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.

Engineering and Science (Carver) School

Governance	DISTRICT	Report Type	Middlehigh
Address	1600 W. Norris St.	Enrollment	900
	Philadelphia, Pa 19121	Grade Range	'07-12'
Phone/Fax	215-684-5079 / 215-684-5151	Admissions Category	Special Admit
Website	Www.Carver.Phila.K12.Pa.Us	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**02.01%**	**$1,575,145**	**$78,489,877**
Building	02.00 %	$1,525,991	$76,257,165
Grounds	02.20 %	$49,154	$2,232,712

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	55.99 %	$1,016,460	$1,815,360
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.60 %	$168,382	$6,471,792
Windows (Shows functionality of exterior windows)	00.00 %	$0	$4,122,771
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$173,780
Interior Doors (Classroom doors)	00.00 %	$0	$563,286
Interior Walls (Paint and Finishes)	02.33 %	$33,869	$1,452,000
Plumbing Fixtures	00.00 %	$0	$2,025,431
Boilers	00.00 %	$0	$2,796,953
Chillers/Cooling Towers	00.00 %	$0	$3,667,349
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$6,440,332
Heating/Cooling Controls	00.00 %	$0	$2,022,435
Electrical Service and Distribution	02.91 %	$42,237	$1,453,157
Lighting	00.43 %	$22,343	$5,195,411
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$1,946,032

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

S403001;Carver

Final

Site Assessment Report

February 2, 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):	149,810
Year Built:	1864
Last Renovation:	2008
Replacement Value:	$78,489,877
Repair Cost:	$1,575,144.58
Total FCI:	2.01 %
Total RSLI:	59.03 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
Carver High School or The George Washington Carver High School of Engineering and Science
1600 W. Norris St.
Philadelphia, PA 19121

149,810 SF / 948 Students / LN 04

Carver High School or The George Washington Carver High School of Engineering and Science is one of the newer schools in service to the Philadelphia communities originally constructed in 1948 then gut renovated in 2008. The school is currently being run by the Philadelphia School System and is identified as B403001 is located at 1600 W Norris St., Philadelphia, PA. The late modern design of the modified square-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces the newly constructed exterior concrete plaza. The drop off area is separate from the parking area as the general parking is south of the school and the drop off is at the Northeast corner of the school.

This School building serves students in grades 9 to 12 and has three stories and a basement consisting of a total gross square footage of 149,810 GSF.

This school has several classrooms, a dedicated library IMC, kitchen and student commons a dedicated technology room and technology Center, two Gyms modified into Art Labs and a main Gym, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on September 15, 2015.

Mr. Bob Murray, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Mr. Ted Domers, Principal, was not available for the interview and did not share information about the school with the assessment team.

ARCHITECTURAL / STRUCTUAL SYSTEMS

The Main and addition Foundations are concrete and appear to be in good condition.

Basement walls are concrete and masonry and appear to be in good condition. The superstructure is steel and concrete framed with masonry support while the concrete floor construction is in like new to good condition depending on the section of building. There are two sections of this school, the 1948 section and the 2008 section. For the purposes of this report they will be identified by year built to imply the school section.

There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. The major differences are between the 1948 construction and the 2008 construction roof sections. Parapet heights, coping materials, and the height of the flashing also varies in different sections. The 1948 roof is a built up application that was installed in the early 1990'S. The 2008 built up roofs are in like new condition. There are numinous leaks including but not limited to Main Street, Library, Weight room, Cafeteria and the Girls locker room. Considering the condition of the 1948 roofing systems, universal upgrades are recommended. Remove and replace the 1948 roof sections. This deficiency also includes consideration for roof repairs for the new roof that connects to the 1948 structure. This roof is expected to have a life cycle that will expire within the next ten years.

The ladder mounted to the exterior wall that provides access to the roof is over 20 feet in height and does not meet the current OSHA standards for safety. "Ladders with cages as defined in 1910.27(c)(3) of the OSHA standard requires a safety cage and landing for access to extended roof levels. This deficiency provides a budgetary consideration to remove the existing roof ladder and replace with a new ladder and cage with landing for safe roof access.

The exterior brick façade and walls of the 1948 section of the school were reported to have been worked on during the 2008 addition effort.

The original schools 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 area near room 138 is a new interior wall that at one time was an exterior wall prior to the 2008 addition. This area will require additional effort as water is currently causing issues with the finish. 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.

The exterior windows were installed in 2008 as part of an exterior envelope renovation and addition. The new windows are double pane aluminum framed applications with both fixed and operable depending on your location. The windows are in very good to good condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The exterior door system is either glass with aluminum in a storefront application or metal framed metal doors for exit or service access. The door system was upgraded as part of the 2008 addition renovation effort. There were issues therefore no recommendations are required at this time.

Special consideration for those that may be physically challenged was a main factor in the last re-construction effort for this school. The exterior has two very good access points for those that may be physically challenged. The main entrance access is from the parking lot with proper sidewalks and curb cuts and the drivers drop off point that has direct access with proper curb cuts. The path of travel is very clear from these access points. The interior path of travel is supported by a passenger elevator, Interior access ramps, approved door hardware, compliant hand rails and guard rails, restroom fixtures and amities as well as proper signage

applications. This recent renovation has set the standard for access for those that may be physically challenged. There are no recommendations required at this time.

The partitions include a glazed block finish mainly in the 1948 section, a rough block finish in the cafeteria, Main Street, Eco Lab and Library and a painted CMU finish for most of the school. There is a small section of wooden wall finish in the Auditorium that lines the walls leading to the stage. With the exception of the minor interior wall finish issues related to the roof leaks the overall condition is very good.

Interior doors are typically wood in metal frames with wired glass glazing. Other interior doors include hollow metal in hollow metal frames 90 minute fire rated doors at stairwells and exit ways, access doors, and folding closet doors. During the time of the inspection it was noted that the fire doors were repainted and thus covering the fire rated tag. Care should be taken to ensure that the tags are clear and legible in order not to void the rating to the door system. Doors are generally in like new condition and meet the current legislation in regards to the physically challenged.

Fittings include: marker boards; tack boards; interior signage; metal lockers; toilet accessories and metal toilet partitions; fixed storage shelving each in like new condition.

Stair construction is concrete with metal framing and proper hand and guard railing systems.

Interior wall finishes are typically painted CMU however, other wall finishes include: ceramic tile at restrooms; wooden wall covering in the auditorium and ceramic or polished brick finish. Wall finishes are generally in very good condition with the minor wall finish issues addressed in the interior paint recommendation included in this report.

There are painted walls, trim, and some painted ceilings in this building. In the older sections of the building, some textured concrete surfaces have been painted. The interior finishes in this school in good to fair condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. The finishes in the new section are in excellent to good condition. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins.

Interior floor finishes are typically 12 x 12 vinyl floor tile in classrooms and corridors. Other floor finishes include: carpet in the library and administration section; wood flooring in the gyms and the stage area; terrazzo in the auditorium lobby; sealed concrete in the mechanical spaces; and ceramic/quarry tile in the restrooms and kitchen areas. The floor finishes were either upgraded or newly installed as part of the 2008 renovation effort and in good condition. The finishes are expected to have a life cycle that is beyond the purview of this report thus no recommendations are required at this time.

The interior ceiling finish is either exposed, 2 x 4 acoustical tile in metal grid. Other ceiling finishes include: painted structure or plaster. Although there are sections of minor damage the overall condition is very good. A deficiency included in this report is designed to correct the minor infractions in the finish. No additional recommendations are required at this time.

The institutional equipment includes: library equipment; stage equipment. The school stage has a stage curtain assembly that appears to be from the original construction. Modern applications are typically fire-proof applications with adjustable tracks and electric support for operation. The curtains are torn in a few sections and the track is not functioning properly, overall the system is in poor condition. It is recommended that the curtain and track system be upgraded to a new system. Special care should be considered in regards to modern fire proofing for the new installation.

The gym equipment such as basketball backstops, scoreboards were upgraded as part of the 2008 renovation effort and no recommendations are required at this time.

Other equipment includes kitchen equipment; loading dock bumpers each part of the 2008 renovation. No recommendations are required at this time.

Furnishings include: fixed casework; window shades/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. Ensure that ADA requirements are followed with the new seating layout.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have electronic automatic faucets. Some urinals and water closets have recessed manual flush valves with push button operators and some have electronic recessed flush valves with electric eye. Water coolers are stainless steel dual level type and custodial closets have fiberglass mop basins. There are a few counter top stainless steel sinks and science classrooms have integral lab sinks and emergency eye wash/showers. Some lab stations have gas, air and water outlets. A lab air compressor is located in the mechanical room. Kitchen waste is piped to a grease trap below the kitchen slab.

Hot water is provided by two PVI gas water heaters in the mechanical room. The heaters are one hundred fifty gallons each. There are two small pressurization tanks adjacent to the water heaters. An Armstrong duplex domestic booster pump system with two ten hp pumps and two small inline circulating pumps are part of the system. A water softener is included in the system. A duplex sump pump is in a storage room adjacent to the mechanical room.

Sanitary, waste and vent piping is hubless cast iron with banded couplings. Domestic hot and cold water is insulated rigid copper piping. There is a four inch water service with meter and two parallel backflow preventers in a storage room adjacent to the mechanical room. The roof has drains connected to horizontal and vertical rainwater piping. Gas service is a six inch line with a pressure boost system located in the building engineer's office. Large gas piping is welded black steel and smaller piping is black steel with screwed fittings.

The plumbing system is from the 2008 addition and renovation and no significant alterations have been made. All components are in good condition and should have remaining service life in excess of twenty years.

HVAC- The building is heated by hot water generated by two HB Smith Mills 450 cast iron sectional gas/ oil fired boilers in the mechanical room. The boilers are one hundred fifty hp with Power Flame burners, forced draft and separate oil pumps. Hot water is circulated to heating coils, unit ventilators and cabinet radiation units throughout the building. There is a ten thousand gallon double wall steel underground oil storage tank. A duplex pump system in the generator room provides oil circulation, and there is an electronic tank monitoring system and carbon monoxide sensor.

Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to roof caps. A large louver with motorized dampers in the generator room provides combustion air to that space and the adjacent mechanical room. A ducted inline exhaust fan ventilates the spaces.

The building is completely air conditioned with two 225 ton Carrier package air cooled chillers on the roof. The original design drawings indicated a water cooled chilled water system with four pipe heating and cooling capability. An addendum changed the system to air cooled chillers and a two pipe changeover system. Spaces are served by interior and roof mounted exterior air handling units, and unit ventilators. Ductless split systems serve equipment areas, with roof mounted condensing units. Exterior classrooms have unit ventilators and other spaces are zoned by variable air volume devices with hot water reheat coils. Staeffa room thermostats control room devices.

The air handling units serve areas as follows

AHU-1 Auditorium

AHU-2 Gymnasium

AHU-3 Gymnasium

AHU-4 Locker Areas

AHU-5 IMC

AHU-6 Cafeteria

AHU-7 Music Area

AHU-8 Art Studio

Air handling units have hydronic heating/cooling coils, outside and return air dampers, fans and motors, control valves and controls. Units are Carrier or Annexair, and some have heat recovery wheels. AHU- 1 is located in a third floor mechanical room. AHU-7 and AHU-8 are above the ceilings in the music and art areas. Other units are roof mounted.

Unit ventilators are either 1250 or 1500 cfm with hydronic coils, filters, controls and blowers. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Exposed areas have spiral construction ductwork. Toilet exhaust, fume hood exhaust and other building exhaust is provided by thirty three fans, including upblast, centrifugal roof ventilators, inline fans and utility vent sets.

Dual temperature water piping is insulated welded black steel. Oil piping is black steel with screwed fittings. There are three 25 hp dual temperature water pumps in the mechanical room. All are Paco end suction type with variable frequency drives. Expansion tanks, air separator and chemical feed unit are part of the piping system. A glycol feed system for the chilled water prevents freezing.

There are two wall mounted canopy double wall stainless steel exhaust hoods in the kitchen with fire suppression and gas solenoid shut off valve. A separate heat removal hood is located at the serving line. Upblast exhaust fans and roof mounted makeup air units are connected to the hoods.

There is a digital building automation system with graphic display by Niagara. The system is reportedly functioning properly and is under a service contract.

All components of the HVAC system are from the 2008 construction and no significant modifications have been made. The systems and equipment are in good condition and should have remaining service life from fifteen to twenty five years for cooling and distribution and thirty years for boilers.

FIRE PROTECTION- The building has a complete automatic sprinkler system with standpipes. An Aurora electric vertical inline fire pump is located in the mechanical room with an inline jockey pump. The fire pump is seven hundred fifty gpm sixty hp. Piping is black steel with Victaulic couplings. There are recessed sprinkler heads with flush cover plates and standpipes with fire hose connections in all stairwells. The fire service is a six inch line to the mechanical room. There are no issues with the existing fire protection system, which should be serviceable up to thirty years.

There are no reported or observed deficiencies with the plumbing, mechanical, or fire protection systems for this building.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a 750 kVA, 13.2 kV-480/277V, 3 phase, 4 wire pad-mounted transformer located on the southwest side of the building near N. 17th Street. Secondary service is routed in a duct bank to a Square D, QED Style, 3000A, 480/277V, 3 phase, 4 wire Main Switchboard Substation located in Electrical Room 008 of the 2008 building addition. The switchboard is provided with PM800 Power Meter, a 300 kVAR power factor correction capacitor and three distribution sections.

Radial distribution at 480/277V is routed to two electrical closets on each floor, where 480/277V panelboards, 208/120V step-down transformers and 208/120V panelboards are located.

Panelboard ITDP provides 208/120V power to panelboards on the floors that serve isolated grounding type receptacles in classrooms for computer equipment.

Except for Panelboards LP1-5 and LP1-6, which are located adjacent to the auditorium, all of the electrical service entrance and distribution equipment was replaced in the 2008 Addition and Renovation project. The remaining useful life of this equipment is 23 years. Panelboards LP1-5 and LP1-6 should be replaced within the next 3 to 4 years.

Receptacles-- Classrooms are supplied with an adequate quantity of receptacles, including isolated grounding type receptacles. In some engineering labs, cord reels with receptacle drops are mounted on suspended framing system to provide power to work stations. Except in the kitchen, all receptacles located within 6 feet of wet locations were observed to be ground-fault circuit-interrupting (GFCI) type. There are five (5) duplex receptacles in the kitchen that need to be replaced with GFCI type to comply with NFPA 70, NEC Article 210.8 (B).

Lighting-- There are a number of different types of lighting fixtures used. Corridors, most classrooms and some offices have 2x4 recessed fluorescent troffers with acrylic prismatic lenses. Computer labs and other offices have 2x4 recessed fluorescent fixtures with parabolic louvers. Lighting in engineering labs, dance studio and the IMC consists of continuous rows of pendant mounted, direct/indirect fluorescent fixtures with parabolic louvers. Pendant mounted industrial fixtures with multiple compact fluorescent lamps are provided in the cafeteria. The gymnasium has suspended industrial type metal halide fixtures. The Auditorium has recessed metal halide downlights and wall mounted fluorescent fixtures with two (2) T12 fluorescent lamps. Some of the wall mounted fixtures have missing shielding covering the lamps. There were two rows of theatrical electrics above the stage, but no worklights. There is no

dimming system in the Auditorium.

Wraparound fluorescent fixtures are provided in stairwells, restrooms and other storage areas. Industrial 4 foot fluorescent fixtures are provided in mechanical and electrical rooms, storage rooms, basement corridors and similar spaces.

Student Main Street, which is the corridor running in the east-west direction between the existing 1949 building and the 2008 Addition is illuminated with pendant mounted direct/indirect compact fluorescent fixtures. The Building Engineer reported that the illumination level was too low for the corridor. Additional lighting fixtures are recommended.

Multiple switches are used in classrooms for lighting control. Also, all classrooms, and most other rooms are provided with occupancy sensors for lighting control. Lighting levels throughout the building are within Illuminating Engineering Society of North America (IESNA) recommendations.

Wall mounted lighting fixtures, wired on emergency power, are located on the building exterior above each egress door. There are also some decorative wall mounted sconces on the north side of the building along W. Norris Street. An ASCO lighting control panel controls the exterior lighting.

The lighting system was replaced in the 2008 Addition and Renovation project and has over 13 years of useful life remaining.

Fire Alarm System-- The fire alarm system is an addressable type by General Electric. The EST 3 fire alarm control panel (FACP) is located in Maintenance Workshop 001. Remote annunciator panels are provided in the main entrance vestibule and in the Main Office. The system consists of pull stations, smoke and heat detectors, and audible and visual notification appliances. Smoke detectors are provided throughout the corridors, in elevator lobbies and machine rooms, and mechanical and electrical rooms. Notification appliances are provided in all classrooms, restrooms and multi-occupant rooms. It was observed that Conference Room 135A did not have a fire alarm notification appliance.

Telephone/LAN-- Telephone is provided by VoIP. Wireless access points are provided in classrooms and throughout the entire school for Wi-Fi service. Room 009 houses the Main Distribution Frame and Telecommunications. Additional IDF closets are located on all floors. Data outlets and telephones are provided in all classrooms. Data and telephone coverage throughout the school is adequate. No deficiencies were observed.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Each classroom has a flush ceiling mounted paging speaker. There are also flush mounted paging speakers in corridor ceilings. This system is estimated to have 18 years of useful life remaining. There is a portable sound system for the Auditorium. There is an Aiphone intercom station provided at the visitor entrance with communications to the main office.

Clock and Program System-- There is a Sapling master clock system provided in the school. The Sapling transmitter is located in MDF Room 009. The analog clocks are provided and throughout the school are battery wireless GPS clocks that are synchronized by the Sapling transmitter. There are a few clocks located in corridors that appear to be double face, but have one clock, or cover plate, missing. This is considered a maintenance item and not included as a deficiency. The ceiling speakers are used for announcements and program system. The system was installed in 2008 and has a useful life extending beyond this report.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of all corridors, auditorium, gymnasium, cafeteria and stairwells. Exterior cameras are building mounted and provide coverage of the site and entrances. The system was installed in 2008 and has 13 years of useful life remaining. Card access is provided for the elevator and some rooms, including telecommunication rooms.

Emergency Power System--There is a Kohler 150 kW/187.5 kVA, 480/277V, 3 phase, 4 wire standby generator with 280 gallon sub-base fuel oil storage tank located in Generator Room 006. The generator has 220 hours of operation. There are three (3) Kohler automatic transfer switches (ATS's) located in Room 006: ATS-1 serves the Emergency System Panelboard EDP, ATS-2 serves the Elevator, and ATS-3 serves Standby Power Panelboard SDP. All equipment was installed in 2008 and in good condition.

Emergency Lighting System / Exit Lighting-- Selected egress lighting fixtures and exit signs are connected to Emergency Power Panelboard ELPHB. Exit signs are LED type, except in the Auditorium, which have incandescent exit signs.

Lightning Protection System --There is a lightning protection system for this facility and it is in good condition. No deficiencies were observed.

Conveying System--There is one Kone LCE Traction passenger elevator located in the 1949 building with 2500 pound capacity rating

that serves all floors. Machine Room 112 is provided with elevator and cab lighting disconnect switches and has smoke and heat detectors, as required by code. The elevator was installed in 2008 and has a remaining useful life that extends beyond this report.

GROUNDS

The parking lot was resurfaced in recent years and overall is in good condition. However, there are sections that are showing signs of the harsh environment associated with snow removal. Before this issue takes hold of the finish it is recommended that new crack sealant be applied to ensure that the finish does not break down.

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

Pedestrian pavements are concrete pavers in like new condition. Fencing is limited to the parking play area and is either chain link or a metal picket fence. This entire site was reconstructed during the 2008 renovation as the parking area and landscaping replaced the foundation of the old school that was razed to build this new school.

Site Lighting— Site lighting is provided by pole mounted, metal halide luminaires for the parking lot and post top metal halide fixtures along the sidewalks to the entrances. All site lighting fixtures were installed in 2008 and are in very good condition with a remaining useful life that extends beyond this report.

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

RECOMMENDATIONS

- Add fixed ladders to wall
- Replace auditorium seating
- Remove and replace stage curtain
- Repair and repaint all interior walls
- Remove and Replace Built Up Roof
- Fill cracks in AC paving
- Build secure trash dumpster enclosure
- Replace 225A Panelboards LP1-5 and LP1-6, located adjacent to the Auditorium, within the next 3 to 4 years.
- Replace five (5) duplex receptacles in the kitchen with GFCI type receptacles to comply with NFPA 70, NEC Article 210.8 (B) for GFCI protection for personnel.
- In the Auditorium, replace ballasts and T12 fluorescent lamps in all (14) wall mounted fixtures along the sides and back of the room. Replace missing shielding on four (4) wall mounted fixtures.
- Provide increased illumination in Student Main Street, which is the corridor running in the east-west direction between the existing 1949 building and the 2008 Addition, by providing additional pendant mounted, direct/indirect compact fluorescent fixtures. Estimate addition of (9) fixtures.
- Replace four (4) incandescent type exit signs in the Auditorium with LED type.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S403001		

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.

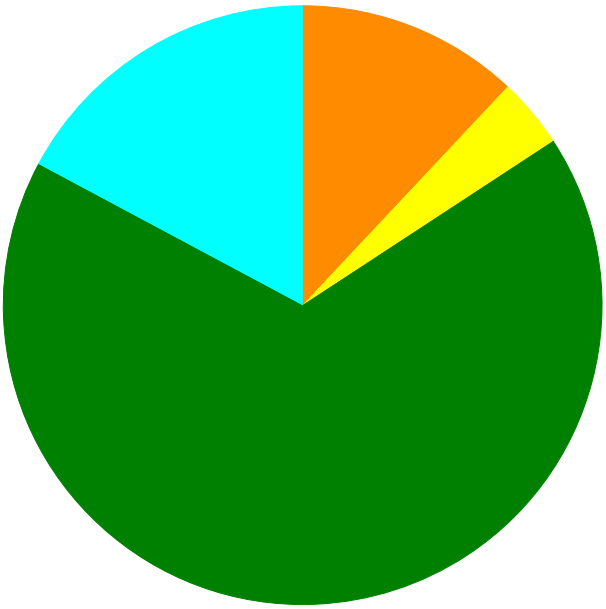
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	34.00 %	0.00 %	$0.00
A20 - Basement Construction	34.00 %	0.00 %	$0.00
B10 - Superstructure	37.02 %	0.00 %	$0.00
B20 - Exterior Enclosure	39.96 %	1.56 %	$168,381.97
B30 - Roofing	65.02 %	55.99 %	$1,016,460.33
C10 - Interior Construction	90.48 %	0.00 %	$0.00
C20 - Stairs	88.94 %	0.00 %	$0.00
C30 - Interior Finishes	70.26 %	0.54 %	$33,869.39
D10 - Conveying	80.00 %	0.00 %	$0.00
D20 - Plumbing	78.58 %	0.00 %	$0.00
D30 - HVAC	72.79 %	0.00 %	$0.00
D40 - Fire Protection	80.00 %	0.00 %	$0.00
D50 - Electrical	64.63 %	0.77 %	$67,971.25
E10 - Equipment	80.00 %	0.00 %	$0.00
E20 - Furnishings	82.50 %	75.00 %	$239,307.93
G20 - Site Improvements	74.32 %	2.95 %	$49,153.71
G40 - Site Electrical Utilities	76.67 %	0.00 %	$0.00
Totals:	**59.03 %**	**2.01 %**	**$1,575,144.58**

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)
B403001;Carver	149,810	2.00	$0.00	$170,094.32	$59,460.04	$1,056,068.93	$240,367.58
G403001;Grounds	130,000	2.20	$0.00	$18,852.52	$0.00	$0.00	$30,301.19
Total:		**2.01**	**$0.00**	**$188,946.84**	**$59,460.04**	**$1,056,068.93**	**$270,668.77**

Deficiencies By Priority



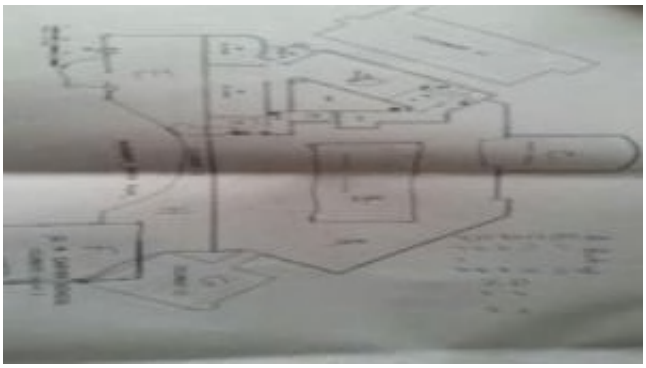
Budget Estimate Total: $1,575,144.58

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:	High School
Gross Area (SF):	149,810
Year Built:	1949
Last Renovation:	2008
Replacement Value:	$76,257,165
Repair Cost:	$1,525,990.87
Total FCI:	2.00 %
Total RSLI:	58.57 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B403001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S403001		

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	34.00 %	0.00 %	$0.00
A20 - Basement Construction	34.00 %	0.00 %	$0.00
B10 - Superstructure	37.02 %	0.00 %	$0.00
B20 - Exterior Enclosure	39.96 %	1.56 %	$168,381.97
B30 - Roofing	65.02 %	55.99 %	$1,016,460.33
C10 - Interior Construction	90.48 %	0.00 %	$0.00
C20 - Stairs	88.94 %	0.00 %	$0.00
C30 - Interior Finishes	70.26 %	0.54 %	$33,869.39
D10 - Conveying	80.00 %	0.00 %	$0.00
D20 - Plumbing	78.58 %	0.00 %	$0.00
D30 - HVAC	72.79 %	0.00 %	$0.00
D40 - Fire Protection	80.00 %	0.00 %	$0.00
D50 - Electrical	64.63 %	0.77 %	$67,971.25
E10 - Equipment	80.00 %	0.00 %	$0.00
E20 - Furnishings	82.50 %	75.00 %	$239,307.93
Totals:	**58.57 %**	**2.00 %**	**$1,525,990.87**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$27.30	S.F.	149,810	100	1949	2049		34.00 %	0.00 %	34			$4,089,813
A1030	Slab on Grade	$5.17	S.F.	149,810	100	1949	2049		34.00 %	0.00 %	34			$774,518
A2010	Basement Excavation	$4.36	S.F.	149,810	100	1949	2049		34.00 %	0.00 %	34			$653,172
A2020	Basement Walls	$9.91	S.F.	149,810	100	1949	2049		34.00 %	0.00 %	34			$1,484,617
B1010	Floor Construction	$85.34	S.F.	149,810	100	1949	2049		34.00 %	0.00 %	34			$12,784,785
B1020	Roof Construction	$14.39	S.F.	48,000	100	2008	2108		93.00 %	0.00 %	93			$690,720
B2010	Exterior Walls	$43.20	S.F.	149,810	100	1949	2049	2027	12.00 %	2.60 %	12		$168,381.97	$6,471,792
B2020	Exterior Windows	$27.52	S.F.	149,810	40	2008	2048		82.50 %	0.00 %	33			$4,122,771
B2030	Exterior Doors	$1.16	S.F.	149,810	25	2008	2033		72.00 %	0.00 %	18			$173,780
B3010105	Built-Up	$37.76	S.F.	48,000	20	2008	2028		65.00 %	56.08 %	13		$1,016,460.33	$1,812,480
B3020	Roof Openings	$0.06	S.F.	48,000	30	2008	2038		76.67 %	0.00 %	23			$2,880
C1010	Partitions	$21.05	S.F.	149,810	100	2008	2108		93.00 %	0.00 %	93			$3,153,501
C1020	Interior Doors	$3.76	S.F.	149,810	40	2008	2048		82.50 %	0.00 %	33			$563,286
C1030	Fittings	$2.90	S.F.	149,810	40	2008	2048		82.50 %	0.00 %	33			$434,449
C2010	Stair Construction	$1.18	S.F.	149,810	100	2008	2108		93.00 %	0.00 %	93			$176,776
C2020	Stair Finishes	$0.39	S.F.	149,810	30	2008	2038		76.67 %	0.00 %	23			$58,426
C3010230	Paint & Covering	$13.21	S.F.	100,000	10	2008	2018	2021	60.00 %	2.56 %	6		$33,869.39	$1,321,000
C3010232	Wall Tile	$2.63	S.F.	49,810	30	2008	2038		76.67 %	0.00 %	23			$131,000

Site Assessment Report - B403001;Carver

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	$7.30	S.F.	5,000	10	2008	2018	2027	120.00 %	0.00 %	12			$36,500
C3020412	Terrazzo & Tile	$75.52	S.F.	4,000	50	2008	2058		86.00 %	0.00 %	43			$302,080
C3020413	Vinyl Flooring	$9.68	S.F.	120,000	20	2008	2028		65.00 %	0.00 %	13			$1,161,600
C3020414	Wood Flooring	$22.27	S.F.	10,000	25	2015	2040		100.00 %	0.00 %	25			$222,700
C3020415	Concrete Floor Finishes	$0.97	S.F.	10,000	50	2008	2058		86.00 %	0.00 %	43			$9,700
C3030	Ceiling Finishes	$20.97	S.F.	149,810	25	2008	2033		72.00 %	0.00 %	18			$3,141,516
D1010	Elevators and Lifts	$1.28	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$191,757
D2010	Plumbing Fixtures	$13.52	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$2,025,431
D2020	Domestic Water Distribution	$1.68	S.F.	149,810	25	2008	2033		72.00 %	0.00 %	18			$251,681
D2030	Sanitary Waste	$2.32	S.F.	149,810	30	2008	2038		76.67 %	0.00 %	23			$347,559
D2040	Rain Water Drainage	$1.90	S.F.	149,810	30	2008	2038		76.67 %	0.00 %	23			$284,639
D3020	Heat Generating Systems	$18.67	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$2,796,953
D3030	Cooling Generating Systems	$24.48	S.F.	149,810	30	2008	2038		76.67 %	0.00 %	23			$3,667,349
D3040	Distribution Systems	$42.99	S.F.	149,810	25	2008	2033		72.00 %	0.00 %	18			$6,440,332
D3050	Terminal & Package Units	$11.60	S.F.	149,810	20	2008	2028		65.00 %	0.00 %	13			$1,737,796
D3060	Controls & Instrumentation	$13.50	S.F.	149,810	20	2008	2028		65.00 %	0.00 %	13			$2,022,435
D4010	Sprinklers	$7.05	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$1,056,161
D4020	Standpipes	$1.01	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$151,308
D5010	Electrical Service/Distribution	$9.70	S.F.	149,810	30	2008	2038		76.67 %	2.91 %	23		$42,237.21	$1,453,157
D5020	Lighting and Branch Wiring	$34.68	S.F.	149,810	20	2008	2028		65.00 %	0.43 %	13		$22,342.76	$5,195,411
D5030	Communications and Security	$12.99	S.F.	149,810	15	2008	2023		53.33 %	0.00 %	8			$1,946,032
D5090	Other Electrical Systems	$1.41	S.F.	149,810	30	2008	2038		76.67 %	1.61 %	23		$3,391.28	$211,232
E1020	Institutional Equipment	$4.82	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$722,084
E1090	Other Equipment	$11.10	S.F.	149,810	35	2008	2043		80.00 %	0.00 %	28			$1,662,891
E2010	Fixed Furnishings	$2.13	S.F.	149,810	40	2008	2048		82.50 %	75.00 %	33		$239,307.93	$319,095
								Total	**58.57 %**	**2.00 %**			**$1,525,990.87**	**$76,257,165**

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 wall finish 80%
Ceramic / brick wall finish 20%

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

Note: Carpet 3%
Tile 4%
Vinyl 81%
Wood 6%
Concrete 6%

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

Note: There are (19) secondary transformers as follows:
(2) 15 kVA
(3) 30 kVA
(8) 45 kVA
(1) 50 kVA phase converter
(2) 75 kVA
(2) 112.5 kVA
(1) 225 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:	**$1,525,991**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,735,077**	**$0**	**$2,711,692**	**$0**	**$0**	**$5,972,761**
*** 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	$168,382	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$168,382**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,016,460	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,016,460**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

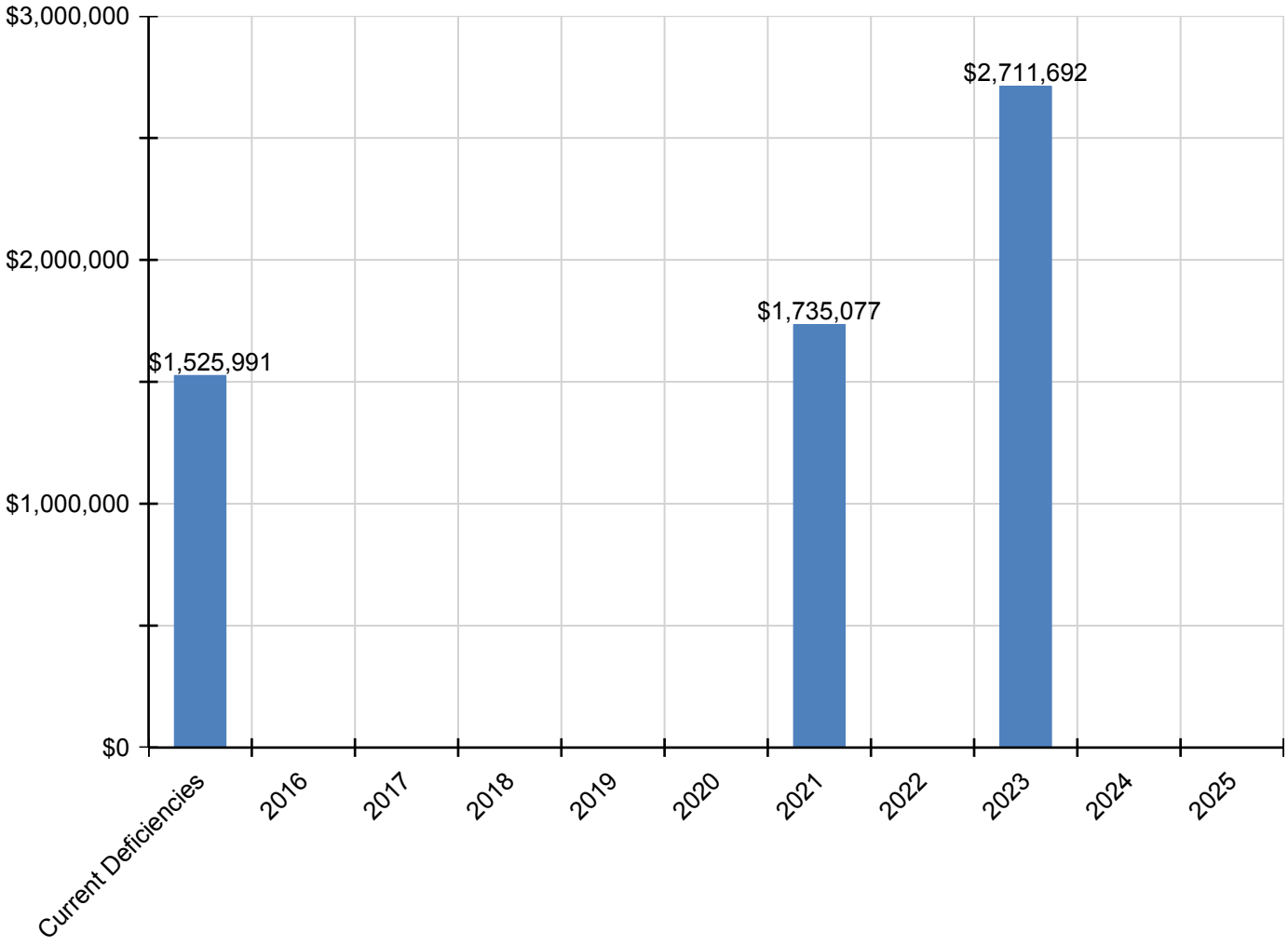
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2020 - Stair Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$33,869	$0	$0	$0	$0	$0	$1,735,077	$0	$0	$0	$0	**$1,768,947**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$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	$42,237	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$42,237**
D5020 - Lighting and Branch Wiring	$22,343	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$22,343**

D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$0	$2,711,692	$0	$0	**$2,711,692**
D5090 - Other Electrical Systems	$3,391	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,391**
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	$239,308	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$239,308**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

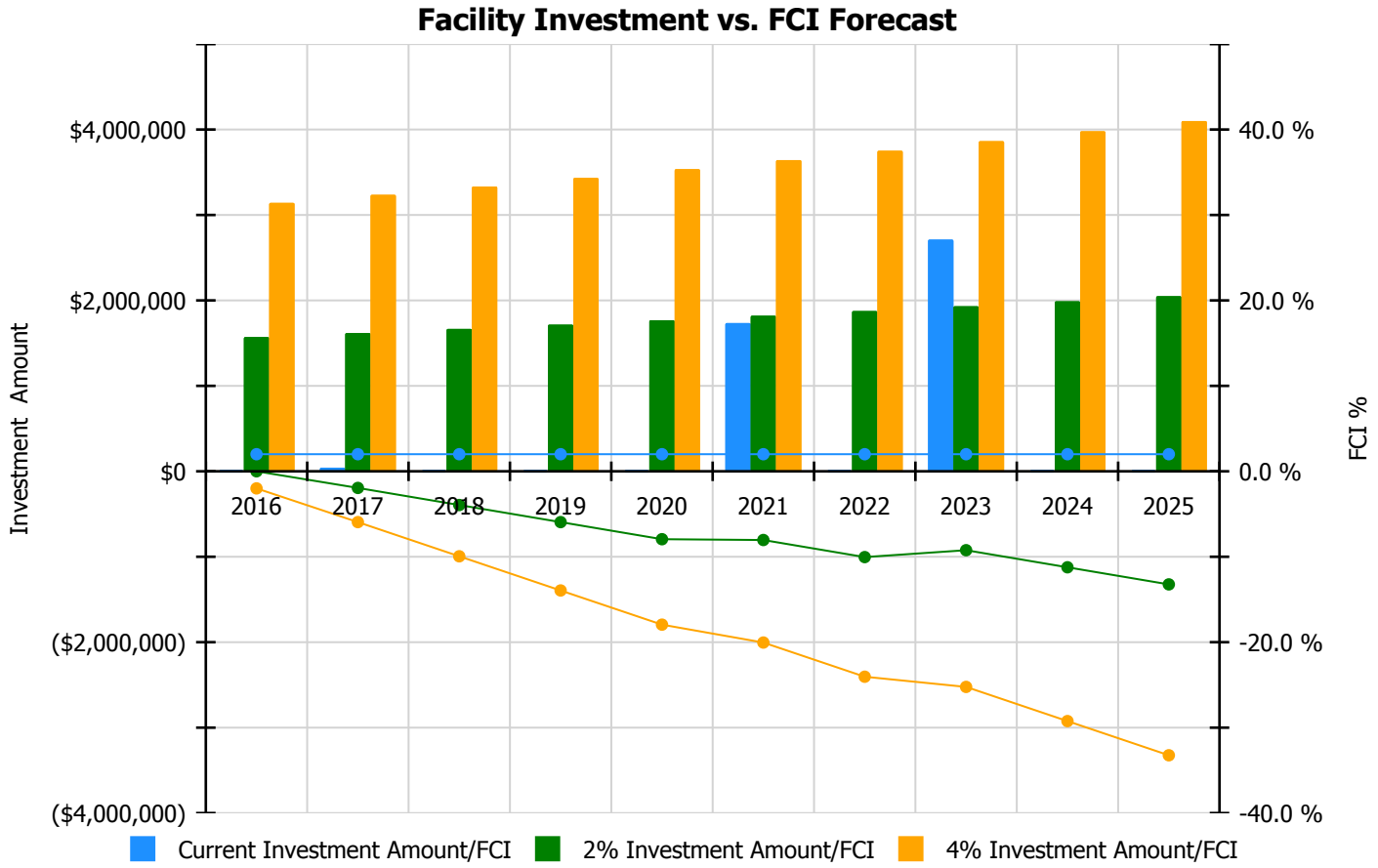
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

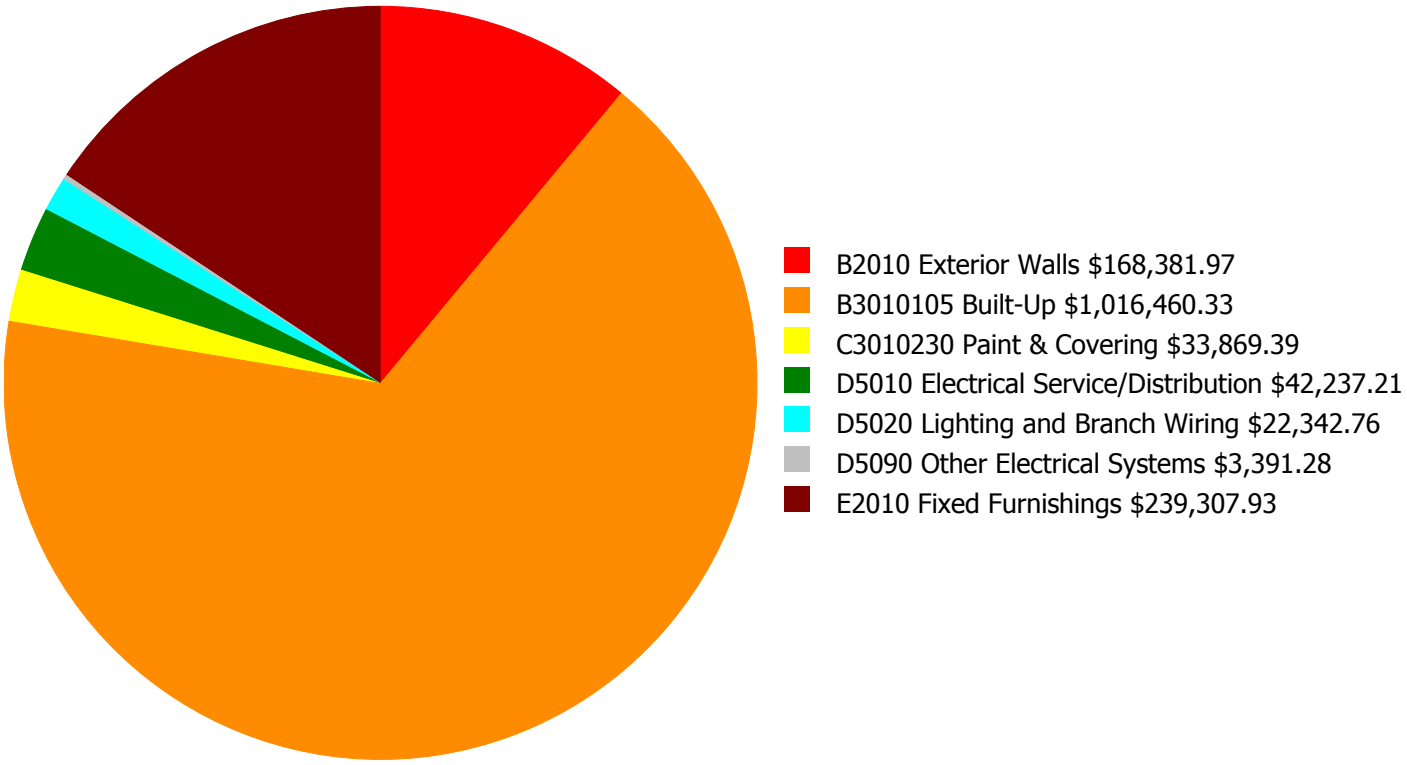
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 2%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,570,898.00	0.00 %	$3,141,795.00	-2.00 %
2017	$42,595	$1,618,025.00	-1.95 %	$3,236,049.00	-5.95 %
2018	$0	$1,666,565.00	-3.95 %	$3,333,131.00	-9.95 %
2019	$0	$1,716,562.00	-5.95 %	$3,433,124.00	-13.95 %
2020	$0	$1,768,059.00	-7.95 %	$3,536,118.00	-17.95 %
2021	$1,735,077	$1,821,101.00	-8.04 %	$3,642,202.00	-20.04 %
2022	$0	$1,875,734.00	-10.04 %	$3,751,468.00	-24.04 %
2023	$2,711,692	$1,932,006.00	-9.23 %	$3,864,012.00	-25.23 %
2024	$0	$1,989,966.00	-11.23 %	$3,979,932.00	-29.23 %
2025	$0	$2,049,665.00	-13.23 %	$4,099,330.00	-33.23 %
Total:	**$4,489,365**	**$18,008,581.00**		**$36,017,161.00**	

Deficiency Summary by System

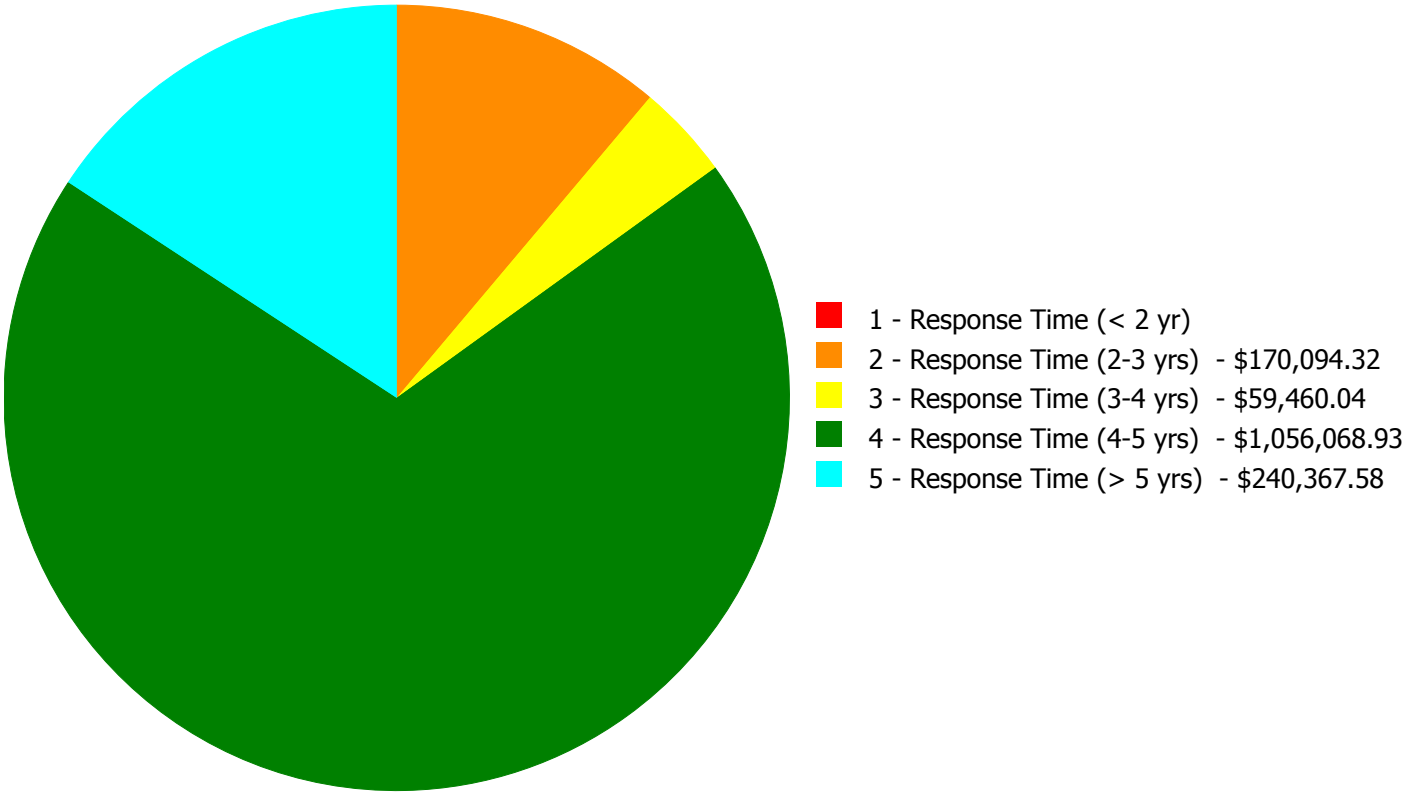
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,525,990.87

Deficiency Summary by Priority

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



Budget Estimate Total: $1,525,990.87

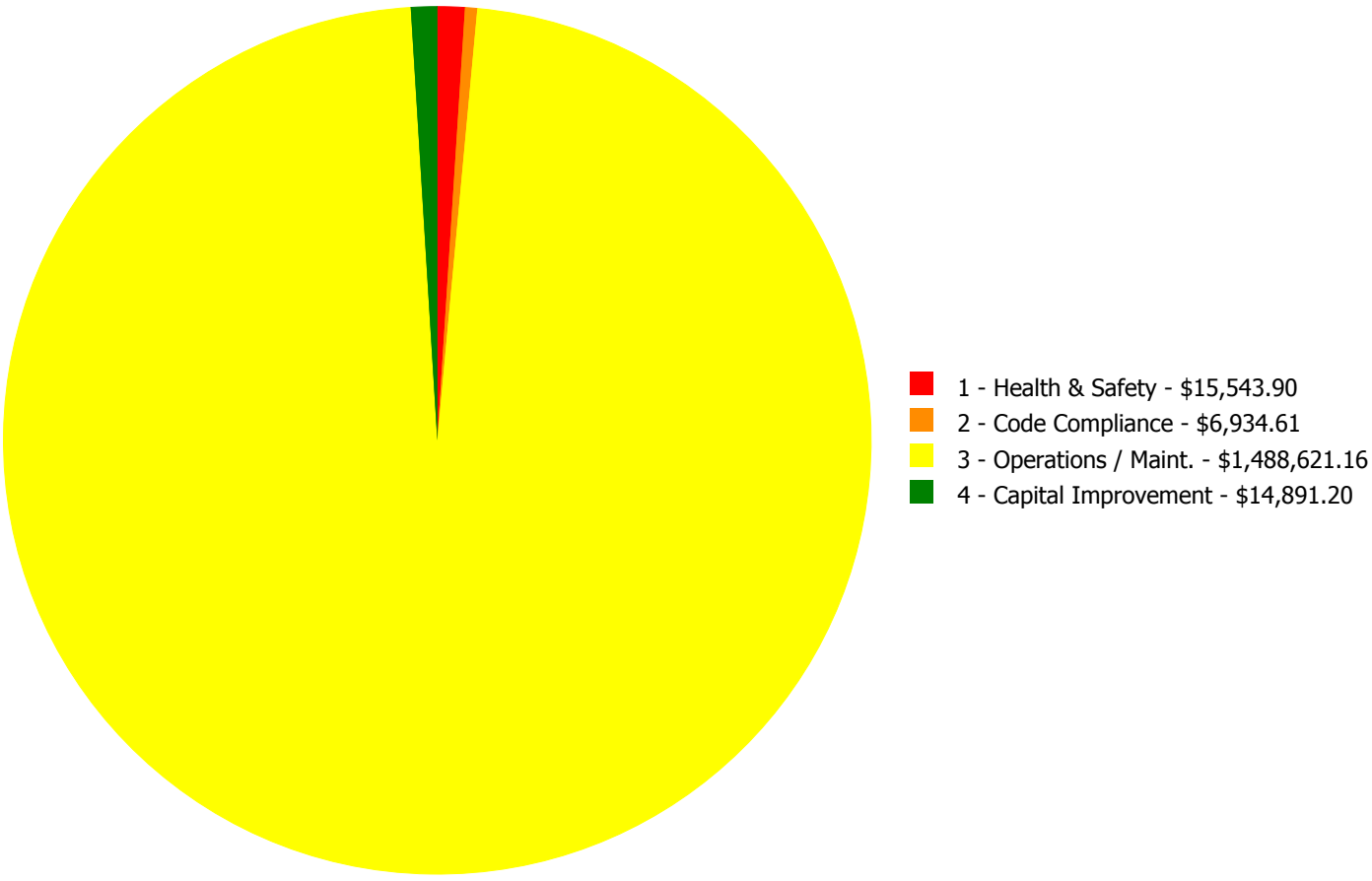
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$168,381.97	$0.00	$0.00	$0.00	$168,381.97
B3010105	Built-Up	$0.00	$0.00	$0.00	$1,016,460.33	$0.00	$1,016,460.33
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$33,869.39	$0.00	$33,869.39
D5010	Electrical Service/Distribution	$0.00	$0.00	$42,237.21	$0.00	$0.00	$42,237.21
D5020	Lighting and Branch Wiring	$0.00	$1,712.35	$0.00	$5,739.21	$14,891.20	$22,342.76
D5090	Other Electrical Systems	$0.00	$0.00	$3,391.28	$0.00	$0.00	$3,391.28
E2010	Fixed Furnishings	$0.00	$0.00	$13,831.55	$0.00	$225,476.38	$239,307.93
	Total:	$0.00	$170,094.32	$59,460.04	$1,056,068.93	$240,367.58	$1,525,990.87

Deficiency Summary by Category

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



Budget Estimate Total: $1,525,990.87

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: B2010 - Exterior Walls

Location: Original School Wall

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 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: $161,447.36

Assessor Name: Craig Anding

Date Created: 11/02/2015

Notes: The original schools 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 area near room 138 is a new interior wall that at one time was an exterior wall prior to the 2008 addition. This area will require additional effort as water is currently causing issues with the finish. 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: B2010 - Exterior Walls

Location: Roof Ladder

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Add fixed ladders to wall

Qty: 25.00

Unit of Measure: V.L.F.

Estimate: $6,934.61

Assessor Name: Craig Anding

Date Created: 11/02/2015

Notes: The ladder mounted to the exterior wall that provides access to the roof is over 20 feet in height and does not meet the current OSHA standards for safety. "Ladders with cages as defined in 1910.27(c)(3) of the OSHA standard requires a safety cage and landing for access to extended roof levels. This deficiency provides a budgetary consideration to remove the existing roof ladder and replace with a new ladder and cage with landing for safe roof access.

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: 5.00

Unit of Measure: Ea.

Estimate: $1,712.35

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Replace five (5) duplex receptacles in the kitchen with GFCI type receptacles to comply with NFPA 70, NEC Article 210.8 (B) for GFCI protection for personnel.

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

System: D5010 - Electrical Service/Distribution

Location: Auditorium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Panelboard
Qty: 2.00
Unit of Measure: Ea.
Estimate: $42,237.21
Assessor Name: Craig Anding
Date Created: 11/24/2015

Notes: Replace 225A Panelboards LP1-5 and LP1-6, located adjacent to the Auditorium, within the next 3 to 4 years.

System: D5090 - Other Electrical Systems

Location: Auditorium
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Emergency/Exit Lighting
Qty: 4.00
Unit of Measure: Ea.
Estimate: $3,391.28
Assessor Name: Craig Anding
Date Created: 11/24/2015

Notes: Replace four (4) incandescent type exit signs in the Auditorium with LED type.

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Remove and replace stage curtain - insert the LF of track and SF of curtain

Qty: 1.00

Unit of Measure: Ea.

Estimate: $13,831.55

Assessor Name: Craig Anding

Date Created: 11/02/2015

Notes: The school stage has a stage curtain assembly that appears to be from the original construction. Modern applications are typically fire-proof applications with adjustable tracks and electric support for operation. The curtains are torn in a few section and the track is not functioning properly, overall the system is in poor condition. It is recommended that the curtain and track system be upgraded to a new system. Special care should be considered in regards to modern fire proofing for the new installation.

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

System: B3010105 - Built-Up

Location: Original School Roof

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $1,016,460.33

Assessor Name: Craig Anding

Date Created: 11/02/2015

Notes: There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. The major differences are between the 1948 construction and the 2008 construction roof sections. Parapet heights, coping materials, and the height of the flashing also varies in different sections. The 1948 roof is a built up application that was installed in the early 1990'S. The 2008 built up roofs are in like new condition. There are numinous leaks including but not limited to Main Street, Library, Weight room, Cafeteria and the Girls locker room. Considering the condition of the 1948 roofing systems, universal upgrades are recommended. Remove and replace the 1948 roof sections. This deficiency also includes consideration for roof repairs for the new roof that connects to the 1948 structure. This roof is expected to have a life cycle that will expire within the next ten years.

System: C3010230 - Paint & Covering

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $33,869.39

Assessor Name: Craig Anding

Date Created: 11/02/2015

Notes: There are painted walls, trim, and some painted ceilings in this building. In the older sections of the building, some textured concrete surfaces have been painted. The interior finishes in this school in good to fair condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. The finishes in the new section are in excellent to good condition. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Maintain Lighting Fixtures

Qty: 14.00

Unit of Measure: Ea.

Estimate: $5,739.21

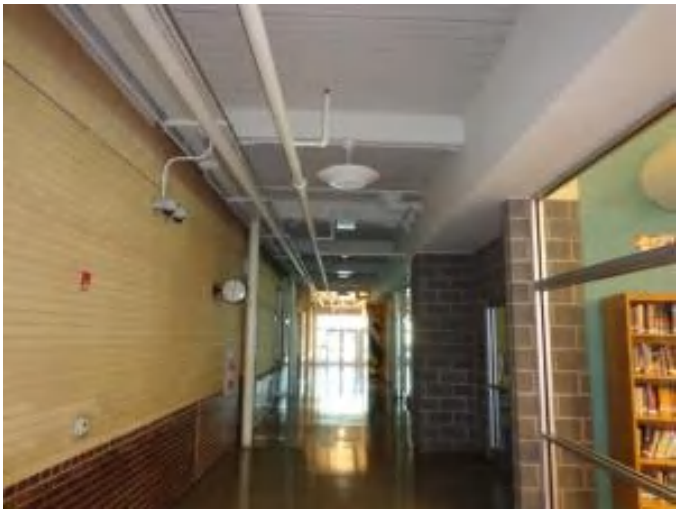
Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: In the Auditorium, replace ballasts and T12 fluorescent lamps in all (14) wall mounted fixtures along the sides and back of the room. Replace missing shielding on four (4) wall mounted fixtures.

Priority 5 - Response Time (> 5 yrs):

System: D5020 - Lighting and Branch Wiring



Location: Student Main Street

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Add Lighting Fixtures

Qty: 9.00

Unit of Measure: Ea.

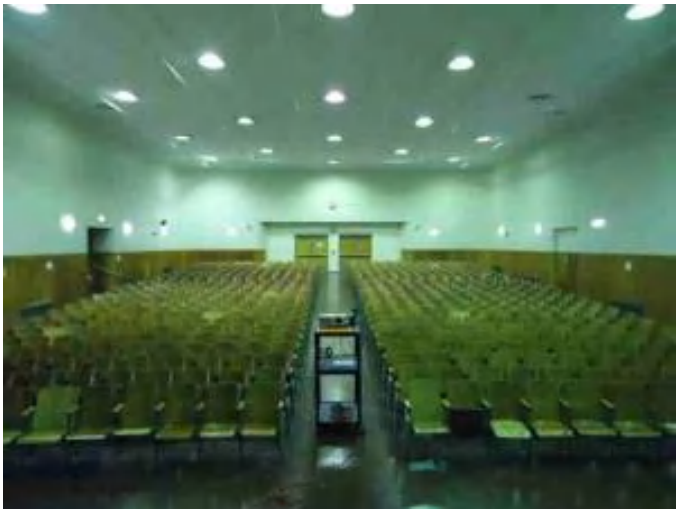
Estimate: $14,891.20

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Provide increased illumination in Student Main Street, which is the corridor running in the east-west direction between the existing 1949 building and the 2008 Addition, by providing additional pendant mounted, direct/indirect compact fluorescent fixtures. Estimate addition of (9) fixtures.

System: E2010 - Fixed Furnishings



Location: Auditorium

Distress: Damaged

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: 250.00

Unit of Measure: Ea.

Estimate: $225,476.38

Assessor Name: Craig Anding

Date Created: 11/02/2015

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. Ensure that ADA requirements are followed with the new seating layout.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Traction geared elevators, passenger, 2500 lb., 5 floors, 200 FPM	1.00	Ea.	Machine Room 112	Kone	KCM831	NA		30	2008	2038	$179,550.00	$197,505.00
D2020 Domestic Water Distribution	Pump, pressure booster system, 10 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	mechanical room	armstrong				25	2008	2033	$12,768.00	$14,044.80
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 5256 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	mills 450			35	2008	2043	$112,817.00	$124,098.70
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 5256 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	mills 450			35	2008	2043	$112,817.00	$124,098.70
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 210 ton cooling, includes standard controls	1.00	Ea.	roof	carrier	30rba27566	3207q839979		30	2008	2038	$161,634.00	$177,797.40
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 210 ton cooling, includes standard controls	1.00	Ea.	roof	carrier	30rba27566	3207q839980		30	2008	2038	$161,634.00	$177,797.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 25 H.P., to 1550 GPM, 6" size	1.00	Ea.	mechanical room	paco				25	2008	2033	$26,334.00	$28,967.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 25 H.P., to 1550 GPM, 6" size	1.00	Ea.	mechanical room	paco				25	2008	2033	$26,334.00	$28,967.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 25 H.P., to 1550 GPM, 6" size	1.00	Ea.	mechanical room	paco				25	2008	2033	$26,334.00	$28,967.40
D4010 Sprinklers	Fire pumps, electric, 750 GPM, 100 psi, 66 HP, 3,550 RPM, 4" pump, including controller, fittings and relief valve	1.00	Ea.	mechanical room	aurora				35	2008	2043	$27,321.80	$30,053.98
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 400 A, 1 stories, 25' horizontal	3.00	Ea.	Generator Room 006	Square D	Type NF	NA		30	2008	2038	$17,698.50	$58,405.05
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 600 A, 1 stories, 25' horizontal	2.00	Ea.	Training Room 157	Square D	Type NF	NA		30	2008	2038	$27,075.60	$59,566.32
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	2.00	Ea.	Electrical Room 168	Square D	Type NF	NA		30	2008	2038	$12,109.50	$26,640.90
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	2.00	Ea.	Receiving Bldg.	Square D	Type NF	NA		30	2008	2038	$12,109.50	$26,640.90
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Electrical Room 008	Square D	I-Line	NA		30	2008	2038	$21,766.05	$23,942.66
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 2000 A	4.00	Ea.	Electrical Room 008	Square D	QED	Cat. No. 2267203-820		30	2008	2038	$64,242.45	$282,666.78
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 800 A	1.00	Ea.	Electrical Room 008	Square D	HCM I -Line			20	2008	2028	$31,205.25	$34,325.78
												Total:	**$1,444,486.57**

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):	130,000
Year Built:	1949
Last Renovation:	2008
Replacement Value:	$2,232,712
Repair Cost:	$49,153.71
Total FCI:	2.20 %
Total RSLI:	74.91 %

Description:

Attributes:

General Attributes:

Bldg ID:	S403001	Site ID:	S403001

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	74.32 %	2.95 %	$49,153.71
G40 - Site Electrical Utilities	76.67 %	0.00 %	$0.00
Totals:	**74.91 %**	**2.20 %**	**$49,153.71**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.	10,000	30	2008	2038		76.67 %	0.00 %	23			$115,200
G2020	Parking Lots	$7.65	S.F.	27,000	30	2008	2038		76.67 %	14.67 %	23		$30,301.19	$206,550
G2030	Pedestrian Paving	$11.52	S.F.	50,300	40	2008	2048		82.50 %	0.00 %	33			$579,456
G2040	Site Development	$4.36	S.F.	130,000	25	2008	2033		72.00 %	3.33 %	18		$18,852.52	$566,800
G2050	Landscaping & Irrigation	$3.78	S.F.	52,700	15	2008	2023		53.33 %	0.00 %	8			$199,206
G4020	Site Lighting	$3.58	S.F.	130,000	30	2008	2038		76.67 %	0.00 %	23			$465,400
G4030	Site Communications & Security	$0.77	S.F.	130,000	30	2008	2038		76.67 %	0.00 %	23			$100,100
								Total	**74.91 %**	**2.20 %**			**$49,153.71**	**$2,232,712**

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.

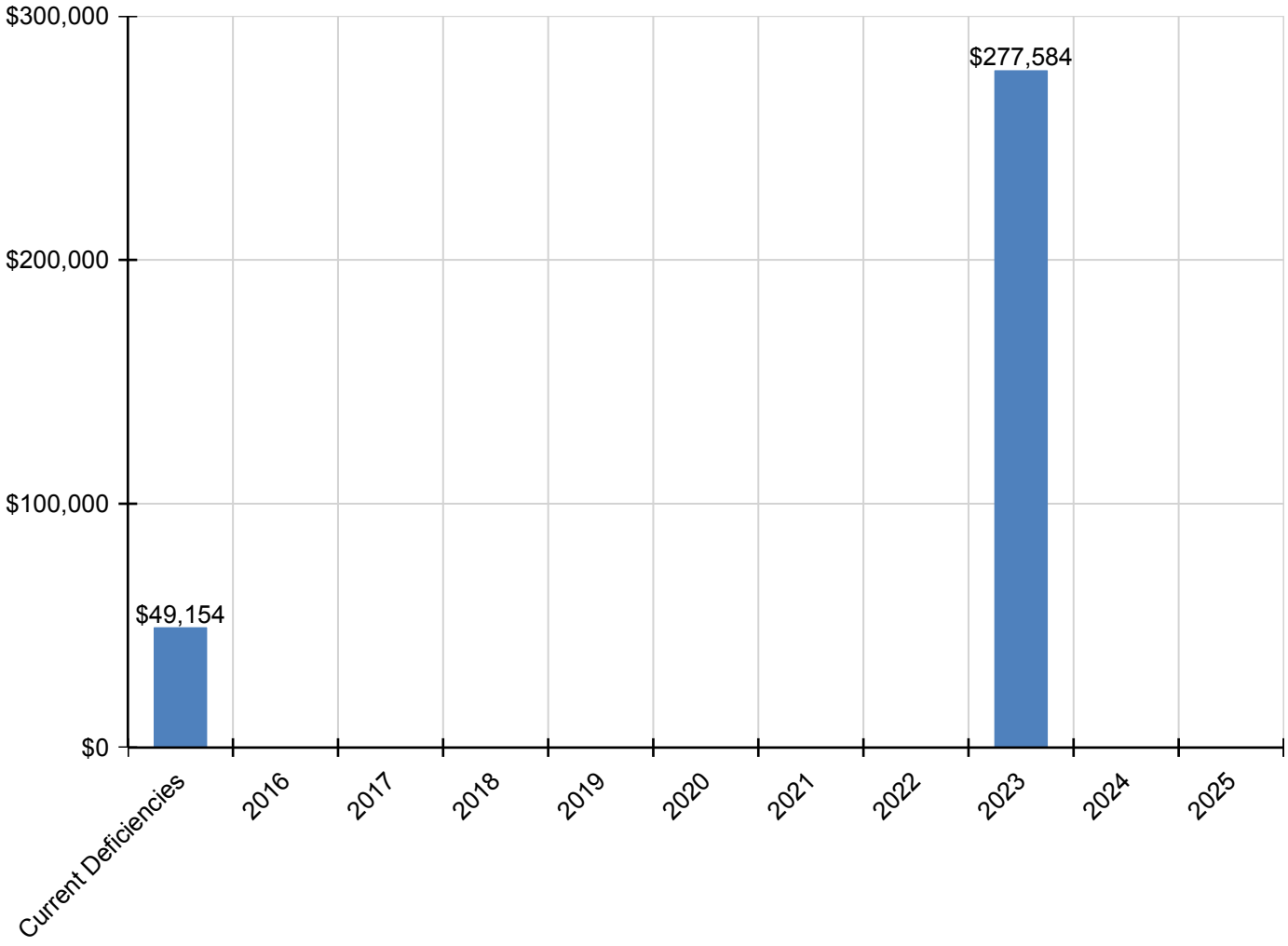
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$49,154**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$277,584**	**$0**	**$0**	**$326,737**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$30,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$30,301**
G2030 - Pedestrian Paving	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2040 - Site Development	$18,853	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,853**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$277,584	$0	$0	**$277,584**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

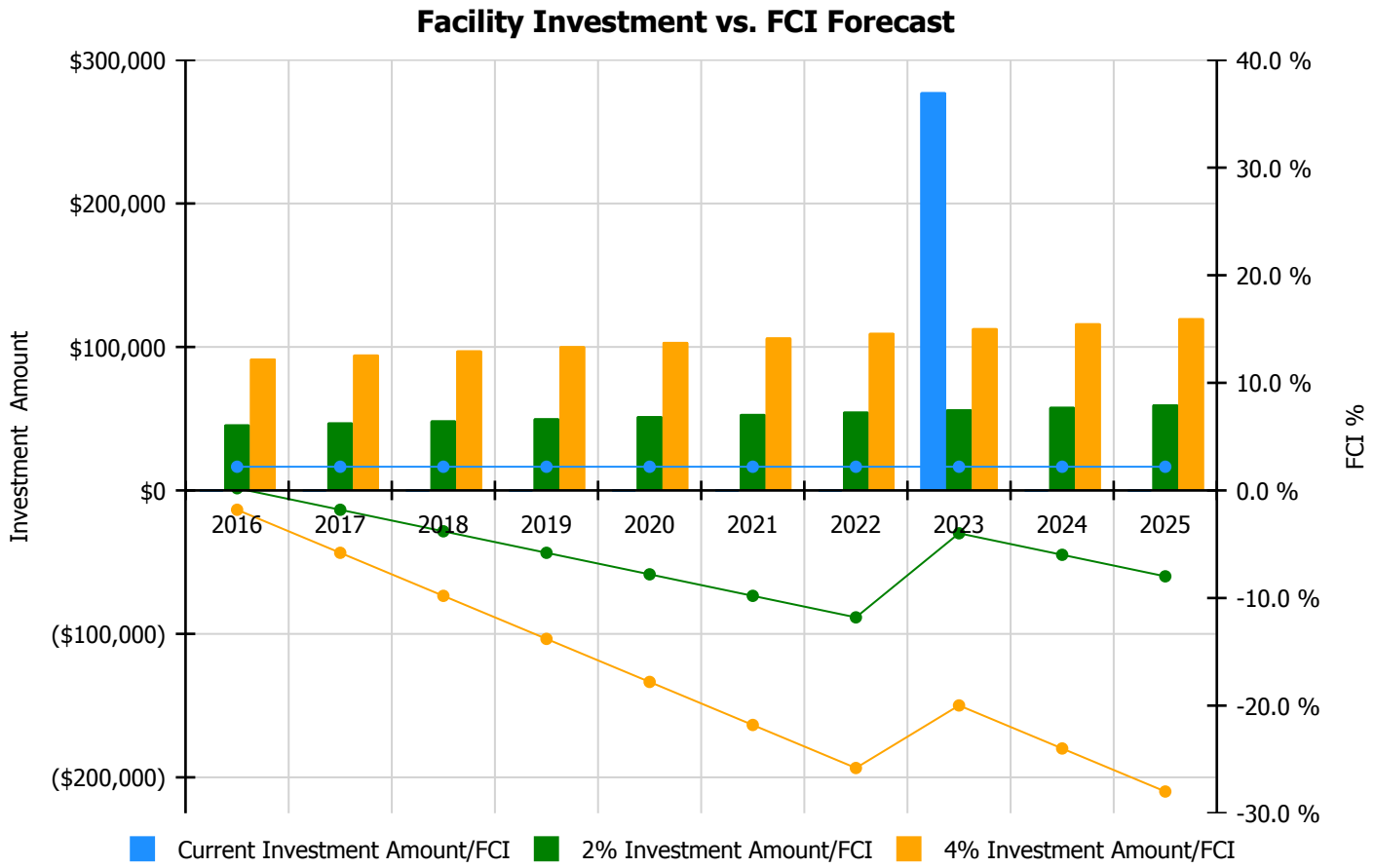
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

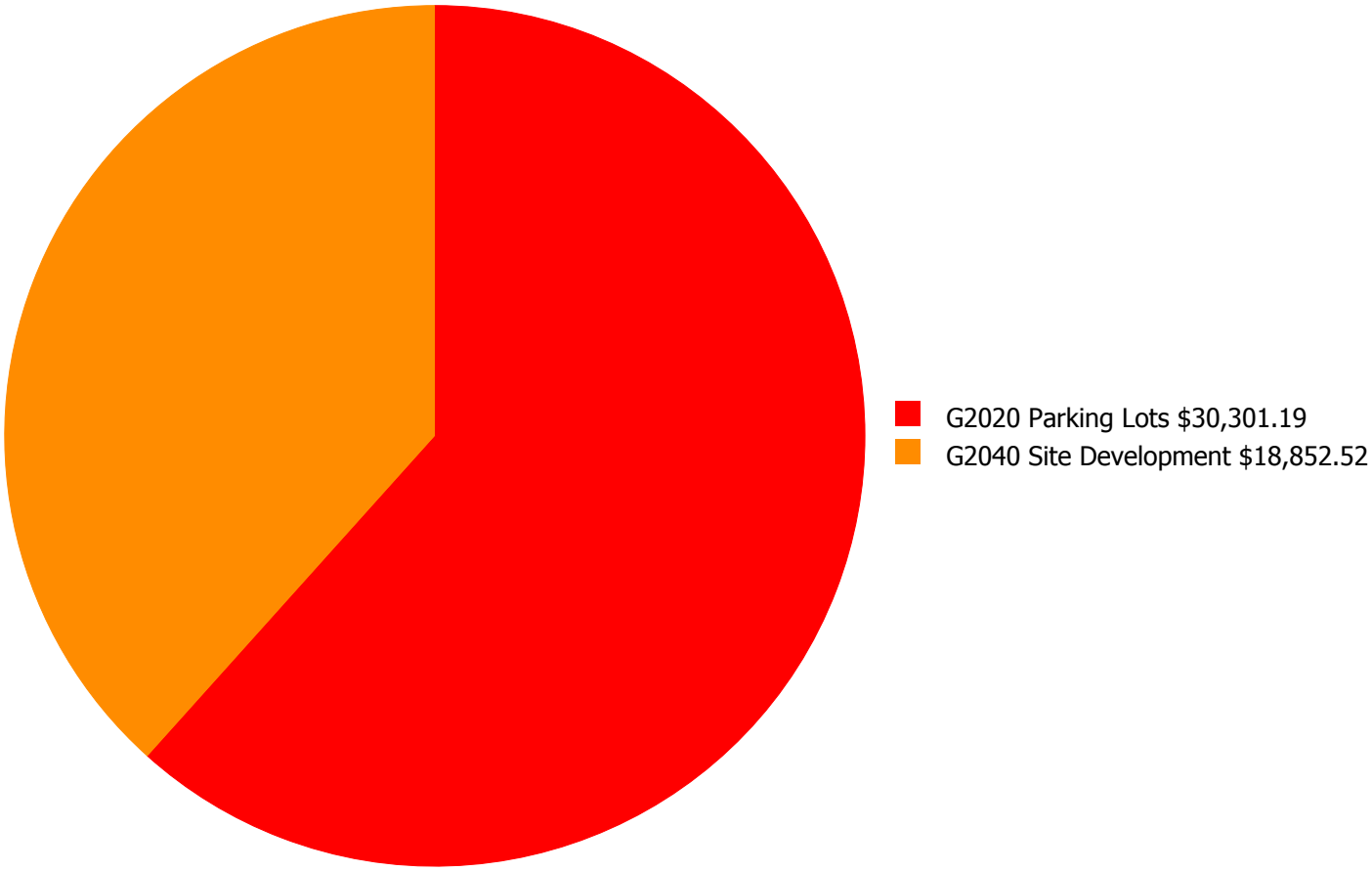
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 2.2%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$45,994.00	0.20 %	$91,988.00	-1.80 %
2017	$0	$47,374.00	-1.80 %	$94,747.00	-5.80 %
2018	$0	$48,795.00	-3.80 %	$97,590.00	-9.80 %
2019	$0	$50,259.00	-5.80 %	$100,517.00	-13.80 %
2020	$0	$51,767.00	-7.80 %	$103,533.00	-17.80 %
2021	$0	$53,319.00	-9.80 %	$106,639.00	-21.80 %
2022	$0	$54,919.00	-11.80 %	$109,838.00	-25.80 %
2023	$277,584	$56,567.00	-3.98 %	$113,133.00	-19.98 %
2024	$0	$58,264.00	-5.98 %	$116,527.00	-23.98 %
2025	$0	$60,012.00	-7.98 %	$120,023.00	-27.98 %
Total:	**$277,584**	**$527,270.00**		**$1,054,535.00**	

Deficiency Summary by System

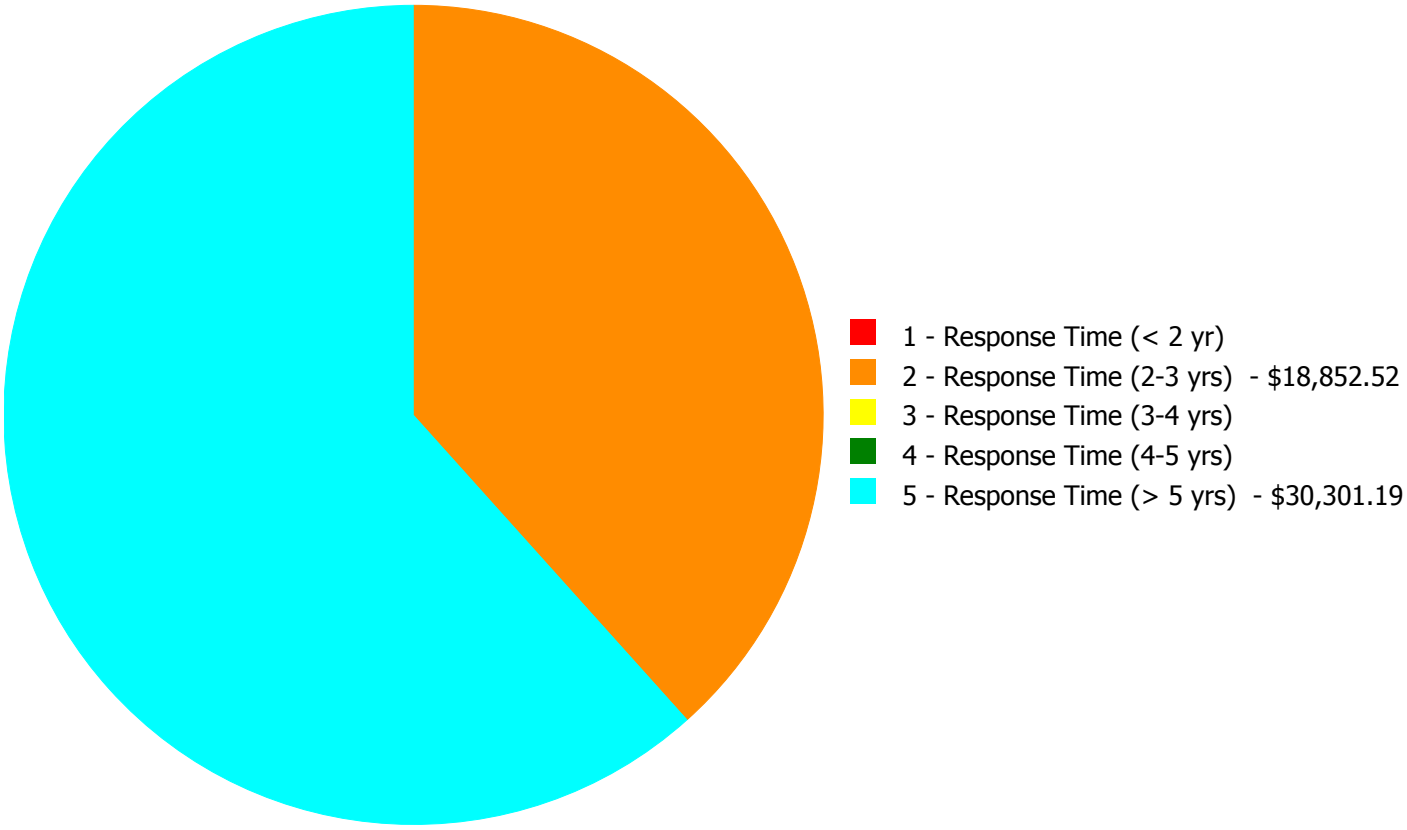
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $49,153.71

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: $49,153.71

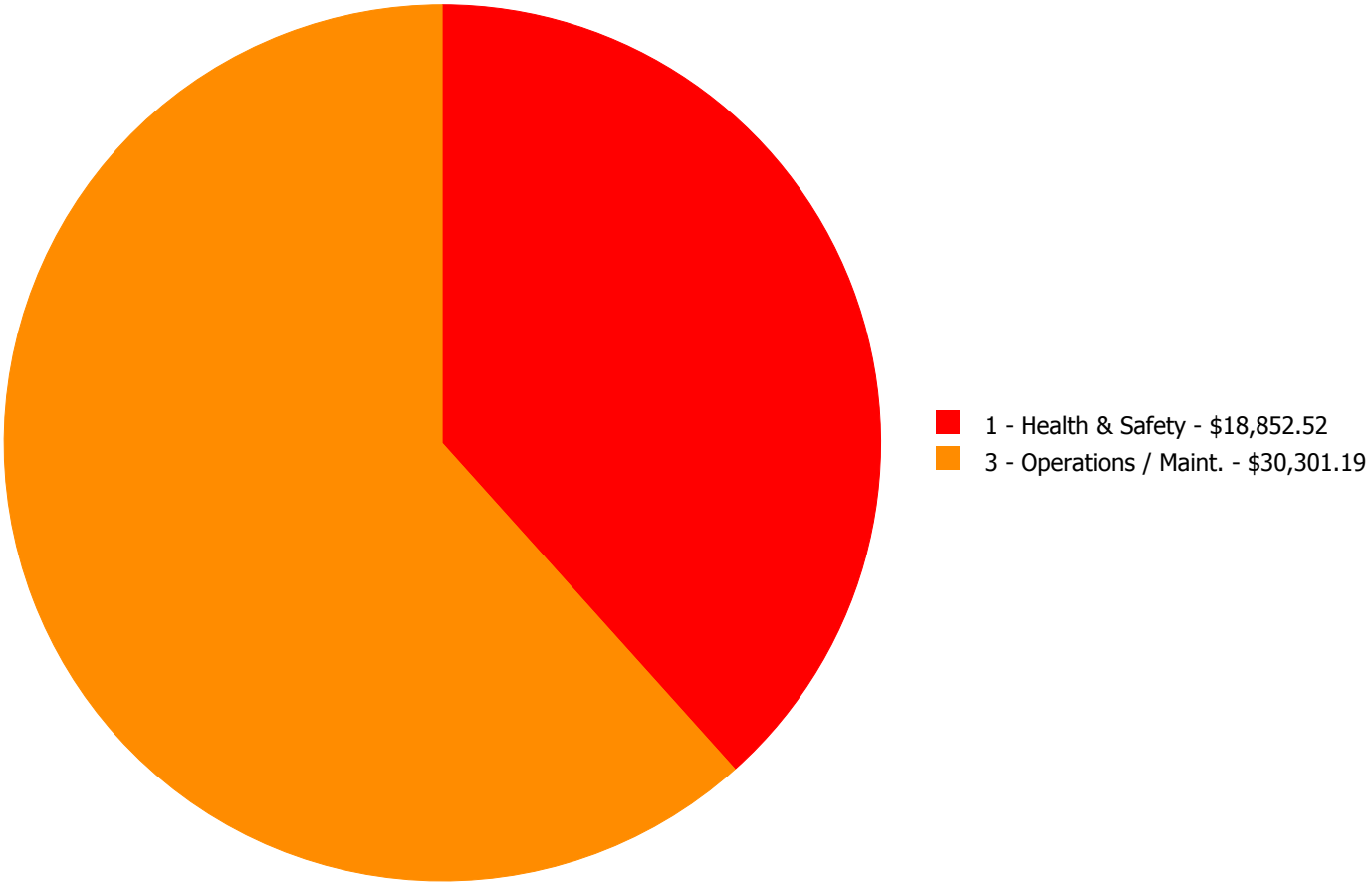
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$0.00	$0.00	$30,301.19	$30,301.19
G2040	Site Development	$0.00	$18,852.52	$0.00	$0.00	$0.00	$18,852.52
	Total:	$0.00	$18,852.52	$0.00	$0.00	$30,301.19	$49,153.71

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: $49,153.71

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: G2040 - Site Development

Location: Site

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Build secure trash dumpster enclosure

Qty: 1.00

Unit of Measure: Ea.

Estimate: $18,852.52

Assessor Name: Ben Nixon

Date Created: 11/02/2015

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

Priority 5 - Response Time (> 5 yrs):

System: G2020 - Parking Lots

Location: Parking Lot

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Fill cracks in AC paving - by the LF - average size and depth of crack

Qty: 3,000.00

Unit of Measure: L.F.

Estimate: $30,301.19

Assessor Name: Ben Nixon

Date Created: 11/02/2015

Notes: The parking lot was resurfaced in recent years and overall is in good condition. However, there are sections that are showing signs of the harsh environment associated with snow removal. Before this issue takes hold of the finish it is recommended that new crack sealant be applied to ensure that the finish does not break down.

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