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.

Bache-Martin School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	2201 Brown St.	Enrollment	480
	Philadelphia, Pa 19130	Grade Range	'00-08'
Phone/Fax	215-684-5074 / 215-684-5446	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Bachemartin	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**69.86%**	**$16,705,080**	**$23,911,530**
Building	69.33 %	$16,345,458	$23,575,460
Grounds	107.01 %	$359,621	$336,070

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	119.84 %	$905,118	$755,254
Exterior Walls (Shows condition of the structural condition of the exterior facade)	60.25 %	$1,007,432	$1,672,023
Windows (Shows functionality of exterior windows)	169.82 %	$1,385,484	$815,853
Exterior Doors (Shows condition of exterior doors)	138.65 %	$91,073	$65,685
Interior Doors (Classroom doors)	245.88 %	$390,964	$159,003
Interior Walls (Paint and Finishes)	135.00 %	$1,028,049	$761,493
Plumbing Fixtures	07.43 %	$45,475	$612,456
Boilers	127.70 %	$1,079,984	$845,751
Chillers/Cooling Towers	64.60 %	$716,386	$1,108,944
Radiators/Unit Ventilators/HVAC	158.18 %	$3,080,500	$1,947,447
Heating/Cooling Controls	158.90 %	$971,780	$611,550
Electrical Service and Distribution	214.63 %	$943,118	$439,410
Lighting	50.39 %	$791,653	$1,571,004
Communications and Security (Cameras, Pa System and Fire Alarm)	50.27 %	$295,831	$588,447

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.

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.

Martin (Bache-Martin) School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	2201 Brown St.	Enrollment	
	Philadelphia, Pa 19130	Grade Range	'00-08'
Phone/Fax	215-684-5074 / 215-684-5446	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Bachemartin	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**37.86%**	**$13,364,629**	**$35,298,431**
Building	37.96 %	$13,258,196	$34,929,276
Grounds	28.83 %	$106,433	$369,155

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$2,229,520
Exterior Walls (Shows condition of the structural condition of the exterior facade)	44.58 %	$807,237	$1,810,760
Windows (Shows functionality of exterior windows)	00.00 %	$0	$790,540
Exterior Doors (Shows condition of exterior doors)	244.47 %	$236,790	$96,860
Interior Doors (Classroom doors)	109.37 %	$238,513	$218,080
Interior Walls (Paint and Finishes)	41.24 %	$378,856	$918,720
Plumbing Fixtures	00.00 %	$0	$1,831,640
Boilers	00.00 %	$0	$1,082,860
Chillers/Cooling Towers	50.14 %	$711,883	$1,419,840
Radiators/Unit Ventilators/HVAC	189.97 %	$4,736,654	$2,493,420
Heating/Cooling Controls	186.51 %	$1,460,373	$783,000
Electrical Service and Distribution	143.96 %	$809,930	$562,600
Lighting	51.78 %	$1,041,608	$2,011,440
Communications and Security (Cameras, Pa System and Fire Alarm)	39.27 %	$295,831	$753,420

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

S221001;Bache-Martin

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	45,300
Year Built:	1906
Last Renovation:	2005
Replacement Value:	$23,911,530
Repair Cost:	$16,705,079.52
Total FCI:	69.86 %
Total RSLI:	72.36 %

Description:

Facility Assessment
June, 2015

School District of Philadelphia
Bache-Martin Elementary School
801 N. 22nd Street
Philadelphia, PA 19130

45,300 SF / 894 Students / LN 03

The Bache-Martin School Building is located at 801 N. 22nd Street in Philadelphia, PA. The 3 story, 45,300 square foot building was originally constructed in 1906. The building has a full basement.

Mr. Derek Parker, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. Robert Morgan, Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and recent maintenance history. The school principal, Mr. Mark Vitvitzky provided additional information about building condition.

STRUCTURAL/ EXTERIOR CLOSURE:

The building typically rests on stone masonry and concrete foundations and bearing walls that are not showing signs of settlement. There is evidence of water penetration, particularly in South West corner of the basement with standing water in some parts of the boiler room and other support spaces.

The main structure consists typically of masonry load bearing walls supporting one-way concrete slabs, in good condition.

The building envelope is typically granite ashlar facing on elevations facing streets and face brick on the courtyard sides. In general, masonry is in fair to poor condition. The school principal reported water penetration on West wall especially during heavy rains.

The original windows were replaced in late 1990's with extruded aluminum double hung windows single glazed with acrylic glazing. The old window frames were left in place and are rotting causing leaks around window's perimeters. All windows are generally in poor to very poor condition with some of the windows inoperable; basement and first floor windows are fitted with the security screens in good condition.

The roof structure consists of heavy timber trusses, girders and purlins supporting wood structural deck. All asphalt shingle roofing and flashing are approximately 20 years old and typically in poor condition. Sky bridges leading to fire escape tower are covered with corrugated metal deck, in poor condition and rusting. Stair tower has flat built-up roof in poor condition.

Exterior doors and frames are typically hollow metal in poor condition; some doors are rusting. The doors are at the end of their useful life.

INTERIORS:

Partition wall types include plastered ceramic blocks (hollow brick) and drywall. The interior wall finishes are generally painted plaster with chair rail trim, painted brick in the basement, and stone panel wainscot in stairways. Generally, paint is in fair condition on all floors and very poor condition in the basement mechanical spaces.

Toilets have ceramic tiles on walls installed in early 2000'.

Most ceilings are 2x4 suspended acoustical panels. The suspension system and tile are old and approaching the end of their useful life. The balance of ceilings is generally plastered in various stages of deterioration, particularly in basement mechanical spaces.

Flooring in classrooms and most corridors is hardwood. Toilet flooring is ceramic tile good condition, installed in early 2000's. VCT is installed in few rooms and in poor condition, some tiles are missing.

Interior doors are wood rail and stile wood doors with transoms, generally in poor condition in need of refinishing, some glazed; doors leading to exit stairways are retrofitted with hollow metal doors and frames in good condition.

Stair construction is generally painted wood with non-slip treads and wooden handrails.

Fittings include original chalk boards, generally in poor condition.

All toilets are fitted with phenolic panel partitions and accessories installed approximately in early 2000's and in very good condition.

Interior identifying signage is typically directly painted on wall or door surfaces in poor condition. Some signage is missing.

CONVEYING EQUIPMENT:

The building does not have an elevator.

ACCESSIBILITY:

The building does not have accessible entrance, and accessible routes. There is no elevator to reach floors above. None of the doors in the building has ADA required door handles. Toilets are generally in compliance with ADA.

GROUNDS (SITE):

There is no parking lot at the site.

Playground adjacent to the building is in poor condition, paving is cracked and deteriorated; playground equipment is in poor condition. Original perimeter fences are generally in poor condition and rusting; chain link fence along North property line is rusting. There is no landscaping.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures have been replaced. Fixtures in the restrooms on each floor consist of wall and floor mounted flush valve water closets, wall hung urinals and lavatories with wheel handle faucets. These fixtures should provide reliable service for the next 5-10 years.

Drinking fountains in the corridors and at the restrooms are wall hung with integral refrigerated coolers. Several fountains are beyond their service life and should be replaced; some are NOT accessible type.

A service sink is available in a janitor closet in the corridor on each floor for use by the janitorial staff.

The Cafeteria has one three compartment stainless steel sink with lever operated faucets but no integral grease trap.

Domestic Water Distribution - A 4" city water service enters the building from N. 22nd Street. The meter is 3" and located in the basement mechanical room. A reduced pressure backflow preventer is installed on the incoming domestic line. A duplex Armstrong domestic water booster pump is installed in the coal/ash room.

The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

A single Bradford White gas fired, 75 gallon, vertical hot water heater with circulating pump supplies hot water for domestic use. The unit is located in the coal/ash room on the basement level and its installation date is unknown. The hot water heater is equipped with a T&P relief valve, and expansion tank.

Sanitary Waste - The original storm and sanitary sewer piping is heavy weight cast iron with hub and spigot fittings. Some of the original piping has been replaced with cast iron piping with no-hub couplings.

A sewage ejector pit, located in basement boiler room, receives water from the basement area. It has one pump that is within its service life. The pit is not sealed.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for decades and will require more frequent attention from the maintenance staff as time passes. 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 - The rain water from the roof is routed down the exterior of the building by both aluminum and cast iron hub and spigot downspouts. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Energy Supply - An 8" city gas service enters the building from N. 22nd Street. The meter is 6" and located in the in the basement coal/ash room. The gas main has a booster pump connected in the coal/ash room.

The oil supply is stored in an 8,000 gallon underground storage tank (UST) located in the parking lot behind the building. Duplex pumps located in the basement boiler room circulate oil through the system. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The current supply has been in storage for some time and should be tested for quality on a regular schedule. USTs have an anticipated service life of 20 years.

Heat Generating Systems - Low pressure steam is generated at a maximum of 15 lbs/sq. in., typically 5-8 lbs/sq. in., three 109.5HP Smith 3500A-14 cast iron sectional boilers. The building engineer did not know when the boilers were installed but estimated they are over 40 years old. These boilers serve both the Bashe school building and Martin school building, which is across the street. Three boilers are required in normal winter weather conditions to hold the buildings' load. Each boiler is equipped with a Power Flame burner

designed to operate on natural gas or fuel oil. Burner controls provide full modulation with electronic ignition, digital flame sensing and pressure atomization on oil. Burner oil pumps are loose and not driven by the fan motor. Induced draft fans with positive draft control are installed on the rear of each boiler. Cast iron sectional boilers have an anticipated service life of 35 years or more; as these units have been in service for decades they should be replaced.

The boiler feed pump and tank assembly is installed in the boiler room, has significant amounts of rust on its exterior, and should be replaced. A condensate booster pump and pit are located in the boiler room. A serious problem was reported with failed steam traps. Live steam passes into the condensate piping system from the failed traps and then vents from the condensate handling equipment. The District should conducted a steam trap survey for this building and ensure traps are serviced on a regular schedule.

Distribution Systems - Steam piping is black steel (ASTM A53) with welded fittings. Not all of the steam piping in the basement was insulated. The condensate piping is Schedule 80 black steel with threaded fittings. Steam and condensate piping mains from the basement level run up through the building to the unit ventilators on all three floors. The distribution piping has been in use well beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

Two pipe unit ventilators provide heating for classrooms, offices, and hallways. The unit ventilators are well beyond their service life and should be replaced. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce sufficient outdoor air to the building.

The school Cafeteria is supplied ventilation by three unit ventilators, which do not provide sufficient code required ventilation. Provide sufficient ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers. For the administration offices install a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings. These units would be equipped with hot water heating coils and chilled water cooling coils. Install steam converters in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.

The exhaust fans serving the restrooms are operational but beyond their service life and should be replaced while utilizing the existing ductwork. The fans were not accessible due to being located in an asbestos containing area.

Terminal & Package Units - Several of the classrooms in the school building have window air conditioning units that have an anticipated service life of only 10 years. Installing a 120 ton air-cooled chiller with pumps located in a mechanical room and chilled water distribution piping would supply more reliable air conditioning for the building with a much longer service life.

The restrooms on the first and second floors are exhausted by two fans located in the attic above the second floor. The Building Engineer reports that all exhaust fans are operations. The fans were not accessible due to being located in an asbestos containing area.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves are wide open and heating control is achieved via the boilers. Pneumatic control air is supplied from a Champion compressor and Hankisan air dryer located in the boiler room. The maintenance staff reports no problems with oil, moisture, or dirt in the pneumatic copper tubing. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. There are fire stand pipes in each of the two building stairwells. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL:

Site Electrical Service - The present electrical service is from Medium Voltage overhead lines (13.2KV) on wooden poles along N. Twenty-second St. The overhead lines feed a pole top transformer to step down the voltage to 120V/240V. The power is brought

down on the face of the pole and run underground in conduit into the school and into the basement in the electrical room (part of the basement boiler room). The electrical service disconnect switch is old fused switch with a utility metering (PECO 222 MUC-38366). There are many other electrical equipment also housed in the electrical room. These include the main distribution switchboard, and a 12.5KW emergency generator, as well as the Fire Alarm Panel and controller. The main switchboard is at maximum capacity and has no more room for growth. The switchboard is very old and outdated (over 50 years old) have reached their useful life.

Distribution System and Raceway System- The distribution system is both 120V single phase and 120V/208V three phase. There are two distribution panels in each floor for lighting and receptacles. These panels are old and have reached their useful life. The raceway is mainly conduits running above the ceiling.

Receptacles - There is inadequate receptacles in classrooms, multi-purpose room, computer room, etc. We recommend two receptacles in each wall of class rooms and other purpose rooms. Also, we recommend adding a wire-mold system with receptacles on every 3' for the computer room.

Lighting - The lighting fixtures and mixture of florescent and incandescent fixtures. The majority of building has outdated lighting with fixtures that are obsolete.

Fire Alarm System – The present Fire Alarm system is inadequate and is not addressable. A new Automated Fire Alarm System is needed.

Telephone/LAN – The present telephone system is adequate.

Public Address/Intercom/Paging – Although the PA system is not working, the school uses the telephone systems for public announcement. This system is working adequately for most part.

Clock and Program System – The present clocks are not functioning properly.

Television System - The present Television system is adequate.

Security System - The present security system is adequate.

Emergency Power System – The present emergency power system is inadequate, old and undersized. A larger emergency power system (30 KVA) is needed.

UPS – There was adequate UPS in the IT room near the Principals Office.

Emergency Lighting System / Exit Lighting- The emergency lighting and exit lighting is inadequate throughout each floor and stairways.

Lightning Protection System- There is a Lightning Protection System that works but needs minor repairs.

Grounding System - The present grounding system is adequate

Site Lighting - The present Site Lighting System is adequate

Site Video Surveillance - The present Site Video Surveillance System is adequate.

Site Paging - The present Site Paging System is adequate

RECOMMENDATIONS:

- Install waterproofing membrane on exterior face of foundation walls (West side and North side of west wing.
- Repair cracks and tuck-point stone and brick masonry (entire building)
- Install all new shingle roofing including insulation; tear-down existing roofing; install ice and water shield and flashing.
- Replace preformed roof panels on sky bridges
- Replace built-up roof on stair tower.
- Replace all windows
- Replace inoperable movable partitions with permanent partitions
- Replace all suspended acoustical ceilings

- Repair (15%) and repaint plaster ceilings
- Repair and repaint all interior walls
- Replace all exterior doors
- Repair & refinish hardwood flooring
- Replace VCT tile flooring
- Replace classroom doors
- Replace original chalkboards
- Install new signage throughout
- Provide elevator serving all floors
- Provide wheelchair lift at main entrance stair (from ground level to first floor)
- Provide accessible ramp at the main entrance
- Resurface playground
- Replace chain link fence
- Replace picket fence
- Install 4000 lb traction elevator serving all floors and basement
- Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. Some of these units are well beyond their service life and many are NOT accessible type.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the existing 2,845MBH cast iron boilers, which are beyond their service life, burners, and boiler feed tank.
- Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Remove the window air conditioning units and install a 120 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.
- Replace existing exhaust fans serving the bathrooms and utilize the existing ductwork.
- Provide ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.
- Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. 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 with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads.
- Install a new step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads.
- Install two 120V/208V panels to replace the existing panels in each floor. Also replace the power feeders, conduit & wire to the four panels from the new 120V/208V three phase main Panel Board.
- Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3’ for the computer room.
- Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.
- Install a new Automated Fire Alarm System to be located in the new Electrical Room.
- Install a new clock system.
- Install a new emergency power system (30 KVA generator).
- Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S221001		

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.

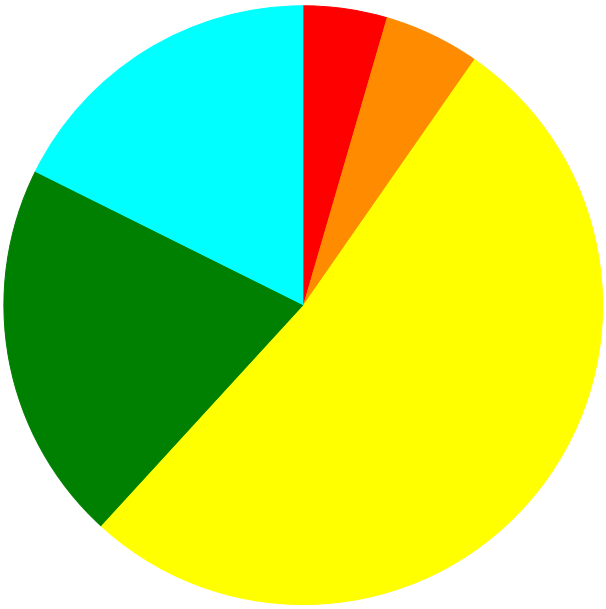
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	21.00 %	24.29 %	$287,463.55
A20 - Basement Construction	21.00 %	0.00 %	$0.00
B10 - Superstructure	21.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	50.08 %	97.28 %	$2,483,989.06
B30 - Roofing	100.60 %	119.84 %	$905,117.63
C10 - Interior Construction	43.69 %	55.80 %	$620,292.23
C20 - Stairs	21.00 %	0.00 %	$0.00
C30 - Interior Finishes	109.64 %	76.85 %	$2,260,361.90
D10 - Conveying	100.00 %	276.55 %	$701,548.04
D20 - Plumbing	51.04 %	34.33 %	$317,547.06
D30 - HVAC	107.88 %	116.06 %	$5,848,648.47
D40 - Fire Protection	105.71 %	177.49 %	$648,036.73
D50 - Electrical	110.11 %	85.34 %	$2,272,453.39
E10 - Equipment	57.14 %	0.00 %	$0.00
E20 - Furnishings	75.00 %	0.00 %	$0.00
G20 - Site Improvements	75.22 %	124.10 %	$241,759.49
G40 - Site Electrical Utilities	106.67 %	83.44 %	$117,861.97
Totals:	**72.36 %**	**69.86 %**	**$16,705,079.52**

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)
B221001;Bache-Martin	45,300	69.33	$648,036.73	$864,652.77	$8,563,418.46	$3,367,662.71	$2,901,687.39
G221001;Grounds	11,900	107.01	$104,642.71	$0.00	$143,843.78	$64,722.83	$46,412.14
Total:		**69.86**	**$752,679.44**	**$864,652.77**	**$8,707,262.24**	**$3,432,385.54**	**$2,948,099.53**

Deficiencies By Priority



1 - Response Time (< 2 yr) - $752,679.44
2 - Response Time (2-3 yrs) - $864,652.77
3 - Response Time (3-4 yrs) - $8,707,262.24
4 - Response Time (4-5 yrs) - $3,432,385.54
5 - Response Time (> 5 yrs) - $2,948,099.53

Budget Estimate Total: $16,705,079.52

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	45,300
Year Built:	1906
Last Renovation:	
Replacement Value:	$23,575,460
Repair Cost:	$16,345,458.06
Total FCI:	69.33 %
Total RSLI:	72.13 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B221001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S221001		

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	21.00 %	24.29 %	$287,463.55
A20 - Basement Construction	21.00 %	0.00 %	$0.00
B10 - Superstructure	21.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	50.08 %	97.28 %	$2,483,989.06
B30 - Roofing	100.60 %	119.84 %	$905,117.63
C10 - Interior Construction	43.69 %	55.80 %	$620,292.23
C20 - Stairs	21.00 %	0.00 %	$0.00
C30 - Interior Finishes	109.64 %	76.85 %	$2,260,361.90
D10 - Conveying	100.00 %	276.55 %	$701,548.04
D20 - Plumbing	51.04 %	34.33 %	$317,547.06
D30 - HVAC	107.88 %	116.06 %	$5,848,648.47
D40 - Fire Protection	105.71 %	177.49 %	$648,036.73
D50 - Electrical	110.11 %	85.34 %	$2,272,453.39
E10 - Equipment	57.14 %	0.00 %	$0.00
E20 - Furnishings	75.00 %	0.00 %	$0.00
Totals:	**72.13 %**	**69.33 %**	**$16,345,458.06**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	45,300	100	1906	2006	2036	21.00 %	34.49 %	21		$287,463.55	$833,520
A1030	Slab on Grade	$7.73	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$350,169
A2010	Basement Excavation	$6.55	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$296,715
A2020	Basement Walls	$12.70	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$575,310
B1010	Floor Construction	$75.10	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$3,402,030
B1020	Roof Construction	$13.88	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$628,764
B2010	Exterior Walls	$36.91	S.F.	45,300	100	1906	2006	2036	21.00 %	60.25 %	21		$1,007,431.53	$1,672,023
B2020	Exterior Windows	$18.01	S.F.	45,300	40	1980	2020	2057	105.00 %	169.82 %	42		$1,385,484.32	$815,853
B2030	Exterior Doors	$1.45	S.F.	45,300	25	1980	2005	2042	108.00 %	138.65 %	27		$91,073.21	$65,685
B3010105	Built-Up	$37.76	S.F.	360	20	1990	2010	2037	110.00 %	89.73 %	22		$12,197.51	$13,594
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	800	30	1980	2010	2047	106.67 %	107.15 %	32		$46,478.87	$43,376
B3010140	Shingle & Tile	$38.73	S.F.	18,000	25	1990	2015	2040	100.00 %	121.42 %	25		$846,441.25	$697,140
B3020	Roof Openings	$0.06	S.F.	19,060	20	1990	2010	2040	125.00 %	0.00 %	25			$1,144
C1010	Partitions	$17.91	S.F.	45,300	100	1906	2006	2036	21.00 %	21.97 %	21		$178,235.98	$811,323
C1020	Interior Doors	$3.51	S.F.	45,300	40	1906	1946	2057	105.00 %	245.88 %	42		$390,964.48	$159,003
C1030	Fittings	$3.12	S.F.	45,300	40	1906	1946	2057	105.00 %	36.15 %	42		$51,091.77	$141,336
C2010	Stair Construction	$1.41	S.F.	45,300	100	1906	2006	2036	21.00 %	0.00 %	21			$63,873

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$16.31	S.F.	45,300	10	2005	2015	2027	120.00 %	139.14 %	12		$1,028,049.12	$738,843
C3010231	Vinyl Wall Covering	$0.00	S.F.	45,300	15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$0.50	S.F.	45,300	30	2005	2035		66.67 %	0.00 %	20			$22,650
C3020411	Carpet	$7.30	S.F.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	1,500	50	2005	2055		80.00 %	0.00 %	40			$113,280
C3020413	Vinyl Flooring	$9.68	S.F.	3,300	20	2005	2025	2037	110.00 %	124.15 %	22		$39,657.85	$31,944
C3020414	Wood Flooring	$22.27	S.F.	48,700	25	1906	1931	2042	108.00 %	42.15 %	27		$457,185.96	$1,084,549
C3020415	Concrete Floor Finishes	$0.97	S.F.		50	1906	1956	2067	104.00 %	0.00 %	52			$0
C3030	Ceiling Finishes	$20.97	S.F.	45,300	25	1990	2015	2042	108.00 %	77.42 %	27		$735,468.97	$949,941
D1010	Elevators and Lifts	$5.60	S.F.	45,300	35	2015	2050		100.00 %	276.55 %	35		$701,548.04	$253,680
D2010	Plumbing Fixtures	$13.52	S.F.	45,300	35	1995	2030	2030	42.86 %	7.43 %	15		$45,475.14	$612,456
D2020	Domestic Water Distribution	$1.68	S.F.	45,300	25	1995	2020		20.00 %	0.00 %	5			$76,104
D2030	Sanitary Waste	$2.90	S.F.	45,300	25	1906	1931	2042	108.00 %	169.16 %	27		$222,230.44	$131,370
D2040	Rain Water Drainage	$2.32	S.F.	45,300	30	1906	1936	2030	50.00 %	47.42 %	15		$49,841.48	$105,096
D3020	Heat Generating Systems	$18.67	S.F.	45,300	35	1906	1941	2052	105.71 %	127.70 %	37		$1,079,983.61	$845,751
D3030	Cooling Generating Systems	$24.48	S.F.	45,300	28			2045	107.14 %	64.60 %	30		$716,385.50	$1,108,944
D3040	Distribution Systems	$42.99	S.F.	45,300	25	1906	1931	2042	108.00 %	158.18 %	27		$3,080,499.59	$1,947,447
D3050	Terminal & Package Units	$11.60	S.F.	45,300	20	1906	1926	2037	110.00 %	0.00 %	22			$525,480
D3060	Controls & Instrumentation	$13.50	S.F.	45,300	20	1906	1926	2037	110.00 %	158.90 %	22		$971,779.77	$611,550
D4010	Sprinklers	$7.05	S.F.	45,300	35			2052	105.71 %	202.91 %	37		$648,036.73	$319,365
D4020	Standpipes	$1.01	S.F.	45,300	35			2052	105.71 %	0.00 %	37			$45,753
D5010	Electrical Service/Distribution	$9.70	S.F.	45,300	30	1906	1936	2047	106.67 %	214.63 %	32		$943,118.49	$439,410
D5020	Lighting and Branch Wiring	$34.68	S.F.	45,300	20	1906	1926	2037	110.00 %	50.39 %	22		$791,652.82	$1,571,004
D5030	Communications and Security	$12.99	S.F.	45,300	15	1906	1921	2032	113.33 %	50.27 %	17		$295,831.35	$588,447
D5090	Other Electrical Systems	$1.41	S.F.	45,300	30	1906	1936	2047	106.67 %	378.64 %	32		$241,850.73	$63,873
E1020	Institutional Equipment	$4.82	S.F.	45,300	35			2035	57.14 %	0.00 %	20			$218,346
E1090	Other Equipment	$11.10	S.F.	45,300	35	2000	2035		57.14 %	0.00 %	20			$502,830
E2010	Fixed Furnishings	$2.13	S.F.	45,300	40	2005	2045		75.00 %	0.00 %	30			$96,489
								Total	**72.13 %**	**69.33 %**			**$16,345,458.06**	**$23,575,460**

System Notes

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

System:	C3010 - Wall Finishes	This system contains no images
Note:	Paint 97% Ceramic Tile 3%	
System:	C3020 - Floor Finishes	This system contains no images
Note:	Hardwood 75% VCT 5% Ceramic Tile 2% Concrete 18%	
System:	C3030 - Ceiling Finishes	This system contains no images
Note:	Acoustic Tile 60% Exposed, painted (plaster) 40%	
System:	D5010 - Electrical Service/Distribution	This system contains no images
Note:	Two 75 KVA transformers , phase changers, single phase to three phase.	

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:	**$16,345,458**	**$0**	**$0**	**$0**	**$0**	**$97,047**	**$0**	**$0**	**$0**	**$0**	**$0**	**$16,442,506**
*** 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	$287,464	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$287,464**
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	$1,007,432	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,007,432**
B2020 - Exterior Windows	$1,385,484	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,385,484**
B2030 - Exterior Doors	$91,073	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$91,073**
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	$12,198	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$12,198**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$46,479	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,479**
B3010140 - Shingle & Tile	$846,441	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$846,441**
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	$178,236	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$178,236**

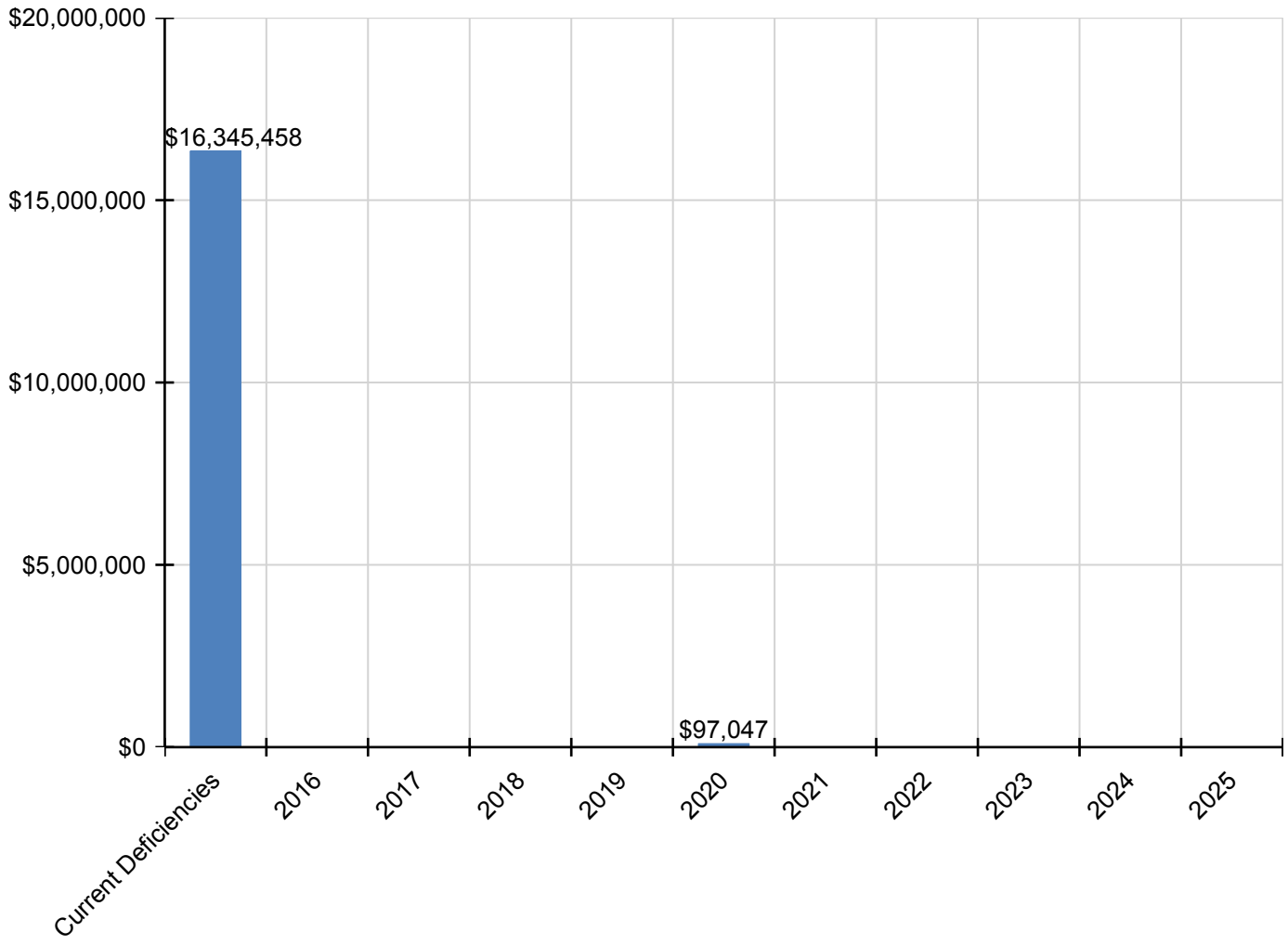
C1020 - Interior Doors	$390,964	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$390,964**
C1030 - Fittings	$51,092	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$51,092**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$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	$1,028,049	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,028,049**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$39,658	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$39,658**
C3020414 - Wood Flooring	$457,186	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$457,186**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$735,469	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$735,469**
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	$701,548	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$701,548**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$45,475	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$45,475**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$97,047	$0	$0	$0	$0	$0	**$97,047**
D2030 - Sanitary Waste	$222,230	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$222,230**
D2040 - Rain Water Drainage	$49,841	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$49,841**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,079,984	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,079,984**
D3030 - Cooling Generating Systems	$716,386	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$716,386**
D3040 - Distribution Systems	$3,080,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,080,500**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$971,780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$971,780**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$648,037	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$648,037**
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	$943,118	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$943,118**
D5020 - Lighting and Branch Wiring	$791,653	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$791,653**
D5030 - Communications and Security	$295,831	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$295,831**
D5090 - Other Electrical Systems	$241,851	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$241,851**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

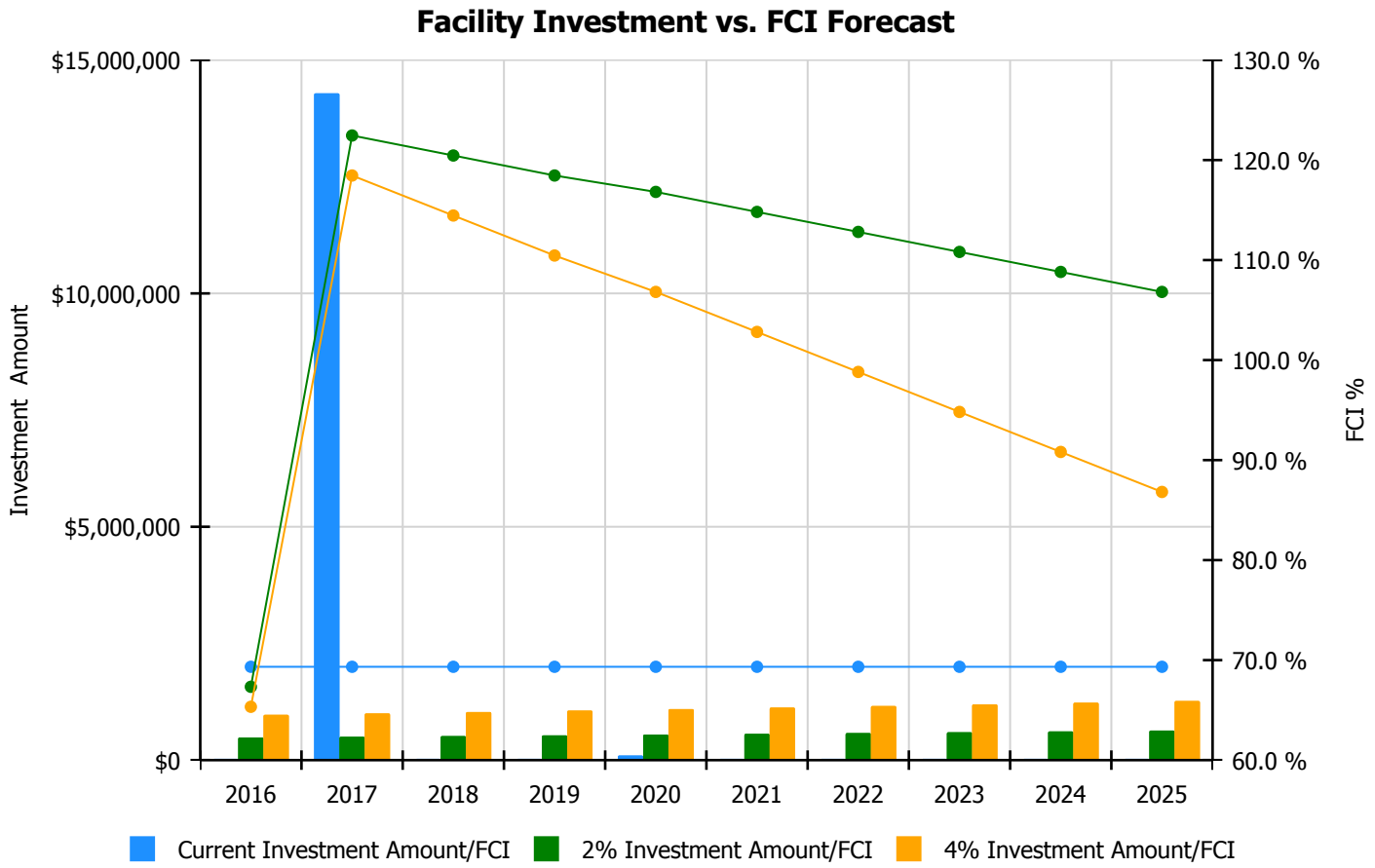
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

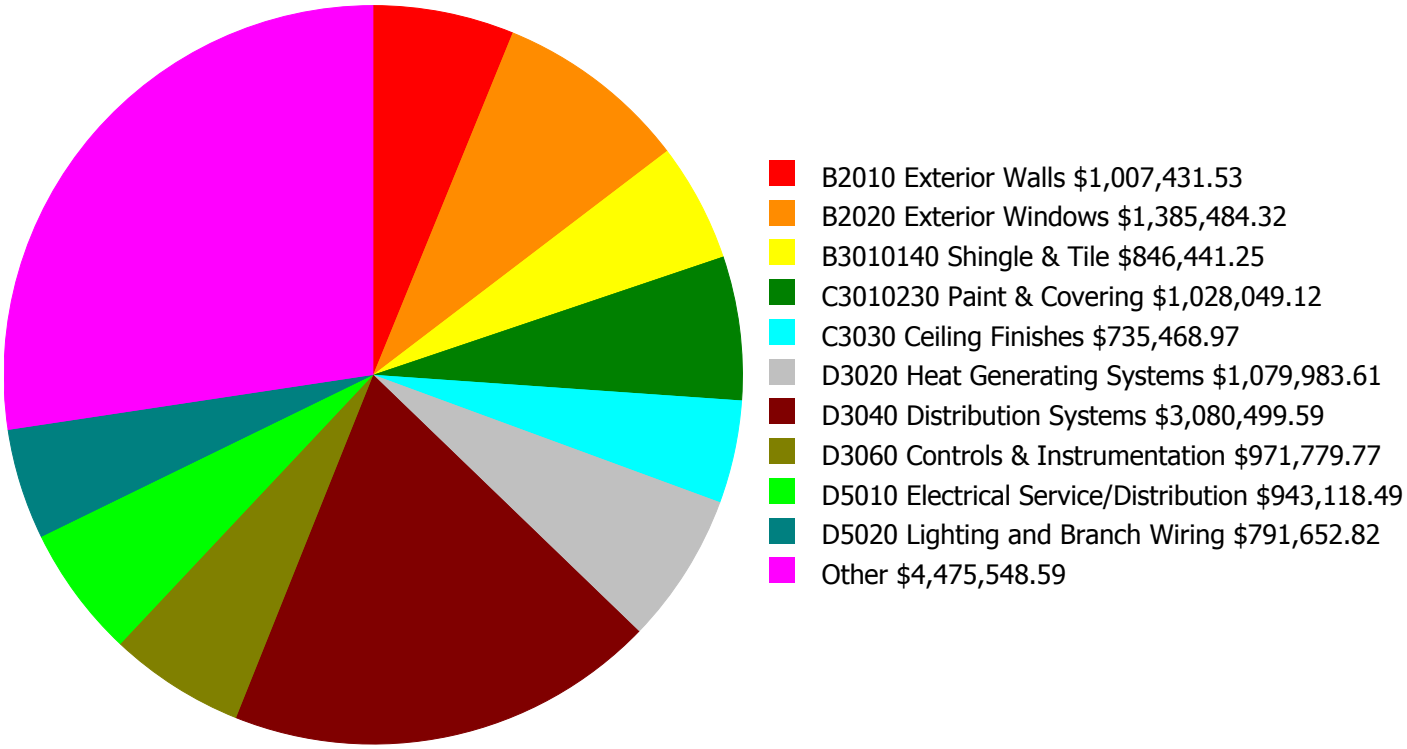
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 69.33%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$485,654.00	67.33 %	$971,309.00	65.33 %
2017	$14,286,895	$500,224.00	122.45 %	$1,000,448.00	118.45 %
2018	$0	$515,231.00	120.45 %	$1,030,462.00	114.45 %
2019	$0	$530,688.00	118.45 %	$1,061,376.00	110.45 %
2020	$98,506	$546,608.00	116.81 %	$1,093,217.00	106.81 %
2021	$0	$563,007.00	114.81 %	$1,126,013.00	102.81 %
2022	$0	$579,897.00	112.81 %	$1,159,794.00	98.81 %
2023	$0	$597,294.00	110.81 %	$1,194,587.00	94.81 %
2024	$0	$615,213.00	108.81 %	$1,230,425.00	90.81 %
2025	$0	$633,669.00	106.81 %	$1,267,338.00	86.81 %
Total:	**$14,385,401**	**$5,567,485.00**		**$11,134,969.00**	

Deficiency Summary by System

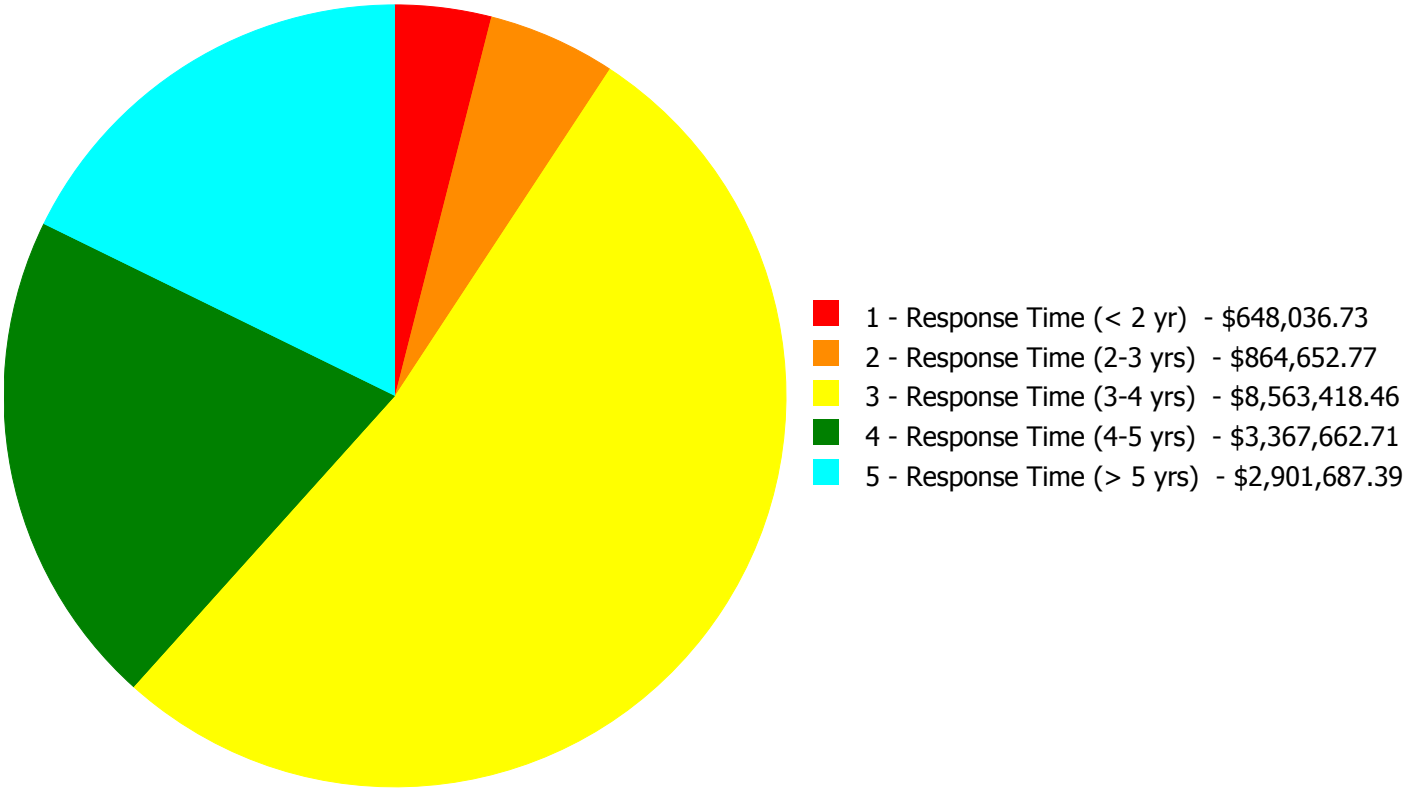
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $16,345,458.06

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: $16,345,458.06

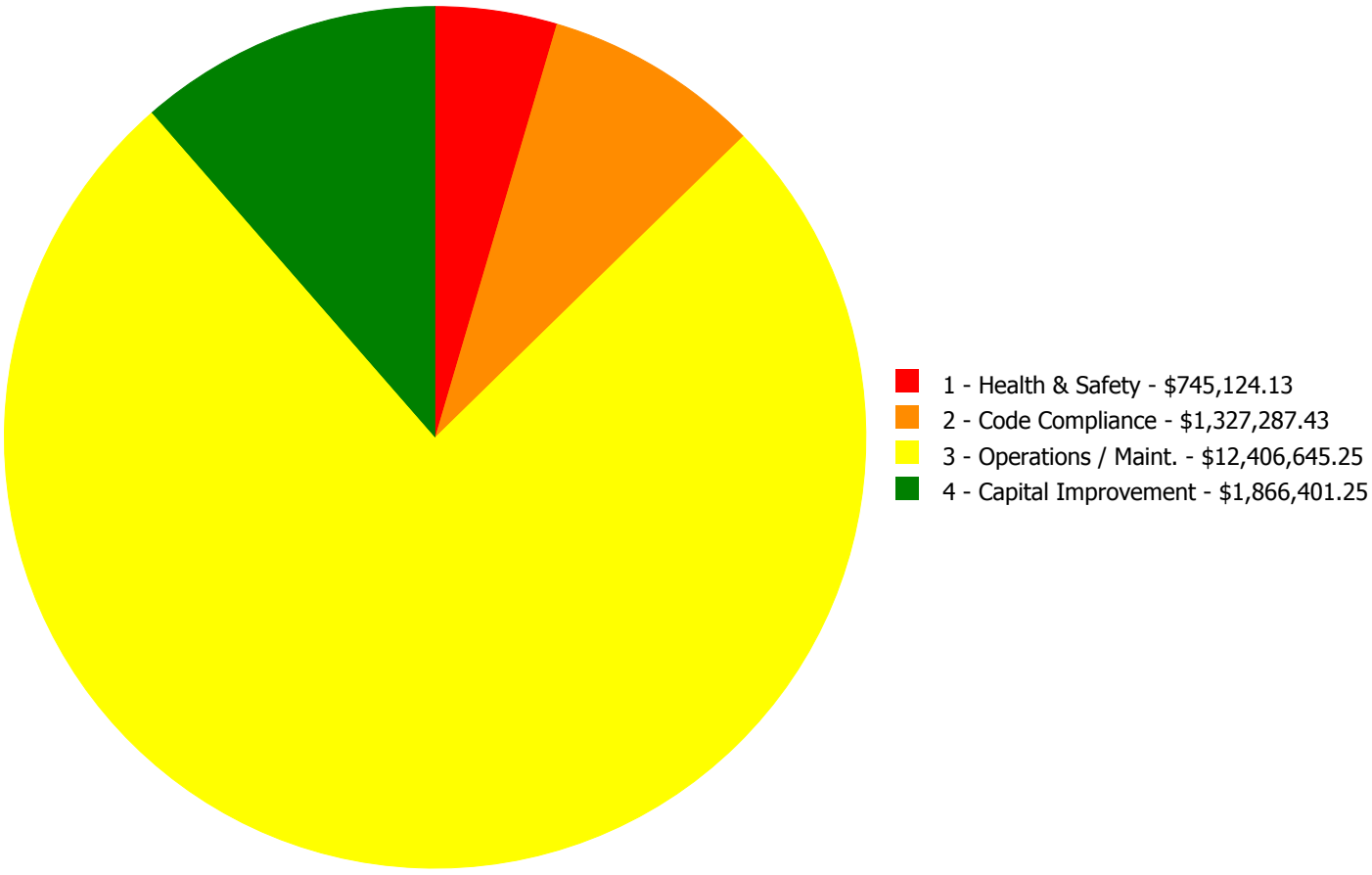
Deficiency By Priority Investment Table

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
A1010	Standard Foundations	$0.00	$287,463.55	$0.00	$0.00	$0.00	$287,463.55
B2010	Exterior Walls	$0.00	$0.00	$1,007,431.53	$0.00	$0.00	$1,007,431.53
B2020	Exterior Windows	$0.00	$0.00	$1,385,484.32	$0.00	$0.00	$1,385,484.32
B2030	Exterior Doors	$0.00	$0.00	$91,073.21	$0.00	$0.00	$91,073.21
B3010105	Built-Up	$0.00	$0.00	$12,197.51	$0.00	$0.00	$12,197.51
B3010130	Preformed Metal Roofing	$0.00	$0.00	$46,478.87	$0.00	$0.00	$46,478.87
B3010140	Shingle & Tile	$0.00	$0.00	$846,441.25	$0.00	$0.00	$846,441.25
C1010	Partitions	$0.00	$0.00	$0.00	$0.00	$178,235.98	$178,235.98
C1020	Interior Doors	$0.00	$0.00	$0.00	$0.00	$390,964.48	$390,964.48
C1030	Fittings	$0.00	$0.00	$0.00	$0.00	$51,091.77	$51,091.77
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$1,028,049.12	$0.00	$1,028,049.12
C3020413	Vinyl Flooring	$0.00	$0.00	$39,657.85	$0.00	$0.00	$39,657.85
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$457,185.96	$0.00	$457,185.96
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$735,468.97	$0.00	$735,468.97
D1010	Elevators and Lifts	$0.00	$0.00	$655,743.23	$45,804.81	$0.00	$701,548.04
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$45,475.14	$0.00	$45,475.14
D2030	Sanitary Waste	$0.00	$0.00	$222,230.44	$0.00	$0.00	$222,230.44
D2040	Rain Water Drainage	$0.00	$0.00	$49,841.48	$0.00	$0.00	$49,841.48
D3020	Heat Generating Systems	$0.00	$0.00	$1,079,983.61	$0.00	$0.00	$1,079,983.61
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$716,385.50	$716,385.50
D3040	Distribution Systems	$0.00	$577,189.22	$1,910,080.48	$0.00	$593,229.89	$3,080,499.59
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$971,779.77	$971,779.77
D4010	Sprinklers	$648,036.73	$0.00	$0.00	$0.00	$0.00	$648,036.73
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$943,118.49	$0.00	$943,118.49
D5020	Lighting and Branch Wiring	$0.00	$0.00	$791,652.82	$0.00	$0.00	$791,652.82
D5030	Communications and Security	$0.00	$0.00	$183,271.13	$112,560.22	$0.00	$295,831.35
D5090	Other Electrical Systems	$0.00	$0.00	$241,850.73	$0.00	$0.00	$241,850.73
	Total:	$648,036.73	$864,652.77	$8,563,418.46	$3,367,662.71	$2,901,687.39	$16,345,458.06

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: $16,345,458.06

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: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 45,300.00

Unit of Measure: S.F.

Estimate: $648,036.73

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

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

System: A1010 - Standard Foundations

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Apply waterproofing on existing foundation walls - SF of foundation wall - add for sump and discharge piping

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $287,463.55

Assessor Name: System

Date Created: 09/21/2015

Notes: Install waterproofing membrane on exterior face of foundation walls (West side and North side of west wing.

System: D3040 - Distribution Systems

Location: Throughout buliding

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 45,300.00

Unit of Measure: S.F.

Estimate: $428,554.89

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location:	Throughout building
Distress:	Failing
Category:	3 - Operations / Maint.
Priority:	2 - Response Time (2-3 yrs)
Correction:	Conduct a steam trap survey and replace failed units.
Qty:	45,300.00
Unit of Measure:	S.F.
Estimate:	$148,634.33
Assessor Name:	System
Date Created:	08/10/2015

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.

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

System: B2010 - Exterior Walls

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

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

Qty: 31,200.00

Unit of Measure: S.F.

Estimate: $1,007,431.53

Assessor Name: System

Date Created: 09/21/2015

Notes: Repair cracks and tuck-point stone and brick masonry (entire building)

System: B2020 - Exterior Windows

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 205.00

Unit of Measure: Ea.

Estimate: $1,385,484.32

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace all windows

System: B2030 - Exterior Doors

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 10.00

Unit of Measure: Ea.

Estimate: $91,073.21

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace all exterior doors

System: B3010105 - Built-Up

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 360.00

Unit of Measure: S.F.

Estimate: $12,197.51

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace built-up roof on stair tower

System: B3010130 - Preformed Metal Roofing

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace preformed metal roofing

Qty: 800.00

Unit of Measure: S.F.

Estimate: $46,478.87

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace preformed roof panels on sky bridges

System: B3010140 - Shingle & Tile

Location: Exterior/ roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace asphalt shingle roof - partial area

Qty: 18,000.00

Unit of Measure: S.F.

Estimate: $846,441.25

Assessor Name: System

Date Created: 09/18/2015

Notes: Install all new shingle roofing including insulation; tear-down existing roofing; install ice and water shield and flashing.

System: C3020413 - Vinyl Flooring

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 3,300.00

Unit of Measure: S.F.

Estimate: $39,657.85

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace VCT tile flooring

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $655,743.23

Assessor Name: System

Date Created: 09/21/2015

Notes: Install 4000 lb traction elevator serving all floors and basement

System: D2030 - Sanitary Waste

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 45,300.00

Unit of Measure: S.F.

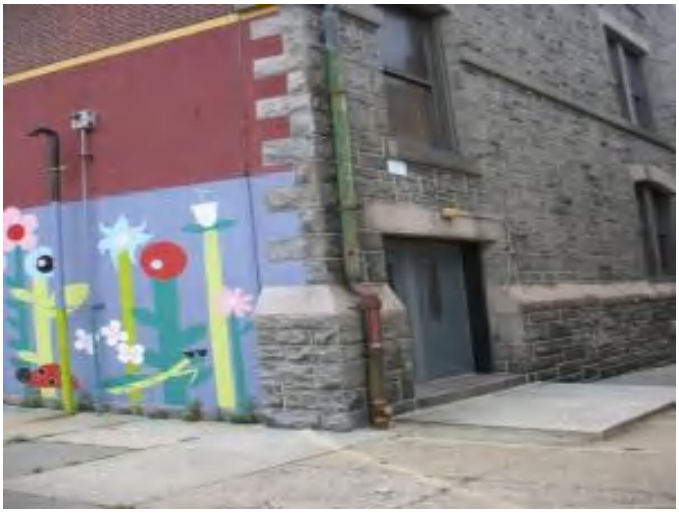
Estimate: $222,230.44

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D2040 - Rain Water Drainage



Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace roof drains - per drain including piping

Qty: 6.00

Unit of Measure: Ea.

Estimate: $49,841.48

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 3.00

Unit of Measure: Ea.

Estimate: $1,079,983.61

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the existing 2,845MBH cast iron boilers, which are beyond their service life, burners, and boiler feed tank.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 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: 45,300.00

Unit of Measure: S.F.

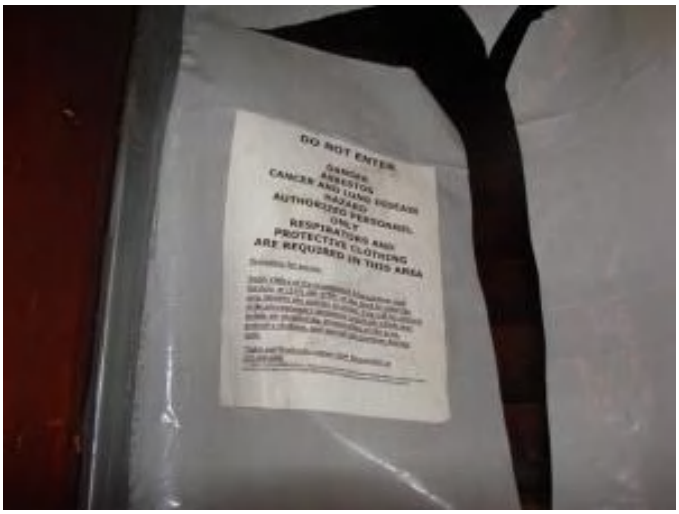
Estimate: $1,833,905.97

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.

System: D3040 - Distribution Systems



Location: Attic

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace utility set exhaust fan (5 HP)

Qty: 2.00

Unit of Measure: Ea.

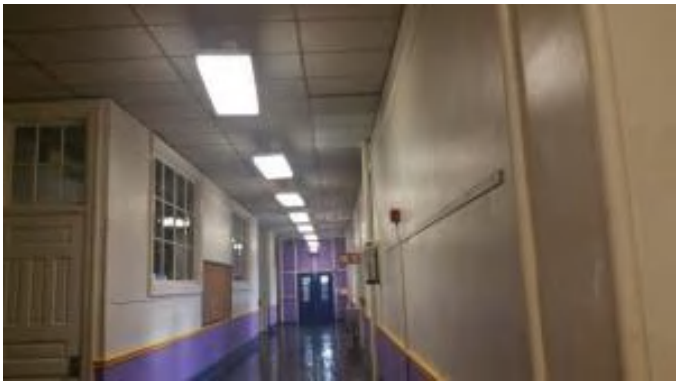
Estimate: $76,174.51

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace existing exhaust fans serving the bathrooms and utilize the existing ductwork.

System: D5020 - Lighting and Branch Wiring



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

Estimate: $460,569.41

Assessor Name: System

Date Created: 08/06/2015

Notes: Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.

System: D5020 - Lighting and Branch Wiring

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 0.00

Unit of Measure: S.F.

Estimate: $331,083.41

Assessor Name: System

Date Created: 08/06/2015

Notes: Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.

System: D5030 - Communications and Security

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $183,271.13

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new Automated Fire Alarm System to be located in the new Electrical Room.

System: D5090 - Other Electrical Systems

Location: Electrical room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $144,763.33

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new emergency power system (100 KVA generator).

System: D5090 - Other Electrical Systems

Location: Throughout the building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add Emergency/Exit Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $97,087.40

Assessor Name: System

Date Created: 08/06/2015

Notes: Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

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

System: C3010230 - Paint & Covering

Location: Interior

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 120,000.00

Unit of Measure: S.F.

Estimate: $1,028,049.12

Assessor Name: System

Date Created: 09/21/2015

Notes: Repair and repaint all interior walls

System: C3020414 - Wood Flooring

Location: Interior

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Remove and replace partial area of wood flooring and refinish entire floor - set replacement area

Qty: 48,700.00

Unit of Measure: S.F.

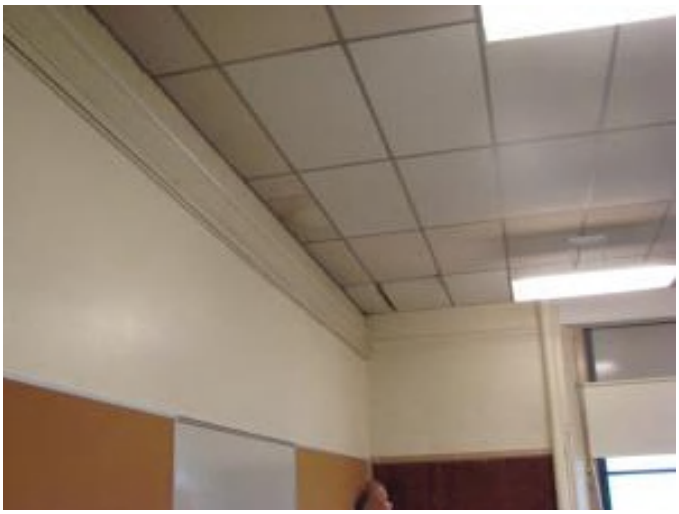
Estimate: $457,185.96

Assessor Name: System

Date Created: 09/21/2015

Notes: Repair refinish hardwood flooring

System: C3030 - Ceiling Finishes



Location: Interior

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: 39,100.00

Unit of Measure: S.F.

Estimate: $589,723.02

Assessor Name: System

Date Created: 09/21/2015

Notes:

System: C3030 - Ceiling Finishes

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace plaster ceilings

Qty: 26,100.00

Unit of Measure: S.F.

Estimate: $145,745.95

Assessor Name: System

Date Created: 09/21/2015

Notes: Repair (15%) and repaint plaster ceilings

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Update/Modernize Elevator Cab - select the scope of work and change the quantities to fit the need

Qty: 1.00

Unit of Measure: Ea.

Estimate: $45,804.81

Assessor Name: System

Date Created: 09/21/2015

Notes: Provide wheelchair lift at main entrance stair (from ground level to first floor)

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 6.00

Unit of Measure: Ea.

Estimate: $45,475.14

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. Some of these units are well beyond their service life and many are NOT accessible type.

System: D5010 - Electrical Service/Distribution

Location: Electrical Room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add Electrical Switchgear and Distribution System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $633,079.50

Assessor Name: System

Date Created: 08/06/2015

Notes: Upgrade the existing electrical service with a new service. Install a new 1000 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph, with a new 1200A, 480V, 3 phase Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads. •

System: D5010 - Electrical Service/Distribution

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard - 225A

Qty: 0.00

Unit of Measure: Ea.

Estimate: $310,038.99

Assessor Name: System

Date Created: 08/06/2015

Notes: Install two 120V/208V panels to replace the existing panels in each floor. Also replace the power feeders, conduit wire to the four panels from the new 120V/208V three phase main Panel Board.

System: D5030 - Communications and Security

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $112,560.22

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new clock system.

Priority 5 - Response Time (> 5 yrs):

System: C1010 - Partitions

Location: Interior

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 8,000.00

Unit of Measure: S.F.

Estimate: $178,235.98

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace inoperable movable partitions with permanent partitions

System: C1020 - Interior Doors

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 84.00

Unit of Measure: Ea.

Estimate: $390,964.48

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace classroom doors

System: C1030 - Fittings

Location: Interior

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 120.00

Unit of Measure: Ea.

Estimate: $32,509.50

Assessor Name: System

Date Created: 09/21/2015

Notes: Install new signage throughout to meet ADA requirements

System: C1030 - Fittings

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 27.00

Unit of Measure: Ea.

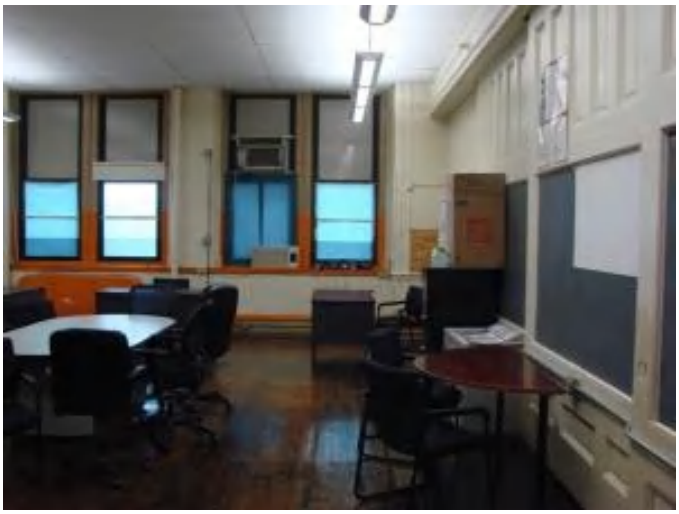
Estimate: $18,582.27

Assessor Name: System

Date Created: 09/21/2015

Notes: Replace original chalkboards

System: D3030 - Cooling Generating Systems



Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 45,300.00

Unit of Measure: S.F.

Estimate: $716,385.50

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove the window air conditioning units and install a 120 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.

System: D3040 - Distribution Systems

Location: Administration

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Install HVAC unit for Administration (2000 students).

Qty: 699.00

Unit of Measure: Pr.

Estimate: $302,543.71

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

System: D3040 - Distribution Systems

Location: Cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 699.00

Unit of Measure: Pr.

Estimate: $290,686.18

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 45,300.00

Unit of Measure: S.F.

Estimate: $971,779.77

Assessor Name: System

Date Created: 08/10/2015

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

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, 5 HP pump, includes diaphragm tank, control and pressure switch	2.00	Ea.	Coal/Ash Room	Armstrong				25	1995	2020	$10,972.50	$24,139.50
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Smith	3500A-14			35	1970	2005	$75,956.00	$250,654.80
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Smith	3500A-14			35	1970	2005	$75,956.00	$250,654.80
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Smith	3500A-14			35	1970	2005	$75,956.00	$250,654.80
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 0 stories, 0' horizontal	1.00	Ea.	Electrical Room					30	1906	2017	$7,824.60	$8,607.06
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1600 A	1.00	Ea.	electrical room					20	1906	2017	$40,458.15	$44,503.97
												Total:	**$829,214.93**

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):	11,900
Year Built:	1906
Last Renovation:	
Replacement Value:	$336,070
Repair Cost:	$359,621.46
Total FCI:	107.01 %
Total RSLI:	88.44 %

Description:

Attributes:

General Attributes:

Bldg ID:	S221001	Site ID:	S221001

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	75.22 %	124.10 %	$241,759.49
G40 - Site Electrical Utilities	106.67 %	83.44 %	$117,861.97
Totals:	**88.44 %**	**107.01 %**	**$359,621.46**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$9.47	S.F.	7,400	30	1906	1936	2021	20.00 %	149.32 %	6		$104,642.71	$70,078
G2030	Pedestrian Paving	$16.19	S.F.	4,500	40	1906	1946	2057	105.00 %	124.50 %	42		$90,704.64	$72,855
G2040	Site Development	$4.36	S.F.	11,900	25	1906	1931	2042	108.00 %	89.45 %	27		$46,412.14	$51,884
G2050	Landscaping & Irrigation	$4.36	S.F.		15				0.00 %	0.00 %				$0
G4020	Site Lighting	$8.75	S.F.	11,900	30	1906	1936	2047	106.67 %	113.19 %	32		$117,861.97	$104,125
G4030	Site Communications & Security	$3.12	S.F.	11,900	30	1906	1936	2047	106.67 %	0.00 %	32			$37,128
								Total	**88.44 %**	**107.01 %**			**$359,621.46**	**$336,070**

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.

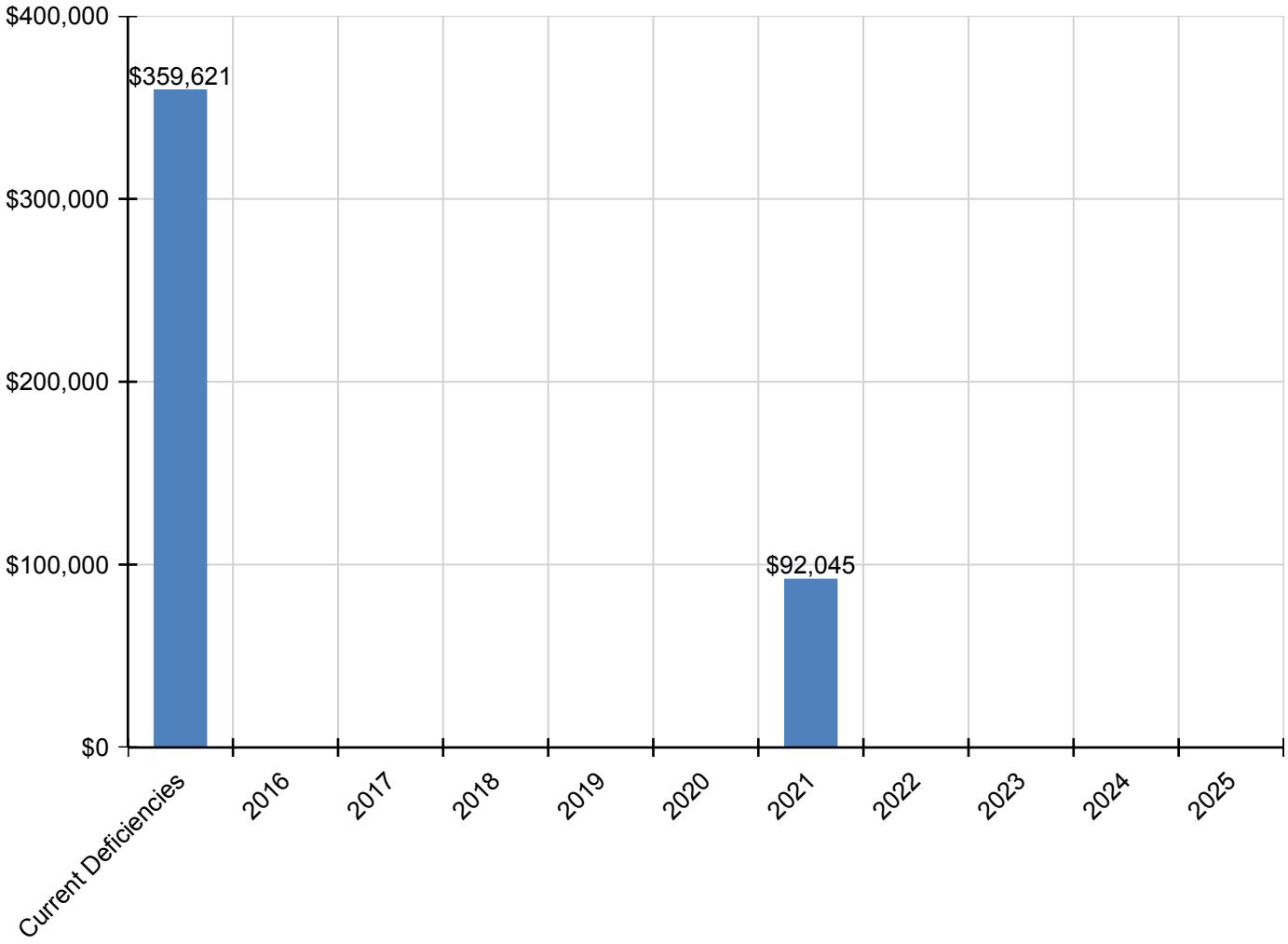
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$359,621**	**$0**	**$0**	**$0**	**$0**	**$0**	**$92,045**	**$0**	**$0**	**$0**	**$0**	**$451,666**
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	$104,643	$0	$0	$0	$0	$0	$92,045	$0	$0	$0	$0	**$196,687**
G2030 - Pedestrian Paving	$90,705	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$90,705**
G2040 - Site Development	$46,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,412**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$117,862	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$117,862**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

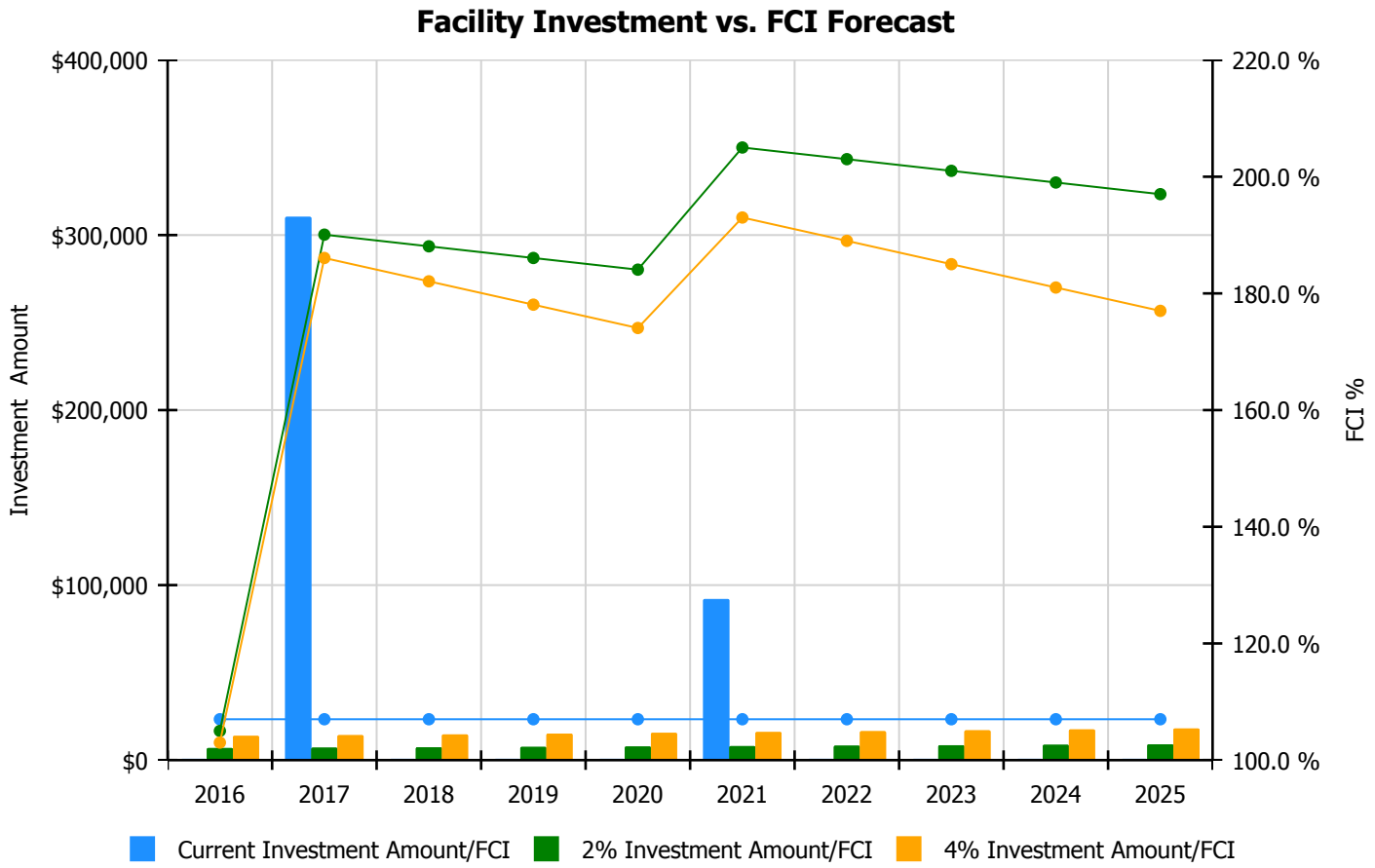
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

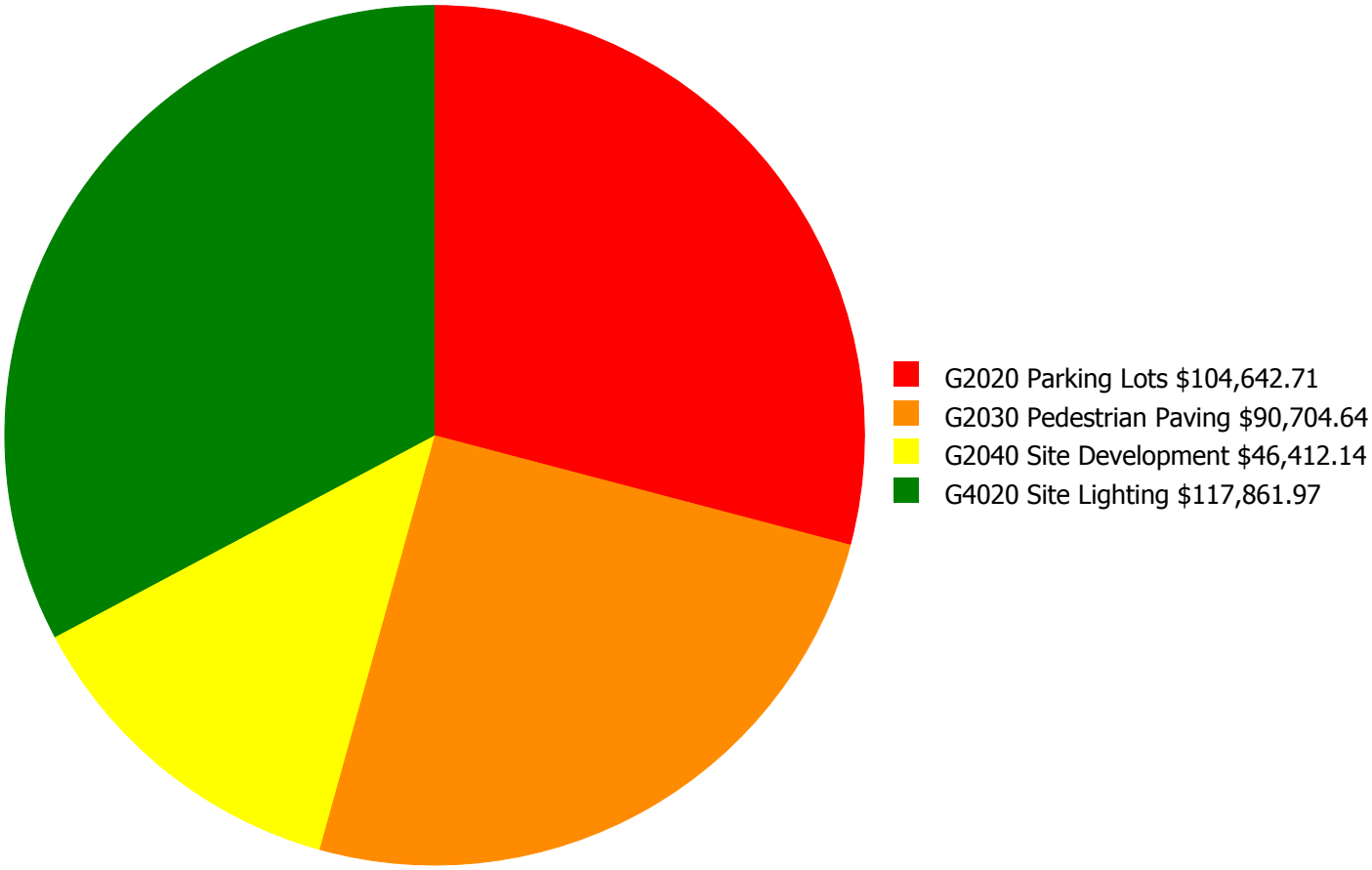
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 107.01%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$6,923.00	105.01 %	$13,846.00	103.01 %
2017	$310,411	$7,131.00	190.07 %	$14,261.00	186.07 %
2018	$0	$7,345.00	188.07 %	$14,689.00	182.07 %
2019	$0	$7,565.00	186.07 %	$15,130.00	178.07 %
2020	$0	$7,792.00	184.07 %	$15,584.00	174.07 %
2021	$92,045	$8,026.00	205.01 %	$16,051.00	193.01 %
2022	$0	$8,266.00	203.01 %	$16,533.00	189.01 %
2023	$0	$8,514.00	201.01 %	$17,029.00	185.01 %
2024	$0	$8,770.00	199.01 %	$17,540.00	181.01 %
2025	$0	$9,033.00	197.01 %	$18,066.00	177.01 %
Total:	**$402,456**	**$79,365.00**		**$158,729.00**	

Deficiency Summary by System

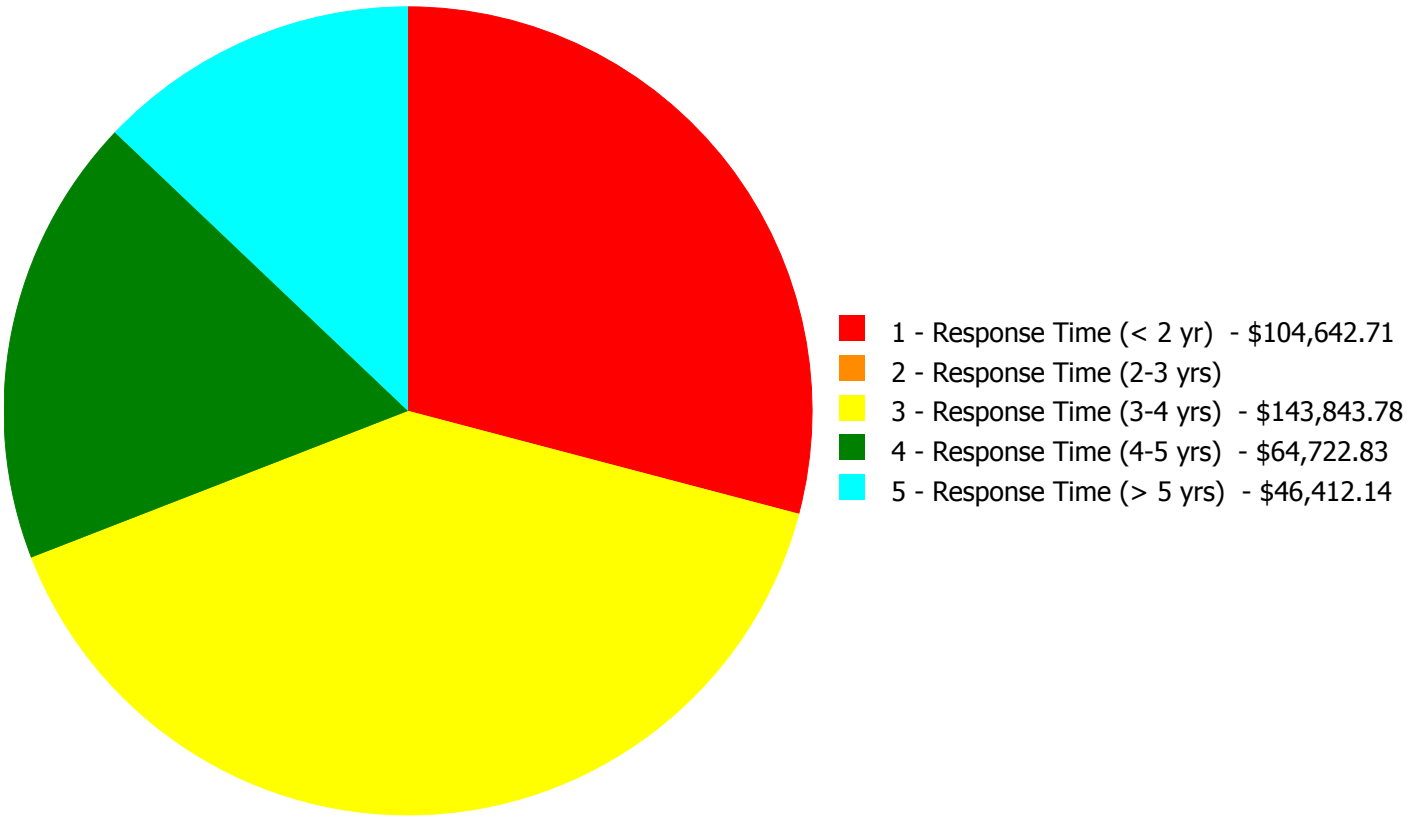
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $359,621.46

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: $359,621.46

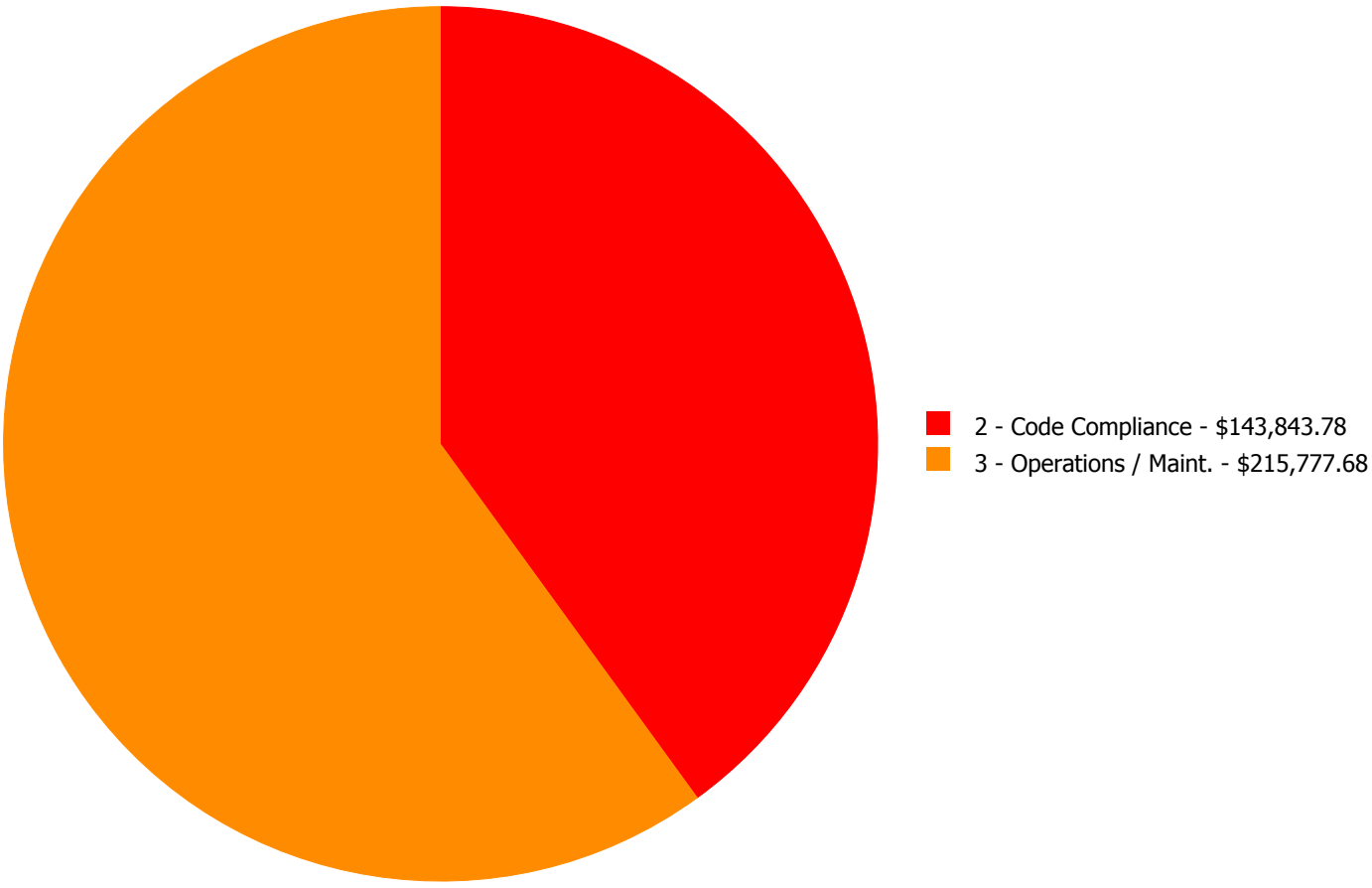
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$104,642.71	$0.00	$0.00	$0.00	$0.00	$104,642.71
G2030	Pedestrian Paving	$0.00	$0.00	$25,981.81	$64,722.83	$0.00	$90,704.64
G2040	Site Development	$0.00	$0.00	$0.00	$0.00	$46,412.14	$46,412.14
G4020	Site Lighting	$0.00	$0.00	$117,861.97	$0.00	$0.00	$117,861.97
	Total:	$104,642.71	$0.00	$143,843.78	$64,722.83	$46,412.14	$359,621.46

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: $359,621.46

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: G2020 - Parking Lots

Location: grounds/site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace AC paving parking lot

Qty: 7,400.00

Unit of Measure: S.F.

Estimate: $104,642.71

Assessor Name: Craig Anding

Date Created: 12/05/2015

Notes: Replace parking lot surface

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

System: G2030 - Pedestrian Paving

This deficiency has no image.

Location: Grounds/ site

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 20.00

Unit of Measure: L.F.

Estimate: $25,981.81

Assessor Name: Craig Anding

Date Created: 09/21/2015

Notes: Provide accessible ramp at the main entrance

System: G4020 - Site Lighting

Location: Grounds/Site

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $117,861.97

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Install new parking lot lighting, using two poles with two flood lights on each.

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

System: G2030 - Pedestrian Paving

Location: Grounds/ site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 4,500.00

Unit of Measure: S.F.

Estimate: $64,722.83

Assessor Name: Craig Anding

Date Created: 09/21/2015

Notes: Resurface playground

Priority 5 - Response Time (> 5 yrs):

System: G2040 - Site Development

Location: Grounds/ site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: L.F.

Estimate: $38,572.99

Assessor Name: Craig Anding

Date Created: 09/21/2015

Notes: Replace picket fence

System: G2040 - Site Development

Location: Grounds/ site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace chain link fence - 8' high

Qty: 70.00

Unit of Measure: L.F.

Estimate: $7,839.15

Assessor Name: Craig Anding

Date Created: 09/21/2015

Notes: Replace chain link fence

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

School District of Philadelphia

S236001;Martin (Bache-Martin)

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	68,076
Year Built:	1937
Last Renovation:	
Replacement Value:	$35,298,431
Repair Cost:	$13,364,629.34
Total FCI:	37.86 %
Total RSLI:	68.03 %

Description:

Facility Assessment, June, 2015

School District of Philadelphia

Martin Bache Elementary School

2201 Brown Street

Philadelphia, PA 19130

58,000 SF / 894 Students / LN 03

The Martin-Bache School Building is located at 2201 Brown Street in Philadelphia, PA. The 1 story, 58,000 square foot building was originally constructed in 1937. The building has a small, partial basement.

Mr. Derek Parker, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. Robert Morgan, Building Engineer, accompanied us on our tour of the school and provided us with detailed

information on the building systems and recent maintenance history. The school principal, Mr. Mark Vitvitzky provided additional information about building condition.

STRUCTURAL/ EXTERIOR CLOSURE:

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement. There is no evidence of water penetration in the basement mechanical spaces.

The main structure consists typically of masonry load bearing walls supporting roof, in good condition. Floor above basement and roof over east and west porticos is concrete slab; some concrete spalling and rusting reinforcement was observed.

The building envelope is typically face brick over CMU backup. In general, masonry is in fair to poor condition with mortar missing and deteriorated.

The original windows were replaced in early 2000's with extruded aluminum double hung windows single glazed with acrylic glazing. All windows are generally in good condition with no security screens.

The roof structure consists of steel trusses and purlins supporting roof deck and resting on load bearing walls.

Roofing is typically asphalt shingle installed in 2010. The link between two courtyards and west side portico is covered with built-up system also installed in 2010.

Exterior doors and frames are typically hollow metal in poor condition; some doors are rusting. The doors are at the end of their useful life.

INTERIORS:

Partition wall types include plastered ceramic blocks (hollow brick), CMU and some drywall. The interior wall finishes are generally painted plaster and brick, and glazed block wainscot in corridors and some classrooms. Generally, paint is in fair to poor condition and very poor condition in the basement mechanical spaces.

Toilets have ceramic tiles on walls installed in early 2000's.

Most ceilings are 2x4 suspended acoustical panels; multipurpose room has 1x1 perforated metal tiles. The suspension system and tiles are old and approaching the end of their useful life. The balance of ceilings is generally plastered or drywalled with some water damage.

Flooring in classrooms and most corridors is hardwood. Toilet flooring is ceramic tile good condition, installed in early 2000's. VCT is installed in some rooms and in good condition. Corridors have terrazzo floors in very god condition.

Interior doors are wood rail and stile wood doors with transoms, generally in fair condition in need of refinishing, solid core wood doors in some rooms are damaged; doors leading to exit stairways are retrofitted with hollow metal doors and frames in good condition. Most doors do not have ADA compliant handles. Doors in main corridors and entrance lobby have ornamental marble portals.

Stair construction (roof and basement access) is generally steel stringers with non-slip metal treads.

Fittings include original chalk boards, generally in poor condition.

All toilets are fitted with phenolic panel partitions and accessories installed approximately in early 2000's and in very good condition.

Interior identifying signage is typically directly painted on wall or door surfaces in poor condition. Some signage is missing.

CONVEYING EQUIPMENT:

The building does not have an elevator.

ACCESSIBILITY:

The building does have accessible entrance via portico access ramps, and accessible routes within the building. None of the doors in the building has ADA required door handles. Toilets are generally in compliance with ADA.

GROUNDS (SITE):

There is no parking lot at the site.

Playground is located in one of two enclosed courtyards. Paving is cracked and deteriorated; there is no playground equipment; however, portion of the courtyard is covered with protective playground resilient mat in fair condition. Picket fence is installed on west side ramps leading to portico. The second courtyard is landscaped with mature vegetation.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures have been replaced. Fixtures in the restrooms on each floor consist of wall mounted flush valve water closets, wall hung urinals and lavatories with wheel handle faucets. These fixtures should provide reliable service for the next 5-10 years.

Drinking fountains in the corridors and at the restrooms are wall hung with integral refrigerated coolers. The fountains are within their service life many are accessible type.

A service sink is available in a janitor closet in the corridor on each floor for use by the janitorial staff.

The Cafeteria has one three compartment stainless steel sink with lever operated faucets but no integral grease trap.

Domestic Water Distribution - A 4" city water service enters the building from N. 23rd Street near the intersection with Brown Street. The meter is 3" and located in the in the basement mechanical room. Two reduced pressure backflow preventers are installed in parallel on the incoming domestic line. A duplex domestic water booster pump is installed. The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

Two Paloma instant hot water heaters connected to a circulating pump, installation dates unknown, supply hot water for domestic use. The units are located in the basement mechanical room. One of the Paloma units appears inoperable and the other is beyond its service life. These units should be replaced in the next 1-3 years.

Sanitary Waste - The original storm and sanitary sewer piping is heavy weight cast iron with hub and spigot fittings. Some of the original piping has been replaced with cast iron piping with no-hub couplings.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for decades and will require more frequent attention from the maintenance staff as time passes. 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 - The rain water from the roof is routed down through pipe chases in the interior of the building by both cast iron hub and spigot piping and threaded galvanized piping. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Heat Generating Systems - One condensate receiver is installed in the mechanical room to return condensate to the boiler room in the Bache building. The receiver is in poor condition and should be replaced. Live steam passes into the condensate piping system from the failed traps and then vents from the condensate handling equipment. The District has not conducted a steam trap survey for this building and traps are not serviced on a regular schedule.

Distribution Systems - Steam piping is black steel (ASTM A53) with welded fittings. Not all of the steam piping in the basement was insulated. The condensate piping is Schedule 80 black steel with threaded fittings. Steam and condensate piping mains from the basement level run up through the building to the unit ventilators on all three floors. The distribution piping has been in use well beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the steam and condensate piping and perform additional testing to

locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

Two pipe unit ventilators provide heating for classrooms, offices, and hallways. The unit ventilators are well beyond their service life and should be replaced. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce sufficient outdoor air to the building.

The school Cafeteria is supplied ventilation by unit ventilators, which do not provide sufficient code required ventilation. Provide sufficient ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers. Provide ventilation for the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings. Install similar units for the administration offices. Provide ventilation for the Auditorium by installing a constant volume air handling unit with distribution ductwork and registers. These units would be equipped with hot water heating coils and chilled water cooling coils. Install steam converters in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.

Nine (9) exhaust fans serving the restrooms are operational and within their. The fans were not accessible due to being located in the attic.

Terminal & Package Units - Several of the classrooms in the school building have window air conditioning units that have an anticipated service life of only 10 years. Installing a 175 ton air-cooled chiller with pumps located in a mechanical room and chilled water distribution piping would supply more reliable air conditioning for the building with a much longer service life.

A Mitsubishi split system air conditioning system provides cooling to the LAN room located on the first floor off of the Main Office. The installation date of this unit is unknown; the anticipated service life of a split system air conditioner is 15 years. The district should budget to replace this unit within the next 7-10 years.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves are wide open and heating control is achieved via the boilers. Pneumatic control air is supplied from a Champion compressor and air dryer located in the boiler room. The maintenance staff reports no problems with oil, moisture, or dirt in the pneumatic copper tubing. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. There are fire stand pipes in each of the two building stairwells. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL:

Site Electrical Service - The present electrical service is provided by Medium Voltage overhead lines (13.2KV) on wooden poles along N. Twenty-second St. The overhead lines feed a pole top transformer to step down the voltage to 120V/240V. The power is brought down on the face of the pole and run underground into the basement in the electrical room. The electrical service main disconnect switch is old. The utility metering (PECO 222 MUC-38366) in located in the small electrical room. There is much other electrical equipment also housed in the small electrical room. These include the main distribution switchboard, and a 12.5KW emergency generator, as well as the Fire Alarm Panel. The main switchboard is at maximum capacity and has no more room for future growth (new HVAC). The switchboard is also very old and outdated (over 50 years old) and it has reached the end of its service life.

Distribution System and Raceway System - The distribution system is both 120V single phase and 120V/208V three phase. There are two distribution panels in each floor for lighting and receptacles. These panels are old and have reached their useful life. The raceway is mainly conduits running above the ceiling.

Receptacles - There is inadequate receptacles in classrooms, multi-purpose room, computer room, etc. The walls require minimum two receptacles in each wall of classrooms and other purpose rooms (a wire-mold system with receptacles on every 3’ for the computer room).

Lighting - The lighting fixtures are a mixture of florescent and incandescent fixtures. The majority of building has outdated lighting with fixtures that are obsolete (T-12).

Fire Alarm System – The present Fire Alarm system is inadequate and is not addressable. A new Automated Fire Alarm System is needed.

Telephone/LAN – The present telephone system is adequate.

Public Address/Intercom/Paging – Although the PA system is not working, the school uses the telephone systems for public announcement. This system is working adequately for most part.

Clock and Program System – The present clocks are not functioning properly.

Television System - The present Television system is adequate.

Security System - The present security system is inadequate. There are no security cameras.

Emergency Power System – The present emergency power system is inadequate. There is no emergency generator in the school.

Emergency Lighting System/ Exit Lighting - The emergency lighting and exit lighting is inadequate throughout.

Lightning Protection System- There is a Lightning Protection System that works but needs minor repairs.

Grounding System - The present grounding system is adequate.

Site Lighting - The present Site Lighting System is adequate.

Site Video Surveillance - The present Site Video Surveillance System is adequate.

Site Paging - The present Site Paging System is adequate.

RECOMMENDATIONS:

- Repair cracks and tuck-point stone and brick masonry (entire building)
- Repair damaged structural slabs and supporting members
- Replace all suspended acoustical ceilings
- Repair (15%) and repaint plaster ceilings
- Repair (10%) and repaint all interior walls
- Replace all exterior doors
- Repair & refinish hardwood flooring
- Replace damaged classroom doors
- Refinish original doors and transoms
- Replace door knobs with ADA compliant handles
- Replace original chalkboards
- Install new signage throughout
- Resurface playground
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the two existing Paloma instant hot water heaters.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the condensate receiver in the basement mechanical room.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Remove the window air conditioning units and install a 175 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service

life.

- Provide ventilation for the lunch Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.
- Provide ventilation for the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings.
- Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Provide ventilation for the Auditorium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. 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 with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Upgrade the existing electrical service to a new service with a new 1500 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph. Install a new 1600A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus the new HVAC loads. Install a new MCC for the new mechanical loads, also, install a step down transformer from 480V to 120V/208V, with a new 120V/208V Panel Board for all the existing lighting/receptacle loads.
- Install new 120V/208V panels to replace the existing panels (two in each floor).
- Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.
- Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.
- Install a new Automated Fire Alarm System to be located in the new Electrical Room.
- Install a new clock system.
- Install a new emergency power system (100 KVA generator).
- Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S236001		

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	22.00 %	0.00 %	$0.00
A20 - Basement Construction	22.00 %	0.00 %	$0.00
B10 - Superstructure	22.00 %	0.48 %	$32,434.15
B20 - Exterior Enclosure	28.16 %	38.69 %	$1,044,027.14
B30 - Roofing	75.00 %	0.00 %	$0.00
C10 - Interior Construction	45.25 %	20.79 %	$274,990.92
C20 - Stairs	22.00 %	0.00 %	$0.00
C30 - Interior Finishes	109.72 %	33.53 %	$1,270,396.03
D20 - Plumbing	96.76 %	17.16 %	$404,874.52
D30 - HVAC	101.52 %	107.08 %	$6,908,909.54
D40 - Fire Protection	105.71 %	186.35 %	$973,843.99
D50 - Electrical	110.11 %	68.89 %	$2,348,719.95
E10 - Equipment	105.71 %	0.00 %	$0.00
E20 - Furnishings	0.00 %	0.00 %	$0.00
G20 - Site Improvements	70.32 %	38.61 %	$106,433.10
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**68.03 %**	**37.86 %**	**$13,364,629.34**

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)
B236001;Martin (Bache-Martin)	58,000	37.96	$1,531,172.66	$2,845,982.34	$2,070,253.85	$2,410,783.10	$4,400,004.29
G236001;Grounds	21,500	28.83	$0.00	$0.00	$0.00	$106,433.10	$0.00
Total:		**37.86**	**$1,531,172.66**	**$2,845,982.34**	**$2,070,253.85**	**$2,517,216.20**	**$4,400,004.29**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $1,531,172.66
2 - Response Time (2-3 yrs) - $2,845,982.34
3 - Response Time (3-4 yrs) - $2,070,253.85
4 - Response Time (4-5 yrs) - $2,517,216.20
5 - Response Time (> 5 yrs) - $4,400,004.29

Budget Estimate Total: $13,364,629.34

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	58,000
Year Built:	1937
Last Renovation:	
Replacement Value:	$34,929,276
Repair Cost:	$13,258,196.24
Total FCI:	37.96 %
Total RSLI:	68.06 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B236001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S236001		

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	22.00 %	0.00 %	$0.00
A20 - Basement Construction	22.00 %	0.00 %	$0.00
B10 - Superstructure	22.00 %	0.48 %	$32,434.15
B20 - Exterior Enclosure	28.16 %	38.69 %	$1,044,027.14
B30 - Roofing	75.00 %	0.00 %	$0.00
C10 - Interior Construction	45.25 %	20.79 %	$274,990.92
C20 - Stairs	22.00 %	0.00 %	$0.00
C30 - Interior Finishes	109.72 %	33.53 %	$1,270,396.03
D20 - Plumbing	96.76 %	17.16 %	$404,874.52
D30 - HVAC	101.52 %	107.08 %	$6,908,909.54
D40 - Fire Protection	105.71 %	186.35 %	$973,843.99
D50 - Electrical	110.11 %	68.89 %	$2,348,719.95
E10 - Equipment	105.71 %	0.00 %	$0.00
E20 - Furnishings	0.00 %	0.00 %	$0.00
Totals:	**68.06 %**	**37.96 %**	**$13,258,196.24**

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	$24.32	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$1,410,560
A1030	Slab on Grade	$15.51	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$899,580
A2010	Basement Excavation	$13.07	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$758,060
A2020	Basement Walls	$23.02	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$1,335,160
B1010	Floor Construction	$92.20	S.F.	58,000	100	1937	2037		22.00 %	0.61 %	22		$32,434.15	$5,347,600
B1020	Roof Construction	$24.11	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$1,398,380
B2010	Exterior Walls	$31.22	S.F.	58,000	100	1937	2037		22.00 %	44.58 %	22		$807,236.80	$1,810,760
B2020	Exterior Windows	$13.63	S.F.	58,000	40	1937	1977	2028	32.50 %	0.00 %	13			$790,540
B2030	Exterior Doors	$1.67	S.F.	58,000	25	1937	1962	2042	108.00 %	244.47 %	27		$236,790.34	$96,860
B3010105	Built-Up	$37.76	S.F.	58,000	20	2010	2030		75.00 %	0.00 %	15			$2,190,080
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.68	S.F.	58,000	20	2010	2030		75.00 %	0.00 %	15			$39,440
C1010	Partitions	$14.93	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$865,940
C1020	Interior Doors	$3.76	S.F.	58,000	40	1937	1977	2057	105.00 %	109.37 %	42		$238,513.44	$218,080
C1030	Fittings	$4.12	S.F.	58,000	40	2005	2045		75.00 %	15.27 %	30		$36,477.48	$238,960
C2010	Stair Construction	$1.28	S.F.	58,000	100	1937	2037		22.00 %	0.00 %	22			$74,240

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	58,000	10	2005	2015	2028	130.00 %	49.45 %	13		$378,856.01	$766,180
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	58,000	30	2005	2035		66.67 %	0.00 %	20			$152,540
C3020411	Carpet	$7.30	S.F.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	13,920	50	1937	1987	2067	104.00 %	0.00 %	52			$1,051,238
C3020413	Vinyl Flooring	$9.68	S.F.	9,800	20	1990	2010	2037	110.00 %	0.00 %	22			$94,864
C3020414	Wood Flooring	$22.27	S.F.	22,680	25	1937	1962	2042	108.00 %	48.35 %	27		$244,194.20	$505,084
C3020415	Concrete Floor Finishes	$0.97	S.F.	3,000	50	1937	1987	2067	104.00 %	0.00 %	52			$2,910
C3030	Ceiling Finishes	$20.97	S.F.	58,000	25	1937	1962	2042	108.00 %	53.22 %	27		$647,345.82	$1,216,260
D2010	Plumbing Fixtures	$31.58	S.F.	58,000	35	1995	2030	2052	105.71 %	0.00 %	37			$1,831,640
D2020	Domestic Water Distribution	$2.90	S.F.	58,000	25	1937	1962	2030	60.00 %	29.10 %	15		$48,947.09	$168,200
D2030	Sanitary Waste	$2.90	S.F.	58,000	25	1937	1962	2042	108.00 %	198.55 %	27		$333,963.76	$168,200
D2040	Rain Water Drainage	$3.29	S.F.	58,000	30	1937	1967	2025	33.33 %	11.51 %	10		$21,963.67	$190,820
D3020	Heat Generating Systems	$18.67	S.F.	58,000	35	1937	1972	2052	105.71 %	0.00 %	37			$1,082,860
D3030	Cooling Generating Systems	$24.48	S.F.	58,000	30	1937	1967	2047	106.67 %	50.14 %	32		$711,882.57	$1,419,840
D3040	Distribution Systems	$42.99	S.F.	58,000	25	1937	1962	2042	108.00 %	189.97 %	27		$4,736,653.78	$2,493,420
D3050	Terminal & Package Units	$11.60	S.F.	58,000	20	1937	1957	2025	50.00 %	0.00 %	10			$672,800
D3060	Controls & Instrumentation	$13.50	S.F.	58,000	20	1937	1957	2037	110.00 %	186.51 %	22		$1,460,373.19	$783,000
D4010	Sprinklers	$8.02	S.F.	58,000	35	1937	1972	2052	105.71 %	209.36 %	37		$973,843.99	$465,160
D4020	Standpipes	$0.99	S.F.	58,000	35	1937	1972	2052	105.71 %	0.00 %	37			$57,420
D5010	Electrical Service/Distribution	$9.70	S.F.	58,000	30	1937	1967	2047	106.67 %	143.96 %	32		$809,930.20	$562,600
D5020	Lighting and Branch Wiring	$34.68	S.F.	58,000	20	1937	1957	2037	110.00 %	51.78 %	22		$1,041,608.49	$2,011,440
D5030	Communications and Security	$12.99	S.F.	58,000	15	1937	1952	2032	113.33 %	39.27 %	17		$295,831.35	$753,420
D5090	Other Electrical Systems	$1.41	S.F.	58,000	30	1937	1967	2047	106.67 %	246.21 %	32		$201,349.91	$81,780
E1020	Institutional Equipment	$4.82	S.F.	58,000	35	1937	1972	2052	105.71 %	0.00 %	37			$279,560
E1090	Other Equipment	$11.10	S.F.	58,000	35	1937	1972	2052	105.71 %	0.00 %	37			$643,800
E2010	Fixed Furnishings	$2.13	S.F.		40				0.00 %	0.00 %				$0
								Total	**68.06 %**	**37.96 %**			**$13,258,196.24**	**$34,929,276**

System Notes

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

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

Note: Paint 70%
Glazed block wainscot 20%
Ceramic tile 5%

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

Note: Hardwood 48%
VCT 22%
Terrazzo 20%
Ceramic tile 5%
Concrete 5%

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$13,258,196**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,276,696**	**$14,534,893**
*** 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	$32,434	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$32,434**
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	$807,237	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$807,237**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$236,790	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$236,790**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

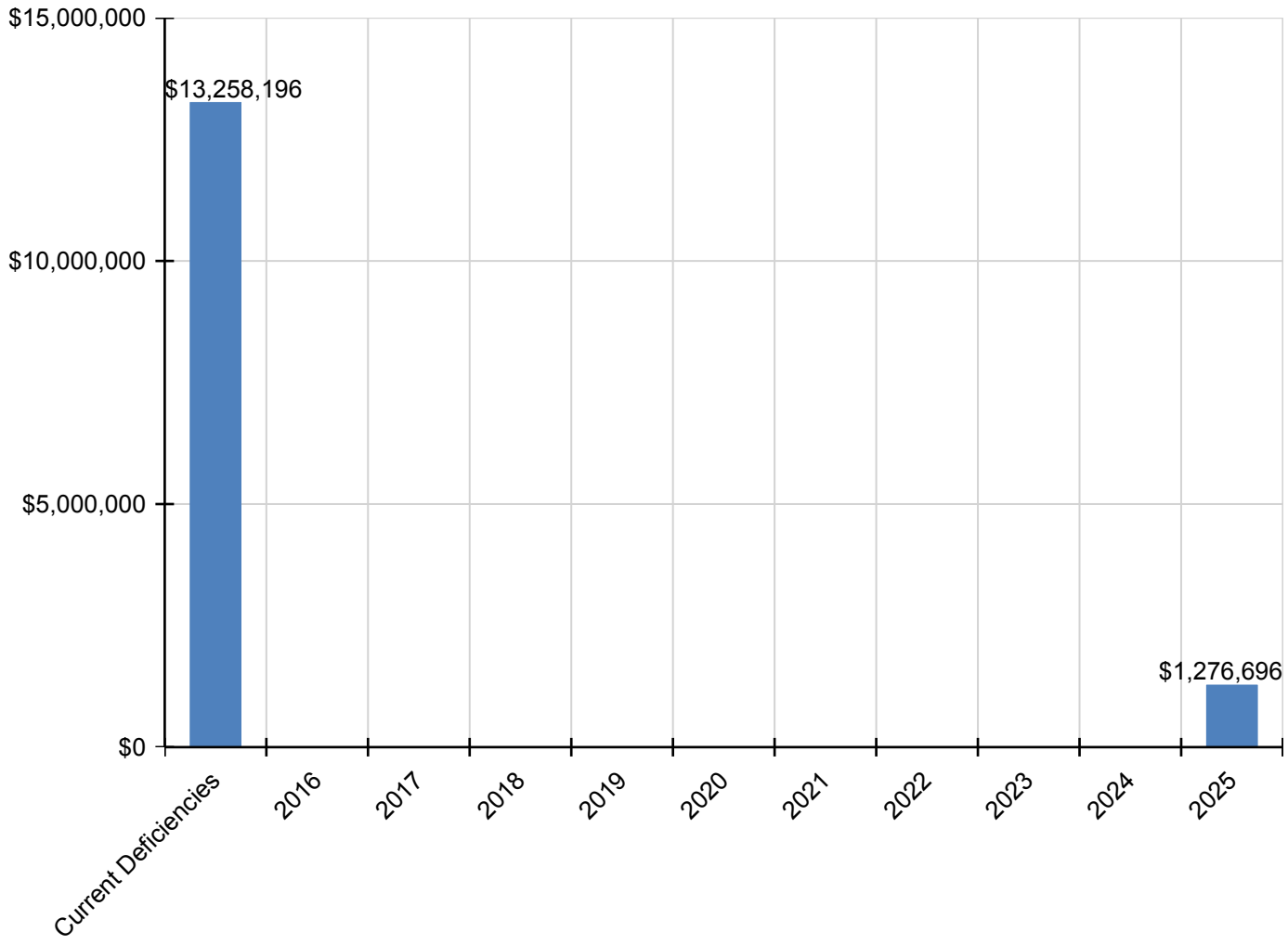
C1020 - Interior Doors	$238,513	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$238,513**
C1030 - Fittings	$36,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$36,477**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$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	$378,856	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$378,856**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$244,194	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$244,194**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$647,346	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$647,346**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$48,947	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$48,947**
D2030 - Sanitary Waste	$333,964	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$333,964**
D2040 - Rain Water Drainage	$21,964	$0	$0	$0	$0	$0	$0	$0	$0	$0	$282,091	**$304,054**
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	$711,883	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$711,883**
D3040 - Distribution Systems	$4,736,654	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,736,654**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$994,606	**$994,606**
D3060 - Controls & Instrumentation	$1,460,373	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,460,373**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$973,844	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$973,844**
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	$809,930	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$809,930**

D5020 - Lighting and Branch Wiring	$1,041,608	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,041,608**
D5030 - Communications and Security	$295,831	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$295,831**
D5090 - Other Electrical Systems	$201,350	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$201,350**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

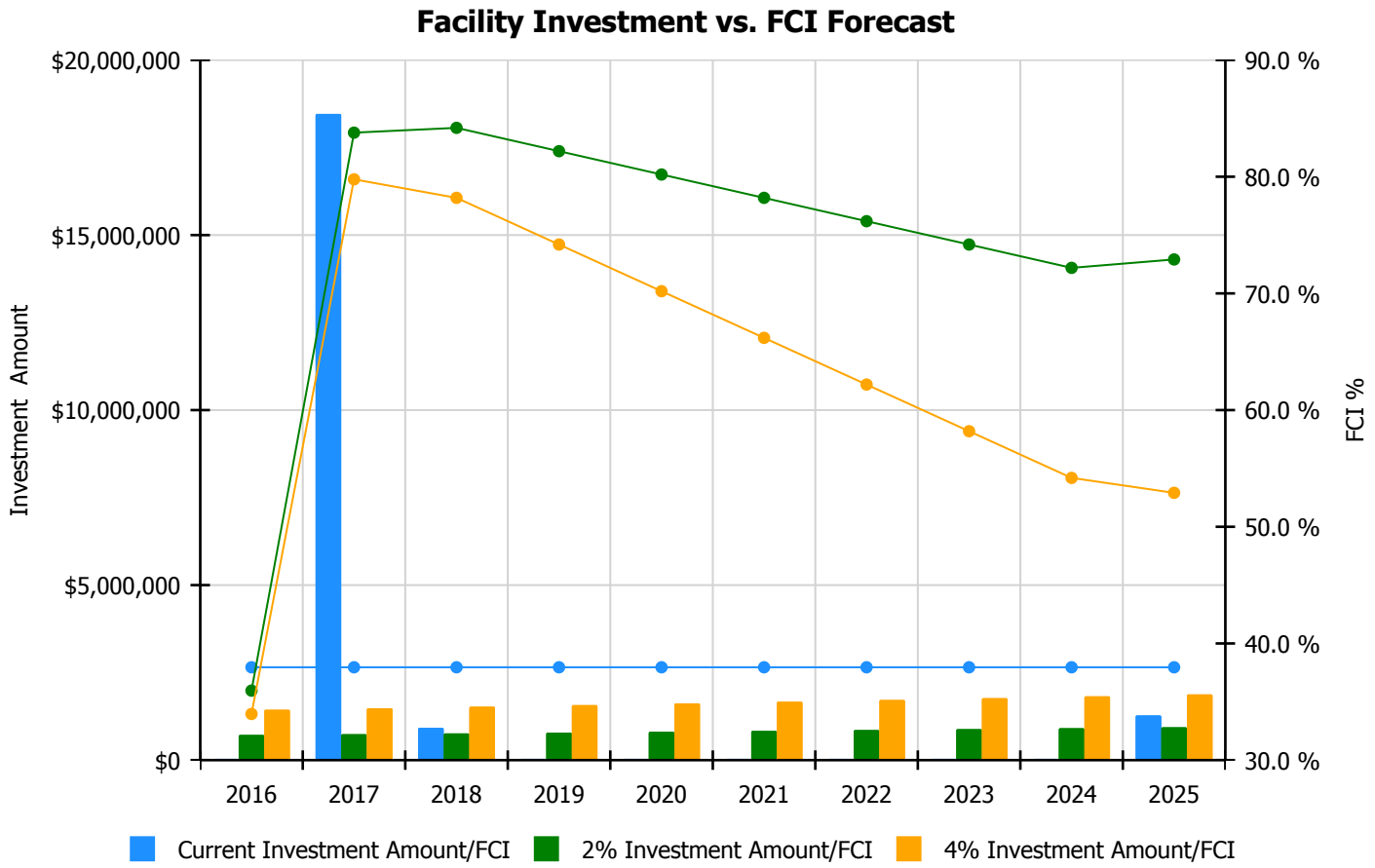
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

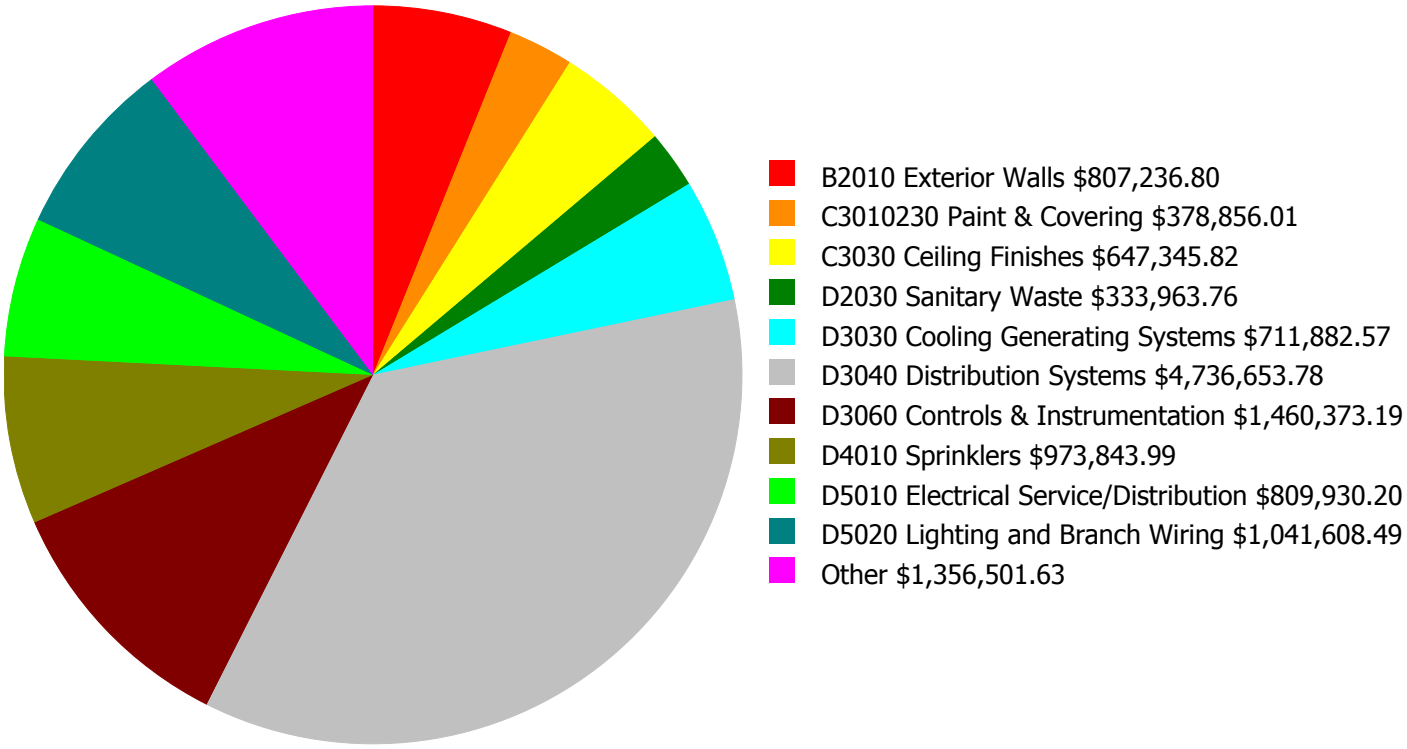
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 37.96%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$719,543.00	35.96 %	$1,439,086.00	33.96 %
2017	$18,461,123	$741,129.00	83.78 %	$1,482,259.00	79.78 %
2018	$920,948	$763,363.00	84.19 %	$1,526,727.00	78.19 %
2019	$0	$786,264.00	82.19 %	$1,572,528.00	74.19 %
2020	$0	$809,852.00	80.19 %	$1,619,704.00	70.19 %
2021	$0	$834,148.00	78.19 %	$1,668,295.00	66.19 %
2022	$0	$859,172.00	76.19 %	$1,718,344.00	62.19 %
2023	$0	$884,947.00	74.19 %	$1,769,894.00	58.19 %
2024	$0	$911,496.00	72.19 %	$1,822,991.00	54.19 %
2025	$1,276,696	$938,841.00	72.91 %	$1,877,681.00	52.91 %
Total:	**$20,658,767**	**$8,248,755.00**		**$16,497,509.00**	

Deficiency Summary by System

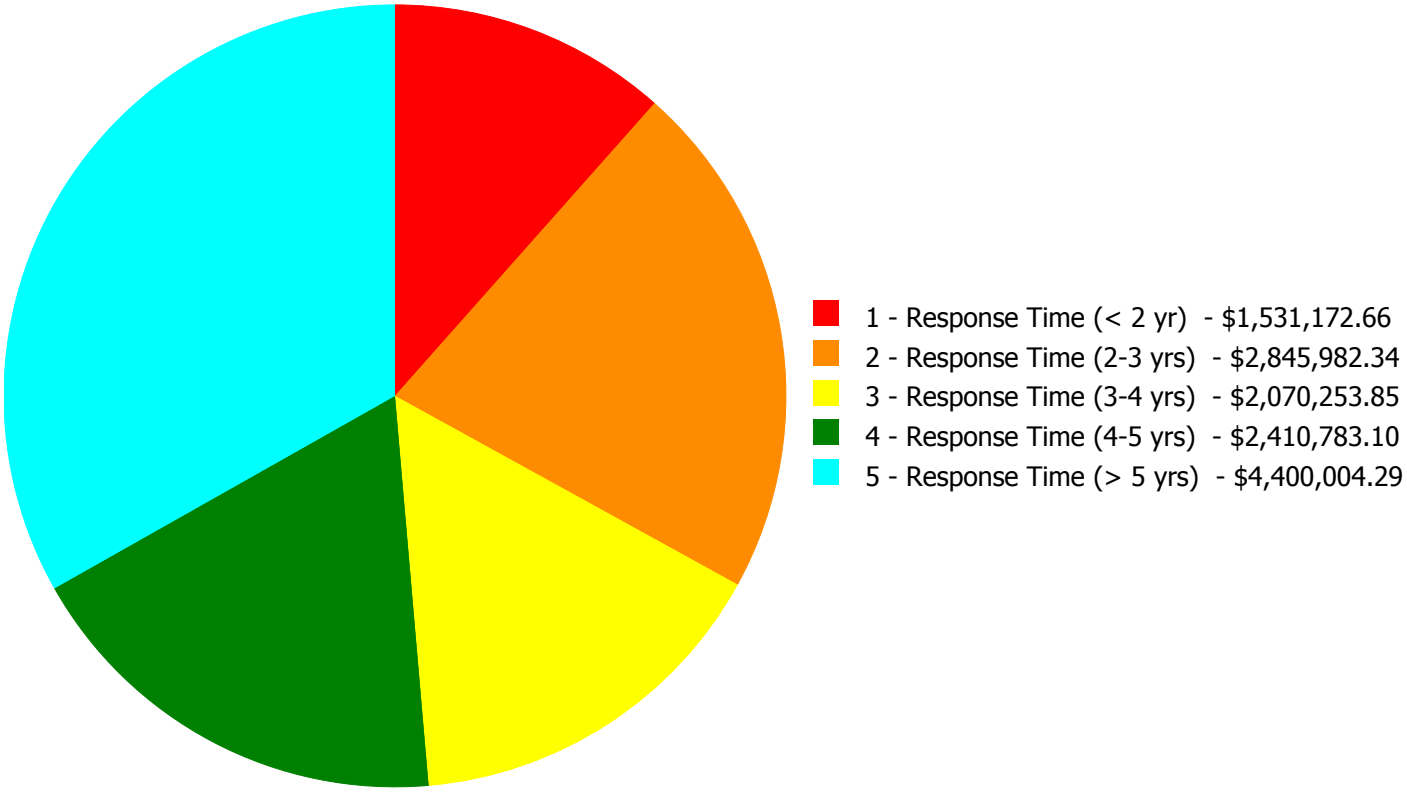
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,258,196.24

Deficiency Summary by Priority

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



Budget Estimate Total: $13,258,196.24

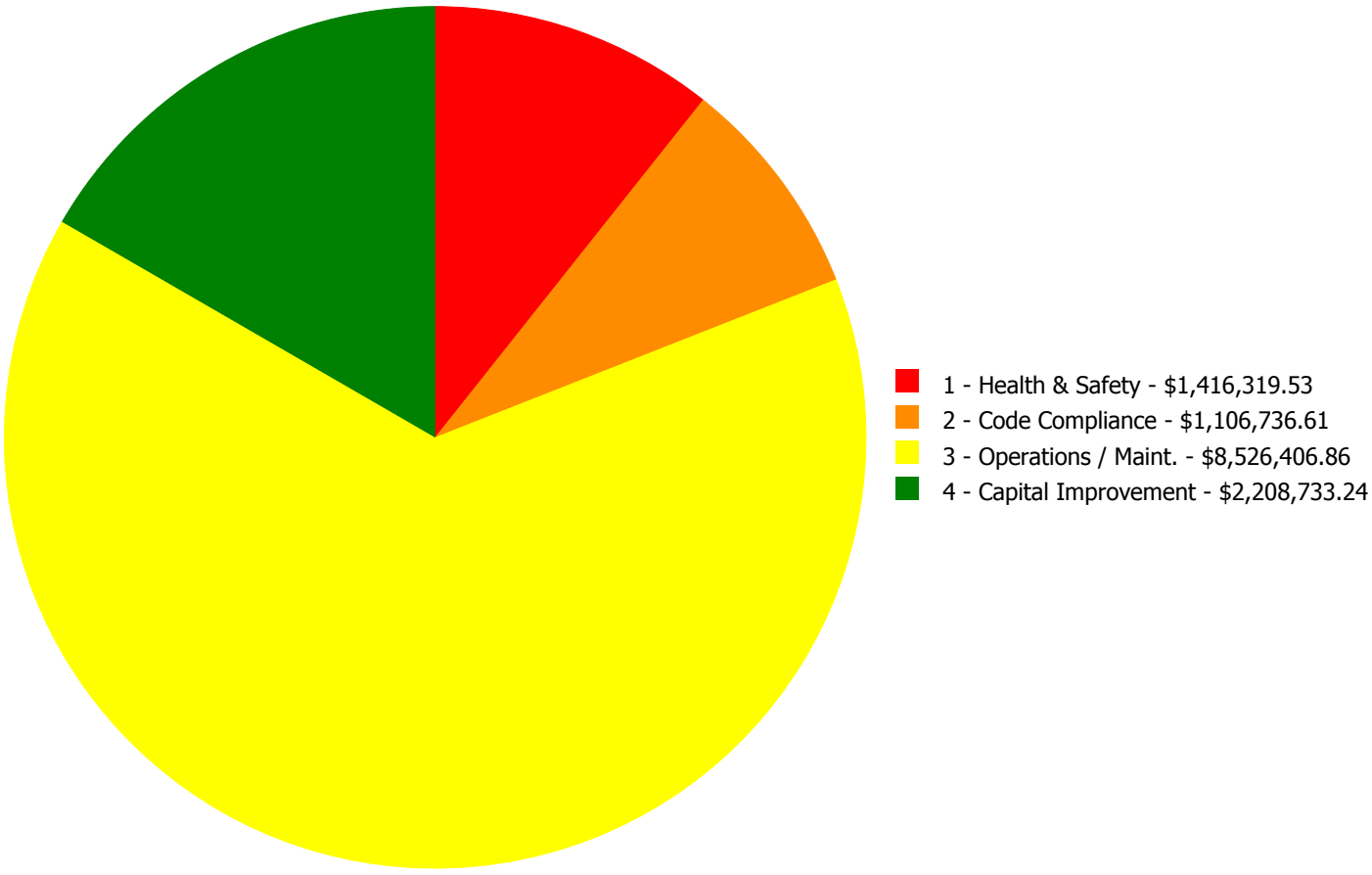
Deficiency By Priority Investment Table

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
B1010	Floor Construction	$0.00	$0.00	$0.00	$32,434.15	$0.00	$32,434.15
B2010	Exterior Walls	$0.00	$0.00	$0.00	$807,236.80	$0.00	$807,236.80
B2030	Exterior Doors	$0.00	$0.00	$0.00	$236,790.34	$0.00	$236,790.34
C1020	Interior Doors	$0.00	$0.00	$0.00	$0.00	$238,513.44	$238,513.44
C1030	Fittings	$0.00	$0.00	$0.00	$11,011.71	$25,465.77	$36,477.48
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$378,856.01	$0.00	$378,856.01
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$0.00	$244,194.20	$244,194.20
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$0.00	$647,345.82	$647,345.82
D2020	Domestic Water Distribution	$0.00	$48,947.09	$0.00	$0.00	$0.00	$48,947.09
D2030	Sanitary Waste	$333,963.76	$0.00	$0.00	$0.00	$0.00	$333,963.76
D2040	Rain Water Drainage	$0.00	$0.00	$0.00	$21,963.67	$0.00	$21,963.67
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$711,882.57	$711,882.57
D3040	Distribution Systems	$223,364.91	$2,797,035.25	$644,024.32	$0.00	$1,072,229.30	$4,736,653.78
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$1,460,373.19	$1,460,373.19
D4010	Sprinklers	$973,843.99	$0.00	$0.00	$0.00	$0.00	$973,843.99
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$809,930.20	$0.00	$809,930.20
D5020	Lighting and Branch Wiring	$0.00	$0.00	$1,041,608.49	$0.00	$0.00	$1,041,608.49
D5030	Communications and Security	$0.00	$0.00	$183,271.13	$112,560.22	$0.00	$295,831.35
D5090	Other Electrical Systems	$0.00	$0.00	$201,349.91	$0.00	$0.00	$201,349.91
	Total:	$1,531,172.66	$2,845,982.34	$2,070,253.85	$2,410,783.10	$4,400,004.29	$13,258,196.24

Deficiency Summary by Category

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



Budget Estimate Total: $13,258,196.24

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: D2030 - Sanitary Waste

Location: Throughout building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $333,963.76

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Conduct a steam trap survey and replace failed units.

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $223,364.91

Assessor Name: System

Date Created: 08/10/2015

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.

System: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 68,075.00

Unit of Measure: S.F.

Estimate: $973,843.99

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

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

System: D2020 - Domestic Water Distribution

Location: Mechanical room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 2.00

Unit of Measure: Ea.

Estimate: $48,947.09

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the two existing Paloma instant hot water heaters.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $2,712,051.42

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace vacuum condensate pump set (duplex)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $84,983.83

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace the condensate receiver in the basement mechanical room.

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

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $644,024.32

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D5020 - Lighting and Branch Wiring

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

Estimate: $721,543.77

Assessor Name: System

Date Created: 08/06/2015

Notes: Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.

System: D5020 - Lighting and Branch Wiring

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 0.00

Unit of Measure: S.F.

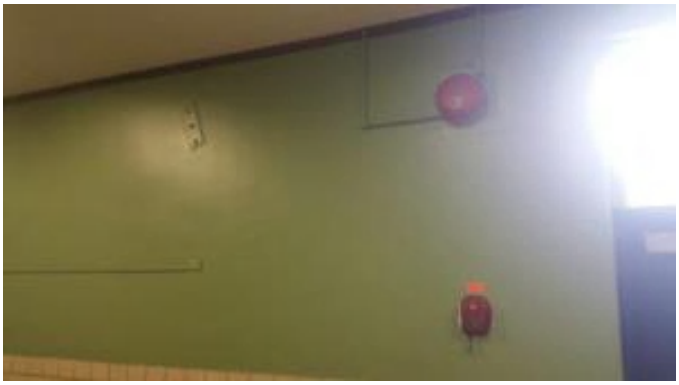
Estimate: $320,064.72

Assessor Name: System

Date Created: 08/06/2015

Notes: Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.

System: D5030 - Communications and Security



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $183,271.13

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new Automated Fire Alarm System to be located in the new Electrical Room.

System: D5090 - Other Electrical Systems

Location: Throughout the building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Emergency/Exit Lighting
Qty: 1.00
Unit of Measure: Ea.
Estimate: $108,511.78
Assessor Name: System
Date Created: 08/06/2015

Notes: Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

System: D5090 - Other Electrical Systems

Location: Electrical room in the basement
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $92,838.13
Assessor Name: System
Date Created: 08/06/2015

Notes: Install a new emergency power system (100 KVA generator).

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

System: B1010 - Floor Construction

Location: Exterior/ Interior

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair rebar and epoxy grout exposed rebar on the underside of floors and floor beams

Qty: 400.00

Unit of Measure: S.F.

Estimate: $32,434.15

Assessor Name: System

Date Created: 11/21/2015

Notes: Repair damaged structural slabs and supporting members

System: B2010 - Exterior Walls

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

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

Qty: 25,000.00

Unit of Measure: S.F.

Estimate: $807,236.80

Assessor Name: System

Date Created: 11/21/2015

Notes: Repair cracks and tuck-point stone and brick masonry (entire building)

System: B2030 - Exterior Doors

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 26.00

Unit of Measure: Ea.

Estimate: $236,790.34

Assessor Name: System

Date Created: 11/21/2015

Notes: Replace all exterior doors

System: C1030 - Fittings

Location: Interior/ classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 16.00

Unit of Measure: Ea.

Estimate: $11,011.71

Assessor Name: System

Date Created: 11/21/2015

Notes: Replace original chalkboards

System: C3010230 - Paint & Covering

Location: Interior

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 68,220.00

Unit of Measure: S.F.

Estimate: $378,856.01

Assessor Name: System

Date Created: 11/21/2015

Notes: Repair (10%) and repaint all interior walls

System: D2040 - Rain Water Drainage

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace roof drains - per drain including piping

Qty: 6.00

Unit of Measure: Ea.

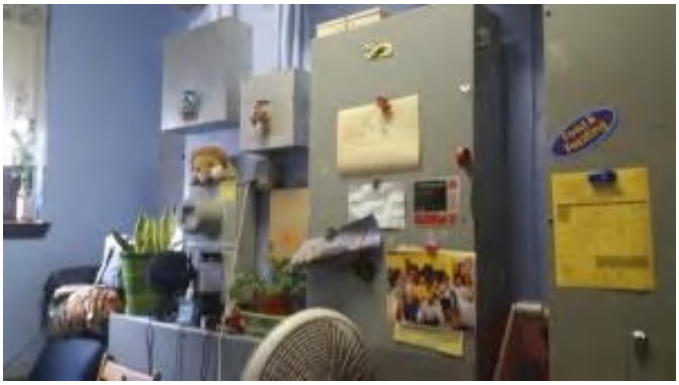
Estimate: $21,963.67

Assessor Name: System

Date Created: 08/10/2015

Notes: Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D5010 - Electrical Service/Distribution



Location: Electrical room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical DIstribution System (U1)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $809,930.20

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new electrical service. Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads. Install two 120V/208V panels in each floor to replace the existing panels. Also replace the power feeders, conduits, wire to the four panels from the new 120V/208V three phase main Panel Board.

System: D5030 - Communications and Security

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $112,560.22

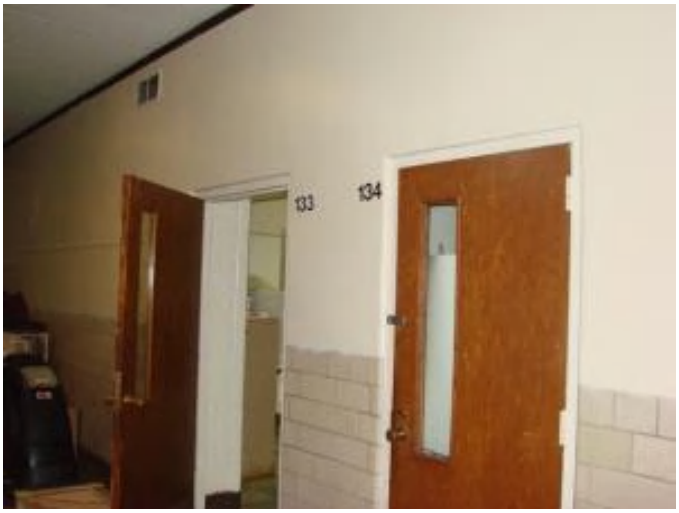
Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new clock system. •

Priority 5 - Response Time (> 5 yrs):

System: C1020 - Interior Doors



Location: Interior

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace interior doors - wood doors with hollow metal frames - per leaf

Qty: 32.00

Unit of Measure: Ea.

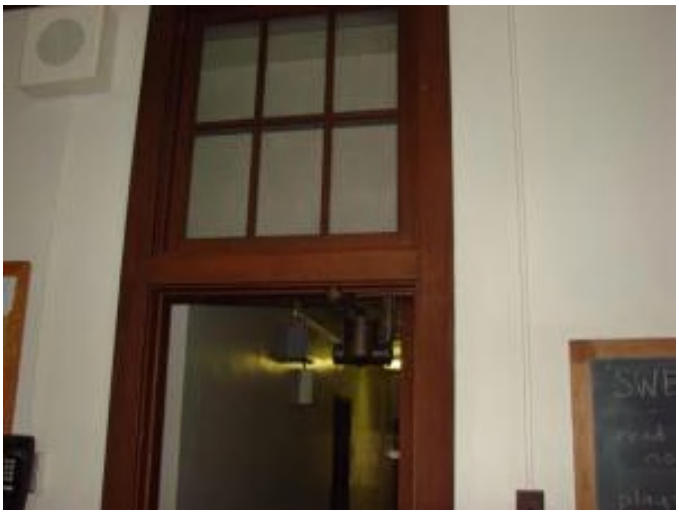
Estimate: $152,658.79

Assessor Name: System

Date Created: 11/21/2015

Notes: Replace damaged classroom doors

System: C1020 - Interior Doors



Location: Interior

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Refinish interior doors

Qty: 62.00

Unit of Measure: Ea.

Estimate: $51,347.34

Assessor Name: System

Date Created: 11/21/2015

Notes: Refinish original doors and transoms

System: C1020 - Interior Doors

Location: Interior

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace door knobs with compliant lever type

Qty: 62.00

Unit of Measure: Ea.

Estimate: $34,507.31

Assessor Name: System

Date Created: 11/21/2015

Notes: Replace door knobs with ADA compliant handles

System: C1030 - Fittings

Location: Interior

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 94.00

Unit of Measure: Ea.

Estimate: $25,465.77

Assessor Name: System

Date Created: 11/21/2015

Notes: Install new signage throughout

System: C3020414 - Wood Flooring

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Refinish wood floors

Qty: 22,680.00

Unit of Measure: S.F.

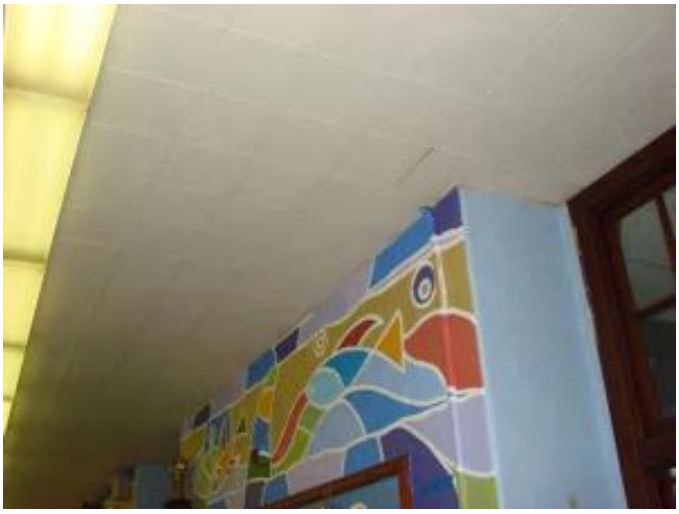
Estimate: $244,194.20

Assessor Name: System

Date Created: 11/21/2015

Notes: Repair refinish hardwood flooring

System: C3030 - Ceiling Finishes



Location: Interior

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 40,400.00

Unit of Measure: S.F.

Estimate: $609,330.18

Assessor Name: System

Date Created: 11/21/2015

Notes: Replace all suspended acoustical ceilings

System: C3030 - Ceiling Finishes

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $38,015.64

Assessor Name: System

Date Created: 11/21/2015

Notes: Repair (15%) and repaint plaster ceilings

System: D3030 - Cooling Generating Systems

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $711,882.57

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove the window air conditioning units and install a 170 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.

System: D3040 - Distribution Systems

Location: Gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $308,301.04

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings.

System: D3040 - Distribution Systems

Location: Cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 600.00

Unit of Measure: Pr.

Estimate: $280,526.58

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the lunch Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

This deficiency has no image.

Location: Administration

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Install HVAC unit for Administration (2000 students).

Qty: 600.00

Unit of Measure: Pr.

Estimate: $259,694.18

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

System: D3040 - Distribution Systems

Location: Auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 400.00

Unit of Measure: Seat

Estimate: $223,707.50

Assessor Name: System

Date Created: 08/10/2015

Notes: Provide ventilation for the Auditorium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 68,076.00

Unit of Measure: S.F.

Estimate: $1,460,373.19

Assessor Name: System

Date Created: 08/10/2015

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

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, 1 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	Mechanical Room					25	2000	2025	$9,262.50	$10,188.75
D5010 Electrical Service/Distribution	Circuit breaker, 3 pole, 600 volt, 1200 amp, enclosed (NEMA 1)	1.00	Ea.	electrical room					30	1937	2047	$13,662.00	$15,028.20
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 400 A, 1 stories, 25' horizontal	2.00	Ea.	throughout the building					30	2000	2030	$17,698.50	$38,936.70
D5010 Electrical Service/Distribution	Switchboards, no main disconnect, 4 wire, 120/208 V, 800 amp, incl CT compartment, excl CT's or PT's	1.00	Ea.	electrical room					30	2000	2030	$7,638.30	$8,402.13
												Total:	**$72,555.78**

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):	21,500
Year Built:	1937
Last Renovation:	
Replacement Value:	$369,155
Repair Cost:	$106,433.10
Total FCI:	28.83 %
Total RSLI:	65.17 %

Description:

Attributes:

General Attributes:

Bldg ID:	S236001	Site ID:	S236001

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	70.32 %	38.61 %	$106,433.10
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**65.17 %**	**28.83 %**	**$106,433.10**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$11.52	S.F.	13,000	40	1990	2030		37.50 %	71.07 %	15		$106,433.10	$149,760
G2040	Site Development	$4.36	S.F.	21,500	25	1990	2015	2042	108.00 %	0.00 %	27			$93,740
G2050	Landscaping & Irrigation	$3.78	S.F.	8,500	15	2000	2015	2032	113.33 %	0.00 %	17			$32,130
G4020	Site Lighting	$3.58	S.F.	21,500	30	2000	2030		50.00 %	0.00 %	15			$76,970
G4030	Site Communications & Security	$0.77	S.F.	21,500	30	2000	2030		50.00 %	0.00 %	15			$16,555
								Total	**65.17 %**	**28.83 %**			**$106,433.10**	**$369,155**

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.

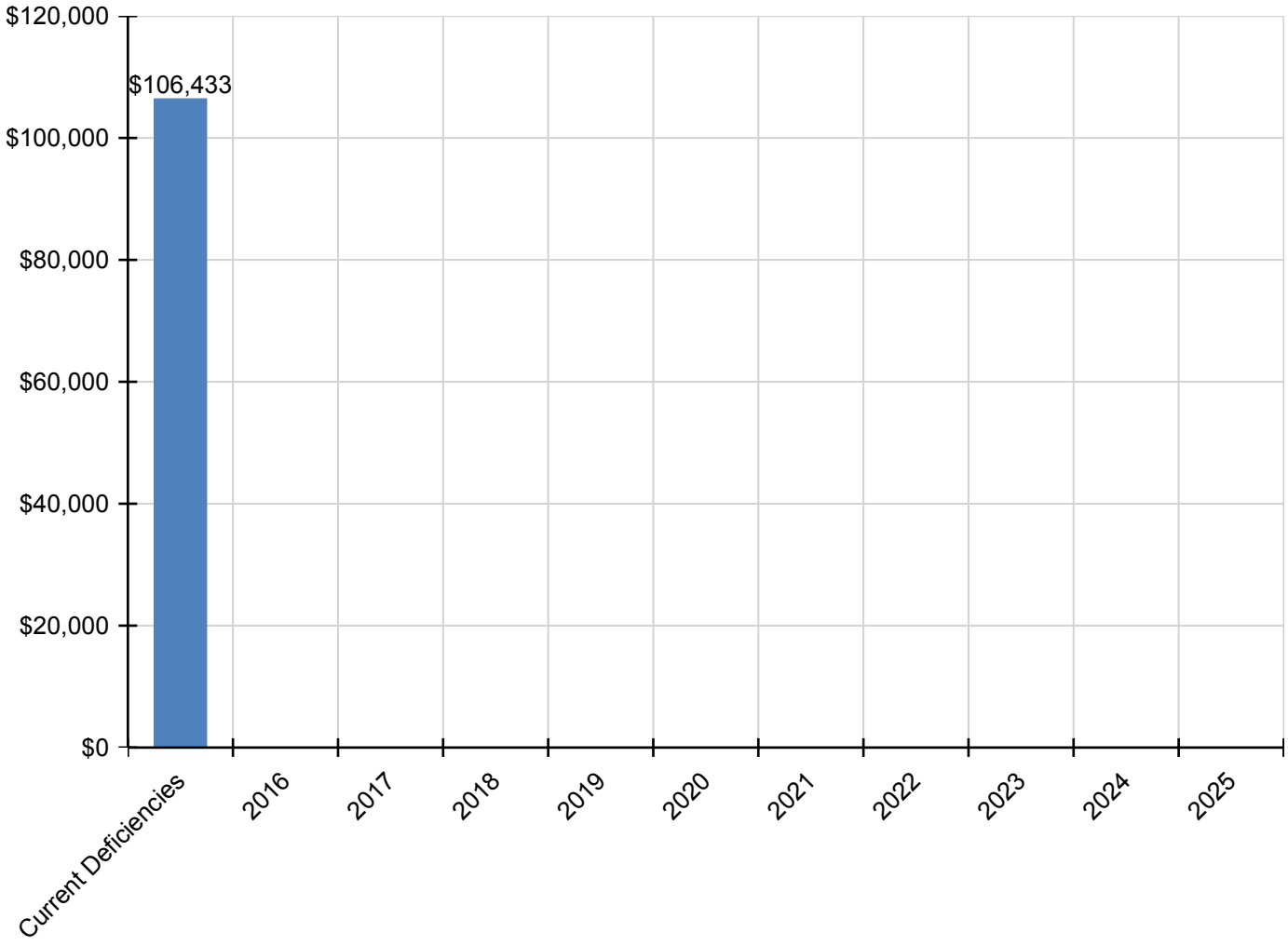
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$106,433**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$106,433**
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	$106,433	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$106,433**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

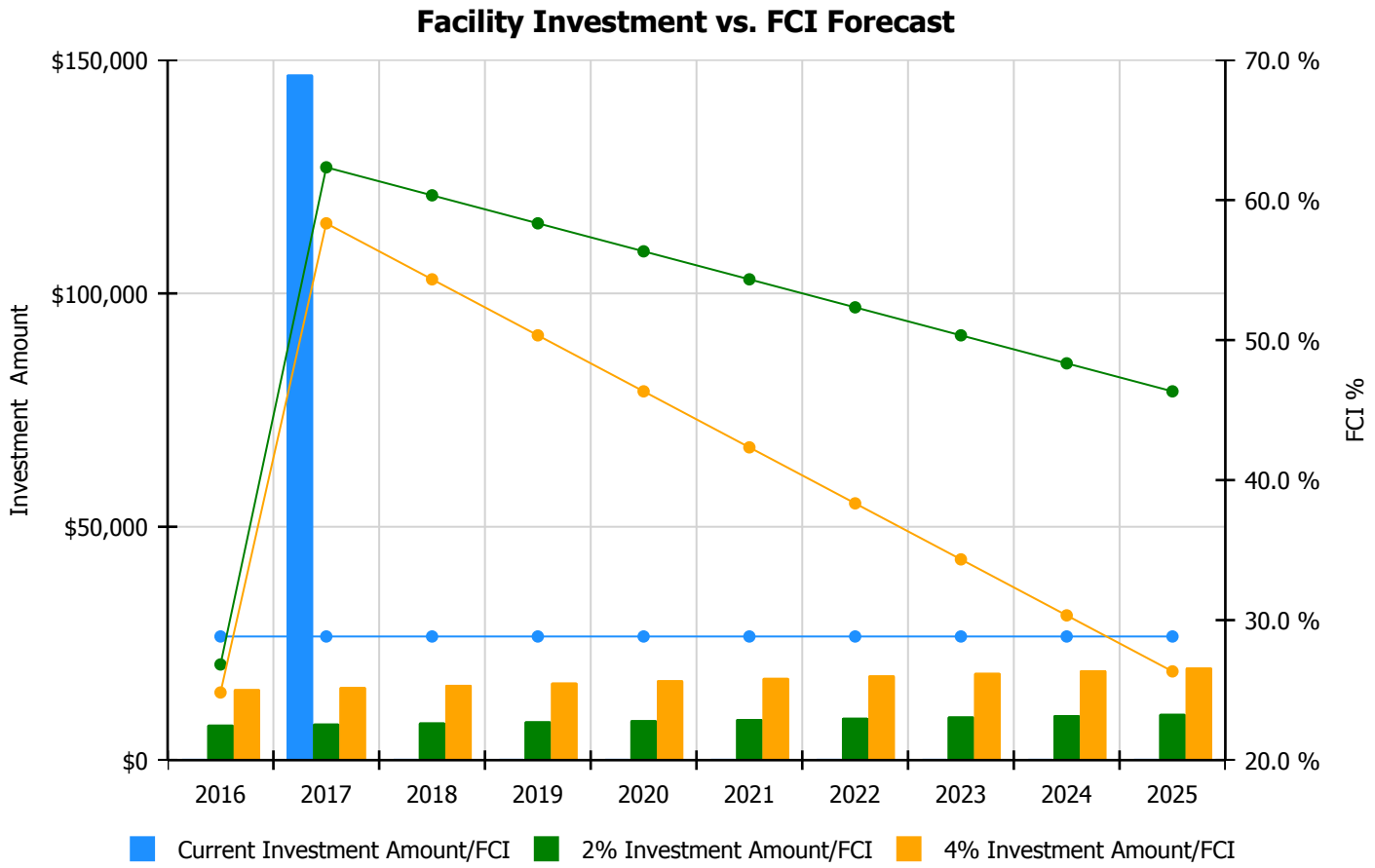
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

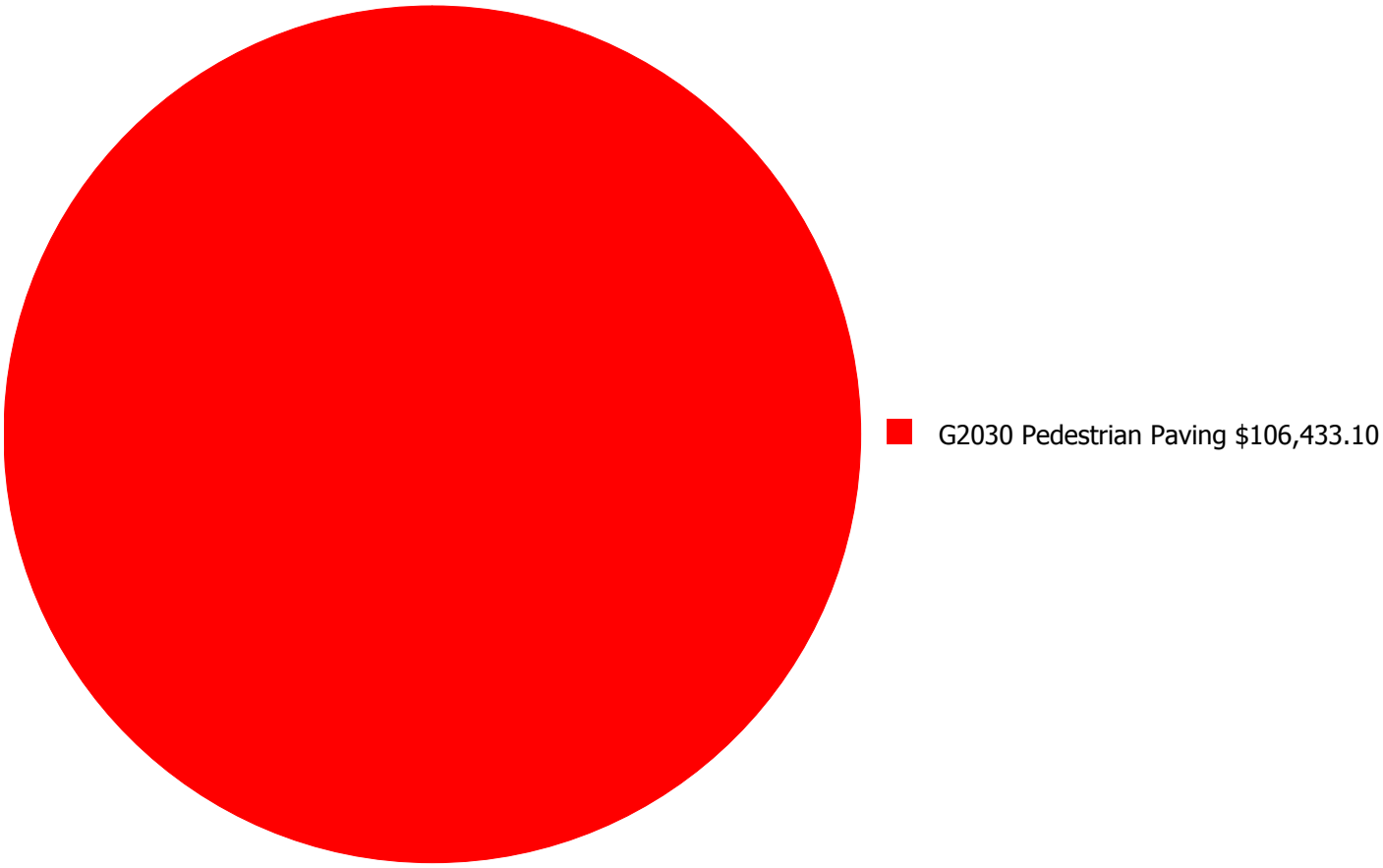
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 28.83%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$7,605.00	26.83 %	$15,209.00	24.83 %
2017	$146,889	$7,833.00	62.34 %	$15,665.00	58.34 %
2018	$0	$8,068.00	60.34 %	$16,135.00	54.34 %
2019	$0	$8,310.00	58.34 %	$16,619.00	50.34 %
2020	$0	$8,559.00	56.34 %	$17,118.00	46.34 %
2021	$0	$8,816.00	54.34 %	$17,632.00	42.34 %
2022	$0	$9,080.00	52.34 %	$18,161.00	38.34 %
2023	$0	$9,353.00	50.34 %	$18,705.00	34.34 %
2024	$0	$9,633.00	48.34 %	$19,267.00	30.34 %
2025	$0	$9,922.00	46.34 %	$19,845.00	26.34 %
Total:	**$146,889**	**$87,179.00**		**$174,356.00**	

Deficiency Summary by System

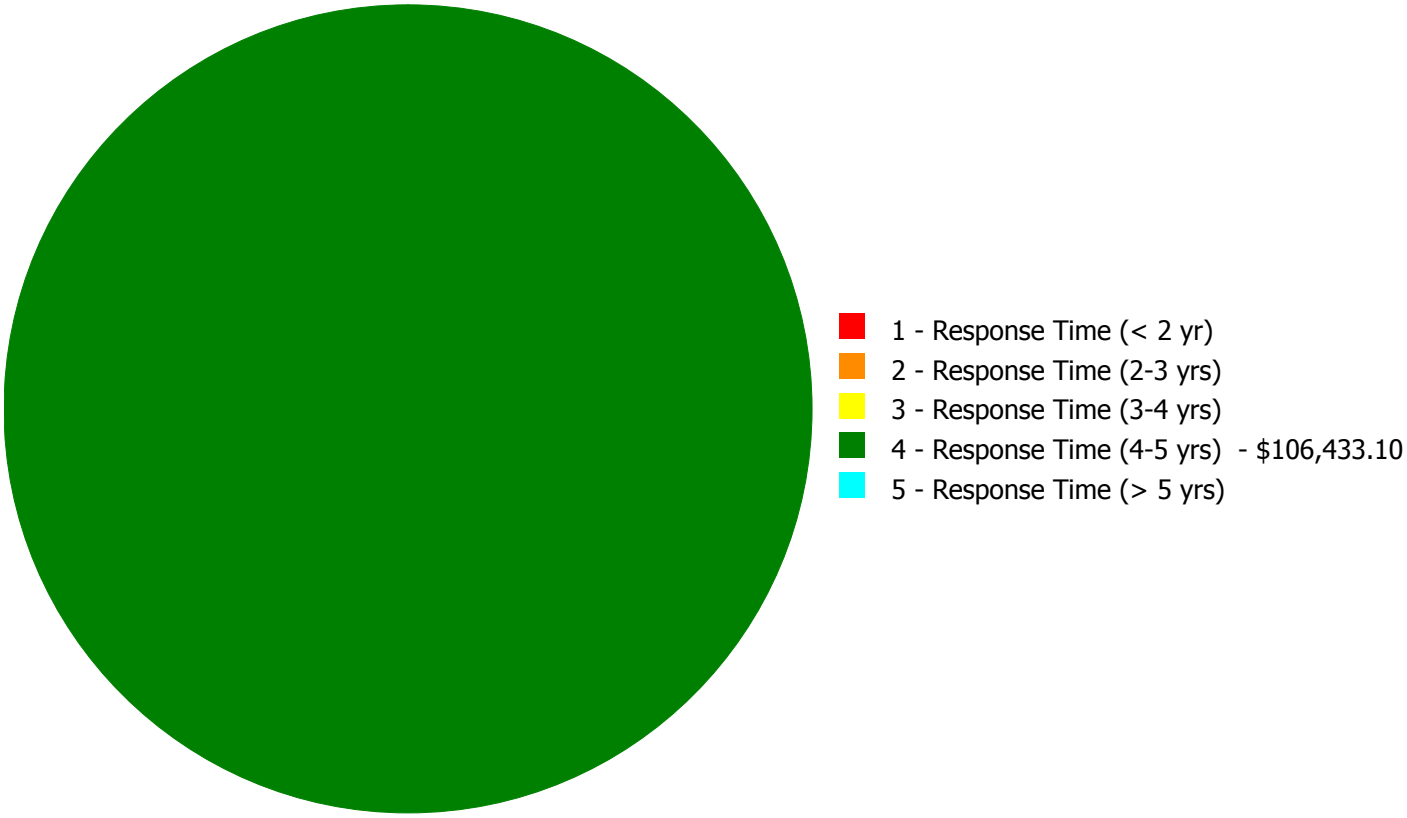
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $106,433.10

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: $106,433.10

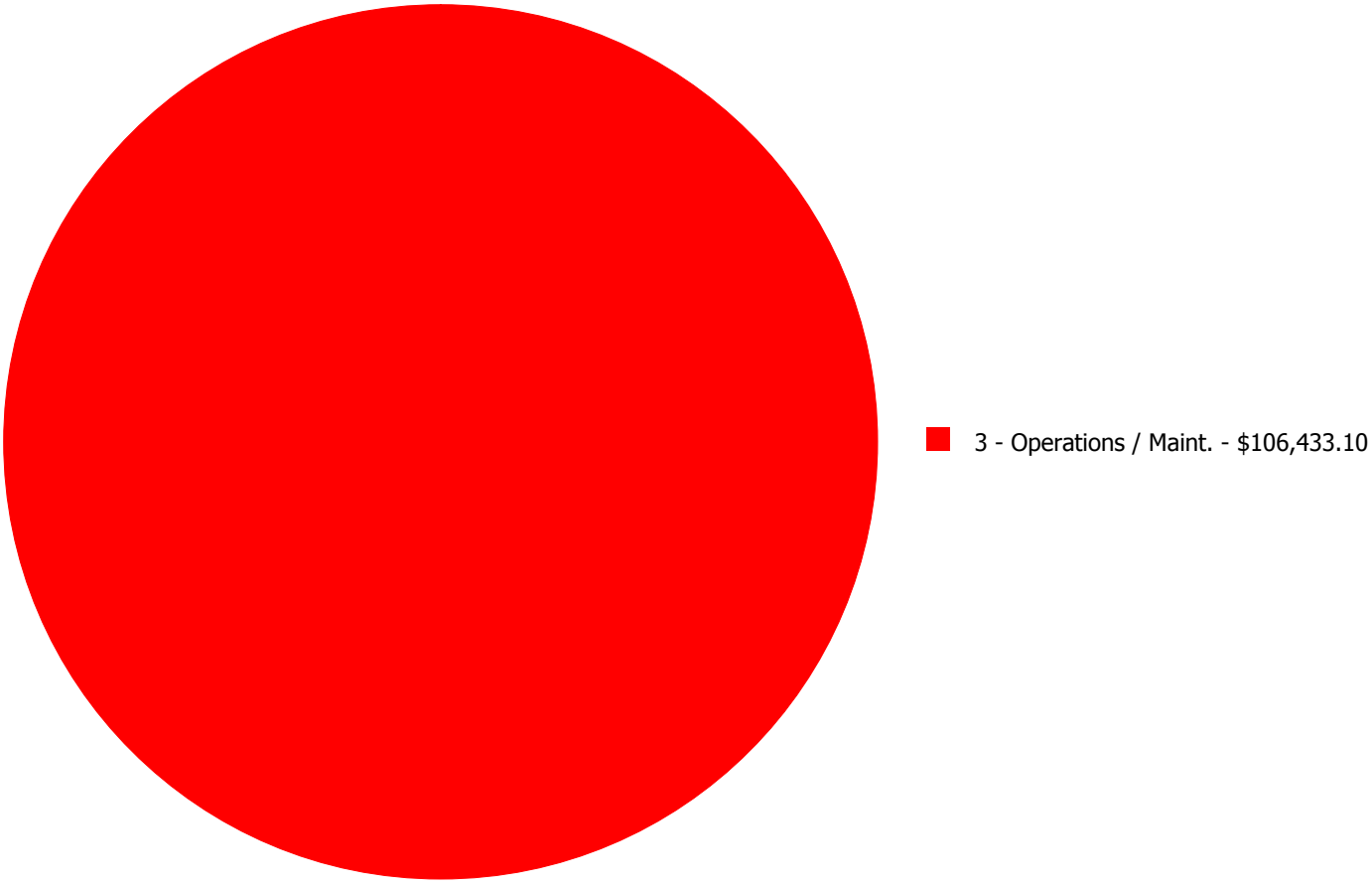
Deficiency By Priority Investment Table

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	$0.00	$0.00	$106,433.10	$0.00	$106,433.10
	Total:	$0.00	$0.00	$0.00	$106,433.10	$0.00	$106,433.10

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: $106,433.10

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

Location: Grounds/ site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 7,400.00

Unit of Measure: S.F.

Estimate: $106,433.10

Assessor Name: Ben Nixon

Date Created: 11/21/2015

Notes: Resurface playground

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