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.

Bluford School

Governance	CHARTER	Report Type	Elementary
Address	5801 Media St. Philadelphia, Pa 19131	Enrollment	530
		Grade Range	'00-06'
Phone/Fax	215-581-5502 / N/A	Admissions Category	Neighborhood
Website	Www.Universalcompanies.Org/Education/Bluford-Charter-School/	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	**01.51%**	**$619,956**	**$41,033,848**
Building	01.48 %	$593,620	$40,034,855
Grounds	02.64 %	$26,336	$998,993

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,973,107
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$2,888,466
Windows (Shows functionality of exterior windows)	00.00 %	$0	$1,409,409
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$113,473
Interior Doors (Classroom doors)	00.00 %	$0	$274,682
Interior Walls (Paint and Finishes)	00.00 %	$0	$946,416
Plumbing Fixtures	00.00 %	$0	$1,058,035
Boilers	00.00 %	$0	$1,461,058
Chillers/Cooling Towers	00.00 %	$0	$1,915,731
Radiators/Unit Ventilators/HVAC	00.29 %	$9,712	$3,364,268
Heating/Cooling Controls	00.00 %	$0	$1,056,470
Electrical Service and Distribution	10.28 %	$78,024	$759,093
Lighting	00.19 %	$5,195	$2,713,953
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$1,016,558

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

S429001;Bluford

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):	78,257
Year Built:	2009
Last Renovation:	
Replacement Value:	$41,033,848
Repair Cost:	$619,956.32
Total FCI:	1.51 %
Total RSLI:	83.13 %

Description:

Facility assessment
July 2015

School District of Philadelphia
Universal Bluford Elementary School
5720 Media Street
Philadelphia, PA 19131

78,257 SF / 636 Students / LN 02

GENERAL

The recently constructed Universal Bluford Charter School is identified as B429001 and was originally designated as the Guion S Bluford Elementary School. This facility is located at 5720 Media Street, Philadelphia, PA. The design of the rectangular-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces the Northern exterior facing the plaza, drop off drive and general parking. This School serves students in

grades K to 6. This school was reported to have been constructed in 2009 and consist of three stories with a total gross square footage of 78,257 GSF.

This school has several classrooms, a library, kitchen and student commons, Gym, Auditorium and cafeteria, with supporting administrative spaces. Specially note the existing paintings on the side of the school near the entrances depicting the children of age attending the school. The information for this report was collected during a site visit on July 23, 2015.

Mr. Stephon Crews, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Crystal Gary-Nelson, Principal, also shared information about the school with the assessment team.

Structural / EXTERIOR CLOSURE

Foundations are concrete and in very good condition. There were no issues related to the foundation that surfaced during the time of the inspection. Therefore no recommendations are required at this time.

The superstructure is a combination of masonry and steel support. The concrete floor and metal decking roof construction is in good condition and no recommendations are warranted at this time.

The main entrance of this school faces Media street and there are several supporting egress paths and secondary entrances that face both 58th and Alden Streets.

The exterior brick surfaces are in like new condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The exterior window system is a weather guard double pane aluminum framed application. This system is in like new condition and expected to have a normal life cycle that extends beyond the outlook of this report. There are no recommendations required at this time.

The exterior door system is a mix of metal door metal frames systems and storefront systems. In each case the door systems are well maintained and there were no issues that surfaced therefore no recommendations are required at this time.

There are seven roof sections and different roof elevations ranging from the main roof to the mechanical roof. Coping materials, and the height of the flashing also varies in different sections. The roofing system is a built up application that was reported to have been installed during the original construction of 2009. Although the roofing system is currently in very good condition care should be taken to ensure that the standard maintenance issues such as drain cleaning and debris removal continues. There are no recommendations required for the roofing system at this time.

Special consideration for those that may be physically challenged was a main factor in the construction of this new school. This schools design is a good example for the district as the needs of the physically challenged appear to have been paramount. Currently there are two compliant entrances at grade and with an approved ADA exterior ramp. The path of travel is clear from this access points as the interior path of travel is supported by interior ramps, elevator, compliant signage, restrooms amities, compliant door hardware, hand rails and guard rails to meet the needs of the physically challenged.

Interior partitions consist of a painted CMU finish with small sections of wall tile in the restrooms. The partitions are in like new condition.

The interior corridor system consist of wooden doors with metal frames is code compliant with both ADA and fire safety. The corridor door system is in like new condition and no recommendations are required at this time.

The modern construction and support for the conducive level of education is apparent with the classroom accommodations such as the white boards, tack boards and advanced media support for modern educational needs. There are no upgrades or recommendations required at this time.

The interior metal and concrete stair finishes have graspable handrails on both sides, and the rails have a specific end geometry. The current guardrail construction is designed to support passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). The stairs were designed with the safety of the students and the physically challenged in mind. Considering the like new condition and the construction design, there are no recommendations for the stairs at this time.

The interior finishes consist of a painted CMU wall finish with a ceramic finish in the restrooms. The painted finish is on a program of consistent renewal and in very good condition. The ceramic finish is in like new condition. The interior finishes are in good condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. The cyclical painting program at year's end is the best approach to maintaining the quality of the interior finishes. Considering the condition of the painted interior surfaces there are no recommendations required at this time for either the wall tile or the painted CMU finish.

The interior carpet finish was installed as part of the original construction in 2009 and is in very good condition considering the high traffic use of a school. Although there are a few minor issues at the doorways the carpet is expected to have a life cycle that extends beyond the outlook of this purview. There are no recommendations required at this time.

The remaining finishes consist of a concrete floor in the mechanical spaces, ceramic tile in the restrooms and in the kitchen and a standard 12x12 vinyl floor tile for the remaining areas of this school. The interior floor finishes are in like new condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The ceiling finish is a mix of 2x4 acoustical tile finish and painted drywall finish. The drywall finish is in the restrooms and the acoustical tile finish is the majority finish in the school. There are a few sections of exposed ceiling such as in the mechanical space and in the gym. Overall the ceiling finishes are in like new condition, with this in mind there are no recommendations required at this time.

The auditorium modern design includes fixed seating and open stage design. The auditorium is in very good condition and considering the low traffic use this finish will have a longer than normal life cycle. Considering there were no issues that surfaced during the time of the inspection there are no recommendations required at this time.

The school gym is in very good condition the wooden floor and modern backboards and sports supports. There were no issues that surfaced thus no recommendations required.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have dual lever handle faucets and urinals and water closets have manual flush valves with push button operators. Water coolers are stainless steel both single level and high/low type and custodial closets have fiberglass mop basins. There are a few counter top stainless steel sinks.

Hot water is provided by two A.O. Smith gas water heaters in the mechanical room. The heaters are one hundred fifty gallons each. There are two small pressurization tanks adjacent to the water heaters. An Alyan duplex domestic booster pump and two small inline circulating pumps are part of the system. A master mixing valve controls hot water temperature. Kitchen waste is piped to a grease trap above the kitchen floor. A water softener is included in the water system.

Sanitary, waste and vent piping is hubless cast iron with banded couplings. Domestic hot and cold water is insulated rigid copper piping. There is a four inch water service with meter and backflow preventer in the mechanical room, with service from N. Alden St. The roof has drains connected to horizontal and vertical rainwater piping. Main sewer and rainwater lines connect at Master St. and gas service is a six inch line.

The plumbing system is from the original 1974 and 2009 addition installations and no significant alterations have been made. Water heaters, pumps and service entrance equipment are in the 2009 mechanical room. All components are in good condition and should have remaining service life well in excess of this report period.

HVAC- The building is heated by hot water generated by two Buderus Logano 615 cast iron sectional oil fired boilers in the mechanical room. The boilers are eighty five hp with Power Flame burners, gas pilots and separate oil pumps. Hot water is circulated to heating coils, unit ventilators and cabinet radiation units throughout the building. There is a fiberglass underground oil storage tank, capacity unknown. Two sets of duplex pump systems in the mechanical room provide oil circulation.

Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap. Louvers with motorized dampers provide combustion air in the mechanical room and two wall propeller fans ventilate the space.

The building is completely air conditioned with two 220 ton Carrier package air cooled chillers on the roof. Spaces are served by four roof mounted exterior air handling units, fan coil units located above ceilings, and unit ventilators. One package rooftop HVAC unit serves the computer lab and three split systems serve equipment areas.

The four air handling units serve areas as follows:

AHU-1 Cafeteria

AHU-2 Auditorium

AHU-3 Gymnasium

AHU-4 Library

Air handling units have chilled and hot water coils, outside and return air dampers, fans and motors, control valves and controls.

Seventeen fan coil units are located above ceilings. Units are from 250 thru 1500 cfm with hot and chilled water coils, filters, and blowers. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Exposed ductwork above the roof has exterior rigid insulation with aluminum jacket. Classrooms in the addition are served by a total of twenty nine Carrier unit ventilators with hot and chilled water coils, outside air dampers, control valves, blowers, motors and controls. Toilet exhaust and other building exhaust is provided by twenty one fractional hp fans of various types.

Chilled and heating water piping is insulated copper. Exposed piping above the roof has aluminum jacketing covering insulation. Oil piping is black steel with screwed fittings. There are two 20 hp chilled water and two 10 hp hot water floor mounted pumps in the mechanical room. All are B&G series 1510 end suction type. An expansion tank, air separator and chemical feed unit are part of the piping system. A glycol feed system for the chilled water prevents freezing. There is a double wall stainless steel exhaust hood in the kitchen with fire suppression and gas solenoid shut off valve. An upblast exhaust fan and roof mounted air handling unit with hot water coil for makeup air are connected to the hood.

There is a digital building automation system with graphic display by CM3 Building Solutions. The system is reportedly functioning properly.

All components of the HVAC system are from the 2009 construction and no significant modifications have been made. The systems and equipment are in good condition and should have remaining service life up to twenty five years for cooling and distribution and thirty years for boilers.

FIRE PROTECTION- The building has a partial automatic sprinkler system with standpipes. A Clarke diesel fire pump is located in the mechanical room with a one hundred nineteen gallon oil tank and an inline jockey pump. Piping is black steel with Victaulic couplings. There are recessed sprinkler heads with flush cover plates in the addition and standpipes with fire hose connections in all stairwells. The fire service is a six inch line from Master St. There are no issues with the existing fire protection system, which should be serviceable up to thirty years. Consideration should be given to expanding the sprinkler system to the older part of the building.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by a 13.2 kV underground service from a PECO Energy Company overhead terminal pole located on the south side of Master Street to Load Center Unit Substation SS1 located in Mechanical Room 121 of the 2009 building addition. The unit substation consists of a General Electric 600A load interrupter switch, metering transformer compartment and General Electric 1000/1333 kVA, AA/FA 480/277V, 3 phase, 4 wire transformer section that feeds a General Electric 1600A Main Switchboard with a 1600A main circuit breaker, PQM2 Power Quality Meter, and distribution section. The switchboard feeds 480/277V distribution panels, and step-down transformers to feed 208/120V panelboards and equipment. The service entrance equipment was installed in 2009 and has a remaining useful life that extends beyond this report.

Electrical closets in the 2009 addition have a 480/277V lighting panelboard, 75 kVA K-rated transformer and 208/120V receptacle panelboard.

The electrical room for the original 1974 building is Room 203B, which houses a General Electric 800A, 480/277V Distribution Panelboard DPA, and Federal Pacific Electric 225A, 480/277V Panelboard PP1, FPE 225 kVA step-down transformer, a 200A Distribution Panelboard with 6 circuit breakers and 100A Panelboard RP-3. Panelboards PP1, RP-3, the 200A Distribution Panelboard and the 225 kVA transformer have reached the end of their useful life and need to be replaced within the next 3 to 4 years.

Receptacles-- Classrooms are supplied with an adequate quantity of receptacles, including isolated ground receptacles. All receptacles located within 6 feet of wet locations are ground-fault circuit-interrupting type. No deficiencies were observed.

Lighting-- Fixtures in corridors, classrooms, library, cafeteria/auditorium and kitchen are 2x4 recessed fluorescent troffers with acrylic prismatic lenses and T8 lamps. Lighting in Computer Room 203 has 2x4 recessed fluorescent troffers with parabolic louver and T8 lamps. Classrooms are provided with multiple switches and occupancy sensors for lighting control. Lighting levels throughout the building are within Illuminating Engineering Society of North America (IESNA) recommendations.

The large instrument area is illuminated with recessed metal halide fixtures with wall mounted emergency lighting units. Industrial fluorescent worklights with T12 lamps and theatrical lighting fixtures are provided on the platform. The gymnasium has stem mounted industrial 400W metal halide fixtures with quartz re-strike for emergency lighting. Gym lighting is key switched.

Stairwells are well illuminated with 4 foot wall mounted, direct-indirect fluorescent fixtures with T8 lamps. Industrial fluorescent fixtures are provided in elevator machine rooms, mechanical rooms, storage rooms, workshop and similar type spaces.

Wall pack lighting fixtures are provided on the roof to illuminate access to rooftop mechanical equipment.

The perimeter of the building is illuminated with metal halide wall packs and flood lighting fixtures. Fixtures located at the exit discharges are provided with quartz re-strike.

Fire Alarm System-- The fire alarm system is an addressable type by General Electric EST. The fire alarm control panel (FACP) is located in Electrical Room 121. Remote annunciator panels are provided at the main entrance and in the Building Engineer's office. The system consists of pull stations, smoke and heat detectors, and audible and visual notification appliances. Smoke detectors are provided throughout the corridors, in elevator lobbies and machine rooms, and mechanical and electrical rooms. Notification appliances are provided in all classrooms, restrooms and multi-occupant rooms. There was no fire alarm notification appliance in Electrical Room 121. Heat detectors were installed in Mechanical Room 130 and in the elevator machine rooms.

Telephone/LAN-- Telephone is provided by VoIP. Wireless access points are provided in classrooms, auditorium, gymnasium and cafeteria for Wi-Fi service throughout the entire school. The Main IT Server Room is located in Room 103A. Additional telecommunication closets are located on Floors 2 and 3 in the 2009 addition.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Each classroom has a flush ceiling mounted paging speaker. There are also flush mounted paging speakers in corridor ceilings. This system is estimated to have 14 years of useful life remaining. A separate sound system cabinet is provided for the auditorium. There is an Aiphone intercom station provided at the northwest entrance and at the front (north) entrance with communications to the main office.

Clock and Program System—Individual clocks are provided in classrooms, corridors, auditorium, cafeteria and gymnasium. The ceiling speakers are used for announcements and program system.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of all corridors, auditorium, gymnasium, cafeteria and stairwells. Exterior cameras are building mounted and provide coverage of the site and entrances. There are a total of 52 surveillance cameras, included 5 exterior cameras that are monitored in Main Office Room 103. Magnetic door contacts are provided on some exterior doors and on the corridor door between the original building and 2009 addition.

Emergency Power System--There is a Kohler 27 kW/34 kVA kW, 480/277V, 3 phase, 4 wire standby generator with weatherproof enclosure and 165 gallon sub-base fuel oil storage tank located within a fenced area on the east side of the 2009 building addition. The Kohler 150A automatic transfer switch (ATS) is located in Room 130 adjacent to standby Panelboards LSLP, LSRP-E and LSRP-N. There is a remote generator annunciator in the Building Engineer's office.

Emergency Lighting System / Exit Lighting-- Selected lighting fixtures are connected to the standby power system. Battery powered emergency lighting units are provided in the large instrument area of the auditorium. Exit signs are in good condition and have approximately 15 years of useful life remaining. No deficiencies were observed.

Lightning Protection System --There is no lightning protection system for this facility.

Conveying Systems--There are two hydraulic ThyssenKrupp TAC20 passenger elevators. Elevator PE1 is located in the 1974 building (north end). Elevator PE2 is located in the 2009 addition. Both elevator machine rooms are provided with elevator and cab lighting disconnect switches and have smoke and heat detectors, as required by code. The elevators were installed in 2010 and have a remaining useful life that extends beyond this report.

GROUNDS

On the northern section of this site there is a drive through lane for dropping off students. This drive rests between the concrete student plaza and the asphalt parking area. The entire section is fenced in and is in like new condition. The sidewalk systems are in very good condition and the landscaping although scarce is well maintained and in good condition.

The loading dock is located just off the parking area between the dumpsters and the access point for students entering the school. The existing recommendation to enclose and move the dumpsters to a new location is related to this effort. After the dumpster correction is complete it is recommended that the loading dock area be clearly marked and safety barriers be placed to protect pedestrian traffic and mitigate possible issues related to loading and unloading materials and supplies.

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.

During the time of the inspection it was noted that several boxes of filters were being stored in the electrical room next to the media center. Although this is very convenient for access to the units that use the filters care should be taken to remove any flammable materials from the electrical room. This issue does not warrant a deficiency however, supporting the Fire / Life Safety needs of the school serves the needs of the students and protects from potential fire related issues.

Site Lighting— Site lighting is provided by pole mounted, metal halide shoebox type lighting fixtures in the parking lot and post top metal halide fixtures at the paved area on the north side of the main entrance. All site lighting fixtures are in very good condition with a remaining useful life that extends beyond this report.

Site video surveillance—exterior cameras are mounted on the exterior of the building and site lighting poles to provide surveillance of building entrances and the parking lot.

RECOMMENDATIONS

- Loading Dock Upgrade
- Dumpster Isolation
- Extend sprinkler system to original portion of the building.
- Provide ventilation or extend air conditioning ductwork to walk in cooler area with indoor refrigeration near kitchen to alleviate high space temperature.
- In Electrical Room 203, replace Panelboards PP1 (2 sections) and RP-3 and unmarked 200A Distribution Panelboard and 225 kVA step-down transformer that have reached the end of their useful life.
- Replace six (6) 4 foot, 2 lamp industrial fluorescent fixtures above the platform in the large instrument area with industrial fixtures with T8 lamps.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S429001		

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.

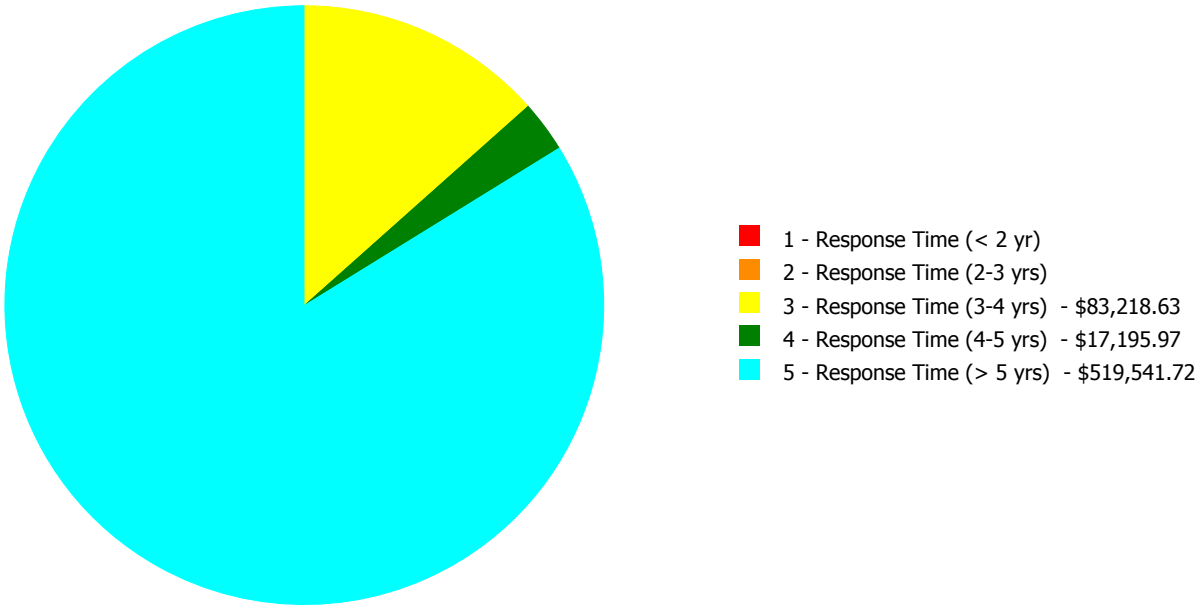
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	94.00 %	0.00 %	$0.00
A20 - Basement Construction	94.00 %	0.00 %	$0.00
B10 - Superstructure	94.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	90.66 %	0.00 %	$0.00
B30 - Roofing	70.00 %	0.00 %	$0.00
C10 - Interior Construction	91.57 %	0.00 %	$0.00
C20 - Stairs	94.00 %	0.00 %	$0.00
C30 - Interior Finishes	71.20 %	0.00 %	$0.00
D10 - Conveying	82.86 %	0.00 %	$0.00
D20 - Plumbing	80.99 %	0.00 %	$0.00
D30 - HVAC	76.68 %	0.11 %	$9,712.48
D40 - Fire Protection	82.86 %	79.38 %	$500,689.20
D50 - Electrical	77.05 %	1.81 %	$83,218.63
E10 - Equipment	82.86 %	0.00 %	$0.00
E20 - Furnishings	85.00 %	0.00 %	$0.00
G20 - Site Improvements	80.35 %	3.31 %	$26,336.01
G40 - Site Electrical Utilities	80.00 %	0.00 %	$0.00
Totals:	**83.13 %**	**1.51 %**	**$619,956.32**

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)
B429001;Bluford	78,257	1.48	$0.00	$0.00	$83,218.63	$9,712.48	$500,689.20
G429001;Grounds	46,700	2.64	$0.00	$0.00	$0.00	$7,483.49	$18,852.52
Total:		**1.51**	**$0.00**	**$0.00**	**$83,218.63**	**$17,195.97**	**$519,541.72**

Deficiencies By Priority



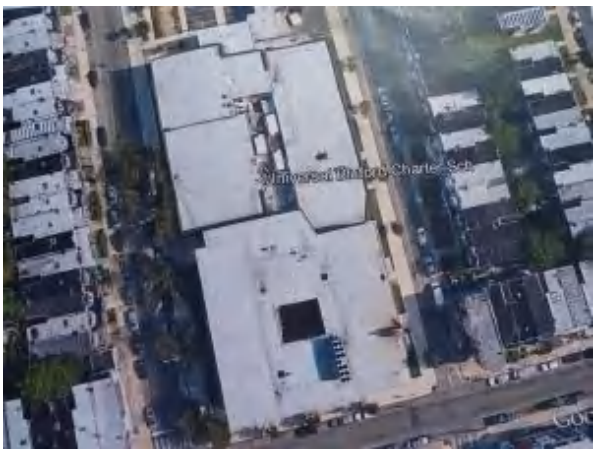
Budget Estimate Total: $619,956.32

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):	78,257
Year Built:	2009
Last Renovation:	
Replacement Value:	$40,034,855
Repair Cost:	$593,620.31
Total FCI:	1.48 %
Total RSLI:	83.21 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B429001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S429001		

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	94.00 %	0.00 %	$0.00
A20 - Basement Construction	94.00 %	0.00 %	$0.00
B10 - Superstructure	94.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	90.66 %	0.00 %	$0.00
B30 - Roofing	70.00 %	0.00 %	$0.00
C10 - Interior Construction	91.57 %	0.00 %	$0.00
C20 - Stairs	94.00 %	0.00 %	$0.00
C30 - Interior Finishes	71.20 %	0.00 %	$0.00
D10 - Conveying	82.86 %	0.00 %	$0.00
D20 - Plumbing	80.99 %	0.00 %	$0.00
D30 - HVAC	76.68 %	0.11 %	$9,712.48
D40 - Fire Protection	82.86 %	79.38 %	$500,689.20
D50 - Electrical	77.05 %	1.81 %	$83,218.63
E10 - Equipment	82.86 %	0.00 %	$0.00
E20 - Furnishings	85.00 %	0.00 %	$0.00
Totals:	**83.21 %**	**1.48 %**	**$593,620.31**

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.	78,257	100	2009	2109		94.00 %	0.00 %	94			$1,439,929
A1030	Slab on Grade	$7.73	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$604,927
A2010	Basement Excavation	$6.55	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$512,583
A2020	Basement Walls	$12.70	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$993,864
B1010	Floor Construction	$75.10	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$5,877,101
B1020	Roof Construction	$13.88	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$1,086,207
B2010	Exterior Walls	$36.91	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$2,888,466
B2020	Exterior Windows	$18.01	S.F.	78,257	40	2009	2049		85.00 %	0.00 %	34			$1,409,409
B2030	Exterior Doors	$1.45	S.F.	78,257	25	2009	2034		76.00 %	0.00 %	19			$113,473
B3010105	Built-Up	$37.76	S.F.	52,171	20	2009	2029		70.00 %	0.00 %	14			$1,969,977
B3020	Roof Openings	$0.06	S.F.	52,171	20	2009	2029		70.00 %	0.00 %	14			$3,130
C1010	Partitions	$17.91	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$1,401,583
C1020	Interior Doors	$3.51	S.F.	78,257	40	2009	2049		85.00 %	0.00 %	34			$274,682
C1030	Fittings	$3.12	S.F.	78,257	40	2009	2049		85.00 %	0.00 %	34			$244,162
C2010	Stair Construction	$1.41	S.F.	78,257	100	2009	2109		94.00 %	0.00 %	94			$110,342
C3010230	Paint & Covering	$13.21	S.F.	70,000	10	2009	2019	2020	50.00 %	0.00 %	5			$924,700
C3010232	Wall Tile	$2.63	S.F.	8,257	30	2009	2039		80.00 %	0.00 %	24			$21,716
C3020411	Carpet	$7.30	S.F.	7,000	10	2009	2019	2020	50.00 %	0.00 %	5			$51,100

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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.	10,000	50	2009	2059		88.00 %	0.00 %	44			$755,200
C3020413	Vinyl Flooring	$9.68	S.F.	55,000	20	2009	2029		70.00 %	0.00 %	14			$532,400
C3020414	Wood Flooring	$22.27	S.F.	5,000	25	2009	2034		76.00 %	0.00 %	19			$111,350
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,257	50	2009	2059		88.00 %	0.00 %	44			$1,219
C3030	Ceiling Finishes	$20.97	S.F.	78,257	25	2009	2034		76.00 %	0.00 %	19			$1,641,049
D1010	Elevators and Lifts	$1.53	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$119,733
D2010	Plumbing Fixtures	$13.52	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$1,058,035
D2020	Domestic Water Distribution	$1.68	S.F.	78,257	25	2009	2034		76.00 %	0.00 %	19			$131,472
D2030	Sanitary Waste	$2.90	S.F.	78,257	25	2009	2034		76.00 %	0.00 %	19			$226,945
D2040	Rain Water Drainage	$2.32	S.F.	78,257	30	2009	2039		80.00 %	0.00 %	24			$181,556
D3020	Heat Generating Systems	$18.67	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$1,461,058
D3030	Cooling Generating Systems	$24.48	S.F.	78,257	30	2009	2039		80.00 %	0.00 %	24			$1,915,731
D3040	Distribution Systems	$42.99	S.F.	78,257	25	2009	2034		76.00 %	0.29 %	19		$9,712.48	$3,364,268
D3050	Terminal & Package Units	$11.60	S.F.	78,257	20	2009	2029		70.00 %	0.00 %	14			$907,781
D3060	Controls & Instrumentation	$13.50	S.F.	78,257	20	2009	2029		70.00 %	0.00 %	14			$1,056,470
D4010	Sprinklers	$7.05	S.F.	78,257	35	2009	2044		82.86 %	90.75 %	29		$500,689.20	$551,712
D4020	Standpipes	$1.01	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$79,040
D5010	Electrical Service/Distribution	$9.70	S.F.	78,257	30	2009	2039		80.00 %	10.28 %	24		$78,023.54	$759,093
D5020	Lighting and Branch Wiring	$34.68	S.F.	78,257	20	2009	2029		70.00 %	0.19 %	14		$5,195.09	$2,713,953
D5030	Communications and Security	$12.99	S.F.	78,257	15	2009	2024	2029	93.33 %	0.00 %	14			$1,016,558
D5090	Other Electrical Systems	$1.41	S.F.	78,257	30	2009	2039		80.00 %	0.00 %	24			$110,342
E1020	Institutional Equipment	$4.82	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$377,199
E1090	Other Equipment	$11.10	S.F.	78,257	35	2009	2044		82.86 %	0.00 %	29			$868,653
E2010	Fixed Furnishings	$2.13	S.F.	78,257	40	2009	2049		85.00 %	0.00 %	34			$166,687
								Total	**83.21 %**	**1.48 %**			**$593,620.31**	**$40,034,855**

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 CMU 90%
Ceramic Tile 10%

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

Note: Carpet 9%
Tile Ceramic / Clay / 13%
Vinyl 12 x 12 72%
Concrete 1%
Wood 5%

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

Note: There is one (1) 1000/1333 kVA substation transformer and four (4) secondary transformers (one 225 kVA, one 150 kVA and two 75 kVA K-factor rated)

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:	**$593,620**	**$0**	**$0**	**$0**	**$0**	**$1,244,342**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,837,962**
*** 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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

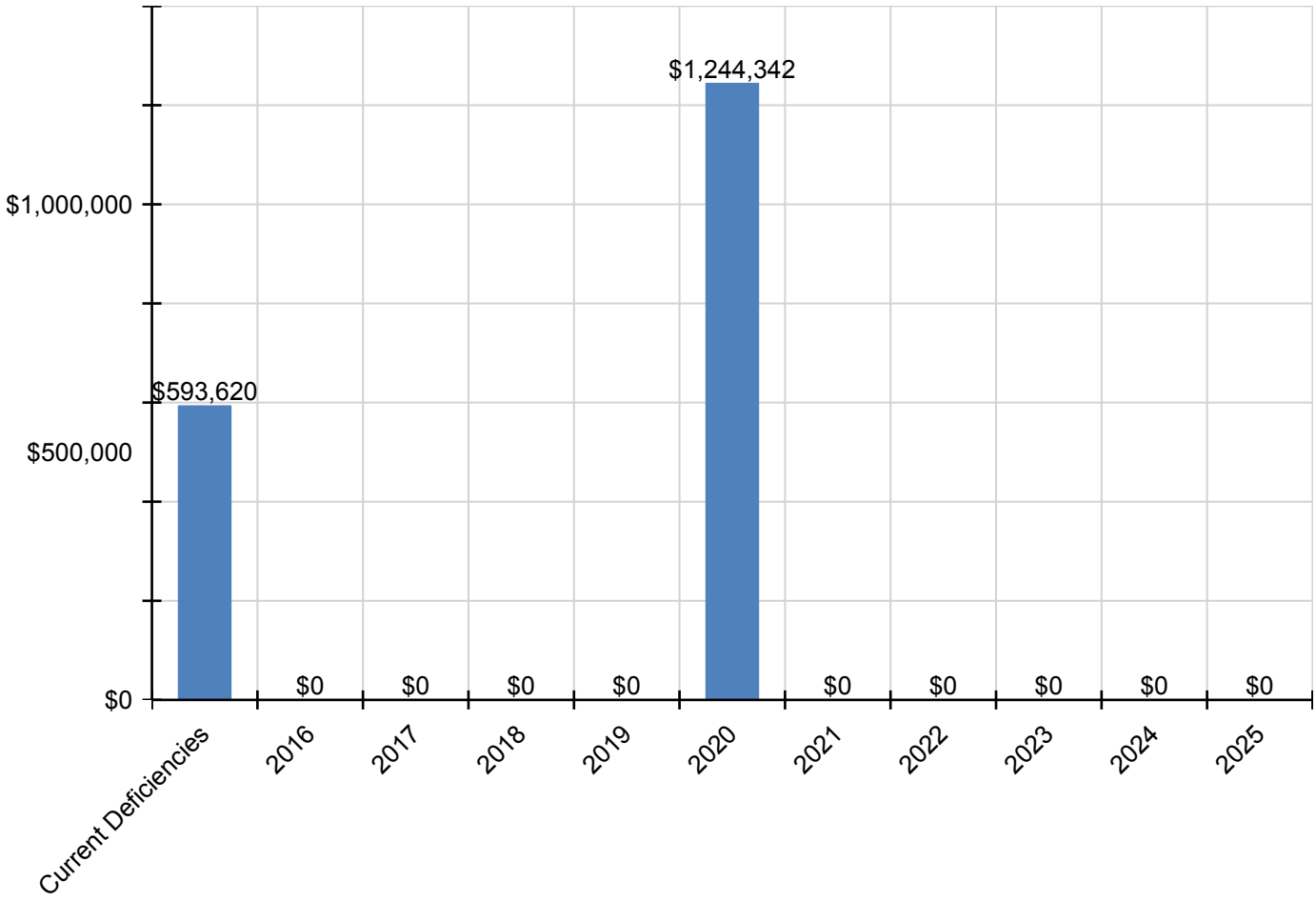
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$1,179,179	$0	$0	$0	$0	$0	**$1,179,179**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$65,163	$0	$0	$0	$0	$0	**$65,163**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$9,712	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$9,712**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$500,689	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$500,689**
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	$78,024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$78,024**
D5020 - Lighting and Branch Wiring	$5,195	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,195**
D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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

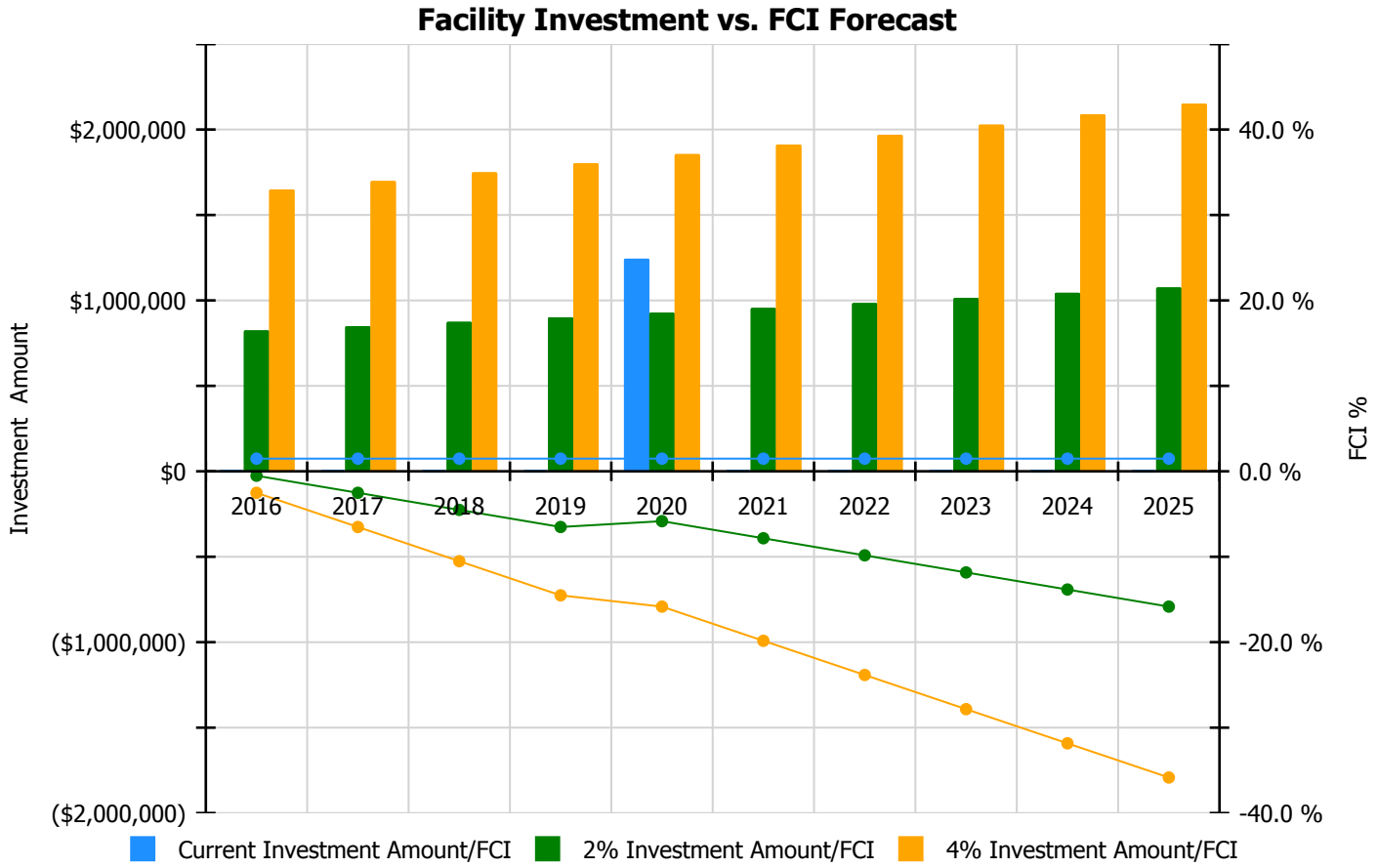
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

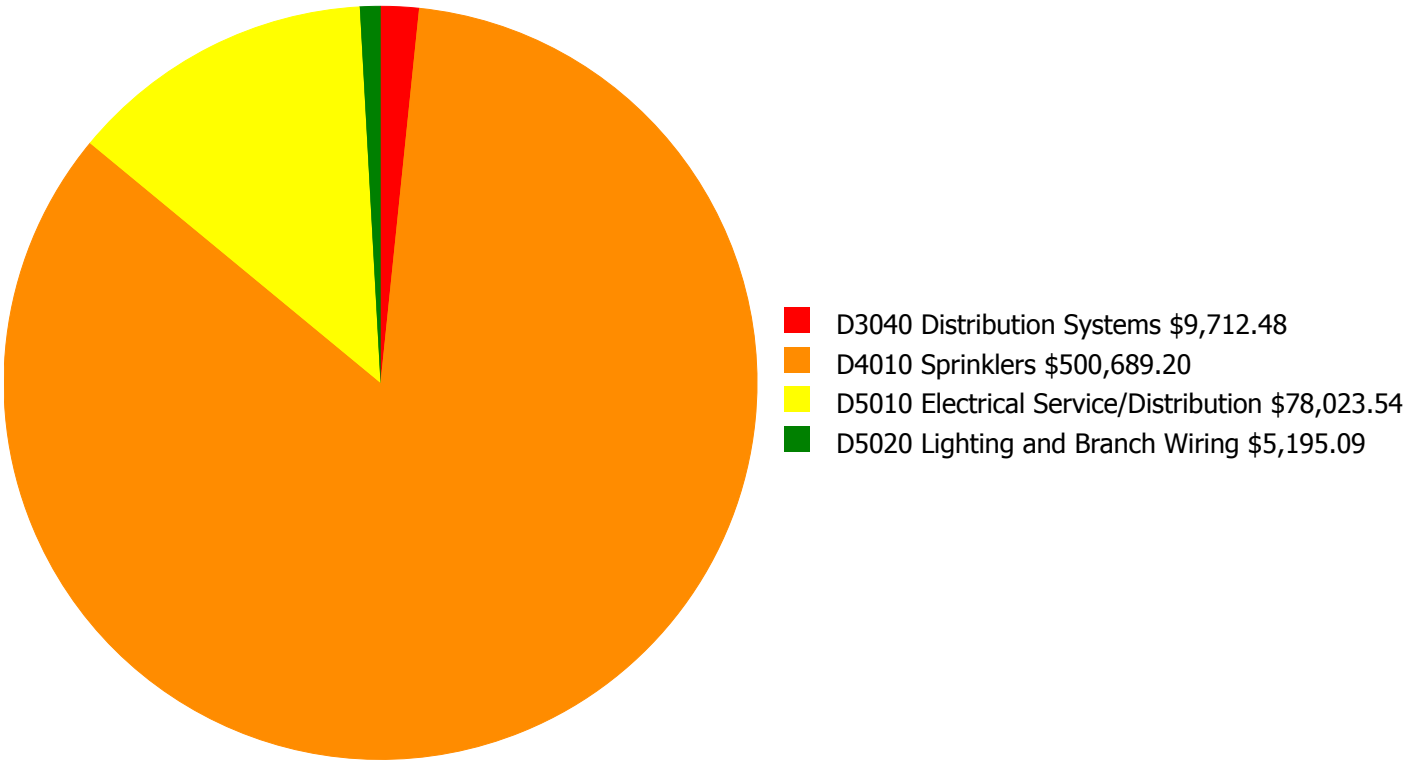
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 1.48%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$824,718.00	-0.52 %	$1,649,436.00	-2.52 %
2017	$0	$849,460.00	-2.52 %	$1,698,919.00	-6.52 %
2018	$0	$874,943.00	-4.52 %	$1,749,887.00	-10.52 %
2019	$0	$901,192.00	-6.52 %	$1,802,383.00	-14.52 %
2020	$1,244,342	$928,227.00	-5.84 %	$1,856,455.00	-15.84 %
2021	$0	$956,074.00	-7.84 %	$1,912,148.00	-19.84 %
2022	$0	$984,756.00	-9.84 %	$1,969,513.00	-23.84 %
2023	$0	$1,014,299.00	-11.84 %	$2,028,598.00	-27.84 %
2024	$0	$1,044,728.00	-13.84 %	$2,089,456.00	-31.84 %
2025	$0	$1,076,070.00	-15.84 %	$2,152,140.00	-35.84 %
Total:	**$1,244,342**	**$9,454,467.00**		**$18,908,935.00**	

Deficiency Summary by System

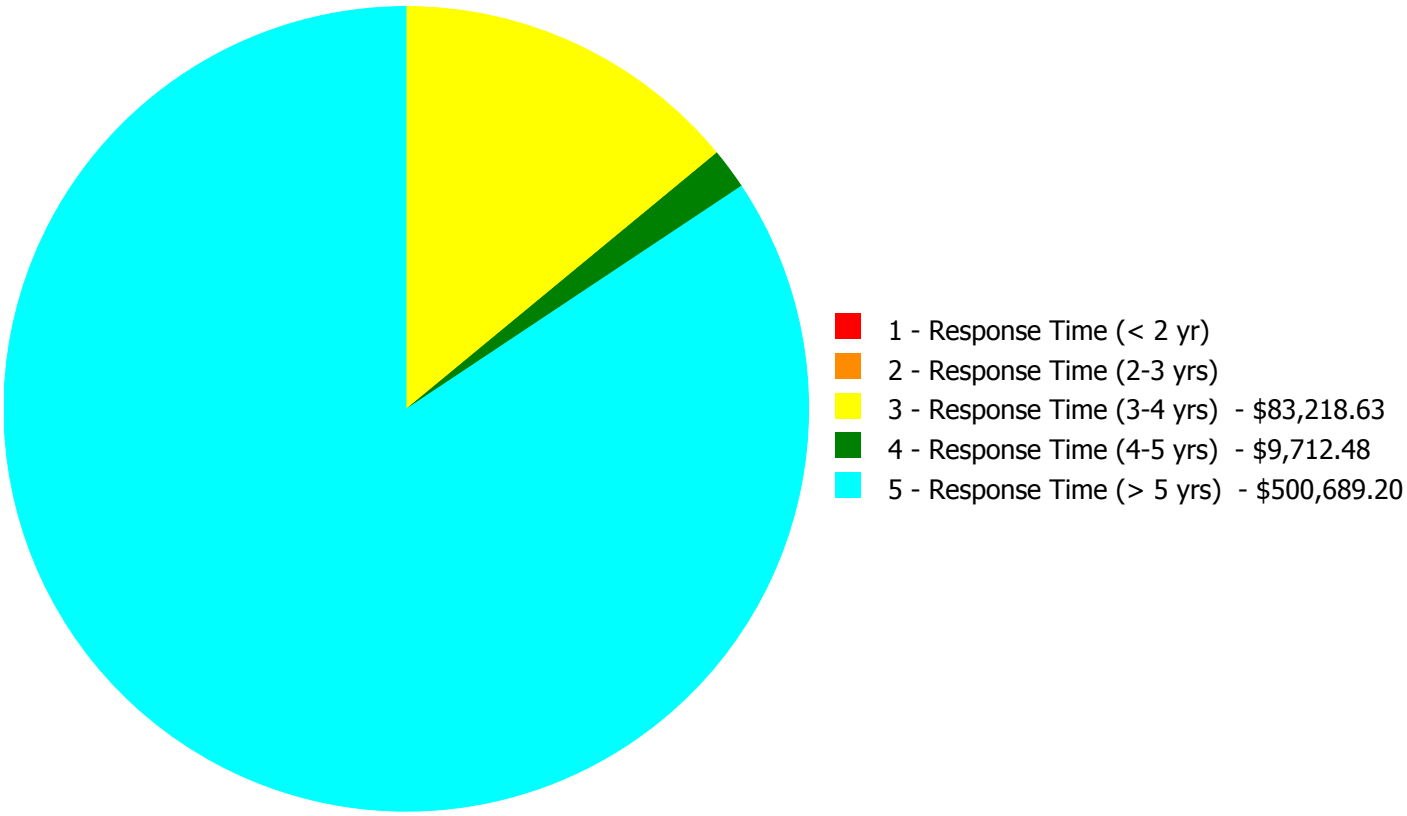
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $593,620.31

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: $593,620.31

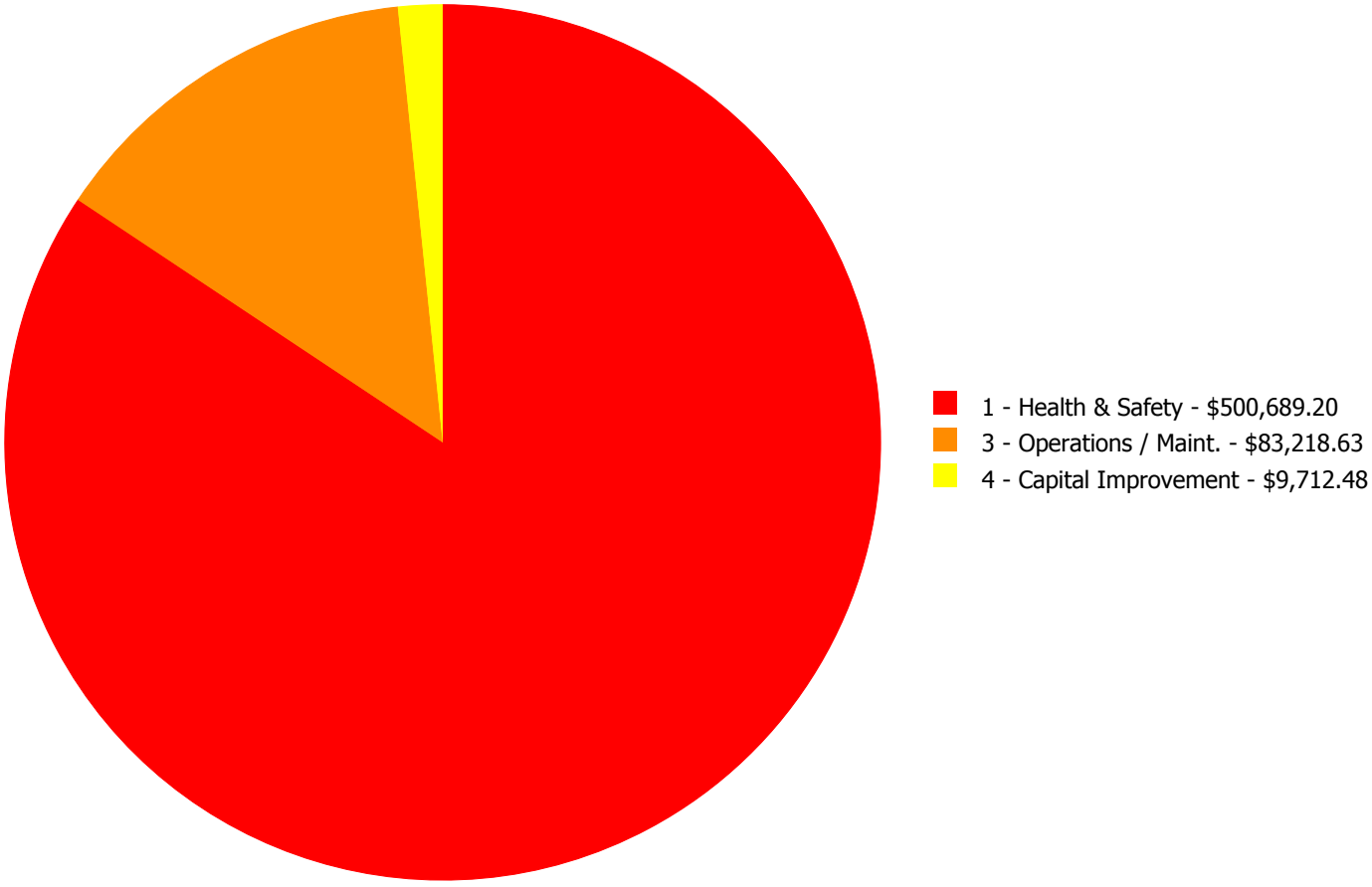
Deficiency By Priority Investment Table

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
D3040	Distribution Systems	$0.00	$0.00	$0.00	$9,712.48	$0.00	$9,712.48
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$500,689.20	$500,689.20
D5010	Electrical Service/Distribution	$0.00	$0.00	$78,023.54	$0.00	$0.00	$78,023.54
D5020	Lighting and Branch Wiring	$0.00	$0.00	$5,195.09	$0.00	$0.00	$5,195.09
	Total:	$0.00	$0.00	$83,218.63	$9,712.48	$500,689.20	$593,620.31

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: $593,620.31

Deficiency Details by Priority

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

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

System: D5010 - Electrical Service/Distribution

Location: Electrical Room 203B
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Electrical Distribution System (U)
Qty: 4.00
Unit of Measure: Ea.
Estimate: $78,023.54
Assessor Name: Craig Anding
Date Created: 09/28/2015

Notes: In Electrical Room 203, replace Panelboards PP1 (2 sections) and RP-3 and unmarked 200A Distribution Panelboard and 225 kVA step-down transformer that have reached the end of their useful life.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium Platform
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 6.00
Unit of Measure: Ea.
Estimate: $5,195.09
Assessor Name: Craig Anding
Date Created: 09/28/2015

Notes: Replace six (6) 4 foot, 2 lamp industrial fluorescent fixtures above the platform in the large instrument area with industrial fixtures with T8 lamps.

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

System: D3040 - Distribution Systems

Location: kitchen storage

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide inline ceiling exhaust fan and wall outlet louver

Qty: 1.00

Unit of Measure: Ea.

Estimate: $9,712.48

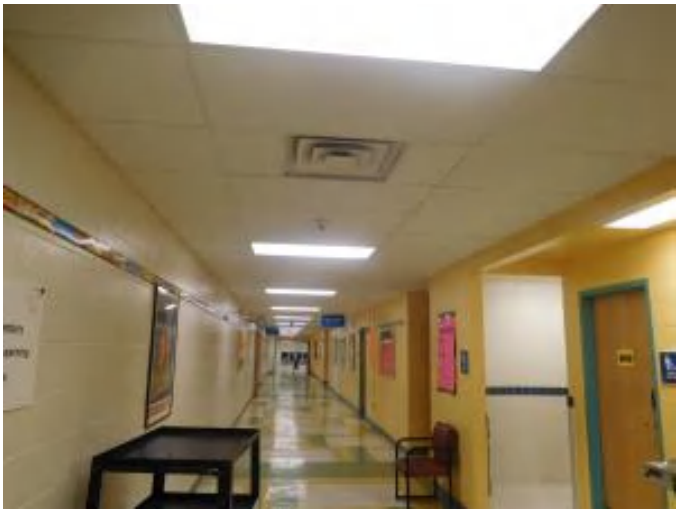
Assessor Name: Craig Anding

Date Created: 09/23/2015

Notes: Provide ventilation or extend air conditioning ductwork to walk in cooler area with indoor refrigeration near kitchen to alleviate high space temperature.

Priority 5 - Response Time (> 5 yrs):

System: D4010 - Sprinklers



Location: original building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 35,000.00

Unit of Measure: S.F.

Estimate: $500,689.20

Assessor Name: Craig Anding

Date Created: 09/04/2015

Notes: Extend sprinkler system to original portion of the building.

Equipment Inventory

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

Site Assessment Report - B429001;Bluford

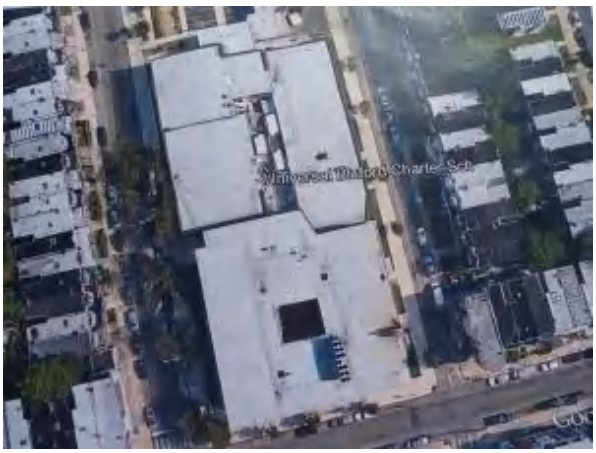
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 4500 lb, 5 floors, 100 FPM	1.00	Ea.	2009 Building Addition	ThyssenKrup	EP09525	EAF972		30	2009	2039	$151,620.00	$166,782.00
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 4500 lb, 5 floors, 100 FPM	1.00	Ea.	Main Entrance Reception/Waiting	ThyssenKrup	EP17030	EAF973		30	2009	2039	$151,620.00	$166,782.00
D2020 Domestic Water Distribution	Pump, pressure booster system, 1 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	mechanical room	alyan				25	2009	2034	$9,262.50	$10,188.75
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	buderus	logano ge 615			35	2009	2044	$75,956.00	$83,551.60
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	buderus	logano ge 615			35	2009	2044	$75,956.00	$83,551.60
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 210 ton cooling, includes standard controls	1.00	Ea.	roof	carrier				30	2009	2039	$161,634.00	$177,797.40
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 210 ton cooling, includes standard controls	1.00	Ea.	roof	carrier				30	2009	2039	$161,634.00	$177,797.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 20 H.P., to 1350 GPM, 6" size	1.00	Ea.	mechanical room	b&g	1510			25	2009	2034	$23,598.00	$25,957.80
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 20 H.P., to 1350 GPM, 6" size	1.00	Ea.	mechanical room	b&g	1510			25	2009	2034	$23,598.00	$25,957.80
D4010 Sprinklers	Fire pumps, diesel, 1000 GPM, 200 psi, 280 HP, 5" pump, including controller, fittings and relief valve	1.00	Ea.	mechanical room	clarke				35	2009	2044	$81,288.00	$89,416.80
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Electrical Room 121	General ELectric	Breakmaster	86722-2		30	2009	2039	$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 0 stories, 0' horizontal	7.00	Ea.	Electrical Room 200E	General Electric	A-Series II	Cat. No. AQF3424JB		30	2009	2039	$7,824.60	$60,249.42
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 0 stories, 0' horizontal	7.00	Ea.	Electrical Room 300E	General Electric	A-Series II	Cat. No. AQF3424JB		30	2009	2039	$7,824.60	$60,249.42
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 0 stories, 0' horizontal	7.00	Ea.	Electrical Room 121	General Electric	A-Series II	Cat. No. AQF3424JBX		30	2009	2039	$7,824.60	$60,249.42
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 1600 A	2.00	Ea.	Electrical Room 121	General Electric	NA	NA		20	2009	2029	$53,561.25	$117,834.75
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 800 A	1.00	Ea.	Electrical Room 203B	General Electric	Spectra Series	NA		30	2009	2039	$31,205.25	$34,325.78
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 1500 kVA	1.00	Ea.	Electrical Room 121	General Electric	NA	P111782		30	2009	2039	$125,442.00	$137,986.20
												Total:	**$1,525,812.04**

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):	46,700
Year Built:	2009
Last Renovation:	
Replacement Value:	$998,993
Repair Cost:	$26,336.01
Total FCI:	2.64 %
Total RSLI:	80.28 %



Description:

Attributes:

General Attributes:

Bldg ID:	S429001	Site ID:	S429001

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	80.35 %	3.31 %	$26,336.01
G40 - Site Electrical Utilities	80.00 %	0.00 %	$0.00
Totals:	**80.28 %**	**2.64 %**	**$26,336.01**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.	7,000	30	2009	2039		80.00 %	0.00 %	24			$80,640
G2020	Parking Lots	$7.65	S.F.	20,000	30	2009	2039		80.00 %	0.00 %	24			$153,000
G2030	Pedestrian Paving	$11.52	S.F.	28,700	40	2009	2049		85.00 %	0.00 %	34			$330,624
G2040	Site Development	$4.36	S.F.	46,700	25	2009	2034		76.00 %	12.93 %	19		$26,336.01	$203,612
G2050	Landscaping & Irrigation	$3.78	S.F.	7,400	15	2009	2024		60.00 %	0.00 %	9			$27,972
G4020	Site Lighting	$3.58	S.F.	46,700	30	2009	2039		80.00 %	0.00 %	24			$167,186
G4030	Site Communications & Security	$0.77	S.F.	46,700	30	2009	2039		80.00 %	0.00 %	24			$35,959
								Total	**80.28 %**	**2.64 %**			**$26,336.01**	**$998,993**

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.

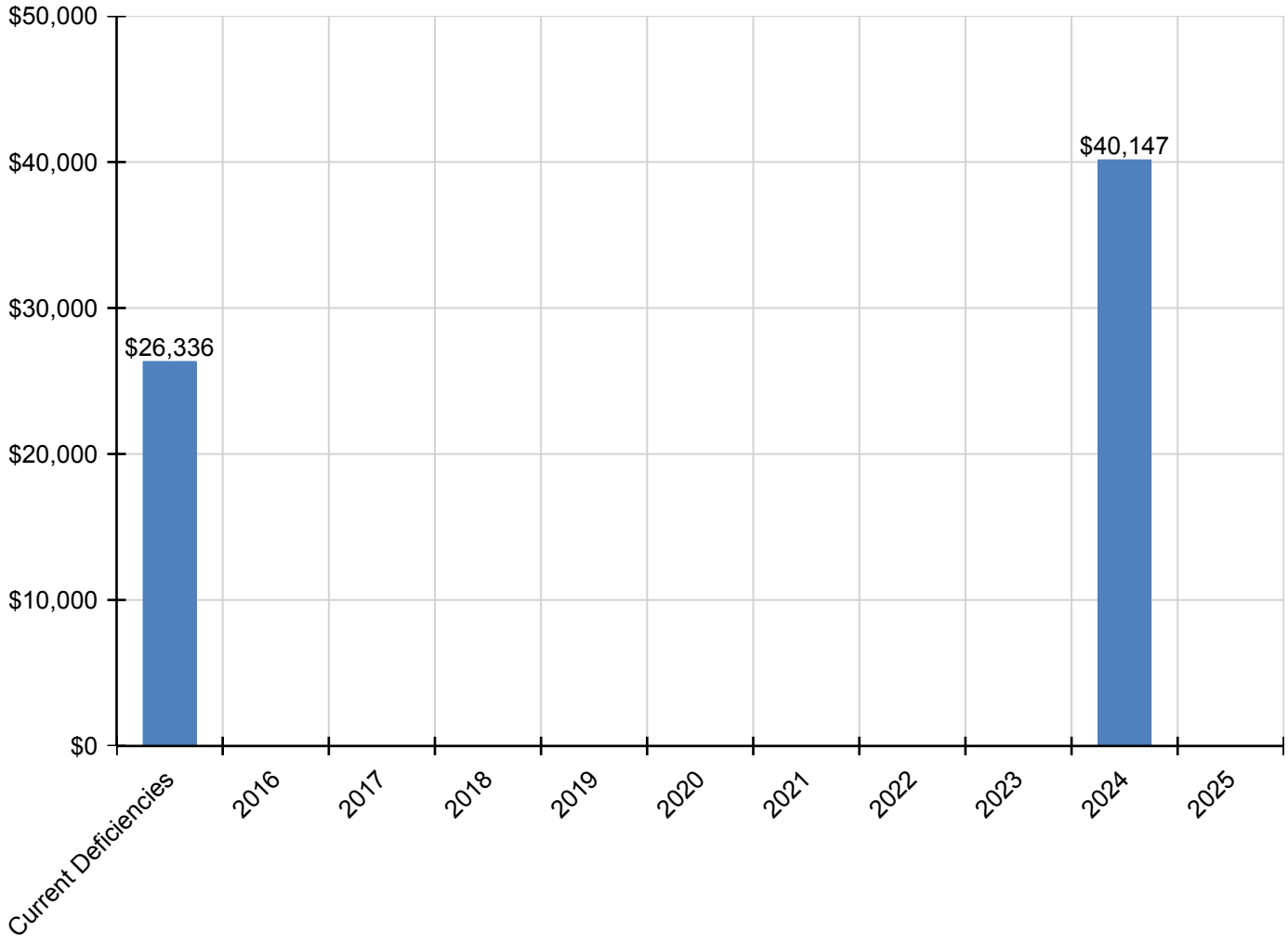
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$26,336**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$40,147**	**$0**	**$66,483**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2040 - Site Development	$26,336	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$26,336**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,147	$0	**$40,147**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

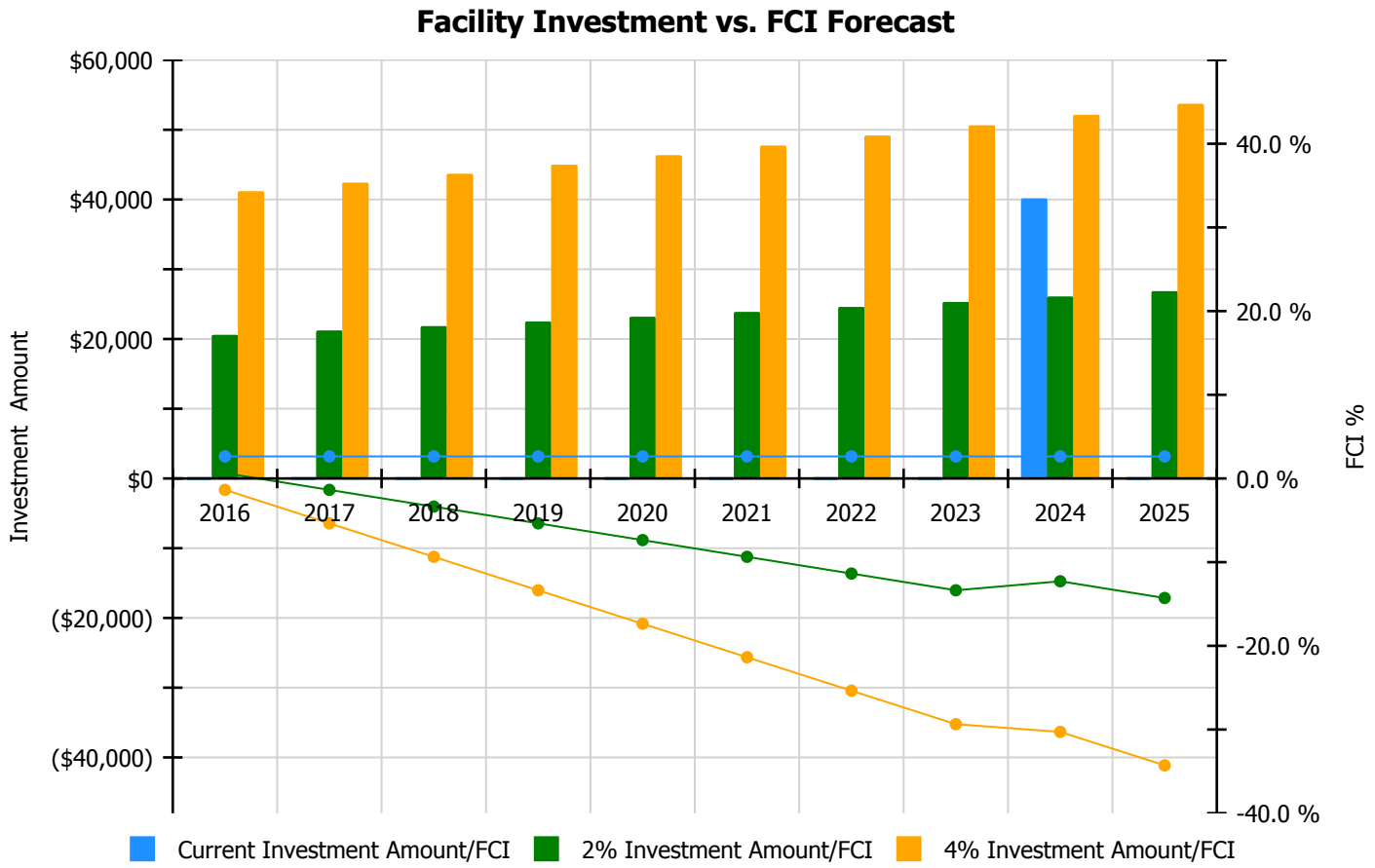
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

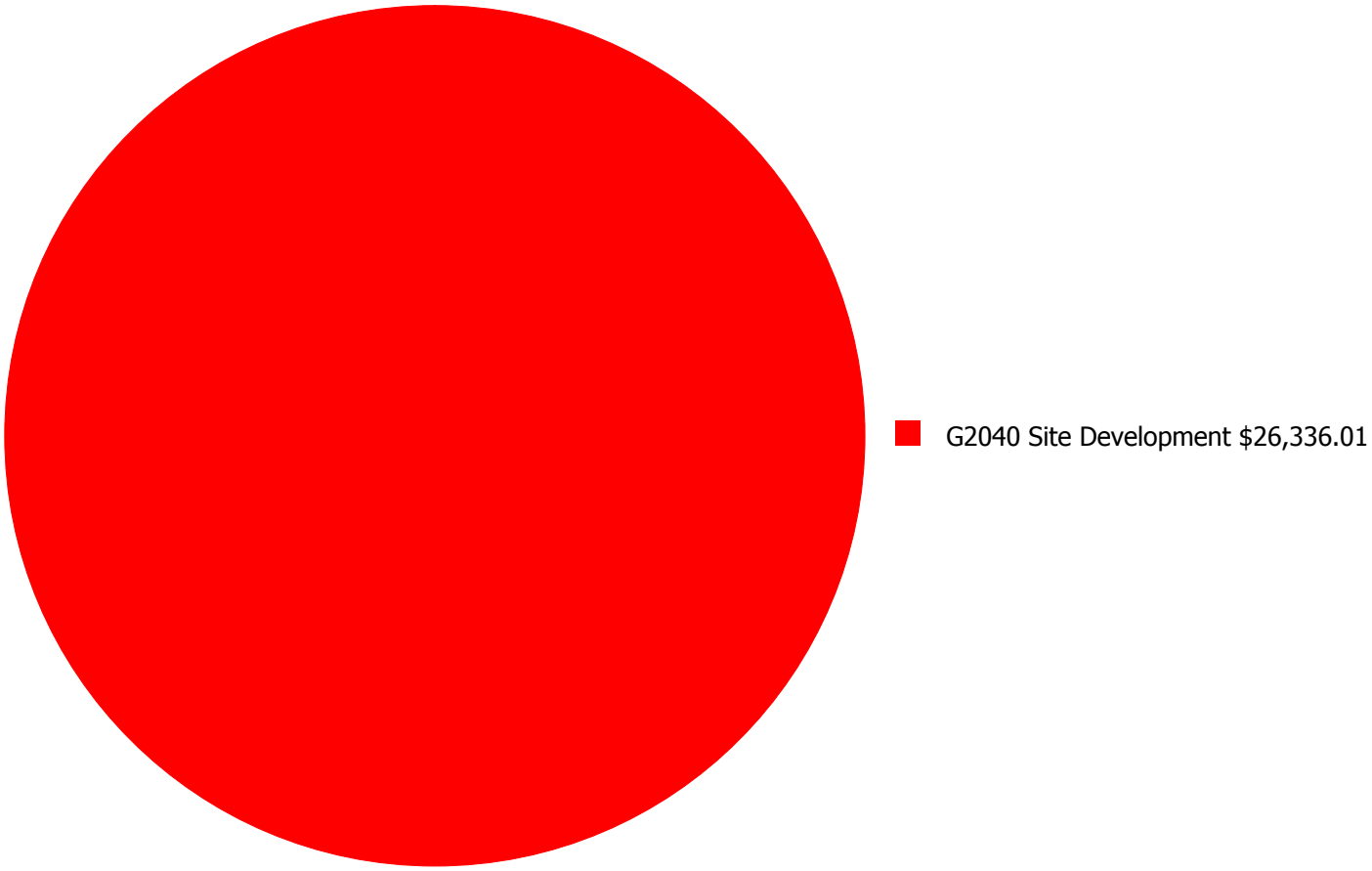
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 2.64%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$20,579.00	0.64 %	$41,159.00	-1.36 %
2017	$0	$21,197.00	-1.36 %	$42,393.00	-5.36 %
2018	$0	$21,833.00	-3.36 %	$43,665.00	-9.36 %
2019	$0	$22,488.00	-5.36 %	$44,975.00	-13.36 %
2020	$0	$23,162.00	-7.36 %	$46,324.00	-17.36 %
2021	$0	$23,857.00	-9.36 %	$47,714.00	-21.36 %
2022	$0	$24,573.00	-11.36 %	$49,145.00	-25.36 %
2023	$0	$25,310.00	-13.36 %	$50,620.00	-29.36 %
2024	$40,147	$26,069.00	-12.28 %	$52,138.00	-30.28 %
2025	$0	$26,851.00	-14.28 %	$53,703.00	-34.28 %
Total:	**$40,147**	**$235,919.00**		**$471,836.00**	

Deficiency Summary by System

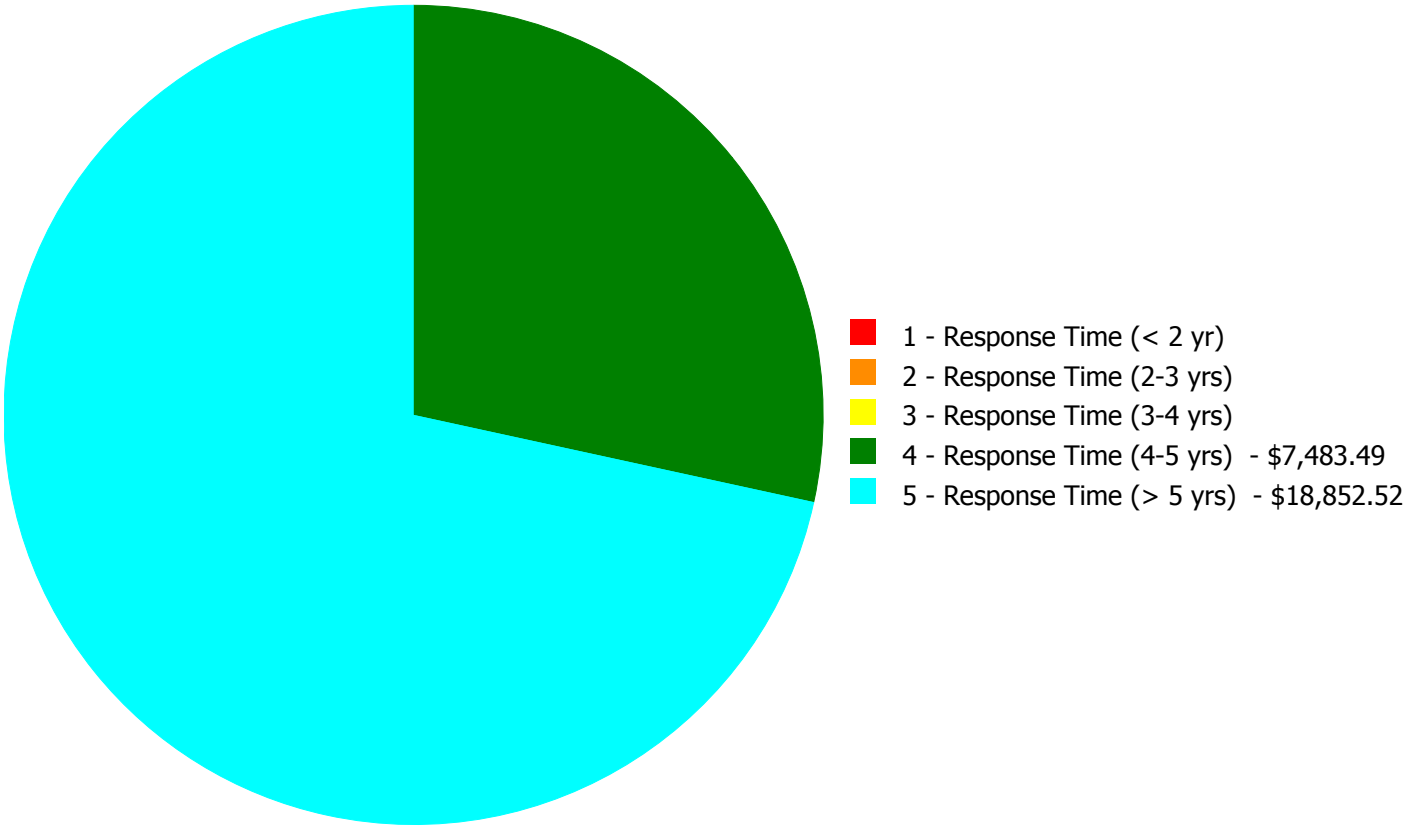
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $26,336.01

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: $26,336.01

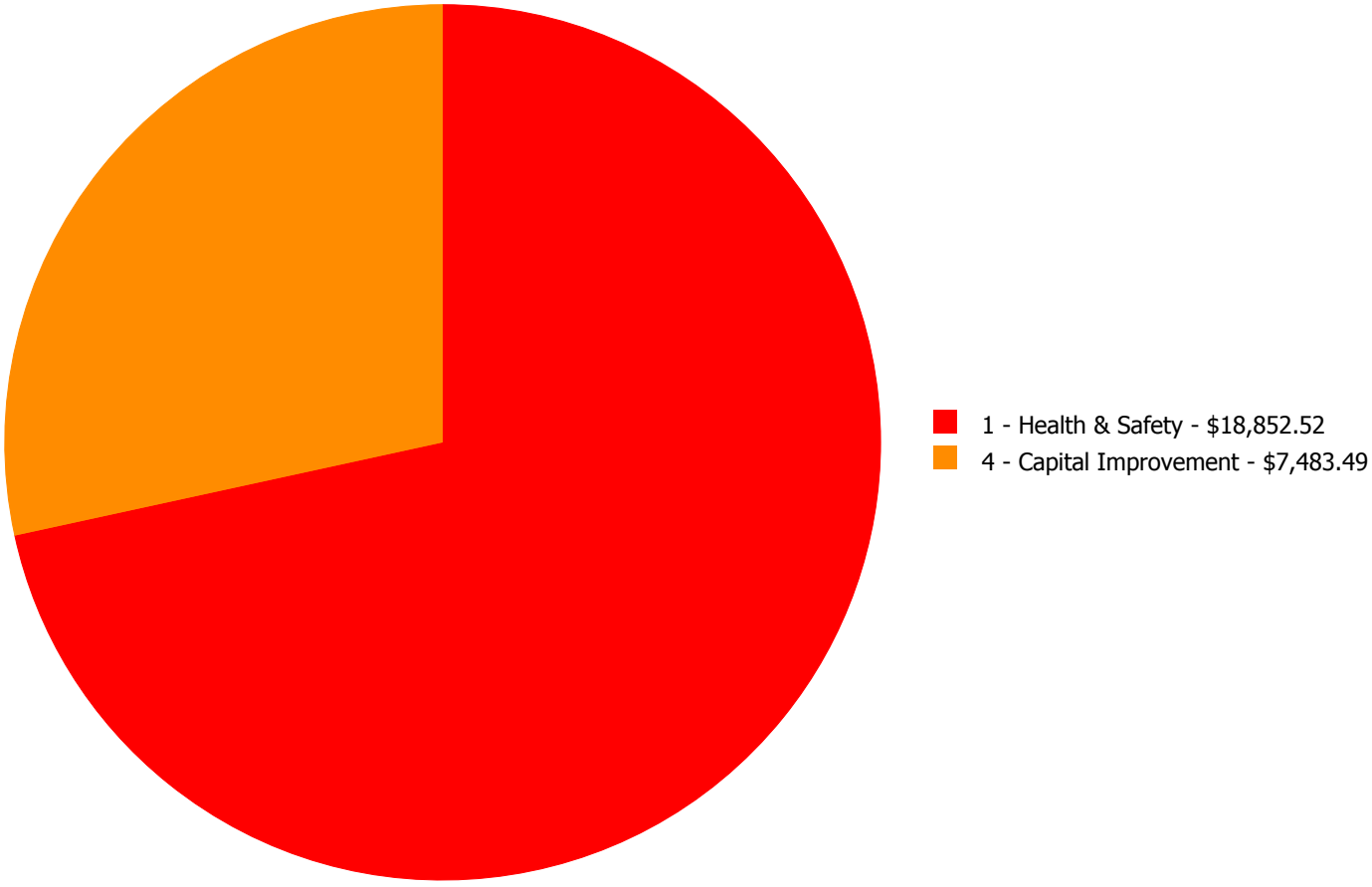
Deficiency By Priority Investment Table

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
G2040	Site Development	$0.00	$0.00	$0.00	$7,483.49	$18,852.52	$26,336.01
	Total:	$0.00	$0.00	$0.00	$7,483.49	$18,852.52	$26,336.01

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: $26,336.01

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: G2040 - Site Development

Location: Parking Lot

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add safety barriers and guide lines at parking and loading dock areas

Qty: 1.00

Unit of Measure: Ea.

Estimate: $7,483.49

Assessor Name: Craig Anding

Date Created: 09/21/2015

Notes: The loading dock is located just off the parking area between the dumpsters and the access point for students entering the school. The existing recommendation to enclose and move the dumpsters to a new location is related to this effort. After the dumpster correction is complete it is recommended that the loading dock area be clearly marked and safety barriers be placed to protect pedestrian traffic and mitigate possible issues related to loading and unloading materials and supplies.

Priority 5 - Response Time (> 5 yrs):

System: G2040 - Site Development

Location: Parking Lot

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: 09/21/2015

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