### **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.

### **McDaniel School**

Governance DISTRICT Report Type Elementarymiddle

 Address
 1801 S. 22Nd St.
 Enrollment
 629

 Philadelphia, Pa 19145
 Grade Range
 '00-08'

Phone/Fax 215-952-6380 / 215-952-6379 Admissions Category Neighborhood

Website Www.Philasd.Org/Schools/Mcdaniel Turnaround Model N/A

### **Building/System FCI Tiers**

Facilit	v Condition Index (ECI)	_ Cost of Assess	sed Deficiencies				
raciiit	Facility Condition Index (FCI) = 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	06.58%	\$2,165,841	\$32,935,701
Building	06.39 %	\$2,061,504	\$32,285,135
Grounds	16.04 %	\$104,337	\$650,566

### **Major Building Systems**

Building System	System FCI	Repair Costs	Replacement Cost
<b>Roof</b> (Shows physical condition of roof)	00.14 %	\$3,254	\$2,307,020
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	\$0	\$2,251,510
Windows (Shows functionality of exterior windows)	110.24 %	\$1,211,075	\$1,098,610
Exterior Doors (Shows condition of exterior doors)	00.00 %	\$0	\$88,450
Interior Doors (Classroom doors)	00.00 %	\$0	\$214,110
Interior Walls (Paint and Finishes)	06.45 %	\$62,309	\$966,240
Plumbing Fixtures	05.98 %	\$49,321	\$824,720
Boilers	00.00 %	\$0	\$1,138,870
Chillers/Cooling Towers	01.13 %	\$16,948	\$1,493,280
Radiators/Unit Ventilators/HVAC	07.83 %	\$205,250	\$2,622,390
Heating/Cooling Controls	00.34 %	\$2,820	\$823,500
Electrical Service and Distribution	00.00 %	\$0	\$591,700
Lighting	00.00 %	\$0	\$2,115,480
Communications and Security (Cameras, Pa System and Fire Alarm)	03.10 %	\$24,582	\$792,390

### **Facility Condition Assessment Summary Report**

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### McDaniel Annex (St Edmond) School

Governance DISTRICT Report Type Elementarymiddle

Address 1901 S 23rd St Enrollment

Philadelphia, Pa 19145 Grade Range '00-08' 215-952-6380 / 215-952-6379 Admissions Category Neighborhood

Website Www.Philasd.Org/Schools/Mcdaniel Turnaround Model N/A

### **Building/System FCI Tiers**

Phone/Fax

Facilit	y 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	00.63%	\$209,556	\$33,271,371
Building	00.63 %	\$209,556	\$33,147,853
Grounds	00.00 %	\$0	\$123,518

### **Major Building Systems**

Building System	System FCI	Repair Costs	Replacement Cost
<b>Roof</b> (Shows physical condition of roof)	01.27 %	\$5,788	\$455,789
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	\$0	\$2,512,685
Windows (Shows functionality of exterior windows)	00.00 %	\$0	\$1,226,049
Exterior Doors (Shows condition of exterior doors)	00.00 %	\$0	\$98,710
Interior Doors (Classroom doors)	00.00 %	\$0	\$238,947
Interior Walls (Paint and Finishes)	03.55 %	\$40,676	\$1,144,358
Plumbing Fixtures	00.00 %	\$0	\$920,388
Boilers	00.00 %	\$0	\$1,270,979
Chillers/Cooling Towers	00.00 %	\$0	\$1,666,500
Radiators/Unit Ventilators/HVAC	00.00 %	\$0	\$2,926,587
Heating/Cooling Controls	01.00 %	\$9,226	\$919,026
Electrical Service and Distribution	00.00 %	\$0	\$660,337
Lighting	00.00 %	\$0	\$2,360,876
Communications and Security (Cameras, Pa System and Fire Alarm)	17.40 %	\$153,865	\$884,307

### **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.

### McDaniel Annex (King of Peace) School

Governance DISTRICT Report Type Elementarymiddle

Address 1315-9 S 26th St Enrollment

Philadelphia, Pa 19145 Grade Range '00-08'

 Phone/Fax
 215-952-6380 / 215-952-6379
 Admissions Category
 Neighborhood

 Website
 Www.Philasd.Org/Schools/Mcdaniel
 Turnaround Model
 N/A

### **Building/System FCI Tiers**

Facilit	y 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	56.51%	\$6,718,965	\$11,888,921
Building	55.27 %	\$6,249,394	\$11,307,659
Grounds	80.78 %	\$469,571	\$581,262

#### **Major Building Systems**

System FCI	Repair Costs	Replacement Cost
88.14 %	\$338,820	\$384,400
04.87 %	\$32,289	\$662,613
190.10 %	\$549,941	\$289,283
205.56 %	\$72,859	\$35,444
478.24 %	\$381,647	\$79,802
00.00 %	\$0	\$174,569
00.00 %	\$0	\$670,254
00.00 %	\$0	\$396,252
119.32 %	\$619,942	\$519,564
200.41 %	\$1,828,602	\$912,420
158.90 %	\$455,301	\$286,524
21.58 %	\$44,437	\$205,873
10.62 %	\$78,156	\$736,048
65.83 %	\$181,484	\$275,700
	04.87 % 190.10 % 205.56 % 478.24 % 00.00 % 00.00 % 119.32 % 200.41 % 158.90 % 21.58 % 10.62 %	88.14 %       \$338,820         04.87 %       \$32,289         190.10 %       \$549,941         205.56 %       \$72,859         478.24 %       \$381,647         00.00 %       \$0         00.00 %       \$0         119.32 %       \$619,942         200.41 %       \$1,828,602         158.90 %       \$455,301         21.58 %       \$44,437         10.62 %       \$78,156

**School District of Philadelphia** 

# S237001;McDaniel

Final
Site Assessment Report
January 30, 2017



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### **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%.

68,076

Year Built: 1935
Last Renovation: 2008
Replacement Value: \$32,935,701

Repair Cost: \$2,165,841.28

Total FCI: 6.58 %

Total RSLI: 50.67 %



#### **Description:**

**Facility Assessment** 

Gross Area (SF):

July 15<sup>th</sup>, 2015

School District of Philadelphia

**Mc Daniel Elementary School** 

1801 S 22nd Street

Philadelphia, PA 19145

61,000 SF / 556 Students / LN 01

**GENERAL** 

Mr. Richard Toohey, Facility Area Coordinator accompanied us on our tour of the school and provided us with detailed information on the building

systems and maintenance history. In general, all the building mechanical systems suffer from a chronic lack of routine maintenance and repair.

The 4 story, 61,000 square foot building was originally constructed in 1935 with a major renovation in 2008. The building has a one level basement.

#### ARCHITECHURAL/STRUCTURAL SYSTEMS

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement or damage. 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 good condition. Flashing is damaged in spots on parapet wall. The building envelope is typically masonry with face brick. Elevations are enhanced with decorative brickwork around entrances and windows. In general, masonry is in good or very good condition with new building section at SW entrance. All elevations are face brick. The original 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 heavy hazing. Exterior doors are typically hollow metal in good condition. Public access doors have granite stoops with granite stairs; service doors have concrete stoops and stairs. The building is accessible per ADA requirements.

Partition wall types include plastered ceramic hollow blocks, CMU and metal stud gypsum board. Interior doors are generally metal frame with solid core doors in very good condition. Doors leading to exit stairways are hollow metal doors and frames in good condition. Fittings include: ADA compliant toilet accessories and composite plastic toilet partitions in very good condition; handrails and ornamental metals, generally in good condition. Interior identifying signage is engraved plastic plates with brail in very good condition. Stair construction is generally concrete with terrazzo treads, risers, and nosing in very good condition. Stair railings are cast iron balusters with wood handrail in good condition.

The interior wall finishes include: painted plaster, brick, CMU and gypsum board with marble wainscot in stairways and corridors in very good condition. New building section and elevator corridors have ground face CMU with glazed block wainscot in very good condition. Paint and plaster in auditorium and basement service areas has some deterioration. Flooring includes: hardwood in classrooms in very good condition and auditorium and stage in poor condition needing refinishing; VCT in very good condition; concrete in toilets, utility and storage in good condition; terrazzo tile in corridors and entries in very good condition; carpet in main office and IMC in good condition. Wood base in classrooms is typically in fair to good condition. Ceilings include: suspended acoustic tile in classrooms, corridors, cafeteria and offices in very good condition; painted plaster with some exposed, painted structure in toilets, stairways, auditorium, multi-purpose room, and utility/storage areas in good condition. Plaster and paint repairs needed in auditorium and roof access stairway.

The building has one elevator added as part of the 2008 renovation serving 3 main floors, basement and entrance.

Institutional and Commercial equipment includes: stage equipment, generally in fair condition. 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 good condition; window shades/blinds, generally in good condition; fixed auditorium seating is original, generally in fair condition with some damaged seats.

#### **MECHANICAL SYSTEMS**

All of the plumbing fixtures and valves were replaced in 2008 when the building was entirely renovated. Fixtures in the restrooms on each floor consist of wall hung flush valve water closets, urinals and lavatories with wheel handle faucets and lever handle accessible faucets on accessible lavatories. The fixtures should provide reliable service for the next 10-15 years. Approximately 50% of the faucets do not function fully due to accumulated lack of repair and maintenance since their installation 7 years ago. Urinal flush valves leak and flow excessively when flushed. Malfunctioning toilet room valves throughout the entire building should be repaired or replaced as needed within the next year.

Drinking fountains are wall mounted in pairs in hallway alcoves. They are accessible wall hung with integral refrigerated coolers. They were installed in 2008 and are well within their service life but many of them do not run due to lack of maintenance. For example, one pair does not flow, has clogged drains, and is infested with fruit flies. Fountains should be repaired within one year.

A floor level service sink with vacuum breaker faucet is located in the cleaning closets on each floor for use by the janitorial staff. The kitchen has a three compartment, stainless steel sink with two faucets and a spray hose for a disposer. There is no sanitization chemical system. The kitchen also has a hand wash sink. Sinks are fully functional and should provide 10-15 years additional service.

A 4" city water service enters the building along Moore Street. The 4" meter and valves are located in a small utility room on the basement level behind the boiler room. Upon entering the building, the domestic water piping first T's to two 4" gate valves. One gate valve isolates the compound water meter and the other gate valve is on the water meter bypass line. After the meter there is a third 4" gate valve, and then the water meter line and bypass line join together at a second T. These three valves are iron body gate valves with steel trim and are severely rusted

due to galvanic corrosion. The valve upstream of the water meter is so badly rusted that it was dripping water at the time of the assessment. This valve needs replacement immediately, and the others should be replaced as well before their condition deteriorates further. The single 4" domestic water line then T's to a primary 4" double backflow preventer and 2" bypass backflow preventer. Both of these have block valves and Y-strainers up stream and block valves down steam of them. The two lines then T together again and connect to a 3" copper line and 3" iron gate valve feeding the pressure booster pump system. The connection to the boiler make-up water system is located here between the back flow preventers and the domestic booster pumps. The 3" iron body gate valve upstream of the booster system is rusted so badly that it also was leaking and needs immediate replacement. The booster system includes two horizontal end suction pressure booster pumps and a pneumatic expansion tank. One pump was running at the time of inspection. Other fittings in this room, such as a flanged flexible connector down steam of the booster system, are also severely rusted and need replacement presently. A reduced pressure backflow preventer is installed on the makeup line to the boilers. The original domestic hot and cold water distribution piping was replaced in 2008 with copper piping and soldered fittings. The domestic water distribution piping should be serviceable for the next 20 years or more.

A 75 gallon vertical tank type, gas-fired water heater installed February 27, 2015 supplies hot water for domestic use. It is equipped with a T&P relief valve and two circulation pumps. The water heater is new this year and should provide reliable service for the next 10 years with proper maintenance. There is no expansion tank and one should be added.

The sanitary sewer piping is cast iron with banded fittings installed in 2008. Rainwater drainage piping from the roof runs inside the building and no evidence of leakage is present. There are 4 sumps in the basement for ground water collection. They each have two base mounted pumps installed in 2008. The building does not have a sewage ejector. All drainage systems run well and should last 20 more years.

Low pressure steam is generated at 15 lbs/sq. in. or less by two 4,061 MBH (121 HP) Weil-McLain model H-1994, cast iron sectional boilers installed in 1993. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner controls provide full modulation with electronic ignition, digital flame sensing and pressure atomization on oil. Burner oil pumps are loose and not driven by the fan motor. The gas train serving each boiler appears to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. There is a pressure booster on the incoming gas service. The oil supply to the burners comes from two pumps that circulate the fuel oil through the storage tank. One pump was running at the time of the inspection. There is a water softener on the makeup water supply line, but it is not in use because it is out of salt. The condensate receiver tank is equipped with 3 pumps and two feedwater lines, one to each boiler. Steam and condensate system piping is steel with threaded connections. Steam and condensate piping mains from the basement level run up through the building to the terminal units on all three floors.

There is a steam to water, tube and shell, two-pass heat exchanger in the boiler room for hydronic water heating. The hydronic heating system has 2 pumps in the basement. It was installed in 2008, and should have 20 years life remaining.

Two rooftop air-cooled, screw compressor, 177 and 98 ton cooling capacity, standard efficiency, R-134a chillers supply chilled water to air handlers and unit ventilators throughout the building. There are 4 chilled water pumps. The entire chilled water system was installed in 2008. The chillers should not need replacement in 10 years. The chilled water pumps leak and need to be rebuilt. The location and cause of leaks was not determined during the inspection because the leaking pumps were not running at the time.

Four rooftop, ductless, split system, 2 ton capacity heat pumps provide heating and cooling to network closets and other small rooms in the building. The indoor unit in the basement electronic equipment room was inoperable and the room was very warm. Ceiling mounted units in the main building entrance vestibule had extremely dusty grills. All these units should be cleaned, inspected, and repaired as needed.

A rooftop air handler serves hallways on the upper floors and a second outdoor air handler in the window well alongside the lunch room serves the basement level. Insulation is falling off the ground level unit. Three air handlers inside the building serve the auditorium and other spaces. Their duct work has insulation falling off and is perforated in multiple areas. The basement fan room where they are located is infested with fruit flies. The air handlers were installed in 2008. With insulation repairs and routine preventive maintenance they should last 20 more years.

Unit ventilators provide heating, cooling, and ventilation for the majority of the classrooms. The unit ventilators were installed in 2008 and are equipped with mixing dampers and hydronic heating and cooling coils. The outdoor air intake for these units is though original openings in the building façade. The unit ventilators are well within their anticipated service life and should not need replacement for 10-15 years. Some units have developed leaks causing damage to floors and ceilings. One unit was leaking at the time of the inspection as dripping was present in the classroom below it and the area smelled like antifreeze. Another unit had a fan rattling during the inspection. These units should all be inspected for problems and cleaned of dust and rubbish.

Classrooms and toilet rooms have finned tube heating coil units. These were installed in 2008 and are in good condition and will not need replacement within 20 years.

Hydronic heated and chilled water piping is threaded steel pipe installed in 2008. The pipe is in good condition and should not need replacement for 25 years, but pipe insulation is damaged in many areas exposing piping to ambient air leading to condensation. The hydronic piping insulation

should be repaired.

The kitchen has no fuel burning cooking equipment and doesn't require an exhaust hood.

The building controls were updated in 2008 to digital and will not need replacement for 10-15 years. Multiple thermometers and pressure gauges on the mechanical systems are broken and need replacement.

The school building has standpipes and sprinklers installed in 2008. Sprinklers cover the entire building, including the cafeteria and auditorium. There is no fire pump. The system should not need replacement for 20 years.

#### **ELECTRICAL SYSTEMS**

A service drop to a pad mounted transformer from a Medium voltage overhead line on a wooden poles at 22<sup>nd</sup> street serves this school. The pad mounted transformer is located approximate at the corner of 22<sup>nd</sup> street and Mc Clellan. Next to the pad mounted transformer is the utility meter. The electrical room is located in the basement which houses General Electric service entrance switchboard 1200 Amperes 480/277V. The switchboard serves the mechanical equipment, 480/277 V panel-boards serves the lighting load and step down transformer 480V-120/208V serves the receptacle and small loads The service entrance switchboard was installed in 2007 and is expected to provide 32 more years of useful life.

The electrical distribution is obtained using 120/208V panel-boards for receptacles and small loads and 480/277V panel-boards for lighting loads. Panel-boards are located at each floor in electrical closets. Panel-boards are manufactured by General Electric and were installed in 2007 and are expected to provide 35 more years of useful life. Raceways are concealed in ceiling or wall spaces.

Quantity of receptacles per office/classrooms are adequate. Classrooms are provided with double compartment, surface mounted raceway. Receptacles and surface raceways are part of the 2007 modernization project.

Classrooms, offices, kitchen, cafeteria, and auditorium are illuminated with recessed mounted fluorescent fixtures. The first and second floor corridors are illuminated with recessed, round fluorescent fixtures. The multipurpose room, stairways and the girls and boys rooms are illuminated with surface mounted fluorescent fixtures. All lighting fixtures are provided with T-8 lamps. Fixtures are part of the 2007 modernization project.

The fire alarm system is part of the 2007 modernization project. The fire alarm control panel is manufactured by General Electric EST. The fire alarm system is composed of pull station at exit doors, audio/visual devices at corridors, classrooms and restrooms, elevator recall, smoke detectors in front of the elevator.

The present telephone system is adequate.

An independent and separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately for most part.

The school clock system consists of wireless, battery operated, round 12" clocks. Bells and clocks are part of the 2007 modernization project

There is not television system.

The security system consists of CCTV cameras at corridors. Cameras are located at each corridor's main entrance doors from the basement to the third floor. Security system is part of the 2007 modernization project

The emergency power system consists of an indoor generator, manufactured by Kholer Power Systems rated 50KW with two 100 A output circuit breakers. One circuit breaker is for the fire pump and the other for emergency lighting. The present emergency power system serves the corridor and stair ways lighting fixtures, exit signs, stair and generator damper. The generator is located at the basement and is part of the 2007 modernization project and is expected to provide 12 more years of useful service life.

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 lightning protection system is accomplished with air terminals mounted on the chimney. A study needs to be conducted to verify that air terminals provide the proper coverage.

The school has a hydraulic elevator manufactured by ThyssenKrupp Elevator TAC 20. Elevator was installed in 2007 and is expected to provide 12 more years of useful service life. Since the elevator is not connected to the school emergency power system, an emergency battery lowering device should be provided in case of power outage.

Theatrical lighting are ON/OFF from local panel-board, there is not a dimming control panel. A more complete theatrical lighting and dimming control system should be provided.

The auditorium sound system is portable type. Provide a permanent installed sound system

#### **GROUNDS SYSTEMS**

The site surrounds the building on all four sides which is set back from the street. Play yard area on South and West sides are asphalt paving with no parking area. All paving is in very good condition. Metal and composite plastic playground equipment and fall protection surface appears new and in very good condition. Metal fence surrounding most of the site is in very good condition. Landscaping is minimal in SE corner of site and is mature and in good condition.

Accessibility: the building has one accessible entrance, and accessible routes. Toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Doors in the building have ADA required door handles.

The school perimeter and playground area are illuminated via wall mounted lighting fixtures. Provide 6 poles mounted fixtures for safety.

CCTV cameras around the building perimeter are provided.

Loud speakers are provided on the building exterior.

#### RECOMMENDATIONS

- Repair damaged flashing on parapet wall
- Replace hazed Plexiglas windows
- · Repair and repaint plaster damage in auditorium, basement, and roof access
- Refinish hardwood flooring (auditorium and stage)
- · Repair and replace damaged or missing auditorium seats
- Repair bathroom flush and faucet valves.
- Replace or repair inoperable wall hung drinking fountains with clogged drains.
- Replace severely rusted gate valve and other fittings on building water entry.
- Add expansion tank to hot water plumbing.
- Rebuild three leaking chilled water circulation pumps.
- Clean, inspect, and repair four split unit 2 ton air-conditioners.
- Repair insulation and perform preventive maintenance on five air handlers and associated ducts.
- Inspect and repair leaking unit ventilators.
- Repair hydronic piping insulation.
- Replace broken temperature and pressure instrumentation.
- A study needs to be conducted to verify that air terminals provide the proper coverage.
- Since the elevator is not connected to the school emergency power system. Provide an emergency battery lowering device in power outage.
- Provide a complete theatrical lighting and dimming control system.
- Provide an up to date auditorium sound system.
- Provide 6 pole mounted fixtures for safety

#### **Attributes:**

### **General Attributes:**

Active: Open Bldg Lot Tm: Lot 1 / Tm 3 Tm 3

Status: Accepted by SDP Team:

Site ID: S237001

### **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.

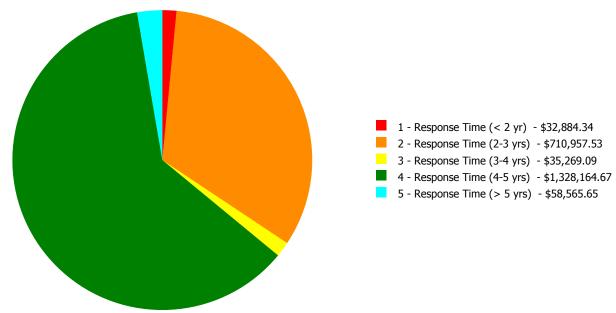
### **Current Investment Requirement and Condition by Uniformat Classification**

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	20.00 %	0.00 %	\$0.00
A20 - Basement Construction	20.00 %	0.00 %	\$0.00
B10 - Superstructure	20.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	41.31 %	35.22 %	\$1,211,074.59
B30 - Roofing	65.00 %	0.14 %	\$3,254.29
C10 - Interior Construction	36.89 %	0.00 %	\$0.00
C20 - Stairs	20.00 %	0.00 %	\$0.00
C30 - Interior Finishes	70.21 %	3.11 %	\$107,529.97
D10 - Conveying	80.00 %	9.03 %	\$8,424.45
D20 - Plumbing	77.83 %	5.61 %	\$69,940.89
D30 - HVAC	65.60 %	4.18 %	\$283,584.26
D40 - Fire Protection	80.00 %	0.00 %	\$0.00
D50 - Electrical	59.57 %	1.36 %	\$48,832.16
E10 - Equipment	60.10 %	30.23 %	\$293,594.70
E20 - Furnishings	12.50 %	27.14 %	\$35,269.09
G20 - Site Improvements	79.54 %	0.00 %	\$0.00
G40 - Site Electrical Utilities	73.33 %	61.50 %	\$104,336.88
Totals:	50.67 %	6.58 %	\$2,165,841.28

# **Condition Deficiency Priority**

Facility Name	Gross Area (S.F.)	FCI %	_	2 - Response Time (2-3 yrs)		The second secon	
B237001;McDaniel	61,000	6.39	\$32,884.34	\$606,620.65	\$35,269.09	\$1,328,164.67	\$58,565.65
G237001;Grounds	29,200	16.04	\$0.00	\$104,336.88	\$0.00	\$0.00	\$0.00
Total:		6.58	\$32,884.34	\$710,957.53	\$35,269.09	\$1,328,164.67	\$58,565.65

# **Deficiencies By Priority**



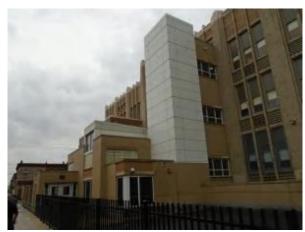
Budget Estimate Total: \$2,165,841.28

### **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):	61,000
Year Built:	1935
Last Renovation:	2008
Replacement Value:	\$32,285,135
Repair Cost:	\$2,061,504.40
Total FCI:	6.39 %
Total RSLI:	50.12 %



#### **Description:**

#### Attributes:

**General Attributes:** 

Active: Open Bldg ID: B237001

Sewage Ejector: No Status: Accepted by SDP

Site ID: S237001

# **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	20.00 %	0.00 %	\$0.00
A20 - Basement Construction	20.00 %	0.00 %	\$0.00
B10 - Superstructure	20.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	41.31 %	35.22 %	\$1,211,074.59
B30 - Roofing	65.00 %	0.14 %	\$3,254.29
C10 - Interior Construction	36.89 %	0.00 %	\$0.00
C20 - Stairs	20.00 %	0.00 %	\$0.00
C30 - Interior Finishes	70.21 %	3.11 %	\$107,529.97
D10 - Conveying	80.00 %	9.03 %	\$8,424.45
D20 - Plumbing	77.83 %	5.61 %	\$69,940.89
D30 - HVAC	65.60 %	4.18 %	\$283,584.26
D40 - Fire Protection	80.00 %	0.00 %	\$0.00
D50 - Electrical	59.57 %	1.36 %	\$48,832.16
E10 - Equipment	60.10 %	30.23 %	\$293,594.70
E20 - Furnishings	12.50 %	27.14 %	\$35,269.09
Totals:	50.12 %	6.39 %	\$2,061,504.40

### **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 the system based on Building Owners and Managers Association (BOMA) recommendations.
- 7. Year Installed: The date of system installation.
- 8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
- 9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
- 10. CI: The Condition Index of the system.
- 11. FCI: The Facility Condition Index of the system.
- 12. RSL: Remaining Service Life.
- 13. eCR: eCOMET Condition Rating (not used).
- 14. Deficiency \$: The financial investment to repair/replace system.

### **System Listing**

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

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

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

System Code	System Description	Unit Price \$	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
A1010	Standard Foundations	\$18.40	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$1,122,400
A1030	Slab on Grade	\$7.73	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$471,530
A2010	Basement Excavation	\$6.55	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$399,550
A2020	Basement Walls	\$12.70	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$774,700
B1010	Floor Construction	\$75.10	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$4,581,100
B1020	Roof Construction	\$13.88	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$846,680
B2010	Exterior Walls	\$36.91	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$2,251,510
B2020	Exterior Windows	\$18.01	S.F.	61,000	40	2008	2048		82.50 %	110.24 %	33		\$1,211,074.59	\$1,098,610
B2030	Exterior Doors	\$1.45	S.F.	61,000	25	2008	2033		72.00 %	0.00 %	18			\$88,450
B3010105	Built-Up	\$37.76	S.F.	61,000	20	2008	2028		65.00 %	0.14 %	13		\$3,254.29	\$2,303,360
B3020	Roof Openings	\$0.06	S.F.	61,000	20	2008	2028		65.00 %	0.00 %	13			\$3,660
C1010	Partitions	\$17.91	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$1,092,510
C1020	Interior Doors	\$3.51	S.F.	61,000	40	2008	2048		82.50 %	0.00 %	33			\$214,110
C1030	Fittings	\$3.12	S.F.	61,000	40	2008	2048		82.50 %	0.00 %	33			\$190,320
C2010	Stair Construction	\$1.41	S.F.	61,000	100	1935	2035		20.00 %	0.00 %	20			\$86,010
C3010230	Paint & Covering	\$13.21	S.F.	61,000	10	2013	2023		80.00 %	7.73 %	8		\$62,308.82	\$805,810
C3010232	Wall Tile	\$2.63	S.F.	61,000	30	2008	2038		76.67 %	0.00 %	23			\$160,430
C3020411	Carpet	\$7.30	S.F.	3,050	10	2008	2018	2025	100.00 %	0.00 %	10			\$22,265

System Code	System Description	Unit Price \$	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
C3020412	Terrazzo & Tile	\$75.52	S.F.	6,100	50	1937	1987	2037	44.00 %	0.00 %	22			\$460,672
C3020413	Vinyl Flooring	\$9.68	S.F.	18,300	20	2008	2028		65.00 %	0.00 %	13			\$177,144
C3020414	Wood Flooring	\$22.27	S.F.	24,400	25	2008	2033		72.00 %	8.32 %	18		\$45,221.15	\$543,388
C3020415	Concrete Floor Finishes	\$0.97	S.F.	9,150	50	2008	2058		86.00 %	0.00 %	43			\$8,876
C3030	Ceiling Finishes	\$20.97	S.F.	61,000	25	2008	2033		72.00 %	0.00 %	18			\$1,279,170
D1010	Elevators and Lifts	\$1.53	S.F.	61,000	35	2008	2043		80.00 %	9.03 %	28		\$8,424.45	\$93,330
D2010	Plumbing Fixtures	\$13.52	S.F.	61,000	35	2008	2043		80.00 %	5.98 %	28		\$49,321.18	\$824,720
D2020	Domestic Water Distribution	\$1.68	S.F.	61,000	25	2008	2033		72.00 %	20.12 %	18		\$20,619.71	\$102,480
D2030	Sanitary Waste	\$2.90	S.F.	61,000	25	2008	2033		72.00 %	0.00 %	18			\$176,900
D2040	Rain Water Drainage	\$2.32	S.F.	61,000	30	2008	2038		76.67 %	0.00 %	23			\$141,520
D3020	Heat Generating Systems	\$18.67	S.F.	61,000	35	1993	2028		37.14 %	0.00 %	13			\$1,138,870
D3030	Cooling Generating Systems	\$24.48	S.F.	61,000	30	2008	2038		76.67 %	1.13 %	23		\$16,948.40	\$1,493,280
D3040	Distribution Systems	\$42.99	S.F.	61,000	25	2008	2033		72.00 %	7.83 %	18		\$205,249.89	\$2,622,390
D3050	Terminal & Package Units	\$11.60	S.F.	61,000	20	2008	2028		65.00 %	8.28 %	13		\$58,565.65	\$707,600
D3060	Controls & Instrumentation	\$13.50	S.F.	61,000	20	2008	2028		65.00 %	0.34 %	13		\$2,820.32	\$823,500
D4010	Sprinklers	\$7.05	S.F.	61,000	35	2008	2043		80.00 %	0.00 %	28			\$430,050
D4020	Standpipes	\$1.01	S.F.	61,000	35	2008	2043		80.00 %	0.00 %	28			\$61,610
D5010	Electrical Service/Distribution	\$9.70	S.F.	61,000	30	2007	2037		73.33 %	0.00 %	22			\$591,700
D5020	Lighting and Branch Wiring	\$34.68	S.F.	61,000	20	2007	2027		60.00 %	0.00 %	12			\$2,115,480
D5030	Communications and Security	\$12.99	S.F.	61,000	15	2007	2022		46.67 %	3.10 %	7		\$24,582.34	\$792,390
D5090	Other Electrical Systems	\$1.41	S.F.	61,000	30	2007	2037		73.33 %	28.19 %	22		\$24,249.82	\$86,010
E1020	Institutional Equipment	\$4.82	S.F.	61,000	35	1980	2015	2020	14.29 %	99.86 %	5		\$293,594.70	\$294,020
E1090	Other Equipment	\$11.10	S.F.	61,000	35	2008	2043		80.00 %	0.00 %	28			\$677,100
E2010	Fixed Furnishings	\$2.13	S.F.	61,000	40	1980	2020		12.50 %	27.14 %	5		\$35,269.09	\$129,930
								Total	50.12 %	6.39 %			\$2,061,504.40	\$32,285,135

# **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:	80% Paint & Covering 20% - Wall Tile (10% glazed brick, 10% ground face block)	
System:	C3020 - Floor Finishes	This system contains no images
Note:	5% - Carpet 10% - Terrazzo & Tile 30% - Vinyl Flooring 40% - Wood Flooring 15% - Concrete Floor Finishes	
System:	C3030 - Ceiling Finishes	This system contains no images
Note:	80% - Suspended acoustic ceiling 20% - Painted plaster/structure	
System:	D5010 - Electrical Service/Distribution	This system contains no images
Note:	One Step down transformer 480V-120/208V	

# **Renewal Schedule**

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	\$2,061,504	\$0	\$0	\$0	\$0	\$540,622	\$0	\$1,071,994	\$1,122,854	\$0	\$32,915	\$4,829,889
* A - Substructure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A10 - Foundations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A1010 - Standard Foundations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A1030 - Slab on Grade	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A20 - Basement Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A2010 - Basement Excavation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A2020 - Basement Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B - Shell	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B10 - Superstructure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B1010 - Floor Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B1020 - Roof Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B20 - Exterior Enclosure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2010 - Exterior Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2020 - Exterior Windows	\$1,211,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,211,075
B2030 - Exterior Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B30 - Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010 - Roof Coverings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010105 - Built-Up	\$3,254	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,254
B3020 - Roof Openings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C - Interiors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C10 - Interior Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C1010 - Partitions	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C1020 - Interior Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C1030 - Fittings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C20 - Stairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

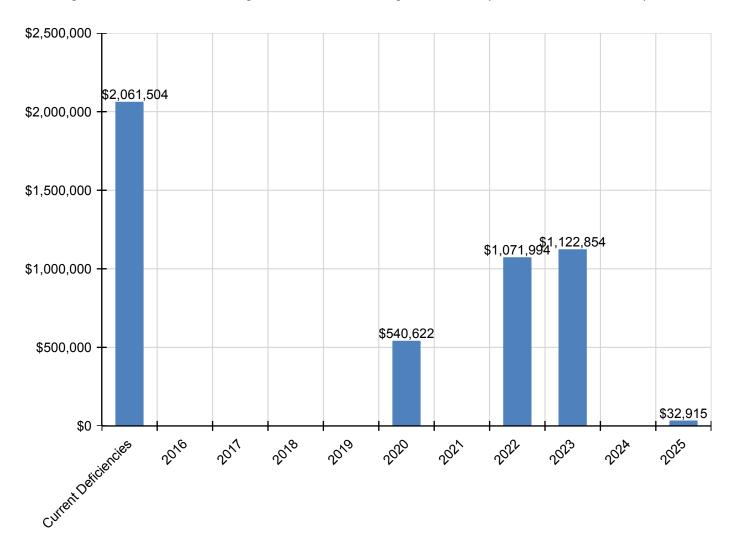
C2010 - Stair Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010 - Wall Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010230 - Paint & Covering	\$62,309	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,122,854	\$0	\$0	\$1,185,162
C3010232 - Wall Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020 - Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020411 - Carpet	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,915	\$32,915
C3020412 - Terrazzo & Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020413 - Vinyl Flooring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020414 - Wood Flooring	\$45,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,221
C3020415 - Concrete Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3030 - Ceiling Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D - Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D10 - Conveying	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D1010 - Elevators and Lifts	\$8,424	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,424
D20 - Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2010 - Plumbing Fixtures	\$49,321	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,321
D2020 - Domestic Water Distribution	\$20,620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,620
D2030 - Sanitary Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2040 - Rain Water Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D30 - HVAC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3020 - Heat Generating Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3030 - Cooling Generating Systems	\$16,948	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,948
D3040 - Distribution Systems	\$205,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$205,250
D3050 - Terminal & Package Units	\$58,566	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,566
D3060 - Controls & Instrumentation	\$2,820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,820
D40 - Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4010 - Sprinklers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4020 - Standpipes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D50 - Electrical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5010 - Electrical Service/Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5020 - Lighting and Branch Wiring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5030 - Communications and Security	\$24,582	\$0	\$0	\$0	\$0	\$0	\$0	\$1,071,994	\$0	\$0	\$0	\$1,096,576

D5090 - Other Electrical Systems	\$24,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,250
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	\$293,595	\$0	\$0	\$0	\$0	\$374,935	\$0	\$0	\$0	\$0	\$0	\$668,529
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	\$35,269	\$0	\$0	\$0	\$0	\$165,687	\$0	\$0	\$0	\$0	\$0	\$200,956

<sup>\*</sup> Indicates non-renewable system

# **Forecasted Sustainment Requirement**

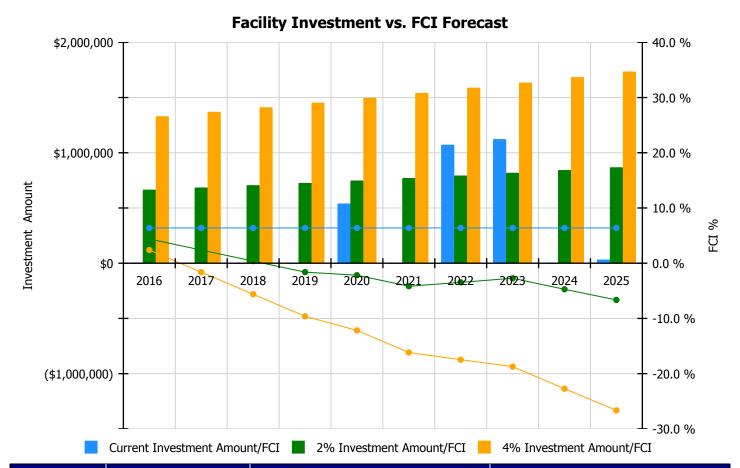
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



# 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:

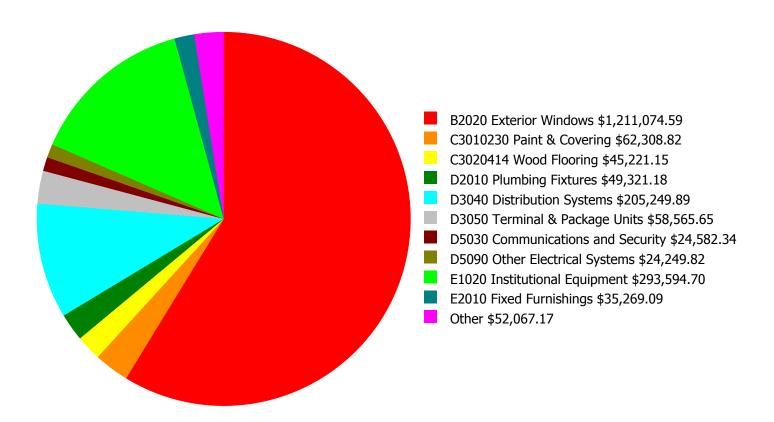
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



	Investment Amount	2% Investm	ent	4% Investment			
Year	Current FCI - 6.39%	Amount	FCI	Amount	FCI		
2016	\$0	\$665,074.00	4.39 %	\$1,330,148.00	2.39 %		
2017	\$0	\$685,026.00	2.39 %	\$1,370,052.00	-1.61 %		
2018	\$0	\$705,577.00	0.39 %	\$1,411,154.00	-5.61 %		
2019	\$0	\$726,744.00	-1.61 %	\$1,453,488.00	-9.61 %		
2020	\$540,622	\$748,546.00	-2.17 %	\$1,497,093.00	-12.17 %		
2021	\$0	\$771,003.00	-4.17 %	\$1,542,006.00	-16.17 %		
2022	\$1,071,994	\$794,133.00	-3.47 %	\$1,588,266.00	-17.47 %		
2023	\$1,122,854	\$817,957.00	-2.72 %	\$1,635,914.00	-18.72 %		
2024	\$0	\$842,496.00	-4.72 %	\$1,684,991.00	-22.72 %		
2025	\$32,915	\$867,770.00	-6.65 %	\$1,735,541.00	-26.65 %		
Total:	\$2,768,384	\$7,624,326.00		\$15,248,653.00			

### **Deficiency Summary by System**

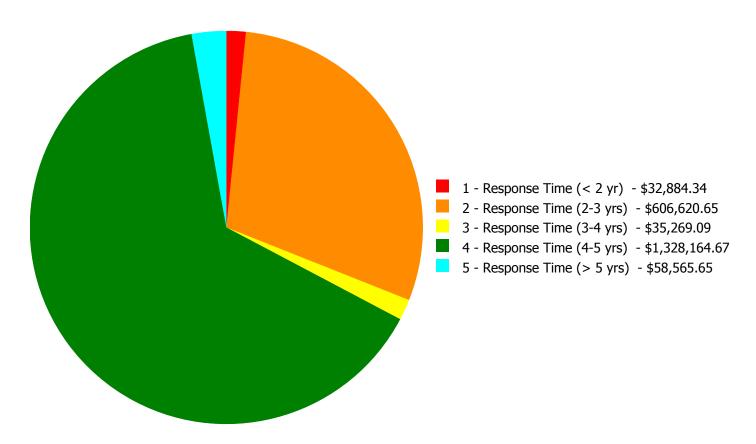
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$2,061,504.40** 

### **Deficiency Summary by Priority**

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



**Budget Estimate Total: \$2,061,504.40** 

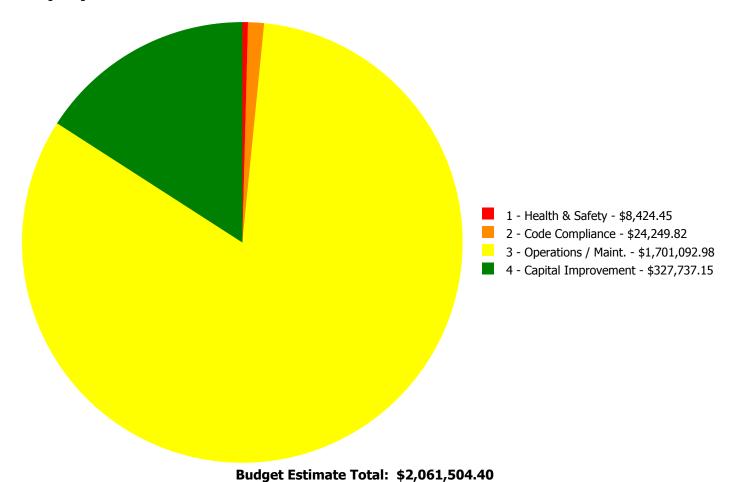
# **Deficiency By Priority Investment Table**

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
B2020	Exterior Windows	\$0.00	\$0.00	\$0.00	\$1,211,074.59		\$1,211,074.59
B3010105	Built-Up	\$0.00	\$3,254.29	\$0.00	\$0.00	\$0.00	\$3,254.29
C3010230	Paint & Covering	\$0.00	\$0.00	\$0.00	\$62,308.82	\$0.00	\$62,308.82
C3020414	Wood Flooring	\$0.00	\$0.00	\$0.00	\$45,221.15	\$0.00	\$45,221.15
D1010	Elevators and Lifts	\$0.00	\$8,424.45	\$0.00	\$0.00	\$0.00	\$8,424.45
D2010	Plumbing Fixtures	\$19,004.42	\$30,316.76	\$0.00	\$0.00	\$0.00	\$49,321.18
D2020	Domestic Water Distribution	\$11,059.60	\$0.00	\$0.00	\$9,560.11	\$0.00	\$20,619.71
D3030	Cooling Generating Systems	\$0.00	\$16,948.40	\$0.00	\$0.00	\$0.00	\$16,948.40
D3040	Distribution Systems	\$0.00	\$205,249.89	\$0.00	\$0.00	\$0.00	\$205,249.89
D3050	Terminal & Package Units	\$0.00	\$0.00	\$0.00	\$0.00	\$58,565.65	\$58,565.65
D3060	Controls & Instrumentation	\$2,820.32	\$0.00	\$0.00	\$0.00	\$0.00	\$2,820.32
D5030	Communications and Security	\$0.00	\$24,582.34	\$0.00	\$0.00	\$0.00	\$24,582.34
D5090	Other Electrical Systems	\$0.00	\$24,249.82	\$0.00	\$0.00	\$0.00	\$24,249.82
E1020	Institutional Equipment	\$0.00	\$293,594.70	\$0.00	\$0.00	\$0.00	\$293,594.70
E2010	Fixed Furnishings	\$0.00	\$0.00	\$35,269.09	\$0.00	\$0.00	\$35,269.09
	Total:	\$32,884.34	\$606,620.65	\$35,269.09	\$1,328,164.67	\$58,565.65	\$2,061,504.40

# **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:



### **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: D2010 - Plumbing Fixtures



**Location:** Toilet Rooms

**Distress:** Maintenance Required

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

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

Correction: Replace flush valves (enter qty of WC or Urinals

in estimate)

**Qty:** 20.00

Unit of Measure: Ea.

**Estimate:** \$13,706.16

**Assessor Name:** Craig Anding

**Date Created:** 09/21/2015

Notes: Replace 50% of flush valves due to leaks.

### System: D2010 - Plumbing Fixtures



**Location:** Toilet rooms

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

**Correction:** Replace lavatory faucet

**Qty:** 20.00

Unit of Measure: Ea.

**Estimate:** \$5,298.26

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

**Notes:** Repair bathroom faucet valves.

### System: D2020 - Domestic Water Distribution



**Location:** Basement

**Distress:** Failing

Category: 3 - Operations / Maint.

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

**Correction:** Replace valves

**Qty:** 4.00

Unit of Measure: Ea.

**Estimate:** \$11,059.60

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

**Notes:** Replace severely rusted gate valve and other fittings on building water entry.

#### System: D3060 - Controls & Instrumentation



Location: Boiler room, AHUs

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace temperature, pressure gauges (enter

estimate)

**Qty:** 20.00

Unit of Measure: Ea.

**Estimate:** \$2,820.32

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

**Notes:** Replace broken temperature and pressure instrumentation.

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

System: B3010105 - Built-Up



Location: Roof

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Repair or replace flashing where it connects to

masonry parapet - choose proper material

**Qty:** 50.00

Unit of Measure: L.F.

**Estimate:** \$3,254.29

**Assessor Name:** Craig Anding

**Date Created:** 08/07/2015

Notes: Repair damaged flashing on parapet wall

#### System: D1010 - Elevators and Lifts



**Location:** Elevator Machine room

Distress: Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

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

**Correction:** Update/Modernize Elevator Cab - select the

scope of work and change the quantities to fit

the need

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$8,424.45

Assessor Name: Craig Anding

**Date Created:** 08/04/2015

**Notes:** Since the elevator is not connected to the school emergency power system, an emergency battery lowering device should be provided in case of power outage.

### System: D2010 - Plumbing Fixtures



Location: Corridors

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Water Fountains - without

ADA new recessed alcove

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** \$30,316.76

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

**Notes:** Replace or repair inoperable wall hung drinking fountains with clogged drains.

### System: D3030 - Cooling Generating Systems



**Location:** Basement

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

**Correction:** Rebuild base mounted, end suction CHW pump

(5" size, 15 HP, to 1000 GPM)

**Qty:** 3.00

Unit of Measure: Ea.

**Estimate:** \$16,948.40

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

**Notes:** Rebuild three leaking chilled water circulation pumps.

### System: D3040 - Distribution Systems



**Location:** Classrooms

**Distress:** Failing

Category: 3 - Operations / Maint.

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

Correction: Replace classroom unit ventilator (htg/clg coils,

5 tons, 2,000 CFM)

**Qty:** 3.00

**Unit of Measure:** Ea.

**Estimate:** \$149,636.03

Assessor Name: Craig Anding

**Date Created:** 08/10/2015

Notes: Replace (or repair) leaking unit ventilators.

### System: D3040 - Distribution Systems



**Location:** Roof top, window well, fan rooms.

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Replace thermal duct insulation - per 100 SF

**Qty:** 1,000.00

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

**Estimate:** \$38,156.80

Assessor Name: Craig Anding

**Date Created:** 08/10/2015

**Notes:** Repair insulation and perform preventive maintenance on five air handlers and associated ducts.

### System: D3040 - Distribution Systems



Location: Entire building

**Distress:** Damaged

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

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

Correction: Replace hydronic distribution piping insulation -

100 LF of piping

**Qty:** 500.00

Unit of Measure: L.F.

**Estimate:** \$17,457.06

**Assessor Name:** Craig Anding

**Date Created:** 08/10/2015

Notes: Repair hydronic piping insulation.

### **System: D5030 - Communications and Security**



**Notes:** Provide an up to date auditorium sound system

**Location:** Auditorium

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Sound System

**Qty:** 1.00

Unit of Measure: LS

**Estimate:** \$24,582.34

**Assessor Name:** Craig Anding

**Date Created:** 08/04/2015

### System: D5090 - Other Electrical Systems



**Location:** Roof

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

Correction: Repair Lightning Protection System

**Qty:** 1.00

Unit of Measure: Job

**Estimate:** \$24,249.82

Assessor Name: Craig Anding

**Date Created:** 08/04/2015

**Notes:** A study needs to be conducted to verify that air terminals provide the proper coverage.

### System: E1020 - Institutional Equipment



**Location:** Auditorium

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

**Correction:** Add/Replace Stage Theatrical Lighting System

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$293,594.70

Assessor Name: Craig Anding

**Date Created:** 08/04/2015

**Notes:** A more complete theatrical lighting and dimming control system should be provided.

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

### **System: E2010 - Fixed Furnishings**



**Location:** Auditorium

**Distress:** Failing

**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:** 40.00

Unit of Measure: Ea.

**Estimate:** \$35,269.09

**Assessor Name:** Craig Anding

**Date Created:** 08/07/2015

Notes: Repair and replace damaged or missing auditorium seats

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

#### System: B2020 - Exterior Windows



**Notes:** Replace hazed Plexiglas windows

**Location:** Throughout

**Distress:** Beyond Service Life

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

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

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

**Qty:** 240.00

Unit of Measure: Ea.

**Estimate:** \$1,211,074.59

**Assessor Name:** Craig Anding

**Date Created:** 08/07/2015

#### System: C3010230 - Paint & Covering



**Location:** Auditorium, stage, basement, roof access

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior walls - SF

of wall surface

**Qty:** 8,000.00

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

**Estimate:** \$62,308.82

**Assessor Name:** Craig Anding

**Date Created:** 08/07/2015

Notes: Repair and repaint plaster damage in auditorium, basement, and roof access

#### System: C3020414 - Wood Flooring



**Location:** Auditorium, stage

**Distress:** Appearance

Category: 3 - Operations / Maint.

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

**Correction:** Refinish wood floors

**Qty:** 4,200.00

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

**Estimate:** \$45,221.15

**Assessor Name:** Craig Anding

**Date Created:** 08/07/2015

Notes: Refinish hardwood flooring (auditorium and stage)

#### System: D2020 - Domestic Water Distribution



**Location:** Basement

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

**Correction:** Provide expansion tank for water heater.

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$9,560.11

**Assessor Name:** Craig Anding

**Date Created:** 09/21/2015

**Notes:** Add expansion tank to hot water plumbing.

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

#### System: D3050 - Terminal & Package Units



**Location:** Network room, entry vestibule, etc.

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

**Correction:** Install ductless split system for equipment room

**Qty:** 4.00

Unit of Measure: Ea.

**Estimate:** \$58,565.65

Assessor Name: Craig Anding

Date Created: 08/10/2015

Notes: Replace (or clean, inspect, and repair) four split unit 2 ton air-conditioners.

# **Equipment Inventory**

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 4500 lb, 5 floors, 100 FPM	1.00	Ea.	Elevator room	Thyssen Krupp	TAC 20			30	2007	2037	\$151,620.00	\$166,782.00
D2020 Domestic Water Distribution	Pump, pressure booster system, variable speed, base, controls, starter, duplex, 100' head, 400 GPM, 7-1/2 H.P., 4" discharge	1.00	Ea.	Basement					25	2008	2033	\$51,870.00	\$57,057.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3796 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler room					35	1993	2028	\$84,333.50	\$185,533.70
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 175 ton cooling, includes standard controls	1.00	Ea.	rooftop	York	YCIV0177SA4 6VABBXTXXT XXLXXXXX45S X	RKSM020176		15	2008	2023	\$139,639.50	\$153,603.45
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 80 ton cooling, includes standard controls	1.00	Ea.	rooftop	York	YCAS0098EB4 6ZGADBTXXT XXLXXX\$^SX	RKSM020202		15	2008	2023	\$73,656.00	\$81,021.60
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	6.00	Ea.	Basement					25	2008	2033	\$21,432.00	\$141,451.20
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 400 amp, excl breakers	1.00		Basement electrical room					30	2007	2037	\$3,291.30	\$3,620.43
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 1600 A	1.00	Ea.	Electrical room	General Electric	Spectra Series	77349057-2		20	2007	2027	\$53,561.25	\$58,917.38
												Total:	\$847,986.76

### **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).

77.92 %

Function:

 Gross Area (SF):
 29,200

 Year Built:
 1937

 Last Renovation:
 2008

 Replacement Value:
 \$650,566

 Repair Cost:
 \$104,336.88

 Total FCI:
 16.04 %



#### **Description:**

Total RSLI:

#### Attributes:

**General Attributes:** 

Bldg ID: S237001 Site ID: S237001

# **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	79.54 %	0.00 %	\$0.00
G40 - Site Electrical Utilities	73.33 %	61.50 %	\$104,336.88
Totals:	77.92 %	16.04 %	\$104,336.88

#### **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		Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
G2030	Pedestrian Paving	\$12.30	S.F.	28,500	40	2008	2048		82.50 %	0.00 %	33			\$350,550
G2040	Site Development	\$4.36	S.F.	29,200	25	2008	2033		72.00 %	0.00 %	18			\$127,312
G2050	Landscaping & Irrigation	\$4.36	S.F.	700	15	2008	2023		53.33 %	0.00 %	8			\$3,052
G4020	Site Lighting	\$4.84	S.F.	29,200	30	2007	2037		73.33 %	73.83 %	22		\$104,336.88	\$141,328
G4030	Site Communications & Security	\$0.97	S.F.	29,200	30	2007	2037		73.33 %	0.00 %	22			\$28,324
	Total 77.92 % 16.04 % \$104,336.88										\$650,566			

# **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.

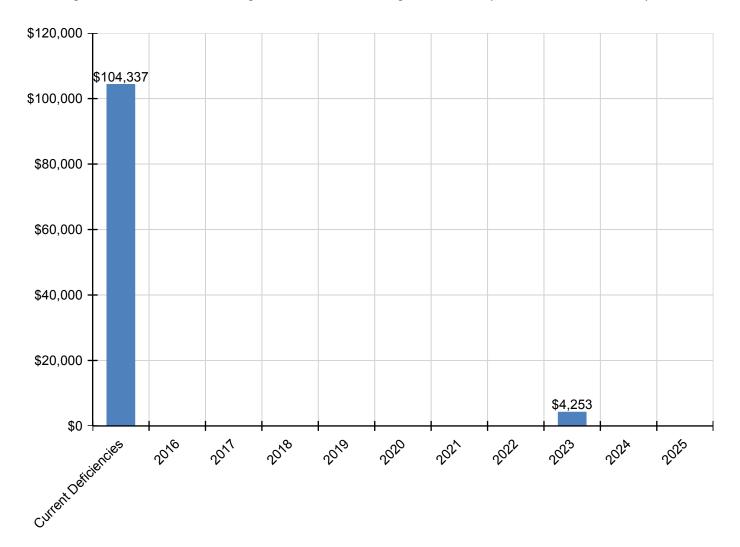
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	\$104,337	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,253	\$0	\$0	\$108,589
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
G2030 - Pedestrian Paving	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G2040 - Site Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G2050 - Landscaping & Irrigation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,253	\$0	\$0	\$4,253
G40 - Site Electrical Utilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G4020 - Site Lighting	\$104,337	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104,337
G4030 - Site Communications & Security	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

<sup>\*</sup> Indicates non-renewable system

# **Forecasted Sustainment Requirement**

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

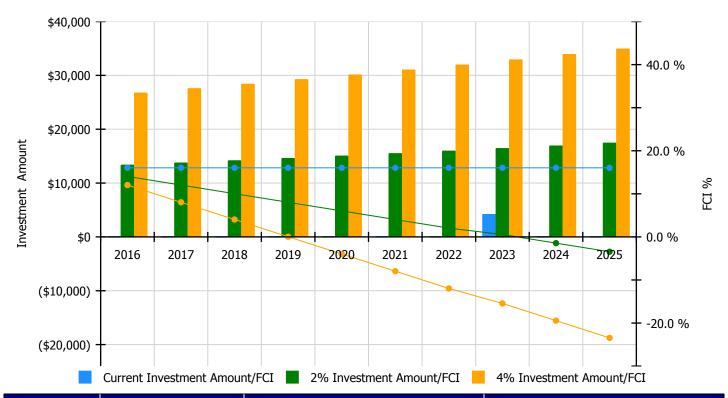


# 10 Year FCI Forecast by Investment Scenario

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:

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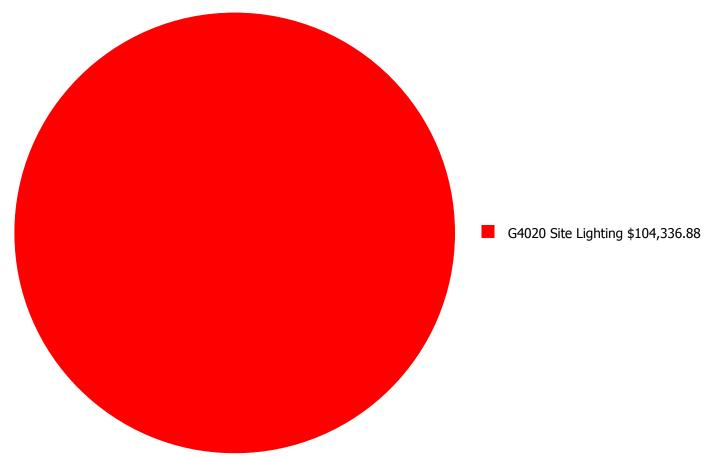
## **Facility Investment vs. FCI Forecast**



	Investment Amount	2% Investm	ent	4% Investment			
Year	Current FCI - 16.04%	Amount	FCI	Amount	FCI		
2016	\$0	\$13,402.00	14.04 %	\$26,803.00	12.04 %		
2017	\$0	\$13,804.00	12.04 %	\$27,607.00	8.04 %		
2018	\$0	\$14,218.00	10.04 %	\$28,436.00	4.04 %		
2019	\$0	\$14,644.00	8.04 %	\$29,289.00	0.04 %		
2020	\$0	\$15,084.00	6.04 %	\$30,167.00	-3.96 %		
2021	\$0	\$15,536.00	4.04 %	\$31,072.00	-7.96 %		
2022	\$0	\$16,002.00	2.04 %	\$32,005.00	-11.96 %		
2023	\$4,253	\$16,482.00	0.55 %	\$32,965.00	-15.45 %		
2024	\$0	\$16,977.00	-1.45 %	\$33,954.00	-19.45 %		
2025	\$0	\$17,486.00	-3.45 %	\$34,972.00	-23.45 %		
Total:	\$4,253	\$153,635.00		\$307,270.00			

# **Deficiency Summary by System**

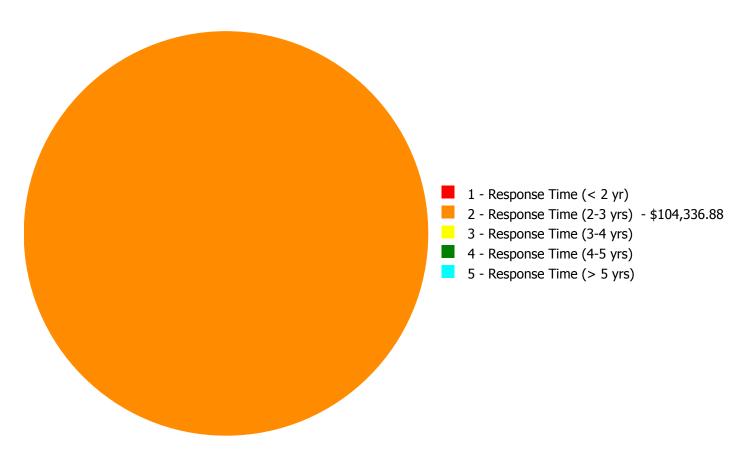
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$104,336.88** 

# **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: \$104,336.88** 

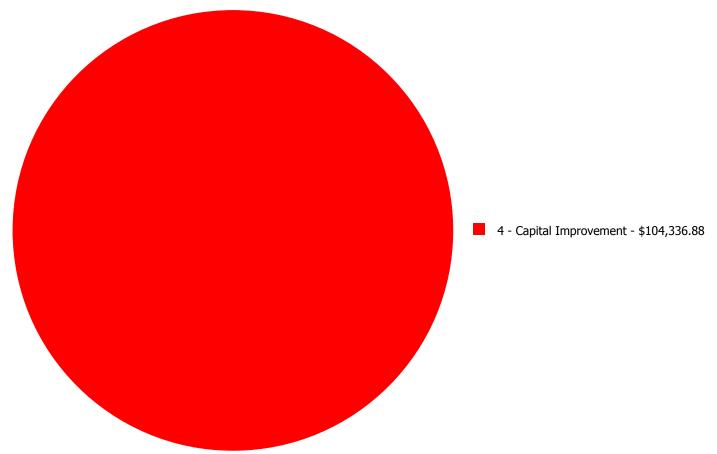
# **Deficiency By Priority Investment Table**

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

System Code	System Description		2 - Response Time (2-3 yrs)			5 - Response Time (> 5 yrs)	Total
G4020	Site Lighting	\$0.00	\$104,336.88	\$0.00	\$0.00	\$0.00	\$104,336.88
	Total:	\$0.00	\$104,336.88	\$0.00	\$0.00	\$0.00	\$104,336.88

# **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: \$104,336.88** 

# **Deficiency Details by Priority**

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

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

System: G4020 - Site Lighting



**Location:** Playground/parking

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Add Site Lighting - pole mounted - select the

proper light and pole

**Qty:** 6.00

Unit of Measure: Ea.

**Estimate:** \$104,336.88

**Assessor Name:** Ben Nixon

**Date Created:** 08/04/2015

**Notes:** As a safety measure at least 6 poles mounted fixtures should be added.

# **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 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

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)

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

**School District of Philadelphia** 

# **S237301;St Edmond**

Final
Site Assessment Report
January 30, 2017



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### **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):	68,076
Year Built:	1912
Last Renovation:	2004
Replacement Value:	\$33,272,732
Repair Cost:	\$209,555.83
Total FCI:	0.63 %
Total RSLI:	42.17 %



#### **Description:**

Facility Assessment

August 28<sup>th</sup>, 2015

School District of Philadelphia

ST. Edmonds (Mc Daniel Annex) Elementary School

1901 S. 23<sup>rd</sup> Street

Philadelphia, PA 19145

40,000 SF / 358 Students / LN 01

GENERAL

#### Site Assessment Report - S237301;St Edmond

Mr. Dave Loftus FAC, provided input to the assessment team on current problems. Mr. Thomas Clark Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Clark has been one year in this school.

The 4 story, 47,484 square foot building was originally constructed in 1912 with a complete renovation and small addition in 2004. The building has a one level basement and attic space housing mechanical equipment.

#### ARCHITECHURAL/STRUCTURAL SYSTEMS

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement or damage. The main structure consists of both masonry and cast-in-place concrete columns, beams and one way ribbed slab. The roof structure consists of wood truss supported by main structural frame. Main roofing is built-up application with asphalt shingles on pitched edges both in good condition. Scuppers on pitched roof edge are allowing water intrusion into attic space and third floor. The building envelope is masonry with face stone brick. Elevations are enhanced with decorative stonework around entrances and windows. In general, masonry is in good or very good condition. All exterior windows were replaced in the renovation with extruded aluminum, single hung, dual pain tilt-out windows with insect/security screens. All windows are in very good condition. Exterior doors are typically hollow metal in good condition. The building is accessible from public sidewalks via grade level lobby entrance.

Partition wall types include CMU and metal stud with gypsum board. Interior doors and doors leading to exit stairways are generally metal frame with solid core doors with lites in very good condition. Fittings include: toilet accessories in good condition; composite plastic toilet partitions in very good condition; and handrails and ornamental metals, generally in good condition. Toilet partitions and accessories are ADA accessible. Interior identifying signage is engraved plastic plates with brail in very good condition. Main stair construction is wood with vinyl rubber tread, riser, and nosing protection cover in good condition. Stair railings are wood balusters with wood and metal handrails in good condition.

The interior wall finishes include: painted CMU and gypsum board in most areas with wood panel wainscot in corridors and cafeteria in very good condition. Toilet wall finish is ceramic tile in good condition. Entry and lobby areas are ground face CMU with glazed brick wainscot in very good condition. Paint is generally in good condition with some water damaged areas causing microbial growth in need of remediation. Flooring includes: hardwood on stage in fair condition; VCT in classrooms, corridors, and main office in fair condition; ceramic tile in toilets and terrazzo tile in entry and lobby in very good condition; and carpet in some partial classrooms, small offices and lounge in good condition. Ceiling finishes include: suspended acoustic tile in most areas in good condition with painted gypsum in toilets in good condition.

The building has one elevator service 4 stories and one lift to stage level.

Institutional and Commercial equipment includes: stage equipment, generally in good condition. 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 good condition and window shades/blinds, generally in good condition.

#### **MECHANICAL SYSTEMS**

Plumbing fixtures throughout the building are modern low flow fixtures installed in 2003 when the building was completely remodeled. Wall hung water closets and urinals have push button flush valves installed in pipe chases. Toilet room lavatories have separate hot and cold non-mixing faucets. The school cafeteria has a stainless steel triple basin scullery sink and a lavatory. There is a grease trap. Several classrooms have stainless steel cabinet mounted sinks. Janitor closets have plastic floor level service sinks. The plumbing fixtures are in good condition throughout the building and will not need replacement within 15 years. Stainless steel drinking fountains are located in hallways throughout the building. They are accessible with coolers. They were installed in 2003, are in good condition, and will last at least 10 more years.

Domestic water distribution plumbing is copper with soldered connections. Visible areas of pipe overall are in good condition with no reported problems and can be expected to last 20 – 25 more years. There is a domestic water pressure booster system including a pair of 3 HP pumps and a hydro-pneumatic storage tank. Water enters the building in the basement through a 4 inch line with compound water meter with bypass line and two double backflow preventers in parallel. There is a double backflow preventer on the connection to hydronic system. Water is heated by a 100 gallon, vertical tank, gas burning, A. O. Smith water heater installed in 2003. There is a 1/6 HP circulation pump. The water heater is in good condition and can be expected to last at least 5 more years.

Sanitary waste pipes are hubless cast iron with banded couplings installed in 2003. The building has a sewage ejector in the basement with 2 pumps. Rain water drains outside the building through sheet metal downspouts and transition to cast iron pipe at the basement level before going underground. Drain pipes are in good condition and will last 10-15 more years.

#### Site Assessment Report - S237301;St Edmond

The build HVAC was completely replaced in 2003 with a multi-zone forced air and hydronic system.

Heat generation is provided by 2 H.B. Smith, model 28A, 6 section, cast iron, 1,246 MBH (43 HP) capacity hydronic boilers with ethylene glycol. They were installed in basement boiler room in 2003. They are equipped with Power Flame dual fuel burners manufactured in 2003. Gas service enters the building through a 4 inch line. There is a gas pressure booster. There are two oil pumps. The engineer stated there is a 6,000 gallon tank, but district records show 8,000 gallons. In all, the boiler system is in excellent condition and should last 20 more years.

Cooling generating equipment consists of a roof top York air cooled chiller with 158 ton capacity. It was installed in 2003 and has 20 years of service life remaining. The chiller serves the 3 air handlers in the attic. There are two roof mounted 3 ton condensing units with R-22 refrigerant. They have about 5 years of service life expectancy remaining.

The building has 3 air handlers in the attic installed in 2003. AHU 1 and 2 supply the classrooms and AHU 3 is for offices and hallways. Supply and return grills are located in ceilings throughout the building. There is 1 roof top exhaust fan for toilet rooms. The school kitchen has a gas burning convection oven with exhaust hood with fire suppression system. Hydronic pipe was installed in 2003. It is threaded steel. There are 3 heating water pumps in the basement and 2 chilled water pumps in the attic. All the distribution equipment is in good condition and will last at least 10 more years.

Fan coil unit heaters are located in the attic to prevent AHUs from freezing. Finned tube radiators provide supplemental heating for classrooms and hallways. Units are in fair condition and will not need replacement for at least 15 years.

The building is equipped with digital HVAC controls installed in 2003. The classrooms have electronic thermostats, but some are damaged and need replacement.

The building has wet standpipes and sprinklers. They were installed in 2003 and will be serviceable for 25 years. There is a 25 HP electric fire pump in the basement.

#### **ELECTRICAL SYSTEMS**

An underground lateral service, a 15KV load interrupter switch and a transformer vault provide the electrical service to this school. The transformer vault is part of the building addition. The basement boiler room houses the General Electric service entrance switchboard which is rated 800A, 480/277V. The Service Entrance Switchboard was installed in 2002 and is expected to provide 27 more years of useful life.

The electrical distribution is obtained using 400A, 480/277V distribution panelboard at mezzanine level for HVAC equipment, the basement and third floor are provided with 480/277V panelboards for lighting and step down transformer with 120/208V panelboard for receptacles and small motor loads. Panel-boards and stepdown transformers are manufactured by General Electric. They were installed in 2002 and are expected to provide 27 more years of useful life. Raceways are concealed in ceiling or wall spaces.

The number of receptacles in classrooms varies, classrooms have been remodeled and provided with the proper amount of receptacles. There were no indication that more receptacles outlets are required.

The corridors are illuminated with pendant, architectural lighting fixture with compact fluorescent lamp. The classrooms and offices are illuminated with recessed mounted fluorescent fixtures with T-8 lamps. The library is illuminated with pendant mounted fluorescent fixtures with T-8 lamps. Fixtures were installed in 2002 and are expected to provide 10 more years of useful service life.

The Fire Alarm system is manufactured by Siemens. The fire alarm system consists of audio/visual devices at corridors and classrooms, pull station at exit doors and smoke detectors at elevator lobby. Fire alarm system was installed in 2002 and is expected to provide 10 more years of useful service life. Fire alarm system is tested every day in the morning.

The present telephone system is adequate.

An independent and separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately for most part.

The school is provided with a Sapling central clock system. The clock system was installed in 2002 and is reaching its useful service life.

There is not television system.

The security system consists of CCTV cameras at corridors and motion sensors at main stairway. There were no indication of additional CCTV

#### Site Assessment Report - S237301;St Edmond

cameras are required.

The emergency power system consists of an indoor, diesel powered generator, manufactured by Kholer Power Systems rated 30KW. The emergency system is provided with two transfer switches one is dedicated to life safety systems and the other to mechanical equipment. The life safety system serves the corridor, exit signs, stair ways. Diesel generator was installed in 2002 and is expected to provide 12 more years of useful service life.

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 emergency system.

The lightning protection is obtained with air terminals around the building perimeter. Installed system provides full protection.

The school is provided with 25HP hydraulic elevator, manufactured by OTIS. Elevator is provided with AUT-O-SAFE emergency return system. Elevator was installed in 2002 and is expected to provide 12 more year of useful service life.

The stage theatrical lighting is composed of ceiling mounted three rows of spotlights that are controlled by local panel.

The auditorium stage is provided with a sound system. The sound system manufacturer by Architectural Acoustic PEAVEY.

#### **GROUNDS SYSTEMS**

The site surrounds the building on all four sides which is set back from the street. Play yard area on south side is asphalt paving with no parking area. All paving is in very good condition. Metal and composite plastic playground equipment and fall protection surface appears new and in very good condition. Metal fence surrounding most of the site is in very good condition. Landscaping is minimal and consists of mature trees along public sidewalks in good condition.

Accessibility: the building has one accessible entrance, and accessible routes. Toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Doors in the building have ADA required door handles.

The school perimeter is illuminated via wall mounted architectural lighting fixtures. There were no indication that additional exterior lighting fixtures are required.

CCTV cameras are not installed around the building perimeter.

#### RECOMMENDATIONS

- Repair and seal roofing around roof scuppers leaking into attic
- Remediate water damaged gypsum areas microbial growth (2% gypsum wall area)
- Replace broken thermostats.
- Provide new clocks to replace inoperative ones. Approximate 45
- Provide exterior CCTV cameras. Approximate 12

#### **Attributes:**

General Attributes:										
Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 3							
Status:	Accepted by SDP	Team:	Tm 3							
Site ID:	S237301									

### **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.

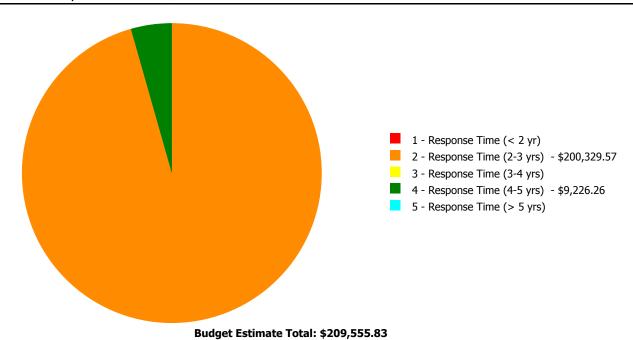
### **Current Investment Requirement and Condition by Uniformat Classification**

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	17.00 %	0.00 %	\$0.00
A20 - Basement Construction	17.00 %	0.00 %	\$0.00
B10 - Superstructure	17.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	35.74 %	0.00 %	\$0.00
B30 - Roofing	48.33 %	1.27 %	\$5,788.10
C10 - Interior Construction	84.54 %	0.00 %	\$0.00
C20 - Stairs	17.00 %	0.00 %	\$0.00
C30 - Interior Finishes	53.02 %	1.31 %	\$40,676.47
D10 - Conveying	68.57 %	0.00 %	\$0.00
D20 - Plumbing	61.99 %	0.00 %	\$0.00
D30 - HVAC	53.35 %	0.12 %	\$9,226.26
D40 - Fire Protection	65.71 %	0.00 %	\$0.00
D50 - Electrical	38.73 %	3.85 %	\$153,865.00
E10 - Equipment	68.57 %	0.00 %	\$0.00
E20 - Furnishings	72.50 %	0.00 %	\$0.00
G20 - Site Improvements	70.35 %	0.00 %	\$0.00
G40 - Site Electrical Utilities	52.76 %	0.00 %	\$0.00
Totals:	42.17 %	0.63 %	\$209,555.83

### **Condition Deficiency Priority**

Facility Name	Gross Area (S.F.)	FCI %		2 - Response Time (2-3 yrs)			_
B237301;St Edmond	68,076	0.63	\$0.00	\$200,329.57	\$0.00	\$9,226.26	\$0.00
G237301;Grounds	5,400	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total:		0.63	\$0.00	\$200,329.57	\$0.00	\$9,226.26	\$0.00

### **Deficiencies By Priority**



#### **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:	Annex
Gross Area (SF):	68,076
Year Built:	1912
Last Renovation:	2004
Replacement Value:	\$33,149,214
Repair Cost:	\$209,555.83
Total FCI:	0.63 %
Total RSLI:	42.08 %



#### **Description:**

# Attributes: General Attributes:

Active: Open Bldg ID: B237301

Sewage Ejector: Yes Status: Accepted by SDP

Site ID: S237301

### **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	17.00 %	0.00 %	\$0.00
A20 - Basement Construction	17.00 %	0.00 %	\$0.00
B10 - Superstructure	17.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	35.74 %	0.00 %	\$0.00
B30 - Roofing	48.33 %	1.27 %	\$5,788.10
C10 - Interior Construction	84.54 %	0.00 %	\$0.00
C20 - Stairs	17.00 %	0.00 %	\$0.00
C30 - Interior Finishes	53.02 %	1.31 %	\$40,676.47
D10 - Conveying	68.57 %	0.00 %	\$0.00
D20 - Plumbing	61.99 %	0.00 %	\$0.00
D30 - HVAC	53.35 %	0.12 %	\$9,226.26
D40 - Fire Protection	65.71 %	0.00 %	\$0.00
D50 - Electrical	38.73 %	3.85 %	\$153,865.00
E10 - Equipment	68.57 %	0.00 %	\$0.00
E20 - Furnishings	72.50 %	0.00 %	\$0.00
Totals:	42.08 %	0.63 %	\$209,555.83

#### **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 the system 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 quidelines is provided as observed at the time of the assessment.

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

System Code	System Description	Unit Price \$	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
A1010	Standard Foundations	\$18.40		68,076	100	1912	2012	2032	17.00 %	0.00 %	17	COIL	Deficiency $\phi$	\$1,252,598
A1030	Slab on Grade	\$7.73	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$526,227
A2010	Basement Excavation	\$6.55	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$445,898
A2020	Basement Walls	\$12.70	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$864,565
B1010	Floor Construction	\$75.10	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$5,112,508
B1020	Roof Construction	\$13.88	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$944,895
B2010	Exterior Walls	\$36.91	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$2,512,685
B2020	Exterior Windows	\$18.01	S.F.	68,076	40	2004	2044		72.50 %	0.00 %	29			\$1,226,049
B2030	Exterior Doors	\$1.45	S.F.	68,076	25	2004	2029		56.00 %	0.00 %	14			\$98,710
B3010105	Built-Up	\$37.76	S.F.	8,310	20	2004	2024		45.00 %	0.00 %	9			\$313,786
B3010120	Single Ply Membrane	\$38.73	S.F.		20				0.00 %	0.00 %				\$0
B3010130	Preformed Metal Roofing	\$54.22	S.F.		30				0.00 %	0.00 %				\$0
B3010140	Shingle & Tile	\$38.73	S.F.	3,561	25	2004	2029		56.00 %	4.20 %	14		\$5,788.10	\$137,918
B3020	Roof Openings	\$0.06	S.F.	68,076	20	2004	2024		45.00 %	0.00 %	9			\$4,085
C1010	Partitions	\$17.91	S.F.	68,076	100	2004	2104		89.00 %	0.00 %	89			\$1,219,241
C1020	Interior Doors	\$3.51	S.F.	68,076	40	2004	2044		72.50 %	0.00 %	29			\$238,947
C1030	Fittings	\$3.12	S.F.	68,076	40	2004	2044		72.50 %	0.00 %	29			\$212,397
C2010	Stair Construction	\$1.41	S.F.	68,076	100	1912	2012	2032	17.00 %	0.00 %	17			\$95,987

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System Code	System Description	Unit Price \$	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
C3010230	Paint & Covering	\$16.31	S.F.	68,076	10	2010	2020		50.00 %	3.66 %	5		\$40,676.47	\$1,110,320
C3010231	Vinyl Wall Covering	\$0.00	S.F.	68,076	15				0.00 %	0.00 %				\$0
C3010232	Wall Tile	\$0.50	S.F.	68,076	30	2004	2034		63.33 %	0.00 %	19			\$34,038
C3020411	Carpet	\$7.30	S.F.	1,425	10	2004	2014	2024	90.00 %	0.00 %	9			\$10,403
C3020412	Terrazzo & Tile	\$75.52	S.F.	950	50	2004	2054		78.00 %	0.00 %	39			\$71,744
C3020413	Vinyl Flooring	\$9.68	S.F.	44,635	20	2004	2024		45.00 %	0.00 %	9			\$432,067
C3020414	Wood Flooring	\$22.27	S.F.	475	25	2004	2029		56.00 %	0.00 %	14			\$10,578
C3020415	Concrete Floor Finishes	\$0.97	S.F.		50	2004	2054		78.00 %	0.00 %	39			\$0
C3030	Ceiling Finishes	\$20.97	S.F.	68,076	25	2004	2029		56.00 %	0.00 %	14			\$1,427,554
D1010	Elevators and Lifts	\$1.53	S.F.	68,076	35	2004	2039		68.57 %	0.00 %	24			\$104,156
D2010	Plumbing Fixtures	\$13.52	S.F.	68,076	35	2003	2038		65.71 %	0.00 %	23			\$920,388
D2020	Domestic Water Distribution	\$1.68	S.F.	68,076	25	2003	2028		52.00 %	0.00 %	13			\$114,368
D2030	Sanitary Waste	\$2.90	S.F.	68,076	25	2003	2028		52.00 %	0.00 %	13			\$197,420
D2040	Rain Water Drainage	\$2.32	S.F.	68,076	30	2003	2033		60.00 %	0.00 %	18			\$157,936
D3020	Heat Generating Systems	\$18.67	S.F.	68,076	35	2003	2038		65.71 %	0.00 %	23			\$1,270,979
D3030	Cooling Generating Systems	\$24.48	S.F.	68,076	30	2003	2033		60.00 %	0.00 %	18			\$1,666,500
D3040	Distribution Systems	\$42.99	S.F.	68,076	25	2003	2028		52.00 %	0.00 %	13			\$2,926,587
D3050	Terminal & Package Units	\$11.60	S.F.	68,076	20	2003	2023		40.00 %	0.00 %	8			\$789,682
D3060	Controls & Instrumentation	\$13.50	S.F.	68,076	20	2003	2023		40.00 %	1.00 %	8		\$9,226.26	\$919,026
D4010	Sprinklers	\$7.05	S.F.	68,076	35	2003	2038		65.71 %	0.00 %	23			\$479,936
D4020	Standpipes	\$1.01	S.F.	68,076	35	2003	2038		65.71 %	0.00 %	23			\$68,757
D5010	Electrical Service/Distribution	\$9.70	S.F.	68,076	30	2002	2032		56.67 %	0.00 %	17			\$660,337
D5020	Lighting and Branch Wiring	\$34.68	S.F.	68,076	20	2002	2022		35.00 %	0.00 %	7			\$2,360,876
D5030	Communications and Security	\$12.99	S.F.	68,076	15	2002	2017	2020	33.33 %	17.40 %	5		\$153,865.00	\$884,307
D5090	Other Electrical Systems	\$1.41	S.F.	68,076	30	2002	2032		56.67 %	0.00 %	17			\$95,987
E1020	Institutional Equipment	\$4.82	S.F.	68,076	35	2004	2039		68.57 %	0.00 %	24			\$328,126
E1090	Other Equipment	\$11.10	S.F.	68,076	35	2004	2039		68.57 %	0.00 %	24			\$755,644
E2010	Fixed Furnishings	\$2.13	S.F.	68,076	40	2004	2044		72.50 %	0.00 %	29			\$145,002
_							_	Total	42.08 %	0.63 %			\$209,555.83	\$33,149,214

#### **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:** 97% - Paint & Coverings

3% - Wall Tile (ceramic & glazed brick)

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

**Note:** 3% - Carpet

2% - Terrazzo & Tile 94% - Vinyl Flooring 1% - Wood Flooring

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

**Note:** (2)30KVA, K-13 transformer for computer load.

(1)75KVA and (1)30KVA transformer for receptacle and general use loads

(2)15KVA transformer for basement mechanical loads.

### **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:	\$209,556	\$0	\$0	\$0	\$0	\$2,543,552	\$0	\$3,193,937	\$2,380,994	\$1,091,277	\$0	\$9,419,316
* A - Substructure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A10 - Foundations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A1010 - Standard Foundations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A1030 - Slab on Grade	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A20 - Basement Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A2010 - Basement Excavation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A2020 - Basement Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B - Shell	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B10 - Superstructure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B1010 - Floor Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B1020 - Roof Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B20 - Exterior Enclosure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2010 - Exterior Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2020 - Exterior Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2030 - Exterior Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B30 - Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010 - Roof Coverings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010105 - Built-Up	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450,361	\$0	\$450,361
B3010120 - Single Ply Membrane	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010130 - Preformed Metal Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010140 - Shingle & Tile	\$5,788	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,788
B3020 - Roof Openings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,862	\$0	\$5,862
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

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C1020 - Interior Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C1030 - Fittings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C20 - Stairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C2010 - Stair Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010 - Wall Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010230 - Paint & Covering	\$40,676	\$0	\$0	\$0	\$0	\$1,415,882	\$0	\$0	\$0	\$0	\$0	\$1,456,558
C3010231 - Vinyl Wall Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010232 - Wall Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020 - Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020411 - Carpet	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,931	\$0	\$14,931
C3020412 - Terrazzo & Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020413 - Vinyl Flooring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$620,123	\$0	\$620,123
C3020414 - Wood Flooring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020415 - Concrete Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3030 - Ceiling Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D - Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D10 - Conveying	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D1010 - Elevators and Lifts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D20 - Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2010 - Plumbing Fixtures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2020 - Domestic Water Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2030 - Sanitary Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2040 - Rain Water Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D30 - HVAC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3020 - Heat Generating Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3030 - Cooling Generating Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3040 - Distribution Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3050 - Terminal & Package Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100,380	\$0	\$0	\$1,100,380
D3060 - Controls & Instrumentation	\$9,226	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,280,615	\$0	\$0	\$1,289,841
D40 - Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4010 - Sprinklers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4020 - Standpipes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

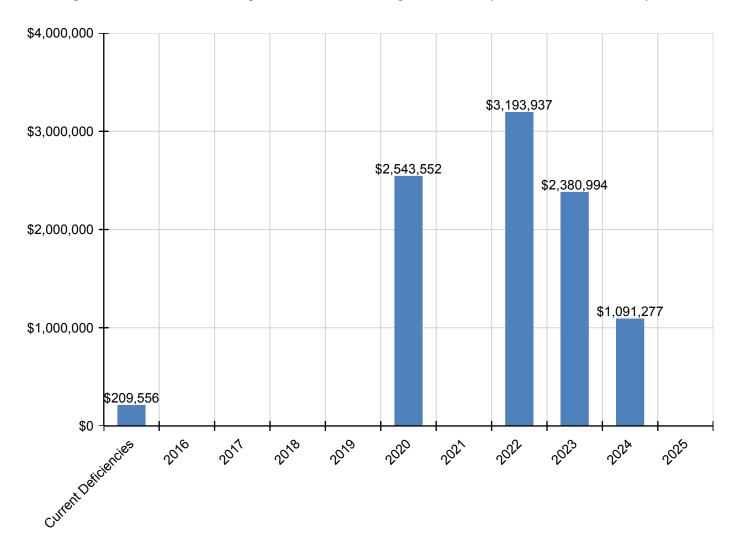
## Site Assessment Report - B237301;St Edmond

D50 - Electrical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5010 - Electrical Service/Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5020 - Lighting and Branch Wiring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,193,937	\$0	\$0	\$0	\$3,193,937
D5030 - Communications and Security	\$153,865	\$0	\$0	\$0	\$0	\$1,127,670	\$0	\$0	\$0	\$0	\$0	\$1,281,535
D5090 - Other Electrical Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E - Equipment & Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E10 - Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E1020 - Institutional Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E1090 - Other Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E20 - Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E2010 - Fixed Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

<sup>\*</sup> Indicates non-renewable system

### **Forecasted Sustainment Requirement**

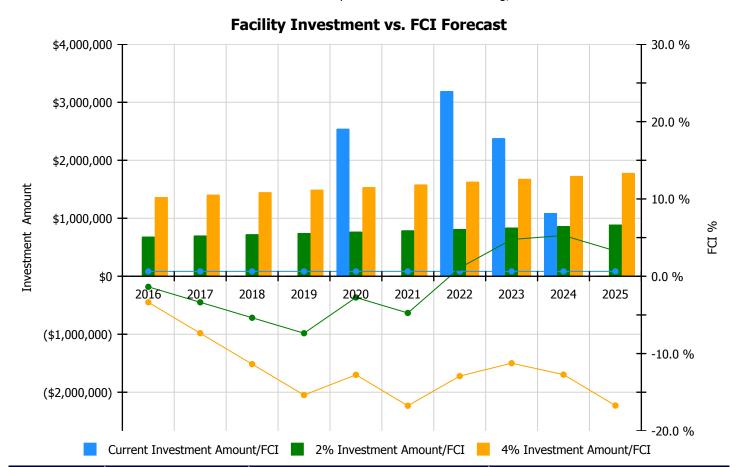
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



### 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:

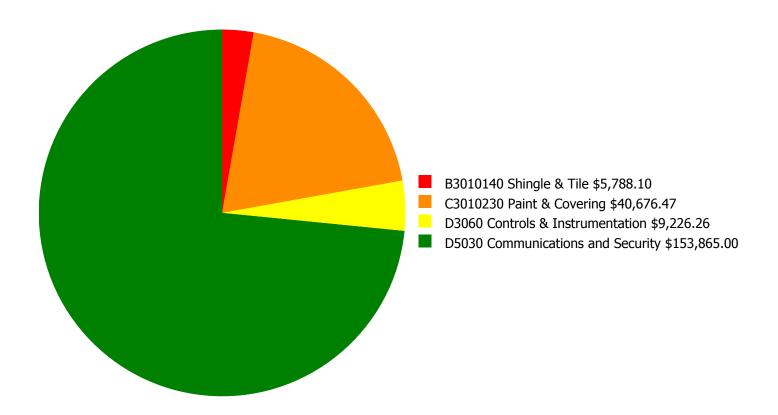
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



	Investment Amount	2% Investm	ent	4% Investm	ent
Year	Current FCI - 0.63%	Amount	FCI	Amount	FCI
2016	\$0	\$682,874.00	-1.37 %	\$1,365,748.00	-3.37 %
2017	\$0	\$703,360.00	-3.37 %	\$1,406,720.00	-7.37 %
2018	\$0	\$724,461.00	-5.37 %	\$1,448,922.00	-11.37 %
2019	\$0	\$746,195.00	-7.37 %	\$1,492,389.00	-15.37 %
2020	\$2,543,552	\$768,580.00	-2.75 %	\$1,537,161.00	-12.75 %
2021	\$0	\$791,638.00	-4.75 %	\$1,583,276.00	-16.75 %
2022	\$3,193,937	\$815,387.00	1.09 %	\$1,630,774.00	-12.91 %
2023	\$2,380,994	\$839,849.00	4.76 %	\$1,679,697.00	-11.24 %
2024	\$1,091,277	\$865,044.00	5.28 %	\$1,730,088.00	-12.72 %
2025	\$0	\$890,995.00	3.28 %	\$1,781,991.00	-16.72 %
Total:	\$9,209,760	\$7,828,383.00		\$15,656,766.00	

### **Deficiency Summary by System**

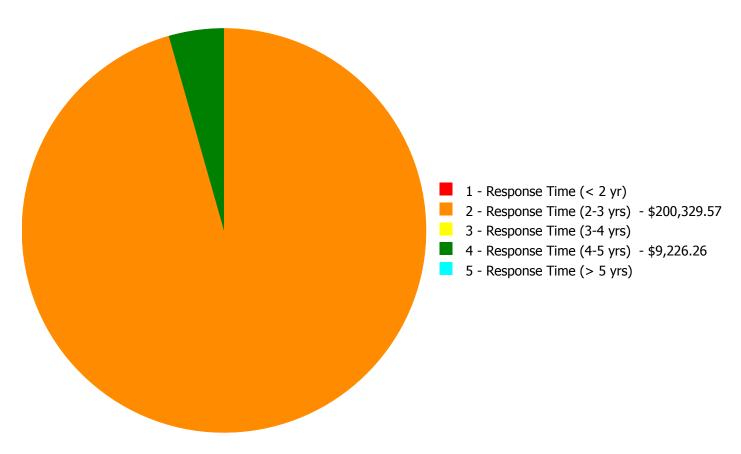
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$209,555.83** 

### **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: \$209,555.83** 

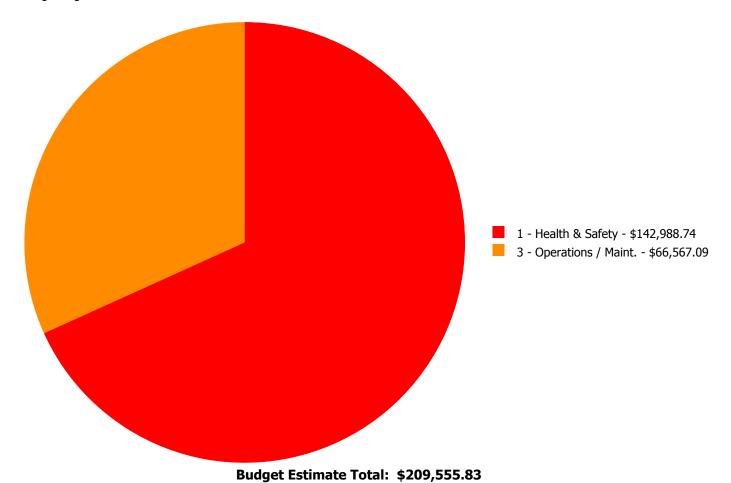
### **Deficiency By Priority Investment Table**

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

System Code	System Description		2 - Response Time (2-3 yrs)			5 - Response Time (> 5 yrs)	Total
B3010140	Shingle & Tile	\$0.00	\$5,788.10	\$0.00	\$0.00	\$0.00	\$5,788.10
C3010230	Paint & Covering	\$0.00	\$40,676.47	\$0.00	\$0.00	\$0.00	\$40,676.47
D3060	Controls & Instrumentation	\$0.00	\$0.00	\$0.00	\$9,226.26	\$0.00	\$9,226.26
D5030	Communications and Security	\$0.00	\$153,865.00	\$0.00	\$0.00	\$0.00	\$153,865.00
	Total:	\$0.00	\$200,329.57	\$0.00	\$9,226.26	\$0.00	\$209,555.83

### **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:



### **Deficiency Details by Priority**

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

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

System: B3010140 - Shingle & Tile



Location: Roof

**Distress:** Maintenance Required

Category: 3 - Operations / Maint.

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

**Correction:** Remove and replace step flashing for shingle

oofs

**Qty:** 100.00

Unit of Measure: L.F.

**Estimate:** \$5,788.10

Assessor Name: Ben Nixon

**Date Created:** 10/26/2015

Notes: Repair and seal roofing around roof scuppers – leaking into attic

#### System: C3010230 - Paint & Covering



**Location:** Throughout

**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:** 4,748.00

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

**Estimate:** \$40,676.47

**Assessor Name:** Ben Nixon

**Date Created:** 10/26/2015

**Notes:** Remediate water damaged gypsum areas – microbial growth (2% gypsum wall area)

#### System: D5030 - Communications and Security



Qty: 12.00

Unit of Measure: Ea.

Location:

Distress:

**Building Perimeter** 

Security Issue

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

Correction: Add/Replace Video Surveillance System

**Category:** 1 - Health & Safety

**Estimate:** \$142,988.74

Assessor Name: Ben Nixon

**Date Created:** 10/14/2015

Notes: Provide exterior CCTV cameras. Approximate 12

#### **System: D5030 - Communications and Security**



Location: Entire School

**Distress:** Failing

Category: 3 - Operations / Maint.

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

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

**Qty:** 45.00

Unit of Measure: Ea.

**Estimate:** \$10,876.26

Assessor Name: Ben Nixon

**Date Created:** 10/14/2015

Notes: Provide new clocks to replace inoperative ones. Approximate 45

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

#### System: D3060 - Controls & Instrumentation



**Location:** Classrooms

**Distress:** Damaged

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

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

**Correction:** Replace temperature, pressure gauges (enter

estimate)

**Qty:** 10.00

Unit of Measure: Ea.

**Estimate:** \$9,226.26

**Assessor Name:** Ben Nixon

**Date Created:** 11/30/2015

**Notes:** Replace broken thermostats

## **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, 3 HP pump, includes diaphragm tank, control and pressure switch	1.00		Basement					25	2003	2028	\$9,861.00	\$10,847.10
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 1168 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Basement boiler room					35	2003	2038	\$44,903.40	\$98,787.48
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 175 ton cooling, includes standard controls	1.00	Ea.	Roof	York	YCAS0158EB4 6TGADBCXXT XXLXXXX45SX 			30	2003	2033	\$139,639.50	\$153,603.45
D3040 Distribution Systems	Air-handling unit, built-up, horizontal or vertical, blow-thru fan, multizone, 16,500 CFM, with cooling/heating coil section, filters, mixing box	1.00	Ea.	Attic	MSP	MSP-HX-?			25	2003	2028	\$38,157.90	\$41,973.69
D3040 Distribution Systems	Air-handling unit, built-up, horizontal/vertical, constant volume, single zone, 11,500 CFM, with cooling/heating coil section, filters, mixing box	1.00	Ea.	Attic	Temtrol	WF-DH29	U101029-002 -00		25	2003	2028	\$30,178.50	\$33,196.35
D3040 Distribution Systems	Central station air handling unit, packaged indoor, constant volume, 10,000 CFM, cooling coils may be chilled water or DX, heating coils may be hot water, steam or electric	1.00	Ea.	Attic	York	AP250	CGMM 18887D		25	2003	2028	\$33,042.90	\$36,347.19
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 10 H.P., to 600 GPM, 5" size	3.00	Ea.	Boiler room	Armstorng	3x2x10 4030			25	2003	2028	\$19,608.00	\$64,706.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 10 H.P., to 600 GPM, 5" size	3.00	Ea.	Boiler room	Armstorng	3x2x10 4030			25	2003	2028	\$19,608.00	\$64,706.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 10 H.P., to 600 GPM, 5" size	3.00	Ea.	Boiler room	Armstorng	3x2x10 4030	484697		25	2003	2028	\$19,608.00	\$64,706.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	2.00	Ea.	Attic	Armsttong	3x2.5x6 4030			25	2003	2028	\$21,432.00	\$47,150.40
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	2.00	Ea.	Attic	Armstrong	3x2.5x6 4030	C484393		25	2003	2028	\$21,432.00	\$47,150.40
D4010 Sprinklers	Fire pumps, electric, 500 GPM, 50 psi, 27 HP, 1,770 RPM, 4" pump, including controller, fittings and relief valve	1.00	Ea.	Basement	Emerson	FF25S1EV AD21	6310-J/C3		35	2003	2038	\$22,805.80	\$25,086.38
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 400 amp, excl breakers	1.00	Ea.	Attic	General Electric	Spectra Series			30	2002	2032	\$3,291.30	\$3,620.43
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 boiler room	General Electric	Spectra Series Switchboard			30	2002	2032	\$3,819.15	\$4,201.07
												Total:	\$696,083.14

### **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):	5,400
Year Built:	1912
Last Renovation:	2004
Replacement Value:	\$123,518
Repair Cost:	\$0.00
Total FCI:	0.00 %
Total RSLI:	65.89 %



#### **Description:**

#### Attributes:

**General Attributes:** 

Bldg ID: S237301 Site ID: S237301

### **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	70.35 %	0.00 %	\$0.00
G40 - Site Electrical Utilities	52.76 %	0.00 %	\$0.00
Totals:	65.89 %	0.00 %	\$0.00

#### **Condition Detail**

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

- 1. System Code: A code that identifies the system.
- 2. System Description: A brief description of a system present in the building.
- 3. Unit Price \$: The unit price of the system.
- 4. UoM: The unit of measure for of the system.
- 5. Qty: The quantity for the system
- 6. Life: anticipated service life for the system 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		Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
G2010	Roadways	\$11.52	S.F.		30				0.00 %	0.00 %				\$0
G2020	Parking Lots	\$8.50	S.F.		30				0.00 %	0.00 %				\$0
G2030	Pedestrian Paving	\$12.30	S.F.	5,400	40	2004	2044		72.50 %	0.00 %	29			\$66,420
G2040	Site Development	\$4.36	S.F.	5,400	25	2004	2029		56.00 %	0.00 %	14			\$23,544
G2050	Landscaping & Irrigation	\$4.36	S.F.	500	15	2004	2019	2039	160.00 %	0.00 %	24			\$2,180
G4020	Site Lighting	\$4.84	S.F.	5,400	30	2004	2034		63.33 %	0.00 %	19			\$26,136
G4030	Site Communications & Security	\$0.97	S.F.	5,400	30				0.00 %	0.00 %				\$5,238
								Total	65.89 %					\$123,518

### **System Notes**

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

No data found for this asset

### **Renewal Schedule**

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

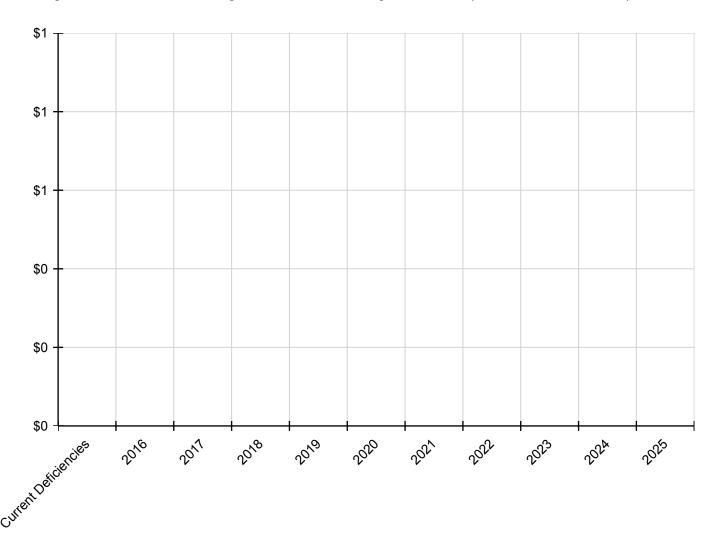
Inflation Rate: 3%

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

<sup>\*</sup> Indicates non-renewable system

### **Forecasted Sustainment Requirement**

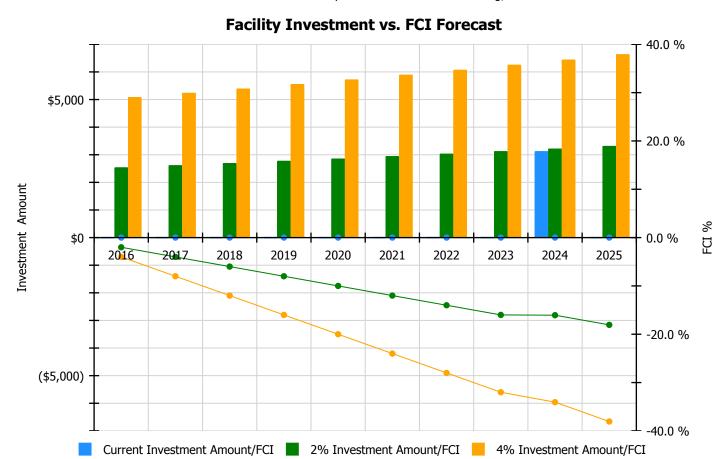
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



### 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



	Investment Amount	2% Investm	ent	4% Investm	ent	
Year	Current FCI - 0%	Amount	FCI	Amount	FCI	
2016	\$0	\$2,544.00	-2.00 %	\$5,089.00	-4.00 %	
2017	\$0	\$2,621.00	-4.00 %	\$5,242.00	-8.00 %	
2018	\$0	\$2,699.00	-6.00 %	\$5,399.00	-12.00 %	
2019	\$0	\$2,780.00	-8.00 %	\$5,561.00	-16.00 %	
2020	\$0	\$2,864.00	-10.00 %	\$5,728.00	-20.00 %	
2021	\$0	\$2,950.00	-12.00 %	\$5,899.00	-24.00 %	
2022	\$0	\$3,038.00	-14.00 %	\$6,076.00	-28.00 %	
2023	\$0	\$3,129.00	-16.00 %	\$6,259.00	-32.00 %	
2024	\$3,129	\$3,223.00	-16.06 %	\$6,447.00	-34.06 %	
2025	\$0	\$3,320.00	-18.06 %	\$6,640.00	-38.06 %	
Total:	\$3,129	\$29,168.00		\$58,340.00		

### **Deficiency Summary by System**

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

No data found for this asset

### **Deficiency Summary by Priority**

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

No data found for this asset

### **Deficiency By Priority Investment Table**

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

No data found for this asset

### **Deficiency Summary by Category**

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

No data found for this asset

### **Deficiency Details by Priority**

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

No data found for this asset

## **Equipment Inventory**

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

No data found for this asset

## Glossary

ABMA American Boiler Manufacturers Association http://www.abma.com/

ACEEE American Council for an Energy-Efficient Economy

ACGIH American Council of Governmental and Industrial Hygienists

AEE Association of Energy Engineers

AFD Adjustable Frequency Drive

AFTC After Tax Cash Flow

AGA American Gas Association

AHU Air Handling Unit

Amp Ampere

ANSI American National Standards Institute

ARI Air Conditioning and Refrigeration Institute

ASD Adjustable Speed Drive

ASHRAE American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.

ASME American Society of Mechanical Engineers

Assessment Visual survey of a facility to determine its condition. It involves looking at the age of systems

reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or

equipment for functionality.

ATS After Tax Savings

AW Annual worth

BACNET Building Automation Control Network

BAS Building Automation System

BCR Benefit Cost Ratio

BEP Business Energy Professional (AEE)

BF Ballast Factor

BHP Boiler Horsepower (boilers)

BHP Brake Horsepower (motors)

BLCC Building Life Cycle Cost analysis program (FEMP)

BOCA Building Officials and Code Administrators

BTCF Before Tax Cash Flow

BTS Before Tax Savings

Btu British thermal unit

Building Addition An area space or component of a building added to a building after the original building's year

built date.

CAA Clean Air Act

CAAA-90 Clean Air Act Amendments of 1990

CABO Council of American Building Officials

CAC Conventional Air Conditioning

CADDET Center for the Analysis and Dissemination of Demonstrated Energy Technologies

Calculated Next Renewal The year a system or element would be expected to expire based solely on the date it was

installed and the expected useful lifetime for that kind of system.

Capital Renewal Capital renewal is condition work (excluding suitability and energy audit work) that includes the

replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life

of a system or element based on on-site inspection.

CDD Cooling Degree Days

CDGP Certified Distributed Generation Professional

CEC California Energy Commission

CEM Certified Energy Manager

CEP Certified Energy Procurement Professional

CFC Chlorofluorocarbon

CFD Cash Flow Diagram

CFL Compact Fluorescent Light

CFM cfm Cubic Feet per Minute

CHP Combined Heat and Power (a.k.a. cogeneration)

CHW Chilled Water

Condition Condition refers to the state of physical fitness or readiness of a facility system or system element

for its intended use.

COP Coefficient of Performance

Cp Heat Capacity of Material

CPUC California Public Utility Commission

CRI Color Rendering Index

CRT Cathode Ray Tube VDT HMI

CTC Competitive Transition Charge

Cu Coefficient of Utilization

Current Replacement

Value (CRV)

CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction

standards.

Cv Value Coefficient

CWS Chilled Water System

D d Distance (usually feet)

DB Dry Bulb

DCV Demand Control Ventilation

DD Degree Day

DDB Double Declining Balance

DDC Direct Digital Controls

Deferred maintenance Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on

a planned or unplanned basis to a future budget cycle or postponed until funds are available.

Deficiency A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended

purpose.

Delta Difference

Delta P Pressure Difference

Delta T Temperature Difference

DG Distributed Generation

DOE Department of Energy

DP Dew Point

DR Demand Response

DX Direct Expansion Air Conditioner

EA Energy Audit

EBITDA Earnings before Interest Taxes Depreciation and Amortization

ECI Energy Cost Index

ECM Energy Conservation Measure

ECO Energy Conservation Opportunity

ECPA Energy Conservation and Production Act

ECR Energy Conservation Recommendation

ECS Energy Control System

EER Energy Efficiency Ratio

EERE Energy Efficiency and Renewable Energy division of US DOE

EIA Energy Information Agency

EIS Energy Information System

EMCS Energy Management Computer System

EMO Energy Management Opportunity

EMP Energy Management Project

EMR Energy Management Recommendation

EMS Energy Management System

**Energy Utilization Index** 

(EUI)

EUI is the measure of total energy consumed in the cooling or heating of a building in a period

expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.

EO Executive Order

EPA Environmental Protection Agency

EPACT Energy Policy Act of 1992

EPCA Energy Production and Conservation Act of 1975

EPRI Electric Power Research Institute

EREN Efficiency and Renewable Energy (Division of USDOE)

ERV Energy Recovery Ventilator

ESCO Energy Service Company

ESPC Energy Savings Performance Contract

EUI Energy Use Index

EWG Exempt Wholesale Generators

Extended Facility
Condition Index (EFCI)

EFCI is calculated as the condition needs for the current year plus facility system renewal needs

going out to a set time in the future divided by Current Replacement Value.

f Frequency

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

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)

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

٧ Volts Voltage

٧ 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

Year built The year that a building or addition was originally built based on substantial completion or

occupancy.

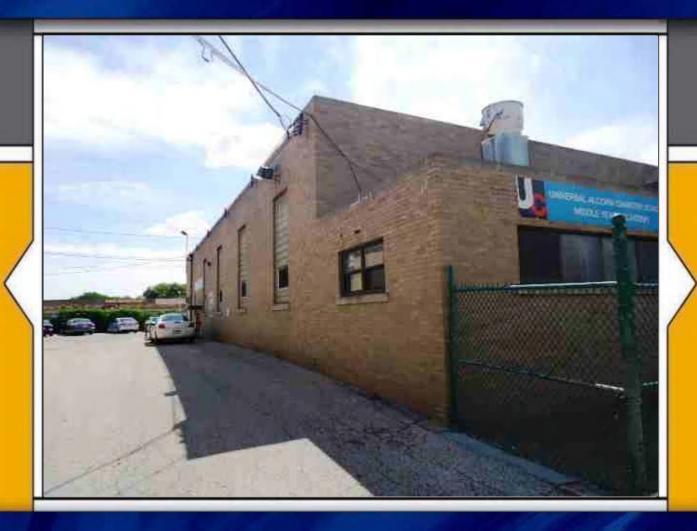
Watt Hours

Ζ Electrical Impedance

**School District of Philadelphia** 

# S237101; King of Peace

Final
Site Assessment Report
February 1, 2017



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## **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): 21,224

Year Built: 1952

Last Renovation:

Replacement Value: \$11,888,921

Repair Cost: \$6,718,965.49

Total FCI: 56.51 %

Total RSLI: 56.89 %



#### **Description:**

**Facility Assessment** 

August 2015

School District of Philadelphia

King of Peace (Alcorn Annex)

1315 S. 26<sup>th</sup> St.

Philadelphia, PA 19145

21,224 SF / 358 Students / LN 01

**GENERAL** 

The Universal Alcorn Charter School extension, or The Universal Alcorn Charter School Middle Years Academy was originally known as

The King of Peace School. The school is currently being run by the Universal Charter system and is identified as B237101 and was originally designated as the King of Peace Church School. Universal assumed the facility located at 1315-9 S 26<sup>th</sup> St., Philadelphia, PA. The rectangular-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces the Western exterior facing 1315 S 26<sup>th</sup> St. drop off area. General parking is East and South of the school. This School serves students in grades 6 to 8 consisting of a total gross square footage of 21,224 GSF.

This two story school has several classrooms, a library, kitchen and student commons, Gym / cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on August 27, 2015.

Mr. Ron Smith, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Sheila Mallory, Principal, also shared information about the school with the assessment team.

#### ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are cast in place reinforced concrete and appear to be in very good condition considering the age of the facility. Mechanical sub space walls are concrete and masonry constructed and appear to be in very good condition.

The exterior finishes for this school is a combination of the stone work for the main entrance of the original school and the brick finish which is predominate throughout the remaining areas of the exterior.

The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

Exterior windows are a mix of single pane industrial grade metal, double hung aluminum framed single pane and one wooden framed window. Windows are in good to poor condition based on the year of installation or last renovation. The single pane wood and metal-framed, double hung windows have been replaced in the last twenty years however, a majority of the windows no longer function due to damage or neglect. The original steel-framed, multi-light windows have exceeded their useful service life. The exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features. This universal upgrade is expected to be completed as part of an overall renovation effort to eliminate dual efforts.

The exterior doors are a combination of wooden and metal applications with wooden or metal frames. There is a decorative wooden storefront system at the old main entrance with a newer metal-framed metal door application for the new main entrance. The exterior door system for this school is a very high traffic system. The doors are in fair condition with the exception of the doors to the air handling room and to the service room. These doors are out of service and need immediate attention. Other doors are aging at a faster rate than expected based on traffic and condition. The exterior door system, store front and service doors are recommended for upgrade.

During the time of the inspection roof access was not available. According to reports the roofing system is over twenty years of age and was recently repaired over the Cafeteria/Auditorium. The roofing system is not expected to outlast the ten-year scope of this analysis. Future budget modeling should include provisions for the replacement of all failing roofing systems.

There are student restrooms on the first floor that appear to be original with original fixtures. Each restroom is limited by the design of the time that did not include options for those that may be physically challenged. These restrooms warrant unique renovations to restore the systems to modern operations options and service to the school. Accessibility legislation requires that goods, amenities, and services offered in buildings, such as restrooms, be generally accessible to all people. There are no compliant restrooms located in this school. A unisex, compliant restroom should be added on each of the floors. Recommended modifications include the construction of new single occupancy restrooms in existing academic areas to accommodate requirements. This involves adding two new partitions to enclose 50 square feet of area and installing a door with hardware, ceramic tile and plaster surfaces, suspended ceilings, plumbing fixtures, electrical fixtures, piping, HVAC equipment, and accessories for each new restroom. Also, the renovation of the existing restrooms and modification to new layouts and floor plans to support modern designs and requirements for ADA legislation.

This two story school has no corridor doors, thus allowing free open access between levels. As indicated in the photos the existing fire doors although compliant during the time of the construction are no longer considered serviceable. The existing doors that separate the gym from the main building are typically metal in metal frames. The older doors are generally in poor condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original corridor door systems with new code compliant fire rated door system. Additional consideration to bring the stair system up to current standards by adding a fire rated door system should be a main factor in this effort. This deficiency is expected to be completed as part of an overall effort for this school.

Interior doors are typically wood in wood frames with glass glazing. Other interior doors include wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames. Doors are generally in good condition considering the age of the application. Universal upgrades are required for the interior door systems, it is recommended that the interior doors system be removed and replaced with a new modern metal framed wooden door system with consideration for ADA compliance.

There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

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

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

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

The wooden hand rails to the basement level entrance are not current with requirements that the hand rails be graspable and continuous. Remove the wooden application and replace with a metal hand and guard rail system.

The floor finish for this school is a combination of tile in the kitchen and service line areas, ceramic tile in the hallways and stirs finishes and a vinyl tile finish in the classrooms and general areas. The vinyl tile finish is a  $9 \times 9$  application and is suspect to contain asbestos. This finish is recommended for upgrade to a new  $12 \times 12$  vinyl tile application.

The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile. Ceilings have been repaired in several areas and are in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

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

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

The Gyms has a single scoreboard that appears to be from the early 1950's. This scoreboard no longer functions. This deficiency provides a budgetary consideration for the removal and replacement of each scoreboard.

**MECHANICAL SYSTEMS** 

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories and floor mounted water closets and urinals. Lavatories have lever handle faucets and urinals and water closets have manual flush valves with lever operator flush valves. Water coolers are stainless steel single level type.

Hot water is provided by a fifty gallon State gas heater in the mechanical room with a small circulating pump. There is no booster pump system.

Sanitary, waste and vent piping is hub and spigot cast iron. Domestic hot and cold water is insulated rigid copper piping. There is a one inch water service and meter from Reese St. The two inch gas service and meter is also from Reese St. entering into the mechanical room

The domestic water piping appears newer and in good condition. The cast iron piping is original and should be inspected for damage and repaired as required. The water heater is from 1996 and should remain serviceable up to ten years. The plumbing fixtures have been replaced and should serve ten or more years.

HVAC- The building is heated with hot water generated by a Weil McLain cast iron sectional boiler in the first floor mechanical room. The boiler is a Model 88 series 1, sixty hp installed in 2006, with Power Flame gas/oil burner and control panel. Hot water is circulated to cabinet radiation units and unit heaters throughout the building by four small inline zone pumps. Boilers are connected to a type B vent system through the building to a chimney. There is a combustion air louver for the gas equipment. There is no separate fuel oil pump system. A six thousand gallon underground storage tank is in the parking area, condition unknown.

The toilet rooms have mechanical toilet exhaust with two centrifugal roof ventilators. There is no cooking in the kitchen. Warming equipment has a heat removal hood ducted to a roof fan. Gas and oil piping is screwed black steel. Heating hot water is welded black steel or newer copper around the boiler. Some of the mechanical room piping is not insulated.

There is no central air conditioning or control system. New window air conditioners are being installed in each classroom and office area.

The boiler was installed in 2006 and should have twenty five years of remaining service life. The heating distribution is original and has exceeded the service life and should be replaced.

FIRE PROTECTION- There are no standpipes nor sprinkler system.

#### **ELECTRICAL SYSTEMS**

Electrical Service--The building is served by PECO Energy Company from a utility pole located on 26<sup>th</sup> Street with an overhead service drop to a weatherhead on the north side of the building. The service enters the building in the Basement in a current transformer cabinet where it is metered. The service continues underground to a 400A, 120/240V, 1 phase, 3 wire fusible type Federal Electric Products Company panelboard. This 400A panelboard feeds two (2) 100A panelboards, one located in the Boiler Room and one located on the platform in the gymnasium. All three of these panelboards have exceeded their useful life and need to be replaced. The 400A service entrance panelboard should be sized to include the addition of an elevator.

The 400A panelboard also feeds two (2) 100A load centers that are located in the corridors on the First and Second floors. These panels were installed when the school was acquired by Universal Companies, and are in good condition.

Receptacles—Classrooms are provided with an adequate number of receptacles. Additional duplex receptacles and isolated grounding type receptacles provided in classrooms using surface metal raceway system. Wiring devices are in good condition with a remaining useful life that extends beyond this report.

The duplex receptacles in the gymnasium kitchen need to be replaced with ground-fault circuit-interrupting (GFCI) type to comply with NFPA 70, National Electrical Code, Article 210.8 (B). Some of the receptacles were not 3-wire grounding type.

Lighting— Most of the lighting fixtures in the building are surface mounted 4 foot, wraparound fluorescent fixtures with acrylic prismatic lenses. Rooms with acoustical tile ceilings have 2x4 recessed fluorescent troffers with acrylic lenses. Classrooms, corridors and some offices have been upgraded with T8 lamps and are in good condition, with an estimated remaining useful life of 15 years. Lighting fixtures in classrooms and corridors are controlled by two light switches. There are some rooms that have fluorescent fixtures with T12 that have reached the end of their useful life. These rooms include Rooms 200, 201, 202, First Floor restroom, gymnasium storage and entrance vestibule, and Basement. A total of (16) fixtures is included in this report for replacement.

The gymnasium has (16) industrial type suspended fixtures, 8 that have incandescent lamps and 8 that have metal halide lamps. It is recommended that all gym fixtures be replaced with LED fixtures.

The gymnasium platform and Boiler Room have shallow bowl incandescent fixtures with A-lamps. Recommendation is to replace these fixtures with 4 foot industrial fluorescent fixtures.

Fire Alarm System-- The fire alarm system is an obsolete system by Edwards that does not comply with current code. The fire alarm control panel (FACP) is located in the Boiler Room. The system consists of manual fire alarm pull stations and audio/visual notification appliances. There are no visual notification appliances in classrooms or restrooms. A complete fire alarm system replacement is recommended.

Telephone/LAN-- The telephone service demarcation point is located in the Main IT Room on the Second Floor, which is adjacent to the Main Office. Approximately half of the classrooms have telephone outlet jacks, but staff requested that outlet jacks be provided in the remaining rooms. An allowance for adding telephone outlet jacks in six (6) rooms is included in this report. Classrooms are provided with two wired data jacks in addition to wireless access. Wireless access points are located to provide Wi-Fi service throughout the school.

Intercom/Paging Systems-- An Aiphone audible intercom system is provided between the main entrance and the Main Office. The paging system is accessed through the telephone system. There is a 100W amplifier in the IT Room for the paging interface. There are wall mounted paging speakers in corridors, classrooms and the gymnasium. Horn type speakers are located in the gymnasium, at the main entrance and for the parking area on the east side.

Clock and Program System—There is no clock or program system in this school. Speakers are used for announcements and program. Only some of the classrooms are provided with clocks. A wireless GPS clock system is recommended. An estimated (18) clocks are included in this report.

Television System-- There is no televisions system in this school.

Video Surveillance and Security Systems-- There is no video surveillance system at this school. An ADT Tyco security system control panel is located in the Main IT Room. A security system keypad is located at the north door in the gymnasium. Magnetic door contacts are provided on the doors in the gymnasium and for Stairwell 2. There are also motion sensors for some classrooms on the First Floor and in the corridors. It is recommended that a video surveillance system be provided, to include approximately (12) cameras, monitor, DVR and associated equipment.

Emergency Power System--There is no standby generator that serves this building.

Emergency Lighting System / Exit Lighting—There are no emergency lighting units or battery powered exit signs in the building. Emergency egress lighting and exit signs need to be provided, as required by NFPA 101, Life Safety Code. Battery type units are recommended.

Emergency egress lighting is provided by battery powered wall mounted emergency lighting units (ELU) in corridors, classrooms, kitchen and Multi-Purpose Room. One of the ELUs in the Multi-Purpose Room is damaged and needs to be replaced. Remote emergency lighting heads are provided in the restrooms and at exit discharges. Exit signs are provided with battery backup.

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

Conveying Systems-- The building does not have an elevator.

#### **GROUNDS**

The parking play area has no assigned parking and limited markers for approved activity areas. No curb cuts for access to the sidewalks that lead to the ADA main entrance. The parking play lot is in fair condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a play, parking lot renewal program that includes all aspects of the current ADA legislation. Asphalt removal and replacement is recommended.

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

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

This school has a perimeter fence surrounding the parking / playground area. The fence has several areas of repairs and the mounting posts are damaged in several areas, overall the fence is in fair condition. This fence system is recommended to be removed and replaced with a new system within the next five to ten years.

The landscaping is in good condition and well maintained but with no irrigation system. The landscaping is generally located near the parking / play area of the site with limited turf sections around the general exterior of the school. This deficiency provides a budgetary consideration for the installation of an irrigation system for this site.

Site Lighting— Site lighting is provided with wall mounted HID lighting fixtures on the north and east sides of the building. There are no pole mounted lighting fixtures on the site. Site lighting is in good condition, with an estimated remaining useful life of 10 years.

#### RECOMMENDATIONS

- Repair Brick finish
- Universal window upgrade
- Upgrade Exterior Doors
- Remove and Replace Roof
- · Restroom Renovation
- · Install rated doors and fire rated stair landing
- · Replace interior doors
- Build fire rated wall Transom correction
- · Tack Boards
- Upgrade Chalk Boards
- Upgrade Signage
- · Upgrade hand rails
- · Remove VAT and replace with VCT
- Ceiling upgrades
- · Elevator Addition
- Curtain Upgrade
- Remove and replace parking lot
- Upgrade sidewalks
- · Build dumpster area
- · Build secure fence
- Enhance Landscaping with sprinkler upgrade
- Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.
- Provide a new central station air handling unit for the cafeteria with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.
- Install new direct digital control system and building automation system with remote computer control capability and graphics package.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Remove the window air conditioning units and install a fifty five ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.
- Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new pumps for hot water, piping, control valves and controls, to replace existing heating system.
- Replace 400A, 120/240V, 1 phase, 3 wire service entrance panelboard and two (2) 100A panelboards (one in Boiler Room and one on platform in gymnasium) and their feeders.
- Replace five (5) duplex in the gymnasium kitchen with ground-fault circuiting-interrupting (GFCI) type for personnel protection, as required by NFPA 70, Article 210.8 (B).
- Replace fluorescent lighting fixtures in Rooms 200, 201, 202, First Floor restroom, gymnasium storage and entrance vestibule, and Basement that have T12 lamps and have extended their useful life. A total of (16) fixtures are included in this report for replacement.
- Replace (16) industrial incandescent and metal halide fixtures in the gymnasium with LED fixtures.
- Replace incandescent lighting fixtures on the gymnasium platform and in the Boiler Room with 4 foot industrial fluorescent

#### fixtures.

- Replace fire alarm system with an addressable type system.
- Provide an allowance for adding telephone outlet jacks in six (6) classrooms.
- Provide a wireless GPS clock system. An estimated (18) clocks are included in this report.
- Provide a video surveillance system, to include approximately (12) cameras, monitor, DVR and associated equipment.
- Replace all exit signs with battery type emergency exit signs and provide emergency lighting units (ELUs) in corridors, stairwells, restrooms, gymnasium, platform, kitchen, and other rooms as needed for safe egress. Estimate includes (13) exit signs and (20) ELUs.

#### **Attributes:**

#### **General Attributes:**

Active: Open Bldg Lot Tm: Lot 2 / Tm 1

Status: Accepted by SDP Team: Tm 1

Site ID: S237101

## **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.

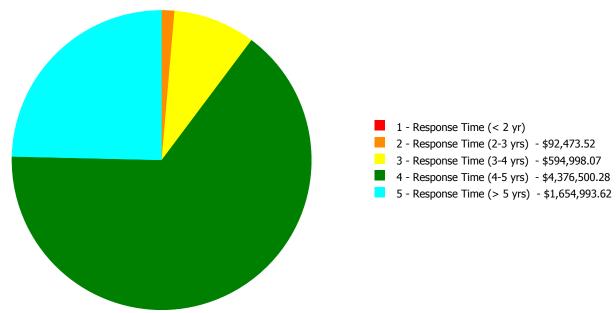
## **Current Investment Requirement and Condition by Uniformat Classification**

UNIFORMAT Classification	RSLI%	FCI %	<b>Current Repair</b>
A10 - Foundations	37.00 %	0.00 %	\$0.00
B10 - Superstructure	37.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	35.34 %	66.35 %	\$655,088.87
B30 - Roofing	60.00 %	88.14 %	\$338,820.11
C10 - Interior Construction	34.58 %	157.75 %	\$763,709.44
C20 - Stairs	37.00 %	34.39 %	\$9,341.68
C30 - Interior Finishes	48.98 %	34.99 %	\$423,150.42
D10 - Conveying	91.43 %	307.61 %	\$387,153.48
D20 - Plumbing	57.62 %	12.06 %	\$104,119.64
D30 - HVAC	91.03 %	122.99 %	\$2,903,844.98
D40 - Fire Protection	94.10 %	158.77 %	\$303,617.37
D50 - Electrical	79.22 %	27.41 %	\$341,925.99
E10 - Equipment	34.29 %	2.71 %	\$9,141.65
E20 - Furnishings	30.00 %	20.97 %	\$9,480.52
G20 - Site Improvements	42.05 %	116.38 %	\$469,571.34
G40 - Site Electrical Utilities	33.33 %	0.00 %	\$0.00
Totals:	56.89 %	56.51 %	\$6,718,965.49

## **Condition Deficiency Priority**

Facility Name	Gross Area (S.F.)	FCI %	the state of the s	2 - Response Time (2-3 yrs)			
B237101;King of Peace	21,224	55.27	\$0.00	\$73,621.00	\$312,179.95	\$4,219,102.38	\$1,644,490.82
G237101;Grounds	30,600	80.78	\$0.00	\$18,852.52	\$282,818.12	\$157,397.90	\$10,502.80
Total:		56.51	\$0.00	\$92,473.52	\$594,998.07	\$4,376,500.28	\$1,654,993.62

## **Deficiencies By Priority**



Budget Estimate Total: \$6,718,965.49

## **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: Annex
Gross Area (SF): 21,224
Year Built: 1952
Last Renovation:

 Replacement Value:
 \$11,307,659

 Repair Cost:
 \$6,249,394.15

 Total FCI:
 55.27 %

 Total RSLI:
 57.79 %



#### **Description:**

## Attributes: General Attributes:

Active: Open Bldg ID: B237101

Sewage Ejector: No Status: Accepted by SDP

Site ID: S237101

## **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
B10 - Superstructure	37.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	35.34 %	66.35 %	\$655,088.87
B30 - Roofing	60.00 %	88.14 %	\$338,820.11
C10 - Interior Construction	34.58 %	157.75 %	\$763,709.44
C20 - Stairs	37.00 %	34.39 %	\$9,341.68
C30 - Interior Finishes	48.98 %	34.99 %	\$423,150.42
D10 - Conveying	91.43 %	307.61 %	\$387,153.48
D20 - Plumbing	57.62 %	12.06 %	\$104,119.64
D30 - HVAC	91.03 %	122.99 %	\$2,903,844.98
D40 - Fire Protection	94.10 %	158.77 %	\$303,617.37
D50 - Electrical	79.22 %	27.41 %	\$341,925.99
E10 - Equipment	34.29 %	2.71 %	\$9,141.65
E20 - Furnishings	30.00 %	20.97 %	\$9,480.52
Totals:	57.79 %	55.27 %	\$6,249,394.15

#### **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 the system based on Building Owners and Managers Association (BOMA) recommendations.
- 7. Year Installed: The date of system installation.
- 8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
- 9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
- 10. CI: The Condition Index of the system.
- 11. FCI: The Facility Condition Index of the system.
- 12. RSL: Remaining Service Life.
- 13. eCR: eCOMET Condition Rating (not used).
- 14. Deficiency \$: The financial investment to repair/replace system.

## **System Listing**

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

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

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

System Code	System Description	Unit Price \$	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
A1010	Standard Foundations	\$24.32	S.F.	21,224	100	1952	2052		37.00 %	0.00 %	37			\$516,168
A1030	Slab on Grade	\$15.51	S.F.	21,224	100	1952	2052		37.00 %	0.00 %	37			\$329,184
B1010	Floor Construction	\$92.20	S.F.	21,224	100	1952	2052		37.00 %	0.00 %	37			\$1,956,853
B1020	Roof Construction	\$24.11	S.F.	10,000	100	1952	2052		37.00 %	0.00 %	37			\$241,100
B2010	Exterior Walls	\$31.22	S.F.	21,224	100	1952	2052		37.00 %	4.87 %	37		\$32,289.47	\$662,613
B2020	Exterior Windows	\$13.63	S.F.	21,224	40	1952	1992	2027	30.00 %	190.10 %	12		\$549,940.83	\$289,283
B2030	Exterior Doors	\$1.67	S.F.	21,224	25	1952	1977	2027	48.00 %	205.56 %	12		\$72,858.57	\$35,444
B3010105	Built-Up	\$37.76	S.F.	10,000	20	1952	1972	2027	60.00 %	89.73 %	12		\$338,820.11	\$377,600
B3020	Roof Openings	\$0.68	S.F.	10,000	20	1952	1972	2027	60.00 %	0.00 %	12			\$6,800
C1010	Partitions	\$14.93	S.F.	21,224	100	1952	2052		37.00 %	101.83 %	37		\$322,685.59	\$316,874
C1020	Interior Doors	\$3.76	S.F.	21,224	40	1952	1992	2027	30.00 %	478.24 %	12		\$381,646.97	\$79,802
C1030	Fittings	\$4.12	S.F.	21,224	40	1952	1992	2027	30.00 %	67.90 %	12		\$59,376.88	\$87,443
C2010	Stair Construction	\$1.28	S.F.	21,224	100	1952	2052		37.00 %	34.39 %	37		\$9,341.68	\$27,167
C3010230	Paint & Covering	\$13.21	S.F.	11,224	10	1952	1962	2027	120.00 %	0.00 %	12			\$148,269
C3010232	Wall Tile	\$2.63	S.F.	10,000	30	1952	1982	2027	40.00 %	0.00 %	12			\$26,300
C3020412	Terrazzo & Tile	\$75.52	S.F.	6,000	50	1952	2002	2027	24.00 %	0.00 %	12			\$453,120
C3020413	Vinyl Flooring	\$9.68	S.F.	14,000	20	1952	1972	2027	60.00 %	111.91 %	12		\$151,666.68	\$135,520
C3020415	Concrete Floor Finishes	\$0.97	S.F.	1,224	50	1952	2002	2027	24.00 %	0.00 %	12			\$1,187
C3030	Ceiling Finishes	\$20.97	S.F.	21,224	25	1952	1977	2027	48.00 %	61.00 %	12		\$271,483.74	\$445,067
D1010	Elevators and Lifts	\$5.93	S.F.	21,224	35	1952	1987	2047	91.43 %	307.61 %	32		\$387,153.48	\$125,858
D2010	Plumbing Fixtures	\$31.58	S.F.	21,224	35	2000	2035		57.14 %	0.00 %	20			\$670,254
D2020	Domestic Water Distribution	\$2.90	S.F.	21,224	25	2000	2025		40.00 %	0.00 %	10			\$61,550
D2030	Sanitary Waste	\$2.90	S.F.	21,224	25	1952	1977	2042	108.00 %	169.16 %	27		\$104,119.64	\$61,550
D2040	Rain Water Drainage	\$3.29	S.F.	21,224	30	1952	1982	2025	33.33 %	0.00 %	10			\$69,827
D3020	Heat Generating Systems	\$18.67	S.F.	21,224	35	2006	2041		74.29 %	0.00 %	26			\$396,252
D3030	Cooling Generating Systems	\$24.48	S.F.	21,224	30			2047	106.67 %	119.32 %	32		\$619,942.24	\$519,564
D3040	Distribution Systems	\$42.99	S.F.	21,224	25	1952	1977	2042	108.00 %	200.41 %	27		\$1,828,602.21	\$912,420
D3050	Terminal & Package Units	\$11.60	S.F.	21,224	20				0.00 %	0.00 %				\$246,198
D3060	Controls & Instrumentation	\$13.50	S.F.	21,224	20	1952	1972	2037	110.00 %	158.90 %	22		\$455,300.53	\$286,524
D4010	Sprinklers	\$8.02	S.F.	21,224	35			2052	105.71 %	178.37 %	37		\$303,617.37	\$170,216
D4020	Standpipes	\$0.99	S.F.	21,224	35				0.00 %	0.00 %				\$21,012
D5010	Electrical Service/Distribution	\$9.70	S.F.	21,224	30	1952	1982	2047	106.67 %	21.58 %	32		\$44,436.61	\$205,873
D5020	Lighting and Branch Wiring	\$34.68	S.F.	21,224	20	1952	1972	2030	75.00 %	10.62 %	15		\$78,155.91	\$736,048
D5030	Communications and Security	\$12.99	S.F.	21,224	15	1952	1967	2025	66.67 %	65.83 %	10		\$181,483.73	\$275,700
D5090	Other Electrical Systems	\$1.41	S.F.	21,224	20	1952	1972	2037	110.00 %	126.48 %	22		\$37,849.74	\$29,926
E1020	Institutional Equipment	\$4.82	S.F.	21,224	35	1952	1987	2027	34.29 %	8.94 %	12		\$9,141.65	\$102,300
E1090	Other Equipment	\$11.10	S.F.	21,224	35	1952	1987	2027	34.29 %	0.00 %	12			\$235,586
E2010	Fixed Furnishings	\$2.13	S.F.	21,224	40	1952	1992	2027	30.00 %	20.97 %	12		\$9,480.52	\$45,207
								Total	57.79 %	55.27 %			\$6,249,394.15	\$11,307,659

## **System Notes**

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

System:	C3010 - Wall Finishes	This system contains no images
Note:	Painted CMU 50% Polished CMU 50%	
System:	C3020 - Floor Finishes	This system contains no images
Note:	Tile 28% Vinyl 69% Concrete 3%	
System:	D10 - Conveying	This system contains no images
Note:	There is no existing elevator.	
System:	D5010 - Electrical Service/Distribution	This system contains no images
Note:	There are no secondary transformers.	

## **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:	\$6,249,394	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$601,786	\$6,851,180
* 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
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	\$32,289	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,289
B2020 - Exterior Windows	\$549,941	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$549,941
B2030 - Exterior Doors	\$72,859	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,859
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	\$338,820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$338,820
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	\$322,686	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$322,686
C1020 - Interior Doors	\$381,647	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$381,647
C1030 - Fittings	\$59,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,377
C20 - Stairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C2010 - Stair Construction	\$9,342	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,342
C30 - Interior Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010 - Wall Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

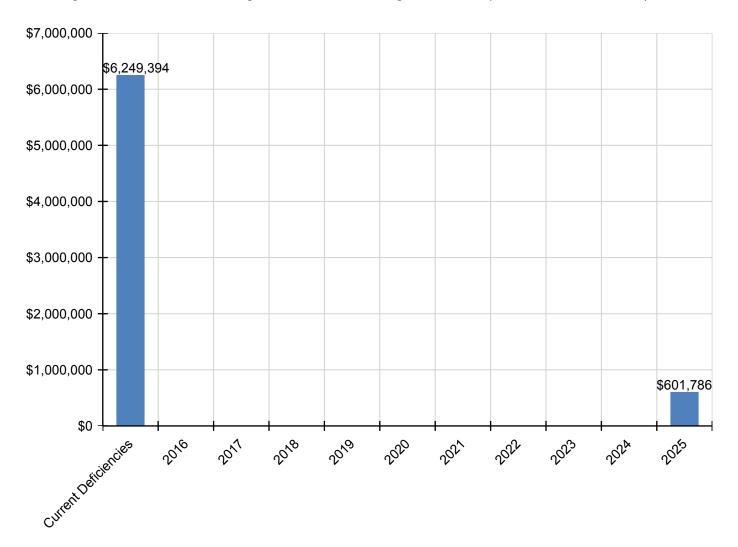
C3010230 - Paint & Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3010232 - Wall Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020 - Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020412 - Terrazzo & Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3020413 - Vinyl Flooring	\$151,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$151,667
C3020415 - Concrete Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3030 - Ceiling Finishes	\$271,484	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$271,484
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	\$387,153	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$387,153
D20 - Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2010 - Plumbing Fixtures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2020 - Domestic Water Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,990	\$90,990
D2030 - Sanitary Waste	\$104,120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104,120
D2040 - Rain Water Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$103,226	\$103,226
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	\$619,942	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$619,942
D3040 - Distribution Systems	\$1,828,602	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,828,602
D3050 - Terminal & Package Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3060 - Controls & Instrumentation	\$455,301	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$455,301
D40 - Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4010 - Sprinklers	\$303,617	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$303,617
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	\$44,437	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,437
D5020 - Lighting and Branch Wiring	\$78,156	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$78,156
D5030 - Communications and Security	\$181,484	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$407,570	\$589,053
D5090 - Other Electrical Systems	\$37,850	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,850
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	\$9,142	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,142
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	\$9,481	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,481

<sup>\*</sup> Indicates non-renewable system

## **Forecasted Sustainment Requirement**

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



## 10 Year FCI Forecast by Investment Scenario

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

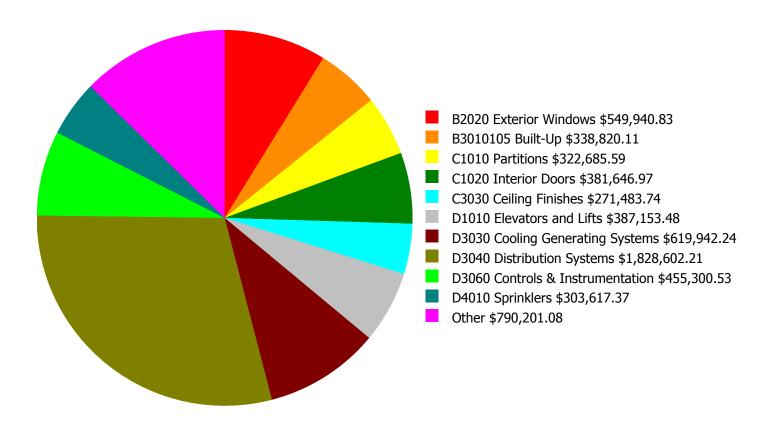
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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

## **Facility Investment vs. FCI Forecast** \$3,000,000 80.0 % 70.0 % \$2,000,000 Investment Amount 60.0 % \$1,000,000 - 50.0 % \$0 40.0 % 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 Current Investment Amount/FCI 2% Investment Amount/FCI 4% Investment Amount/FCI

	Investment Amount	2% Investm	ent	4% Investment				
Year	Current FCI - 55.27%	Amount	FCI	Amount	FCI			
2016	\$0	\$232,938.00	53.27 %	\$465,876.00	51.27 %			
2017	\$2,724,152	\$239,926.00	73.98 %	\$479,852.00	69.98 %			
2018	\$0	\$247,124.00	71.98 %	\$494,247.00	65.98 %			
2019	\$0	\$254,537.00	69.98 %	\$509,075.00	61.98 %			
2020	\$0	\$262,174.00	67.98 %	\$524,347.00	57.98 %			
2021	\$0	\$270,039.00	65.98 %	\$540,077.00	53.98 %			
2022	\$0	\$278,140.00	63.98 %	\$556,280.00	49.98 %			
2023	\$0	\$286,484.00	61.98 %	\$572,968.00	45.98 %			
2024	\$0	\$295,079.00	59.98 %	\$590,157.00	41.98 %			
2025	\$601,786	\$303,931.00	61.94 %	\$607,862.00	41.94 %			
Total:	\$3,325,938	\$2,670,372.00		\$5,340,741.00				

## **Deficiency Summary by System**

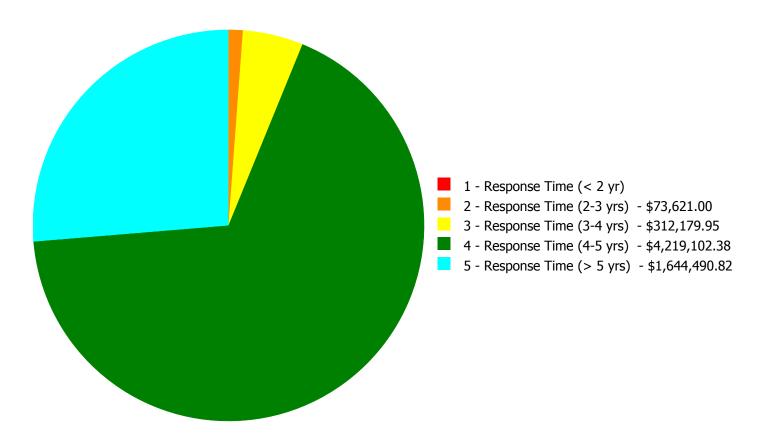
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: \$6,249,394.15

## **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: \$6,249,394.15** 

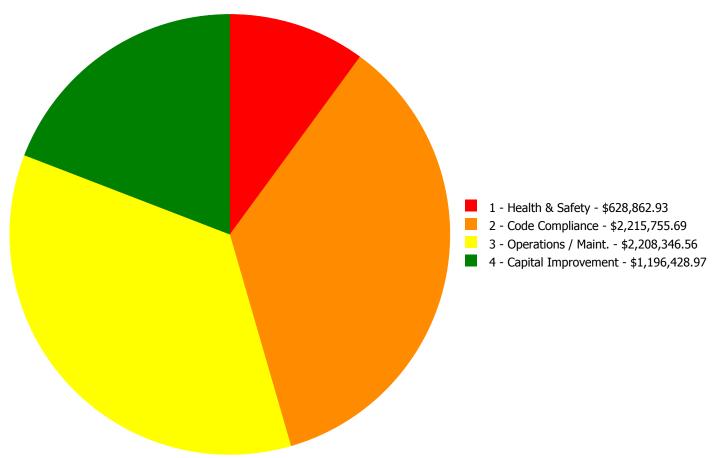
## **Deficiency By Priority Investment Table**

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	\$0.00	\$0.00		\$32,289.47	\$0.00	\$32,289.47
B2020	Exterior Windows	\$0.00	\$0.00	\$0.00	\$549,940.83	\$0.00	\$549,940.83
B2030	Exterior Doors	\$0.00	\$0.00	\$72,858.57	\$0.00	\$0.00	\$72,858.57
B3010105	Built-Up	\$0.00	\$0.00	\$0.00	\$0.00	\$338,820.11	\$338,820.11
C1010	Partitions	\$0.00	\$55,137.67	\$0.00	\$267,547.92	\$0.00	\$322,685.59
C1020	Interior Doors	\$0.00	\$0.00	\$0.00	\$381,646.97	\$0.00	\$381,646.97
C1030	Fittings	\$0.00	\$0.00	\$0.00	\$32,285.63	\$27,091.25	\$59,376.88
C2010	Stair Construction	\$0.00	\$9,341.68	\$0.00	\$0.00	\$0.00	\$9,341.68
C3020413	Vinyl Flooring	\$0.00	\$0.00	\$0.00	\$151,666.68	\$0.00	\$151,666.68
C3030	Ceiling Finishes	\$0.00	\$0.00	\$0.00	\$0.00	\$271,483.74	\$271,483.74
D1010	Elevators and Lifts	\$0.00	\$0.00	\$0.00	\$0.00	\$387,153.48	\$387,153.48
D2030	Sanitary Waste	\$0.00	\$0.00	\$0.00	\$104,119.64	\$0.00	\$104,119.64
D3030	Cooling Generating Systems	\$0.00	\$0.00	\$0.00	\$0.00	\$619,942.24	\$619,942.24
D3040	Distribution Systems	\$0.00	\$0.00	\$0.00	\$1,828,602.21	\$0.00	\$1,828,602.21
D3060	Controls & Instrumentation	\$0.00	\$0.00	\$0.00	\$455,300.53	\$0.00	\$455,300.53
D4010	Sprinklers	\$0.00	\$0.00	\$0.00	\$303,617.37	\$0.00	\$303,617.37
D5010	Electrical Service/Distribution	\$0.00	\$0.00	\$44,436.61	\$0.00	\$0.00	\$44,436.61
D5020	Lighting and Branch Wiring	\$0.00	\$0.00	\$78,155.91	\$0.00	\$0.00	\$78,155.91
D5030	Communications and Security	\$0.00	\$0.00	\$69,398.60	\$112,085.13	\$0.00	\$181,483.73
D5090	Other Electrical Systems	\$0.00	\$0.00	\$37,849.74	\$0.00	\$0.00	\$37,849.74
E1020	Institutional Equipment	\$0.00	\$9,141.65	\$0.00	\$0.00	\$0.00	\$9,141.65
E2010	Fixed Furnishings	\$0.00	\$0.00	\$9,480.52	\$0.00	\$0.00	\$9,480.52
	Total:	\$0.00	\$73,621.00	\$312,179.95	\$4,219,102.38	\$1,644,490.82	\$6,249,394.15

## **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: \$6,249,394.15** 

## **Deficiency Details by Priority**

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

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

System: C1010 - Partitions



Location: Stairs

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

**Category:** 1 - Health & Safety

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

**Correction:** Install fire rated walls and door where required

- insert number of doors

**Qty:** 6.00

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

**Estimate:** \$28,388.35

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** This two story school has no corridor doors, thus allowing free open access between levels. As indicated in the photos the existing fire doors although compliant during the time of the construction are no longer considered serviceable. The existing doors that separates the gym from the main building are typically metal in metal frames. The older doors are generally in poor condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original corridor door systems with new code compliant fire rated door system. Additional consideration to bring the stair system up to current standards by adding a fire rated door system should be a main factor in this effort. This deficiency is expected to be completed as part of an overall effort for this school.

### System: C1010 - Partitions



**Location:** Classrooms

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

Category: 1 - Health & Safety

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

**Correction:** Remove non-rated interior glass panels and

replace with studs, gypsum board, paint (E)

wall

**Qty:** 1,000.00

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

**Estimate:** \$26,749.32

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

#### System: C2010 - Stair Construction



Location: Stairs

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Replace inadequate or install proper stair railing

- select appropriate material

**Qty:** 600.00

Unit of Measure: L.F.

**Estimate:** \$9,341.68

Assessor Name: System

**Date Created:** 11/20/2015

**Notes:** The wooden hand rails to the basement level entrance are not current with requirements that the hand rails be graspable and continuous. Remove the wooden application and replace with a metal hand and guard rail system.

## System: E1020 - Institutional Equipment



Location: Gym

**Distress:** Damaged

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

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

Correction: Remove and replace or install new scoreboard -

pick the appropriate scoreboard

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** \$9,141.65

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** The Gyms has a single scoreboard that appears to be from the early 1950's. This scoreboard no longer functions. This deficiency provides a budgetary consideration for the removal and replacement of each scoreboard.

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

### System: B2030 - Exterior Doors



**Location:** Exterior Elevation

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

**Qty:** 8.00

Unit of Measure: Ea.

**Estimate:** \$72,858.57

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** The exterior doors are a combination of wooden and metal applications with wooden or metal frames. There is a decorative wooden storefront system at the old main entrance with a newer metal-framed metal door application for the new main entrance. The exterior door system for this school is a very high traffic system. The doors are in fair condition with the exception of the doors to the air handling room and to the service room. These doors are out of service and need immediate attention. Other doors are aging at a faster rate than expected based on traffic and condition. The exterior door system, store front and service doors are recommended for upgrade.

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



**Location:** Main Electrical Room, Boiler Room, Gym

platform

**Distress:** Beyond Service Life

Category: 3 - Operations / Maint.

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

**Correction:** Replace Panelboard

**Qty:** 3.00

Unit of Measure: Ea.

**Estimate:** \$44,436.61

Assessor Name: System

**Date Created:** 10/19/2015

**Notes:** Replace 400A, 120/240V, 1 phase, 3 wire service entrance panelboard and two (2) 100A panelboards (one in Boiler Room and one on platform in gymnasium) and their feeders.

## System: D5020 - Lighting and Branch Wiring



Location: Gym

**Distress:** Failing

Category: 3 - Operations / Maint.

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

**Correction:** Replace lighting fixtures

**Qty:** 16.00

Unit of Measure: Ea.

**Estimate:** \$53,605.73

**Assessor Name:** System

**Date Created:** 10/19/2015

Notes: Replace (16) industrial incandescent and metal halide fixtures in the gymnasium with LED fixtures.

### System: D5020 - Lighting and Branch Wiring



**Location:** Various rooms

**Distress:** Beyond Service Life

Category: 3 - Operations / Maint.

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

**Correction:** Replace lighting fixtures

**Qty:** 16.00

Unit of Measure: Ea.

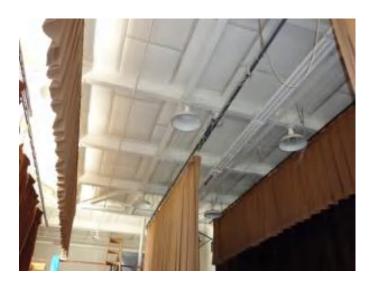
**Estimate:** \$13,736.76

Assessor Name: System

**Date Created:** 10/19/2015

**Notes:** Replace fluorescent lighting fixtures in Rooms 200, 201, 202, First Floor restroom, gymnasium storage and entrance vestibule, and Basement that have T12 lamps and have extended their useful life. A total of (16) fixtures are included in this report for replacement.

## System: D5020 - Lighting and Branch Wiring



Location: Gym platform, Boiler Room

**Distress:** Energy Efficiency

**Category:** 4 - Capital Improvement

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

**Correction:** Replace lighting fixtures

**Qty:** 11.00

Unit of Measure: Ea.

**Estimate:** \$9,101.07

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Replace incandescent lighting fixtures on the gymnasium platform and in the Boiler Room with 4 foot industrial fluorescent fixtures.

### System: D5020 - Lighting and Branch Wiring



**Location:** Gym kitchen

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

**Category:** 1 - Health & Safety

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

**Correction:** Replace Wiring Device

**Qty:** 5.00

Unit of Measure: Ea.

**Estimate:** \$1,712.35

Assessor Name: System

**Date Created:** 10/19/2015

**Notes:** Replace five (5) duplex in the gymnasium kitchen with ground-fault circuiting-interrupting (GFCI) type for personnel protection, as required by NFPA 70, Article 210.8 (B).

### **System: D5030 - Communications and Security**



**Location:** Building wide

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

Category: 1 - Health & Safety

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

**Correction:** Replace fire alarm system

**Qty:** 21,224.00

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

**Estimate:** \$69,398.60

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Replace fire alarm system with an addressable type system.

### **System: D5090 - Other Electrical Systems**



**Location:** Building wide

Distress: Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

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

Correction: Add Emergency/Exit Lighting

**Qty:** 33.00

Unit of Measure: Ea.

**Estimate:** \$37,849.74

Assessor Name: System

**Date Created:** 10/19/2015

**Notes:** Replace all exit signs with battery type emergency exit signs and provide emergency lighting units (ELUs) in corridors, stairwells, restrooms, gymnasium, platform, kitchen, and other rooms as needed for safe egress. Estimate includes (13) exit signs and (20) ELUs.

### System: E2010 - Fixed Furnishings



Location: Stage

Distress: Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

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

Correction: Remove and replace stage curtain - insert the

LF of track and SF of curtain

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$9,480.52

Assessor Name: System

**Date Created:** 11/20/2015

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

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

#### System: B2010 - Exterior Walls



**Location:** Exterior Elevation

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair cracks in masonry - replace missing

mortar and repoint - SF of wall area

**Qty:** 1,000.00

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

**Estimate:** \$32,289.47

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

### System: B2020 - Exterior Windows



**Location:** Exterior Elevation

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Remove and replace aluminum windows - pick

the appropriate size and style and insert the

number of units

**Qty:** 100.00

Unit of Measure: Ea.

**Estimate:** \$549,940.83

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** Exterior windows are a mix of single pane industrial grade metal, double hung aluminum framed single pane and one wooden framed window. Windows are in good to poor condition based on the year of installation or last renovation. The single pane wood and metal-framed, double hung windows have been replaced in the last twenty years however, a majority of the windows no longer function due to damage or neglect. The original steel-framed, multi-light windows have exceeded their useful service life. The exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features. This universal upgrade is expected to be completed as part of an overall renovation effort to eliminate dual efforts.

### System: C1010 - Partitions



**Location:** Restrooms

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Build new gang restroom to meet code or

occupant needs - select type and number of fixtures and toilet partitions for mens or

womens

**Qty:** 2.00

Unit of Measure: Ea.

**Estimate:** \$267,547.92

Assessor Name: System

**Date Created:** 11/20/2015

**Notes:** There are student restrooms on the first floor that appear to be original with original fixtures. Each restroom is limited by the design of the time that did not include options for those that may be physically challenged. These restrooms warrant unique renovations to restore the systems to modern operations options and service to the school. Accessibility legislation requires that goods, amenities, and services offered in buildings, such as restrooms, be generally accessible to all people. There are no compliant restrooms located in this school. A unisex, compliant restroom should be added on each of the floors. Recommended modifications include the construction of new single occupancy restrooms in existing academic areas to accommodate requirements. This involves adding two new partitions to enclose 50 square feet of area and installing a door with hardware, ceramic tile and plaster surfaces, suspended ceilings, plumbing fixtures, electrical fixtures, piping, HVAC equipment, and accessories for each new restroom. Also, the renovation of the existing restrooms and modification to new layouts and floor plans to support modern designs and requirements for ADA legislation.

#### System: C1020 - Interior Doors



Location: Classroom

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood

doors with hollow metal frames - per leaf

**Qty:** 80.00

**Unit of Measure:** Ea.

**Estimate:** \$381,646.97

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** Interior doors are typically wood in wood frames with glass glazing. Other interior doors include wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames. Doors are generally in good condition considering the age of the application. Universal upgrades are required for the interior door systems, it is recommended that the interior doors system be removed and replaced with a new modern metal framed wooden door system with consideration for ADA compliance.

#### System: C1030 - Fittings



**Location:** Classrooms

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace blackboards with marker boards - pick

the appropriate size and insert the quantities

**Qty:** 40.00

Unit of Measure: Ea.

**Estimate:** \$27,529.28

Assessor Name: System

**Date Created:** 11/20/2015

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

#### System: C1030 - Fittings



**Location:** Classrooms

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Remove and replace tackboards - select size

**Qty:** 6.00

Unit of Measure: Ea.

**Estimate:** \$4,756.35

**Assessor Name:** System

**Date Created:** 11/20/2015

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

### System: C3020413 - Vinyl Flooring



**Location:** Classrooms

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

**Category:** 1 - Health & Safety

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

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

**Qty:** 10,000.00

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

**Estimate:** \$151,666.68

Assessor Name: System

**Date Created:** 11/20/2015

**Notes:** The floor finish for this school is a combination of tile in the kitchen and service line areas, ceramic tile in the hallways and stirs finishes and a vinyl tile finish in the classrooms and general areas. The vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. This finish is recommended for upgrade to a new 12 x 12 vinyl tile application.

## System: D2030 - Sanitary Waste



Location: entire building

**Distress:** Beyond Service Life

Category: 3 - Operations / Maint.

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

**Correction:** Inspect sanitary waste piping and replace

damaged sections. (+50KSF)

**Qty:** 21,224.00

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

**Estimate:** \$104,119.64

Assessor Name: System

**Date Created:** 11/10/2015

Notes: Inspect old cast iron sanitary piping including camera observation and replace damaged sections.

#### System: D3040 - Distribution Systems



**Location:** entire building

**Distress:** Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide classroom FC units and dedicated OA

ventilation system. (20 clsrms)

**Qty:** 20.00

**Unit of Measure:** C

**Estimate:** \$1,661,219.77

**Assessor Name:** System

**Date Created:** 11/10/2015

**Notes:** Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new pumps for hot water, piping, control valves and controls, to replace existing heating system.

#### System: D3040 - Distribution Systems



Location: cafeteria

**Distress:** Building / MEP Codes

Category: 2 - Code Compliance

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

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

**Qty:** 358.00

Unit of Measure: Pr.

**Estimate:** \$167,382.44

**Assessor Name:** System

**Date Created:** 11/10/2015

**Notes:** Provide a new central station air handling unit for the cafeteria with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.

#### System: D3060 - Controls & Instrumentation



**Location:** entire building

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

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

**Qty:** 21,224.00

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

**Estimate:** \$455,300.53

Assessor Name: System

**Date Created:** 11/10/2015

**Notes:** Install new direct digital control system and building automation system with remote computer control capability and graphics package.

### System: D4010 - Sprinklers



Location: entire building

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

**Category:** 1 - Health & Safety

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

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

**Qty:** 21,224.00

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

**Estimate:** \$303,617.37

**Assessor Name:** System

**Date Created:** 11/10/2015

**Notes:** Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.

## System: D5030 - Communications and Security



Location: Building wide

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Video Surveillance System

**Qty:** 1.00

Unit of Measure: Ea.

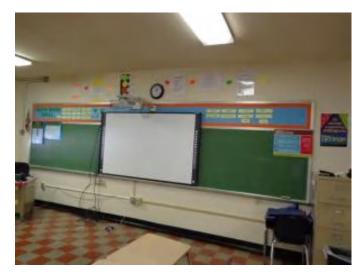
**Estimate:** \$91,311.86

Assessor Name: System

**Date Created:** 10/19/2015

Notes: Provide a video surveillance system, to include approximately (12) cameras, monitor, DVR and associated equipment.

## **System: D5030 - Communications and Security**



**Location:** Building wide

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

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

**Qty:** 18.00

Unit of Measure: Ea.

**Estimate:** \$12,017.11

**Assessor Name:** System

**Date Created:** 10/19/2015

Notes: Provide a wireless GPS clock system. An estimated (18) clocks are included in this report.

### System: D5030 - Communications and Security



**Location:** Classrooms

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

**Correction:** Add telephone outlets

**Qty:** 6.00

Unit of Measure: Ea.

**Estimate:** \$8,756.16

Assessor Name: System

**Date Created:** 10/19/2015

**Notes:** Provide an allowance for adding telephone outlet jacks in six (6) classrooms.

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

System: B3010105 - Built-Up



**Location:** Roof

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

**Qty:** 10,000.00

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

**Estimate:** \$338,820.11

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** During the time of the inspection roof access was not available. According to reports the roofing system is over twenty years of age and was recently repaired over the Cafeteria/Auditorium. The roofing system is not expected to outlast the ten-year scope of this analysis. Future budget modeling should include provisions for the replacement of all failing roofing systems.

#### System: C1030 - Fittings



Location: Building Wide

**Distress:** Damaged

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

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

**Correction:** Replace missing or damaged signage - insert

the number of rooms

**Qty:** 100.00

Unit of Measure: Ea.

**Estimate:** \$27,091.25

Assessor Name: System

**Date Created:** 11/20/2015

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

### System: C3030 - Ceiling Finishes



**Location:** Building Wide

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Remove and replace suspended acoustic

ceilings - lighting not included

**Qty:** 18,000.00

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

**Estimate:** \$271,483.74

**Assessor Name:** System

**Date Created:** 11/20/2015

**Notes:** The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

#### System: D1010 - Elevators and Lifts



**Location:** Building Wide

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

Correction: Add interior hydraulic elevator - 2 floors - adjust

the electrical run lengths to hook up the

elevator

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$387,153.48

**Assessor Name:** System

**Date Created:** 11/20/2015

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

### **System: D3030 - Cooling Generating Systems**



**Location:** roof, mechanical room

**Distress:** Inadequate

Category: 4 - Capital Improvement

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

**Correction:** Install chilled water system with distribution

piping and pumps. (+25KSF)

**Qty:** 21,224.00

Unit of Measure: S.F.

**Estimate:** \$619,942.24

**Assessor Name:** System

**Date Created:** 11/10/2015

**Notes:** Remove the window air conditioning units and install a fifty five ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.

# **Equipment Inventory**

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2044 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	weil mclain	model 88 series 1			35	2006	2041	\$62,552.00	\$68,807.20
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	1.00			Federal Electric Products Co.		Cat. No. PD49602		30			\$12,109.50	\$13,320.45
												Total:	\$82,127.65

## **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): 30,600
Year Built: 1952
Last Renovation:

Replacement Value: \$581,262

Repair Cost: \$469,571.34

Total FCI: 80.78 %

Total RSLI: 39.38 %



#### **Description:**

#### Attributes:

**General Attributes:** 

Bldg ID: S237101 Site ID: S237101

## **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	42.05 %	116.38 %	\$469,571.34
G40 - Site Electrical Utilities	33.33 %	0.00 %	\$0.00
Totals:	39.38 %	80.78 %	\$469,571.34

## **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 the system 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		Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency \$	Replacement Value \$
G2020	Parking Lots	\$8.50	S.F.	23,800	30	1980	2010	2027	40.00 %	139.80 %	12		\$282,818.12	\$202,300
G2030	Pedestrian Paving	\$12.30	S.F.	4,800	40	1980	2020	2027	30.00 %	38.98 %	12		\$23,012.55	\$59,040
G2040	Site Development	\$4.36	S.F.	30,600	25	1980	2005	2027	48.00 %	114.86 %	12		\$153,237.87	\$133,416
G2050	Landscaping & Irrigation	\$4.36	S.F.	2,000	15	1980	1995	2027	80.00 %	120.44 %	12		\$10,502.80	\$8,720
G4020	Site Lighting	\$4.84	S.F.	30,600	30			2025	33.33 %	0.00 %	10			\$148,104
G4030	Site Communications & Security	\$0.97	S.F.	30,600	30			2025	33.33 %	0.00 %	10			\$29,682
	Total									80.78 %			\$469,571.34	\$581,262

## **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.

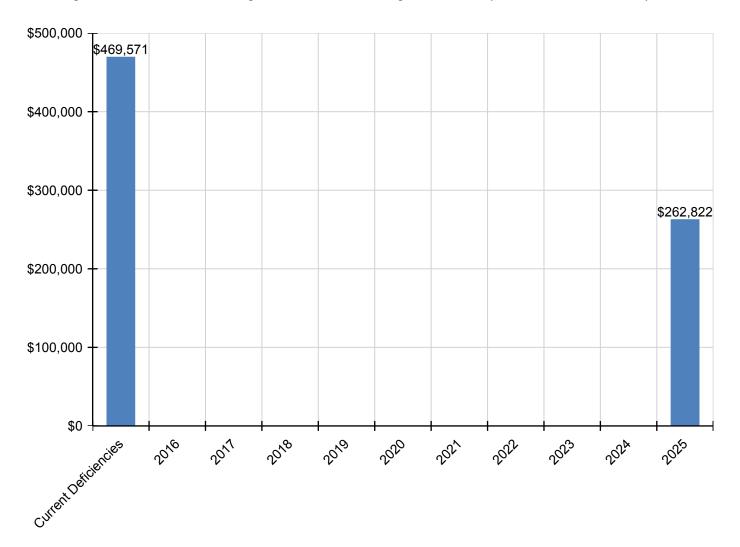
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	\$469,571	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$262,822	\$732,393
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	\$282,818	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$282,818
G2030 - Pedestrian Paving	\$23,013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,013
G2040 - Site Development	\$153,238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$153,238
G2050 - Landscaping & Irrigation	\$10,503	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,503
G40 - Site Electrical Utilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G4020 - Site Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$218,943	\$218,943
G4030 - Site Communications & Security	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,879	\$43,879

<sup>\*</sup> Indicates non-renewable system

## **Forecasted Sustainment Requirement**

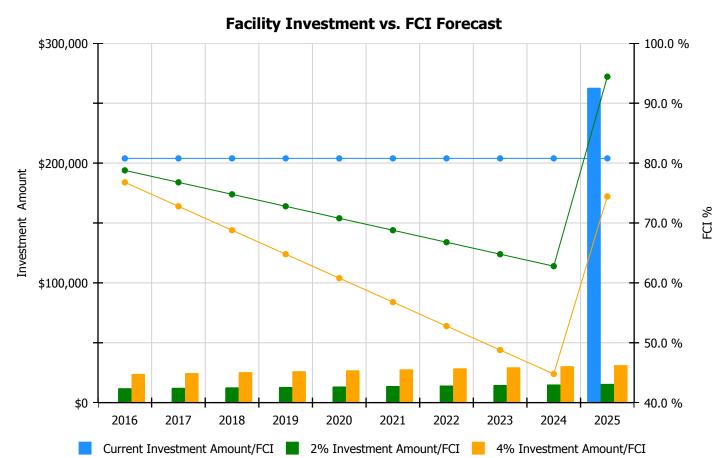
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 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:

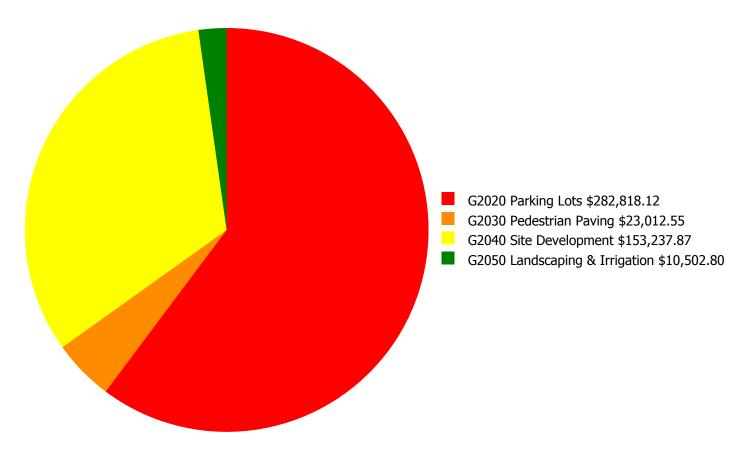
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



	Investment Amount	2% Investm	ent	4% Investment			
Year	Current FCI - 80.78%	Amount	FCI	Amount	FCI		
2016	\$0	\$11,974.00	78.78 %	\$23,948.00	76.78 %		
2017	\$0	\$12,333.00	76.78 %	\$24,666.00	72.78 %		
2018	\$0	\$12,703.00	74.78 %	\$25,406.00	68.78 %		
2019	\$0	\$13,084.00	72.78 %	\$26,169.00	64.78 %		
2020	\$0	\$13,477.00	70.78 %	\$26,954.00	60.78 %		
2021	\$0	\$13,881.00	68.78 %	\$27,762.00	56.78 %		
2022	\$0	\$14,298.00	66.78 %	\$28,595.00	52.78 %		
2023	\$0	\$14,727.00	64.78 %	\$29,453.00	48.78 %		
2024	\$0	\$15,168.00	62.78 %	\$30,337.00	44.78 %		
2025	\$262,822	\$15,623.00	94.43 %	\$31,247.00	74.43 %		
Total:	\$262,822	\$137,268.00		\$274,537.00			

## **Deficiency Summary by System**

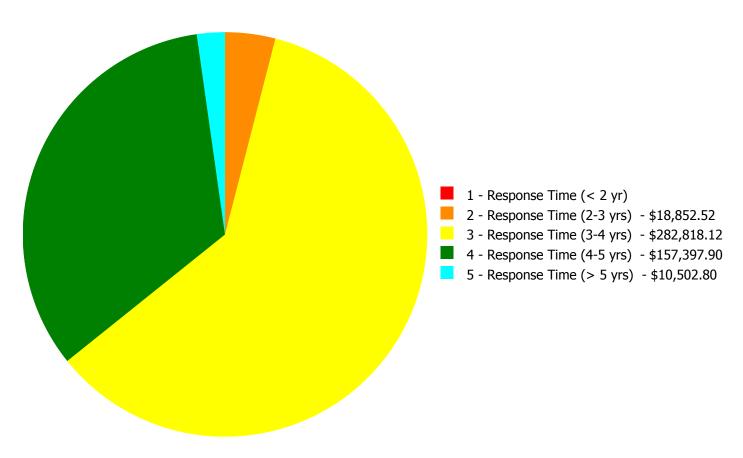
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$469,571.34** 

## **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: \$469,571.34** 

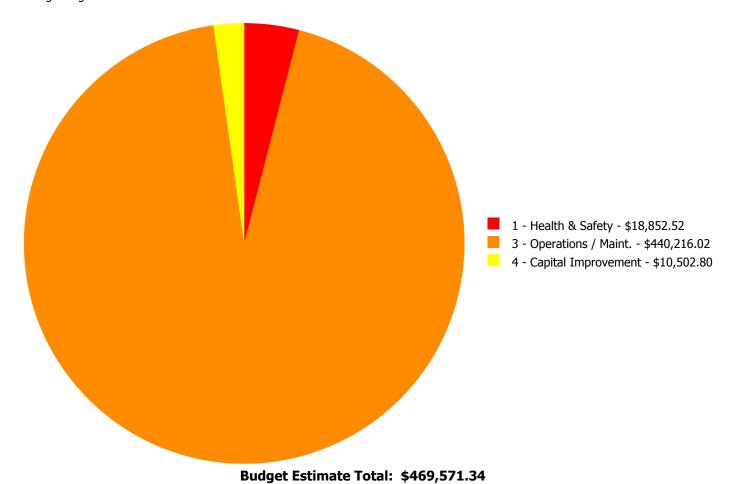
## **Deficiency By Priority Investment Table**

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

System				3 - Response			
Code	System Description	Time (< 2 yr)	Time (2-3 yrs)	Time (3-4 yrs)	Time (4-5 yrs)	Time (> 5 yrs)	Total
G2020	Parking Lots	\$0.00	\$0.00	\$282,818.12	\$0.00	\$0.00	\$282,818.12
G2030	Pedestrian Paving	\$0.00	\$0.00	\$0.00	\$23,012.55	\$0.00	\$23,012.55
G2040	Site Development	\$0.00	\$18,852.52	\$0.00	\$134,385.35	\$0.00	\$153,237.87
G2050	Landscaping & Irrigation	\$0.00	\$0.00	\$0.00	\$0.00	\$10,502.80	\$10,502.80
	Total:	\$0.00	\$18,852.52	\$282,818.12	\$157,397.90	\$10,502.80	\$469,571.34

## **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:

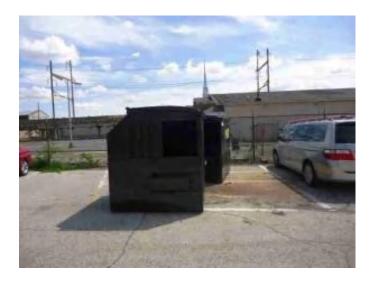


## **Deficiency Details by Priority**

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

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

System: G2040 - Site Development



Location: Site

Distress: Health Hazard / Risk

**Category:** 1 - Health & Safety

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

**Correction:** Build secure trash dumpster enclosure

**Qty:** 1.00

Unit of Measure: Ea.

**Estimate:** \$18,852.52

**Assessor Name:** Ben Nixon

**Date Created:** 11/20/2015

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

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

System: G2020 - Parking Lots



**Location:** Parking Lot

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

**Correction:** Remove and replace AC paving parking lot

**Qty:** 20,000.00

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

**Estimate:** \$282,818.12

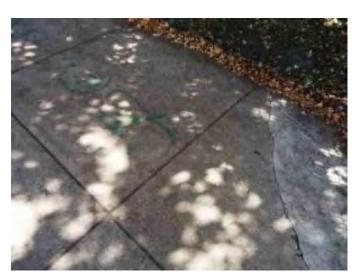
Assessor Name: Ben Nixon

**Date Created:** 11/20/2015

**Notes:** The parking play area has no assigned parking and limited markers for approved activity areas. No curb cuts for access to the sidewalks that lead to the ADA main entrance. The parking play lot is in fair condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a play, parking lot renewal program that includes all aspects of the current ADA legislation. Asphalt removal and replacement is recommended.

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

#### System: G2030 - Pedestrian Paving



**Location:** Site

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace concrete sidewalk or

concrete paving - 4" concrete thickness

**Qty:** 1,600.00

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

**Estimate:** \$23,012.55

**Assessor Name:** Ben Nixon

**Date Created:** 11/20/2015

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

#### System: G2040 - Site Development



Location: Site

**Distress:** Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 8' high

**Qty:** 1,200.00

Unit of Measure: L.F.

**Estimate:** \$134,385.35

Assessor Name: Ben Nixon

**Date Created:** 11/20/2015

**Notes:** This school has a perimeter fence surrounding the parking / playground area. The fence has several areas of repairs and the mounting post are damaged in several areas, overall the fence is in fair condition. This fence system is recommended to be removed and replaced with a new system within the next five to ten years.

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

#### System: G2050 - Landscaping & Irrigation

This deficiency has no image. **Location:** Site

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

Correction: Add landscape irrigation system to small area -

insert SF of area and LF of pipe run to get to the area for pavement removal and restoration

**Qty:** 1,400.00

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

**Estimate:** \$10,502.80

Assessor Name: Ben Nixon

**Date Created:** 11/20/2015

**Notes:** The landscaping is in good condition and well maintained but with no irrigation system. The landscaping is generally located near the parking / play area of the site with limited turf sections around the general exterior of the school. This deficiency provides a budgetary consideration for the installation of an irrigation system for this site

# **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 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

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

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

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)

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 Hou

Year built

WH Wh Watt Hours

The year that a building or addition was originally built based on substantial completion or occupancy.

Z Electrical Impedance