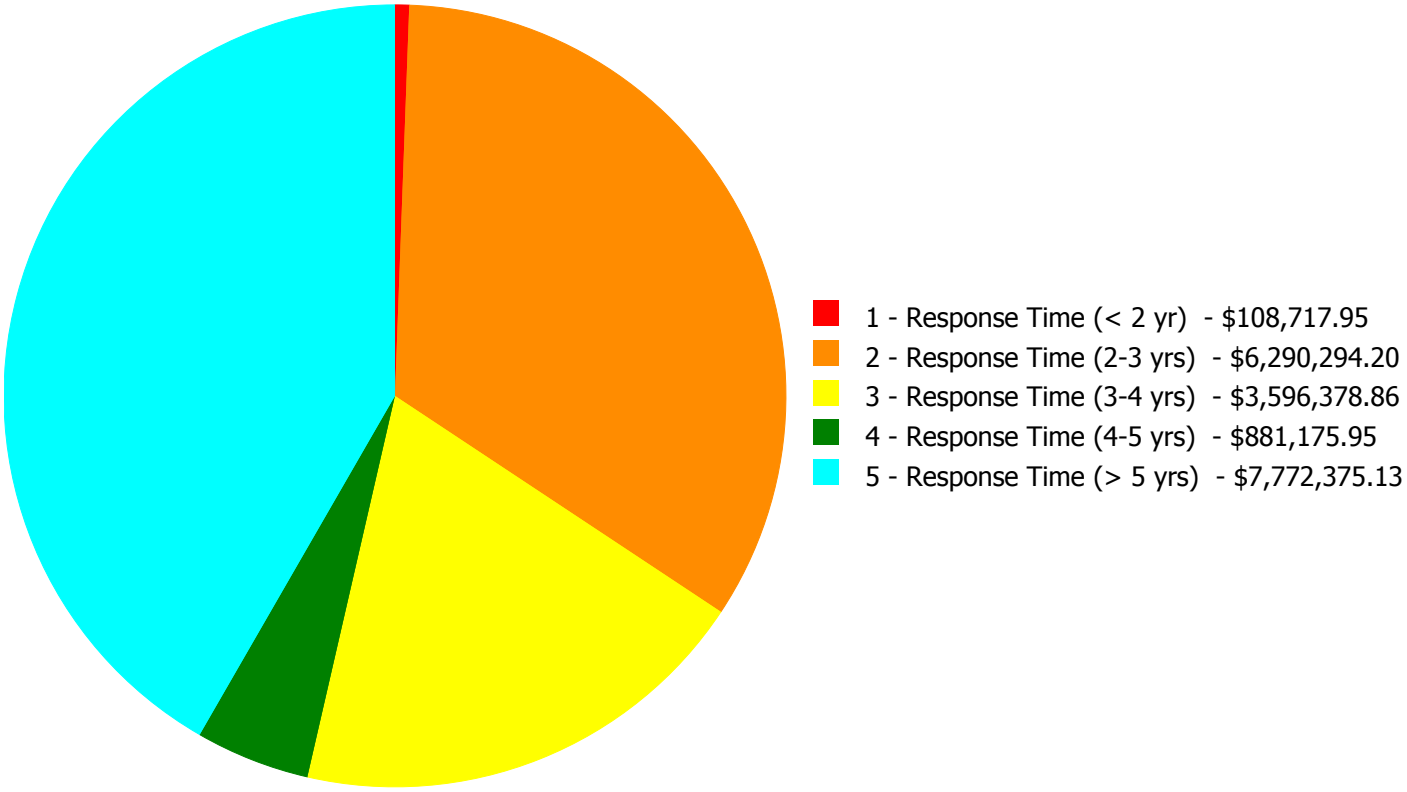
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $18,648,942.09

Deficiency Summary by Priority

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



Budget Estimate Total: $18,648,942.09

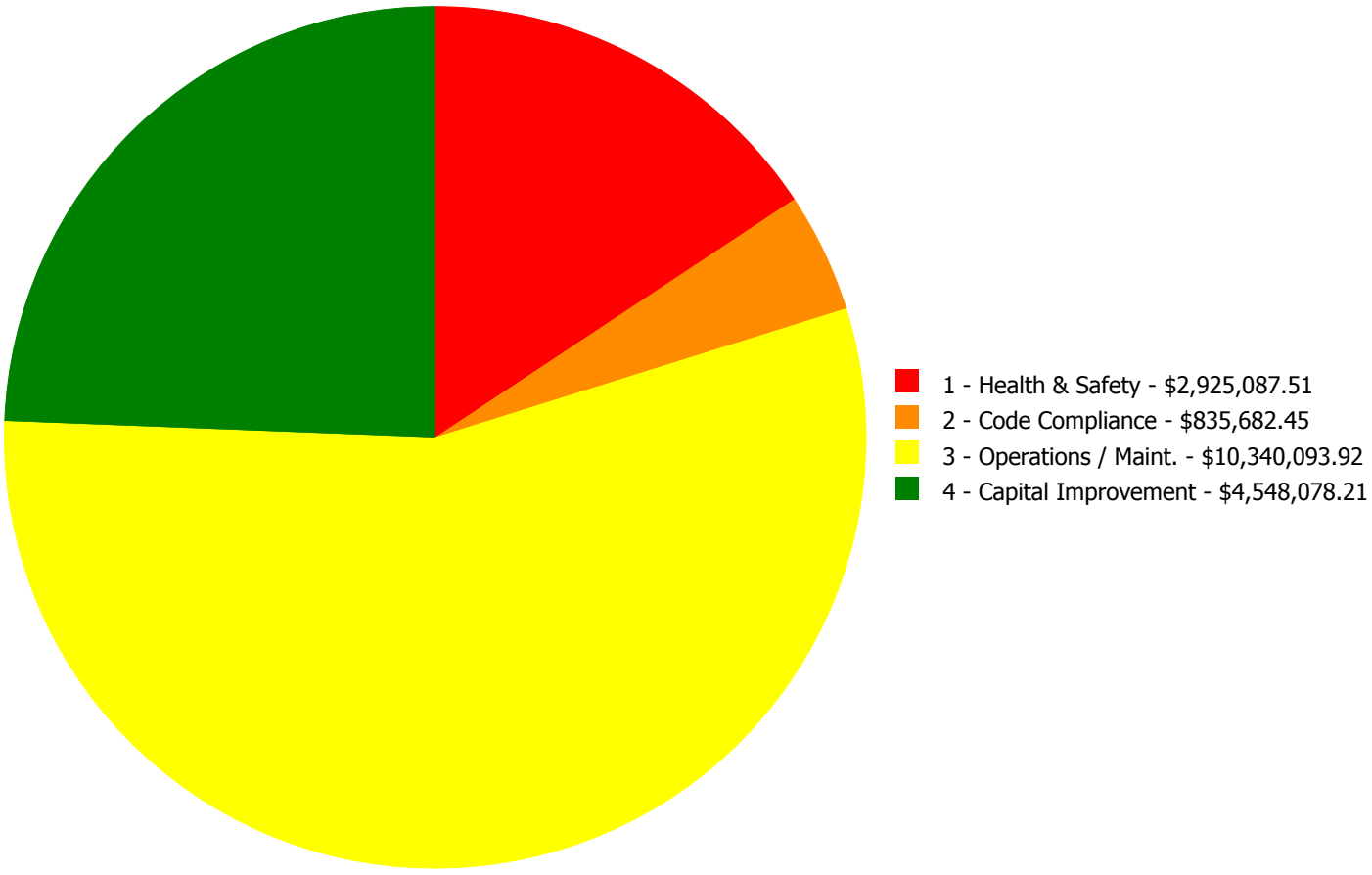
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
A2020	Basement Walls	$0.00	$68,723.85	$0.00	$0.00	$0.00	$68,723.85
B2010	Exterior Walls	$0.00	$83,292.33	$16,052.81	$0.00	$0.00	$99,345.14
C1010	Partitions	$0.00	$438,757.14	$0.00	$0.00	$0.00	$438,757.14
C1020	Interior Doors	$0.00	$0.00	$0.00	$13,914.24	$0.00	$13,914.24
C1030	Fittings	$0.00	$14,667.83	$0.00	$0.00	$0.00	$14,667.83
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$267,232.80	$0.00	$267,232.80
C3020413	Vinyl Flooring	$0.00	$0.00	$41,238.17	$0.00	$0.00	$41,238.17
C3020415	Concrete Floor Finishes	$0.00	$0.00	$57,262.46	$0.00	$0.00	$57,262.46
C3030	Ceiling Finishes	$0.00	$0.00	$75,140.15	$561,386.03	$0.00	$636,526.18
D2010	Plumbing Fixtures	$19,188.62	$723,267.56	$0.00	$0.00	$0.00	$742,456.18
D2020	Domestic Water Distribution	$0.00	$50,533.86	$0.00	$34,375.16	$526,677.88	$611,586.90
D2030	Sanitary Waste	$0.00	$15,764.25	$785,535.30	$0.00	$0.00	$801,299.55
D2040	Rain Water Drainage	$0.00	$403,114.76	$0.00	$0.00	$0.00	$403,114.76
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$2,245,253.14	$2,245,253.14
D3040	Distribution Systems	$89,529.33	$2,265.63	$1,712,327.53	$0.00	$1,769,036.69	$3,573,159.18
D3060	Controls & Instrumentation	$0.00	$2,274,748.38	$0.00	$0.00	$0.00	$2,274,748.38
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$2,589,287.22	$2,589,287.22
D5010	Electrical Service/Distribution	$0.00	$1,654,479.86	$0.00	$0.00	$0.00	$1,654,479.86
D5020	Lighting and Branch Wiring	$0.00	$282,140.92	$0.00	$0.00	$0.00	$282,140.92
D5030	Communications and Security	$0.00	$278,537.83	$521,145.85	$0.00	$0.00	$799,683.68
D5090	Other Electrical Systems	$0.00	$0.00	$387,676.59	$0.00	$0.00	$387,676.59
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$4,267.72	$0.00	$4,267.72
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$0.00	$642,120.20	$642,120.20
	Total:	$108,717.95	$6,290,294.20	$3,596,378.86	$881,175.95	$7,772,375.13	$18,648,942.09

Deficiency Summary by Category

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



Budget Estimate Total: $18,648,942.09

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: D2010 - Plumbing Fixtures

Location: Toilet rooms and classrooms

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 28.00

Unit of Measure: Ea.

Estimate: $19,188.62

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace (additional) 25% of flush valves, 28 each.

System: D3040 - Distribution Systems

Location: Kitchen

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Install GF makeup air unit for kitchen exhaust hood (single 10 ft hood).

Qty: 1.00

Unit of Measure: Ea.

Estimate: $89,529.33

Assessor Name: System

Date Created: 11/19/2015

Notes: Repair cafeteria kitchen fume hood exhaust fan.

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 concrete wall in poor condition including rebar dowelling - insert the SF of wall area

Qty: 300.00

Unit of Measure: S.F.

Estimate: $68,723.85

Assessor Name: System

Date Created: 09/22/2015

Notes: Repair basement walls – water damaged

System: B2010 - Exterior Walls

Location: Ground level

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace expansion joints at exterior walls

Qty: 860.00

Unit of Measure: L.F.

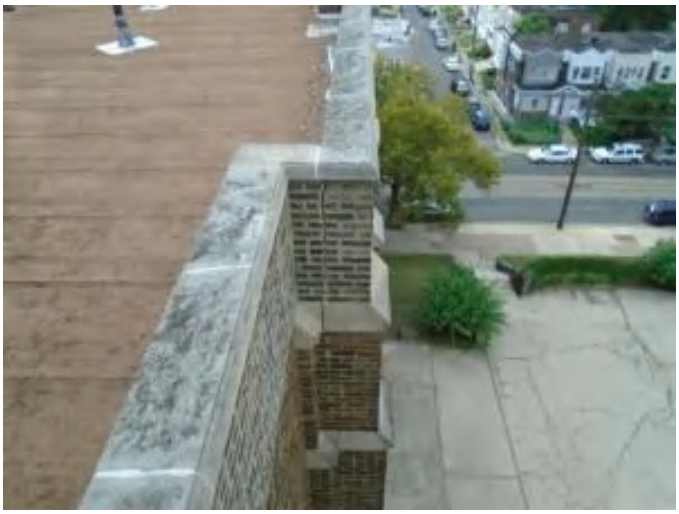
Estimate: $76,834.43

Assessor Name: System

Date Created: 09/22/2015

Notes: Repair expansion joint between building and exterior sidewalk – allowing water intrusion

System: B2010 - Exterior Walls



Location: South wall

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: S.F.

Estimate: $6,457.90

Assessor Name: System

Date Created: 09/22/2015

Notes: Repair masonry – vertical crack on south side

System: C1010 - Partitions

Location: Shower rooms

Distress: Inadequate

Category: 3 - Operations / Maint.

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

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

Qty: 2.00

Unit of Measure: Ea.

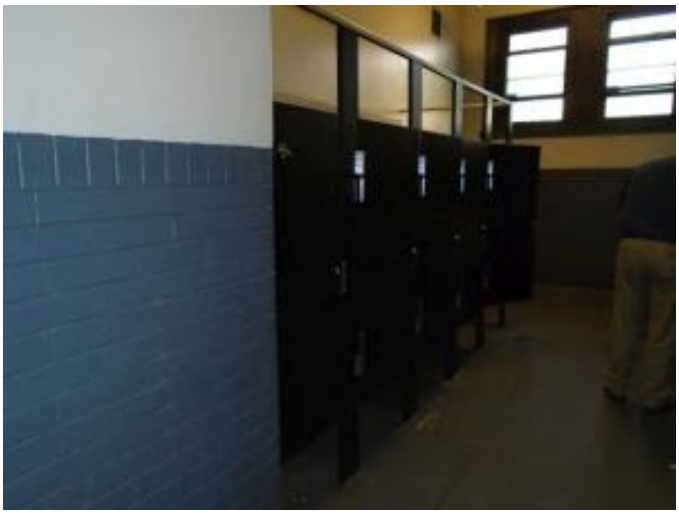
Estimate: $438,757.14

Assessor Name: System

Date Created: 11/19/2015

Notes: Completely renovate male and female shower rooms, 16 shower heads per room.

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: 15.00

Unit of Measure: Ea.

Estimate: $14,667.83

Assessor Name: System

Date Created: 09/23/2015

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

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 16.00

Unit of Measure: Ea.

Estimate: $228,884.69

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace 40% of water closets, 32 each.

System: D2010 - Plumbing Fixtures

Location: Hallways

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 12.00

Unit of Measure: Ea.

Estimate: $188,314.75

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace drinking fountains with ADA compliant fountains including integral coolers, 12 pairs.

System: D2010 - Plumbing Fixtures

Location: Toilet rooms and classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 24.00

Unit of Measure: Ea.

Estimate: $154,277.00

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace 60% of lavatories, 36 each.

System: D2010 - Plumbing Fixtures

Location: Janitor closets

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace wall janitor or mop sink - insert the quantity

Qty: 12.00

Unit of Measure: Ea.

Estimate: $94,376.49

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace 12 service sinks due to age, wear, and rust.

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove and replace or replace wall hung urinals

Qty: 4.00

Unit of Measure: Ea.

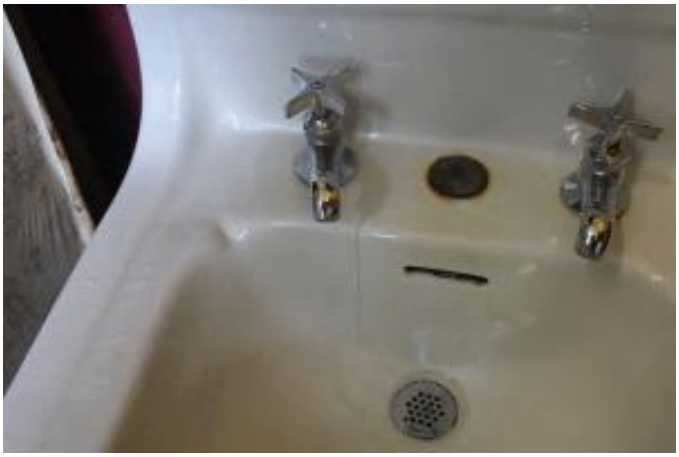
Estimate: $53,440.93

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace 50% of urinals, 15 each.

System: D2010 - Plumbing Fixtures



Location: Toilet rooms and classrooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace lavatory faucet

Qty: 15.00

Unit of Measure: Ea.

Estimate: $3,973.70

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace (additional) 25% of faucet valves, 15 each.

System: D2020 - Domestic Water Distribution

Location: Basement

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace duplex domestic booster pump set (5 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $50,533.86

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace domestic water booster system including hydro-pneumatic storage tank.

System: D2030 - Sanitary Waste

Location: Basement

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace sanitary sewage ejector pit and pumps. (48" dia.)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $15,764.25

Assessor Name: System

Date Created: 11/19/2015

Notes: Install 2 sump pumps for ground water collection and condensate trough.

System: D2040 - Rain Water Drainage

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace rain water drainage piping - based on +- 30 KSF roof area on 3-4 story building - insert the SF of roof area to be drained

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $403,114.76

Assessor Name: System

Date Created: 11/19/2015

Notes: Inspect rain water drain pipe and repair as needed.

System: D3040 - Distribution Systems

Location: Life skills and parent resource center rooms.

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide inline ceiling exhaust fan and wall outlet louver

Qty: 2.00

Unit of Measure: Ea.

Estimate: $2,265.63

Assessor Name: System

Date Created: 11/19/2015

Notes: Install vents for clothes dryers in life skills and parent resource center rooms. (Code compliance.)

System: D3060 - Controls & Instrumentation

Location: Entire building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 127,000.00

Unit of Measure: S.F.

Estimate: $2,274,748.38

Assessor Name: System

Date Created: 11/19/2015

Notes: Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

System: D5010 - Electrical Service/Distribution

Location: Entire Building
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 2 - Response Time (2-3 yrs)
Correction: Replace Panelboard
Qty: 30.00
Unit of Measure: Ea.
Estimate: $871,992.01
Assessor Name: System
Date Created: 10/22/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Approximate (30) 208/120V panel boards.

System: D5010 - Electrical Service/Distribution

Location: Basement
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 2 - Response Time (2-3 yrs)
Correction: Replace unit substation
Qty: 1.00
Unit of Measure: Ea.
Estimate: $782,487.85
Assessor Name: System
Date Created: 10/21/2015

Notes: Provide a new electrical service 480V/277V, 3 phase power, approximate 2500 Amperes and will be located in the vicinity of the existing electrical service.

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: 768.00

Unit of Measure: Ea.

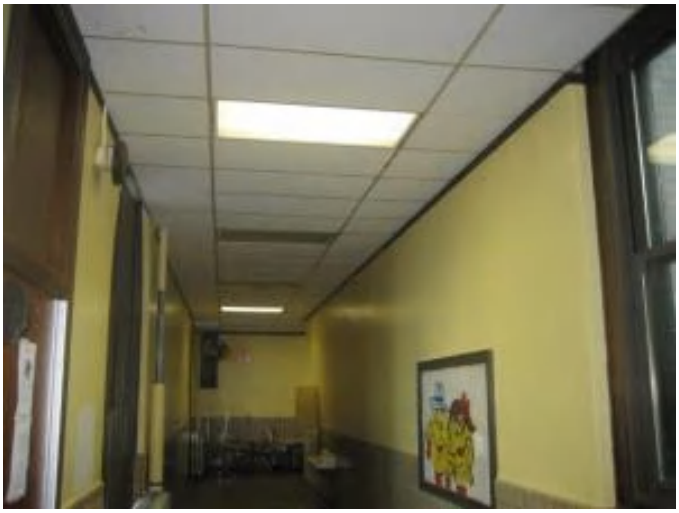
Estimate: $282,140.92

Assessor Name: System

Date Created: 10/22/2015

Notes: Provide (2)25FT of surface raceways with receptacles spaced 24” on center and 4 wall mount receptacles per classroom. Approximate 768

System: D5030 - Communications and Security



Location: Entire Buildiing

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add/Replace Video Surveillance System

Qty: 85.00

Unit of Measure: Ea.

Estimate: $278,537.83

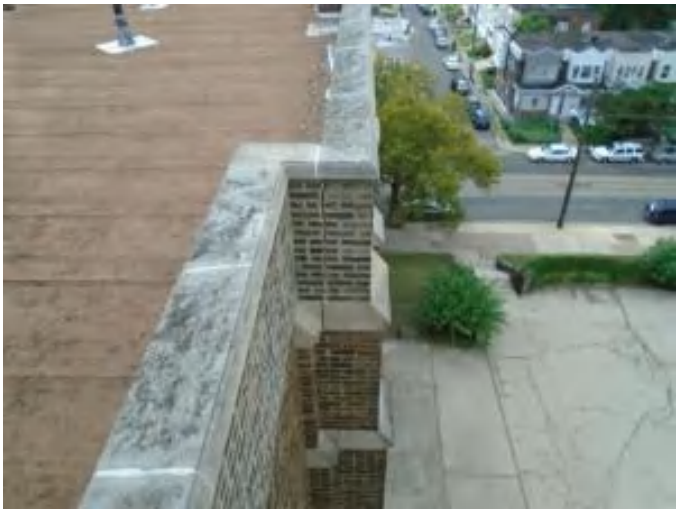
Assessor Name: System

Date Created: 10/22/2015

Notes: Add CCTV cameras to provide a full coverage of the building interior. Approximate 85 CCTV cameras

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

System: B2010 - Exterior Walls



Location: Roof

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

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

Qty: 800.00

Unit of Measure: L.F.

Estimate: $16,052.81

Assessor Name: System

Date Created: 09/22/2015

Notes: Re-caulk capstone joints on parapet wall – allowing water intrusion

System: C3020413 - Vinyl Flooring

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2,719.00

Unit of Measure: S.F.

Estimate: $41,238.17

Assessor Name: System

Date Created: 09/23/2015

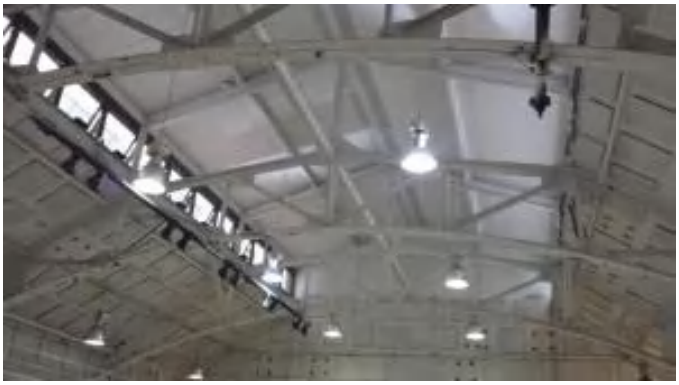
Notes: Replace damaged VAT with VCT – (5% of vinyl floor area)

System: C3020415 - Concrete Floor Finishes

Location: Toilets
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Repair spalled concrete floor surface
Qty: 800.00
Unit of Measure: S.F.
Estimate: $57,262.46
Assessor Name: System
Date Created: 09/23/2015

Notes: Level and repair concrete floors in toilets – not sloped to drain

System: C3030 - Ceiling Finishes



Location: Gyms
Distress: Maintenance Required
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Re-paint ceilings - SF of ceilings
Qty: 8,320.00
Unit of Measure: S.F.
Estimate: $75,140.15
Assessor Name: System
Date Created: 09/23/2015

Notes: Paint structural steel ceiling and replace acoustic panels in gyms

System: D2030 - Sanitary Waste

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+200KSF)

Qty: 181,000.00

Unit of Measure: S.F.

Estimate: $785,535.30

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace sanitary waste piping.

System: D3040 - Distribution Systems

Location: Entire building

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 181,000.00

Unit of Measure: S.F.

Estimate: $1,712,327.53

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace steam and condensate pipe system including steam traps and condensate pumps.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace fire alarm system

Qty: 250.00

Unit of Measure: S.F.

Estimate: $521,145.85

Assessor Name: System

Date Created: 10/22/2015

Notes: Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 250 devices

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

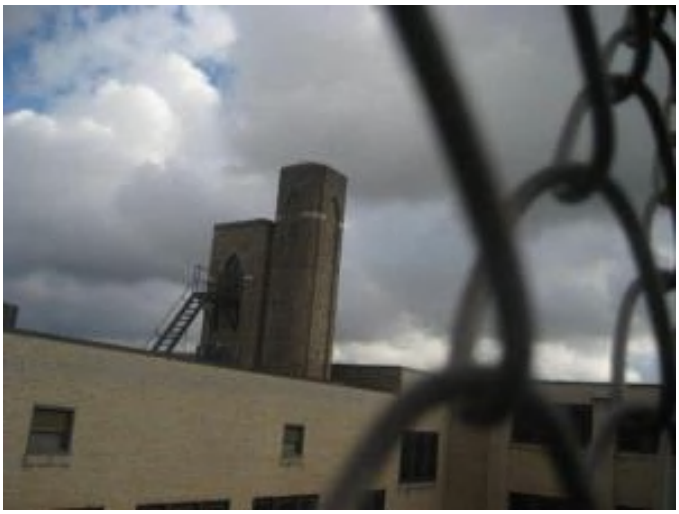
Estimate: $366,204.29

Assessor Name: System

Date Created: 10/22/2015

Notes: Provide 150KW, roof mounted, diesel powered generator.

System: D5090 - Other Electrical Systems



Location: Roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide Lightning Protection System

Qty: 1.00

Unit of Measure: LS

Estimate: $21,472.30

Assessor Name: System

Date Created: 10/22/2015

Notes: Prepare a study to determine if the existing lightning system provide the proper protection to the school building.

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

System: C1020 - Interior Doors

Location: Storage doors

Distress: Not Reliable

Category: 3 - Operations / Maint.

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

Correction: Replace door knobs with compliant lever type

Qty: 25.00

Unit of Measure: Ea.

Estimate: $13,914.24

Assessor Name: System

Date Created: 09/22/2015

Notes: Replace latch sets on classroom storage rooms – no keys or master keys

System: C3010230 - Paint & Covering

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 31,193.00

Unit of Measure: S.F.

Estimate: $267,232.80

Assessor Name: System

Date Created: 09/23/2015

Notes: Repair and paint interior plaster walls – damaged (10% of plaster area and entire 5th floor)

System: C3030 - Ceiling Finishes

Location: Various

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 36,250.00

Unit of Measure: S.F.

Estimate: $546,738.11

Assessor Name: System

Date Created: 09/23/2015

Notes: Replace suspended acoustic tile ceiling system – beyond service life (50% of suspended ceiling)

System: C3030 - Ceiling Finishes

Location: Basement

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 2,856.00

Unit of Measure: S.F.

Estimate: $14,647.92

Assessor Name: System

Date Created: 09/23/2015

Notes: Demo suspended ceiling in basement – damaged and not used

System: D2020 - Domestic Water Distribution

Location: Basement

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace instantaneous water heater

Qty: 1.00

Unit of Measure: Ea.

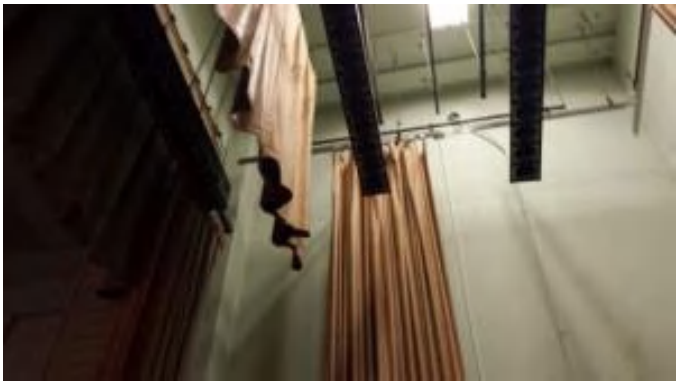
Estimate: $34,375.16

Assessor Name: System

Date Created: 11/19/2015

Notes: Replace domestic water heater and circulation pump, to provide sufficient hot water to cafeteria kitchen.

System: E1020 - Institutional Equipment



Location: Stage

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 3.00

Unit of Measure: Ea.

Estimate: $4,267.72

Assessor Name: System

Date Created: 09/23/2015

Notes: Replace stage equipment – damaged curtains

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Entire building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace domestic water piping (150 KSF)
Qty: 127,000.00
Unit of Measure: S.F.
Estimate: $526,677.88
Assessor Name: System
Date Created: 11/19/2015

Notes: Replace domestic water supply piping.

System: D3030 - Cooling Generating Systems

This deficiency has no image.

Location: Entire building
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 5 - Response Time (> 5 yrs)
Correction: Install chilled water system with distribution piping and pumps. (+150KSF)
Qty: 135,000.00
Unit of Measure: S.F.
Estimate: $2,245,253.14
Assessor Name: System
Date Created: 11/19/2015

Notes: Install 450 ton capacity central air-conditioning system.

System: D3040 - Distribution Systems

Location: Basement fan rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 600.00

Unit of Measure: Seat

Estimate: $1,769,036.69

Assessor Name: System

Date Created: 01/19/2016

Notes: Remove 3 obsolete original air handlers and replace with modern equipment, including insulated ducts and new airflow control dampers and doors, and replace radiators.

System: D4010 - Sprinklers

Location: Entire building.

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 181,000.00

Unit of Measure: S.F.

Estimate: $2,589,287.22

Assessor Name: System

Date Created: 11/19/2015

Notes: Install a fire protection sprinkler system. A fire pump may be required depending on the available city water pressure.

System: E2010 - Fixed Furnishings

Location: Auditorium / balcony

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 842.00

Unit of Measure: Ea.

Estimate: $642,120.20

Assessor Name: System

Date Created: 09/23/2015

Notes: Replace auditorium seats – failing and beyond service life

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
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 40,000 CFM	3.00	Ea.	Basement fan rooms					25	1927	2042	$151,511.80	$499,988.94
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1200 amp, excl breakers	1.00	Ea.	Basement					30	1927	2047	$6,551.55	$7,206.71
E1020 Institutional Equipment	Electric traction passenger elevator, base unit, standard finish, 2000 lb, 200 fpm, 4 stop	1.00	Ea.	Roof					35	1975	2020	$143,275.00	$157,602.50
												Total:	**$664,798.15**

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):	180,000
Year Built:	1927
Last Renovation:	
Replacement Value:	$3,486,600
Repair Cost:	$527,553.20
Total FCI:	15.13 %
Total RSLI:	58.95 %

Description:

Attributes:

General Attributes:

Bldg ID:	S101001	Site ID:	S101001

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	66.37 %	7.26 %	$196,199.73
G40 - Site Electrical Utilities	33.33 %	42.32 %	$331,353.47
Totals:	**58.95 %**	**15.13 %**	**$527,553.20**

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				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.		0				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$11.52	S.F.	160,000	40	1995	2035		50.00 %	2.84 %	20		$52,432.11	$1,843,200
G2040	Site Development	$4.36	S.F.	180,000	25	1980	2005	2042	108.00 %	18.32 %	27		$143,767.62	$784,800
G2050	Landscaping & Irrigation	$3.78	S.F.	20,000	15	1995	2010	2020	33.33 %	0.00 %	5			$75,600
G4020	Site Lighting	$3.58	S.F.	180,000	30	1995	2025		33.33 %	35.77 %	10		$230,471.00	$644,400
G4030	Site Communications & Security	$0.77	S.F.	180,000	30	1995	2025		33.33 %	72.79 %	10		$100,882.47	$138,600
								Total	**58.95 %**	**15.13 %**			**$527,553.20**	**$3,486,600**

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.

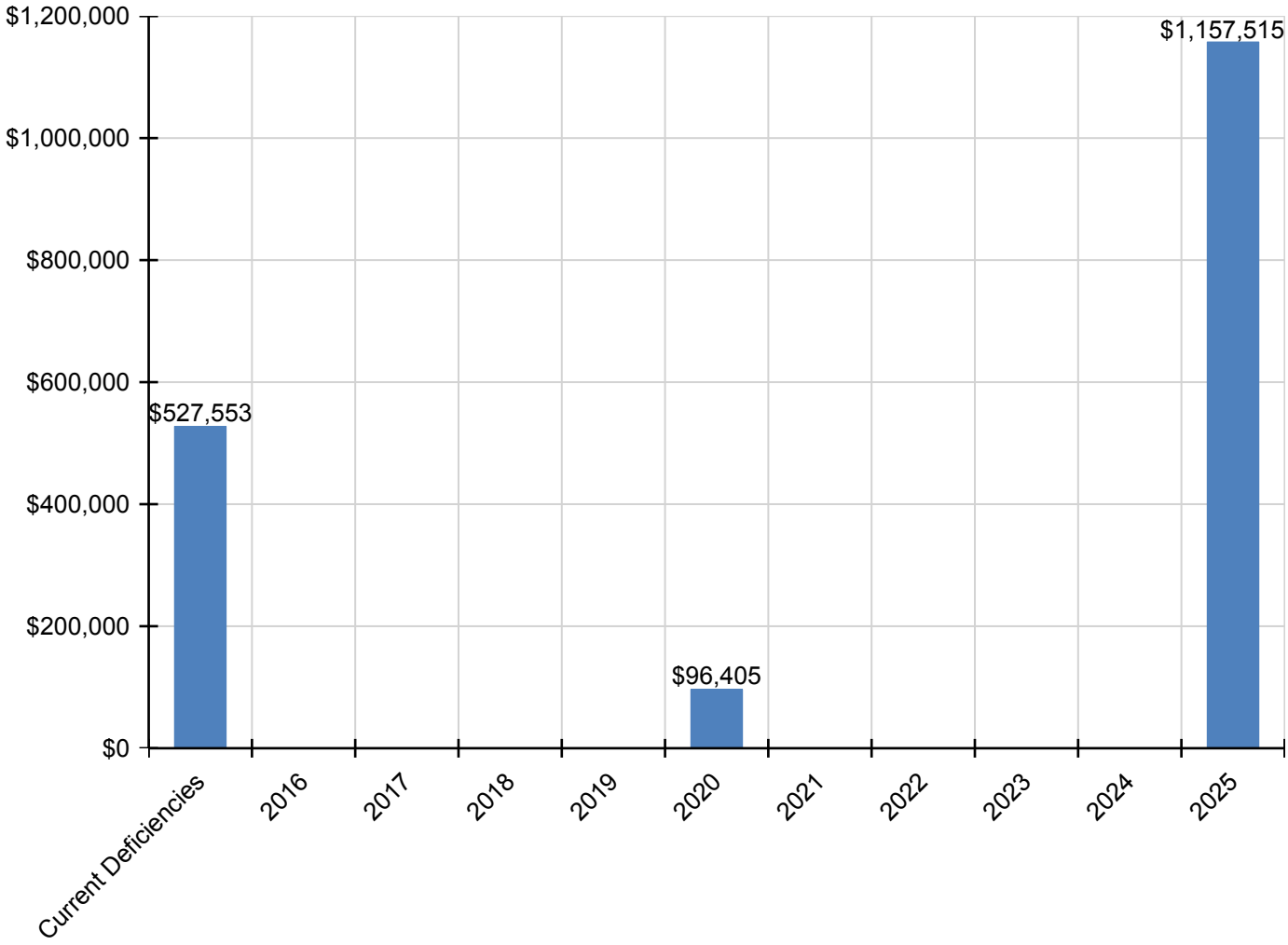
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$527,553**	**$0**	**$0**	**$0**	**$0**	**$96,405**	**$0**	**$0**	**$0**	**$0**	**$1,157,515**	**$1,781,474**
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	$52,432	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$52,432**
G2040 - Site Development	$143,768	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$143,768**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$96,405	$0	$0	$0	$0	$0	**$96,405**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$230,471	$0	$0	$0	$0	$0	$0	$0	$0	$0	$952,622	**$1,183,093**
G4030 - Site Communications & Security	$100,882	$0	$0	$0	$0	$0	$0	$0	$0	$0	$204,893	**$305,776**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

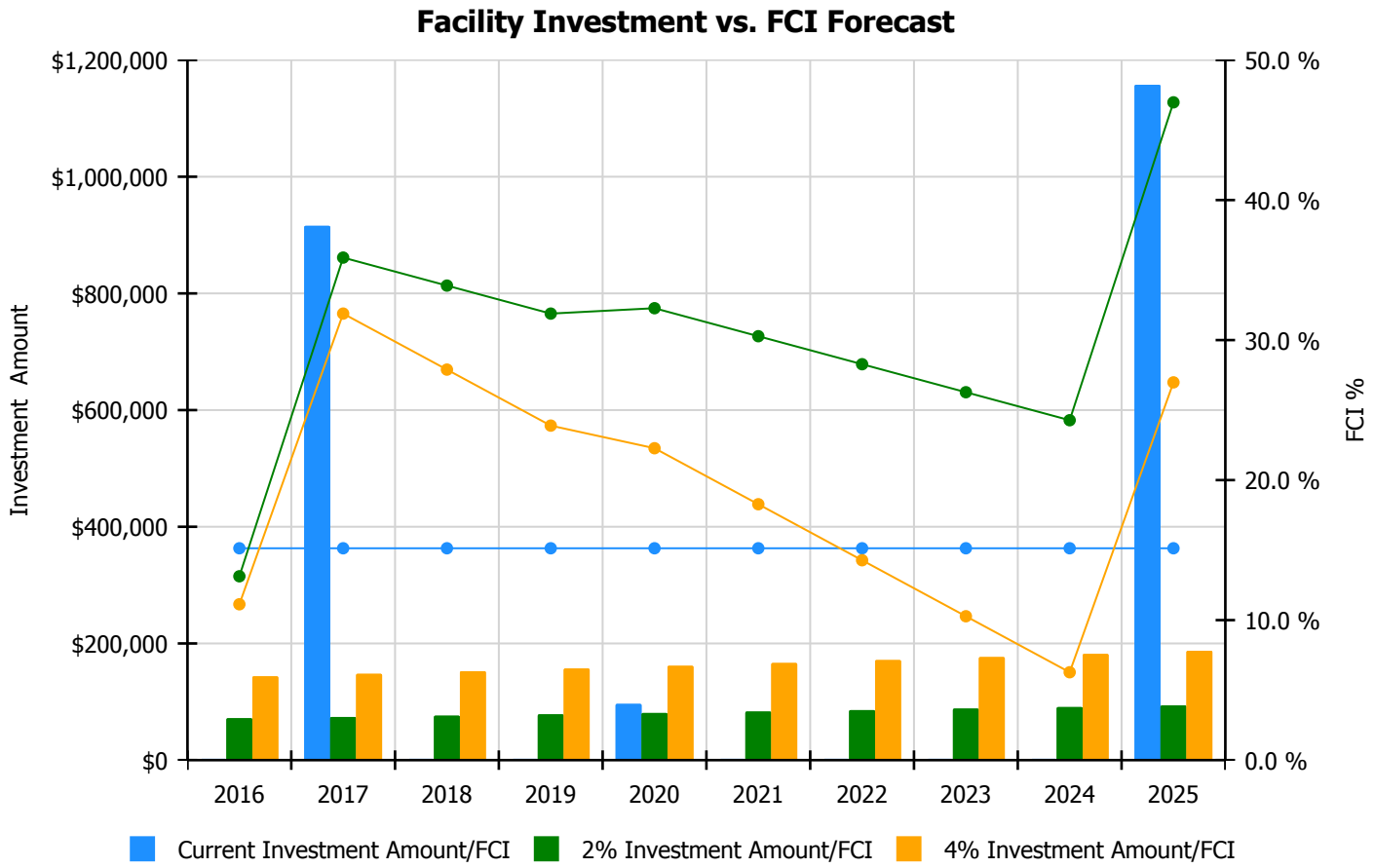
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

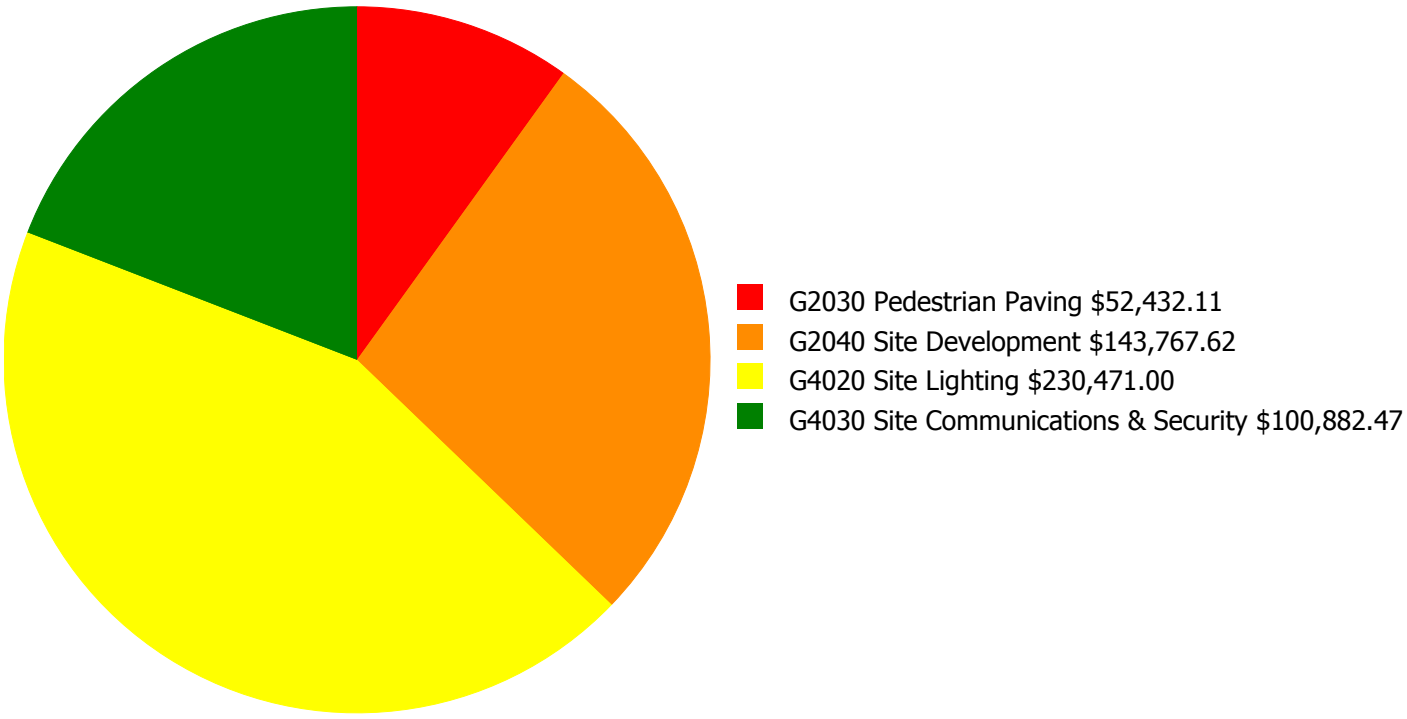
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 15.13%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$71,824.00	13.13 %	$143,648.00	11.13 %
2017	$915,854	$73,979.00	35.89 %	$147,957.00	31.89 %
2018	$0	$76,198.00	33.89 %	$152,396.00	27.89 %
2019	$0	$78,484.00	31.89 %	$156,968.00	23.89 %
2020	$96,405	$80,838.00	32.28 %	$161,677.00	22.28 %
2021	$0	$83,264.00	30.28 %	$166,527.00	18.28 %
2022	$0	$85,762.00	28.28 %	$171,523.00	14.28 %
2023	$0	$88,334.00	26.28 %	$176,669.00	10.28 %
2024	$0	$90,984.00	24.28 %	$181,969.00	6.28 %
2025	$1,157,515	$93,714.00	46.98 %	$187,428.00	26.98 %
Total:	**$2,169,774**	**$823,381.00**		**$1,646,762.00**	

Deficiency Summary by System

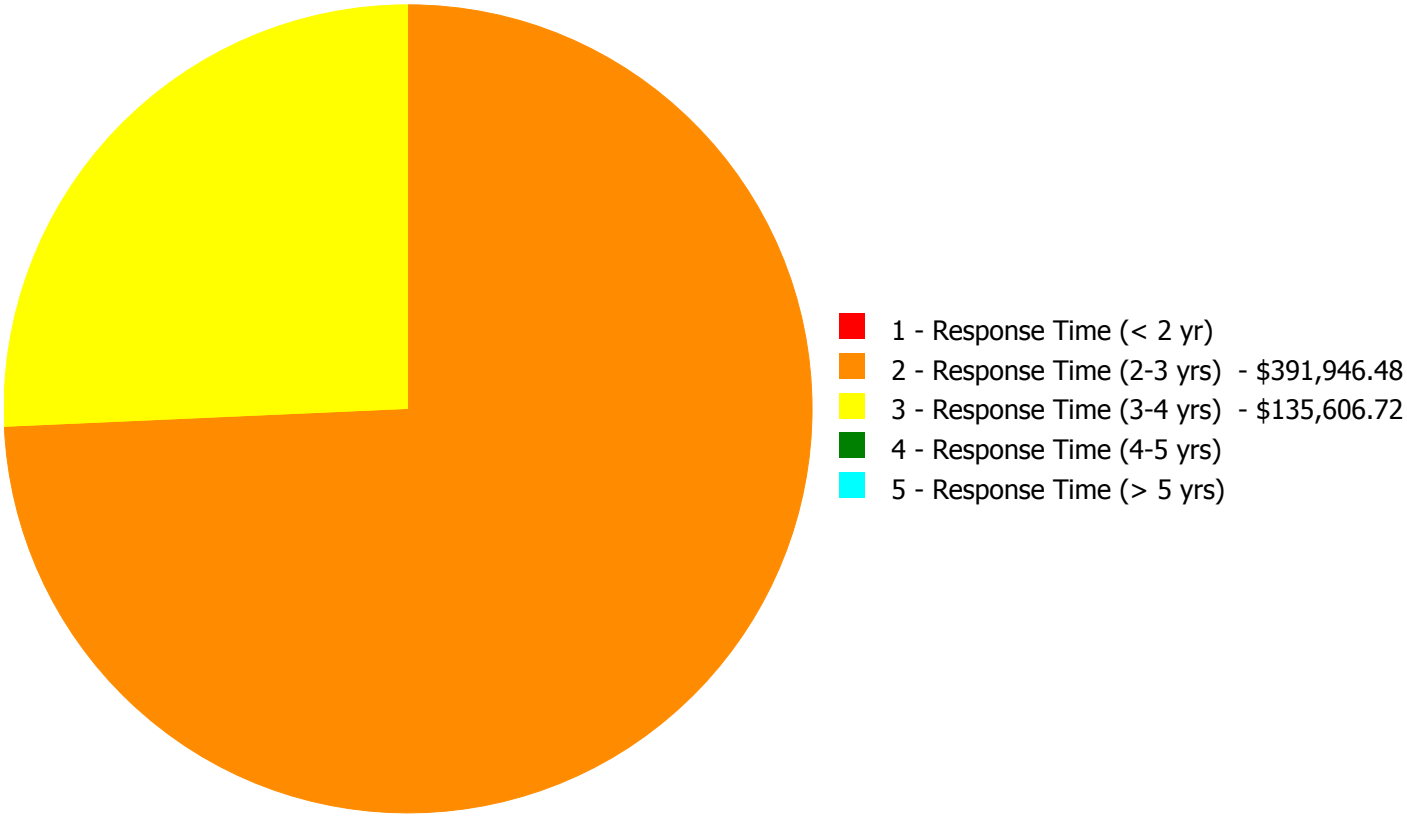
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $527,553.20

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: $527,553.20

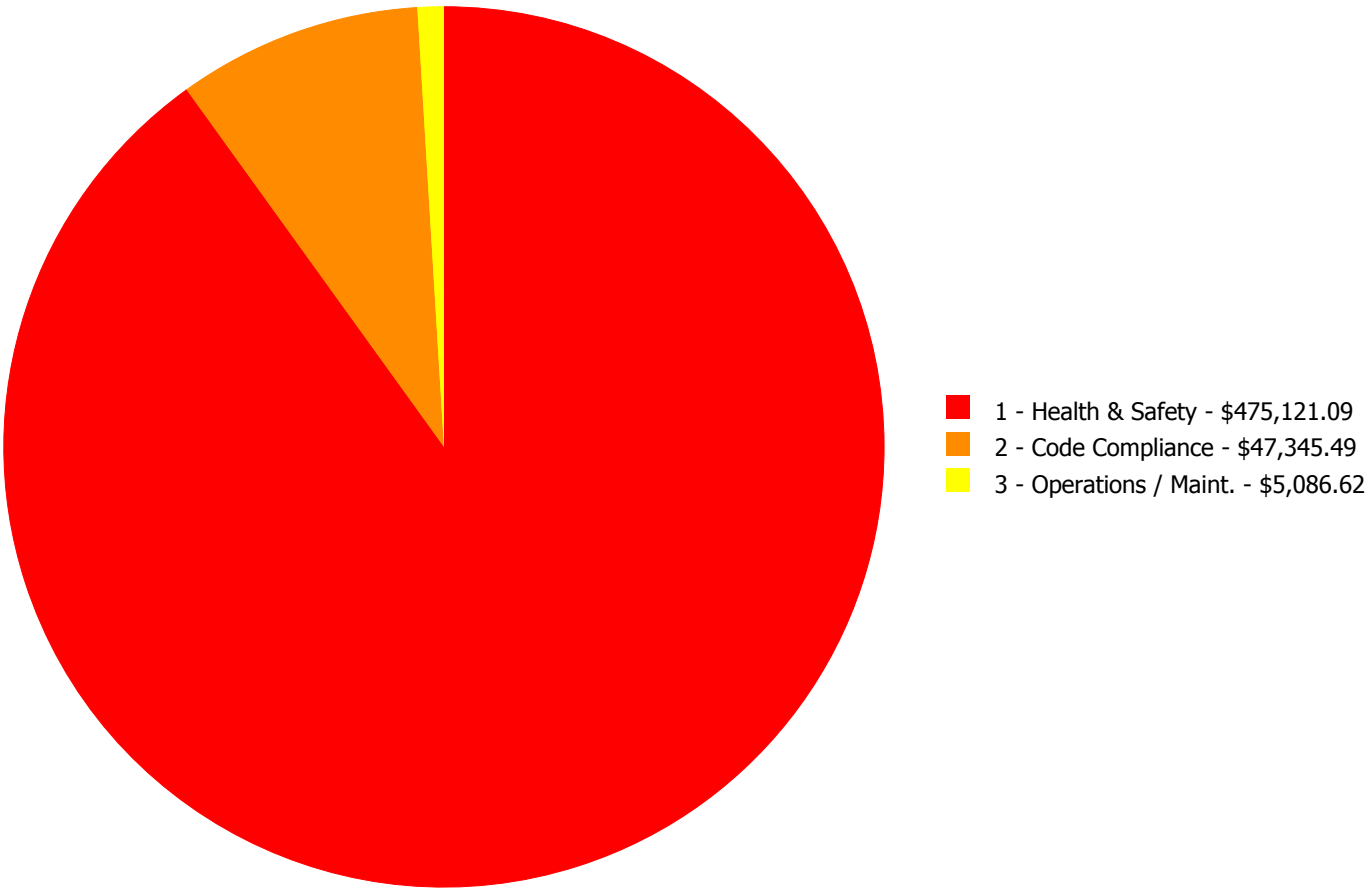
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$47,345.49	$5,086.62	$0.00	$0.00	$52,432.11
G2040	Site Development	$0.00	$13,247.52	$130,520.10	$0.00	$0.00	$143,767.62
G4020	Site Lighting	$0.00	$230,471.00	$0.00	$0.00	$0.00	$230,471.00
G4030	Site Communications & Security	$0.00	$100,882.47	$0.00	$0.00	$0.00	$100,882.47
	Total:	$0.00	$391,946.48	$135,606.72	$0.00	$0.00	$527,553.20

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: $527,553.20

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

Location: Entrance

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 20.00

Unit of Measure: L.F.

Estimate: $47,345.49

Assessor Name: Craig Anding

Date Created: 08/13/2015

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

System: G2040 - Site Development

Location: Yard

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Remove and replace chain link gate - 6' high

Qty: 4.00

Unit of Measure: Ea.

Estimate: $13,247.52

Assessor Name: Craig Anding

Date Created: 09/23/2015

Notes: Install vehicle access gates for site security

System: G4020 - Site Lighting

Location: Parkinglot/playground

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 12.00

Unit of Measure: Ea.

Estimate: $230,471.00

Assessor Name: Craig Anding

Date Created: 08/07/2015

Notes: Provide 12 pole mounted lighting fixtures for security

System: G4030 - Site Communications & Security

Location: Tilden- Building Perimeter

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add Video Surveillance System

Qty: 8.00

Unit of Measure: Ea.

Estimate: $100,882.47

Assessor Name: Craig Anding

Date Created: 10/22/2015

Notes: Provide outdoor CCTV cameras for complete coverage of the building perimeter. Approximate 8 cameras

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

System: G2030 - Pedestrian Paving

Location: Yard

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Resurface AC pedestrian paving - grind and resurface

Qty: 1,425.00

Unit of Measure: S.F.

Estimate: $5,086.62

Assessor Name: Craig Anding

Date Created: 09/23/2015

Notes: Repair cracks in asphalt paving

System: G2040 - Site Development

Location: Site

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Paint steel picket fence - LF of fence 6' high

Qty: 2,000.00

Unit of Measure: L.F.

Estimate: $130,520.10

Assessor Name: Craig Anding

Date Created: 08/13/2015

Notes: Replace site fencing to secure property

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