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.

Pickett School

Governance	CHARTER	Report Type	Middlehigh
Address	5700 Wayne Ave. Philadelphia, Pa 19144	Enrollment	888
		Grade Range	'06-12'
Phone/Fax	215-866-9000 / 215-866-9001	Admissions Category	Citywide With Criteria
Website	Www.Masterycharter.Org/Schools/Pickett-Campus/	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	**19.03%**	**$18,161,527**	**$95,426,843**
Building	17.68 %	$16,231,357	$91,804,362
Grounds	53.28 %	$1,930,170	$3,622,481

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	02.34 %	$61,816	$2,644,866
Exterior Walls (Shows condition of the structural condition of the exterior facade)	01.38 %	$113,432	$8,213,303
Windows (Shows functionality of exterior windows)	08.22 %	$329,965	$4,014,726
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$272,026
Interior Doors (Classroom doors)	14.49 %	$95,412	$658,490
Interior Walls (Paint and Finishes)	05.98 %	$135,478	$2,266,649
Plumbing Fixtures	05.11 %	$129,578	$2,536,406
Boilers	00.00 %	$0	$3,502,567
Chillers/Cooling Towers	26.23 %	$1,204,455	$4,592,546
Radiators/Unit Ventilators/HVAC	88.02 %	$7,098,908	$8,065,096
Heating/Cooling Controls	39.13 %	$991,087	$2,532,654
Electrical Service and Distribution	66.46 %	$1,209,413	$1,819,759
Lighting	17.13 %	$1,114,351	$6,506,107
Communications and Security (Cameras, Pa System and Fire Alarm)	13.35 %	$325,240	$2,436,976

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

S615001;Pickett

Final

Site Assessment Report

February 1, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	187,604
Year Built:	1970
Last Renovation:	
Replacement Value:	$95,426,843
Repair Cost:	$18,161,526.95
Total FCI:	19.03 %
Total RSLI:	69.48 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
Mastery Charter Pickett Campus in Germantown
5700 Wayne Ave.
Philadelphia, PA 19144

187,604 SF / 1,113 Students / LN 06

The Mastery Charter School Pickett Campus opened in August of 2007 serving as a Middle High School serving grades 6-12. Previously known as the Clarence E. Pickett Middle School this facility was originally constructed in 1970 and resides in the Germantown Philadelphia community.

Identified as B615001 this facility is located at 5700 Wayne Ave, Philadelphia, PA. The late modern design of the modified rectangular -shaped, concrete and steel-framed building includes CMU facades with a concrete foundation. The Auditorium connected via elevated walkway over the parking lot entrance is similar construction however was abandoned during the time of the inspection.

The main entrance faces the Western exterior facing W. Rittenhouse St. General parking is east of the school in a dedicated lot accessed from either Wayne or Pulaski Ave. This School building serves two different groups of students in grades 6 to 8, 9 to 12 and has three stories consisting of a total gross square footage of 187,604 GSF.

This school has several classrooms, a library / IMC , kitchen and student commons, technology room, Gym, Auditorium (abandoned) and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on September 16, 2015.

Mr. Otha Gates, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Mr. John Buttil, Assistant Principal of Operation, also shared information about the school with the assessment team.

ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. The superstructure is concrete and steel framed with masonry support and likewise in good condition.

The exterior CMU and concrete façade is in good condition considering the age of the school. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The interior concrete finish that is spalling and falling from the building is a serious concern to the safety of the students and staff of this school. This area is limited to the basement level of the auditorium as indicated in the photos. Special consideration for high priority project to immediately address this issue is recommended. Considering the progression of the failure it is recommended that this issue receives the upmost priority in order to mitigate damage or injury to the students and staff.

There were no issues that surfaced during the time of the inspection for the basement area related to the main building. Therefore no projects or recommendations are required at this time.

The single ply roofing system was reported to have been installed in 2006. Overall the roof is in like new condition and expected to have a normal life cycle that exceeds the purview of this report. There is also a metal roof application extending the length of the main section of the school. This metal roofing system is also in like new condition and there are no recommendations required at this time.

The single ply roofing system over the classrooms in the auditorium is currently leaking into the classroom. This section of the roof is considered to be failing and immediate attention is required to repair the roofing system before additional damage is done to the interior finishes. This deficiency provides a budgetary consideration to repair the roofing system for this area.

Most of the exterior windows have been upgraded from the original applications to a new double pane aluminum framed weather tight application. A majority of the window system is estimated to have been installed in the 2006 renovation effort. As indicated in the photos several of the windows in the classrooms near the auditorium as well as the bridge offices appear to be original. Several of the windows no longer work and will require attention prior to an overall effort. Overall, the windows are in good condition based on the year of installation or last renovation. Select exterior windows are recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The exterior door system consists of metal door and frame with glazing. The exterior door system was reported to have been installed in 2006. There were no issues related to the exterior doors during the time of the inspection therefore no recommendations are required at this time.

Special consideration for those that may be physically challenged was not a main not factor in the last re-construction effort for this school. The exterior ADA ramp on the western exterior of the school near the main entrance is the only option the physically challenged has to enter the school. The path of travel is not very clear from that entrance of the school and from the access points. The interior path of travel is partially supported by a passenger elevator, some door hardware, proper hand rails and guard rails. However, the building has received limited upgrades and does not fully support a path of travel for those that may be physically challenged. Included in this report are modifications that allow for considerations to enhance the upgrades required to support the physically challenged.

The Interior partitions include painted and exposed CMU finishes with sections of painted concrete, plaster and drywall. The interior partitions that were a part of the 2006 renovation effort are in like new condition and there were no issues that surfaced during the

time of the inspection. No recommendations are required at this time.

The interior door system was upgraded in 2006 with new wooden doors, metal frames and proper ADA hardware. Other interior doors include hollow metal in hollow metal frames at stairwells and exit ways. Doors are generally in like new condition. Doors swing in the direction of exit and do not obstruct hallways. The doors in the Auditorium area which includes the band room, music room, Art room and lecture hall have original doors that are in poor condition. Universal upgrades are required for the interior door systems in the auditorium. It is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

The corridor door and stair access doors are fire rated and appear to have been a part of the 2006 renovation effort. However care should be taken to remove the paint covering the identification tags indicating the fire rating on the door systems.

This building has adequate exit pathways and no egress obstructions were noted during our building walk through. However the corridor doors on all floors of the auditorium building are not fire rated and should be upgraded. As indicated in the photos some of the doors and frames have rusted and are in very poor condition. Install new fire rated flush wood doors on all floor corridors. If the recommended lever hardware and room signage has not been implemented then these features should be incorporated into the work scope. This work is expected to be completed as part of an effort to upgrade the auditorium.

The Fittings system includes marker boards, white boards, tack boards, interior signage and toilet accessories. This system was upgraded as part of the 2006 renovation effort. The following recommendations address some minor oversights for the physically challenged and areas in the Auditorium.

There is no directional signage and room signage is a custom design in places and scarce or painted with no consistency in others. Accessibility signage criteria have been established for the physically challenged. These include mounting heights, contrast and finish, raised and Braille characters and pictograms, and character proportions and heights. It is recommended that compliant signage be installed throughout the building.

The classrooms in the auditorium extension have several classrooms with chalk boards. The boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade chalk boards to new marker board systems.

The stair construction is a concrete system with concrete landings. The main buildings stairs were upgraded during the 2006 renovation effort with proper railing and extension's with proper guard conditions.

The interior wall finishes consist of either painted or exposed CMU or concrete surface. Other wall finishes include: some painted drywall and plaster sections. Wall finishes are generally in very good condition, with the exception of the Auditorium section of this school.

There are painted walls, trim, and some painted ceilings in this building. The interior finishes in the older Auditorium section is in fair to poor 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. The abandoned section of the building is expected to require major repairs and additional efforts to restore the finishes. This effort is expected to be coordinated with other mechanical electrical efforts in order to prevent overlapping efforts.

The interior floor finishes were upgraded in 2006 as part of the renovation effort. The renovated section of this school has a 12x12 vinyl floor tile finish in the classrooms and hallways. There are sections of carpet and terrazzo in the administrative and general areas. The interior floor finish for the main building is in very good to like new condition and there were no issues that surfaced during the time of the inspection. There are no recommendations for the main building's interior floor finish at this time.

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

The GYM floor finish is damaged in several areas due to water related issues. Recent repairs have eliminated the trip hazards; however there are areas that remain that warrant replacement. The floor is recommended for universal upgrade.

The auditoriums stage in this school has a wooden floor finish that appears to be from original construction. As indicated in the

photos the wooden floor finish is in very poor condition as a result of a roof leak. It is recommended that the wooden floor finish be removed and replaced with an in kind finish. This work is expected to be completed as part of an effort to upgrade the auditorium.

The interior ceiling finish is a mix of painted exposed and acoustical tile finishes. With the exception of the Auditorium section of this school the ceiling finishes are in very good condition.

The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings were upgraded with the exception of the auditorium in 2006 and are in very good condition. There are no recommendations for the 2006 ceiling finishes. However, the Auditorium ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

Institutional equipment includes: library equipment, stage equipment, instrumental equipment; laboratory equipment and gym equipment – basketball backstops, scoreboards, etc. Other equipment includes kitchen equipment and loading dock bumpers. A majority of the institutional equipment was upgraded in 2006 as part of the renovation effort. The following recommendations address the Auditorium section of this school.

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.

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. Newer lavatories have electronic automatic faucets and older models have dual wheel handles or lever handles. Some urinals and water closets have manual flush valves with lever 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. Unused locker areas have showers with gang and individual shower heads. There is no grease trap.

Hot water is provided by two Bradford White gas water heaters in the mechanical room. The heaters are one hundred gallons each. There is a small pressurization tank adjacent to the water heaters. An Alyan duplex domestic booster pump system with two five hp pumps and a small inline circulating pump are part of the system. A water softener is included in the system. A duplex ground water sump pump and a duplex sewage ejector are in an unused room in the lower level of the auditorium area. The groundwater unit needs to be replaced. The building has a swimming pool that is currently used, with pool equipment in the mechanical room. This equipment is operational and reportedly in good condition.

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 six inch water service with meter and backflow preventer in the mechanical room. The roof has drains connected to horizontal and vertical rainwater piping. Gas service is a six inch line with two pressure boost systems located in the mechanical room. Large gas piping in the mechanical room is welded black steel and smaller piping is black steel with screwed fittings. Exposed gas piping on the roof is galvanized steel. Water, gas and main sanitary piping is connected to utilities at Wayne Ave.

The plumbing system components from the 2006 renovation are in good condition and should have remaining service life in excess of twenty years. Plumbing systems in the other portions of the building have exceeded service life and should be replaced, including fixtures and trim, supply piping and one groundwater sump pump. Older cast iron piping should be inspected and repaired or replaced as required.

HVAC- The building is heated by hot water generated from four cast iron sectional gas fired boilers in the mechanical room. The boilers are MACNA de Detrich, one hundred twenty five hp installed in 2003 with Power Flame burners and forced draft. Hot water is circulated to heating coils and cabinet radiation units throughout the building. Six Armstrong end suction pumps in the mechanical room circulate water to heating zones. Two are thirty hp and four are five hp. There is also a five hp pump in a third floor mechanical

room. These pumps are part of the 2006 renovation. The first floor renovated classrooms have electric baseboard radiation. All other areas have hot water baseboard or wall mounted units.

There are several older heating and ventilating units in the building. A unit above a corridor serves the locker room area. There are two mechanical rooms on the third level housing three units serving some classrooms, pool area, and gym area. Two units in mechanical rooms at the auditorium balcony serve that space, and one unit in the abandoned music area serves that space. These heating and ventilating units are all older and should be replaced. Some renovated offices on the connector bridge are served by a York heat pump with a vertical air handling unit in an adjacent storage room, installed in 2006. The bridge has hot water radiation.

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 mechanical room provides combustion air. A propeller exhaust fan ventilates the space.

The building was originally air conditioned by two York water cooled centrifugal chillers in the mechanical room connected to a Tower Tech cooling tower on grade and four double suction pumps in the mechanical room. The chiller, cooling tower, two chilled water and two condenser water pumps are abandoned. The 2006 renovated portion of the building is air conditioned by ductless split systems, with roof mounted condensing units. The systems are Mitsubishi City Multi, with fifteen roof mounted condensing units and approximately ninety indoor units. Each classroom has one or two exposed cabinet type units installed near the ceiling. Corridors have exposed cabinet type and ceiling mounted units. Most units have an individual condensate pump.

Two Aaon outside air rooftop units are ducted to vertical supply ducts with air ducted to individual spaces to small grilles. Two Carrier rooftop units with gas heating serve the cafeteria and the North gym, fitness area and adjacent office area. These four units are also from 2006. There are DX split systems with ducted fan coil units in NST and other office areas.

Concealed ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Exposed areas have spiral construction ductwork. Toilet exhaust and other building exhaust in the renovated area is provided by four centrifugal roof ventilators. There is no cooking in the kitchen but there is heat removal hood with exhaust only.

There is a digital building automation system with graphic display by Mitsubishi, located in the building engineer's office. The system is reportedly functioning properly.

All components of the HVAC system from the 2006 renovation are in good condition and should have remaining service life from ten to fifteen years for cooling and distribution and twenty five years for boilers. A new HVAC system for the areas of the building not renovated should be installed, including a chilled water system, air handling and fan coil units, controls and distribution.

FIRE PROTECTION- The renovated portion of the building has a complete automatic sprinkler system with standpipes. A Clarke diesel fire pump is located in a separate room on the lower level. The fire pump is five hundred gpm, forty hp. Piping is black steel with Victaulic couplings. There are semi recessed and exposed sprinkler heads and standpipes with fire hose connections. The fire service is a six inch line to the pump room. There are no issues with the existing fire protection system, which should be serviceable up to twenty five years. There is no sprinkler system in the abandoned portion of the building, which should be protected.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by a 13.2 kV underground service from PECO Energy Company to a substation located in the Main Electrical Room in the basement, consisting of a 600A load interrupter switch, a 1500 kVA, 13.2 kV - 208/120V, 3 phase, 4 wire Cutler-Hammer transformer section and 5000A main switchboard with two distribution sections. This substation was installed in 2008 and has 23 years of useful life remaining. The 13.2 kV service also supplies another unit substation in the same room, consisting of a Federal Pacific Electric 600A load interrupter switch and 1000 kVA, 13.2 kV -480/277V, 3 phase, 4 wire transformer section and Cutler-Hammer 1600A 480V, 3 phase, 3 wire Motor Control Center MCC-1. The load interrupter switch and transformer section have served their useful life and need to be replaced. MCC-1 was installed in 2008 and has 23 years of useful life remaining.

The west side of the building, referred to as Part "A", is the "educational" side that was remodeled in 2006, and panelboards were replaced. The east of the building, referred to as Part "B", is the gymnasium, cafeteria, kitchen and swimming pool, which still need to be upgraded. Existing panelboards and feeders in Part "B" have reached the end of their useful life and need to be replaced. The auditorium, which is at the south end of the site, and currently not occupied, also needs major lighting and power upgrades. There are six (6) distribution panelboards and 17 lighting and appliance panelboards that need to be replaced.

The workroom located adjacent to the IT room on Floor 2 needs additional receptacles and a panelboard for additional branch circuits. It is recommended that a dedicated panelboard be provided in this room.

Receptacles-- Classrooms are typically supplied with only a few duplex receptacles and are not adequate for instructional purposes. Additional duplex receptacles need to be provided in classrooms using surface metal raceway and spaced along the walls. Power cords run across the floor to the instructor's table and create a tripping hazard for staff and students. Cords are taped to the floor, but must be removed and re-taped each time the floor is cleaned. A recessed floor receptacle is recommended at the instructor's table to eliminate the use of extension cords. The floor would be channeled to run branch circuit wiring to the floor outlet.

There are approximately four (4) duplex receptacles in the kitchen that need to be replaced with ground-fault circuit-interrupting (GFCI) type devices to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.

Lighting-- Part "A" side of the building had a lighting upgrade in 2006. Several different type of fluorescent lighting fixtures are used. The Network Support Team (NST) Main Office and rooms with lay-in grid ceilings generally have 2x4 recessed fluorescent troffers with acrylic prismatic lenses. Corridors and rooms with exposed structure have 4-foot, surface mounted fluorescent wraparound fixtures or direct/indirect fluorescent fixtures. Corridors with ceilings have 2x4 fluorescent troffers with acrylic prismatic lenses. Locker rooms and restrooms have 4-foot vapor-tight fluorescent fixtures. Fixtures in the locker rooms have reached the end of their useful life and need to be replaced.

Classrooms have cable suspended, direct/indirect, 2 lamp fluorescent fixtures with parabolic cross baffles, arranged in continuous rows. Lighting in classrooms is controlled by two light switches and a motion sensor. A compact fluorescent wall bracket or sconce is typically located in the corridor at the entrance to each classroom.

The north/south corridor on Floor 1 that is located between the east and west sides has 4-foot wraparound fluorescent fixtures that are in poor condition, many fixtures with missing or damaged lenses.

The swimming pool is provided with square HID surface mounted fixtures that have reached the end of their useful life. It is recommended that the lighting fixtures be replaced with LED type fixtures to reduce energy and maintenance costs.

The gymnasium is illuminated with (24) 400W metal halide industrial style fixtures. Separate fluorescent lighting fixtures are used for emergency lighting. It is recommended that the metal halide fixtures be replaced with LED fixtures, which could also be used for emergency lighting, thereby eliminating the need for the separate fluorescent fixtures.

The auditorium is illuminated with metal halide lighting fixtures, 17 fixtures over the main floor and 30 fixtures in the balcony. Several of the lighting fixtures are not illuminated. It is recommended that fixtures be replaced with dimmable type LED type recessed fixtures. The stage has three (3) electrics above the platform and one lighting position in front of the stage with 12 theatrical fixtures. Worklights above the stage are 1x4 fluorescent fixtures. The auditorium and theatrical stage lighting fixtures are controlled by an ETC lighting control system located in the control room in the balcony. In general, lighting fixtures in the classrooms, corridors and support rooms in the auditorium building have reached the end of their useful life and need to be replaced.

The cafeteria is also illuminated with metal halide lighting fixtures. The fixtures are in fair condition, but nearing the end of their useful life and should be replaced within five (5) years with LED type luminaires.

Surface mounted HID lighting fixtures are located in the canopies above the doors at exit discharges and under the bridge to the auditorium. An allowance for replacement of 30 fixtures with LED fixtures is included in this report.

Fire Alarm System-- The fire alarm system control panel (FACP) is an addressable type, Siemens FireFinder Model XLS located in the Building Engineer's Office. The system is provided with a digital communicator for off-premise reporting. The system includes smoke detectors throughout the corridors and in elevator lobbies and machine room, beam type smoke detectors in the light well, and manual pull stations. Audible and visual notification appliances are provided throughout the building, except in the auditorium. Fire alarm notification appliances are provided in classrooms. The auditorium building needs to be updated with new initiating and notification appliances.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are provided in classrooms, corridors, gymnasium and cafeteria for Wi-Fi service throughout the entire school. The Main IT/Server Room is located in Room 214 with an IT workroom located in the adjacent room. The IT room adjacent to the stairwell on Floor 3 has a data rack, telephone board, two Bogen 250W amplifiers for the paging system and ESD electronic security equipment for alarms, motion sensors and power supply for key FOB's.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Each classroom has a ceiling speaker. There are also paging speakers in corridors and throughout the building. The system on the west side of the building is estimated to have 15 years of useful life remaining. The system on the east side of the building (gymnasium, cafeteria/kitchen and

swimming pool) and in the auditorium needs to be replaced. Separate sound systems are provided in the gymnasium and in the auditorium. The gymnasium system has Crest Audio and Bose components and is in good condition. The auditorium has a Rauland sound system with 60W amplifier located in the auditorium control room. This system is also in good condition. Horn type speakers are provided on the exterior of the building.

Clock and Program System--The clocks in classrooms are individual clocks, battery operated. It is recommended that a GPS wireless clock system be provided throughout the school. Classrooms are provided with recessed ceiling speakers for program changes and announcements.

Television System-- There is no television system in the classrooms.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of all corridors and other selected areas. Exterior cameras are mounted on the building and light poles to provide coverage of the site and entrances. There are a total of 35 surveillance cameras that are less than eight (8) years old, many less than three (3) years old. The video surveillance system is monitored in Office 100B. Motion sensors are provided at all entrances and in the four (4) stairwells to monitor ingress/egress.

Emergency Power System--There is a Cummins Onan 65 kW/81 kVA, 208/120V, 3 phase, 4 wire standby, natural gas fueled generator with Onan 225A automatic transfer switch (ATS) located in the Main Electrical Room that supplies emergency egress lighting and exit signage. The generator had 244 hours of operation at the time of this assessment. It is estimated the generator system has a remaining service life of 10 years.

There is a second natural gas fueled Cummins generator set that is located on the east side of the building, south of the loading dock, that serves the Technical Management Emergency Recovery System, which is the main hub for Mastery Charter Schools. The 400A ATS is located in the Main Electrical Room and feeds 400A Panelboard MDP-IT.

Emergency Lighting System / Exit Lighting-- Selected lighting fixtures are connected to the standby power system. Emergency lighting is also provided in the classrooms. Exit signs on the west side of the building are LED type. Exit signs on the east side of the building and in the auditorium building need to be replaced.

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

Conveying Systems--There is one 30 HP hydraulic elevator manufactured by Low Rise Elevator Company that serves all floors. The elevator machine room on the First Floor Lower Level complies with current elevator codes. The electro-hydraulic power unit and control panel was replaced in 2012.

GROUNDS

There are several exterior stairs for the grounds of this school. As indicated in the photos some of the railing has been removed due to damage. In some cases the remaining railing creates a safety hazard as indicated by the photo of the plaza access to the auditorium. Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). This current system is recommended for universal upgrade as they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades. In the short term the railing that presents safety issues should be immediately corrected to prevent injury.

The existing Football field is from the schools original construction. The field has several holes and the goal post no longer carry the safety equipment to prevent injury during practice or games. The poor condition of the field presents a safety issue as well as a maintenance issue. This field is recommended to be upgraded. This deficiency is expected to be completed as part of a site effort to upgrade the Track and Field areas and the bleachers.

The trash dumpster is located in the loading dock drive and parking area. Although not directly open to the students and to the public the dumpsters are not secure. 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.

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

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

The stone retaining wall between the Rental Car establishment and the Auditorium classrooms is failing. This presents a safety issue as the wall is breaking down while students or employees use this patio area and break area. This deficiency provides a budgetary consideration for the repair of the wall.

This school has a perimeter fence surrounding the parking / playground area. The fence that secures the parking area has several areas of repairs and the mounting post are damaged in several areas, overall the site fence is in fair condition. However, the parking lot fence system is recommended to be removed and replaced with a new system.

Site Lighting— Site lighting is provided by pole mounted floodlighting and post top fixtures on varying pole heights and luminaire styles and wall mounted HID lighting fixtures on the building that are aimed to illuminate the site. Staff reports that the light poles on the northwest side of the building at the student plaza are not operational and need to be repaired. There are a total of ten (10) light pole locations, two of which are missing light poles and need to be replaced on their foundations.

RECOMMENDATIONS

- Remove and replace suspended acoustic ceilings
- Repair and repaint all interior walls
- Replace inadequate or install proper stair railing
- Replace auditorium seating
- Repair spalled concrete wall structure
- Remove and replace Gym wood flooring
- Remove VAT and replace with VCT
- Install fire rated walls and door where required
- Remove and replace wood flooring Stage
- Remove and replace stage curtain
- Replace missing or damaged signage
- Repair damaged single ply roofing
- Replace blackboards with marker boards
- Remove and replace interior doors
- Remove and replace aluminum windows
- Replace chain link fence - 8' high
- Repair and regrout stone retaining wall
- Replace or install exterior guardrails
- Refurbish football field
- Build secure trash dumpster enclosure
- Add safety barriers and guide lines at parking and loading dock areas
- Remove and replace concrete sidewalk or paving
- Remove and replace parking lot
- Install complete NFPA automatic sprinkler system in areas of the building not currently protected.
- Install new HVAC/dehumidification DX system for pool area. Locate indoor section in third floor mechanical room and outdoor section on roof. Unit to be specifically designed for pool application, with heating, cooling, dehumidification, and heat recovery for pool water heating. Include new aluminum duct system with linear diffusers and separate exhaust system.
- Install new one hundred thirty ton chilled water system for areas of the building not renovated with air conditioning. Include roof mounted air cooled chiller, distribution piping, glycol system and pumps.
- Install two new air handling units in auditorium mechanical rooms. Units to have hot and chilled water coils, fan, motor, valves and controls. Connect to new chilled water and existing hot water systems, and existing duct systems.
- Provide new fan coil units for classrooms not currently air conditioned. Units to have hot and chilled water coils, fan, motor, valves and controls. Connect to new chilled water and existing hot water systems. Install roof mounted outside air system ducted to each unit.
- Install new mechanical toilet exhaust system for toilet rooms in auditorium portion of building. Include inline fan, ductwork and registers.
- Install new DDC control system with building automation for new HVAC equipment. Include computer monitor, software and graphics package.
- Replace existing duplex groundwater sump pump in auditorium area lower level.
- Replace older plumbing fixtures not replaced with 2006 renovation including water closets, urinals, lavatories, drinking fountains and showers.

- Replace domestic water supply piping in areas not renovated including fittings, valves, hangers and insulation.
- Inspect cast iron plumbing piping including camera survey. Repair or replace as required.
- Replace six (6) distribution panelboards and 17 lighting and appliance panelboards on the east side of the building and in the auditorium that have not yet been replaced.
- Replace 600A load interrupter switch and 1000 kVA, 13.2 kV-480/277V, 3 phase 4 wire, dry type transformer feeding Motor Control Center MCC-1.
- Provide a 225A, 208/120V, 3 phase, 4 wire panelboard in the workroom located adjacent to the IT room on Floor 2, and additional branch circuits and receptacles for plug-in equipment. The exiting workroom does not have adequate receptacles for equipment.
- Provide 6 to 8 additional duplex receptacles in 43 classrooms using surface metal raceway. Also, provide a recessed floor receptacle at each instructor's table (total of 43) to eliminate the use of extension cords run along the floor that creates a tripping hazard to staff and students. Channel floor to run branch circuit wiring to floor outlet.
- Replace four (4) duplex receptacles in the kitchen with ground-fault circuit-interrupting (GFCI) type devices to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.
- Replace vapor-tight fluorescent fixtures in the gymnasium and swimming pool locker rooms.
- Replace fluorescent wraparound fixtures in the north/south corridor on Floor 1 that is located on the west side of the swimming pool and gymnasium with new wraparound fixtures (approximately 28 fixtures).
- Replace approximately 26 HID surface mounted fixtures in the swimming pool with LED type lighting fixtures.
- Replace (24) 400W metal halide industrial style fixtures in the gymnasium with LED fixtures.
- Replace metal halide lighting fixtures in the auditorium with LED downlights (17 fixtures over the main floor and 30 fixtures in the balcony).
- Replace fluorescent lighting fixtures in the classrooms (9,500 SF), and corridors and support rooms (1,900 SF) in the auditorium building.
- Replace 24 metal halide lighting fixtures in the cafeteria with LED type luminaires.
- Provide allowance for replacement of 30 surface mounted HID lighting fixtures located in the canopies above the doors at exit discharges and under the bridge to the auditorium.
- Replace fire alarm initiating devices and notification appliances throughout the auditorium building.
- Replace paging system speakers in the gymnasium, cafeteria/kitchen and swimming pool.
- Provide wireless GPS clock system.
- Replace all exit signs on the east side of the building (gymnasium, cafeteria, kitchen, swimming pool and auditorium with LED type exits. Estimate 45 exit signs.
- Replace two 50 foot, round, tapered light poles and floodlighting fixtures in the plaza on the northwest side of the site with new poles and luminaires. Replace branch circuit wiring, replace lamps in all eight (8) luminaires, and restore site lighting system to full operation.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S615001		

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.

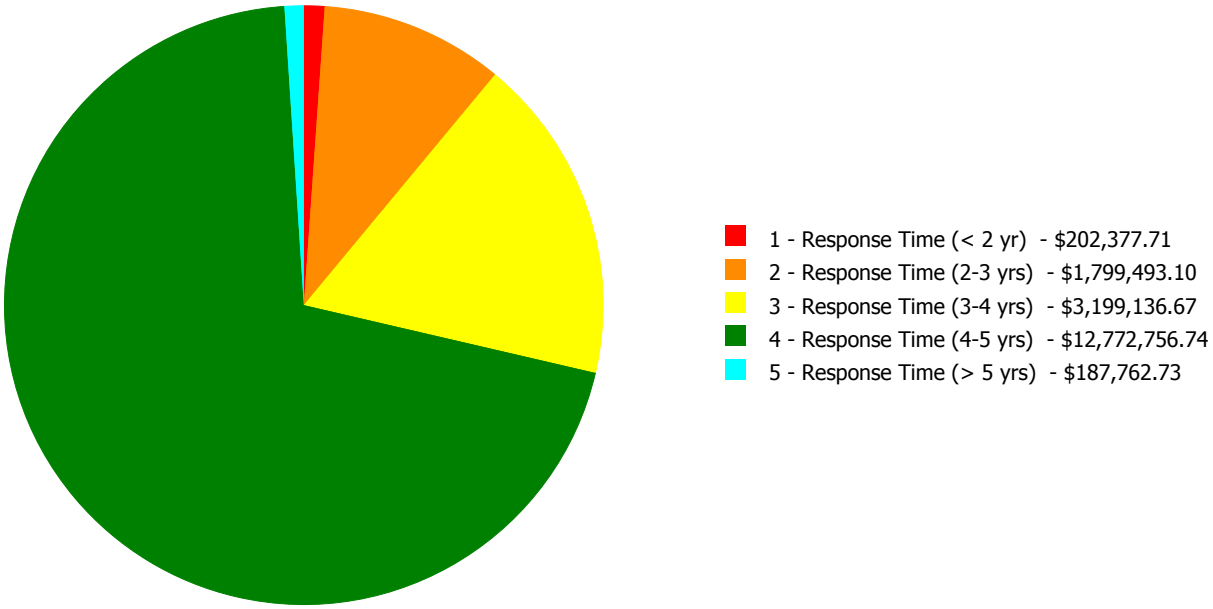
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	55.00 %	0.00 %	$0.00
A30 - Pool Construction	36.67 %	0.00 %	$0.00
B10 - Superstructure	55.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	86.08 %	3.55 %	$443,396.92
B30 - Roofing	59.68 %	2.34 %	$61,815.91
C10 - Interior Construction	61.08 %	5.75 %	$264,523.65
C20 - Stairs	91.00 %	9.60 %	$25,395.65
C30 - Interior Finishes	60.38 %	10.76 %	$891,974.37
D10 - Conveying	91.43 %	0.00 %	$0.00
D20 - Plumbing	76.44 %	32.15 %	$1,208,572.62
D30 - HVAC	84.55 %	49.72 %	$9,294,449.16
D40 - Fire Protection	89.28 %	43.71 %	$660,911.63
D50 - Electrical	64.63 %	24.37 %	$2,687,155.66
E10 - Equipment	74.29 %	0.00 %	$0.00
E20 - Furnishings	77.50 %	173.47 %	$693,161.36
G20 - Site Improvements	48.29 %	71.52 %	$1,849,919.85
G40 - Site Electrical Utilities	75.00 %	7.75 %	$80,250.17
Totals:	**69.48 %**	**19.03 %**	**$18,161,526.95**

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)
B615001;Pickett	187,604	17.68	$202,377.71	$561,640.93	$3,090,693.91	$12,268,279.39	$108,364.99
G615001;Grounds	238,100	53.28	$0.00	$1,237,852.17	$108,442.76	$504,477.35	$79,397.74
Total:		**19.03**	**$202,377.71**	**$1,799,493.10**	**$3,199,136.67**	**$12,772,756.74**	**$187,762.73**

Deficiencies By Priority



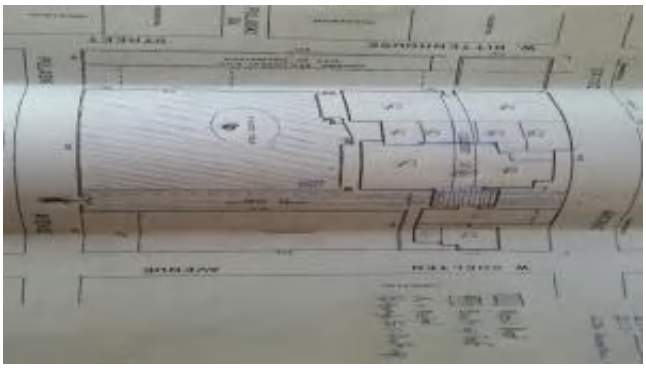
Budget Estimate Total: $18,161,526.95

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:	Middle Secondary
Gross Area (SF):	187,604
Year Built:	1970
Last Renovation:	
Replacement Value:	$91,804,362
Repair Cost:	$16,231,356.93
Total FCI:	17.68 %
Total RSLI:	70.01 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B615001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S615001		

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	55.00 %	0.00 %	$0.00
A30 - Pool Construction	36.67 %	0.00 %	$0.00
B10 - Superstructure	55.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	86.08 %	3.55 %	$443,396.92
B30 - Roofing	59.68 %	2.34 %	$61,815.91
C10 - Interior Construction	61.08 %	5.75 %	$264,523.65
C20 - Stairs	91.00 %	9.60 %	$25,395.65
C30 - Interior Finishes	60.38 %	10.76 %	$891,974.37
D10 - Conveying	91.43 %	0.00 %	$0.00
D20 - Plumbing	76.44 %	32.15 %	$1,208,572.62
D30 - HVAC	84.55 %	49.72 %	$9,294,449.16
D40 - Fire Protection	89.28 %	43.71 %	$660,911.63
D50 - Electrical	64.63 %	24.37 %	$2,687,155.66
E10 - Equipment	74.29 %	0.00 %	$0.00
E20 - Furnishings	77.50 %	173.47 %	$693,161.36
Totals:	**70.01 %**	**17.68 %**	**$16,231,356.93**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$23.16	S.F.	187,604	100	1970	2070		55.00 %	0.00 %	55			$4,344,909
A1030	Slab on Grade	$5.17	S.F.	187,604	100	1970	2070		55.00 %	0.00 %	55			$969,913
A3010	Pool Excavation	$38.73	S.F.	5,000	100	1970	2070		55.00 %	0.00 %	55			$193,650
A3020	Pool Shell	$106.51	S.F.	5,000	40	1970	2010	2027	30.00 %	0.00 %	12			$532,550
B1010	Floor Construction	$85.94	S.F.	187,604	100	1970	2070		55.00 %	0.00 %	55			$16,122,688
B1020	Roof Construction	$9.26	S.F.	62,000	100	1970	2070		55.00 %	0.00 %	55			$574,120
B2010	Exterior Walls	$43.78	S.F.	187,604	100	2006	2106		91.00 %	1.38 %	91		$113,432.42	$8,213,303
B2020	Exterior Windows	$21.40	S.F.	187,604	40	2006	2046		77.50 %	8.22 %	31		$329,964.50	$4,014,726
B2030	Exterior Doors	$1.45	S.F.	187,604	25	2006	2031		64.00 %	0.00 %	16			$272,026
B3010120	Single Ply Membrane	$38.73	S.F.	47,000	20	2006	2026		55.00 %	3.40 %	11		$61,815.91	$1,820,310
B3010130	Preformed Metal Roofing	$54.22	S.F.	15,000	30	2006	2036		70.00 %	0.00 %	21			$813,300
B3020	Roof Openings	$0.06	S.F.	187,604	30	2006	2036		70.00 %	0.00 %	21			$11,256
C1010	Partitions	$17.91	S.F.	187,604	100	1970	2070		55.00 %	1.60 %	55		$53,864.60	$3,359,988
C1020	Interior Doors	$3.51	S.F.	187,604	40	2006	2046		77.50 %	14.49 %	31		$95,411.74	$658,490
C1030	Fittings	$3.12	S.F.	187,604	40	2006	2046		77.50 %	19.69 %	31		$115,247.31	$585,324
C2010	Stair Construction	$1.41	S.F.	187,604	100	2006	2106		91.00 %	9.60 %	91		$25,395.65	$264,522
C3010230	Paint & Covering	$13.21	S.F.	167,604	10	2006	2016	2020	50.00 %	6.12 %	5		$135,477.54	$2,214,049
C3010232	Wall Tile	$2.63	S.F.	20,000	30	2006	2036		70.00 %	0.00 %	21			$52,600

Site Assessment Report - B615001;Pickett

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.	20,000	10	2014	2024		90.00 %	0.00 %	9			$146,000
C3020412	Terrazzo & Tile	$75.52	S.F.	5,000	50	2006	2056		82.00 %	0.00 %	41			$377,600
C3020413	Vinyl Flooring	$9.68	S.F.	112,604	20	2006	2026		55.00 %	13.91 %	11		$151,666.68	$1,090,007
C3020414	Wood Flooring	$22.27	S.F.	15,000	25	2006	2031		64.00 %	90.76 %	16		$303,181.54	$334,050
C3020415	Concrete Floor Finishes	$0.97	S.F.	20,000	50	2006	2056		82.00 %	0.00 %	41			$19,400
C3030	Ceiling Finishes	$20.97	S.F.	187,604	25	2006	2031		64.00 %	7.67 %	16		$301,648.61	$3,934,056
C3040	Pool Finishes	$24.21	S.F.	5,000	20	1970	1990	2027	60.00 %	0.00 %	12			$121,050
D1010	Elevators and Lifts	$1.53	S.F.	187,604	35	2012	2047		91.43 %	0.00 %	32			$287,034
D2010	Plumbing Fixtures	$13.52	S.F.	187,604	35	2006	2041		74.29 %	5.11 %	26		$129,578.11	$2,536,406
D2020	Domestic Water Distribution	$1.68	S.F.	187,604	25	1970	1995	2042	108.00 %	74.28 %	27		$234,112.01	$315,175
D2030	Sanitary Waste	$2.52	S.F.	187,604	30	1970	2000	2047	106.67 %	178.71 %	32		$844,882.50	$472,762
D2040	Rain Water Drainage	$2.32	S.F.	187,604	30	1970	2000	2025	33.33 %	0.00 %	10			$435,241
D3020	Heat Generating Systems	$18.67	S.F.	187,604	35	2003	2038		65.71 %	0.00 %	23			$3,502,567
D3030	Cooling Generating Systems	$24.48	S.F.	187,604	30	1970	2000	2047	106.67 %	26.23 %	32		$1,204,454.53	$4,592,546
D3040	Distribution Systems	$42.99	S.F.	187,604	25	2006	2031	2035	80.00 %	88.02 %	20		$7,098,908.05	$8,065,096
D3050	Terminal & Package Units	$11.60	S.F.		20				0.00 %	0.00 %				$0
D3060	Controls & Instrumentation	$13.50	S.F.	187,604	20	2006	2026	2032	85.00 %	39.13 %	17		$991,086.58	$2,532,654
D4010	Sprinklers	$7.05	S.F.	187,604	35	2006	2041	2047	91.43 %	49.97 %	32		$660,911.63	$1,322,608
D4020	Standpipes	$1.01	S.F.	187,604	35	2006	2041		74.29 %	0.00 %	26			$189,480
D5010	Electrical Service/Distribution	$9.70	S.F.	187,604	30	2008	2038		76.67 %	66.46 %	23		$1,209,412.86	$1,819,759
D5020	Lighting and Branch Wiring	$34.68	S.F.	187,604	20	2008	2028		65.00 %	17.13 %	13		$1,114,350.94	$6,506,107
D5030	Communications and Security	$12.99	S.F.	187,604	15	2008	2023		53.33 %	13.35 %	8		$325,240.00	$2,436,976
D5090	Other Electrical Systems	$1.41	S.F.	187,604	30	2008	2038		76.67 %	14.42 %	23		$38,151.86	$264,522
E1020	Institutional Equipment	$10.65	S.F.	187,604	35	2006	2041		74.29 %	0.00 %	26			$1,997,983
E1090	Other Equipment	$16.46	S.F.	187,604	35	2006	2041		74.29 %	0.00 %	26			$3,087,962
E2010	Fixed Furnishings	$2.13	S.F.	187,604	40	2006	2046		77.50 %	173.47 %	31		$693,161.36	$399,597
								Total	**70.01 %**	**17.68 %**			**$16,231,356.93**	**$91,804,362**

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 80
Painted Drywall 10
Brick/tile 10

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

Note:
carpet 9%
Concrete 9%
Wood 14%
Vinyl 68%

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

Note: There are two (2) service transformers and no secondary transformers.

System: E10 - Equipment — This system contains no images

Note: Additional cost for pool equipment added to cost model.

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:	**$16,231,357**	**$0**	**$0**	**$0**	**$0**	**$2,823,359**	**$0**	**$0**	**$3,395,798**	**$209,547**	**$643,420**	**$23,303,480**
*** 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**
A30 - Pool Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A3010 - Pool Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A3020 - Pool Shell	$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	$113,432	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$113,432**
B2020 - Exterior Windows	$329,965	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$329,965**
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**
B3010120 - Single Ply Membrane	$61,816	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$61,816**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$53,865	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$53,865**
C1020 - Interior Doors	$95,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$95,412**
C1030 - Fittings	$115,247	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$115,247**

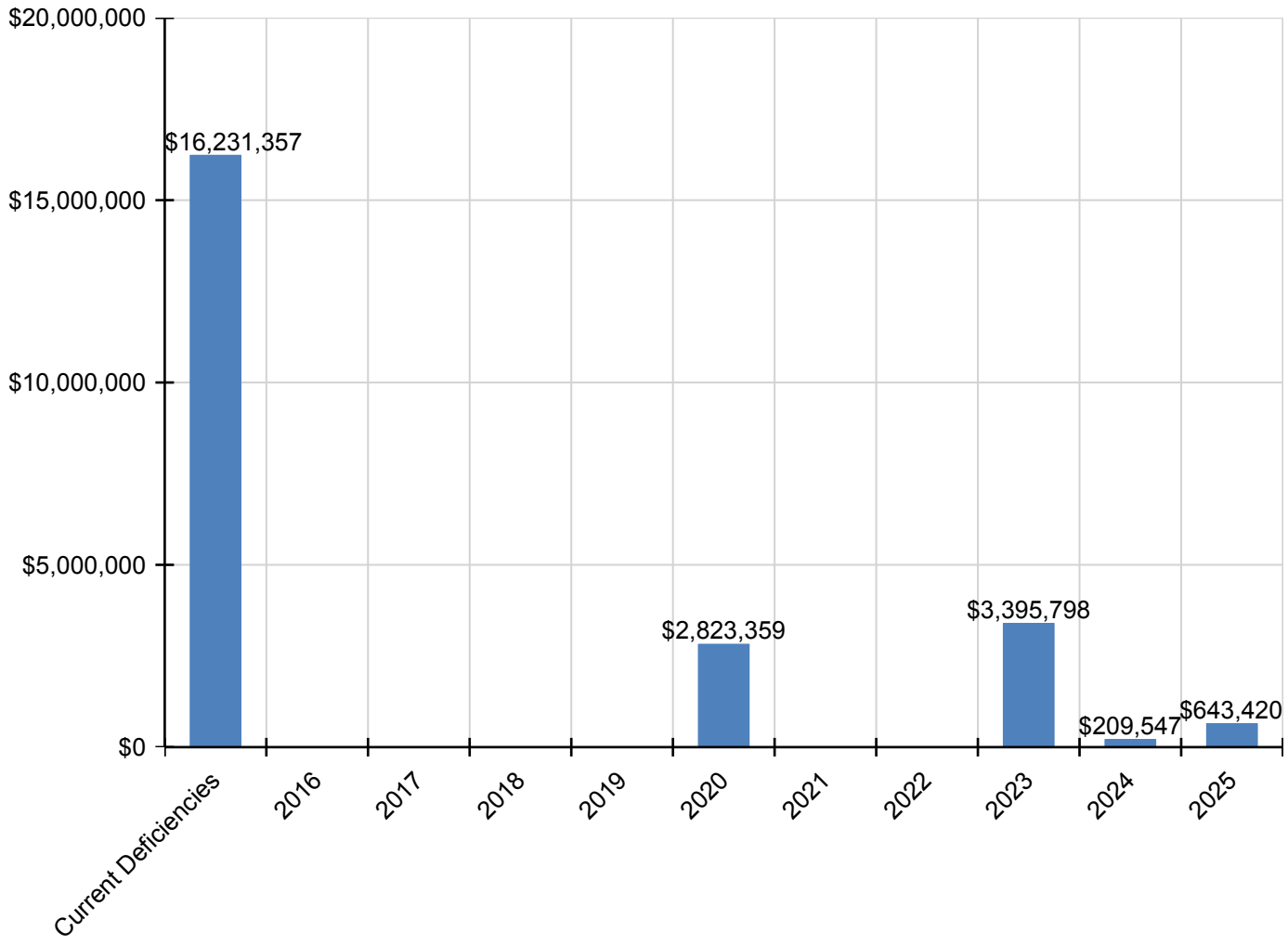
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$25,396	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$25,396**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$135,478	$0	$0	$0	$0	$2,823,359	$0	$0	$0	$0	$0	**$2,958,836**
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	$209,547	$0	**$209,547**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$151,667	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$151,667**
C3020414 - Wood Flooring	$303,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$303,182**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$301,649	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$301,649**
C3040 - Pool 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	$129,578	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$129,578**
D2020 - Domestic Water Distribution	$234,112	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$234,112**
D2030 - Sanitary Waste	$844,883	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$844,883**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$643,420	**$643,420**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,204,455	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,204,455**
D3040 - Distribution Systems	$7,098,908	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,098,908**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$991,087	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$991,087**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$660,912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$660,912**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$1,209,413	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,209,413**

D5020 - Lighting and Branch Wiring	$1,114,351	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,114,351**
D5030 - Communications and Security	$325,240	$0	$0	$0	$0	$0	$0	$0	$3,395,798	$0	$0	**$3,721,038**
D5090 - Other Electrical Systems	$38,152	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$38,152**
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	$693,161	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$693,161**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

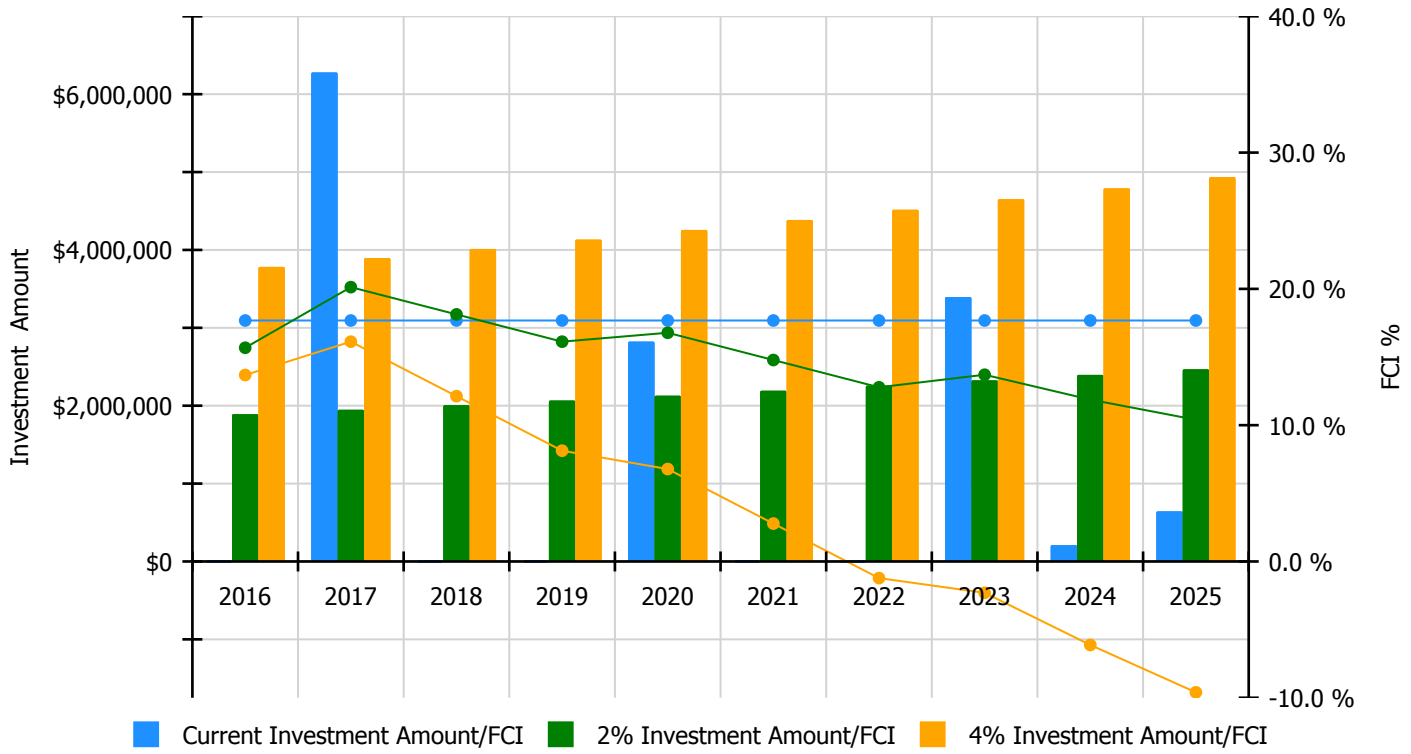


10 Year FCI Forecast by Investment Scenario

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

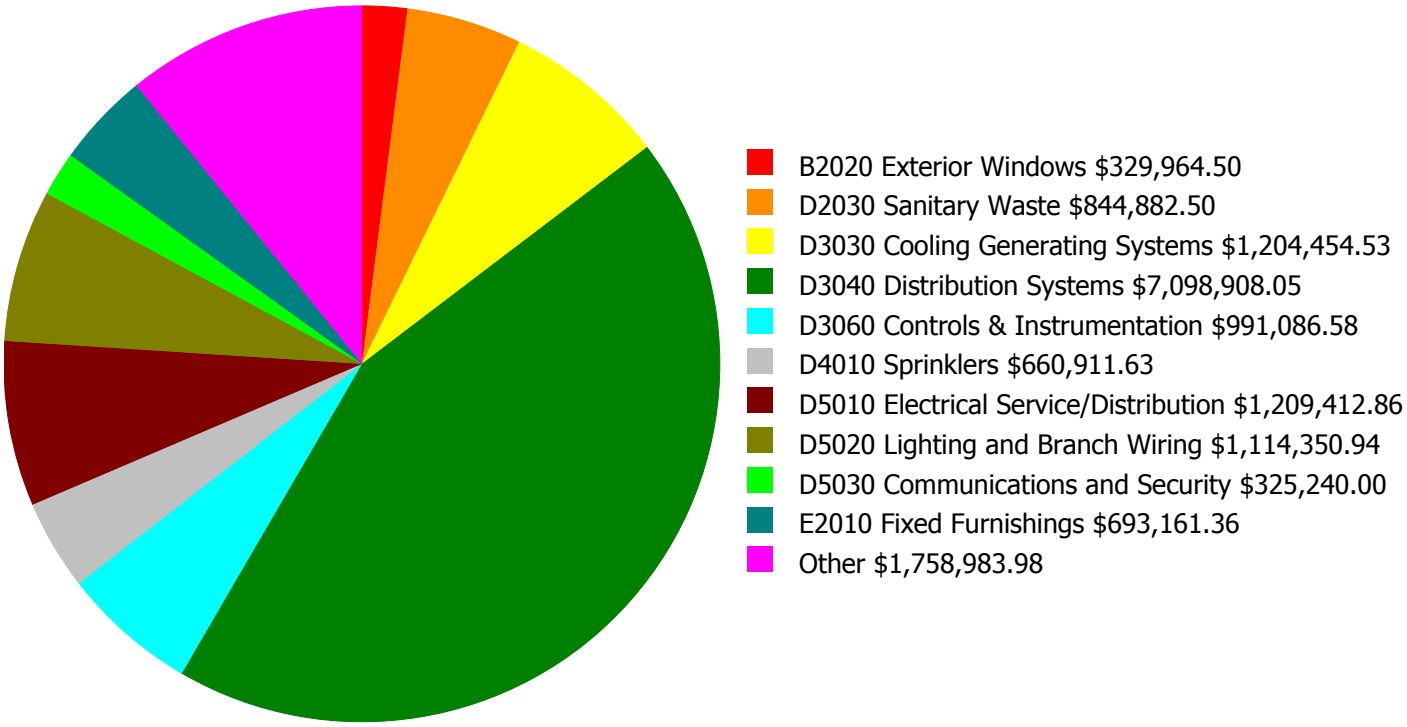
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 17.68%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,891,170.00	15.68 %	$3,782,340.00	13.68 %
2017	$6,278,970	$1,947,905.00	20.13 %	$3,895,810.00	16.13 %
2018	$0	$2,006,342.00	18.13 %	$4,012,684.00	12.13 %
2019	$0	$2,066,532.00	16.13 %	$4,133,065.00	8.13 %
2020	$2,823,359	$2,128,528.00	16.78 %	$4,257,057.00	6.78 %
2021	$0	$2,192,384.00	14.78 %	$4,384,768.00	2.78 %
2022	$0	$2,258,156.00	12.78 %	$4,516,311.00	-1.22 %
2023	$3,395,798	$2,325,900.00	13.70 %	$4,651,801.00	-2.30 %
2024	$209,547	$2,395,677.00	11.88 %	$4,791,355.00	-6.12 %
2025	$643,420	$2,467,548.00	10.40 %	$4,935,095.00	-9.60 %
Total:	**$13,351,093**	**$21,680,142.00**		**$43,360,286.00**	

Deficiency Summary by System

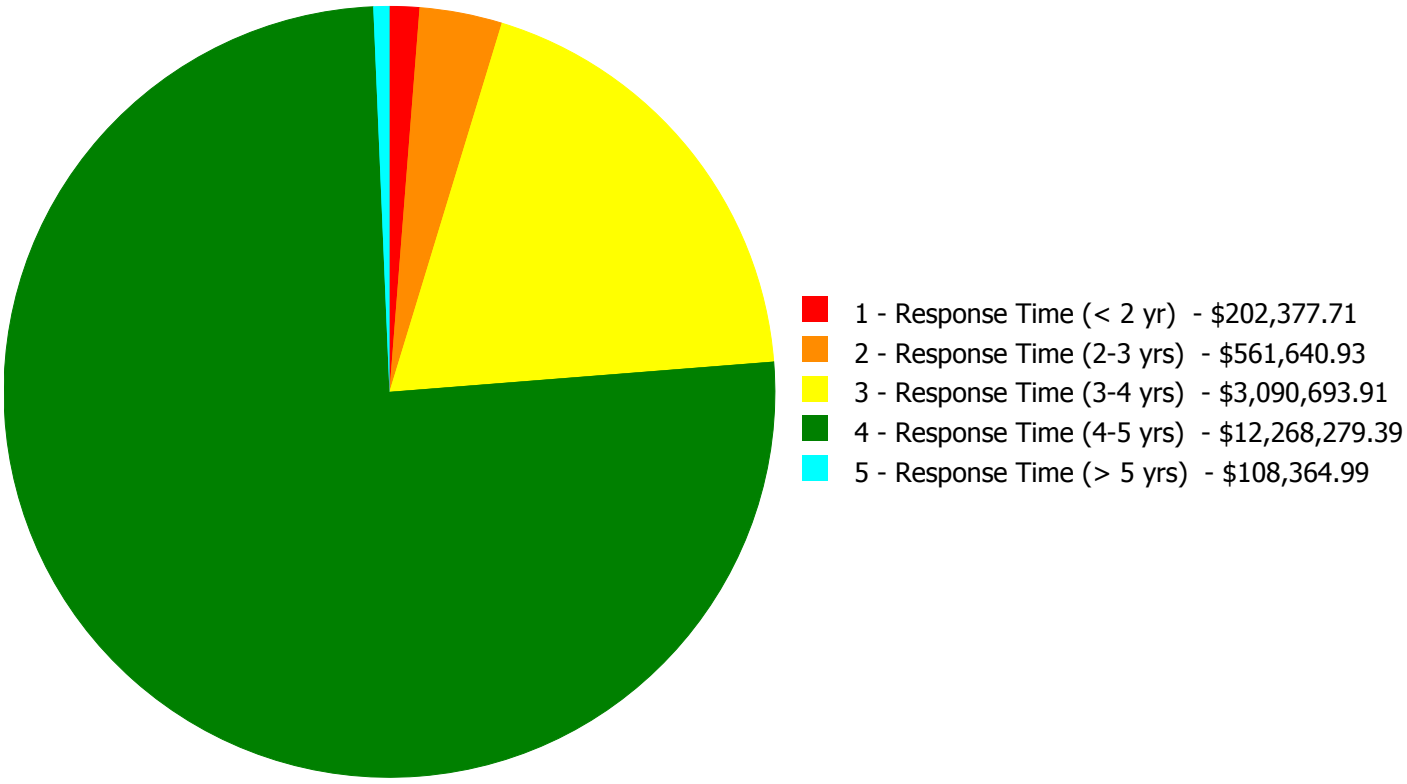
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $16,231,356.93

Deficiency Summary by Priority

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



Budget Estimate Total: $16,231,356.93

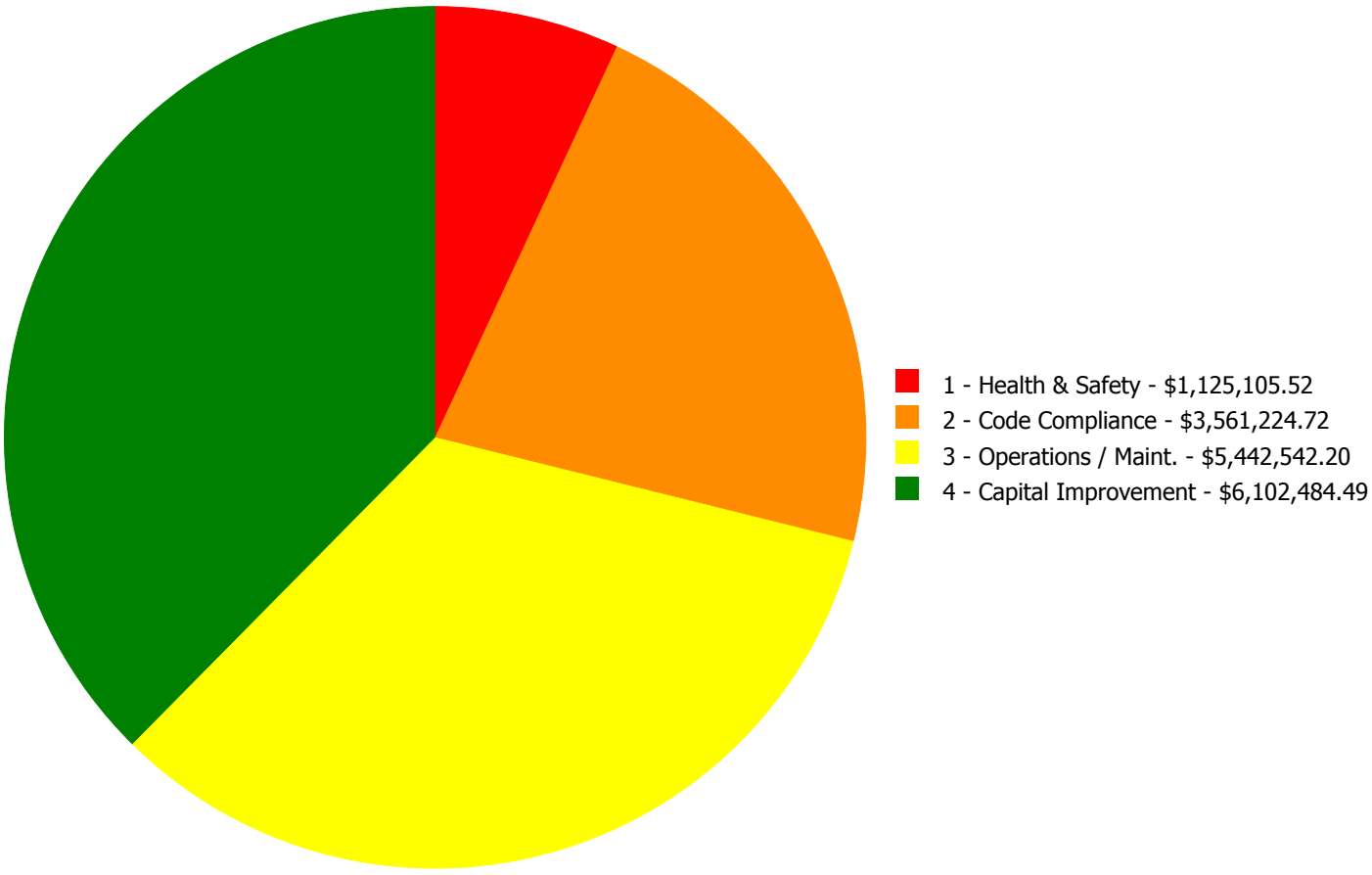
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$113,432.42	$0.00	$0.00	$0.00	$113,432.42
B2020	Exterior Windows	$0.00	$0.00	$0.00	$329,964.50	$0.00	$329,964.50
B3010120	Single Ply Membrane	$61,815.91	$0.00	$0.00	$0.00	$0.00	$61,815.91
C1010	Partitions	$53,864.60	$0.00	$0.00	$0.00	$0.00	$53,864.60
C1020	Interior Doors	$0.00	$0.00	$95,411.74	$0.00	$0.00	$95,411.74
C1030	Fittings	$0.00	$0.00	$0.00	$6,882.32	$108,364.99	$115,247.31
C2010	Stair Construction	$0.00	$0.00	$25,395.65	$0.00	$0.00	$25,395.65
C3010230	Paint & Covering	$0.00	$135,477.54	$0.00	$0.00	$0.00	$135,477.54
C3020413	Vinyl Flooring	$0.00	$0.00	$151,666.68	$0.00	$0.00	$151,666.68
C3020414	Wood Flooring	$69,964.97	$0.00	$0.00	$233,216.57	$0.00	$303,181.54
C3030	Ceiling Finishes	$0.00	$301,648.61	$0.00	$0.00	$0.00	$301,648.61
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$129,578.11	$0.00	$129,578.11
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$234,112.01	$0.00	$234,112.01
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$844,882.50	$0.00	$844,882.50
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$1,204,454.53	$0.00	$1,204,454.53
D3040	Distribution Systems	$0.00	$9,712.48	$0.00	$7,089,195.57	$0.00	$7,098,908.05
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$991,086.58	$0.00	$991,086.58
D4010	Sprinklers	$0.00	$0.00	$0.00	$660,911.63	$0.00	$660,911.63
D5010	Electrical Service/Distribution	$0.00	$0.00	$1,209,412.86	$0.00	$0.00	$1,209,412.86
D5020	Lighting and Branch Wiring	$0.00	$1,369.88	$700,480.77	$412,500.29	$0.00	$1,114,350.94
D5030	Communications and Security	$0.00	$0.00	$193,745.22	$131,494.78	$0.00	$325,240.00
D5090	Other Electrical Systems	$0.00	$0.00	$38,151.86	$0.00	$0.00	$38,151.86
E2010	Fixed Furnishings	$16,732.23	$0.00	$676,429.13	$0.00	$0.00	$693,161.36
	Total:	$202,377.71	$561,640.93	$3,090,693.91	$12,268,279.39	$108,364.99	$16,231,356.93

Deficiency Summary by Category

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



Budget Estimate Total: $16,231,356.93

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B3010120 - Single Ply Membrane

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair damaged single ply roofing - per SF of damaged area

Qty: 1,400.00

Unit of Measure: S.F.

Estimate: $61,815.91

Assessor Name: System

Date Created: 11/03/2015

Notes: The single ply roofing system over the classrooms in the auditorium is currently leaking into the classroom. This section of the roof is considered to be failing and immediate attention is required to repair the roofing system before additional damage is done to the interior finishes. This deficiency provides a budgetary consideration to repair the roofing system for this area.

System: C1010 - Partitions

Location: Auditorium

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $53,864.60

Assessor Name: System

Date Created: 12/15/2015

Notes: This building has adequate exit pathways and no egress obstructions were noted during our building walk through. However the corridor doors on all floors of the auditorium building are not fire rated and should be upgraded. As indicated in the photos some of the doors and frames have rusted and are in very poor condition. Install new fire rated flush wood doors on all floor corridors. If the recommended lever hardware and room signage has not been implemented then these features should be incorporated into the work scope. This work is expected to be completed as part of an effort to upgrade the auditorium.

System: C3020414 - Wood Flooring

Location: Stage

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace wood flooring

Qty: 2,400.00

Unit of Measure: S.F.

Estimate: $69,964.97

Assessor Name: System

Date Created: 12/15/2015

Notes: The auditoriums stage in this school has a wooden floor finish that appears to be from original construction. As indicated in the photos the wooden floor finish is in very poor condition as a result of a roof leak. It is recommended that the wooden floor finish be removed and replaced with an in kind finish. This work is expected to be completed as part of an effort to upgrade the auditorium.

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $16,732.23

Assessor Name: System

Date Created: 12/15/2015

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 2 - Response Time (2-3 yrs):

System: B2010 - Exterior Walls

Location: Auditorium Basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete wall structure

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $113,432.42

Assessor Name: System

Date Created: 12/15/2015

Notes: The interior concrete finish that is spalling and falling from the building is a serious concern to the safety of the students and staff of this school. This area is limited to the basement level of the auditorium as indicated in the photos. Special consideration for high priority project to immediately address this issue is recommended. Considering the progression of the failure it is recommended that this issue receives the upmost priority in order to mitigate damage or injury to the students and staff.

System: C3010230 - Paint & Covering

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $135,477.54

Assessor Name: System

Date Created: 12/16/2015

Notes: There are painted walls, trim, and some painted ceilings in this building. The interior finishes in the older Auditorium section is in fair to poor 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. The abandoned section of the building is expected to require major repairs and additional efforts to restore the finishes. This effort is expected to be coordinated with other mechanical electrical efforts in order to prevent overlapping efforts

System: C3030 - Ceiling Finishes

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $301,648.61

Assessor Name: System

Date Created: 12/16/2015

Notes: The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings were upgraded with the exception of the auditorium in 2006 and is in very good condition. There are no recommendations for the 2006 ceiling finishes. However, the Auditorium ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

System: D3040 - Distribution Systems

Location: older toilet rooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide inline ceiling exhaust fan and wall outlet louver

Qty: 1.00

Unit of Measure: Ea.

Estimate: $9,712.48

Assessor Name: System

Date Created: 11/20/2015

Notes: Install new mechanical toilet exhaust system for toilet rooms in auditorium portion of building. Include inline fan, ductwork and registers.

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: 4.00

Unit of Measure: Ea.

Estimate: $1,369.88

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace four (4) duplex receptacles in the kitchen with ground-fault circuit-interrupting (GFCI) type devices to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.

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

System: C1020 - Interior Doors

Location: Auditorium Extension

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $95,411.74

Assessor Name: System

Date Created: 11/03/2015

Notes: The interior door system was upgraded in 2006 with new wooden doors, metal frames and proper ADA hardware. Other interior doors include hollow metal in hollow metal frames at stairwells and exit ways. Doors are generally in like new condition. Doors swing in the direction of exit and do not obstruct hallways. The doors in the Auditorium area which includes the band room, music room, art room and lecture hall have original doors that are in poor condition. Universal upgrades are required for the interior door systems in the auditorium. It is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

System: C2010 - Stair Construction

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 180.00

Unit of Measure: L.F.

Estimate: $25,395.65

Assessor Name: System

Date Created: 12/15/2015

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

System: C3020413 - Vinyl Flooring

Location: Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $151,666.68

Assessor Name: System

Date Created: 12/15/2015

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

System: D5010 - Electrical Service/Distribution

Location: East side of building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 23.00

Unit of Measure: Ea.

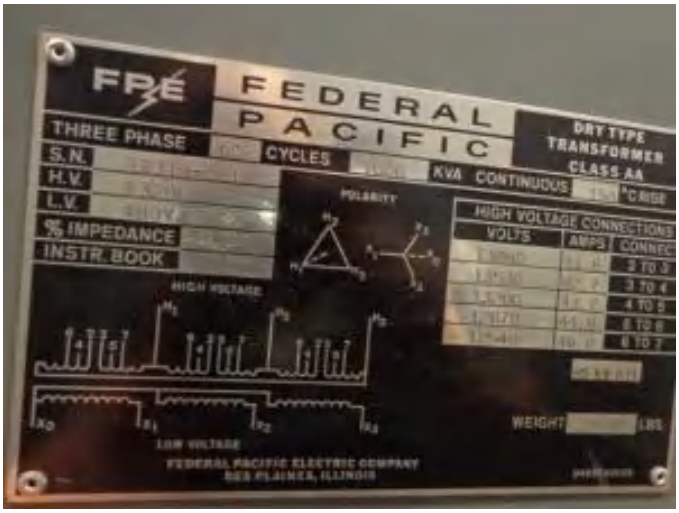
Estimate: $885,386.08

Assessor Name: System

Date Created: 12/20/2015

Notes: Replace six (6) distribution panelboards and 17 lighting and appliance panelboards on the east side of the building and in the auditorium that have not yet been replaced.

System: D5010 - Electrical Service/Distribution



Location: Main Electrical Room 023

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace unit substation

Qty: 1.00

Unit of Measure: Ea.

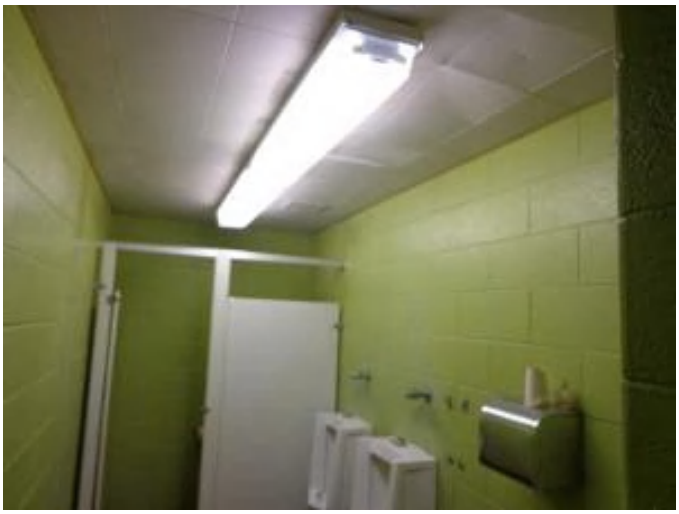
Estimate: $324,026.78

Assessor Name: System

Date Created: 12/20/2015

Notes: Replace 600A load interrupter switch and 1000 kVA, 13.2 kV-480/277V, 3 phase 4 wire, dry type transformer feeding Motor Control Center MCC-1.

System: D5020 - Lighting and Branch Wiring



Location: Auditorium Building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 11,400.00
Unit of Measure: S.F.
Estimate: $220,417.04
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace fluorescent lighting fixtures in the classrooms (9,500 SF), and corridors and support rooms (1,900 SF) in the auditorium building.

System: D5020 - Lighting and Branch Wiring

Location: Swimming Pool
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 28.00
Unit of Measure: Ea.
Estimate: $149,455.00
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace approximately 26 HID surface mounted fixtures in the swimming pool with LED type lighting fixtures.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 47.00
Unit of Measure: Ea.
Estimate: $112,384.93
Assessor Name: System
Date Created: 12/21/2015

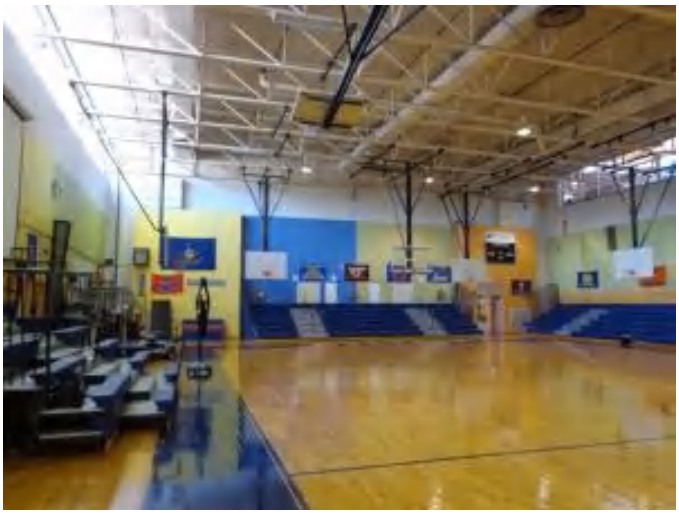
Notes: Replace metal halide lighting fixtures in the auditorium with LED downlights (17 fixtures over the main floor and 30 fixtures in the balcony).

System: D5020 - Lighting and Branch Wiring

Location: Cafeteria
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 1.00
Unit of Measure: Ea.
Estimate: $94,056.97
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace 24 metal halide lighting fixtures in the cafeteria with LED type luminaires.

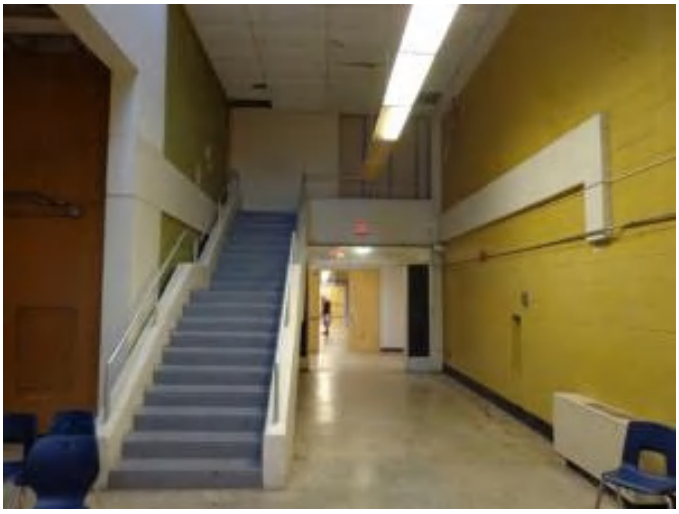
System: D5020 - Lighting and Branch Wiring



Location: Gymnasium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 24.00
Unit of Measure: Ea.
Estimate: $93,479.73
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace (24) 400W metal halide industrial style fixtures in the gymnasium with LED fixtures.

System: D5020 - Lighting and Branch Wiring



Location: Floor 1 Corridor on west side of pool
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 28.00
Unit of Measure: Ea.
Estimate: $30,687.10
Assessor Name: System
Date Created: 12/21/2015

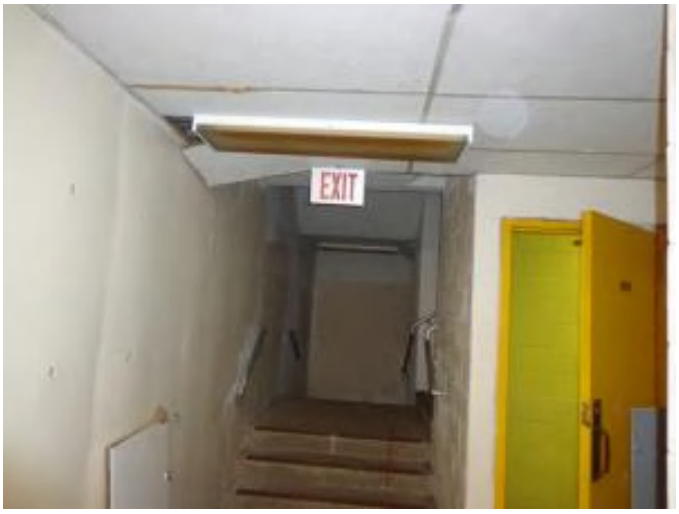
Notes: Replace fluorescent wraparound fixtures in the north/south corridor on Floor 1 that is located on the west side of the swimming pool and gymnasium with new wraparound fixtures (approximately 28 fixtures).

System: D5030 - Communications and Security

Location: Auditorium Building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 20,509.00
Unit of Measure: S.F.
Estimate: $193,745.22
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace fire alarm initiating devices and notification appliances throughout the auditorium building.

System: D5090 - Other Electrical Systems



Location: East side of building and auditorium
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Emergency/Exit Lighting
Qty: 45.00
Unit of Measure: Ea.
Estimate: $38,151.86
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace all exit signs on the east side of the building (gymnasium, cafeteria, kitchen, swimming pool and auditorium with LED type exits. Estimate 45 exit signs.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 750.00

Unit of Measure: Ea.

Estimate: $676,429.13

Assessor Name: System

Date Created: 12/15/2015

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.

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

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 60.00

Unit of Measure: Ea.

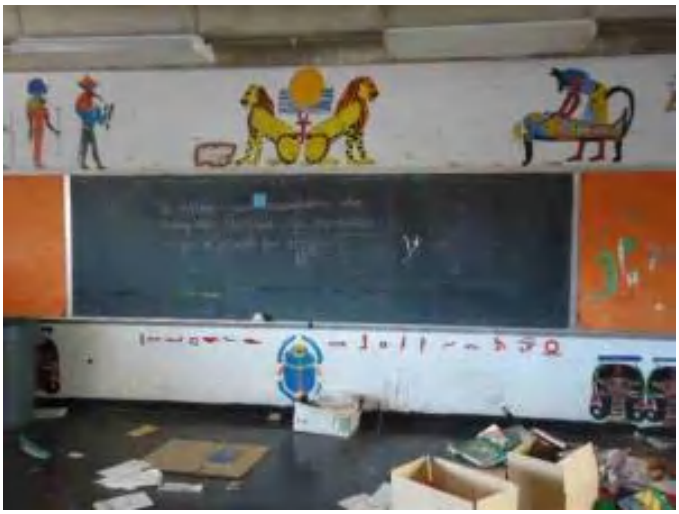
Estimate: $329,964.50

Assessor Name: System

Date Created: 11/03/2015

Notes: Most of the exterior windows have been upgraded from the original applications to a new double pane aluminum framed weather tight application. A majority of the window system is estimated to have been installed in the 2006 renovation effort. As indicated in the photos several of the windows in the classrooms near the auditorium as well as the bridge offices appear to be original. Several of the windows no longer work and will require attention prior to an overall effort. Overall, the windows are in good condition based on the year of installation or last renovation. Select exterior windows are recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: C1030 - Fittings



Location: Auditorium Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 10.00

Unit of Measure: Ea.

Estimate: $6,882.32

Assessor Name: System

Date Created: 11/03/2015

Notes: The classrooms in the auditorium extension have several classrooms with chalk boards. The boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade chalk boards to new marker board systems.

System: C3020414 - Wood Flooring

Location: Gym

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace wood flooring

Qty: 8,000.00

Unit of Measure: S.F.

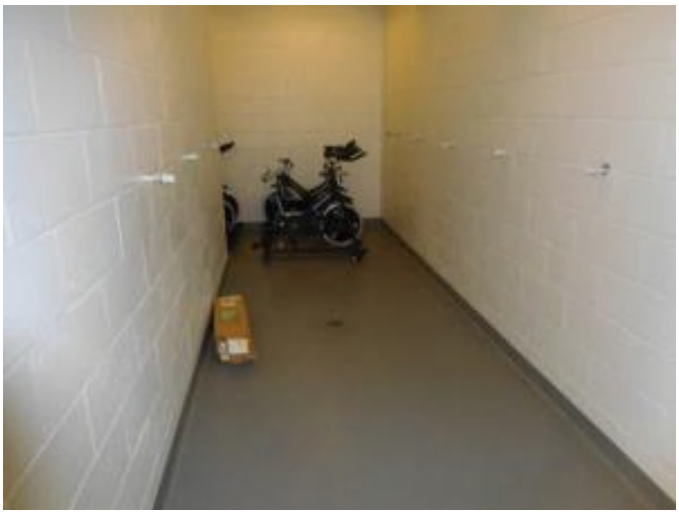
Estimate: $233,216.57

Assessor Name: System

Date Created: 12/15/2015

Notes: The GYM floor finish is damaged in several areas due to water related issues.. Recent repairs have eliminated the trip hazards however, there are areas that remain that warrant replacement. The floor is recommended for universal upgrade.

System: D2010 - Plumbing Fixtures



Location: older toilet and locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 8.00

Unit of Measure: Ea.

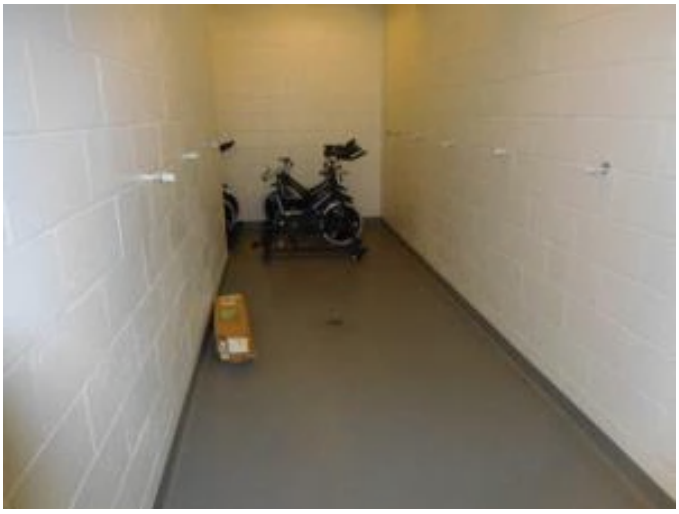
Estimate: $59,697.18

Assessor Name: System

Date Created: 01/04/2016

Notes: Replace older plumbing fixtures not replaced with 2006 renovation including water closets, urinals, lavatories, drinking fountains and showers.

System: D2010 - Plumbing Fixtures



Location: older toilet and locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 8.00

Unit of Measure: Ea.

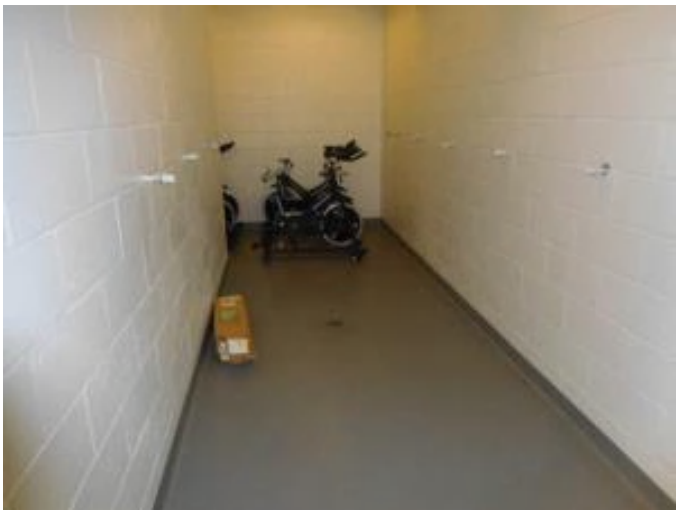
Estimate: $40,960.54

Assessor Name: System

Date Created: 11/20/2015

Notes: Replace older plumbing fixtures not replaced with 2006 renovation including water closets, urinals, lavatories, drinking fountains and showers.

System: D2010 - Plumbing Fixtures



Location: older toilet and locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 6.00

Unit of Measure: Ea.

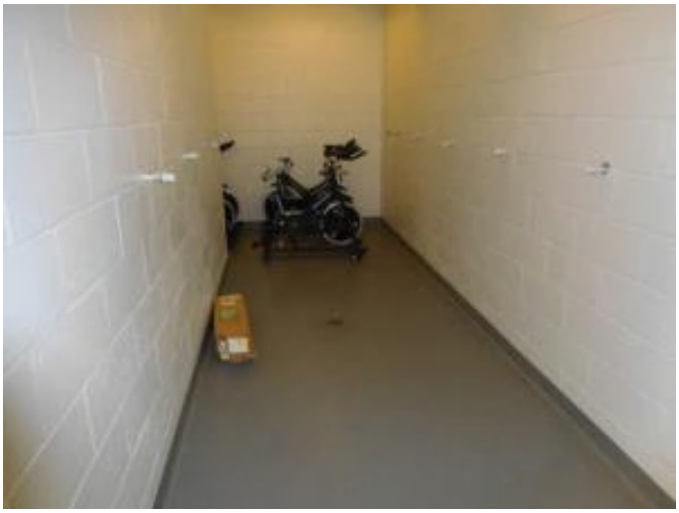
Estimate: $19,914.50

Assessor Name: System

Date Created: 01/04/2016

Notes: Replace older plumbing fixtures not replaced with 2006 renovation including water closets, urinals, lavatories, drinking fountains and showers.

System: D2010 - Plumbing Fixtures



Location: older toilet and locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace shower valve and shower head including disruption and replacement of finishes

Qty: 4.00

Unit of Measure: Ea.

Estimate: $9,005.89

Assessor Name: System

Date Created: 01/04/2016

Notes: Replace older plumbing fixtures not replaced with 2006 renovation including water closets, urinals, lavatories, drinking fountains and showers.

System: D2020 - Domestic Water Distribution

Location: older building area

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 46,200.00

Unit of Measure: S.F.

Estimate: $234,112.01

Assessor Name: System

Date Created: 11/20/2015

Notes: Replace domestic water supply piping in areas not renovated including fittings, valves, hangers and insulation.

System: D2030 - Sanitary Waste

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+200KSF)

Qty: 187,604.00

Unit of Measure: S.F.

Estimate: $814,196.55

Assessor Name: System

Date Created: 11/20/2015

Notes: Inspect cast iron plumbing piping including camera survey. Repair or replace as required.

System: D2030 - Sanitary Waste

Location: lower level

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace sanitary sewage ejector pit and pumps. (48" dia.)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $30,685.95

Assessor Name: System

Date Created: 11/20/2015

Notes: Replace existing duplex groundwater sump pump in auditorium area lower level.

System: D3030 - Cooling Generating Systems

Location: older building area

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty:

Unit of Measure: S.F.

Estimate: $1,204,454.53

Assessor Name: System

Date Created: 11/20/2015

Notes: Install new one hundred thirty ton chilled water system for areas of the building not renovated with air conditioning. Include roof mounted air cooled chiller, distribution piping, glycol system and pumps.

System: D3040 - Distribution Systems

Location: pool

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Install pool environmental unit with Dx condenser and pool heater

Qty: 14,400.00

Unit of Measure: S.F.

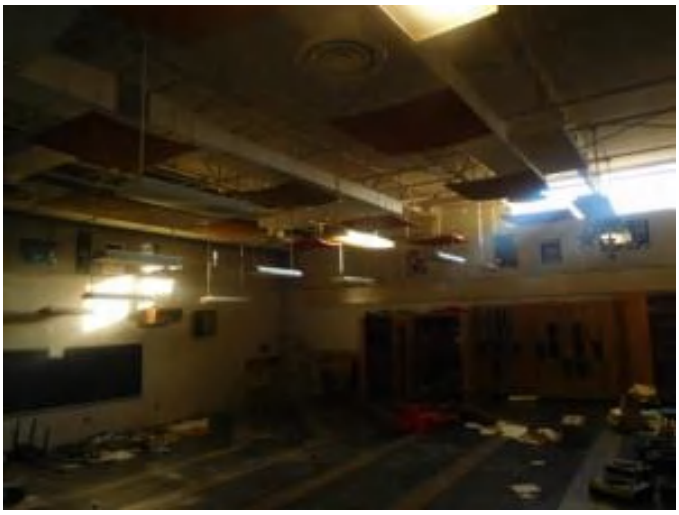
Estimate: $3,537,683.33

Assessor Name: System

Date Created: 11/20/2015

Notes: Install new HVAC/dehumidification DX system for pool area. Locate indoor section in third floor mechanical room and outdoor section on roof. Unit to be specifically designed for pool application, with heating, cooling, dehumidification, and heat recovery for pool water heating. Include new aluminum duct system with linear diffusers and separate exhaust system.

System: D3040 - Distribution Systems



Location: older building area

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 37.00

Unit of Measure: C

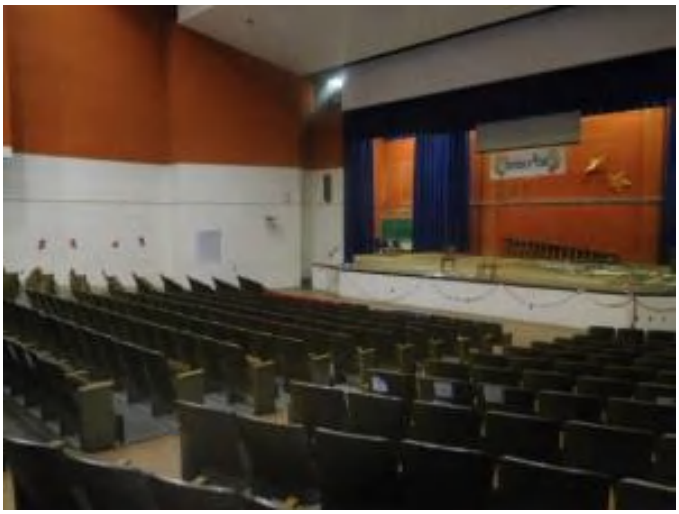
Estimate: $2,981,341.42

Assessor Name: System

Date Created: 11/20/2015

Notes: Provide new fan coil units for classrooms not currently air conditioned. Units to have hot and chilled water coils, fan, motor, valves and controls. Connect to new chilled water and existing hot water systems. Install roof mounted outside air system ducted to each unit.

System: D3040 - Distribution Systems



Location: auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $285,085.41

Assessor Name: System

Date Created: 11/20/2015

Notes: Install two new air handling units in auditorium mechanical rooms. Units to have hot and chilled water coils, fan, motor, valves and controls. Connect to new chilled water and existing hot water systems.

System: D3040 - Distribution Systems

Location: auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $285,085.41

Assessor Name: System

Date Created: 12/15/2015

Notes: Install two new air handling units in auditorium mechanical rooms. Units to have hot and chilled water coils, fan, motor, valves and controls. Connect to new chilled water and existing hot water systems.

System: D3060 - Controls & Instrumentation

Location: older building area

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 46,200.00

Unit of Measure: S.F.

Estimate: $991,086.58

Assessor Name: System

Date Created: 11/20/2015

Notes: Install new DDC control system with building automation for new HVAC equipment. Include computer monitor, software and graphics package.

System: D4010 - Sprinklers

Location: older building area

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 46,200.00

Unit of Measure: S.F.

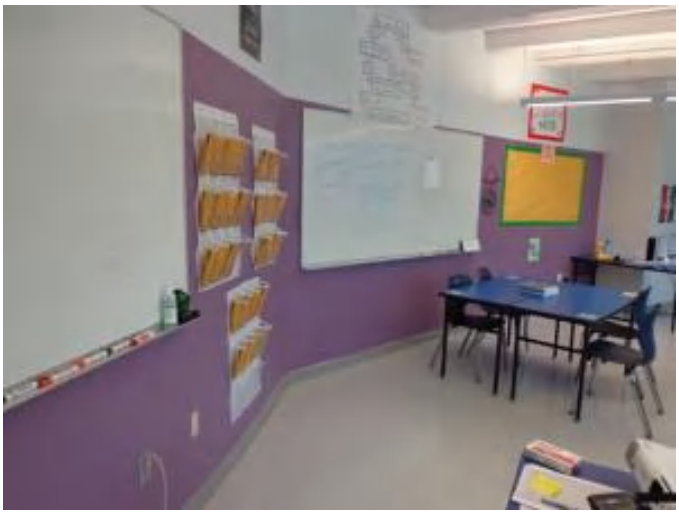
Estimate: $660,911.63

Assessor Name: System

Date Created: 11/20/2015

Notes: Install complete NFPA automatic sprinkler system in areas of the building not currently protected.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide surface raceway system and wiring devices

Qty: 1,290.00

Unit of Measure: L.F.

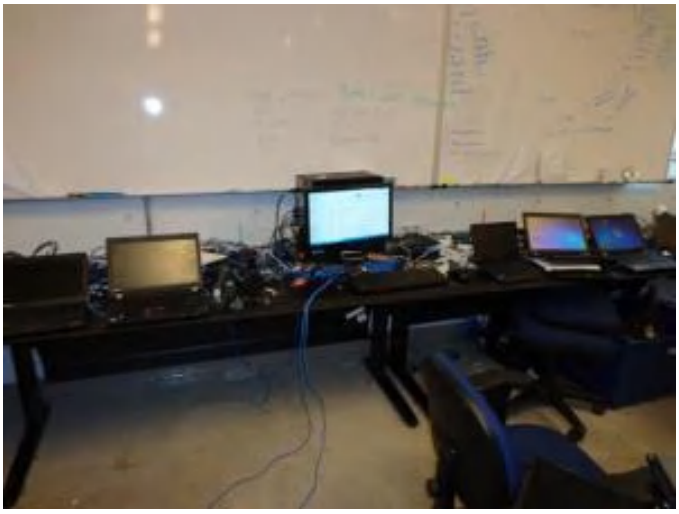
Estimate: $240,939.29

Assessor Name: System

Date Created: 12/21/2015

Notes: Provide 6 to 8 additional duplex receptacles in 43 classrooms using surface metal raceway. Also, provide a recessed floor receptacle at each instructor's table (total of 43) to eliminate the use of extension cords run along the floor that creates a tripping hazard to staff and students. Channel floor to run branch circuit wiring to floor outlet.

System: D5020 - Lighting and Branch Wiring



Location: Floor 2 IT Workroom

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add receptacles and branch circuits

Qty: 32.00

Unit of Measure: Ea.

Estimate: $60,297.32

Assessor Name: System

Date Created: 12/20/2015

Notes: Provide a 225A, 208/120V, 3 phase, 4 wire panelboard in the workroom located adjacent to the IT room on Floor 2, and additional branch circuits and receptacles for plug-in equipment. The exiting workroom does not have adequate receptacles for equipment.

System: D5020 - Lighting and Branch Wiring

Location: Canopies at exit discharges

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lighting fixtures

Qty: 30.00

Unit of Measure: Ea.

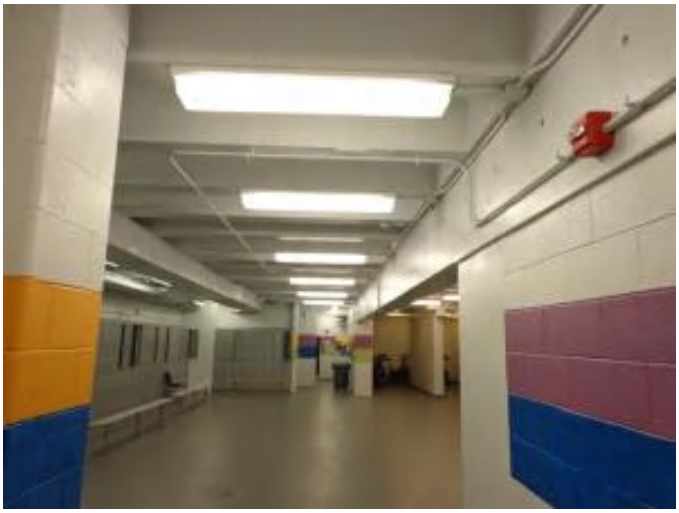
Estimate: $57,629.25

Assessor Name: System

Date Created: 12/21/2015

Notes: Provide allowance for replacement of 30 surface mounted HID lighting fixtures located in the canopies above the doors at exit discharges and under the bridge to the auditorium.

System: D5020 - Lighting and Branch Wiring



Location: Gym and Pool Locker Rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 3,900.00

Unit of Measure: S.F.

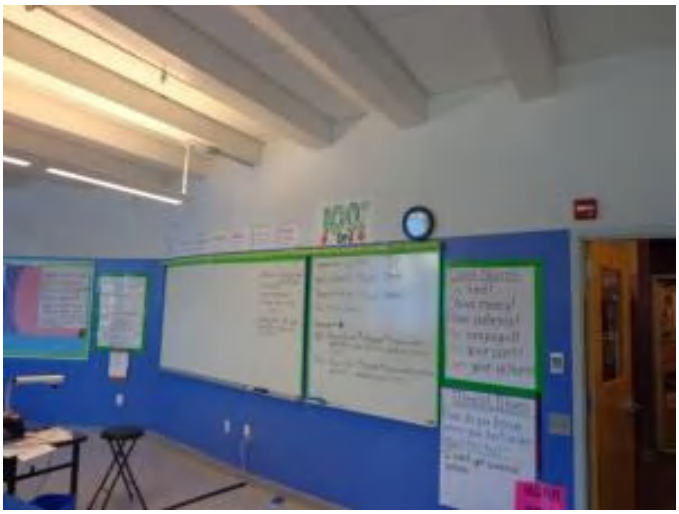
Estimate: $53,634.43

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace vapor-tight fluorescent fixtures in the gymnasium and swimming pool locker rooms.

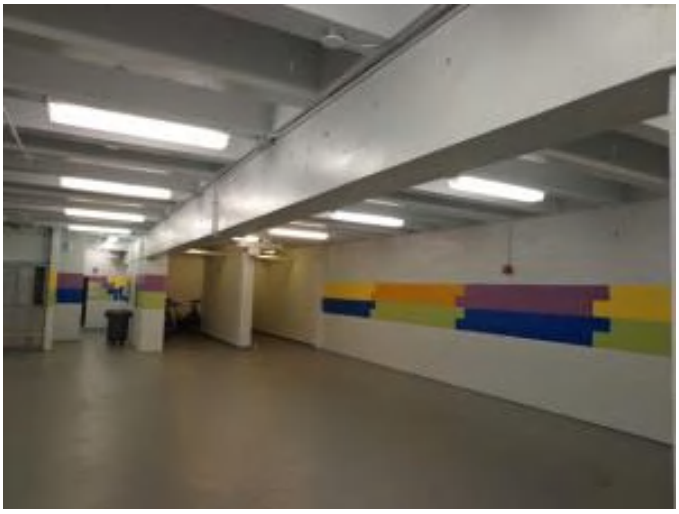
System: D5030 - Communications and Security



Location: Building wide
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Provide wireless GPS clock system
Qty: 109.00
Unit of Measure: LS
Estimate: $68,023.44
Assessor Name: System
Date Created: 12/21/2015

Notes: Provide wireless GPS clock system.

System: D5030 - Communications and Security



Location: Gym, cafeteria/kitchen and pool.
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Paging System
Qty: 75.00
Unit of Measure: Ea.
Estimate: $63,471.34
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace paging system speakers in the gymnasium, cafeteria/kitchen and swimming pool. (quantities estimated)

Priority 5 - Response Time (> 5 yrs):

System: C1030 - Fittings

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 400.00

Unit of Measure: Ea.

Estimate: $108,364.99

Assessor Name: System

Date Created: 11/03/2015

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

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	Hydraulic, passenger elevator, 2000 lb, 5 floors, 100 FPM	1.00	Ea.	Floor 1 Machine Room	Low Rise Elevator CO.	CM-1260			30	2012	2042	$140,070.00	$154,077.00
D2020 Domestic Water Distribution	Pump, pressure booster system, 5 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	mechanical room	alyan	vsph	41155		25	2006	2031	$10,972.50	$12,069.75
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	macna de detrich	gte520a	4566615		35	2003	2038	$68,695.50	$75,565.05
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	macna de detrich	gte520a	4566611		35	2003	2038	$68,695.50	$75,565.05
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	macna de detrich	gte520a	45566614		35	2003	2038	$68,695.50	$75,565.05
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	mechanical room	macna de detrich	gte520a	4566613		35	2003	2038	$68,695.50	$75,565.05
D3040 Distribution Systems	Pump, circulating, cast iron, close coupled, end suction, bronze impeller, flanged joints, 25 H.P., to 1550 GPM, 5" size	2.00	Ea.	mechanical room	armstrong				25	2006	2031	$10,858.50	$23,888.70
D4010 Sprinklers	Fire pumps, electric, 1000 GPM, 150 psi, 142 HP, 3550 RPM, 5" pump, including controller, fittings and relief valve	1.00	Ea.	mechanical room	clarke				35	2006	2041	$38,724.70	$42,597.17
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Main Electrical Room	Federal Pacific Electric	Cat. No. 2651D 1595			30			$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Main Electrical Room	Eaton Cuttler-Hammer	NA	NA		30	2008	2038	$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Motor control center, starters, class 1, type B, combination MCP, FVNR, with control XFMR, size 1, 10 HP, 12" high, incl starters & structures	25.00	Ea.	Main Electrical Room	Eaton Cutler-Hammer	Freedom Series 2100			30	2008	2038	$2,670.30	$73,433.25
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 400 A, 1 stories, 25' horizontal	1.00	Ea.	Floor 3 Electrical Closet 2	Eaton Cutler-Hammer	PRL3A			30	2008	2038	$17,698.50	$19,468.35
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	1.00	Ea.	Auditorium	B-K Electrical Products, Inc.	CDP	11011		30			$12,109.50	$13,320.45
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	1.00	Ea.	Main Electrical Room	B-K Electrical Products, Inc.				30			$12,109.50	$13,320.45

D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	1.00	Ea.	Main Electrical Room	Eaton Cutler-Hammer	PRL3A			30	2014	2044	$12,109.50	$13,320.45
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Floor 2 Pool Panel	B-K Electrical Products, Inc.	CDP			30			$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Building Engineer's Office	B-K Electrical Products, Inc.	Type CDP	11011		30			$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Boiler Room Office	B-K Electrical Products, Inc.				30			$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Building Engineer's Office	Eaton Cutler-Hammer	PRL4			30	2008	2038	$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Floor 3 Electrical Closet 1	Eaton Cutler-Hammer	PL3A			30	2008	2038	$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Girls Restroom Electrical Closet	Eaton Cutler-Hammer	PRL3A			30	2008	2038	$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Switchboards, pressure switch, 4 wire, with ground fault, 120/208 V, 800 amp, incl CT compartment, excl CT's or PT's	4.00	Ea.	Main Electrical Room	Eaton Cutler-Hammer	Pow-R-Line			30	2008	2038	$25,212.60	$110,935.44
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Floor 3 Electrical Closet 2	Eaton Cutler-Hammer	PRL4			30	2008	2038	$21,766.05	$23,942.66
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 1500 kVA	1.00	Ea.	Main Electrical Room	FPE		11011		30			$125,442.00	$137,986.20
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 1500 kVA	1.00	Ea.	Main Electrical Room	Cutler-Hammer		1LUB DS82810001		30	2008	2038	$125,442.00	$137,986.20
												Total:	**$1,295,217.31**

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):	238,100
Year Built:	1970
Last Renovation:	
Replacement Value:	$3,622,481
Repair Cost:	$1,930,170.02
Total FCI:	53.28 %
Total RSLI:	55.93 %

Description:

Attributes:

General Attributes:

Bldg ID:	S615001	Site ID:	S615001

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	48.29 %	71.52 %	$1,849,919.85
G40 - Site Electrical Utilities	75.00 %	7.75 %	$80,250.17
Totals:	**55.93 %**	**53.28 %**	**$1,930,170.02**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2020	Parking Lots	$7.65	S.F.	29,800	30	1970	2000	2027	40.00 %	186.09 %	12		$424,227.18	$227,970
G2030	Pedestrian Paving	$11.52	S.F.	68,900	40	1970	2010	2027	30.00 %	9.06 %	12		$71,914.25	$793,728
G2040	Site Development	$4.36	S.F.	238,100	25	1970	1995	2027	48.00 %	130.41 %	12		$1,353,778.42	$1,038,116
G2050	Landscaping & Irrigation	$3.78	S.F.	139,400	15	1970	1985	2027	80.00 %	0.00 %	12			$526,932
G4020	Site Lighting	$3.58	S.F.	238,100	20			2030	75.00 %	9.41 %	15		$80,250.17	$852,398
G4030	Site Communications & Security	$0.77	S.F.	238,100	20			2030	75.00 %	0.00 %	15			$183,337
								Total	**55.93 %**	**53.28 %**			**$1,930,170.02**	**$3,622,481**

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.

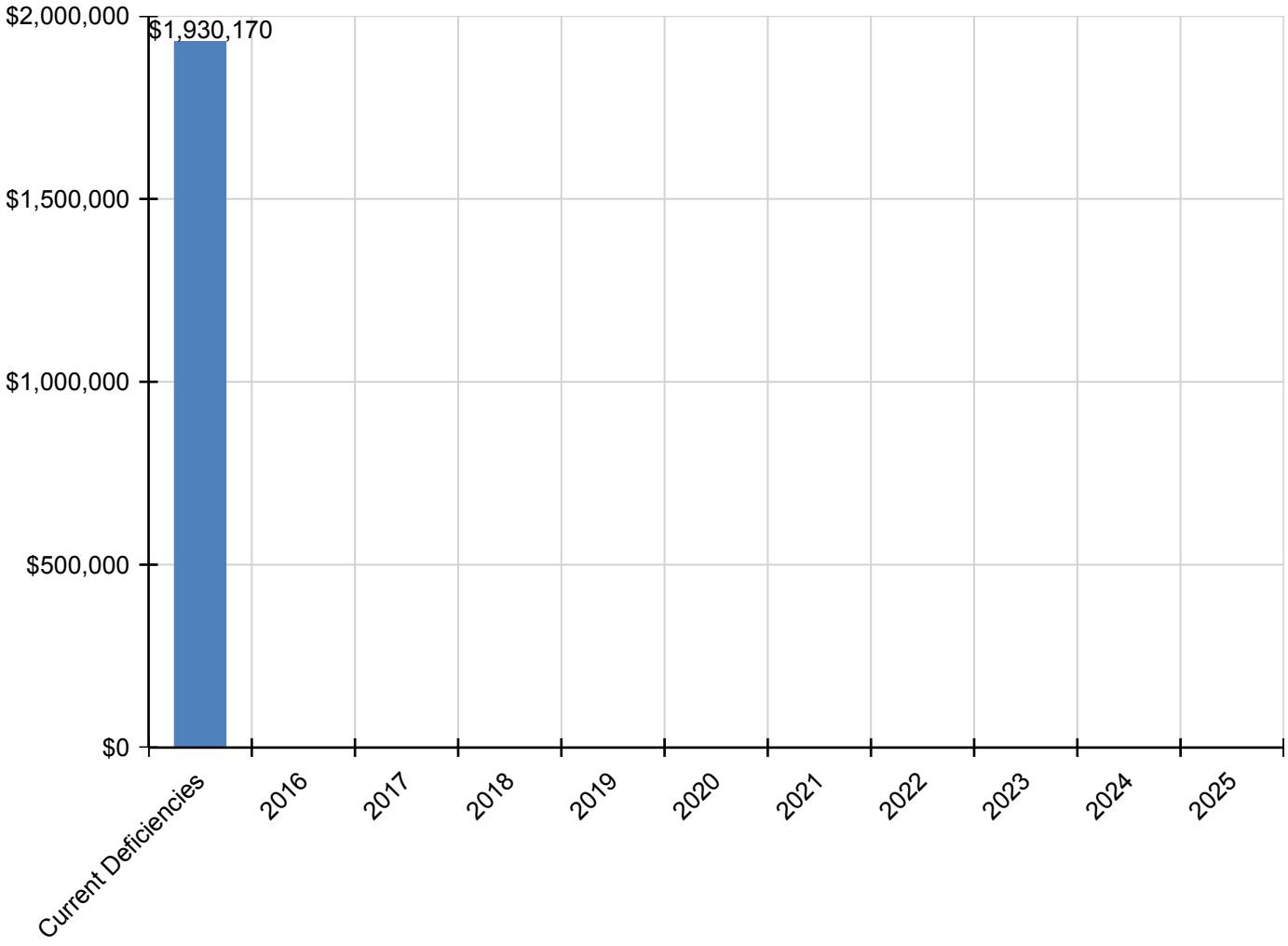
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$1,930,170**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,930,170**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$424,227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$424,227**
G2030 - Pedestrian Paving	$71,914	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$71,914**
G2040 - Site Development	$1,353,778	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,353,778**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$80,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,250**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

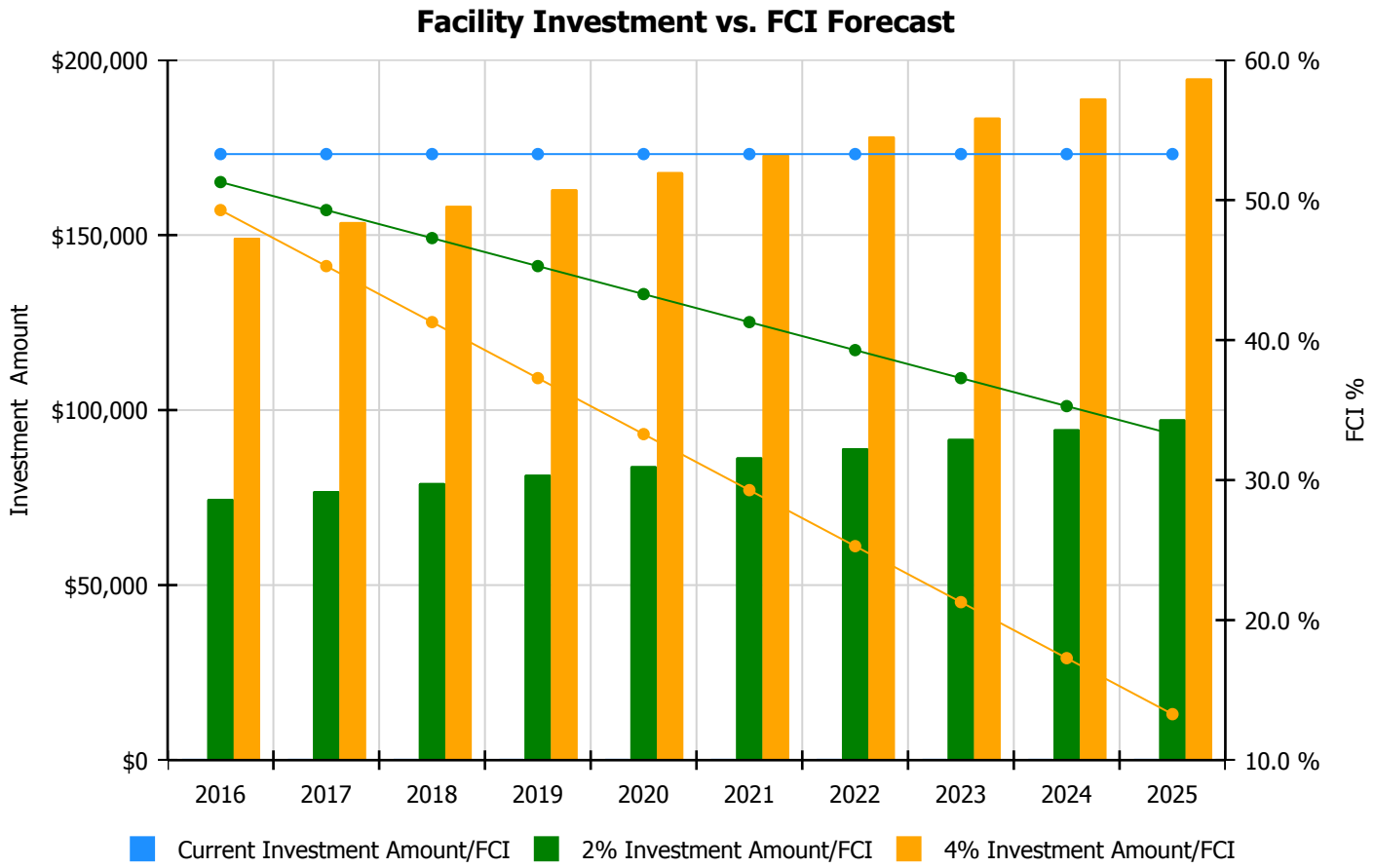
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

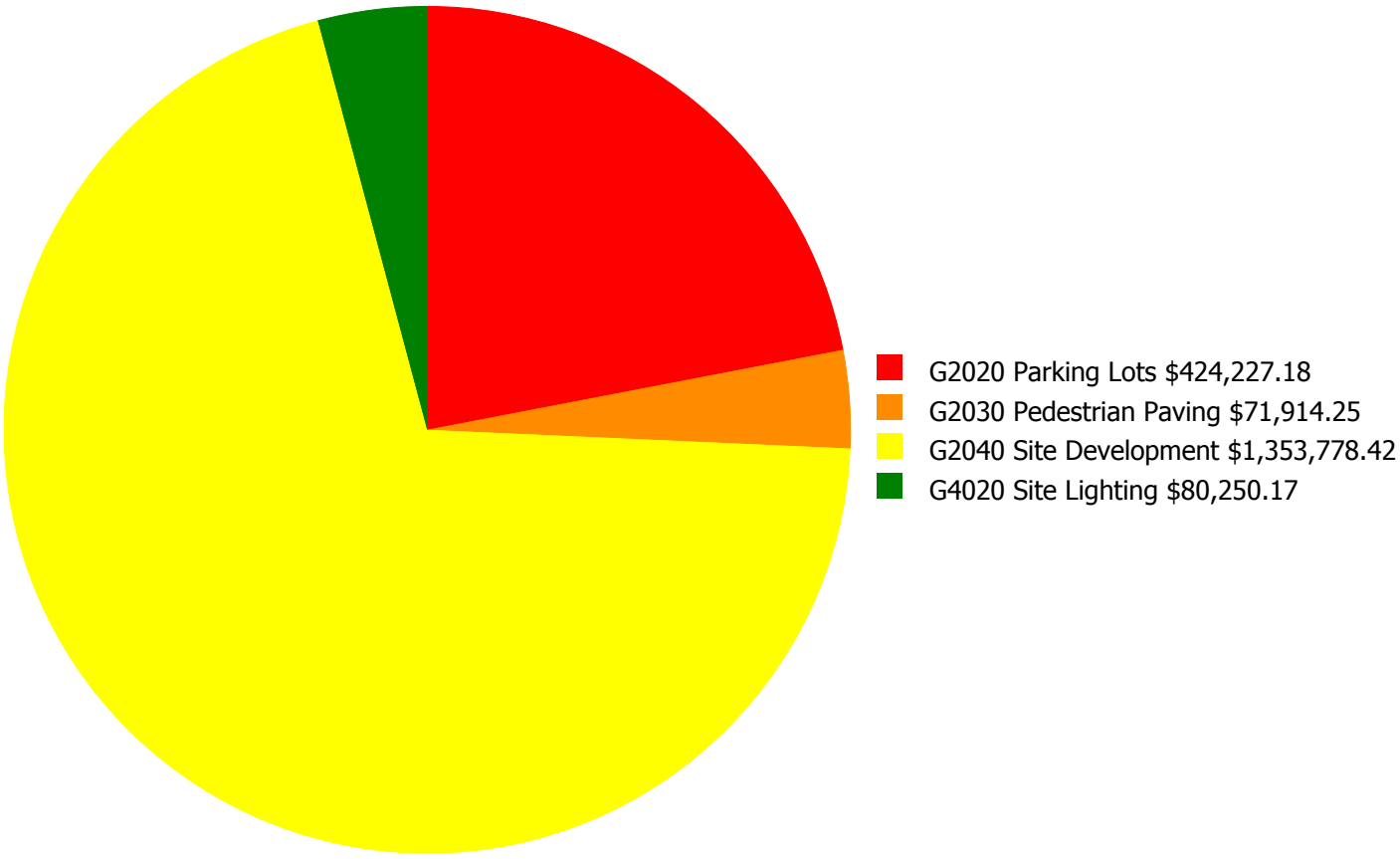
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 53.28%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$74,623.00	51.28 %	$149,246.00	49.28 %
2017	$0	$76,862.00	49.28 %	$153,724.00	45.28 %
2018	$0	$79,168.00	47.28 %	$158,335.00	41.28 %
2019	$0	$81,543.00	45.28 %	$163,085.00	37.28 %
2020	$0	$83,989.00	43.28 %	$167,978.00	33.28 %
2021	$0	$86,509.00	41.28 %	$173,017.00	29.28 %
2022	$0	$89,104.00	39.28 %	$178,208.00	25.28 %
2023	$0	$91,777.00	37.28 %	$183,554.00	21.28 %
2024	$0	$94,530.00	35.28 %	$189,061.00	17.28 %
2025	$0	$97,366.00	33.28 %	$194,732.00	13.28 %
Total:	**$0**	**$855,471.00**		**$1,710,940.00**	

Deficiency Summary by System

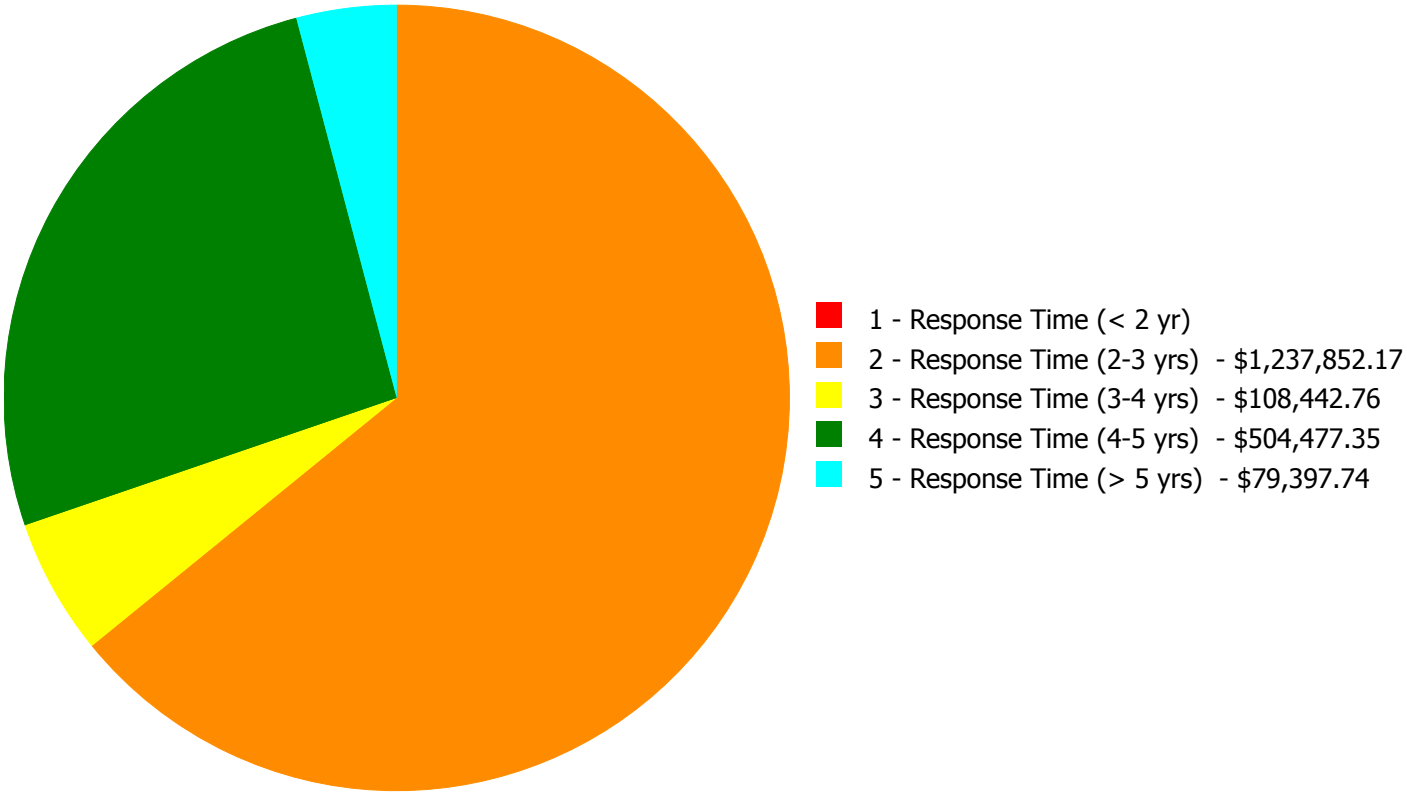
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,930,170.02

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: $1,930,170.02

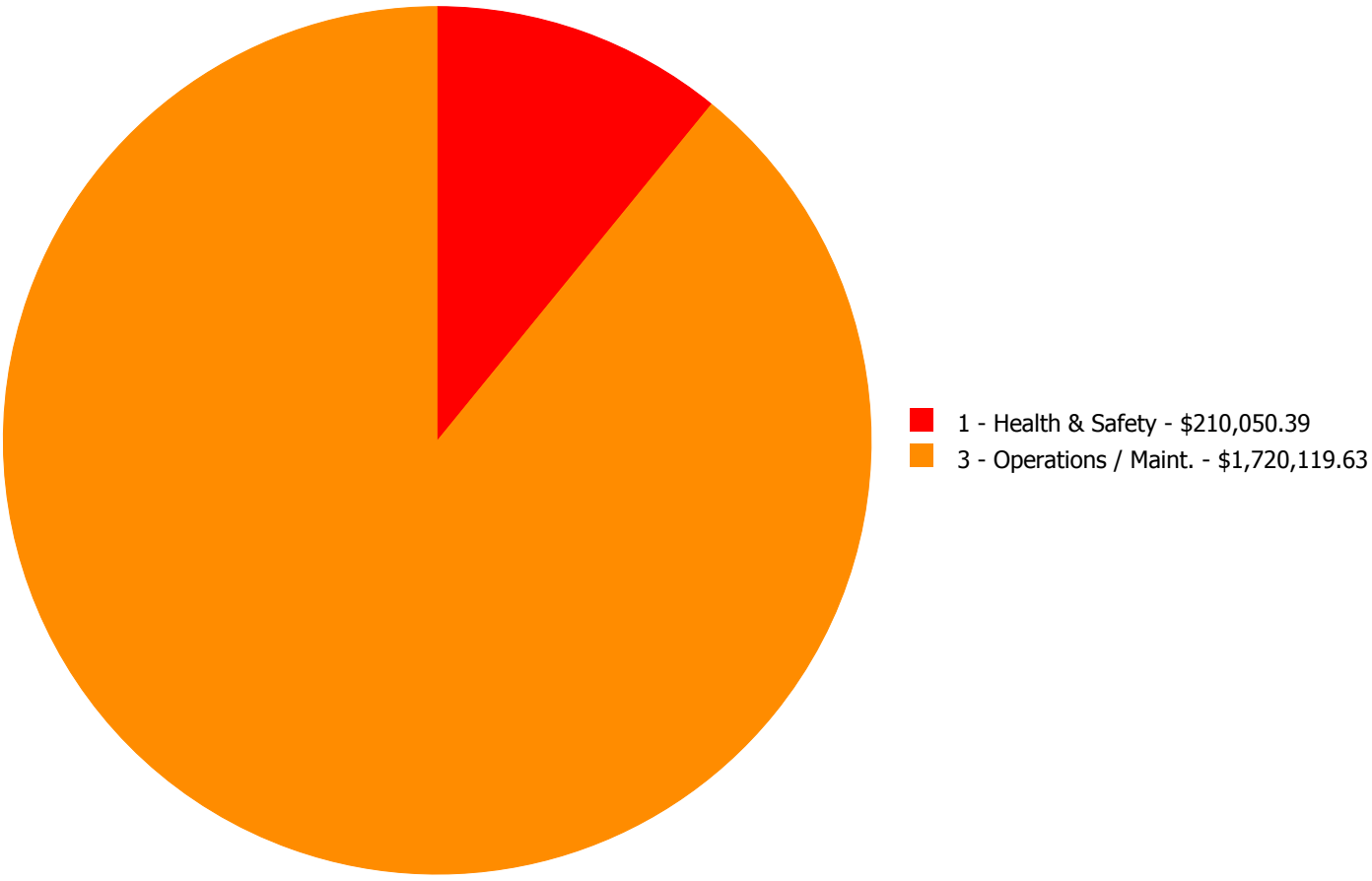
Deficiency By Priority Investment Table

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	$424,227.18	$0.00	$424,227.18
G2030	Pedestrian Paving	$0.00	$0.00	$0.00	$0.00	$71,914.25	$71,914.25
G2040	Site Development	$0.00	$1,237,852.17	$108,442.76	$0.00	$7,483.49	$1,353,778.42
G4020	Site Lighting	$0.00	$0.00	$0.00	$80,250.17	$0.00	$80,250.17
	Total:	$0.00	$1,237,852.17	$108,442.76	$504,477.35	$79,397.74	$1,930,170.02

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: $1,930,170.02

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: Football Field

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refurbish football field - based on approximate 90,000 SF grass field

Qty: 90,000.00

Unit of Measure: S.F.

Estimate: $1,046,654.30

Assessor Name: Gerald Petric

Date Created: 11/03/2015

Notes: The existing Football field is from the schools original construction. The field has several holes and the goal post no longer carry the safety equipment to prevent injury during practice or games. The poor condition of the field presents a safety issue as well as a maintenance issue. This field is recommended to be upgraded. This deficiency is expected to be completed as part of a site effort to upgrade the Track and Field areas and the bleachers.

System: G2040 - Site Development

Location: Site

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace or install exterior guardrails

Qty: 800.00

Unit of Measure: L.F.

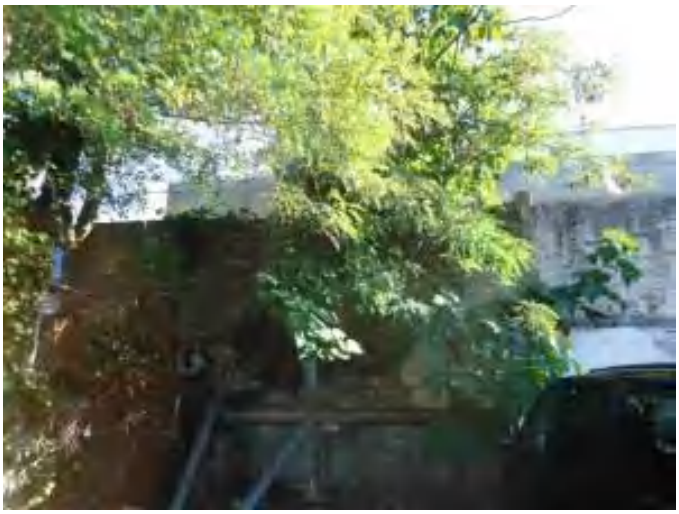
Estimate: $153,882.04

Assessor Name: Gerald Petric

Date Created: 11/03/2015

Notes: There are several exterior stairs for the grounds of this school. As indicated in the photos some of the railing has been removed due to damage. In some cases the remaining railing creates a safety hazard as indicated by the photo of the plaza access to the auditorium. Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). This current system is recommended for universal upgrade as they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades. In the short term the railing that presents safety issues should be immediately corrected to prevent injury.

System: G2040 - Site Development



Location: Property Line Auditorium

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 80.00

Unit of Measure: L.F.

Estimate: $37,315.83

Assessor Name: Gerald Petric

Date Created: 12/15/2015

Notes: The stone retaining wall between the Rental Car establishment and the Auditorium classrooms is failing. This presents a safety issue as the wall is breaking down while students or employees use this patio area and break area. This deficiency provides a budgetary consideration for the repair of the wall.

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

System: G2040 - Site Development

Location: Site
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace chain link fence - 8' high
Qty: 800.00
Unit of Measure: L.F.
Estimate: $89,590.24
Assessor Name: Gerald Petric
Date Created: 12/15/2015

Notes: This school has a perimeter fence surrounding the parking / playground area. The fence that secures the parking area has several areas of repairs and the mounting post are damaged in several areas, overall the site fence is in fair condition. However, the parking lot fence system is recommended to be removed and replaced with a new system.

System: G2040 - Site Development

Location: Site
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Build secure trash dumpster enclosure
Qty: 1.00
Unit of Measure: Ea.
Estimate: $18,852.52
Assessor Name: Gerald Petric
Date Created: 11/03/2015

Notes: The trash dumpster is located in the loading dock drive and parking area. Although not directly open to the students and to the public the dumpsters are not secure. 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 4 - Response Time (4-5 yrs):

System: G2020 - Parking Lots

Location: Parking Lot

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace AC paving parking lot

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $424,227.18

Assessor Name: Gerald Petric

Date Created: 11/03/2015

Notes: The parking area has ADA parking with approved curb cuts for access to the sidewalks that lead to the main entrance. However, the parking lots are in poor condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a parking lot renewal program that includes all aspects of the current ADA legislation. Universal upgrades are recommended.

System: G4020 - Site Lighting

Location: Northwest student plaza

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Maintain Site Lighting Fixture

Qty: 6.00

Unit of Measure: Ea.

Estimate: $80,250.17

Assessor Name: Gerald Petric

Date Created: 12/21/2015

Notes: Replace two 50 foot, round, tapered light poles and floodlighting fixtures in the plaza on the northwest side of the site with new poles and luminaires. Replace branch circuit wiring, replace lamps in all six (6) luminaires, and restore site lighting system to full operation.

Priority 5 - Response Time (> 5 yrs):

System: G2030 - Pedestrian Paving

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $71,914.25

Assessor Name: Gerald Petric

Date Created: 11/03/2015

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

System: G2040 - Site Development

Location: Loading Dock

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $7,483.49

Assessor Name: Gerald Petric

Date Created: 11/03/2015

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

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