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.

Harrity School

Governance	CHARTER	Report Type	Elementarymiddle
Address	5601 Christian St. Philadelphia, Pa 19143	Enrollment Grade Range	849 '00-08'
Phone/Fax	215-471-2908 / N/A	Admissions Category	Neighborhood
Website	Www.Masterycharter.Org/Schools/Harrity-Campus/	Turnaround Model	Renaissance Charter

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	**38.00%**	**$14,304,632**	**$37,642,411**
Building	38.42 %	$13,977,388	$36,382,306
Grounds	25.97 %	$327,244	$1,260,105

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	02.99 %	$20,346	$680,760
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$2,654,087
Windows (Shows functionality of exterior windows)	106.16 %	$1,374,852	$1,295,045
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$104,265
Interior Doors (Classroom doors)	378.03 %	$954,117	$252,394
Interior Walls (Paint and Finishes)	00.00 %	$0	$1,139,006
Plumbing Fixtures	04.71 %	$45,810	$972,183
Boilers	00.00 %	$0	$1,342,504
Chillers/Cooling Towers	65.60 %	$1,154,800	$1,760,283
Radiators/Unit Ventilators/HVAC	128.47 %	$3,971,512	$3,091,282
Heating/Cooling Controls	158.90 %	$1,542,557	$970,745
Electrical Service and Distribution	143.93 %	$1,003,883	$697,498
Lighting	08.00 %	$199,459	$2,493,735
Communications and Security (Cameras, Pa System and Fire Alarm)	10.15 %	$94,824	$934,072

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.

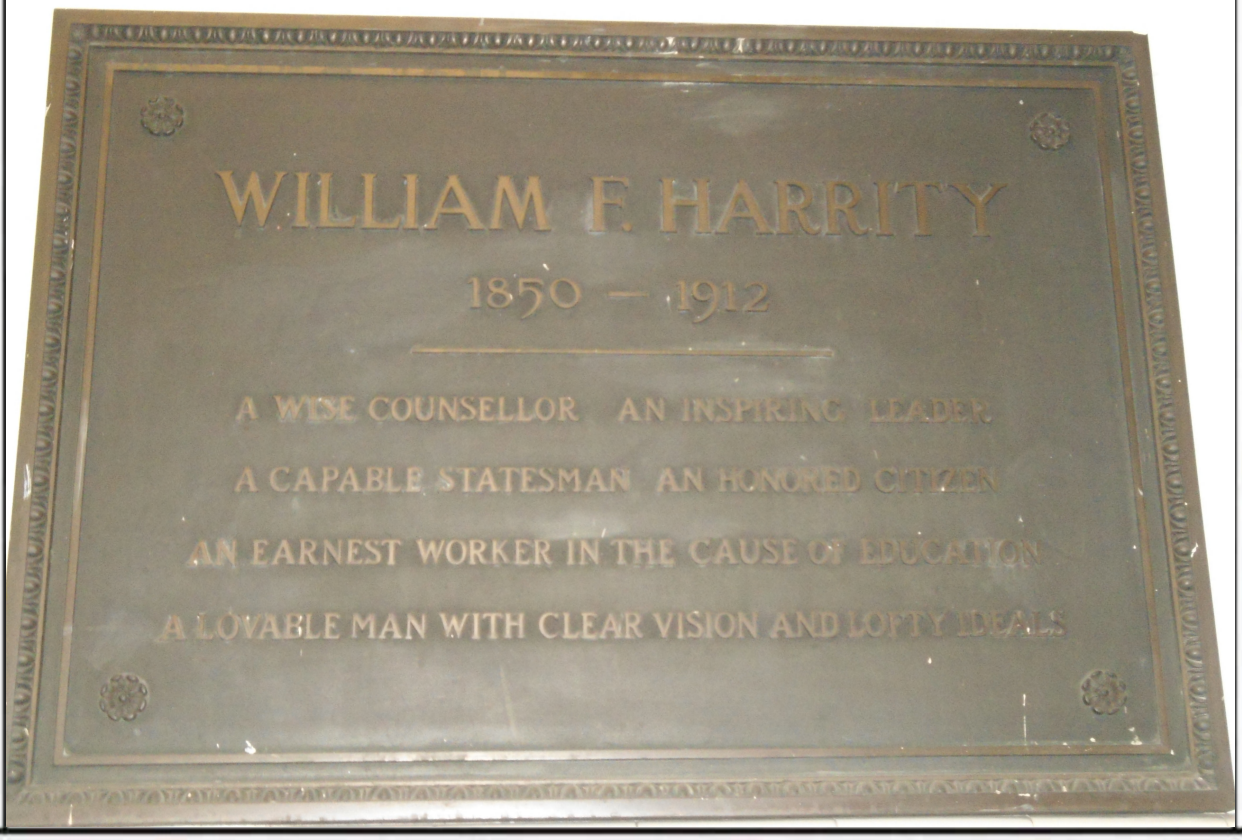
School District of Philadelphia

S131001;Harrity

Final

Site Assessment Report

February 1, 2017



PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	71,907
Year Built:	1913
Last Renovation:	
Replacement Value:	$37,642,411
Repair Cost:	$14,304,632.12
Total FCI:	38.00 %
Total RSLI:	63.82 %

Description:

Facility Assessment

July 2015

School District of Philadelphia

William F Harrity School

5601 Christian Street

Philadelphia, PA 19143

71,907 SF / 735 Students / LN 02

GENERAL

The William F Harrity Mastery Charter School Campus is identified as B131001 and was originally constructed as the William F Harrity

Public School. This facility is located at 5601 Christian Street in Philadelphia, PA. The design of the modified rectangle-shaped, concrete and steel-framed building includes brick facades with a concrete foundation, detailing, and ornamental molding.

The main entrance faces the western exterior on South Fifty-Sixth Street. This School serves students in grades K-8. Originally constructed in 1913 and consist of a Basement level and four additional stories with a total gross square footage of 71,907 GSF.

The foundation for a new gym addition were being constructed during the time of the inspection. The columns and the base footings are ready for the next phase of construction. This effort, although clearly underway and considered to be funded, is not part of this facility condition assessment.

The recent history of this school includes a remodeling effort that took place in 2011/2012 just prior to the re-opening under the charter system. This school has several classrooms, a lab, library, kitchen, cafeteria and student commons, and an auditorium with supporting administrative spaces. The information for this report was collected during a site visit on July 20, 2015.

Ms. Chastity Moran, Assistant Principal of Operations, and Eucal Holness, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history.

Architectural / Structural Systems

Foundations are original to the construction of this school and consist of reinforced concrete and appear to be in good condition. The basement walls are reinforced concrete and appear to be in good condition considering the age of the application. The superstructure is steel and concrete supported with a concrete floor construction.

The exterior walls systems are a mix of concrete, CMU and brick masonry systems. The exterior brick and concrete finish is from the original construction of this school. It was reported that sections of the school have received point and tuck work and there were no current issues. With this in mind, there are no recommendations warranted at this time.

Exterior windows have been upgraded from the original applications with the exception of the roof mechanical windows. The current aluminum framed system is estimated to have been installed in the 1990's; however, several of the original wooden windows are still present. Several windows no longer work and will require attention prior to an overall effort. Windows are in fair condition based on the year of installation or last renovation. It is recommended that the exterior window system be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The exterior doors system is a metal doors with metal frame application. This system was reported to have been upgraded within the past few years. The doors are in good condition and no deficiencies are warranted at this time.

Special consideration for those that may be physically challenged was not a main factor in the 2011/2012 renovation effort for this school. The South Frazier entrance is damaged and a deficiency exists in this report to modify the entrance to support those that may be physically challenged. The path of travel is not very clear from that entrance of the school and from the access point. The interior path of travel is partially supported by an elevator, some door hardware, limited hand rails and guard rails. Most of the building has received no upgrades and does not support a path of travel for those that may be physically challenged.

The built up roof was installed within the past ten years as reported by the school. The roof is in very good condition with one exception. Currently, there is an active leak over room 411 that, if not repaired soon, will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof repair for this section.

The interior partitions include CMU, brick and a plaster painted finish. The partitions are in very good condition considering the age of the school. This system appears to be on a consistent renewal program that corrects minor issues and provides cyclical repainting to maintain the surface finish.

There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

A large portion of the interior corridor, exit stair doors are code compliant with both ADA and are fire rated. However, several interior doors are typically wood in wood frames with transom lites or sidelights, glass glazing. The entrance doors to the lobby from the main entrance and the stair entrance to the common area are good examples of the interior system needs. The older doors are generally in good condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original door systems.

Interior doors include wooden glass pane doors with original wooden pane frames or hollow metal frames. Doors are generally in good condition considering the age of the application. Doors swing in the direction of exit and do not obstruct hallways. Universal upgrades are required for the interior door systems. It is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

The fittings system includes marker boards, tack boards, metal lockers, toilet accessories with metal toilet partitions and sections of fixed shelving. These systems are in good condition and there were no issues that surfaced during the time of the inspection, therefore no deficiencies are required at this time.

There is no directional signage and room signage is a combination of either printed paper or painted with no consistency. Accessibility signage criteria have been established for the physically challenged. These include mounting heights, contrast and finish, raised and Braille characters and pictograms, and character proportions and heights. It is recommended that compliant signage be installed throughout the building.

Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

The exterior stair at the western exterior elevation is broken and missing sections of concrete. Considering the limited access to the school by those that may be physically challenged, this stair is recommended for universal upgrade. Current legislation related to accessibility requires that building entrances be wheelchair accessible. To comply with the intent of this legislation, it is recommended that a wheelchair ramp be installed at this entrance. This work should include the installation of a powered door operator and steel handrails at all entrances as required.

Interior wall finishes are typically painted CMU. Other wall finishes include: ceramic tile at restrooms; painted brick and plaster. Wall finishes are generally in good condition. Interior floor finishes are typically VCT/VAT in classrooms and concrete or tile finishes in the corridors. Other floor finishes include: carpet; wood flooring; terrazzo; sealed concrete; and ceramic/quarry tile. The interior carpet finish was installed approximately in 2000 and is in fair condition considering the age and high traffic conditions. This finish will exceed its expected life within the next five years and is recommended for removal and replacement.

The tile application in the kitchen area is damaged in several places. As indicated in the photo some of the finish has been removed revealing the deck finish only. This deficiency provides a budgetary consideration for the repairs and replacement of the damaged kitchen tile finish.

The vinyl floor finish in most of this school is in very good condition and appears to have part of an isolated upgrade. Some of the original flooring that was not a part of that effort consists of a 9x9 finish. This finish is suspect to contain asbestos and is recommended for upgrade. Remove and replace with a 12x12 vinyl tile application.

The classrooms in this school have a wooden floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the wooden floor finish be removed and replaced with an in kind finish.

Interior ceilings are typically 2 x 4, 2 x 2 and glue on 12 x 12 acoustical tile systems. There are sections in the restrooms, stairwells and connecting hallways that are exposed and painted. This ceiling system is well maintained and there were no issues that surfaced during the time of the inspection. No deficiencies are warranted at this time.

This schools institutional equipment such as the library shelving, student benches and support desk are in good condition. The stage in the student common or multipurpose room is a simple stage with limited equipment such as lights and curtains. This school has a student laboratory with modern benches, cabinets and supporting sinks. In each case the institutional equipment is expected to have a life cycle that extends beyond the outlook of this purview. There are no deficiencies warranted at this time.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have electronic automatic faucets. Urinals and water closets have manual flush valves with push handle operators. Custodial closets have cast iron service sinks. There are stainless steel water coolers with integral refrigeration and china drinking

fountains with no refrigeration. There are two kitchens each with kitchen waste piped through above floor grease traps.

There is a Bradford White seventy five gallon gas water heater in the basement mechanical room, with a small circulating pump installed in 2010. The system includes a water softener system in the mechanical room. There is no domestic booster pump system and no pressure problems are reported. Building domestic water piping is copper, which was probably replaced since the original construction and may have lead solder based on age. Sanitary, waste, vent and rainwater piping is hub and spigot cast iron. The water service is a four inch line and meter from S. 56th St. entering in the boiler room with a backflow preventer assembly. Gas service is a four inch line with a booster pump system in the boiler room, also from S. 56th St. St. Main sewer line is connected at S. 56th St.

Water closets, lavatories and urinals have been replaced and should remain serviceable fifteen to twenty more years. The older china drinking fountains should be replaced including trim and fittings. The domestic water system should be replaced, based on age and condition. The gas water heater should be in service fifteen to twenty more years. The original cast iron has exceeded the anticipated service life, and the sanitary should be examined for damage and selected replacement.

HVAC- Heating source is two cast iron sectional low pressure steam boilers that are gas/oil fired, located in the basement boiler room. The boilers are one hundred eighty five hp each, Weil McLain model 94 series 3, reportedly less than five years old. The boilers have Webster fully modulating burners with separate oil pumps and control panels. A Multi-mod control system sequences the boilers. There is a Shipco triplex boiler feed pump system. An automatic chemical feed system and two cast iron condensate receivers with duplex pumps serve the boilers.

The building has both steam and hot water radiation units. Hot water is generated by a frame mounted shell and tube, steam to water heat exchanger package including two end suction pumps, expansion tank and controls.

Boilers are connected to a factory fabricated metal vent system routed to a roof cap. Louvers and motorized dampers provide combustion air, with one ducted to the floor level. There is an underground oil tank, size, construction and condition unknown. There is a duplex fuel oil pump system with strainer and control panel in the boiler room.

Two house fan systems provide heat and ventilation through central duct systems. One is in the electrical room and one is in a space near the multipurpose room, and both are operational. There is no central air conditioning. Fourteen ductless split systems and numerous window units provide cooling. Condensing units are mounted on the exterior wall.

Three centrifugal roof ventilators provide toilet exhaust. There are two kitchen hoods that are not used. One has an inline supply fan for makeup air. Both have fire suppression systems.

Steam, condensate return, and hot water piping are welded black steel. Fuel oil piping is black steel with screwed fittings.

Controls are older pneumatic and there is no building automation system. There is a simplex controls air compressor in the boiler room. Reportedly control valves for steam and hot water radiation are inoperable. Some have been replaced with manual valves.

The steam and hot water radiators and distribution systems are original and should be replaced with a new system. The boilers should be in service twenty five more years.

FIRE PROTECTION- There is no fire protection system, sprinklers nor standpipes.

ELECTRICAL SYSTEMS

Electrical Service-- Electrical service to the building is provided by PECO Energy Company from an overhead utility line routed along S. 56th Street. Secondary service at 208/120V, 3 phase, 4 wire is routed underground from a utility pole to a Federal Pacific Electric Company 800A Main Switchboard located in the Boiler Room. The switchboard consists of an incoming section and one distribution section with 800A main circuit breaker and feeder circuit breakers to serve panelboards, mechanical equipment, elevators and mechanical equipment.

The existing service equipment is obsolete equipment. The electrical demand load is at rated capacity and does not have adequate capacity to serve the building addition that is currently under construction. The service entrance equipment needs to be replaced with a switchboard with a higher Ampacity rating to serve the building addition and for a central air conditioning system for the building.

The flush mounted Federal Pacific Electric Company panelboards located in the corridors on each floor and panelboards on the Multi-Purpose Room platform have exceeded their useful life and need to be replaced.

Receptacles-- Classrooms are typically supplied with only 2 or 4 duplex receptacles. Additional receptacles were added in only a few classrooms using surface mounted conduit. Additional receptacles need to be added in 32 classrooms using a surface metal raceway system. At least four (4) duplex receptacles should be added in each classroom.

Lighting-- The lighting systems I the school consist mainly of fluorescent fixtures with acrylic prismatic lenses and T8 lamps. Most of the fixtures in classrooms and corridors are 2x4 lay-in grid type. There are some classrooms that are provided with modular 2x4 fluorescent or wraparound fixtures that are surface mounted to the ceiling grid. In most rooms, lighting fixtures are in good condition with 8 to 10 years of useful life remaining. Classroom lighting is controlled by two light switches. There are no occupancy sensors for lighting control. An allowance for lighting upgrades for approximately 1500 SF, mainly in the Floor 1 teachers lounge, kitchen area, platform in the Multi-Purpose Room, and some storage areas, is included as a deficiency.

The Multi-Purpose Room has 6 lamp, 4 foot surface mounted fluorescent with wire guards. The platform has incandescent worklights. There are also 6 theatrical lighting fixtures in the Multi-Purpose Room to illuminate the platform. There is no dimming system for the Multi-Purpose Room or platform. Industrial type fluorescent fixtures with T8 lamps are provided in mechanical spaces. Stairwells have 4 foot surface mounted fluorescent fixtures.

The exterior of the building has HID wall pack fixtures and floodlights. Exit discharges have lighting fixtures above the doors. Recessed fixtures with drop lenses are mounted under canopies.

Fire Alarm System-- The fire alarm control panel (FACP) is a Notifier NFW2-100 that is located in the Boiler Room. It is an addressable fire alarm system that is approximately 5 years old and maintained by Keystone Fire Protection Company. The system consists of manual pull stations at egress doors and audio and visual notification appliances in corridors and restrooms. There are no smoke detectors in elevator lobbies for elevator recall. There are several rooms that are not provided with fire alarm notification appliances, such as all classrooms, secondary dining Room 118, Teachers' Dining Room 243, kitchen, and infirmary. There is a remote fire alarm annunciator panel located at the main entrance. It is recommended that the FACP be replaced and notification appliances be provided in all multiple occupant rooms that do not have devices.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are located in corridors and classrooms to provide wireless access throughout the building. The main IT equipment is located in the Technology Room 202.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Each classroom has a recessed ceiling speaker for announcements. There is a Clear Sound cabinet for the sound system in the Multi-Purpose Room. Speakers are mounted on each side of the platform. Equipment is in good condition, with an estimated 8 years of useful life remaining.

Clock and Program System-- There is a clock/speaker assembly located in classrooms. Program speakers in the assemblies have been abandoned in place and replaced with ceiling speakers. Individual clocks are also provided in classrooms where there are no clock/speaker assemblies. The speakers in the classrooms are used for the program system.

Video Surveillance and Security Systems -- video cameras are provided in corridors, the Multi-Purpose Room and exterior of the building. The video surveillance equipment cabinet is located in Room 001C on Floor 1. Video surveillance cameras are in good condition, with an estimated 5 to 7 years useful life remaining before replacement. There are no magnetic door contacts on exterior doors or motion sensors in the corridors.

Emergency Power System-- There is an Onan 20kW/25kVA standby generator with Onan 70A automatic transfer switch (ATS) located in Boiler Room 114. The generator supplies Panelboard EM, which only serves emergency egress and exit lighting loads. The generator, transfer switch and Panelboard EM have exceeded their useful lifespan and need to be replaced. The replacement generator should be sized to include the passenger and freight elevators.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit lighting is supplied from Panelboard EM. Exit signs are in good condition and located per code requirements.

Lightning Protection System -- There is no lightning protection system for this building. There are only a few air terminals mounted on the roof stack.

Conveying Systems-- There are two Otis elevators in the building, one freight and one passenger. Both elevators are electric traction, motor-generator type with relay type elevator controllers. The passenger elevator is rated 1200 pound capacity. Both elevators have

exceeded their life expectancies and need to be upgraded and modernized.

GROUNDS

This school's eastern parking area is an asphalt finish with striping and proper parking markers. There were no issues that surfaced with the parking area during the time of the inspection. There are no deficiencies warranted at this time.

The play area and general asphalt covered general purpose area was fenced in for construction during the time of the inspection. This area is expected to be included in the ongoing construction effort and not part of this report.

The sidewalk system is original to the buildings construction. There are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required.

The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are necessary for the safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

This school has a perimeter fence surrounding the parking / playground area. The fence consists of either a chain link or metal picket fence and has several areas in need of repairs. The picket fence mounting posts are damaged in several areas, gates are damaged and locking units no longer function. Overall the fence is in fair condition considering the age of the application. This picket fence system is recommended to be removed and replaced with a new system within the next five to ten years.

This school has very limited landscaping that consists of a few mature trees and a few young trees street-side. The mature trees are near the main entrance with a concrete sitting plaza with benches. The young trees are street-side and in each case there were no issues that warrant deficiencies at this time.

Site Lighting-- Site lighting for the paved play area on the west side of the building is provided by wall mounted HID lighting fixtures. There are no other pole mounted lighting fixtures on the site.

Site Paging-- There are three (3) horn type speakers mounted on the west side of the building exterior to provide coverage for the play area.

Site Video Surveillance-- exterior mounted video surveillance cameras are mounted on all sides of the building exterior to monitor to the site play area, parking lot and entrances.

RECOMMENDATIONS

- Remove and replace wood flooring
- Remove VAT and replace with VCT
- Replace and re-grout floor tile
- Remove and replace carpet
- Repair exterior stairs
- Replace inadequate or install proper stair railing
- Replace missing or damaged signage
- Remove and replace interior doors
- Install fire rated doors
- Remove folding wood partitions
- Blister or membrane repair
- Remove and replace aluminum windows
- Remove and replace metal picket fence
- Build secure trash dumpster enclosure
- Remove and replace concrete sidewalk or paving
- Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new heat exchanger and pump for hot water, piping, control valves and controls.
- Provide a one hundred eighty ton air cooled package chiller on the roof with pumps, piping and controls. Connect to new fan coil units.
- Install NFPA wet pipe automatic sprinkler system in original and addition portions of building not currently protected.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.

- Replace domestic hot and cold water pipe, fittings, valves, hangars and insulation.
- Replace older drinking fountains on basement level with new water coolers. Include fittings and trim.
- Provide a new central station air handling unit for the multipurpose room with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.
- Replace pneumatic control devices with digital control equipment. Provide building automation system to control all components with remote computer based control console with graphics package.
- Provide new ductless split systems at each of two elevator equipment rooms on roof. Locate condensing units on roof. Include electrical connections, refrigerant line sets and drain lines.
- Replace existing 800A Main Switchboard and distribution system with increased capacity (2500A) for current building addition and central air condition loads.
- Replace panelboards, and their feeder conductors, in corridors on each floor and on the auditorium platform. Total of 14 panelboards.
- Provide surface metal raceway system and at least four (4) duplex receptacles in each of 32 classrooms.
- Provide an allowance for lighting fixture replacement for approximately 1500 SF, mainly in the Floor 1 teachers lounge, kitchen area, platform in the Multi-Purpose Room, and some storage areas.
- Replace fire alarm control panel and provide notification appliances in all classrooms, secondary dining Room 118, Teachers' Dining Room 243, kitchen, and infirmary. Provide smoke detectors in elevator lobbies, and smoke and heat detectors in elevator machine rooms for elevator recall.
- Replace standby generator system, including generator, transfer switch and standby power panelboards, sized to include elevator loads.
- Provide upgrade and modernization of elevator cab, controls and machine room for freight elevator.
- Provide upgrade and modernization of elevator cab, controls and machine room for passenger elevator.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S131001		

Site Condition Summary

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

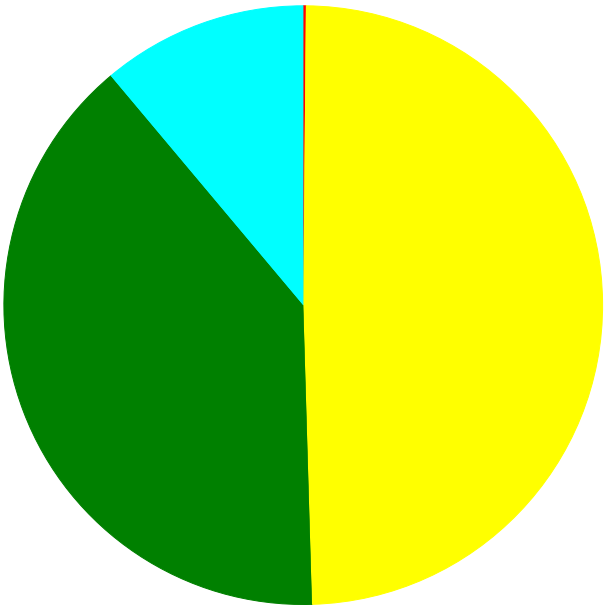
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	58.29 %	33.92 %	$1,374,852.06
B30 - Roofing	25.00 %	2.99 %	$20,345.84
C10 - Interior Construction	51.99 %	65.77 %	$1,160,554.72
C20 - Stairs	37.00 %	160.71 %	$162,938.76
C30 - Interior Finishes	66.77 %	17.40 %	$840,027.72
D10 - Conveying	105.71 %	98.83 %	$383,761.66
D20 - Plumbing	87.41 %	51.96 %	$762,946.82
D30 - HVAC	104.43 %	91.34 %	$6,698,151.94
D40 - Fire Protection	105.71 %	177.49 %	$1,028,663.90
D50 - Electrical	73.24 %	36.56 %	$1,545,144.45
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	0.00 %	$0.00
G20 - Site Improvements	16.14 %	35.34 %	$327,244.25
G40 - Site Electrical Utilities	26.67 %	0.00 %	$0.00
Totals:	**63.82 %**	**38.00 %**	**$14,304,632.12**

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)
B131001;Harrity	71,907	38.42	$20,345.84	$0.00	$7,065,804.02	$5,320,506.88	$1,570,731.13
G131001;Grounds	57,500	25.97	$0.00	$0.00	$0.00	$308,391.73	$18,852.52
Total:		**38.00**	**$20,345.84**	**$0.00**	**$7,065,804.02**	**$5,628,898.61**	**$1,589,583.65**

Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $20,345.84
- 2 - Response Time (2-3 yrs)
- 3 - Response Time (3-4 yrs) - $7,065,804.02
- 4 - Response Time (4-5 yrs) - $5,628,898.61
- 5 - Response Time (> 5 yrs) - $1,589,583.65

Budget Estimate Total: $14,304,632.12

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):	71,907
Year Built:	1913
Last Renovation:	1990
Replacement Value:	$36,382,306
Repair Cost:	$13,977,387.87
Total FCI:	38.42 %
Total RSLI:	65.37 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B131001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S131001		

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	58.29 %	33.92 %	$1,374,852.06
B30 - Roofing	25.00 %	2.99 %	$20,345.84
C10 - Interior Construction	51.99 %	65.77 %	$1,160,554.72
C20 - Stairs	37.00 %	160.71 %	$162,938.76
C30 - Interior Finishes	66.77 %	17.40 %	$840,027.72
D10 - Conveying	105.71 %	98.83 %	$383,761.66
D20 - Plumbing	87.41 %	51.96 %	$762,946.82
D30 - HVAC	104.43 %	91.34 %	$6,698,151.94
D40 - Fire Protection	105.71 %	177.49 %	$1,028,663.90
D50 - Electrical	73.24 %	36.56 %	$1,545,144.45
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	0.00 %	$0.00
Totals:	**65.37 %**	**38.42 %**	**$13,977,387.87**

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.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$1,323,089
A1030	Slab on Grade	$7.73	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$555,841
A2010	Basement Excavation	$6.55	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$470,991
A2020	Basement Walls	$12.70	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$913,219
B1010	Floor Construction	$75.10	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$5,400,216
B1020	Roof Construction	$13.88	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$998,069
B2010	Exterior Walls	$36.91	S.F.	71,907	100	1913	2013	2052	37.00 %	0.00 %	37			$2,654,087
B2020	Exterior Windows	$18.01	S.F.	71,907	40	1990	2030	2057	105.00 %	106.16 %	42		$1,374,852.06	$1,295,045
B2030	Exterior Doors	$1.45	S.F.	71,907	25	1990	2015	2020	20.00 %	0.00 %	5			$104,265
B3010105	Built-Up	$37.76	S.F.	18,000	20	1990	2010	2020	25.00 %	2.99 %	5		$20,345.84	$679,680
B3020	Roof Openings	$0.06	S.F.	18,000	20	1990	2010	2020	25.00 %	0.00 %	5			$1,080
C1010	Partitions	$17.91	S.F.	71,907	100	1913	2013	2052	37.00 %	11.07 %	37		$142,560.40	$1,287,854
C1020	Interior Doors	$3.51	S.F.	71,907	40	2012	2052		92.50 %	378.03 %	37		$954,117.42	$252,394
C1030	Fittings	$3.12	S.F.	71,907	40	2012	2052		92.50 %	28.47 %	37		$63,876.90	$224,350
C2010	Stair Construction	$1.41	S.F.	71,907	100	1913	2013	2052	37.00 %	160.71 %	37		$162,938.76	$101,389
C3010230	Paint & Covering	$13.21	S.F.	71,907	10	2013	2023		80.00 %	0.00 %	8			$949,891
C3010232	Wall Tile	$2.63	S.F.	71,907	30	2013	2043		93.33 %	0.00 %	28			$189,115
C3020411	Carpet	$7.30	S.F.	3,000	10	2013	2023		80.00 %	153.30 %	8		$33,572.29	$21,900

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020412	Terrazzo & Tile	$75.52	S.F.	20,000	50	1913	1963	2025	20.00 %	4.75 %	10		$71,747.33	$1,510,400
C3020413	Vinyl Flooring	$9.68	S.F.	20,000	20	1913	1933	2025	50.00 %	78.34 %	10		$151,666.68	$193,600
C3020414	Wood Flooring	$22.27	S.F.	20,000	25	1913	1938	2042	108.00 %	130.90 %	27		$583,041.42	$445,400
C3020415	Concrete Floor Finishes	$0.97	S.F.	8,907	50	1913	1963	2025	20.00 %	0.00 %	10			$8,640
C3030	Ceiling Finishes	$20.97	S.F.	71,907	25	2013	2038		92.00 %	0.00 %	23			$1,507,890
D1010	Elevators and Lifts	$5.40	S.F.	71,907	35	1968	2003	2052	105.71 %	98.83 %	37		$383,761.66	$388,298
D2010	Plumbing Fixtures	$13.52	S.F.	71,907	35	2011	2046		88.57 %	4.71 %	31		$45,809.92	$972,183
D2020	Domestic Water Distribution	$1.68	S.F.	71,907	25			2042	108.00 %	301.63 %	27		$364,379.16	$120,804
D2030	Sanitary Waste	$2.90	S.F.	71,907	25			2042	108.00 %	169.16 %	27		$352,757.74	$208,530
D2040	Rain Water Drainage	$2.32	S.F.	71,907	30	1913	1943	2027	40.00 %	0.00 %	12			$166,824
D3020	Heat Generating Systems	$18.67	S.F.	71,907	35	2011	2046		88.57 %	0.00 %	31			$1,342,504
D3030	Cooling Generating Systems	$24.48	S.F.	71,907	30			2047	106.67 %	65.60 %	32		$1,154,799.76	$1,760,283
D3040	Distribution Systems	$42.99	S.F.	71,907	25			2042	108.00 %	128.47 %	27		$3,971,511.96	$3,091,282
D3050	Terminal & Package Units	$2.34	S.F.	71,907	20			2037	110.00 %	17.40 %	22		$29,282.82	$168,262
D3060	Controls & Instrumentation	$13.50	S.F.	71,907	20			2037	110.00 %	158.90 %	22		$1,542,557.40	$970,745
D4010	Sprinklers	$7.05	S.F.	71,907	35			2052	105.71 %	202.91 %	37		$1,028,663.90	$506,944
D4020	Standpipes	$1.01	S.F.	71,907	35			2052	105.71 %	0.00 %	37			$72,626
D5010	Electrical Service/Distribution	$9.70	S.F.	71,907	30	1968	1998	2047	106.67 %	143.93 %	32		$1,003,882.63	$697,498
D5020	Lighting and Branch Wiring	$34.68	S.F.	71,907	20	1913	1933	2027	60.00 %	8.00 %	12		$199,459.33	$2,493,735
D5030	Communications and Security	$12.99	S.F.	71,907	15	1913	1928	2027	80.00 %	10.15 %	12		$94,823.74	$934,072
D5090	Other Electrical Systems	$1.41	S.F.	71,907	30	1913	1943	2047	106.67 %	243.60 %	32		$246,978.75	$101,389
E1020	Institutional Equipment	$4.82	S.F.	71,907	35	1913	1948	2027	34.29 %	0.00 %	12			$346,592
E1090	Other Equipment	$11.10	S.F.	71,907	35	1913	1948	2027	34.29 %	0.00 %	12			$798,168
E2010	Fixed Furnishings	$2.13	S.F.	71,907	40	1913	1953	2027	30.00 %	0.00 %	12			$153,162
								Total	**65.37 %**	**38.42 %**			**$13,977,387.87**	**$36,382,306**

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: Painted surface plaster drywall 40
CMU 40
Brick 20

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

Note: Carpet 5%
Tile 27%
Vinyl 27%
Wood 27%
Concrete 12%

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

Note: There are no secondary transformers.

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$13,977,388**	**$0**	**$0**	**$0**	**$0**	**$1,001,066**	**$0**	**$0**	**$1,354,140**	**$0**	**$2,531,809**	**$18,864,403**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A10 - Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A20 - Basement Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$1,374,852	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,374,852**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$132,959	$0	$0	$0	$0	$0	**$132,959**
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	$20,346	$0	$0	$0	$0	$866,729	$0	$0	$0	$0	$0	**$887,075**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$1,377	$0	$0	$0	$0	$0	**$1,377**
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	$142,560	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$142,560**
C1020 - Interior Doors	$954,117	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$954,117**
C1030 - Fittings	$63,877	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$63,877**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

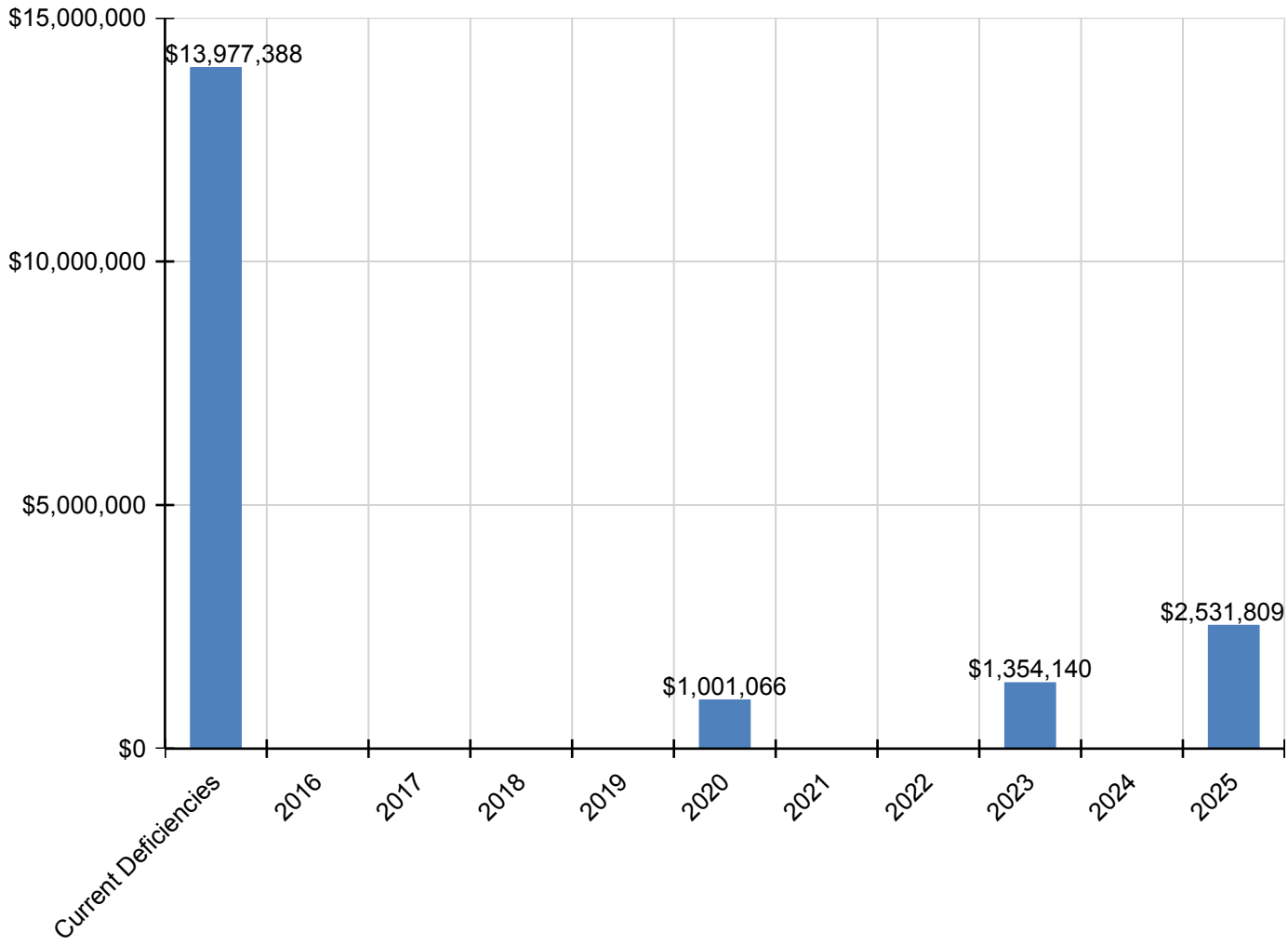
C2010 - Stair Construction	$162,939	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$162,939**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$1,323,624	$0	$0	**$1,323,624**
C3010232 - Wall 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	$33,572	$0	$0	$0	$0	$0	$0	$0	$30,516	$0	$0	**$64,089**
C3020412 - Terrazzo & Tile	$71,747	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,232,836	**$2,304,584**
C3020413 - Vinyl Flooring	$151,667	$0	$0	$0	$0	$0	$0	$0	$0	$0	$286,200	**$437,867**
C3020414 - Wood Flooring	$583,041	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$583,041**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,773	**$12,773**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$383,762	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$383,762**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$45,810	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$45,810**
D2020 - Domestic Water Distribution	$364,379	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$364,379**
D2030 - Sanitary Waste	$352,758	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$352,758**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,154,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,154,800**
D3040 - Distribution Systems	$3,971,512	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,971,512**
D3050 - Terminal & Package Units	$29,283	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$29,283**
D3060 - Controls & Instrumentation	$1,542,557	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,542,557**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,028,664	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,028,664**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$1,003,883	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,003,883**
D5020 - Lighting and Branch Wiring	$199,459	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$199,459**
D5030 - Communications and Security	$94,824	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$94,824**

D5090 - Other Electrical Systems	$246,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$246,979**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

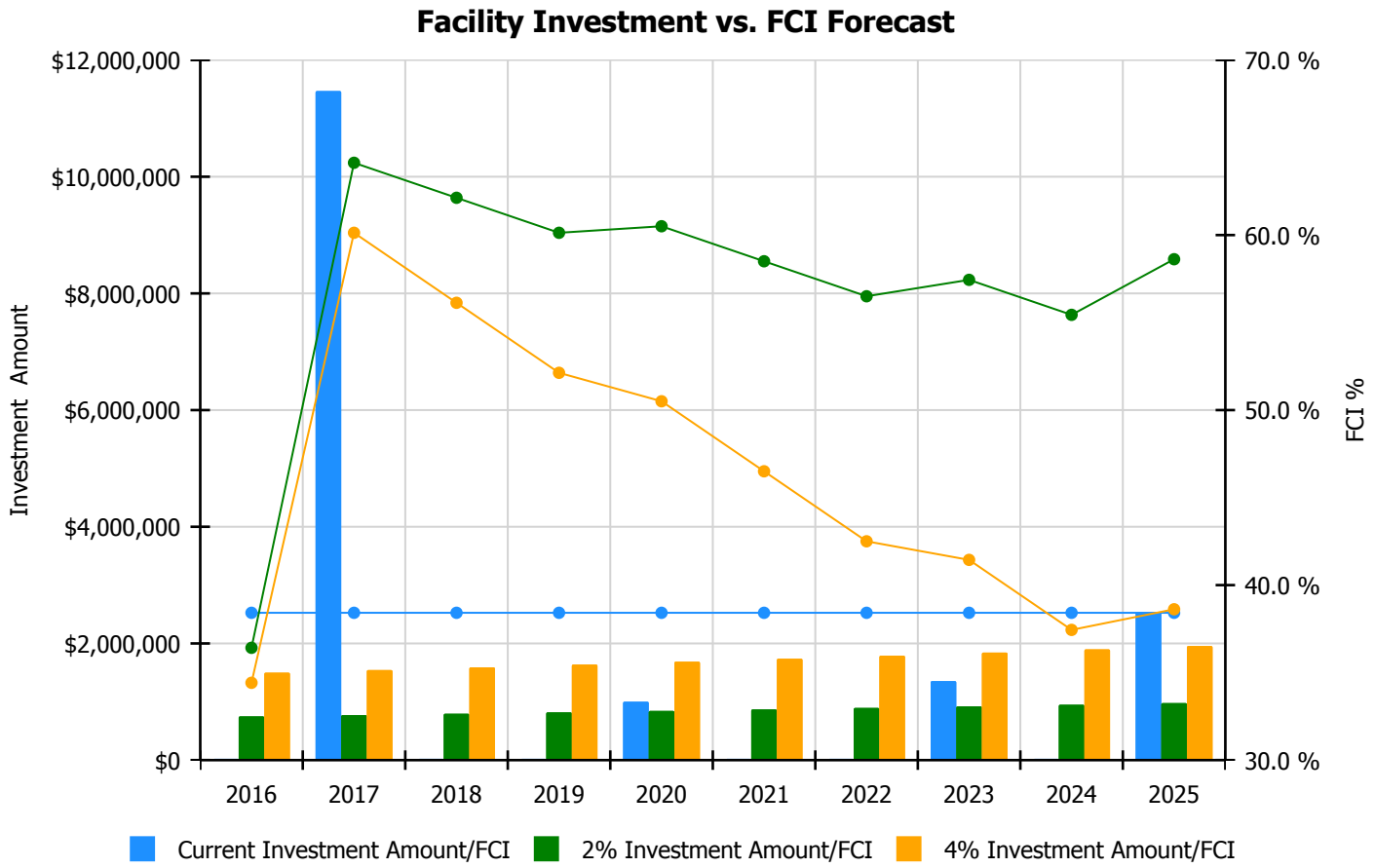
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

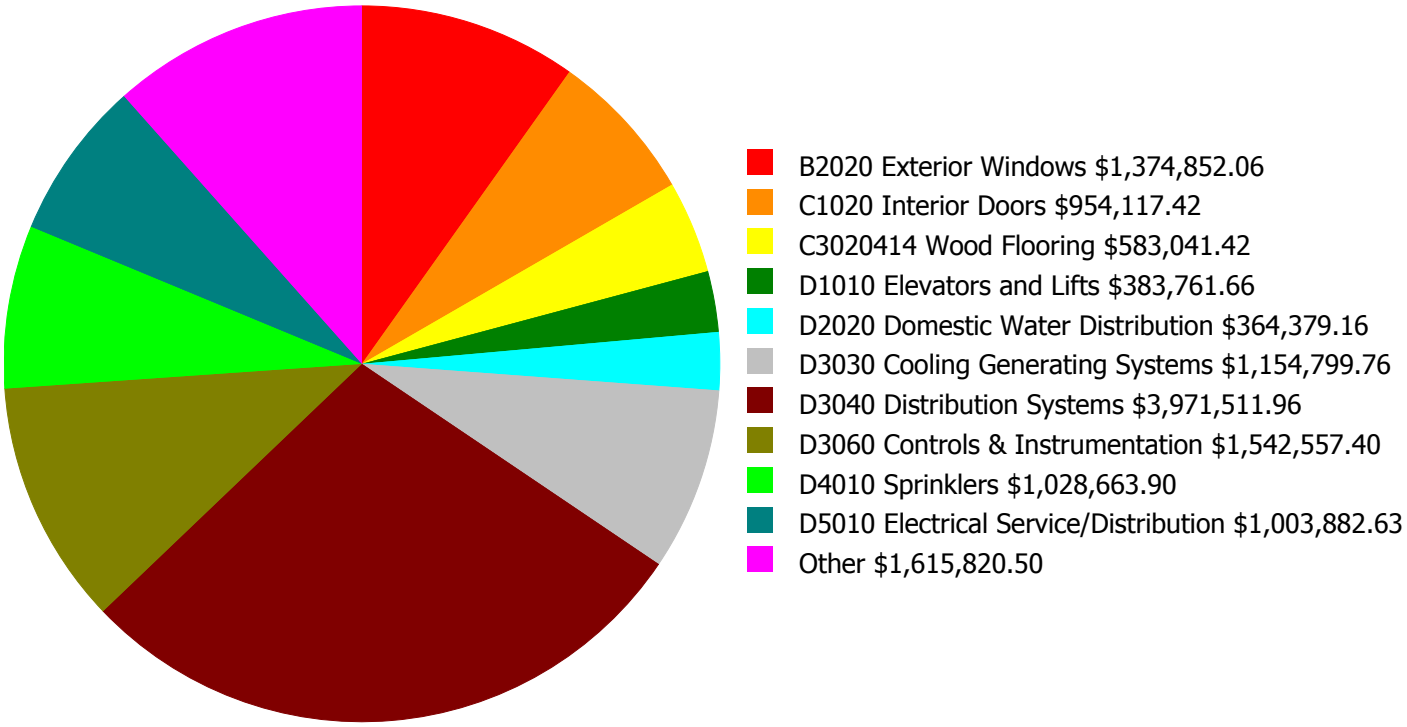
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 38.42%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$749,476.00	36.42 %	$1,498,951.00	34.42 %
2017	$11,468,137	$771,960.00	64.13 %	$1,543,920.00	60.13 %
2018	$0	$795,119.00	62.13 %	$1,590,237.00	56.13 %
2019	$0	$818,972.00	60.13 %	$1,637,944.00	52.13 %
2020	$1,001,066	$843,541.00	60.50 %	$1,687,083.00	50.50 %
2021	$0	$868,848.00	58.50 %	$1,737,695.00	46.50 %
2022	$0	$894,913.00	56.50 %	$1,789,826.00	42.50 %
2023	$1,354,140	$921,760.00	57.44 %	$1,843,521.00	41.44 %
2024	$0	$949,413.00	55.44 %	$1,898,826.00	37.44 %
2025	$2,531,809	$977,896.00	58.62 %	$1,955,791.00	38.62 %
Total:	**$16,355,153**	**$8,591,898.00**		**$17,183,794.00**	

Deficiency Summary by System

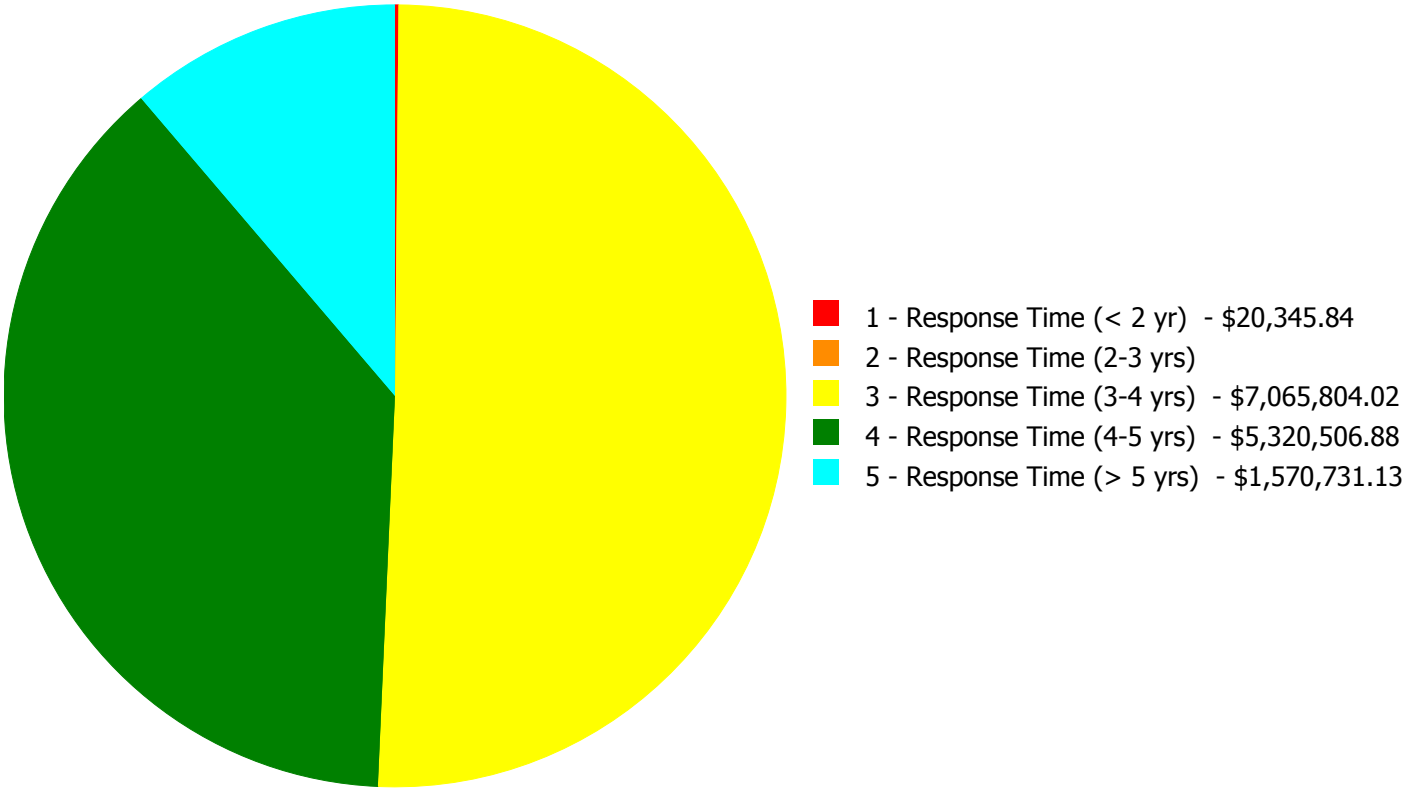
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,977,387.87

Deficiency Summary by Priority

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



Budget Estimate Total: $13,977,387.87

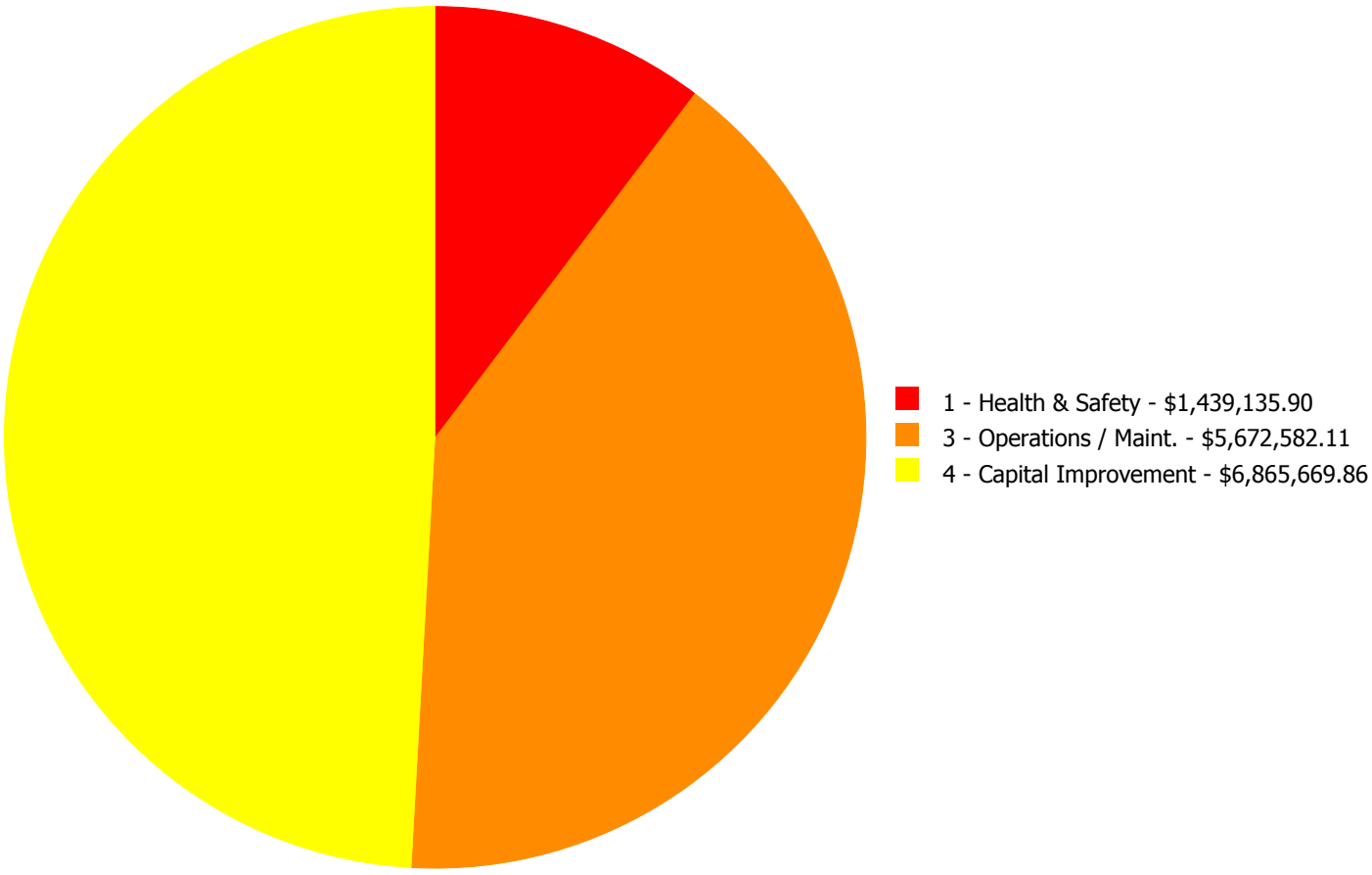
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,374,852.06	$0.00	$1,374,852.06
B3010105	Built-Up	$20,345.84	$0.00	$0.00	$0.00	$0.00	$20,345.84
C1010	Partitions	$0.00	$0.00	$8,883.42	$133,676.98	$0.00	$142,560.40
C1020	Interior Doors	$0.00	$0.00	$0.00	$0.00	$954,117.42	$954,117.42
C1030	Fittings	$0.00	$0.00	$0.00	$63,876.90	$0.00	$63,876.90
C2010	Stair Construction	$0.00	$0.00	$0.00	$162,938.76	$0.00	$162,938.76
C3020411	Carpet	$0.00	$0.00	$0.00	$0.00	$33,572.29	$33,572.29
C3020412	Terrazzo & Tile	$0.00	$0.00	$71,747.33	$0.00	$0.00	$71,747.33
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$151,666.68	$0.00	$151,666.68
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$0.00	$583,041.42	$583,041.42
D1010	Elevators and Lifts	$0.00	$0.00	$383,761.66	$0.00	$0.00	$383,761.66
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$45,809.92	$0.00	$45,809.92
D2020	Domestic Water Distribution	$0.00	$0.00	$364,379.16	$0.00	$0.00	$364,379.16
D2030	Sanitary Waste	$0.00	$0.00	$352,757.74	$0.00	$0.00	$352,757.74
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$1,154,799.76	$0.00	$1,154,799.76
D3040	Distribution Systems	$0.00	$0.00	$3,971,511.96	$0.00	$0.00	$3,971,511.96
D3050	Terminal & Package Units	$0.00	$0.00	$0.00	$29,282.82	$0.00	$29,282.82
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,542,557.40	$0.00	$1,542,557.40
D4010	Sprinklers	$0.00	$0.00	$1,028,663.90	$0.00	$0.00	$1,028,663.90
D5010	Electrical Service/Distribution	$0.00	$0.00	$510,354.95	$493,527.68	$0.00	$1,003,882.63
D5020	Lighting and Branch Wiring	$0.00	$0.00	$31,941.41	$167,517.92	$0.00	$199,459.33
D5030	Communications and Security	$0.00	$0.00	$94,823.74	$0.00	$0.00	$94,823.74
D5090	Other Electrical Systems	$0.00	$0.00	$246,978.75	$0.00	$0.00	$246,978.75
	Total:	$20,345.84	$0.00	$7,065,804.02	$5,320,506.88	$1,570,731.13	$13,977,387.87

Deficiency Summary by Category

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



Budget Estimate Total: $13,977,387.87

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: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Blister or membrane repair - partial areas

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $20,345.84

Assessor Name: System

Date Created: 09/02/2015

Notes: The built up roof was installed within the past ten years as reported by the school. The roof is in very good condition with one exception. Currently there is an active leak over room 411 that if not repaired soon will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof repair for this section.

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

System: C1010 - Partitions

Location: Exit Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install fire rated walls and door where required - insert number of doors

Qty: 8.00

Unit of Measure: S.F.

Estimate: $8,883.42

Assessor Name: System

Date Created: 09/02/2015

Notes: A large portion of the interior corridor, exit stair doors are code compliant with both ADA and are fire rated. However, several interior doors are typically wood in wood frames with transom lites or sidelights, glass glazing. The entrance doors to the lobby from the main entrance and the stair entrance to the common area are good examples of the interior system needs. The older doors are generally in good condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original door systems.

System: C3020412 - Terrazzo & Tile

Location: Kitchen

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace and re-grout floor tile

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $71,747.33

Assessor Name: System

Date Created: 09/02/2015

Notes: The tile application in the kitchen area is damaged in several places. As indicated in the photo some of the finish has been removed revealing the deck finish only. This deficiency provides a budgetary consideration for the repairs and replacement of the damaged kitchen tile finish.

System: D1010 - Elevators and Lifts

Location: Northwest Elevator

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Upgrade elevator cab and machinery - based on 3 stops, change the stops if required

Qty: 1.00

Unit of Measure: Ea.

Estimate: $191,880.83

Assessor Name: System

Date Created: 09/25/2015

Notes: Provide upgrade and modernization of elevator cab, controls and machine room for freight elevator.

System: D1010 - Elevators and Lifts

Location: Southwest Elevator

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Upgrade elevator cab and machinery - based on 3 stops, change the stops if required

Qty: 1.00

Unit of Measure: Ea.

Estimate: $191,880.83

Assessor Name: System

Date Created: 09/25/2015

Notes: Provide upgrade and modernization of elevator cab, controls and machine room for passenger elevator.

System: D2020 - Domestic Water Distribution

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 71,907.00

Unit of Measure: S.F.

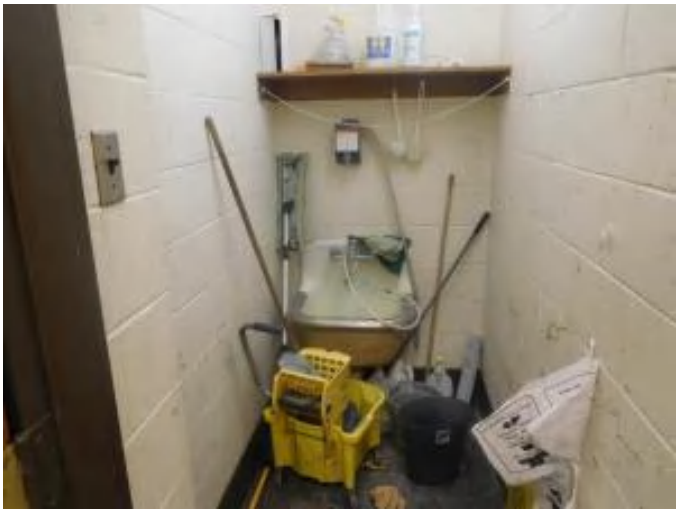
Estimate: $364,379.16

Assessor Name: System

Date Created: 09/01/2015

Notes: Replace domestic hot and cold water pipe, fittings, valves, hangars and insulation.

System: D2030 - Sanitary Waste



Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 71,907.00

Unit of Measure: S.F.

Estimate: $352,757.74

Assessor Name: System

Date Created: 09/01/2015

Notes: Inspect old cast iron sanitary piping including camera observation and replace damaged sections.

System: D3040 - Distribution Systems

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 45.00

Unit of Measure: C

Estimate: $3,737,744.54

Assessor Name: System

Date Created: 09/01/2015

Notes: Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new heat exchanger and pump for hot water, piping, control valves and controls.

System: D3040 - Distribution Systems

Location: multipurpose room

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 500.00

Unit of Measure: Pr.

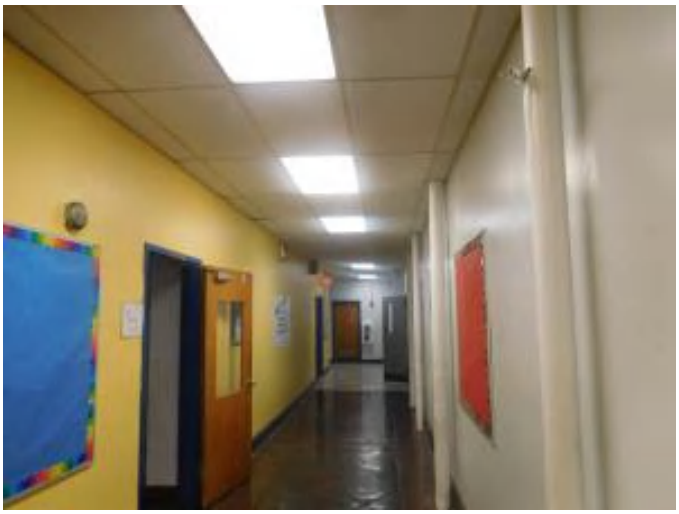
Estimate: $233,767.42

Assessor Name: System

Date Created: 09/01/2015

Notes: Provide a new central station air handling unit for the multipurpose room with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.

System: D4010 - Sprinklers



Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 71,907.00

Unit of Measure: S.F.

Estimate: $1,028,663.90

Assessor Name: System

Date Created: 09/01/2015

Notes: Install NFPA wet pipe automatic sprinkler system in original and addition portions of building not currently protected.

System: D5010 - Electrical Service/Distribution

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $510,354.95

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace existing 800A Main Switchboard and distribution system with increased capacity (2500A) for current building addition and central air condition loads.

System: D5020 - Lighting and Branch Wiring

Location: Various rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 1,500.00

Unit of Measure: S.F.

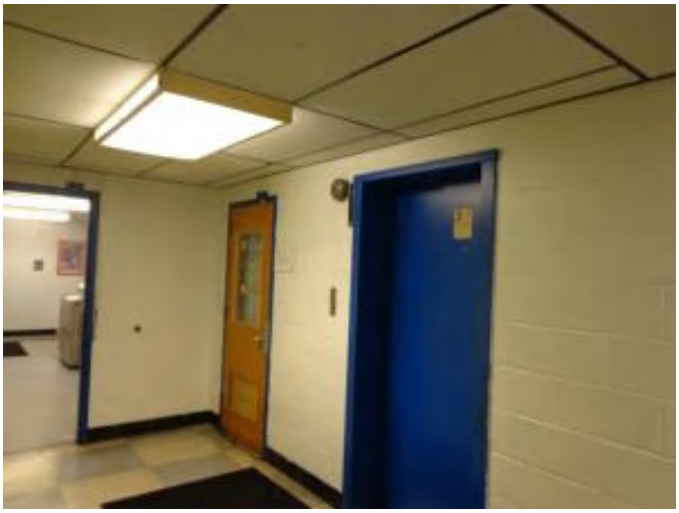
Estimate: $31,941.41

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide an allowance for lighting fixture replacement for approximately 1500 SF, mainly in the Floor 1 teachers lounge, kitchen area, platform in the Multi-Purpose Room, and some storage areas.

System: D5030 - Communications and Security



Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add fire alarm device

Qty: 1.00

Unit of Measure: Ea.

Estimate: $94,823.74

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace fire alarm control panel and provide notification appliances in all classrooms, secondary dining Room 118, Teachers' Dining Room 243, kitchen, and infirmary. Provide smoke detectors in elevator lobbies, and smoke and heat detectors in elevator machine rooms for elevator recall.

System: D5090 - Other Electrical Systems

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $246,978.75

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace standby generator system, including generator, transfer switch and standby power panelboards, sized to include elevator loads.

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

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 250.00

Unit of Measure: Ea.

Estimate: $1,374,852.06

Assessor Name: System

Date Created: 09/02/2015

Notes: Exterior windows have been upgraded from the original applications with the exception of the roof mechanical windows. The current aluminum framed system is estimated to have been installed in the 1990's however, several of the original wooden windows are still present. Several windows no longer work and will require attention prior to an overall effort. Windows are in fair condition based on the year of installation or last renovation. The exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: C1010 - Partitions

Location: Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $133,676.98

Assessor Name: System

Date Created: 09/02/2015

Notes: There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

System: C1030 - Fittings

Location: Building Wide Signage

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: Ea.

Estimate: $63,876.90

Assessor Name: System

Date Created: 09/02/2015

Notes: There is no directional signage and room signage is a combination of either printed paper or painted with no consistency. Accessibility signage criteria have been established for the physically challenged. These include mounting heights, contrast and finish, raised and Braille characters and pictograms, and character proportions and heights. It is recommended that compliant signage be installed throughout the building.

System: C2010 - Stair Construction

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $155,098.16

Assessor Name: System

Date Created: 09/02/2015

Notes: Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

System: C2010 - Stair Construction

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair exterior stairs

Qty: 5.00

Unit of Measure: Riser

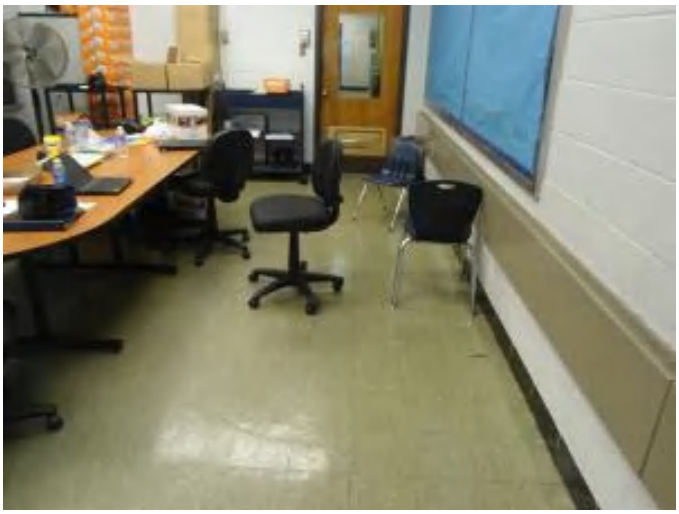
Estimate: $7,840.60

Assessor Name: System

Date Created: 09/02/2015

Notes: The exterior stair at the western exterior elevation is broken and missing sections of concrete. Considering the limited access to the school by those that may be physically challenged this stair is recommended for universal upgrade. Current legislation related to accessibility requires that building entrances be wheelchair accessible. To comply with the intent of this legislation, it is recommended that a wheelchair ramp be installed at this entrance. This work should include the installation of a powered door operator and steel handrails at all entrances as required.

System: C3020413 - Vinyl Flooring



Location: Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 10,000.00

Unit of Measure: S.F.

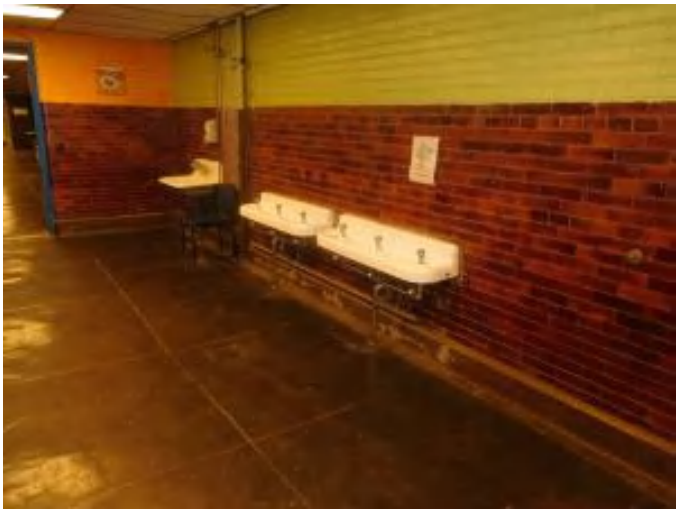
Estimate: $151,666.68

Assessor Name: System

Date Created: 09/02/2015

Notes: The vinyl floor finish in most of this school is in very good condition and appears to have part of an isolated upgrade. Some of the original flooring that was not a part of that effort consist of a 9x9 finish. This finish is suspect to contain asbestos and is recommended for upgrade. Remove and replace with a 12x12 vinyl tile application.

System: D2010 - Plumbing Fixtures



Location: basement corridor

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 4.00

Unit of Measure: Ea.

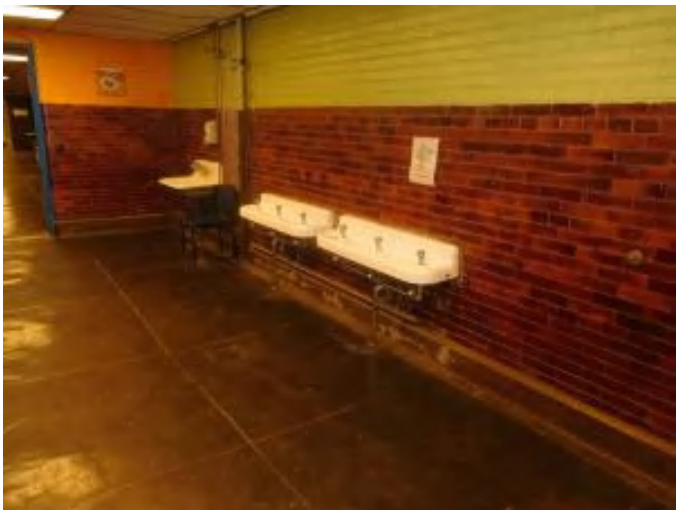
Estimate: $30,316.76

Assessor Name: System

Date Created: 09/01/2015

Notes: Replace older drinking fountains on basement level with new water coolers. Include fittings and trim.

System: D2010 - Plumbing Fixtures



Location: basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 4.00

Unit of Measure: Ea.

Estimate: $15,493.16

Assessor Name: System

Date Created: 09/01/2015

Notes: Replace older lavatories on basement level. Include fittings and trim.

System: D3030 - Cooling Generating Systems

Location: roof,mechanical room

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 71,907.00

Unit of Measure: S.F.

Estimate: $1,154,799.76

Assessor Name: System

Date Created: 09/01/2015

Notes: Provide a one hundred eighty ton air cooled package chiller on the roof with pumps, piping and controls. Connect to new fan coil units.

System: D3050 - Terminal & Package Units

Location: roof

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Install ductless split system for equipment room

Qty: 1.00

Unit of Measure: Ea.

Estimate: $14,641.41

Assessor Name: System

Date Created: 09/01/2015

Notes: Provide new ductless split systems at each of two elevator equipment rooms on roof. Locate condensing units on roof. Include electrical connections, refrigerant line sets and drain lines.

System: D3050 - Terminal & Package Units

Location: roof

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Install ductless split system for equipment room

Qty: 1.00

Unit of Measure: Ea.

Estimate: $14,641.41

Assessor Name: System

Date Created: 09/01/2015

Notes: Provide new ductless split systems at each of two elevator equipment rooms on roof. Locate condensing units on roof. Include electrical connections, refrigerant line sets and drain lines.

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 71,907.00

Unit of Measure: S.F.

Estimate: $1,542,557.40

Assessor Name: System

Date Created: 09/01/2015

Notes: Replace pneumatic control devices with digital control equipment. Provide building automation system to control all components with remote computer based control console with graphics package.

System: D5010 - Electrical Service/Distribution

Location: Corridors - all floors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard - 225A

Qty: 0.00

Unit of Measure: Ea.

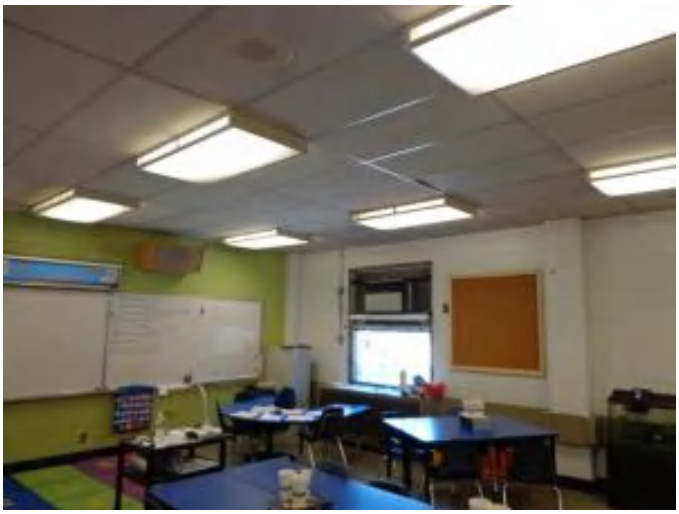
Estimate: $493,527.68

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace panelboards, and their feeder conductors, in corridors on each floor and on the auditorium platform. Total of 14 panelboards.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide surface raceway system and wiring devices

Qty: 1,920.00

Unit of Measure: L.F.

Estimate: $167,517.92

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide surface metal raceway system and at least four (4) duplex receptacles in each of 32 classrooms.

Priority 5 - Response Time (> 5 yrs):

System: C1020 - Interior Doors

Location: Building Wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Ea.

Estimate: $954,117.42

Assessor Name: System

Date Created: 09/02/2015

Notes: Interior doors include wooden glass pane doors with original wooden pane frames or hollow metal frames. Doors are generally in good condition considering the age of the application. Doors swing in the direction of exit and do not obstruct hallways. Universal upgrades are required for the interior door systems, it is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

System: C3020411 - Carpet

Location: Classrooms / Library

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace carpet

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $33,572.29

Assessor Name: System

Date Created: 09/02/2015

Notes: The interior carpet finish was installed approximately in 2000 and is in fair condition considering the age and high traffic conditions. This finish will exceeded its expected life within the next five years and is recommended for removal and replacement.

System: C3020414 - Wood Flooring

Location: Building Wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace wood flooring

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $583,041.42

Assessor Name: System

Date Created: 09/02/2015

Notes: This school has a wooden floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the wooden floor finish be removed and replaced with an in kind finish.

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
D1010 Elevators and Lifts	Electric traction freight elevators, base unit, standard finish, 4000 lb, 200 fpm, 4 stop	1.25	Ea.	Northwest Corner	Otis	NA	NA		30			$164,636.00	$226,374.50
D1010 Elevators and Lifts	Traction geared elevators, passenger, 2000 lb, 5 floors, 200 FPM	1.00	Ea.	Southwest Corner	Otis	NA	NA		30			$175,350.00	$192,885.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6100 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	weil mclain	model 94 series 3			35	2011	2046	$140,742.00	$154,816.20
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6100 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	weil mclain	model 94 series 3			35	2011	2046	$140,742.00	$154,816.20
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	2.00	Ea.	Boiler Room	Federal Pacific Electric Co.	NA	S.O. 15758-01		30			$21,766.05	$47,885.31
												Total:	**$776,777.21**

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):	57,500
Year Built:	1913
Last Renovation:	
Replacement Value:	$1,260,105
Repair Cost:	$327,244.25
Total FCI:	25.97 %
Total RSLI:	18.93 %

Description:

Attributes:

General Attributes:

Bldg ID:	S131001	Site ID:	S131001

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	16.14 %	35.34 %	$327,244.25
G40 - Site Electrical Utilities	26.67 %	0.00 %	$0.00
Totals:	**18.93 %**	**25.97 %**	**$327,244.25**

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 $
G2020	Parking Lots	$8.50	S.F.	8,400	30	1995	2025		33.33 %	0.00 %	10			$71,400
G2030	Pedestrian Paving	$12.30	S.F.	49,100	40	1913	1953	2020	12.50 %	11.91 %	5		$71,914.25	$603,930
G2040	Site Development	$4.36	S.F.	57,500	25	1913	1938	2020	20.00 %	101.85 %	5		$255,330.00	$250,700
G2050	Landscaping & Irrigation	$4.36	S.F.		15	1913	1928	2020	33.33 %	0.00 %	5			$0
G4020	Site Lighting	$4.84	S.F.	57,500	30	1913	1943	2023	26.67 %	0.00 %	8			$278,300
G4030	Site Communications & Security	$0.97	S.F.	57,500	30	1913	1943	2023	26.67 %	0.00 %	8			$55,775
								Total	**18.93 %**	**25.97 %**			**$327,244.25**	**$1,260,105**

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.

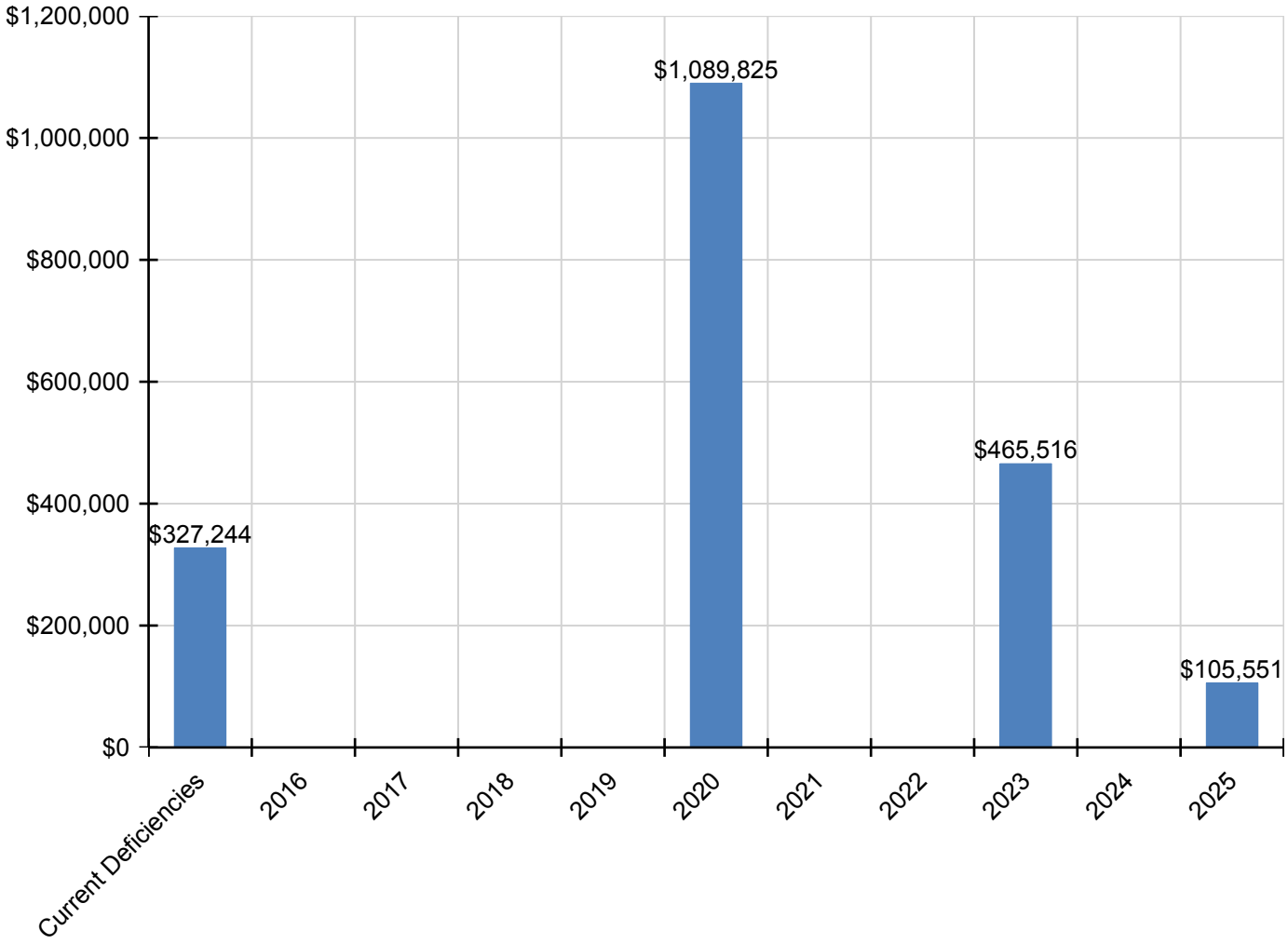
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$327,244**	**$0**	**$0**	**$0**	**$0**	**$1,089,825**	**$0**	**$0**	**$465,516**	**$0**	**$105,551**	**$1,988,137**
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**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$105,551	**$105,551**
G2030 - Pedestrian Paving	$71,914	$0	$0	$0	$0	$770,132	$0	$0	$0	$0	$0	**$842,047**
G2040 - Site Development	$255,330	$0	$0	$0	$0	$319,693	$0	$0	$0	$0	$0	**$575,023**
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	$387,796	$0	$0	**$387,796**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$77,720	$0	$0	**$77,720**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

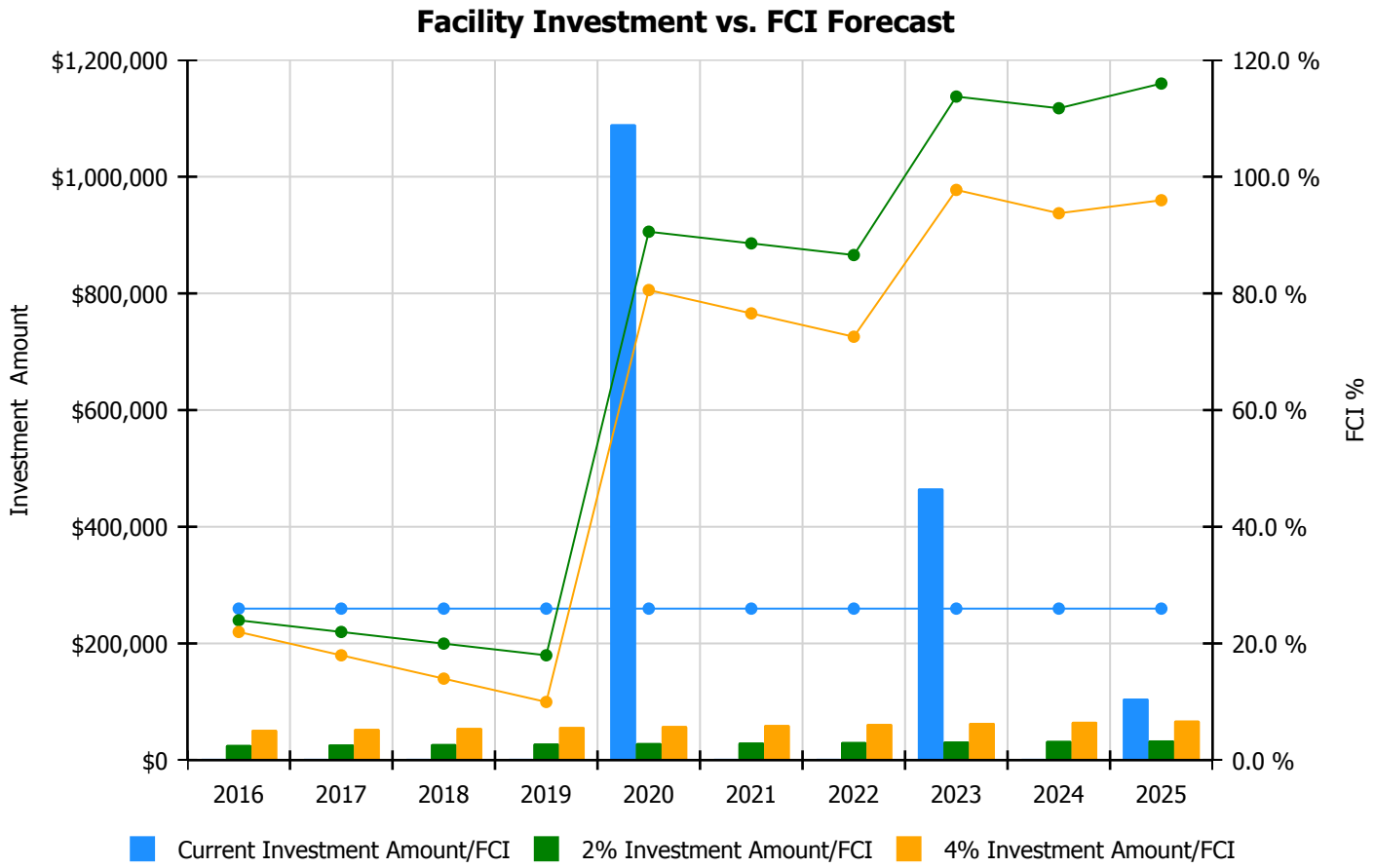
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

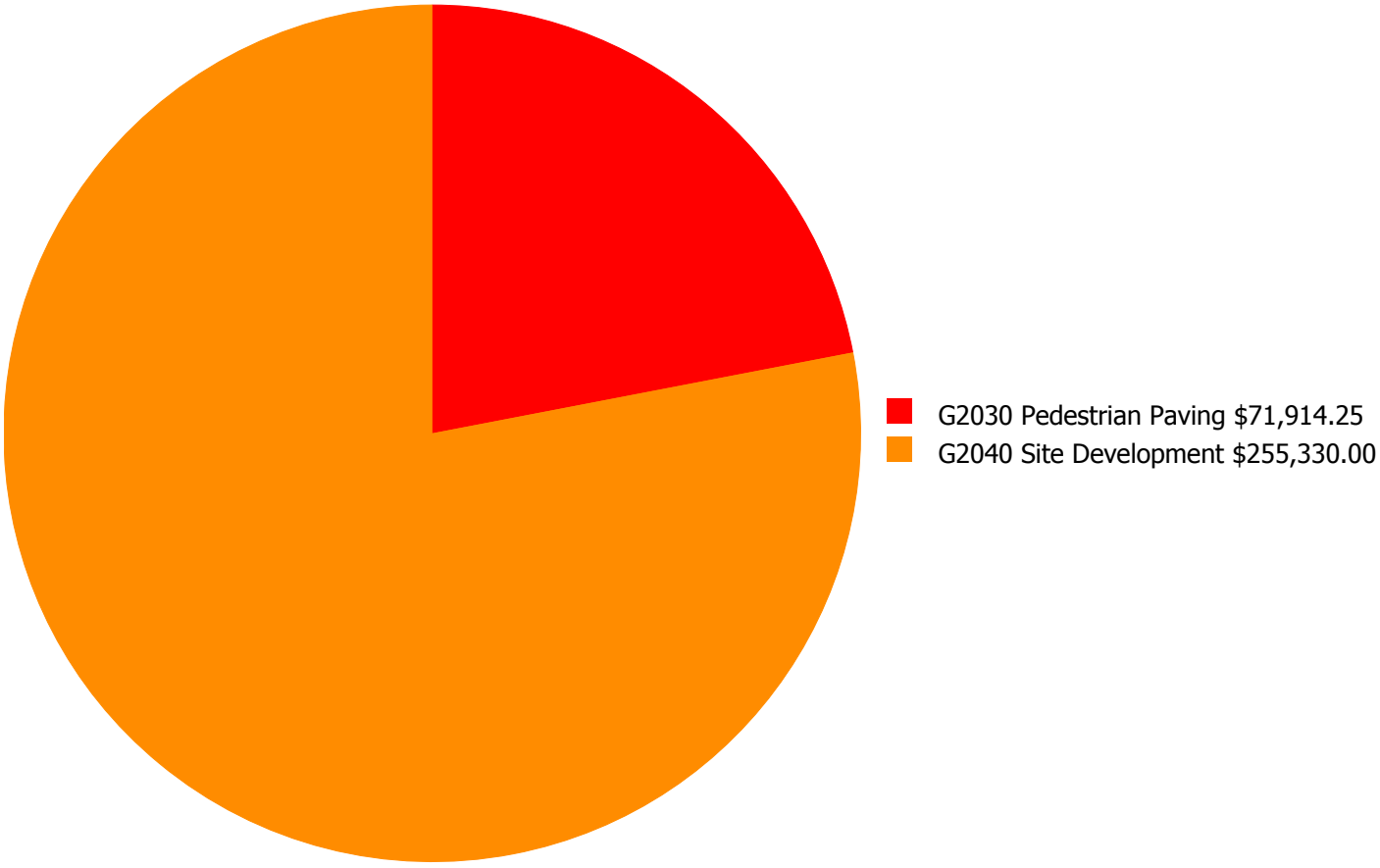
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 25.97%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$25,958.00	23.97 %	$51,916.00	21.97 %
2017	$0	$26,737.00	21.97 %	$53,474.00	17.97 %
2018	$0	$27,539.00	19.97 %	$55,078.00	13.97 %
2019	$0	$28,365.00	17.97 %	$56,730.00	9.97 %
2020	$1,089,825	$29,216.00	90.57 %	$58,432.00	80.57 %
2021	$0	$30,093.00	88.57 %	$60,185.00	76.57 %
2022	$0	$30,995.00	86.57 %	$61,991.00	72.57 %
2023	$465,516	$31,925.00	113.74 %	$63,851.00	97.74 %
2024	$0	$32,883.00	111.74 %	$65,766.00	93.74 %
2025	$105,551	$33,870.00	115.97 %	$67,739.00	95.97 %
Total:	**$1,660,893**	**$297,581.00**		**$595,162.00**	

Deficiency Summary by System

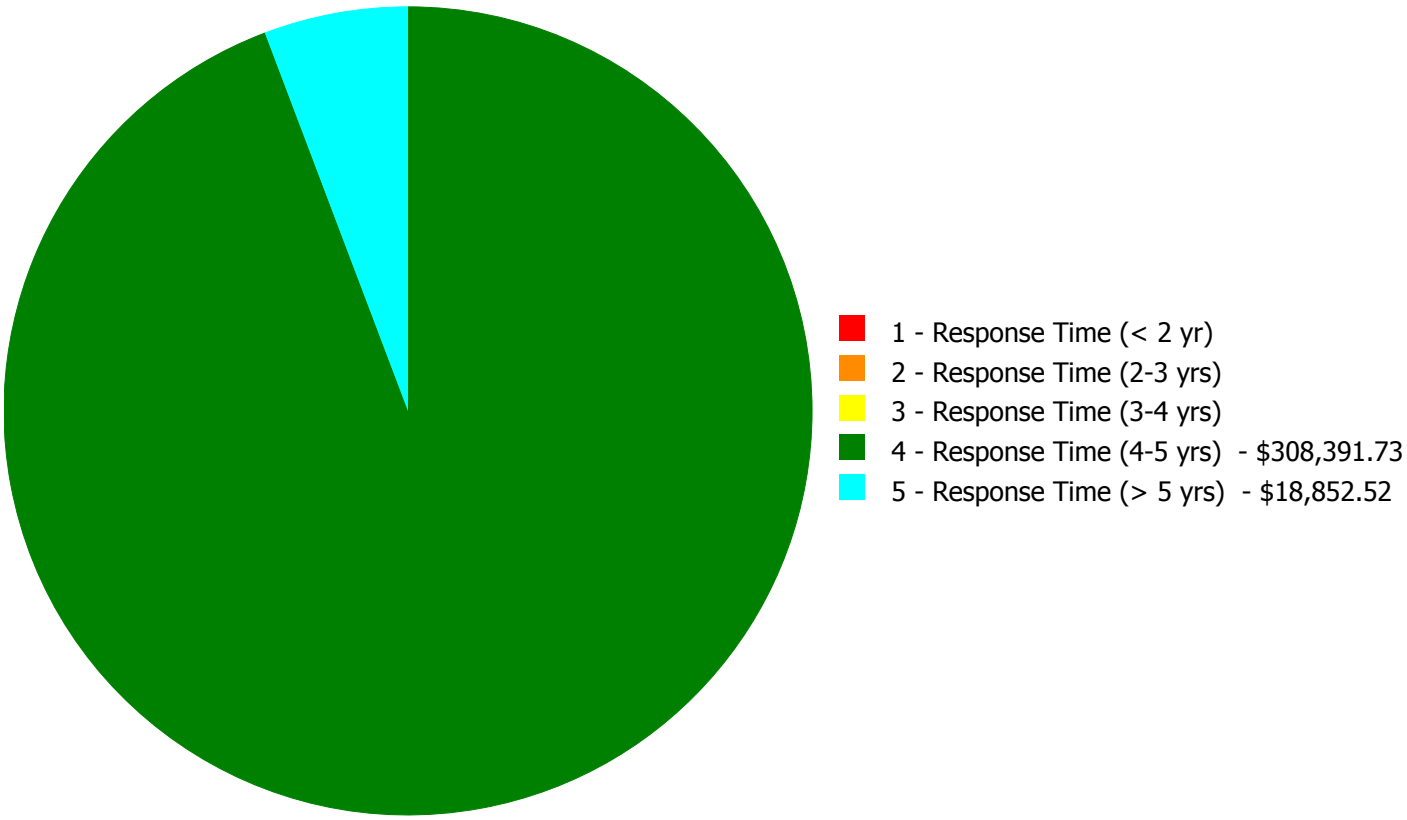
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $327,244.25

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: $327,244.25

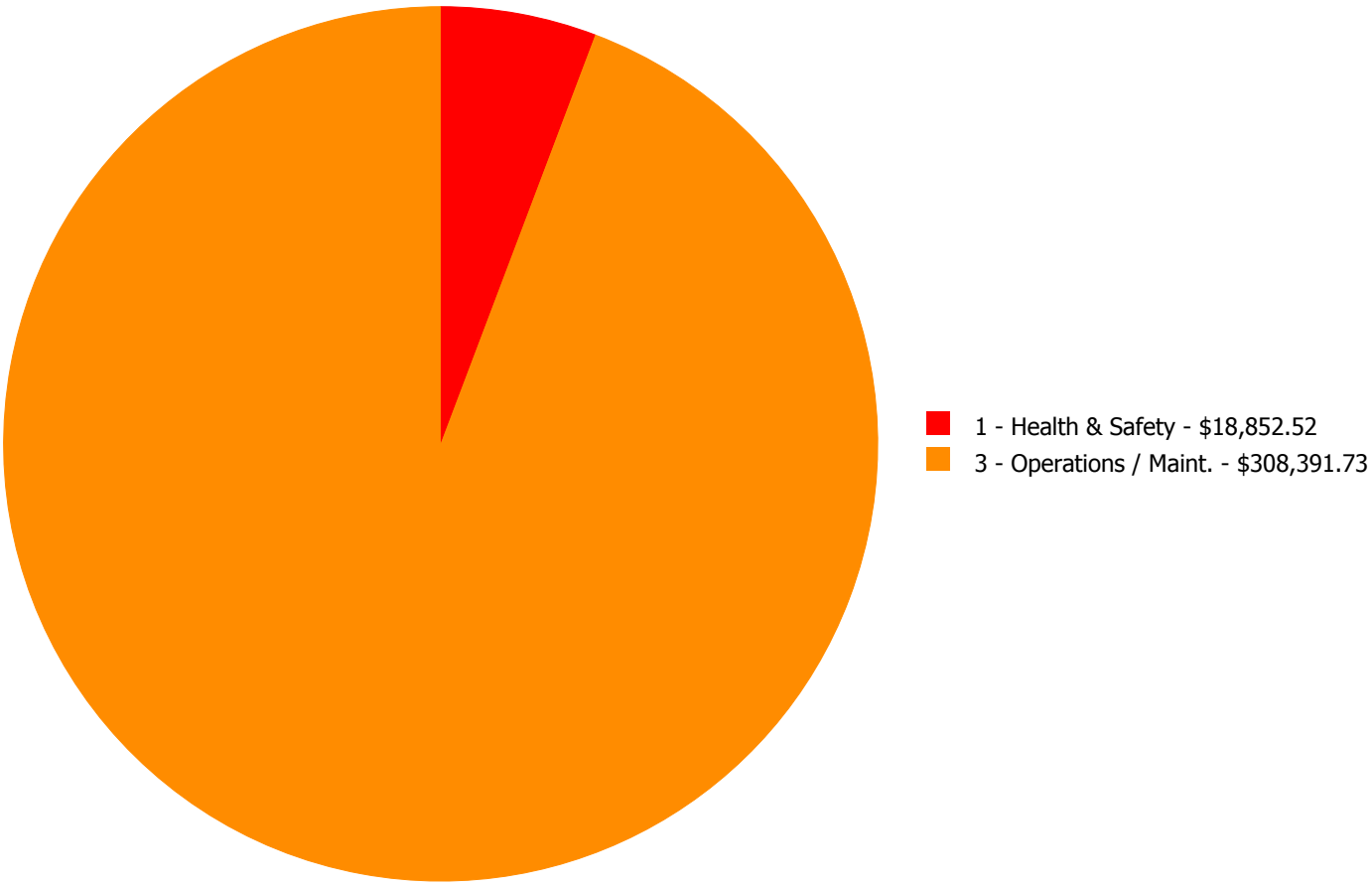
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$0.00	$0.00	$71,914.25	$0.00	$71,914.25
G2040	Site Development	$0.00	$0.00	$0.00	$236,477.48	$18,852.52	$255,330.00
	Total:	$0.00	$0.00	$0.00	$308,391.73	$18,852.52	$327,244.25

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: $327,244.25

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $71,914.25

Assessor Name: Ben Nixon

Date Created: 09/02/2015

Notes: The sidewalk system is original to the buildings construction. There are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required.

System: G2040 - Site Development

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 1,400.00

Unit of Measure: L.F.

Estimate: $236,477.48

Assessor Name: Ben Nixon

Date Created: 09/02/2015

Notes: This school has a perimeter fence surrounding the parking / playground area. The fence consist of either a chain link or metal picket fence and has several areas in need of repairs. The picket fence mounting post are damaged in several areas, gates are damaged and locking units no longer function. Overall the fence is in fair condition considering the age of the application. This picket fence system is recommended to be removed and replaced with a new system within the next five to ten years.

Priority 5 - Response Time (> 5 yrs):

System: G2040 - Site Development

Location: Site

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Build secure trash dumpster enclosure

Qty: 1.00

Unit of Measure: Ea.

Estimate: $18,852.52

Assessor Name: Ben Nixon

Date Created: 09/02/2015

Notes: The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area is necessary for the safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

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