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.

Key School

Governance	DISTRICT	Report Type	Elementary
Address	2230 S. 8Th St.	Enrollment	465
	Philadelphia, Pa 19148	Grade Range	'00-06'
Phone/Fax	215-952-6216 / 215-952-8505	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Key	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	**34.53%**	**$8,686,744**	**$25,153,696**
Building	34.82 %	$8,619,771	$24,755,977
Grounds	16.84 %	$66,973	$397,719

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	02.68 %	$17,151	$639,877
Exterior Walls (Shows condition of the structural condition of the exterior facade)	22.40 %	$405,210	$1,808,590
Windows (Shows functionality of exterior windows)	90.92 %	$802,337	$882,490
Exterior Doors (Shows condition of exterior doors)	09.83 %	$6,987	$71,050
Interior Doors (Classroom doors)	203.46 %	$349,938	$171,990
Interior Walls (Paint and Finishes)	10.19 %	$83,957	$823,690
Plumbing Fixtures	28.11 %	$186,227	$662,480
Boilers	00.00 %	$0	$914,830
Chillers/Cooling Towers	60.88 %	$730,227	$1,199,520
Radiators/Unit Ventilators/HVAC	34.91 %	$735,292	$2,106,510
Heating/Cooling Controls	158.90 %	$1,051,150	$661,500
Electrical Service and Distribution	187.51 %	$891,254	$475,300
Lighting	06.17 %	$104,858	$1,699,320
Communications and Security (Cameras, Pa System and Fire Alarm)	54.25 %	$345,295	$636,510

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

S254001;Key

Final

Site Assessment Report

January 30, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	80,000
Year Built:	1889
Last Renovation:	1917
Replacement Value:	$25,153,696
Repair Cost:	$8,686,744.10
Total FCI:	34.53 %
Total RSLI:	65.17 %

Description:

Facility Assessment

August 28th, 2015

School District of Philadelphia
Francis Scott Key Elementary School
2230 S. 8th Street
Philadelphia, PA 19148

49,000SF / 556 Students / LN 01

GENERAL

Mr. Dave Loftus FAC, provided input to the assessment team on current problems. Mr. Jason Rindone Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Rindone has been in the school for the last 2 years.

The 4 story, 49,000 square foot building consists of elements constructed originally in 1889 and additions in 1906 and 1917. The building has a multi-level basement.

STRUCTURAL / EXTERIOR CLOSURE

The building typically rests on concrete and stacked stone foundations and bearing walls that are not showing signs of settlement damage. Basement walls are a combination of brick, stacked stone, and concrete in fair to poor condition with deteriorating areas due to water intrusion and age. The main structure consists of masonry, steel and cast-in-place concrete columns, beams, and both brick and one way ribbed slab. The main roof structures consist of both wood and steel truss supported by main structural frame. Main roofing is built up application over center of original building and hallway or addition in good condition and pitched asphalt shingle roof in other areas in fair condition with missing shingles. The building envelope is typically masonry and concrete with face brick over structural stone in fair condition. Elevations are enhanced with decorative stonework around entrances and windows with some deterioration of the stonework. The windows were replaced in the early 1990s with extruded aluminum, double hung, Lexan Plexiglas sliding windows with insect/security screens in poor condition with heavy hazing and energy inefficient. Exterior doors are typically hollow metal in fair condition. Public access doors have concrete stoops and stairs in poor condition with heavy spalling. The building is not accessible per ADA requirements due to first floor grade separation with no access ramp.

Partition walls are plastered ceramic hollow blocks in good condition. Interior doors are generally wood frame and rail and stile wood doors with lites and transoms in poor condition and beyond service life. Doors leading to exit stairways are wood frame and doors in poor condition, beyond service life and not fire code compliant. Interior doors do not have lever type handles. Fittings include: toilet accessories in fair condition; composite plastic and wood toilet partitions in poor condition and beyond service life; and handrails and ornamental metals, generally in fair condition. Toilet partitions and accessories are not ADA accessible. Interior identifying signage is typically directly painted on wall or door surfaces in poor condition. Stair construction is generally wood with cast iron tread and nosing cap in fair condition. Stair railings are wall mounted wood railing in poor condition and not meeting building safety codes.

The interior wall finishes include: painted plaster and masonry throughout with wood panel wainscot in stairways and lounge in fair condition. Paint is generally in fair condition with small damaged areas throughout building due to water intrusion. Flooring includes patterned or bare concrete in basement service areas in good condition; hardwood in most classrooms, gym, corridors, lounge and office areas in fair condition with some damaged and uneven areas; vinyl tile in some classrooms, cafeteria, toilets and two offices in good to poor condition with most beyond service life; and carpet in library in fair condition. Ceiling finishes include: suspended acoustic tile system in most classrooms, corridors, offices, and library in varying condition with some new and some beyond service life and in need of replacement; and painted plaster, structural concrete, or stamped metal ceiling in toilets, stairways, gym, and basement areas in fair to poor condition with some water damaged areas needing repair. Cafeteria has direct mounted acoustic tiles that are failing and in need or replacement.

The building has no elevator and is not accessible.

Commercial and Institutional equipment includes: gym equipment in good condition. Other equipment includes: food service equipment in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair condition and window blinds/shades in fair condition.

MECHANICAL SYSTEMS

Plumbing fixtures have been replaced at various times over the past century. The only children toilets are in the basement. Upper floors have floor mounted water closets and basement has wall hung. Toiler room urinals and lavatories are wall hung. There are also lavatories in the corridors located by drinking fountains. Flush valves are installed in pipe chases with lever handle operation in the basement, and they are exposed on upper floors. Lavatory faucet valves are non-mixing, momentary action, hot and cold knobs. Most of the fixtures have surpassed their expected service life and some are noticeably stained. The district should budget to replace 25% of them. Valves are in worse condition collectively and the district should budget to replace an additional 25% of flush valves and 50% of faucets.

The cafeteria kitchen in the basement has a single basin, rim mounted, stainless steel, residential, kitchen sink without

grease trap or chemical sanitation system installed in a 1960s vintage sheet metal cabinet. Its faucets leaks steadily. The sink is beyond its service life and not suitable for an institutional setting and should be replaced.

Service sinks in hallways are enameled cast iron with integral backsplash and trap and with stainless steel lip. They have mixing faucets with short neck spouts without vacuum breakers. Sinks are in fair condition and should be serviceable for 10 more years.

Drinking fountains are painted sheet metal and stainless steel located in hallways on each floor. They are beyond their service life and not ADA compliant. Fountains throughout the building should be replaced with accessible fountains with integral coolers.

Domestic water distribution piping is soldered copper of unknown age. Visible pipe surfaces are corroded from age, but there were other signs or mentions of failure, and consequently supply pipes should last at least 5 more years. A 4" water service enters the building along South 8th Street in the basement boiler room. There is no backflow preventer, and one should be added for code compliance. The domestic water pressure booster system is abandoned in place; the engineer stated it was not needed. Hot water is provided by a Bradford White, 50 gallon, vertical tank, gas fired water heater manufactured in 2007. There is a pipe mounted 1/4 HP circulation pump. They are visually in good condition, and hot water was available at toilet room faucets instantly. Heater and pump will not need replacement within the next 5 years.

Sanitary waste piping is hub and spigot cast iron, threaded galvanized steel pipe, and hub less cast iron with banded connections for repairs. The principal stated there was a problem with slow drains. The sanitary drain pipes should be inspected and repaired as needed due to age and reported problems. The building does not have a sewage ejector.

Rain water drainage runs externally in sheet metal drain pipes and connects to cast iron hub and spigot pipe at ground level before going underground. Visible areas of the cast iron pipe show rust and peeling paint however there were reported problems with rain water infiltration. The rain water drainage system should be serviceable for at least 10 more years. There are no ground water sumps.

The building has 2 H. B. Smith brand, model 4500, 19 section, 4,953 MBH (148 HP), cast iron boilers in the northeast corner of the basement in the old coal store room. They were installed in 1992 and are in very good condition. The two Smith coal fired boilers installed in 1917 are abandoned vintage in the prior boiler room. The boilers are equipped with Power Flame burners for pressure atomized oil or natural gas, manufactured in 1992. They are in good condition. Oil is supplied from a 10,000 gallon tank by two circulation pumps, and both of them run. Low pressure gas service enters the building from South 8th St. in a 6 inch line, and the gas booster sends high pressure gas to the boilers through a 4 inch line. There is a water softener and chemical injectors for the steam system. The make-up water line does not have proper backflow prevention, and a double check valve should be installed. There are 2 condensate collection tanks in the boiler room with two pumps for each. They send condensate to the feed water tank. The feed water tank is equipped with 2 pumps, one for each of the boilers without cross connection of the feed lines. Overall the boiler system is in good condition and can be expected to last 10 more years.

The building does not have any central cooling generation. There are 11 window unit air-conditioners for offices, IMC, and some classrooms. One mini-split systems provide cooling for the computer network equipment room. In total, the building currently has approximately 24 tons cooling capacity. A chiller system should be installed with 100 ton capacity for the entire building.

The existing ventilation system in the building consists of a single air handler in the southwest corner of the basement supplying ducts to classrooms and then exhausting to the attic. Many rooms have the ducts blocked off. The air handler includes primary heating coils, 5 HP air washer, 10 HP fan, and secondary heating coils. Heating coils are cast iron, approximately 6 feet tall and 12 feet wide. Estimated air flow is 36,000 CFM. Attic plenum does not have return ducts to the basement AHU intakes. The intake louvers to the outside have been replaced with windows. The air handler is obsolete and should be replaced with new HVAC system.

The cafeteria kitchen does not have any fuel burning appliances and does not have a fume hood exhaust fan system. Toilet rooms have exhaust fans installed through windows, but there is still a problem with odor. Exhaust fans should be upgraded and makeup air supplied.

Steam and condensate piping is threaded steel throughout the building. Its age is unknown, and it is in fair

condition. There were no reported problems or areas of visual concern. The steam and condensate system piping should be reliable for 5 to 10 more years.

All rooms in the building are heated by radiators. Most radiators are a mix of cast iron and threaded steel pipe. They are equipped with pneumatic controlled steam valves and thermostatic steam traps. Radiators have (relatively) new expanded metal guards. They however are still beyond their service life and should all be replaced with modern units.

The building is equipped with pneumatic controls including wall thermostats and radiator steam valves. The pneumatic system is obsolete. A building automation system should be installed as part of overall system upgrades to integrate all new components.

The building has neither a fire protection sprinkler system nor standpipes. A sprinkler system with quick response type heads should be installed. A fire pump may be required depending on the available city water pressure.

ELECTRICAL SYSTEMS

A service droop from a pole mounted transformer on Wolf Street serves this school. The basement electrical room houses the utility main disconnect switch, utility metering PECO No 01017147663 and estimated 400A 120/240V distribution section. The existing service is approximately 20 years old (it was upgraded on 1995) and has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The electrical service entrance needs to be upgraded. The new service will be 480V/277V, 3 phase power, approximate 800 Amperes and will be located in the vicinity of the existing electrical service. The new electrical service would feed a 480V Motor Control Center (MCC) and HVAC (Heating, Ventilation and Air Conditioning) equipment, and a 480V 3 phase to 120V/208V 3 phase 225 KVA step-down transformer to feed receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles, they were installed in 2005 and are expected to provide 30 more years of useful service life. Since demand load and branch circuit requirements will increase in the future. Provide 2 panel boards per floor. There are (1) 50KVA, (1) 25KVA and (1) 5KVA phase converters from 240V to 120/208V which normally feed newest mechanical equipment. Panel-board's doors at corridors are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor or in areas where students are present must be provided with lockable devices.

The number of receptacles in 50% of the classrooms is inadequate. Teachers use extension cords. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Classrooms, corridors, stairways, equipment rooms are illuminated with surface/pendant mounted fluorescent fixtures, with T-8 lamps. Lighting level is good and adequate.

The Fire Alarm system is manufactured by Simplex 4001. The present Fire Alarm system does not meet current code and needs to be replaced. Fire alarm system is tested every day in the morning.

The present telephone system is adequate.

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

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

There is not television system.

The security system consists of CCTV cameras at the basement only. Provide additional CCTV cameras for total coverage of the building interior.

The emergency power system consists of a gas powered generator, manufactured by Kohler 20 kW (estimated), 120/240V. The present emergency power system serves the corridor, exit signs, gymnasium, stair ways, boiler room, and

fire alarm panel. The gas powered generator is approximately 10 years old and is expected to provide 10 more years of useful service life. The future emergency load will exceed the capacity of the existing generator. Provide 50KW outdoor generator.

There were no access to the server room, but district standard practice is to provide (2) rack mounted UPS.

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

The school is not provided with lightning protection system. A study should be conducted to determine if the school requires lightning protection system.

GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Play yard area on west side is concrete paving in poor condition with spalling, cracks, and depressions at manholes. Metal fence and gates surrounding site is in good condition. There is no landscaping at this site.

Accessibility: the building does have an accessible entrance or accessible routes. Toilets are not equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Doors in the building do not have lever type door handles.

The school perimeter is illuminated with wall mounted lighting fixtures. There were no indication of additional fixtures are required.

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

There are not wall mounted loud speakers facing the playground area. Provide (2) loud speakers.

RECOMMENDATIONS

- Repair damaged basement walls
- Repair and seal window lintels and sills – damaged stonework
- Replace Plexiglas windows – hazed and inefficient
- Install accessible door hardware on at least one entrance door
- Repair roof – missing shingles (5% of shingle roof area)
- Replace interior doors and frames – beyond service life
- Replace exit stairway doors – do not meet fire code
- Replace toilet partitions – beyond service life
- Install proper ID signage
- Replace stair railing to meet building codes
- Repair and paint interior plaster walls – damaged (10% of plaster wall area)
- Replace wood flooring – damaged (10% of wood floor area)
- Replace damaged VAT with VCT (40% of vinyl flooring area)
- Replace damaged VCT (40% of vinyl flooring area)
- Replace direct mounted acoustic tile ceiling in cafeteria - failing
- Repaint interior plaster ceiling – damaged (10% of painted ceiling area)
- Replace suspended acoustic tile ceiling system – beyond service life (80%)
- Install elevator for accessibility
- Install accessible ramp on at least one entrance
- Repair entrance steps and stoops – damaged and failing
- Resurface concrete play yard – damaged and hazard to safety
- Replace water closets due to age and staining, 8 each.
- Replace urinals due to age and staining, 4 each.
- Replace lavatories due to age and staining, 6 each.
- Replace flush valves due to age and failure, 12 each.
- Replace faucets due to age and leaks, 12 each.

- Replace cafeteria kitchen sink including cabinet due to age.
- Replace drinking fountains with ADA compliant fountains including integral coolers, 4 pairs.
- Install double back flow prevention valve on water entry for code compliance.
- Inspect and repair sanitary drain pipes due to age and reported problems.
- Install double back flow prevention valve on boiler make up connection for code compliance.
- Install 100 ton capacity chiller system for entire building.
- Replace obsolete air handler to restore ventilation to building via ducts and radiators throughout building due to age.
- Upgrade toilet room exhaust fans to abate odor problem.
- Replace pneumatic control with digital and provide a new building automation system (BAS).
- Install a fire protection sprinkler system. A fire pump may be required depending on the available city water pressure.
- Provide a new electrical service 480V/277V, 3 phase power, approximate 800 Amperes and will be located in the vicinity of the existing electrical service.
- Provide additional panel boards per floor. Total (8) 208/120V panel boards.
- Provide (2)25FT of surface raceways with 24” receptacles on center and two-duplex wall mount receptacles. Approximate 160.
- Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms.
- Replace clock and bell system with wireless, battery operated, clock system. Approximate 35
- Provide additional CCTV cameras for total coverage of the building interior. Approximate 12
- Provide 50KW outdoor generator.
- Prepare a study to determine if the school building requires lightning protection system.
- Provide two PA loud speakers facing the playground area.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S254001		

Site Condition Summary

The Table below shows the CI and FCI for each major system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

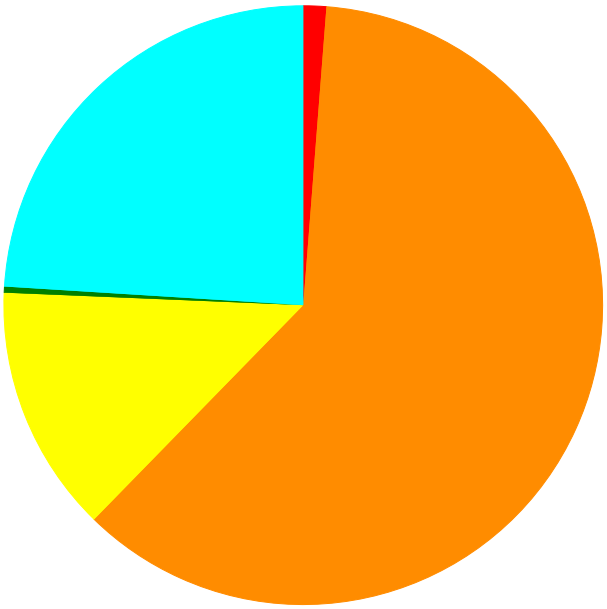
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	7.29 %	$68,723.85
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	58.80 %	43.97 %	$1,214,534.40
B30 - Roofing	64.83 %	2.68 %	$17,150.86
C10 - Interior Construction	55.37 %	34.51 %	$414,954.11
C20 - Stairs	37.00 %	99.93 %	$69,044.75
C30 - Interior Finishes	79.41 %	24.71 %	$645,729.42
D10 - Conveying	105.71 %	369.02 %	$1,012,601.25
D20 - Plumbing	78.26 %	47.98 %	$480,097.11
D30 - HVAC	68.93 %	46.17 %	$2,516,668.59
D40 - Fire Protection	105.71 %	177.49 %	$700,968.31
D50 - Electrical	110.11 %	51.36 %	$1,479,298.52
E10 - Equipment	49.62 %	0.00 %	$0.00
E20 - Furnishings	35.00 %	0.00 %	$0.00
G20 - Site Improvements	86.94 %	22.71 %	$66,972.93
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**65.17 %**	**34.53 %**	**$8,686,744.10**

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)
B254001;Key	49,000	34.82	$81,380.29	$5,264,296.88	$1,160,168.49	$28,352.57	$2,085,572.94
G254001;Grounds	17,700	16.84	$25,981.81	$40,991.12	$0.00	$0.00	$0.00
Total:		**34.53**	**$107,362.10**	**$5,305,288.00**	**$1,160,168.49**	**$28,352.57**	**$2,085,572.94**

Deficiencies By Priority



1 - Response Time (< 2 yr) - $107,362.10
2 - Response Time (2-3 yrs) - $5,305,288.00
3 - Response Time (3-4 yrs) - $1,160,168.49
4 - Response Time (4-5 yrs) - $28,352.57
5 - Response Time (> 5 yrs) - $2,085,572.94

Budget Estimate Total: $8,686,744.10

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):	49,000
Year Built:	1889
Last Renovation:	1917
Replacement Value:	$24,755,977
Repair Cost:	$8,619,771.17
Total FCI:	34.82 %
Total RSLI:	64.97 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B254001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S254001		

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	7.29 %	$68,723.85
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	58.80 %	43.97 %	$1,214,534.40
B30 - Roofing	64.83 %	2.68 %	$17,150.86
C10 - Interior Construction	55.37 %	34.51 %	$414,954.11
C20 - Stairs	37.00 %	99.93 %	$69,044.75
C30 - Interior Finishes	79.41 %	24.71 %	$645,729.42
D10 - Conveying	105.71 %	369.02 %	$1,012,601.25
D20 - Plumbing	78.26 %	47.98 %	$480,097.11
D30 - HVAC	68.93 %	46.17 %	$2,516,668.59
D40 - Fire Protection	105.71 %	177.49 %	$700,968.31
D50 - Electrical	110.11 %	51.36 %	$1,479,298.52
E10 - Equipment	49.62 %	0.00 %	$0.00
E20 - Furnishings	35.00 %	0.00 %	$0.00
Totals:	**64.97 %**	**34.82 %**	**$8,619,771.17**

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.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$901,600
A1030	Slab on Grade	$7.73	S.F.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$378,770
A2010	Basement Excavation	$6.55	S.F.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$320,950
A2020	Basement Walls	$12.70	S.F.	49,000	100	1889	1989	2052	37.00 %	11.04 %	37		$68,723.85	$622,300
B1010	Floor Construction	$75.10	S.F.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$3,679,900
B1020	Roof Construction	$13.88	S.F.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$680,120
B2010	Exterior Walls	$36.91	S.F.	49,000	100	1889	1989	2052	37.00 %	22.40 %	37		$405,210.20	$1,808,590
B2020	Exterior Windows	$18.01	S.F.	49,000	40	1989	2029	2057	105.00 %	90.92 %	42		$802,336.92	$882,490
B2030	Exterior Doors	$1.45	S.F.	49,000	25	1989	2014	2025	40.00 %	9.83 %	10		$6,987.28	$71,050
B3010105	Built-Up	$37.76	S.F.	6,645	20	2007	2027		60.00 %	0.00 %	12			$250,915
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.	9,967	25	2007	2032		68.00 %	4.44 %	17		$17,150.86	$386,022
B3020	Roof Openings	$0.06	S.F.	49,000	20	2007	2027		60.00 %	0.00 %	12			$2,940
C1010	Partitions	$17.91	S.F.	49,000	100	1889	1989	2052	37.00 %	0.00 %	37			$877,590
C1020	Interior Doors	$3.51	S.F.	49,000	40	1972	2012	2057	105.00 %	203.46 %	42		$349,937.67	$171,990
C1030	Fittings	$3.12	S.F.	49,000	40	1972	2012	2057	105.00 %	42.53 %	42		$65,016.44	$152,880
C2010	Stair Construction	$1.41	S.F.	49,000	100	1889	1989	2052	37.00 %	99.93 %	37		$69,044.75	$69,090

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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	$16.81	S.F.	49,000	10	2007	2017	2020	50.00 %	10.19 %	5		$83,957.34	$823,690
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$0.00	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	490	10	2007	2017	2020	50.00 %	0.00 %	5			$3,577
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	9,800	20	1989	2009	2037	110.00 %	112.33 %	22		$106,562.05	$94,864
C3020414	Wood Flooring	$22.27	S.F.	29,400	25	2007	2032		68.00 %	12.29 %	17		$80,469.24	$654,738
C3020415	Concrete Floor Finishes	$0.97	S.F.	9,310	50	1889	1939	2028	26.00 %	0.00 %	13			$9,031
C3030	Ceiling Finishes	$20.97	S.F.	49,000	25	1989	2014	2042	108.00 %	36.47 %	27		$374,740.79	$1,027,530
D1010	Elevators and Lifts	$5.60	S.F.	49,000	35			2052	105.71 %	369.02 %	37		$1,012,601.25	$274,400
D2010	Plumbing Fixtures	$13.52	S.F.	49,000	35	1889	1924	2047	91.43 %	28.11 %	32		$186,227.20	$662,480
D2020	Domestic Water Distribution	$1.68	S.F.	49,000	25	1889	1914	2028	52.00 %	64.98 %	13		$53,488.10	$82,320
D2030	Sanitary Waste	$2.90	S.F.	49,000	25	1889	1914	2032	68.00 %	169.16 %	17		$240,381.81	$142,100
D2040	Rain Water Drainage	$2.32	S.F.	49,000	30	1889	1919	2025	33.33 %	0.00 %	10			$113,680
D3020	Heat Generating Systems	$18.67	S.F.	49,000	35	1992	2027		34.29 %	0.00 %	12			$914,830
D3030	Cooling Generating Systems	$24.48	S.F.	49,000	30			2047	106.67 %	60.88 %	32		$730,227.08	$1,199,520
D3040	Distribution Systems	$42.99	S.F.	49,000	25	1889	1914	2028	52.00 %	34.91 %	13		$735,291.51	$2,106,510
D3050	Terminal & Package Units	$11.60	S.F.	49,000	20	1889	1909	2027	60.00 %	0.00 %	12			$568,400
D3060	Controls & Instrumentation	$13.50	S.F.	49,000	20	1889	1909	2037	110.00 %	158.90 %	22		$1,051,150.00	$661,500
D4010	Sprinklers	$7.05	S.F.	49,000	35			2052	105.71 %	202.91 %	37		$700,968.31	$345,450
D4020	Standpipes	$1.01	S.F.	49,000	35			2052	105.71 %	0.00 %	37			$49,490
D5010	Electrical Service/Distribution	$9.70	S.F.	49,000	30	1889	1919	2047	106.67 %	187.51 %	32		$891,254.10	$475,300
D5020	Lighting and Branch Wiring	$34.68	S.F.	49,000	20	1889	1909	2037	110.00 %	6.17 %	22		$104,858.38	$1,699,320
D5030	Communications and Security	$12.99	S.F.	49,000	15	1889	1904	2032	113.33 %	54.25 %	17		$345,295.41	$636,510
D5090	Other Electrical Systems	$1.41	S.F.	49,000	30	1889	1919	2047	106.67 %	199.58 %	32		$137,890.63	$69,090
E1020	Institutional Equipment	$4.82	S.F.	49,000	35	1989	2024		25.71 %	0.00 %	9			$236,180
E1090	Other Equipment	$11.10	S.F.	49,000	35	2001	2036		60.00 %	0.00 %	21			$543,900
E2010	Fixed Furnishings	$2.13	S.F.	49,000	40	1989	2029		35.00 %	0.00 %	14			$104,370
								Total	**64.97 %**	**34.82 %**			**$8,619,771.17**	**$24,755,977**

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: 100% - Paint & Covering

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

Note: 1% - Carpet
20% - Vinyl Flooring (10% VCT, 10% VAT)
60% - Wood Flooring
19% - Concrete Floor Finishes

System: D5010 - Electrical Service/Distribution

Note: Phase converters (1)50KVA, (1)25KVA and (1)5KVA

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:	**$8,619,771**	**$0**	**$0**	**$0**	**$0**	**$1,054,932**	**$0**	**$0**	**$0**	**$338,977**	**$273,088**	**$10,286,769**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A10 - Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A20 - Basement Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$68,724	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$68,724**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$405,210	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$405,210**
B2020 - Exterior Windows	$802,337	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$802,337**
B2030 - Exterior Doors	$6,987	$0	$0	$0	$0	$0	$0	$0	$0	$0	$105,034	**$112,021**
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	$17,151	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$17,151**
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**

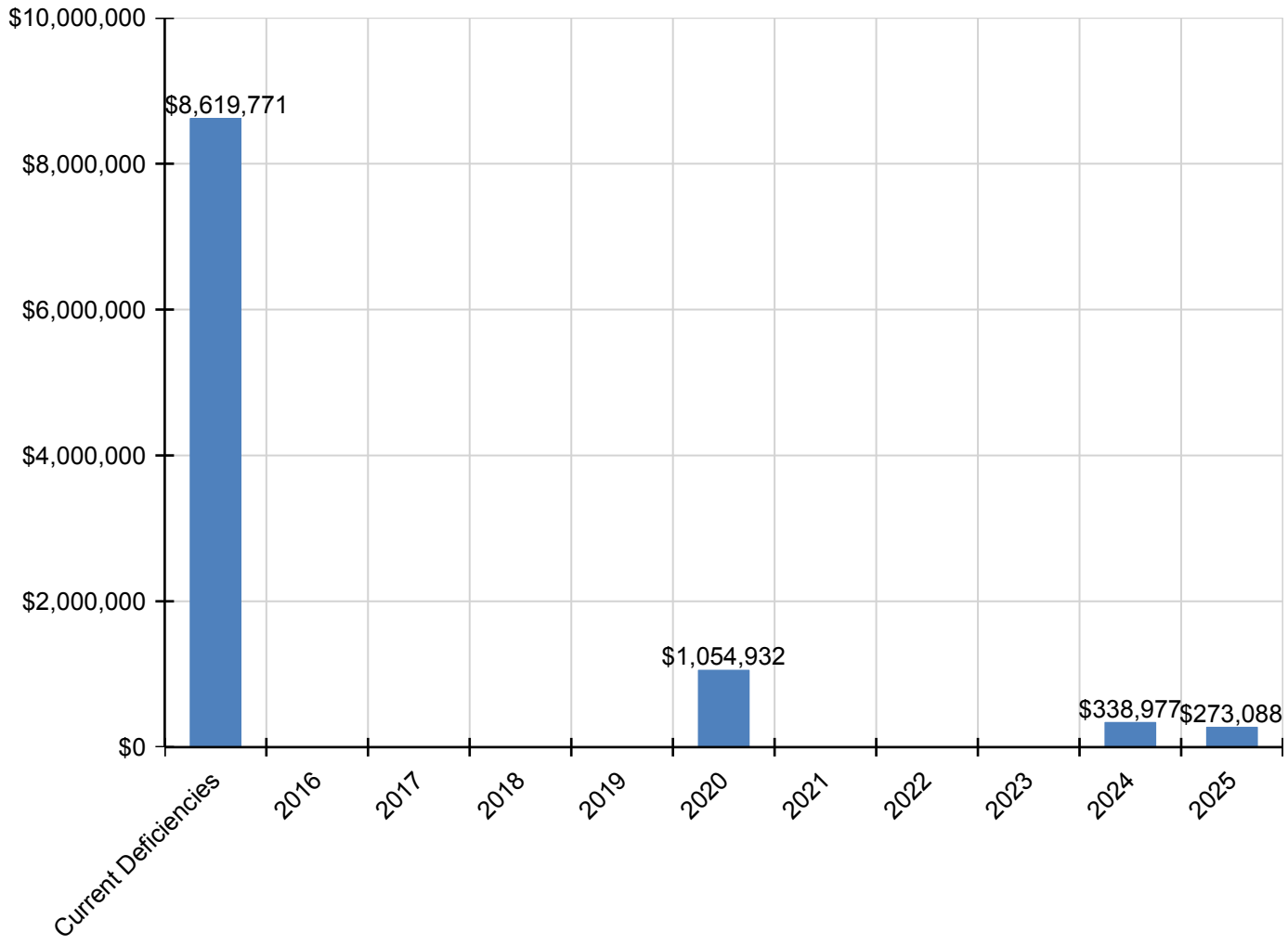
C1020 - Interior Doors	$349,938	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$349,938**
C1030 - Fittings	$65,016	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$65,016**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$69,045	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$69,045**
C30 - Interior Finishes	$0	$0	$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	$83,957	$0	$0	$0	$0	$1,050,371	$0	$0	$0	$0	$0	**$1,134,328**
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	$4,562	$0	$0	$0	$0	$0	**$4,562**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$106,562	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$106,562**
C3020414 - Wood Flooring	$80,469	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,469**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$374,741	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$374,741**
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	$1,012,601	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,012,601**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$186,227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$186,227**
D2020 - Domestic Water Distribution	$53,488	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$53,488**
D2030 - Sanitary Waste	$240,382	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$240,382**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$168,054	**$168,054**
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	$730,227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$730,227**
D3040 - Distribution Systems	$735,292	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$735,292**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,051,150	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,051,150**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$700,968	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$700,968**
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	$891,254	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$891,254**
D5020 - Lighting and Branch Wiring	$104,858	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$104,858**
D5030 - Communications and Security	$345,295	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$345,295**
D5090 - Other Electrical Systems	$137,891	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$137,891**
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	$338,977	$0	**$338,977**
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

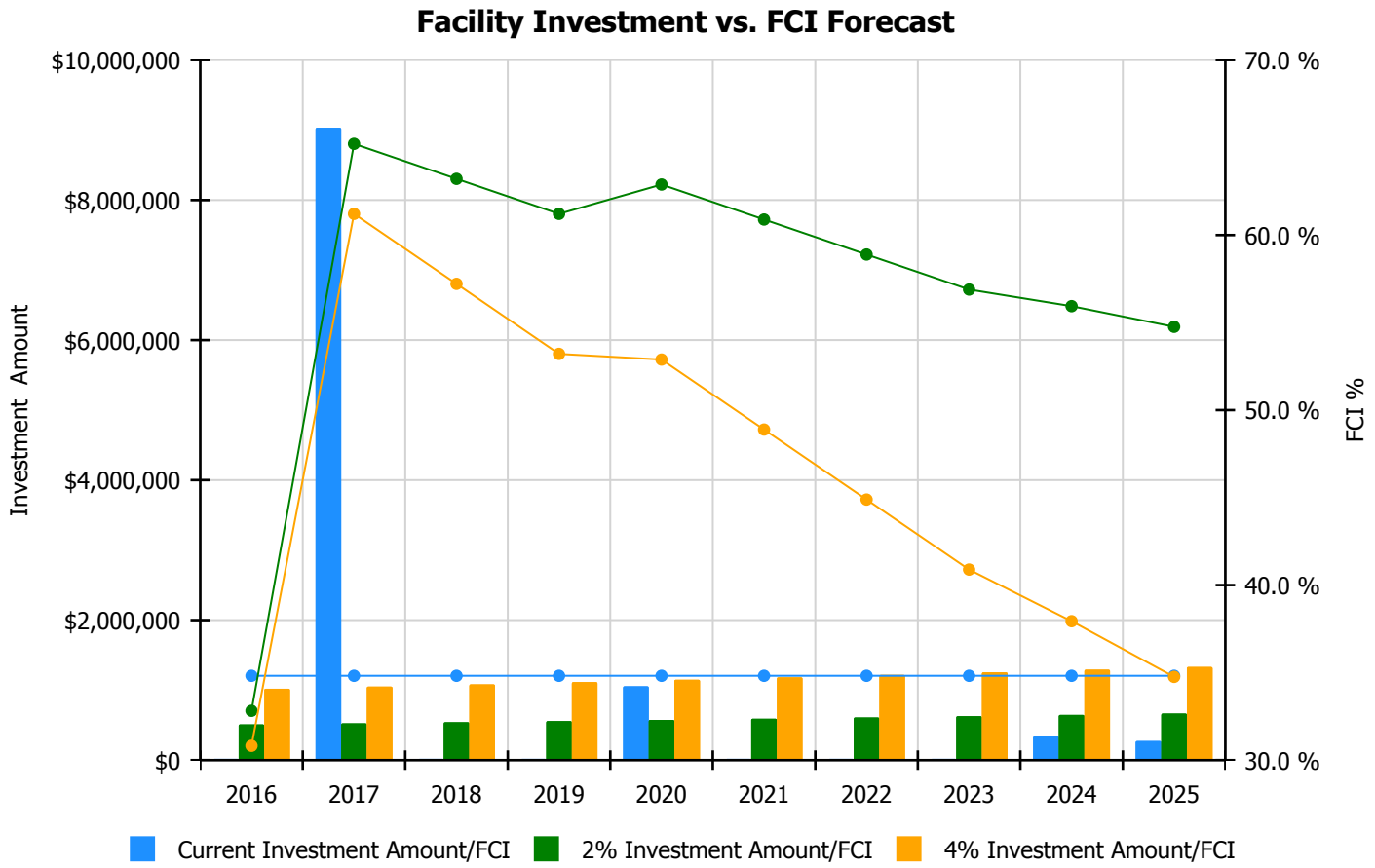
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

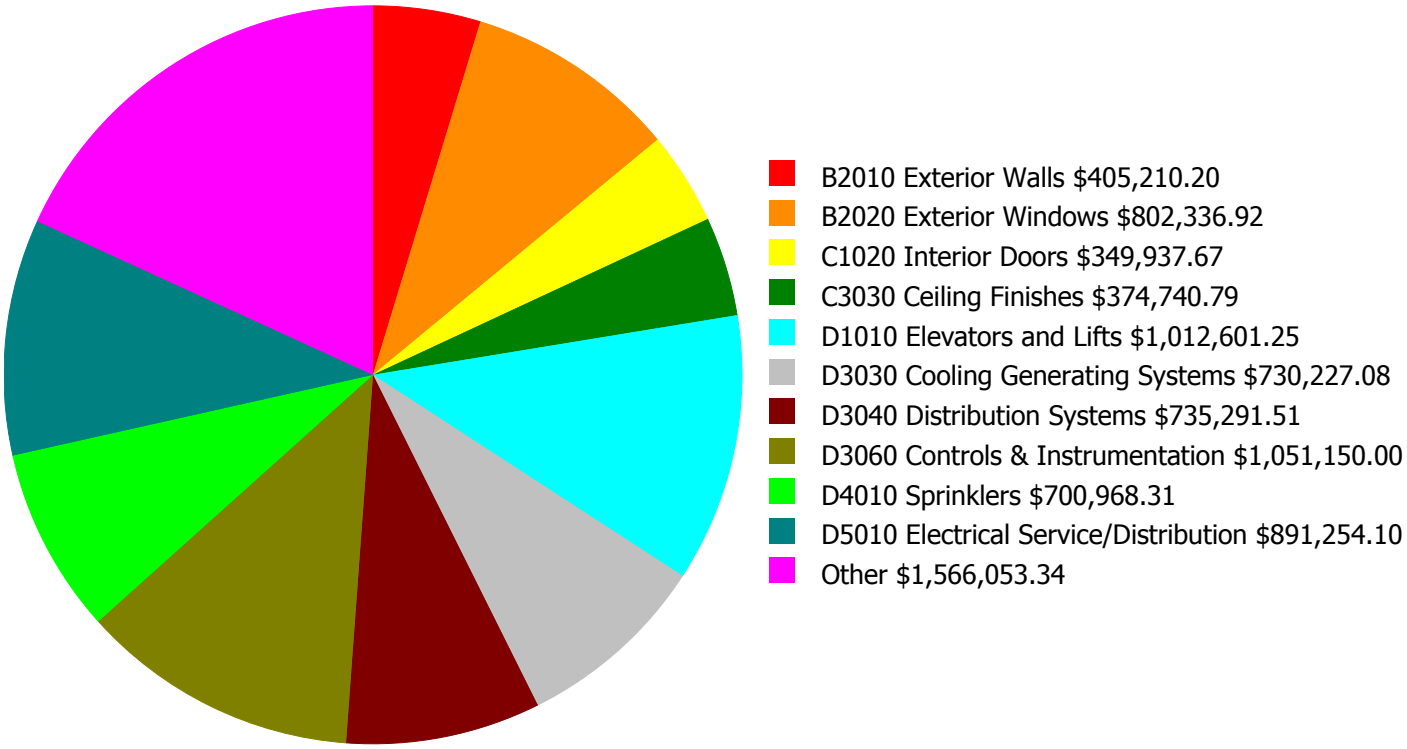
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 34.82%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$509,973.00	32.82 %	$1,019,946.00	30.82 %
2017	$9,032,892	$525,272.00	65.21 %	$1,050,545.00	61.21 %
2018	$0	$541,030.00	63.21 %	$1,082,061.00	57.21 %
2019	$0	$557,261.00	61.21 %	$1,114,523.00	53.21 %
2020	$1,054,932	$573,979.00	62.89 %	$1,147,958.00	52.89 %
2021	$0	$591,199.00	60.89 %	$1,182,397.00	48.89 %
2022	$0	$608,935.00	58.89 %	$1,217,869.00	44.89 %
2023	$0	$627,203.00	56.89 %	$1,254,405.00	40.89 %
2024	$338,977	$646,019.00	55.94 %	$1,292,037.00	37.94 %
2025	$273,088	$665,399.00	54.76 %	$1,330,799.00	34.76 %
Total:	**$10,699,890**	**$5,846,270.00**		**$11,692,540.00**	

Deficiency Summary by System

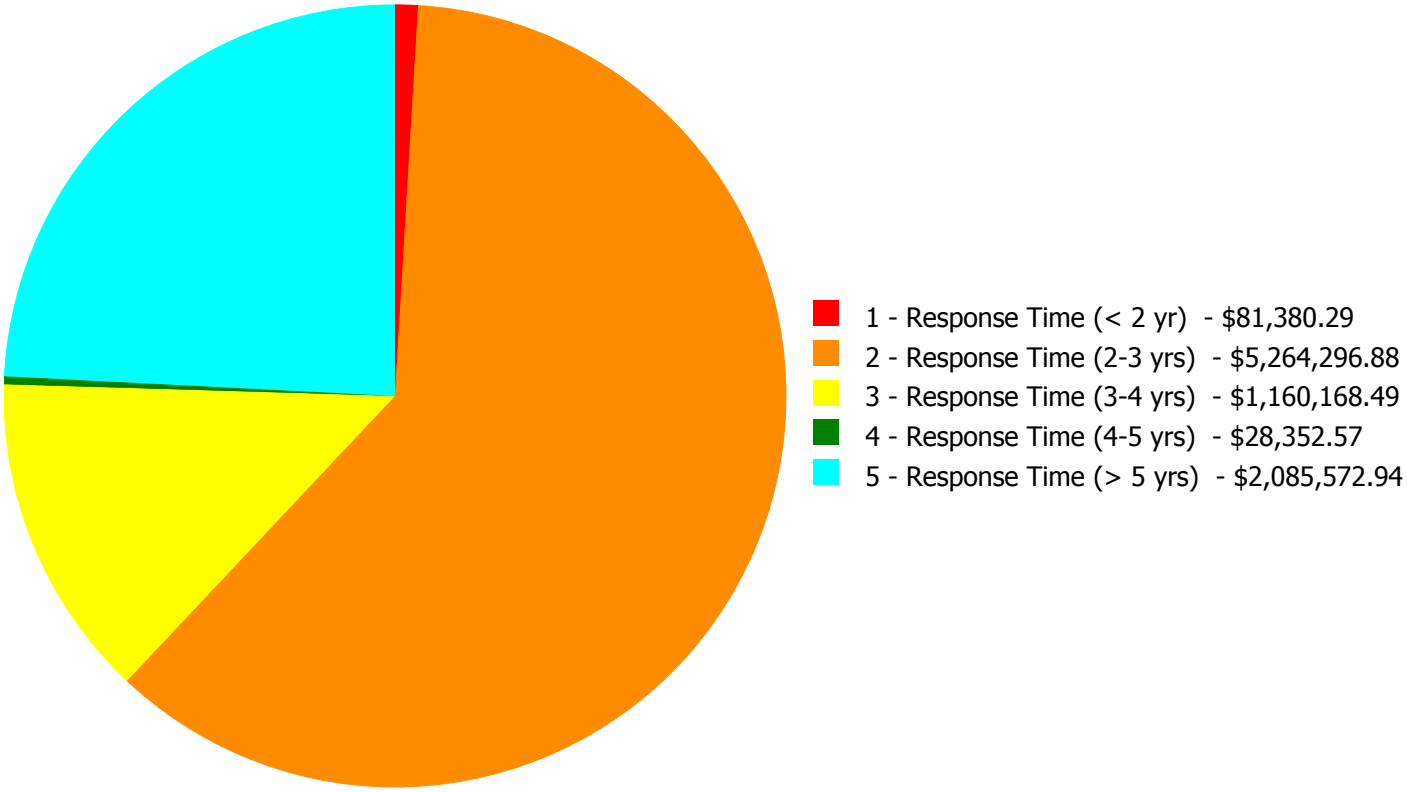
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $8,619,771.17

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: $8,619,771.17

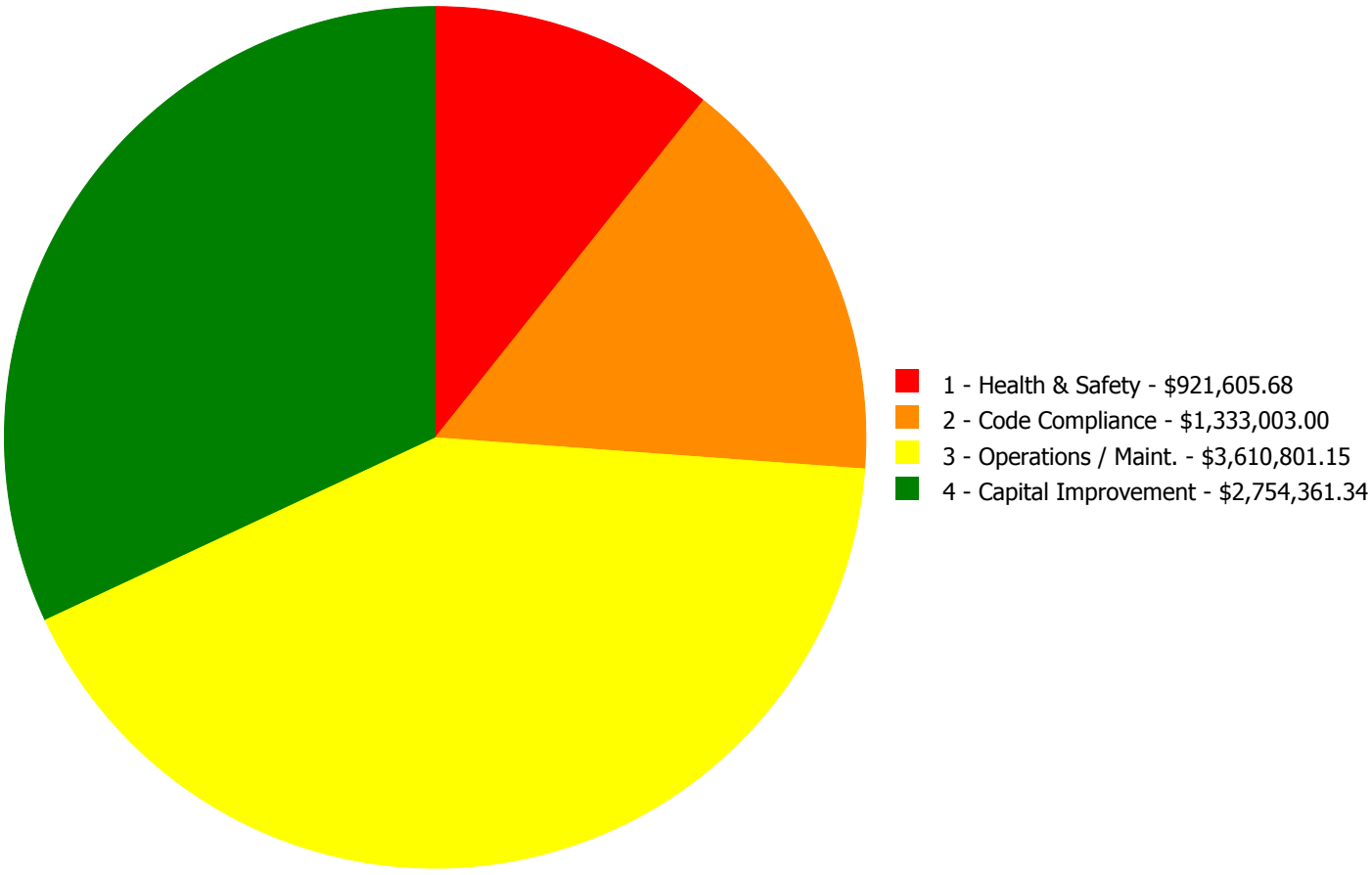
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
A2020	Basement Walls	$0.00	$68,723.85	$0.00	$0.00	$0.00	$68,723.85
B2010	Exterior Walls	$0.00	$405,210.20	$0.00	$0.00	$0.00	$405,210.20
B2020	Exterior Windows	$0.00	$802,336.92	$0.00	$0.00	$0.00	$802,336.92
B2030	Exterior Doors	$0.00	$6,987.28	$0.00	$0.00	$0.00	$6,987.28
B3010140	Shingle & Tile	$0.00	$17,150.86	$0.00	$0.00	$0.00	$17,150.86
C1020	Interior Doors	$0.00	$106,637.73	$243,299.94	$0.00	$0.00	$349,937.67
C1030	Fittings	$0.00	$48,761.69	$0.00	$16,254.75	$0.00	$65,016.44
C2010	Stair Construction	$69,044.75	$0.00	$0.00	$0.00	$0.00	$69,044.75
C3010230	Paint & Covering	$0.00	$83,957.34	$0.00	$0.00	$0.00	$83,957.34
C3020413	Vinyl Flooring	$0.00	$106,562.05	$0.00	$0.00	$0.00	$106,562.05
C3020414	Wood Flooring	$0.00	$0.00	$80,469.24	$0.00	$0.00	$80,469.24
C3030	Ceiling Finishes	$0.00	$0.00	$374,740.79	$0.00	$0.00	$374,740.79
D1010	Elevators and Lifts	$0.00	$1,012,601.25	$0.00	$0.00	$0.00	$1,012,601.25
D2010	Plumbing Fixtures	$12,335.54	$173,891.66	$0.00	$0.00	$0.00	$186,227.20
D2020	Domestic Water Distribution	$0.00	$53,488.10	$0.00	$0.00	$0.00	$53,488.10
D2030	Sanitary Waste	$0.00	$0.00	$240,381.81	$0.00	$0.00	$240,381.81
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$730,227.08	$730,227.08
D3040	Distribution Systems	$0.00	$80,913.96	$0.00	$0.00	$654,377.55	$735,291.51
D3060	Controls & Instrumentation	$0.00	$1,051,150.00	$0.00	$0.00	$0.00	$1,051,150.00
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$700,968.31	$700,968.31
D5010	Electrical Service/Distribution	$0.00	$891,254.10	$0.00	$0.00	$0.00	$891,254.10
D5020	Lighting and Branch Wiring	$0.00	$0.00	$104,858.38	$0.00	$0.00	$104,858.38
D5030	Communications and Security	$0.00	$333,197.59	$0.00	$12,097.82	$0.00	$345,295.41
D5090	Other Electrical Systems	$0.00	$21,472.30	$116,418.33	$0.00	$0.00	$137,890.63
	Total:	$81,380.29	$5,264,296.88	$1,160,168.49	$28,352.57	$2,085,572.94	$8,619,771.17

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: $8,619,771.17

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: C2010 - Stair Construction

Location: Stairs

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 480.00

Unit of Measure: L.F.

Estimate: $69,044.75

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace stair railing to meet building codes

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 18.00

Unit of Measure: Ea.

Estimate: $12,335.54

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace flush valves due to age and failure.

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

System: A2020 - Basement Walls

Location: Basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: S.F.

Estimate: $68,723.85

Assessor Name: System

Date Created: 10/27/2015

Notes: Repair damaged basement walls

System: B2010 - Exterior Walls

Location: Windows

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 731.00

Unit of Measure: L.F.

Estimate: $405,210.20

Assessor Name: System

Date Created: 10/27/2015

Notes: Repair and seal window lintels and sills – damaged stonework

System: B2020 - Exterior Windows

Location: Entire building

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Remove and replace double slider windows

Qty: 159.00

Unit of Measure: Ea.

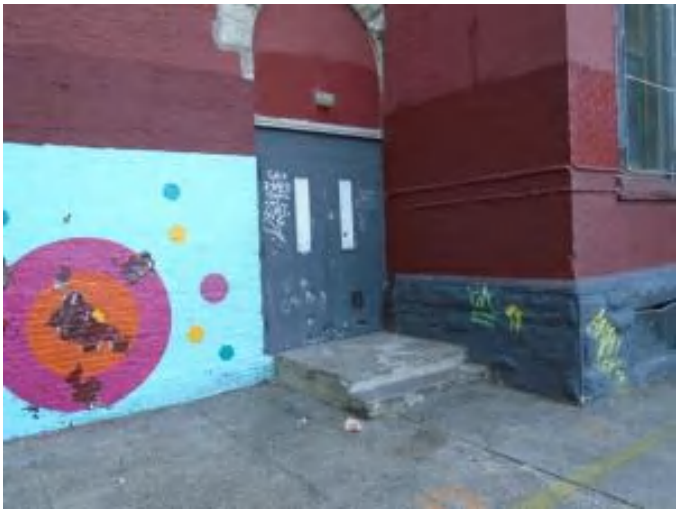
Estimate: $802,336.92

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace Plexiglas windows – hazed and inefficient

System: B2030 - Exterior Doors



Location: Entrance

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 2.00

Unit of Measure: Ea.

Estimate: $6,987.28

Assessor Name: System

Date Created: 10/27/2015

Notes: Install accessible door hardware on at least one entrance door

System: B3010140 - Shingle & Tile

Location: Roof

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Remove and replace asphalt shingle roof - partial area

Qty: 500.00

Unit of Measure: S.F.

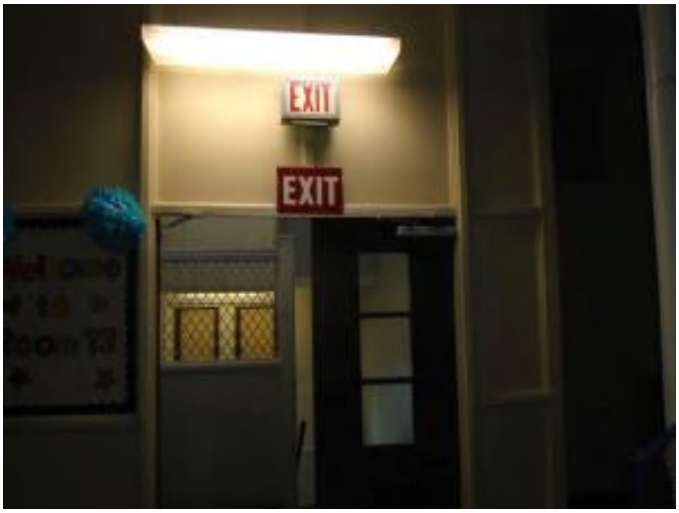
Estimate: $17,150.86

Assessor Name: System

Date Created: 10/27/2015

Notes: Repair roof – missing shingles (5% of shingle roof area)

System: C1020 - Interior Doors



Location: Exit stairs

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove and replace hollow metal frames and doors

Qty: 21.00

Unit of Measure: Ea.

Estimate: $106,637.73

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace exit stairway doors – do not meet fire code

System: C1030 - Fittings

Location: Toilets

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace toilet partitions

Qty: 19.00

Unit of Measure: Ea.

Estimate: $48,761.69

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace toilet partitions – beyond service life

System: C3010230 - Paint & Covering

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 9,800.00

Unit of Measure: S.F.

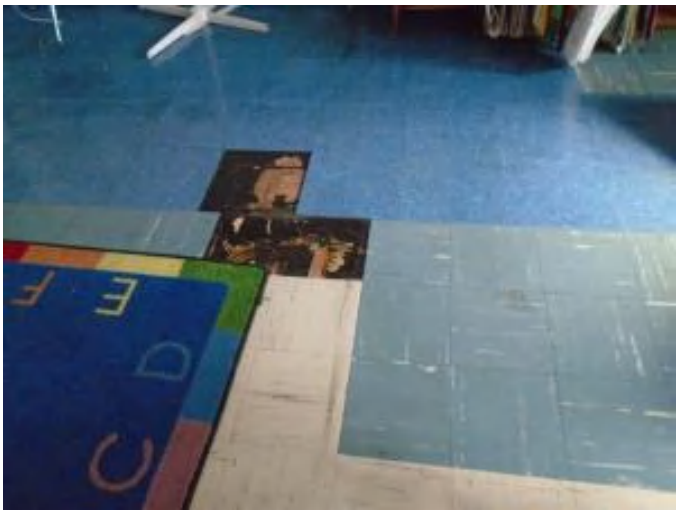
Estimate: $83,957.34

Assessor Name: System

Date Created: 10/27/2015

Notes: Repair and paint interior plaster walls – damaged (10% of plaster wall area)

System: C3020413 - Vinyl Flooring



Location: Various
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove VAT and replace with VCT - SF of area
Qty: 3,920.00
Unit of Measure: S.F.
Estimate: $59,453.34
Assessor Name: System
Date Created: 10/27/2015

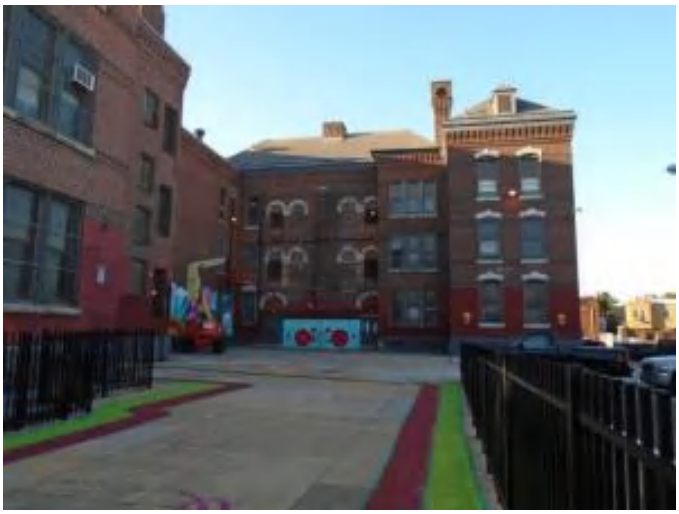
Notes: Replace damaged VAT with VCT (40% of vinyl flooring area)

System: C3020413 - Vinyl Flooring

Location: Various
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 3,920.00
Unit of Measure: S.F.
Estimate: $47,108.71
Assessor Name: System
Date Created: 10/27/2015

Notes: Replace damaged VCT (40% of vinyl flooring area)

System: D1010 - Elevators and Lifts



Location: TBD

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Add external 4 stop elevator - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $1,012,601.25

Assessor Name: System

Date Created: 10/27/2015

Notes: Install elevator for accessibility

System: D2010 - Plumbing Fixtures

Location: Hallways

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 4.00

Unit of Measure: Ea.

Estimate: $62,771.59

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace drinking fountains with ADA compliant fountains including integral coolers, 4 pairs.

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 5.00

Unit of Measure: Ea.

Estimate: $57,840.18

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace water closets due to age and staining.

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 6.00

Unit of Measure: Ea.

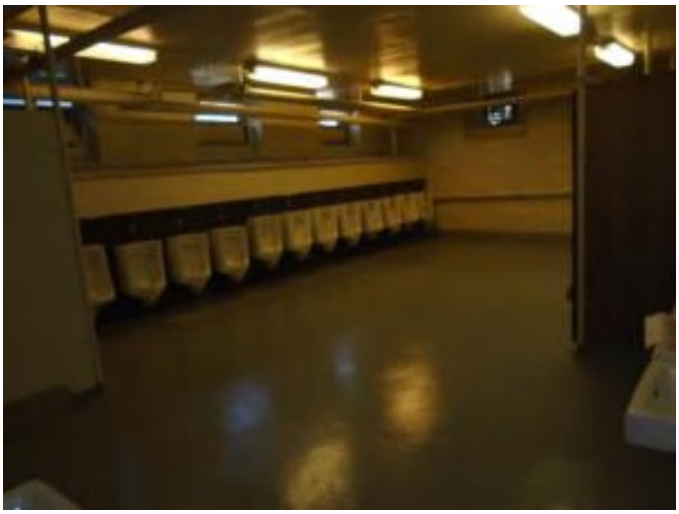
Estimate: $27,960.17

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace lavatories due to age and staining.

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 4.00

Unit of Measure: Ea.

Estimate: $13,724.54

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace urinals due to age and staining.

System: D2010 - Plumbing Fixtures

Location: Cafeteria

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $8,416.22

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace cafeteria kitchen sink including cabinet due to age.

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lavatory faucet

Qty: 12.00

Unit of Measure: Ea.

Estimate: $3,178.96

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace faucet valves due to age and failure.

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide 4" reduced pressure back flow preventer

Qty: 1.00

Unit of Measure: Ea.

Estimate: $51,112.25

Assessor Name: System

Date Created: 11/29/2015

Notes: Install double back flow prevention valve on water entry for code compliance.

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide 3" reduced pressure back flow preventer

Qty: 1.00

Unit of Measure: Ea.

Estimate: $2,375.85

Assessor Name: System

Date Created: 11/29/2015

Notes: Install double back flow prevention valve on boiler make up connection for code compliance.

System: D3040 - Distribution Systems

Location: Toilet rooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide inline centrifugal fan and wall outlet louver for restroom exhaust (8 plbg fixtures)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $80,913.96

Assessor Name: System

Date Created: 11/29/2015

Notes: Upgrade toilet room exhaust fans to abate odor problem.

System: D3060 - Controls & Instrumentation

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 49,000.00

Unit of Measure: S.F.

Estimate: $1,051,150.00

Assessor Name: System

Date Created: 11/29/2015

Notes: Replace pneumatic control with digital and provide a new building automation system (BAS).

System: D5010 - Electrical Service/Distribution

Location: Corridors

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Panelboard

Qty: 8.00

Unit of Measure: Ea.

Estimate: $594,045.39

Assessor Name: System

Date Created: 10/14/2015

Notes: Provide additional panel boards per floor. Total (8) 208/120V panel boards.

System: D5010 - Electrical Service/Distribution

Location: Basement electrical room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $297,208.71

Assessor Name: System

Date Created: 10/14/2015

Notes: Provide a new electrical service 480V/277V, 3 phase power, approximate 800 Amperes and will be located in the vicinity of the existing electrical service.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 65.00

Unit of Measure: S.F.

Estimate: $128,586.33

Assessor Name: System

Date Created: 10/14/2015

Notes: Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 65 devices.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Obsolete
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Add/Replace Clock System or Components
Qty: 35.00
Unit of Measure: Ea.
Estimate: $112,560.22
Assessor Name: System
Date Created: 10/14/2015

Notes: Replace clock and bell system with wireless, battery operated, clock system. Approximate 35

System: D5030 - Communications and Security

Location: Interior corridors and stair ways
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 2 - Response Time (2-3 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 12.00
Unit of Measure: Ea.
Estimate: $92,051.04
Assessor Name: System
Date Created: 10/14/2015

Notes: Provide additional CCTV cameras for total coverage of the building interior. Approximate 12

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide Lightning Protection System

Qty: 1.00

Unit of Measure: LS

Estimate: $21,472.30

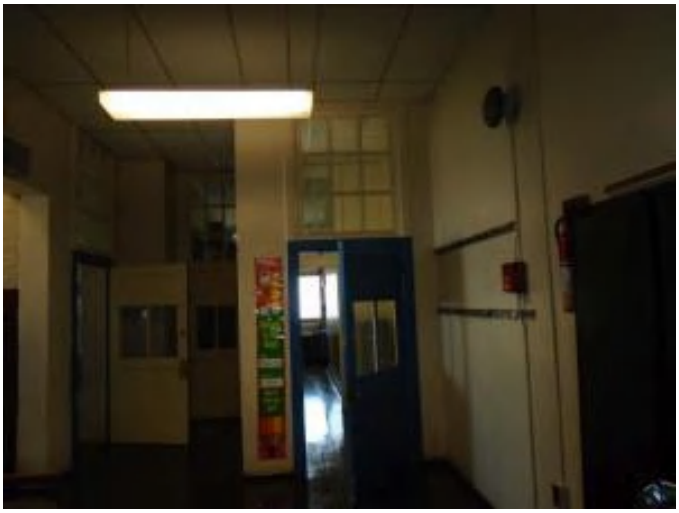
Assessor Name: System

Date Created: 10/14/2015

Notes: Prepare a study to determine if the school building requires lightning protection system.

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

System: C1020 - Interior Doors



Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 51.00

Unit of Measure: Ea.

Estimate: $243,299.94

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace interior doors and frames – beyond service life

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System: C3020414 - Wood Flooring

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2,940.00

Unit of Measure: S.F.

Estimate: $80,469.24

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace wood flooring – damaged (10% of wood floor area)

System: C3030 - Ceiling Finishes

Location: Various

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 23,520.00

Unit of Measure: S.F.

Estimate: $354,738.76

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace suspended acoustic tile ceiling system – beyond service life (80%)

System: C3030 - Ceiling Finishes

Location: Cafeteria

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace glued on or mechanically attached acoustical ceiling tiles

Qty: 851.00

Unit of Measure: S.F.

Estimate: $10,619.46

Assessor Name: System

Date Created: 10/27/2015

Notes: Replace direct mounted acoustic tile ceiling in cafeteria - failing

System: C3030 - Ceiling Finishes

Location: Various

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Re-paint ceilings - SF of ceilings

Qty: 1,960.00

Unit of Measure: S.F.

Estimate: $9,382.57

Assessor Name: System

Date Created: 10/27/2015

Notes: Repaint interior plaster ceiling – damaged (10% of painted ceiling area)

System: D2030 - Sanitary Waste

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 49,000.00

Unit of Measure: S.F.

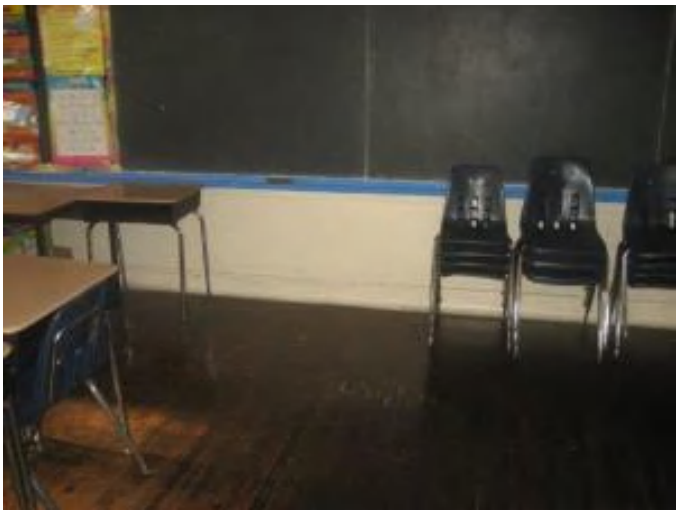
Estimate: $240,381.81

Assessor Name: System

Date Created: 11/29/2015

Notes: Inspect and repair sanitary drain pipes due to age and reported problems.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add wiring device

Qty: 160.00

Unit of Measure: Ea.

Estimate: $104,858.38

Assessor Name: System

Date Created: 10/14/2015

Notes: Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 160.

System: D5090 - Other Electrical Systems

Location: Outdoor

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $116,418.33

Assessor Name: System

Date Created: 10/14/2015

Notes: Provide 50KW outdoor generator.

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

System: C1030 - Fittings

Location: Throughout

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 60.00

Unit of Measure: Ea.

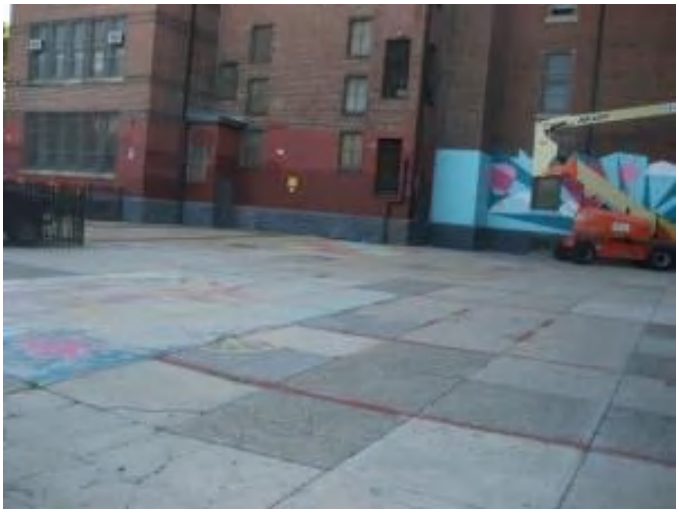
Estimate: $16,254.75

Assessor Name: System

Date Created: 10/27/2015

Notes: Install proper ID signage

System: D5030 - Communications and Security



Location: Building exterior

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Paging System

Qty: 2.00

Unit of Measure: Ea.

Estimate: $12,097.82

Assessor Name: System

Date Created: 10/14/2015

Notes: Provide two PA loud speakers facing the playground area.

Priority 5 - Response Time (> 5 yrs):

System: D3030 - Cooling Generating Systems

Location: Entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+25KSF)

Qty: 25,000.00

Unit of Measure: S.F.

Estimate: $730,227.08

Assessor Name: System

Date Created: 11/29/2015

Notes: Install 100 ton capacity chiller system for entire building.

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $654,377.55

Assessor Name: System

Date Created: 01/21/2016

Notes: Replace obsolete air handler to restore ventilation to building via ducts and radiators throughout building due to age.

System: D4010 - Sprinklers

This deficiency has no image.

Location: Entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 49,000.00

Unit of Measure: S.F.

Estimate: $700,968.31

Assessor Name: System

Date Created: 11/29/2015

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 4672 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.						35	1992	2027	$102,205.50	$224,852.10
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 40,000 CFM	1.00	Ea.	Mechanical room					25	1917	2042	$151,511.80	$166,662.98
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 400 amp, excl breakers	1.00	Ea.	Basement electrical room					30	1995	2025	$3,291.30	$3,620.43
												Total:	**$395,135.51**

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):	17,700
Year Built:	1889
Last Renovation:	1917
Replacement Value:	$397,719
Repair Cost:	$66,972.93
Total FCI:	16.84 %
Total RSLI:	77.39 %

Description:

Attributes:

General Attributes:

Bldg ID:	S254001	Site ID:	S254001

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	86.94 %	22.71 %	$66,972.93
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**77.39 %**	**16.84 %**	**$66,972.93**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$8.50	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$12.30	S.F.	17,700	40	1972	2012	2057	105.00 %	30.76 %	42		$66,972.93	$217,710
G2040	Site Development	$4.36	S.F.	17,700	25	1989	2014	2024	36.00 %	0.00 %	9			$77,172
G2050	Landscaping & Irrigation	$4.36	S.F.		15				0.00 %	0.00 %				$0
G4020	Site Lighting	$4.84	S.F.	17,700	30	2000	2030		50.00 %	0.00 %	15			$85,668
G4030	Site Communications & Security	$0.97	S.F.	17,700	30	2000	2030		50.00 %	0.00 %	15			$17,169
								Total	**77.39 %**	**16.84 %**			**$66,972.93**	**$397,719**

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.

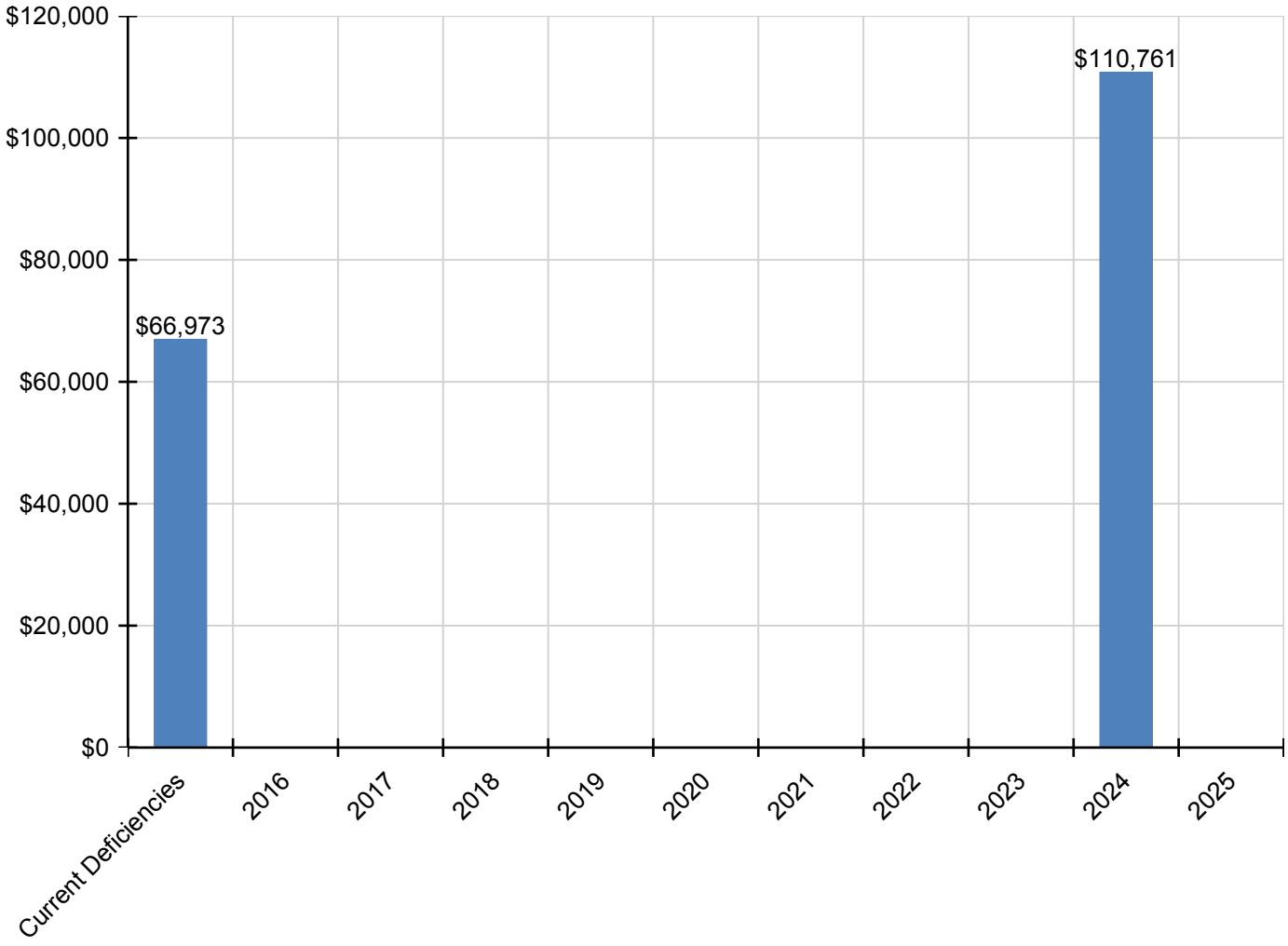
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$66,973**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$110,761**	**$0**	**$177,734**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$66,973	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$66,973**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$110,761	$0	**$110,761**
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

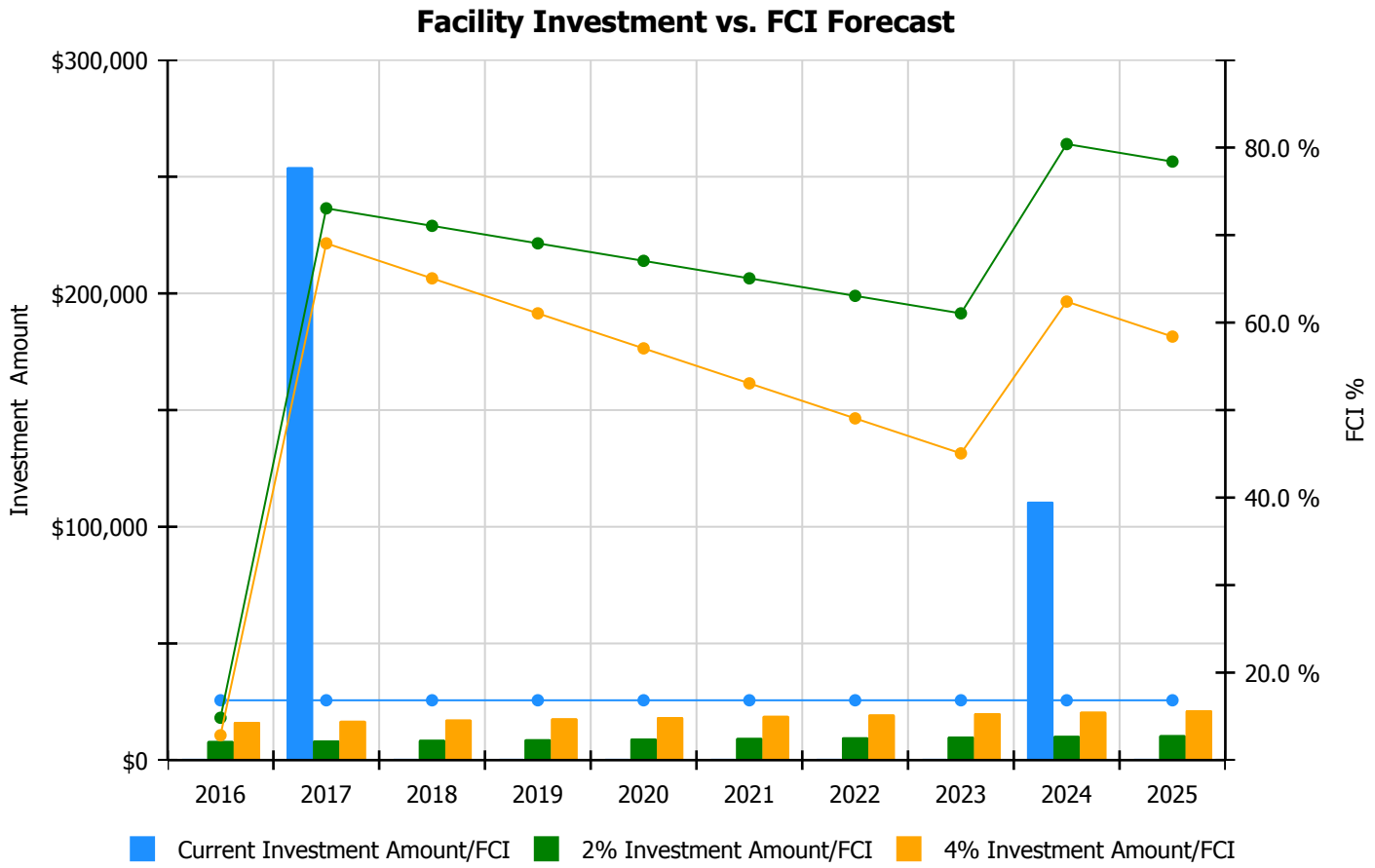
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

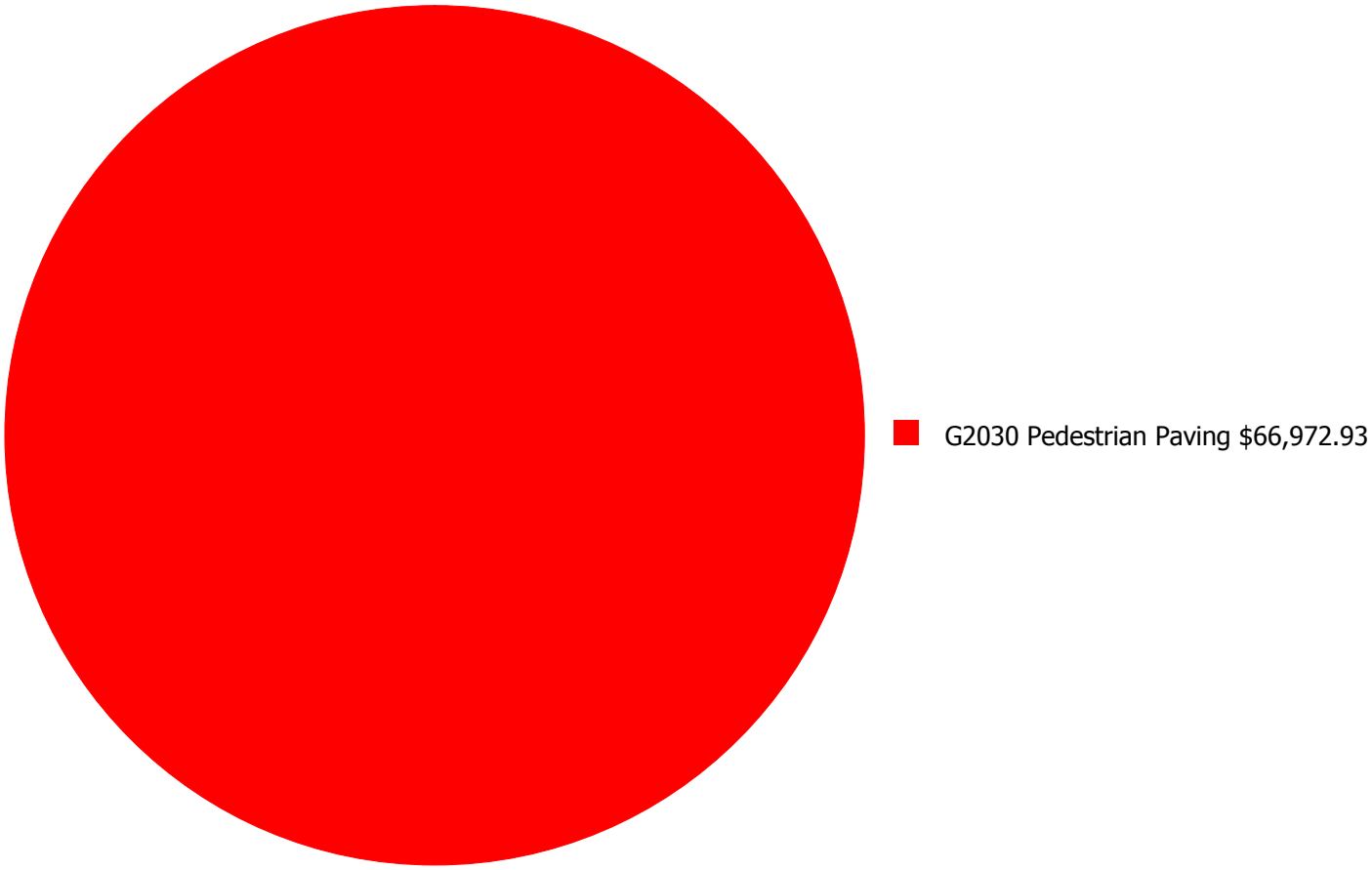
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 16.84%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$8,193.00	14.84 %	$16,386.00	12.84 %
2017	$254,065	$8,439.00	73.05 %	$16,878.00	69.05 %
2018	$0	$8,692.00	71.05 %	$17,384.00	65.05 %
2019	$0	$8,953.00	69.05 %	$17,905.00	61.05 %
2020	$0	$9,221.00	67.05 %	$18,443.00	57.05 %
2021	$0	$9,498.00	65.05 %	$18,996.00	53.05 %
2022	$0	$9,783.00	63.05 %	$19,566.00	49.05 %
2023	$0	$10,076.00	61.05 %	$20,153.00	45.05 %
2024	$110,761	$10,379.00	80.40 %	$20,757.00	62.40 %
2025	$0	$10,690.00	78.40 %	$21,380.00	58.40 %
Total:	**$364,826**	**$93,924.00**		**$187,848.00**	

Deficiency Summary by System

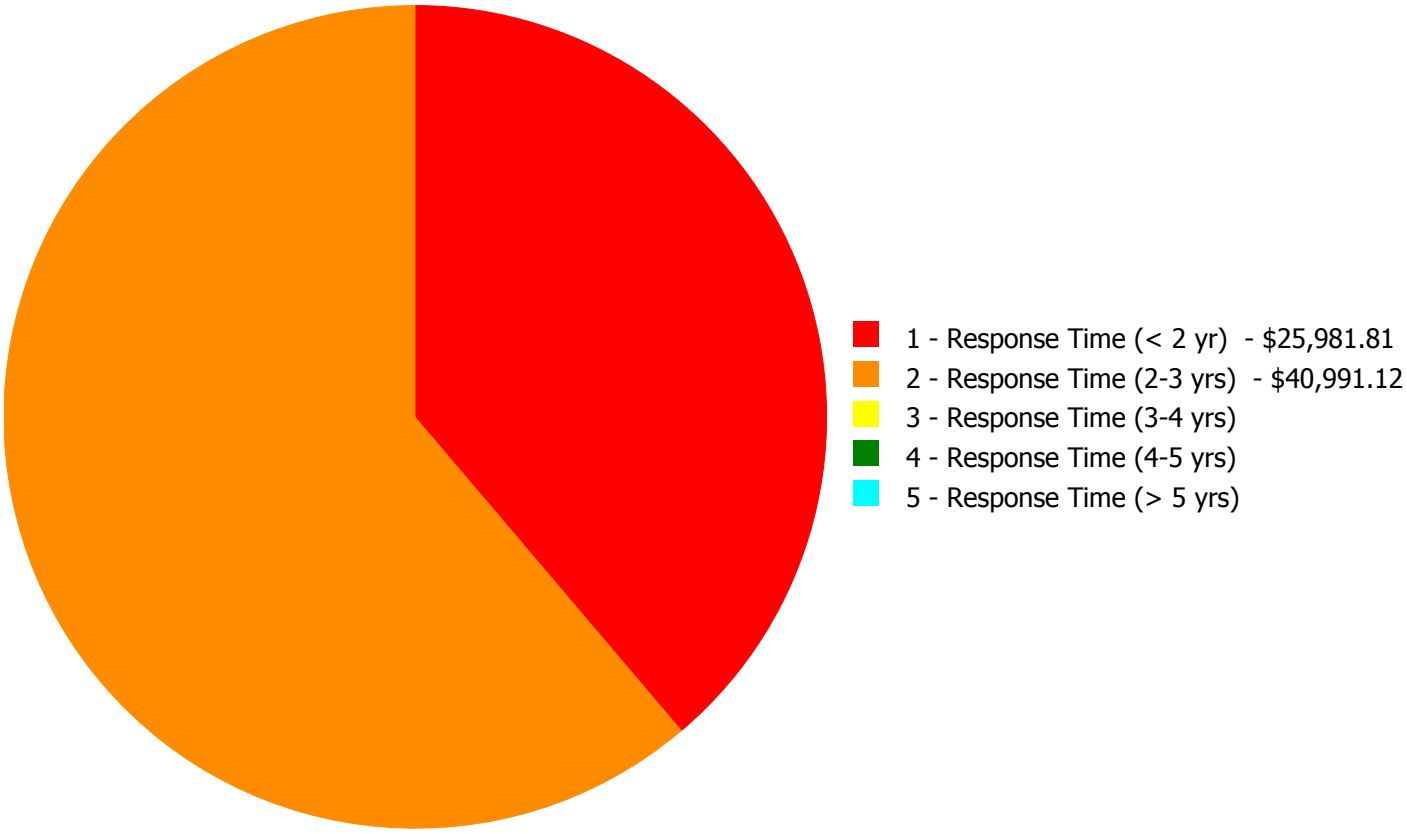
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $66,972.93

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: $66,972.93

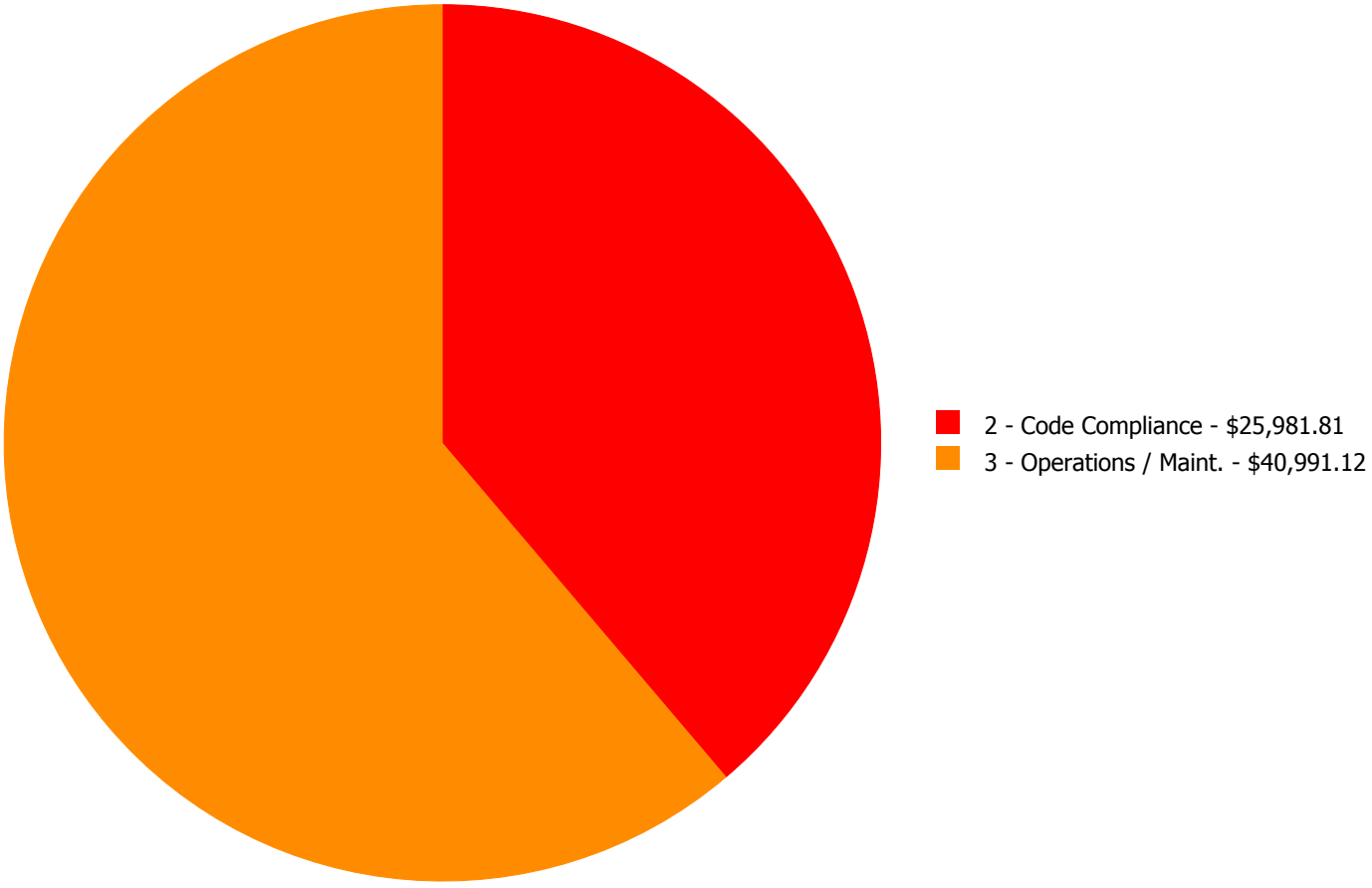
Deficiency By Priority Investment Table

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	$25,981.81	$40,991.12	$0.00	$0.00	$0.00	$66,972.93
	Total:	$25,981.81	$40,991.12	$0.00	$0.00	$0.00	$66,972.93

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:



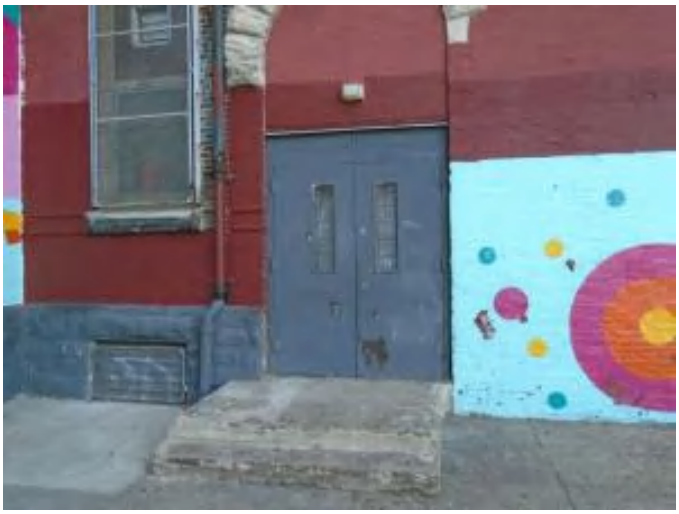
Budget Estimate Total: $66,972.93

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: G2030 - Pedestrian Paving



Location: Entrance

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 20.00

Unit of Measure: L.F.

Estimate: $25,981.81

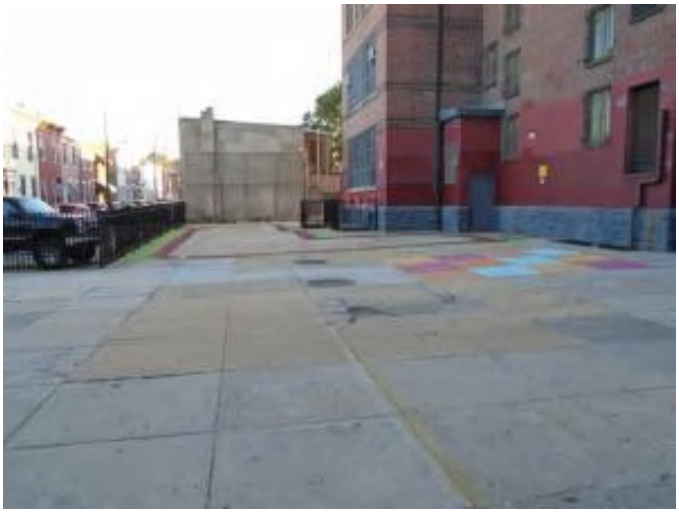
Assessor Name: Ben Nixon

Date Created: 10/27/2015

Notes: Install accessible ramp on at least one entrance

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

System: G2030 - Pedestrian Paving



Location: Yard

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2,850.00

Unit of Measure: S.F.

Estimate: $40,991.12

Assessor Name: Ben Nixon

Date Created: 10/27/2015

Notes: Repair entrance steps and stoops – damaged and failing
Resurface concrete play yard – damaged and hazard to safety

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