## 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.*

## Jenks, Abram School

| | | | |
|---|---|---|---|
| Governance | DISTRICT | Report Type | Elementary |
| Address | 2501 S. 13Th St. | Enrollment | 309 |
| | Philadelphia, Pa 19148 | Grade Range | '00-05' |
| Phone/Fax | 215-952-6224 / 215-952-6407 | Admissions Category | Neighborhood |
| Website | Www.Philasd.Org/Schools/Asjenks | 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** | **31.58%** | **$5,141,754** | **$16,283,315** |
| Building | 31.32 % | $4,920,009 | $15,709,437 |
| Grounds | 38.64 % | $221,745 | $573,878 |

## Major Building Systems

| Building System | System FCI | Repair Costs | Replacement Cost |
|---|---|---|---|
| **Roof** (Shows physical condition of roof) | 89.40 % | $455,205 | $509,195 |
| **Exterior Walls** (Shows condition of the structural condition of the exterior facade) | 00.78 % | $9,078 | $1,161,742 |
| **Windows** (Shows functionality of exterior windows) | 67.65 % | $383,507 | $566,865 |
| **Exterior Doors** (Shows condition of exterior doors) | 15.31 % | $6,987 | $45,639 |
| **Interior Doors** (Classroom doors) | 15.11 % | $16,697 | $110,477 |
| **Interior Walls** (Paint and Finishes) | 10.65 % | $53,116 | $498,564 |
| **Plumbing Fixtures** | 11.06 % | $47,079 | $425,542 |
| **Boilers** | 00.00 % | $0 | $587,638 |
| **Chillers/Cooling Towers** | 50.02 % | $385,425 | $770,508 |
| **Radiators/Unit Ventilators/HVAC** | 31.12 % | $421,134 | $1,353,110 |
| **Heating/Cooling Controls** | 158.90 % | $675,207 | $424,913 |
| **Electrical Service and Distribution** | 78.42 % | $239,423 | $305,308 |
| **Lighting** | 20.78 % | $226,865 | $1,091,553 |
| **Communications and Security** (Cameras, Pa System and Fire Alarm) | 51.57 % | $210,858 | $408,860 |

*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

# S252001;Jenks, Abram

Final

## Site Assessment Report

January 30, 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): | 80,000 |
| Year Built: | 1897 |
| Last Renovation: | |
| Replacement Value: | $16,283,315 |
| Repair Cost: | $5,141,754.10 |
| Total FCI: | 31.58 % |
| Total RSLI: | 68.76 % |


**Description:**

Facility Assessment

August 25th, 2015

***School District of Philadelphia***

***Abram S Jenks Elementary School***

***2501 S. 13th Street***

***Philadelphia, PA 19148***

31,475 SF / 318 Students / LN 01

GENERAL

Mr. Dave Loftus FAC, provided input to the assessment team on current problems. Mr. Andrew Laquintano Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Laquintano has been in the school for more than 6 years.

The 3 story, 31,475 square foot building was originally constructed in 1897. The building has a multi-level basement. The school was originally 3 stories, and the top story was removed after a fire in 1955. Most of the mechanical systems were completely replaced during the renovation and date to that time.

ARCHITECHURAL/STRUCTURAL SYSTEMS

The building rests on concrete and stone foundations and bearing walls that are showing some signs of settlement or damage and appears to be structurally sound. The main structure consists typically of cast-in-place concrete columns, beams, and concrete one way ribbed slab. The roof structure consists of concrete one-way slab supported by main structural frame. Roofing is built up application in very poor condition with multiple patched areas, uneven surface and ponding and in need of replacement. The building envelope is typically masonry with granite block face and face brick on the rear elevation. In general, masonry is in fair condition with re-pointing and sealing needed around window lintels and sills. The windows were replaced in early 1990s with extruded aluminum, double hung windows, Lexan Plexiglas with insect/security screens. All windows are generally in fair condition with slight hazing. Exterior doors are typically hollow metal in fair condition. Public access doors have granite stoops with granite stairs; service doors have concrete stoops and stairs. The building is not accessible per ADA requirements due to first floor- grade separation with no ramps or lifts.

Partition wall types include plastered ceramic hollow blocks with some CMU added at a later date. Interior doors are generally metal frame with solid core and wood doors with lites and transoms in fair condition. Doors leading to exit stairways are hollow metal doors and frames in fair condition. Interior doors do not have lever type handles. Fittings include: toilet accessories in good condition; marble toilet partitions with composite plastic doors, generally in fair to poor condition; handrails and ornamental metals, generally in fair condition. Toilet partitions and accessories are not ADA accessible. Interior identifying signage is typically missing or handmade in poor condition. Stair construction is generally steel and concrete with cast iron nosing in good condition. Stair railings are cast iron balusters with wood handrail in fair condition and missing handrail for code compliance.

The interior wall finishes are painted plaster throughout with tile wainscot in the kindergarten toilet in good condition. Generally, paint is in good condition with some deterioration in basement areas and various water damaged areas. Flooring includes: patterned or bare concrete in corridors, stairways, gym, toilets, part of auditorium, and basement service areas in good condition; vinyl flooring in classrooms, part of auditorium, stage, cafeteria, kitchen, and offices in good to fair condition with some damaged areas in need of replacement; and ceramic tile in kindergarten toilet in good condition. Ceiling finishes are painted plaster or structural concrete throughout in fair condition with some areas in need of repair and re-painting. Installation of suspended acoustic ceiling in corridors would improve appearance and hide current and updated utilities. Gym is in need of sound absorbing acoustic panels on ceiling.

The building has no elevators.

Institutional and Commercial equipment includes: stage equipment, generally in poor condition with torn curtains. Other equipment includes kitchen equipment (heat and serve only), generally in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair to good condition; window shades/blinds in fair condition; and fixed auditorium seating in fair condition with some damaged or missing seats.

MECHANICAL SYSTEMS

Plumbing fixtures throughout the building date from the 1950s forward. Floor mounted water closets and wall hung urinals have exposed flush valves. Toilet room lavatories have mixing faucets. The school cafeteria has a single lavatory. Service sinks are installed in janitor closets on each floor. The plumbing fixtures are in good condition throughout the building and will not need replacement within 10 years. Vitreous china drinking fountains are located in hallways throughout the building. They are in good condition but non-accessible without coolers, and they should be replaced.

Domestic water distribution plumbing is copper with soldered connections. Visible areas of pipe overall are in fair condition with no reported problems and can be expected to last at least 5 more years. Water enters the building in the basement through a 3 inch line. There is no backflow prevention on the city connection, and one should be installed to comply with building codes. There is a double backflow preventer on the connection to boiler system. Domestic water is heated by a 40 gallon, vertical tank, gas burning, Bradford White water heater installed in 2010. The water heater is in good condition and can be expected to last at least 5 more years. In the basement there are two water pressure

booster pumps, an air pump, and a non-bladder pressurized storage tank. This booster system is obsolete and appears to be abandoned in place.

Sanitary waste pipes are threaded galvanized steel dating from 1955. Rain water drain pipes run in pipe chases inside the building. There is a groundwater sump below the boiler room floor with a single pump. Drain pipe systems are visibly in fair condition, however due to age and material they both should be inspected more thoroughly and repaired as needed. The building engineer stated that city sewer repairs eliminated boiler room flooding that happened in the past.

The building was designed for primary heating and ventilation via forced air from a basement air handler and secondary heating by steam radiators along windows.

Heat generation is provided by 2 H.B. Smith, model 350, 13 section, cast iron, 2,602 MBH (78 HP) capacity steam boilers. They were installed in basement boiler room in 1995. They are equipped with Power Flame pressure atomized oil burners manufactured in 1995. Burners are also suitable for natural gas. The entire gas train is installed for both boilers including a booster, but it is not connected to the utility. Gas service for boiler pilots and domestic water heating enters the building through a 1 inch line on the east side of the basement. There are two oil pumps with a 6,000 gallon oil tank located south of the building. Combustion makeup air enters the boiler room from outside through automatically controlled dampers. The boiler exhausts have constant draft dampers. There is a single tank for condensate collection and feedwater supply. There are three feed water pumps with separate feed lines for each boiler. The domestic water connection to the boiler system has a double backflow prevention valve. Overall, the boiler system is in good condition and should last 15 more years.

The building has no central cooling generating equipment. There are 5 window units and 1 mini-split with a total capacity of approximately 12 tons. A cooling system should be installed to air condition the entire building with a capacity of approximately 80 tons.

The building has 1 air handler in the basement installed in circa 1955. The air handler has approximately 36,000 CFM capacity and includes finned tube steam heating coils and a 7.5 HP fan. It is obsolete and should be replaced with a new unit including cooling coils. The AHU feeds sheet metal ductwork in the basement that leads to built-in vertical ducts leading to the classrooms. Classrooms have diffuser vanes on the duct outlets. Room exhaust air discharges up to the attic plenum and out the roof through gravity vents. The gravity vents are damaged and leak water during storms, so they should be replaced.

Fan coil unit heaters are located in the gym and boiler room. Unit vents are installed in the auditorium addition. Radiators throughout the school were replaced with finned tube units at the time of the remodel. They have pneumatic steam control valves and thermostatic traps. Units are in fair condition and will not need replacement for at least 15 years. Steam traps however pass lots of steam according to the engineer and there is no history of trap maintenance. Steam traps should be surveyed and repaired.

The building has pneumatic controls for radiators and steam coils. Some of the pneumatic thermostats could be heard operating during the inspection. There is an air compressor from 1988 in the basement mechanical room. The compressor had a new motor installed in 2015. The entire system is obsolete and should be upgraded to modern digital controls.

The building does not have standpipes or sprinklers. A sprinkler system should be added to improve occupant safety including a fire pump if needed.

ELECTRICAL SYSTEMS

A service drop from a 100KVA (estimated) pole mounted transformer on W Porter Street serves this school. The basement electrical room houses the utility main disconnect switch, utility metering No 213MU 46887 and 400A, 120/240V distribution section. The existing service is approximately 20 years old and has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The electrical service entrance needs to be upgraded to an estimated 1200A, 120/208V.The new electrical service would feed HVAC (Heating, Ventilation and Air Conditioning) equipment, receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles. These panel-boards are 20 years old and are expected to provide 20 more years of useful service life. There are (1) 22.5KVA and 75KVA phase converters from 240V to 120/208V which normally feed newest mechanical equipment. Panel-board's doors at corridors are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor or in areas where students are present must be provided with lockable devices.

The number of receptacles in approximate 6 classrooms are inadequate. Teachers use extension cords. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Classrooms, corridors, stairways, gymnasium, equipment rooms are illuminated with surface/pendant mounted fluorescent fixtures, with T-8 lamps. Lighting level is good and adequate.

The Fire Alarm system is manufactured by S.H. COUCH INC. The system is approximately 30 years old. The present Fire Alarm system does not meet current code and needs to be replaced. Fire alarm system is tested every day in the morning.

The present telephone system is adequate.

An independent and separate PA system connected to the telephone system, the school uses for public announcement. System is working adequately for most part.

The present clocks are old and manufactured by Simplex 2350 Master Time System. The clocks are difficult to find parts and repair. Replace clock system with wireless, battery operated clock system.

There is not television system.

The security system consists of CCTV cameras at the basement and first floor stairways. There are missing CCTV cameras at the gym and corridors. Provide additional CCTV cameras.

The emergency power system consists of a gas powered generator, manufactured by Generac 15KW, 120/240V. The present emergency power system serves the corridor, exit signs, gymnasium, stair ways, Boiler room, battery charger and fire alarm panel. The gas powered generator is approximately 30 years old and has exceeded its useful service life. Generator is tested once a week. Provide 35KW, outdoor, diesel powered generator.

There is adequate UPS in the IT room.

The emergency lighting is obtained with dedicated fixtures connected to the emergency generator. Exit signs are located at each exit door and corridors and are connected to the school emergency system.

The school building is not provided with lightning protection system. A study should be conducted to determine if the lightning protection system is required.

There are not theatrical lighting and dimming systems and they are not required.

There is a portable sound system. It is approximately 4 years old. The present sound system is adequate.

GROUNDS SYSTEMS

The site surrounds the building on all three sides which is set back from the street. Yard area on south and east sides are concrete paving in fair condition. Metal fence surrounding the site is rusted, falling, and in poor condition in need of complete replacement to include access gates. Landscaping is minimal and consists of newly planted trees along public sidewalks in good condition.

Accessibility: the building does not have accessible entrance, or accessible routes. None of the toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. None of the doors in the building have ADA required door handles.

The school perimeter is illuminated with wall mounted lighting fixtures. Most of the lenses or lamps are damaged. Replace existing lighting fixtures.

CCTV cameras around the building perimeter and parking lot are provided. For total building coverage provide (3) CCTV cameras on the south side of the building.

There is not wall mounted loud speaker facing the playground area. Provide (2) loud speakers.

RECOMMENDATIONS

- Repair foundation walls – deterioration
- Re-point and seal window lintels and sills
- Replace Plexiglas windows – hazed and energy inefficient
- Provide ADA compliant exterior door hardware at one entrance
- Replace built-up roofing system – leaking, failing, and beyond service life

- Provide ADA lever handle lock/latchsets on interior doors
- Provide new toilet partitions and toilet accessories including grab bars for accessibility
- Install new ID signage – missing
- Install code compliant stair railing
- Repair and repaint damaged wall areas (10% of plaster wall areas)
- Replaced damaged VAC tile with VCT (10% of vinyl floor area)
- Repair and repaint damaged ceiling areas (5% of plaster ceiling areas)
- Install suspended acoustic ceiling system in corridors – hide utilities
- Install acoustic panels on gym ceiling for sound absorption
- Install elevator for accessibility ( location TBD)
- Replace auditorium curtains – damaged
- Replace auditorium seats – damaged or missing (10%)
- Replace metal fence and gates for site security - failing
- Provide ADA compliant ramp at one entrance (location TBD)

- Replace 3 drinking fountains with accessible types.

- Install backflow preventer on domestic water entry for code compliance.

- Inspect and repair sanitary waste pipe due to age, 31,475 sq. ft.

- Inspect and repair rain water drain pipe, 31,475 sq. ft.

- Install 80 ton chiller to provide air-conditioning.

- Replace obsolete AHU to restore ventilation and add central cooling.

- Replace rooftop gravity vents due to age and damage.

- Survey and repair steam traps due to steam leaks.

- Replace obsolete pneumatic HVAC controls with DDC.

- Install fire protection sprinkler system, including fire pump if needed.

- Provide a new electrical service 1200 Amperes 120/208V, it will be located in the vicinity of the existing electrical service.

- Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 96
- Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms.
- Replace clock and bell system with wireless, battery operated, clock system. Approximate 25
- Add CCTV cameras to provide a full coverage of the building interior. Approximate 15 CCTV cameras
- Provide 35KW, outdoor, diesel powered generator.
- Prepare a study to determine if a lightning protection system is required.
- Replace exterior, wall mounted lighting fixtures. Total of 10.
- Provide (3) CCTV cameras on the south side of the building.
- Provide two PA loud speakers facing the playground area.

**Attributes:**

| **General Attributes:** | | | |
|---|---|---|---|
| Active: | Open | Bldg Lot Tm: | Lot 2 / Tm 3 |
| Status: | Accepted by SDP | Team: | Tm 3 |
| Site ID: | S252001 | | |

## 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 | 37.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 37.00 % | 28.36 % | $171,809.61 |
| B10 - Superstructure | 37.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 59.11 % | 22.52 % | $399,572.01 |
| B30 - Roofing | 110.00 % | 89.40 % | $455,204.82 |
| C10 - Interior Construction | 46.79 % | 9.21 % | $71,162.46 |
| C20 - Stairs | 37.00 % | 39.14 % | $17,370.87 |
| C30 - Interior Finishes | 61.20 % | 9.45 % | $131,198.76 |
| D10 - Conveying | 105.71 % | 282.40 % | $497,751.74 |
| D20 - Plumbing | 35.09 % | 58.40 % | $375,367.77 |
| D30 - HVAC | 97.22 % | 42.32 % | $1,481,766.15 |
| D40 - Fire Protection | 92.47 % | 177.49 % | $450,264.64 |
| D50 - Electrical | 110.11 % | 45.13 % | $835,025.94 |
| E10 - Equipment | 73.84 % | 0.00 % | $0.00 |
| E20 - Furnishings | 20.00 % | 49.99 % | $33,514.23 |
| G20 - Site Improvements | 59.02 % | 40.11 % | $166,335.46 |
| G40 - Site Electrical Utilities | 50.00 % | 34.81 % | $55,409.64 |
| **Totals:** | **68.76 %** | **31.58 %** | **$5,141,754.10** |

### 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) |
|---|---|---|---|---|---|---|---|
| B252001;Jenks, Abram | 31,475 | 31.32 | $575,848.38 | $2,094,046.92 | $1,091,936.37 | $23,888.66 | $1,134,288.67 |
| G252001;Grounds | 27,400 | 38.64 | $25,981.81 | $140,353.65 | $24,744.19 | $30,665.45 | $0.00 |
| **Total:** | | **31.58** | **$601,830.19** | **$2,234,400.57** | **$1,116,680.56** | **$54,554.11** | **$1,134,288.67** |

### Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $601,830.19
- 2 - Response Time (2-3 yrs) - $2,234,400.57
- 3 - Response Time (3-4 yrs) - $1,116,680.56
- 4 - Response Time (4-5 yrs) - $54,554.11
- 5 - Response Time (> 5 yrs) - $1,134,288.67

**Budget Estimate Total: $5,141,754.10**

## Executive Summary

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

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

| | |
|---|---|
| Function: | Elementary School |
| Gross Area (SF): | 31,475 |
| Year Built: | 1897 |
| Last Renovation: | |
| Replacement Value: | $15,709,437 |
| Repair Cost: | $4,920,009.00 |
| Total FCI: | 31.32 % |
| Total RSLI: | 69.21 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg ID: | B252001 |
| Sewage Ejector: | No | Status: | Accepted by SDP |
| Site ID: | S252001 | | |

## 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 | 37.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 37.00 % | 28.36 % | $171,809.61 |
| B10 - Superstructure | 37.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 59.11 % | 22.52 % | $399,572.01 |
| B30 - Roofing | 110.00 % | 89.40 % | $455,204.82 |
| C10 - Interior Construction | 46.79 % | 9.21 % | $71,162.46 |
| C20 - Stairs | 37.00 % | 39.14 % | $17,370.87 |
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| D10 - Conveying | 105.71 % | 282.40 % | $497,751.74 |
| D20 - Plumbing | 35.09 % | 58.40 % | $375,367.77 |
| D30 - HVAC | 97.22 % | 42.32 % | $1,481,766.15 |
| D40 - Fire Protection | 92.47 % | 177.49 % | $450,264.64 |
| D50 - Electrical | 110.11 % | 45.13 % | $835,025.94 |
| E10 - Equipment | 73.84 % | 0.00 % | $0.00 |
| E20 - Furnishings | 20.00 % | 49.99 % | $33,514.23 |
| **Totals:** | **69.21 %** | **31.32 %** | **$4,920,009.00** |

## Condition Detail

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

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

## System Listing

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

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

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

# Site Assessment Report - B252001;Jenks, Abram

| 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 | $18.40 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $579,140 |
| A1030 | Slab on Grade | $7.73 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $243,302 |
| A2010 | Basement Excavation | $6.55 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $206,161 |
| A2020 | Basement Walls | $12.70 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 42.98 % | 37 | | $171,809.61 | $399,733 |
| B1010 | Floor Construction | $75.10 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $2,363,773 |
| B1020 | Roof Construction | $13.88 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $436,873 |
| B2010 | Exterior Walls | $36.91 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.78 % | 37 | | $9,077.77 | $1,161,742 |
| B2020 | Exterior Windows | $18.01 | S.F. | 31,475 | 40 | 1993 | 2033 | 2057 | 105.00 % | 67.65 % | 42 | | $383,506.96 | $566,865 |
| B2030 | Exterior Doors | $1.45 | S.F. | 31,475 | 25 | 1993 | 2018 | 2028 | 52.00 % | 15.31 % | 13 | | $6,987.28 | $45,639 |
| B3010105 | Built-Up | $37.76 | S.F. | 13,435 | 20 | 1975 | 1995 | 2037 | 110.00 % | 89.73 % | 22 | | $455,204.82 | $507,306 |
| B3020 | Roof Openings | $0.06 | S.F. | 31,475 | 20 | 1975 | 1995 | 2037 | 110.00 % | 0.00 % | 22 | | | $1,889 |
| C1010 | Partitions | $17.91 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 0.00 % | 37 | | | $563,717 |
| C1020 | Interior Doors | $3.51 | S.F. | 31,475 | 40 | 1993 | 2033 | | 45.00 % | 15.11 % | 18 | | $16,697.08 | $110,477 |
| C1030 | Fittings | $3.12 | S.F. | 31,475 | 40 | 1897 | 1937 | 2057 | 105.00 % | 55.46 % | 42 | | $54,465.38 | $98,202 |
| C2010 | Stair Construction | $1.41 | S.F. | 31,475 | 100 | 1897 | 1997 | 2052 | 37.00 % | 39.14 % | 37 | | $17,370.87 | $44,380 |
| C3010230 | Paint & Covering | $15.69 | S.F. | 31,475 | 10 | 2013 | 2023 | | 80.00 % | 10.76 % | 8 | | $53,115.87 | $493,843 |
| C3010232 | Wall Tile | $0.15 | S.F. | 31,475 | 30 | 1993 | 2023 | | 26.67 % | 0.00 % | 8 | | | $4,721 |
| C3020412 | Terrazzo & Tile | $75.52 | S.F. | 315 | 50 | 1993 | 2043 | | 56.00 % | 0.00 % | 28 | | | $23,789 |
| C3020413 | Vinyl Flooring | $9.68 | S.F. | 20,144 | 20 | 1972 | 1992 | 2027 | 60.00 % | 13.36 % | 12 | | $26,060.55 | $194,994 |
| C3020415 | Concrete Floor Finishes | $0.97 | S.F. | 11,016 | 50 | 1993 | 2043 | | 56.00 % | 0.00 % | 28 | | | $10,686 |
| C3030 | Ceiling Finishes | $20.97 | S.F. | 31,475 | 25 | 1993 | 2018 | 2027 | 48.00 % | 7.88 % | 12 | | $52,022.34 | $660,031 |
| D1010 | Elevators and Lifts | $5.60 | S.F. | 31,475 | 35 | | | 2052 | 105.71 % | 282.40 % | 37 | | $497,751.74 | $176,260 |
| D2010 | Plumbing Fixtures | $13.52 | S.F. | 31,475 | 35 | 1955 | 1990 | 2025 | 28.57 % | 11.06 % | 10 | | $47,078.70 | $425,542 |
| D2020 | Domestic Water Distribution | $1.68 | S.F. | 31,475 | 25 | 1955 | 1980 | 2021 | 24.00 % | 64.88 % | 6 | | $34,306.86 | $52,878 |
| D2030 | Sanitary Waste | $2.90 | S.F. | 31,475 | 25 | 1897 | 1922 | 2030 | 60.00 % | 169.16 % | 15 | | $154,408.49 | $91,278 |
| D2040 | Rain Water Drainage | $2.32 | S.F. | 31,475 | 30 | 1897 | 1927 | 2030 | 50.00 % | 191.14 % | 15 | | $139,573.72 | $73,022 |
| D3020 | Heat Generating Systems | $18.67 | S.F. | 31,475 | 35 | 1995 | 2030 | | 42.86 % | 0.00 % | 15 | | | $587,638 |
| D3030 | Cooling Generating Systems | $24.48 | S.F. | 31,475 | 30 | | | 2047 | 106.67 % | 50.02 % | 32 | | $385,425.49 | $770,508 |
| D3040 | Distribution Systems | $42.99 | S.F. | 31,475 | 25 | 1955 | 1980 | 2042 | 108.00 % | 31.12 % | 27 | | $421,133.52 | $1,353,110 |
| D3050 | Terminal & Package Units | $11.60 | S.F. | 31,475 | 20 | 1955 | 1975 | 2037 | 110.00 % | 0.00 % | 22 | | | $365,110 |
| D3060 | Controls & Instrumentation | $13.50 | S.F. | 31,475 | 20 | 1955 | 1975 | 2037 | 110.00 % | 158.90 % | 22 | | $675,207.14 | $424,913 |
| D4010 | Sprinklers | $7.05 | S.F. | 31,475 | 35 | | | 2052 | 105.71 % | 202.91 % | 37 | | $450,264.64 | $221,899 |
| D4020 | Standpipes | $1.01 | S.F. | 31,475 | 35 | | | | 0.00 % | 0.00 % | | | | $31,790 |
| D5010 | Electrical Service/Distribution | $9.70 | S.F. | 31,475 | 30 | 1995 | 2025 | 2047 | 106.67 % | 78.42 % | 32 | | $239,422.66 | $305,308 |
| D5020 | Lighting and Branch Wiring | $34.68 | S.F. | 31,475 | 20 | 1995 | 2015 | 2037 | 110.00 % | 20.78 % | 22 | | $226,864.93 | $1,091,553 |
| D5030 | Communications and Security | $12.99 | S.F. | 31,475 | 15 | 1897 | 1912 | 2032 | 113.33 % | 51.57 % | 17 | | $210,857.67 | $408,860 |
| D5090 | Other Electrical Systems | $1.41 | S.F. | 31,475 | 30 | 1897 | 1927 | 2047 | 106.67 % | 355.75 % | 32 | | $157,880.68 | $44,380 |
| E1020 | Institutional Equipment | $4.82 | S.F. | 31,475 | 35 | 1972 | 2007 | 2052 | 105.71 % | 0.00 % | 37 | | | $151,710 |
| E1090 | Other Equipment | $11.10 | S.F. | 31,475 | 35 | 2001 | 2036 | | 60.00 % | 0.00 % | 21 | | | $349,373 |
| E2010 | Fixed Furnishings | $2.13 | S.F. | 31,475 | 40 | 1983 | 2023 | | 20.00 % | 49.99 % | 8 | | $33,514.23 | $67,042 |
| | | | | | | | | **Total** | **69.21 %** | **31.32 %** | | | **$4,920,009.00** | **$15,709,437** |

## 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:** 99% - Paint & covering
1% - Wall tile (ceramic)

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

**Note:** 1% - Terrazzo & Tile (ceramic)
64% - Vinyl Flooring (20% VCT, 44% VAT)
35% - Concrete Floor Finishes

**System:** D5010 - Electrical Service/Distribution

**Note:** (1) 22.5 KVA and (1) 75KVA phase converters

## 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:** | **$4,920,009** | **$0** | **$0** | **$0** | **$0** | **$0** | **$69,453** | **$0** | **$788,141** | **$0** | **$629,082** | **$6,406,685** |
| *** 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** | $171,810 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$171,810** |
| **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** | $9,078 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$9,078** |
| **B2020 - Exterior Windows** | $383,507 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$383,507** |
| **B2030 - Exterior Doors** | $6,987 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$6,987** |
| **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** | $455,205 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$455,205** |
| **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** | $16,697 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$16,697** |
| **C1030 - Fittings** | $54,465 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$54,465** |
| **C20 - Stairs** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

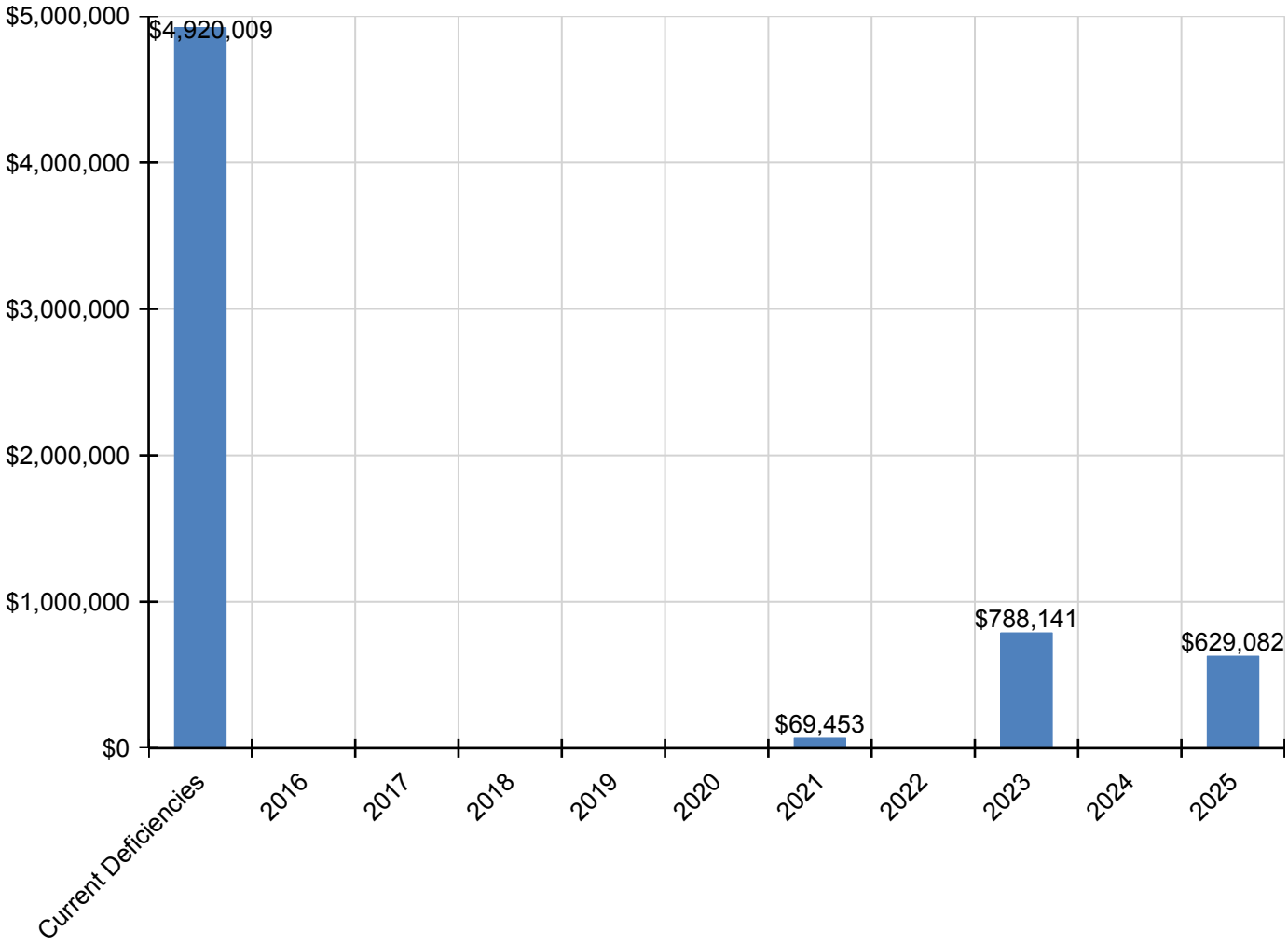
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C2010 - Stair Construction** | $17,371 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$17,371** |
| **C30 - Interior Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010 - Wall Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010230 - Paint & Covering** | $53,116 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $688,144 | $0 | $0 | **$741,260** |
| **C3010232 - Wall Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,578 | $0 | $0 | **$6,578** |
| **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** | $26,061 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$26,061** |
| **C3020415 - Concrete Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3030 - Ceiling Finishes** | $52,022 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$52,022** |
| **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** | $47,079 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $629,082 | **$676,161** |
| **D2020 - Domestic Water Distribution** | $34,307 | $0 | $0 | $0 | $0 | $0 | $69,453 | $0 | $0 | $0 | $0 | **$103,760** |
| **D2030 - Sanitary Waste** | $154,408 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$154,408** |
| **D2040 - Rain Water Drainage** | $139,574 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$139,574** |
| **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** | $385,425 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$385,425** |
| **D3040 - Distribution Systems** | $421,134 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$421,134** |
| **D3050 - Terminal & Package Units** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D3060 - Controls & Instrumentation** | $675,207 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$675,207** |
| **D40 - Fire Protection** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D4010 - Sprinklers** | $450,265 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$450,265** |
| **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** | $239,423 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$239,423** |
| **D5020 - Lighting and Branch Wiring** | $226,865 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$226,865** |
| **D5030 - Communications and Security** | $210,858 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$210,858** |
| **D5090 - Other Electrical Systems** | $157,881 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$157,881** |
| **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** | $33,514 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $93,419 | $0 | $0 | **$126,933** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

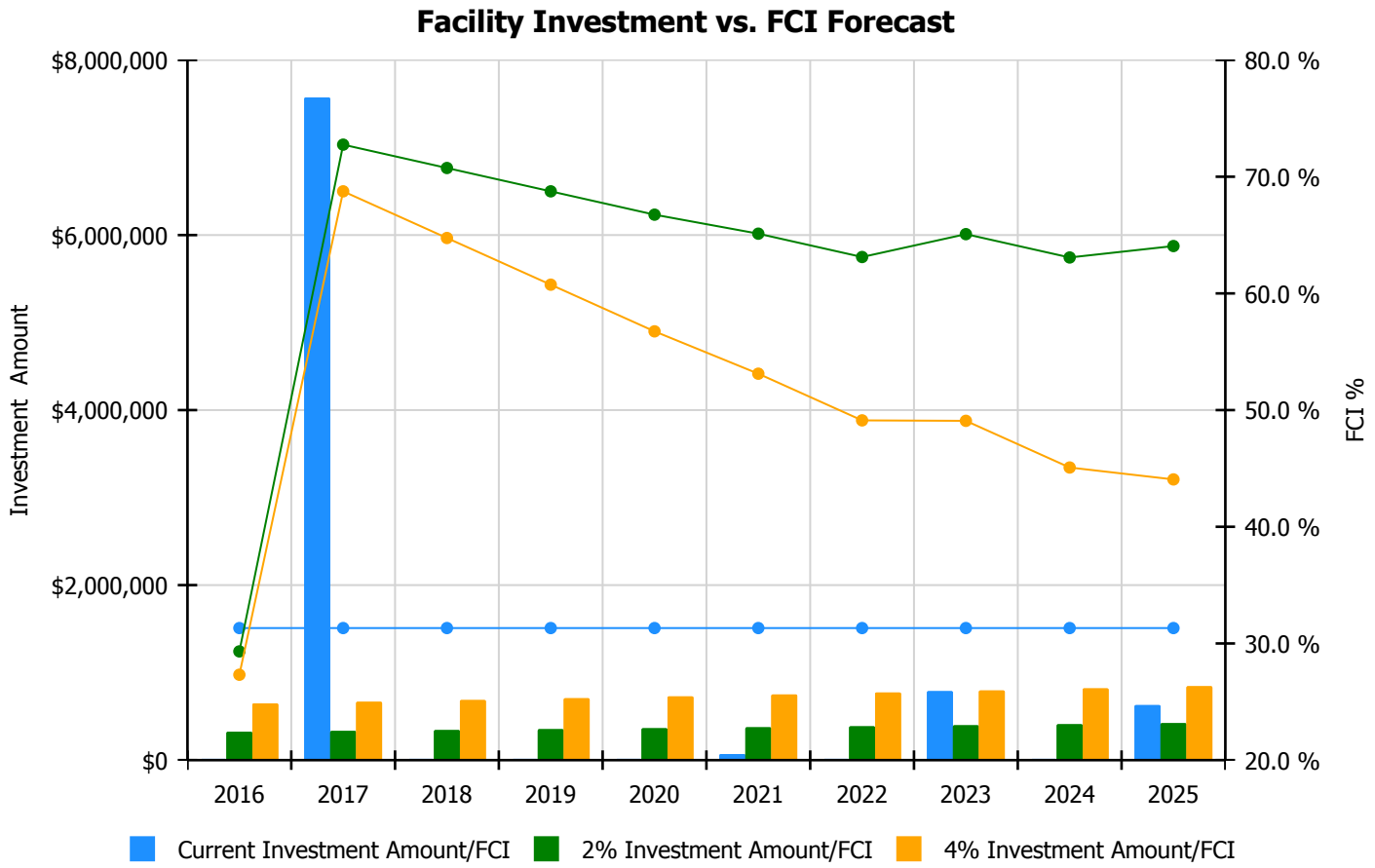
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 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:

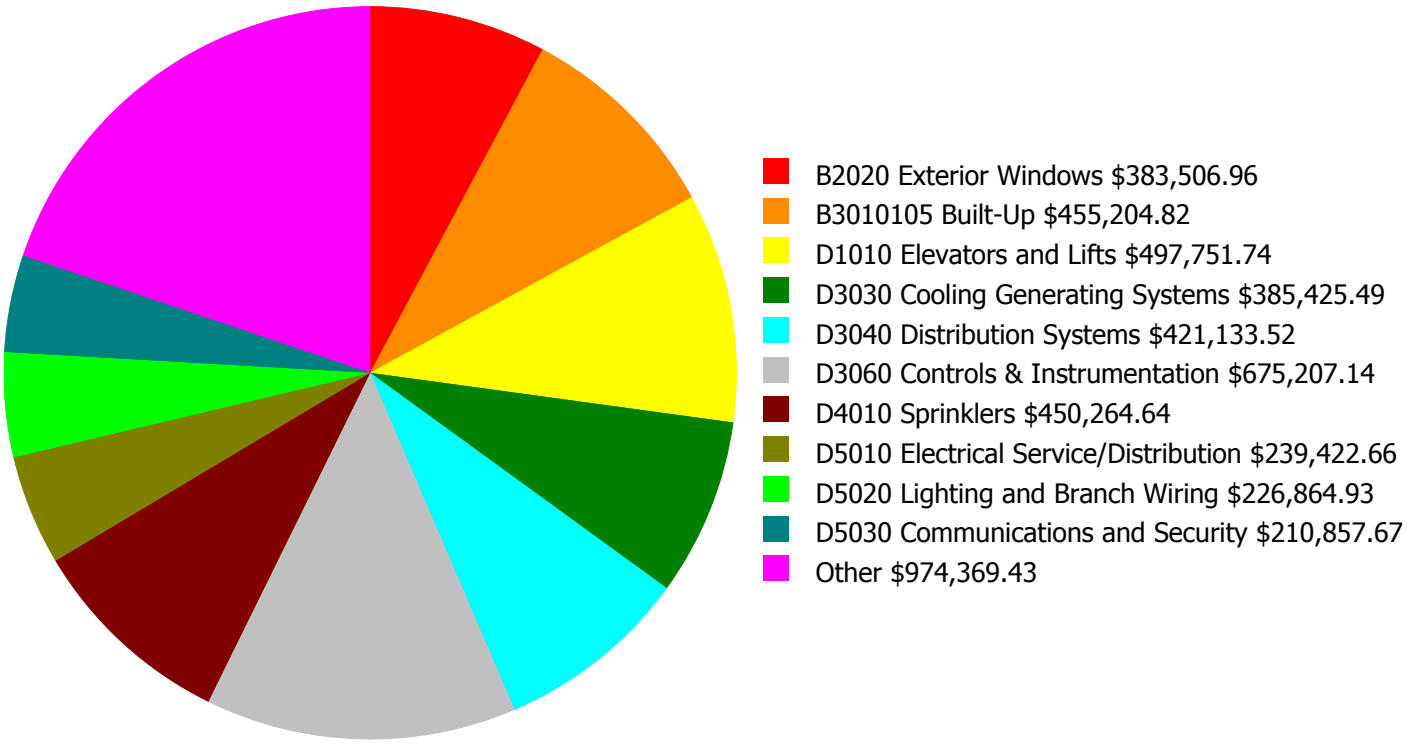
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 31.32% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $323,614.00 | 29.32 % | $647,229.00 | 27.32 % |
| 2017 | $7,571,278 | $333,323.00 | 72.75 % | $666,646.00 | 68.75 % |
| 2018 | $0 | $343,323.00 | 70.75 % | $686,645.00 | 64.75 % |
| 2019 | $0 | $353,622.00 | 68.75 % | $707,244.00 | 60.75 % |
| 2020 | $0 | $364,231.00 | 66.75 % | $728,462.00 | 56.75 % |
| 2021 | $69,453 | $375,158.00 | 65.12 % | $750,316.00 | 53.12 % |
| 2022 | $0 | $386,413.00 | 63.12 % | $772,825.00 | 49.12 % |
| 2023 | $788,141 | $398,005.00 | 65.08 % | $796,010.00 | 49.08 % |
| 2024 | $0 | $409,945.00 | 63.08 % | $819,890.00 | 45.08 % |
| 2025 | $629,082 | $422,243.00 | 64.06 % | $844,487.00 | 44.06 % |
| **Total:** | **$9,057,955** | **$3,709,877.00** | | **$7,419,754.00** | |

## Deficiency Summary by System

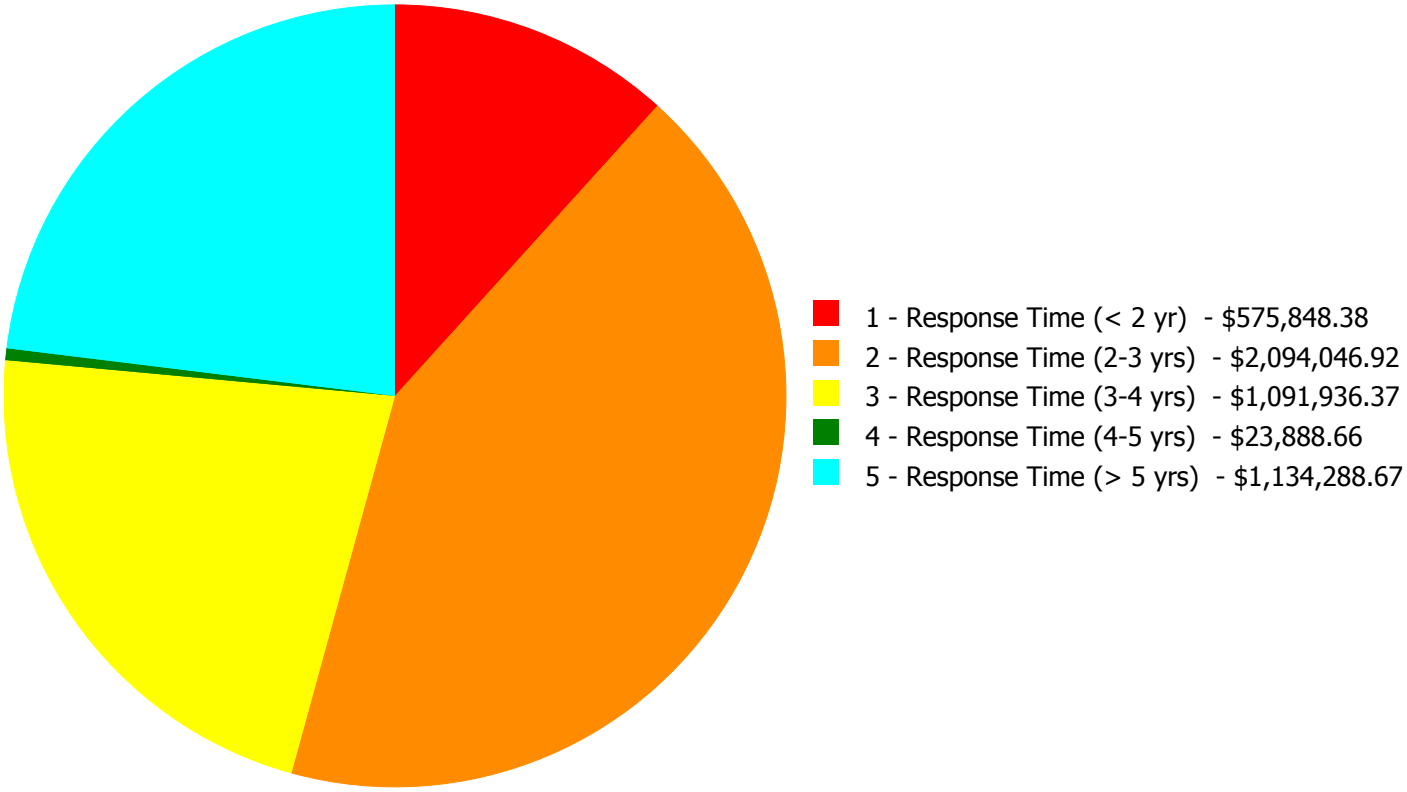
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $4,920,009.00**

## 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: $4,920,009.00**

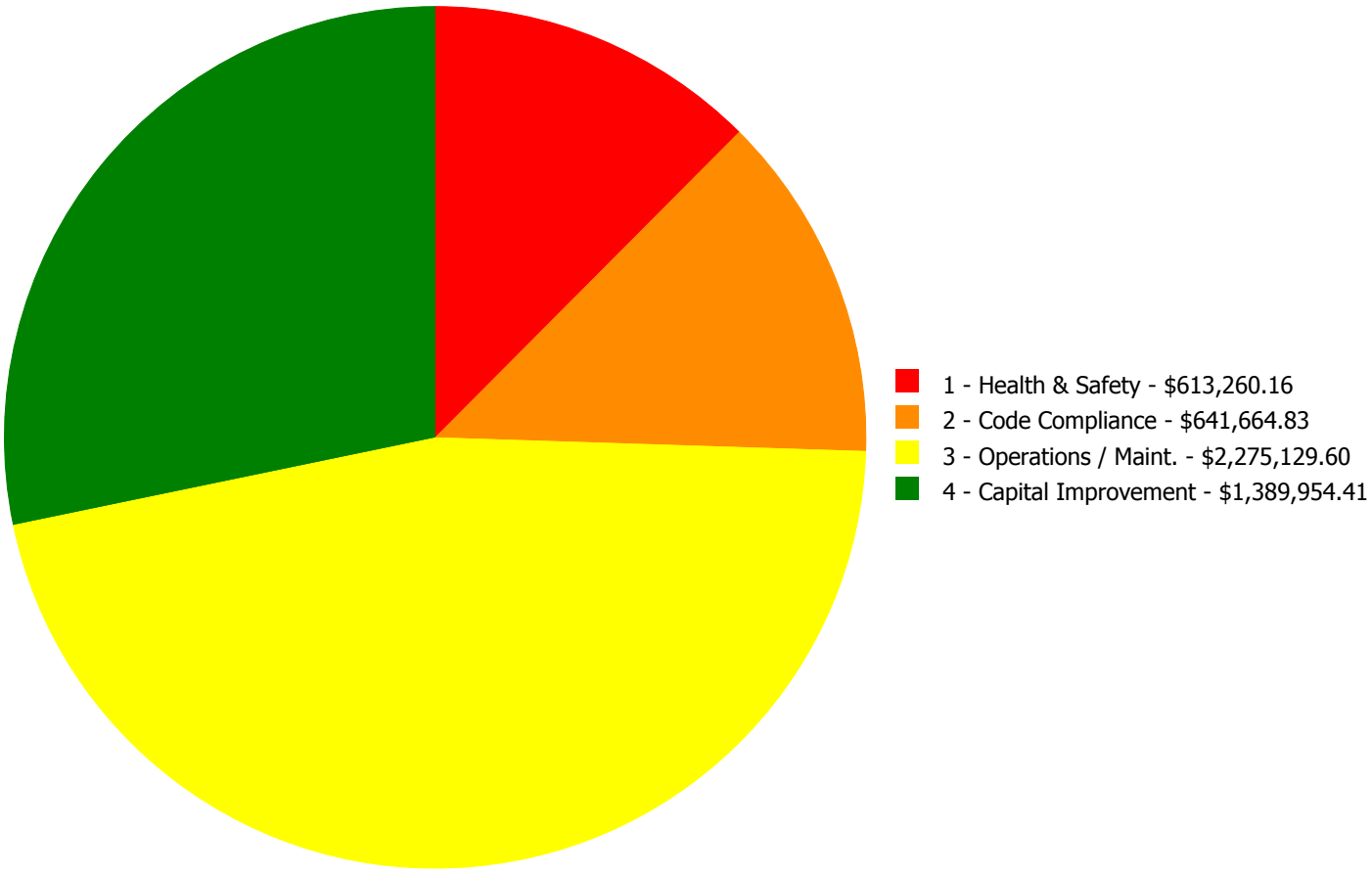
## Deficiency By Priority Investment Table

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 |
|---|---|---|---|---|---|---|---|
| A2020 | Basement Walls | $0.00 | $0.00 | $171,809.61 | $0.00 | $0.00 | $171,809.61 |
| B2010 | Exterior Walls | $0.00 | $9,077.77 | $0.00 | $0.00 | $0.00 | $9,077.77 |
| B2020 | Exterior Windows | $0.00 | $0.00 | $383,506.96 | $0.00 | $0.00 | $383,506.96 |
| B2030 | Exterior Doors | $0.00 | $6,987.28 | $0.00 | $0.00 | $0.00 | $6,987.28 |
| B3010105 | Built-Up | $455,204.82 | $0.00 | $0.00 | $0.00 | $0.00 | $455,204.82 |
| C1020 | Interior Doors | $0.00 | $16,697.08 | $0.00 | $0.00 | $0.00 | $16,697.08 |
| C1030 | Fittings | $0.00 | $43,628.88 | $10,836.50 | $0.00 | $0.00 | $54,465.38 |
| C2010 | Stair Construction | $17,370.87 | $0.00 | $0.00 | $0.00 | $0.00 | $17,370.87 |
| C3010230 | Paint & Covering | $0.00 | $53,115.87 | $0.00 | $0.00 | $0.00 | $53,115.87 |
| C3020413 | Vinyl Flooring | $0.00 | $26,060.55 | $0.00 | $0.00 | $0.00 | $26,060.55 |
| C3030 | Ceiling Finishes | $0.00 | $0.00 | $28,133.68 | $23,888.66 | $0.00 | $52,022.34 |
| D1010 | Elevators and Lifts | $0.00 | $497,751.74 | $0.00 | $0.00 | $0.00 | $497,751.74 |
| D2010 | Plumbing Fixtures | $0.00 | $47,078.70 | $0.00 | $0.00 | $0.00 | $47,078.70 |
| D2020 | Domestic Water Distribution | $0.00 | $34,306.86 | $0.00 | $0.00 | $0.00 | $34,306.86 |
| D2030 | Sanitary Waste | $0.00 | $0.00 | $154,408.49 | $0.00 | $0.00 | $154,408.49 |
| D2040 | Rain Water Drainage | $0.00 | $139,573.72 | $0.00 | $0.00 | $0.00 | $139,573.72 |
| D3030 | Cooling Generating Systems | $0.00 | $0.00 | $0.00 | $0.00 | $385,425.49 | $385,425.49 |
| D3040 | Distribution Systems | $103,272.69 | $19,262.29 | $0.00 | $0.00 | $298,598.54 | $421,133.52 |
| D3060 | Controls & Instrumentation | $0.00 | $675,207.14 | $0.00 | $0.00 | $0.00 | $675,207.14 |
| D4010 | Sprinklers | $0.00 | $0.00 | $0.00 | $0.00 | $450,264.64 | $450,264.64 |
| D5010 | Electrical Service/Distribution | $0.00 | $239,422.66 | $0.00 | $0.00 | $0.00 | $239,422.66 |
| D5020 | Lighting and Branch Wiring | $0.00 | $0.00 | $226,864.93 | $0.00 | $0.00 | $226,864.93 |
| D5030 | Communications and Security | $0.00 | $110,784.09 | $100,073.58 | $0.00 | $0.00 | $210,857.67 |
| D5090 | Other Electrical Systems | $0.00 | $157,880.68 | $0.00 | $0.00 | $0.00 | $157,880.68 |
| E2010 | Fixed Furnishings | $0.00 | $17,211.61 | $16,302.62 | $0.00 | $0.00 | $33,514.23 |
| | **Total:** | $575,848.38 | $2,094,046.92 | $1,091,936.37 | $23,888.66 | $1,134,288.67 | $4,920,009.00 |

## 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: $4,920,009.00**

## 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: B3010105 - Built-Up**

**Location:** Roof
**Distress:** Failing
**Category:** 3 - Operations / Maint.
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Remove and Replace Built Up Roof
**Qty:** 13,435.00
**Unit of Measure:** S.F.
**Estimate:** $455,204.82
**Assessor Name:** System
**Date Created:** 10/21/2015

**Notes:** Replace built-up roofing system – leaking, failing, and beyond service life

**System: C2010 - Stair Construction**

**Location:** Stairs
**Distress:** Building / MEP Codes
**Category:** 2 - Code Compliance
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Replace inadequate or install proper stair railing - select appropriate material
**Qty:** 96.00
**Unit of Measure:** L.F.
**Estimate:** $17,370.87
**Assessor Name:** System
**Date Created:** 10/21/2015

**Notes:** Install code compliant stair railing

**System: D3040 - Distribution Systems**

| | |
|---|---|
| **Location:** | Entire building |
| **Distress:** | Failing |
| **Category:** | 3 - Operations / Maint. |
| **Priority:** | 1 - Response Time (< 2 yr) |
| **Correction:** | Conduct a steam trap survey and replace failed units. |
| **Qty:** | 31,475.00 |
| **Unit of Measure:** | S.F. |
| **Estimate:** | $103,272.69 |
| **Assessor Name:** | System |
| **Date Created:** | 11/28/2015 |

**Notes:** Survey and repair steam traps due to steam leaks.

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

**System: B2010 - Exterior Walls**

**Location:** Ext. walls

**Distress:** Maintenance Required

**Category:** 3 - Operations / Maint.

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

**Correction:** Repoint horizontal or vertical joints at limestone coping

**Qty:** 532.00

**Unit of Measure:** L.F.

**Estimate:** $9,077.77

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Re-point and seal window lintels and sills

**System: B2030 - Exterior Doors**

**Location:** Entrance

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Replace hardware with compliant hardware, paint and weatherstrip - per leaf

**Qty:** 2.00

**Unit of Measure:** Ea.

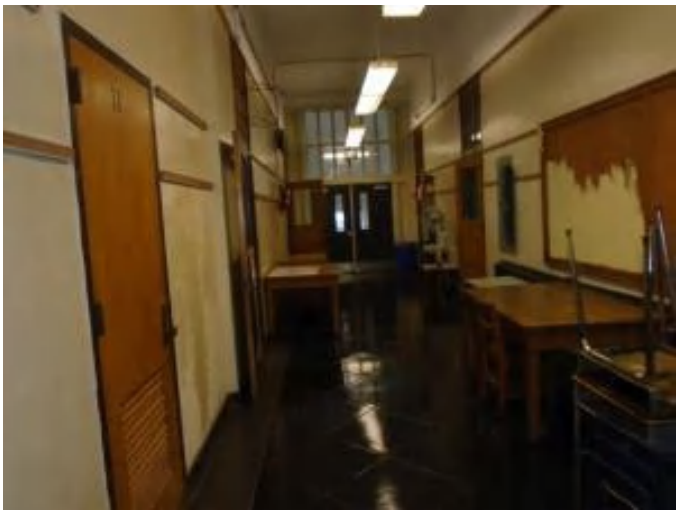
**Estimate:** $6,987.28

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Provide ADA compliant exterior door hardware at one entrance

**System: C1020 - Interior Doors**



**Location:** Throughout

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Replace door knobs with compliant lever type

**Qty:** 30.00

**Unit of Measure:** Ea.

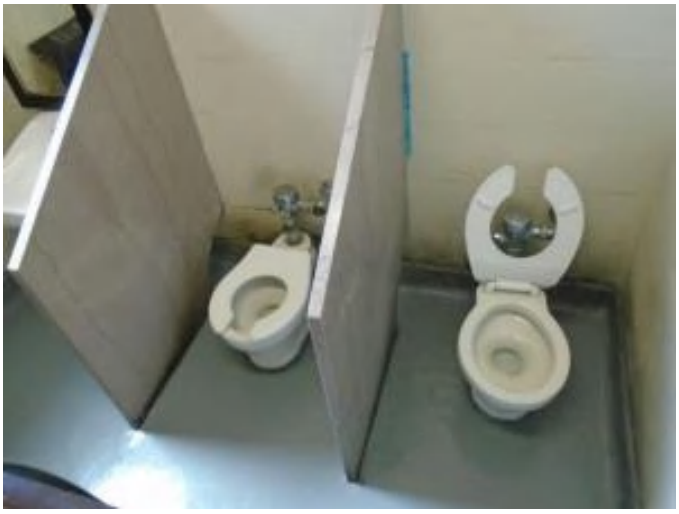
**Estimate:** $16,697.08

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Provide ADA lever handle lock/latchsets on interior doors

**System: C1030 - Fittings**



**Location:** Toilets

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

**Correction:** Remove and replace toilet partitions

**Qty:** 17.00

**Unit of Measure:** Ea.

**Estimate:** $43,628.88

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Provide new toilet partitions and toilet accessories including grab bars for accessibility

**System: C3010230 - Paint & Covering**

**Location:** Various

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 6,200.00

**Unit of Measure:** S.F.

**Estimate:** $53,115.87

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Repair and repaint damaged wall areas (10% of plaster wall areas)

**System: C3020413 - Vinyl Flooring**

**Location:** Various

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 2,014.00

**Unit of Measure:** S.F.

**Estimate:** $26,060.55

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Replaced damaged VAC tile with VCT (10% of vinyl floor area)

**System: D1010 - Elevators and Lifts**

**Location:** TBD

**Distress:** Accessibility

**Category:** 2 - Code Compliance

**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:** 10/22/2015

**Notes:** Install elevator for accessibility (location TBD)

**System: D2010 - Plumbing Fixtures**

**Location:** Hallways

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Remove and replace water fountains to meet ADA - includes high and low fountains and new recessed alcove

**Qty:** 3.00

**Unit of Measure:** Ea.

**Estimate:** $47,078.70

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Replace 3 drinking fountains with accessible types.

**System: D2020 - Domestic Water Distribution**

**Location:** Basement

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Provide 3" reduced pressure back flow preventer

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $34,306.86

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Install backflow preventer on domestic water entry for code compliance.

**System: D2040 - Rain Water Drainage**

**Location:** Entire building

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

**Correction:** Inspect internal rain water drainage piping and replace pipe - based on SF of multi-story building - insert SF of building

**Qty:** 31,475.00

**Unit of Measure:** S.F.

**Estimate:** $139,573.72

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Inspect and repair rain water drain pipe, 31,475 sq. ft.

**System: D3040 - Distribution Systems**

**Location:** Rooftop

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

**Correction:** Replace rooftop gravity ventilator units - select the proper type and size

**Qty:** 10.00

**Unit of Measure:** Ea.

**Estimate:** $19,262.29

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Replace rooftop gravity vents due to age and damage.

**System: D3060 - Controls & Instrumentation**

**Location:** Entire building

**Distress:** Obsolete

**Category:** 3 - Operations / Maint.

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

**Correction:** Replace pneumatic controls with DDC (75KSF)

**Qty:** 31,475.00

**Unit of Measure:** S.F.

**Estimate:** $675,207.14

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Replace obsolete pneumatic HVAC controls with DDC.

**System: D5010 - Electrical Service/Distribution**

**Location:** Basement

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Replace Switchboard

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $239,422.66

**Assessor Name:** System

**Date Created:** 10/15/2015

**Notes:** Provide a new electrical service 1200 Amperes 120/208V, it will be located in the vicinity of the existing electrical service.

**System: D5030 - Communications and Security**

**Location:** Entire Building

**Distress:** Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

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

**Correction:** Replace fire alarm system

**Qty:** 1.00

**Unit of Measure:** S.F.

**Estimate:** $110,784.09

**Assessor Name:** System

**Date Created:** 10/15/2015

**Notes:** Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms.

**System: D5090 - Other Electrical Systems**


**Location:** Outdoor
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Add Standby Generator System
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $136,408.38
**Assessor Name:** System
**Date Created:** 10/15/2015

**Notes:** Provide 35KW, outdoor, diesel powered generator.

**System: D5090 - Other Electrical Systems**

**Location:** Roof
**Distress:** Building / MEP Codes
**Category:** 2 - Code Compliance
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Provide Lightning Protection System
**Qty:** 1.00
**Unit of Measure:** LS
**Estimate:** $21,472.30
**Assessor Name:** System
**Date Created:** 10/15/2015

**Notes:** Prepare a study to determine if a lightning protection system is required

**System: E2010 - Fixed Furnishings**

**Location:** Stage

**Distress:** Failing

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** $17,211.61

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Replace auditorium curtains – damaged

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

**System: A2020 - Basement Walls**

**Location:** Basement

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

**Correction:** Repair concrete wall in poor condition including rebar dowelling - insert the SF of wall area

**Qty:** 750.00

**Unit of Measure:** S.F.

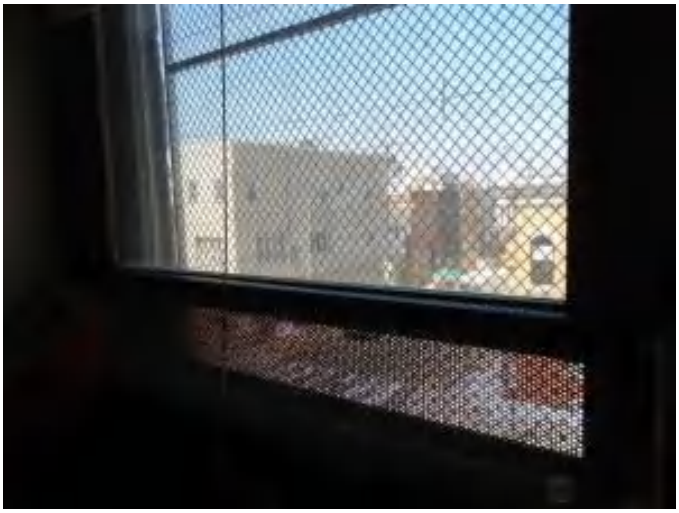
**Estimate:** $171,809.61

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Repair foundation walls – deterioration

**System: B2020 - Exterior Windows**



**Location:** Windows

**Distress:** Energy Efficiency

**Category:** 4 - Capital Improvement

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

**Correction:** Remove and replace double slider windows

**Qty:** 76.00

**Unit of Measure:** Ea.

**Estimate:** $383,506.96

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Replace Plexiglas windows – hazed and energy inefficient

**System: C1030 - Fittings**

**Location:** Throughout

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 40.00

**Unit of Measure:** Ea.

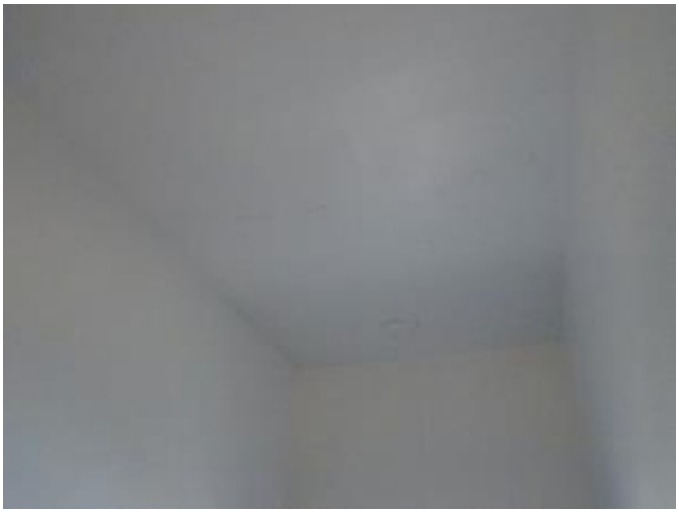
**Estimate:** $10,836.50

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Install new ID signage – missing

**System: C3030 - Ceiling Finishes**



**Location:** Various

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

**Correction:** Repair and resurface plaster ceilings - 2 coats plaster

**Qty:** 1,573.00

**Unit of Measure:** S.F.

**Estimate:** $20,644.19

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Repair and repaint damaged ceiling areas (5% of plaster ceiling areas)

**System: C3030 - Ceiling Finishes**

**Location:** Gym

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Remove and replace glued on or mechanically attached acoustical ceiling tiles

**Qty:** 883.00

**Unit of Measure:** S.F.

**Estimate:** $7,489.49

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Install acoustic panels on gym ceiling for sound absorption

**System: D2030 - Sanitary Waste**

**Location:** Entire building

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

**Correction:** Inspect sanitary waste piping and replace damaged sections. (+50KSF)

**Qty:** 31,475.00

**Unit of Measure:** S.F.

**Estimate:** $154,408.49

**Assessor Name:** System

**Date Created:** 11/28/2015

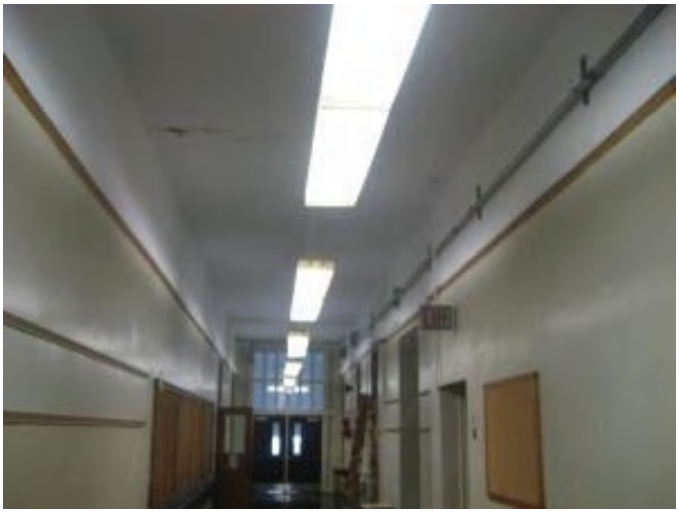
**Notes:** Inspect and repair sanitary waste pipe due to age, 31,475 sq. ft.

**System: D5020 - Lighting and Branch Wiring**

**Location:** Entire Building
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add wiring device
**Qty:** 96.00
**Unit of Measure:** Ea.
**Estimate:** $226,864.93
**Assessor Name:** System
**Date Created:** 10/15/2015

**Notes:** Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 96

**System: D5030 - Communications and Security**



**Location:** Entire Building
**Distress:** Security Issue
**Category:** 1 - Health & Safety
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add/Replace Video Surveillance System
**Qty:** 15.00
**Unit of Measure:** Ea.
**Estimate:** $52,211.43
**Assessor Name:** System
**Date Created:** 10/15/2015

**Notes:** Add CCTV cameras to provide a full coverage of the building interior. Approximate 15 CCTV cameras

**System: D5030 - Communications and Security**

**Location:** Entire Building

**Distress:** Obsolete

**Category:** 3 - Operations / Maint.

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

**Correction:** Add/Replace Clock System or Components

**Qty:** 25.00

**Unit of Measure:** Ea.

**Estimate:** $47,862.15

**Assessor Name:** System

**Date Created:** 10/15/2015

**Notes:** Replace clock and bell system with wireless, battery operated, clock system. Approximate 25

**System: E2010 - Fixed Furnishings**

**Location:** Auditorium

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 20.00

**Unit of Measure:** Ea.

**Estimate:** $16,302.62

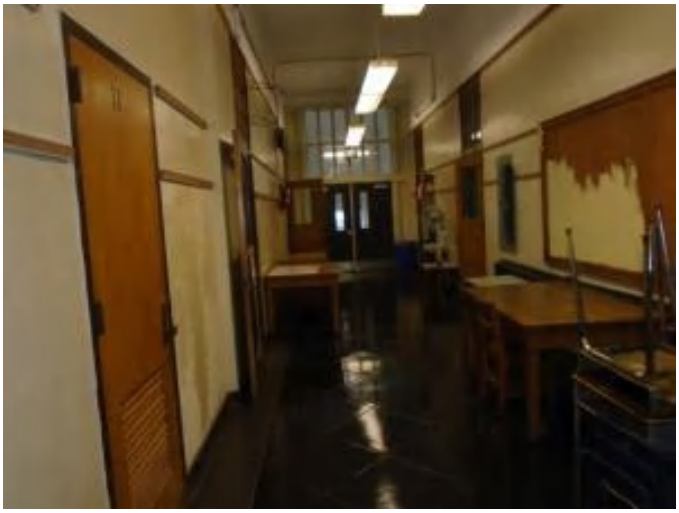
**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Replace auditorium seats – damaged or missing (10%)

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

**System: C3030 - Ceiling Finishes**



**Location:** Corridors

**Distress:** Appearance

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 2,400.00

**Unit of Measure:** S.F.

**Estimate:** $23,888.66

**Assessor Name:** System

**Date Created:** 10/22/2015

**Notes:** Install suspended acoustic ceiling system in corridors – hide utilities

## Priority 5 - Response Time (> 5 yrs):

**System: D3030 - Cooling Generating Systems**

This deficiency has no image.

**Location:** Entire building

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

**Priority:** 5 - Response Time (> 5 yrs)

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

**Qty:** 24,000.00

**Unit of Measure:** S.F.

**Estimate:** $385,425.49

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Install 80 ton chiller to provide air-conditioning.

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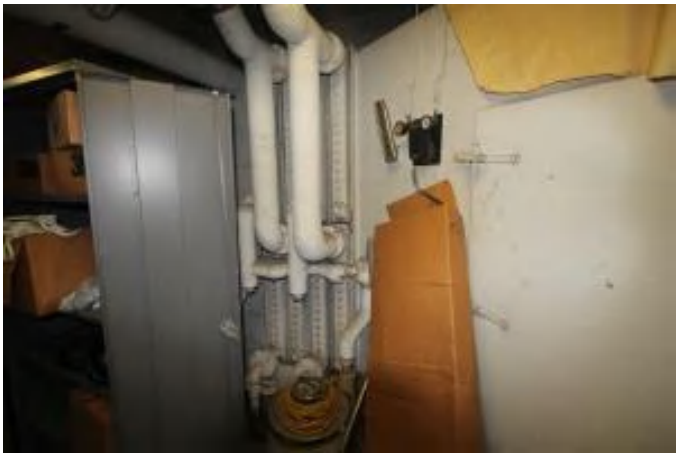
**System: D3040 - Distribution Systems**



**Location:** Basement Mechanical Room

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

**Priority:** 5 - Response Time (> 5 yrs)

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

**Qty:** 200.00

**Unit of Measure:** Seat

**Estimate:** $298,598.54

**Assessor Name:** System

**Date Created:** 01/20/2016

**Notes:** Replace AHU to restore ventilation to building

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**System: D4010 - Sprinklers**

This deficiency has no image.

**Location:** Entire buidling

**Distress:** Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

**Priority:** 5 - Response Time (> 5 yrs)

**Correction:** Install a fire protection sprinkler system

**Qty:** 31,475.00

**Unit of Measure:** S.F.

**Estimate:** $450,264.64

**Assessor Name:** System

**Date Created:** 11/28/2015

**Notes:** Install fire protection sprinkler system, including fire pump if needed.

## 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. | Basement mechanical room | | | | | 25 | 1955 | 2020 | $10,972.50 | $12,069.75 |
| D3020 Heat Generating Systems | Boiler, gas/oil combination, cast iron, hot water, gross output, 2628 MBH, includes burners, controls and insulated jacket, packaged | 2.00 | Ea. | Basement boiler room | | | | | 35 | 1995 | 2030 | $69,812.50 | $153,587.50 |
| D5010 Electrical Service/Distribution | Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 600 amp, excl breakers | 1.00 | Ea. | Basement | Penn Panel & Box Co. | | | | 30 | 1995 | 2025 | $3,819.15 | $4,201.07 |
| | | | | | | | | | | | | **Total:** | **$169,858.32** |

## 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): | 27,400 |
| Year Built: | 1897 |
| Last Renovation: | |
| Replacement Value: | $573,878 |
| Repair Cost: | $221,745.10 |
| Total FCI: | 38.64 % |
| Total RSLI: | 56.51 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Bldg ID: | S252001 | Site ID: | S252001 |

## Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

| UNIFORMAT Classification | RSLI % | FCI % | Current Repair Cost |
|---|---|---|---|
| G20 - Site Improvements | 59.02 % | 40.11 % | $166,335.46 |
| G40 - Site Electrical Utilities | 50.00 % | 34.81 % | $55,409.64 |
| **Totals:** | **56.51 %** | **38.64 %** | **$221,745.10** |

## Condition Detail

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

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

## System Listing

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

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

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

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G2020 | Parking Lots | $8.50 | S.F. | 11,000 | 30 | 1993 | 2023 | | 26.67 % | 0.00 % | 8 | | | $93,500 |
| G2030 | Pedestrian Paving | $12.30 | S.F. | 16,400 | 40 | 1993 | 2033 | | 45.00 % | 12.88 % | 18 | | $25,981.81 | $201,720 |
| G2040 | Site Development | $4.36 | S.F. | 27,400 | 25 | 1897 | 1922 | 2042 | 108.00 % | 117.49 % | 27 | | $140,353.65 | $119,464 |
| G2050 | Landscaping & Irrigation | $4.36 | S.F. | | 15 | 2010 | 2025 | | 66.67 % | 0.00 % | 10 | | | $0 |
| G4020 | Site Lighting | $4.84 | S.F. | 27,400 | 30 | 2000 | 2030 | | 50.00 % | 23.12 % | 15 | | $30,665.45 | $132,616 |
| G4030 | Site Communications & Security | $0.97 | S.F. | 27,400 | 30 | 2000 | 2030 | | 50.00 % | 93.10 % | 15 | | $24,744.19 | $26,578 |
| | | | | | | | | **Total** | **56.51 %** | **38.64 %** | | | **$221,745.10** | **$573,878** |

## 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.

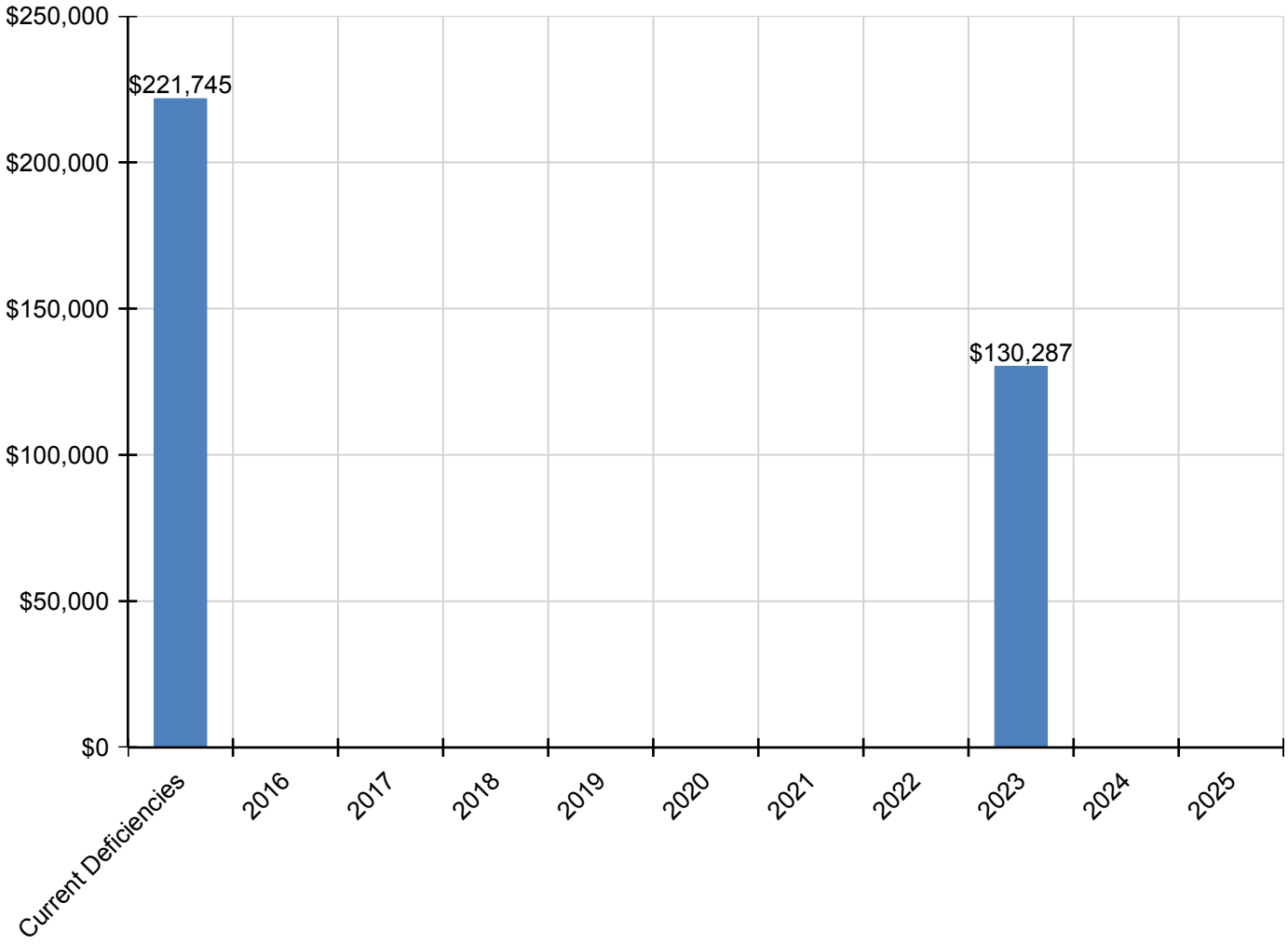
*Inflation Rate: 3%*

| System | Current Deficiencies | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total:** | **$221,745** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$130,287** | **$0** | **$0** | **$352,032** |
| **G - Building Sitework** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G20 - Site Improvements** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2020 - Parking Lots** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $130,287 | $0 | $0 | **$130,287** |
| **G2030 - Pedestrian Paving** | $25,982 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$25,982** |
| **G2040 - Site Development** | $140,354 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$140,354** |
| **G2050 - Landscaping & Irrigation** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G40 - Site Electrical Utilities** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4020 - Site Lighting** | $30,665 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$30,665** |
| **G4030 - Site Communications & Security** | $24,744 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$24,744** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

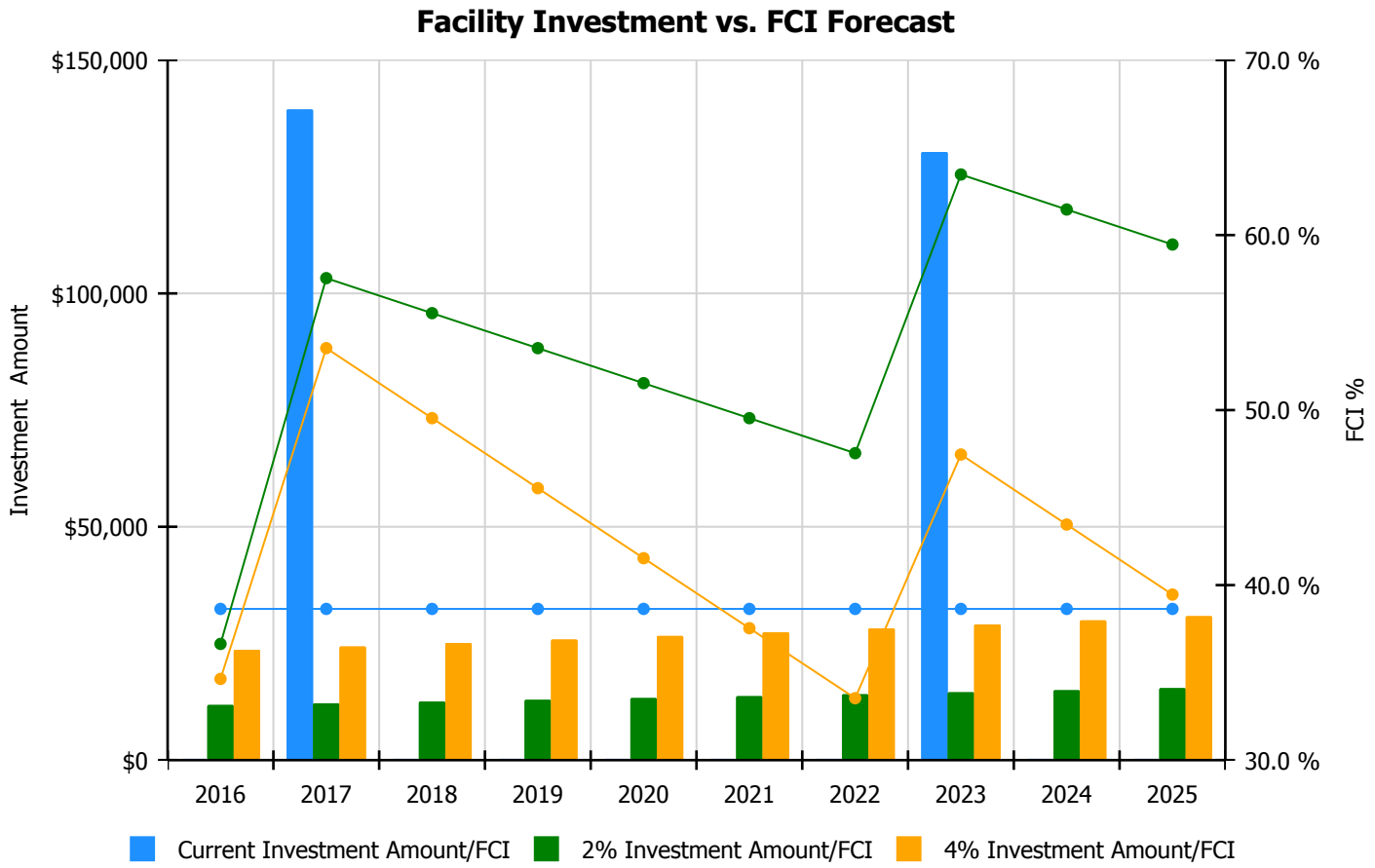
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 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:

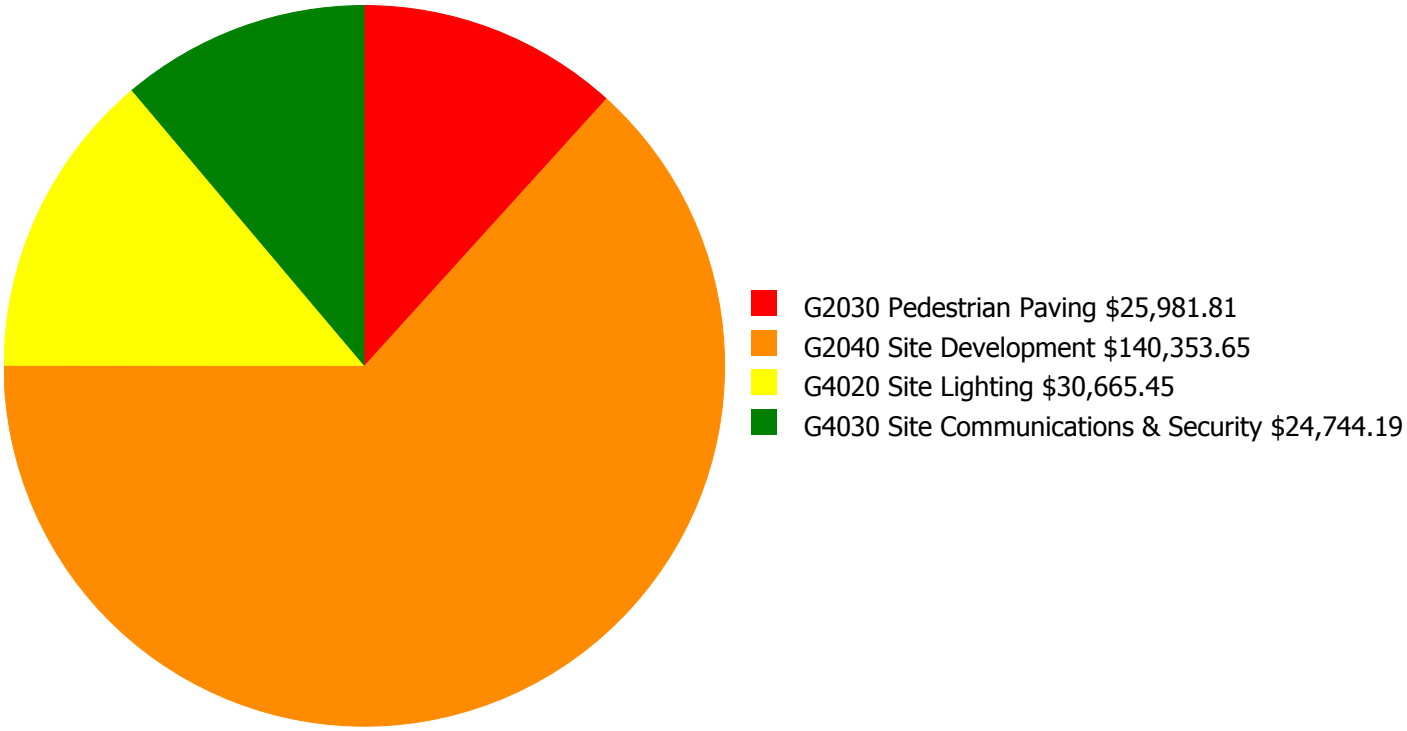
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 38.64% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $11,822.00 | 36.64 % | $23,644.00 | 34.64 % |
| 2017 | $139,413 | $12,177.00 | 57.54 % | $24,353.00 | 53.54 % |
| 2018 | $0 | $12,542.00 | 55.54 % | $25,084.00 | 49.54 % |
| 2019 | $0 | $12,918.00 | 53.54 % | $25,836.00 | 45.54 % |
| 2020 | $0 | $13,306.00 | 51.54 % | $26,611.00 | 41.54 % |
| 2021 | $0 | $13,705.00 | 49.54 % | $27,410.00 | 37.54 % |
| 2022 | $0 | $14,116.00 | 47.54 % | $28,232.00 | 33.54 % |
| 2023 | $130,287 | $14,539.00 | 63.46 % | $29,079.00 | 47.46 % |
| 2024 | $0 | $14,976.00 | 61.46 % | $29,951.00 | 43.46 % |
| 2025 | $0 | $15,425.00 | 59.46 % | $30,850.00 | 39.46 % |
| **Total:** | **$269,700** | **$135,526.00** | | **$271,050.00** | |

## Deficiency Summary by System

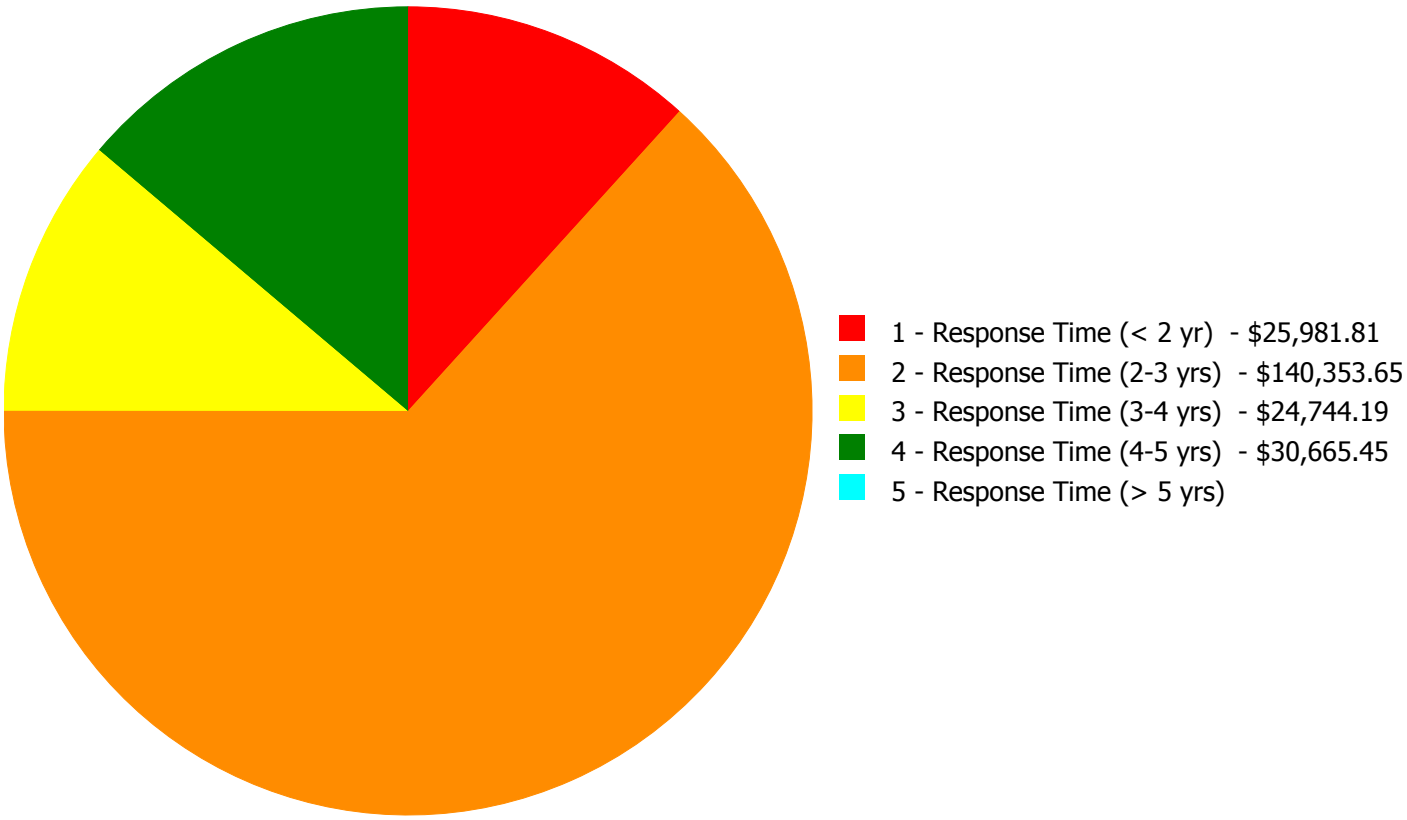
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $221,745.10**

## 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: $221,745.10**

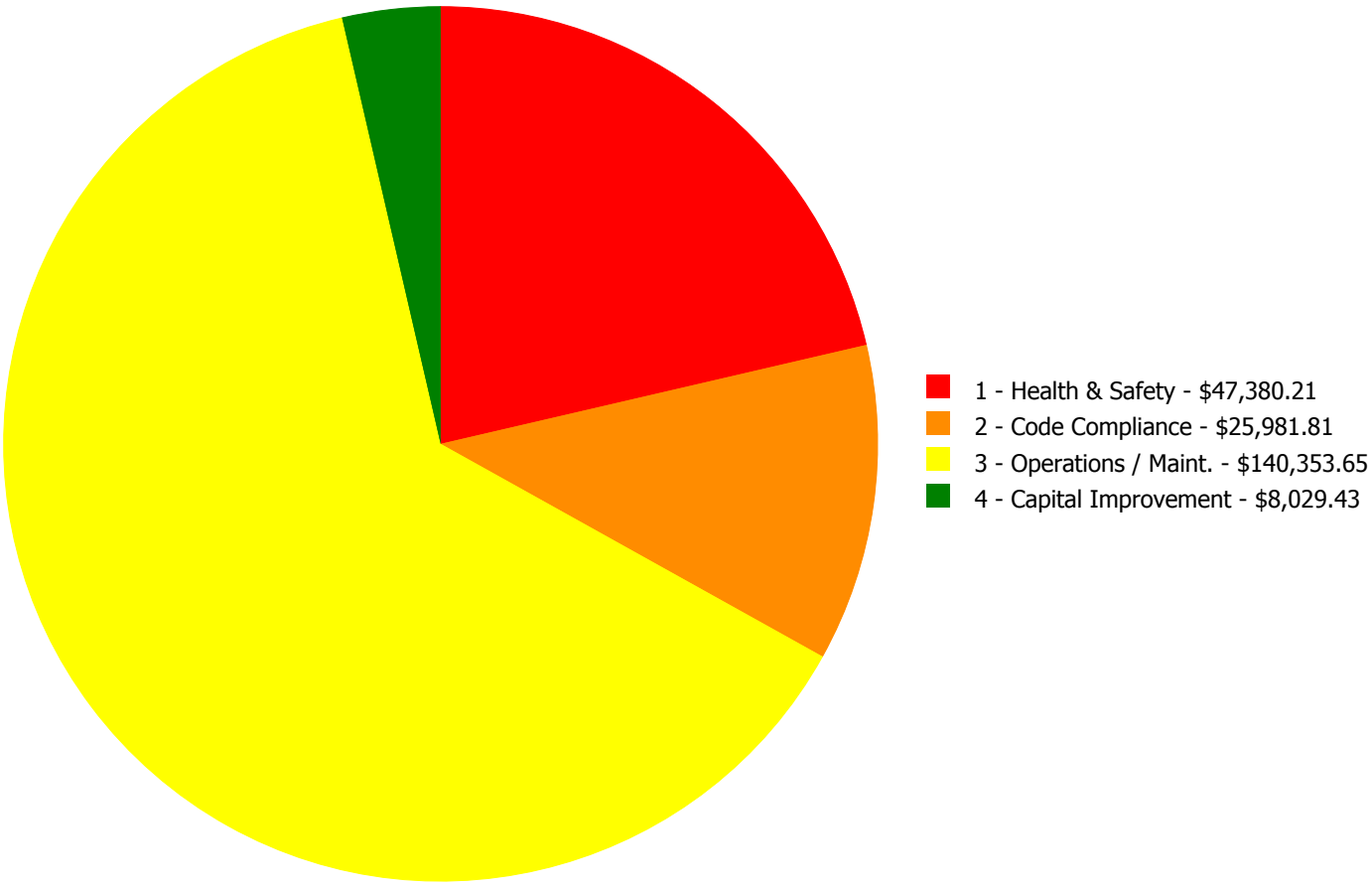
## Deficiency By Priority Investment Table

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

| System Code | System Description | 1 - Response Time (< 2 yr) | 2 - Response Time (2-3 yrs) | 3 - Response Time (3-4 yrs) | 4 - Response Time (4-5 yrs) | 5 - Response Time (> 5 yrs) | Total |
|---|---|---|---|---|---|---|---|
| G2030 | Pedestrian Paving | $25,981.81 | $0.00 | $0.00 | $0.00 | $0.00 | $25,981.81 |
| G2040 | Site Development | $0.00 | $140,353.65 | $0.00 | $0.00 | $0.00 | $140,353.65 |
| G4020 | Site Lighting | $0.00 | $0.00 | $0.00 | $30,665.45 | $0.00 | $30,665.45 |
| G4030 | Site Communications & Security | $0.00 | $0.00 | $24,744.19 | $0.00 | $0.00 | $24,744.19 |
| | **Total:** | $25,981.81 | $140,353.65 | $24,744.19 | $30,665.45 | $0.00 | $221,745.10 |

## 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: $221,745.10**

## 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: G2030 - Pedestrian Paving**

**Location:** TBD

**Distress:** Accessibility

**Category:** 2 - Code Compliance

**Priority:** 1 - Response Time (< 2 yr)

**Correction:** Install an exterior ADA ramp - based on 5' wide by the linear foot - up to a 48" rise - per LF of ramp - figure 1 LF per inch of rise

**Qty:** 20.00

**Unit of Measure:** L.F.

**Estimate:** $25,981.81

**Assessor Name:** Ben Nixon

**Date Created:** 10/22/2015

**Notes:** Provide ADA compliant ramp at one entrance (location TBD)

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

**System: G2040 - Site Development**

**Location:** Site

**Distress:** Failing

**Category:** 3 - Operations / Maint.

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

**Correction:** Remove and replace metal picket fence - input number of gates

**Qty:** 1,000.00

**Unit of Measure:** L.F.

**Estimate:** $140,353.65

**Assessor Name:** Ben Nixon

**Date Created:** 10/22/2015

**Notes:** Replace metal fence and gates for site security - failing

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

**System: G4030 - Site Communications & Security**

**Location:** outdoor
**Distress:** Security Issue
**Category:** 1 - Health & Safety
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add Video Surveillance System
**Qty:** 3.00
**Unit of Measure:** Ea.
**Estimate:** $16,714.76
**Assessor Name:** Ben Nixon
**Date Created:** 10/15/2015

**Notes:** Provide (3) CCTV cameras on the south side of the building.

**System: G4030 - Site Communications & Security**

**Location:** Outdoor
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add Site Paging System
**Qty:** 2.00
**Unit of Measure:** Ea.
**Estimate:** $8,029.43
**Assessor Name:** Ben Nixon
**Date Created:** 10/15/2015

**Notes:** Provide two PA loud speakers facing the playground area.

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

**System: G4020 - Site Lighting**

**Location:** Outdoor

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

**Correction:** Add site lighting fixtures

**Qty:** 10.00

**Unit of Measure:** Ea.

**Estimate:** $30,665.45

**Assessor Name:** Ben Nixon

**Date Created:** 10/15/2015

**Notes:** Replace exterior, wall mounted lighting fixtures. Total of 10.

## 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 |