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.

Creighton School

Governance	CHARTER	Report Type	Elementarymiddle
Address	5401 Tabor Ave. Philadelphia, Pa 19120	Enrollment Grade Range	770 '00-08'
Phone/Fax	215-537-2531 / N/A	Admissions Category	Neighborhood
Website	Www.Universalcompanies.Org/Education/Creighton-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	**35.31%**	**$14,762,504**	**$41,810,889**
Building	53.87 %	$14,642,625	$27,180,502
Grounds	09.25 %	$110,682	$1,197,090

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	74.58 %	$453,931	$608,640
Exterior Walls (Shows condition of the structural condition of the exterior facade)	06.84 %	$139,234	$2,034,806
Windows (Shows functionality of exterior windows)	164.81 %	$1,637,175	$993,375
Exterior Doors (Shows condition of exterior doors)	199.38 %	$158,851	$79,672
Interior Doors (Classroom doors)	213.90 %	$405,765	$189,696
Interior Walls (Paint and Finishes)	00.00 %	$0	$515,009
Plumbing Fixtures	00.00 %	$0	$756,887
Boilers	24.78 %	$259,203	$1,045,857
Chillers/Cooling Towers	66.45 %	$911,416	$1,371,502
Radiators/Unit Ventilators/HVAC	114.45 %	$2,755,057	$2,407,242
Heating/Cooling Controls	155.54 %	$1,175,282	$755,622
Electrical Service and Distribution	171.47 %	$845,707	$493,210
Lighting	31.80 %	$561,449	$1,765,437
Communications and Security (Cameras, Pa System and Fire Alarm)	75.80 %	$501,331	$661,407

Please note that some FCIs may be over 100% because there are times when replacing a building system requires that other building systems be upgraded to complete the installation. A FCI of 0.0% represents that there are no current deficiencies with the associated system.

Facility Condition Assessment Summary Report

This report provides a summary of the Facility Condition Index (FCI) value of a school facility and select major building systems. The FCI calculation represents the cost of needed repairs divided by the replacement value. The FCI is a numerical value of condition and helps to identify the need for renewal or replacement of specific parts of the facility. The FCI is particularly useful when comparing similar facilities within the same portfolio.

Creighton LSH School

Governance	CHARTER	Report Type	Elementarymiddle
Address	5401 Tabor Ave. Philadelphia, Pa 19120	Enrollment Grade Range	'00-08'
Phone/Fax	215-537-2531 / N/A	Admissions Category	Neighborhood
Website	Www.Universalcompanies.Org/Education/Creighton-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	**35.31%**	**$14,762,504**	**$41,810,889**
Building	00.07 %	$9,197	$13,433,297
Grounds	09.25 %	$110,682	$1,197,090

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$896,499
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$710,193
Windows (Shows functionality of exterior windows)	00.00 %	$0	$310,055
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$37,989
Interior Doors (Classroom doors)	00.00 %	$0	$85,532
Interior Walls (Paint and Finishes)	00.00 %	$0	$360,328
Plumbing Fixtures	00.00 %	$0	$718,382
Boilers	00.00 %	$0	$424,705
Chillers/Cooling Towers	00.00 %	$0	$556,871
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$977,937
Heating/Cooling Controls	00.00 %	$0	$307,098
Electrical Service and Distribution	00.00 %	$0	$220,656
Lighting	00.96 %	$7,576	$788,901
Communications and Security (Cameras, Pa System and Fire Alarm)	00.24 %	$696	$295,497

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.

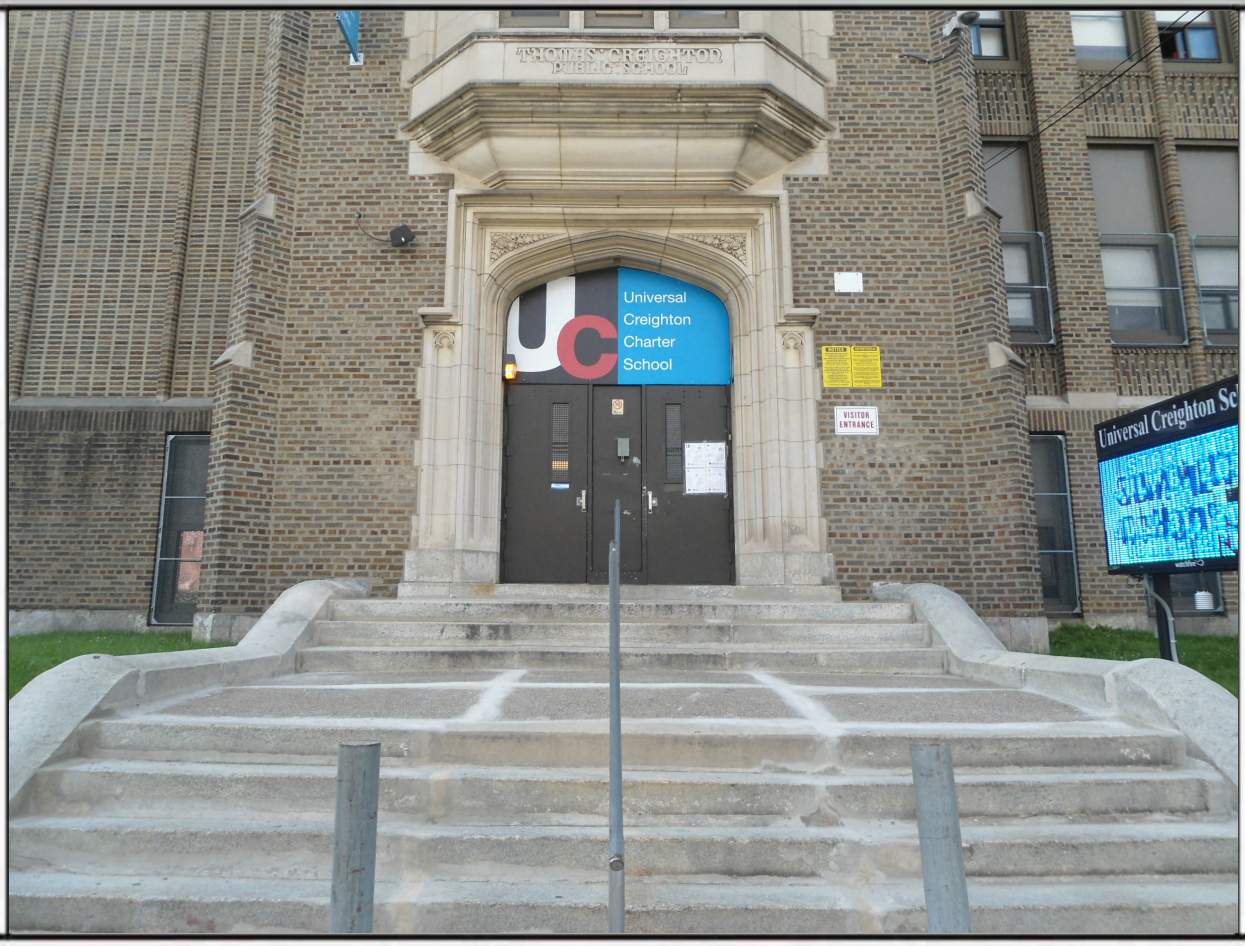
School District of Philadelphia

S724001;Creighton

Final

Site Assessment Report

February 1, 2017



PARSONS

Table of Contents

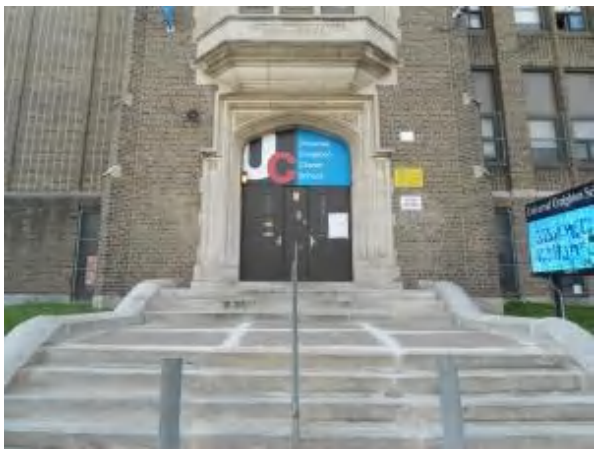
Site Executive Summary

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):	74,885
Year Built:	1931
Last Renovation:	
Replacement Value:	$41,810,889
Repair Cost:	$14,762,503.62
Total FCI:	35.31 %
Total RSLI:	59.27 %



Description:

Facility Assessment

July 2015

School District of Philadelphia

Thomas Creighton School

5401 Tabor Rd.

Philadelphia, PA 19120

62,232 SF / 636 Students / LN 07

GENERAL

The Universal Creighton Charter School is a historic school building identified as B724001 and was originally constructed in 1929 as the

Thomas Creighton Public School. This facility is located in the Crescentville neighborhood at 5401 Tabor Rd in Philadelphia, PA. The design of the E-shaped, concrete and steel-framed building includes, Gothic Revival style brick facades with a concrete foundation, detailing, and ornamental molding. As listed in the National Register of Historic Places this school was designed by Irwin T. Catharine and additions were built in 1931 and 1954. It was added to the National Register of Historic Places in 1988.

The main entrance faces the northeastern exterior on East Tabor. This School serves students in grades K-8. This school was originally constructed in 1929 and consists of a Basement level and three additional stories with a total gross square footage of 62,232 GSF.

This site is shared by this school as well as the Thomas Creighton Little School House. This summary will address the Universal Creighton Charter School and the site for both schools. The Little School House is identified as B724002

This recent history of this school includes a minor remodeling effort that took place in 2011. This school has several classrooms, a gym, cafeteria and student commons and auditorium, with supporting administrative spaces. The information for this report was collected during a site visit on July 17, 2015.

Mr. Chris Harris, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history.

ARCHITRECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. Basement walls are concrete and appear to be in good condition.

There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. Parapet heights, coping materials, and the height of the flashing also varies in different sections. The main roof is a built up application that was installed in the early 1990's. The other built up roofs have not conclusive installation dates and have been seal coated several times to extend the life cycle of the application. Considering the age and condition of the roofing systems, universal upgrades are recommended. Remove and replace all roof sections.

The auditorium roofing system was recently upgraded to a new asphalt shingle application. The pitched roof is in very good condition and there were no issues that surfaced during the time of the inspection therefore no projects or recommendations are required at this time.

The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

Exterior windows have been upgraded from the original applications. The current system is estimated to have been installed in the 1990's. 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.

The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. Special consideration for the main entrance door system to extend the concrete pad and prevent pinch point injury as the door currently extends beyond the concrete step. The exterior door system, store front and service doors are recommended for upgrade.

Special consideration for those that may be physically challenged was not a main factor in the last re-construction effort for this school. The southwestern entrance serves as the exterior ADA entrance. This is not an automated system and requires support for access. The path of travel is not very clear from that entrance of the school and from the access points. The interior path of travel is partially supported by some door hardware and guard rails that will require modifications to meet the needs of the physically challenged. The building has received limited upgrades and does not fully support a path of travel for those that may be physically challenged. Included in this report is the recommendation for the addition of an elevator to serve all floors.

Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the southern elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of

this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

Signage criteria have been established for public building such as schools to support the physically challenged and directional needs. 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 old portion of the building.

Interior partitions include CMU, plaster on wood and or metal framing, moveable partitions, and glazed openings. There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

The movable partition that has been modified and no longer functions as originally designed the Library and is a good example for a universal correction. This wall has been modified to suit the needs of the Library however does not reflect the most recent code requirements. This deficiency recommends universal removal of the existing movable partitions and upgrades to a permeate wall systems.

Interior doors are typically wood in wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include solid wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at some of the stairwells and exit ways, access doors, and folding closet doors. Doors are generally in fair condition and are a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the hallway, transoms, wooden doors and frames with consideration for the exit stair doors and construction.

This schools interior door system is a mix of the original wooden doors and frames and a few solid core wooden several interior doors are typically wood in wood frames with transom lites or sidelights, glass glazing. 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 with new doors, frames and hardware.

Fittings include: marker and chalkboards; tack boards; toilet accessories and a mix of wooden and marble toilet partitions; fixed storage wooden shelving and cabinets. Most of the systems are in good condition however, there are several tack boards in the hallways for student displays. The tack board systems are beyond the expected service life for this application. Remove and replace tack boards is recommended.

Stair construction is concrete with concrete treads and landings are finished with concrete and nosings are metal. Current legislation regarding building accessibility by the handicapped requires that stairs 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 renovation efforts should include comprehensive stair railing upgrades.

Interior wall finishes are typically painted plaster, marble or brick in fair condition. This school is on a cyclical program of renewal and each painted surface is renewed at year's end. Other wall finishes include: ceramic tile at restrooms in good condition. Wall finishes are generally in fair condition.

Interior floor finishes are typically a mix of vinyl tile and wooden floors in classrooms and sealed concrete in the corridors. 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.

The GYM floor finish is beyond its expected life cycle for this application. Recent repairs have eliminated the trip hazards; however, there are areas that remain that warrant replacement. The floor is recommended for universal upgrade. There were no issues with the polished concrete floor finish therefore no recommendations are required at this time.

Interior ceilings are typically 2 x 4 acoustical tile in metal grid in the hallways and a few support rooms. Other ceiling finishes include: exposed or painted structure plaster. The ceiling finish is in good condition and there are no projects or recommendations required at this time.

Elevators are not present at this school. There is no elevator that services this school. To assist those that may be physically challenged and to meet the current accessibility legislation that requires wheelchair access to all floors in a building. The installation

of an interior hydraulic elevator is proposed within the purview of this assessment for all floors of this school.

Institutional equipment includes: library equipment such as wooden shelving and tables, auditorium and stage equipment A/V equipment and minor laboratory equipment, gym equipment such as basketball backstops and a kitchen with kitchen equipment. The institutional equipment is expected to have a life cycle that extends beyond the outlook of this report.

Furnishings include: fixed casework, window blinds and fixed auditorium seating. The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories and urinals and both wall and floor mounted water closets. Lavatories have dual wheel handle, single or dual lever faucets. Urinals and water closets have manual lever or push button concealed flush valves. Custodial closets have service sinks or mop sinks. There are single level stainless steel water coolers with integral refrigeration. Kitchen waste is piped through an above floor grease trap. There is a fifty gallon Bradford White gas water heater in the basement mechanical room with a small inline circulating pump installed in 2010. There is an older duplex domestic water booster pump system with pressure tank and control panel in the mechanical room. One of the pumps has been removed for repair and there are reportedly low pressure problems on the upper level. The booster system should be replaced or repaired/ upgraded with new pumps to provide adequate pressure. Two sump pumps for ground water removal are in the mechanical room. The domestic water system includes a water softener.

Water piping has been replaced since the original installation with copper. Sanitary, waste, vent and rainwater piping is original installation hub and spigot cast iron with hubless cast iron where additions or repairs were made. Water service is a four inch line and meter from Claridge St. into the mechanical room. The shut off valves are leaking and there is no backflow preventer, only a check valve. The gas service is a three inch line from E. Tabor Rd. and enters in a closet adjacent to the gym.

Plumbing fixtures have been replaced but age is unknown. Appearance and function indicate remaining service life of fifteen to twenty years. The water heater should be serviceable for ten or more years. The cast iron piping has exceeded the anticipated service life. Rainwater and vent piping should continue functioning, but the sanitary and waste piping should be inspected to determine condition and replace damaged portions. The domestic water piping may have lead solder based on age, and should be replaced based on age and condition.

HVAC- Heating is generated by two older Weil McLain one hundred ninety hp sectional cast iron low pressure steam oil fired boilers in the basement mechanical room. The boilers are Model 94 with Weil McLain burners and separate oil pumps. Boilers were installed approximately 1980 and have signs of age. There is a duplex sump pump condensate receiver that had the original pumps removed and replaced with two end suction pumps mounted on top of the sump cover. Steam escapes from the sump, indicating problems with steam traps. A new condensate receiver system should be installed. There is a chemical feed system, but no boiler feed system. There is a combustion air louver and damper and a field fabricated boiler stack into a brick chimney. An eight thousand gallon indoor oil storage tank is in an adjacent space with a partial block wall enclosure. A duplex fuel oil pump system outside the enclosure provides circulation. Oil piping near the pump assembly has several saddle patches and the oil pumps reportedly need repair or replacement.

Spaces are heated by exposed steam radiators with control valves and F&T traps. There is a house fan system in the basement that provided heat and ventilation through a central duct system that is inoperable.

There is no central air conditioning, but some areas have window air conditioners. Sixteen small DX split systems have been installed this year in classroom closets to cool individual rooms. The units are Goodman 2 ½ tons with short supply and return ducts and package condensate pumps, installed in a preformed equipment pan. There are no outside air provisions and condensing units are located on the roof. There is mechanical toilet exhaust with exposed ductwork and roof mounted fans. A small double wall makeup air hood in the kitchen is ducted with welded stainless steel ductwork to an exhaust fan. A gas makeup air unit in the kitchen is connected to the hood. The hood has an Ansul fire suppression system and there is a solenoid valve to shut off gas flow to equipment.

Steam and condensate piping is welded insulated black steel and both piping and valves have exterior corrosion. The steam piping system and radiators are from original construction and are well beyond service life. The mechanical room and boilers need a thorough maintenance cleaning, and the condensate receiver system should be replaced.

The control system is an old pneumatic system with a simplex air compressor. Radiators have pneumatic control valves most of which do not function. The newer split system air conditioning systems are controlled by individual programmable room thermostats.

FIRE PROTECTION- There are standpipes with fire hose connections in the stairwells and no sprinkler system.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from an overhead utility line along E. Tabor Road. Two 120/240V, 1 phase, 3 wire services are routed underground from two pole mounted transformers to the Main Switchboard located in Main Electrical Room 013 in the Basement. The Main Switchboard is manufactured by Frank Adam Electric Company, but is not identified with nameplate information. The Main Switchboard appears to be rated 800A, 120/240V, 2 phase, 5 wire. It is an obsolete, exposed bus, knife blade switchboard with cartridge fuses. There are several disconnect switches that are fed from the Main Switchboard that serve Panel L, Panel M, the Floor 3 closet, and one that is not labeled. There is also a 400A safety switch that feeds Panel P, via an MGM 150 kVA, 240V-208/120V, 3 phase, 4 wire phase shifting transformer and secondary side safety switch. This transformer also feeds a safety switch for Panel K. There is also a 400A, 120/240V panelboard with exposed bus, knife blade switches and cartridge fuses that is fed by the Main Switchboard that is obsolete.

The Main Switchboard needs to be replaced with a 208/120V. 3 phase, 4 wire switchboard, sized to accommodate central air conditioning and an elevator addition. All of the existing safety switches would be replaced with feeder circuit breakers in the new switchboard.

The stage lighting panelboard has exceeded its useful life and needs to be replaced. There are also (6) recessed panelboards in the corridors on Floors 1-3 that are beyond their useful life and need to be replaced.

Receptacles—Classrooms are generally provided with 4 to 5 duplex receptacles. In many classrooms, additional surface raceway system with up to (8) duplex receptacles were provided on the front and back walls of the classrooms. There are two duplex receptacles in the kitchen that need to be replaced with ground-fault circuit interrupting type, as required by code.

Lighting-- Fixtures in classrooms are typically 2x4 fluorescent grid troffers with acrylic lenses in classrooms with lay-in ceilings. Lighting is controlled by two light switches. Fixtures in corridors without ceilings are typically 1x4 surface mounted or suspended modular fluorescent fixtures. A few selected classrooms and the library have had lighting upgrades with T8 lamps, but a majority of the classrooms have 2x4 fluorescent grid troffers with T12 lamps and need to be replaced. Lighting needs to be upgraded in 28 classrooms.

The gymnasium has 8 foot long, 4 lamp surface mounted fluorescent lensed fixtures with wire guards. Lighting levels measured at 27 footcandles.

The auditorium is illuminated with (10) chain suspended incandescent fixtures with A-lamps. Lighting levels are inadequate and some of the fixture surrounds are damaged. A new lighting system is warranted for the auditorium. The stage is provided with stage lighting and work lights. There is no dimming system for the auditorium or stage lighting. Lighting control is by branch circuit breakers from the stage lighting panelboard on stage left. A dimming system for the auditorium and stage is recommended.

The kitchen has a combination of 2x4 suspended modular fluorescent fixtures and 1x4 fluorescent wraparound fixtures with T8 lamps. Lighting levels measured from 90 footcandles at the food preparation table and serving counter to 157 footcandles in the center of the kitchen.

A few of the restrooms had lighting upgrades to T8 lamps, but most still had surface mounted fluorescent with T12 lamps. Exterior lighting fixtures are located above the doors at exit discharges.

Approximately 26,500 SF, which includes classrooms, book lockers, offices, toilet rooms and stairwells, will require a lighting system upgrade.

Fire Alarm System-- The fire alarm system is an obsolete 120V wired system that includes only manual pull stations and bell notification appliances. Pull station mounting heights exceed ADA requirements. There are no visual notification appliances. The fire alarm control panel (FACP) is by S.H. Couch Company located in the Main Electrical Room in the Basement. The system has exceeded its useful life and needs to be replaced to meet current NFPA codes and ADA.

Telephone/LAN--The telephone service demarcation point is located in Music Room 113. A telephone and data outlet is provided in each classroom. Wireless access points are provided in the classrooms, corridors, gymnasium and auditorium for Wi-Fi coverage throughout the school. Smart boards are provided in many classrooms.

Intercom/Paging/Sound Systems-- The paging system is accessed through the telephone system. There are ceiling recessed speakers

in classrooms, and ceiling recessed or wall mounted speakers in corridors. There is a separate sound cabinet for the auditorium that is located in the room off stage left. The cabinet was locked, but is in good condition.

Clock and Program System-- There is a speaker in each classroom for the program system. Most rooms have individual clocks. The clock and program system control panel is located in the Main Office. The system is beyond useful life and needs to be replaced. The obsolete speakers have been abandoned in place.

Television System-- There are no televisions outlets in the classrooms.

Video Surveillance and Security Systems-- There are Interior video surveillance cameras that provide coverage of corridors, gymnasium and entrances. Surveillance cameras are monitored in the Main Office area. Magnetic door contacts are provided on exterior doors, except from the auditorium.

Emergency Power System--There is a 35 kW/44 kVA Onsite Energy standby generator with sub-base fuel oil storage tank located in the room adjacent to the Main Electrical Room. The generator, 150A ASCO 7000 Series automatic transfer switch and Panelboards ELP and EPP were installed in 2009. The standby power system mainly serves emergency lighting loads via a 50 kVA 240-208/120V, 3 phase, 4 wire phase shift transformer.

If an elevator is installed, it should be powered by the standby generator system. A larger generator, approximately sized at 150 kW should be should be provided to replace the existing standby generator.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit sign lighting is powered from emergency lighting circuits in Panelboard ELP.

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

Conveying Systems-- The building does not have an elevator.

GROUNDS

There is no school parking thus no driveways or parking lot.

There is a concrete paver system that surrounds this school that is on a consistent program of renewal. However as indicated in the photos the damage is extensive and requires upgrades. This deficiency provides a budgetary consideration for concrete sidewalk upgrades.

The landscaping is in good condition and well maintained but with no irrigation system. The landscaping is generally located near the play area of the site with limited turf sections around the general exterior of the school. This deficiency provides a budgetary consideration for the installation of an irrigation system for this site.

The trash dumpster is located near the southwestern fence open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are recommended.

The brick exterior wall leading to the main entrance of The Little School House is damaged and several brick have been removed. This presents a safety issue as the wall is breaking down while students have to use this entrance. This deficiency provides a budgetary consideration for the repair of the wall.

Site Lighting— Site lighting is provided with a few wall mounted HID lighting fixtures to illuminate the southeast side of the property. Other than for fixtures at the entrances, there are no other wall or pole mounted site lighting fixtures.

RECOMMENDATIONS

- Replace auditorium seating
- Remove and replace wood flooring Gym.
- Remove and replace wood flooring Classroom / Hallway
- Replace inadequate or install proper stair railing.
- Replace missing or damaged signage
- Replace blackboards with marker boards.
- Remove and replace tackboards.

- Remove and replace interior doors.
- Remove folding wood partitions; replace with metal studs and gypsum board painted
- Remove non-rated interior glass panels and replace with studs, gypsum board, paint (E) wall
- Install fire rated walls and door where required - insert number of doors.
- Add external 4 stop elevator
- Remove and Replace Built Up Roof
- Remove and replace exterior doors - per leaf
- Remove and replace aluminum windows
- Repair cracks in masonry - replace missing mortar and repoint
- Remove and replace defective irrigation system - pop up spray system
- Build secure trash dumpster enclosure
- Remove and replace concrete sidewalk or paving
- Repair and regrout stone/brick retaining wall
- Remove the existing window air conditioning units and install a 350 ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.
- Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.
- Provide a new central station air handling unit for the auditorium 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.
- 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, to replace steam heating system.
- Provide a new central station air handling unit for the cafeteria 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.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Install new direct digital control system and building automation system with remote computer control capability and graphics package.
- Provide a new central station air handling unit for the gymnasium 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.
- Install new ten thousand gallon concrete oil storage tank outdoors above grade with tank monitoring system.
- Install new duplex fuel oil pump system with control panel. Install new black steel fuel oil piping connected to tank, pumps and boilers.
- Install new duplex condensate return system with duplex pumps and control panel.
- Replace existing check valve assembly on main water service inside building with reduced pressure approved backflow assembly
- Replace domestic hot and cold water pipe, fittings, valves, hangers and insulation.
- Repair domestic water booster system and upgrade pumps if required to provide adequate pressure.
- Replace existing Main Switchboard and service distribution equipment with a 2000A, 208/120V, 3 phase, 4 wire service switchboard with associated feeder circuit breakers and feeders to serve added central air conditioning equipment, an elevator addition, and a fire pump (if required).
- Replace 120/240V, 1 phase panelboards in corridors on Floors 1-3 and Auditorium/Stage lighting Panelboard. Total of (7) panelboards.
- Replace two (2) duplex receptacles in the kitchen with ground-fault circuit-interrupting type.
- Replace lighting system in the auditorium and provide lighting control system.
- Replace fluorescent lighting fixtures in classrooms, offices, toilet rooms and stairwells (Approximately 26,500 SF)
- Replace fire alarm system with an addressable type system, including pull stations, smoke and heat detectors, and audible and visual notification appliances.
- Replace clock and program system.
- Provide magnetic door contacts on the four (4) exterior exit doors in the Auditorium.
- Replace standby generator system to be sized for all emergency egress and exit lighting and for an elevator addition.

Facility Assessment

July 2015

School District of Philadelphia

Thomas Creighton Little School House School

5401 Tabor Rd

Philadelphia, PA 19120

22,748 SF / 219 Students / LN 07

GENERAL

The Thomas Creighton Little School House School is located at 5401 Tabor Rd. The main entrance faces northeastern exterior. The main building constructed in 1999 and is a single story school. The school has 22,748 GSF.

The information for this report was collected during a site visit on July 17, 2015.

Mr. Chris Harris, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems.

ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. The steel framed superstructure is good condition. The slab on grade floor construction is in good condition and the pitched roofing system is in good condition. The exterior brick walls are in good condition. Exterior windows are double pane aluminum frame with operable and are in good condition. Exterior doors are typically metal doors and frames with glazing. Doors are in generally good condition and are ADA compliant. There is at least one handicap entrance.

Interior partitions include CMU, gypsum wallboard on metal studs. Interior partitions are in very good condition. Interior doors are typically wood in metal frames with some sidelights, wired glass glazing. Other interior doors include hollow metal in hollow metal frames at the mechanical spaces, exit ways, access doors. Doors are generally in very good condition and are ADA compliant and fire rated. Doors swing in the direction of exit and do not obstruct hallways. Fittings include: marker boards; tack boards; interior signage; wooden lockers; toilet accessories and toilet partitions; fixed storage shelving. The fittings are in very good condition and expected to have a normal life cycle that extends beyond the outlook of this report.

Special consideration for those that may be physically challenged was not a main factor in the design of The Little School House. The main entrance serves as the exterior ADA entrance complete with access ramp and automated access controlled from the front desk. The path of travel is very clear from that entrance of the school and from the access points. The interior path of travel is suppoted by some ADA lever actuated door hardware and guard rails, signage, ADA restroom accommodation that meet the needs of the physically challenged. The building sets the example for construction efforts to support the ADA guidelines. There are no projects or recommendations required at this time.

Interior wall finishes are typically painted CMU. Other wall finishes include and ceramic tile at restrooms. Wall finishes are generally in very good condition. Interior floor finishes are typically VCT in classrooms and corridors. Other floor finishes include: carpet and sealed concrete. Interior ceilings are typically 2 x 4 acoustical tile in metal grid. Other ceiling finishes include: exposed/painted structure with gypsum wallboard. There are no corrections required at this time.

Furnishings include: fixed casework and fixed benches with shelves all in like new condition. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

MECHANICAL SYSTEMS

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

Hot water is provided by two PVI gas water heaters in the mechanical room. The heaters are one hundred twenty five gallons each. There are two small pressurization tanks adjacent to the water heaters. Kitchen waste is piped to a grease trap below the kitchen slab, with access through a stainless steel panel flush with the floor.

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 three inch meter from E. Tabor Rd. The service includes a backflow preventer. The roof is sloped with no roof drains.

The plumbing system is from the original 1999 installation and no significant alterations have been made. All components are in good condition and should have remaining service life from ten to twenty years.

HVAC- The building is heated by hot water generated by two HB Smith cast iron sectional gas/oil boilers in the mechanical room. The boilers are forty hp with Powerflame burners and separate oil pumps. Hot water is circulated to heating coils and cabinet radiation units throughout the building.

There are two 500 gallon steel double wall oil storage tanks in the mechanical room, with a small containment curb around the installation. Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap.

There is a central chilled water system with an eighty ton Carrier air cooled chiller in an enclosure outside the mechanical room. The unit is elevated on an eight foot high steel frame. A glycol system with tank and pump prevents freezing.

Fan coil units are located above ceilings and in the mechanical room. The units are MagicAire single zone package type with hot and chilled water coils, filters, blowers and motors. There are a total of thirteen units with one floor mounted in the mechanical room and the others above ceilings. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Toilet exhaust is ducted to three centrifugal roof ventilators. There is a small exhaust only stainless steel kitchen hood connected to an upblast exhaust fan on the roof with stainless steel welded ductwork. There are only electric warming appliances and no fire suppression nor gas solenoid valve associated with the hood. There are combustion air louvers with motorized dampers in the mechanical room.

Chilled and heating water piping is insulated copper. Oil piping is black steel with screwed fittings. There are two chilled and two hot water floor mounted pumps in the mechanical room. All are B&G series 1510 end suction type. Two small inline B&G pumps in the heating water piping circulate to hot water radiation units. An expansion tank, air separator and chemical feed unit are part of the piping system.

There is a digital building automation system with graphic display by TSBA Controls. The system is reportedly functioning properly.

All components of the HVAC system are from the original 1999 construction and no significant modifications have been made. The sheet metal covers on the radiation units in the multipurpose room have some damage. Otherwise the systems and equipment are in good condition and should have remaining service life from ten to twenty years.

FIRE PROTECTION-The building has a complete automatic sprinkler system. Piping is black steel with Victaulic couplings. There are exposed upright and recessed sprinkler heads with flush cover plates.

The fire service is a six inch line from E. Tabor Rd. There is no fire pump and no noted problems with the fire protection system.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a utility-owned pad-mount transformer located at the northwest corner of the site. Underground service is routed to an Eaton Cutler-Hammer 800A, 208/120V, 3 phase, 4 wire Main Distribution Panelboard (MDP) with 800A main circuit breaker that is located in a separate room off the Boiler Room. The MDP was installed in 2000 and serves the chiller, mechanical equipment and flush mounted panelboards located in the corridors and kitchen.

Receptacles—Classrooms are provided with an adequate number of receptacles. All receptacles located within six (6) feet of a sink are ground-fault circuit interrupting type, as required by code.

Lighting-- Fixtures in classrooms are typically (4) rows of (6) stem mounted, 4 foot wraparound fluorescent fixtures with two T8 lamps and acrylic prismatic lenses. Classroom lighting is controlled by two light switches. Corridors are provided with recessed 1x4, 2 lamp fluorescent grid troffers with T8 lamps, and 2 lamp, pendant mounted fixtures with parabolic louver at the three (3) skylights.

The Multi-Purpose Room has a combination of 2x4 fluorescent grid troffers and recessed incandescent downlights with A-lamps. The (15) downlights should be retrofitted with LED lamps to increase lamp life and improved energy efficiency.

The kitchen has 2x4, 4 lamp fluorescent grid troffers; restrooms are illuminated with 1x4, 2 lamp fluorescent flanged troffers. Restrooms have 1x4 flanged fluorescent troffers. Mechanical and electrical rooms have 4 foot industrial fluorescent with (2) T8 lamps.

Site lighting is provided with wall mounted HID lighting fixtures with wire guards around the perimeter of the building. Most fixtures have an accumulation of debris between the lens and wire guard that reduces fixture efficiency. Approximately 14 fixtures need to cleaned and re-lamped.

Fire Alarm System-- The fire alarm system is by Simplex, and consists of manual pull stations and audible and visual notification appliances that meet ADA requirements. Notification appliances are provided in all classroom and toilet rooms. There is a remote annunciator panel at the main entrance. The fire alarm system is expected to have 8 to 10 years useful life remaining before replacement.

Telephone/LAN—The telephone service demarcation point is located in the Main Electrical Room, adjacent to Distribution Panelboard MDP. A telephone and data outlet is provided in each classroom. Wireless access points are provided in the classrooms and Multi-Purpose Room for Wi-Fi service throughout the school. The Main IT Room is located across the corridor from the Main Office.

Intercom/Paging Systems-- An Aiphone audible intercom system is provided between the main and entrance and the Main Office. The paging system is accessed through the telephone system. There are ceiling recessed paging speakers in corridors. This system is estimated to have 15 years of useful life remaining.

Clock and Program System-- There is a clock/speaker assembly in each classroom for the program system. The Simplex Time Control Center is located in the Main Office. The clock/speaker assembly in the Multi-Purpose Room is missing a clock.

Television System-- There are no televisions outlets in the classrooms.

Video Surveillance and Security Systems-- There are Interior video surveillance cameras that provide coverage of corridors, entrances and Multi-Purpose Room. Surveillance cameras are monitored in the Main Office. Magnetic door contacts are provided on exterior doors. There are also motion sensors in the corridors to monitor ingress/egress. There is an ADT security annunciator panel at the south entrance. The Tyco Integrated Security Panel is located in the Building Engineer's Office.

Emergency Power System--There is no standby generator that serves this building.

Emergency Lighting System / Exit Lighting-- Emergency egress lighting is provided by battery powered, wall mounted emergency lighting units (ELU) in corridors, classrooms, kitchen and Multi-Purpose Room. One of the ELUs in the Multi-Purpose Room is damaged and needs to be replaced. Remote emergency lighting heads are provided in the restrooms and at exit discharges. Exit signs are provided with battery backup.

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

Conveying Systems-- The building does not have an elevator.

GROUNDS

This section of the report is included in the main building report.

RECOMMENDATIONS

- There are no recommended corrections for the plumbing, HVAC or fire protection systems in this building.
- Clean (15) incandescent A-lamp downlights in the Multi-Purpose Room and re-lamp with LED lamps.
- Provide clock in clock/speaker assembly in the Multi-Purpose Room.
- Replace damaged emergency lighting unit in the Multi-Purpose Room.
- Clean and re-lamp (14) exterior wall mounted HID lighting fixtures.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S724001		

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.

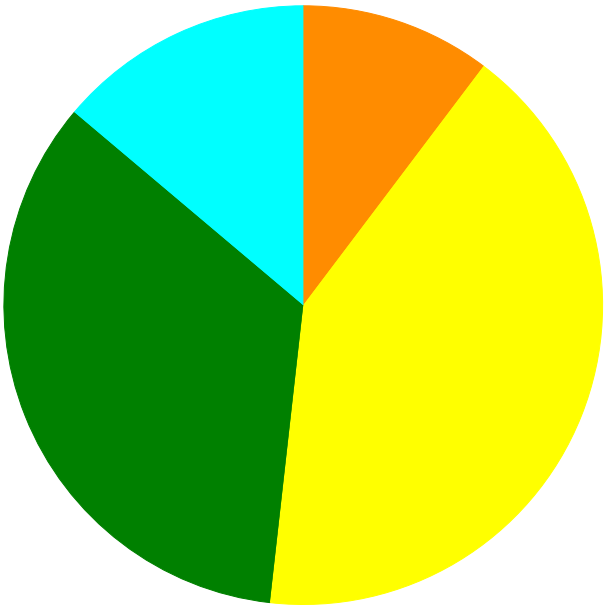
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	41.95 %	0.00 %	$0.00
A20 - Basement Construction	45.41 %	0.00 %	$0.00
B10 - Superstructure	39.10 %	0.00 %	$0.00
B20 - Exterior Enclosure	35.76 %	46.45 %	$1,935,260.65
B30 - Roofing	75.04 %	30.16 %	$453,931.09
C10 - Interior Construction	44.97 %	55.29 %	$1,020,759.56
C20 - Stairs	15.00 %	219.97 %	$166,906.94
C30 - Interior Finishes	70.93 %	24.93 %	$917,707.35
D10 - Conveying	105.71 %	388.90 %	$919,712.71
D20 - Plumbing	64.48 %	30.89 %	$639,117.53
D30 - HVAC	81.82 %	58.23 %	$5,100,958.63
D40 - Fire Protection	89.64 %	121.26 %	$795,252.95
D50 - Electrical	79.47 %	47.57 %	$2,059,590.42
E10 - Equipment	35.22 %	0.00 %	$0.00
E20 - Furnishings	38.05 %	355.81 %	$642,623.65
G20 - Site Improvements	51.77 %	11.39 %	$105,159.90
G40 - Site Electrical Utilities	46.67 %	2.02 %	$5,522.24
Totals:	**59.27 %**	**35.31 %**	**$14,762,503.62**

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)
B724001;Creighton	63,232	53.87	$0.00	$1,518,878.73	$6,113,358.40	$5,010,322.16	$2,000,065.53
B724002;Creighton LSH	22,748	0.07	$0.00	$0.00	$924.78	$695.71	$7,576.17
G724001;Grounds	63,000	9.25	$0.00	$0.00	$10,921.45	$63,053.64	$36,707.05
Total:		**35.31**	**$0.00**	**$1,518,878.73**	**$6,125,204.63**	**$5,074,071.51**	**$2,044,348.75**

Deficiencies By Priority



1 - Response Time (< 2 yr)
2 - Response Time (2-3 yrs) - $1,518,878.73
3 - Response Time (3-4 yrs) - $6,125,204.63
4 - Response Time (4-5 yrs) - $5,074,071.51
5 - Response Time (> 5 yrs) - $2,044,348.75

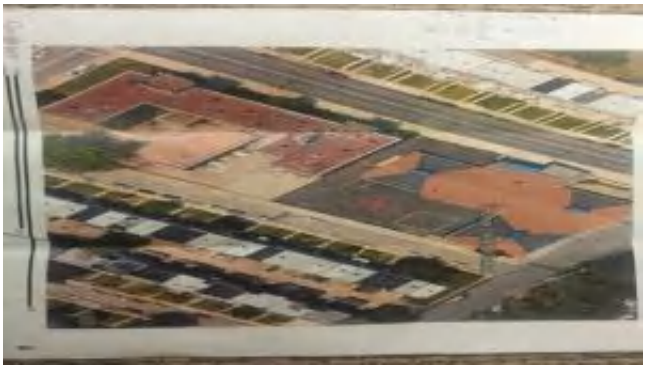
Budget Estimate Total: $14,762,503.62

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):	63,232
Year Built:	1930
Last Renovation:	
Replacement Value:	$27,180,502
Repair Cost:	$14,642,624.82
Total FCI:	53.87 %
Total RSLI:	56.48 %



Description:

Facility Assessment

July 2015

School District of Philadelphia

Thomas Creighton School

5401 Tabor Rd.

Philadelphia, PA 19120

62,232 SF / 636 Students / LN 07

GENERAL

The Universal Creighton Charter School is a historic school building identified as B724001 and was originally constructed in 1929 as the Thomas Creighton Public School. This facility is located in the Crescentville neighborhood at 5401 Tabor Rd in Philadelphia, PA. The design of the E-shaped, concrete and steel-framed building includes, Gothic Revival style brick facades with a concrete foundation, detailing, and ornamental molding. As listed in the National Register of Historic Places this school was designed by Irwin T. Catharine and additions were built in 1931 and 1954. It was added to the National Register of Historic Places in 1988.

The main entrance faces the northeastern exterior on East Tabor. This School serves students in grades K-8. This school was originally constructed in 1929 and consists of a Basement level and three additional stories with a total gross square footage of 62,232 GSF.

This site is shared by this school as well as the Thomas Creighton Little School House. This summary will address the Universal Creighton Charter School and the site for both schools. The Little School House is identified as B724002

This recent history of this school includes a minor remodeling effort that took place in 2011. This school has several classrooms, a gym, cafeteria and student commons and auditorium, with supporting administrative spaces. The information for this report was collected during a site visit on July 17, 2015.

Mr. Chris Harris, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history.

ARCHITRECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. Basement walls are concrete and appear to be in good condition.

There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. Parapet heights, coping materials, and the height of the flashing also varies in different sections. The main roof is a built up application that was installed in the early 1990's. The other built up roofs have not conclusive installation dates and have been seal coated several times to extend the life cycle of the application. Considering the age and condition of the roofing systems, universal upgrades are recommended. Remove and replace all roof sections.

The auditorium roofing system was recently upgraded to a new asphalt shingle application. The pitched roof is in very good condition and there were no issues that surfaced during the time of the inspection therefore no projects or recommendations are required at this time.

The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

Exterior windows have been upgraded from the original applications. The current system is estimated to have been installed in the 1990's. 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.

The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. Special consideration for the main entrance door system to extend the concrete pad and prevent pinch point injury as the door currently extends beyond the concrete step. The exterior door system, store front and service doors are recommended for upgrade.

Special consideration for those that may be physically challenged was not a main factor in the last re-construction effort for this school. The southwestern entrance serves as the exterior ADA entrance. This is not an automated system and requires support for access. The path of travel is not very clear from that entrance of the school and from the access points. The interior path of travel is partially supported by some door hardware and guard rails that will require modifications to meet the needs of the physically challenged. The building has received limited upgrades and does not fully support a path of travel for those that may be physically challenged. Included in this report is the recommendation for the addition of an elevator to serve all floors.

Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the southern elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

Signage criteria have been established for public building such as schools to support the physically challenged and directional needs. 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 old portion of the building.

Interior partitions include CMU, plaster on wood and or metal framing, moveable partitions, and glazed openings. There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

The movable partition that has been modified and no longer functions as originally designed the Library and is a good example for a universal correction. This wall has been modified to suit the needs of the Library however does not reflect the most recent code requirements. This deficiency recommends universal removal of the existing movable partitions and upgrades to a permeate wall systems.

Interior doors are typically wood in wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include solid wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at some of the stairwells and exit ways, access doors, and folding closet doors. Doors are generally in fair condition and are a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the hallway, transoms, wooden doors and frames with consideration for the exit stair doors and construction.

This schools interior door system is a mix of the original wooden doors and frames and a few solid core wooden several interior doors are typically wood in wood frames with transom lites or sidelights, glass glazing. 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 with new doors, frames and hardware.

Fittings include: marker and chalkboards; tack boards; toilet accessories and a mix of wooden and marble toilet partitions; fixed storage wooden shelving and cabinets. Most of the systems are in good condition however, there are several tack boards in the hallways for student displays. The tack board systems are beyond the expected service life for this application. Remove and replace tack boards is recommended.

Stair construction is concrete with concrete treads and landings are finished with concrete and nosings are metal. Current legislation regarding building accessibility by the handicapped requires that stairs 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 renovation efforts should include comprehensive stair railing upgrades.

Interior wall finishes are typically painted plaster, marble or brick in fair condition. This school is on a cyclical program of renewal and each painted surface is renewed at year's end. Other wall finishes include: ceramic tile at restrooms in good condition. Wall finishes are generally in fair condition.

Interior floor finishes are typically a mix of vinyl tile and wooden floors in classrooms and sealed concrete in the corridors. 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.

The GYM floor finish is beyond its expected life cycle for this application. Recent repairs have eliminated the trip hazards; however, there are areas that remain that warrant replacement. The floor is recommended for universal upgrade. There were no issues with the polished concrete floor finish therefore no recommendations are required at this time.

Interior ceilings are typically 2 x 4 acoustical tile in metal grid in the hallways and a few support rooms. Other ceiling finishes include: exposed or painted structure plaster. The ceiling finish is in good condition and there are no projects or recommendations required at this time.

Elevators are not present at this school. There is no elevator that services this school. To assist those that may be physically challenged and to meet the current accessibility legislation that requires wheelchair access to all floors in a building. The installation of an interior hydraulic elevator is proposed within the purview of this assessment for all floors of this school.

Institutional equipment includes: library equipment such as wooden shelving and tables, auditorium and stage equipment A/V equipment and minor laboratory equipment, gym equipment such as basketball backstops and a kitchen with kitchen equipment. The

institutional equipment is expected to have a life cycle that extends beyond the outlook of this report.

Furnishings include: fixed casework, window blinds and fixed auditorium seating. The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories and urinals and both wall and floor mounted water closets. Lavatories have dual wheel handle, single or dual lever faucets. Urinals and water closets have manual lever or push button concealed flush valves. Custodial closets have service sinks or mop sinks. There are single level stainless steel water coolers with integral refrigeration. Kitchen waste is piped through an above floor grease trap. There is a fifty gallon Bradford White gas water heater in the basement mechanical room with a small inline circulating pump installed in 2010. There is an older duplex domestic water booster pump system with pressure tank and control panel in the mechanical room. One of the pumps has been removed for repair and there are reportedly low pressure problems on the upper level. The booster system should be replaced or repaired/ upgraded with new pumps to provide adequate pressure. Two sump pumps for ground water removal are in the mechanical room. The domestic water system includes a water softener.

Water piping has been replaced since the original installation with copper. Sanitary, waste, vent and rainwater piping is original installation hub and spigot cast iron with hubless cast iron where additions or repairs were made. Water service is a four inch line and meter from Claridge St. into the mechanical room. The shut off valves are leaking and there is no backflow preventer, only a check valve. The gas service is a three inch line from E. Tabor Rd. and enters in a closet adjacent to the gym.

Plumbing fixtures have been replaced but age is unknown. Appearance and function indicate remaining service life of fifteen to twenty years. The water heater should be serviceable for ten or more years. The cast iron piping has exceeded the anticipated service life. Rainwater and vent piping should continue functioning, but the sanitary and waste piping should be inspected to determine condition and replace damaged portions. The domestic water piping may have lead solder based on age, and should be replaced based on age and condition.

HVAC- Heating is generated by two older Weil McLain one hundred ninety hp sectional cast iron low pressure steam oil fired boilers in the basement mechanical room. The boilers are Model 94 with Weil McLain burners and separate oil pumps. Boilers were installed approximately 1980 and have signs of age. There is a duplex sump pump condensate receiver that had the original pumps removed and replaced with two end suction pumps mounted on top of the sump cover. Steam escapes from the sump, indicating problems with steam traps. A new condensate receiver system should be installed. There is a chemical feed system, but no boiler feed system. There is a combustion air louver and damper and a field fabricated boiler stack into a brick chimney. An eight thousand gallon indoor oil storage tank is in an adjacent space with a partial block wall enclosure. A duplex fuel oil pump system outside the enclosure provides circulation. Oil piping near the pump assembly has several saddle patches and the oil pumps reportedly need repair or replacement.

Spaces are heated by exposed steam radiators with control valves and F&T traps. There is a house fan system in the basement that provided heat and ventilation through a central duct system that is inoperable.

There is no central air conditioning, but some areas have window air conditioners. Sixteen small DX split systems have been installed this year in classroom closets to cool individual rooms. The units are Goodman 2 ½ tons with short supply and return ducts and package condensate pumps, installed in a preformed equipment pan. There are no outside air provisions and condensing units are located on the roof. There is mechanical toilet exhaust with exposed ductwork and roof mounted fans. A small double wall makeup air hood in the kitchen is ducted with welded stainless steel ductwork to an exhaust fan. A gas makeup air unit in the kitchen is connected to the hood. The hood has an Ansul fire suppression system and there is a solenoid valve to shut off gas flow to equipment.

Steam and condensate piping is welded insulated black steel and both piping and valves have exterior corrosion. The steam piping system and radiators are from original construction and are well beyond service life. The mechanical room and boilers need a thorough maintenance cleaning, and the condensate receiver system should be replaced.

The control system is an old pneumatic system with a simplex air compressor. Radiators have pneumatic control valves most of which do not function. The newer split system air conditioning systems are controlled by individual programmable room thermostats.

FIRE PROTECTION- There are standpipes with fire hose connections in the stairwells and no sprinkler system.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from an overhead utility line along E. Tabor Road. Two 120/240V, 1 phase, 3 wire services are routed underground from two pole mounted transformers to the Main Switchboard located in Main Electrical Room 013 in the Basement. The Main Switchboard is manufactured by Frank Adam Electric Company, but is not identified with nameplate information. The Main Switchboard appears to be rated 800A, 120/240V, 2 phase, 5 wire. It is an obsolete, exposed bus, knife blade switchboard with cartridge fuses. There are several disconnect switches that are fed from the Main Switchboard that serve Panel L, Panel M, the Floor 3 closet, and one that is not labeled. There is also a 400A safety switch that feeds Panel P, via an MGM 150 kVA, 240V-208/120V, 3 phase, 4 wire phase shifting transformer and secondary side safety switch. This transformer also feeds a safety switch for Panel K. There is also a 400A, 120/240V panelboard with exposed bus, knife blade switches and cartridge fuses that is fed by the Main Switchboard that is obsolete.

The Main Switchboard needs to be replaced with a 208/120V. 3 phase, 4 wire switchboard, sized to accommodate central air conditioning and an elevator addition. All of the existing safety switches would be replaced with feeder circuit breakers in the new switchboard.

The stage lighting panelboard has exceeded its useful life and needs to be replaced. There are also (6) recessed panelboards in the corridors on Floors 1-3 that are beyond their useful life and need to be replaced.

Receptacles—Classrooms are generally provided with 4 to 5 duplex receptacles. In many classrooms, additional surface raceway system with up to (8) duplex receptacles were provided on the front and back walls of the classrooms. There are two duplex receptacles in the kitchen that need to be replaced with ground-fault circuit interrupting type, as required by code.

Lighting-- Fixtures in classrooms are typically 2x4 fluorescent grid troffers with acrylic lenses in classrooms with lay-in ceilings. Lighting is controlled by two light switches. Fixtures in corridors without ceilings are typically 1x4 surface mounted or suspended modular fluorescent fixtures. A few selected classrooms and the library have had lighting upgrades with T8 lamps, but a majority of the classrooms have 2x4 fluorescent grid troffers with T12 lamps and need to be replaced. Lighting needs to be upgraded in 28 classrooms.

The gymnasium has 8 foot long, 4 lamp surface mounted fluorescent lensed fixtures with wire guards. Lighting levels measured at 27 footcandles.

The auditorium is illuminated with (10) chain suspended incandescent fixtures with A-lamps. Lighting levels are inadequate and some of the fixture surrounds are damaged. A new lighting system is warranted for the auditorium. The stage is provided with stage lighting and work lights. There is no dimming system for the auditorium or stage lighting. Lighting control is by branch circuit breakers from the stage lighting panelboard on stage left. A dimming system for the auditorium and stage is recommended.

The kitchen has a combination of 2x4 suspended modular fluorescent fixtures and 1x4 fluorescent wraparound fixtures with T8 lamps. Lighting levels measured from 90 footcandles at the food preparation table and serving counter to 157 footcandles in the center of the kitchen.

A few of the restrooms had lighting upgrades to T8 lamps, but most still had surface mounted fluorescent with T12 lamps. Exterior lighting fixtures are located above the doors at exit discharges.

Approximately 26,500 SF, which includes classrooms, book lockers, offices, toilet rooms and stairwells, will require a lighting system upgrade.

Fire Alarm System-- The fire alarm system is an obsolete 120V wired system that includes only manual pull stations and bell notification appliances. Pull station mounting heights exceed ADA requirements. There are no visual notification appliances. The fire alarm control panel (FACP) is by S.H. Couch Company located in the Main Electrical Room in the Basement. The system has exceeded its useful life and needs to be replaced to meet current NFPA codes and ADA.

Telephone/LAN--The telephone service demarcation point is located in Music Room 113. A telephone and data outlet is provided in each classroom. Wireless access points are provided in the classrooms, corridors, gymnasium and auditorium for Wi-Fi coverage throughout the school. Smart boards are provided in many classrooms.

Intercom/Paging/Sound Systems-- The paging system is accessed through the telephone system. There are ceiling recessed speakers in classrooms, and ceiling recessed or wall mounted speakers in corridors. There is a separate sound cabinet for the auditorium that is located in the room off stage left. The cabinet was locked, but is in good condition.

Clock and Program System-- There is a speaker in each classroom for the program system. Most rooms have individual clocks. The

clock and program system control panel is located in the Main Office. The system is beyond useful life and needs to be replaced. The obsolete speakers have been abandoned in place.

Television System-- There are no televisions outlets in the classrooms.

Video Surveillance and Security Systems-- There are Interior video surveillance cameras that provide coverage of corridors, gymnasium and entrances. Surveillance cameras are monitored in the Main Office area. Magnetic door contacts are provided on exterior doors, except from the auditorium.

Emergency Power System--There is a 35 kW/44 kVA Onsite Energy standby generator with sub-base fuel oil storage tank located in the room adjacent to the Main Electrical Room. The generator, 150A ASCO 7000 Series automatic transfer switch and Panelboards ELP and EPP were installed in 2009. The standby power system mainly serves emergency lighting loads via a 50 kVA 240-208/120V, 3 phase, 4 wire phase shift transformer.

If an elevator is installed, it should be powered by the standby generator system. A larger generator, approximately sized at 150 kW should be should be provided to replace the existing standby generator.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit sign lighting is powered from emergency lighting circuits in Panelboard ELP.

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

Conveying Systems-- The building does not have an elevator.

GROUNDS

There is no school parking thus no driveways or parking lot.

There is a concrete paver system that surrounds this school that is on a consistent program of renewal. However as indicated in the photos the damage is extensive and requires upgrades. This deficiency provides a budgetary consideration for concrete sidewalk upgrades.

The landscaping is in good condition and well maintained but with no irrigation system. The landscaping is generally located near the play area of the site with limited turf sections around the general exterior of the school. This deficiency provides a budgetary consideration for the installation of an irrigation system for this site.

The trash dumpster is located near the southwestern fence open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are recommended.

The brick exterior wall leading to the main entrance of The Little School House is damaged and several brick have been removed. This presents a safety issue as the wall is breaking down while students have to use this entrance. This deficiency provides a budgetary consideration for the repair of the wall.

Site Lighting— Site lighting is provided with a few wall mounted HID lighting fixtures to illuminate the southeast side of the property. Other than for fixtures at the entrances, there are no other wall or pole mounted site lighting fixtures.

RECOMMENDATIONS

- Replace auditorium seating
- Remove and replace wood flooring Gym.
- Remove and replace wood flooring Classroom / Hallway
- Replace inadequate or install proper stair railing.
- Replace missing or damaged signage
- Replace blackboards with marker boards.
- Remove and replace tackboards.
- Remove and replace interior doors.
- Remove folding wood partitions; replace with metal studs and gypsum board painted
- Remove non-rated interior glass panels and replace with studs, gypsum board, paint (E) wall
- Install fire rated walls and door where required - insert number of doors.

- Add external 4 stop elevator
- Remove and Replace Built Up Roof
- Remove and replace exterior doors - per leaf
- Remove and replace aluminum windows
- Repair cracks in masonry - replace missing mortar and repoint
- Remove and replace defective irrigation system - pop up spray system
- Build secure trash dumpster enclosure
- Remove and replace concrete sidewalk or paving
- Repair and regrout stone/brick retaining wall
- Remove the existing window air conditioning units and install a 350 ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.
- Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.
- Provide a new central station air handling unit for the auditorium 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.
- 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, to replace steam heating system.
- Provide a new central station air handling unit for the cafeteria 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.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Install new direct digital control system and building automation system with remote computer control capability and graphics package.
- Provide a new central station air handling unit for the gymnasium 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.
- Install new ten thousand gallon concrete oil storage tank outdoors above grade with tank monitoring system.
- Install new duplex fuel oil pump system with control panel. Install new black steel fuel oil piping connected to tank, pumps and boilers.
- Install new duplex condensate return system with duplex pumps and control panel.
- Replace existing check valve assembly on main water service inside building with reduced pressure approved backflow assembly
- Replace domestic hot and cold water pipe, fittings, valves, hangers and insulation.
- Repair domestic water booster system and upgrade pumps if required to provide adequate pressure.
- Replace existing Main Switchboard and service distribution equipment with a 2000A, 208/120V, 3 phase, 4 wire service switchboard with associated feeder circuit breakers and feeders to serve added central air conditioning equipment, an elevator addition, and a fire pump (if required).
- Replace 120/240V, 1 phase panelboards in corridors on Floors 1-3 and Auditorium/Stage lighting Panelboard. Total of (7) panelboards.
- Replace two (2) duplex receptacles in the kitchen with ground-fault circuit-interrupting type.
- Replace lighting system in the auditorium and provide lighting control system.
- Replace fluorescent lighting fixtures in classrooms, offices, toilet rooms and stairwells (Approximately 26,500 SF)
- Replace fire alarm system with an addressable type system, including pull stations, smoke and heat detectors, and audible and visual notification appliances.
- Replace clock and program system.
- Provide magnetic door contacts on the four (4) exterior exit doors in the Auditorium.
- Replace standby generator system to be sized for all emergency egress and exit lighting and for an elevator addition.

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B724001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S724001		

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	15.00 %	0.00 %	$0.00
A20 - Basement Construction	15.00 %	0.00 %	$0.00
B10 - Superstructure	15.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	22.32 %	62.27 %	$1,935,260.65
B30 - Roofing	97.19 %	74.58 %	$453,931.09
C10 - Interior Construction	32.95 %	76.91 %	$1,020,759.56
C20 - Stairs	15.00 %	219.97 %	$166,906.94
C30 - Interior Finishes	70.82 %	36.67 %	$917,707.35
D10 - Conveying	105.71 %	388.90 %	$919,712.71
D20 - Plumbing	75.34 %	55.87 %	$639,117.53
D30 - HVAC	96.95 %	81.87 %	$5,100,958.63
D40 - Fire Protection	105.71 %	176.39 %	$795,252.95
D50 - Electrical	93.25 %	68.53 %	$2,050,393.76
E10 - Equipment	28.22 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	486.27 %	$642,623.65
Totals:	**56.48 %**	**53.87 %**	**$14,642,624.82**

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	$15.74	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$995,272
A1030	Slab on Grade	$6.62	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$418,596
A2010	Basement Excavation	$5.60	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$354,099
A2020	Basement Walls	$10.88	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$687,964
B1010	Floor Construction	$65.82	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$4,161,930
B1020	Roof Construction	$12.16	S.F.	63,232	100	1930	2030		15.00 %	0.00 %	15			$768,901
B2010	Exterior Walls	$32.18	S.F.	63,232	100	1930	2030		15.00 %	6.84 %	15		$139,234.35	$2,034,806
B2020	Exterior Windows	$15.71	S.F.	63,232	40	1990	2030		37.50 %	164.81 %	15		$1,637,175.20	$993,375
B2030	Exterior Doors	$1.26	S.F.	63,232	25	1990	2015	2020	20.00 %	199.38 %	5		$158,851.10	$79,672
B3010105	Built-Up	$32.69	S.F.	15,000	20	1990	2010	2037	110.00 %	92.57 %	22		$453,931.09	$490,350
B3010140	Shingle & Tile	$33.54	S.F.	3,500	25	2001	2026		44.00 %	0.00 %	11			$117,390
B3020	Roof Openings	$0.06	S.F.	15,000	20	1990	2010	2026	55.00 %	0.00 %	11			$900
C1010	Partitions	$15.32	S.F.	63,232	100	1930	2030		15.00 %	53.40 %	15		$517,293.76	$968,714
C1020	Interior Doors	$3.00	S.F.	63,232	40	1930	1970	2057	105.00 %	213.90 %	42		$405,764.53	$189,696
C1030	Fittings	$2.67	S.F.	63,232	40	1930	1970	2037	55.00 %	57.87 %	22		$97,701.27	$168,829
C2010	Stair Construction	$1.20	S.F.	63,232	100	1930	2030		15.00 %	219.97 %	15		$166,906.94	$75,878
C3010230	Paint & Covering	$11.29	S.F.	41,232	10	2011	2021		60.00 %	0.00 %	6			$465,509
C3010232	Wall Tile	$2.25	S.F.	22,000	30	1990	2020		16.67 %	0.00 %	5			$49,500

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020411	Carpet	$6.24	S.F.	1,000	10	2011	2021		60.00 %	0.00 %	6			$6,240
C3020412	Terrazzo & Tile	$64.54	S.F.	2,232	50	1930	1980	2020	10.00 %	0.00 %	5			$144,053
C3020413	Vinyl Flooring	$8.27	S.F.	15,000	20	1930	1950	2020	25.00 %	0.00 %	5			$124,050
C3020414	Wood Flooring	$19.04	S.F.	30,000	25	1930	1955	2042	108.00 %	160.66 %	27		$917,707.35	$571,200
C3020415	Concrete Floor Finishes	$0.83	S.F.	10,000	50	1930	1980	2030	30.00 %	0.00 %	15			$8,300
C3030	Ceiling Finishes	$17.93	S.F.	63,232	25	2008	2033		72.00 %	0.00 %	18			$1,133,750
D1010	Elevators and Lifts	$3.74	S.F.	63,232	35	1930	1965	2052	105.71 %	388.90 %	37		$919,712.71	$236,488
D2010	Plumbing Fixtures	$11.97	S.F.	63,232	35	2005	2040		71.43 %	0.00 %	25			$756,887
D2020	Domestic Water Distribution	$1.49	S.F.	63,232	25			2042	108.00 %	385.13 %	27		$362,849.89	$94,216
D2030	Sanitary Waste	$2.58	S.F.	63,232	25			2042	108.00 %	169.34 %	27		$276,267.64	$163,139
D2040	Rain Water Drainage	$2.05	S.F.	63,232	30	1930	1960	2025	33.33 %	0.00 %	10			$129,626
D3020	Heat Generating Systems	$16.54	S.F.	63,232	35	1985	2020	2024	25.71 %	24.78 %	9		$259,203.23	$1,045,857
D3030	Cooling Generating Systems	$21.69	S.F.	63,232	30			2047	106.67 %	66.45 %	32		$911,416.47	$1,371,502
D3040	Distribution Systems	$38.07	S.F.	63,232	25			2042	108.00 %	114.45 %	27		$2,755,057.35	$2,407,242
D3050	Terminal & Package Units	$10.28	S.F.	63,232	20			2042	135.00 %	0.00 %	27			$650,025
D3060	Controls & Instrumentation	$11.95	S.F.	63,232	20			2037	110.00 %	155.54 %	22		$1,175,281.58	$755,622
D4010	Sprinklers	$6.24	S.F.	63,232	35			2052	105.71 %	201.55 %	37		$795,252.95	$394,568
D4020	Standpipes	$0.89	S.F.	63,232	35			2052	105.71 %	0.00 %	37			$56,276
D5010	Electrical Service/Distribution	$7.80	S.F.	63,232	30	1930	1960	2047	106.67 %	171.47 %	32		$845,706.79	$493,210
D5020	Lighting and Branch Wiring	$27.92	S.F.	63,232	20	1930	1950	2035	100.00 %	31.80 %	20		$561,449.45	$1,765,437
D5030	Communications and Security	$10.46	S.F.	63,232	15	1930	1945	2025	66.67 %	75.80 %	10		$501,330.80	$661,407
D5090	Other Electrical Systems	$1.14	S.F.	63,232	30	2009	2039		80.00 %	196.86 %	24		$141,906.72	$72,084
E1020	Institutional Equipment	$4.73	S.F.	63,232	35	1930	1965	2020	14.29 %	0.00 %	5			$299,087
E1090	Other Equipment	$10.86	S.F.	63,232	35	1930	1965	2027	34.29 %	0.00 %	12			$686,700
E2010	Fixed Furnishings	$2.09	S.F.	63,232	40	1930	1970	2027	30.00 %	486.27 %	12		$642,623.65	$132,155
								Total	**56.48 %**	**53.87 %**			**$14,642,624.82**	**$27,180,502**

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
Painted drywall 10

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

Note: Tile 5%
Vinyl 25%
Wood 55%
Concrete 15%

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

Note: There are two (2) phase shifting transformers from 240V, 1 phase to 208/120V, 3 phase. 150 kVA and 50 kVA

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:	**$14,642,625**	**$0**	**$0**	**$0**	**$0**	**$888,004**	**$619,622**	**$0**	**$0**	**$1,501,067**	**$1,169,389**	**$18,820,707**
*** 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	$139,234	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$139,234**
B2020 - Exterior Windows	$1,637,175	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,637,175**
B2030 - Exterior Doors	$158,851	$0	$0	$0	$0	$101,599	$0	$0	$0	$0	$0	**$260,450**
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	$453,931	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$453,931**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$517,294	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$517,294**
C1020 - Interior Doors	$405,765	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$405,765**
C1030 - Fittings	$97,701	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$97,701**

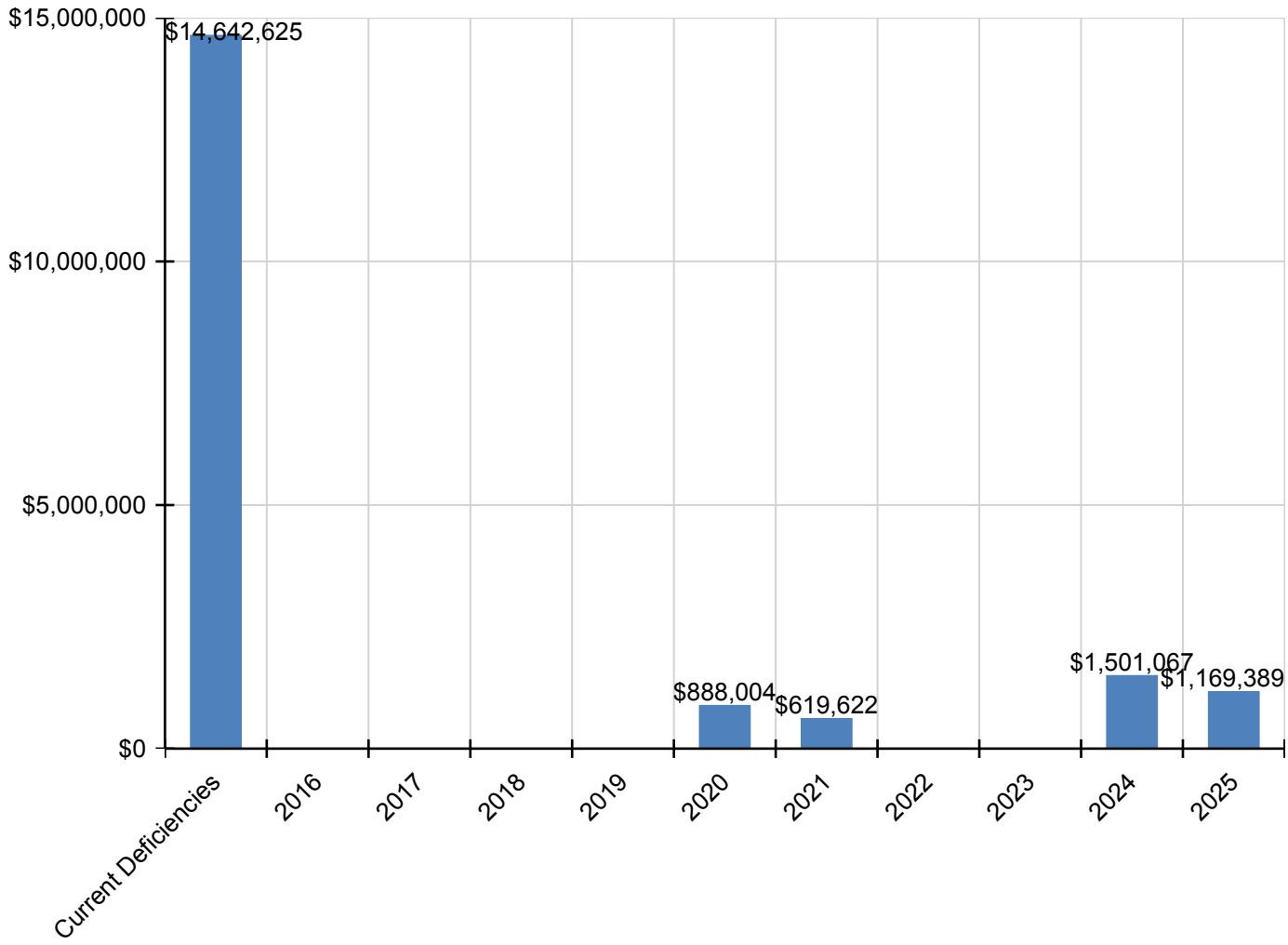
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$166,907	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$166,907**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$611,426	$0	$0	$0	$0	**$611,426**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$63,122	$0	$0	$0	$0	$0	**$63,122**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$8,196	$0	$0	$0	$0	**$8,196**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$183,697	$0	$0	$0	$0	$0	**$183,697**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$158,189	$0	$0	$0	$0	$0	**$158,189**
C3020414 - Wood Flooring	$917,707	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$917,707**
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	$919,713	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$919,713**
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	$362,850	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$362,850**
D2030 - Sanitary Waste	$276,268	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$276,268**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$191,626	**$191,626**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$259,203	$0	$0	$0	$0	$0	$0	$0	$0	$1,501,067	$0	**$1,760,270**
D3030 - Cooling Generating Systems	$911,416	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$911,416**
D3040 - Distribution Systems	$2,755,057	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,755,057**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,175,282	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,175,282**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$795,253	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$795,253**
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	$845,707	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$845,707**
D5020 - Lighting and Branch Wiring	$561,449	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$561,449**

D5030 - Communications and Security	$501,331	$0	$0	$0	$0	$0	$0	$0	$0	$0	$977,762	**$1,479,093**
D5090 - Other Electrical Systems	$141,907	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$141,907**
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	$381,397	$0	$0	$0	$0	$0	**$381,397**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$642,624	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$642,624**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

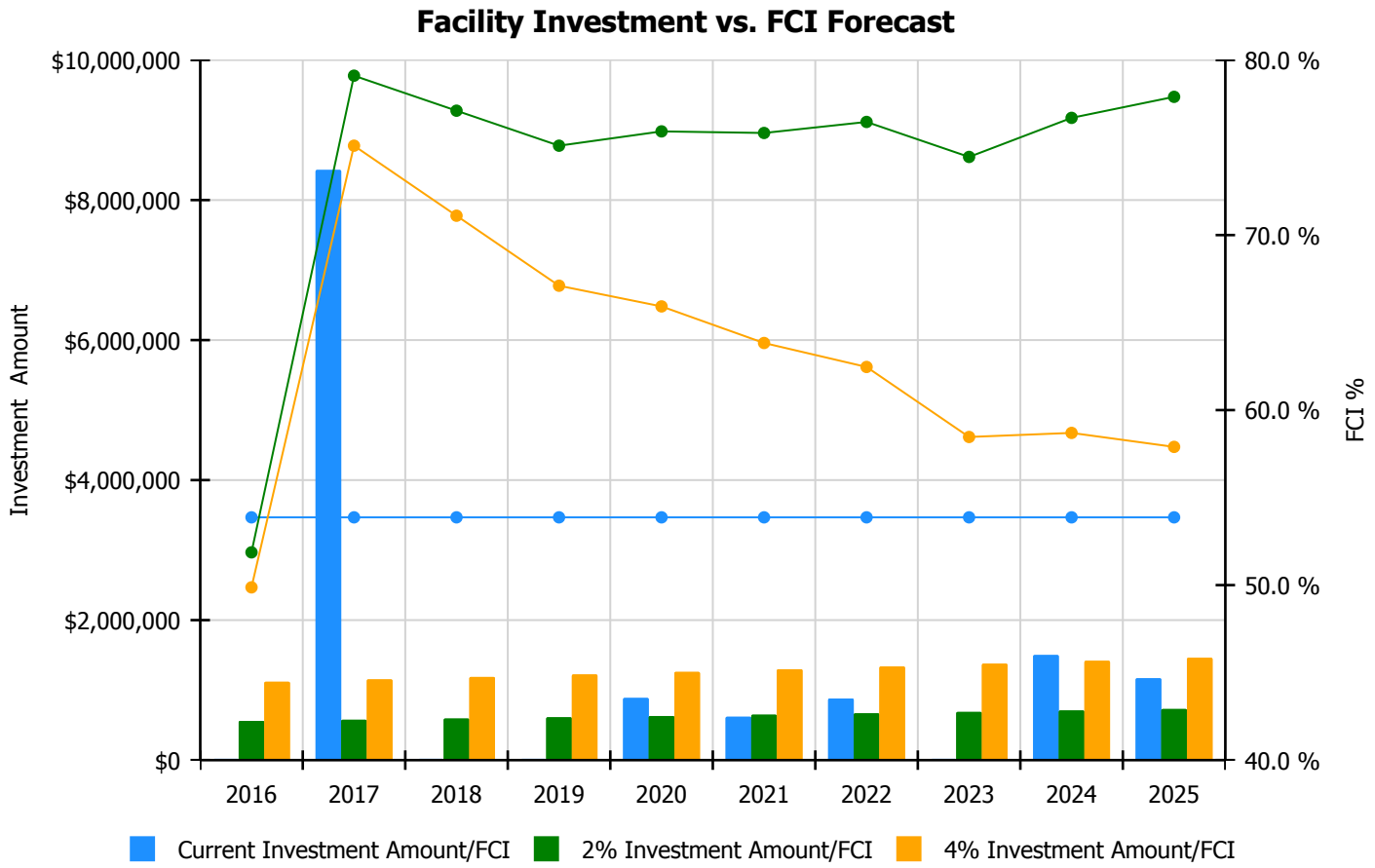
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

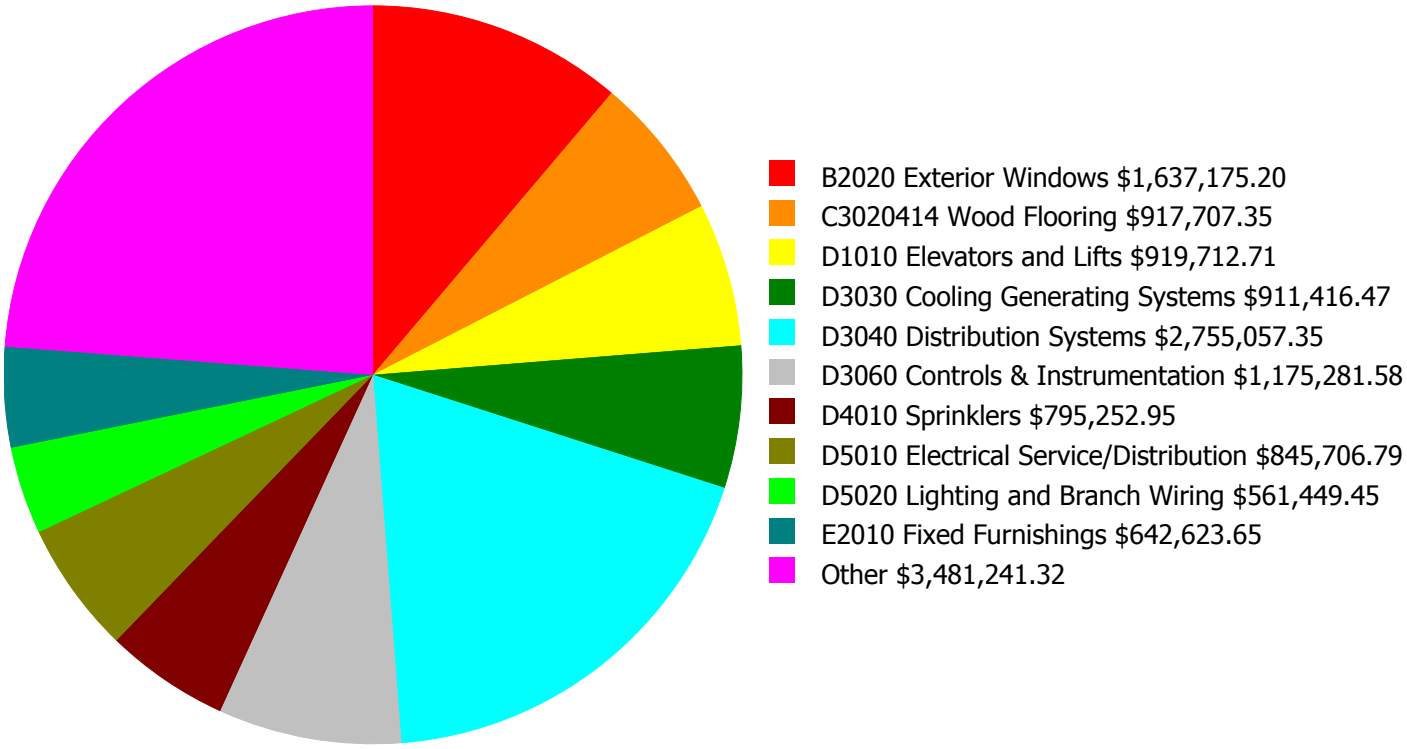
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 53.87%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$559,918.00	51.87 %	$1,119,837.00	49.87 %
2017	$8,429,761	$576,716.00	79.11 %	$1,153,432.00	75.11 %
2018	$0	$594,017.00	77.11 %	$1,188,035.00	71.11 %
2019	$0	$611,838.00	75.11 %	$1,223,676.00	67.11 %
2020	$888,004	$630,193.00	75.92 %	$1,260,386.00	65.92 %
2021	$619,622	$649,099.00	75.83 %	$1,298,198.00	63.83 %
2022	$879,393	$668,572.00	76.46 %	$1,337,144.00	62.46 %
2023	$0	$688,629.00	74.46 %	$1,377,258.00	58.46 %
2024	$1,501,067	$709,288.00	76.70 %	$1,418,576.00	58.70 %
2025	$1,169,389	$730,566.00	77.90 %	$1,461,133.00	57.90 %
Total:	**$13,487,236**	**$6,418,836.00**		**$12,837,675.00**	

Deficiency Summary by System

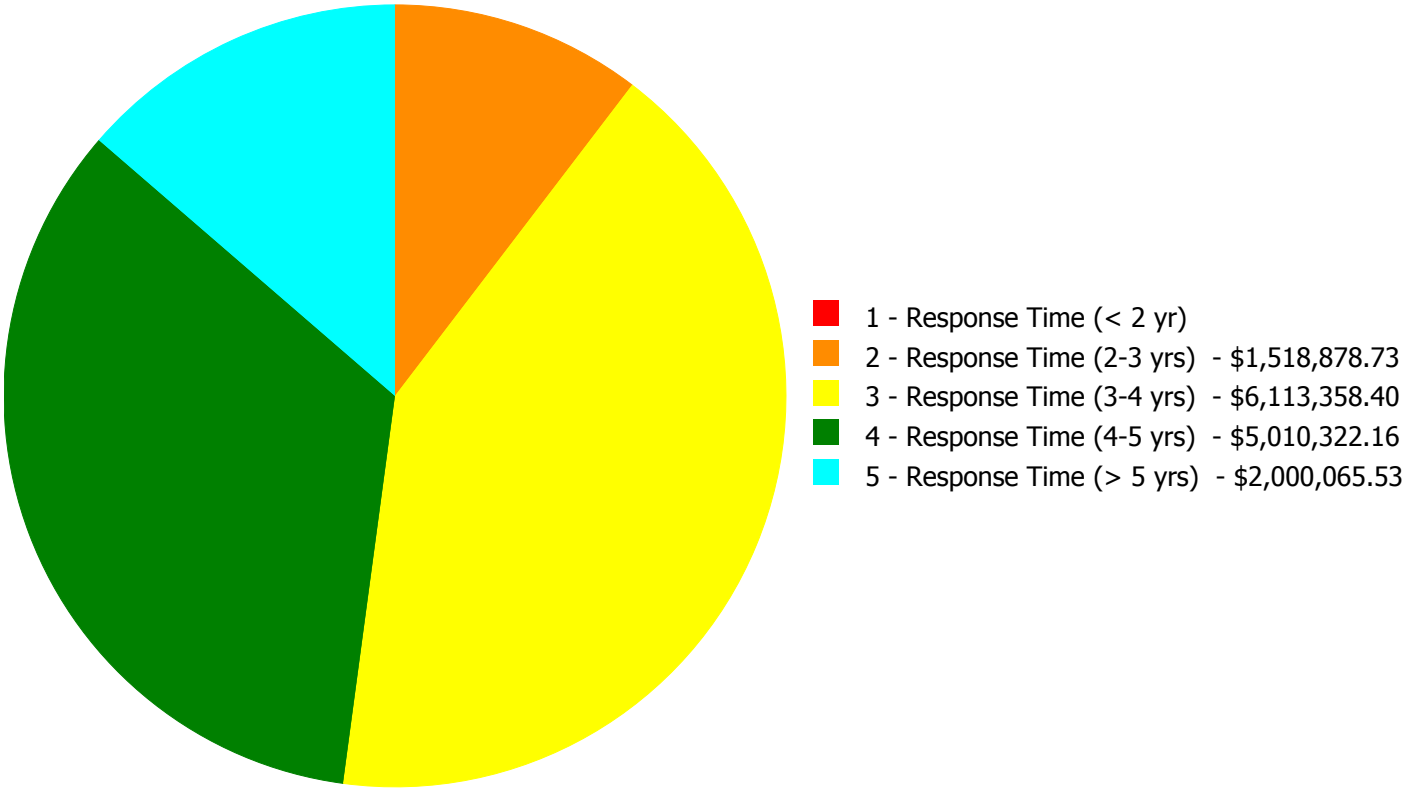
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $14,642,624.82

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: $14,642,624.82

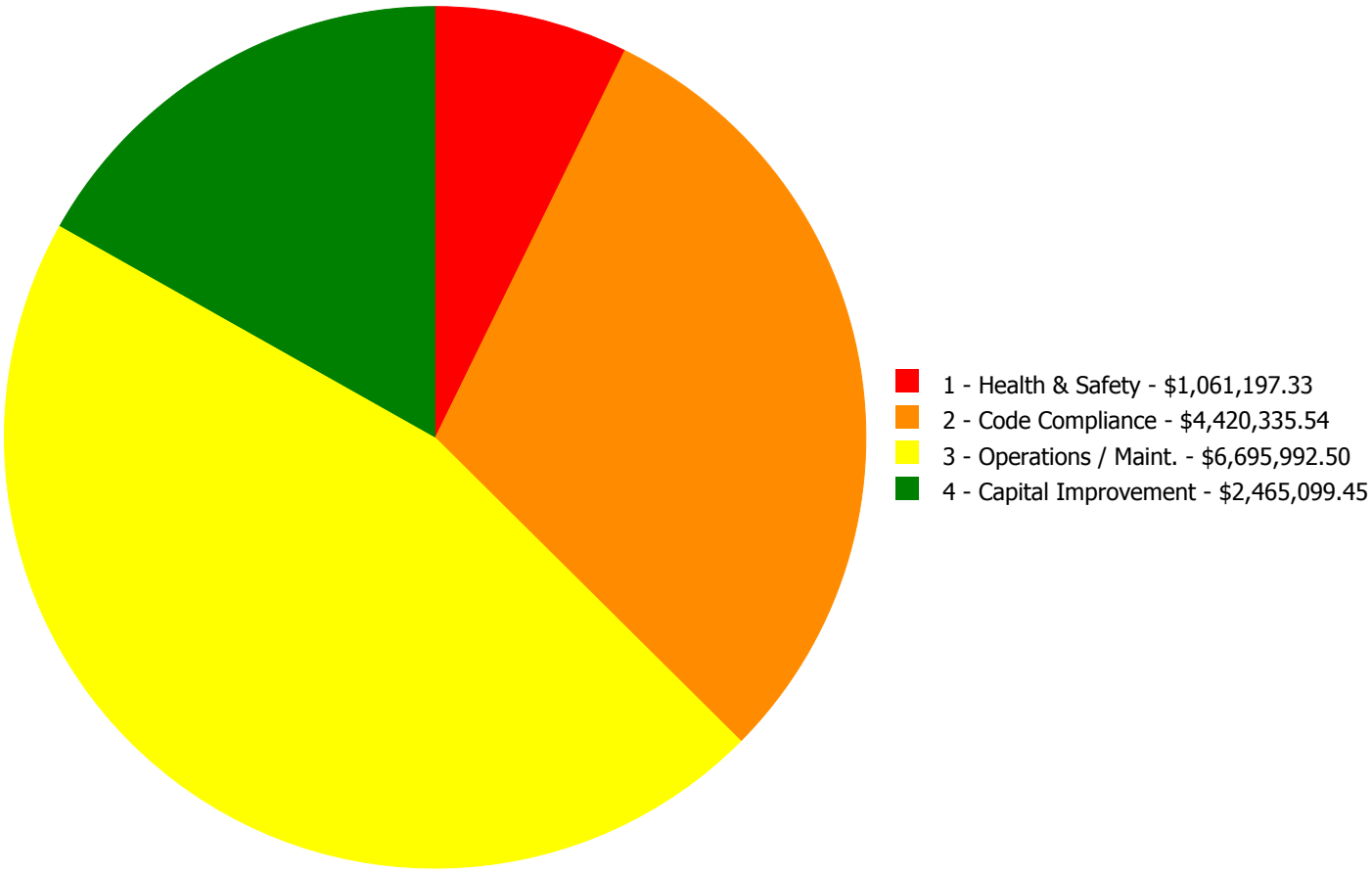
Deficiency By Priority Investment Table

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
B2010	Exterior Walls	$0.00	$0.00	$0.00	$139,234.35	$0.00	$139,234.35
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,637,175.20	$0.00	$1,637,175.20
B2030	Exterior Doors	$0.00	$0.00	$0.00	$158,851.10	$0.00	$158,851.10
B3010105	Built-Up	$0.00	$0.00	$453,931.09	$0.00	$0.00	$453,931.09
C1010	Partitions	$0.00	$0.00	$517,293.76	$0.00	$0.00	$517,293.76
C1020	Interior Doors	$0.00	$0.00	$0.00	$405,764.53	$0.00	$405,764.53
C1030	Fittings	$0.00	$0.00	$0.00	$50,276.38	$47,424.89	$97,701.27
C2010	Stair Construction	$0.00	$0.00	$166,906.94	$0.00	$0.00	$166,906.94
C3020414	Wood Flooring	$0.00	$786,606.30	$0.00	$0.00	$131,101.05	$917,707.35
D1010	Elevators and Lifts	$0.00	$0.00	$0.00	$0.00	$919,712.71	$919,712.71
D2020	Domestic Water Distribution	$0.00	$44,187.06	$274,202.73	$44,460.10	$0.00	$362,849.89
D2030	Sanitary Waste	$0.00	$0.00	$276,267.64	$0.00	$0.00	$276,267.64
D3020	Heat Generating Systems	$0.00	$0.00	$0.00	$0.00	$259,203.23	$259,203.23
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$911,416.47	$0.00	$911,416.47
D3040	Distribution Systems	$0.00	$0.00	$2,755,057.35	$0.00	$0.00	$2,755,057.35
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,175,281.58	$0.00	$1,175,281.58
D4010	Sprinklers	$0.00	$0.00	$795,252.95	$0.00	$0.00	$795,252.95
D5010	Electrical Service/Distribution	$0.00	$687,514.10	$158,192.69	$0.00	$0.00	$845,706.79
D5020	Lighting and Branch Wiring	$0.00	$571.27	$443,894.21	$116,983.97	$0.00	$561,449.45
D5030	Communications and Security	$0.00	$0.00	$272,359.04	$228,971.76	$0.00	$501,330.80
D5090	Other Electrical Systems	$0.00	$0.00	$0.00	$141,906.72	$0.00	$141,906.72
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$0.00	$642,623.65	$642,623.65
	Total:	$0.00	$1,518,878.73	$6,113,358.40	$5,010,322.16	$2,000,065.53	$14,642,624.82

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: $14,642,624.82

Deficiency Details by Priority

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

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

System: C3020414 - Wood Flooring

Location: Building Wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace wood flooring
Qty: 30,000.00
Unit of Measure: S.F.
Estimate: $786,606.30
Assessor Name: System
Date Created: 08/31/2015

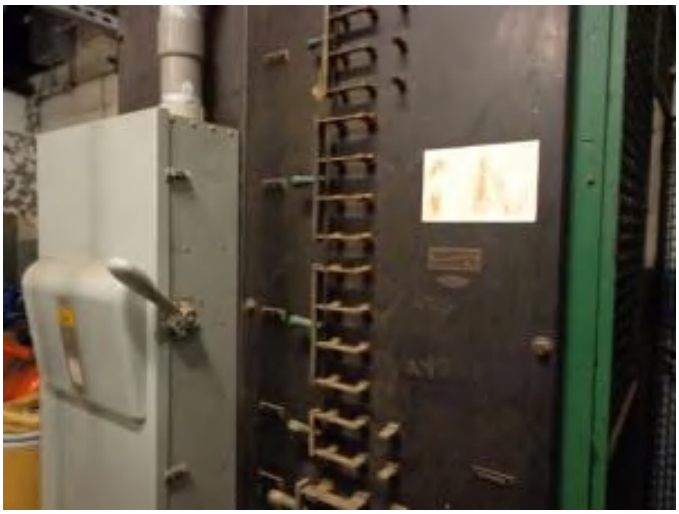
Notes: The classrooms in this school have a wooden floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish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

System: D2020 - Domestic Water Distribution

Location: mechanical room
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 2 - Response Time (2-3 yrs)
Correction: Replace duplex domestic booster pump set (5 HP)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $44,187.06
Assessor Name: System
Date Created: 08/13/2015

Notes: Replace or repair domestic water booster system and upgrade pumps if required to provide adequate pressure.

System: D5010 - Electrical Service/Distribution



Location: Main Electrical Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $687,514.10

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace existing Main Switchboard and service distribution equipment with a 2000A, 208/120V, 3 phase, 4 wire service switchboard with associated feeder circuit breakers and feeders to serve added central air conditioning equipment, an elevator addition, and a fire pump (if required).

System: D5020 - Lighting and Branch Wiring

Location: Kitchen

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace Wiring Device

Qty: 2.00

Unit of Measure: Ea.

Estimate: $571.27

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace two (2) duplex receptacles in the kitchen with ground-fault circuit-interrupting type.

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

System: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 15,000.00

Unit of Measure: S.F.

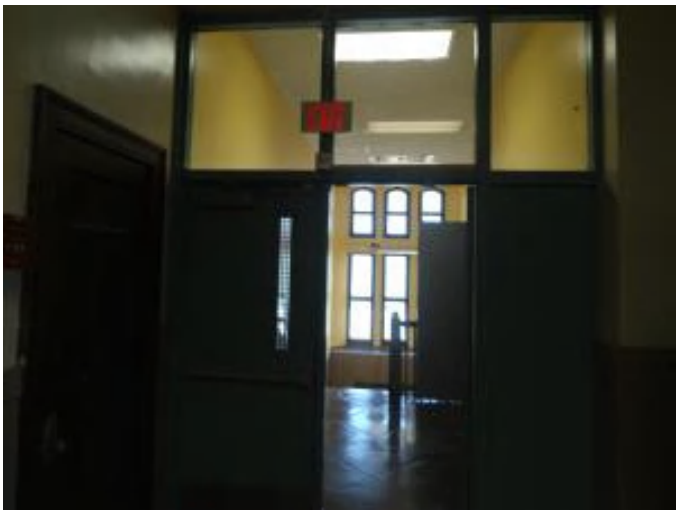
Estimate: $453,931.09

Assessor Name: System

Date Created: 08/31/2015

Notes: There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. Parapet heights, coping materials, and the height of the flashing also varies in different sections. The main roof is a built up application that was installed in the early 1990'S. The other built up roofs have not conclusive installation dates and have been seal coated several times to extend the life cycle of the application. Considering the age and condition of the roofing systems, universal upgrades are recommended. Remove and replace all roof sections.

System: C1010 - Partitions



Location: Building Wide

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 100.00

Unit of Measure: S.F.

Estimate: $469,066.78

Assessor Name: System

Date Created: 08/31/2015

Notes: Interior doors are typically wood in wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include solid wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at some of the stairwells and exit ways, access doors, and folding closet doors. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the hallway, transoms, wooden doors and frames with consideration for the exit stair doors and construction.

System: C1010 - Partitions

Location: Library

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 1,500.00

Unit of Measure: S.F.

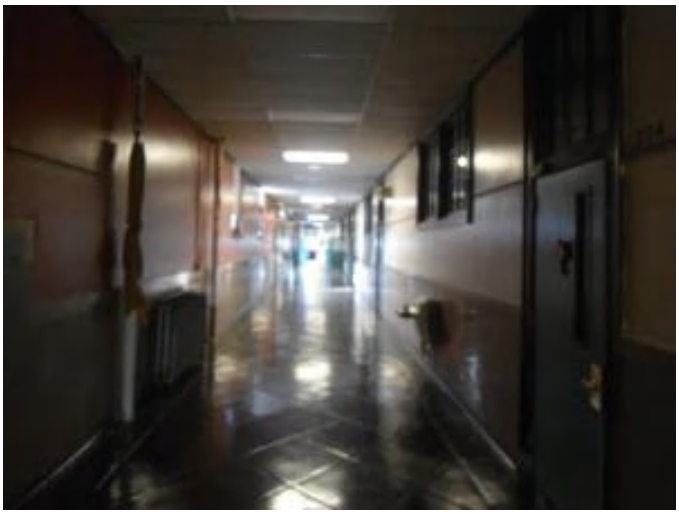
Estimate: $26,810.65

Assessor Name: System

Date Created: 08/31/2015

Notes: The movable partition that has been modified and no longer functions as originally designed the Library and is a good example for a universal correction. This wall has been modified to suite the needs of the Library however does not reflect the most recent code requirements. This deficiency recommends universal removal of the existing movable partitions and upgrades to a permeate wall systems.

System: C1010 - Partitions



Location: Hallways

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Remove non-rated interior glass panels and replace with studs, gypsum board, paint (E) wall

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $21,416.33

Assessor Name: System

Date Created: 08/31/2015

Notes: There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

System: C2010 - Stair Construction

Location: Stairs

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $166,906.94

Assessor Name: System

Date Created: 08/31/2015

Notes: Current legislation regarding building accessibility by the handicapped requires that stairs 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 renovation efforts should include comprehensive stair railing upgrades.

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: 63,232.00

Unit of Measure: S.F.

Estimate: $274,202.73

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace domestic hot and cold water pipe, fittings, valves, hangers 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: 63,232.00

Unit of Measure: S.F.

Estimate: $276,267.64

Assessor Name: System

Date Created: 08/13/2015

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

System: D3040 - Distribution Systems

Location: entire building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 29.00

Unit of Measure: C

Estimate: $2,154,417.52

Assessor Name: System

Date Created: 08/13/2015

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, to replace steam heating system.

System: D3040 - Distribution Systems

Location: auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $257,700.71

Assessor Name: System

Date Created: 08/13/2015

Notes: Provide a new central station air handling unit for the auditorium 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: D3040 - Distribution Systems

Location: gymnasium

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 4,000.00

Unit of Measure: Ea.

Estimate: $192,307.62

Assessor Name: System

Date Created: 08/13/2015

Notes: Provide a new central station air handling unit for the gymnasium 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: D3040 - Distribution Systems

Location: cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 250.00

Unit of Measure: Pr.

Estimate: $108,901.09

Assessor Name: System

Date Created: 08/13/2015

Notes: Provide a new central station air handling unit for the cafeteria 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: D3040 - Distribution Systems

Location: mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Condensate Receiver Pump Set

Qty: 1.00

Unit of Measure: Ea.

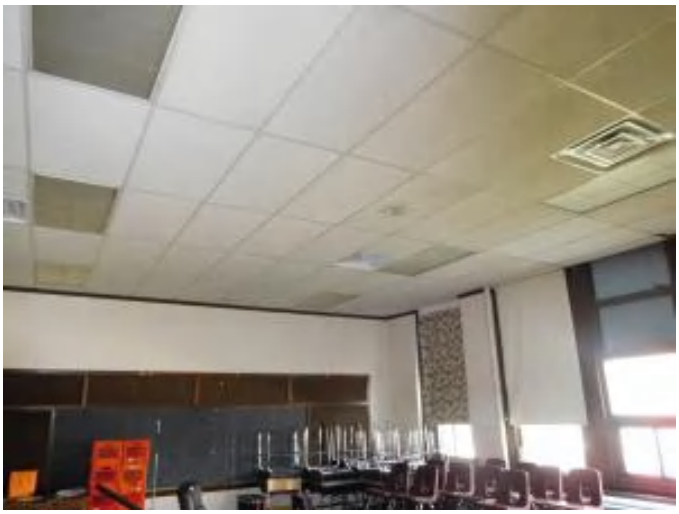
Estimate: $41,730.41

Assessor Name: System

Date Created: 08/13/2015

Notes: Install new duplex condensate return system with duplex pumps and control panel.

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: 63,232.00

Unit of Measure: S.F.

Estimate: $795,252.95

Assessor Name: System

Date Created: 08/13/2015

Notes: Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.

System: D5010 - Electrical Service/Distribution

Location: Corridors - Floor 1-3

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 7.00

Unit of Measure: Ea.

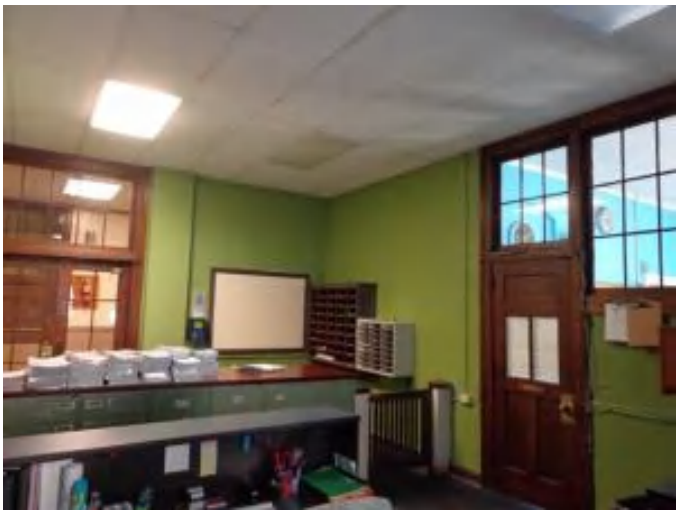
Estimate: $158,192.69

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace 120/240V, 1 phase panelboards in corridors on Floors 1-3 and Auditorium/Stage lighting Panelboard. Total of (7) panelboards.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms, Toilet Rooms, Stairwells
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 26,500.00
Unit of Measure: S.F.
Estimate: $443,894.21
Assessor Name: System
Date Created: 08/07/2015

Notes: Replace fluorescent lighting fixtures in classrooms, offices, toilet rooms and stairwells (Approximately 26,500 SF)

System: D5030 - Communications and Security

Location: Entire Building
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 63,232.00
Unit of Measure: S.F.
Estimate: $272,359.04
Assessor Name: System
Date Created: 08/07/2015

Notes: Replace fire alarm system with an addressable type system, including pull stations, smoke and heat detectors, and audible and visual notification appliances.

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

System: B2010 - Exterior Walls

Location: Exterior Brick Surface

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 5,000.00

Unit of Measure: S.F.

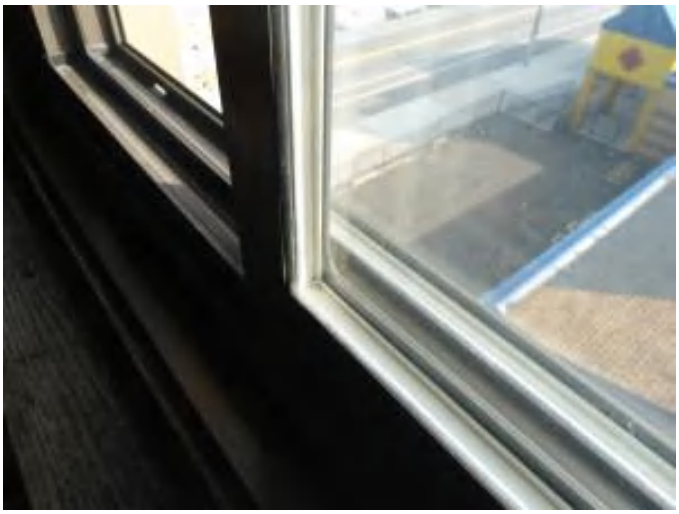
Estimate: $139,234.35

Assessor Name: System

Date Created: 08/31/2015

Notes: The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

System: B2020 - Exterior Windows



Location: Exterior Windows

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: 300.00

Unit of Measure: Ea.

Estimate: $1,637,175.20

Assessor Name: System

Date Created: 08/31/2015

Notes: Exterior windows have been upgraded from the original applications. The current system is estimated to have been installed in the 1990's. 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: B2030 - Exterior Doors

Location: Exterior Doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 20.00

Unit of Measure: Ea.

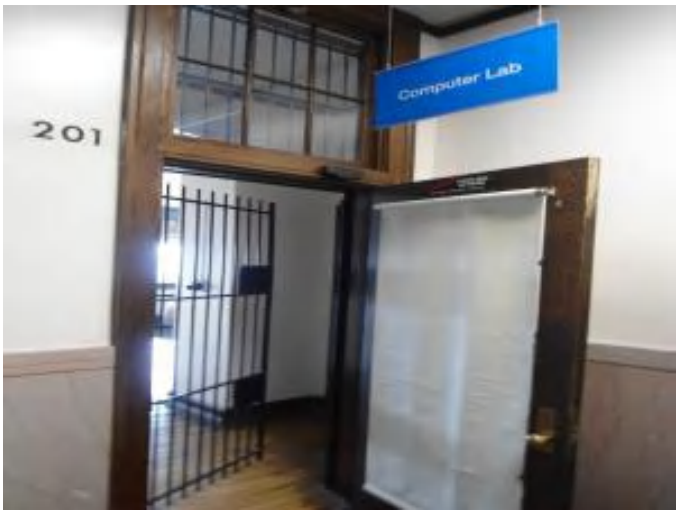
Estimate: $158,851.10

Assessor Name: System

Date Created: 08/31/2015

Notes: The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. Special consideration for the main entrance door system to extend the concrete pad and prevent pinch point injury as the door currently extends beyond the concrete step. The exterior door system, store front and service doors are recommended for upgrade.

System: C1020 - Interior Doors



Location: Building Wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 100.00

Unit of Measure: Ea.

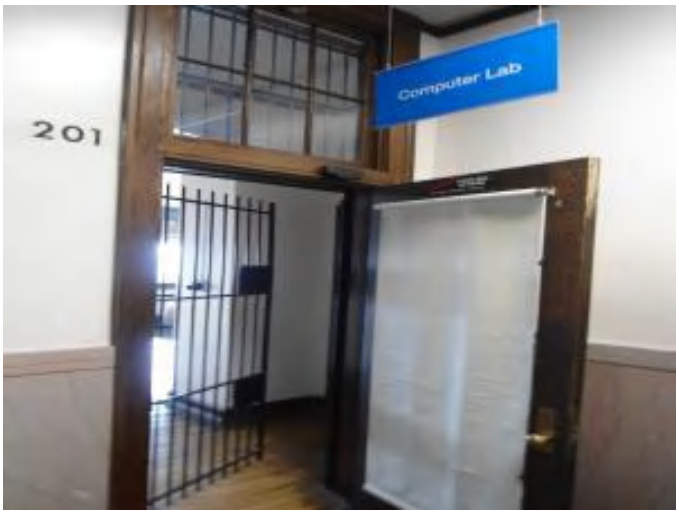
Estimate: $405,764.53

Assessor Name: System

Date Created: 08/31/2015

Notes: This schools interior door system is a mix of the original wooden doors and frames and a few solid core wooden several interior doors are typically wood in wood frames with transom lites or sidelights, glass glazing. 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 with new doors, frames and hardware.

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: $50,276.38

Assessor Name: System

Date Created: 08/31/2015

Notes: There is no directional signage and room signage is scarce 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: D2020 - Domestic Water Distribution

Location: mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide 4" reduced pressure back flow preventer

Qty: 1.00

Unit of Measure: Ea.

Estimate: $44,460.10

Assessor Name: System

Date Created: 08/13/2015

Notes: Replace existing check valve assembly on main water service inside building with reduced pressure approved backflow assembly

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: 63,232.00

Unit of Measure: S.F.

Estimate: $911,416.47

Assessor Name: System

Date Created: 08/13/2015

Notes: Remove the existing window air conditioning units and install a 160 ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.

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: 63,232.00

Unit of Measure: S.F.

Estimate: $1,175,281.58

Assessor Name: System

Date Created: 08/13/2015

Notes: Install new direct digital control system and building automation system with remote computer control capability and graphics package.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 3,680.00

Unit of Measure: S.F.

Estimate: $116,983.97

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace lighting system in the auditorium and provide lighting control system.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace clock/program system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $211,310.88
Assessor Name: System
Date Created: 08/07/2015

Notes: Replace clock and program system.

System: D5030 - Communications and Security

This deficiency has no image.

Location: Auditorium
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Security System
Qty: 8.00
Unit of Measure: Ea.
Estimate: $17,660.88
Assessor Name: System
Date Created: 08/07/2015

Notes: Provide magnetic door contacts on the four (4) exterior exit doors in the Auditorium.

System: D5090 - Other Electrical Systems

Location: Main Electrical Room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $141,906.72

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace standby generator system to be sized for all emergency egress and exit lighting and for an elevator addition.

Priority 5 - Response Time (> 5 yrs):

System: C1030 - Fittings

Location: Building WIde

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 60.00

Unit of Measure: Ea.

Estimate: $39,795.08

Assessor Name: System

Date Created: 08/31/2015

Notes: The classroom chalk boards are original to the buildings construction. This system is beyond its expected life and universal upgrades are warranted. Remove and upgrade chalkboards to new marker board systems.

System: C1030 - Fittings

Location: Building Wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace tackboards - select size

Qty: 10.00

Unit of Measure: Ea.

Estimate: $7,629.81

Assessor Name: System

Date Created: 08/31/2015

Notes: There are several tack boards in the hallways for student displays. The systems are beyond the expected service life for this application. Remove and replace tack boards is recommended.

System: C3020414 - Wood Flooring

Location: Gym

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace wood flooring

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $131,101.05

Assessor Name: System

Date Created: 08/31/2015

Notes: The GYM floor finish is beyond its expected life cycle for this application. Recent repairs have eliminated the trip hazards however, there are areas that remain that warrant replacement. The floor is recommended for universal upgrade.

System: D1010 - Elevators and Lifts

Location: Building Wide

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 1.00

Unit of Measure: Ea.

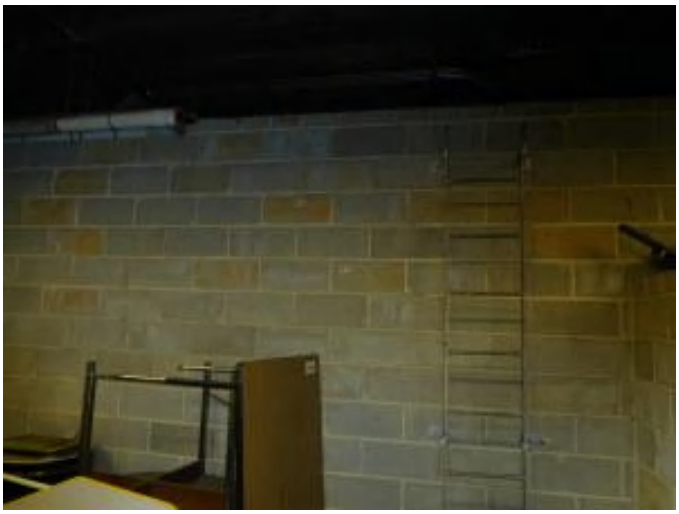
Estimate: $919,712.71

Assessor Name: System

Date Created: 08/31/2015

Notes: There is no elevator that services this school. To assist those that may be physically challenged and to meet the current accessibility legislation that requires wheelchair access to all floors in a building. The installation of an interior hydraulic elevator is proposed within the purview of this assessment for all floors of this school.

System: D3020 - Heat Generating Systems



Location: exterior, mechanical room

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide fuel oil tank, above ground concrete encased (8,000 gal)

Qty: 1.00

Unit of Measure: Ea.

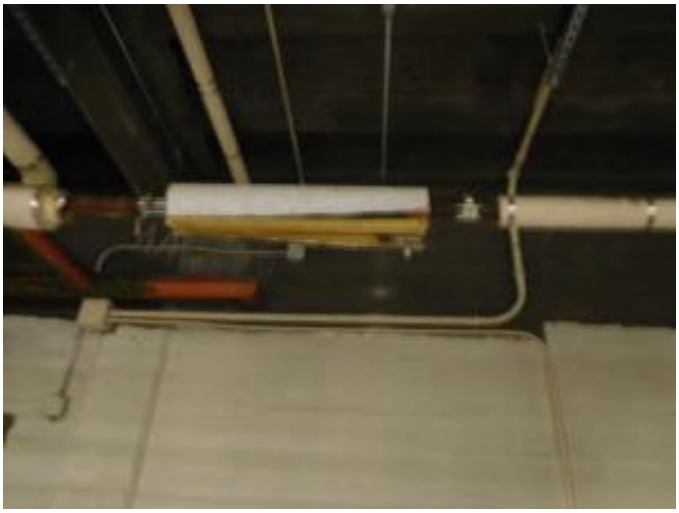
Estimate: $226,295.90

Assessor Name: System

Date Created: 08/13/2015

Notes: Install new eight thousand gallon concrete oil storage tank outdoors above grade with tank monitoring system.

System: D3020 - Heat Generating Systems



Location: mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $32,907.33

Assessor Name: System

Date Created: 08/13/2015

Notes: Install new duplex fuel oil pump system with control panel. Install new black steel fuel oil piping connected to tank, pumps and boilers.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 440.00

Unit of Measure: Ea.

Estimate: $642,623.65

Assessor Name: System

Date Created: 08/31/2015

Notes: The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school.

Equipment Inventory

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

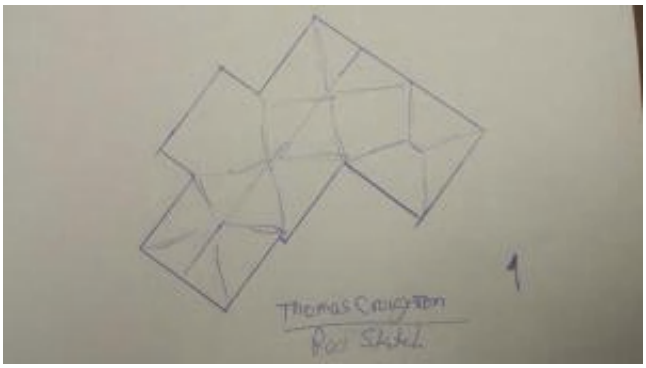
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D2020 Domestic Water Distribution	Pump, pressure booster system, 5 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	mechanical room					25	1985	2042	$9,625.00	$10,587.50
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room					35	1985	2020	$145,000.00	$159,500.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 6970 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room					35	1985	2020	$145,000.00	$159,500.00
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Main Electrical Room	Frank Adam Electric Co.	NA	NA		30			$17,525.00	$19,277.50
												Total:	**$348,865.00**

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:	Little School House
Gross Area (SF):	22,748
Year Built:	1999
Last Renovation:	
Replacement Value:	$13,433,297
Repair Cost:	$9,196.66
Total FCI:	0.07 %
Total RSLI:	65.71 %



Description:

Facility Assessment

July 2015

School District of Philadelphia

Thomas Creighton Little School House School

5401 Tabor Rd

Philadelphia, PA 19120

22,748 SF / 219 Students / LN 07

GENERAL

The Thomas Creighton Little School House School is located at 5401 Tabor Rd. The main entrance faces northeastern exterior. The main building constructed in 1999 and is a single story school. The school has 22,748 GSF.

The information for this report was collected during a site visit on July 17, 2015.

Mr. Chris Harris, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems.

ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. The steel framed superstructure is good condition. The slab on grade floor construction is in good condition and the pitched roofing system is in good condition. The exterior brick walls are in good condition. Exterior windows are double pane aluminum frame with operable and are in good condition. Exterior doors are typically metal doors and frames with glazing. Doors are in generally good condition and are ADA compliant. There is at least one handicap entrance.

Interior partitions include CMU, gypsum wallboard on metal studs. Interior partitions are in very good condition. Interior doors are typically wood in metal frames with some sidelights, wired glass glazing. Other interior doors include hollow metal in hollow metal frames at the mechanical spaces, exit ways, access doors. Doors are generally in very good condition and are ADA compliant and fire rated. Doors swing in the direction of exit and do not obstruct hallways. Fittings include: marker boards; tack boards; interior signage; wooden lockers; toilet accessories and toilet partitions; fixed storage shelving. The fittings are in very good condition and expected to have a normal life cycle that extends beyond the outlook of this report.

Special consideration for those that may be physically challenged was not a main factor in the design of The Little School House. The main entrance serves as the exterior ADA entrance complete with access ramp and automated access controlled from the front desk. The path of travel is very clear from that entrance of the school and from the access points. The interior path of travel is suppoted by some ADA lever actuated door hardware and guard rails, signage, ADA restroom accommodation that meet the needs of the physically challenged. The building sets the example for construction efforts to support the ADA guidelines. There are no projects or recommendations required at this time.

Interior wall finishes are typically painted CMU. Other wall finishes include and ceramic tile at restrooms. Wall finishes are generally in very good condition. Interior floor finishes are typically VCT in classrooms and corridors. Other floor finishes include: carpet and sealed concrete. Interior ceilings are typically 2 x 4 acoustical tile in metal grid. Other ceiling finishes include: exposed/painted structure with gypsum wallboard. There are no corrections required at this time.

Furnishings include: fixed casework and fixed benches with shelves all in like new condition. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

MECHANICAL SYSTEMS

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

Hot water is provided by two PVI gas water heaters in the mechanical room. The heaters are one hundred twenty five gallons each. There are two small pressurization tanks adjacent to the water heaters. Kitchen waste is piped to a grease trap below the kitchen slab, with access through a stainless steel panel flush with the floor.

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 three inch meter from E. Tabor Rd. The service includes a backflow preventer. The roof is sloped with no roof drains.

The plumbing system is from the original 1999 installation and no significant alterations have been made. All components are in good condition and should have remaining service life from ten to twenty years.

HVAC- The building is heated by hot water generated by two HB Smith cast iron sectional gas/oil boilers in the mechanical room. The boilers are forty hp with Powerflame burners and separate oil pumps. Hot water is circulated to heating coils and cabinet radiation units throughout the building.

There are two 500 gallon steel double wall oil storage tanks in the mechanical room, with a small containment curb around the installation. Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap.

There is a central chilled water system with an eighty ton Carrier air cooled chiller in an enclosure outside the mechanical room. The

unit is elevated on an eight foot high steel frame. A glycol system with tank and pump prevents freezing.

Fan coil units are located above ceilings and in the mechanical room. The units are MagicAire single zone package type with hot and chilled water coils, filters, blowers and motors. There are a total of thirteen units with one floor mounted in the mechanical room and the others above ceilings. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Toilet exhaust is ducted to three centrifugal roof ventilators. There is a small exhaust only stainless steel kitchen hood connected to an upblast exhaust fan on the roof with stainless steel welded ductwork. There are only electric warming appliances and no fire suppression nor gas solenoid valve associated with the hood. There are combustion air louvers with motorized dampers in the mechanical room.

Chilled and heating water piping is insulated copper. Oil piping is black steel with screwed fittings. There are two chilled and two hot water floor mounted pumps in the mechanical room. All are B&G series 1510 end suction type. Two small inline B&G pumps in the heating water piping circulate to hot water radiation units. An expansion tank, air separator and chemical feed unit are part of the piping system.

There is a digital building automation system with graphic display by TSBA Controls. The system is reportedly functioning properly.

All components of the HVAC system are from the original 1999 construction and no significant modifications have been made. The sheet metal covers on the radiation units in the multipurpose room have some damage. Otherwise the systems and equipment are in good condition and should have remaining service life from ten to twenty years.

FIRE PROTECTION-The building has a complete automatic sprinkler system. Piping is black steel with Victaulic couplings. There are exposed upright and recessed sprinkler heads with flush cover plates.

The fire service is a six inch line from E. Tabor Rd. There is no fire pump and no noted problems with the fire protection system.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a utility-owned pad-mount transformer located at the northwest corner of the site. Underground service is routed to an Eaton Cutler-Hammer 800A, 208/120V, 3 phase, 4 wire Main Distribution Panelboard (MDP) with 800A main circuit breaker that is located in a separate room off the Boiler Room. The MDP was installed in 2000 and serves the chiller, mechanical equipment and flush mounted panelboards located in the corridors and kitchen.

Receptacles—Classrooms are provided with an adequate number of receptacles. All receptacles located within six (6) feet of a sink are ground-fault circuit interrupting type, as required by code.

Lighting-- Fixtures in classrooms are typically (4) rows of (6) stem mounted, 4 foot wraparound fluorescent fixtures with two T8 lamps and acrylic prismatic lenses. Classroom lighting is controlled by two light switches. Corridors are provided with recessed 1x4, 2 lamp fluorescent grid troffers with T8 lamps, and 2 lamp, pendant mounted fixtures with parabolic louver at the three (3) skylights.

The Multi-Purpose Room has a combination of 2x4 fluorescent grid troffers and recessed incandescent downlights with A-lamps. The (15) downlights should be retrofitted with LED lamps to increase lamp life and improved energy efficiency.

The kitchen has 2x4, 4 lamp fluorescent grid troffers; restrooms are illuminated with 1x4, 2 lamp fluorescent flanged troffers. Restrooms have 1x4 flanged fluorescent troffers. Mechanical and electrical rooms have 4 foot industrial fluorescent with (2) T8 lamps.

Site lighting is provided with wall mounted HID lighting fixtures with wire guards around the perimeter of the building. Most fixtures have an accumulation of debris between the lens and wire guard that reduces fixture efficiency. Approximately 14 fixtures need to cleaned and re-lamped.

Fire Alarm System-- The fire alarm system is by Simplex, and consists of manual pull stations and audible and visual notification appliances that meet ADA requirements. Notification appliances are provided in all classroom and toilet rooms. There is a remote annunciator panel at the main entrance. The fire alarm system is expected to have 8 to 10 years useful life remaining before replacement.

Telephone/LAN—The telephone service demarcation point is located in the Main Electrical Room, adjacent to Distribution Panelboard MDP. A telephone and data outlet is provided in each classroom. Wireless access points are provided in the classrooms and Multi-Purpose Room for Wi-Fi service throughout the school. The Main IT Room is located across the corridor from the Main Office.

Intercom/Paging Systems-- An Aiphone audible intercom system is provided between the main and entrance and the Main Office. The

paging system is accessed through the telephone system. There are ceiling recessed paging speakers in corridors. This system is estimated to have 15 years of useful life remaining.

Clock and Program System-- There is a clock/speaker assembly in each classroom for the program system. The Simplex Time Control Center is located in the Main Office. The clock/speaker assembly in the Multi-Purpose Room is missing a clock.

Television System-- There are no televisions outlets in the classrooms.

Video Surveillance and Security Systems-- There are Interior video surveillance cameras that provide coverage of corridors, entrances and Multi-Purpose Room. Surveillance cameras are monitored in the Main Office. Magnetic door contacts are provided on exterior doors. There are also motion sensors in the corridors to monitor ingress/egress. There is an ADT security annunciator panel at the south entrance. The Tyco Integrated Security Panel is located in the Building Engineer's Office.

Emergency Power System--There is no standby generator that serves this building.

Emergency Lighting System / Exit Lighting-- Emergency egress lighting is provided by battery powered, wall mounted emergency lighting units (ELU) in corridors, classrooms, kitchen and Multi-Purpose Room. One of the ELUs in the Multi-Purpose Room is damaged and needs to be replaced. Remote emergency lighting heads are provided in the restrooms and at exit discharges. Exit signs are provided with battery backup.

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

Conveying Systems-- The building does not have an elevator.

GROUNDS

This section of the report is included in the main building report.

RECOMMENDATIONS

- There are no recommended corrections for the plumbing, HVAC or fire protection systems in this building.
- Clean (15) incandescent A-lamp downlights in the Multi-Purpose Room and re-lamp with LED lamps.
- Provide clock in clock/speaker assembly in the Multi-Purpose Room.
- Replace damaged emergency lighting unit in the Multi-Purpose Room.
- Clean and re-lamp (14) exterior wall mounted HID lighting fixtures.

Attributes:

General Attributes:			
Active:	Open	Bldg ID:	B724002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S724001		

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	84.00 %	0.00 %	$0.00
A20 - Basement Construction	84.00 %	0.00 %	$0.00
B10 - Superstructure	84.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	75.25 %	0.00 %	$0.00
B30 - Roofing	60.00 %	0.00 %	$0.00
C10 - Interior Construction	75.71 %	0.00 %	$0.00
C30 - Interior Finishes	71.17 %	0.00 %	$0.00
D20 - Plumbing	51.06 %	0.00 %	$0.00
D30 - HVAC	44.58 %	0.00 %	$0.00
D40 - Fire Protection	54.29 %	0.00 %	$0.00
D50 - Electrical	48.63 %	0.69 %	$9,196.66
E10 - Equipment	54.29 %	0.00 %	$0.00
E20 - Furnishings	60.00 %	0.00 %	$0.00
Totals:	**65.71 %**	**0.07 %**	**$9,196.66**

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.

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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 $
A1010	Standard Foundations	$24.32	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$553,231
A1030	Slab on Grade	$15.51	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$352,821
A2010	Basement Excavation	$13.07	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$297,316
A2020	Basement Walls	$23.02	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$523,659
B1010	Floor Construction	$92.20	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$2,097,366
B1020	Roof Construction	$24.11	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$548,454
B2010	Exterior Walls	$31.22	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$710,193
B2020	Exterior Windows	$13.63	S.F.	22,748	40	1999	2039		60.00 %	0.00 %	24			$310,055
B2030	Exterior Doors	$1.67	S.F.	22,748	25	1999	2024		36.00 %	0.00 %	9			$37,989
B3010140	Shingle & Tile	$38.73	S.F.	22,748	20	1999	2019	2027	60.00 %	0.00 %	12			$881,030
B3020	Roof Openings	$0.68	S.F.	22,748	20	1999	2019	2027	60.00 %	0.00 %	12			$15,469
C1010	Partitions	$14.93	S.F.	22,748	100	1999	2099		84.00 %	0.00 %	84			$339,628
C1020	Interior Doors	$3.76	S.F.	22,748	40	1999	2039		60.00 %	0.00 %	24			$85,532
C1030	Fittings	$4.12	S.F.	22,748	40	1999	2039		60.00 %	0.00 %	24			$93,722
C3010230	Paint & Covering	$13.21	S.F.	22,748	10	1999	2009	2027	120.00 %	0.00 %	12			$300,501
C3010232	Wall Tile	$2.63	S.F.	22,748	30	1999	2029		46.67 %	0.00 %	14			$59,827
C3020411	Carpet	$7.30	S.F.	1,000	10	1999	2009	2027	120.00 %	0.00 %	12			$7,300
C3020412	Terrazzo & Tile	$75.52	S.F.	2,000	50	1999	2049		68.00 %	0.00 %	34			$151,040
C3020413	Vinyl Flooring	$9.68	S.F.	18,784	20	1999	2019	2027	60.00 %	0.00 %	12			$181,829
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,000	50	1999	2049		68.00 %	0.00 %	34			$970
C3030	Ceiling Finishes	$20.97	S.F.	22,748	25	1999	2024	2027	48.00 %	0.00 %	12			$477,026
D2010	Plumbing Fixtures	$31.58	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$718,382
D2020	Domestic Water Distribution	$2.90	S.F.	22,748	25	1999	2024		36.00 %	0.00 %	9			$65,969
D2030	Sanitary Waste	$2.90	S.F.	22,748	25	1999	2024		36.00 %	0.00 %	9			$65,969
D2040	Rain Water Drainage	$3.29	S.F.	22,748	30	1999	2029		46.67 %	0.00 %	14			$74,841
D3020	Heat Generating Systems	$18.67	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$424,705
D3030	Cooling Generating Systems	$24.48	S.F.	22,748	30	1999	2029		46.67 %	0.00 %	14			$556,871
D3040	Distribution Systems	$42.99	S.F.	22,748	25	1999	2024		36.00 %	0.00 %	9			$977,937
D3050	Terminal & Package Units	$11.60	S.F.	22,748	20	1999	2019	2025	50.00 %	0.00 %	10			$263,877
D3060	Controls & Instrumentation	$13.50	S.F.	22,748	20	1999	2019	2025	50.00 %	0.00 %	10			$307,098
D4010	Sprinklers	$8.02	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$182,439
D4020	Standpipes	$0.99	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$22,521
D5010	Electrical Service/Distribution	$9.70	S.F.	22,748	30	1999	2029		46.67 %	0.00 %	14			$220,656
D5020	Lighting and Branch Wiring	$34.68	S.F.	22,748	20	1999	2019	2024	45.00 %	0.96 %	9		$7,576.17	$788,901
D5030	Communications and Security	$12.99	S.F.	22,748	15	1999	2014	2024	60.00 %	0.24 %	9		$695.71	$295,497
D5090	Other Electrical Systems	$1.41	S.F.	22,748	30	1999	2029		46.67 %	2.88 %	14		$924.78	$32,075
E1020	Institutional Equipment	$4.82	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$109,645
E1090	Other Equipment	$11.10	S.F.	22,748	35	1999	2034		54.29 %	0.00 %	19			$252,503
E2010	Fixed Furnishings	$2.13	S.F.	22,748	40	1999	2039		60.00 %	0.00 %	24			$48,453
								Total	**65.71 %**	**0.07 %**			**$9,196.66**	**$13,433,297**

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%
Painted Drywall 10%

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

Note: Carpet 4%
Tile 9%
Vinyl 83%
Concrete 4%

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:	**$9,197**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,203,854**	**$844,076**	**$4,057,126**
*** 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	$54,524	$0	**$54,524**
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**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$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**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

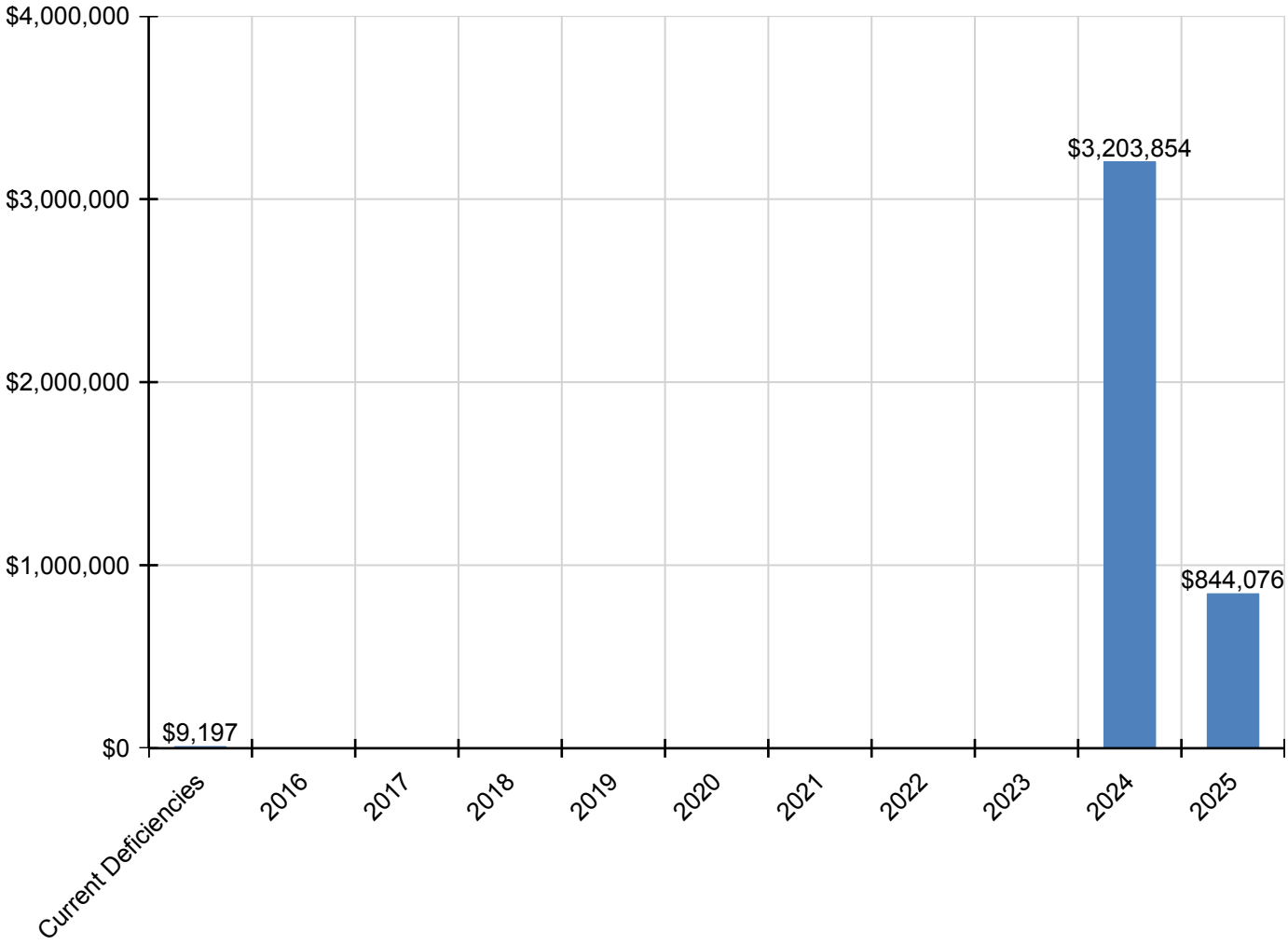
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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**
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	$94,682	$0	**$94,682**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$94,682	$0	**$94,682**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,403,584	$0	**$1,403,584**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$390,091	**$390,091**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$453,986	**$453,986**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5020 - Lighting and Branch Wiring	$7,576	$0	$0	$0	$0	$0	$0	$0	$0	$1,132,270	$0	**$1,139,847**
D5030 - Communications and Security	$696	$0	$0	$0	$0	$0	$0	$0	$0	$424,111	$0	**$424,807**
D5090 - Other Electrical Systems	$925	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$925**
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

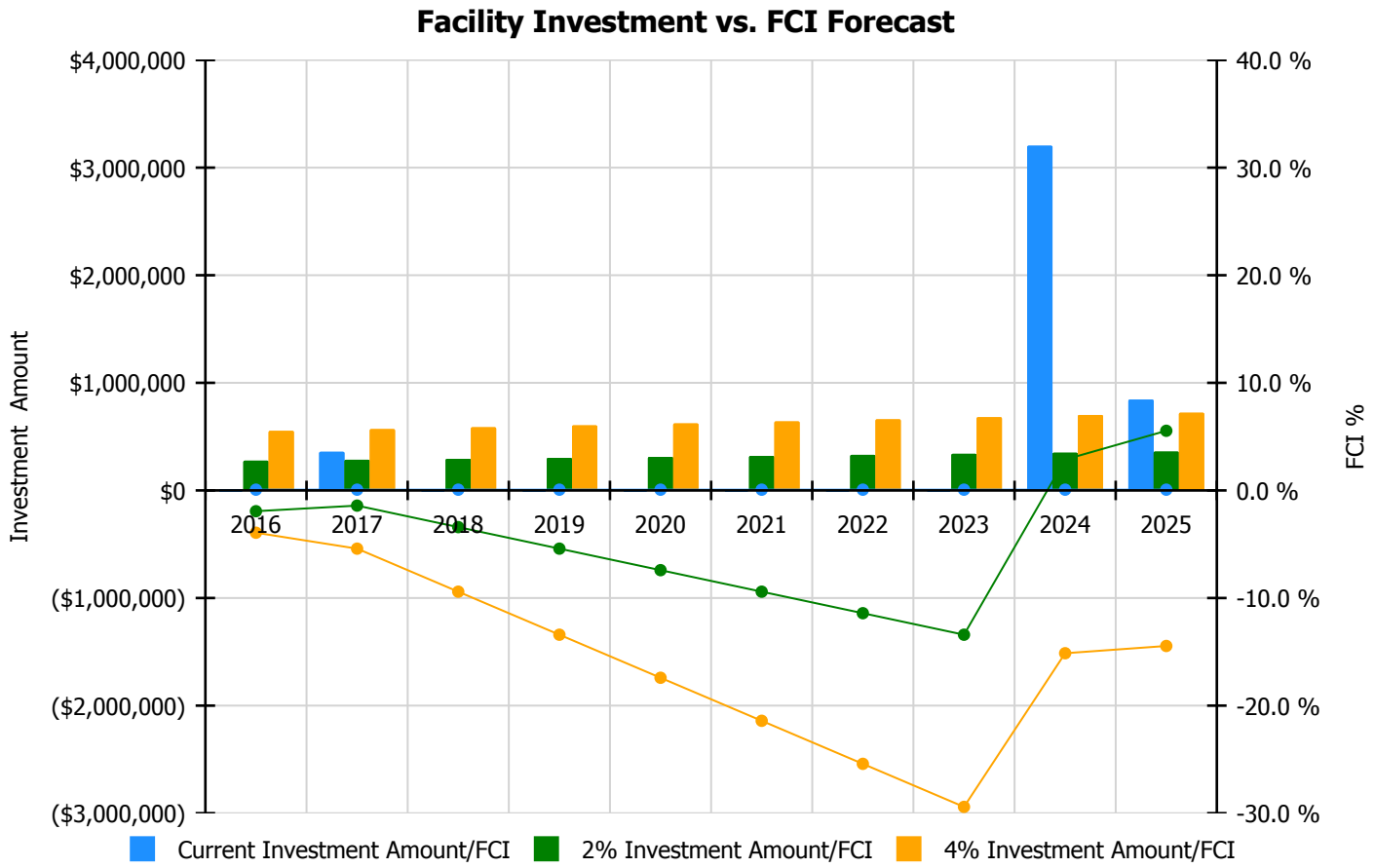
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

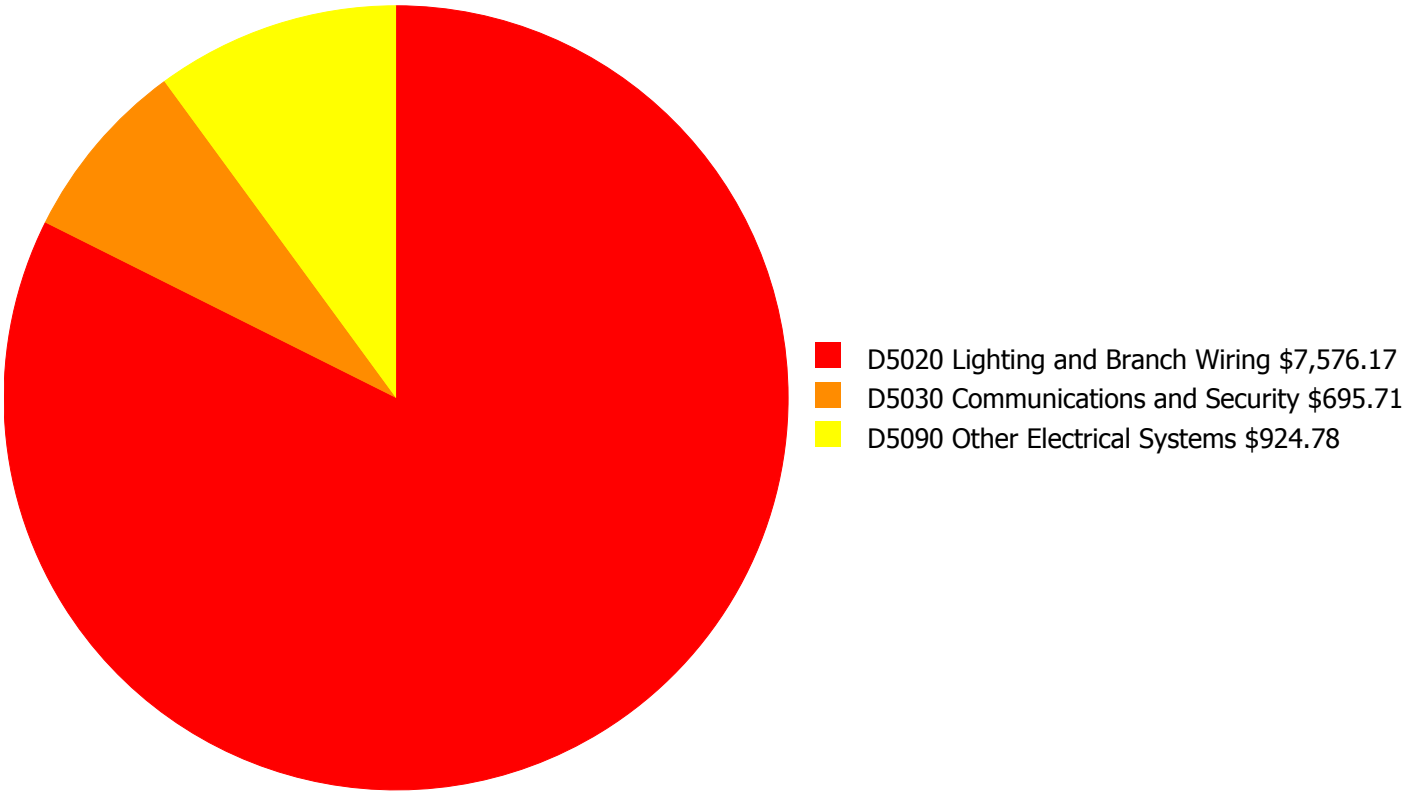
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 0.07%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$276,726.00	-1.93 %	$553,452.00	-3.93 %
2017	$359,201	$285,028.00	-1.41 %	$570,055.00	-5.41 %
2018	$0	$293,579.00	-3.41 %	$587,157.00	-9.41 %
2019	$0	$302,386.00	-5.41 %	$604,772.00	-13.41 %
2020	$0	$311,457.00	-7.41 %	$622,915.00	-17.41 %
2021	$0	$320,801.00	-9.41 %	$641,602.00	-21.41 %
2022	$0	$330,425.00	-11.41 %	$660,850.00	-25.41 %
2023	$0	$340,338.00	-13.41 %	$680,676.00	-29.41 %
2024	$3,203,854	$350,548.00	2.87 %	$701,096.00	-15.13 %
2025	$844,076	$361,065.00	5.54 %	$722,129.00	-14.46 %
Total:	**$4,407,130**	**$3,172,353.00**		**$6,344,704.00**	

Deficiency Summary by System

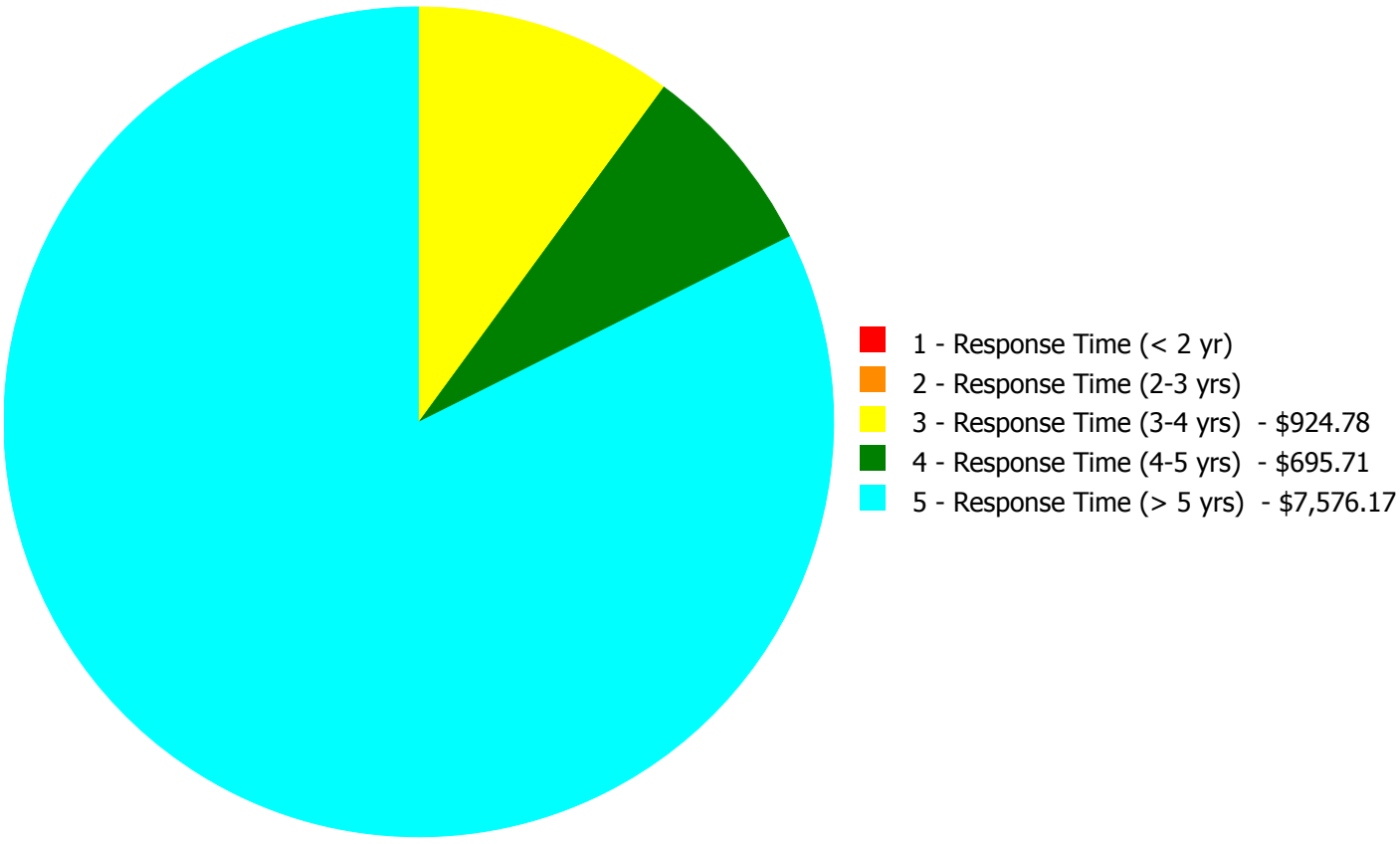
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $9,196.66

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: $9,196.66

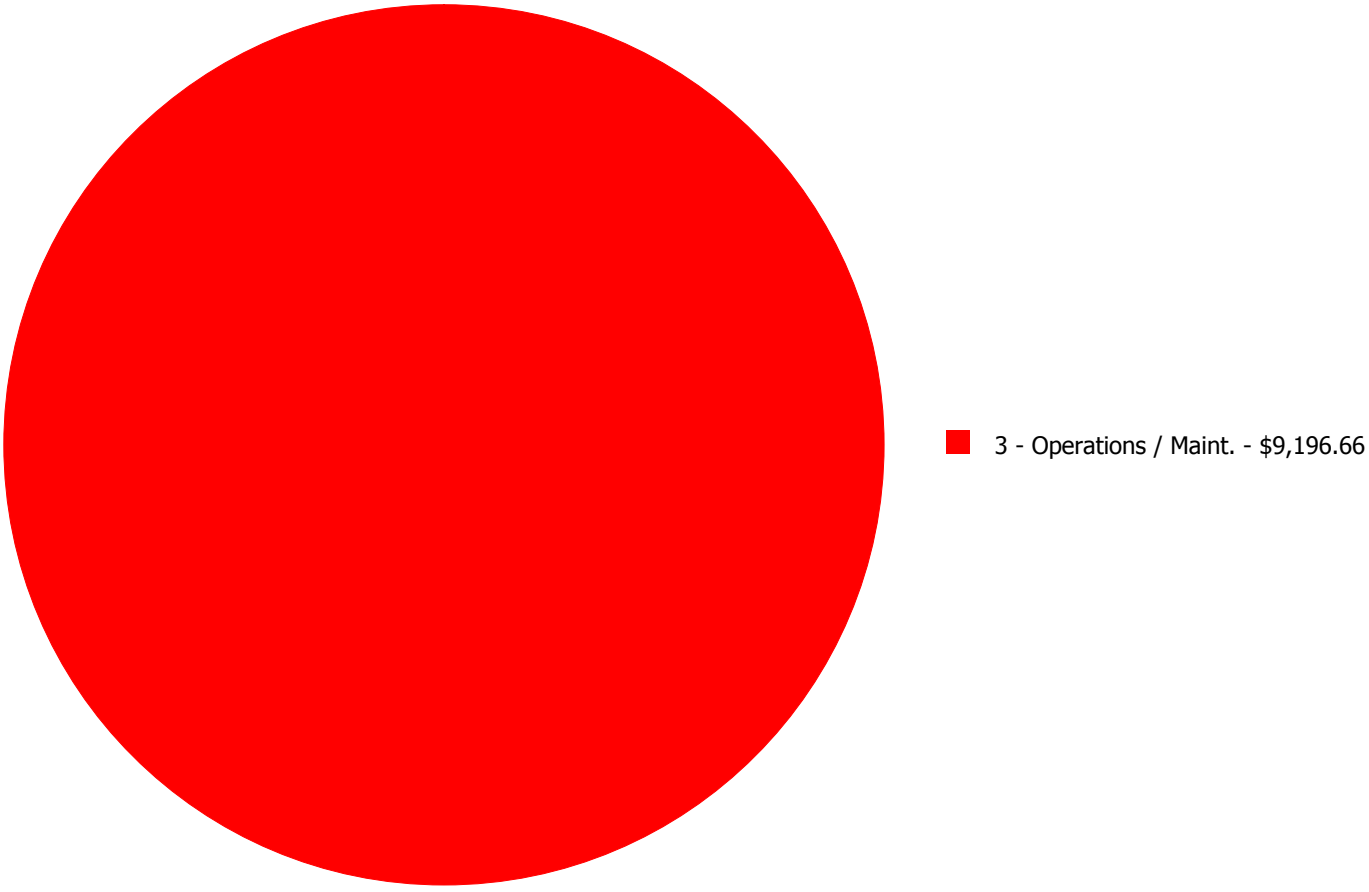
Deficiency By Priority Investment Table

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
D5020	Lighting and Branch Wiring	$0.00	$0.00	$0.00	$0.00	$7,576.17	$7,576.17
D5030	Communications and Security	$0.00	$0.00	$0.00	$695.71	$0.00	$695.71
D5090	Other Electrical Systems	$0.00	$0.00	$924.78	$0.00	$0.00	$924.78
	Total:	$0.00	$0.00	$924.78	$695.71	$7,576.17	$9,196.66

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: $9,196.66

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: D5090 - Other Electrical Systems

Location: Multi-Purpose Room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace Emergency/Exit Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $924.78

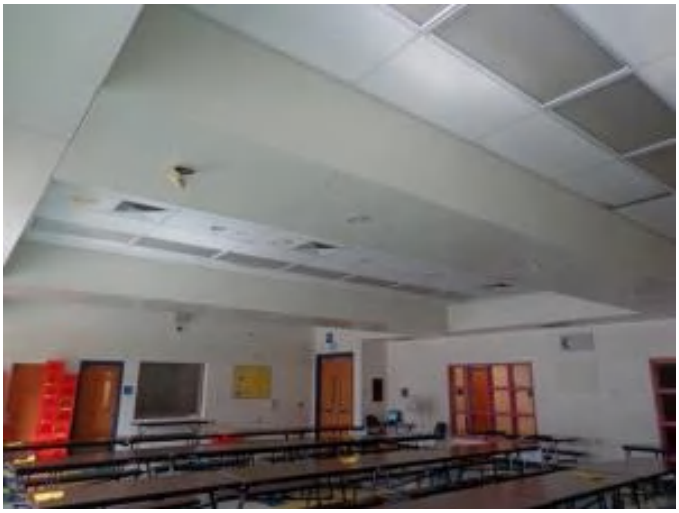
Assessor Name: Ben Nixon

Date Created: 08/06/2015

Notes: Replace damaged emergency lighting unit in the Multi-Purpose Room.

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

System: D5030 - Communications and Security



Location: Multi-Purpose Room

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $695.71

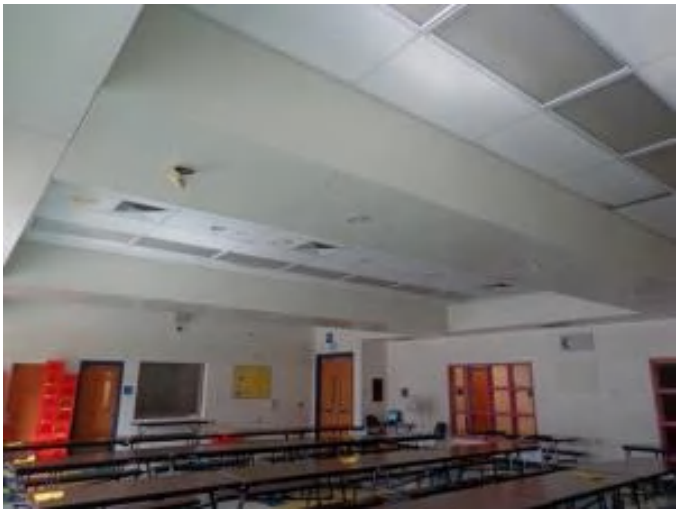
Assessor Name: Ben Nixon

Date Created: 08/06/2015

Notes: Provide clock in clock/speaker assembly in the Multi-Purpose Room.

Priority 5 - Response Time (> 5 yrs):

System: D5020 - Lighting and Branch Wiring



Location: Multi-Purpose Room

Distress: Maintenance Required

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Maintain Lighting Fixtures

Qty: 15.00

Unit of Measure: Ea.

Estimate: $7,576.17

Assessor Name: Ben Nixon

Date Created: 08/06/2015

Notes: Clean (15) incandescent A-lamp downlights in the Multi-Purpose Room and re-lamp with LED lamps.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 1275 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	19 series 10	f40464		35	1999	2034	$29,823.90	$32,806.29
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 1275 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	19series 10	f40465		35	1999	2034	$29,823.90	$32,806.29
D3030 Cooling Generating Systems	Water chiller, reciprocating, packaged, air cooled, 85 ton cooling, includes standard controls, excludes remote air cooled condensers	1.00	Ea.	roof	carrier	30gn080	0899f01168		30	1999	2029	$66,495.00	$73,144.50
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Main Electrical Room	Eaton C-H	PRL4B	NA		30	1999	2029	$21,766.05	$23,942.66
												Total:	**$162,699.74**

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):	63,000
Year Built:	1930
Last Renovation:	
Replacement Value:	$1,197,090
Repair Cost:	$110,682.14
Total FCI:	9.25 %
Total RSLI:	50.60 %

Description:

Attributes:

General Attributes:

Bldg ID:	S724001	Site ID:	S724001

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	51.77 %	11.39 %	$105,159.90
G40 - Site Electrical Utilities	46.67 %	2.02 %	$5,522.24
Totals:	**50.60 %**	**9.25 %**	**$110,682.14**

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 $
G2030	Pedestrian Paving	$11.52	S.F.	53,000	40	1999	2039		60.00 %	9.42 %	24		$57,531.40	$610,560
G2040	Site Development	$4.36	S.F.	63,000	25	1999	2024		36.00 %	10.84 %	9		$29,773.97	$274,680
G2050	Landscaping & Irrigation	$3.78	S.F.	10,000	15	1999	2014	2020	33.33 %	47.23 %	5		$17,854.53	$37,800
G4020	Site Lighting	$3.58	S.F.	63,000	30	1999	2029		46.67 %	2.45 %	14		$5,522.24	$225,540
G4030	Site Communications & Security	$0.77	S.F.	63,000	30	1999	2029		46.67 %	0.00 %	14			$48,510
								Total	**50.60 %**	**9.25 %**			**$110,682.14**	**$1,197,090**

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.

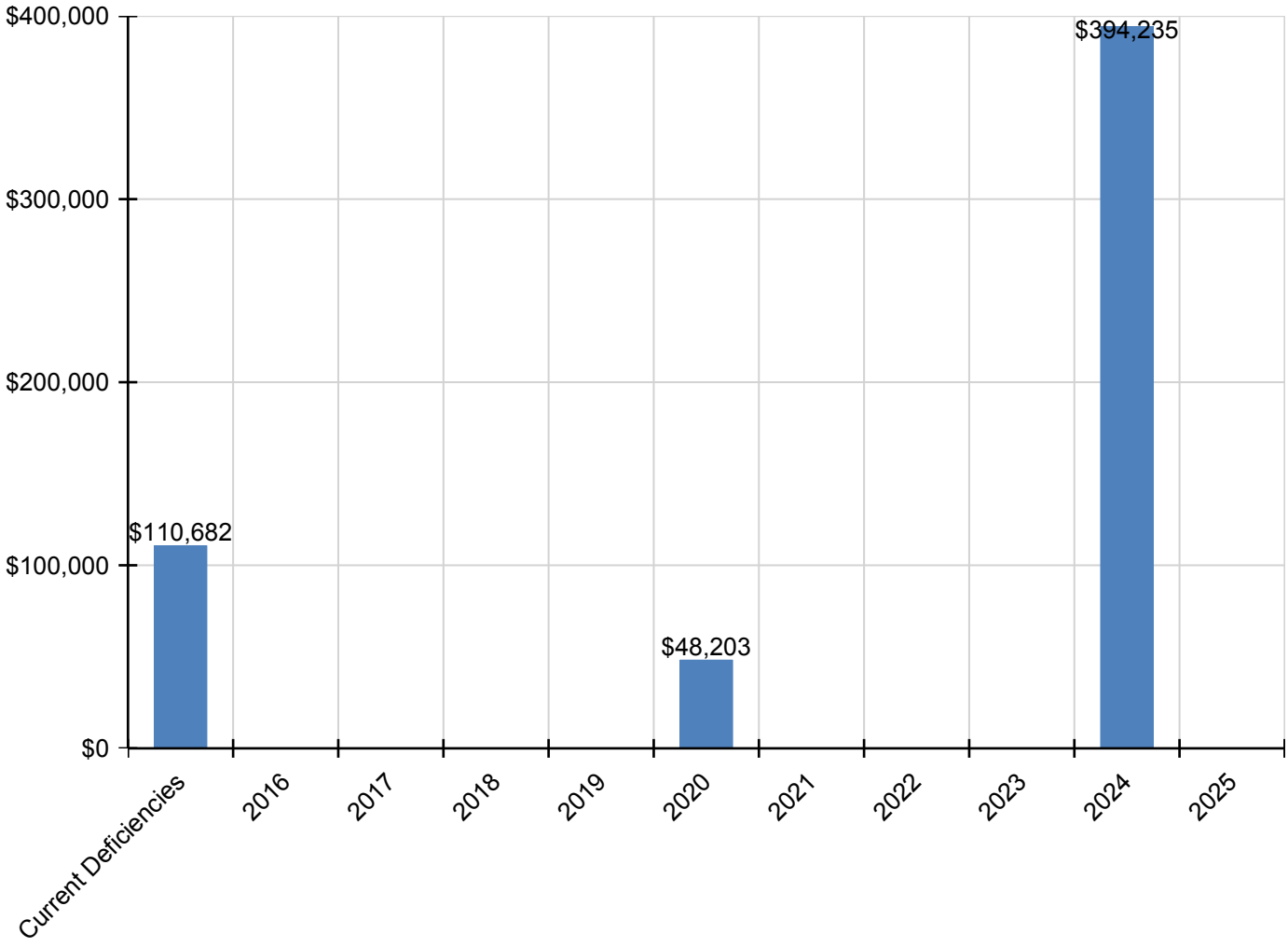
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$110,682**	**$0**	**$0**	**$0**	**$0**	**$48,203**	**$0**	**$0**	**$0**	**$394,235**	**$0**	**$553,119**
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**
G2030 - Pedestrian Paving	$57,531	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$57,531**
G2040 - Site Development	$29,774	$0	$0	$0	$0	$0	$0	$0	$0	$394,235	$0	**$424,009**
G2050 - Landscaping & Irrigation	$17,855	$0	$0	$0	$0	$48,203	$0	$0	$0	$0	$0	**$66,057**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$5,522	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,522**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

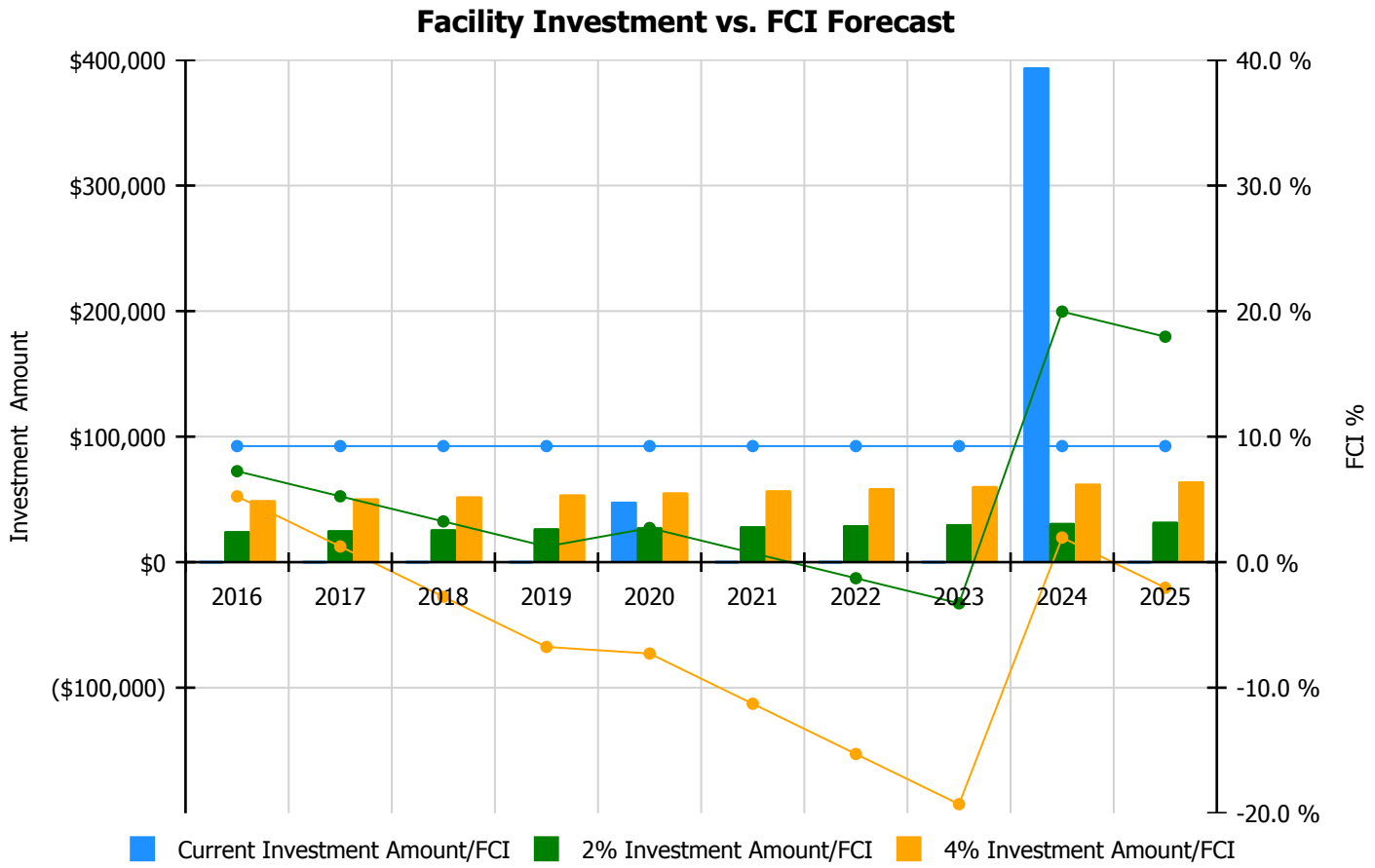
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

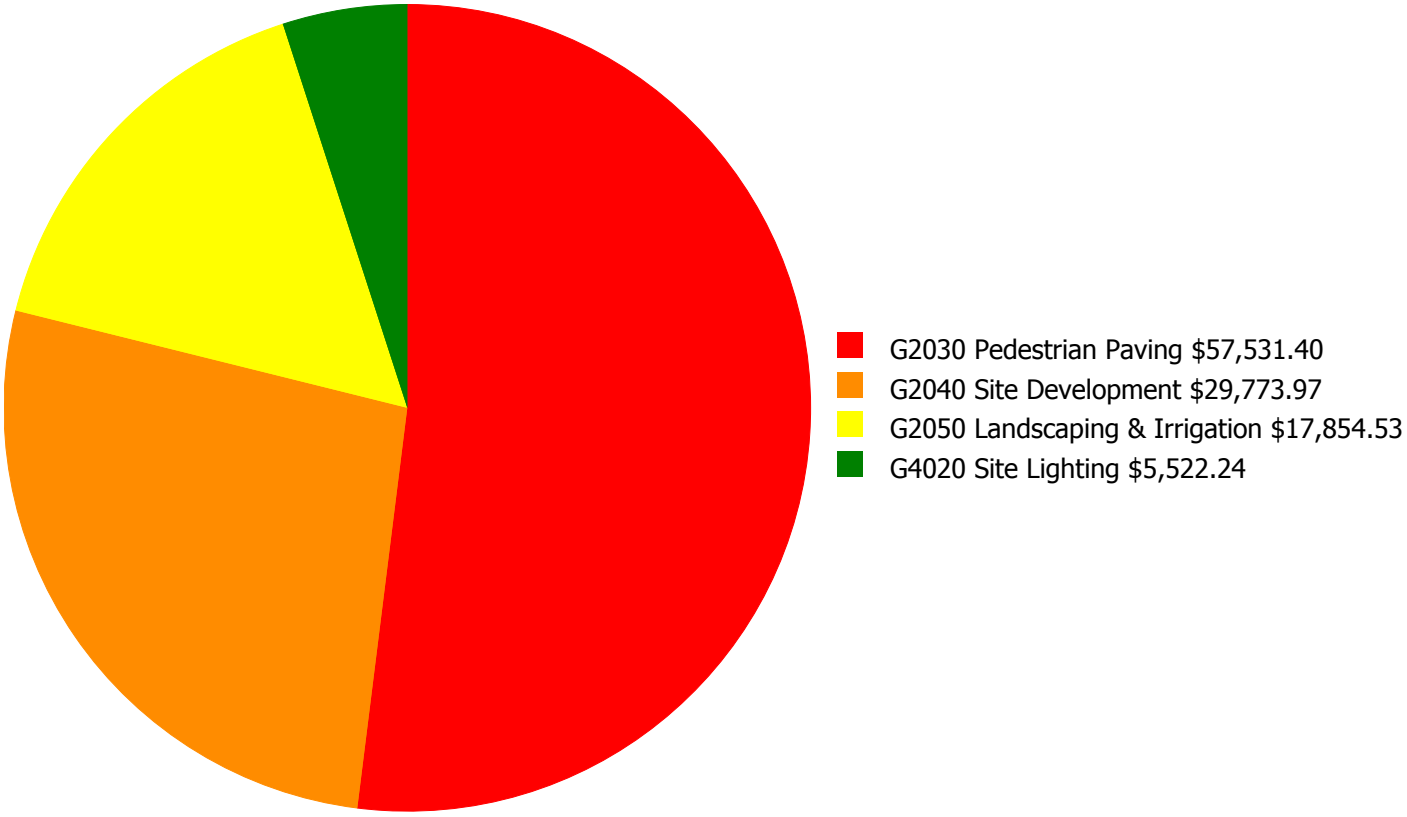
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 9.25%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$24,660.00	7.25 %	$49,320.00	5.25 %
2017	$0	$25,400.00	5.25 %	$50,800.00	1.25 %
2018	$0	$26,162.00	3.25 %	$52,324.00	-2.75 %
2019	$0	$26,947.00	1.25 %	$53,893.00	-6.75 %
2020	$48,203	$27,755.00	2.72 %	$55,510.00	-7.28 %
2021	$0	$28,588.00	0.72 %	$57,176.00	-11.28 %
2022	$0	$29,445.00	-1.28 %	$58,891.00	-15.28 %
2023	$0	$30,329.00	-3.28 %	$60,658.00	-19.28 %
2024	$394,235	$31,239.00	19.96 %	$62,477.00	1.96 %
2025	$0	$32,176.00	17.96 %	$64,352.00	-2.04 %
Total:	**$442,437**	**$282,701.00**		**$565,401.00**	

Deficiency Summary by System

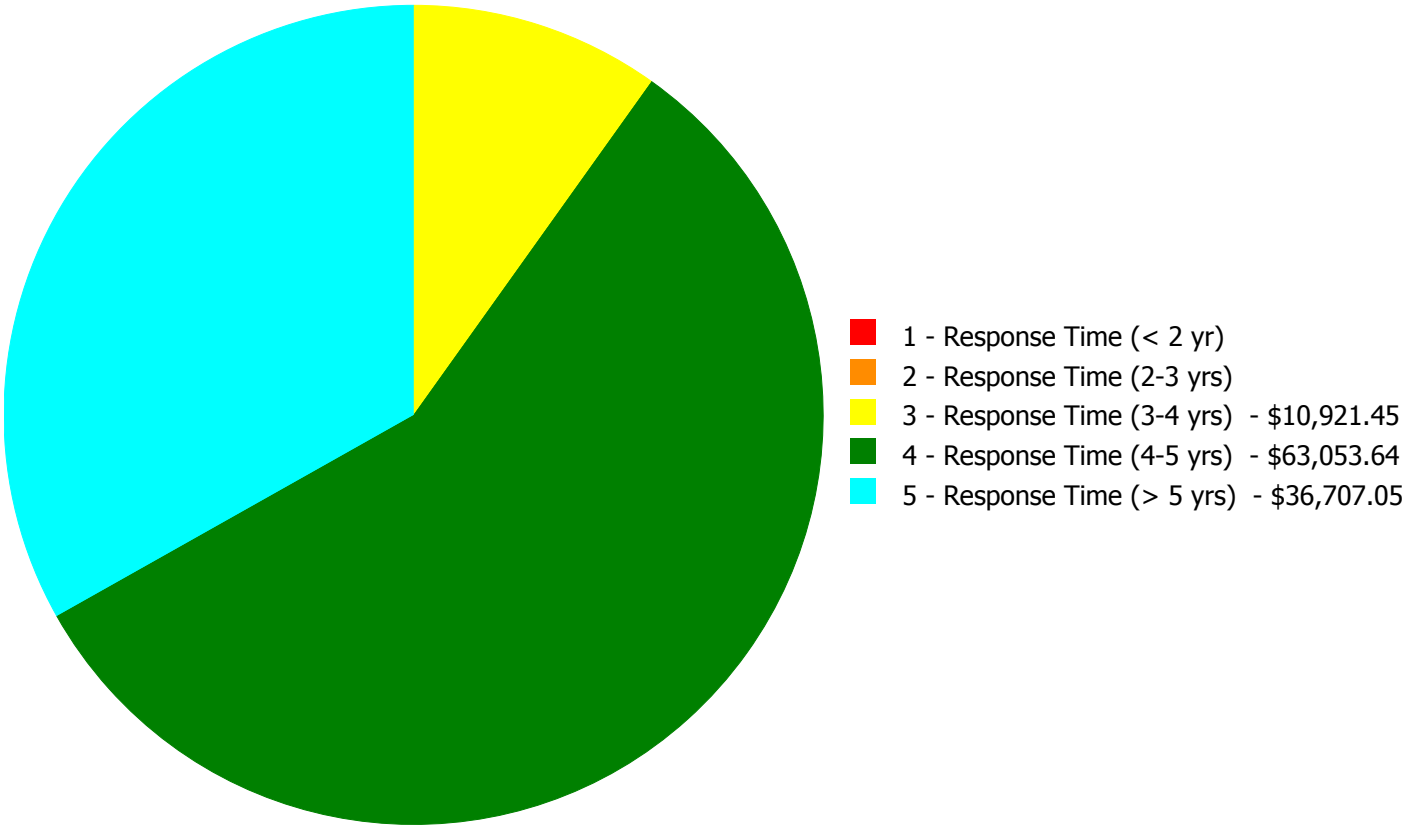
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $110,682.14

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: $110,682.14

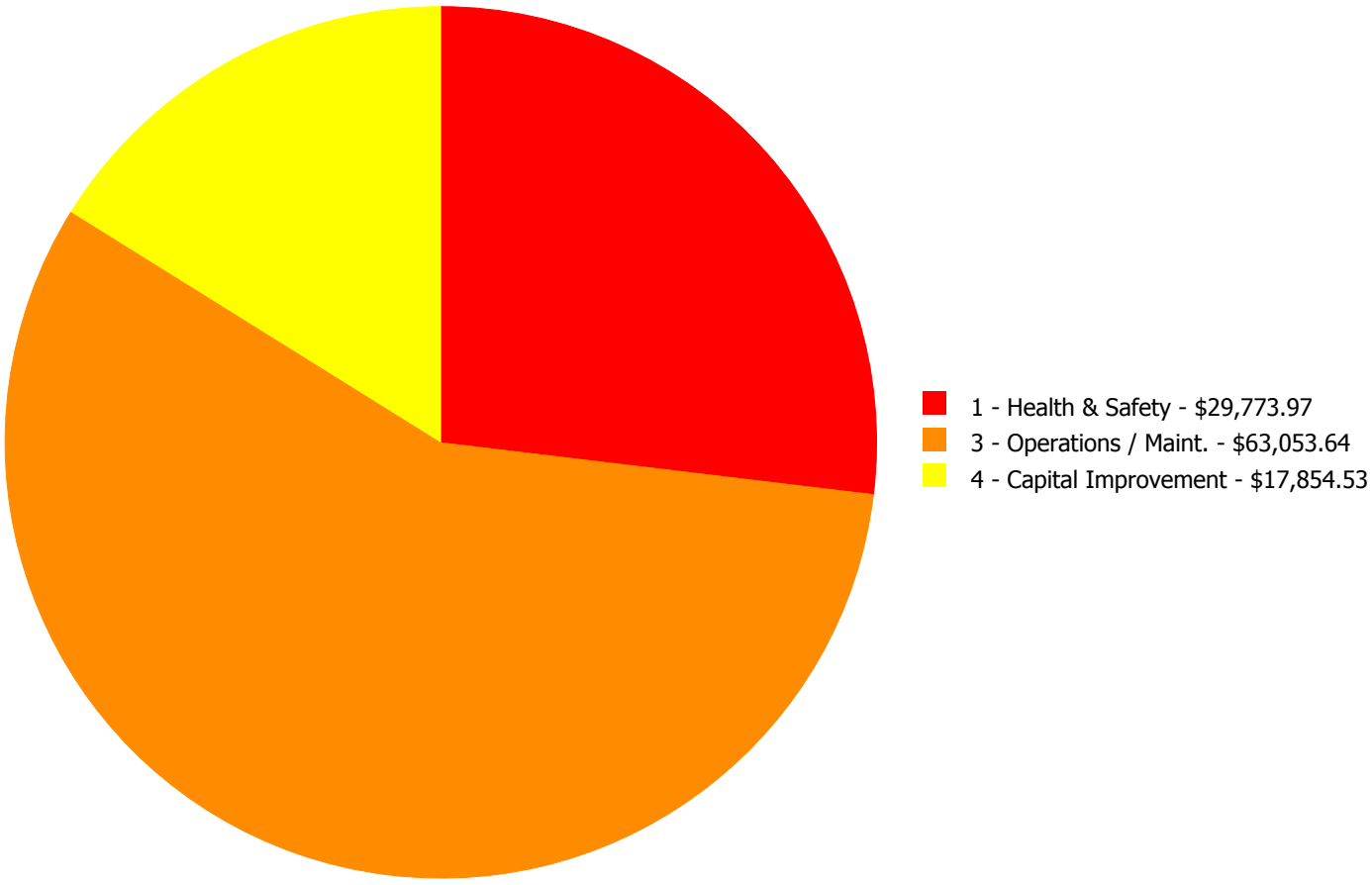
Deficiency By Priority Investment Table

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	$57,531.40	$0.00	$57,531.40
G2040	Site Development	$0.00	$0.00	$10,921.45	$0.00	$18,852.52	$29,773.97
G2050	Landscaping & Irrigation	$0.00	$0.00	$0.00	$0.00	$17,854.53	$17,854.53
G4020	Site Lighting	$0.00	$0.00	$0.00	$5,522.24	$0.00	$5,522.24
	Total:	$0.00	$0.00	$10,921.45	$63,053.64	$36,707.05	$110,682.14

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: $110,682.14

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: G2040 - Site Development

Location: LSH Site

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Repair and regrout stone retaining wall - LF of wall - up to 4' tall

Qty: 25.00

Unit of Measure: L.F.

Estimate: $10,921.45

Assessor Name: Tom Moe

Date Created: 08/31/2015

Notes: The brick exterior wall leading to the main entrance of The Little School House is damaged and several brick have been removed. This presents a safety issue as the wall is breaking down while students have to use this entrance. This deficiency provides a budgetary consideration for the repair of the wall.

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

System: G2030 - Pedestrian Paving

Location: Sidewalks

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: 4,000.00

Unit of Measure: S.F.

Estimate: $57,531.40

Assessor Name: Ben Nixon

Date Created: 08/31/2015

Notes: There is a concrete paver system that surrounds this school that is on a consistent program of renewal. However as indicated in the photos the damage is extensive and requires upgrades. This deficiency provides a budgetary consideration for concrete sidewalk upgrades.

System: G4020 - Site Lighting

Location: Building Exterior

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Maintain Site Lighting Fixture

Qty: 14.00

Unit of Measure: Ea.

Estimate: $5,522.24

Assessor Name: Ben Nixon

Date Created: 08/06/2015

Notes: Clean and re-lamp (14) exterior wall mounted HID lighting fixtures.

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: 08/31/2015

Notes: The trash dumpster is located near the southwestern fence open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are recommended.

System: G2050 - Landscaping & Irrigation

Location: G724001;Grounds

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace defective irrigation system - pop up spray system

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $17,854.53

Assessor Name: Ben Nixon

Date Created: 08/31/2015

Notes: The landscaping is in good condition and well maintained but with no irrigation system. The landscaping is generally located near the play area of the site with limited turf sections around the general exterior of the school. This deficiency provides a budgetary consideration for the installation of an irrigation system for this site.

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