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.

Northeast High School

Governance	DISTRICT	Report Type	High
Address	1601 Cottman Ave.	Enrollment	3386
	Philadelphia, Pa 19111	Grade Range	'09-12'
Phone/Fax	215-728-5018 / 215-728-5004	Admissions Category	Neighborhood
Website	Www.Nehs.Phila.K12.Pa.Us	Turnaround Model	N/A

Building/System FCI Tiers

Facility Condition Index (FCI) = Cost of Assessed Deficiencies / Replacement Value

< 15%	15 to 25%	25 to 45%	45 to 60%	> 60%
Buildings				
Minimal Current Capital Funding Required	Refurbish Systems in building	Replace Systems in building.	Building should be considered for major renovation.	Building should be considered for closing/replacement.
Systems				
Perform routine maintenance on system	System requires minor repairs	System should be studied to determine repair vs. replacement.	System is nearing end of its life expectancy and should be considered for replacement	System should be replaced as part of the Capital Program

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**26.79%**	**$50,044,589**	**$186,826,780**
Building	27.82 %	$44,046,955	$158,331,035
Grounds	06.68 %	$966,506	$14,470,334

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$256	$7,734,641
Exterior Walls (Shows condition of the structural condition of the exterior facade)	01.42 %	$190,854	$13,404,787
Windows (Shows functionality of exterior windows)	32.62 %	$2,785,888	$8,539,346
Exterior Doors (Shows condition of exterior doors)	58.24 %	$209,618	$359,943
Interior Doors (Classroom doors)	154.16 %	$1,798,616	$1,166,713
Interior Walls (Paint and Finishes)	02.80 %	$114,918	$4,099,010
Plumbing Fixtures	60.84 %	$2,552,266	$4,195,202
Boilers	00.00 %	$0	$5,793,226
Chillers/Cooling Towers	00.00 %	$0	$7,596,046
Radiators/Unit Ventilators/HVAC	23.00 %	$3,068,079	$13,339,625
Heating/Cooling Controls	153.93 %	$6,448,206	$4,188,996
Electrical Service and Distribution	165.59 %	$4,984,180	$3,009,871
Lighting	36.40 %	$3,916,735	$10,761,065
Communications and Security (Cameras, Pa System and Fire Alarm)	54.81 %	$2,209,394	$4,030,745

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

School District of Philadelphia

S802001;Northeast HS and Field

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	349,078
Year Built:	1957
Last Renovation:	
Replacement Value:	$186,826,780
Repair Cost:	$50,044,588.65
Total FCI:	26.79 %
Total RSLI:	68.00 %

Description:

Supersite

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S802001		

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	42.00 %	0.00 %	$0.00
A20 - Basement Construction	42.00 %	0.00 %	$0.00
B10 - Superstructure	39.15 %	0.29 %	$101,577.27
B20 - Exterior Enclosure	65.06 %	19.30 %	$4,806,787.32
B30 - Roofing	25.05 %	0.04 %	$3,269.96
C10 - Interior Construction	47.78 %	29.43 %	$2,571,895.61
C20 - Stairs	35.71 %	127.39 %	$620,585.82
C30 - Interior Finishes	59.27 %	36.93 %	$5,407,452.95
D10 - Conveying	14.29 %	0.00 %	$0.00
D20 - Plumbing	115.38 %	97.52 %	$6,267,960.44
D30 - HVAC	120.27 %	38.80 %	$10,868,631.59
D40 - Fire Protection	105.71 %	198.11 %	$5,293,016.61
D50 - Electrical	108.61 %	62.99 %	$12,177,880.46
E10 - Equipment	22.06 %	9.32 %	$579,896.93
E20 - Furnishings	16.06 %	42.86 %	$379,127.98
G20 - Site Improvements	32.52 %	10.63 %	$966,505.71
G40 - Site Electrical Utilities	106.67 %	0.00 %	$0.00
Totals:	**68.00 %**	**26.79 %**	**$50,044,588.65**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B802001;Northeast	310,296	27.82	$11,164,187.43	$20,652,864.66	$5,574,243.87	$0.00	$6,655,658.71
B802901;Northeast - Field Houses	16,452	46.68	$295,849.90	$2,653,817.59	$1,083,616.91	$255,785.51	$464,947.32
B802903;Northeast - Stands and Field	22,330	7.21	$0.00	$166,645.89	$0.00	$72,824.62	$37,640.53
G802001;Grounds, Football Field, and Track	1,235,800	6.68	$0.00	$364,832.20	$601,673.51	$0.00	$0.00
Total:		**26.79**	**$11,460,037.33**	**$23,838,160.34**	**$7,259,534.29**	**$328,610.13**	**$7,158,246.56**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $11,460,037.33
2 - Response Time (2-3 yrs) - $23,838,160.34
3 - Response Time (3-4 yrs) - $7,259,534.29
4 - Response Time (4-5 yrs) - $328,610.13
5 - Response Time (> 5 yrs) - $7,158,246.56

Budget Estimate Total: $50,044,588.65

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:	High School
Gross Area (SF):	310,296
Year Built:	1957
Last Renovation:	
Replacement Value:	$158,331,035
Repair Cost:	$44,046,954.67
Total FCI:	27.82 %
Total RSLI:	70.20 %

Description:

Facility Condition Assessment

November 2015

School District of Philadelphia
Northeast High School
1601 Cottman Avenue
Philadelphia, PA 19111

310,296 SF / 3,140 Students / LN 08

Northeast High School is located at 1601 Cottman Avenue. The main entrance faces Cottman Avenue. This school was constructed in 1957, has 310,296 square feet, and is 1, 2 and 3 stories tall. The sloping grade of the site allows the "ground floor" (basement) to be accessible from grade on the southeast side facing Glendale Avenue. Due to the sloping site, the ground floor extends under only part of the building, with crawl spaces for piping access extending under some of the other areas. The one story wings, located on ground floor and first floor levels that are part of the original construction house the gymnasium, lockers, auditorium and a special high-tech program. The two-story section of the building facing Algon Avenue houses classrooms and the library. One-story additions, constructed around 1970 house the SPARC (Space Research Center) program (facing Glendale Avenue) and a classroom expansion called the "150 Wing" (facing Algon Avenue). The building has two large vegetated courtyards which allow light penetration into most rooms in the building. The football field, track, grandstands, fieldhouse, baseball field, and tennis courts are located to the northeast immediately adjacent to the high school. There are 5 parking areas connected to each other or accessed from the street. Kevin

Carter, the Building Engineer accompanied the team during the building inspection.

The inspection team met with Principal Sharon McCloskey and Mike Phicardi at the time of field inspection. In particular, they indicated that the windows are old, leaky, have condensation in winter, and need to be replaced. Heating controls do not work causing heat to be all on or completely off; some sections of the building are hot and some are cold. The clock system does not function, but the class-change bell and PA systems work. There are not enough cameras outside the building; only 1 front and 1 rear entrance has cameras. There are 30 cameras in corridors, but the classroom area called AVID has high-tech equipment and has no cameras. Classroom doors required security locks to permit a lock-down in case of a security issue. Parking lots need to be repaved; the lot on Algon Avenue pools, floods, and freezes. The boilers were replace approximately 10 years ago and function properly. The elevator is original but still operates as required; maintenance has a stock of miscellaneous replacement parts to make repairs if needed.

ARCHITECTURAL/STRUCTURAL SYSTEMS

Foundations in the boiler room (basement) are constructed of concrete and block. Joints are in good condition with no major settlement cracks observed in any area. The one area of serious concern is the area of the boiler room the passes under the exterior wall above, extending underneath the paved parking and trash area above. The concrete beam that supports the wall has substantial spalling and material loss, exposing rusted reinforcing bars and dropping chunks of concrete on the floor dialing. This beam supports the exterior brick wall and roof above and it is failing. The District was notified of this failing beam and indicated that this had already been documented. This condition requires immediate attention. Paint is peeling on some basement walls. Floor slabs are dirty, but ceilings and walls are relatively clean and in good condition, except for the peeling areas on the walls. There are exposed reinforced concrete columns throughout the space in good condition. Footings were not seen and their construction type or condition could not be ascertained.

The physical condition of the boiler room slabs is good, with very few cracks. Outside the boiler room, basement slabs in classroom areas are also in good condition without any major cracks or settlement. There is a trap door in the boiler room wall that views the crawlspace. This area was poorly lit, but what could be seen was not damaged, however the space felt very humid and steel pipes that were seen were very rusty. There have been projects in recent past to document and remove asbestos pipe wrap from this area; it is not known if it has been completely abated. Upper floor slabs are constructed of cast-in-place concrete with cast-in-place concrete beams. Columns, beams and floor deck above also appeared to be in good condition.

Roof construction is a complex system of flat, minimum overall slope areas. Since there are multiple roof levels, access to the entire roof requires re-entry and exit multiple times. The building is sprawling with over 200,000sf of roof creating two large square "O" shaped courtyards formed by the two square main classroom wings. Most roof areas have one brick wall along an edge, allowing water to flow away to drains in low points in interior areas of the flat roofs. Although less than 12" in height, parapets have overflow openings built into the masonry, allowing for water to escape from the roof if drains are clogged. The roof superstructure over classroom areas is assumed to be constructed of reinforced concrete columns, beams, and floor slabs, although this could not be seen. The roof over the SPARC building is a precast concrete wall and roof deck "portable building", utilized by the District at a number of other schools. Concrete roof "T"s are supported by two central corridor supporting walls (also precast concrete T panels of a different size and finish) which form the high point in the middle of the building, sloping to the two outer precast concrete panel T edge walls. Roof drains are located a couple feet inside from the outer wall, collect and remove storm water down internally located vertical leaders. Gymnasium and auditorium roofs are supported by steel beams and trusses, in order to obtain large, open, column-free spaces below. They also have almost dead level decks with internal roof drains and minimal overflow scuppers in low parapet walls at edges.

Exterior brick walls are generally in fair condition with scattered areas of joint failure, cracks, dirt stains, and mildew. Walls are constructed of brick with continuous bands of triple windows, separated by green granite panels at and between column lines. Limestone sills form the bottom surface under the windows and granite. Many granite panels are spalled and need to be replaced. Brick joints are failing above windows and at uni-vent louvers; if lintels are severely rusted or bending, they need to be replaced; otherwise, lintels need to be repainted as windows are replaced. Afterwards, these brick joints need to be pointed. Some bricks have spalled in an area where joints are failing. Brickwork is cracking along the stairway that leads into the corridor outside the boiler room; this is because the concrete beam supporting this wall in the boiler room is failing and beginning to sink. The condition of the beam supporting this exterior wall needs to be analyzed then repaired as soon as possible. It appears as if some upper areas of brick have been re-pointed. Walls need to be power washed to remove years of dirt, grime, efflorescence and oxidized window frame aluminum that have washed down onto bricks.

Exterior windows are said to be the original units; from the appearance of the frames and moisture damage around many of the frames, it appears to be the truth. Clear anodized window frames are corroding and dirty. Window putty has flaked away in many units and no longer hold glass panels tightly in place. Plexi glass vision panels that have been installed in place of broken window glass is now cloudy and scratched. Windows are operable single pane units that do not seal tightly and provide almost no insulation

value; loose units leak and let in cold air in the winter. Most windows do not have insect screens. Many windows are difficult to open and close. Most windows near grade (ground level or first floor) have galvanized steel security screens which are in good condition. The boiler room has tall windows that are also old, cloudy, lacking window putty and in poor condition. Each gymnasium (boys and girls) has a band of windows installed high above the floor, letting ample amounts of daylight into the spaces, however these windows are as old and failing as all others around the building. All windows around the building need to be replaced with operable, thermally broken aluminum framed, insulated glass, window systems. Integral bug/security screens should be provided with new windows.

Exterior doors at the main entrance consists of twelve pairs of stainless steel framed glass doors with full height side lights and full width transoms for the left 3 bays of the exterior wall and a full height glass curtain wall for the right remaining 1 bay, creating an expansive glass entry into a bright granite-finished lobby. Many glass panels on this wall have been broken and replaced with plexi glass. Other exterior doors around the building are painted steel framed flush hollow metal units with steel frames, with some doors having narrow lite vision panels protected with security screens. The District is in the process of repainting these doors, sidelights, and lintels bright red. However, door systems are still in poor condition with broken or non-functioning panic hardware, lack weatherstripping, and are not ADA compliant. All remaining doors should be repainted if they are not too rusted and in good enough condition and hardware should be replaced with weatherstripping added. Students enter mainly through two entrances – the front entrance on Cottman Avenue entrance (12 glass doors) and the rear entrance on Algon Avenue (6 steel doors). The Algon Avenue entrance is flush at grade level and accessible to wheelchairs, although no signage was seen indicating an accessible entrance. Cottman Avenue requires stairway access from all approaches. A second accessible entrance is at the east end of the SPARC building, where a grade level walkway originating at the Glendale Avenue sidewalk connects to the end-of-corridor exit door; accessible route signage is also lacking at this entrance. At the end of the internal corridor in the SPARC building, there is a wheelchair lift to access the First Floor and the elevator nearby. The cafeteria could be accessible from the Cottman Avenue sidewalk if a 10 foot long, 6” high sloped surface were added outside the door to eliminate the sill step.

Roof covering on the main building flat roof is a fully adhered rolled asphalt sheet system with light gray surface granules that was installed 15-20 years ago. The membrane and flashing appear to be in good condition. There are no crickets to direct the water towards the drains, however drains appear to have very slight dished areas around them to aid in water flow into the roof drain. In some areas, water is not completely draining from roofing membrane as telegraphed by dirty areas; insulation needs to be built up to provide better drainage out of these low spots. One of the roof drains in the SPARC building has leaked around the housing, as seen from inside the building; the roof drain needs to be reset to remedy this situation. Flashing is metal faced asphalt backed material adhered to mechanical equipment and the parapet terminating under the painted aluminum coping. Inspection of all penetrations and flashing should be conducted as well as cleaning of all roof drains. Roof openings include toilet room vents, ventilation ductwork, and roof drains. Brick rooftop structures, brick parapets, and ventilation fan structures are flashed with asphalt-backed metal flashing material. Low parapets less than a foot in height are also flashed full height with the asphalt backed metal membrane. Taller brick structures and building walls with roofing terminations have aluminum counter flashing attached to the brick, counter flashed, and sealed with caulking along the top edge; this caulking is cracking and may not provide an effective seal. Aluminum coping used on the tops of all parapet walls is also thought to be 15-20 years old, and is in good condition except for one area. A 12 foot long section of aluminum coping is missing from the top of the wall forming the east corner of the auditorium roof; this section of coping should be replaced. Although the roofing material could be approaching the end of its useful life, it appears to be in good condition and with flashing, reglet, and joint maintenance, it could continue to provide good performance.

Partitions in most of the building are constructed of block (concrete masonry units). In the boiler room, there are leaks around exterior windows or cracks in exterior walls which have led to peeling paint on exterior walls. A small vertical crack was observed in the culinary area, which should be easily repaired. Most other walls in the building are in good condition with limited and isolated surface damage in corridors and corners. Room 134 has a thin vertical crack in the block under the beam overhead, which needs to be routed and filled. Leaking or condensation at exterior windows has also caused isolated and minor wall surface damage in various locations. Most corridor partitions have recesses in which lockers are built into the walls; this cleans up the appearance of the corridors making them look less cluttered. Internal walls in the SPARC building are gypsum board and metal stud, as seen inside the Space Shuttle Room and the open space where renovations are in progress. A “Dead End Corridor” is created at the end of the small corridor and office area in Room 101, the Main Office. It should be possible to locate a door into the small corridor in the Counselor Area, Room 103, to alleviate this non-compliance issue. Two large full height folding partitions separate the Boy’s and Girl’s gymnasiums into two parts each, allowing for 4 separate groups of students to have their gym classes at the same time. The partition needs to be replaced because it is inoperable and cannot be opened to separate the spaces.

Interior doors are the original oak wood and wired glass doors, most with the original knob hardware, mounted in steel frames. Many of the original wood doors are damaged, have worn finishes, built-up grime, replacement non-wired glass, and poorly functioning hardware. Interior basement doors and interior stairway doors are hollow metal doors in metal frames, some with narrow lite vision panels. Many steel doors and frames are rusted where coming in contact with floors, due to cleaning solutions corroding the frames. Doors are generally in poor condition throughout the building, are not ADA compliant, do not have ADA or proper locking hardware, and do not have fire rated labels where required. Stairway doors do not positively latch (they do not have panic or latching

hardware) as required of fire rated doors, therefore cannot be considered an approved fire rated installation. Music and practice rooms are located near the area behind backstage side of the auditorium. Doors to the small, soundproof practice rooms are worn and need to be replaced. Classroom doors do not have security locking feature that allows for locking from inside classrooms. Steel stairway doors and all wood doors need to be replaced with positively latching fire rated doors with UL approved hardware, closures, and approved fire rated glazing.

Interior fittings/hardware include black slate chalkboards with oak chalk trays or bulletin boards. White board material has been laminated to some of the black slate to provide a more up to date, new marking surface. The type of toilet partitions varies based on whether or not they have been replaced. Original partitions are gray transit partitions with plastic doors. Newer partitions are HDPE (high density polyethylene) plastic partitions with plastic doors. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) have been recently replaced in most toilet rooms. Some components are missing and others are not fully functional. Missing and broken toilet room accessories should be replaced. One boy's toilet room on the second floor has a toilet stall that is considered handicap accessible, with grab bars and a sink inside the compartment. There should be at least one boy's and one girl's toilet room on each floor modified with the proper accessories at the correct heights and proper clearances, in order to be fully ADA compliant. Steel lockers line many corridors on each floor; they have the original factory painted finish and are in poor condition, riddled with scratches, dents and chips. Some classrooms have integrated metal built-in bookcases and uni-vents; most classrooms in addition to or instead of the built-ins have loose metal or wood bookcases and steel cabinets. The library has a large book collection displayed in oak book cases; loose tables and chairs are provided for students to read and study.

Stair construction throughout the building consists of concrete filled steel treads with steel nosings, steel risers, and steel stringers with steel handrails (31" high), guards (36" high), and two horizontal steel balusters. Since handrail and guard heights are not in compliance with today's codes, new handrail and guard systems are required for all stairs. The undersides of some risers and treads on Stairs A & D near the first floor level are rusted and failing. To stabilize the loosening concrete treads above the rusted supports, steel plates have been added to the treads. These stairs are not in good structural condition, they are weakening as the rust spreads, and they should be replaced. All stairs should be checked for rusting undersides of treads and risers.

Wall finishes in most areas of the main building and wings are block, which appears to have been recently painted in some areas. In some stairways and other isolated locations, paint is peeling and needs to be refinished. Minor cracking was seen in only one room in the Culinary Suite; this should be repaired and repainted. Other wall areas have some chipping or damages where chairs come in contact with block walls or uni-vents. The SPARC building has gypsum board walls with painted finishes that are less durable than the painted block, requiring some touch-up. Toilet room walls are painted block above glazed block wainscots, all in good condition. The auditorium has a stained wood wainscot that should be re-stained where damaged. There are large, curved, stained wood panels surrounding the stage on the sides and the ceiling. The queuing area outside the auditorium is part of the grand lobby entrance to the building. This space has full height dark green and beige marble walls, wood and glass display cases, light beige terrazzo floors, and full height curtain wall glazing to the outside. There are some minor chips in the panels, but generally the lobby and queuing area outside the auditorium is in good condition. The main cafeteria, faculty dining room, and the kitchen have full height glazed block walls which is highly durable and in good condition. Dirt stains along the base of the glazed block walls need to be cleaned to improve the appearance of the space. Low walls that separate seating areas in the main cafeteria are painted gypsum board which is damaged and in need of refinishing. Painted concrete columns throughout the cafeteria are chipped and in need of refinishing.

Floor finishes in the building consist VAT (vinyl asbestos tile) in most classrooms, all corridors, the auditorium, and cafeteria. This material is worn, dirty, cracked and broken in many places. VAT flooring should be tested for the presence of asbestos and if present the tiles should be removed using proper asbestos abatement procedures and replaced with 12"x12" VCT. The AVID area and a few isolated classrooms have VCT (vinyl composition tile) good condition. The gymnasium, dance instruction rooms 173/175, and auditorium stage have wood floors that are in good enough condition to be stripped, sanded, and refinished. Toilet rooms, the kitchen, stairways, boy's and girl's locker rooms, and mechanical rooms have sealed or painted concrete that is in poor condition and should be refinished. The lobby is finished in terrazzo, which is highly durable, in excellent condition, and has no major damages. The spacecraft room and surrounding rooms have a raised computer floor system, in good condition.

Ceiling finishes in all corridors, the auditorium, the cafeteria, and most classrooms consist mostly of 12"x12" ceiling tiles, glued to the floor deck above, with 1x4 fluorescent lighting fixtures suspended or surface mounted to the deck; the auditorium has recessed 12" square HID or incandescent lighting. Most ceiling tiles are in poor condition with patched tiles, water stains and loose tiles through the building. The AVID wing, the Library, and a variety of other classrooms have suspended 2x4 acoustical tile ceilings that are worn and aging, mostly in need of replacement. The gymnasium has exposed structural joists and concrete deck ceilings. Toilet rooms, stairways, and the kitchen have exposed painted concrete deck ceilings in good condition.

Furnishings in the building include the original folding wood seating in the auditorium which is still in use. Some (roughly 300) of the 1496 seats need to be repaired to operate properly; many are scratched and worn and need to be refinished to improve their appearance. Student lockers throughout the building need to be repainted. Fixed and loose tables and seating is used in the cafeteria. Loose seating is portable and is folded up when not needed. Fixed seating consists of plastic laminate booths and plastic

laminate tables with vinyl covered seating. All units have some damages which are not significant, but are noticeable. The District should investigate the possibility of repairing the minor damages to avoid having to replace all the fixed seating. The gymnasiums have aluminum bleachers with fiberglass seating, broken and unusable in many places; seats should be replaced where broken. The Drafting Room has adjustable portable drafting tables, now used as the computer tables, a sort of ironic twist to the originally intended use of manual pen/pencil drafting tables.

An 2500 lb capacity 3 stop elevator is present in this school, providing access to all floors.

There are two accessible entrances into the building, located at the doors facing Algon Avenue and the door facing Glendale Avenue into the SPARC wing. Accessible Route signage is required to direct people to these entrances.

MECHANICAL SYSTEMS

Plumbing Fixtures – The building is equipped with wall hung urinals (flush valve type), wall hung water closets (flush valve type), and wall hung lavatories with wheel handle faucets, of which many of the original plumbing fixtures remain in service. The fixtures are part of the original building construction of 1957 and should be replaced. with water efficient fixtures. Some bathrooms were equipped with floor drains while others were not.

Throughout the school the drinking fountains have been upgraded from the original fixtures, however they are not high/low ADA compliant. There are also wall hung electric water coolers in some areas of the school.. Drinking fountains are also located in the Cafeteria as well as near the bathrooms that serve the cafeteria. There are also recessed drinking fountains in the Gymnasium which are recessed style and are the original fixtures. Most of the fixtures are part of the original building construction of 1957 and should be replaced as they are nearing 60 years old and have surpassed their service life expectancy.

The lockers are equipped with gang showers and floor drains in the locker areas. Lavatories, water closets and urinals are the same types as the rest of the school.

Wall hung mop/service sinks are original and are available throughout the building for use by the janitorial staff. Service sinks are typically throughout the buildings. The fixtures are part of the original building construction of 1957 and need to be replaced. The Cafeteria's food prep/kitchen is equipped with one, three compartment stainless steel sink, three, two compartment sinks with wheel handle operated faucets and each of its sanitary connections is served by a grease trap located above the floor and is readily accessible. There are a total of four grease interceptors.. The kitchen is also equipped several hand sinks. The triple wash sinks and double compartment sinks show signs of normal usage. The grease interceptors show signs of minor corrosion. Chemicals are injected manually into the sanitizing basin.

In the science laboratories the lab prep sinks are original and should be replaced. The gas turrets are not active as they have been shutoff at the branch distribution, however the water supply is active. The condition of the compressed air turrets was not confirmed.

Domestic Water Distribution – There are two, 6" water services which supply domestic water to the building which enter the building with the crawl space. Each service is equipped with a backflow preventer (RPZA – reduced pressure zone assembly) and a by pass assembly. It appears that the 6" domestic water service piping is mostly soldered copper. There is a water meter on each service.. There are six instantaneous type natural gas fired water heaters, Paloma model PH24MDN (minimum input 37,7000 btuh, maximum 178,500 btuh) which serve the facilities restrooms and kitchen domestic hot water supply The water heaters were installed in 2007 and should be replaced within the next 5 years. All water heaters are located in the boiler mechanical equipment room. The hot water system is equipped with inline re-circulation pumps to serve each of the water heaters. A water softener was located in the boiler room for treating the boiler make up water system. The water softener system appears to be relatively new.Sanitary Waste - The sanitary waste piping system in the Main Building is extra heavy cast iron with lead and oakum seals and appears to be the original piping installed in the building. It is therefore recommended to inspect this piping and repair or replace sections as needed. The sanitary system leaves the building by gravity flow. Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building and connect to the underground site drainage system. Foundation drainage is handled by a sump pump in the lower section of the main boiler mechanical equipment room.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The 20,000 gallon, fuel storage tank is located below ground which was installed in 2009. The tank is equipped with a leak detection and level monitoring system which readout panel is located in the main boiler mechanical equipment room. The tank is located at the rear of the school prior to reaching the loading dock off Bleigh Avenue. The fuel pumps and controls have recently been replaced. The skid mount duplex pump assembly includes a heat exchanger. A 6" natural gas service enters the building in the main boiler mechanical equipment room. The natural gas main is welded, black steel piping while the branches are threaded, black steel.

Heat Generating Systems – Low pressure steam is generated at 15 lbs/sq. in. or less by three 8,744 MBH, Smith sectional, cast iron, 2 model 4500A-18 steam boiler. The three steam boilers serve the heating needs for the building. According to the building engineer two boilers are used on the coldest days of the year to meet the heating demands. All boilers are equipped with Power Flame burners, dual fuel, natural gas and number 2 fuel oil, model LNIC7-GO-30.These appear to be low NOx burners. Burner controls provide full modulation with electronic ignition and digital flame sensing. Burner oil pumps are driven by independent motors. The boilers were installed in 2005 and will not need to be replaced for 20 – 55 years. There is an Auburn fan for induced draft control on all of the boiler flues. Combustion air louvers serve the boiler room to provide combustion air for the boiler operation. The combustion air dampers/louvers are equipped with electric actuators. Burner oil pumps are driven by independent motors. 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. The oil supply to the burner is equipped with dual solenoid valves and strainer/disposable media filter.

Cooling Generating Systems – There are a few which have window air conditioning units, split systems and an RTU, but predominantly the building does not have cooling systems Three Mitsubishi split systems, model PUYA24NHA4, one Sanyo split system model CL2432A, four International Comfort split systems model CAE180HAA, one Rudd Air split system model UAND-048CAZ serve indoor air evaporator coils for select indoor spaces. In addition, a Lennox RTU, cooling only, model LCC360H2BN2Y resides on the roof. The Rudd unit appears to serve the IMC space which consist of exposed round ductwork with sidewall supply registers.

Distribution Systems – The building steam distribution piping is black steel with welded fittings. The condensate piping is Schedule 80 black steel with threaded fittings. The piping which has not been replaced as part of the boiler renovation has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes, however, according to the building engineer there have not been significant problems with steam trap failures. The District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping beyond the mechanical room over the next 5 years.

The boiler feed water is collected by a boiler feedwater pad mounted system and is treated with a combination of chemicals by a water treatment controller. There are condensate return receivers for the steam system as well which pump back to the feedwater system. The condensate return piping is black steel with threaded joints. The boiler feedwater assembly is equipped with four pumps and a pump control panel which were installed as part of the boiler replacement in 2005. It is recommended that the District conduct a steam trap survey to determine the quantity and condition of all steam taps. The boiler feed tank, pumps and associated components do not need to be replaced at this time and have approximately 20 -25 years of service life remaining.

The building uses unit ventilators with heating and cooling coils in the classrooms. Generally vertical unit ventilators are located at the building perimeter walls of the classrooms for the classroom with an exterior exposed wall. The classrooms are also provided with relief air vents which terminate at the roof to prevent over pressurization of the space from the outside air intakes of the unit ventilators.

The auditorium is served by heating and ventilating units with steam coils and outside air for ventilation. The units are located above the auditorium ceiling and are accessible from the roof. The supply system consists of concentric round diffusers and return air grilles located on the side walls near the floor by the outer aisles of the space. These units are part of the original building construction of 1957, are beyond their service life and should be replaced. It is recommended to replace these systems with a roof top mounted unit with an overhead supply air distribution system and return air ductwork and low return intake grilles.

The gymnasium is served by heating and ventilating units with steam coils and outside air for ventilation. There are four gyms, two boys and two girls. Two H&V units serve each of the gyms. Also, there are two heating and ventilating units of which each one is dedicated to serving the boys' locker and girls' locker area. The units are located in a mechanical in a third floor mechanical room. The units supply air through round concentric diffusers with a low return air grille within the gym space for each unit. These units are part of the original building construction of 1957, are beyond their service life and should be replaced. It is recommended to replace these systems with a roof top mounted unit with an overhead supply air distribution system and return air ductwork and low return intake grilles which would be protected from damage.

The cafeteria is served by a heating and ventilating unit with steam coils. The H&V unit is part of the original building equipment, has exceeded its life expectancy and should be replaced. A roof top mounted unit could be provided with heating and cooling coils as well as ventilation to meet the outside air ventilation requirements for the cafeteria seating area. The kitchen is equipped with three kitchen hoods of which one has make up air. Each kitchen hood exhaust system should be coupled with a heating and ventilating make up supply air system. Proper air flow pressurization and balancing should be performed for the seating area with respect to the kitchen to maintain the kitchen under negative pressurization.

Terminal & Package Units - There are roof mounted exhaust fans which serve the restrooms. Entryways and stair landings/stairwells are served by recessed steam convection units. Hallways are served with vertical fan coil units with steam coils of horizontally

mounted ceiling suspended fan coils with steam coils.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats drive the unit ventilators, the damper actuators and control valves. Wall mounted pneumatic thermostats on the corridor walls control the steam radiators. There is a duplex air compressor which generate control air for the temperature control system which are located in the boiler room, however the system is not run due to the amount of air leaks in the systems. A common refrigerated air dryer serves the compressors. The maintenance staff reports temperature control is generally lacking throughout the facility. The building control temperature control is manual by operating the boilers or shutting them down. Potential problems with oil, moisture or dirt in the pneumatic copper tubing can be one source of problems. The small rubber gaskets and tubing connections at control devices can become brittle over time and fail to compound control problems. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves, dampers and pneumatic actuators are over 65 years old and should be replaced. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL SYSTEMS

The main service switchgear, rated at 1200A, is installed in the Main substation room located near boiler area in the basement of the building. The main Service switchgear has two sets of 13.8 KV bus sections with a tie breaker in between. Each bus section is provided with 1200A load breaker switch and it is wired to receive power from different power source. The switchgear has operational logic that will close the tie breaker manually whenever power is lost on either side of the bus. Utility meters are installed in a separate enclosure adjacent to the switchgear assembly. The main service switchgear feed three substations (re. Substation#1, Substation#2, and Substation#3). Substation #1 is located in same room as service switchgear and it consists of two 1200A medium voltage load breakers, two oil type transformers, each rated at 750KVA, 13200V to 480/277V, 3PH, 4 wires, and a double ended low voltage 208/120V, 3PH, 4w switchboard. The low voltage switchboard is fed by two transformers. The switchboard has operational logic that will close the tie breaker automatically whenever power is lost on either side of the bus. Substation #2 and Substation #3 are located in crawl space of the building and each consist of two 1200A medium voltage load breakers, two oil type transformers, each rated at 500KVA, 13200V to 480/277V, 3PH, 4 wires, and a double ended low voltage switchboard. The low voltage switchboard is fed by two transformers. The switchboard has operational logic that will close the tie breaker automatically whenever power is lost on either side of the bus. It appears that service entrance, switchgears, transformers and distribution switchboards are old and have exceeded their useful life thus requiring replacement.

Power distribution is accomplished with approximately 22 main distribution power panels that are fed by the Low voltage switchboards. This distribution panel boards feed mechanical loads, as well as approximately 23 lighting/receptacle or power panels boards throughout the campus. These light/receptacle panel boards provide power for lights, receptacles, and other power loads. It appears that school power distribution system including distribution panels, panel boards with their respective feeder and branch circuit breakers have out-lived their useful lives thus are ready candidates for upgrade/replacement.

In general there are not enough receptacles installed in the classrooms. Recommendation is to have a minimum of two receptacles on classroom walls but the current installations fall short of this recommendation. Our observation shows that in some computer rooms, the computer desks are equipped with temporary power cords which is not safe for students therefore they should be replaced with permanent UL listed flush mounted type receptacles or using power pole for providing power outlets to the desks. Our observation also shows that general receptacles are used at the sink in science rooms which is valuation of the code. NEC recommends using GFCI type receptacles in area close to the sink.

Interior building spaces are illuminated by various types of lighting fixtures. 98% of fluorescent fixtures in the classrooms, corridors, offices are using outdated T12 Lamp thus requiring replacement. Auditorium is provided with outdated incandescent light with recessed lighting square trim with glass lens. These lighting fixtures have exceeded their useful life therefore should be replaced. Gymnasium is illuminated with pendent mounted metal halide fixtures that are of high energy consumption and are difficult to re-lamp.

Building is equipped with 120V manual fire alarm system. The system does not meet current fire alarm codes and should be replaced with an automatic fire alarm system.

The school telephone and data systems are new and working adequately. A main distribution frame (MDF) along whit a telephone PBX system (telephone within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines) located in main IT room servicing the communication system of the building. School also equipped with wifi system.

Separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately.

Each classroom is provided by intercom telephone service. The system is permit paging and intercom communication between main office phone to classroom phones, and classroom to main office, classroom to classroom, and to office. Outside line access from a classroom phone through the PBX is blocked. The system is interfaces with master clock system for class change signaling utilizing paging speakers. The system also equipped with a tone generator and input from program/clock controller.

Present clock system is not working. School is provided with time system controller consisting of combination of clock and speaker installed on the wall in each classrooms and a master time programmer. The clocks are not controlled properly with the central master controller. System is old and spare part may not be found in the market thus requiring replacement. The present bell system is working adequately.

Television System is not provided in the school.

Building is provided with security system including access control and video surveillance system. Door contacts are provide on major doors such as the main entrance and IMC. The security system is controlled by an intrusion alarm system. There are also sufficient number of security cameras are provided in the corridors, offices, library, and other critical areas. The cameras are controlled by a closed circuit television system (CCTV) located in main building. Both systems are working properly and no major deficiencies observed.

Emergency Power System is provided in the school. A 100KVA, 480/277V, three phase, 4W diesel generator manufactured by Kohler is installed in Boiler room in 1986 for feeding the emergency lighting and other emergency loads. Generator has been exceeded its useful life and should be replaced.

Uninterrupted Power System (UPS) is provided for Local Area Network in the main IT room.

Emergency lighting system is not adequate. There are not enough emergency lights provided in the corridors and other egress ways. There are no emergency lights provided in the ground floor corridors. Incandescent lamp holder with impact fluorescent lamps have been used for emergency lighting. This can be a safety hazard as the exposed bulb is vulnerable to breakage. 90% of the exit signs are old and obsolete and shall be replaced with battery pack exit sign.

Lightning Protection System is accomplished with a few air terminals mounted on the chimney on the roof and connected to the ground system. Further study is needed to verify that the air terminals provide the proper coverage.

A 20 horsepower rated hydraulic type elevator is in operation at the school. The elevator appears to be working properly.

Existing theater lighting and dimming system is accomplished with two rows of spot lights that are turned on and off by branch circuit breakers in a lighting panel located in stage area and not by dimmer. Theater lighting and controller are old and not meet the modern theatrical lighting system. In modern school auditorium, Stage requires front, upstage, high side, back lighting, scenery lighting and controllers by automatic dimmer bank controller. In addition to the stage lights, supplemental fluorescent lighting is also requires to be provided in stage area for lectures and testing. These supplemental lighting could be also turned off automatically by dimmer bank controls during performance.

Sound System in Auditorium is old and not comply with modern multipurpose auditorium sound system requirements recommended by ECE40020 (standard for reinforcement system design) and required to be replaced.

Campus areas, parking areas, and building perimeters have lighting that is adequate for personnel safety and security of property. However some of the lighting fixtures need to be repaired or replaced to make the system fully operational as designed.

The exterior building and parking areas are monitored by a video surveillance system with a good coverage.

Site paging system appears to have a sufficient number of speakers located on building exterior walls and working adequately.

GROUNDS SYSTEMS

Walkway paving in the front and side streets is constructed of 4'x4' (nominal) concrete panels; an estimated amount of 1000 sf are cracked and in need of replacement. Granite block exterior stairways in the front and side of the building have some cracked joints and need repointing. All handrails at exterior stairs are not sturdy nor compliant with today's building codes; they should be replaced with code compliant handrails. ADA accessible entrances are provided but require Accessible Route signage. The asphalt Faculty Parking lot is in need of repaviong and restriping. From the way cars are parked in the lot, it appears that the number of required parking spaces provided is inadequate to meet the full needs of faculty and staff, however there is no space for additional parking. Faculty, staff, and visiting parents not able to find spaces in the parking lot must park on the street. The asphalt driveway off Glendale Avenue to the kitchen delivery loading dock is cracked and broken, in need of repaving. The parking area along Glendale Avenue is cracked and needs repaving/replacement. The asphalt driveway that leads up to the mechanical area needs to be replaced. Sections of the concrete paving in the mechanical area including the large loading dock, dumpster area, and concrete parking area needs to be replaced.

There are two internal courtyards formed by the building. The fully landscaped courtyard has a memorial to Northeast High School World War II Veterans. Repairs are needed to clean up this area. The other courtyard is partially asphalt with a greenhouse. This courtyard is loaded with junk and the asphalt is in poor condition. The best use of this area needs to be considered; removal of the asphalt may be appropriate, replacing it with vegetation and a new greenhouse. Full repairs to this area cannot be estimated until it's use is determined, however removal of the crumbling asphalt and replacement with grass should be considered as a good start to better re-utilization.

Chain link fencing is intermittent around the site. Much of the fencing is beginning to rust, lean over and become detached from supports. Fencing along Cottman Avenue is not continuous, is only 4 ft tall, and it does not provide closure to the site; its removal instead of repair/replacement should be considered, in conjunction with better video surveillance to provide site security. Fencing and gates that enclose the kitchen loading dock, SPARC Building, and faculty parking areas are more-or-less in place and should be repaired to provide physical barriers in those areas. Fencing along Algon Avenue, the football stadium and field house controls access to those fields and should be maintained and to provide security.

RECOMMENDATIONS

- Repair concrete beam supporting exterior wall above, in boiler room (20 ft)
- Repaint peeling walls in boiler room (3,000 sf)
- Replace concrete chimney cap - lower chimney (16 sf)
- Repair failing brick joints on exterior walls in North Courtyard and outside 150 Wing (500 sf)
- Pointing over windows and 32 uni-vents in North Courtyard (1,000 ft)
- Replace coping panel missing from top of auditorium roof (12 ft)
- Powerwash brick building walls, exterior and North and South courtyards (100,000 sf)
- Replace spalling 2'x2' green granite panels between windows (30 ea)
- Replace windows (402 - 4'x8'; 6 - 8'x20'h; 45 - 4'x10')
- Repaint lockers located in hallways (assume lockers in 25% of corridor walls, both sides) (3000 ft (lockers)x5 ft h = 15,000 sf)
- Clean and reseal basement floor in mechanical rooms; clean and reseal concrete floors stairways, and toilet rooms (20,000 sf)
- Repaint exterior doors and frames; also provide new exit hardware. (60 3x7)
- Replace all original wood interior doors and hardware inside classrooms, closets, offices, etc. (80 each)
- Replace all original wood interior doors in hallways with code compliant fire rated doors with fire rated vision panels (250 each)
- Add door installed in gyp bd wall to eliminate dead end corridor (60 sf with a door)
- Provide security hardware for classrooms and offices, locking from inside classroom. (200)
- Remove and replace all steel doors, frames, and hardware; fire rated doors with panic hardware for stairs and corridors (50) 3x7 doors
- Replace 2 folding room dividing partitions (200 0sf + 1600 sf) in each gymnasium with new partitions (3600 sf)
- Repair and repaint cracked and damaged plaster walls and concrete columns throughout the building and cafeteria (1000 sf)
- Remove and replace stairway handrails and guards with code compliant systems (50x24 runs=1200 lf)
- Replace rusted flights of stairways in Stair A and D (4 flights)
- Strip, sand, repair and refinish all wood stage in auditorium (3000 sf)
- Replace VAT floors using proper asbestos abatement procedures if determined asbestos is present. (261,796 sf)
- Replace 12"x12" glued-on ceiling tiles in corridors and cafeteria (70,000 sf)
- Provide toilet room accessories where broken or missing (6 sets)
- Replace transite toilet room partitions with HDPE plastic partitions (assume 10)
- Repair and refinish damaged folding wood auditorium chairs; 33% of total = 500
- Replace handrails on exterior stairs (3 sets of 20 ft total length rails = 60 ft grand total length)
- Repair damaged bleachers in gymnasiums (100 seats)

- Replace science lab furniture (160 ft)

MECHANICAL

- Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.
- Replace all water closets in the building with lower flow fixtures, as the fixtures are original.
- Replace all urinals in the building with lower flow fixtures, as the fixtures are original.
- Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are well beyond their service life and most are NOT accessible type.
- Replace service sinks (janitor sinks) in the building.
- Replace science lab sinks in the building.
- Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.
- Replace four instantaneous natural gas fired water heaters.
- Inspect and replace the original as needed the domestic water piping in the building
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping in service for 49 years and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.
- Replace the steam convection.
- Replace the existing unit ventilators throughout the building with new units designed to provide adequate ventilation per ASHRAE Std 62. The new units shall be equipped with hot water / chilled water coils and integral heat exchanger.
- Provide ventilation, heating and cooling for the Gymnasium by replacing the existing heating and ventilating unit.
- Provide ventilation, heating and cooling for the Cafeteria by removing the existing heating and ventilating unit and installing a new modular constant volume air handling unit with heating, cooling, distribution ductwork and registers.
- Provide ventilation, heating and cooling for the Auditorium by removing the existing heating and ventilating and installing a new modular constant volume air handling unit with heating and cooling.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency.
- Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Install a new sprinkler system throughout the building

ELECTRICAL

- Upgrade the existing electrical service with a new service. Replace the existing switchgear with new 1200A, 13200v double bus switchgear consist of two 1200A incoming breaker switches, six 600A, 13200V outgoing interrupting swathes, one tie breaker and metering sections. Provide three Substations each consist of two 600A interrupter switches, two 1000KVA, 13200V to 120/208V step down transformers and one 3000A double ended low voltage switchboards.
- Replace the entire distribution system with new panels and new wiring /conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flash label on the electrical equipment. Estimated 15- 225A & 8-400A power panel and 23 lighting/receptacle panels.
- Install minimum two receptacles in each wall of class rooms. Replace floor mounted receptacles with UL listed receptacles or used power pole for receptacle installation. Replace general receptacles at sink with GFCI receptacles in since rooms
- Replace all the lighting fixtures in classrooms, offices, cafeteria, kitchen and electrical/mechanical rooms with new fluorescent lighting fixtures with T8 lamp. Replace gymnasium illuminates with LED high bay. Estimated 15 each. Replace auditorium lighting fixtures with LED down light fixtures. Estimated 40 each.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.
- Replace existing master clock system with new wireless clock system.
- Replace existing generator with new 100 KW generator. Provide new ATS and emergency distribution panel.
- Provide lightning protection studies to ascertain adequacy of existing systems.
- Provide new modern stage lighting with automatic dimmer bank controller in the Auditorium.
- Provide new sound system per ECE-40020 (standard for reinforcement system design) including a freestanding 19” rack backstage with mixer per amplifiers, digital media recording with playback capability, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone.

- Repair/replace exterior lighting fixtures. Estimated 9 lighting fixtures.

GROUNDS

- Regrout joints between limestone block tread/risers at misc. exterior stairs (18 treads, 30 ft long)
- Repair/Reconstruct landscape retaining walls leaning and broken along outside sitting area along Cottman Ave (20 ft long x 3 ft h.)
- Repave damaged sections of concrete walkway along Cottman and Glendale Avenues (1,000 sf)
- Repave sections of the concrete mechanical area parking lot and loading dock (3,000 sf)
- Repave part of parking lot and all of asphalt roadway from Glendale Ave to Mechanical areas and repave driveway to kitchen loading dock from Glendale Ave (17,000 sf)
- Repave parking lots on Glendale and all of Faculty Parking lot on Algon Avenue (75,000 sf)
- Remove asphalt and replant grass and landscaping in South courtyard (16,000 sf)
- Repair/replace sections of rusted and damaged chain link fence surrounding site (1,200 ft)

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B802001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S802001		

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	42.00 %	0.00 %	$0.00
A20 - Basement Construction	42.00 %	0.00 %	$0.00
B10 - Superstructure	42.00 %	0.01 %	$4,519.89
B20 - Exterior Enclosure	65.77 %	14.29 %	$3,186,360.40
B30 - Roofing	25.08 %	0.00 %	$256.41
C10 - Interior Construction	47.46 %	28.49 %	$2,450,041.82
C20 - Stairs	35.71 %	127.39 %	$620,585.82
C30 - Interior Finishes	59.06 %	36.90 %	$5,192,986.70
D10 - Conveying	14.29 %	0.00 %	$0.00
D20 - Plumbing	115.30 %	95.89 %	$5,778,508.84
D30 - HVAC	120.22 %	35.35 %	$9,516,285.14
D40 - Fire Protection	105.71 %	197.91 %	$4,949,685.89
D50 - Electrical	110.11 %	62.44 %	$11,388,698.85
E10 - Equipment	14.29 %	11.74 %	$579,896.93
E20 - Furnishings	12.50 %	57.36 %	$379,127.98
Totals:	**70.20 %**	**27.82 %**	**$44,046,954.67**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$27.30	S.F.	310,296	100	1957	2057		42.00 %	0.00 %	42			$8,471,081
A1030	Slab on Grade	$5.17	S.F.	310,296	100	1957	2057		42.00 %	0.00 %	42			$1,604,230
A2010	Basement Excavation	$4.36	S.F.	310,296	100	1957	2057		42.00 %	0.00 %	42			$1,352,891
A2020	Basement Walls	$9.91	S.F.	310,296	100	1957	2057		42.00 %	0.00 %	42			$3,075,033
B1010	Floor Construction	$85.34	S.F.	310,296	100	1957	2057		42.00 %	0.02 %	42		$4,519.89	$26,480,661
B1020	Roof Construction	$14.39	S.F.	310,296	100	1957	2057		42.00 %	0.00 %	42			$4,465,159
B2010	Exterior Walls	$43.20	S.F.	310,296	100	1957	2057		42.00 %	1.42 %	42		$190,853.93	$13,404,787
B2020	Exterior Windows	$27.52	S.F.	310,296	40	1957	1997	2057	105.00 %	32.62 %	42		$2,785,888.09	$8,539,346
B2030	Exterior Doors	$1.16	S.F.	310,296	25	1957	1982	2020	20.00 %	58.24 %	5		$209,618.38	$359,943
B3010105	Built-Up	$37.76	S.F.	204,188	20	2000	2020		25.00 %	0.00 %	5		$256.41	$7,710,139
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.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	204,188	30	2000	2030		50.00 %	0.00 %	15			$12,251
B3020	Roof Openings (1)	$0.06	S.F.	204,188	30	2000	2030		50.00 %	0.00 %	15			$12,251
C1010	Partitions	$21.05	S.F.	310,296	100	1957	2057		42.00 %	9.31 %	42		$607,817.49	$6,531,731
C1020	Interior Doors	$3.76	S.F.	310,296	40	1957	1997	2057	105.00 %	154.16 %	42		$1,798,615.78	$1,166,713
C1030	Fittings	$2.90	S.F.	310,296	40	1957	1997	2020	12.50 %	4.85 %	5		$43,608.55	$899,858

Site Assessment Report - B802001;Northeast

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 $
C2010	Stair Construction	$1.18	S.F.	310,296	100	1957	2057		42.00 %	169.49 %	42		$620,585.82	$366,149
C2020	Stair Finishes	$0.39	S.F.	310,296	30	1957	1987	2020	16.67 %	0.00 %	5			$121,015
C3010230	Paint & Covering	$13.21	S.F.	310,296	10	1957	1967	2020	50.00 %	2.80 %	5		$114,917.72	$4,099,010
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	500	10	1957	1967	2027	120.00 %	0.00 %	12			$3,650
C3020412	Terrazzo & Tile	$75.52	S.F.	3,000	50	1957	2007	2020	10.00 %	0.00 %	5			$226,560
C3020413	Vinyl Flooring	$9.68	S.F.	251,796	20	1957	1977	2037	110.00 %	162.90 %	22		$3,970,573.01	$2,437,385
C3020414	Wood Flooring	$22.27	S.F.	35,000	25	1957	1982	2020	20.00 %	4.14 %	5		$32,300.82	$779,450
C3020415	Concrete Floor Finishes	$0.97	S.F.	20,000	50	1957	2007	2050	70.00 %	396.34 %	35		$76,890.67	$19,400
C3030	Ceiling Finishes	$20.97	S.F.	310,296	25	1957	1982	2028	52.00 %	15.34 %	13		$998,304.48	$6,506,907
D1010	Elevators and Lifts	$1.28	S.F.	310,296	35	1957	1992	2020	14.29 %	0.00 %	5			$397,179
D2010	Plumbing Fixtures	$13.52	S.F.	310,296	35	1957	1992	2055	114.29 %	60.84 %	40		$2,552,266.36	$4,195,202
D2020	Domestic Water Distribution	$1.68	S.F.	310,296	25	1957	1982	2045	120.00 %	327.26 %	30		$1,705,972.82	$521,297
D2030	Sanitary Waste	$2.32	S.F.	310,296	30	1957	1987	2050	116.67 %	211.18 %	35		$1,520,269.66	$719,887
D2040	Rain Water Drainage	$1.90	S.F.	310,296	30	1957	1987	2050	116.67 %	0.00 %	35			$589,562
D3020	Heat Generating Systems	$18.67	S.F.	310,296	35	1957	1992	2055	114.29 %	0.00 %	40			$5,793,226
D3030	Cooling Generating Systems	$24.48	S.F.		0				0.00 %	0.00 %				$0
D3040	Distribution Systems	$42.99	S.F.	310,296	25	1957	1982	2045	120.00 %	23.00 %	30		$3,068,078.99	$13,339,625
D3050	Terminal & Package Units	$11.60	S.F.	310,296	20	1957	1977	2040	125.00 %	0.00 %	25			$3,599,434
D3060	Controls & Instrumentation	$13.50	S.F.	310,296	20	1957	1977	2040	125.00 %	153.93 %	25		$6,448,206.15	$4,188,996
D4010	Sprinklers	$7.05	S.F.	310,296	35			2052	105.71 %	226.26 %	37		$4,949,685.89	$2,187,587
D4020	Standpipes	$1.01	S.F.	310,296	35			2052	105.71 %	0.00 %	37			$313,399
D5010	Electrical Service/Distribution	$9.70	S.F.	310,296	30	1957	1987	2047	106.67 %	165.59 %	32		$4,984,180.00	$3,009,871
D5020	Lighting and Branch Wiring	$34.68	S.F.	310,296	20	1957	1977	2037	110.00 %	36.40 %	22		$3,916,735.26	$10,761,065
D5030	Communications and Security	$12.99	S.F.	310,296	15	1957	1972	2032	113.33 %	54.81 %	17		$2,209,393.69	$4,030,745
D5090	Other Electrical Systems	$1.41	S.F.	310,296	30	1957	1987	2047	106.67 %	63.63 %	32		$278,389.90	$437,517
E1020	Institutional Equipment	$4.82	S.F.	310,296	35	1957	1992	2020	14.29 %	38.77 %	5		$579,896.93	$1,495,627
E1090	Other Equipment	$11.10	S.F.	310,296	35	1957	1992	2020	14.29 %	0.00 %	5			$3,444,286
E2010	Fixed Furnishings	$2.13	S.F.	310,296	40	1957	1997	2020	12.50 %	57.36 %	5		$379,127.98	$660,930
								Total	**70.20 %**	**27.82 %**			**$44,046,954.67**	**$158,331,035**

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: C10 - Interior Construction — This system contains no images

Note:

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

Note:

painted block	200,000sf
painted lockers in corridors	15,000sf
wood wainscot in auditorium	3,000sf
glazed block in toilet rooms	6,000sf
marble entrance	<1,000sf

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

Note:

Concrete - 20,000sf 6%
Wood - 35,000sf 11%
VCT - 20,000sf 6%
VAT - 231,796sf 76%
Marble 3,000sf 1%
Carpet - 500sf <1%

System: C3030 - Ceiling Finishes — This system contains no images

Note:

Acoustical tile (glued, suspended, or metal)255,296 83%
Exposed structure painted (steel or concrete) 55,000 17%

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:	**$44,046,955**	**$0**	**$0**	**$0**	**$0**	**$25,751,416**	**$0**	**$0**	**$0**	**$0**	**$0**	**$69,798,371**
*** 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	$4,520	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,520**
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	$190,854	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$190,854**
B2020 - Exterior Windows	$2,785,888	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,785,888**
B2030 - Exterior Doors	$209,618	$0	$0	$0	$0	$459,001	$0	$0	$0	$0	$0	**$668,619**
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	$256	$0	$0	$0	$0	$9,831,981	$0	$0	$0	$0	$0	**$9,832,237**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings (1)	$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**

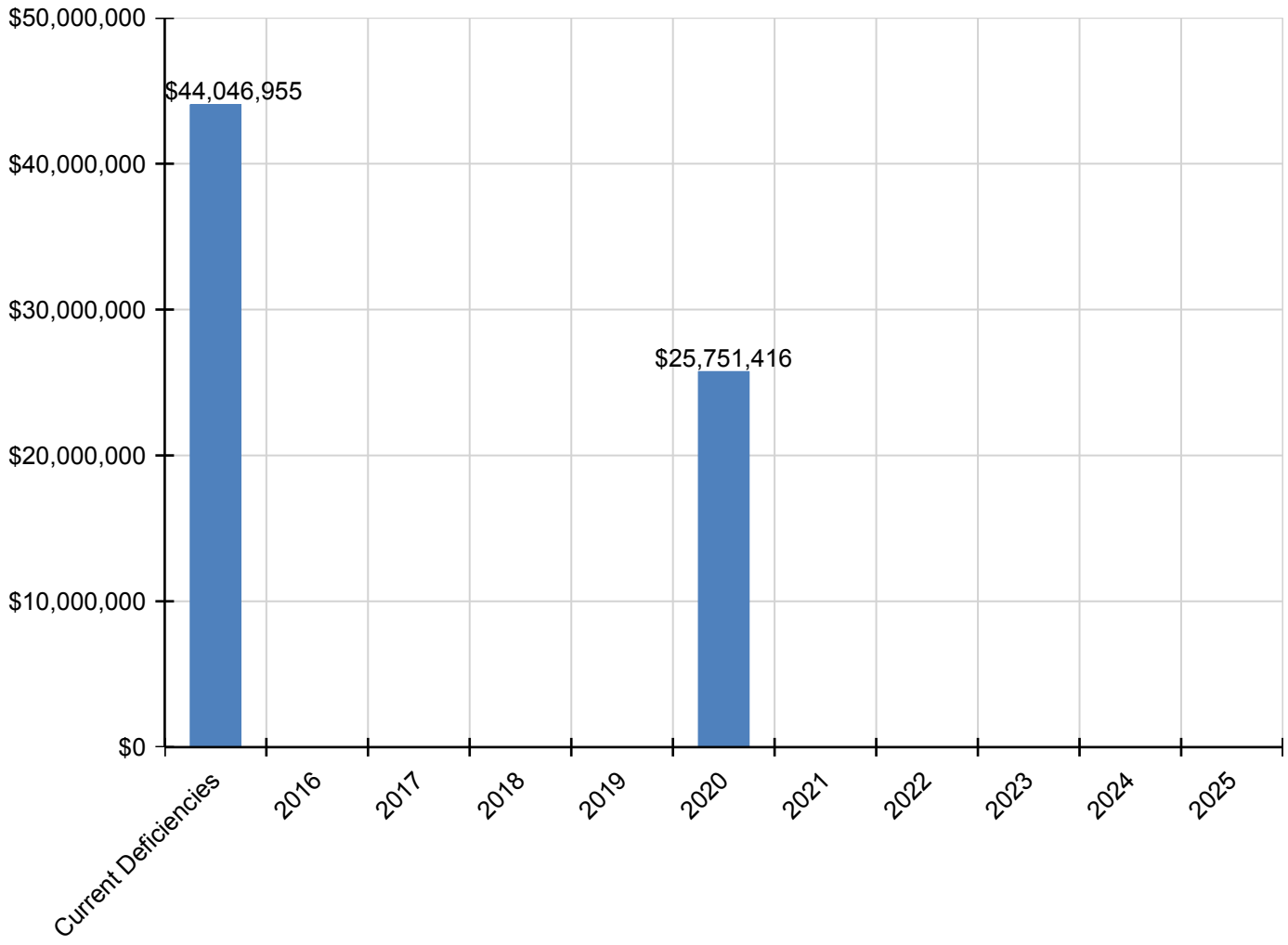
C1010 - Partitions	$607,817	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$607,817**
C1020 - Interior Doors	$1,798,616	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,798,616**
C1030 - Fittings	$43,609	$0	$0	$0	$0	$1,147,500	$0	$0	$0	$0	$0	**$1,191,109**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$620,586	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$620,586**
C2020 - Stair Finishes	$0	$0	$0	$0	$0	$154,319	$0	$0	$0	$0	$0	**$154,319**
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	$114,918	$0	$0	$0	$0	$5,227,064	$0	$0	$0	$0	$0	**$5,341,981**
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	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$288,910	$0	$0	$0	$0	$0	**$288,910**
C3020413 - Vinyl Flooring	$3,970,573	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,970,573**
C3020414 - Wood Flooring	$32,301	$0	$0	$0	$0	$993,956	$0	$0	$0	$0	$0	**$1,026,257**
C3020415 - Concrete Floor Finishes	$76,891	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$76,891**
C3030 - Ceiling Finishes	$998,304	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$998,304**
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	$506,483	$0	$0	$0	$0	$0	**$506,483**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$2,552,266	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,552,266**
D2020 - Domestic Water Distribution	$1,705,973	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,705,973**
D2030 - Sanitary Waste	$1,520,270	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,520,270**
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	$3,068,079	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,068,079**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$6,448,206	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,448,206**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D4010 - Sprinklers	$4,949,686	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,949,686**
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	$4,984,180	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,984,180**
D5020 - Lighting and Branch Wiring	$3,916,735	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,916,735**
D5030 - Communications and Security	$2,209,394	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,209,394**
D5090 - Other Electrical Systems	$278,390	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$278,390**
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	$579,897	$0	$0	$0	$0	$1,907,225	$0	$0	$0	$0	$0	**$2,487,122**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$4,392,158	$0	$0	$0	$0	$0	**$4,392,158**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$379,128	$0	$0	$0	$0	$842,820	$0	$0	$0	$0	$0	**$1,221,948**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

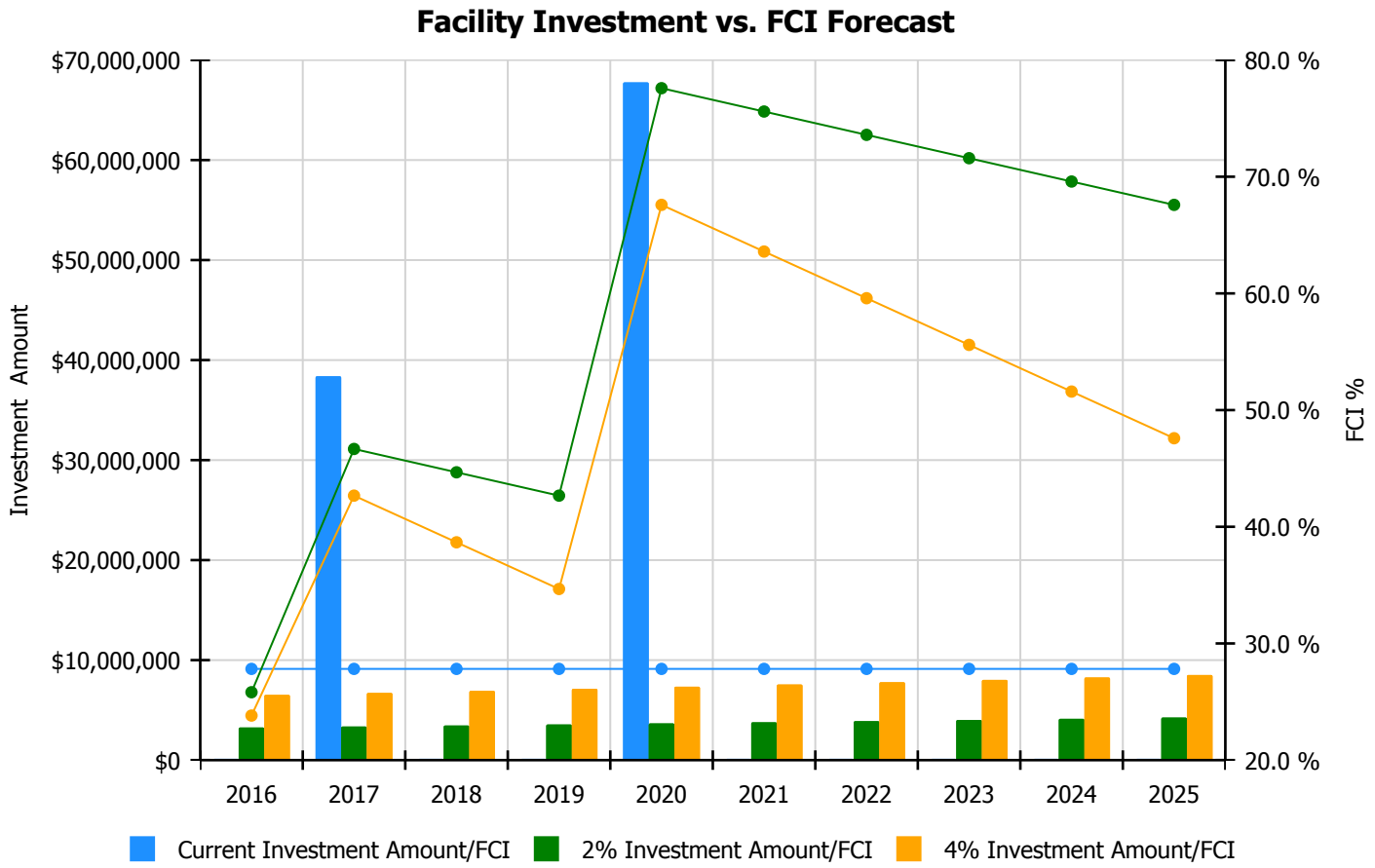
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

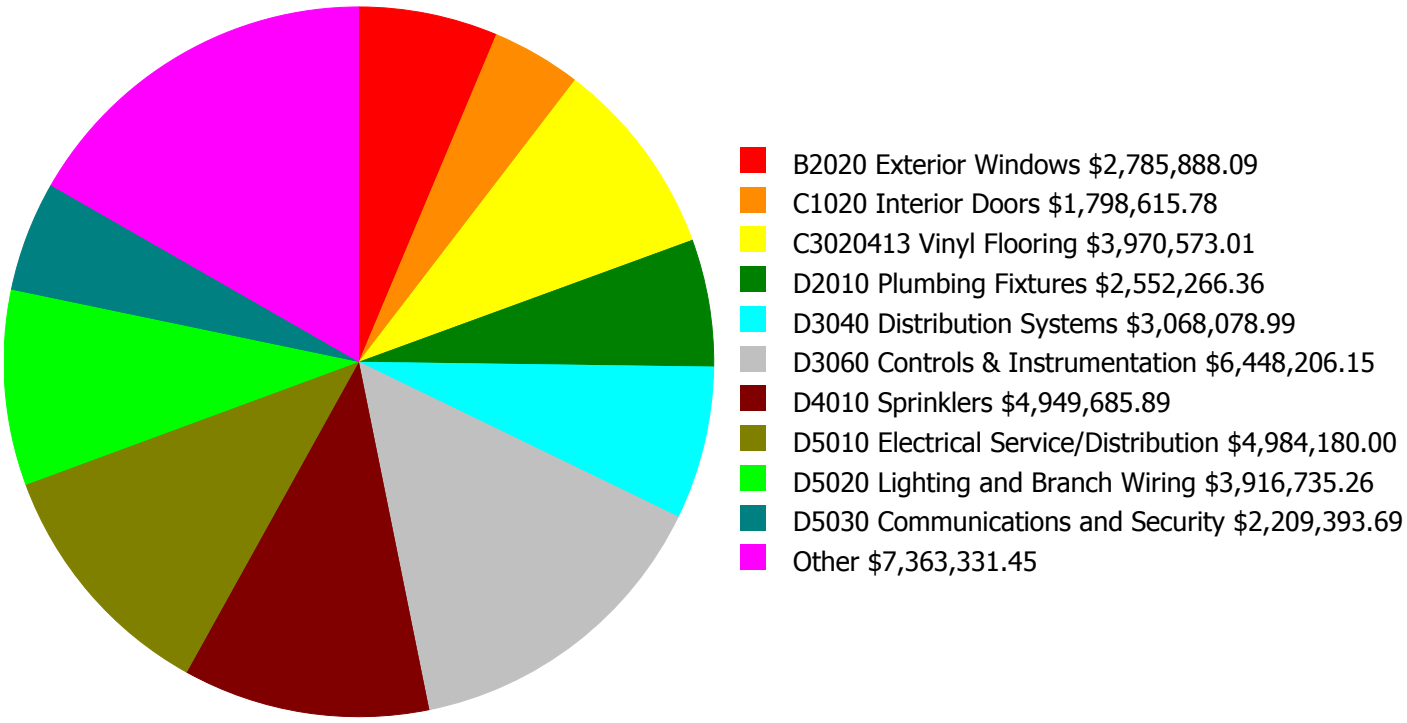
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 27.82%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$3,261,619.00	25.82 %	$6,523,239.00	23.82 %
2017	$38,379,126	$3,359,468.00	46.67 %	$6,718,936.00	42.67 %
2018	$0	$3,460,252.00	44.67 %	$6,920,504.00	38.67 %
2019	$0	$3,564,059.00	42.67 %	$7,128,119.00	34.67 %
2020	$67,765,773	$3,670,981.00	77.59 %	$7,341,963.00	67.59 %
2021	$0	$3,781,111.00	75.59 %	$7,562,221.00	63.59 %
2022	$0	$3,894,544.00	73.59 %	$7,789,088.00	59.59 %
2023	$0	$4,011,380.00	71.59 %	$8,022,761.00	55.59 %
2024	$0	$4,131,722.00	69.59 %	$8,263,444.00	51.59 %
2025	$0	$4,255,673.00	67.59 %	$8,511,347.00	47.59 %
Total:	**$106,144,899**	**$37,390,809.00**		**$74,781,622.00**	

Deficiency Summary by System

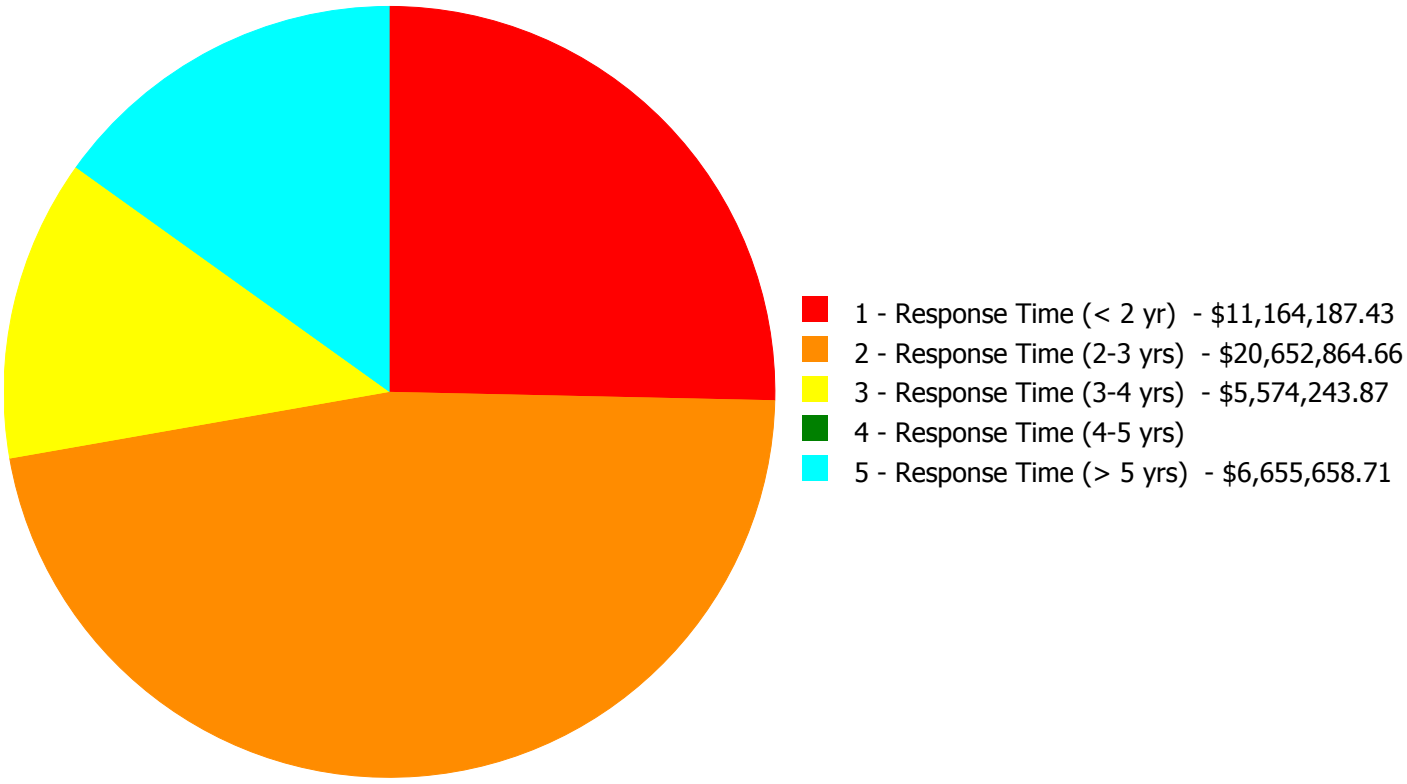
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $44,046,954.67

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: $44,046,954.67

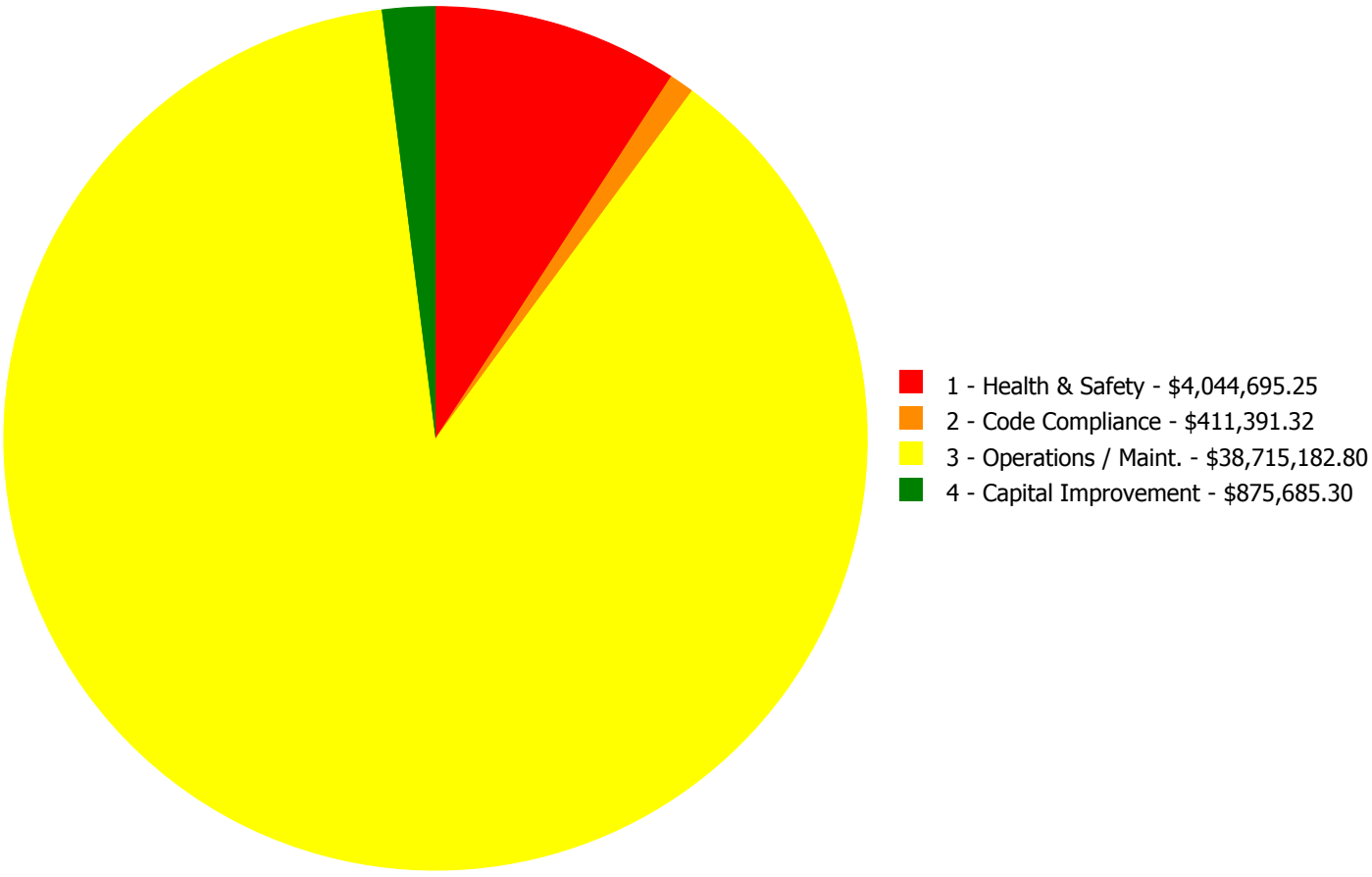
Deficiency By Priority Investment Table

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
B1010	Floor Construction	$0.00	$0.00	$4,519.89	$0.00	$0.00	$4,519.89
B2010	Exterior Walls	$46,334.83	$144,519.10	$0.00	$0.00	$0.00	$190,853.93
B2020	Exterior Windows	$0.00	$2,785,888.09	$0.00	$0.00	$0.00	$2,785,888.09
B2030	Exterior Doors	$0.00	$209,618.38	$0.00	$0.00	$0.00	$209,618.38
B3010105	Built-Up	$256.41	$0.00	$0.00	$0.00	$0.00	$256.41
C1010	Partitions	$5,906.81	$601,910.68	$0.00	$0.00	$0.00	$607,817.49
C1020	Interior Doors	$0.00	$1,798,615.78	$0.00	$0.00	$0.00	$1,798,615.78
C1030	Fittings	$0.00	$43,608.55	$0.00	$0.00	$0.00	$43,608.55
C2010	Stair Construction	$405,484.51	$215,101.31	$0.00	$0.00	$0.00	$620,585.82
C3010230	Paint & Covering	$0.00	$114,917.72	$0.00	$0.00	$0.00	$114,917.72
C3020413	Vinyl Flooring	$0.00	$3,970,573.01	$0.00	$0.00	$0.00	$3,970,573.01
C3020414	Wood Flooring	$0.00	$32,300.82	$0.00	$0.00	$0.00	$32,300.82
C3020415	Concrete Floor Finishes	$0.00	$76,890.67	$0.00	$0.00	$0.00	$76,890.67
C3030	Ceiling Finishes	$0.00	$998,304.48	$0.00	$0.00	$0.00	$998,304.48
D2010	Plumbing Fixtures	$0.00	$2,552,266.36	$0.00	$0.00	$0.00	$2,552,266.36
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$1,705,972.82	$1,705,972.82
D2030	Sanitary Waste	$0.00	$0.00	$1,520,269.66	$0.00	$0.00	$1,520,269.66
D3040	Distribution Systems	$2,270,528.00	$0.00	$797,550.99	$0.00	$0.00	$3,068,078.99
D3060	Controls & Instrumentation	$0.00	$6,448,206.15	$0.00	$0.00	$0.00	$6,448,206.15
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$4,949,685.89	$4,949,685.89
D5010	Electrical Service/Distribution	$1,732,276.67	$0.00	$3,251,903.33	$0.00	$0.00	$4,984,180.00
D5020	Lighting and Branch Wiring	$3,916,735.26	$0.00	$0.00	$0.00	$0.00	$3,916,735.26
D5030	Communications and Security	$2,209,393.69	$0.00	$0.00	$0.00	$0.00	$2,209,393.69
D5090	Other Electrical Systems	$278,389.90	$0.00	$0.00	$0.00	$0.00	$278,389.90
E1020	Institutional Equipment	$298,881.35	$281,015.58	$0.00	$0.00	$0.00	$579,896.93
E2010	Fixed Furnishings	$0.00	$379,127.98	$0.00	$0.00	$0.00	$379,127.98
	Total:	$11,164,187.43	$20,652,864.66	$5,574,243.87	$0.00	$6,655,658.71	$44,046,954.67

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: $44,046,954.67

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: B2010 - Exterior Walls

Location: exterior wall - granite panels
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and replace precast concrete wall features - SF of surface
Qty: 120.00
Unit of Measure: S.F.
Estimate: $40,883.68
Assessor Name: Craig Anding
Date Created: 01/23/2016

Notes: Replace spalling 2'x2' green granite panels between windows (30 ea)

System: B2010 - Exterior Walls

Location: chimney cap
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and replace precast concrete wall features - SF of surface
Qty: 16.00
Unit of Measure: S.F.
Estimate: $5,451.15
Assessor Name: Craig Anding
Date Created: 01/23/2016

Notes: Replace concrete chimney cap - lower chimney (16sf)

System: B3010105 - Built-Up

Location: coping above auditorium wall

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace stripping (gravel stop) at the edge of roof

Qty: 12.00

Unit of Measure: L.F.

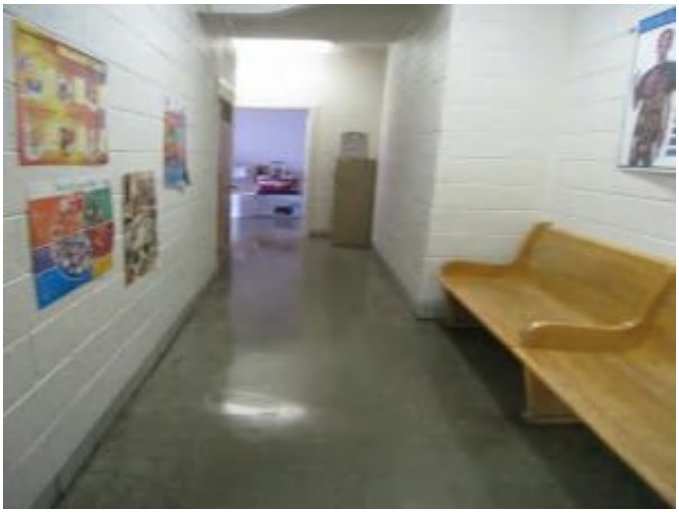
Estimate: $256.41

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Replace coping panel missing from top of auditorium roof (12ft)

System: C1010 - Partitions



Location: dead end corridor

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 60.00

Unit of Measure: S.F.

Estimate: $5,906.81

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Add door installed in gyp bd wall to eliminate dead end corridor (60sf with a door)

System: C2010 - Stair Construction

Location: stairways

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1,200.00

Unit of Measure: L.F.

Estimate: $404,550.34

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Remove and replace stairway handrails and guards with code compliant systems (50x24runs=1200lf)

System: C2010 - Stair Construction

Location: exterior handrails

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 60.00

Unit of Measure: L.F.

Estimate: $934.17

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace handrails on exterior stairs (3 sets of 20ft total length rails = 60ft grand total length)

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Conduct a steam trap survey and replace failed units.

Qty: 346,000.00

Unit of Measure: S.F.

Estimate: $1,135,264.00

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Conduct a steam trap survey and replace failed units.

Qty: 346,000.00

Unit of Measure: S.F.

Estimate: $1,135,264.00

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Hire a qualified contractor to examine the steam and condensate piping in service for 54 years and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $1,732,276.67

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace the entire distribution system with new panels and new wiring /conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flash label on the electrical equipment. Estimated 16 panel boards. Estimated 15- 225A 8-400A power panel and 23 lighting/receptacle panels.

System: D5020 - Lighting and Branch Wiring

Location: Entier Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

Estimate: $3,015,218.13

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace all the lighting fixtures in classrooms, offices, cafeteria, kitchen and electrical/mechanical rooms with new fluorescent lighting fixtures with T8 lamp. Replace gymnasium illuminates with LED high bay. Estimated 15each. Replace auditorium lighting fixtures with LED down light fixtures. Estimated 40each.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Wiring Devices (SF) - surface mounted conduit and boxes

Qty: 1.00

Unit of Measure: S.F.

Estimate: $875,685.30

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway, for data power, for the computer lab room.

System: D5020 - Lighting and Branch Wiring

Location: Exterior Building

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Exterior Lighting

Qty: 1.00

Unit of Measure: Ea.

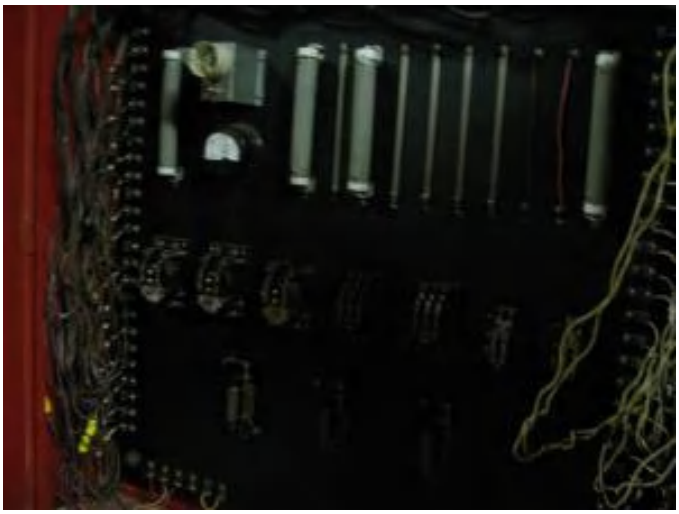
Estimate: $25,831.83

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Repair/replace exterior lighting fixtures. Estimated 9 lighting fixtures.

System: D5030 - Communications and Security



Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $1,441,307.32

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace clock/program system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $715,767.58

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace existing master clock system.

System: D5030 - Communications and Security

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $52,318.79

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Provide new sound system including a freestanding 19" rack backstage area with a mixer, amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers.

System: D5090 - Other Electrical Systems

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $250,154.96

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace existing generator with new 100KW generator.

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: $28,234.94

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Provide lightning protection studies to ascertain adequacy of existing systems.

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $298,881.35

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Provide new stage lighting and lighting controller in the Auditorium.

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

System: B2010 - Exterior Walls

Location: exterior walls

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Sooty and dirty walls - powerwash

Qty: 100,000.00

Unit of Measure: S.F.

Estimate: $109,373.52

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Powerwash brick building walls, exterior and North and South courtyards (100,000sf)

System: B2010 - Exterior Walls

Location: brick walls above windows and univents in courtyards

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Repoint horizontal or vertical joints at limestone coping

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $17,063.47

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Pointing over windows and 32 univents in North Courtyard (1,000ft)

System: B2010 - Exterior Walls

Location: exterior brick walls

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 500.00

Unit of Measure: S.F.

Estimate: $16,144.74

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Repair failing brick joints on exterior walls in North Courtyard and outside 150 Wing (500sf)

System: B2010 - Exterior Walls

Location: exterior wall - seating area

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 60.00

Unit of Measure: S.F.

Estimate: $1,937.37

Assessor Name: Craig Anding

Date Created: 01/25/2016

Notes: Repair/Reconstruct landscape retaining walls leaning and broken along outside sitting area along Cottman Ave (20ft long x 3 ft h.)

System: B2020 - Exterior Windows

Location: exterior windows

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 453.00

Unit of Measure: Ea.

Estimate: $2,785,888.09

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace windows (402 - 4'x8'; 6 - 8'x20'h; 45 - 4'x10')

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 60.00

Unit of Measure: Ea.

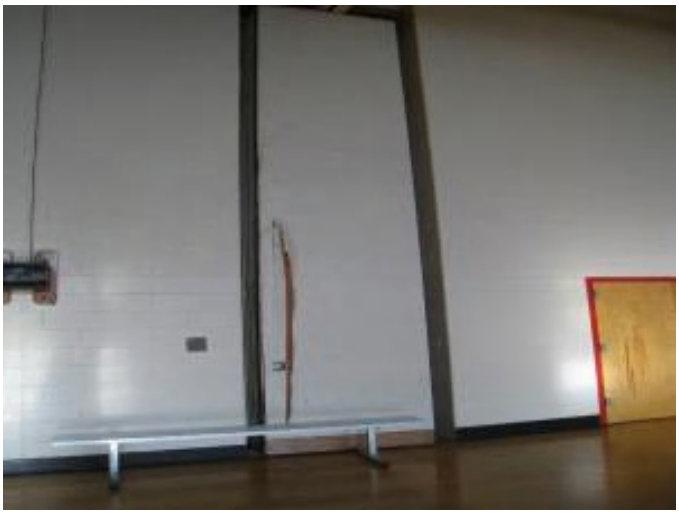
Estimate: $209,618.38

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Repaint exterior doors and frames; also provide new exit hardware. (60 3x7)

System: C1010 - Partitions



Location: gymnasiums - boy's and girl's

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Folding partition inoperable - remove and replace - select quality

Qty: 3,600.00

Unit of Measure: S.F.

Estimate: $601,910.68

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace 2 folding room dividing partitions (2000sf + 1600sf) in each gymnasium with new partitions (3600sf)

System: C1020 - Interior Doors

Location: corridor doors

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

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

Qty: 250.00

Unit of Measure: Ea.

Estimate: $1,192,646.78

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace all original wood interior doors in hallways, including soundproof music room doors, with code compliant fire rated doors with fire rated vision panels (250each)

System: C1020 - Interior Doors

Location: inside classroom doors (closets, offices)

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood doors with wood frame - per leaf

Qty: 80.00

Unit of Measure: Ea.

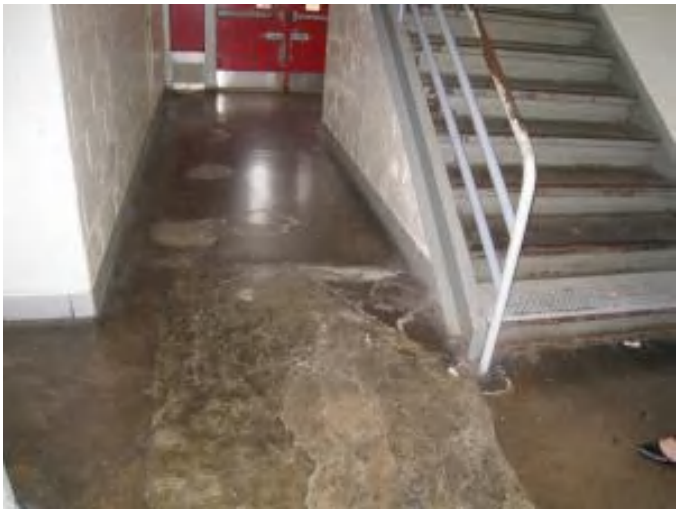
Estimate: $306,182.34

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace all original wood interior doors and hardware inside classrooms, closets, offices, etc. (80 each)

System: C1020 - Interior Doors



Location: interior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace hollow metal frames and doors

Qty: 50.00

Unit of Measure: Ea.

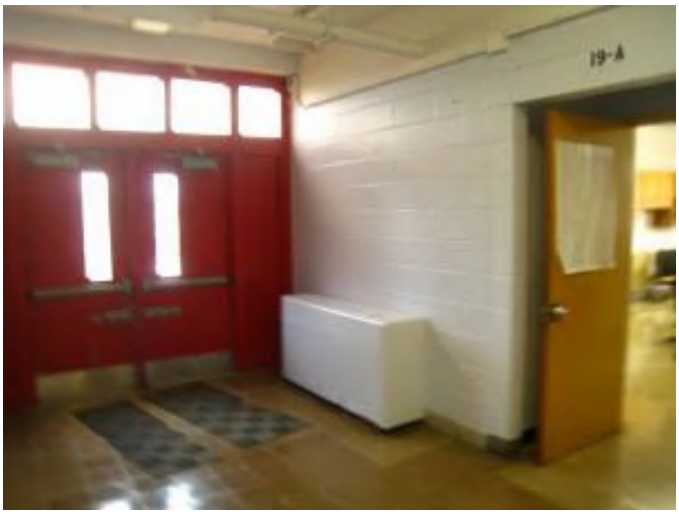
Estimate: $253,899.36

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Remove and replace all steel doors, frames, and hardware; fire rated doors with panic hardware for stairs and corridors (50) 3x7 doors

System: C1020 - Interior Doors



Location: corridor doors to classrooms and offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 200.00

Unit of Measure: Ea.

Estimate: $45,887.30

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Provide security hardware for classrooms and offices, locking from inside classroom. (200)

System: C1030 - Fittings

Location: toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace toilet partitions

Qty: 10.00

Unit of Measure: Ea.

Estimate: $25,664.05

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace transite toilet room partitions with HDPE plastic partitions (assume 10)

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 6.00

Unit of Measure: Ea.

Estimate: $17,944.50

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Provide toilet room accessories where broken or missing (6 sets)

System: C2010 - Stair Construction

Location: stairways

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace exterior enclosed stair tower egress stairs - per flight of stairs - stairs only

Qty: 4.00

Unit of Measure: Flight

Estimate: $215,101.31

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace rusted flights of stairways in Stair A and D (4 flights)

System: C3010230 - Paint & Covering

Location: hallways - lockers

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: 15,000.00

Unit of Measure: S.F.

Estimate: $81,158.72

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Repaint lockers located in hallways (assume lockers in 25% of corridor walls, both sides) (3000ft (lockers)x5ft h = 15,000sf)

System: C3010230 - Paint & Covering

Location: boiler room

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior concrete or CMU walls - SF of wall surface

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $22,506.00

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Repaint peeling walls in boiler room (3,000sf)

System: C3010230 - Paint & Covering

Location: cracked, damaged walls; cafeteria columns

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior concrete or CMU walls - SF of wall surface

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $11,253.00

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Repair and repaint cracked and damaged walls throughout the building and cafeteria (1500sf)

System: C3020413 - Vinyl Flooring

Location: VAT floors throughout the building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 261,796.00

Unit of Measure: S.F.

Estimate: $3,970,573.01

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace VAT floors using proper asbestos abatement procedures if determined asbestos is present. (261,796sf)

System: C3020414 - Wood Flooring

Location: stage

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $32,300.82

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Strip, sand, repair and refinish all wood stage in auditorium (3000sf)

System: C3020415 - Concrete Floor Finishes

Location: basement, stairways, toilet rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $76,890.67

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Clean and reseal basement floor in mechanical rooms; clean and reseal concrete floors stairways, and toilet rooms (20,000sf)

System: C3030 - Ceiling Finishes

Location: corridor ceiling tiles

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 80,000.00

Unit of Measure: S.F.

Estimate: $998,304.48

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace 12”x12” glued-on ceiling tiles in corridors, auditorium, and cafeteria (80,000sf)

System: D2010 - Plumbing Fixtures

Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 180.00

Unit of Measure: Ea.

Estimate: $1,343,186.61

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all water closets in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 110.00

Unit of Measure: Ea.

Estimate: $407,665.98

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all urinals in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 24.00

Unit of Measure: Ea.

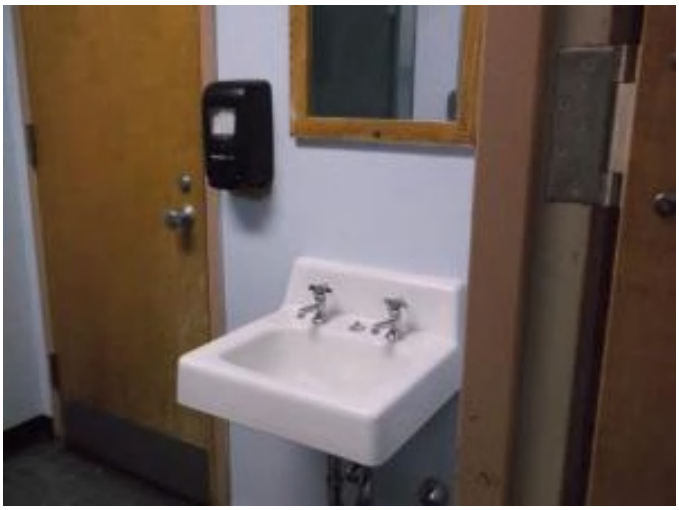
Estimate: $376,629.52

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace the integral refrigerated vertical water coolers and the drinking fountains. These units are well beyond their service life and most are NOT accessible type.

System: D2010 - Plumbing Fixtures



Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 90.00

Unit of Measure: Ea.

Estimate: $342,991.14

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace floor janitor or mop sink - insert the quantity

Qty: 12.00

Unit of Measure: Ea.

Estimate: $81,793.11

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace service sinks (janitor sinks) in the building.

System: D3060 - Controls & Instrumentation

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (350KSF)

Qty: 350,000.00

Unit of Measure: S.F.

Estimate: $6,448,206.15

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace the pneumatic controls for the HVAC systems with modern DDC modules or electric, valves and actuators to improve reliability and energy efficiency.

System: E1020 - Institutional Equipment

Location: science labs

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace lab base cabinets and countertops - per LF - add sinks in plumbing fixtures if required

Qty: 160.00

Unit of Measure: L.F.

Estimate: $281,015.58

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Replace science lab furniture (160ft)

System: E2010 - Fixed Furnishings

Location: auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 500.00

Unit of Measure: Ea.

Estimate: $328,333.58

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Repair and refinish damaged folding wood auditorium chairs; 33% of total = 500

System: E2010 - Fixed Furnishings

Location: gymnasiums - boy's and girl's

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace broken or non-functional bleachers - select number of tiers and power if applicable

Qty: 100.00

Unit of Measure: Seat

Estimate: $50,794.40

Assessor Name: Craig Anding

Date Created: 01/24/2016

Notes: Repair damaged bleachers in gymnasiums

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

System: B1010 - Floor Construction

Location: boiler room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Add structural beam under floor structure to strengthen structure - based on LF of beam

Qty: 20.00

Unit of Measure: L.F.

Estimate: $4,519.89

Assessor Name: Craig Anding

Date Created: 01/23/2016

Notes: Repair concrete beam supporting exterior wall above, in boiler room (20ft)

System: D2030 - Sanitary Waste

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+300KSF)

Qty: 346,000.00

Unit of Measure: S.F.

Estimate: $1,520,269.66

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace power roof ventilator (24" dia.)

Qty: 18.00

Unit of Measure: Ea.

Estimate: $797,550.99

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace exhaust fans and ductwork.

System: D5010 - Electrical Service/Distribution

Location: B802001;Northeast

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Substation

Qty: 3.00

Unit of Measure: Ea.

Estimate: $3,251,903.33

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchgear with new 1200A, 13200v double bus switchgear consist of two 1200A incoming breaker switches, six 600A, 13200V outgoing interrupting swathes, one tie breaker and metering sections. Provide three Substations each consist of two 600A interrupter switches, two 1000KVA, 13200V to 120/208V step down transformers and one 3000Adouble ended low voltage switchboards.

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout the building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace domestic water piping (350 KSF)
Qty: 346,000.00
Unit of Measure: S.F.
Estimate: $1,705,972.82
Assessor Name: Craig Anding
Date Created: 02/17/2016

Notes: Inspect and replace the original as needed the domestic water piping in the building.

System: D4010 - Sprinklers

Location: Throughout the building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install a fire protection sprinkler system
Qty: 346,000.00
Unit of Measure: S.F.
Estimate: $4,949,685.89
Assessor Name: Craig Anding
Date Created: 02/17/2016

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure. Install a new sprinkler system throughout the building

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, cast iron, gas & oil, hot water, 13,500 MBH	3.00	Ea.	Main boiler mechanical equipment room	Smith	4500A			35			$381,037.50	$1,257,423.75
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	4.00	Ea.	Sub station # 2 & 3					30	1957	2017	$42,849.00	$188,535.60
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 2000 amp, excl breakers	6.00	Ea.	Substation#1 & 2 & 3					30	1957	2017	$8,352.45	$55,126.17
D5010 Electrical Service/Distribution	Switchboards, pressure switch, 4 wire, 120/208 V, 3000 amp, incl CT compartment, excl CT's or PT's	6.00	Ea.	Substation#1 & 2 & 3					30	1957	2017	$54,523.80	$359,857.08
D5010 Electrical Service/Distribution	Transformer, oil-filled, 15 kV with taps, 480 V secondary 3 phase, 500 kVA, pad mounted	4.00	Ea.	SUbstation#2 & 3					30	1957	2017	$31,174.20	$137,166.48
D5010 Electrical Service/Distribution	Transformer, oil-filled, 15 kV with taps, 480 V secondary 3 phase, 750 kVA, pad mounted	2.00	Ea.	Substation#1					30	1957	2017	$38,253.60	$84,157.92
												Total:	**$2,082,267.00**

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:	Fieldhouse
Gross Area (SF):	16,452
Year Built:	1957
Last Renovation:	
Replacement Value:	$10,183,756
Repair Cost:	$4,754,017.23
Total FCI:	46.68 %
Total RSLI:	63.87 %

Description:

Facility Condition Assessment

November 2015

School District of Philadelphia
Northeast High School Fieldhouses
1601 Cottman Avenue
Philadelphia, PA 19111

16,452sf - Home Fieldhouse; 4000sf - Visitor Fieldhouse LN 08

Northeast High School Fieldhouses are located on the same property as the high school building with a street address of 1601 Cottman Avenue. The Football Field Houses were constructed at the same time as the original high school building in 1957 and remain in use today. The Home Fieldhouse building has men's and women's toilets and lockers, spectator toilet rooms, an apartment area, an announcement booth,and storage rooms. The Visitor Fieldhouse has storage rooms and spectator men's and women's toilets. Both fieldhouses have spectator bleachers built in front (Home Fieldhouse) and over (Visitor Fieldhouse) the fieldhouse buildings. The bleachers, support structure, football field, and track are discussed in a separate narrative. Joe Knuttel, the Field House Manger lead the inspection team through the buildings.

ARCHITECTURAL/STRUCTURAL SYSTEMS

Foundations for the Home Fieldhouse building were visible in the small boiler rooms. Walls are constructed of concrete and are in good condition with no cracks or spalling surfaces seen. Wall paint is peeling, however and is in need of repainting. The Visitor Fieldhouse building has no boiler room, no basement, and therefore foundations and footings could not be seen.

Floor slabs on grade are in fair condition with no major cracking or spalling. There are two small upper floor areas above the main floor of the Home Fieldhouse. One second floor area, located above the south end (boiler room) of the building is used as a apartment and was not inspected. The other second floor area is the grandstand announcement booth, located above the center of the building and above the bleachers (grandstands). The floor slabs in second floor areas are in good condition. The floor slabs in the Visitor Fieldhouse are also in fair condition. There is no second floor over the Visitor Fieldhouse building.

Roof construction over the Home Fieldhouses was not seen, but is thought to consist of concrete beams supporting a concrete roof deck. The roof construction over the Visitor Fieldhouse is integrated into the grandstand supports, which is an exposed, painted steel structure. Steel supports can be seen on the inside of the storage rooms in the Visitor Fieldhouse; these beams observed are probably smaller beams tied to the main grandstand support system.

Exterior walls of the Home and Visitor Fieldhouses are constructed brick. The two story corner (southeast corner) of the Home Fieldhouse has some stepped cracking. There is also some cracking along some of the lintels and near the northeast corner, but generally the brickwork is in fair condition. Some brickwork on the outside of the announcement booth above the roof level and below first floor windows needs to be repainted as it is worn and chipped. Vertical expansion joints at column lines are in poor condition with caulking and backer rods having fallen out of the joints exposing the interior to the outside elements. Caulking is failing around granite panels between bands of windows; panels need to be recaulked. The Visitor Fieldhouse has some brick cracking on the southeast corner; some cracking on the northeast corner has been recently repaired. Lintels on the east side of the Visitor Fieldhouse appeared to be in good condition.

Exterior doors for personnel use on the Home Fieldhouse are 3x7 hollow metal doors and frames that ae damaged, have faded paint and many are rusted. All doors, frames, and hardware need to be replaced with rugged FRP doors that the District has started using for replacement doors. The Home Fieldhouse has two galvanized steel roll-up doors for access into two storage rooms, which seem to be tightly closed and in good condition. The Visitor Fieldhouse has 10 painted steel rollup doors and a few personnel doors, all in need of repainting.

Windows in the Home Fieldhouse are constructed of a fixed/operable hopper-type, clear anodized aluminum frame system with single pane glass panels. Where windows had been broken, there were replaced with plexiglass vision panels, now becoming cloudy and scratched. Staining from degrading aluminum framing and security screens is washing down brick walls and is visible under some windows. Windows are in poor condition and should be replaced. The Visitor Fieldhouse has no windows.

Roofing over the Home Fieldhouse building is possibly over 10 years old. It is a black asphalt system with dark gravel embedded in the surface, internal roof drains, and painted aluminum coping along the top edge of the walls; some coping is coming loose and needs to be reattached. There are two expansion joints in good condition, breaking the main roof into three sections. Some of the counterflashing is failing along the brick wall outside the announcement booth at the roof level. Metal flashing around the perimeter and rooftop equipment is in good condition. The roof drain over the northwest corner when inspected on the inside appeared to have been recently leaking; it should be re-set to better seal the installation. The overall roof system is aging and approaching its normal useful life span, but is not yet failing – the roof covering is not the most serious issue with this building. The Visitor Fieldhouse has no roof, since it is completely covered by the aluminum grandstands.

Interior partitions in the Home fieldhouse are constructed of concrete masonry units (block) and glazed block wainscots in toilet rooms, showers, and workout areas. Locker room interior walls are structurally sound and in good physical condition, except for one cracked wall at a toilet room entrance, inside. Painted block walls need a new coat of paint; glazed block walls are good as is with some dirt staining along bottom edges in need of thorough cleaning. Interior walls in the Visitor fieldhouse are brick and block, in fair condition.

Interior doors are hollow metal with steel frames. All frames are steel and are damaged, rusted and beyond repair. All doors and frames require replacement.

Fittings consist of toilet partitions and accessories, all of which are in poor and failing condition. Partitions are constructed of plywood or transite. Transite should be tested to determine if it contains asbestos then removed if is asbestos-containing. Toilet partitions have missing and broken doors, broken partition dividers, and damaged/missing toilet room accessories. Full replacement of toilet room equipment is required.

There is an internal stair in the Home Fieldhouse, leading up to the apartment area (not inspected), above the boiler room. Access to

the announcement booth on the second floor of the Home Fieldhouse is by a door opening at the top of the bleachers.

Floor finishes throughout most of both buildings are exposed concrete surfaces that are stained, dirty, and in need of refinishing with new sealer or paint. In the Home Fieldhouse, the boy's workout area and the coach's office area are finished with carpet which needs to be removed and replaced with an athletic rubber/vinyl floor. The announcement booth has a concrete floor in need of new paint. Assuming the showers are to be used, the concrete floors in these wet areas should receive a non-slip coating. The floors in the apartment were not inspected. The floors in the Visitor Fieldhouse are all exposed concrete in need of re-sealing.

Ceilings in the Locker Facility in the Home Fieldhouse are painted exposed concrete. At least one area is damaged from what was as a previously leaking roof drain; these marks should be cleaned and repainted to improve the appearance. Ceilings in the Visitor Fieldhouse are exposed plaster (or concrete) with exposed rusted steel beams; it is recommended to repaint the rusted beams.

Furnishings in the Home Fieldhouse consist of lockers in boy's and girl's areas. Boy's lockers and wooden benches are old, damaged, and in need of repainting. Girl's lockers and benches are newer, in good condition and could continue to be used as is. Fences around locker areas inside the building are in fair condition and could continue to be used as is with a new coat of paint where damaged. There are no furnishings in the Visitor Fieldhouse

MECHANICAL SYSTEMS

Plumbing Fixtures – The Home Stands and Away Stands are equipped with wall hung trough urinals, wall hung water closets (flush valve type), individual showers (for the game officials located in the Home Stands), gang showers (within the team rooms for the Home Stands) and wall hung lavatories with wheel handle faucets. Many of the original plumbing fixtures remain in service, however, these fixtures have reached the end of their service life and should be replaced. New fixtures will provide lower water consumption and provide savings on water heating costs. The bathrooms were equipped with floor drains. The majority of the gang shower areas are being used for storage.

Within the building there are drinking fountains which are original fixtures and should be replaced. The replacement of all drinking fountains is recommended as the equipment is approximately 60 years old and beyond its service life.

For the Home Stands, wall hung service sinks are original and are available within the building for use by the janitorial staff. The sinks appear have exceeded their service life, and should be replaced. The concessions stand is equipped with a hand sink. There are no service sinks for the Away Stands.

Domestic Water Distribution – There is a 3" water meter which serves the Home Stands and is metered. The water service for the Away Stands is connected to the line from Summerdale Avenue and is not metered.. It appears that the domestic water service piping is mostly soldered copper. There is no double check backflow preventer (RPZA – reduced pressure zone assembly) on the service, it is recommended that one be added. The piping is copper with soldered joints. The distribution piping appears to be original and is at the end of its service life and is recommended to be inspected and repaired as needed.

For the Home Stands there are two natural gas fired, instantaneous water heaters manufactured by Paloma, model PH-24M-DN, minimum input 37,700 btuh, maximum input 178,500 btuh. There is no water heater for the Away Stands, The away stand system is drain prior to winter. . The instantaneous heater appears to have been installed recently and should function for another ten years. The hot water system is equipped with recirculation pumps to serve each water heater as well. An expansion tank is not installed on the system. The previous hot water generator tank has been abandoned in place. There is also a domestic water heater for the apartment. No nameplate data was available on the heater but the equipment appears to be original and should be replaced.

Sanitary Waste - Sanitary Waste - The sanitary waste piping system in the Home Stands and Away Stands is extra heavy cast iron with lead and oakum seals and appears to be the original piping installed in the building. It is therefore recommended to inspect this piping and repair or replace sections as needed. The sanitary system leaves the building by gravity flow.

Rain Water Drainage – For the Home Stands the rain water drains from the roof are routed through the building and connect to the underground site drainage system. There are overflow scuppers for the building. Area drains are clogged for the stands walkway. There are areas where the storm drainage pipe is uninsulated. The piping should be insulated as condensation will form on the piping as the space is not conditioned during the summer. For the Away Stands the roof is comprised of the bleachers.

Energy Supply - A 6" natural gas service enters the building at the main boiler mechanical equipment room. The natural gas main is threaded, black steel piping as well as the branches. There is no gas service to the Away Stands.

Heat Generating Systems – Low pressure steam is generated at 15 lbs/sq. in. or less to serve the heating needs for the Home Stands

building. There is no heating in the Away Stands facility. Steam is generated by one 1,852 MBH Crown boiler, model series 24, with a gas burner. The boiler is equipped with the manufacturer's natural gas burner. The boiler appears to be approximately 7 – 10 years in age and has most recently had its trim accessories replaced. There is no draft control on the boiler flue. There are no combustion air louvers serve the boiler room to provide combustion air for the boiler operation. The gas train serving the boiler appears to have code required venting of the regulators and dual solenoid valves with venting of the chamber between.

Distribution Systems – For the Home Stands, the building steam distribution piping is black steel with welded fittings. There is no heating for the Away Stands. The piping has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The steam piping is not insulated. The District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 5 years.

Condensate return is collected by gravity into a condensate receiver. The condensate receiver then pumps the condensate via a duplex pump system to the boiler. In general the building engineer reports that there have been no steam trap problems, however, it is recommended that the District conduct a steam trap survey to determine the quantity and condition of all steam taps.

The Home Stands restrooms are heated by steam convection units. The team rooms are heated by steam convectors and suspended horizontal fan coil units with steam coils and outside air for ventilation. Operable windows as well as fan coil units provide ventilation in the team rooms.

Terminal & Package Units - There are roof top and through the wall exhaust fans which serve the restrooms and team room area. The ductwork and associated fans are beyond their service life and should be replaced. The concession stand area is heated by an electric vertically suspended unit heater and is provided with exhaust. Showers are served by exhaust fans. The exhaust fans and ductwork in general should be replaced with the exception of the concessions area. The security room with the camera equipment is not cooled but should have cooling provided due to the heat which is generated by the equipment.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats drive the damper actuators and control valves. Wall mounted pneumatic thermostats on the corridor walls control the steam radiators. The maintenance staff reports temperature control is generally lacking throughout the facility. Potential problems with oil, moisture or dirt in the pneumatic copper tubing can be one source of problems. The small rubber gaskets and tubing connections at control devices can become brittle over time and fail to compound control problems. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves, dampers and pneumatic actuators are over 65 years old and should be replaced. These controls should be converted to DDC.

A new building automation system(BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL SYSTEMS

Site Electrical Service of the field house is from low voltage underground lines come from one pole-mounted power transformers with medium voltage primary (Voltage level unknown at this time) and 240VAC, 3 phase, 3 wires secondary and at an estimated available power of 112.5KVA on wooden pole along Rowland Ave.

The service entrance to the facility consist of a disconnect switch and utility meter, step down transformer estimated available power at 112.5KVA, 230V, 3 phase to 208/120V 3phase, 4 wire) and 400A main distribution panel is located in electrical room. Service entrance is old and exceeds their useful life and should be replaced.

The electrical distribution is accomplished with a few lighting/receptacle and power panel boards located in both home and visitor field houses. The power distribution system of the facility is old and has exceeded its useful life and should be replaced.

Existing receptacles in both building appeared to be very old and mostly are of none ground type receptacles. Recommendation is to remove the existing receptacles. Cover the outlet boxes with standard cover plates and Provide new 20A duplex receptacles where is required by national electrical cod (NEC).

Interior spaces in both buildings (home and visitor field houses) are provided with either metal shade incandescent light or fluorescent lighting fixtures. Our observation showed that about 85 percent of the fixtures are old and obsolete and lighting levels do not meet IES (Illuminating Engineering Society) recommended levels in most area. These lighting fixtures should be replaced with new lighting fixtures. Lighting fixtures in locker rooms and field booth have already been upgraded and are in acceptable condition.

All exterior wall mounted lighting fixtures are damaged and should be replaced in order to make the system operational as designed.

The Fire Alarm System is old and outdated. This facility is equipped with a 120V manual fire alarm system which does not meet current fire alarm codes.

Northeast high school field house is provided with separate utility telephone line and telephone system is working adequately.

Emergency lighting system is not provided adequately. A few emergency battery pack lighting fixtures are provided in locker rooms. No exit sign have been provided in the building.

Site Video Surveillance system is provided and monitored by a Closed Circuit Television (CCTV) system. There is one camera installed at each corner of the field houses. Site video surveillance appears to be operating adequately.

GROUNDS

Asphalt used as the walkways on the back sides and field sides of both fieldhouse for access to toilet rooms, storage rooms, and the announcement booth and is in poor condition with cracking over a large area of the paving. Concrete stairways and handrails down to the bottom of the bleachers (stands) and field area on the Home side are in fair condition with minimal damages.

RECOMMENDATIONS

Home Side Field House

- Repair cracked exterior northeast and southeast building corners (300 sf)
- Repaint brick below windows and at roof (2500 sf)
- Repair counter flashing along brick on roof (20 ft)
- Re-attach aluminum coping (20 ft)
- Repaint lintels (1300 ft)
- Replace exterior windows - (280) 18”x42” aluminum frame and glass hopper-style windows; + (9) 3’6”x6’ single hung windows
- Replace all exterior doors and frames (10 3x7)
- Repaint galvanized rollup doors, lintels, and steel jamb guards (2) 12’x12’
- Refinish all interior concrete floor slabs (16,452 sf)
- Repaint all interior walls (16,000sf)
- New interior doors and hardware (15 3x7)
- Replace carpet in coach’s office area and exercise room (1,000 sf)
- Replace toilet partitions- estimated total count for all toilet rooms: (21 toilet, 6 urinal, 16 lavatories)
- Replace toilet room accessories – est. (21 toilet paper, 16 soap, 8 paper towel, 8 waste cans)

Visitor Side Field House and Stands

- Replace windows (4 18”x42”)
- Repaint hollow metal doors and frames (4) 3x7
- Repaint galvanized rollup doors, lintels, and steel jamb guards(10) 12’x12’
- Refinish concrete slabs (4,000sf)
- Repaint ceilings in toilet rooms (500 sf)
- Replace toilet room partitions (8 toilets, 7 lavatories)
- Replace toilet room accessories – est. (8 toilet paper, 6 soap, 4 paper towel, 4 waste cans)

Mechanical

- Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.
- Replace all water closets in the building with lower flow fixtures, as the fixtures are original.
- Replace all urinals in the building with lower flow fixtures, as the fixtures are original.
- Replace the integral refrigerated vertical water coolers and the drinking fountains. These units are well beyond their service life

and most are NOT accessible type.
- Replace service sinks (janitor sinks) in the building.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Inspect and replace the original as needed the domestic water piping in the building.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping in service for 85 years and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years
- Replace the steam condensate return system.
- Replace exhaust fans and ductwork.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules or electric, valves and actuators to improve reliability and energy efficiency.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Install a new sprinkler system throughout the building

ELECTRICAL

- Upgrade the existing electrical service with a new service. Replace the existing switchgear with new 1200A, 208/120V switchboard with 400A main breaker.
- Replace the entire distribution system with new panels and new wiring /conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flash label on the electrical equipment. Estimated 8 panel boards.
- Replace all receptacles with new 120V, 20Aduplex receptacles.
- Replace lighting fixtures where required with new fluorescent lighting fixtures with T8 lamp.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors and initiating devices in recommended areas per NEC.
- Provide emergency battery pack lighting fixtures in public area and exit doors. Estimated 15 total.

GROUNDS

- Repave asphalt walkways used for pedestrian access around the field houses on field sides and back sides of Home and Visitor Field houses (23,000 sf)

Attributes:

General Attributes:			
Active:	Open	Bldg ID:	B802901
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S802001		

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	42.00 %	0.00 %	$0.00
A20 - Basement Construction	42.00 %	0.00 %	$0.00
B10 - Superstructure	42.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	58.99 %	62.15 %	$1,620,426.92
B30 - Roofing	24.70 %	0.47 %	$3,013.55
C10 - Interior Construction	67.50 %	86.32 %	$121,853.79
C30 - Interior Finishes	62.58 %	26.53 %	$144,877.74
D20 - Plumbing	116.70 %	121.93 %	$489,451.60
D30 - HVAC	121.47 %	123.96 %	$1,352,346.45
D40 - Fire Protection	105.71 %	201.05 %	$343,330.72
D50 - Electrical	109.57 %	116.21 %	$678,716.46
E10 - Equipment	52.00 %	0.00 %	$0.00
E20 - Furnishings	12.50 %	0.00 %	$0.00
Totals:	**63.87 %**	**46.68 %**	**$4,754,017.23**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$5.42	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$89,170
A1030	Slab on Grade	$17.93	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$294,984
A2010	Basement Excavation	$0.62	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$10,200
A2020	Basement Walls	$8.99	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$147,903
B1010	Floor Construction	$64.58	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$1,062,470
B1020	Roof Construction	$56.76	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$933,816
B2010	Exterior Walls	$112.94	S.F.	16,452	100	1957	2057		42.00 %	2.23 %	42		$41,486.10	$1,858,089
B2020	Exterior Windows	$43.47	S.F.	16,452	40	1957	1997	2057	105.00 %	215.60 %	42		$1,541,910.99	$715,168
B2030	Exterior Doors	$2.07	S.F.	16,452	25	1957	1982	2020	20.00 %	108.73 %	5		$37,029.83	$34,056
B3010105	Built-Up	$37.76	S.F.	16,452	20	2000	2020		25.00 %	0.49 %	5		$3,013.55	$621,228
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.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$1.43	S.F.	16,452	30	1957	1987	2020	16.67 %	0.00 %	5			$23,526
C1010	Partitions	$5.17	S.F.	16,452	100	1957	2057		42.00 %	0.00 %	42			$85,057
C1020	Interior Doors	$1.05	S.F.	16,452	40	1957	1997	2057	105.00 %	414.23 %	42		$71,558.81	$17,275
C1030	Fittings	$2.36	S.F.	16,452	30	1957	1987	2047	106.67 %	129.54 %	32		$50,294.98	$38,827
C3010230	Paint & Covering	$12.84	S.F.	16,452	10	1957	1967	2027	120.00 %	26.06 %	12		$55,058.57	$211,244

Site Assessment Report - B802901;Northeast - Field Houses

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 $
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.19	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	1,000	10	1957	1967	2027	120.00 %	153.30 %	12		$11,190.76	$7,300
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.		20				0.00 %	0.00 %				$0
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$1.08	S.F.	15,452	50	1957	2007	2067	104.00 %	471.17 %	52		$78,628.41	$16,688
C3030	Ceiling Finishes	$18.90	S.F.	16,452	25	1957	1982	2020	20.00 %	0.00 %	5			$310,943
D2010	Plumbing Fixtures	$14.10	S.F.	16,452	35	1957	1992	2055	114.29 %	107.81 %	40		$250,097.10	$231,973
D2020	Domestic Water Distribution	$6.64	S.F.	16,452	25	1957	1982	2045	120.00 %	111.33 %	30		$121,616.60	$109,241
D2030	Sanitary Waste	$3.66	S.F.	16,452	25	1957	1982	2045	120.00 %	195.53 %	30		$117,737.90	$60,214
D3020	Heat Generating Systems	$4.94	S.F.	16,452	35	1957	1992	2055	114.29 %	0.00 %	40			$81,273
D3030	Cooling Generating Systems	$7.51	S.F.		0				0.00 %	0.00 %				$0
D3040	Distribution Systems	$36.27	S.F.	16,452	25	1957	1982	2045	120.00 %	140.35 %	30		$837,496.24	$596,714
D3050	Terminal & Package Units	$11.60	S.F.	16,452	20	1957	1977	2040	125.00 %	0.00 %	25			$190,843
D3060	Controls & Instrumentation	$13.50	S.F.	16,452	20	1957	1977	2040	125.00 %	231.81 %	25		$514,850.21	$222,102
D4010	Sprinklers	$8.71	S.F.	16,452	35			2052	105.71 %	239.59 %	37		$343,330.72	$143,297
D4020	Standpipes	$1.67	S.F.	16,452	35			2052	105.71 %	0.00 %	37			$27,475
D5010	Electrical Service/Distribution	$4.40	S.F.	16,452	30	1957	1987	2047	106.67 %	472.37 %	32		$341,945.55	$72,389
D5020	Lighting and Branch Wiring	$23.92	S.F.	16,452	20	1957	1977	2037	110.00 %	54.84 %	22		$215,801.53	$393,532
D5030	Communications and Security	$6.72	S.F.	16,452	15	1957	1972	2032	113.33 %	109.42 %	17		$120,969.38	$110,557
D5090	Other Electrical Systems	$0.46	S.F.	16,452	20	1957	1977	2027	60.00 %	0.00 %	12			$7,568
E1020	Institutional Equipment	$42.18	S.F.	16,452	25	1957	1982	2028	52.00 %	0.00 %	13			$693,945
E1090	Other Equipment	$35.83	S.F.	16,452	25	1957	1982	2028	52.00 %	0.00 %	13			$589,475
E2010	Fixed Furnishings	$10.65	S.F.	16,452	40	1957	1997	2020	12.50 %	0.00 %	5			$175,214
								Total	**63.87 %**	**46.68 %**			**$4,754,017.23**	**$10,183,756**

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: C10 - Interior Construction — This system contains no images

Note: Home side: painted block 100%
Visitor side: exposed brick and block 100%

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

Note: Home side: carpet 6%
sealed concrete 94%
Visitor side: sealed concrete 100%

System: D2010 - Plumbing Fixtures — This system contains no images

Note: both buildings: painted deck above 100%

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$4,754,017**	**$0**	**$0**	**$0**	**$0**	**$1,485,566**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,239,583**
*** 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	$41,486	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$41,486**
B2020 - Exterior Windows	$1,541,911	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,541,911**
B2030 - Exterior Doors	$37,030	$0	$0	$0	$0	$43,428	$0	$0	$0	$0	$0	**$80,457**
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	$3,014	$0	$0	$0	$0	$792,190	$0	$0	$0	$0	$0	**$795,203**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$30,001	$0	$0	$0	$0	$0	**$30,001**
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**

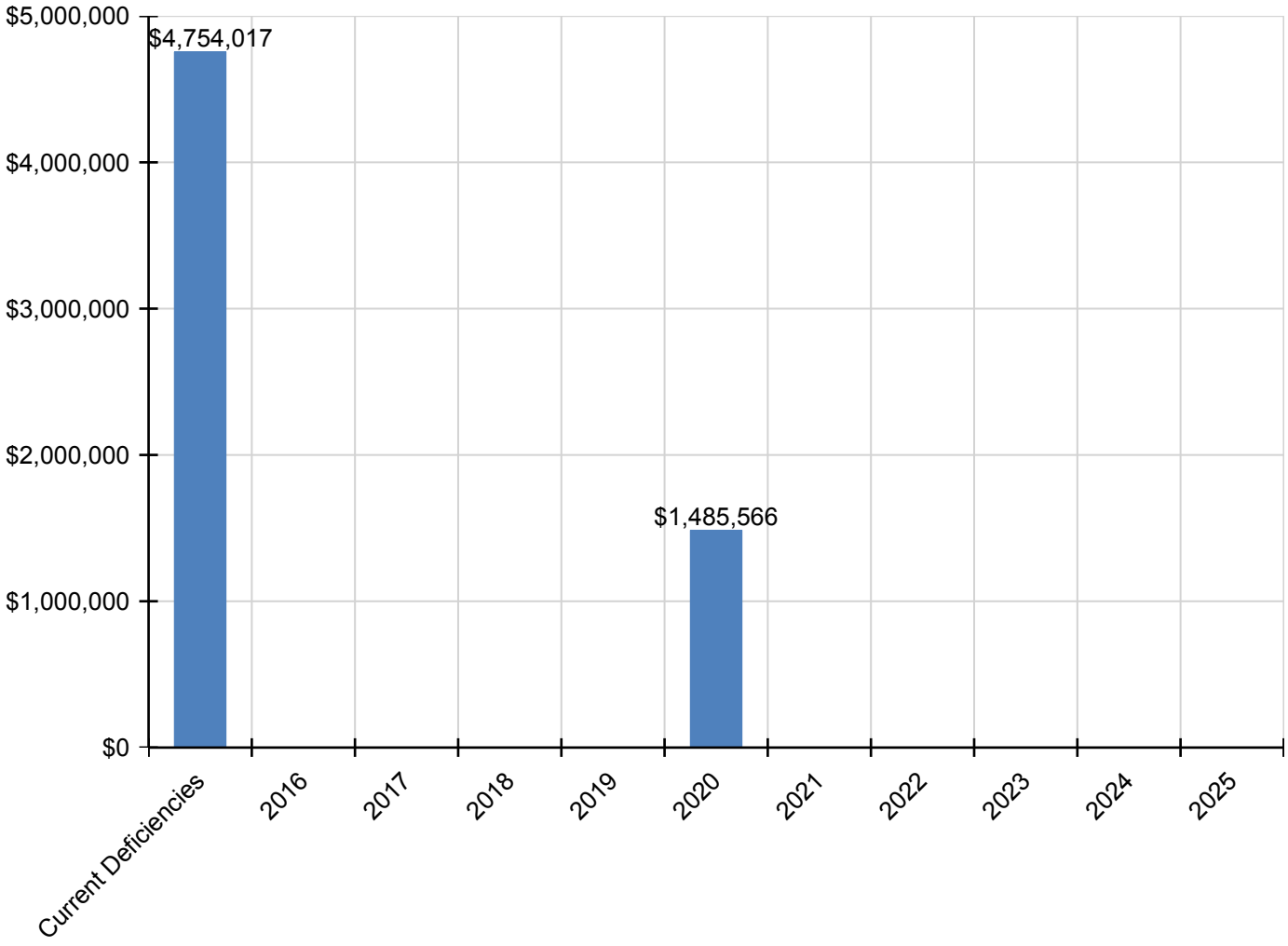
C1020 - Interior Doors	$71,559	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$71,559**
C1030 - Fittings	$50,295	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$50,295**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$55,059	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$55,059**
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	$11,191	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,191**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$78,628	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$78,628**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$396,515	$0	$0	$0	$0	$0	**$396,515**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$250,097	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$250,097**
D2020 - Domestic Water Distribution	$121,617	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$121,617**
D2030 - Sanitary Waste	$117,738	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$117,738**
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	$837,496	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$837,496**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$514,850	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$514,850**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$343,331	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$343,331**
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	$341,946	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$341,946**
D5020 - Lighting and Branch Wiring	$215,802	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$215,802**
D5030 - Communications and Security	$120,969	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$120,969**
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	$223,433	$0	$0	$0	$0	$0	**$223,433**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

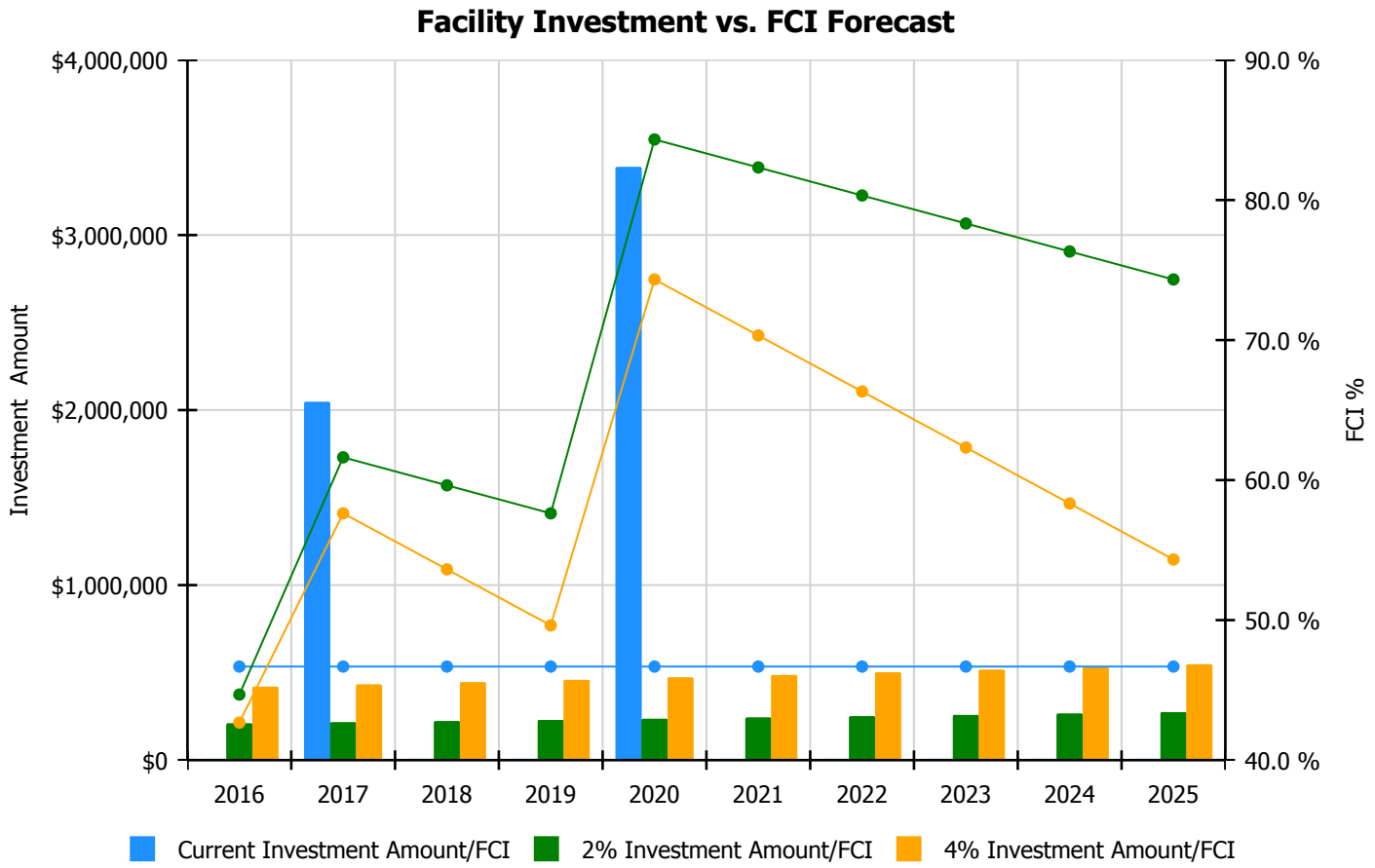
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

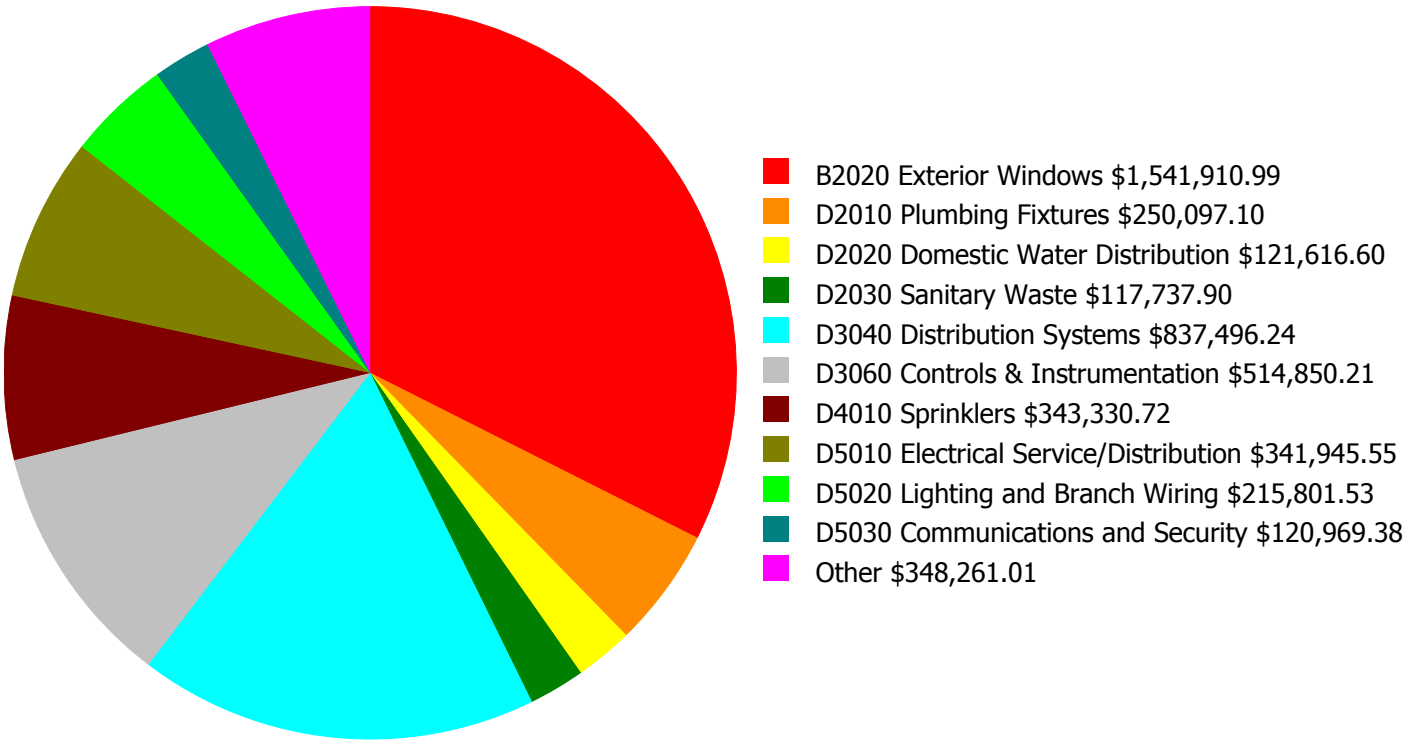
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 46.68%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$209,785.00	44.68 %	$419,571.00	42.68 %
2017	$2,046,610	$216,079.00	61.63 %	$432,158.00	57.63 %
2018	$0	$222,561.00	59.63 %	$445,123.00	53.63 %
2019	$0	$229,238.00	57.63 %	$458,476.00	49.63 %
2020	$3,388,627	$236,115.00	84.33 %	$472,231.00	74.33 %
2021	$0	$243,199.00	82.33 %	$486,397.00	70.33 %
2022	$0	$250,495.00	80.33 %	$500,989.00	66.33 %
2023	$0	$258,010.00	78.33 %	$516,019.00	62.33 %
2024	$0	$265,750.00	76.33 %	$531,500.00	58.33 %
2025	$0	$273,722.00	74.33 %	$547,445.00	54.33 %
Total:	**$5,435,236**	**$2,404,954.00**		**$4,809,909.00**	

Deficiency Summary by System

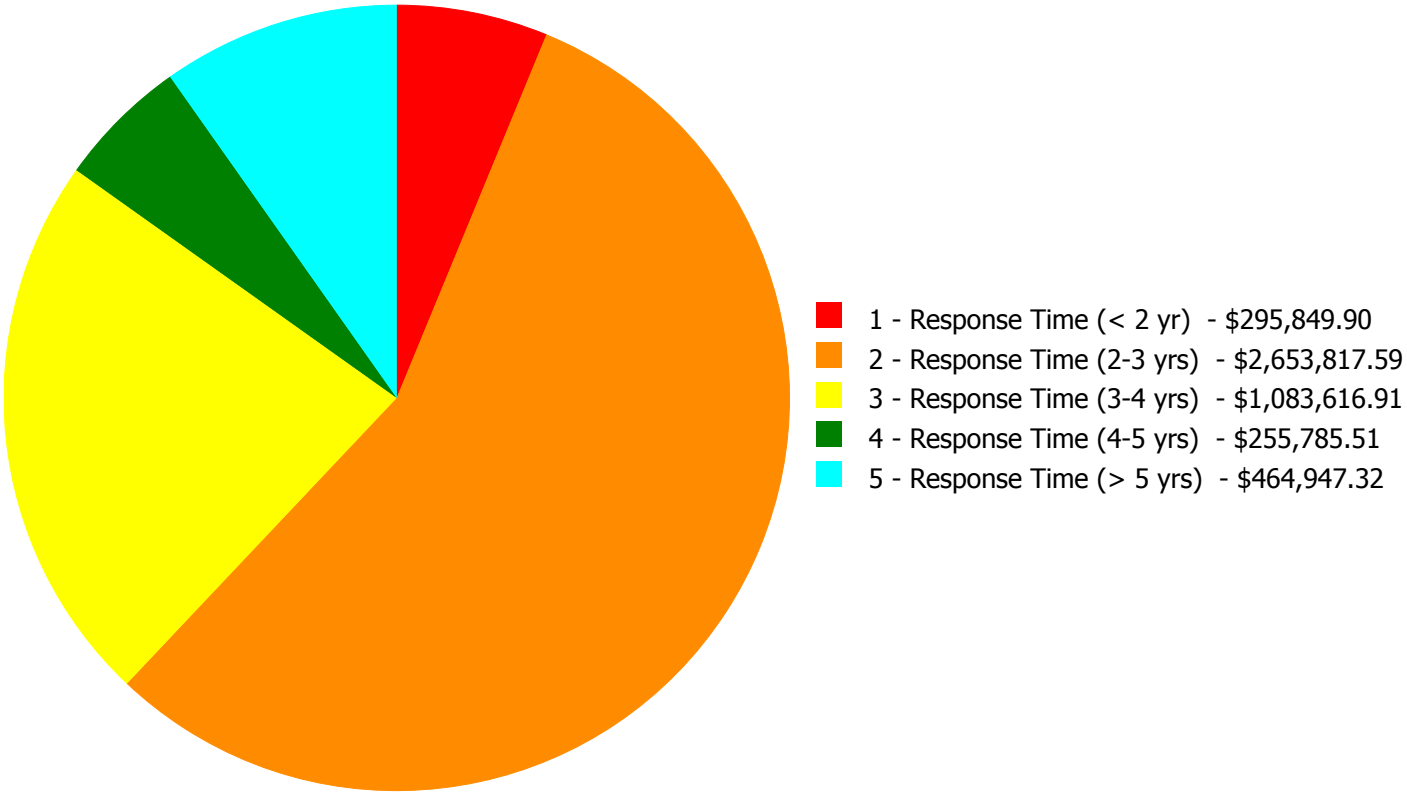
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $4,754,017.23

Deficiency Summary by Priority

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



Budget Estimate Total: $4,754,017.23

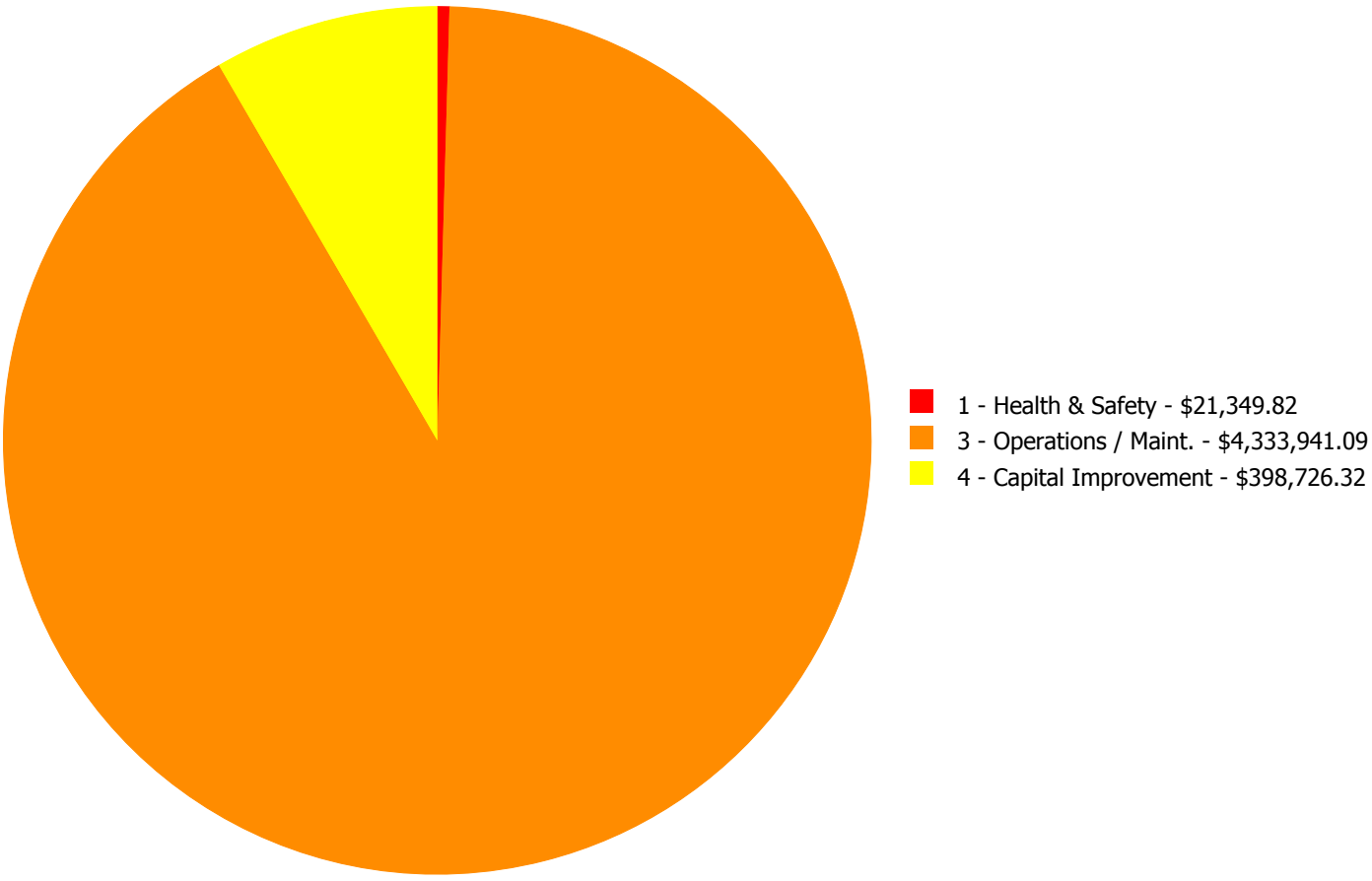
Deficiency By Priority Investment Table

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	$41,486.10	$0.00	$0.00	$0.00	$41,486.10
B2020	Exterior Windows	$0.00	$1,541,910.99	$0.00	$0.00	$0.00	$1,541,910.99
B2030	Exterior Doors	$0.00	$37,029.83	$0.00	$0.00	$0.00	$37,029.83
B3010105	Built-Up	$1,301.72	$1,711.83	$0.00	$0.00	$0.00	$3,013.55
C1020	Interior Doors	$0.00	$71,558.81	$0.00	$0.00	$0.00	$71,558.81
C1030	Fittings	$0.00	$50,294.98	$0.00	$0.00	$0.00	$50,294.98
C3010230	Paint & Covering	$0.00	$55,058.57	$0.00	$0.00	$0.00	$55,058.57
C3020411	Carpet	$0.00	$11,190.76	$0.00	$0.00	$0.00	$11,190.76
C3020415	Concrete Floor Finishes	$0.00	$78,628.41	$0.00	$0.00	$0.00	$78,628.41
D2010	Plumbing Fixtures	$0.00	$250,097.10	$0.00	$0.00	$0.00	$250,097.10
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$121,616.60	$121,616.60
D2030	Sanitary Waste	$0.00	$0.00	$117,737.90	$0.00	$0.00	$117,737.90
D3040	Distribution Systems	$78,746.65	$0.00	$758,749.59	$0.00	$0.00	$837,496.24
D3060	Controls & Instrumentation	$0.00	$514,850.21	$0.00	$0.00	$0.00	$514,850.21
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$343,330.72	$343,330.72
D5010	Electrical Service/Distribution	$0.00	$0.00	$86,160.04	$255,785.51	$0.00	$341,945.55
D5020	Lighting and Branch Wiring	$215,801.53	$0.00	$0.00	$0.00	$0.00	$215,801.53
D5030	Communications and Security	$0.00	$0.00	$120,969.38	$0.00	$0.00	$120,969.38
	Total:	$295,849.90	$2,653,817.59	$1,083,616.91	$255,785.51	$464,947.32	$4,754,017.23

Deficiency Summary by Category

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



Budget Estimate Total: $4,754,017.23

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: brick structures at roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair or replace flashing where it connects to masonry parapet - choose proper material

Qty: 20.00

Unit of Measure: L.F.

Estimate: $1,301.72

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Repair counterflashing along brick on roof (20ft)

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Conduct a steam trap survey and replace failed units.

Qty: 24,000.00

Unit of Measure: S.F.

Estimate: $78,746.65

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Beyond Service Life

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

Estimate: $142,940.81

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace lighting fixtures where required with new fluorescent lighting fixtures with T8 lamp.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Inadequate

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Wiring Devices (SF) - surface mounted conduit and boxes

Qty: 0.00

Unit of Measure: S.F.

Estimate: $51,510.90

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace all receptacles with new 120V, 20A duplex receptacles.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Replace lighting fixtures

Qty: 1.00

Unit of Measure: Ea.

Estimate: $21,349.82

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Provide more emergency battery pack lighting fixtures in public area and exit doors. Estimated 15 total.

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

System: B2010 - Exterior Walls

Location: exterior brick - painted
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Repaint exterior walls - CMU
Qty: 2,500.00
Unit of Measure: S.F.
Estimate: $21,930.86
Assessor Name: Craig Anding
Date Created: 01/26/2016

Notes: Repaint brick below windows and at roof (2500sf)

System: B2010 - Exterior Walls

Location: exterior windows
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Prepare and paint exterior steel beams or steel surfaces
Qty: 1,300.00
Unit of Measure: S.F.
Estimate: $9,868.40
Assessor Name: Craig Anding
Date Created: 01/26/2016

Notes: Repaint lintels (1300ft)

System: B2010 - Exterior Walls

Location: exterior walls

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: S.F.

Estimate: $9,686.84

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Repair cracked exterior northeast and southeast building corners (300sf)

System: B2020 - Exterior Windows

Location: exterior windows

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 289.00

Unit of Measure: Ea.

Estimate: $1,541,910.99

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home side: Replace exterior windows - (280) 18”x42” aluminum frame and glass hopper-style windows; + (9) 3’6”x6’ single hung windows
Visitor side: (4) 18”x42”

System: B2030 - Exterior Doors

Location: exterior roll up doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish and repaint exterior doors - per leaf

Qty: 48.00

Unit of Measure: Ea.

Estimate: $28,668.26

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Visitor Side: Repaint galvanized rollup doors, lintels, and steel jamb guards(10) 12'x12' (ea = to 4 3x7 doors)
Home Side: Repaint galvanized rollup doors, lintels, and steel jamb guards(2) 12'x12' (ea = to 4 3x7 doors)

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refinish and repaint exterior doors - per leaf

Qty: 14.00

Unit of Measure: Ea.

Estimate: $8,361.57

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Visitor side: Replace all exterior doors and frames (4 3x7)
Home side: Replace all exterior doors and frames (10 3x7)

System: B3010105 - Built-Up

Location: coping

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace parapet caps - BUR

Qty: 20.00

Unit of Measure: L.F.

Estimate: $1,711.83

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Re-attach aluminum coping (20ft)

System: C1020 - Interior Doors

Location: interior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 15.00

Unit of Measure: Ea.

Estimate: $71,558.81

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home side only: New interior doors and hardware (15 3x7)

System: C1030 - Fittings

Location: toilet rooms

Distress: Health Hazard / Risk

Category: 3 - Operations / Maint.

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 29.00

Unit of Measure: Ea.

Estimate: $28,357.80

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home side: Replace toilet partitions- estimated total count for all toilet rooms: (21 toilet, 6 urinal, 16 lavatories)
Visitor side: Replace toilet room partitions (8 toilets, 7 lavatories)

System: C1030 - Fittings

Location: toilet rooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 29.00

Unit of Measure: Ea.

Estimate: $21,937.18

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home side: Replace toilet room accessories – est. (21 toilet paper, 16 soap, 8 paper towel, 8 waste cans)
Visitor side: Replace toilet room accessories – est. (8 toilet paper, 6 soap, 4 paper towel, 4 waste cans)

System: C3010230 - Paint & Covering

Location: interior walls

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior concrete or CMU walls - SF of wall surface

Qty: 8,000.00

Unit of Measure: S.F.

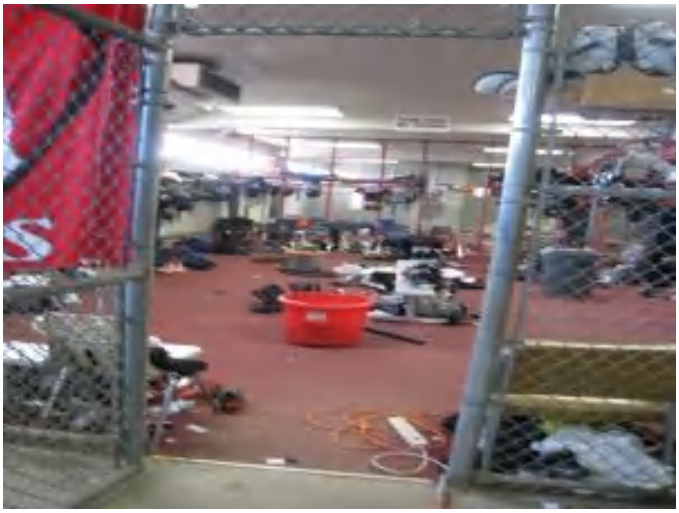
Estimate: $55,058.57

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home Side only: Repaint all interior walls (8,000sf)

System: C3020411 - Carpet



Location: interior carpet

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $11,190.76

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Replace carpet in coach's office area and workout room (1000sf)

System: C3020415 - Concrete Floor Finishes

Location: concrete slabs

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 20,452.00

Unit of Measure: S.F.

Estimate: $78,628.41

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home Side: Refinish all interior concrete floor slabs (16,452sf)
Visitor Side: Refinish concrete slabs (4,000sf)

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

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

Qty: 14.00

Unit of Measure: Ea.

Estimate: $104,470.07

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all water closets in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

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

Qty: 5.00

Unit of Measure: Ea.

Estimate: $78,464.48

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace the integral refrigerated vertical water coolers and the drinking fountains. These units are well beyond their service life and most are NOT accessible type.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

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

Qty: 10.00

Unit of Measure: Ea.

Estimate: $38,110.13

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 6.00

Unit of Measure: Ea.

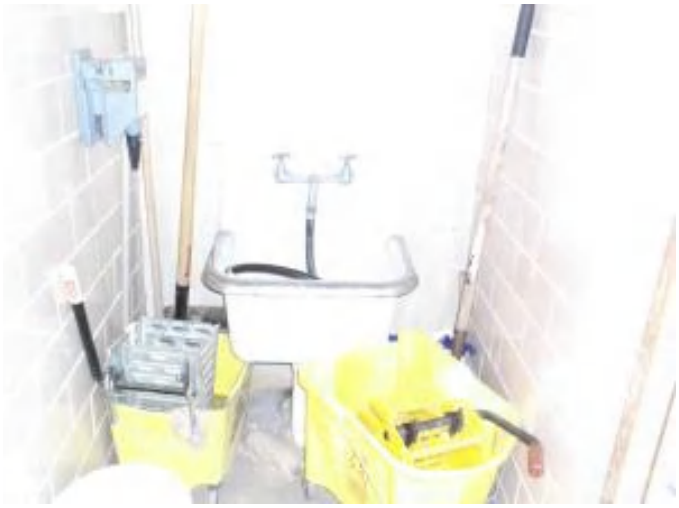
Estimate: $22,236.33

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace all urinals in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures



Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

Correction: Remove and replace floor janitor or mop sink - insert the quantity

Qty: 1.00

Unit of Measure: Ea.

Estimate: $6,816.09

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace service sinks (janitor sinks) in the building.

System: D3060 - Controls & Instrumentation

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 24,000.00

Unit of Measure: S.F.

Estimate: $514,850.21

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace the pneumatic controls for the HVAC systems with modern DDC modules or electric, valves and actuators to improve reliability and energy efficiency.

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

System: D2030 - Sanitary Waste

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

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

Qty: 24,000.00

Unit of Measure: S.F.

Estimate: $117,737.90

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

Correction: Replace power roof ventilator (24" dia.)

Qty: 12.00

Unit of Measure: Ea.

Estimate: $531,700.66

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Replace exhaust fans and ductwork

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Building / MEP Codes

Category: 3 - Operations / Maint.

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

Correction: Perform testing to identify and replace damaged steam and condensate piping.

Qty: 24,000.00

Unit of Measure: S.F.

Estimate: $227,048.93

Assessor Name: Craig Anding

Date Created: 02/17/2016

Notes: Hire a qualified contractor to examine the steam and condensate piping in service for 54 years and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years

---

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Inadequate

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $86,160.04

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace the entire distribution system with new panels and new wiring /conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flash label on the electrical equipment. Estimated 8 panel boards.

System: D5030 - Communications and Security

Location: Entier Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $120,969.38

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace existing fire alarm system with an automatic fire alarm system including smoke detectors and initiating devices in recommended areas per NEC.

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

System: D5010 - Electrical Service/Distribution

Location: Electrical Room

Distress: Beyond Service Life

Category: 4 - Capital Improvement

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

Correction: Add service entrance switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $255,785.51

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchgear with new 1200A, 208/120V switchboard with 400A main breaker.

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout the building
Distress: Building / MEP Codes
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace domestic water piping (75 KSF)
Qty: 24,000.00
Unit of Measure: S.F.
Estimate: $121,616.60
Assessor Name: Craig Anding
Date Created: 02/17/2016

Notes: Inspect and replace the original as needed the domestic water piping in the building.

System: D4010 - Sprinklers

Location: Throughout the building
Distress: Building / MEP Codes
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install a fire protection sprinkler system
Qty: 24,000.00
Unit of Measure: S.F.
Estimate: $343,330.72
Assessor Name: Craig Anding
Date Created: 02/17/2016

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure. Install a new sprinkler system throughout the building

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, cast iron, gas & oil, steam, 2700 MBH	1.00	Ea.	Main boiloer mecanical equipment room	Crown	Series 24			35			$91,900.60	$101,090.66
												Total:	**$101,090.66**

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:	Stands
Gross Area (SF):	22,330
Year Built:	1957
Last Renovation:	
Replacement Value:	$3,841,655
Repair Cost:	$277,111.04
Total FCI:	7.21 %
Total RSLI:	18.17 %

Description:

Facility Condition Assessment

November 2015

School District of Philadelphia
Northeast High School Stands, Football Field and Track
1601 Cottman Avenue
Philadelphia, PA 19111

Home and Visitor Stands, Football Field and Track; LN 08

Northeast High School Home and Visitor Stands (bleachers), Football Field and Track are located on the same property as the high school building with a street address of 1601 Cottman Avenue. They were all constructed at the same time as the original high school building in 1957 and remain in use today. The Football Field and Track were renovated sometime around 2006 when new AstroTurf surfaces were installed in place of the natural grass and track surfaces. The Home Stands are constructed adjacent to and descending down from the ground level of the Home Fieldhouse. The Visitor Stands are constructed over the Visitor Fieldhouse, forming the roof over that building. Both grandstands have aluminum seating attached to the base structure forming the walking surface (floor) of the stands. Joe Knuttel, the Field House Manger led the inspection team through the buildings.

ARCHITECTURAL/STRUCTURAL SYSTEMS

Foundations for the Home and Visitor stands are concrete. The main base structure of the Home Stands is concrete set onto the concrete foundations. The main structure of the Visitor Stands is steel, with columns bearing on concrete pilasters exposed 6”-8” above grade where the column base plates attach. The condition of the foundations and footings could not be determined.

Floor slabs under the aluminum seating on the Home side are in poor condition with many areas of spalling concrete and exposed, rusted reinforcing bars. Concrete nosings and risers over 25% of the surface area need to be repaired with new concrete cover. A protective, high performance paint finish should be applied over the repaired concrete for added durability. The Visitor side floors are constructed of steel plate supported by painted steel beams and columns, forming the structural system of the stands. The painted surface is wearing and rusting where paint is worn. The entire base and structure of the Visitor side needs to be properly cleaned/prepared and repainted.

There are no roofs over either grandstand. However, the roof construction of the Visitor Fieldhouse is integrated into the grandstand floor (structural support system), which is an exposed, painted steel structure. Steel supports can be seen on the inside of the storage rooms in the Visitor Fieldhouse.

There are no exterior walls associated with the Stands; walls below or adjacent to the stands are part of the Fieldhouses and discussed in that narrative.

There are no exterior doors, windows, roofing, interior walls, interior doors, ceilings, or fittings associated with the Stands.

The Home grandstands meet the handrail and guard requirements stated in the building code: there is a guard along the top of the walkway above the seating, with a chain link fence provided as a balustrade; there is a guard along the bottom at the field with a chain link fence in lieu of a balustrade; there are handrails in the middle of aisles leading up and down the stands; there are wheelchair accessible seating areas along the top with guard protection. The Visitor grandstand has a guard with chain link mesh along the field but has no intermediate rails leading up and down the bleachers. Since there is less than 48” between adjacent rows of seating, these handrails cannot be added, however this might not have been a requirement at the time the bleachers were installed therefore they would be existing non-compliant and acceptable (albeit somewhat dangerous) to leave as is. Both Home and Visitor bleachers have guard protection along outside edges.

Floor finish under the Home Stands is exposed concrete, which is worn, spalling and in need of refurbishment. After patching and repairing the surface, a high performance floor coating should be applied to protect the surface from the natural elements. The floor finish of the Visitor Stands is painted steel which is rusting and in need of a new high performance floor coating.

Furnishings in the Home and Visitor Stands consist of aluminum bleacher seating. All seating is in good condition with no observed wear and tear or graffiti requiring attention.

MECHANICAL SYSTEMS

NO MECHANICAL

ELECTRICAL SYSTEMS

Northeast HS (stand and football field)

Overall the Northeast high school football field electrical system is adequate and will serve the community well for years to come.

Football field is illuminated with 96 flood lights of estimated 1500W metal halide lamps, installed on four 50ft tall aluminum poles (24 on each pole). Lights are controlled by branch circuit breakers of a lighting panel located in the field-house. The lighting panel is old and should be replaced. Lighting poles are installed distance away from the sidelines on both side of the field and are in compliance code requirements. For the assessment was conducted during daytime, it was not practical to verify the lighting level on the field area; the assumption is that the lighting level on the field is within the range (30 to 50FC) recommended by IEC (Illuminating Engineering Society). This assumption is based on a calculation that results in 50FC (foot candle) for 24-1500W metal halide installed at 50 feet above the ground level. All Lighting fixtures are in good condition. It is noted that lighting fixtures, including lamps and ballasts, have been upgraded/replaced the previous summer.

The football field sound system appears to be old; the speakers are not matched with the existing PA system. Replacement of the existing sound system with a new modern sound system is recommended.

Score board and its controller are in good condition.

Lighting poles are protected against the lightning strikes. Lightning Protection System is comply with the NFPA780.

Lighting and receptacle in field booth have already been upgraded and are in good working condition.

GROUNDS SYSTEMS

The football field is constructed of AstroTurf, and is thought to be approximately 9 years old. It is in good condition however there are some brownish areas scattered throughout the field. It appears that the field needs to be "re-dressed" to maintained a uniform surface condition. The track surrounding the football field is a textured rubberized material, also installed around 9 years ago. There are large workout and practice areas at the ends of the field area, contiguous with the running track. No deficiencies were observed.

There is a tall chain link site fence around the fieldhouses and football field. Although it is beginning to show signs of wear, looseness and the start of rust, it is not damaged enough to require repairs at this time. However, in 5 years, the condition of the fence will need to be reviewed and it probably will need repairs and repainting at that time.

Parking at the north and south ends of the football field are in fair condition. Each lot has some linear cracking that should be repaired with crackfiller to minimize further degradation.

RECOMMENDATIONS

Home Side Field House

- Repair exposed, spalled concrete under bleacher seating (2000 sf); re-coat all concrete with high performance coating including vertical risers under bleachers (24,000 sf).

Visitor Side Field House and Stands

- Provide high-performance steel deck coating on steel stands base, including vertical steel risers under seating and steel beams and columns supporting stands (12,000 sf)

ELECTRICAL

- Provide site lighting in football field.
- Provide lightning protection studies to ascertain adequacy of existing lighting protection systems.
- Replace the existing sound system with a new sound system including One 1000W power amplifier with digital processing/speaker protection, one mixer with inputs for three microphones and four additional sources (iPod, CD, MP#, etc.), one Desk Top Announcer's Microphone, one A/C Power Distributor, Portable equipment Rack, UV Resistant Speaker Cable and accessory Cables for iPod, MP3, CD Player, etc. Replace existing speakers with four sets of Weather Resistant, Full Range Loudspeakers with multi position mounting Brackets.
- Replace field lighting control panel with new panel.

GROUNDS

- Crackfill asphalt parking lots (2,500 ft)
- Re-dress AstroTurf (80,000 sf)

Attributes:

General Attributes:			
Active:	Open	Bldg ID:	B802903
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S802001		

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	42.00 %	0.00 %	$0.00
A20 - Basement Construction	42.00 %	0.00 %	$0.00
B10 - Superstructure	0.00 %	4.04 %	$97,057.38
B20 - Exterior Enclosure	0.00 %	0.00 %	$0.00
B30 - Roofing	0.00 %	0.00 %	$0.00
C20 - Stairs	0.00 %	0.00 %	$0.00
C30 - Interior Finishes	104.00 %	273.37 %	$69,588.51
D50 - Electrical	53.89 %	21.65 %	$110,465.15
E20 - Furnishings	77.50 %	0.00 %	$0.00
Totals:	**18.17 %**	**7.21 %**	**$277,111.04**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$10.75	S.F.	22,330	100	1957	2057		42.00 %	0.00 %	42			$240,048
A1030	Slab on Grade	$17.93	S.F.	22,330	100	1957	2057		42.00 %	0.00 %	42			$400,377
A2010	Basement Excavation	$0.62	S.F.	22,330	100	1957	2057		42.00 %	0.00 %	42			$13,845
A2020	Basement Walls	$8.99	S.F.	22,330	100	1957	2057		42.00 %	0.00 %	42			$200,747
B1010	Floor Construction	$107.59	S.F.	22,330	100				0.00 %	4.04 %			$97,057.38	$2,402,485
B2010	Exterior Walls	$125.87	S.F.		100				0.00 %	0.00 %				$0
B2030	Exterior Doors	$7.92	S.F.		40				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$24.21	S.F.		20				0.00 %	0.00 %				$0
C2010	Stair Construction	$17.04	S.F.		40				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$1.14	S.F.	22,330	50	1957	2007	2067	104.00 %	273.37 %	52		$69,588.51	$25,456
D5010	Electrical Service/Distribution	$2.42	S.F.	22,330	20	1957	1977	2028	65.00 %	0.00 %	13			$54,039
D5020	Lighting and Branch Wiring	$15.03	S.F.	22,330	20	1957	1977	2022	35.00 %	11.22 %	7		$37,640.53	$335,620
D5030	Communications and Security	$4.20	S.F.	22,330	15	1957	1972	2032	113.33 %	77.65 %	17		$72,824.62	$93,786
D5090	Other Electrical Systems	$1.20	S.F.	22,330	20	1957	1977	2027	60.00 %	0.00 %	12			$26,796
E2010	Fixed Furnishings	$2.17	S.F.	22,330	40	2006	2046		77.50 %	0.00 %	31			$48,456
								Total	**18.17 %**	**7.21 %**			**$277,111.04**	**$3,841,655**

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%

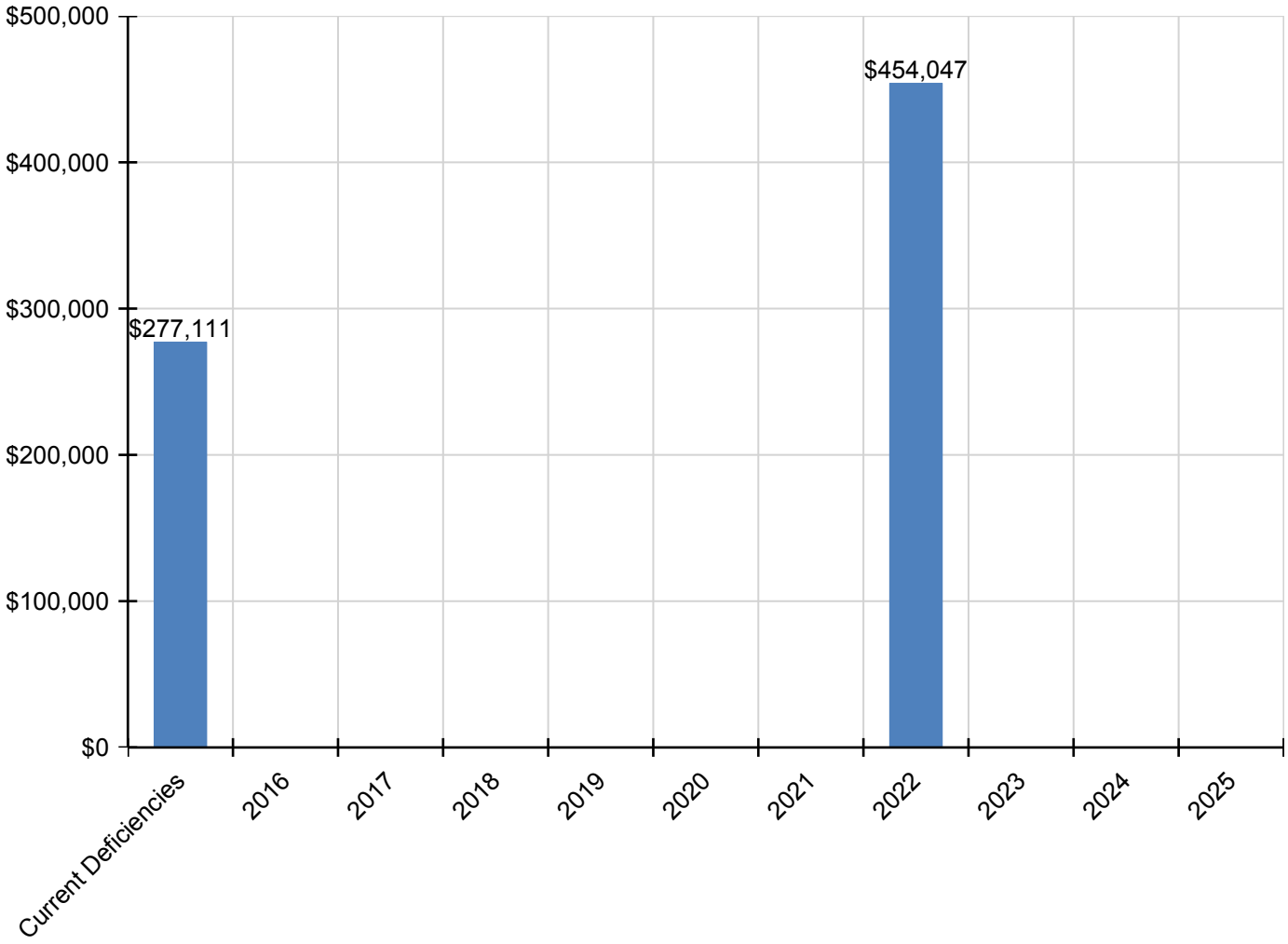
Site Assessment Report - B802903;Northeast - Stands and Field

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$277,111**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$454,047**	**$0**	**$0**	**$0**	**$731,158**
*** 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	$97,057	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$97,057**
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**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$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**
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**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$69,589	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$69,589**
D - Services	$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	$37,641	$0	$0	$0	$0	$0	$0	$454,047	$0	$0	$0	**$491,688**
D5030 - Communications and Security	$72,825	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$72,825**
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**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

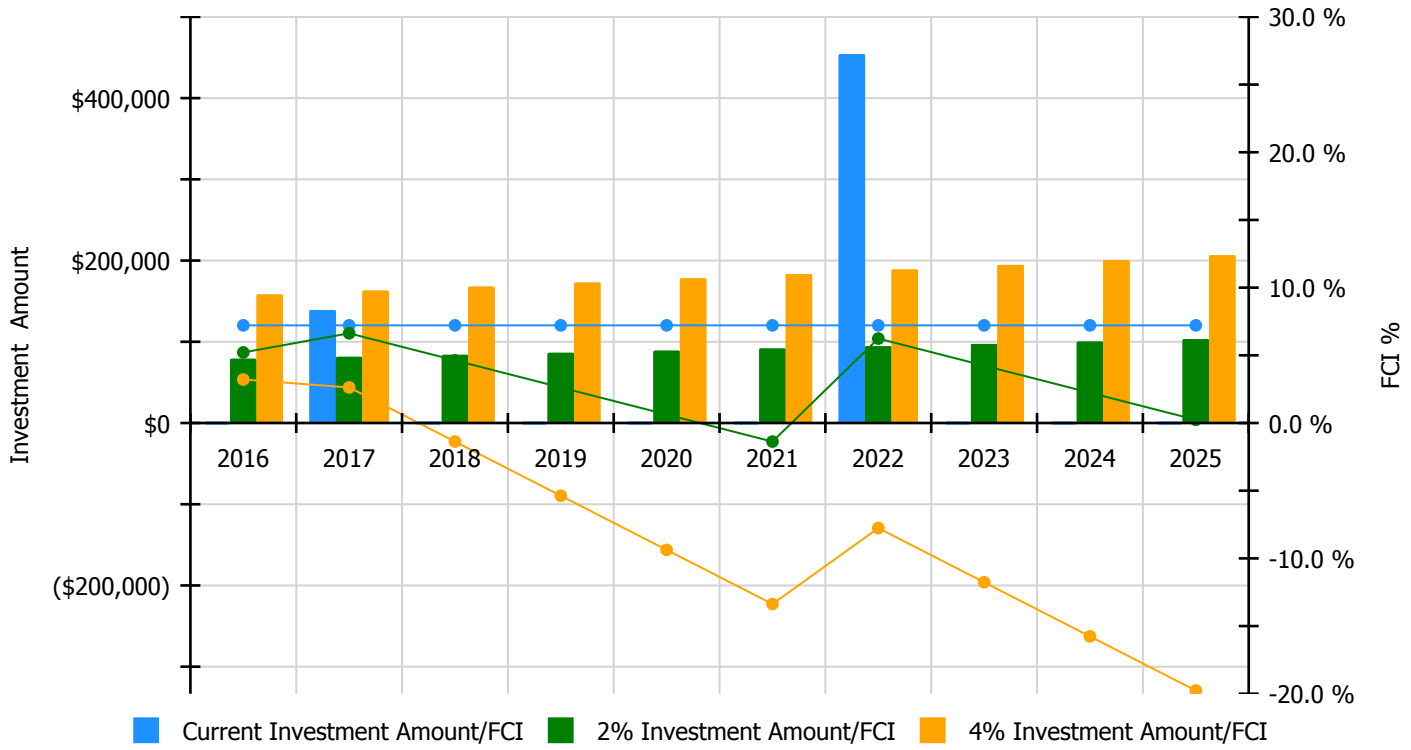


10 Year FCI Forecast by Investment Scenario

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

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

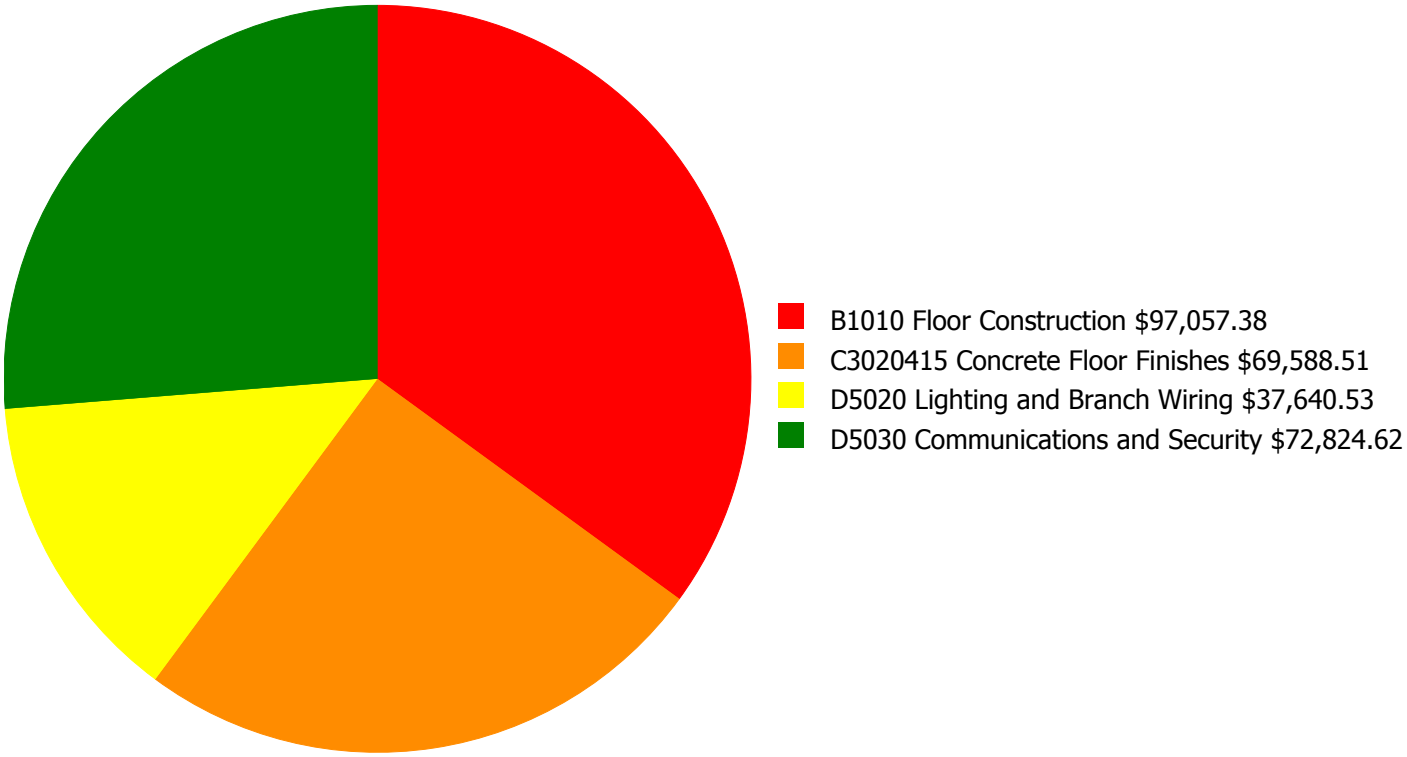
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 7.21%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$79,138.00	5.21 %	$158,276.00	3.21 %
2017	$139,155	$81,512.00	6.63 %	$163,024.00	2.63 %
2018	$0	$83,958.00	4.63 %	$167,915.00	-1.37 %
2019	$0	$86,476.00	2.63 %	$172,953.00	-5.37 %
2020	$0	$89,071.00	0.63 %	$178,141.00	-9.37 %
2021	$0	$91,743.00	-1.37 %	$183,485.00	-13.37 %
2022	$454,047	$94,495.00	6.24 %	$188,990.00	-7.76 %
2023	$0	$97,330.00	4.24 %	$194,660.00	-11.76 %
2024	$0	$100,250.00	2.24 %	$200,500.00	-15.76 %
2025	$0	$103,257.00	0.24 %	$206,515.00	-19.76 %
Total:	**$593,202**	**$907,230.00**		**$1,814,459.00**	

Deficiency Summary by System

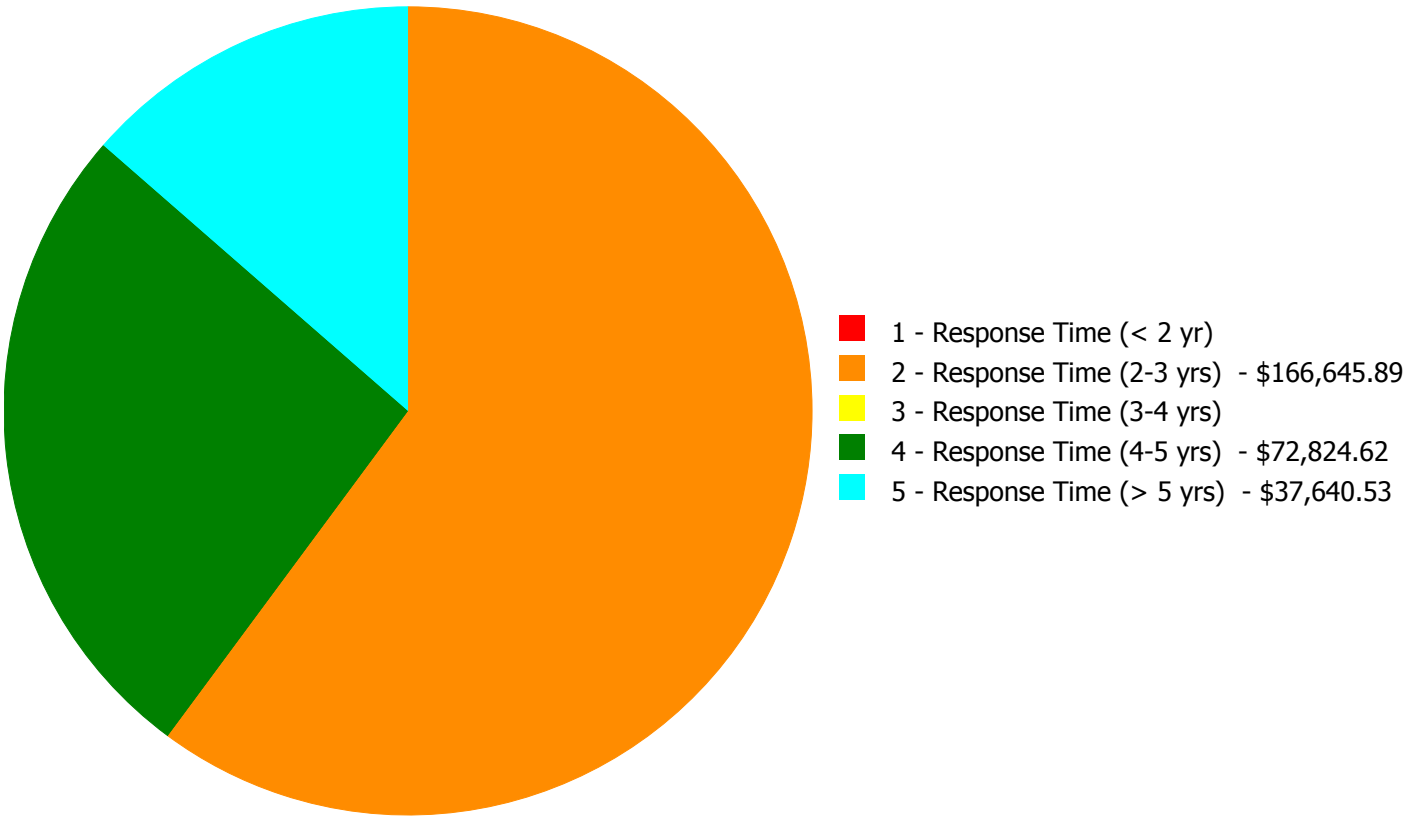
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $277,111.04

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: $277,111.04

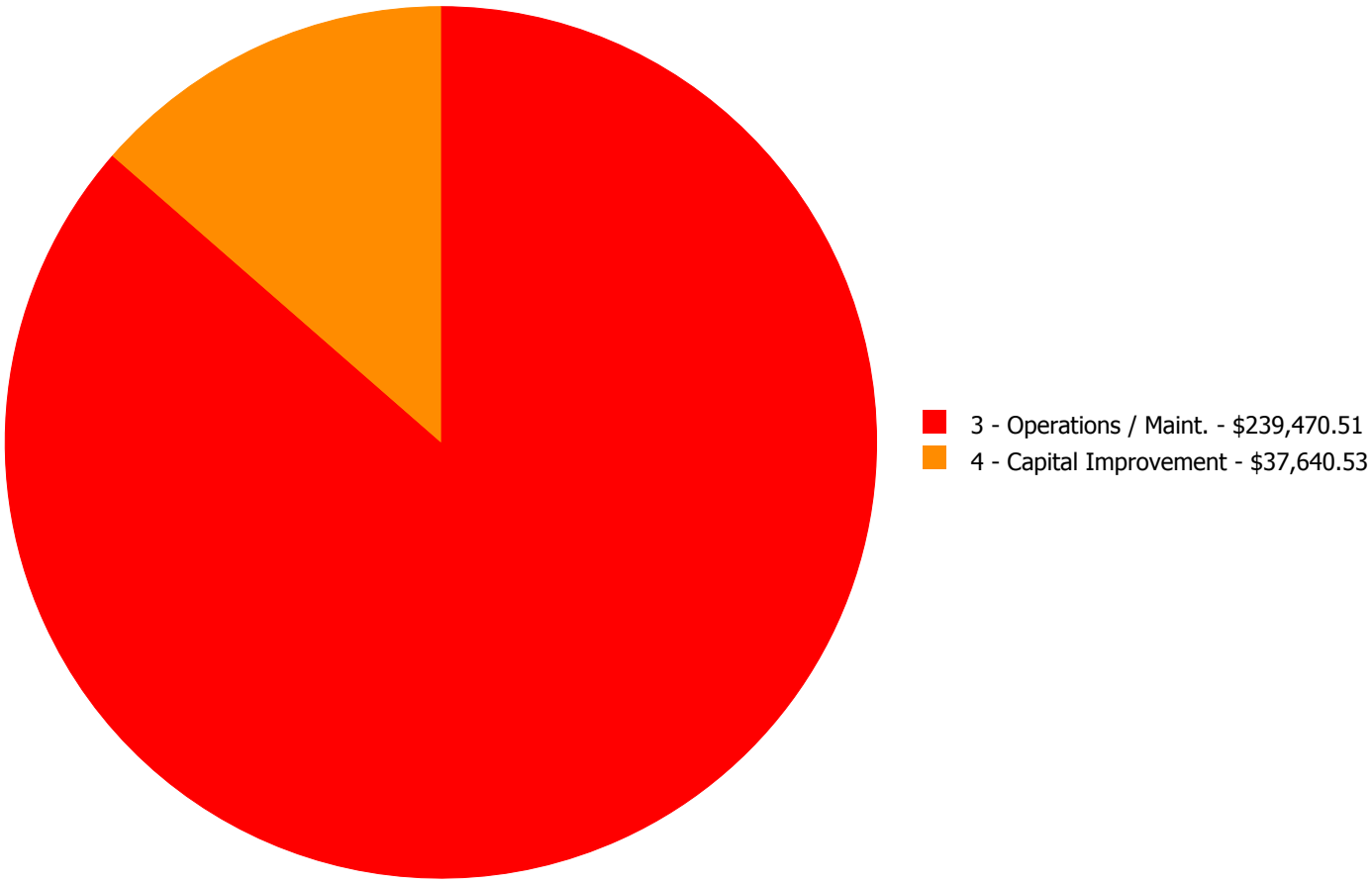
Deficiency By Priority Investment Table

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
B1010	Floor Construction	$0.00	$97,057.38	$0.00	$0.00	$0.00	$97,057.38
C3020415	Concrete Floor Finishes	$0.00	$69,588.51	$0.00	$0.00	$0.00	$69,588.51
D5020	Lighting and Branch Wiring	$0.00	$0.00	$0.00	$0.00	$37,640.53	$37,640.53
D5030	Communications and Security	$0.00	$0.00	$0.00	$72,824.62	$0.00	$72,824.62
	Total:	$0.00	$166,645.89	$0.00	$72,824.62	$37,640.53	$277,111.04

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: $277,111.04

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: B1010 - Floor Construction

Location: home side stand support (conc slab)

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete floor - pick the correct repair and insert the SF of floor area

Qty: 24,000.00

Unit of Measure: S.F.

Estimate: $97,057.38

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Home side only: Repair exposed, spalled concrete under bleacher seating (2000sf); recoat all concrete with high performance coating including vertical risers under bleachers (24,000sf)

System: C3020415 - Concrete Floor Finishes

Location: bleacher support (steel)

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Prepare and repaint concrete floor

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $69,588.51

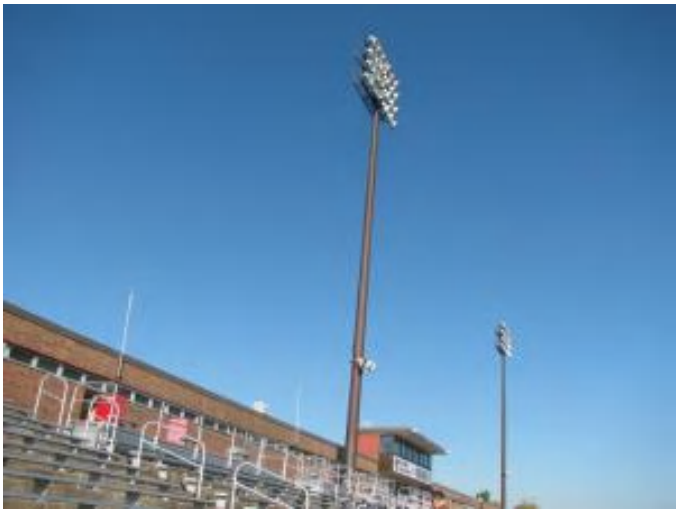
Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Visitor side: Provide high-performance steel deck coating on steel stands base, including vertical steel risers under seating and steel beams and columns supporting stands (12,000sf)

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

System: D5030 - Communications and Security



Location: Field stand

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $72,824.62

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace the existing sound system with a new sound system including One 1000W power amplifier with digital processing/speaker protection, one mixer with inputs for three microphones and four additional sources (iPod, CD, MP#, etc.), one Desk Top Announcer's Microphone, one A/C Power Distributer, Portable equipment Rack, UV Resistant Speaker Cable and accessory Cables for iPod, MP3, CD Player, etc.

Priority 5 - Response Time (> 5 yrs):

System: D5020 - Lighting and Branch Wiring

Location: B802903;Northeast - Stands and Field

Distress: Beyond Service Life

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide lighting control

Qty: 1.00

Unit of Measure: Ea.

Estimate: $37,640.53

Assessor Name: Craig Anding

Date Created: 12/28/2015

Notes: Replace field lighting control panel with new panel.

Equipment Inventory

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

No data found for this asset

Executive Summary

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

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

Function:	
Gross Area (SF):	1,235,800
Year Built:	1957
Last Renovation:	
Replacement Value:	$14,470,334
Repair Cost:	$966,505.71
Total FCI:	6.68 %
Total RSLI:	60.06 %

Description:

Attributes:

General Attributes:

Bldg ID:	S802001	Site ID:	S802001

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	32.52 %	10.63 %	$966,505.71
G40 - Site Electrical Utilities	106.67 %	0.00 %	$0.00
Totals:	**60.06 %**	**6.68 %**	**$966,505.71**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30	1957	1987	2047	106.67 %	0.00 %	32			$0
G2020	Parking Lots	$7.65	S.F.	154,500	30	1957	1987	2020	16.67 %	38.09 %	5		$450,211.52	$1,181,925
G2030	Pedestrian Paving	$11.52	S.F.	164,900	40	1957	1997	2020	12.50 %	5.37 %	5		$101,986.25	$1,899,648
G2040960	Synthetic Turf Football Field	$18.40	S.F.	84,500	10	2006	2016	2020	50.00 %	0.00 %	5			$1,554,800
G2040970	Synthetic Running Track	$24.21	S.F.	64,300	10	2006	2016	2020	50.00 %	0.00 %	5			$1,556,703
G2050	Landscaping & Irrigation	$3.78	S.F.	767,600	15	1957	1972	2020	33.33 %	14.28 %	5		$414,307.94	$2,901,528
G4020	Site Lighting	$3.58	S.F.	1,235,800	30	1957	1987	2047	106.67 %	0.00 %	32			$4,424,164
G4030	Site Communications & Security	$0.77	S.F.	1,235,800	30	1957	1987	2047	106.67 %	0.00 %	32			$951,566
								Total	**60.06 %**	**6.68 %**			**$966,505.71**	**$14,470,334**

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.

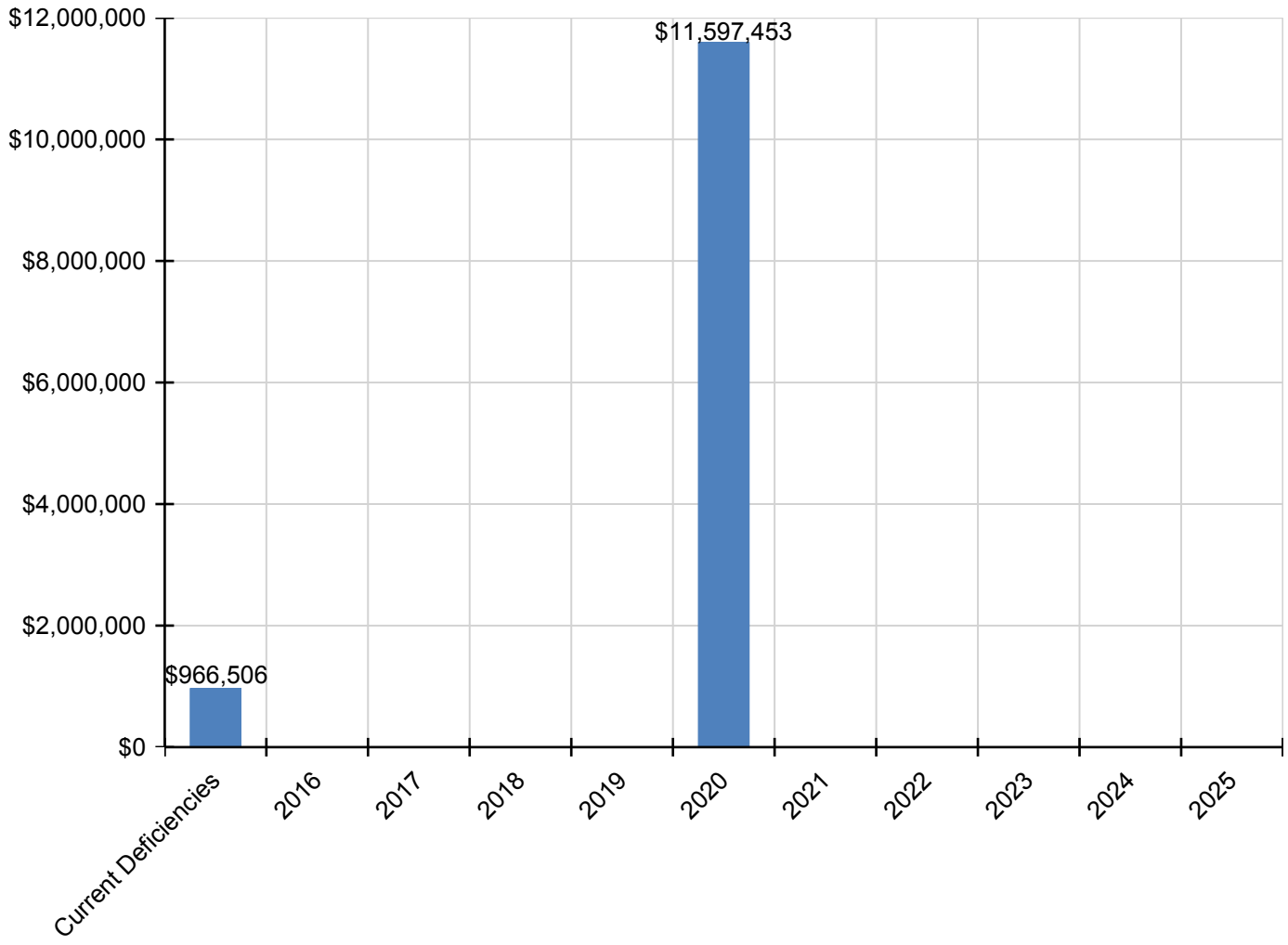
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$966,506**	**$0**	**$0**	**$0**	**$0**	**$11,597,453**	**$0**	**$0**	**$0**	**$0**	**$0**	**$12,563,959**
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	$450,212	$0	$0	$0	$0	$1,507,193	$0	$0	$0	$0	$0	**$1,957,405**
G2030 - Pedestrian Paving	$101,986	$0	$0	$0	$0	$2,422,434	$0	$0	$0	$0	$0	**$2,524,420**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2040960 - Synthetic Turf Football Field	$0	$0	$0	$0	$0	$1,982,683	$0	$0	$0	$0	$0	**$1,982,683**
G2040970 - Synthetic Running Track	$0	$0	$0	$0	$0	$1,985,110	$0	$0	$0	$0	$0	**$1,985,110**
G2050 - Landscaping & Irrigation	$414,308	$0	$0	$0	$0	$3,700,033	$0	$0	$0	$0	$0	**$4,114,341**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

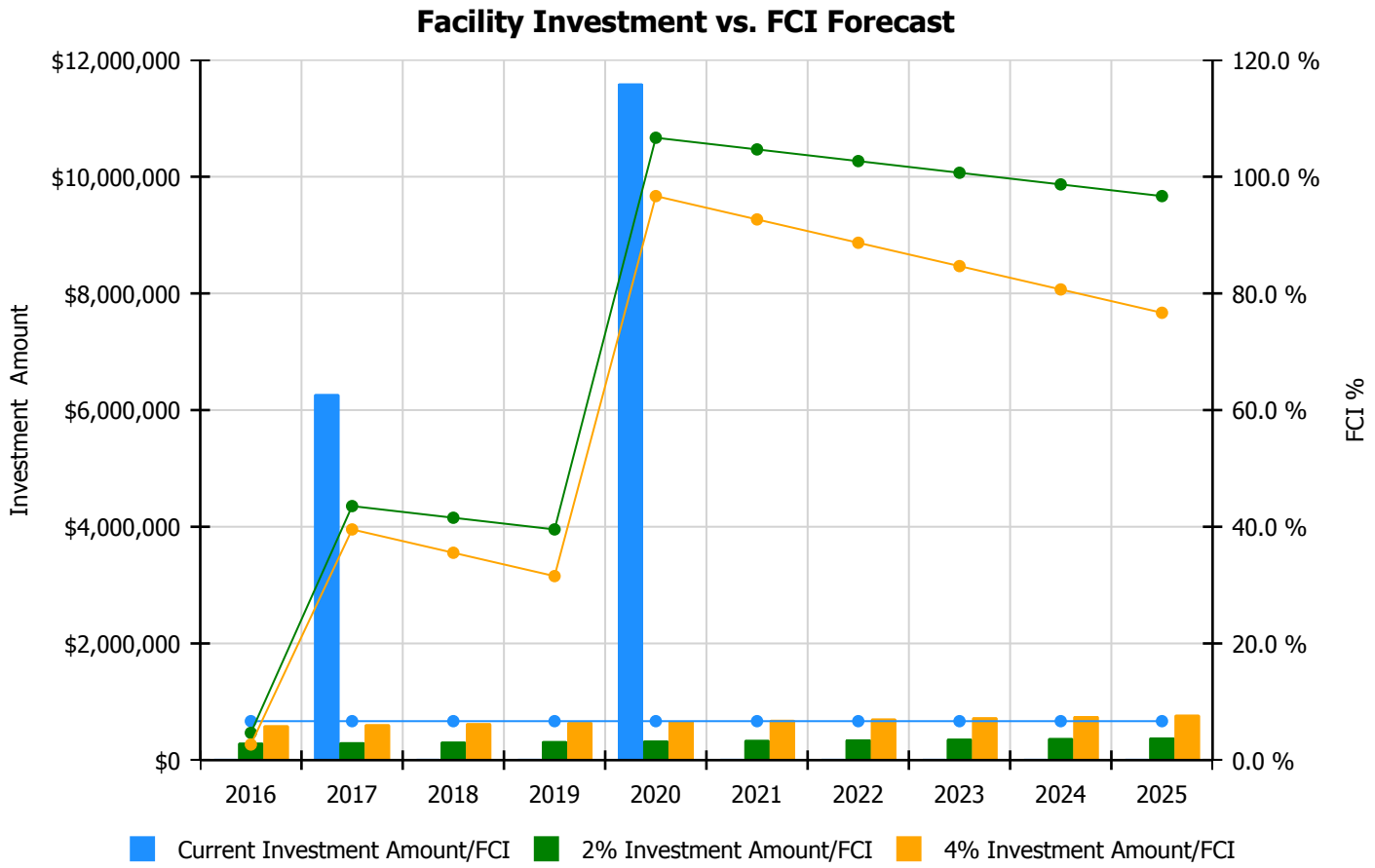
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

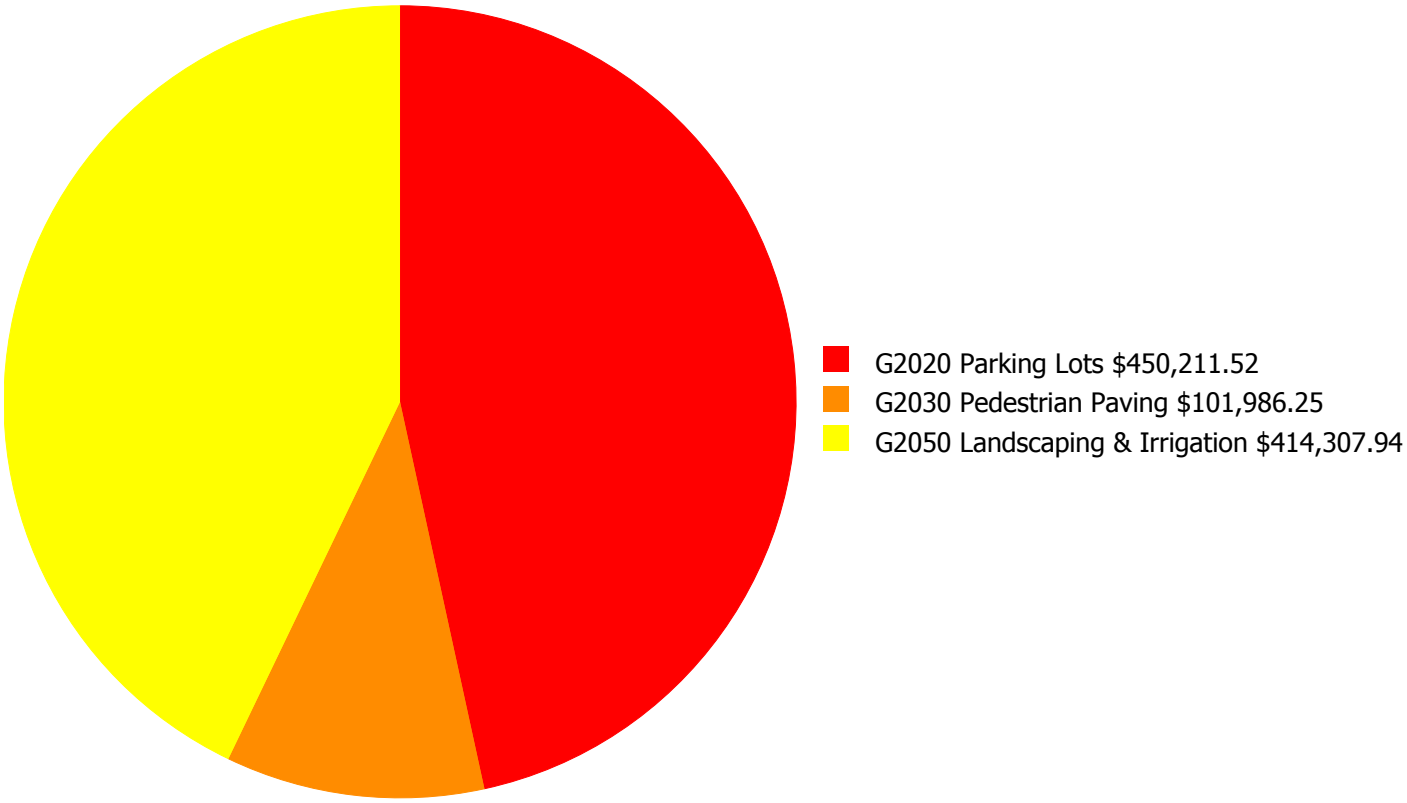
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 6.68%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$298,089.00	4.68 %	$596,178.00	2.68 %
2017	$6,273,423	$307,032.00	43.54 %	$614,063.00	39.54 %
2018	$0	$316,242.00	41.54 %	$632,485.00	35.54 %
2019	$0	$325,730.00	39.54 %	$651,460.00	31.54 %
2020	$11,597,453	$335,502.00	106.68 %	$671,003.00	96.68 %
2021	$0	$345,567.00	104.68 %	$691,133.00	92.68 %
2022	$0	$355,934.00	102.68 %	$711,867.00	88.68 %
2023	$0	$366,612.00	100.68 %	$733,223.00	84.68 %
2024	$0	$377,610.00	98.68 %	$755,220.00	80.68 %
2025	$0	$388,938.00	96.68 %	$777,877.00	76.68 %
Total:	**$17,870,876**	**$3,417,256.00**		**$6,834,509.00**	

Deficiency Summary by System

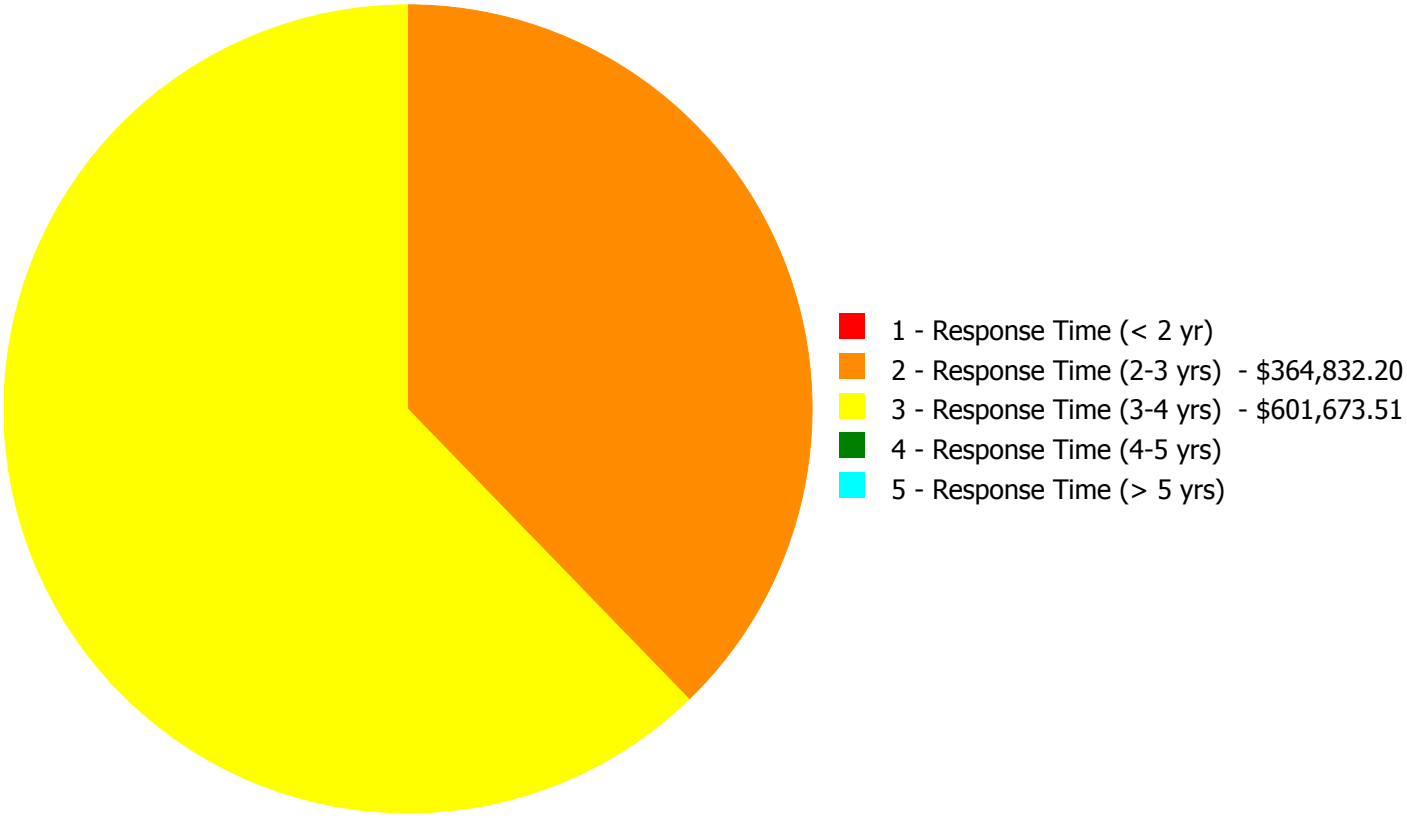
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $966,505.71

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: $966,505.71

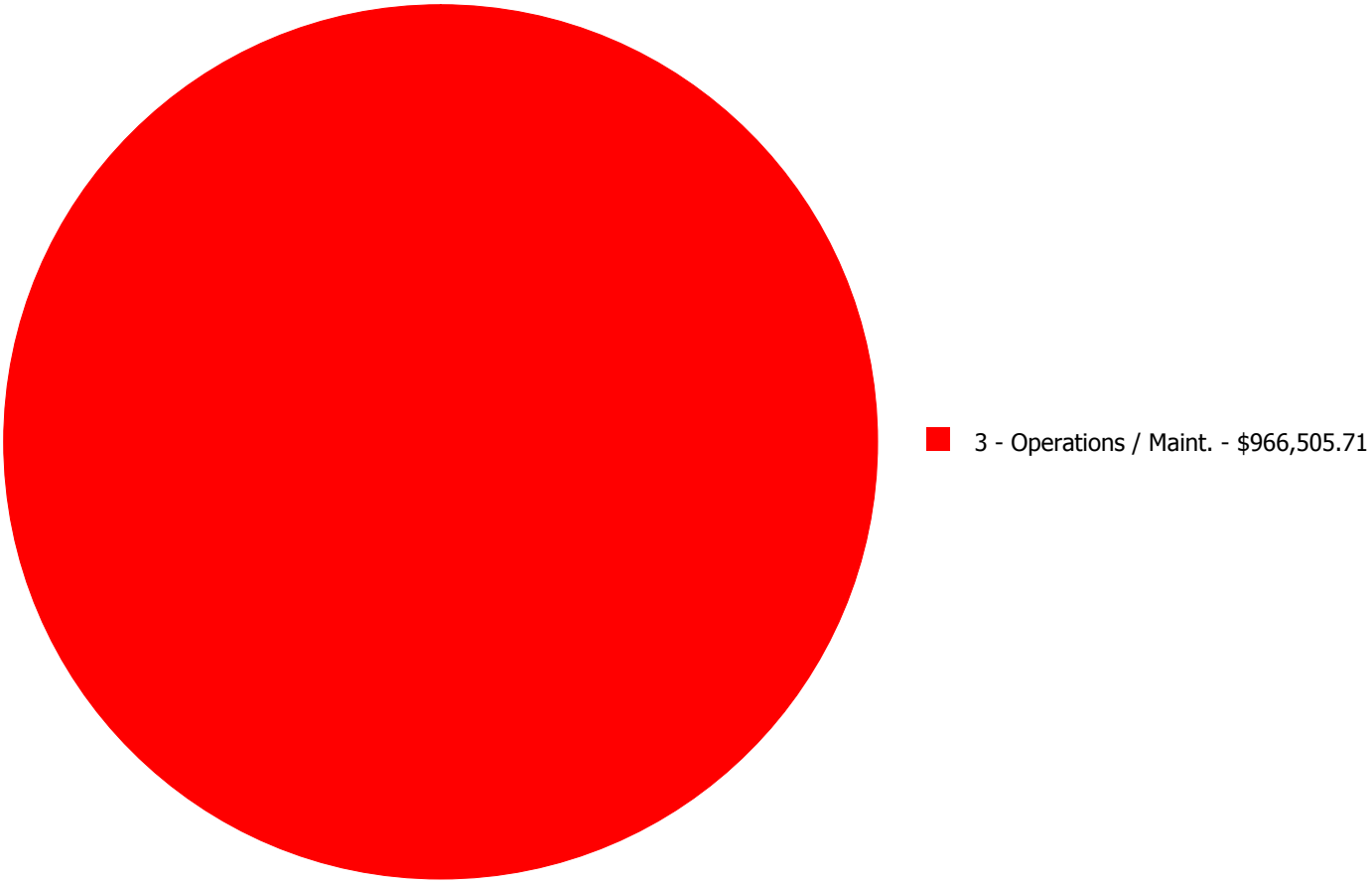
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$25,250.99	$424,960.53	$0.00	$0.00	$450,211.52
G2030	Pedestrian Paving	$0.00	$101,986.25	$0.00	$0.00	$0.00	$101,986.25
G2050	Landscaping & Irrigation	$0.00	$237,594.96	$176,712.98	$0.00	$0.00	$414,307.94
	Total:	$0.00	$364,832.20	$601,673.51	$0.00	$0.00	$966,505.71

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: $966,505.71

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: G2020 - Parking Lots

Location: Fieldhouse area, parking

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Fill cracks in AC paving - by the LF - average size and depth of crack

Qty: 2,500.00

Unit of Measure: L.F.

Estimate: $25,250.99

Assessor Name: Steven Litman

Date Created: 01/26/2016

Notes: Crackfill asphalt parking lots (2,500ft)

System: G2030 - Pedestrian Paving

Location: mechanical area - vehicle parking and unloading

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace concrete paving - pedestrian or parking - 8" concrete thickness

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $78,820.66

Assessor Name: Steven Litman

Date Created: 01/25/2016

Notes: Repave sections of the concrete mechanical area parking lot and loading dock (3,000sf)

System: G2030 - Pedestrian Paving

Location: sidewalks

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $14,382.85

Assessor Name: Steven Litman

Date Created: 01/25/2016

Notes: Repave damaged sections of concrete walkway along Cottman and Glendale Aveenues (1,000sf)

System: G2030 - Pedestrian Paving

Location: exterior stairs

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Regrout joints between stone treads and risers - LF of grout

Qty: 540.00

Unit of Measure: L.F.

Estimate: $8,782.74

Assessor Name: Steven Litman

Date Created: 01/25/2016

Notes: Regrout joints between limestone block tread/risers at misc. exterior stairs (18 treads, 30ft long)

System: G2050 - Landscaping & Irrigation

Location:	south courtyard
Distress:	Damaged
Category:	3 - Operations / Maint.
Priority:	2 - Response Time (2-3 yrs)
Correction:	Remove and replace or replace sod
Qty:	16,000.00
Unit of Measure:	S.F.
Estimate:	$237,594.96
Assessor Name:	Steven Litman
Date Created:	01/25/2016

Notes: Remove asphalt and replant grass and landscaping in South courtyard (16,000sf)

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

System: G2020 - Parking Lots

Location: parking lots

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $285,717.31

Assessor Name: Steven Litman

Date Created: 01/25/2016

Notes: Repave parking lots on Glendale and all of Faculty Parking lot on Algon Avenue (75,000sf)

System: G2020 - Parking Lots

Location: Fieldhouses - pedestrian access both building, both sides

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 23,000.00

Unit of Measure: S.F.

Estimate: $82,099.76

Assessor Name: Steven Litman

Date Created: 01/26/2016

Notes: Repave asphalt walkways used for pedestrian access around the fieldhouses on field sides and back sides of Home and Visitor Fieldhouses (23,000sf)

System: G2020 - Parking Lots

Location: mech area roadway

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 15,000.00

Unit of Measure: S.F.

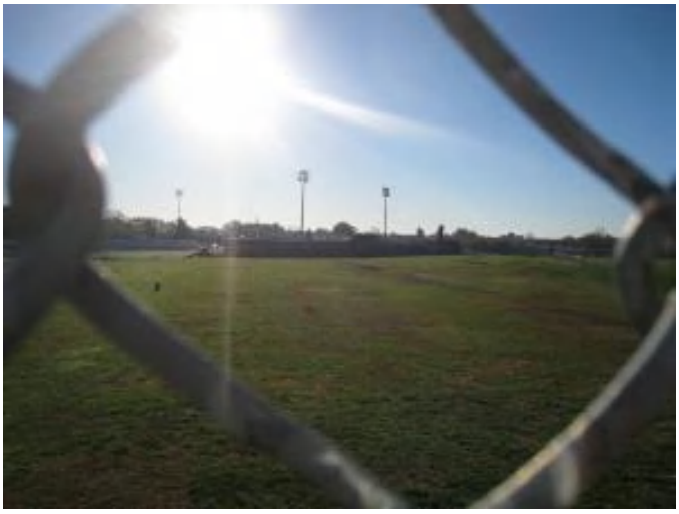
Estimate: $57,143.46

Assessor Name: Steven Litman

Date Created: 01/25/2016

Notes: Repave part of parking lot and all of asphalt roadway from Glendale Ave to Mechanical areas and repave driveway to kitchen loading dock from Glendale Ave (17,000sf)

System: G2050 - Landscaping & Irrigation



Location: Football Field

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Rehabilitate and dress synthetic grass

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $176,712.98

Assessor Name: Steven Litman

Date Created: 01/26/2016

Notes: Re-dress AstroTurf (40,000sf)

Equipment Inventory

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

No data found for this asset

Glossary

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

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

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

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

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

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

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

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

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

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

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