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.

Saul School

Governance	DISTRICT	Report Type	High
Address	7100 Henry Ave.	Enrollment	548
	Philadelphia, Pa 19128	Grade Range	'09-12'
Phone/Fax	215-487-4467 / 215-487-4844	Admissions Category	Special Admit
Website	Www.Philasd.Org/Schools/Saul	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	**29.49%**	**$29,619,360**	**$100,436,519**
Building	32.11 %	$17,646,583	$54,951,116
Grounds	10.80 %	$472,590	$4,375,133

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.59 %	$1,694,101	$1,891,000
Exterior Walls (Shows condition of the structural condition of the exterior facade)	05.28 %	$237,222	$4,493,578
Windows (Shows functionality of exterior windows)	43.36 %	$1,241,149	$2,862,575
Exterior Doors (Shows condition of exterior doors)	50.62 %	$61,082	$120,661
Interior Doors (Classroom doors)	73.17 %	$286,187	$391,108
Interior Walls (Paint and Finishes)	00.00 %	$0	$1,647,645
Plumbing Fixtures	00.00 %	$0	$1,406,323
Boilers	00.00 %	$0	$1,942,016
Chillers/Cooling Towers	65.60 %	$1,670,462	$2,546,361
Radiators/Unit Ventilators/HVAC	17.80 %	$795,781	$4,471,734
Heating/Cooling Controls	158.90 %	$2,231,403	$1,404,243
Electrical Service and Distribution	39.42 %	$397,757	$1,008,975
Lighting	55.57 %	$2,004,711	$3,607,344
Communications and Security (Cameras, Pa System and Fire Alarm)	39.13 %	$528,768	$1,351,194

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

Facility Condition Assessment Summary Report

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

Saul Annex 4 School

Governance	DISTRICT	Report Type	High
Address	7100 Henry Ave.	Enrollment	
	Philadelphia, Pa 19128	Grade Range	'09-12'
Phone/Fax	215-487-4467 / 215-487-4844	Admissions Category	Special Admit
Website	Www.Philasd.Org/Schools/Saul	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	**29.49%**	**$29,619,360**	**$100,436,519**
Building	23.10 %	$7,521,102	$32,559,985
Grounds	10.80 %	$472,590	$4,375,133

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	86.35 %	$914,814	$1,059,456
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$1,833,551
Windows (Shows functionality of exterior windows)	00.00 %	$0	$800,490
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$98,079
Interior Doors (Classroom doors)	21.60 %	$47,706	$220,825
Interior Walls (Paint and Finishes)	00.00 %	$0	$775,823
Plumbing Fixtures	00.00 %	$0	$1,854,693
Boilers	59.81 %	$655,797	$1,096,489
Chillers/Cooling Towers	00.00 %	$0	$1,437,710
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$0
Heating/Cooling Controls	158.90 %	$1,259,884	$792,855
Electrical Service and Distribution	167.77 %	$955,780	$569,681
Lighting	48.07 %	$979,079	$2,036,756
Communications and Security (Cameras, Pa System and Fire Alarm)	34.05 %	$259,767	$762,903

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

Facility Condition Assessment Summary Report

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

Saul Annex 5 School

Governance	DISTRICT	Report Type	High
Address	7100 Henry Ave.	Enrollment	
	Philadelphia, Pa 19128	Grade Range	'09-12'
Phone/Fax	215-487-4467 / 215-487-4844	Admissions Category	Special Admit
Website	Www.Philasd.Org/Schools/Saul	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	**29.49%**	**$29,619,360**	**$100,436,519**
Building	46.54 %	$3,979,084	$8,550,285
Grounds	10.80 %	$472,590	$4,375,133

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	88.14 %	$528,051	$599,125
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$486,595
Windows (Shows functionality of exterior windows)	00.00 %	$0	$212,437
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$26,029
Interior Doors (Classroom doors)	81.41 %	$47,706	$58,603
Interior Walls (Paint and Finishes)	00.00 %	$0	$205,891
Plumbing Fixtures	00.00 %	$0	$492,206
Boilers	00.00 %	$0	$0
Chillers/Cooling Towers	00.00 %	$0	$0
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$0
Heating/Cooling Controls	158.90 %	$334,351	$210,411
Electrical Service and Distribution	21.47 %	$32,461	$151,184
Lighting	44.74 %	$241,829	$540,522
Communications and Security (Cameras, Pa System and Fire Alarm)	67.98 %	$137,629	$202,462

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

S604001;Saul

Final

Site Assessment Report

February 2, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	104,018
Year Built:	1950
Last Renovation:	
Replacement Value:	$100,436,519
Repair Cost:	$29,619,359.84
Total FCI:	29.49 %
Total RSLI:	66.68 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S604001		

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.

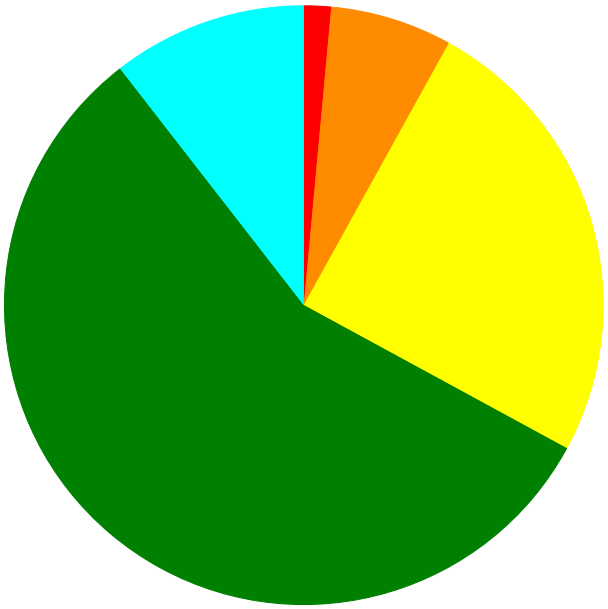
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	46.68 %	0.00 %	$0.00
A20 - Basement Construction	51.09 %	0.00 %	$0.00
B10 - Superstructure	46.27 %	0.00 %	$0.00
B20 - Exterior Enclosure	38.90 %	14.08 %	$1,539,451.90
B30 - Roofing	59.98 %	88.38 %	$3,136,966.00
C10 - Interior Construction	36.75 %	34.16 %	$1,563,660.71
C20 - Stairs	43.73 %	32.24 %	$76,886.80
C30 - Interior Finishes	63.59 %	30.57 %	$2,727,723.90
D10 - Conveying	105.71 %	373.85 %	$497,751.74
D20 - Plumbing	88.26 %	34.59 %	$1,744,287.55
D30 - HVAC	102.79 %	50.42 %	$9,319,779.02
D40 - Fire Protection	98.35 %	160.90 %	$2,426,259.50
D50 - Electrical	110.11 %	56.09 %	$5,879,489.31
E10 - Equipment	34.29 %	0.03 %	$742.42
E20 - Furnishings	30.00 %	3.64 %	$13,831.55
F10 - Special Construction	30.00 %	22.18 %	$219,939.42
G20 - Site Improvements	44.30 %	14.70 %	$472,590.02
G40 - Site Electrical Utilities	45.49 %	0.00 %	$0.00
Totals:	**66.68 %**	**29.49 %**	**$29,619,359.84**

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)
B604001;Saul	104,018	32.11	$9,341.68	$1,347,450.01	$4,487,209.83	$10,132,119.04	$1,670,462.37
B604004;Saul Annex	58,730	23.10	$0.00	$554,748.43	$2,354,056.13	$3,697,483.57	$914,814.30
B604005;Saul Annex	15,586	46.54	$0.00	$0.00	$528,266.01	$2,922,767.30	$528,051.15
G604001;Grounds	266,900	10.80	$424,227.18	$48,362.84	$0.00	$0.00	$0.00
Total:		**29.49**	**$433,568.86**	**$1,950,561.28**	**$7,369,531.97**	**$16,752,369.91**	**$3,113,327.82**

Deficiencies By Priority



1 - Response Time (< 2 yr) - $433,568.86
2 - Response Time (2-3 yrs) - $1,950,561.28
3 - Response Time (3-4 yrs) - $7,369,531.97
4 - Response Time (4-5 yrs) - $16,752,369.91
5 - Response Time (> 5 yrs) - $3,113,327.82

Budget Estimate Total: $29,619,359.84

Executive Summary

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

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

Function:	High School
Gross Area (SF):	104,018
Year Built:	1950
Last Renovation:	
Replacement Value:	$54,951,116
Repair Cost:	$17,646,582.93
Total FCI:	32.11 %
Total RSLI:	64.03 %

Description:

Facility Assessment
October 2015

School District of Philadelphia
Walter Biddle Saul High School
7100 Henry Ave.
Philadelphia, PA 19128

Main 104,018 SF /740 Students / LN 06

The Walter Biddle Saul High School is a high school that is dedicated to agricultural with facilities that match the mission. There are three buildings on the main site identified as B604001, B604004, B604005 and G604001 for the grounds surrounding this school. This facility is located at 7100 Henry Ave., Philadelphia, PA. Each building is similar in construction with the design of the rectangular-shaped, concrete and steel-framed buildings, including brick facades with a concrete foundation. B604001 or the Main Building was constructed in 1950, B604004 the Ag Annex was constructed in 1975 and B604005 the GYM Annex was constructed in 1975.

This report is divided into sections with the buildings identified by name and number.

The main entrance faces the Northern exterior facing Henry Ave. General parking is east and west of the main school and north and south of the Ag Annex. This School serves students in grades 9 to 12. The main building has a basement with two stories consisting of a total gross square footage of 104,018 GSF.

This school has several classrooms, a library, kitchen and student commons, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on October 6, 2015.

Mr. Rick Kovacs, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Tamera Conaway, Principal, 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 brick surfaces are generally in good condition for their age. The section near the loading dock and the exterior brick finish on the second floor Western exterior is showing signs of water infiltration. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

The exterior windows have been upgraded from the original applications. The window system is estimated to have been installed in the 1990's. Several of the windows are no longer functional and will require attention prior to an overall effort. Overall, the windows are in fair condition based on the year of installation or last renovation. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The exterior doors are metal applications with metal frames. The exterior doors are in very high traffic areas. Although the exterior doors are in good condition several warrant replacement. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. Replace warn or damaged exterior door systems and service doors as needed. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The Grounds Shop roll up door is an original metal roll up door. The safety equipment for this door is no longer functional and the door was reported to be limited in operation. This door system is recommended to be removed and replaced with a modern overhead door system with safety and security considerations.

The built up roof was reported to have been installed within the past ten years. The roof is in fair condition with few exceptions. Currently there are active leaks that if not repaired soon will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof replacement.

Special consideration for those that may be physically challenged was not a main factor in the construction of the main building or additions of this school. Currently there are no compliant entrances and the path of travel is clear from this access points as the interior path of travel is supported by some compliant signage, restrooms amities to meet the needs of the physically challenged. The main building will require several upgrades to meet the needs of the physically challenged.

There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

The main office located in the central hallway on the first floor has the original metal framed single glass pane windows designed into the interior wall system. This system however compliant during the time of construction no longer meets code. This deficiency provides a budgetary consideration for the removal and replacement of the office interior window system.

The interior walls consist of painted CMU finish or a brick finish. The wall system is in good condition and there are no recommendations required at this time.

Interior doors are typically wood in metal frames with sidelights or glazing. Other interior doors include solid wooden glass pane doors with original metal frames, metal with glass in metal frames at some of the stairwells and exit ways. Doors are generally in fair condition and are a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a

budgetary consideration to correct the wooden door system.

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

Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

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.

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.

This building has adequate exit pathways and no egress obstructions were noted during our building walk through. However the corridor doors on all floors are not fire rated and should be upgraded. Install new fire rated flush wood doors on all floor corridors. There are several sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

The Saul main building's interior floor finish is a combination of tile in the restrooms, kitchen and service line areas, wooden Gym / Auditorium with vinyl, concrete or painted concrete hallways and stirs. The classroom finishes are a mix of concrete in the shops and vinyl tile in the lecture / classrooms. The vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. Suspected asbestos containing materials (ACM) are believed to be limited to the original vinyl floor tile and mastic. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

The cafeteria / auditorium in the main building has a wooden floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the damaged wood floor finish be removed and replaced with an in kind finish.

The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The 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.

There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

The shop in the main building has a trasnsite wall finish. The transite wall finish is wall mounted application and is suspect to contain asbestos. This finish is recommended for upgrade to a new dry wall finish application. Suspected asbestos containing materials (ACM) are believed to be limited to the original transite wall finish. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

Institutional equipment includes: Library Equipment; instrumental equipment; A/V equipment; and laboratory equipment; gym equipment – basketball backstops, scoreboards, etc... Other equipment includes kitchen equipment; loading dock bumpers.

This schools science labs have been upgraded from the original construction. The installation consist of an instruction demonstration desk with sink. Wall mounted storage cabinets and cabinets with sinks for student use. The system is showing signs of age and lack of

maintenance such as broken sink fixtures missing cabinet doors and damaged shelves. This deficiency provides a budgetary consideration for the universal upgrade of the science teaching labs to include new counter tops, sink, cabinets, shelves and fixtures required to support a conducive level of education.

The loading dock for the main building is located just off the parking area between the dumpsters and the access point for students walking between classes. 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 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.

The hallway that connects the auditorium and the main classroom building has a fire rated roll-up door. Although complaint during the time of construction this door no longer meets current code. This door system is recommended to be removed and replaced with a modern fire door system with safety and security considerations

Furnishings include: fixed casework; window shades and blinds.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Urinals and water closets have exposed manual flush valves with lever operators. Water coolers are stainless steel single level type. Science classrooms have integral lab sinks. There is a grease trap below the kitchen floor slab for kitchen waste.

Hot water is provided by a Laars gas water heater in the mechanical room. The heater is 100 gallons with direct vent and combustion with PVC piping. A small pressurization tank and circulating pump are adjacent to the water heater. There is a duplex domestic booster pump system with two five hp pumps that is reportedly not required and not used.

Visible sanitary, waste and vent piping is galvanized with screwed fittings. Domestic hot and cold water is insulated rigid copper piping. There is a four inch water service with meter and backflow preventer in the mechanical room, with service from Henry Ave. Gas service is a four inch line from Henry Ave. Gas piping is black steel with screwed fittings.

The plumbing fixtures are from a 2012 renovation and should have remaining service life in excess of thirty years. The water heater is from 2012 and should remain serviceable twenty more years. Older sanitary and waste piping should be inspected and repaired or replaced as required. The domestic water supply piping is from the original 1957 installation and should be replaced.

HVAC- The building is heated by hot water generated from two cast iron sectional gas/oil fired boilers in the mechanical room. The boilers are MACNA De Detrich, one hundred fifteen hp installed in 2012 with Power Flame burners. Hot water is circulated to air handling units, unit ventilators and radiation units throughout this building and the Gymnasium Building. Some of the radiation units have sheet metal covers. Two B&G floor mounted ten hp end suction pumps are in a space adjacent to the mechanical room. Two vertical expansion tanks and a chemical treatment unit are part of the hot water system. Oil storage is in an 8000 gallon underground tank, condition unknown. A duplex pump system in the mechanical room provides circulation.

The library has electric baseboard radiation and a rooftop heat pump HVAC unit. There are several older heating and ventilating units in the building. There are mechanical rooms on two sides of the multipurpose room, one with two units and one with one unit. These are vertical Herman Nelson units serving the multipurpose room and surrounding spaces. The single unit is in a finished space and has a plywood enclosure that must be removed for access. A horizontal suspended unit in a storage room adjacent to the kitchen serves the kitchen. These are older units and should be replaced. Classrooms and other spaces are served by unit ventilators with hot water coils, installed in 2012. An unused shop area had two roof mounted heating and ventilating units that have been removed.

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

Toilet exhaust and other building exhaust is provided by six centrifugal roof ventilators. There is no cooking in the kitchen but there are two exhaust hoods. One is heat removal only and the other is a grease exhaust hood with fire suppression system. There is no central air conditioning. Some rooms have window air conditioners and there are two ductless split systems with exterior wall mounted condensing units.

The newer unit ventilators have pneumatic controls with room thermostats. The boilers are controlled by a Multi Mod system. There is a newer control air compressor but no building automation system.

All major components of the heating system, including boilers, unit ventilators, piping and pumps, are from the 2012 renovation and should have remaining service life of twenty five years for distribution and thirty five years for boilers. The heating and ventilating units are original construction and should be replaced.

FIRE PROTECTION- There is no fire protection system for this building.

ELECTRICAL SYSTEMS

Electrical Service-- The Main Building is served from an 800A, 208/120V, 3 phase, 4 wire feeder from the incoming substation located in the Agriculture Building to 800A ITE Distribution Panelboard located in the Building Engineer's Office in the Main Building. This distribution panelboard feeds Boiler Room Panelboard BR1 and recessed panelboards located in the corridors on each floor. Panelboard BR1 was installed in 2011 and is in very good condition. The panelboards on the floors and platform in the Multi-Purpose Room have served their useful life and need to be replaced.

Receptacles-- Most classrooms are not provided with an adequate number of duplex receptacles. It is recommended that a surface raceway system with 4 to 6 additional duplex receptacles be provided in each of 14 classrooms. Power poles are provided in lab classrooms for additional receptacles. There are six (6) duplex receptacles in the kitchen that need to be replaced with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel.

Lighting-- Fixtures in corridors, classrooms, Main Office, kitchen, shop and stairwells are generally 4 foot fluorescent wraparound fixtures with acrylic prismatic lenses and T12 lamps. Industrial fluorescent fixtures with T12 lamps are provided in the Basement. All lighting fixtures in the Main Building are obsolete and need to be replaced. Illumination levels in the corridors of the two story wing of the Main Building also need to be increased to meet the Illuminating Engineering Society of North America (IESNA) recommended illumination levels.

The 20 existing 400 watt metal halide lighting fixtures in the Multi-Purpose Room (MPR) are currently being retrofitted with LED lamps. At the time of this assessment, 4 fixtures still needed to be retrofitted. The illumination level was measured in the area of the MPR that was retrofitted with LED and the footcandle level ranged from 10.6 FC to 11.5 FC, considerably less than the 20 FC minimum recommended by IESNA for this type of occupancy. It is recommended that an additional 20 LED fixtures be provided in the MPR to increase the average maintained illumination level to at least 20 FC, but preferably to 30 FC. The platform in the MPR has two electrics of theatrical lighting fixtures and fluorescent worklights. There is no dimmer panel for the platform/MPR.

Wall mounted compact fluorescent lighting fixtures are located above or adjacent to the doors at exit discharges. Fixtures have reached the end of their useful life and it is recommended that replacement fixtures be LED wall packs for improved energy efficiency and reduced maintenance costs.

Fire Alarm System-- The fire alarm system is an obsolete 120V system by S. H. Couch Company, Inc. that consists of manual fire alarm pull stations and fire alarm bell notification appliances. The fire alarm control panel (FACP) is located in the Building Engineer's Office. There are no visual notification appliances in the building. The fire alarm system does not meet current code. A complete system replacement with an addressable type fire alarm system that meets current NFPA codes and ADA guidelines is recommended.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are located to provide Wi-Fi service throughout the entire school. The Main Distribution Frame (MDF) is located in Room 123. The incoming telephone demarcation point is in Room 123C.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Each classroom has a paging speaker. There are also wall mounted paging speakers in corridors. The 250W amplifier for the system is located in Room 123C. The secondary entrance to the building, which is near the Main Office, has an Aiphone intercom station that communicates with the Main Office. There is also a separate sound system in the MPR with Clear Sound cabinet, which was recently installed and is in good condition.

Clock and Program System-- There is a Simplex Time Control Center in the Main Office for the clock and program system. Clock/speaker assemblies are located in classrooms and throughout the school. The clocks are not functioning and should be replaced with a wireless GPS master clock system with battery operated, synchronized clocks.

Television System-- There are television outlets and wall mounted televisions in classrooms.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of the main entrance and the stairwells. The video surveillance system includes a 9 channel DVR and monitor located in School Police Office 126. Cameras were reported to have reached the end of their useful. Motion sensors are provided in the Main Office and at all entrances to monitor ingress/egress. Magnetic door contacts are provide on the vestibule doors at the main entrance.

Emergency Power System--There is a Generac 20 kW/20 kVA, 120/240V, 1 phase standby generator with natural gas fuel supply located in the Basement that serves emergency egress and exit lighting. The generator supplies 100A Panelboard EL via a Generac 105A automatic transfer switch. The generator was installed in 1994 and has served its useful life. Replacement is recommended within the next 2 to 3 years.

Emergency Lighting System / Exit Lighting-- Selected emergency egress lighting fixtures are connected to the standby power system. Existing wall mounted emergency lighting units (ELUs) in corridors were reported to be non-operational and no longer used since emergency lighting is supplied by the generator. It is recommended that the ELUs be replaced with new units and used as another emergency lighting source. Other, the non-operational ELUs should be removed.

Exit signs are fluorescent type and are in fair to poor condition. A few additional directional exit signs are needed in the corridors to comply with NFPA 101, Life Safety Code. Exit signs should be replaced with LED type and additional signs added.

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

Conveying Systems--There is no elevator in the Main Building.

GROUNDS

The parking area has no ADA parking with approved curb cuts for access to the sidewalks that lead to the main entrance. 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 for any of the buildings on this site. 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.

The Tennis courts are located on the main site just west of the exterior student commons. The student commons and the hardscape, landscape and sidewalks are in good condition however, the tennis courts will require some maintenance. Only one of the two courts is being used by the students because of the growth between the cracks of the asphalt finish on the second court. This deficiency provides a budgetary consideration for the restoration of the court surface.

As indicated in the photos most of the sidewalk system was upgraded in 1999 or 2001 as stamped into the concrete. The sidewalk system is in good condition and no issues surfaced during the time of the inspection therefore no recommendations are required at this time.

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

The student commons has several fences that surround the Tennis courts and the basketball area. The fence system is in good condition however care should be taken to cut down the growth that is consuming the fence. This is considered a minor maintenance issue and no recommendations are required at this time.

The baseball and football/soccer areas appear to be abandoned. The fields although not included in the scope of this assessment are used by the students in unorganized sports. Care should be taken to either remove the equipment to prevent any safety issues or restore the areas.

Site Lighting— Site lighting is provided in the front of the campus, along the entrance drive and in the parking lot by 12 pole mounted 400W metal halide floodlighting fixtures, typically with three fixtures per pole. Fixtures and light poles are in good condition with an estimated remaining useful life of 10 to 12 years.

RECOMMENDATIONS

- Repair cracks in masonry

- Remove and replace aluminum windows
- Remove and replace exterior doors
- Remove and replace overhead door
- Remove and Replace Built Up Roof
- Remove folding wood partitions; replace with metal studs and gypsum board painted
- Remove and replace wire glass
- Remove and replace interior doors
- Remove and replace tackboards
- Replace blackboards with marker boards
- Replace missing or damaged signage
- Replace inadequate or install proper stair railing
- Remove and replace roll up fire doors
- Remove and replace interior doors
- Remove VAT and replace with VCT
- Remove and replace wood flooring
- Remove and replace suspended acoustic ceilings
- Remodel existing classroom for lab use - approx 900 GSF
- Remove and replace dock bumpers
- Remove and replace stage curtain
- Remove and replace roll-up fire door
- Install elevator
- Install complete NFPA automatic sprinkler system in entire building including fire pump if required.
- Install new three hundred ton chilled water system. Include roof mounted air cooled chiller, distribution piping, glycol system, pumps and controls.
- Install new DDC control system with building automation for HVAC equipment. Include computer monitor, software and graphics package.
- Replace domestic water supply piping including fittings, valves, hangers and insulation.
- Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.
- Install new central station air handling unit for cafeteria with hot and chilled water coils, blower and motor, filters, return and outside air dampers, control valves and controls. Connect to hot and chilled water piping and control system. Include new air distribution and electrical connection.
- Install new roof mounted central station air handling unit for library with hot and chilled water coils, blower and motor, filters, return and outside air dampers, control valves and controls. Connect to hot and chilled water piping and control system. Include new air distribution and electrical connection.
- Install new roof mounted heating and ventilating system for shop. Connect to hot water piping, control system and existing duct system. Include electrical connection.
- Replace 800A, 208/120V, 3 phase, 4 wire Main Distribution Panelboard.
- Replace ten (10) recessed panelboards and their feeder conductors for panels that have reached the end of their useful life.
- Add surface raceway system with 4 to 6 duplex receptacles in each of the 16 classrooms. Provide allowance for replacement of 50 duplex receptacles and receptacle branch circuits.
- Replace six (6) duplex receptacles in the kitchen with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel.
- Replace all lighting fixtures in the Main Building. Fixtures have T12 lamps, which are now obsolete and no longer manufactured. Also, illumination levels in the corridors of the two story wing of the Main Building also need to be increased to meet the Illuminating Engineering Society of North America (IESNA) recommended illumination levels.
- Provide 20 additional LED fixtures in the Multi-Purpose Room to increase the average maintained illumination level to at least 20 FC, but preferably to 30 FC.
- Replace 11 wall mounted compact fluorescent lighting fixtures located above or adjacent to the doors at exit discharges. Fixtures have reached the end of their useful life. Recommend replacement with LED wall packs for improved energy efficiency and reduced maintenance costs.
- Replace obsolete fire alarm system with an addressable system.
- Replace non-operational clock system with a wireless GPS synchronized clock system.
- Replace nine (9) cameras, DVR and monitor for video surveillance system.
- Replace standby generator, automatic transfer switch and Emergency Lighting Panel EL. Size generator to include the addition of a hydraulic elevator.
- Provide allowance for replacement of eight (8) emergency lighting units and replacement of approximately 30 exit signs with LED type.
- Crack seal for Asphalt
- Remove and replace asphalt parking and drive
- Isolate trash dumpster

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B604001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S604001		

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	35.00 %	0.00 %	$0.00
A20 - Basement Construction	35.00 %	0.00 %	$0.00
B10 - Superstructure	35.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	33.30 %	20.59 %	$1,539,451.90
B30 - Roofing	59.97 %	89.59 %	$1,694,100.55
C10 - Interior Construction	33.80 %	48.88 %	$1,408,889.73
C20 - Stairs	36.24 %	5.72 %	$9,341.68
C30 - Interior Finishes	63.84 %	39.78 %	$2,198,144.39
D10 - Conveying	105.71 %	373.85 %	$497,751.74
D20 - Plumbing	87.01 %	47.96 %	$968,820.03
D30 - HVAC	102.86 %	40.60 %	$4,697,646.52
D40 - Fire Protection	92.47 %	177.49 %	$1,488,022.48
D50 - Electrical	110.11 %	51.19 %	$3,129,839.94
E10 - Equipment	34.29 %	0.04 %	$742.42
E20 - Furnishings	30.00 %	6.24 %	$13,831.55
Totals:	**64.03 %**	**32.11 %**	**$17,646,582.93**

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	$27.30	S.F.	104,018	100	1950	2050		35.00 %	0.00 %	35			$2,839,691
A1030	Slab on Grade	$5.17	S.F.	104,018	100	1950	2050		35.00 %	0.00 %	35			$537,773
A2010	Basement Excavation	$4.36	S.F.	104,018	100	1950	2050		35.00 %	0.00 %	35			$453,518
A2020	Basement Walls	$9.91	S.F.	104,018	100	1950	2050		35.00 %	0.00 %	35			$1,030,818
B1010	Floor Construction	$85.34	S.F.	104,018	100	1950	2050		35.00 %	0.00 %	35			$8,876,896
B1020	Roof Construction	$14.39	S.F.	50,000	100	1950	2050		35.00 %	0.00 %	35			$719,500
B2010	Exterior Walls	$43.20	S.F.	104,018	100	1950	2050		35.00 %	5.28 %	35		$237,221.54	$4,493,578
B2020	Exterior Windows	$27.52	S.F.	104,018	40	1950	1990	2027	30.00 %	43.36 %	12		$1,241,148.55	$2,862,575
B2030	Exterior Doors	$1.16	S.F.	104,018	25	1950	1975	2027	48.00 %	50.62 %	12		$61,081.81	$120,661
B3010105	Built-Up	$37.76	S.F.	50,000	20	1985	2005	2027	60.00 %	89.73 %	12		$1,694,100.55	$1,888,000
B3020	Roof Openings	$0.06	S.F.	50,000	30	1985	2015	2027	40.00 %	0.00 %	12			$3,000
C1010	Partitions	$21.05	S.F.	104,018	100	1950	2050		35.00 %	49.36 %	35		$1,080,801.71	$2,189,579
C1020	Interior Doors	$3.76	S.F.	104,018	40	1950	1990	2027	30.00 %	73.17 %	12		$286,187.19	$391,108
C1030	Fittings	$2.90	S.F.	104,018	40	1950	1990	2027	30.00 %	13.89 %	12		$41,900.83	$301,652
C2010	Stair Construction	$1.18	S.F.	104,018	100	1950	2050		35.00 %	7.61 %	35		$9,341.68	$122,741
C2020	Stair Finishes	$0.39	S.F.	104,018	30	1950	1980	2027	40.00 %	0.00 %	12			$40,567
C3010230	Paint & Covering	$13.21	S.F.	104,018	10	1985	1995	2027	120.00 %	0.00 %	12			$1,374,078
C3010232	Wall Tile	$2.63	S.F.	104,018	30	1950	1980	2027	40.00 %	0.00 %	12			$273,567

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020412	Terrazzo & Tile	$75.52	S.F.	10,000	50	1950	2000	2027	24.00 %	0.00 %	12			$755,200
C3020413	Vinyl Flooring	$9.68	S.F.	78,018	20	1950	1970	2027	60.00 %	100.41 %	12		$758,333.40	$755,214
C3020414	Wood Flooring	$22.27	S.F.	8,000	25	1950	1975	2027	48.00 %	130.90 %	12		$233,216.57	$178,160
C3020415	Concrete Floor Finishes	$0.97	S.F.	8,000	50	1950	2000	2027	24.00 %	0.00 %	12			$7,760
C3030	Ceiling Finishes	$20.97	S.F.	104,018	25	1985	2010	2027	48.00 %	55.32 %	12		$1,206,594.42	$2,181,257
D1010	Elevators and Lifts	$1.28	S.F.	104,018	35	1950	1985	2052	105.71 %	373.85 %	37		$497,751.74	$133,143
D2010	Plumbing Fixtures	$13.52	S.F.	104,018	35	2012	2047		91.43 %	0.00 %	32			$1,406,323
D2020	Domestic Water Distribution	$1.68	S.F.	104,018	25	1950	1975	2042	108.00 %	301.63 %	27		$527,096.44	$174,750
D2030	Sanitary Waste	$2.32	S.F.	104,018	30	1950	1980	2042	90.00 %	183.04 %	27		$441,723.59	$241,322
D2040	Rain Water Drainage	$1.90	S.F.	104,018	30	1950	1980	2025	33.33 %	0.00 %	10			$197,634
D3020	Heat Generating Systems	$18.67	S.F.	104,018	35	2012	2047		91.43 %	0.00 %	32			$1,942,016
D3030	Cooling Generating Systems	$24.48	S.F.	104,018	30			2047	106.67 %	65.60 %	32		$1,670,462.37	$2,546,361
D3040	Distribution Systems	$42.99	S.F.	104,018	25	2012	2037		88.00 %	17.80 %	22		$795,781.05	$4,471,734
D3050	Terminal & Package Units	$11.60	S.F.	104,018	20	1950	1970	2047	160.00 %	0.00 %	32			$1,206,609
D3060	Controls & Instrumentation	$13.50	S.F.	104,018	20	1950	1970	2037	110.00 %	158.90 %	22		$2,231,403.10	$1,404,243
D4010	Sprinklers	$7.05	S.F.	104,018	35			2052	105.71 %	202.91 %	37		$1,488,022.48	$733,327
D4020	Standpipes	$1.01	S.F.	104,018	35				0.00 %	0.00 %				$105,058
D5010	Electrical Service/Distribution	$9.70	S.F.	104,018	30	1950	1980	2047	106.67 %	39.42 %	32		$397,756.60	$1,008,975
D5020	Lighting and Branch Wiring	$34.68	S.F.	104,018	20	1950	1970	2037	110.00 %	55.57 %	22		$2,004,711.16	$3,607,344
D5030	Communications and Security	$12.99	S.F.	104,018	15	1950	1965	2032	113.33 %	39.13 %	17		$528,768.18	$1,351,194
D5090	Other Electrical Systems	$1.41	S.F.	104,018	30	1950	1980	2047	106.67 %	135.41 %	32		$198,604.00	$146,665
E1020	Institutional Equipment	$4.82	S.F.	104,018	35	1950	1985	2027	34.29 %	0.00 %	12			$501,367
E1090	Other Equipment	$11.10	S.F.	104,018	35	1950	1985	2027	34.29 %	0.06 %	12		$742.42	$1,154,600
E2010	Fixed Furnishings	$2.13	S.F.	104,018	40	1950	1990	2027	30.00 %	6.24 %	12		$13,831.55	$221,558
								Total	**64.03 %**	**32.11 %**			**$17,646,582.93**	**$54,951,116**

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 Finish 80%
Brick 15%
No finish 5%

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

Note: Tile / Terrazzo 8%
Wood 8%
Concrete 8%
Vinyl 76%

System: D1010 - Elevators and Lifts — This system contains no images

Note: There is no existing elevator in this building.

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

Note: There are no secondary transformers in the Main Building.

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:	**$17,646,583**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$292,165**	**$17,938,748**
*** 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	$237,222	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$237,222**
B2020 - Exterior Windows	$1,241,149	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,241,149**
B2030 - Exterior Doors	$61,082	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$61,082**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,694,101	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,694,101**
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	$1,080,802	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,080,802**
C1020 - Interior Doors	$286,187	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$286,187**
C1030 - Fittings	$41,901	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$41,901**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

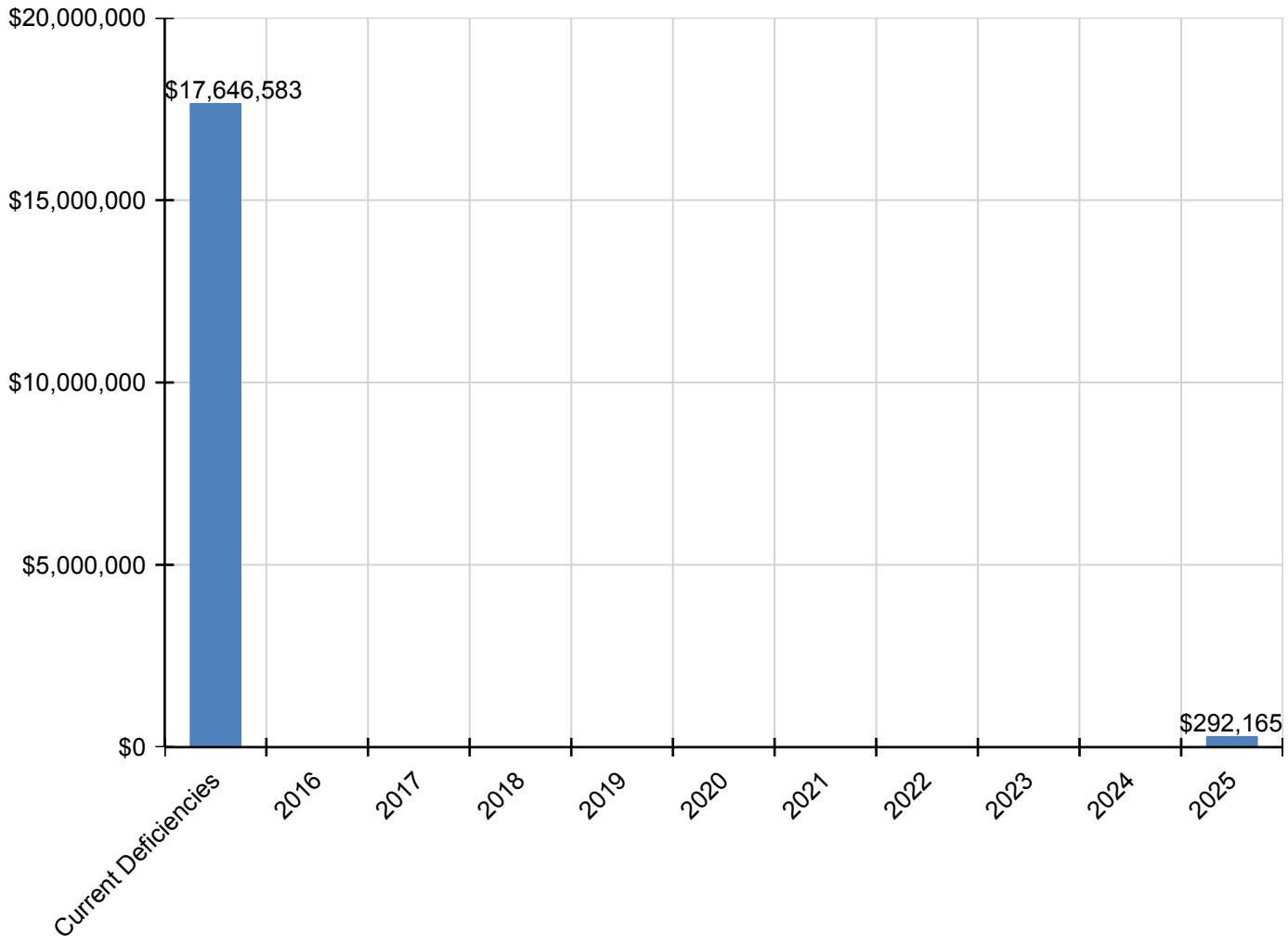
C2010 - Stair Construction	$9,342	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$9,342**
C2020 - Stair Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$758,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$758,333**
C3020414 - Wood Flooring	$233,217	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$233,217**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$1,206,594	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,206,594**
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	$497,752	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$497,752**
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	$527,096	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$527,096**
D2030 - Sanitary Waste	$441,724	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$441,724**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$292,165	**$292,165**
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	$1,670,462	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,670,462**
D3040 - Distribution Systems	$795,781	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$795,781**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$2,231,403	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,231,403**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,488,022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,488,022**
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	$397,757	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$397,757**
D5020 - Lighting and Branch Wiring	$2,004,711	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,004,711**
D5030 - Communications and Security	$528,768	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$528,768**

D5090 - Other Electrical Systems	$198,604	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$198,604**
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	$742	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$742**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$13,832	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$13,832**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

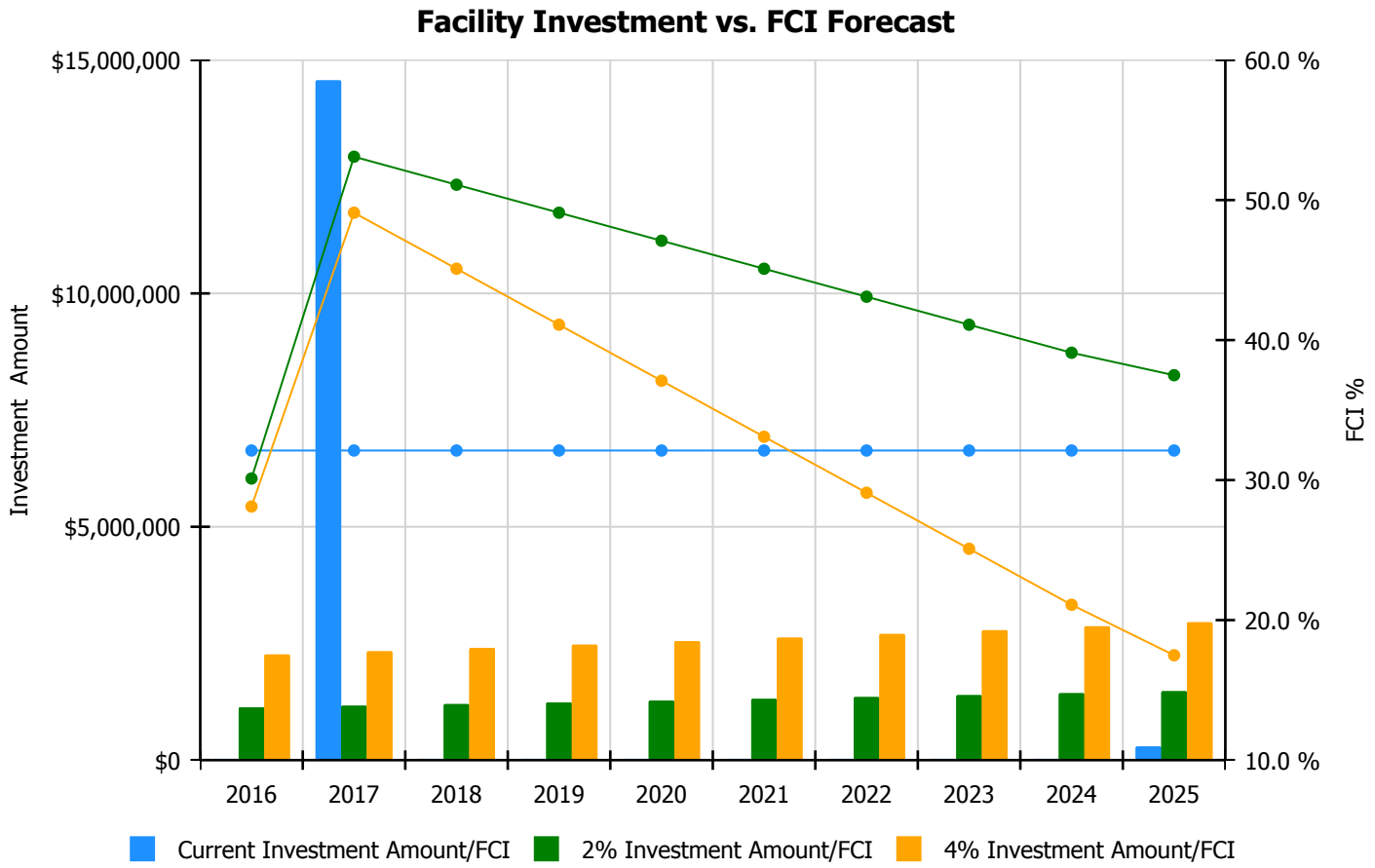
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

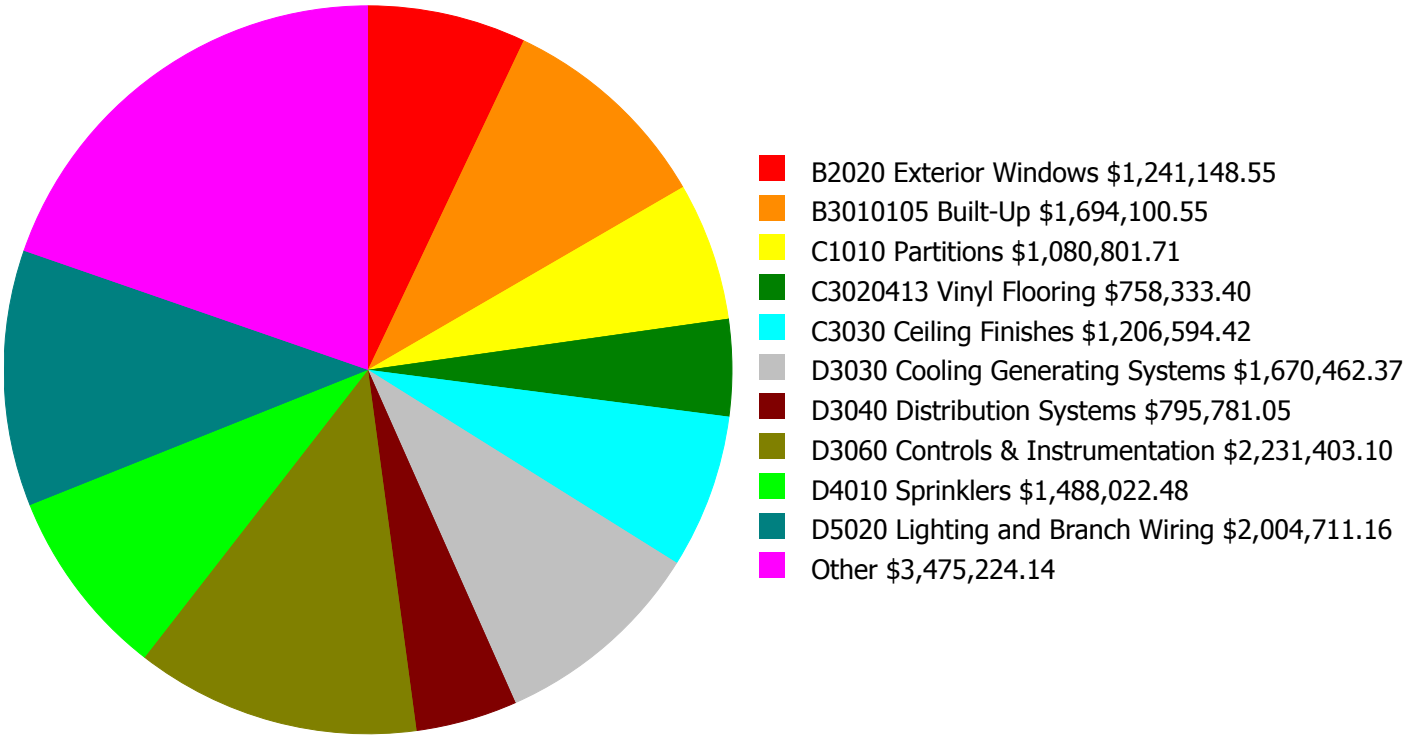
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 32.11%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,131,993.00	30.11 %	$2,263,986.00	28.11 %
2017	$14,564,129	$1,165,953.00	53.10 %	$2,331,906.00	49.10 %
2018	$0	$1,200,931.00	51.10 %	$2,401,863.00	45.10 %
2019	$0	$1,236,959.00	49.10 %	$2,473,919.00	41.10 %
2020	$0	$1,274,068.00	47.10 %	$2,548,136.00	37.10 %
2021	$0	$1,312,290.00	45.10 %	$2,624,580.00	33.10 %
2022	$0	$1,351,659.00	43.10 %	$2,703,318.00	29.10 %
2023	$0	$1,392,209.00	41.10 %	$2,784,417.00	25.10 %
2024	$0	$1,433,975.00	39.10 %	$2,867,950.00	21.10 %
2025	$292,165	$1,476,994.00	37.49 %	$2,953,988.00	17.49 %
Total:	**$14,856,293**	**$12,977,031.00**		**$25,954,063.00**	

Deficiency Summary by System

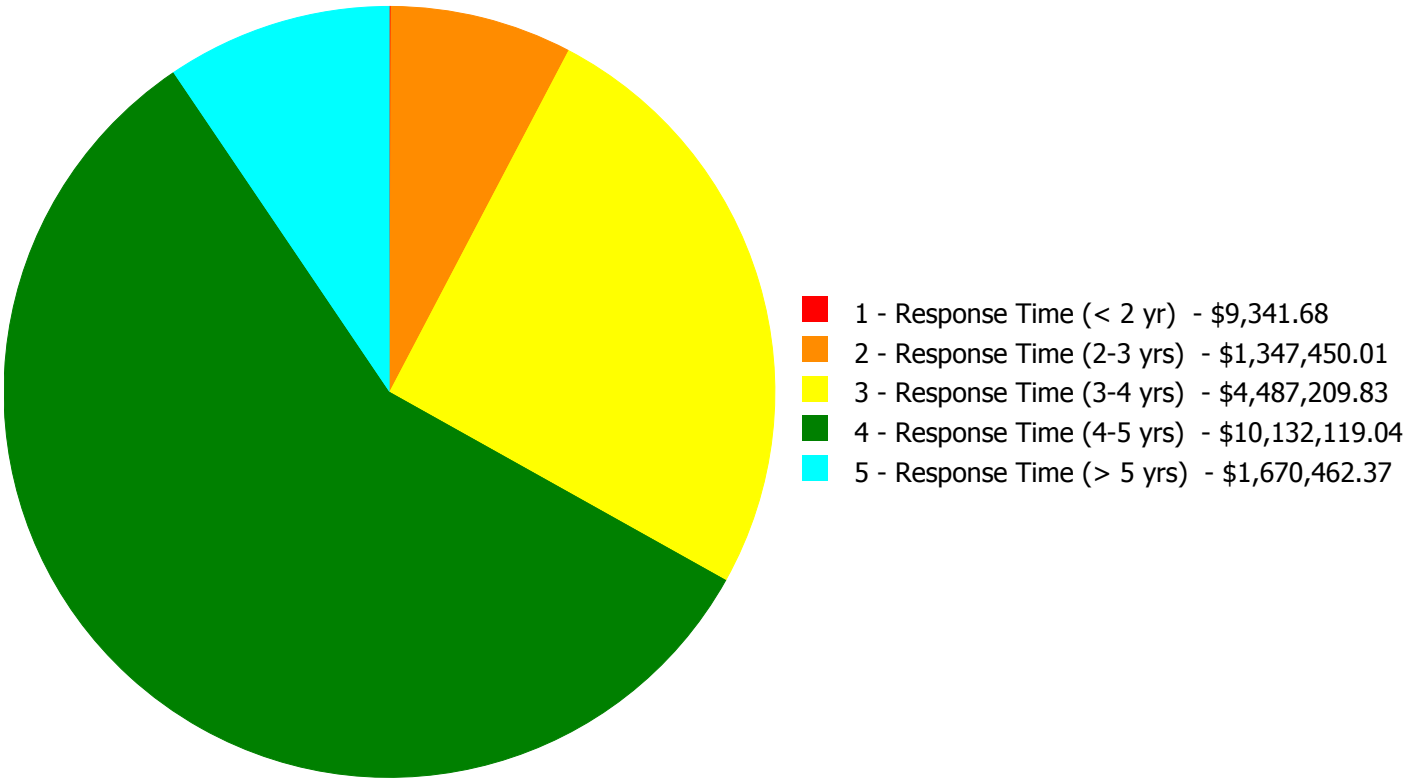
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $17,646,582.93

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: $17,646,582.93

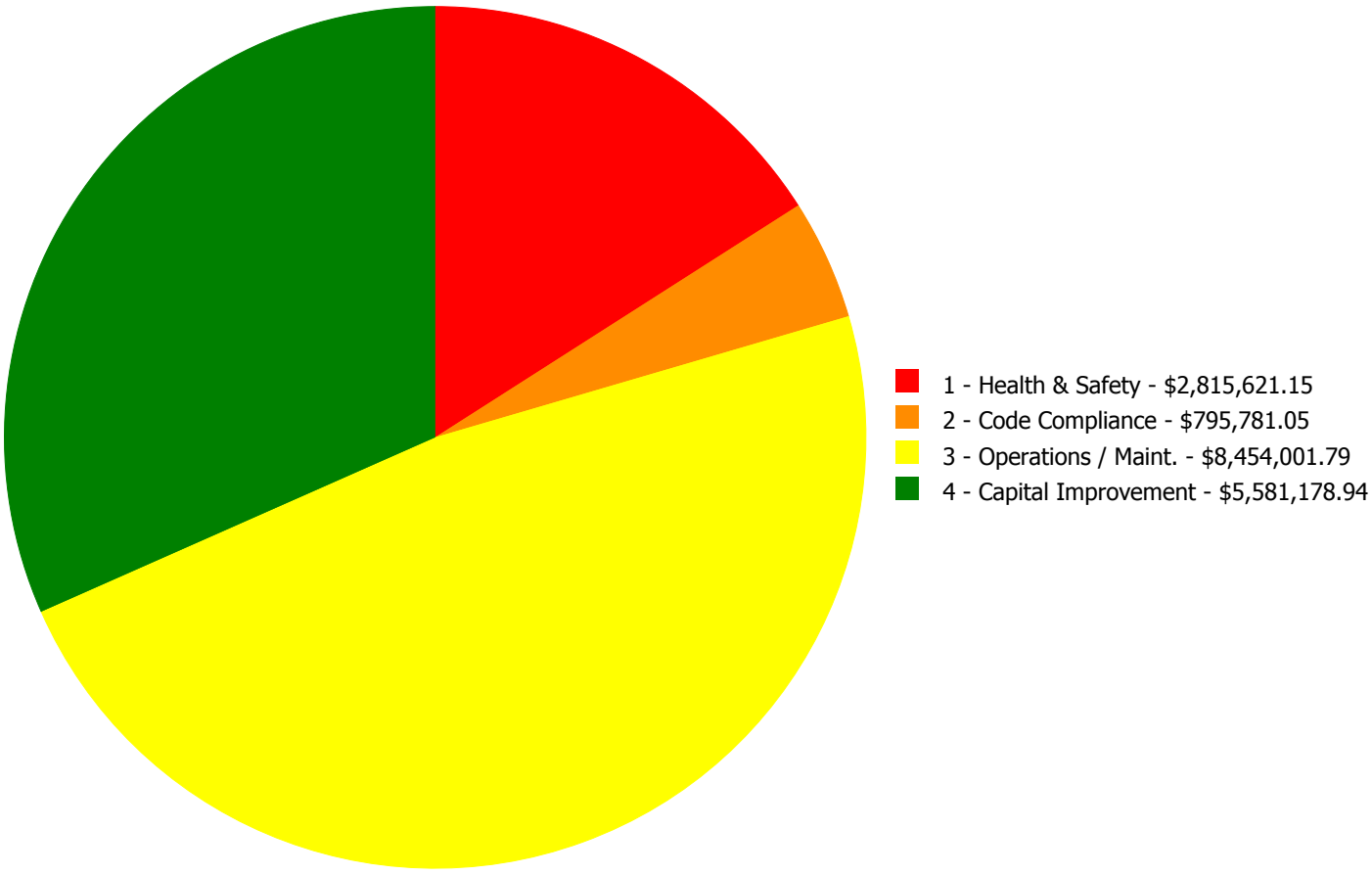
Deficiency By Priority Investment Table

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	$27,339.97	$0.00	$209,881.57	$0.00	$237,221.54
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,241,148.55	$0.00	$1,241,148.55
B2030	Exterior Doors	$0.00	$6,437.89	$54,643.92	$0.00	$0.00	$61,081.81
B3010105	Built-Up	$0.00	$0.00	$0.00	$1,694,100.55	$0.00	$1,694,100.55
C1010	Partitions	$0.00	$9,186.76	$0.00	$1,071,614.95	$0.00	$1,080,801.71
C1020	Interior Doors	$0.00	$47,657.83	$238,529.36	$0.00	$0.00	$286,187.19
C1030	Fittings	$0.00	$0.00	$0.00	$41,900.83	$0.00	$41,900.83
C2010	Stair Construction	$9,341.68	$0.00	$0.00	$0.00	$0.00	$9,341.68
C3020413	Vinyl Flooring	$0.00	$758,333.40	$0.00	$0.00	$0.00	$758,333.40
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$233,216.57	$0.00	$233,216.57
C3030	Ceiling Finishes	$0.00	$0.00	$1,206,594.42	$0.00	$0.00	$1,206,594.42
D1010	Elevators and Lifts	$0.00	$497,751.74	$0.00	$0.00	$0.00	$497,751.74
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$527,096.44	$0.00	$527,096.44
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$441,723.59	$0.00	$441,723.59
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,670,462.37	$1,670,462.37
D3040	Distribution Systems	$0.00	$0.00	$0.00	$795,781.05	$0.00	$795,781.05
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$2,231,403.10	$0.00	$2,231,403.10
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,488,022.48	$0.00	$1,488,022.48
D5010	Electrical Service/Distribution	$0.00	$0.00	$397,756.60	$0.00	$0.00	$397,756.60
D5020	Lighting and Branch Wiring	$0.00	$0.00	$1,879,341.86	$125,369.30	$0.00	$2,004,711.16
D5030	Communications and Security	$0.00	$0.00	$497,908.12	$30,860.06	$0.00	$528,768.18
D5090	Other Electrical Systems	$0.00	$0.00	$198,604.00	$0.00	$0.00	$198,604.00
E1090	Other Equipment	$0.00	$742.42	$0.00	$0.00	$0.00	$742.42
E2010	Fixed Furnishings	$0.00	$0.00	$13,831.55	$0.00	$0.00	$13,831.55
	Total:	$9,341.68	$1,347,450.01	$4,487,209.83	$10,132,119.04	$1,670,462.37	$17,646,582.93

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:



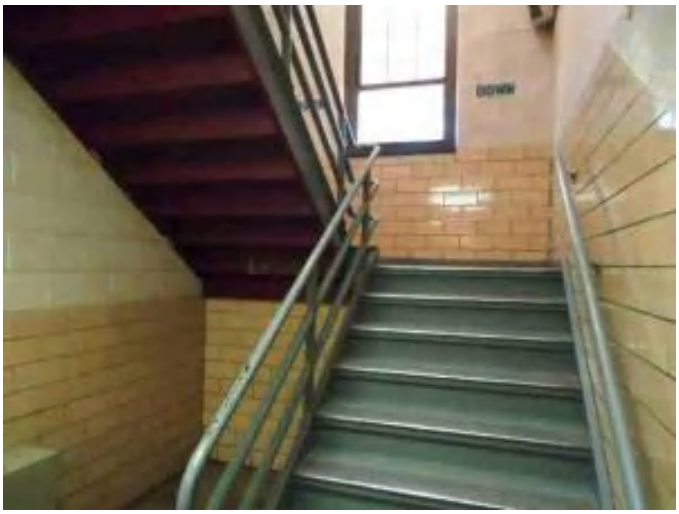
Budget Estimate Total: $17,646,582.93

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: C2010 - Stair Construction



Location: Main Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 600.00

Unit of Measure: L.F.

Estimate: $9,341.68

Assessor Name: System

Date Created: 01/07/2016

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.

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

System: B2010 - Exterior Walls

Location: Main Shop

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Remove transite wall panels and replace with steel siding panels

Qty: 800.00

Unit of Measure: S.F.

Estimate: $27,339.97

Assessor Name: System

Date Created: 01/07/2016

Notes: The shop in the main building has a trasnsite wall finish. The transite wall finish is wall mounted application and is suspect to contain asbestos. This finish is recommended for upgrade to a new dry wall finish application. Suspected asbestos containing materials (ACM) are believed to be limited to the original transite wall finish. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

System: B2030 - Exterior Doors

Location: Main Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace overhead door - pick the closest type and size and add for the operator if required

Qty: 1.00

Unit of Measure: Ea.

Estimate: $6,437.89

Assessor Name: System

Date Created: 01/05/2016

Notes: The Grounds Shop roll up door is an original metal roll up door. The safety equipment for this door is no longer functional and the door was reported to be limited in operation. This door system is recommended to be removed and replaced with a modern overhead door system with safety and security considerations

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System: C1010 - Partitions

Location: Main Office

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Remove and replace wire glass

Qty: 80.00

Unit of Measure: S.F.

Estimate: $9,186.76

Assessor Name: System

Date Created: 01/05/2016

Notes: The main office located in the central hallway on the first floor has the original metal framed single glass pane windows designed into the interior wall system. This system however compliant during the time of construction no longer meets code. This deficiency provides a budgetary consideration for the removal and replacement of the office interior window system.

System: C1020 - Interior Doors

Location: Main Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 8.00

Unit of Measure: Ea.

Estimate: $38,164.70

Assessor Name: System

Date Created: 01/07/2016

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 are not fire rated and should be upgraded. Install new fire rated flush wood doors on all floor corridors. There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

System: C1020 - Interior Doors

Location: Main Hallway

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Remove and replace roll up fire doors - pick the appropriate size

Qty: 1.00

Unit of Measure: Ea.

Estimate: $9,493.13

Assessor Name: System

Date Created: 01/07/2016

Notes: The hallway that connects the auditorium and the main classroom building has a fire rated roll-up door. Although complaint during the time of construction this door no longer meets current code. This door system is recommended to be removed and replaced with a modern fire door system with safety and security considerations

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System: C3020413 - Vinyl Flooring

Location: Main Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 50,000.00

Unit of Measure: S.F.

Estimate: $758,333.40

Assessor Name: System

Date Created: 01/07/2016

Notes: The Saul main building's interior floor finish is a combination of tile in the restrooms, kitchen and service line areas, wooden Gym / Auditorium with vinyl, concrete or painted concrete hallways and stirs. The classroom finishes are a mix of concrete in the shops and vinyl tile in the lecture / classrooms. The vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. Suspected asbestos containing materials (ACM) are believed to be limited to the original vinyl floor tile and mastic. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

System: D1010 - Elevators and Lifts

Location: Building Wide

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add interior hydraulic elevator - 3 floors - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $497,751.74

Assessor Name: System

Date Created: 01/11/2016

Notes: There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc

System: E1090 - Other Equipment

Location: Main Loading Dock

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace dock bumpers

Qty: 2.00

Unit of Measure: Ea.

Estimate: $742.42

Assessor Name: System

Date Created: 01/07/2016

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

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

System: B2030 - Exterior Doors

Location: Main Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 6.00

Unit of Measure: Ea.

Estimate: $54,643.92

Assessor Name: System

Date Created: 01/05/2016

Notes: The exterior doors are metal applications with metal frames. The exterior doors are in very high traffic areas. Although the exterior doors are in good condition several warrant replacement. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. Replace warn or damaged exterior door systems and service doors as needed. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: C1020 - Interior Doors

Location: Main Building Wide

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: 50.00

Unit of Measure: Ea.

Estimate: $238,529.36

Assessor Name: System

Date Created: 01/07/2016

Notes: Interior doors are typically wood in metal frames with sidelights or glazing. Other interior doors include solid wooden glass pane doors with original metal frames, metal with glass in metal frames at some of the stairwells and exit ways. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the wooden door system.

System: C3030 - Ceiling Finishes

Location: Main Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 80,000.00

Unit of Measure: S.F.

Estimate: $1,206,594.42

Assessor Name: System

Date Created: 01/07/2016

Notes: The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The 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: D5010 - Electrical Service/Distribution

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 10.00

Unit of Measure: Ea.

Estimate: $303,816.98

Assessor Name: System

Date Created: 12/21/2015

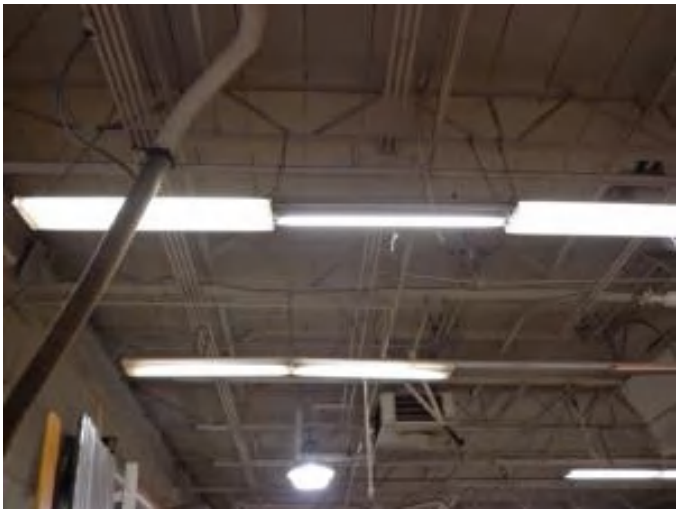
Notes: Replace ten (10) recessed panelboards and their feeder conductors for panels that have reached the end of their useful life.

System: D5010 - Electrical Service/Distribution

Location: Building Engineer's Office
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Panelboard
Qty: 1.00
Unit of Measure: Ea.
Estimate: $93,939.62
Assessor Name: System
Date Created: 12/30/2015

Notes: Replace 800A, 208/120V, 3 phase, 4 wire Main Distribution Panelboard.

System: D5020 - Lighting and Branch Wiring



Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 102,000.00
Unit of Measure: S.F.
Estimate: $1,867,720.19
Assessor Name: System
Date Created: 12/21/2015

Notes: Replace all lighting fixtures in the Main Building. Fixtures have T12 lamps, which are now obsolete and no longer manufactured. Also, illumination levels in the corridors of the two story wing of the Main Building also need to be increased to meet the Illuminating Engineering Society of North America (IESNA) recommended illumination levels.

System: D5020 - Lighting and Branch Wiring

Location: Exit discharges

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lighting fixtures

Qty: 11.00

Unit of Measure: Ea.

Estimate: $11,621.67

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace 11 wall mounted compact fluorescent lighting fixtures located above or adjacent to the doors at exit discharges. Fixtures have reached the end of their useful life. Recommend replacement with LED wall packs for improved energy efficiency and reduced maintenance costs.

System: D5030 - Communications and Security

Location: Building wide

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 104,018.00

Unit of Measure: S.F.

Estimate: $459,852.66

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace obsolete fire alarm system with an addressable system.

System: D5030 - Communications and Security

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Video Surveillance System

Qty: 9.00

Unit of Measure: Ea.

Estimate: $38,055.46

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace nine (9) cameras, DVR and monitor for video surveillance system.

System: D5090 - Other Electrical Systems

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $165,771.22

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace standby generator, automatic transfer switch and Emergency Lighting Panel EL. Size generator to include the addition of a hydraulic elevator.

System: D5090 - Other Electrical Systems

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Emergency/Exit Lighting

Qty: 38.00

Unit of Measure: Ea.

Estimate: $32,832.78

Assessor Name: System

Date Created: 12/21/2015

Notes: Provide allowance for replacement of eight (8) emergency lighting units and replacement of approximately 30 exit signs with LED type.

System: E2010 - Fixed Furnishings

Location: Main Stage

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $13,831.55

Assessor Name: System

Date Created: 01/07/2016

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

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

System: B2010 - Exterior Walls

Location: Main Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 6,500.00

Unit of Measure: S.F.

Estimate: $209,881.57

Assessor Name: System

Date Created: 01/05/2016

Notes: The exterior brick surfaces are generally in good condition for their age. The section near the loading dock and the exterior brick finish on the second floor Western exterior is showing signs of water infiltration. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

System: B2020 - Exterior Windows

Location: Main 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: 200.00

Unit of Measure: Ea.

Estimate: $1,241,148.55

Assessor Name: System

Date Created: 01/05/2016

Notes: The exterior windows have been upgraded from the original applications. The window system is estimated to have been installed in the 1990's. Several of the windows are no longer functional and will require attention prior to an overall effort. Overall, the windows are in fair condition based on the year of installation or last renovation. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: B3010105 - Built-Up

Location: Main Roof

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 50,000.00

Unit of Measure: S.F.

Estimate: $1,694,100.55

Assessor Name: System

Date Created: 01/05/2016

Notes: The built up roof was reported to have been installed within the past ten years. The roof is in fair condition with few exceptions. Currently there are active leaks that if not repaired soon will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof replacement.

System: C1010 - Partitions

Location: Main Building Wide

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Remodel existing classroom for lab use - approx 900 GSF - with chemical storage room, 15 tables + instructors table

Qty: 3.00

Unit of Measure: Ea.

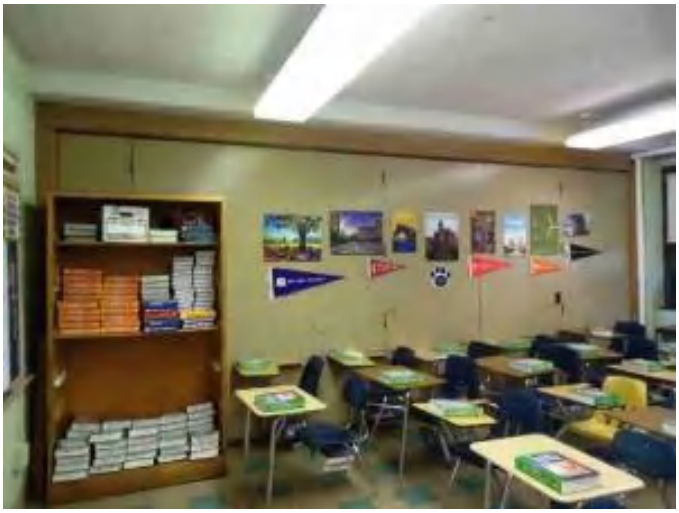
Estimate: $1,058,247.25

Assessor Name: System

Date Created: 01/07/2016

Notes: This schools science labs have been upgraded from the original construction. The installation consist of an instruction demonstration desk with sink. Wall mounted storage cabinets and cabinets with sinks for student use. The system is showing signs of age and lack of maintenance such as broken sink fixtures missing cabinet doors and damaged shelves. This deficiency provides a budgetary consideration for the universal upgrade of the science teaching labs to include new counter tops, sink, cabinets, shelves and fixtures required to support a conducive level of education.

System: C1010 - Partitions



Location: Main Classroom 102

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 600.00

Unit of Measure: S.F.

Estimate: $13,367.70

Assessor Name: System

Date Created: 01/05/2016

Notes: There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

System: C1030 - Fittings

Location: Main Building WIde

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 100.00

Unit of Measure: Ea.

Estimate: $27,091.25

Assessor Name: System

Date Created: 01/07/2016

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.

System: C1030 - Fittings

Location: Main Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace tackboards - select size

Qty: 10.00

Unit of Measure: Ea.

Estimate: $7,927.26

Assessor Name: System

Date Created: 01/07/2016

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

System: C1030 - Fittings

Location: Main Building Wide

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.

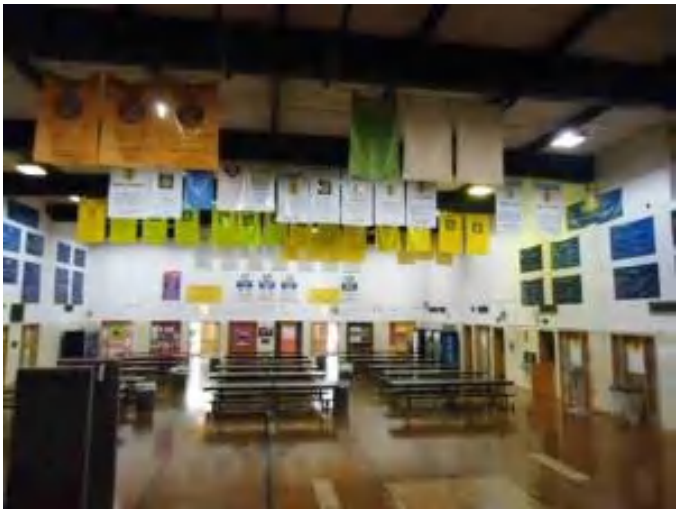
Estimate: $6,882.32

Assessor Name: System

Date Created: 01/07/2016

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

System: C3020414 - Wood Flooring



Location: Main Gym Auditorium

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: 01/07/2016

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

System: D2020 - Domestic Water Distribution

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 104,018.00

Unit of Measure: S.F.

Estimate: $527,096.44

Assessor Name: System

Date Created: 01/11/2016

Notes: Replace domestic water supply piping 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. (+100KSF)

Qty: 104,018.00

Unit of Measure: S.F.

Estimate: $441,723.59

Assessor Name: System

Date Created: 01/11/2016

Notes: Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.

System: D3040 - Distribution Systems

Location: IMC/library

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for IMC (850 students)

Qty: 704.00

Unit of Measure: Pr.

Estimate: $364,511.09

Assessor Name: System

Date Created: 01/11/2016

Notes: Install new roof mounted central station air handling unit for library with hot and chilled water coils, blower and motor, filters, return and outside air dampers, control valves and controls. Connect to hot and chilled water piping and controll system. Include new air distribution and electrical connection.

System: D3040 - Distribution Systems

Location: cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 704.00

Unit of Measure: Pr.

Estimate: $360,243.96

Assessor Name: System

Date Created: 01/11/2016

Notes: Install new central station air handling unit for cafeteria with hot and chilled water coils, blower and motor, filters, return and outside air dampers, control valves and controls. Connect to hot and chilled water piping and control system. Include new air distribution and electrical connection.

System: D3040 - Distribution Systems

Location: shop

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace HV Unit for Lab/Shop (5KSF)

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $71,026.00

Assessor Name: System

Date Created: 01/11/2016

Notes: Install new roof mounted heating and ventilating system for shop. Connect to hot water piping, control system and existing duct system. Include electrical connection.

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 104,018.00

Unit of Measure: S.F.

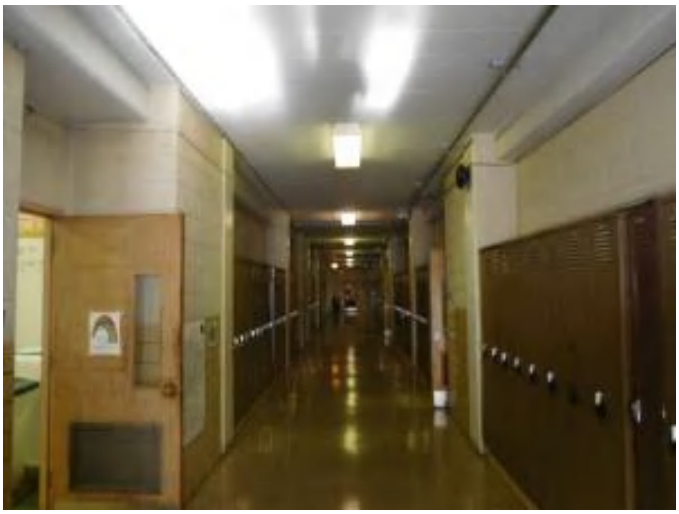
Estimate: $2,231,403.10

Assessor Name: System

Date Created: 01/11/2016

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

System: D4010 - Sprinklers



Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 104,018.00

Unit of Measure: S.F.

Estimate: $1,488,022.48

Assessor Name: System

Date Created: 01/11/2016

Notes: Install complete NFPA automatic sprinkler system in entire building including fire pump if required.

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: 480.00

Unit of Measure: L.F.

Estimate: $85,428.02

Assessor Name: System

Date Created: 12/21/2015

Notes: Add surface raceway system with 4 to 6 duplex receptacles in each of the 16 classrooms. Provide allowance for replacement of 50 duplex receptacles and receptacle branch circuits.

System: D5020 - Lighting and Branch Wiring

Location: Multi-Purpose Room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Lighting Fixtures

Qty: 20.00

Unit of Measure: Ea.

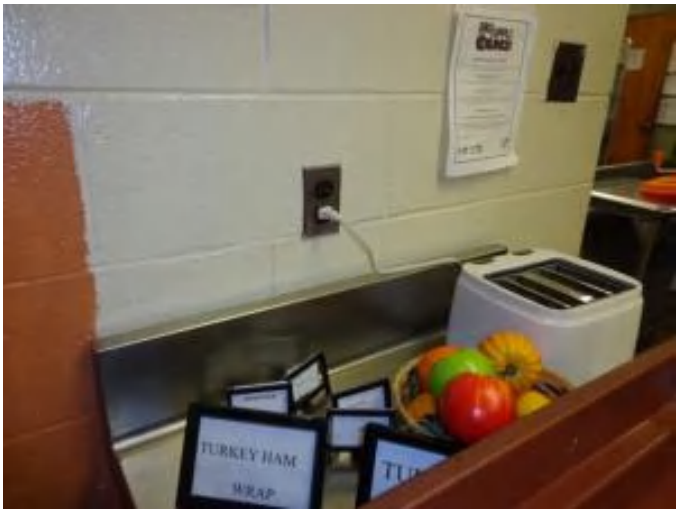
Estimate: $37,886.46

Assessor Name: System

Date Created: 12/21/2015

Notes: Provide 20 additional LED fixtures in the Multi-Purpose Room to increase the average maintained illumination level to at least 20 FC, but preferably to 30 FC.

System: D5020 - Lighting and Branch Wiring



Location: Kitchen

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace Wiring Device

Qty: 6.00

Unit of Measure: Ea.

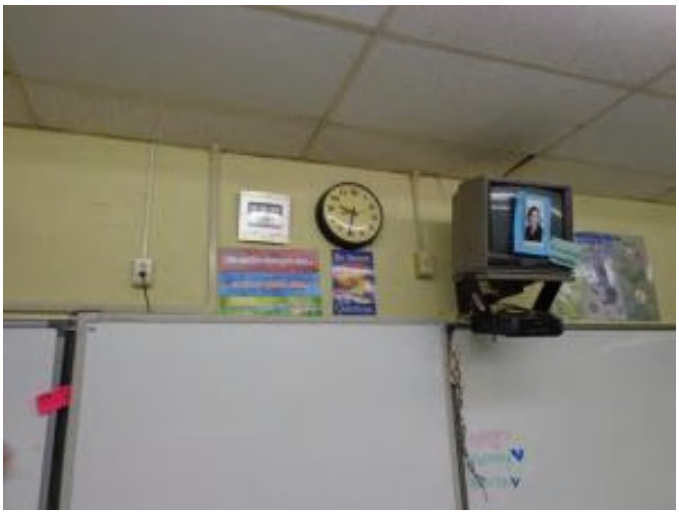
Estimate: $2,054.82

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace six (6) duplex receptacles in the kitchen with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel.

System: D5030 - Communications and Security



Location: Building wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Provide wireless GPS clock system

Qty: 45.00

Unit of Measure: LS

Estimate: $30,860.06

Assessor Name: System

Date Created: 12/21/2015

Notes: Replace non-operational clock system with a wireless GPS synchronized clock system.

Priority 5 - Response Time (> 5 yrs):

System: D3030 - Cooling Generating Systems

Location: roof, mechanical room

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 104,018.00

Unit of Measure: S.F.

Estimate: $1,670,462.37

Assessor Name: System

Date Created: 01/11/2016

Notes: Install new three hundred ton chilled water system. Include roof mounted air cooled chiller, distribution piping, glycol system, pumps and controls.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D2020 Domestic Water Distribution	Pump, pressure booster system, 5 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	mechanical room	alyan				25	2012	2037	$10,972.50	$12,069.75
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 4088 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	mechanical room	de deitrich	gt53019a			35	2012	2047	$94,386.50	$207,650.30
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Main Building - Building Engineer's Office	ITE	Type CDP	72-90806-051		30			$21,766.05	$23,942.66
												Total:	**$243,662.71**

Executive Summary

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

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

Function:	High School
Gross Area (SF):	58,730
Year Built:	1975
Last Renovation:	
Replacement Value:	$32,559,985
Repair Cost:	$7,521,102.43
Total FCI:	23.10 %
Total RSLI:	73.69 %

Description:

Facility Assessment
October 2015

School District of Philadelphia
Walter Biddle Saul High School Agriculture Annex
7100 Henry Ave.
Philadelphia, PA 19128

AG Annex 58,730 SF / 740 Students / LN 06

The Walter Biddle Saul High School is a high school that is dedicated to agricultural with facilities that match the mission. There are three buildings on the main site identified as B604001, B604004, B604005 and G604001 for the grounds surrounding this school. This facility is located at 7100 Henry Ave., Philadelphia, PA. Each building is similar in construction with the design of the rectangular-shaped, concrete and steel-framed buildings, including brick facades with a concrete foundation. B604001 or the Main Building was constructed in 1950, B604004 the Ag Annex was constructed in 1975 and B604005 the GYM Annex was constructed in 1975.

This report is divided into sections with the buildings identified by name and number.

The main entrance faces the Northern exterior facing Henry Ave. General parking is east and west of the main school and north and south of the Ag Annex. This School serves students in grades 9 to 12. The main building has a basement with two stories consisting of a total gross square footage of 104,018 GSF.

This school has several classrooms, a library, kitchen and student commons, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on October 6, 2015.

Mr. Rick Kovacs, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Tamera Conaway, Principal, also shared information about the school with the assessment team.

ARCHITECTURAL/STRUCTURAL SYSTEMS

The Ag Annex is located south of the main building and the main entrance faces north. Constructed in 1975 this is a single story building with a partially exposed basement level. The lower level or basement level is accessed via the southern parking area. This building supports the Agricultural Sciences for the Saul High School. The Annex has a total gross square footage of 58,730 and is identified as B604004.

This buildings concrete foundation is in very good condition with no reported issues. No recommendations are required at this time.

The exterior brick finish is in very 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 window system is in good condition considering the age of the application. The aluminum framed windows are suitable for the building's design and are expected to continue serving beyond the purview of this report. There were no issues with the exterior windows during the time of the inspection. No recommendations are required at this time.

The exterior door system consist of metal framed metal doors and a few roll-up door systems to support the shops and greenhouse classroom. The exterior door system is in good condition and appear to be on a continuous program of renewal. Although there were no records to indicate the date of installation considering the condition and application the doors are expected to have a extended life cycle. No recommendations are required at this time.

There are two existing greenhouses, Greenhouses A and B, which are connected directly to the Ag Annex on the southern exterior, there are several different types of mechanical and electrical systems which feed each of the buildings. Heating, ventilation and cooling are the main concerns as the systems are in poor condition and in need of replacement. The scope of work will generally include replacing the heating systems, replacing the cooling systems, installing new control, upgrading the lighting and electrical systems, and basic general construction work such as doors, floors and benches.

The built up roofing system is not expected to outlast the ten-year scope of this analysis. Although there were no reported issues during the time of the inspection repairs have been completed in the life of this roof. There are no current leaks and future budget modeling should include provisions for the replacement of all failing roofing systems.

Special consideration for those that may be physically challenged was not a main factor in the design of this Annex building. The main entrance serves as the exterior ADA entrance and is limited by the curb and access path. 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 limited in support as the absence of ADA lever actuated door hardware and guard rails, signage, ADA restroom accommodations.

The interior partition system is sound and well maintained. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

Interior doors are typically wood in wood or metal frames. Doors are generally in fair condition and are a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numerous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

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

Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

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.

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.

The interior floor finishes consist of vinyl tile, ceramic tile and concrete. The ceramic tile is located in the restrooms while the concrete flooring is in the labs and classrooms dedicated to industrial work. Other classrooms and hallways have a 12x12 vinyl tile floor finish. In each case the interior floor finishes are in very good condition. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The interior pained finish appears to be on a consistent renewal program and in very good condition. The painted CMU finish is expected to have a life cycle that extends beyond the purview of this report.

The ceiling finish is a 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The 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.

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

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Urinals and water closets have exposed manual flush valves with lever operators. Water coolers are stainless steel single level type.

Hot water is provided by two gas fired Paloma units in the basement mechanical room connected to a horizontal insulated storage tank. There are two small circulating pumps, one for the Agriculture Building and one for the Gymnasium Building. There is also a fifty gallon Bradford White electric water heater in a work area on the main level adjacent to the greenhouse that reportedly only serves a work sink in that area. A duplex sump pump in the mechanical room pumps ground water from the basement level and sewage from the main level.

Visible sanitary, waste and vent piping is hub and spigot cast iron. Domestic hot and cold water is insulated rigid copper piping. Domestic water is served from the Gymnasium Building.

The plumbing fixtures are from a 2012 renovation and should have remaining service life in excess of thirty years. The water heaters are from 2012 and should remain serviceable twenty more years. Older sanitary and waste piping should be inspected and repaired or replaced as required. The domestic water supply piping is from the original 1975 installation and should be replaced.

HVAC-Heating is provided by steam and hot water generated by two steam boilers and a heat exchanger. The boilers are Weil Mclain seventy five hp oil fired located in the basement mechanical room installed in 1975. This room also contains a duplex Shipco condensate return/boiler feed system, the shell and tube hot water heat exchanger and two end suction B&G five hp hot water pumps. Fuel oil is stored in an 8000 gallon underground tank. A duplex fuel oil pump system in the mechanical room provides circulation. Boilers are connected to a field fabricated insulated flue system.

A Carrier air cooled chiller is located on grade adjacent to this building in a fence enclosure. The surrounding area is overgrown with vegetation making access difficult. The chiller is a 111 ton air cooled screw machine installed in 2012. The chiller supplies cooling to the Agriculture and Gymnasium Buildings. Two five hp B&G end suction pumps are located in the basement mechanical room. There is a glycol system for freeze protection and a chemical treatment system. The chilled water system should have excess capacity available for additional cooling loads.

A 2012 Carrier air handling unit in the mechanical room serves two classrooms. There are newer unit ventilators in other classrooms.

These units have heating and cooling coils. There are three older heating and ventilating units in the building serving shop and production areas. A duplex control air compressor is in the mechanical room. Controls are older pneumatic with no central control or automation system. Toilet exhaust is provided by four centrifugal roof ventilators.

There are two greenhouses, one of which is currently not used. Mechanical systems in these structures include unit heaters, hot water radiation, exhaust fans and water spray and misting systems for humidification and watering. Most of these systems are inoperable. There is a separate section of this report addressing replacement of these structures including all components.

The boilers and heating and ventilating units are from 1975 and should be replaced. The chiller, air handling unit, unit ventilators, pumps and piping distribution are from 2012 and should have remaining service life of twenty five years for the chiller and twenty years for the air handling unit, pumps, distribution and unit ventilators.

FIRE PROTECTION-There are sprinklers in the mechanical room and the lower level only. A six inch fire protection line from Henry Ave. enters the building in a tool storage area.

ELCTRICAL SYSTEMS

Electrical Service-- The building is served by a 13.2 kV underground service from PECO Energy Company to a substation located in the Basement of the Agricultural Building. The substation consists of a 600A load interrupter switch, Hevi-Duty Electric 1000 kVA, 208/120V, 3 phase, 4 wire dry-type transformer, and Westinghouse Pow-R-Line 4000A Main Switchboard with three distribution sections with 21 feeder circuit breakers. This substation also feeds the Main Building and Gymnasium Building. The substation is original to the 1975 building and has exceeded its 30 year useful life.

There are approximately eight (8) normal power system panelboards in the Agriculture Building that are original equipment and have served their useful life.

Receptacles—Nine (9) classrooms are not provided with an adequate number of duplex receptacles. It is recommended that a surface raceway system with 4 to 6 additional duplex receptacles be provided in each classroom. Power poles are provided in the computer for additional receptacles. There are a few duplex receptacles located within 6 feet of a sink that need to be replaced with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel. None of the duplex receptacles in the two green house buildings are GFCI type. This deficiency is addressed in the greenhouse building replacement.

Lighting-- Fixtures in classrooms are generally 4 foot fluorescent wraparound fixtures with acrylic prismatic lenses and T12 lamps. Some classrooms rooms have 2x4 modular fluorescent fixtures with acrylic lenses or industrial type fluorescent with T12 lamps. Corridors and restrooms are provided with 2x4 recessed fluorescent grid troffers with T8 lamps and are in good condition with a remaining useful life of at least 10 years. Lighting fixtures in the greenhouses will be replaced with the new greenhouse building.

The Basement Mechanical Room is provided with pendant metal halide fixtures and wall mounted compact fluorescent fixtures. The metal halide fixtures should be replaced with industrial type fluorescent fixtures with wire guards, with some fixtures wired on emergency power for egress.

The recessed HID lighting fixtures in the canopy at the main entrance should be replaced with wet location, LED recessed fixtures. Exterior lighting fixtures for the campus are time clock controlled and served from two panelboards in the Boiler Room.

Fire Alarm System-- The fire alarm system control panel is a Simplex 4002 panel that has exceeded its useful life. A General Electric EST fire alarm control panel was added when the boilers were replaced. A complete system replacement with an addressable type fire alarm system that meets current NFPA codes and ADA guidelines is recommended.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are located to provide Wi-Fi service throughout the entire school. The Main Distribution Frame (MDF) is located inside a storage room within Classroom 29A. The incoming telephone demarcation point is in this same storage room.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system using a 250W Lucent Technologies amplifier. Each classroom has a paging speaker. There are also recessed ceiling mounted paging speakers in corridors.

Clock and Program System-- Clock/speaker assemblies are located in classrooms and throughout the school. The clocks are not functioning and should be replaced with a wireless GPS master clock system with battery operated, synchronized clocks.

Television System-- There are television outlets and wall mounted televisions in classrooms.

Video Surveillance and Security Systems-- There are no video surveillance cameras in the Agriculture Building. Motion sensors are provided in the corridors.

Emergency Power System--There is a Generac 45 kW/56.2 kVA, 208/120V, 3 phase standby generator with natural gas fuel supply located in the Basement that serves emergency egress and exit lighting. The generator supplies 225A Panelboard B (also labeled Panel ER) and Panelboard A (also labeled Panel EMG) via an ASCO Series 300, 150A automatic transfer switch (ATS). The generator has 286 hours of operation and has served its useful life. Replacement is recommended within the next 2 to 3 years. The ATS has been replaced and is in good condition with an estimated remaining useful life of 15 years. Panelboard B serves the gymnasium.

Emergency Lighting System / Exit Lighting-- Selected emergency egress lighting fixtures and exit signs are connected to the standby power system. Exit signs are approaching the end of their useful life and should be replaced with LED type.

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

RECOMMENDATIONS

- Replace Interior Doors Selective
- Upgrade Roof
- Replace tackboards
- Greenhouse renovation
- Chalkboard removal and replacement
- Signage upgrade
- Upgrade stair railing system
- Ceiling finish upgrade
- Install complete NFPA automatic sprinkler system in remainder of building including fire pump if required.
- Install new DDC control system with building automation for HVAC equipment. Include computer monitor, software and graphics package.
- Replace domestic water supply piping including fittings, valves, hangers and insulation.
- Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.
- Replace three heating and ventilating units for shop areas. Connect to hot water piping and control system. Include electrical connection.
- Replace two older boilers with two new oil fired seventy five hp cast iron low pressure steam boilers.
- Replace the substation that serves the campus, which consists of a 600A load interrupter switch, 1000 kVA, 208/120V, 3 phase, 4 wire dry-type transformer, and 4000A Main Switchboard with three distribution sections with 21 feeder circuit breakers.
- Replace eight (8) normal system panelboards and their feeder conductors for panels that have reached the end of their useful life.
- Add surface raceway system with 4 to 6 duplex receptacles in each of nine (9) classrooms.
- Replace duplex receptacles within sink feet of a sink with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel (estimate 4 receptacles to be replaced).
- Replace all fluorescent lighting fixtures having T12 lamps with fixtures having T8 lamps (estimate 47,000 SF).
- Replace metal halide lighting fixtures in the Basement Mechanical Room with industrial fluorescent fixtures with T8 lamps and wire guards.
- Replace the recessed HID lighting fixtures in the canopy at the main entrance with wet location, LED recessed fixtures.
- Replace obsolete fire alarm system with an addressable system.
- Replace non-operational clock system with a wireless GPS synchronized clock system.
- Replace standby generator and emergency lighting Panelboards A and B.
- Replace approximately 12 exit signs with LED type.

Attributes:

General Attributes:			
Active:	Open	Bldg ID:	B604004
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S604001		

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	50.78 %	0.00 %	$0.00
B30 - Roofing	60.00 %	86.35 %	$914,814.30
C10 - Interior Construction	49.64 %	7.32 %	$98,014.14
C20 - Stairs	60.00 %	89.85 %	$67,545.12
C30 - Interior Finishes	68.51 %	18.14 %	$463,483.09
D20 - Plumbing	89.09 %	24.52 %	$585,720.11
D30 - HVAC	103.42 %	36.38 %	$2,128,758.71
D40 - Fire Protection	105.71 %	135.17 %	$715,270.89
D50 - Electrical	110.11 %	67.42 %	$2,327,556.65
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	0.00 %	$0.00
F10 - Special Construction	30.00 %	22.18 %	$219,939.42
Totals:	**73.69 %**	**23.10 %**	**$7,521,102.43**

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.

Site Assessment Report - B604004;Saul Annex

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$1,428,314
A1030	Slab on Grade	$15.51	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$910,902
A2010	Basement Excavation	$13.07	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$767,601
A2020	Basement Walls	$23.02	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$1,351,965
B1010	Floor Construction	$92.20	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$5,414,906
B1020	Roof Construction	$24.11	S.F.	27,000	100	1975	2075		60.00 %	0.00 %	60			$650,970
B2010	Exterior Walls	$31.22	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$1,833,551
B2020	Exterior Windows	$13.63	S.F.	58,730	40	1975	2015	2027	30.00 %	0.00 %	12			$800,490
B2030	Exterior Doors	$1.67	S.F.	58,730	25	1975	2000	2027	48.00 %	0.00 %	12			$98,079
B3010105	Built-Up	$37.76	S.F.	27,000	20	1995	2015	2027	60.00 %	89.73 %	12		$914,814.30	$1,019,520
B3020	Roof Openings	$0.68	S.F.	58,730	20	1995	2015	2027	60.00 %	0.00 %	12			$39,936
C1010	Partitions	$14.93	S.F.	58,730	100	1975	2075		60.00 %	0.00 %	60			$876,839
C1020	Interior Doors	$3.76	S.F.	58,730	40	1975	2015	2027	30.00 %	21.60 %	12		$47,705.87	$220,825
C1030	Fittings	$4.12	S.F.	58,730	40	1975	2015	2027	30.00 %	20.79 %	12		$50,308.27	$241,968
C2010	Stair Construction	$1.28	S.F.	58,730	100	1975	2075		60.00 %	89.85 %	60		$67,545.12	$75,174
C3010230	Paint & Covering	$13.21	S.F.	58,730	10	1995	2005	2027	120.00 %	0.00 %	12			$775,823
C3020412	Terrazzo & Tile	$75.52	S.F.	3,000	50	1975	2025		20.00 %	0.00 %	10			$226,560
C3020413	Vinyl Flooring	$9.68	S.F.	30,730	20	1975	1995	2027	60.00 %	0.00 %	12			$297,466
C3020415	Concrete Floor Finishes	$0.97	S.F.	25,000	50	1975	2025		20.00 %	0.00 %	10			$24,250
C3030	Ceiling Finishes	$20.97	S.F.	58,730	25	1975	2000	2027	48.00 %	37.63 %	12		$463,483.09	$1,231,568
D2010	Plumbing Fixtures	$31.58	S.F.	58,730	35	2012	2047		91.43 %	0.00 %	32			$1,854,693
D2020	Domestic Water Distribution	$2.90	S.F.	58,730	25	1975	2000	2042	108.00 %	174.74 %	27		$297,605.39	$170,317
D2030	Sanitary Waste	$2.90	S.F.	58,730	25	1975	2000	2042	108.00 %	169.16 %	27		$288,114.72	$170,317
D2040	Rain Water Drainage	$3.29	S.F.	58,730	30	1975	2005	2025	33.33 %	0.00 %	10			$193,222
D3020	Heat Generating Systems	$18.67	S.F.	58,730	35	1975	2010	2052	105.71 %	59.81 %	37		$655,796.89	$1,096,489
D3030	Cooling Generating Systems	$24.48	S.F.	58,730	30	2012	2042		90.00 %	0.00 %	27			$1,437,710
D3040	Distribution Systems	$42.99	S.F.	58,730	25	1975	2000	2042	108.00 %	8.44 %	27		$213,078.00	$2,524,803
D3050	Terminal & Package Units	$11.60	S.F.		20				0.00 %	0.00 %				$0
D3060	Controls & Instrumentation	$13.50	S.F.	58,730	20	1975	1995	2037	110.00 %	158.90 %	22		$1,259,883.82	$792,855
D4010	Sprinklers	$8.02	S.F.	58,730	35			2052	105.71 %	151.86 %	37		$715,270.89	$471,015
D4020	Standpipes	$0.99	S.F.	58,730	35			2052	105.71 %	0.00 %	37			$58,143
D5010	Electrical Service/Distribution	$9.70	S.F.	58,730	30	1975	2005	2047	106.67 %	167.77 %	32		$955,779.89	$569,681
D5020	Lighting and Branch Wiring	$34.68	S.F.	58,730	20	1975	1995	2037	110.00 %	48.07 %	22		$979,078.93	$2,036,756
D5030	Communications and Security	$12.99	S.F.	58,730	15	1975	1990	2032	113.33 %	34.05 %	17		$259,766.75	$762,903
D5090	Other Electrical Systems	$1.41	S.F.	58,730	30	1975	2005	2047	106.67 %	160.53 %	32		$132,931.08	$82,809
E1020	Institutional Equipment	$4.82	S.F.	58,730	35	1975	2010	2027	34.29 %	0.00 %	12			$283,079
E1090	Other Equipment	$11.10	S.F.	58,730	35	1975	2010	2027	34.29 %	0.00 %	12			$651,903
E2010	Fixed Furnishings	$2.13	S.F.	58,730	40	1975	2015	2027	30.00 %	0.00 %	12			$125,095
F1010	Special Structures	$154.92	S.F.	6,400	40	1975	2015	2027	30.00 %	22.18 %	12		$219,939.42	$991,488
								Total	**73.69 %**	**23.10 %**			**$7,521,102.43**	**$32,559,985**

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 100%

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

Note: Concrete 42%
Vinyl 52%
Tile 6%

System: F - Special Construction — This system contains no images

Note: Two 3,200 SF greenhouses attached to the building

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:	**$7,521,102**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$656,416**	**$8,177,518**
*** 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	$914,814	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$914,814**
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	$47,706	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$47,706**
C1030 - Fittings	$50,308	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$50,308**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

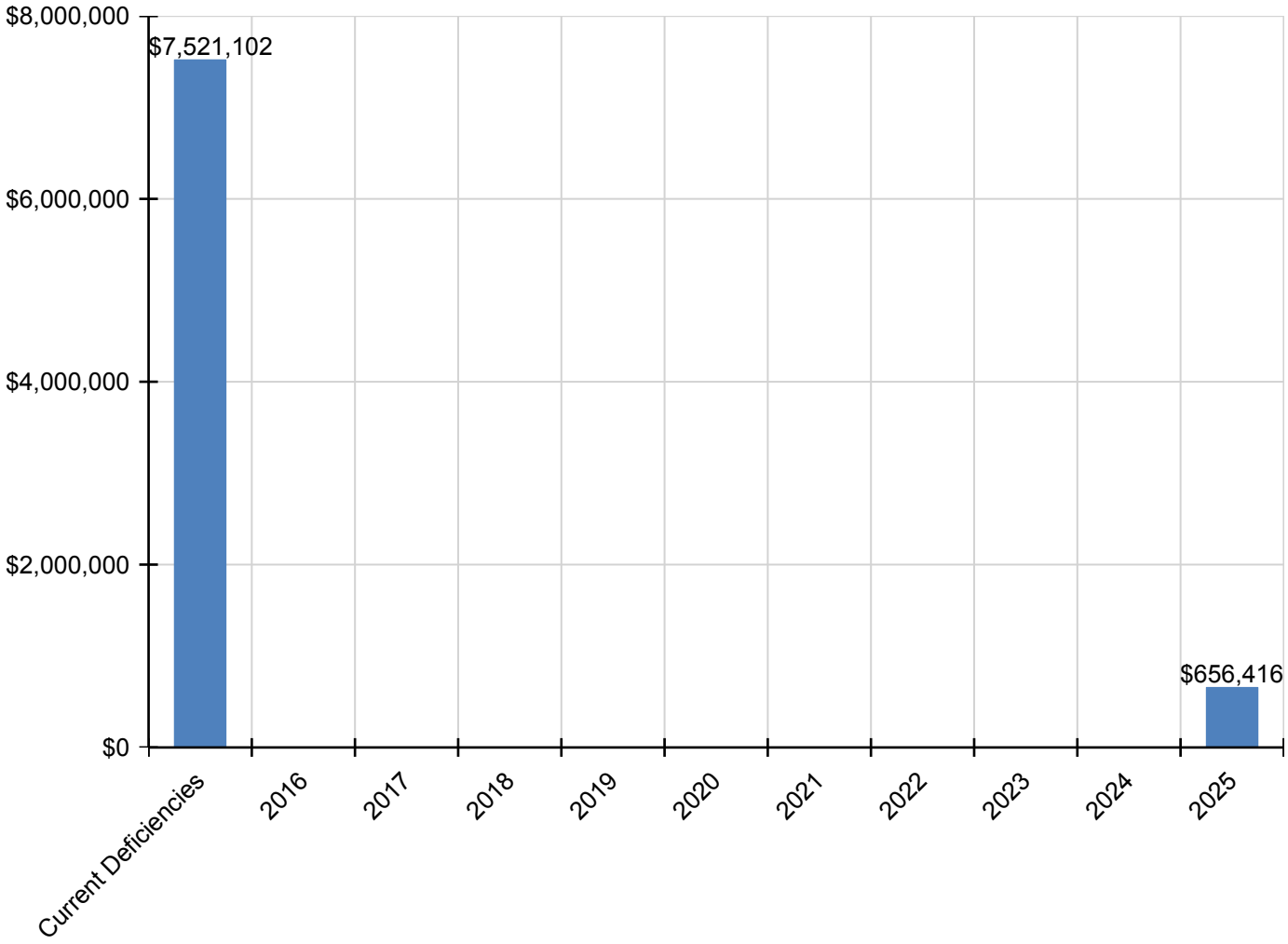
C2010 - Stair Construction	$67,545	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$67,545**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$334,925	**$334,925**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$35,849	**$35,849**
C3030 - Ceiling Finishes	$463,483	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$463,483**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$297,605	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$297,605**
D2030 - Sanitary Waste	$288,115	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$288,115**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$285,641	**$285,641**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$655,797	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$655,797**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$213,078	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$213,078**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,259,884	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,259,884**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$715,271	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$715,271**
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	$955,780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$955,780**
D5020 - Lighting and Branch Wiring	$979,079	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$979,079**
D5030 - Communications and Security	$259,767	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$259,767**
D5090 - Other Electrical Systems	$132,931	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$132,931**
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**
F - Special Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
F10 - Special Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
F1010 - Special Structures	$219,939	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$219,939**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

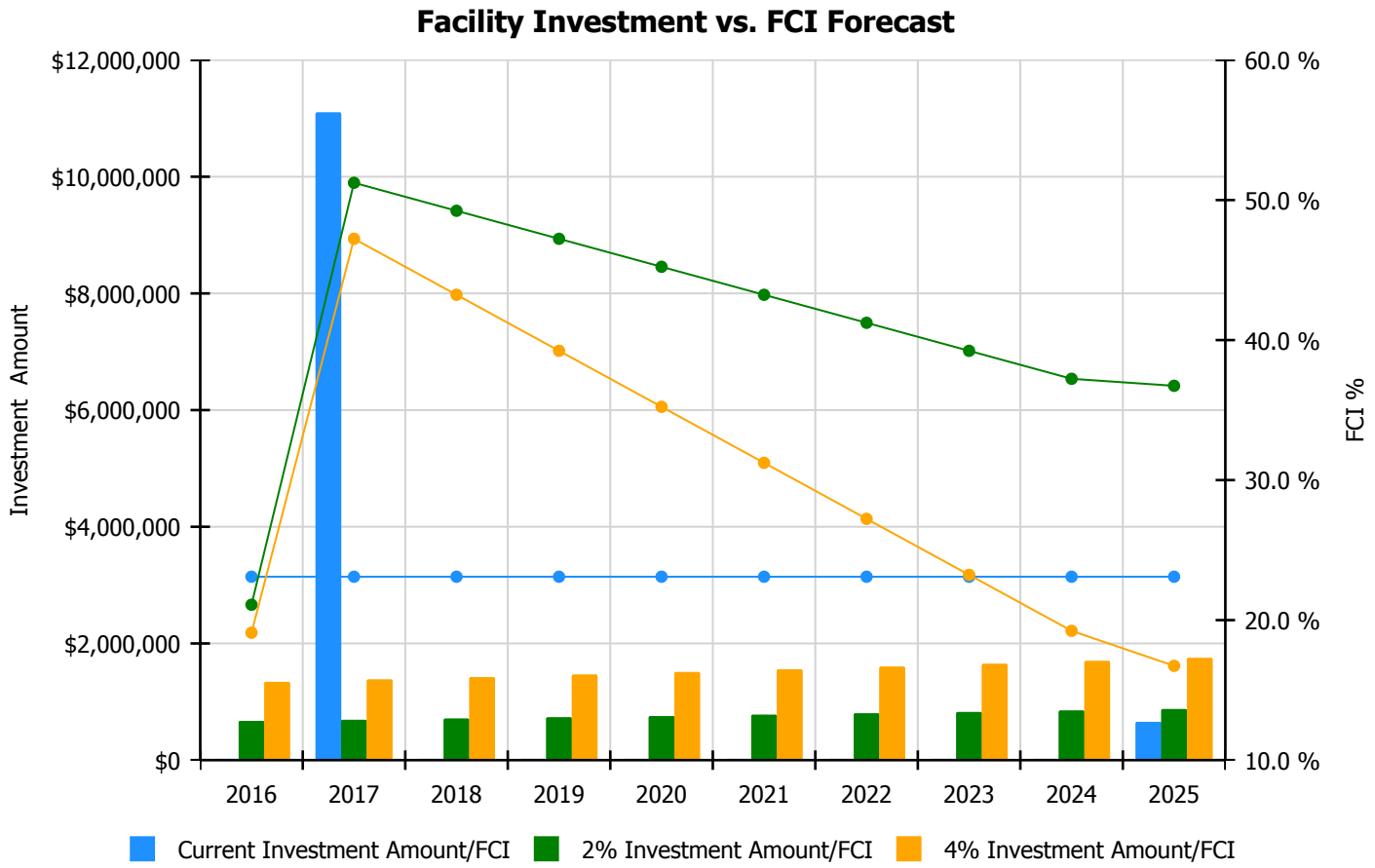
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

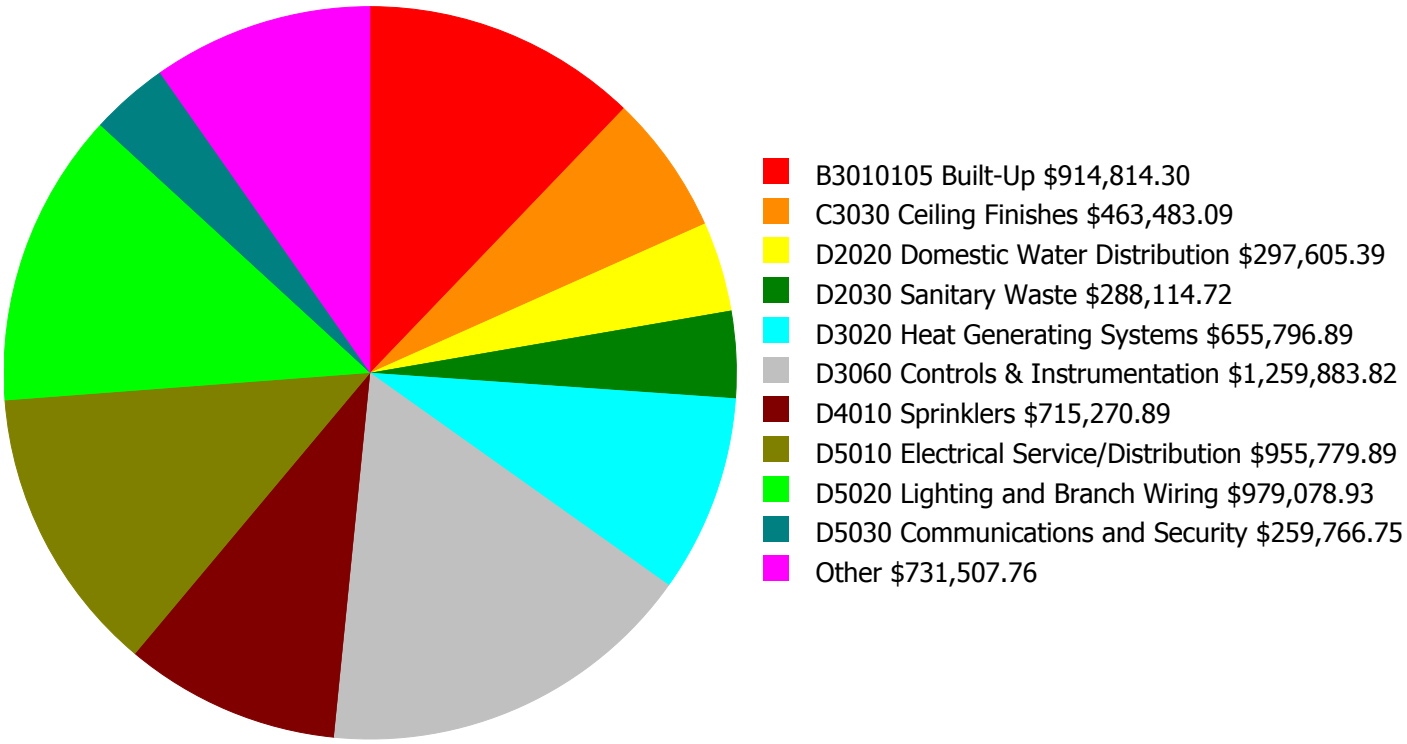
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 23.1%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$670,736.00	21.10 %	$1,341,471.00	19.10 %
2017	$11,100,306	$690,858.00	51.23 %	$1,381,716.00	47.23 %
2018	$0	$711,583.00	49.23 %	$1,423,167.00	43.23 %
2019	$0	$732,931.00	47.23 %	$1,465,862.00	39.23 %
2020	$0	$754,919.00	45.23 %	$1,509,838.00	35.23 %
2021	$0	$777,566.00	43.23 %	$1,555,133.00	31.23 %
2022	$0	$800,893.00	41.23 %	$1,601,787.00	27.23 %
2023	$0	$824,920.00	39.23 %	$1,649,841.00	23.23 %
2024	$0	$849,668.00	37.23 %	$1,699,336.00	19.23 %
2025	$656,416	$875,158.00	36.73 %	$1,750,316.00	16.73 %
Total:	**$11,756,722**	**$7,689,232.00**		**$15,378,467.00**	

Deficiency Summary by System

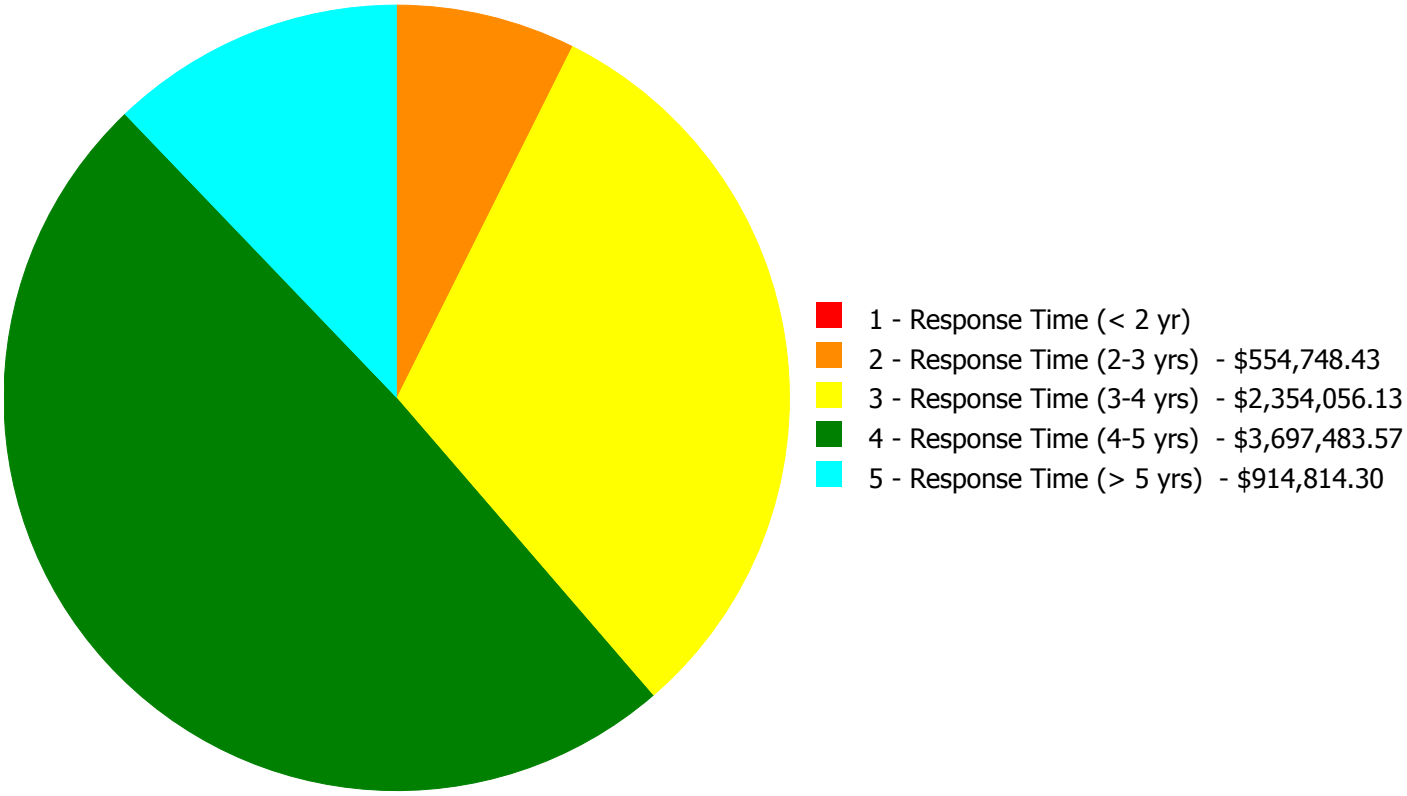
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $7,521,102.43

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: $7,521,102.43

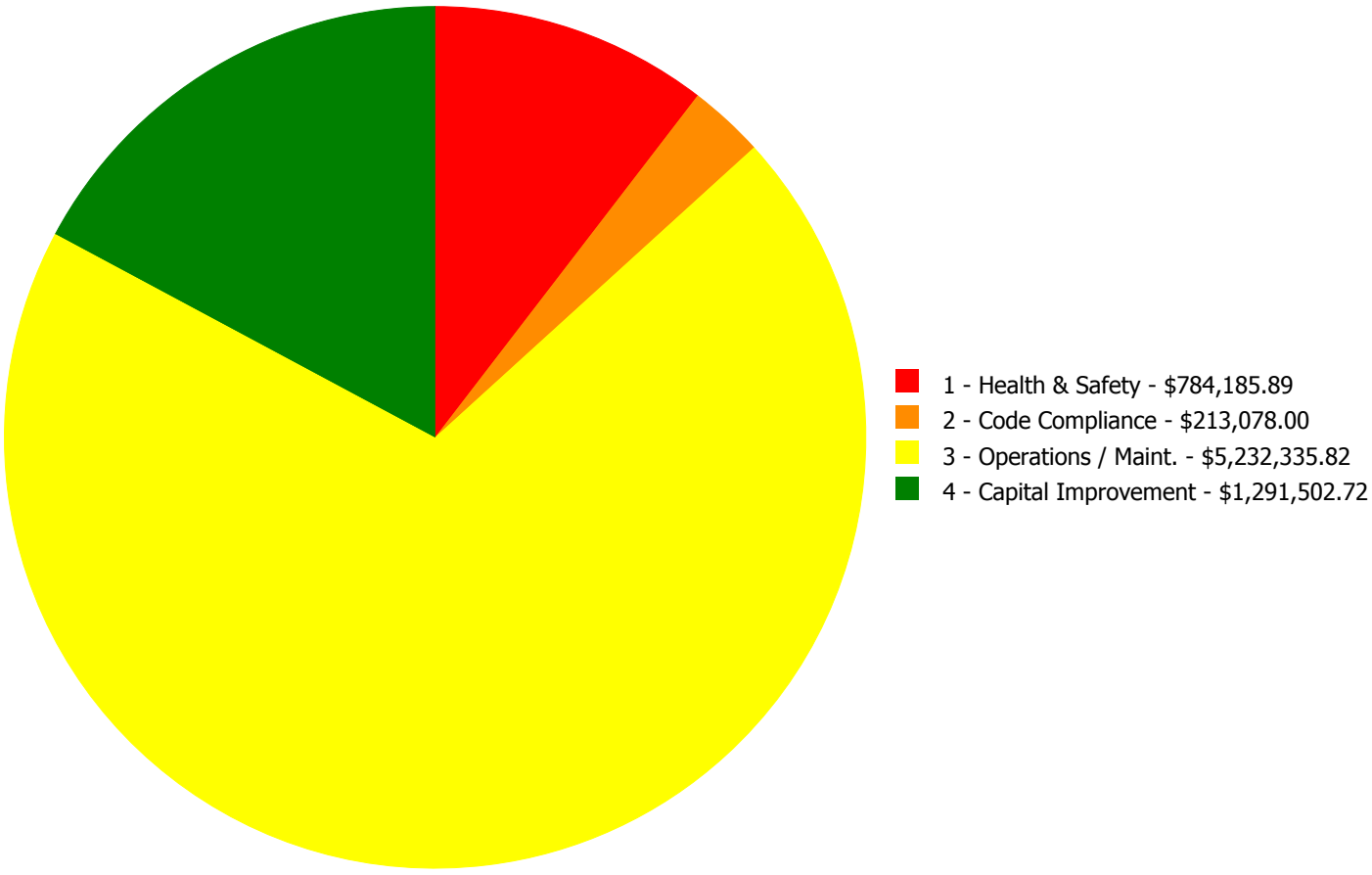
Deficiency By Priority Investment Table

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
B3010105	Built-Up	$0.00	$0.00	$0.00	$0.00	$914,814.30	$914,814.30
C1020	Interior Doors	$0.00	$0.00	$47,705.87	$0.00	$0.00	$47,705.87
C1030	Fittings	$0.00	$23,720.22	$26,588.05	$0.00	$0.00	$50,308.27
C2010	Stair Construction	$0.00	$67,545.12	$0.00	$0.00	$0.00	$67,545.12
C3030	Ceiling Finishes	$0.00	$463,483.09	$0.00	$0.00	$0.00	$463,483.09
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$297,605.39	$0.00	$297,605.39
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$288,114.72	$0.00	$288,114.72
D3020	Heat Generating Systems	$0.00	$0.00	$0.00	$655,796.89	$0.00	$655,796.89
D3040	Distribution Systems	$0.00	$0.00	$0.00	$213,078.00	$0.00	$213,078.00
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,259,883.82	$0.00	$1,259,883.82
D4010	Sprinklers	$0.00	$0.00	$0.00	$715,270.89	$0.00	$715,270.89
D5010	Electrical Service/Distribution	$0.00	$0.00	$955,779.89	$0.00	$0.00	$955,779.89
D5020	Lighting and Branch Wiring	$0.00	$0.00	$943,559.96	$35,518.97	$0.00	$979,078.93
D5030	Communications and Security	$0.00	$0.00	$247,491.28	$12,275.47	$0.00	$259,766.75
D5090	Other Electrical Systems	$0.00	$0.00	$132,931.08	$0.00	$0.00	$132,931.08
F1010	Special Structures	$0.00	$0.00	$0.00	$219,939.42	$0.00	$219,939.42
	Total:	$0.00	$554,748.43	$2,354,056.13	$3,697,483.57	$914,814.30	$7,521,102.43

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:



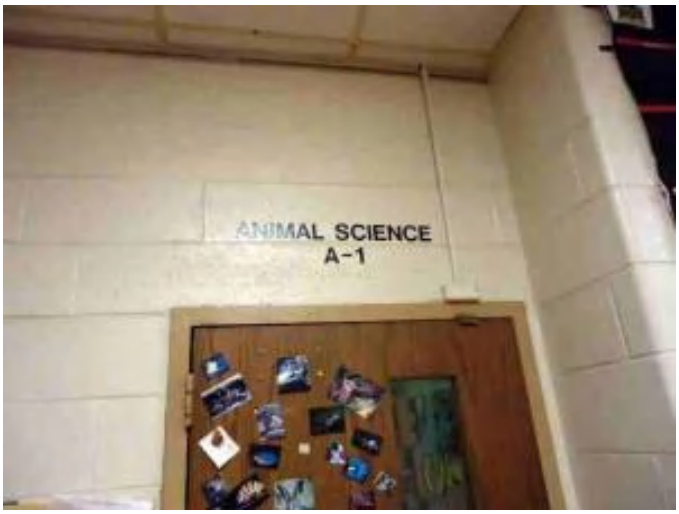
Budget Estimate Total: $7,521,102.43

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: C1030 - Fittings



Location: AG Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 70.00

Unit of Measure: Ea.

Estimate: $18,963.87

Assessor Name: Craig Anding

Date Created: 01/11/2016

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.

System: C1030 - Fittings

Location: AG Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace tackboards - select size

Qty: 6.00

Unit of Measure: Ea.

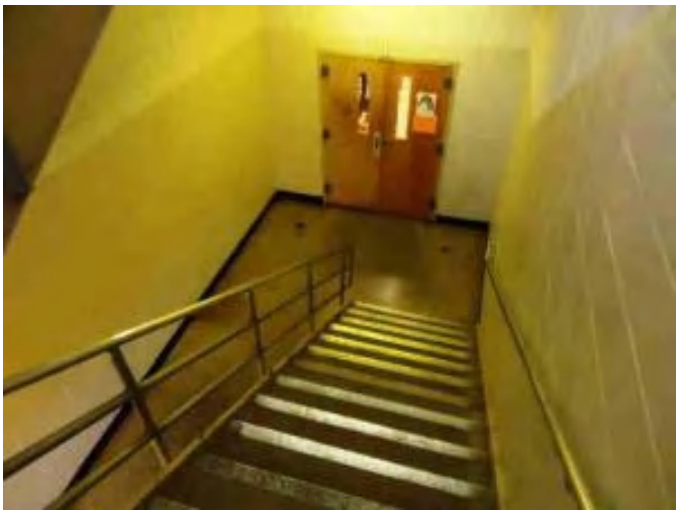
Estimate: $4,756.35

Assessor Name: Craig Anding

Date Created: 01/11/2016

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

System: C2010 - Stair Construction



Location: AG Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 400.00

Unit of Measure: L.F.

Estimate: $67,545.12

Assessor Name: Craig Anding

Date Created: 01/11/2016

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: C3030 - Ceiling Finishes

Location: AG Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 30,730.00

Unit of Measure: S.F.

Estimate: $463,483.09

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: The ceiling finish is a 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The 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.

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

System: C1020 - Interior Doors

Location: AG Building Wide

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: 10.00

Unit of Measure: Ea.

Estimate: $47,705.87

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Interior doors are typically wood in wood or metal frames. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numerous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

System: C1030 - Fittings

Location: AG Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $26,588.05

Assessor Name: Craig Anding

Date Created: 01/11/2016

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

System: D5010 - Electrical Service/Distribution

Location: Basement Main Electrical Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Substation

Qty: 1.00

Unit of Measure: Ea.

Estimate: $694,449.62

Assessor Name: Craig Anding

Date Created: 12/24/2015

Notes: Replace the substation that serves the campus, which consists of a 600A load interrupter switch, 1000 kVA, 208/120V, 3 phase, 4 wire dry-type transformer, and 4000A Main Switchboard with three distribution sections with 21 feeder circuit breakers.

System: D5010 - Electrical Service/Distribution

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 8.00

Unit of Measure: Ea.

Estimate: $261,330.27

Assessor Name: Craig Anding

Date Created: 12/24/2015

Notes: Replace eight (8) normal system panelboards and their feeder conductors for panels that have reached the end of their useful life.

System: D5020 - Lighting and Branch Wiring

Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 47,000.00
Unit of Measure: S.F.
Estimate: $906,653.50
Assessor Name: Craig Anding
Date Created: 12/24/2015

Notes: Replace all fluorescent lighting fixtures having T12 lamps with fixtures having T8 lamps (estimate 47,000 SF).

System: D5020 - Lighting and Branch Wiring

Location: Ag Bldg. Basement
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 35.00
Unit of Measure: Ea.
Estimate: $36,906.46
Assessor Name: Craig Anding
Date Created: 12/27/2015

Notes: Replace metal halide lighting fixtures in the Basement Mechanical Room with industrial fluorescent fixtures with T8 lamps and wire guards.

System: D5030 - Communications and Security

Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 58,730.00
Unit of Measure: S.F.
Estimate: $247,491.28
Assessor Name: Craig Anding
Date Created: 12/27/2015

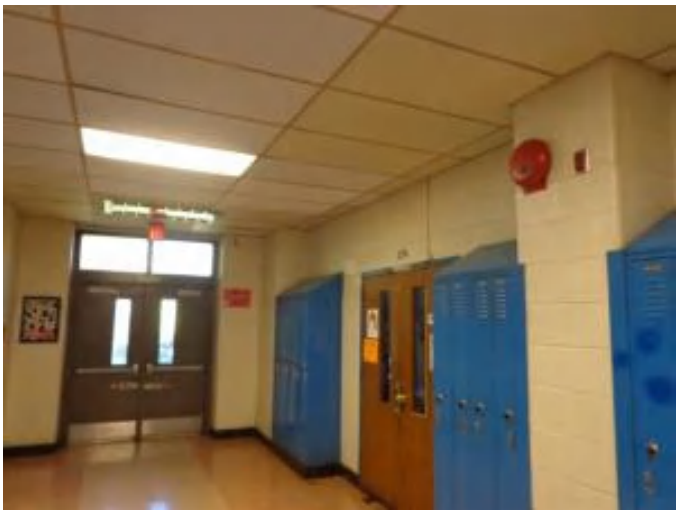
Notes: Replace obsolete fire alarm system with an addressable system.

System: D5090 - Other Electrical Systems

Location: Ag Bldg. Basement
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $118,322.24
Assessor Name: Craig Anding
Date Created: 12/27/2015

Notes: Replace standby generator and emergency lighting Panelboards A and B.

System: D5090 - Other Electrical Systems



Location:	Building wide
Distress:	Beyond Service Life
Category:	3 - Operations / Maint.
Priority:	3 - Response Time (3-4 yrs)
Correction:	Replace Emergency/Exit Lighting
Qty:	12.00
Unit of Measure:	Ea.
Estimate:	$14,608.84
Assessor Name:	Craig Anding
Date Created:	12/27/2015

Notes: Replace approximately 12 exit signs with LED type.

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

System: D2020 - Domestic Water Distribution

Location: entire building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace domestic water piping (75 KSF)
Qty: 58,730.00
Unit of Measure: S.F.
Estimate: $297,605.39
Assessor Name: Craig Anding
Date Created: 01/11/2016

Notes: Replace domestic water supply piping 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. (+50KSF)
Qty: 58,730.00
Unit of Measure: S.F.
Estimate: $288,114.72
Assessor Name: Craig Anding
Date Created: 01/11/2016

Notes: Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.

System: D3020 - Heat Generating Systems

Location: mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler, cast iron sectional (100 HP)

Qty: 2.00

Unit of Measure: Ea.

Estimate: $655,796.89

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace two older boilers with two new oil fired seventy five hp cast iron low pressure steam boilers.

System: D3040 - Distribution Systems

Location: shop areas

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace HV Unit for Lab/Shop (5KSF)

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $71,026.00

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace three heating and ventilating units for shop areas. Connect to hot water piping and control system. Include electrical connection.

System: D3040 - Distribution Systems

Location: shop areas

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace HV Unit for Lab/Shop (5KSF)

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $71,026.00

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace three heating and ventilating units for shop areas. Connect to hot water piping and control system. Include electrical connection.

System: D3040 - Distribution Systems

Location: shop areas

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace HV Unit for Lab/Shop (5KSF)

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $71,026.00

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace three heating and ventilating units for shop areas. Connect to hot water piping and control system. Include electrical connection.

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 58,730.00

Unit of Measure: S.F.

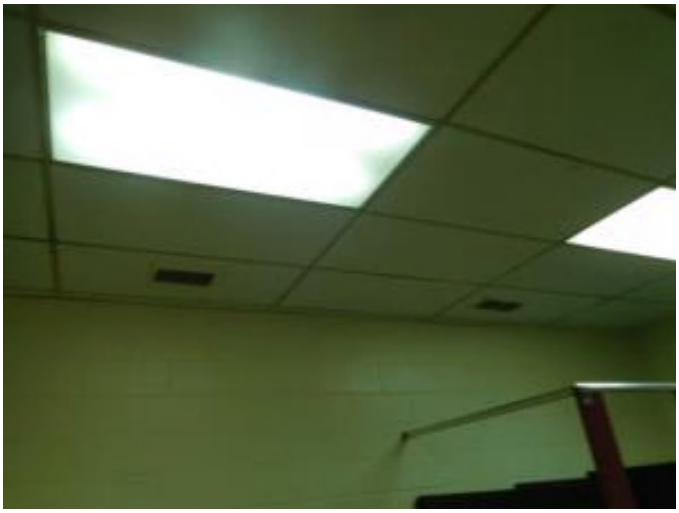
Estimate: $1,259,883.82

Assessor Name: Craig Anding

Date Created: 01/11/2016

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

System: D4010 - Sprinklers



Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 50,000.00

Unit of Measure: S.F.

Estimate: $715,270.89

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Install complete NFPA automatic sprinkler system in remainder of building including fire pump if required.

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: 270.00

Unit of Measure: L.F.

Estimate: $31,618.90

Assessor Name: Craig Anding

Date Created: 12/24/2015

Notes: Add surface raceway system with 4 to 6 duplex receptacles in each of nine (9) classrooms.

System: D5020 - Lighting and Branch Wiring

Location: Main Entrance canopy

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lighting fixtures

Qty: 2.00

Unit of Measure: Ea.

Estimate: $2,530.19

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Replace the recessed HID lighting fixtures in the canopy at the main entrance with wet location, LED recessed fixtures.

System: D5020 - Lighting and Branch Wiring

Location: Receptacles at sinks

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace Wiring Device

Qty: 4.00

Unit of Measure: Ea.

Estimate: $1,369.88

Assessor Name: Craig Anding

Date Created: 12/24/2015

Notes: Replace duplex receptacles within sink feet of a sink with ground-fault circuit-interrupting (GFCI) type receptacles to comply with National Electrical Code (NEC) Article 210.8 for protection for personnel (estimate 4 receptacles to be replaced).

System: D5030 - Communications and Security

Location: Building wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 18.00

Unit of Measure: Ea.

Estimate: $12,275.47

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Replace non-operational clock system with a wireless GPS synchronized clock system.

System: F1010 - Special Structures

Location: AG Annex Greenhouse

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Rennovate and repair greenhouse - based on GSF of greenhouse - adjust estimate as required

Qty: 4,200.00

Unit of Measure: S.F.

Estimate: $219,939.42

Assessor Name: Craig Anding

Date Created: 12/31/2015

Notes: There are two existing greenhouses, Greenhouses A and B, which are connected directly to the Ag Annex on the southern exterior, there are several different types of mechanical and electrical systems which feed each of the buildings. Heating, ventilation and cooling are the main concerns as the systems are in poor condition and in need of replacement. The scope of work will generally include replacing the heating systems, replacing the cooling systems, installing new control, upgrading the lighting and electrical systems, and basic general construction work such as doors, floors and benches.

Priority 5 - Response Time (> 5 yrs):

System: B3010105 - Built-Up

Location: AG Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and Replace Built Up Roof

Qty: 27,000.00

Unit of Measure: S.F.

Estimate: $914,814.30

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: The built up roofing system is not expected to outlast the ten-year scope of this analysis. Although there were no reported issues during the time of the inspection repairs have been completed in the life of this roof. There are no current leaks and future budget modeling should include provisions for the replacement of all failing roofing systems.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 2175 MBH, includes standard controls and insulated flush jacket, packaged	2.00	Ea.	mechanical room	weil mclain				35	1975	2010	$35,185.50	$77,408.10
D3030 Cooling Generating Systems	Water chiller, screw liquid chiller, air cooled, insulated evaporator, 130 ton, includes standard controls	1.00	Ea.	exterior	carrier	30xab127			30	2012	2042	$122,760.00	$135,036.00
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.	Agriculture Building - Main Electrical Room	Westinghouse	NA	NA		30			$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 2000 A	4.00	Ea.	Agriculture Building - Main Electrical Room	Westinghouse	Pow-R-Line	S.O. No. PH-52570 IT.1C		30			$47,537.55	$209,165.22
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 1000 kVA	1.00	Ea.	Agriculture Building - Main Electrical Room	GS Hevi-Duty	NA	851912		30			$109,296.00	$120,225.60
												Total:	**$588,968.82**

Executive Summary

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

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

Function:	High School
Gross Area (SF):	15,586
Year Built:	1975
Last Renovation:	
Replacement Value:	$8,550,285
Repair Cost:	$3,979,084.46
Total FCI:	46.54 %
Total RSLI:	68.25 %

Description:

Facility Assessment
October 2015

School District of Philadelphia
Walter Biddle Saul High School Gymnasium Annex
7100 Henry Ave.
Philadelphia, PA 1912

Gym Annex 15,586 SF740 Students / LN 06

The Walter Biddle Saul High School is a high school that is dedicated to agricultural with facilities that match the mission. There are three buildings on the main site identified as B604001, B604004, B604005 and G604001 for the grounds surrounding this school. This facility is located at 7100 Henry Ave., Philadelphia, PA. Each building is similar in construction with the design of the rectangular-shaped, concrete and steel-framed buildings, including brick facades with a concrete foundation. B604001 or the Main Building was constructed in 1950, B604004 the Ag Annex was constructed in 1975 and B604005 the GYM Annex was constructed in 1975.

This report is divided into sections with the buildings identified by name and number.

The main entrance faces the Northern exterior facing Henry Ave. General parking is east and west of the main school and north and south of the Ag Annex. This School serves students in grades 9 to 12. The main building has a basement with two stories consisting of a total gross square footage of 104,018 GSF.

This school has several classrooms, a library, kitchen and student commons, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on October 6, 2015.

Mr. Rick Kovacs, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Tamera Conaway, Principal, also shared information about the school with the assessment team.

ARCHITECTURAL / STRUCTURAL SYSTEMS

The Gym Annex is located west of the main building and the main entrance faces north. Constructed in 1975 this is a single story building with a design that supports the sports and athletics departments for the Saul High School. The Annex has a total gross square footage of 15,586 and is identified as B604005.

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. Floor structure appears to be reinforced, cast-in-place concrete. The roof structure is metal decking on steel joists and has a built-up surface.

Exterior walls are concrete and brick finished. The foundations, superstructure, floor and wall construction are in very good condition. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

The exterior windows were reported to have been upgraded within the past ten years. Although there were no records to indicate the date of installation the aluminum framed windows are in very good condition. There were no issues with that surfaced during the time of the inspection therefore no recommendations are required at this time.

The exterior door system is a metal frame metal door system in very good condition. Although minor issues such as weather stripping exist overall the doors are expected to have a normal life cycle that exceeds the purview of this report.

Special consideration for those that may be physically challenged was not a main factor in the construction of the additions of this high school. Currently the path of travel is clear from the main access to the interior. There is limited support to meet the needs of the physically challenged.

The built up roof was installed within the past ten years as reported by the school. The roof is in good condition with few exceptions. The roof is very well maintained and debris removal has been a high priority for the staff. This is obvious by the condition of the drains and the flashing. The efforts by the staff has extended the life cycle of this roof. Currently there are no active leaks however the roofs life cycle will end within the next ten years. This deficiency provides a budgetary consideration for scheduled built up roof replacement.

A majority of the building's interior walls and partitions are painted CMU and gypsum board. The interior partitions are in good condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

Interior doors are typically wood in metal or wood frames with wooden transom and wired glass glazing. Other interior doors include hollow metal in hollow metal frames at the corridor sections. Doors are generally in good condition with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numerous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

Fittings include: Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

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.

Interior wall finishes are typically painted CMU finish. This finish is on a continuous program of renewal and is in very good condition. There are no recommendations required at this time.

The floor finish for this school is a combination of wood for the main Gym, concrete in the mechanical space, ceramic tile in the restrooms and vinyl tile for the remaining sections of the school. The vinyl tile finish is damaged in several areas and will require upgrade to renew finish. This finish is recommended for upgrade to a new 12 x 12 vinyl tile application.

Institutional equipment includes: gym equipment – basketball backstops and scoreboards. There were no issues therefore no recommendations are required at this time.

Furnishings include: limited fixed casework in the main hallway.

No recommendations are required at this time for the existing casework.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Urinals and water closets have exposed manual flush valves with lever operators.

Hot water is served from the Agriculture Building, with a separate pump in that facility for the Gymnasium Building. There is three inch domestic water service in this building from Henry Ave. for this facility and the Agriculture Building. There is no backflow preventer in this line.

Visible sanitary, waste and vent piping is hub and spigot cast iron. Domestic hot and cold water is insulated rigid copper piping.

The plumbing fixtures are from a 2012 renovation and should have remaining service life in excess of thirty years. Older sanitary and waste piping should be inspected and repaired or replaced as required. The domestic water supply piping is from the original 1975 installation and should be replaced.

HVAC- Hot and chilled water for this building is served from the Agriculture Building with underground piping into a mechanical room adjacent to the gym. The gym has three horizontal suspended air handling units in the space for that area. There are mechanical rooms on each side of the gym, each containing a horizontal suspended air handling unit, for the girls and boys locker rooms.

There is an older unit ventilator for the classroom. An office area has a small air handling above the ceiling and two older unit ventilators. The two locker rooms each have a roof mounted exhaust fan.

FIRE PROTECTION-there is no sprinkler system for this building.

ELECTRICAL SYSTEMS

Electrical Service-- The building is served from the Agriculture Building. There is a 225A Panelboard and a 100A Panelboard located in the Gymnasium Mechanical Room. Both of these panelboards are original 1975 equipment and have exceeded their useful life.

Receptacles—Receptacles are generally adequate, except in the Health Education Classroom, which only has three (3) duplex receptacles. It is recommended that 3 to 5 additional receptacles be provided using a metal surface raceway system.

Lighting—There are (25) 400W metal halide industrial fixtures with wire guards in the gymnasium. Fixtures are in poor condition. Replacement with LED industrial fixtures is recommended. Surface mounted 4 foot, 2 lamp vapor-tight fluorescent fixtures with T12 lamps are provided in the locker rooms. There are several fixtures that have damaged lenses. Fixtures should be replaced with vandal-resistant, vapor-tight fixtures with T8 lamps.

Surface mounted 4 foot fluorescent wraparound fixtures with T8 lamps are provided in the corridor. The Health Education Classroom has fluorescent wraparound fixtures with T12 lamps. Offices have surface mounted 2x4 modular fluorescent fixtures with acrylic lenses and T12 lamps. Restrooms in the office suite have incandescent fixtures. All fixtures in the classroom and offices should be replaced with fixtures using T8 or T5 lamps.

Fire Alarm System-- The fire alarm system is an extension of the Simplex 4002 system from the Agriculture Building. The fire alarm system should be replaced with Agriculture Building fire alarm system replacement.

Telephone/LAN-- A telephone and data outlet is provided in the classroom. Wireless access points are located to provide Wi-Fi service throughout the building.

Public Address/Paging System-- The paging system is an extension of the system in the Agriculture Building. There are recessed ceiling paging speakers in offices and classroom. Horns are located in the gymnasium.

Clock and Program System-- A clock/speaker assembly is provided in the classroom. An individual clock is provided in the gymnasium. The clocks should be replaced with battery operated GPS clocks.

Video Surveillance and Security Systems—There are no video surveillance cameras in the Gymnasium Building. Motion sensors are provided in the corridors. Magnetic door contacts are provided on exterior egress doors.

Emergency Power System--There is no separate generator for this building. Emergency power is supplied from the Agriculture Building.

Emergency Lighting System / Exit Lighting-- Selected emergency egress lighting fixtures and exit signs are connected to the standby power system. Exit signs are approaching the end of their useful life and should be replaced with LED type.

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

RECOMMENDATIONS

- Upgrade Roof
- Selective upgrade of the Interior doors
- Chalk board upgrade
- Signage upgrade
- Install complete NFPA automatic sprinkler system including fire pump if required.
- Install new DDC control system with building automation for HVAC equipment. Include computer monitor, software and graphics package.
- Replace domestic water supply piping including fittings, valves, hangers and insulation.
- Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.
- Replace three air handling units for gymnasium. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.
- Replace two air handling units for two locker rooms. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.
- Replace three older unit ventilators in classroom and office area with new units with hot and chilled water coils, blowers and motors, outside air dampers, valves and controls. Connect to hot and chilled water systems and control systems. Include electrical connections.
- Replace small air handling unit for office area. Unit to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.
- Install code approved backflow prevention assembly in three inch service line.
- Remove the 225A Panelboard, 100A Panelboard, and their existing main disconnecting means located in the Gymnasium Mechanical Room and replace with main circuit breaker panelboards.
- Provide surface raceway system with 3 to 5 duplex receptacles in Health Education Classroom.
- Replace (25) 400W metal halide industrial fixtures with wire guards in the gymnasium with LED industrial fixtures.
- Replace all fluorescent lighting fixtures having T12 lamps with fixtures having T8 lamps (estimated 9,140 SF).
- Replace obsolete fire alarm system with an addressable system in conjunction with fire alarm system upgrade in the Agriculture Building.
- Replace non-operational clock system with a wireless GPS synchronized clock system.
- Replace approximately 12 exit signs with vandal resistant LED type.

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B604005
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S604001		

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	51.97 %	0.00 %	$0.00
B30 - Roofing	60.00 %	88.14 %	$528,051.15
C10 - Interior Construction	12.17 %	15.96 %	$56,756.84
C30 - Interior Finishes	47.08 %	7.86 %	$66,096.42
D20 - Plumbing	89.09 %	29.93 %	$189,747.41
D30 - HVAC	98.52 %	234.95 %	$2,493,373.79
D40 - Fire Protection	105.71 %	158.77 %	$222,966.13
D50 - Electrical	110.11 %	46.07 %	$422,092.72
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	0.00 %	$0.00
Totals:	**68.25 %**	**46.54 %**	**$3,979,084.46**

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.

Site Assessment Report - B604005;Saul Annex

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$379,052
A1030	Slab on Grade	$15.51	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$241,739
A2010	Basement Excavation	$13.07	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$203,709
A2020	Basement Walls	$23.02	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$358,790
B1010	Floor Construction	$92.20	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$1,437,029
B1020	Roof Construction	$24.11	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$375,778
B2010	Exterior Walls	$31.22	S.F.	15,586	100	1975	2075		60.00 %	0.00 %	60			$486,595
B2020	Exterior Windows	$13.63	S.F.	15,586	40	1990	2030		37.50 %	0.00 %	15			$212,437
B2030	Exterior Doors	$1.67	S.F.	15,586	25	1990	2015	2020	20.00 %	0.00 %	5			$26,029
B3010105	Built-Up	$37.76	S.F.	15,586	20	1995	2015	2027	60.00 %	89.72 %	12		$528,051.15	$588,527
B3020	Roof Openings	$0.68	S.F.	15,586	20	1995	2015	2027	60.00 %	0.00 %	12			$10,598
C1010	Partitions	$14.93	S.F.	15,586	100	1975	2075	2027	12.00 %	0.00 %	12			$232,699
C1020	Interior Doors	$3.76	S.F.	15,586	40	1975	2015	2020	12.50 %	81.41 %	5		$47,705.87	$58,603
C1030	Fittings	$4.12	S.F.	15,586	40	1975	2015	2020	12.50 %	14.10 %	5		$9,050.97	$64,214
C3010230	Paint & Covering	$13.21	S.F.	15,586	10	2000	2010	2020	50.00 %	0.00 %	5			$205,891
C3020412	Terrazzo & Tile	$75.52	S.F.	1,000	50	1990	2040	2027	24.00 %	0.00 %	12			$75,520
C3020413	Vinyl Flooring	$9.68	S.F.	5,586	20	1990	2010	2027	60.00 %	122.24 %	12		$66,096.42	$54,072
C3020414	Wood Flooring	$22.27	S.F.	8,000	25	1990	2015	2027	48.00 %	0.00 %	12			$178,160
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,000	50	1990	2040	2027	24.00 %	0.00 %	12			$970
C3030	Ceiling Finishes	$20.97	S.F.	15,586	25	1990	2015	2027	48.00 %	0.00 %	12			$326,838
D2010	Plumbing Fixtures	$31.58	S.F.	15,586	35	2012	2047		91.43 %	0.00 %	32			$492,206
D2020	Domestic Water Distribution	$2.90	S.F.	15,586	25	1975	2000	2042	108.00 %	250.64 %	27		$113,286.49	$45,199
D2030	Sanitary Waste	$2.90	S.F.	15,586	25	1975	2000	2042	108.00 %	169.17 %	27		$76,460.92	$45,199
D2040	Rain Water Drainage	$3.29	S.F.	15,586	30	1975	2005	2025	33.33 %	0.00 %	10			$51,278
D3020	Heat Generating Systems	$18.67	S.F.		35				0.00 %	0.00 %				$0
D3030	Cooling Generating Systems	$24.48	S.F.		30				0.00 %	0.00 %				$0
D3040	Distribution Systems	$42.99	S.F.	15,586	25	1975	2000	2042	108.00 %	322.22 %	27		$2,159,022.79	$670,042
D3050	Terminal & Package Units	$11.60	S.F.	15,586	20	1975	1995	2025	50.00 %	0.00 %	10			$180,798
D3060	Controls & Instrumentation	$13.50	S.F.	15,586	20	1975	1995	2037	110.00 %	158.90 %	22		$334,351.00	$210,411
D4010	Sprinklers	$8.02	S.F.	15,586	35			2052	105.71 %	178.37 %	37		$222,966.13	$125,000
D4020	Standpipes	$0.99	S.F.	15,586	35			2052	105.71 %	0.00 %	37			$15,430
D5010	Electrical Service/Distribution	$9.70	S.F.	15,586	30	1975	2005	2047	106.67 %	21.47 %	32		$32,460.56	$151,184
D5020	Lighting and Branch Wiring	$34.68	S.F.	15,586	20	1975	1995	2037	110.00 %	44.74 %	22		$241,828.89	$540,522
D5030	Communications and Security	$12.99	S.F.	15,586	15	1975	1990	2032	113.33 %	67.98 %	17		$137,629.44	$202,462
D5090	Other Electrical Systems	$1.41	S.F.	15,586	30	1975	2005	2047	106.67 %	46.30 %	32		$10,173.83	$21,976
E1020	Institutional Equipment	$4.82	S.F.	15,586	35	1975	2010	2027	34.29 %	0.00 %	12			$75,125
E1090	Other Equipment	$11.10	S.F.	15,586	35	1975	2010	2027	34.29 %	0.00 %	12			$173,005
E2010	Fixed Furnishings	$2.13	S.F.	15,586	40	1975	2015	2027	30.00 %	0.00 %	12			$33,198
								Total	**68.25 %**	**46.54 %**			**$3,979,084.46**	**$8,550,285**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

System: C3010 - Wall Finishes — This system contains no images

Note: Painted CMU wall finish 100%

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

Note: Concrete 6%
Wood 51%
Vinyl 35%
Tile 8%

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

Note: There are no inventory items to record.

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:	**$3,979,084**	**$0**	**$0**	**$0**	**$0**	**$452,361**	**$0**	**$0**	**$0**	**$0**	**$343,079**	**$4,774,525**
*** 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	$33,191	$0	$0	$0	$0	$0	**$33,191**
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	$528,051	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$528,051**
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	$47,706	$0	$0	$0	$0	$74,731	$0	$0	$0	$0	$0	**$122,437**
C1030 - Fittings	$9,051	$0	$0	$0	$0	$81,886	$0	$0	$0	$0	$0	**$90,937**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

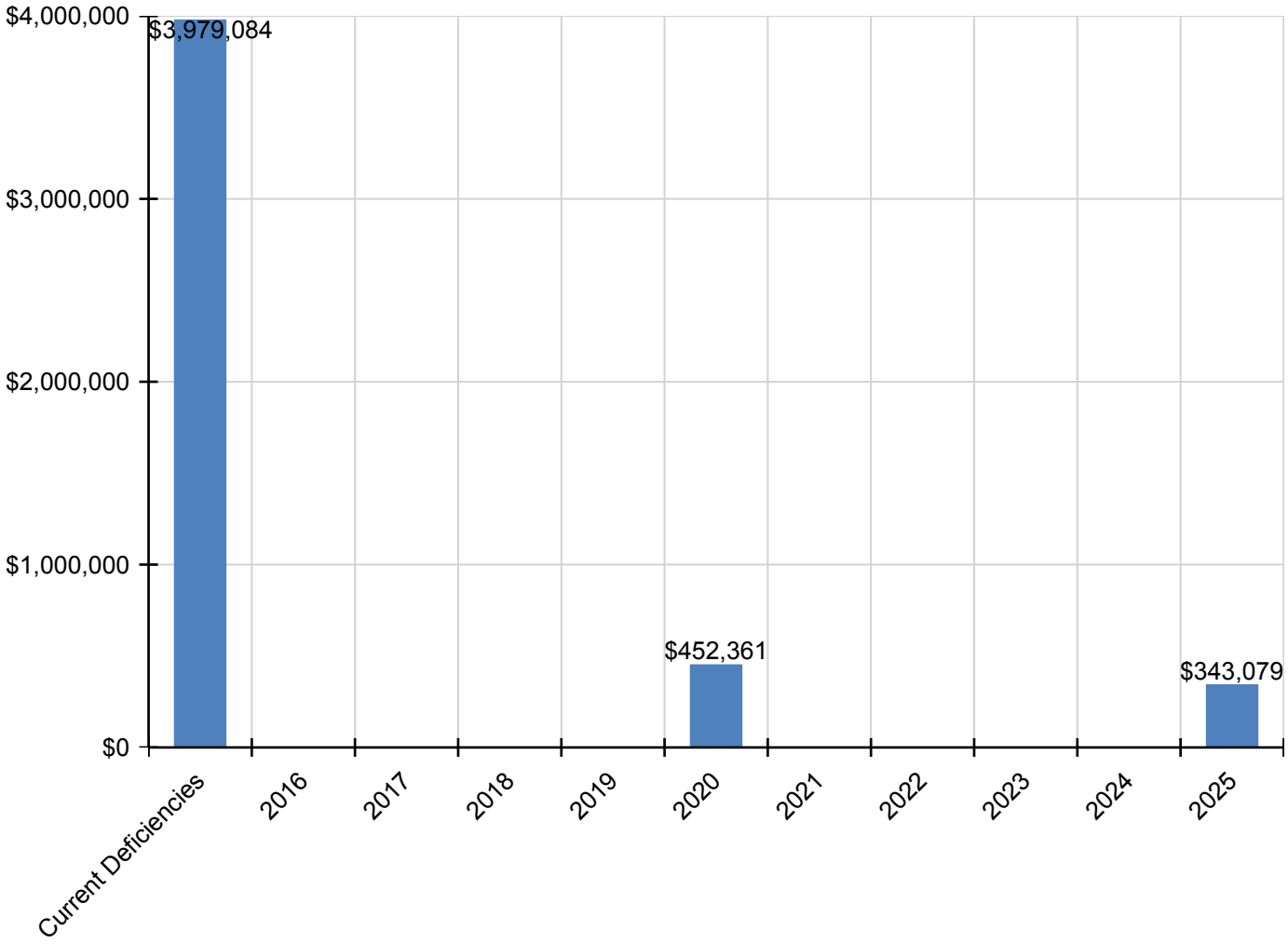
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$262,552	$0	$0	$0	$0	$0	**$262,552**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$66,096	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$66,096**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$113,286	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$113,286**
D2030 - Sanitary Waste	$76,461	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$76,461**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$75,805	**$75,805**
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	$2,159,023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,159,023**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$267,274	**$267,274**
D3060 - Controls & Instrumentation	$334,351	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$334,351**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$222,966	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$222,966**
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	$32,461	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$32,461**
D5020 - Lighting and Branch Wiring	$241,829	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$241,829**
D5030 - Communications and Security	$137,629	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$137,629**
D5090 - Other Electrical Systems	$10,174	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$10,174**
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

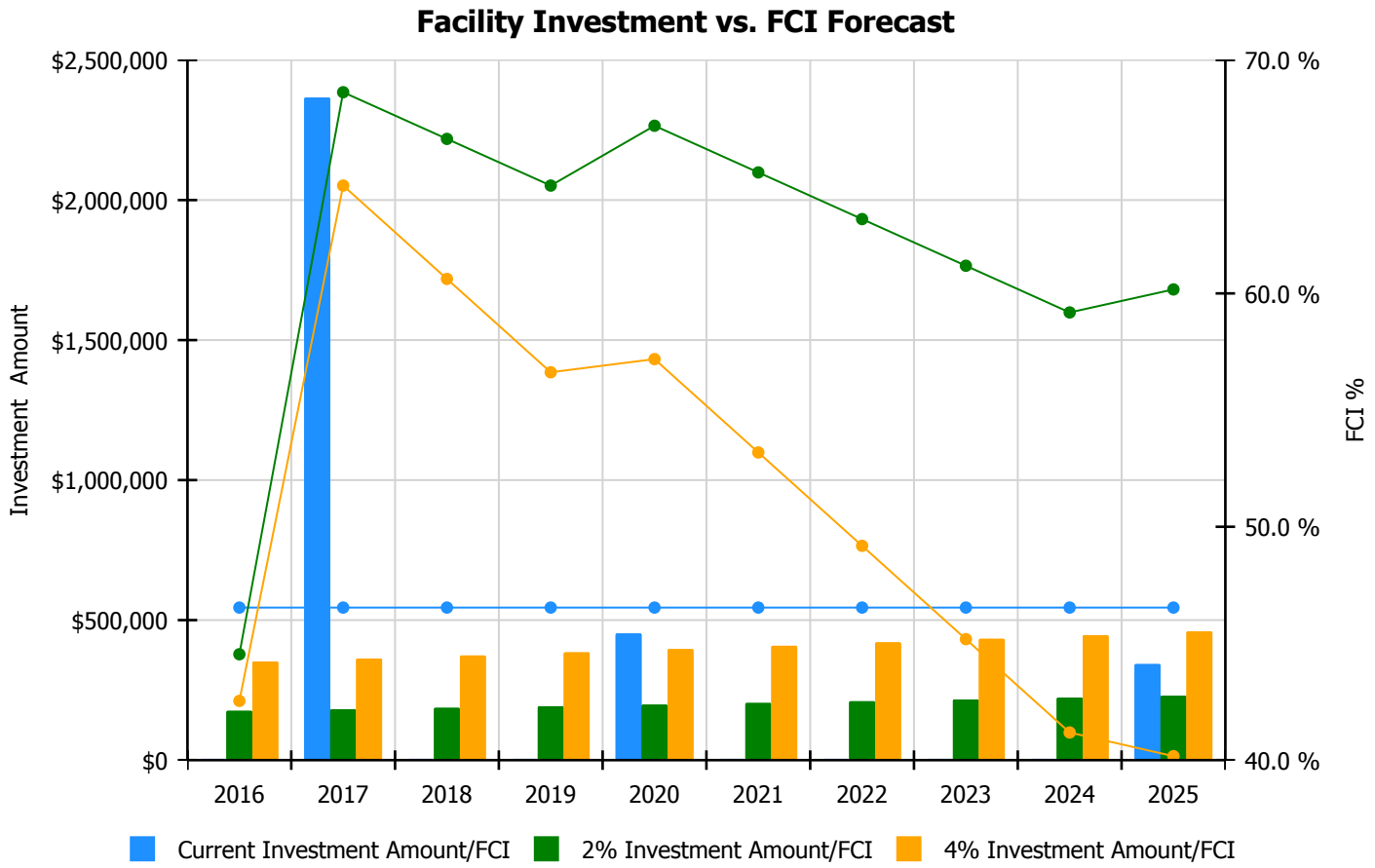
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

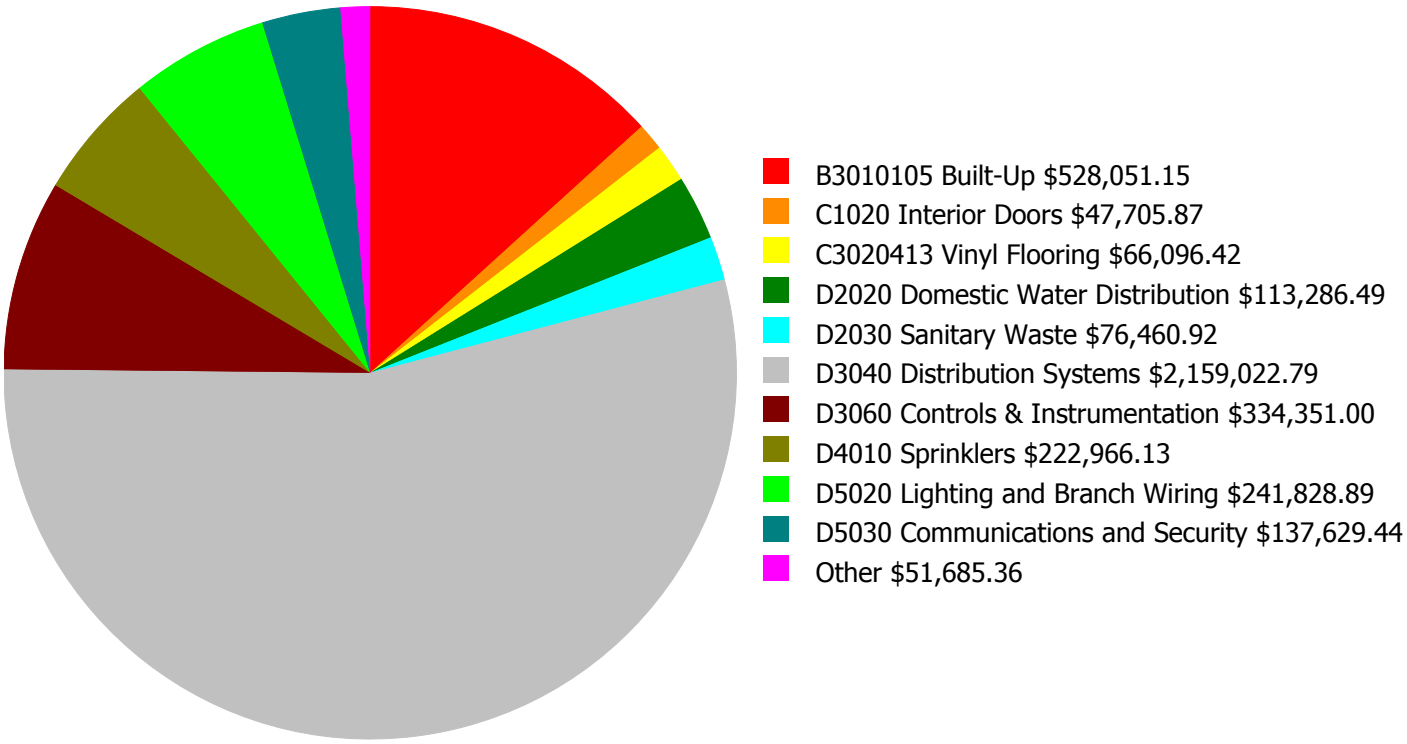
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 46.54%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$176,136.00	44.54 %	$352,272.00	42.54 %
2017	$2,365,986	$181,420.00	68.62 %	$362,840.00	64.62 %
2018	$0	$186,863.00	66.62 %	$373,725.00	60.62 %
2019	$0	$192,468.00	64.62 %	$384,937.00	56.62 %
2020	$452,361	$198,242.00	67.18 %	$396,485.00	57.18 %
2021	$0	$204,190.00	65.18 %	$408,379.00	53.18 %
2022	$0	$210,315.00	63.18 %	$420,631.00	49.18 %
2023	$0	$216,625.00	61.18 %	$433,250.00	45.18 %
2024	$0	$223,124.00	59.18 %	$446,247.00	41.18 %
2025	$343,079	$229,817.00	60.17 %	$459,635.00	40.17 %
Total:	**$3,161,427**	**$2,019,200.00**		**$4,038,401.00**	

Deficiency Summary by System

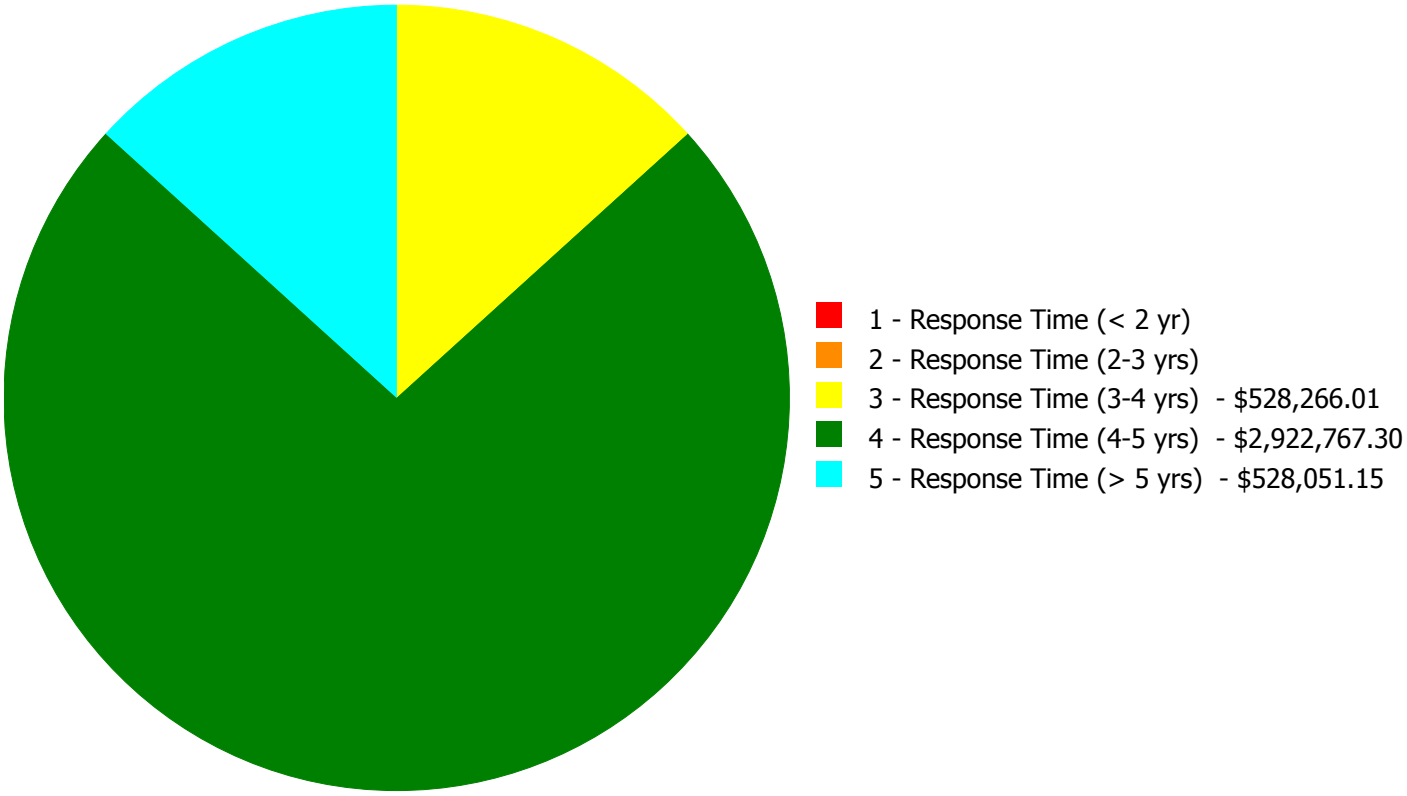
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $3,979,084.46

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: $3,979,084.46

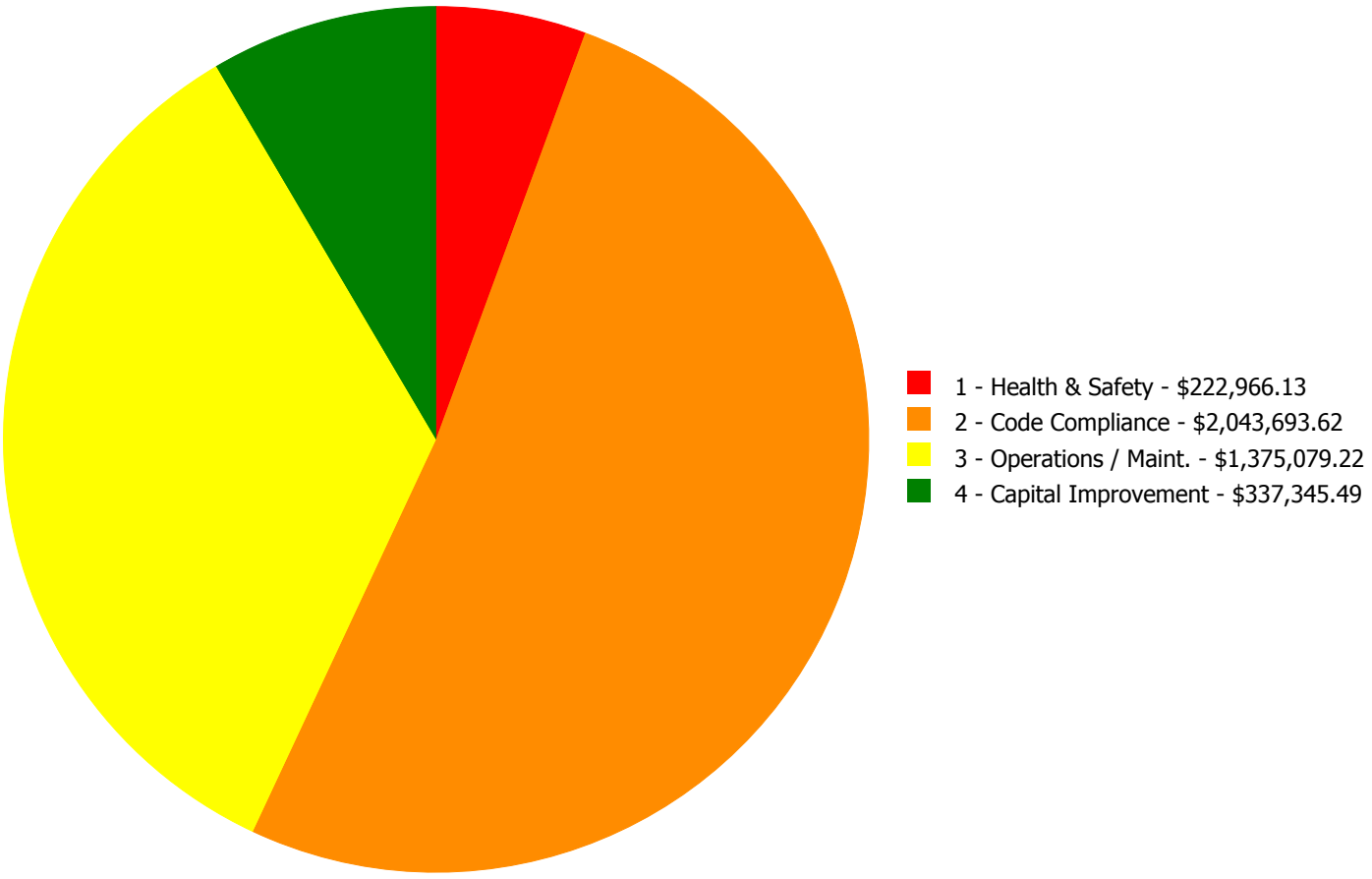
Deficiency By Priority Investment Table

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
B3010105	Built-Up	$0.00	$0.00	$0.00	$0.00	$528,051.15	$528,051.15
C1020	Interior Doors	$0.00	$0.00	$47,705.87	$0.00	$0.00	$47,705.87
C1030	Fittings	$0.00	$0.00	$5,418.25	$3,632.72	$0.00	$9,050.97
C3020413	Vinyl Flooring	$0.00	$0.00	$66,096.42	$0.00	$0.00	$66,096.42
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$113,286.49	$0.00	$113,286.49
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$76,460.92	$0.00	$76,460.92
D3040	Distribution Systems	$0.00	$0.00	$0.00	$2,159,022.79	$0.00	$2,159,022.79
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$334,351.00	$0.00	$334,351.00
D4010	Sprinklers	$0.00	$0.00	$0.00	$222,966.13	$0.00	$222,966.13
D5010	Electrical Service/Distribution	$0.00	$0.00	$32,460.56	$0.00	$0.00	$32,460.56
D5020	Lighting and Branch Wiring	$0.00	$0.00	$238,834.40	$2,994.49	$0.00	$241,828.89
D5030	Communications and Security	$0.00	$0.00	$127,576.68	$10,052.76	$0.00	$137,629.44
D5090	Other Electrical Systems	$0.00	$0.00	$10,173.83	$0.00	$0.00	$10,173.83
	Total:	$0.00	$0.00	$528,266.01	$2,922,767.30	$528,051.15	$3,979,084.46

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: $3,979,084.46

Deficiency Details by Priority

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

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

System: C1020 - Interior Doors

Location: GYM Building Wide

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: 10.00

Unit of Measure: Ea.

Estimate: $47,705.87

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Interior doors are typically wood in metal or wood frames with wooden transom and wired glass glazing. Other interior doors include hollow metal in hollow metal frames at the corridor sections. Doors are generally in good condition with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numerous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

System: C1030 - Fittings

Location: Main Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $5,418.25

Assessor Name: Craig Anding

Date Created: 01/11/2016

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.

System: C3020413 - Vinyl Flooring

Location: GYM Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 5,500.00

Unit of Measure: S.F.

Estimate: $66,096.42

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: The floor finish for this school is a combination of wood for the main Gym, concrete in the mechanical space, ceramic tile in the restrooms and vinyl tile for the remaining sections of the school. The vinyl tile finish is damaged in several areas and will require upgrade to renew finish. This finish is recommended for upgrade to a new 12 x 12 vinyl tile application.

System: D5010 - Electrical Service/Distribution

Location: Gym Mechanical Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 2.00

Unit of Measure: Ea.

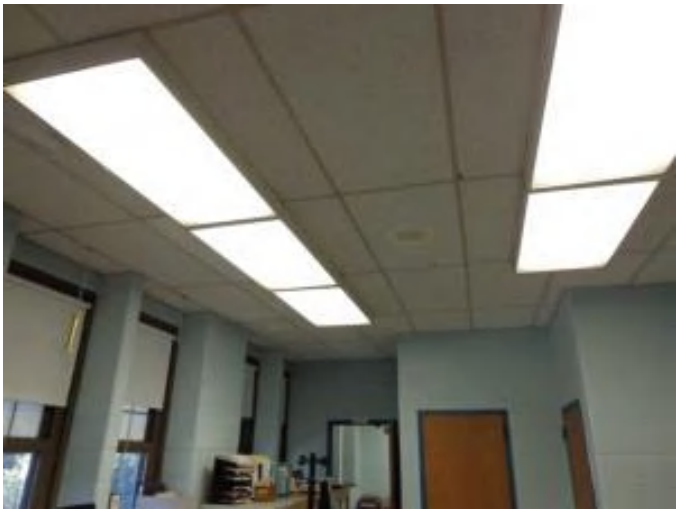
Estimate: $32,460.56

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Remove the 225A Panelboard, 100A Panelboard, and their existing main disconnecting means located in the Gymnasium Mechanical Room and replace with main circuit breaker panelboards.

System: D5020 - Lighting and Branch Wiring



Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 9,140.00

Unit of Measure: S.F.

Estimate: $152,564.29

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Replace all fluorescent lighting fixtures having T12 lamps with fixtures having T8 lamps (estimated 9,140 SF).

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: 25.00
Unit of Measure: Ea.
Estimate: $86,270.11
Assessor Name: Craig Anding
Date Created: 12/27/2015

Notes: Replace (25) 400W metal halide industrial fixtures with wire guards in the gymnasium with LED industrial fixtures.

System: D5030 - Communications and Security

Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 15,586.00
Unit of Measure: S.F.
Estimate: $127,576.68
Assessor Name: Craig Anding
Date Created: 12/27/2015

Notes: Replace obsolete fire alarm system with an addressable system in conjunction with fire alarm system upgrade in the Agriculture Building.

System: D5090 - Other Electrical Systems

Location:	Building wide
Distress:	Beyond Service Life
Category:	3 - Operations / Maint.
Priority:	3 - Response Time (3-4 yrs)
Correction:	Replace Emergency/Exit Lighting
Qty:	12.00
Unit of Measure:	Ea.
Estimate:	$10,173.83
Assessor Name:	Craig Anding
Date Created:	12/27/2015

Notes: Replace approximately 12 exit signs with vandal resistant LED type.

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

System: C1030 - Fittings

Location: GYM Building Wide

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: 4.00

Unit of Measure: Ea.

Estimate: $3,632.72

Assessor Name: Craig Anding

Date Created: 01/11/2016

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

System: D2020 - Domestic Water Distribution

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 15,586.00

Unit of Measure: S.F.

Estimate: $78,979.63

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace domestic water supply piping including fittings, valves, hangers and insulation.

System: D2020 - Domestic Water Distribution

Location: mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide 3" reduced pressure back flow preventer

Qty: 1.00

Unit of Measure: Ea.

Estimate: $34,306.86

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Install code approved backflow prevention assembly in three inch service line.

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. (+50KSF)

Qty: 15,586.00

Unit of Measure: S.F.

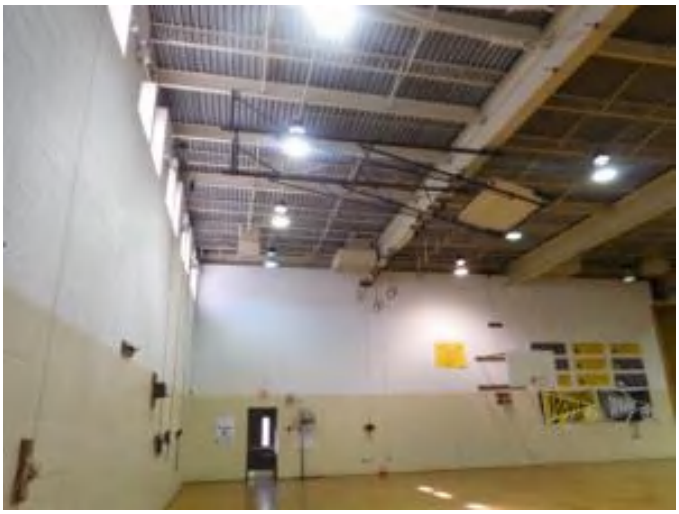
Estimate: $76,460.92

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Inspect sanitary and waste plumbing piping including camera survey. Repair or replace as required.

System: D3040 - Distribution Systems



Location: gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $344,860.27

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace three air handling units for gymnasium. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection

---

System: D3040 - Distribution Systems

Location: boys and girls locker rooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $344,860.27

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace two air handling units for two locker rooms. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.

System: D3040 - Distribution Systems

Location: gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $344,860.27

Assessor Name: Craig Anding

Date Created: 01/12/2016

Notes: Replace three air handling units for gymnasium. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection

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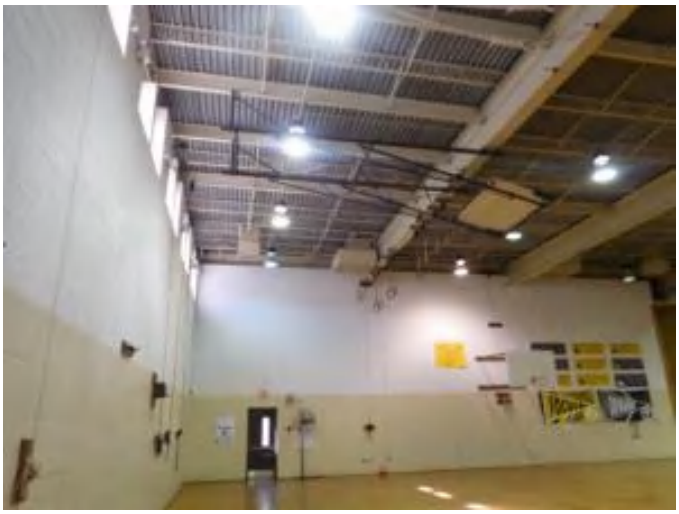
System: D3040 - Distribution Systems



Location: gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $344,860.27

Assessor Name: Craig Anding

Date Created: 01/12/2016

Notes: Replace three air handling units for gymnasium. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection

---

System: D3040 - Distribution Systems

Location: boys and girls locker rooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $344,860.27

Assessor Name: Craig Anding

Date Created: 01/12/2016

Notes: Replace two air handling units for two locker rooms. Units to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.

System: D3040 - Distribution Systems

Location: office area

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

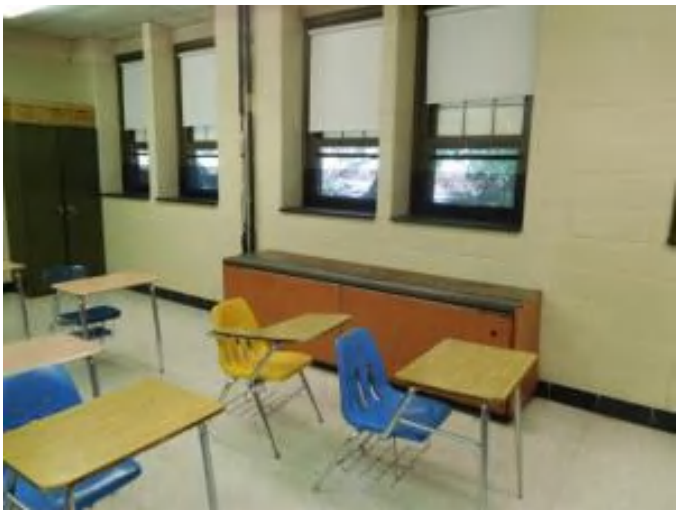
Estimate: $285,085.41

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace small air handling unit for office area. Unit to have hot and chilled water coils, blowers and motors, outside and return air dampers, valves and controls. Connect to hot and chilled water piping systems and control system. Include electrical connection.

System: D3040 - Distribution Systems



Location: classroom, offices

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace classroom unit ventilator (htg/clg coils, 5 tons, 2,000 CFM)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $149,636.03

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Replace three older unit ventilators in classroom and office area with new units with hot and chilled water coils, blowers and motors, outside air dampers, valves and controls. Connect to hot and chilled water systems and control systems. Include electrical connections.

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 15,586.00

Unit of Measure: S.F.

Estimate: $334,351.00

Assessor Name: Craig Anding

Date Created: 01/11/2016

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

System: D4010 - Sprinklers

Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 15,586.00

Unit of Measure: S.F.

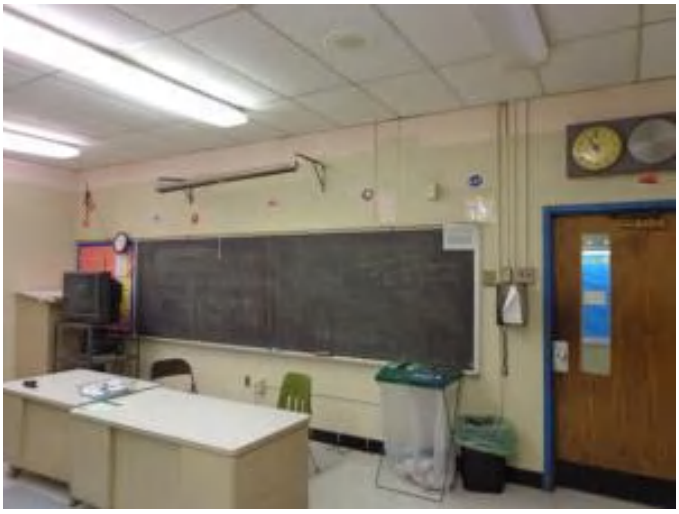
Estimate: $222,966.13

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: Install complete NFPA automatic sprinkler system including fire pump if required.

System: D5020 - Lighting and Branch Wiring



Location: Health Education Classroom

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide surface raceway system and wiring devices

Qty: 20.00

Unit of Measure: L.F.

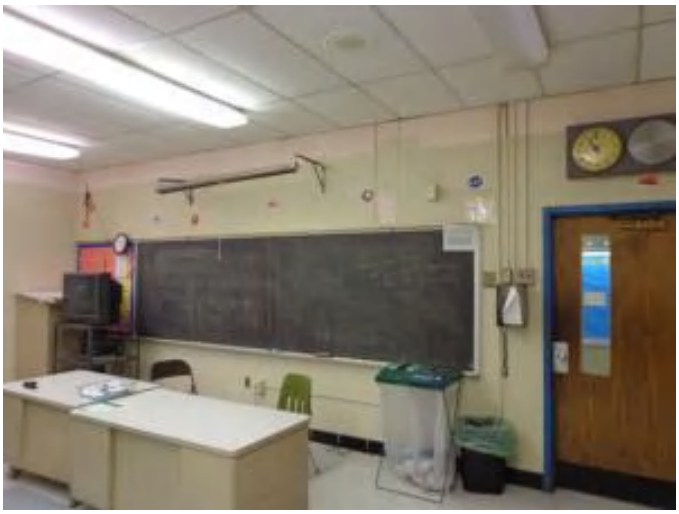
Estimate: $2,994.49

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Provide surface raceway system with 3 to 5 duplex receptacles in Health Education Classroom.

System: D5030 - Communications and Security



Location: Building wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 13.00

Unit of Measure: Ea.

Estimate: $10,052.76

Assessor Name: Craig Anding

Date Created: 12/27/2015

Notes: Replace non-operational clock system with a wireless GPS synchronized clock system.

Priority 5 - Response Time (> 5 yrs):

System: B3010105 - Built-Up

Location: GYM Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and Replace Built Up Roof

Qty: 15,585.00

Unit of Measure: S.F.

Estimate: $528,051.15

Assessor Name: Craig Anding

Date Created: 01/11/2016

Notes: The built up roof was installed within the past ten years as reported by the school. The roof is in good condition with few exceptions. The roof is very well maintained and debris removal has been a high priority for the staff. This is obvious by the condition of the drains and the flashing. The efforts by the staff has extended the life cycle of this roof. Currently there are no active leaks however the roofs life cycle will end within the next ten years. This deficiency provides a budgetary consideration for scheduled built up roof replacement.

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

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):	266,900
Year Built:	1975
Last Renovation:	
Replacement Value:	$4,375,133
Repair Cost:	$472,590.02
Total FCI:	10.80 %
Total RSLI:	44.61 %

Description:

Attributes:

General Attributes:

Bldg ID:	S604001	Site ID:	S604001

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
F10 - Special Construction	0.00 %	0.00 %	$0.00
G20 - Site Improvements	44.30 %	14.70 %	$472,590.02
G40 - Site Electrical Utilities	45.49 %	0.00 %	$0.00
Totals:	**44.61 %**	**10.80 %**	**$472,590.02**

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 $
F10	Special Construction	$0.00	S.F.	266,900	0	1975		2027	0.00 %	0.00 %	12			$0
G2010	Roadways	$11.52	S.F.	18,000	30	1975	2005	2027	40.00 %	0.00 %	12			$207,360
G2020	Parking Lots	$7.65	S.F.	20,000	30	1975	2005	2027	40.00 %	296.56 %	12		$453,737.50	$153,000
G2030	Pedestrian Paving	$11.52	S.F.	96,800	40	1999	2039		60.00 %	0.00 %	24			$1,115,136
G2040	Site Development	$4.36	S.F.	266,900	25	1999	2024		36.00 %	1.62 %	9		$18,852.52	$1,163,684
G2050	Landscaping & Irrigation	$3.78	S.F.	152,100	15	1999	2014	2020	33.33 %	0.00 %	5			$574,938
G4020	Site Lighting	$3.58	S.F.	266,900	30	1975	2005	2029	46.67 %	0.00 %	14			$955,502
G4030	Site Communications & Security	$0.77	S.F.	266,900	30	1975	2005	2027	40.00 %	0.00 %	12			$205,513
								Total	**44.61 %**	**10.80 %**			**$472,590.02**	**$4,375,133**

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.

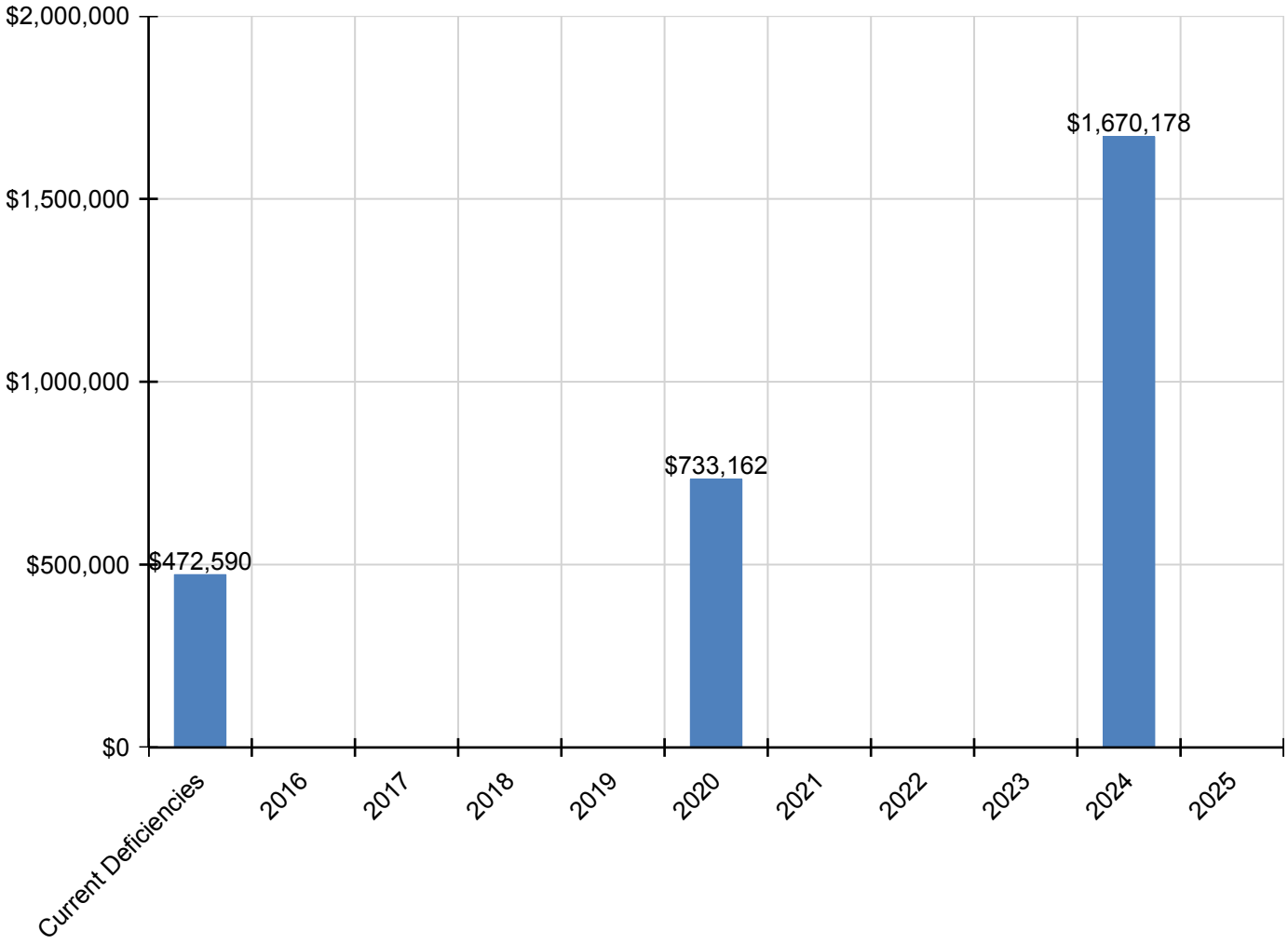
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$472,590**	**$0**	**$0**	**$0**	**$0**	**$733,162**	**$0**	**$0**	**$0**	**$1,670,178**	**$0**	**$2,875,930**
F - Special Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
F10 - Special Construction	$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	$453,738	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$453,738**
G2030 - Pedestrian Paving	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2040 - Site Development	$18,853	$0	$0	$0	$0	$0	$0	$0	$0	$1,670,178	$0	**$1,689,030**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$733,162	$0	$0	$0	$0	$0	**$733,162**
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

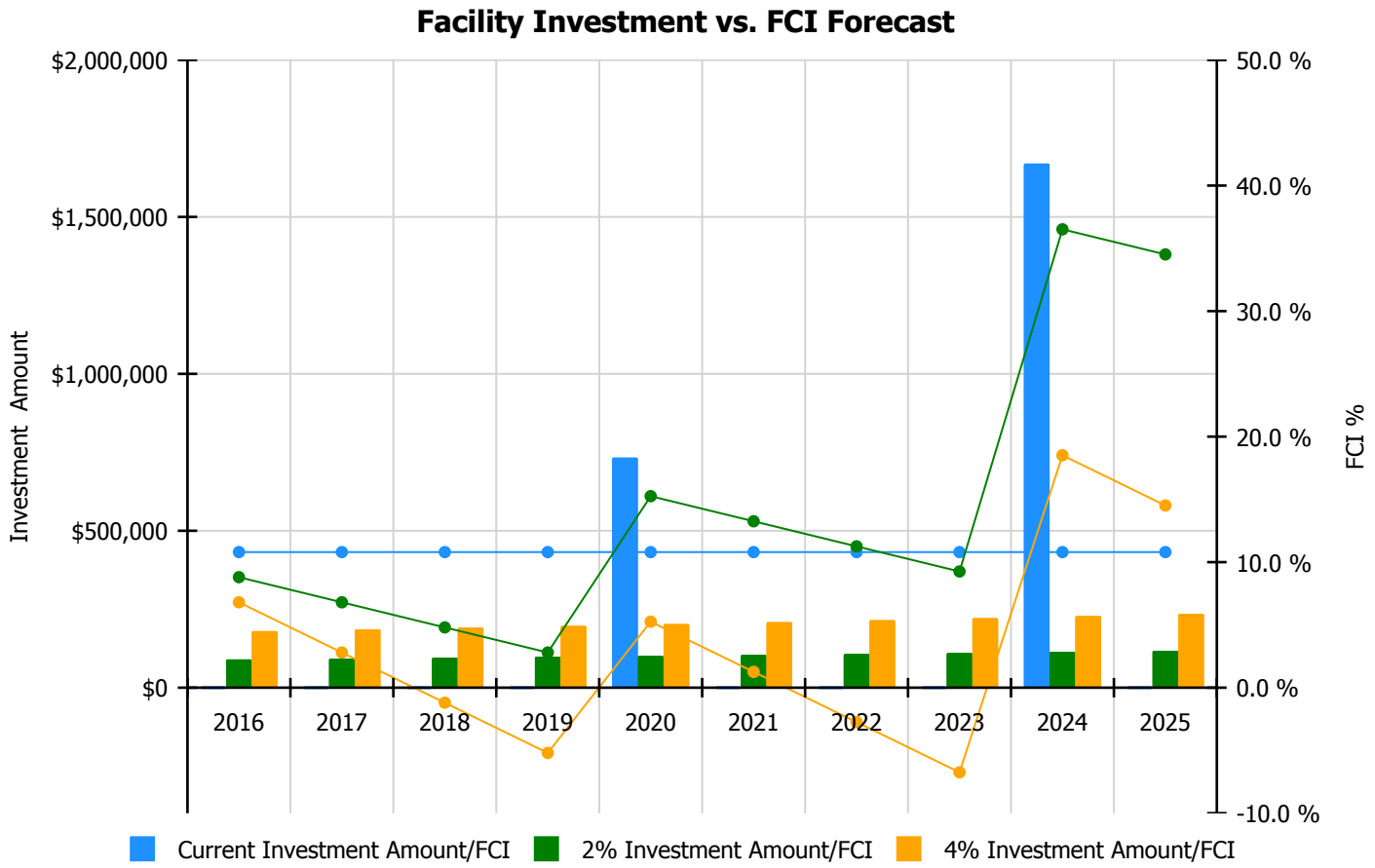
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

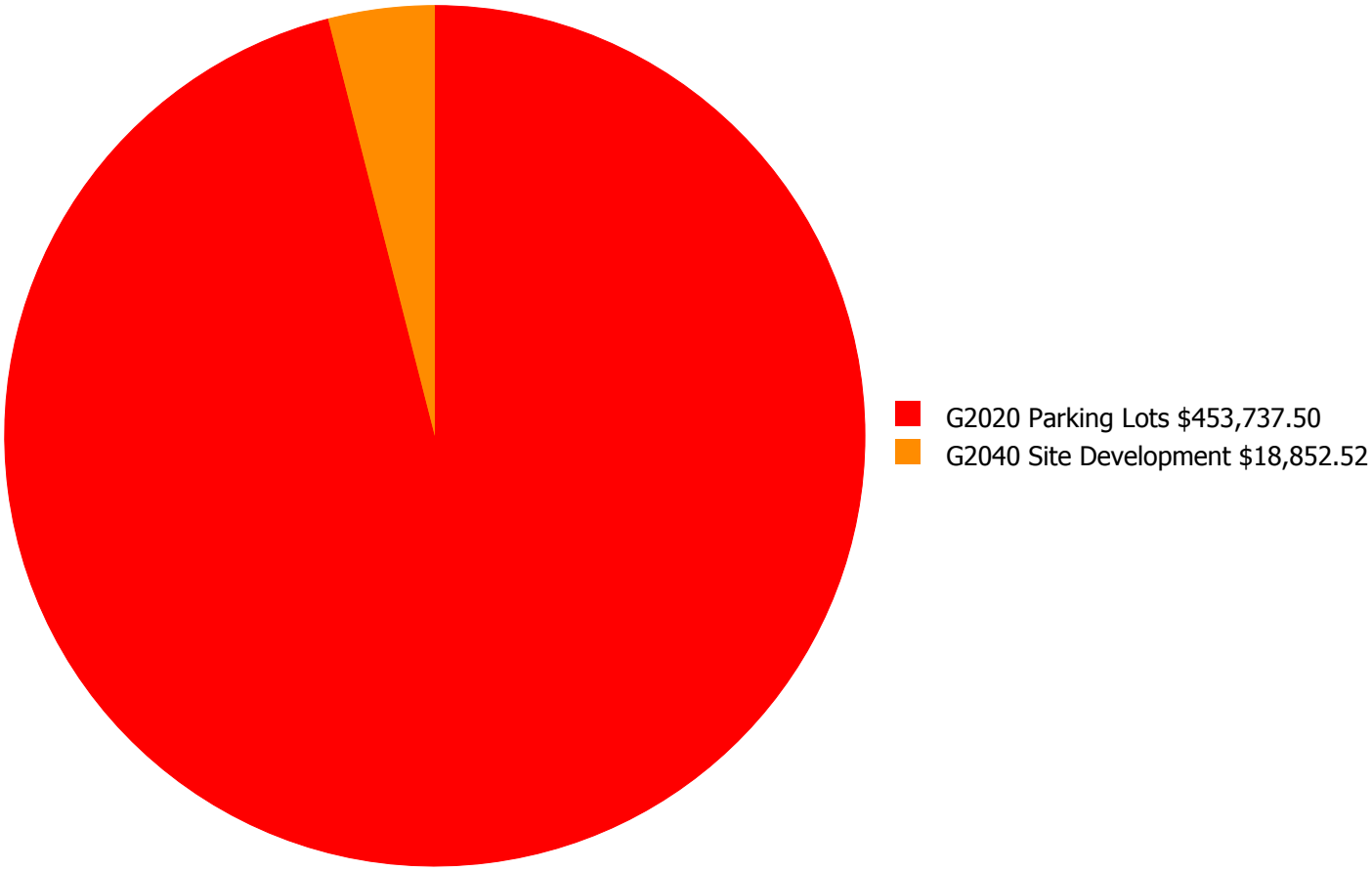
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 10.8%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$90,128.00	8.80 %	$180,255.00	6.80 %
2017	$0	$92,832.00	6.80 %	$185,663.00	2.80 %
2018	$0	$95,617.00	4.80 %	$191,233.00	-1.20 %
2019	$0	$98,485.00	2.80 %	$196,970.00	-5.20 %
2020	$733,162	$101,440.00	15.26 %	$202,879.00	5.26 %
2021	$0	$104,483.00	13.26 %	$208,966.00	1.26 %
2022	$0	$107,617.00	11.26 %	$215,234.00	-2.74 %
2023	$0	$110,846.00	9.26 %	$221,692.00	-6.74 %
2024	$1,670,178	$114,171.00	36.51 %	$228,342.00	18.51 %
2025	$0	$117,596.00	34.51 %	$235,193.00	14.51 %
Total:	**$2,403,340**	**$1,033,215.00**		**$2,066,427.00**	

Deficiency Summary by System

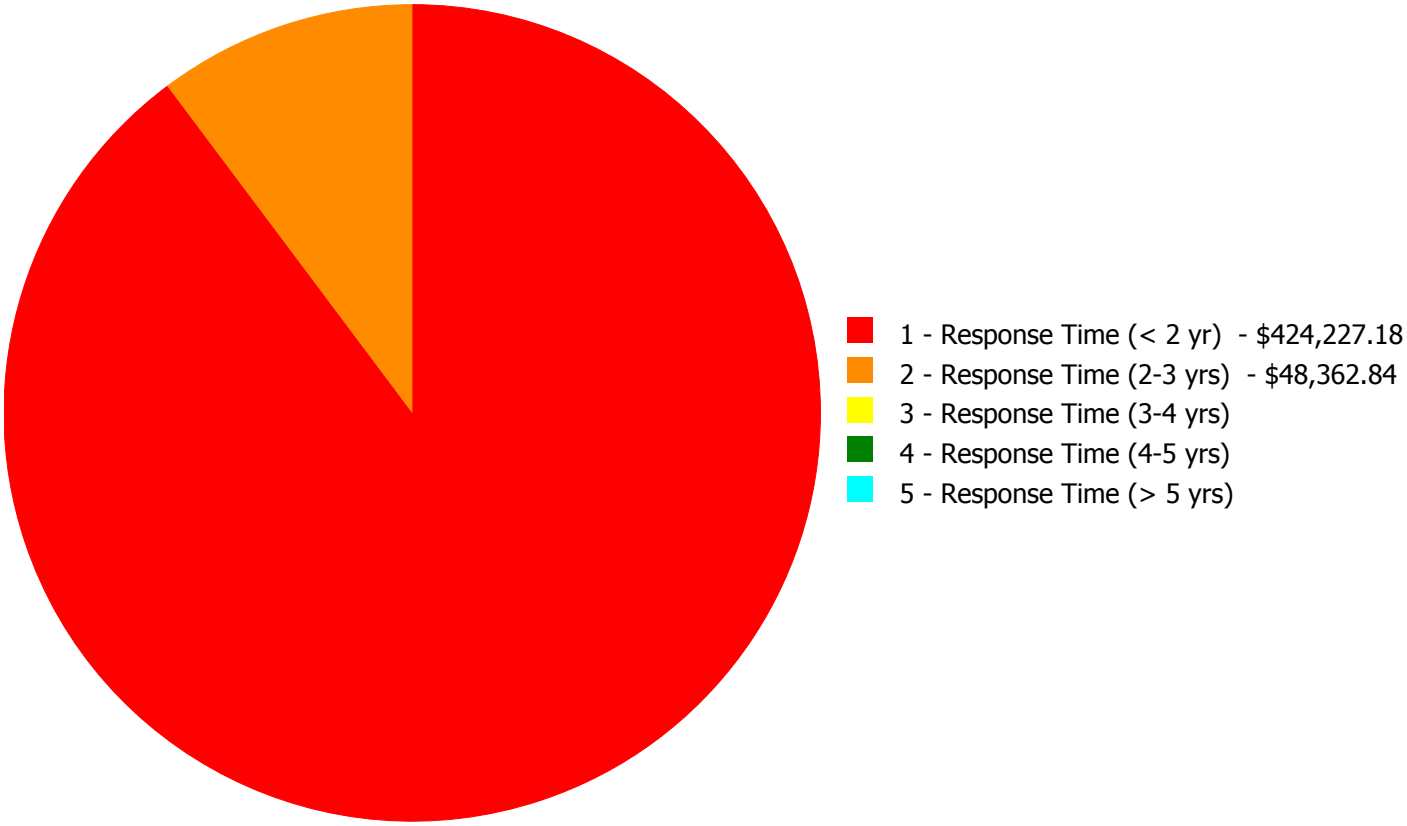
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $472,590.02

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: $472,590.02

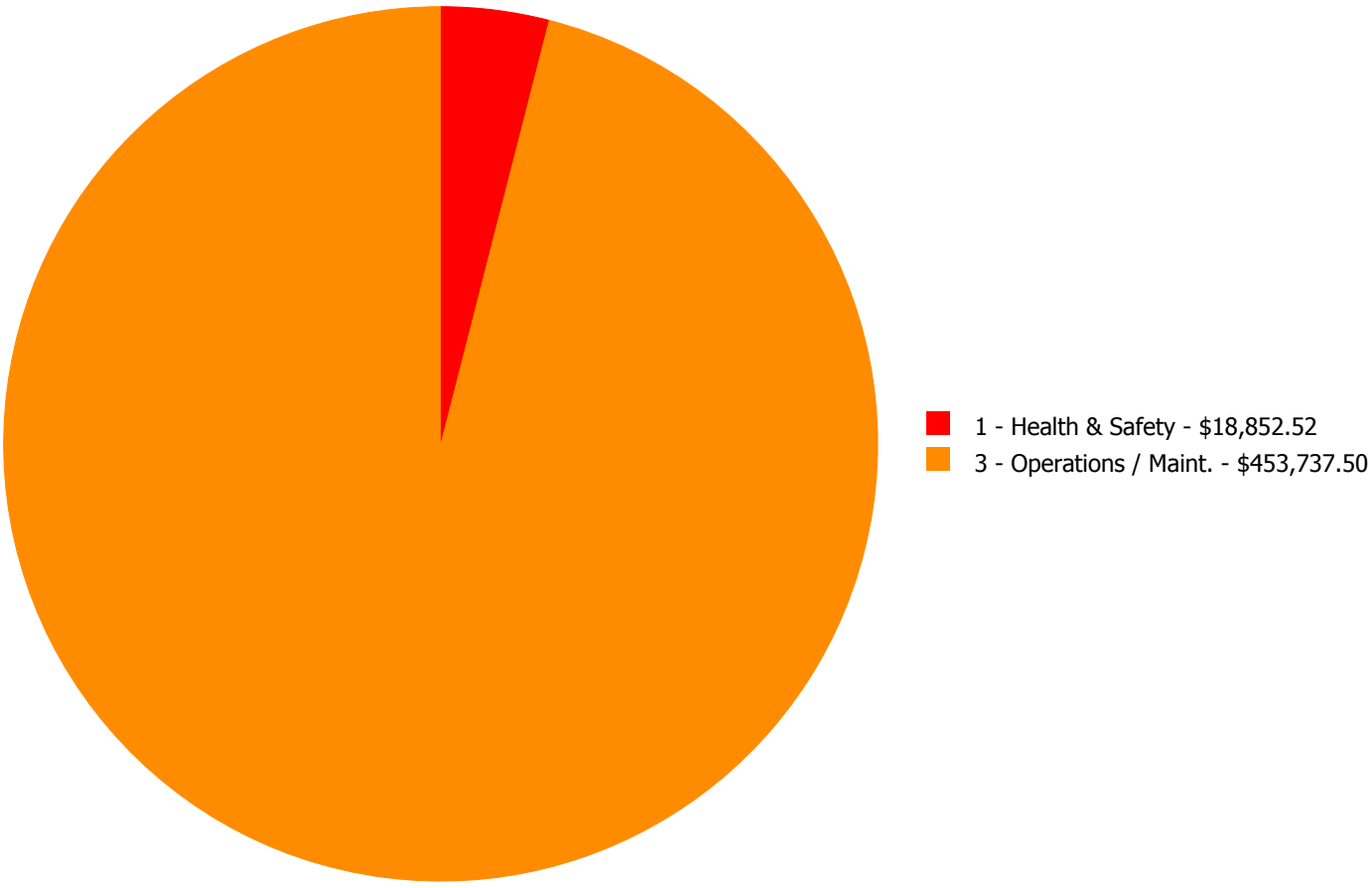
Deficiency By Priority Investment Table

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	$424,227.18	$29,510.32	$0.00	$0.00	$0.00	$453,737.50
G2040	Site Development	$0.00	$18,852.52	$0.00	$0.00	$0.00	$18,852.52
	Total:	$424,227.18	$48,362.84	$0.00	$0.00	$0.00	$472,590.02

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: $472,590.02

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: G2020 - Parking Lots

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace AC paving parking lot

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $424,227.18

Assessor Name: Hayden Collins

Date Created: 01/11/2016

Notes: The parking area has no ADA parking with approved curb cuts for access to the sidewalks that lead to the main entrance. 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 for any of the buildings on this site. 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.

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

System: G2020 - Parking Lots

Location: Site Tennis Courts

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Fill cracks in AC paving - by the LF - select appropriate width and depth

Qty: 100.00

Unit of Measure: L.F.

Estimate: $29,510.32

Assessor Name: Hayden Collins

Date Created: 01/11/2016

Notes: The Tennis courts are located on the main site just west of the exterior student commons. The student commons and the hardscape, landscape and sidewalks are in good condition however, the tennis courts will require some maintenance. Only one of the two courts are being used by the students because of the growth between the cracks of the asphalt finish on the second court. This deficiency provides a budgetary consideration for the restoration of the court surface.

System: G2040 - Site Development

Location: Loading Dock

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Build secure trash dumpster enclosure

Qty: 1.00

Unit of Measure: Ea.

Estimate: $18,852.52

Assessor Name: Hayden Collins

Date Created: 01/11/2016

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

Equipment Inventory

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

No data found for this asset

Glossary

ABMA	American Boiler Manufacturers Association http://www.abma.com/
ACEEE	American Council for an Energy-Efficient Economy
ACGIH	American Council of Governmental and Industrial Hygienists
AEE	Association of Energy Engineers
AFD	Adjustable Frequency Drive
AFTC	After Tax Cash Flow
AGA	American Gas Association
AHU	Air Handling Unit
Amp	Ampere
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration Institute
ASD	Adjustable Speed Drive
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.
ASME	American Society of Mechanical Engineers
Assessment	Visual survey of a facility to determine its condition. It involves looking at the age of systems reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or equipment for functionality.
ATS	After Tax Savings
AW	Annual worth
BACNET	Building Automation Control Network
BAS	Building Automation System
BCR	Benefit Cost Ratio
BEP	Business Energy Professional (AEE)
BF	Ballast Factor
BHP	Boiler Horsepower (boilers)
BHP	Brake Horsepower (motors)
BLCC	Building Life Cycle Cost analysis program (FEMP)
BOCA	Building Officials and Code Administrators
BTCF	Before Tax Cash Flow

BTS	Before Tax Savings
Btu	British thermal unit
Building Addition	An area space or component of a building added to a building after the original building's year built date.
CAA	Clean Air Act
CAAA-90	Clean Air Act Amendments of 1990
CABO	Council of American Building Officials
CAC	Conventional Air Conditioning
CADDET	Center for the Analysis and Dissemination of Demonstrated Energy Technologies
Calculated Next Renewal	The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.
Capital Renewal	Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life of a system or element based on on-site inspection.
CDD	Cooling Degree Days
CDGP	Certified Distributed Generation Professional
CEC	California Energy Commission
CEM	Certified Energy Manager
CEP	Certified Energy Procurement Professional
CFC	Chlorofluorocarbon
CFD	Cash Flow Diagram
CFL	Compact Fluorescent Light
CFM cfm	Cubic Feet per Minute
CHP	Combined Heat and Power (a.k.a. cogeneration)
CHW	Chilled Water
Condition	Condition refers to the state of physical fitness or readiness of a facility system or system element for its intended use.
COP	Coefficient of Performance
Cp	Heat Capacity of Material
CPUC	California Public Utility Commission
CRI	Color Rendering Index
CRT	Cathode Ray Tube VDT HMI

CTC	Competitive Transition Charge
Cu	Coefficient of Utilization
Current Replacement Value (CRV)	CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.
Cv	Value Coefficient
CWS	Chilled Water System
D d	Distance (usually feet)
DB	Dry Bulb
DCV	Demand Control Ventilation
DD	Degree Day
DDB	Double Declining Balance
DDC	Direct Digital Controls
Deferred maintenance	Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.
Deficiency	A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended purpose.
Delta	Difference
Delta P	Pressure Difference
Delta T	Temperature Difference
DG	Distributed Generation
DOE	Department of Energy
DP	Dew Point
DR	Demand Response
DX	Direct Expansion Air Conditioner
EA	Energy Audit
EBITDA	Earnings before Interest Taxes Depreciation and Amortization
ECI	Energy Cost Index
ECM	Energy Conservation Measure
ECO	Energy Conservation Opportunity
ECPA	Energy Conservation and Production Act
ECR	Energy Conservation Recommendation
ECS	Energy Control System

EER	Energy Efficiency Ratio
EERE	Energy Efficiency and Renewable Energy division of US DOE
EIA	Energy Information Agency
EIS	Energy Information System
EMCS	Energy Management Computer System
EMO	Energy Management Opportunity
EMP	Energy Management Project
EMR	Energy Management Recommendation
EMS	Energy Management System
Energy Utilization Index (EUI)	EUI is the measure of total energy consumed in the cooling or heating of a building in a period expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.
EO	Executive Order
EPA	Environmental Protection Agency
EPACT	Energy Policy Act of 1992
EPCA	Energy Production and Conservation Act of 1975
EPRI	Electric Power Research Institute
EREN	Efficiency and Renewable Energy (Division of USDOE)
ERV	Energy Recovery Ventilator
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
EUI	Energy Use Index
EWG	Exempt Wholesale Generators
Extended Facility Condition Index (EFCI)	EFCI is calculated as the condition needs for the current year plus facility system renewal needs going out to a set time in the future divided by Current Replacement Value.
f	Frequency
F	Fahrenheit
Facility	A facility refers to site(s) building(s) or building addition(s) or combinations thereof that provide a particular service.
Facility Condition Assessment (FCA)	FCA is a process for evaluating the condition of buildings and facilities for programming and budgetary purposes through an on site inspection and evaluation process.
Facility Condition Index (FCI)	FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

FC	Footcandle
FCA	Fuel Cost Adjustment
FEMIA	Federal Energy Management Improvement Act of 1988
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FESR	Fuel Energy Savings Ratio
FLA	Full Load Amps
FLF	Facility Load Factor (usually monthly)
FLRPM	Full Load Revolutions per Minute
FMS	Facility Management System
FPM fpm	Feet per Minute (velocity)
FSEC	Florida Solar Energy Center
Ft	Foot
GPM gpm	Gallons per Minute
GRI	Gas Research Institute
Gross Square Feet (GSF)	The size of the enclosed floor space of a building in square feet measured to the outside face of the enclosing wall.
GUI	Graphical User Interface
H h	Enthalpy Btu/lb
HCFC	Hydrochlorofluorocarbons
HDD	Heating Degree days
HFC	Hydrofluorocarbons
HHV	Higher Heating Value
HID	High Intensity Discharge (lamp)
HMI	Human Machine Interface
HMMI	Human Man Machine Interface
HO	High Output (lamp)
HP Hp hp	Horsepower
HPS	High Pressure Sodium (lamp)
HR	Humidity Ratio
Hr hr	Hour

HRU	Heat Recovery Unit
HVAC	Heating Ventilation and Air-Conditioning
Hz	Hertz
I	Intensity (lumen output of lamp)
I i	Interest rate or Discount rate
IAQ	Indoor Air Quality
ICA	International Cogeneration Alliance
ICBO	International Conference of Buildings Officials
ICC	International Code Council
ICP	Institutional Conservation Program
IECC	International Energy Conservation Code
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
Install year	The year a building or system was built or the most recent major renovation date (where a minimum of 70 of the system?s Current Replacement Value (CRV) was replaced).
IRP	Integrated Resource Planning
IRR	Internal Rate of Return
ISO	Independent System Operator
ITA	Independent Tariff Administrator
k	Kilo multiple of thousands in SI system
K	Kelvins (color temperature of lamp)
K k	Thermal Conductivity of Material
KVA	Kilovolt Ampere
KVAR	Kilovolt Ampere Reactive
kW	kiloWatt
kWh	kiloWatt hour
L	Length (usually feet)
LCC	Life Cycle Costing
LDC	Local Distribution Company
LEED	Leadership in Energy and Environmental Design
LEED EB	LEED for Existing Buildings

LEED NC	LEED for new construction
LF	Load Factor
LHV	Lower Heating Value
Life cycle	The period of time that a building or site system or element can be expected to adequately serve its intended function.
LPS	Low Pressure Sodium (lamp)
Lu	Lumen Output of a Lamp or Fixture
M	Mega multiple of millions in SI system
M&V	Measurement and Verification
MACRS	Modified Accelerated Cost Recovery System
MARR	Minimum Attractive Rate of Return
Mbtu	Thousand Btu
MCF	Thousand Cubic Feet (usually of gas)
MEC	Model Energy Code
Mm	Multiple of Thousands in I/P System
MMBtu	Million Btu
MMCS	Maintenance Management Computer System
MMI	Man Machine Interface
MMS	Maintenance Management System
MSE 2000	Management System for Energy 2000 (ANSI Georgia Tech Univ)
MW	MegaWatt
MWH MWh	MegaWatt hour
NAAQS	National Ambient Air Quality Standards
NAESCO	National Association of Energy Service Companies
NAIMA	North American Insulation Manufacturers Association
NEA	National Energy Act of 1978
NECPA	National Energy Conservation Policy Act
NEMA	National Electrical Manufacturer's Association
NERC	North American Electric Reliability Council
Next Renewal	The Next Renewal date is an override of the 'Calculated Next Renewal' date and is based upon the assessor?s visual inspection.

NFPA	National Fire Protection Association
NGPA	National Gas Policy Act of 1978
NLRPM	No Load Revolutions per Minute (speed)
Nn	Equipment or Project lifetime in economic analysis
NOPR	Notice of Proposed Rule Making from FERC
NOx	Nitrogen Oxide Compounds
NPV	Net present value in economic analysis
NREL	National Renewable Energy Laboratory
NUG	Non-Utility Generator
O&M	Operation and Maintenance
OA	Outside Air
ODP	Ozone Depletion Potential
OPAC	Off-Peak Air Conditioning
P	Present value in economic analysis
PBR	Performance Based Rates
PEA	Preliminary Energy Audit
PF	Power Factor
PID	Proportional plus integral plus derivative (control system)
PM	Portfolio Manager in Energy Star rating system
PM	Preventive Maintenance
PoolCo	Power Pool Company or Organization
POU	Point of Use
PQ	Power Quality
PSC	Public Service Commission
PSIA psia	Pounds per square inch absolute (pressure)
PSIG psig	Pounds per square inch gauge (pressure)
PUC	Public Utility Commission
PUHCA	Public Utilities Holding Company Act of 1935
PURPA	Public Utilities Regulatory Policies of 1978
PV	Photovotaic system

PV	Present Value
PW	Present Worth
PX	Power Exchange
q	Rate of heat flow in Btu per hour
Q	Heat load due to conduction using degree days
QF	Qualifying Facility
R	Electrical resistance
R	Thermal Resistance
RC	Remote controller
RCR	Room Cavity Ratio
RCRA	Resource Conservation and Recovery Act
Remaining Service Life (RSL)	RSL is the number of years service remaining for a system or equipment item. It is automatically calculated based on the difference between the current year and the 'Calculated Next Renewal' date or the 'Next Renewal' date whichever one is the later date.
Remaining Service Life Index (RSLI)	RSLI is defined as a percentage ratio of the remaining service life of a system. It usually ranges from 0 to 100
REMR	Repair Evaluation Maintenance Rehabilitation (REMR) is a scale used to objectively rank systems based on their condition
Renewal Schedule	A timeline that provides the items that need repair the year in which the repair is needed and the estimated price of the renewal.
RH	Relative Humidity
RLA	Running Load Amps
RMS	Root Mean Square
RO	Reverse Osmosis
ROI	Return on Investment
RPM	Revolutions Per Minute
RTG	Regional Transmission Group
RTO	Regional Transmission Organization
RTP	Real Time Pricing
SBCCI	Southern Building Code Congress International
SC	Scheduling Coordinator
SC	Shading Coefficient
SCADA	Supervisory Control and Data Acquisition Systems

SEER	Seasonal Energy Efficiency Ratio
SHR	Sensible Heat Ratio
Site	The grounds and utilities roadways landscaping fencing and other typical land improvements needed to support the facility.
Soft Cost	An expense item that is not considered direct construction cost. Soft cost includes architectural engineering financing legal fees and other pre-and-post construction expenses.
SOx	Sulfur Oxide Compounds
SP	Static Pressure
SP SPB	Simple Payback
SPP	Simple Payback Period
SPP	Small Power Producers
STR	Stack Temperature Rise
SV	Specific Volume
System	System refers to building and related site work elements as described by ASTM Uniformat II Classification for Building Elements (E1557-97) a format for classifying major facility elements common to most buildings. Elements usually perform a given function regardless of the design specification construction method or materials used. See also Uniformat II.
T	Temperature
T	Tubular (lamps)
TAA	Technical Assistance Audit
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Thermal Energy Storage
THD	Total Harmonic Distortion
TOD	Time of Day
TOU	Time of Use
TQM	Total Quality Management
TransCo	Transmission Company
U	Thermal Conductance
UDC	Utility Distribution Company
UL	Underwriters Laboratories
UNIFORMAT II	The ASTM UNIFORMAT II Classification for Building Elements (E1557-97) a format for classifying major facility components common to most buildings.
USGBC	US Green Building Council
v	Specific Volume

V	Volts Voltage
V	Volume
VAV	Variable Air Volume
VDT	Video Display Terminal
VFD	Variable Frequency Drive
VHO	Very High Output
VSD	Variable Speed Drive
W	Watts
W	Width
WB	Wet bulb
WH Wh	Watt Hours
Year built	The year that a building or addition was originally built based on substantial completion or occupancy.
Z	Electrical Impedance