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.

PLA North at Hunting Park (Alt Ed Center) School

Governance	DISTRICT	Report Type	High
Address	4224 N. Front St. Philadelphia, Pa 19140	Enrollment	57
		Grade Range	'09-12'
Phone/Fax	267-336-6054 / 267-232-6121	Admissions Category	Alternative
Website	Www.Webgui.Phila.K12.Pa.Us/Offices/R/Alternative/Programs--Services/Multiple-Pathways/Educational-Options-Programs	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	**03.06%**	**$2,612,808**	**$85,267,232**
Building	03.09 %	$2,612,808	$84,628,500
Grounds	00.00 %	$0	$638,732

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$6,202,480
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$7,179,920
Windows (Shows functionality of exterior windows)	00.00 %	$0	$3,509,600
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$237,800
Interior Doors (Classroom doors)	00.00 %	$0	$575,640
Interior Walls (Paint and Finishes)	00.00 %	$0	$2,597,760
Plumbing Fixtures	00.00 %	$0	$2,217,280
Boilers	00.00 %	$0	$0
Chillers/Cooling Towers	00.00 %	$0	$4,014,720
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$7,050,360
Heating/Cooling Controls	107.99 %	$2,390,828	$2,214,000
Electrical Service and Distribution	00.00 %	$0	$1,590,800
Lighting	02.64 %	$150,265	$5,687,520
Communications and Security (Cameras, Pa System and Fire Alarm)	00.45 %	$9,632	$2,130,360

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

S503001;Alt Ed Center

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):	164,000
Year Built:	1975
Last Renovation:	2005
Replacement Value:	$85,267,232
Repair Cost:	$2,612,808.09
Total FCI:	3.06 %
Total RSLI:	64.54 %

Description:

Facility Assessment
November 2015

School District of Philadelphia
Alternative Education Regional Center
4224 N Front St.
Philadelphia, PA 19140

164,000 SF / 446 Students / LN 04

GENERAL

Alternative Education Regional Center was reported to have been purchased from the U.S. Postal Service in the mid 70's and converted into the first academy. Currently this school is used by four different efforts for alternative education and each shares space in this school. Recently this school was renovated in 2005 covering most of the interior finishes and a final exterior renovation to include a new roof in 2013. The school is currently being run by the Philadelphia School System and is identified as B503001 is located at 4224 N Front St., Philadelphia, PA 19140. The late modern design of the modified square-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces Front Street that also acts as the drop off area. This School building serves students in grades Elementary to High School and has one story and a basement consisting of a total gross square footage of 164,000 GSF.

This school has several classrooms divided into pods and each section represents a different school program.

The information for this report was collected during a site visit on November 5, 2015.

Mr. Roseau Onor, Building Engineer, and Mr. Derek Parker, Facilities Area Coordinator, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Mr. Scott Lauman, Principal, Alternative Education Center, also participated in the interview and shared information about the school with the assessment team.

Architectural / Structural Systems

The Main foundations are concrete and appear to be in good condition. Basement walls are concrete and masonry and appear to be in good condition. The superstructure is steel and concrete framed with masonry support while the concrete floor construction is in like new to good condition depending on the section of building.

The built up roofing system was installed in 2013. There were no issues that surfaced during the time of the inspection therefore no projects or recommendations required at this time.

The exterior brick façade and concrete walls from the 1975 exterior finish were reported to have been worked on during the 2005 addition effort. No recommendations are required for the exterior brick or concrete finish at this time.

The exterior windows were installed in 2005 as part of an exterior envelope renovation. The new windows are double pane aluminum framed applications. The windows are in very good to good condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The exterior door system is either glass with aluminum in a storefront application or metal framed metal doors for exit or service access. The door system was upgraded as part of the 2005 addition renovation effort. There were issues therefore no recommendations are required at this time.

Special consideration for those that may be physically challenged was a main factor in the last re-construction effort for this school. The exterior has two very good access points for those that may be physically challenged. The main entrance has access from the parking lot with proper sidewalks and curb cuts and the drivers' drop off point that has direct access with proper curb cuts. The path of travel is very clear from these access points. The interior path of travel is supported by a passenger elevator, Interior access ramps, approved door hardware, compliant hand rails and guard rails, restroom fixtures and amities as well as proper signage applications. This recent renovation has set the standard for access for those that may be physically challenged. There are no recommendations required at this time.

The partitions include a painted drywall finish mainly in the 2005. There is a small section of wall tile finish in the restrooms. With the exception of the minor interior wall finish issues related to the past roof leaks the overall condition is very good. There are no recommendations required at this time.

Interior doors are typically wood in metal frames with wired glass glazing. Other interior doors include hollow metal in hollow metal frames 90 minute fire rated doors at stairwells and exit ways, access doors, and folding closet doors. Doors are generally in like new condition and meet the current legislation in regards to the physically challenged.

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

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

Interior wall finishes are typically painted drywall other finishes include: ceramic tile at restrooms. Wall finishes are generally in very good condition with the minor wall finish issues, therefore no deficiencies are required at this time.

Interior floor finishes are typically 12 x 12 vinyl floor tile in pods center and in some classrooms and corridors. Other floor finishes include: carpet in classrooms, office areas and some sections of the hallway. There is also ceramic/quarry tile in the restrooms and kitchen areas. The floor finishes were either upgraded or newly installed as part of the 2005 renovation effort and in good

condition. The finishes are expected to have a life cycle that is beyond the purview of this report thus no recommendations are required at this time.

The interior carpet finish was installed approximately in 2005 and is in fair condition considering the age and high traffic conditions. This finish will exceed its expected life within the next five years and is recommended for removal and replacement.

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

The institutional equipment includes: library equipment; the gym equipment such as basketball backstops, scoreboards were upgraded as part of the 2005 renovation effort and no recommendations are required at this time.

Other equipment includes kitchen equipment; loading dock bumpers each part of the 2005 renovation. No recommendations are required at this time.

Furnishings include: fixed casework and limited hallway case displaces with sections of fixed desk to support the pods. There were no issues with the furnishings therefore no recommendations are required at this time.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories and urinals and floor mounted water closets. Lavatories have dual wheel handle faucets. Urinals and water closets have manual flush valves concealed with pushbutton operators. Custodial closets have mop basins and there are a few stainless steel counter top sinks in break areas. There are dual level stainless steel water coolers with integral refrigeration. The kitchen waste is piped through an above floor grease trap in the kitchen. There is a forty gallon electric Bradford White water heater in the kitchen area for kitchen sinks. A seventy five gallon Bradford White gas water heater installed in 2014 is in the mechanical room, with a small inline circulating pump and pressure tank. The classroom pods have a ten gallon AO Smith water heater for each set of toilet rooms.

Water piping is insulated rigid copper tubing. Sanitary, waste, vent and rainwater piping is installation hub and spigot cast iron. Water service is a four inch line and meter from Front St. with a backflow preventer. Gas service is a six inch line with a pressure boost system, connected to Front St. Both the water and gas equipment is in a meter room 135.

The plumbing system was installed in 2005. Fixtures should be functional twenty five more years. Piping and water heaters should be serviceable fifteen more years.

HVAC- The building is heated and cooled by approximately thirty eight Carrier single zone package rooftop units with gas heat. The classroom area consists of twelve pods of four classrooms each and a common area. In the center of the building are four identical gymnasium spaces. There is one HVAC unit for every two classrooms and two for the gym areas. Two of the units are twenty ton capacity and the remainder are twelve and one half ton capacity, all installed in 2005. Seven ductless split systems with roof mounted condensing units cool IT areas.

Areas with no ceiling have exposed spiral construction ductwork and other areas have insulated ductwork connected to ceiling diffusers. HVAC units are controlled by individual programmable room thermostats. There is no central building automation system.

Part of the facility is the central maintenance center with carpentry, glass and key shops, as well as storage areas and offices. Six of the HVAC units are in this separate building space. The carpentry shop contains three cyclone dust collectors with exhaust ductwork system at equipment.

The kitchen has a makeup air grease exhaust hood with fire suppression system. A roof mounted Greenheck gas makeup air unit and roof exhaust fan are connected to the hood. Eight centrifugal roof ventilators provide toilet and building exhaust.

The HVAC system was installed in 2005. One inoperable unit was replaced the day before this survey. The system should remain serviceable ten to fifteen more years.

FIRE PROTECTION-The building has a complete automatic sprinkler system. The fire service is an eight inch line from Front St. with the valve assembly in a meter room 135. Four zone risers are connected to the service line. Sprinkler heads are concealed type with flush cover plates in areas with ceilings and exposed upright heads in areas with no ceilings.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by a 13.2 kV underground service from PECO Energy Company to a Square D load center unit substation located in the Main Electrical Room at the west side of the building. The Square D load center unit substation consists of a medium voltage load interrupter switch, 1500/2000 kVA, 13.2 kV – 480/277V, 3 phase, 4 wire dry-type transformer, and 3000A switchboard with main circuit breaker and one distribution section. The substation feeds several panelboards in the Main Electrical Room and distribution panelboards located in electrical closets located within the four classroom communities and in the administrative area. All of the electrical distribution equipment in the Main Electrical Room was installed in 2001 and has a remaining useful life of at least 16 years. Step-down transformers feed 208/120 volt panelboards, which feed 120 volt loads in the building. The panelboards located in the electrical closets serving the four classroom communities in the building are manufactured by Square D and were installed in 2005. All electrical distribution equipment is in good condition.

Receptacles-- Except for classrooms, receptacle quantities are adequate in all other locations. In classrooms, there is typically only one duplex receptacle on the two walls where the instructor's desk is located. It is recommended that additional duplex receptacles be provided on each of these two walls using a metal surface raceway system. Except for the kitchen, ground-fault circuit-interrupting (GFCI) type receptacles were observed within 6 feet of all wet locations, as required by code. Replace five (5) duplex receptacles in the kitchen with GFCI receptacles to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.

Lighting-- There are four classroom communities in the building. Each community has multiple classroom pods, each pod with four classrooms and a common core area. All 12 classroom pods are identical in design and lighting layout. Each classroom is provided with 21 stem mounted fluorescent wraparound fixtures with acrylic prismatic lenses, arranged in continuous rows, and controlled by a single light switch. Each classroom restroom has a round ceiling mounted vandal-resistant fixture with compact fluorescent lamps. The corridors leading into the common core have 2x4 recessed fluorescent grid troffers with parabolic louvers. The common core area is illuminated with two wall mounted indirect fluorescent fixtures, each with two compact fluorescent lamps.

The corridors along the classroom pods have cable suspended, 8 foot, direct/indirect fluorescent fixtures. The library, media center, and most offices have 2x4 fluorescent grid troffers with parabolic louvers. There are 2x4 recessed grid troffers with acrylic lensed in food services, corridors leading to gymnasiums and basement restrooms. Stem mounted, metal halide industrial fixtures are provided in the gymnasiums and in the Facilities Management Services Carpentry Shop area. The Carpentry Shop also has industrial fluorescent fixtures located at the work stations. There are a few metal halide fixtures in the gymnasiums that are not illuminated and need to be serviced. This is considered a maintenance repair and not a capital expenditure, and is not included in this report as a deficiency.

Wall mounted indirect compact fluorescent fixtures are located in the north and south entrances from N. Front Street. The main entrance and elevator lobbies have recessed compact fluorescent downlights with cross baffles.

All 4 foot fluorescent fixtures in the building use T8 lamps. Lighting fixtures have at least 10 years of useful life remaining. Time controls and lighting contactors are located in the electrical closets to provide lighting control of corridor and lobby lighting and outdoor lighting fixtures.

The perimeter of the building is illuminated with wall mounted compact fluorescent fixtures located at each exit discharge. Exterior lighting is controlled by photocell and time clock.

In general, interior and exterior lighting systems are in very good condition with a remaining useful life that extends beyond this report.

Fire Alarm System-- The fire alarm system control panel (FACP) is an addressable type by Cerberus Pyrotronics, Model MXL-IQ, and located in Security Office 168. Additional fire alarm booster power supplies are located in electrical closets in the building quadrants. The fire alarm system includes pull stations, smoke and heat detectors, duct detectors, audible and visual notification appliances, control panels, elevator recall operation and interface with fire suppression system. Except in a few multiple occupancy areas, such as Main Offices 186 and 123 and the Central Maintenance Warehouse area, notification appliances are provided in all rooms required to meet NFPA codes ADA requirements. Notification appliances should be provided in all multi-occupancy rooms that are missing devices. The fire alarm system was installed in 2005 and is expected to have at least 10 years of useful life remaining.

Telephone/LAN-- Telephone is provided by VoIP. Each classroom is provided with a telephone. Data outlets are also provided in each classroom. Wireless access points are located to provide Wi-Fi service throughout the entire school. The Main IT Distribution Frame/Telecom equipment is located in Room 007. Intermediate Distribution Frames (IDFs) are located in each quadrant of the building and in Facilities Management Services and the Administrative area.

Public Address/Paging Systems-- The central paging system has four zones and is accessed through the telephone system. The paging

system interface equipment and 250W amplifier are located in Main IT Network Room 007.

Recessed ceiling mounted paging speakers are provided in corridors, offices, library, Media Center, each classroom, and other rooms. The paging system has an estimated remaining useful life of 10 years. An Aiphone intercom station is located at the main entrance on the east side of the building.

Clock and Program System-- Battery operated clocks are provided in each classroom. The ceiling speakers are used for announcements and program system. The system is in good condition with an estimated remaining useful life extending beyond this report.

Television Distribution System-- There is no television distribution system in this school.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of entrances and corridors. There are also exterior building mounted cameras that provide surveillance at all entrances. The Alternative Education Center has a total of 16 cameras that were installed in 2015. Interior cameras are also provided by the other three community tenants. The video surveillance system equipment and two monitors are located in Security Office 168. Altronix power supplies for outside cameras are located in the electrical closets. The remaining useful life of the surveillance system extends beyond this report.

Building security includes magnetic door contacts on all exterior doors, security motion sensors at entrance doors and in corridors, and local door alarms. The existing Sonitrol security system is no longer in use and the security system keypads have been abandoned in place.

Emergency/Standby Power System-- An Olympian Model G60F3, 60 kW/75 kVA, 480/277V, 3 phase, 4 wire, natural gas fueled, standby generator with weatherproof enclosure is located in the loading dock area, outside the Facilities Management Services Maintenance Division offices. A generator remote annunciator panel is located in Security Office 168. The generator serves Normal/Emergency Distribution Panelboard NEDP and Emergency Distribution Panelboard EDP via Zenith Controls automatic transfer switch ATS-1, which serves interior and exterior emergency lighting. The generator also serves standby power loads fed by Distribution Panelboard SDB via Zenith Controls automatic transfer switch ATS-2. The standby and emergency panelboards and ATS-1 and ATS-2 are located in the Main Electrical Room. The emergency/standby power system equipment has a remaining useful life extending beyond this report.

Emergency Lighting System / Exit Lighting-- Emergency egress lighting fixtures and exit signs are connected to emergency power and fed from emergency lighting panelboards supplied by Normal/Emergency Distribution Panelboard NEDP and Emergency Distribution Panelboard EDP. Exterior lighting is also connected on emergency power.

The north/south corridors in Classroom pods J, K, L and M have exit doors on the north side of the building. The east/west corridor located south of these Classroom pods has exit signage leading to these exits, but they are not visible when looking down the path of egress. A double sided exit sign needs to be provided at each of these corridor intersections to comply with Chapter 7 of NFPA 101, Life Safety Code.

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

Conveying Systems-- There is one Schindler passenger, hydraulic elevator that serves the four floors in the administrative area of the building. Separate safety switches are provided in the machine room for cab lighting and elevator controller, as required by the elevator code. The elevator cab also meets ADA requirements. Smoke and heat detectors are installed as required to provide elevator recall on fire alarm. The elevator is in good condition and has over 20 years of useful life remaining.

GROUNDS

The parking lot was resurfaced in recent years and overall is in good condition. Pedestrian pavements are concrete pavers in like new condition. Fencing is limited to the parking play area and is either chain link or a metal picket fence. This entire site was reconstructed during the 2005 renovation.

Site Lighting-- Other than the building mounted lighting fixtures, there are no pole mounted site lighting fixtures.

Site video surveillance-- exterior cameras are mounted on the exterior of the building to provide surveillance at each building entrance and the loading dock for Facilities Management Services Maintenance Division.

RECOMMENDATIONS

- Remove and replace carpet
- Install new direct digital control system and building automation system with remote computer control capability and graphics package to connect to HVAC units and exhaust fans.
- Provide additional duplex receptacles in all 48 classrooms on the two walls where the instructor's desk is located (total of 144 duplex receptacles). Currently, there is only one (1) existing duplex receptacle.
- Replace five (5) duplex receptacles in Food Services with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.
- Provide allowance for adding six (6) fire alarm notification appliances in multiple occupancy areas that are missing devices to comply with ADA requirements. Main Offices 186 and 123 and the Central Maintenance Warehouse area are missing devices.
- Provide a double sided exit sign in the east/west corridor located south of Classroom pods J, K, L and M at each of the four (4) corridors that leads to the exit discharge on the north side of the building. The current location of exit signage does not clearly mark the direction of egress travel to the exit discharge, as required by Chapter 7 of NFPA 101, Life Safety Code.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S503001		

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.

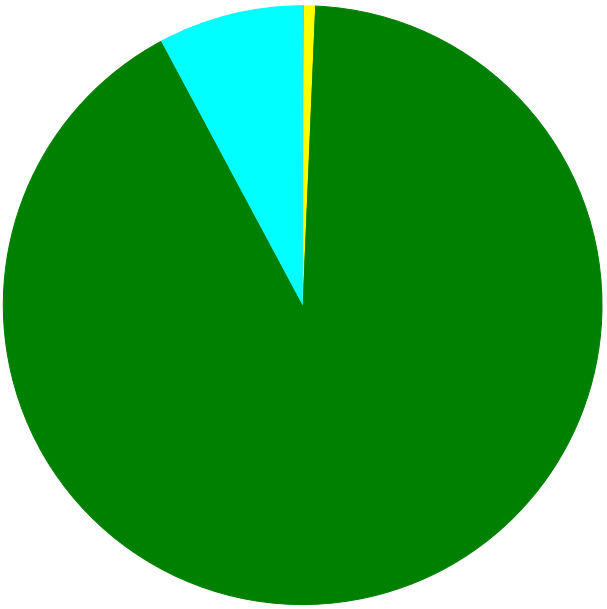
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	60.00 %	0.00 %	$0.00
A20 - Basement Construction	60.00 %	0.00 %	$0.00
B10 - Superstructure	60.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	64.82 %	0.00 %	$0.00
B30 - Roofing	90.01 %	0.00 %	$0.00
C10 - Interior Construction	85.95 %	0.00 %	$0.00
C20 - Stairs	90.00 %	0.00 %	$0.00
C30 - Interior Finishes	45.30 %	0.70 %	$55,953.81
D10 - Conveying	71.43 %	0.00 %	$0.00
D20 - Plumbing	69.32 %	0.00 %	$0.00
D30 - HVAC	67.80 %	15.75 %	$2,390,828.19
D40 - Fire Protection	71.43 %	0.00 %	$0.00
D50 - Electrical	54.63 %	1.72 %	$166,026.09
E10 - Equipment	71.43 %	0.00 %	$0.00
E20 - Furnishings	75.00 %	0.00 %	$0.00
G20 - Site Improvements	66.10 %	0.00 %	$0.00
G40 - Site Electrical Utilities	66.67 %	0.00 %	$0.00
Totals:	**64.54 %**	**3.06 %**	**$2,612,808.09**

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)
B503001;Alt Ed Center	164,000	3.09	$0.00	$1,712.35	$15,761.11	$2,390,828.19	$204,506.44
G503001;Grounds	33,800	0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total:		**3.06**	**$0.00**	**$1,712.35**	**$15,761.11**	**$2,390,828.19**	**$204,506.44**

Deficiencies By Priority



- 1 - Response Time (< 2 yr)
- 2 - Response Time (2-3 yrs) - $1,712.35
- 3 - Response Time (3-4 yrs) - $15,761.11
- 4 - Response Time (4-5 yrs) - $2,390,828.19
- 5 - Response Time (> 5 yrs) - $204,506.44

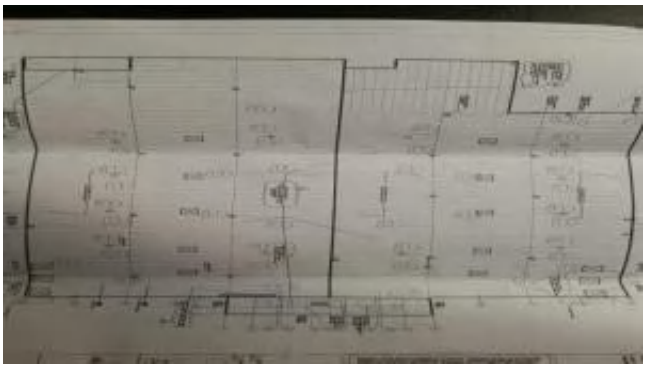
Budget Estimate Total: $2,612,808.09

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:	Alternative Education
Gross Area (SF):	164,000
Year Built:	1975
Last Renovation:	2005
Replacement Value:	$84,628,500
Repair Cost:	$2,612,808.09
Total FCI:	3.09 %
Total RSLI:	64.53 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B503001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S503001		

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	60.00 %	0.00 %	$0.00
A20 - Basement Construction	60.00 %	0.00 %	$0.00
B10 - Superstructure	60.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	64.82 %	0.00 %	$0.00
B30 - Roofing	90.01 %	0.00 %	$0.00
C10 - Interior Construction	85.95 %	0.00 %	$0.00
C20 - Stairs	90.00 %	0.00 %	$0.00
C30 - Interior Finishes	45.30 %	0.70 %	$55,953.81
D10 - Conveying	71.43 %	0.00 %	$0.00
D20 - Plumbing	69.32 %	0.00 %	$0.00
D30 - HVAC	67.80 %	15.75 %	$2,390,828.19
D40 - Fire Protection	71.43 %	0.00 %	$0.00
D50 - Electrical	54.63 %	1.72 %	$166,026.09
E10 - Equipment	71.43 %	0.00 %	$0.00
E20 - Furnishings	75.00 %	0.00 %	$0.00
Totals:	**64.53 %**	**3.09 %**	**$2,612,808.09**

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.	164,000	100	1975	2075		60.00 %	0.00 %	60			$3,798,240
A1030	Slab on Grade	$5.17	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$847,880
A2010	Basement Excavation	$4.36	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$715,040
A2020	Basement Walls	$10.05	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$1,648,200
B1010	Floor Construction	$85.94	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$14,094,160
B1020	Roof Construction	$9.26	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$1,518,640
B2010	Exterior Walls	$43.78	S.F.	164,000	100	1975	2075		60.00 %	0.00 %	60			$7,179,920
B2020	Exterior Windows	$21.40	S.F.	164,000	40	2005	2045		75.00 %	0.00 %	30			$3,509,600
B2030	Exterior Doors	$1.45	S.F.	164,000	25	2005	2030		60.00 %	0.00 %	15			$237,800
B3010105	Built-Up	$37.76	S.F.	164,000	20	2013	2033		90.00 %	0.00 %	18			$6,192,640
B3020	Roof Openings	$0.06	S.F.	164,000	30	2013	2043		93.33 %	0.00 %	28			$9,840
C1010	Partitions	$17.91	S.F.	164,000	100	2005	2105		90.00 %	0.00 %	90			$2,937,240
C1020	Interior Doors	$3.51	S.F.	164,000	40	2005	2045		75.00 %	0.00 %	30			$575,640
C1030	Fittings	$3.12	S.F.	164,000	40	2005	2045		75.00 %	0.00 %	30			$511,680
C2010	Stair Construction	$1.41	S.F.	164,000	100	2005	2105		90.00 %	0.00 %	90			$231,240
C3010230	Paint & Covering	$13.21	S.F.	164,000	10	2005	2015		0.00 %	0.00 %	0			$2,166,440
C3010232	Wall Tile	$2.63	S.F.	164,000	30	2005	2035		66.67 %	0.00 %	20			$431,320
C3020411	Carpet	$7.30	S.F.	50,000	10	2013	2023		80.00 %	15.33 %	8		$55,953.81	$365,000

Site Assessment Report - B503001;Alt Ed Center

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020412	Terrazzo & Tile	$75.52	S.F.	8,000	50	2005	2055		80.00 %	0.00 %	40			$604,160
C3020413	Vinyl Flooring	$9.68	S.F.	100,000	20	2005	2025		50.00 %	0.00 %	10			$968,000
C3020415	Concrete Floor Finishes	$0.97	S.F.	6,000	50	2005	2055		80.00 %	0.00 %	40			$5,820
C3030	Ceiling Finishes	$20.97	S.F.	164,000	25	2005	2030		60.00 %	0.00 %	15			$3,439,080
D1010	Elevators and Lifts	$1.53	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$250,920
D2010	Plumbing Fixtures	$13.52	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$2,217,280
D2020	Domestic Water Distribution	$1.68	S.F.	164,000	25	2005	2030		60.00 %	0.00 %	15			$275,520
D2030	Sanitary Waste	$2.52	S.F.	164,000	30	2005	2035		66.67 %	0.00 %	20			$413,280
D2040	Rain Water Drainage	$2.32	S.F.	164,000	30	2005	2035		66.67 %	0.00 %	20			$380,480
D3020	Heat Generating Systems	$18.67	S.F.		35				0.00 %	0.00 %				$0
D3030	Cooling Generating Systems	$24.48	S.F.	164,000	30	2005	2035		66.67 %	0.00 %	20			$4,014,720
D3040	Distribution Systems	$42.99	S.F.	164,000	25	2005	2030		60.00 %	0.00 %	15			$7,050,360
D3050	Terminal & Package Units	$11.60	S.F.	164,000	20	2005	2025		50.00 %	0.00 %	10			$1,902,400
D3060	Controls & Instrumentation	$13.50	S.F.	164,000	20	2005	2025	2037	110.00 %	107.99 %	22		$2,390,828.19	$2,214,000
D4010	Sprinklers	$7.05	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$1,156,200
D4020	Standpipes	$1.01	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$165,640
D5010	Electrical Service/Distribution	$9.70	S.F.	164,000	30	2001	2031		53.33 %	0.00 %	16			$1,590,800
D5020	Lighting and Branch Wiring	$34.68	S.F.	164,000	20	2005	2025		50.00 %	2.64 %	10		$150,264.98	$5,687,520
D5030	Communications and Security	$12.99	S.F.	164,000	15	2005	2020	2025	66.67 %	0.45 %	10		$9,631.78	$2,130,360
D5090	Other Electrical Systems	$1.41	S.F.	164,000	30	2005	2035		66.67 %	2.65 %	20		$6,129.33	$231,240
E1020	Institutional Equipment	$4.82	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$790,480
E1090	Other Equipment	$11.10	S.F.	164,000	35	2005	2040		71.43 %	0.00 %	25			$1,820,400
E2010	Fixed Furnishings	$2.13	S.F.	164,000	40	2005	2045		75.00 %	0.00 %	30			$349,320
								Total	**64.53 %**	**3.09 %**			**$2,612,808.09**	**$84,628,500**

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

Note: There is one (1) 1500/2000 kVA 13.2 kV - 480/277V, 3 phase, 4 wire substation transformer and six (6) 480-208/120V secondary transformers as follows:
(2) 30 kVA
(2) 45 kVA
(1) 75 kVA
(1) 112.5 kVA

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$2,612,808**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$508,608**	**$0**	**$19,003,236**	**$22,124,652**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

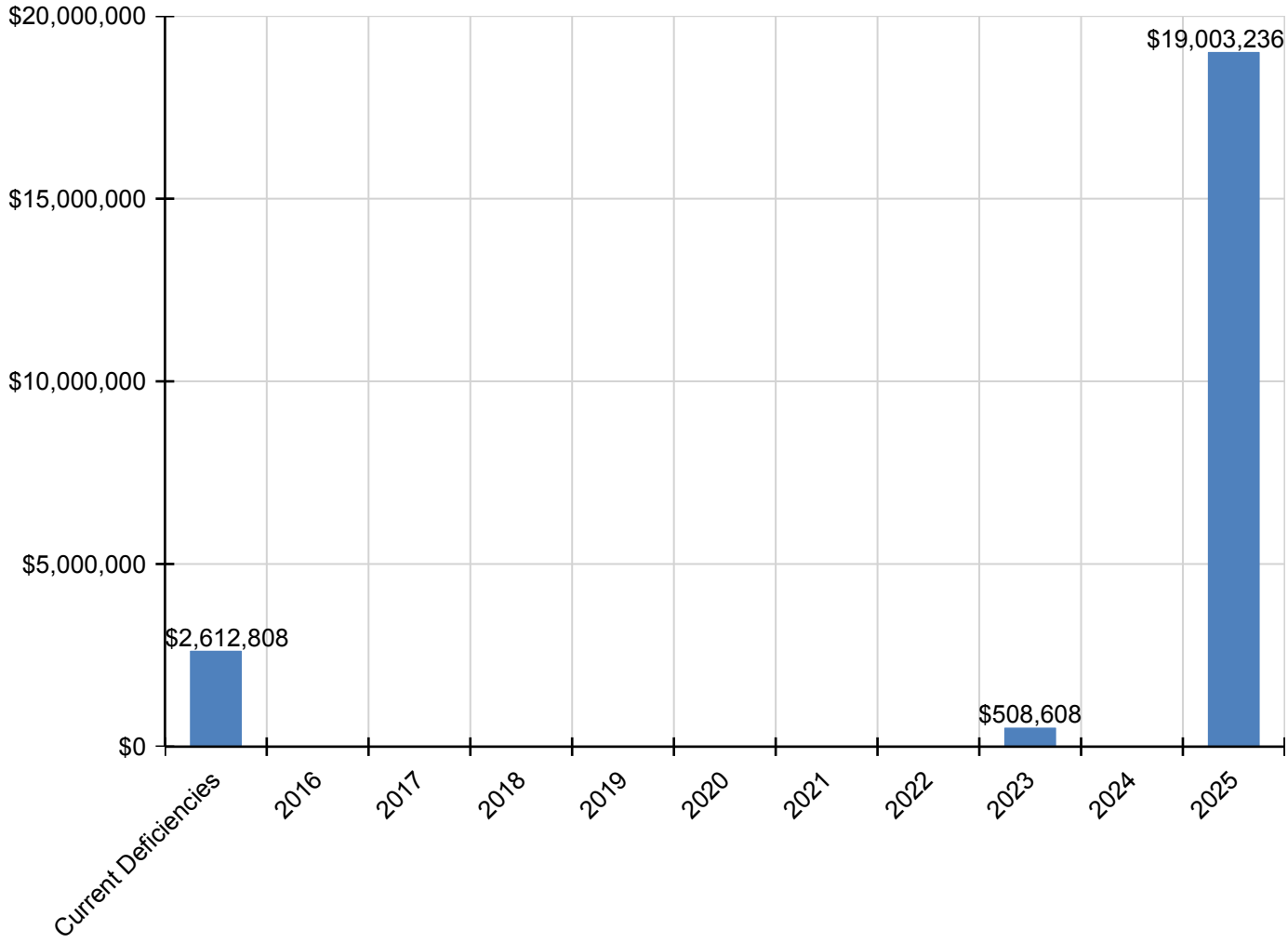
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,202,666	**$3,202,666**
C3010232 - Wall Tile	$0	$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	$55,954	$0	$0	$0	$0	$0	$0	$0	$508,608	$0	$0	**$564,562**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,431,002	**$1,431,002**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,812,333	**$2,812,333**
D3060 - Controls & Instrumentation	$2,390,828	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,390,828**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5020 - Lighting and Branch Wiring	$150,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,407,906	**$8,558,171**
D5030 - Communications and Security	$9,632	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,149,328	**$3,158,960**
D5090 - Other Electrical Systems	$6,129	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,129**

E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

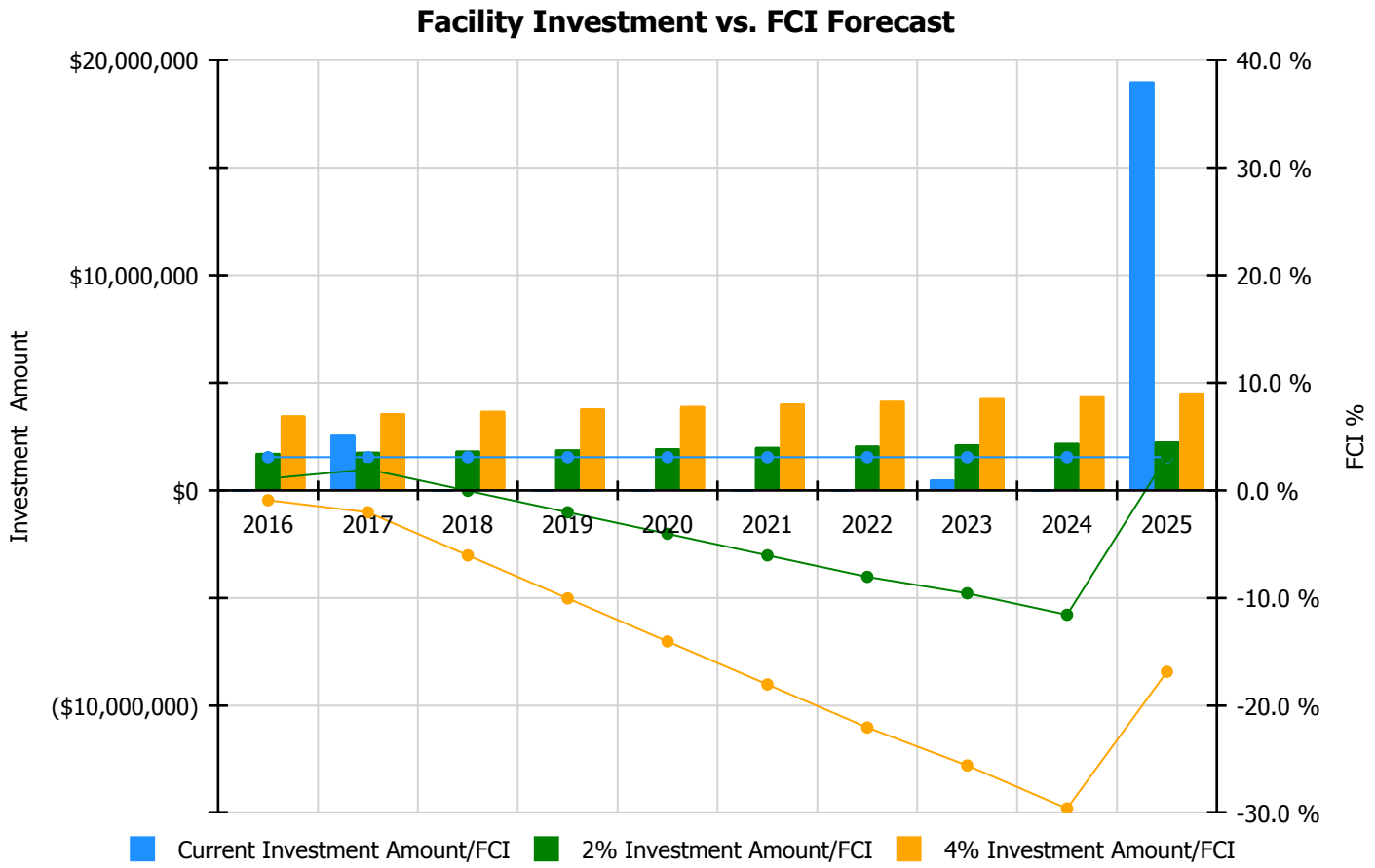
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

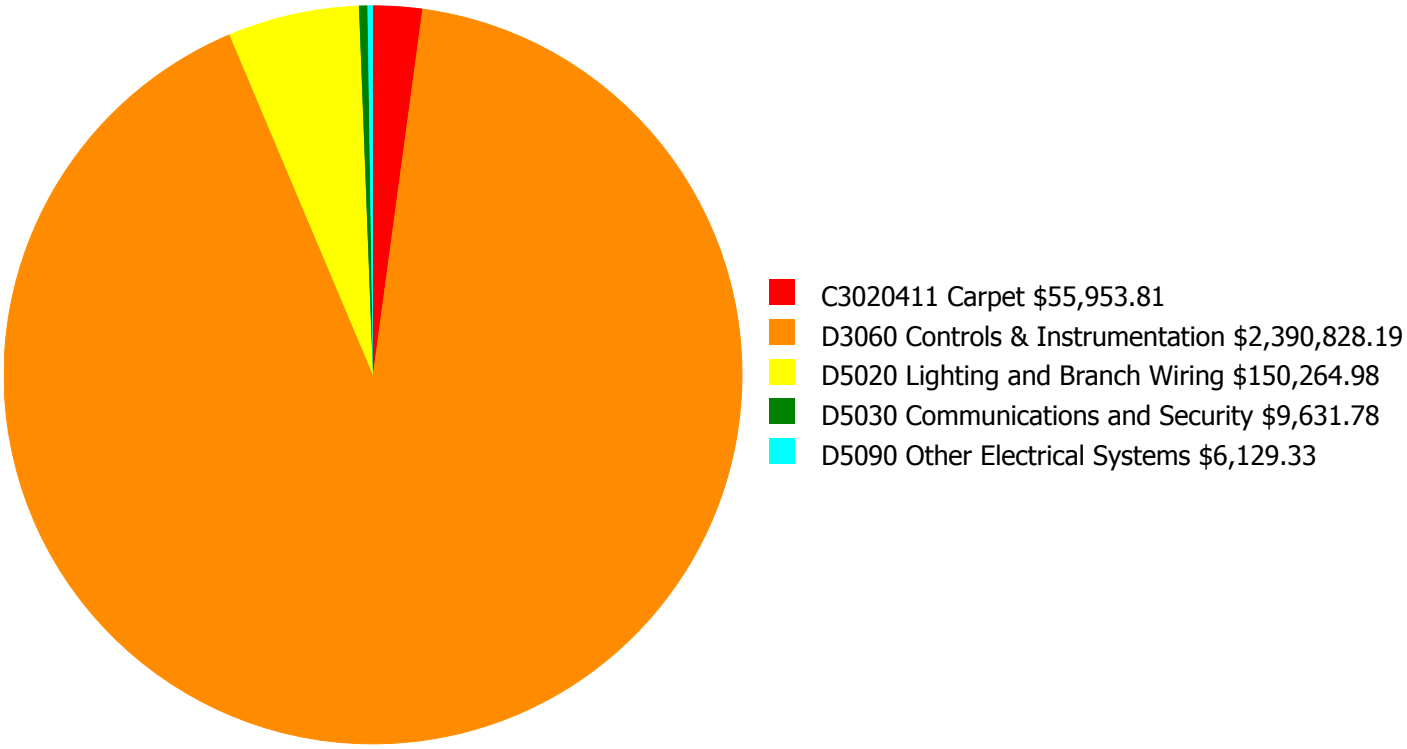
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 3.09%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,743,347.00	1.09 %	$3,486,694.00	-0.91 %
2017	$2,583,716	$1,795,648.00	1.97 %	$3,591,295.00	-2.03 %
2018	$0	$1,849,517.00	-0.03 %	$3,699,034.00	-6.03 %
2019	$0	$1,905,002.00	-2.03 %	$3,810,005.00	-10.03 %
2020	$0	$1,962,153.00	-4.03 %	$3,924,305.00	-14.03 %
2021	$0	$2,021,017.00	-6.03 %	$4,042,034.00	-18.03 %
2022	$0	$2,081,648.00	-8.03 %	$4,163,295.00	-22.03 %
2023	$508,608	$2,144,097.00	-9.56 %	$4,288,194.00	-25.56 %
2024	$0	$2,208,420.00	-11.56 %	$4,416,840.00	-29.56 %
2025	$19,003,236	$2,274,673.00	3.15 %	$4,549,345.00	-16.85 %
Total:	**$22,095,560**	**$19,985,522.00**		**$39,971,041.00**	

Deficiency Summary by System

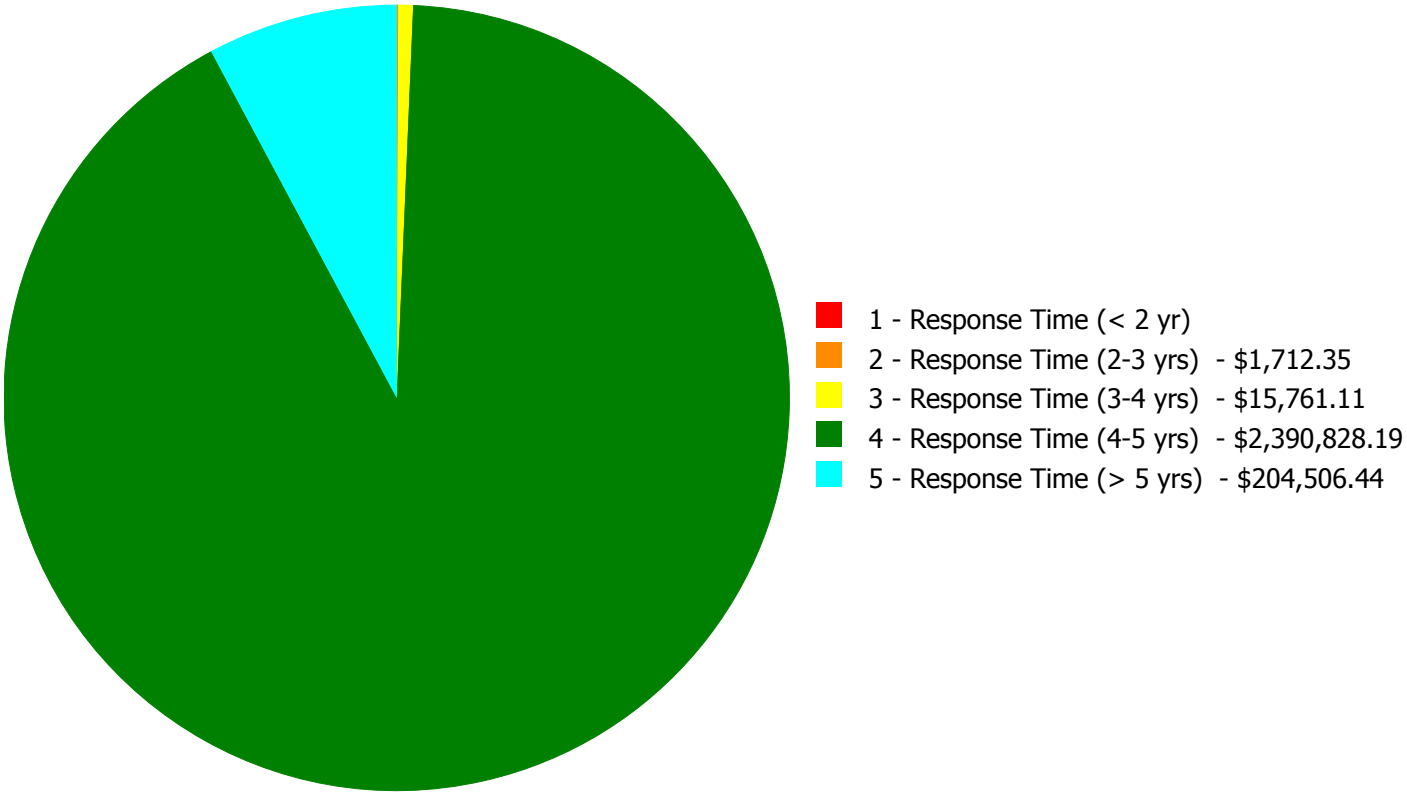
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $2,612,808.09

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: $2,612,808.09

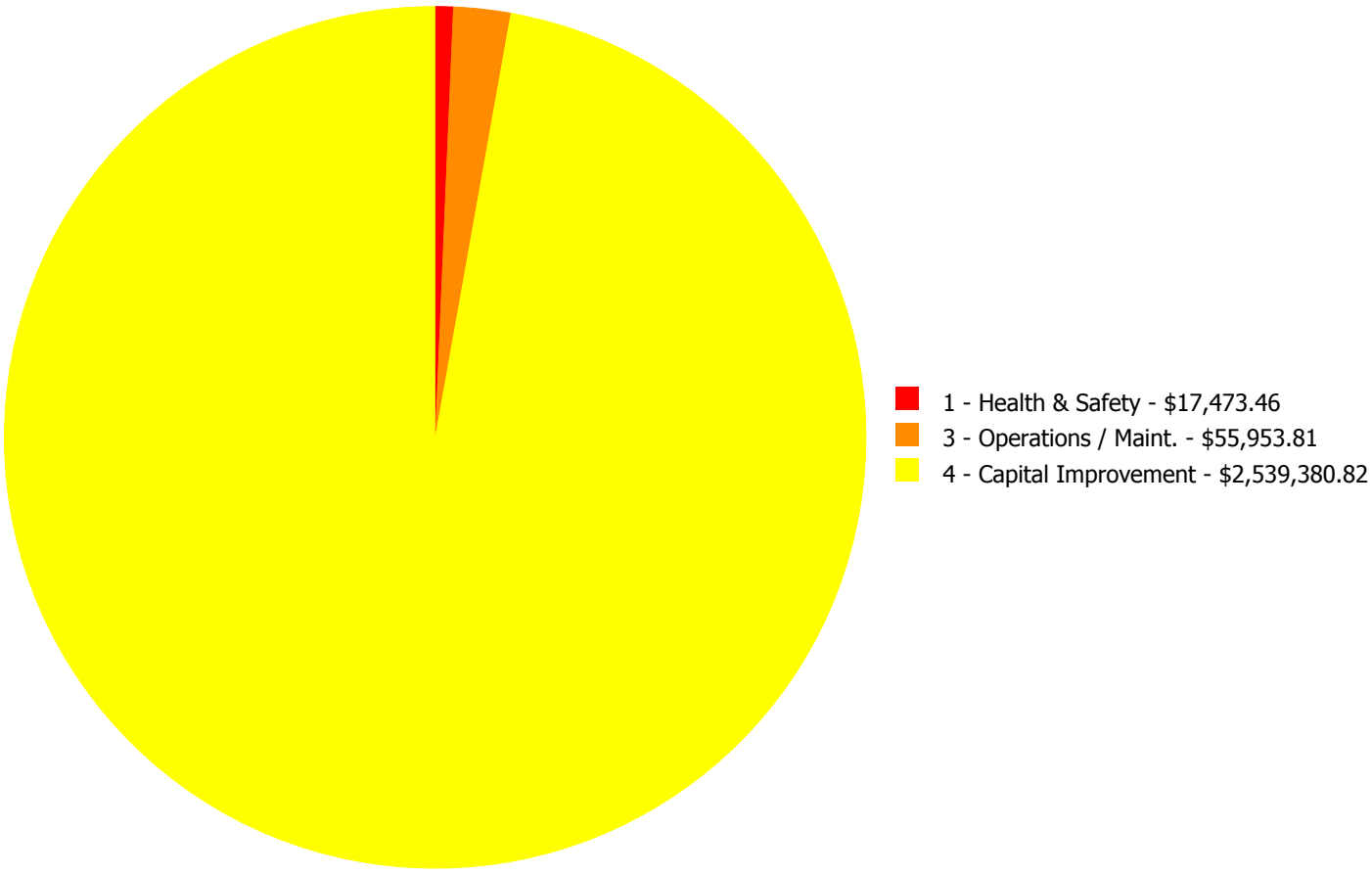
Deficiency By Priority Investment Table

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
C3020411	Carpet	$0.00	$0.00	$0.00	$0.00	$55,953.81	$55,953.81
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$2,390,828.19	$0.00	$2,390,828.19
D5020	Lighting and Branch Wiring	$0.00	$1,712.35	$0.00	$0.00	$148,552.63	$150,264.98
D5030	Communications and Security	$0.00	$0.00	$9,631.78	$0.00	$0.00	$9,631.78
D5090	Other Electrical Systems	$0.00	$0.00	$6,129.33	$0.00	$0.00	$6,129.33
	Total:	$0.00	$1,712.35	$15,761.11	$2,390,828.19	$204,506.44	$2,612,808.09

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: $2,612,808.09

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: D5020 - Lighting and Branch Wiring

Location: Food Services

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace Wiring Device

Qty: 5.00

Unit of Measure: Ea.

Estimate: $1,712.35

Assessor Name: Hayden Collins

Date Created: 11/21/2015

Notes: Replace five (5) duplex receptacles in Food Services with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, National Electrical Code (NEC) Article 210.8.

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

System: D5030 - Communications and Security

Location: Main Offices 186 and 123 and the Central Maintenance Warehouse area

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add fire alarm device

Qty: 6.00

Unit of Measure: Ea.

Estimate: $9,631.78

Assessor Name: Hayden Collins

Date Created: 11/21/2015

Notes: Provide allowance for adding six (6) fire alarm notification appliances in multiple occupancy areas that are missing devices to comply with requirements. Main Offices 186 and 123 and the Central Maintenance Warehouse area are missing devices.

System: D5090 - Other Electrical Systems

Location: Corridor south of Classroom Pods J, K, L and M

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add Emergency/Exit Lighting

Qty: 4.00

Unit of Measure: Ea.

Estimate: $6,129.33

Assessor Name: Hayden Collins

Date Created: 11/21/2015

Notes: Provide a double sided exit sign in the east/west corridor located south of Classroom pods J, K, L and M at each of the four (4) corridors that leads to the exit discharge on the north side of the building. The current location of exit signage does not clearly mark the direction of egress travel to the exit discharge, as required by Chapter 7 of NFPA 101, Life Safety Code.

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

System: D3060 - Controls & Instrumentation

Location:	entire building
Distress:	Inadequate
Category:	4 - Capital Improvement
Priority:	4 - Response Time (4-5 yrs)
Correction:	Replace pneumatic controls with DDC (150KSF)
Qty:	164,000.00
Unit of Measure:	S.F.
Estimate:	$2,390,828.19
Assessor Name:	Hayden Collins
Date Created:	02/01/2016

Notes: Install new direct digital control system and building automation system with remote computer control capability and graphics package to connect to HVAC units and exhaust fans.

Priority 5 - Response Time (> 5 yrs):

System: C3020411 - Carpet

Location: Select Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace carpet

Qty: 5,000.00

Unit of Measure: S.F.

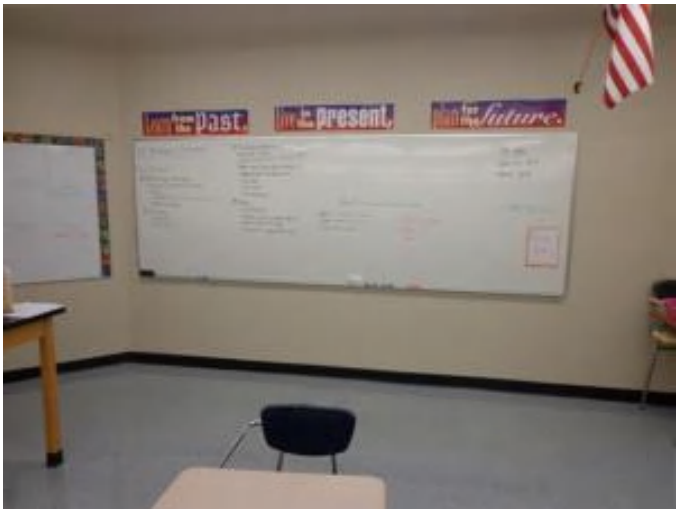
Estimate: $55,953.81

Assessor Name: Hayden Collins

Date Created: 11/05/2015

Notes: The interior carpet finish was installed approximately in 2005 and is in fair condition considering the age and high traffic conditions. This finish will exceed its expected life within the next five years and is recommended for removal and replacement.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide surface raceway system and wiring devices

Qty: 144.00

Unit of Measure: L.F.

Estimate: $148,552.63

Assessor Name: Hayden Collins

Date Created: 11/21/2015

Notes: Provide additional duplex receptacles in all 48 classrooms on the two walls where the instructor's desk is located (total of 144 duplex receptacles). Currently, there is only one (1) existing duplex receptacle.

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, 2500 lb, 5 floors, 100 FPM	1.00	Ea.	Machine Room 312	Schindler	NA	NA		30	2001	2031	$142,170.00	$156,387.00
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	Square D	HVL	Part No. 44036-325-60		30	2001	2031	$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NEHB, 277/480 V, 400 A, 1 stories, 25' horizontal	6.00	Ea.	Electrical Closets 174, 193, 204, 222, 323 and Facilities Management Services	Square D	I-Line			30	2005	2035	$17,698.50	$116,810.10
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 2000 A	1.00	Ea.	Main Electrical Room	Square D	QED	Cat. No. 14882445-004		30	2001	2031	$64,242.45	$70,666.70
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 2000 kVA	1.00	Ea.	Main Electrical Room	Square D	Power-Dry	014154-A-1		30	2001	2031	$139,104.00	$153,014.40
												Total:	**$544,012.10**

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):	33,800
Year Built:	2005
Last Renovation:	
Replacement Value:	$638,732
Repair Cost:	$0.00
Total FCI:	0.00 %
Total RSLI:	66.28 %

Description:

Attributes:

General Attributes:

Bldg ID:	S503001	Site ID:	S503001

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	66.10 %	0.00 %	$0.00
G40 - Site Electrical Utilities	66.67 %	0.00 %	$0.00
Totals:	**66.28 %**	**0.00 %**	**$0.00**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30	2005	2035		66.67 %	0.00 %	20			$0
G2020	Parking Lots	$8.50	S.F.	25,300	30	2005	2035		66.67 %	0.00 %	20			$215,050
G2030	Pedestrian Paving	$12.30	S.F.	5,400	40	2005	2045		75.00 %	0.00 %	30			$66,420
G2040	Site Development	$4.36	S.F.	33,800	25	2005	2030		60.00 %	0.00 %	15			$147,368
G2050	Landscaping & Irrigation	$4.36	S.F.	3,100	15	2005	2020	2027	80.00 %	0.00 %	12			$13,516
G4020	Site Lighting	$4.84	S.F.	33,800	30	2005	2035		66.67 %	0.00 %	20			$163,592
G4030	Site Communications & Security	$0.97	S.F.	33,800	30	2005	2035		66.67 %	0.00 %	20			$32,786
								Total	**66.28 %**					**$638,732**

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.

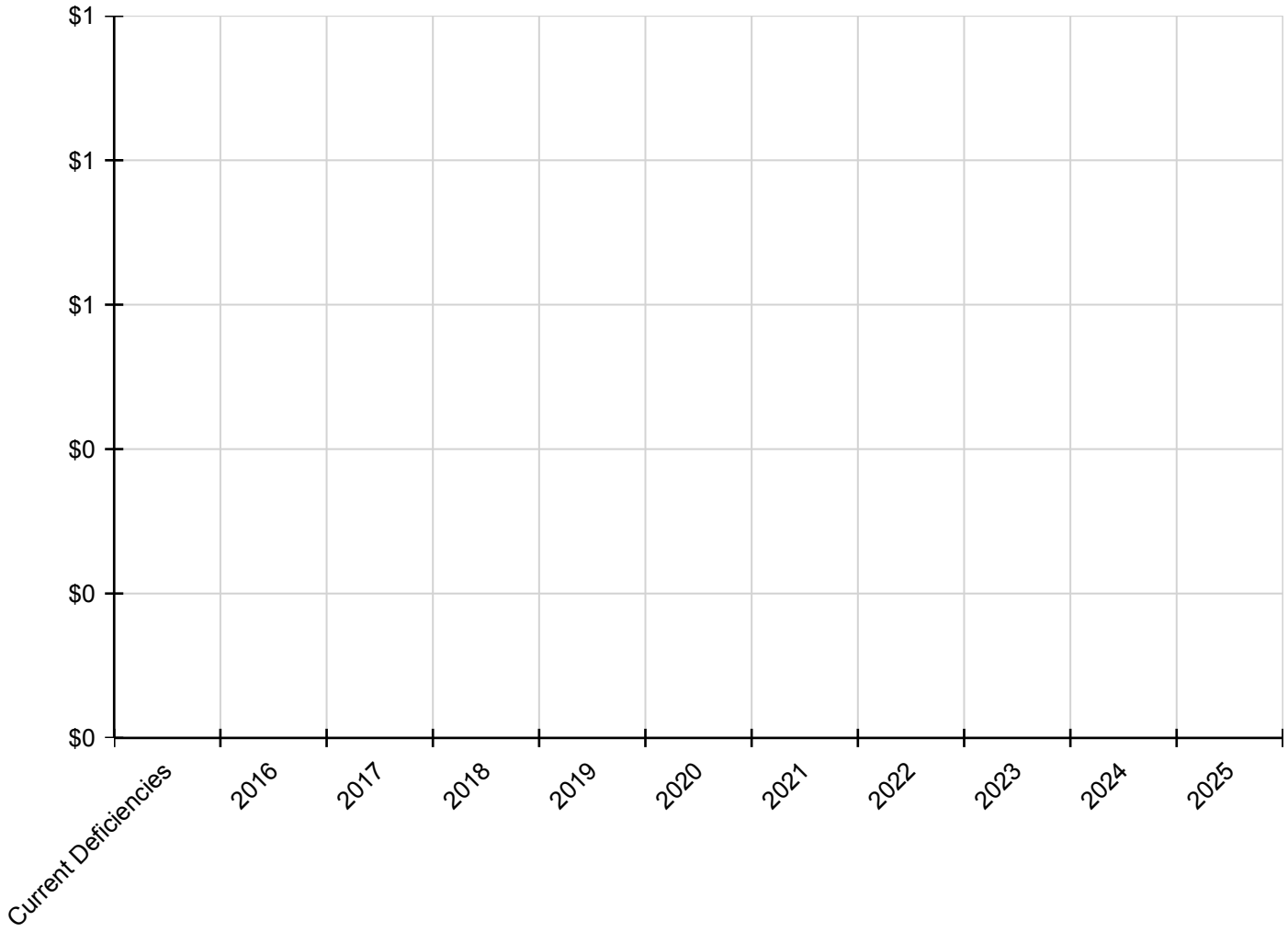
Inflation Rate: 3%

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

** Indicates non-renewable system*

Forecasted Sustainment Requirement

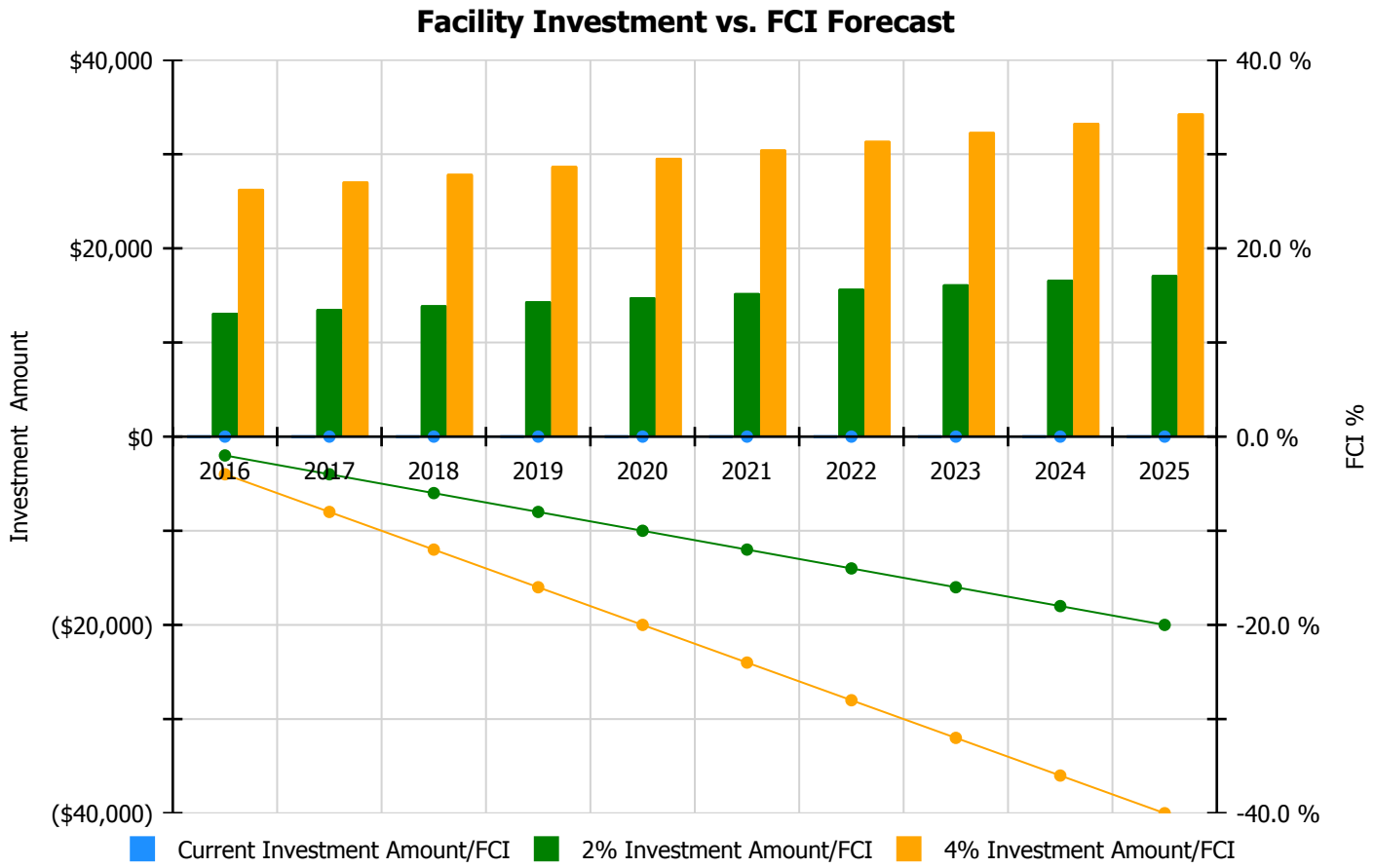
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

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



Year	Investment Amount Current FCI - 0%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$13,158.00	-2.00 %	$26,316.00	-4.00 %
2017	$0	$13,553.00	-4.00 %	$27,105.00	-8.00 %
2018	$0	$13,959.00	-6.00 %	$27,918.00	-12.00 %
2019	$0	$14,378.00	-8.00 %	$28,756.00	-16.00 %
2020	$0	$14,809.00	-10.00 %	$29,619.00	-20.00 %
2021	$0	$15,254.00	-12.00 %	$30,507.00	-24.00 %
2022	$0	$15,711.00	-14.00 %	$31,422.00	-28.00 %
2023	$0	$16,183.00	-16.00 %	$32,365.00	-32.00 %
2024	$0	$16,668.00	-18.00 %	$33,336.00	-36.00 %
2025	$0	$17,168.00	-20.00 %	$34,336.00	-40.00 %
Total:	**$0**	**$150,841.00**		**$301,680.00**	

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.

No data found for this asset

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:

No data found for this asset

Deficiency By Priority Investment Table

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

No data found for this asset

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:

No data found for this asset

Deficiency Details by Priority

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

No data found for this asset

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