

EAST CAROLINA UNIVERSITY

Facility Condition Assessment

HSC Central Utility Plant

Asset UTIL

Inspected March 16, 2015



TABLE OF CONTENTS

SECTION 1 ASSET OVERVIEW

Asset Executive Summary.....	1.1.1
Asset Summary	1.2.1
Inspection Team Data.....	1.3.1
Definitions	1.4.1
Overview	1.4.1
Recurring Costs	1.4.2
Non-Recurring Costs	1.4.3
Drawings/Project Locations.....	1.4.6
Photographs	1.4.6
Category Code Report	1.5.1

SECTION 2 COST SUMMARIES AND TOTALS

Facilities Renewal Budget Pro-Forma	2.1.1
Facilities Renewal Needs by System	2.2.1
Facilities Renewal Plan	2.3.1
Project List by Project Classification.....	2.4.1
Project List by Category/System Code	2.5.1

SECTION 3 PROJECT DETAILS 3.1.1

SECTION 4 LIFECYCLE COMPONENT INVENTORY

Asset Component Inventory.....	4.1.1
Recurring Component Renewal Schedule	4.2.1
Recurring Component Expenditure Projections Graph.....	4.3.1

SECTION 5 DRAWINGS/PROJECT LOCATIONS

SECTION 6 PHOTOGRAPHS 6.1.1

FACILITY CONDITION ASSESSMENT

SECTION 1

ASSET OVERVIEW

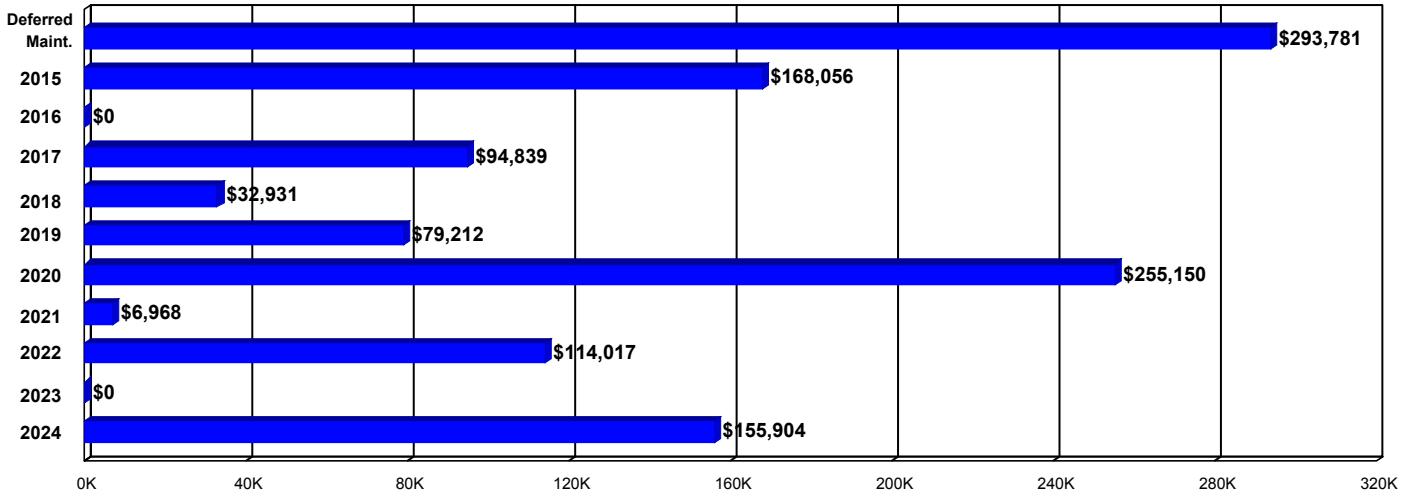
EXECUTIVE SUMMARY - HSC CENTRAL UTILITY PLANT

Building Code: UTIL
Building Name: HSC CENTRAL UTILITY PLANT
Year Built: 1980
Building Use: Physical Plant / Utility
Square Feet: 28,535

Non-Recurring Project Costs by Priority
Immediate: \$0
Critical: \$0
Non-Critical: \$4,423

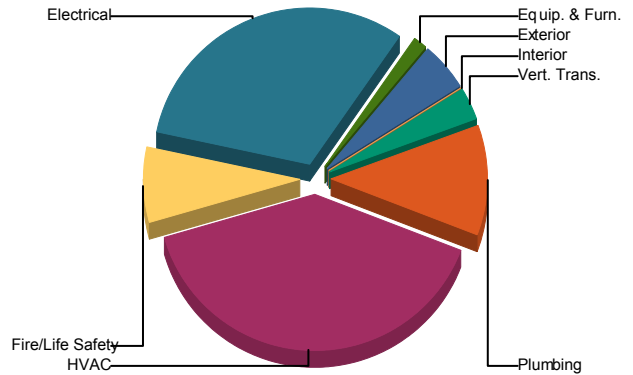
Current Replacement Value: \$9,715,000 **Total Non-Recurring Project Costs:** \$4,423

Recurring Component Replacement Cost By Year



Recurring Facilities Renewal Cost By System

Exterior	\$59,711
Interior	\$1,817
Plumbing	\$137,227
HVAC	\$475,710
Fire/Life Safety	\$93,339
Electrical	\$377,429
Site	\$0
Conveying	\$38,400
Equipment	\$17,224
Total	\$1,200,858



Non-Recurring Project Cost	\$4,423
Deferred Maintenance Cost	\$293,781
Projected Facility Renewal Cost	\$907,077
Total 10-Year Facility Cost	\$1,205,281

FCNI	FCI	10-Yr \$/SqFt
0.12	0.030	\$42.24

ASSET SUMMARY

Built in 1980, the HSC Central Utility Plant is a two-story, 28,535 square foot plant that houses much of the infrastructure for the campus steam and chilled water loops at East Carolina University. This recently renovated facility also contains administrative offices for the main Facility Service Group. The exterior is a combination of blond brick veneer and some metal siding, and there are multiple levels of flat ballasted and unballasted roofing. In 2007, there was a mechanical upgrade that required a structural modification and addition.

Information for this report was gathered during a site visit conducted on March 16, 2015.

Site

The landscaping is adequate around the building. The dedicated parking lot is only partially paved. The paved section is striped and the general parking consist of gravel. This industrial grade parking area and paved drive will not require restriping or resurfacing within the next ten years.

Exterior Structure

The exterior brick facades are in good condition and expected to have a lifecycle that extends beyond the next ten years. The metal siding near the utility access section appears to have been recently repaired and repainted and is in very good condition. Exterior windows also appear to have been upgraded. These double-pane, aluminum frame windows are in very good condition. It appeared that the primary and secondary exterior doors were going to be upgraded after this inspection. The hangar and overhead doors facing the utility parking area were just replaced prior to the inspection. The main roof is an EPDM system. There is also a smaller mopped roof and a metal roof mainly over the access point for the stair to the second floor offices. The EPDM and metal roofs should outlast the scope of this report, but the mopped roof is nearing the end of its useful life. It should be upgraded within the next few years.

Interior Finishes/Systems

Floor finishes include 12x12 vinyl tile, industrial carpet, and concrete. These finishes appear to have mostly been upgraded between 2007 and 2010 and are in very good condition. Walls are mostly either painted drywall or CMU and are in very good condition. The ceilings are exposed structure or 2x2 acoustical tile. They are in good condition, although there is minor staining in the control room. This can be addressed as a maintenance issue. The break room has a newly installed cabinet system with sink that has under-counter wheelchair access. No interior upgrades are deemed necessary at this time.

Accessibility

Although this facility has limited public access, ADA modifications were part of the 2007 renovation effort. Handicap access is through the loading dock entrance to the control room. Consideration should be given to creating additional handicap accessible exit points for emergencies. There is elevator access to the second floor, and the handrails in the stairwell are ADA compliant. No ADA upgrade of the industrial stair is deemed necessary. Doors have lever hardware, and signage is ADA compliant. Handicap accessible restrooms are provided. The single level drinking fountains have bottle fillers, which is not compliant with current ADA standards. To equally serve all potential users, it is recommended that dual level drinking fountains be installed.

Health

The Thermal-King walk-in freezer at the northwest loading dock area is assumed to be 2007 vintage. The enclosure should outlast the scope of this report, but the refrigeration system should be scheduled for replacement in the next few years due to normal lifecycle depletion.

Fire/Life Safety

The bay area used for biological and radioactive disposal storage is clearly marked but can be easily accessed through the administration area. It is recommended that a restricted access point be created so that no one can accidentally enter that area.

There is a lightning arrest system on each level of the roof. This system appears to be in good condition, so no upgrade is recommended.

This facility is protected by a point addressable central fire alarm system with a modern Simplex 4100U control panel. The devices that serve this system include manual pull stations, audible/visible devices, and smoke detectors. The fire alarm system is in very good condition. With proper testing and maintenance, the devices will outlast the purview of this analysis. However, a strobe fire device should be installed in several restrooms. This can be done as part of routine maintenance. The control panel is approximately 2007 vintage and should be replaced towards the end of the next ten years.

This facility is protected by an automatic, comprehensive sprinkler system. Both wet-pipe and dry-pipe areas were observed. A 125 hp fire pump provides additional water pressure to the system. The fire pump and sprinkler system are adequate and in good condition. With proper testing and maintenance, the sprinkler system will outlast the scope of this report. The fire pump, however, should be scheduled for replacement at the end of the next ten years.

Exit signs are LED illuminated and connected to the emergency power network. Emergency lighting is available through standard interior light fixtures that are connected to the emergency power network. The exit signs are currently in good condition but should be scheduled for replacement towards the end of the next ten years due to normal lifecycle depletion.

HVAC

This facility houses much of the infrastructure for the campus steam and chilled water loops. The infrastructure equipment that is not included in this report includes two boilers, cooling towers (6 cells), seven chillers, chilled water pumps, condenser water pumps, water treatment system for the boiler feedwater, air compressors for campus use, large condensate receivers, and a de-aerator.

Steam from the boilers is reduced by a small set of pressure reducing valves (PRV) for building use. The PRVs are 1980 vintage and overdue for replacement. Steam is distributed to several steam unit heaters and a shell-and-tube heat exchanger for heating hot water. Two small pneumatic condensate receivers complete the steam loop. The condensate receivers, heat exchanger, and two small associated heating hot water pumps are relatively new and should outlast the scope of this report.

For the purpose of describe the HVAC system, this facility has been divided into four separate sections. The original (1980) section is heated by steam unit heaters that are at the end of their expected service life. The 1999 addition (former incinerator room and medical waste handling areas) is also heated by steam unit heaters. These should be replaced toward the end of the next ten years.

The 2007 addition on the south end of the building is heated by modern McQuay fan coil units. These units are in good condition and should outlast the scope of this report.

The final section includes the offices on the second floor (added around 2002), as well as the shop offices and control room on the first floor. These office areas are the only areas supplied with both heating and cooling. Note that the first floor offices incorporate approximately 2,800 square feet of the original section of the building (10,215 square feet), leaving a remainder 7,415 square feet of the original section with only radiant heating.

The first air handler (AHU-001) is a 5 hp indoor unit that serves the offices on the first floor. It was replaced in 2014 and is in very good condition. A second air handler (AHU-002) is a 7.5 hp outdoor unit on the roof and serves the second floor offices. It appears to be 1980 vintage and is overdue for replacement.

The building trade shop area also is served by a 5 ton Carrier rooftop packaged unit (DX cooling and natural gas heating). It was installed in 2014 and is in very good condition. Supplemental cooling to the data/telecom area is provided by a 3 ton Mitsubishi Mr. Slim split DX system. Both the packaged unit and split DX system are relatively new and expected to outlast the scope of this report.

Additional ventilation is provided by centrifugal rooftop exhausters as well as utility set fans and a single strobic exhaust fan for the chemical storage area (fume hood). The exhaust fans were installed at various dates. They should be scheduled for replacement based upon expected service life depletion. Note that several of the fans are original and already overdue for replacement. The fume hood in room 118 appears to be seldom used, so its lifecycle has been adjusted.

Variable frequency drives (VFD) have been installed to improve the efficiency and control of the air handler fans, as well as heating hot water pump, domestic water pumps, and three well pumps. Most of

the VFDs were installed in 2007 and should be scheduled for replacement within the next ten years based upon normal lifecycle depletion. The smaller horsepower VFDs are expected to have a shorter expected service life.

Even though AHU-001 was replaced last year, the first floor offices still have pneumatic HVAC controls and a distribution network that are 1980 vintage. The controls and distribution network are long overdue for replacement. The controls for the second floor offices are in good condition but should be scheduled for replacement in the next five to seven years. The 2007 addition has modern Siemens Apogee controls that will outlast the scope of this report. No upgrade of the distribution network for the second floor offices and 2007 addition should be necessary within the next ten years.

Electrical

This facility houses some of the infrastructure of the 7,200 volt campus power loop. Most of this high voltage equipment, including the 1,500 kVA oil-filled transformer (exterior) and switchgear (room 133), are not included in this report. Building power enters the original Federal Pacific Electric (FPE) switchboard in room 105. The switchboard is rated for 2,000 amps at 480/277 volts. It is obsolete and overdue for replacement.

The electrical distribution network is a dual voltage configuration. Small dry-type transformers convert the power to 120/208 volts. The electrical distribution network in most sections of the building is in good condition and should not require any significant work in the near future. However, in the 1980 section, the electrical distribution system will reach the end of its expected service life during the next ten years. In this area, replacement should be scheduled because aging components, such as the circuit breakers, serve as potential fire hazards due to the inability to open a circuit in an overload or short circuit condition. Replacement should include all power panels, switches, raceways, conductors, and devices. Provide molded case, thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification.

The interior spaces are illuminated by fluorescent fixtures. There are pendant fixtures in the open areas and lay-in fixtures with acrylic lenses in the office areas. The pendant fixtures were replaced with modern T5 units in 2014. These will outlast the scope of this report. The fluorescent lights in the office areas were replaced around 2002. They should be scheduled for replacement towards the end of the next ten years due to normal lifecycle depletion. Specify energy-efficient fixtures, and install occupancy sensors where possible.

The exterior areas adjacent to the building are illuminated by building-mounted HID fixtures that were installed round 2007. These lights are currently in good condition. However, their replacement should be scheduled within the next ten years due to predictable wear. Install energy-efficient fixtures, and place them on photocell activation.

Emergency power is provided by the 1,250 kW Caterpillar diesel generator. The generator and its Cutler-Hammer distribution panel (switchboard) are located at the north exterior. The life/safety automatic

transfer switch (ATS1-LS) is in room 105. The fire pump controller (room 113) is considered to be a second ATS (this unit is not listed separately). The automatic transfer switch for the equipment (ATS2-EQ) is considered to be infrastructure and is not included in this report. The generator, switchboard, and ATS1-LS are 2005 vintage. Based upon normal lifecycle expectancy, these items should outlast the scope of this report.

Plumbing

Potable water is distributed via a copper piping network. Sanitary waste and stormwater piping is cast-iron, no-hub. The supply and drain piping networks appear to be in good condition. In most areas of this facility, they will likely provide reliable service throughout the scope of this analysis. However, in the 1980 section, the supply and drain piping will reach the end of their expected service life during the next ten years. It is recommended that these systems be scheduled for replacement with the appropriate piping, control valves, hot and cold water lines, and backflow prevention, and that insulation be installed where required. Vacuum breaks should be installed on threaded water spigots.

Backflow preventers were observed on the domestic water main, fire suppression water main, and supply piping to other equipment. Most of the backflow preventers are near or past the end of their expected service life. Replacement or overhaul is recommended.

A few of the plumbing fixtures are 1980 vintage. These will soon reach the end of their expected service life. Install new fixtures with automatic, hands-free faucets and flush valves. Most fixtures were installed during the 1999 addition and should outlast the scope of this report.

The source for domestic hot water for this facility is unknown. Because of the usage of this facility, the need for domestic hot water is limited.

A domestic water booster system is located in room 113. It has two pumps that are 15 hp each and was installed around 2005. It is expected to outlast the scope of this report.

Vertical Transportation

There is a two-stop, ThyssenKrupp hydraulic passenger elevator on the northeast end of the building. It was installed in 2002 when the offices were added to the second floor. The cab interior should be scheduled for an upgrade in the coming years due to normal wear and tear. However, the elevator mechanicals should outlast the scope of this report.

Note: The renewal needs outlined in this report were identified from the visual inspection and staff interviews. Our professional architectural and engineering inspectors thoroughly examined the accessible equipment and various building components to determine what repairs or modifications may be necessary to restore the systems and asset to an acceptable condition, or to a level defined by the Client. The estimated costs represent correction of existing deficiencies and anticipated lifecycle failures within a ten-year period. These recommendations are to bring the facility to modern standards without any anticipation of change to facility space layout or function. The total costs include variable project delivery costs as determined by the Owner. The costs developed do not represent the cost of a complete facility renovation. Soft costs not represented in this report include telecommunications, security, furniture, window treatment, space change, program issues, relocation, swing space, contingency, or costs that could not be identified or determined from the visual inspection and available building information.

INSPECTION TEAM DATA

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Date of Inspection

March 16, 2015

Inspection Team Personnel

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Richard Franck	Project Engineer	Mechanical, Electrical, Plumbing, Energy, Fire/Life Safety, Health

Client Contact

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DEFINITIONS

The following information is a clarification of the Facility Condition Assessment report using example definitions.

Overview

Recurring and Non-Recurring Facility Renewal Costs

Facility renewal costs are divided into two main categories – recurring and non-recurring. Recurring costs are cyclical and consist primarily of major repairs to or replacement/rebuilding of facility systems and components (e.g., roof or HVAC system replacement at or past the end of its normal useful life). The tool for projecting the recurring renewal costs is the Lifecycle Component Inventory, which is explained in detail below. Non-recurring costs typically consist of modifications or repairs necessary to comply with fire/life safety or accessibility code requirements or to address isolated, non-recurring deficiencies that could negatively affect the structure of the facility or the systems and components within. For these non-recurring costs, projects have been developed and include estimated material and labor costs.

Facility Condition Needs Index (FCNI)

The FCNI provides a lifecycle cost comparison. It is a ratio of the sum of the recurring and non-recurring facilities renewal costs over ten years to the current replacement value of the asset. The current replacement value is based on replacement with current construction standards for the facility use type, and not original design parameters. This index gives the university a comparison within all buildings for identifying worst case/best case building conditions.

$$\text{FCNI} = \frac{\text{Non-Recurring Projects} + \text{10-Year Recurring Component Renewal}}{\text{Current Replacement Value}}$$

Facility Condition Index (FCI)

The FCI is a ratio of the Deferred Maintenance facilities renewal costs to the current replacement value.

$$\text{FCI} = \frac{\text{Deferred Maintenance}}{\text{Current Replacement Value}}$$

Material and Labor Cost Factors and Additional Markups

The project costs are adjusted from the national averages to reflect conditions in Greenville using the R. S. Means City Cost Index for material and labor cost factors. The percentage adjustment of the national average is shown in the table below. Typical general contractor fees (which could include profit, overhead, bonds, and insurance) and professional fees (architect or engineer design fees and in-house design costs) are also included in the project costs.

GLOBAL MARKUP	%
Local Labor Index	51.3
Local Materials Index	100.7
General Contractor Markup	20.0
Professional Fees	16.0

Recurring Costs

Asset Component Inventory and Cost Projections

The Asset Component Inventory (starting on page 4.1.1) is based on industry standard lifecycle expectancies applied to an inventory of major building systems and major components within a facility. This is a list of all major systems and components within the facility. Each indicated component has the following associated information:

CATEGORY	DEFINITION
Uniformat Code	The standard Uniformat Code that applies to the component
Component Description	This line item describes the individual component
Identifier	Unique identifying information entered for a component as necessary
Quantity	The quantity of the listed component
Units	The unit of measure associated with the quantity
Unit Cost	The cost to replace each individual component unit (this cost is in today's dollars)
Complexity Adjustment	A factor utilize to adjust component replacement costs accordingly when it is anticipated that the actual cost will deviate from the average for that component
Total Cost	Unit cost multiplied by quantity, in today's dollars. Note that this is a one-time renewal/replacement cost
Install Date	Year that the component was or is estimated to have been installed. When this data is not available, it defaults to the year the asset was constructed
Life Expectancy	Average life expectancy for each individual component
Life Expectancy Adjustment	Utilized to adjust the first lifecycle of the component and to express when the next replacement should occur

The component listing forms the basis of the Recurring Component Renewal Schedule, which provides a year-by-year list of projected recurring renewal costs over the next ten years. Each individual component is assigned a replacement year based on lifecycles, and the costs for each item are in future year dollars. For items that are already past the end of their lifecycle, the replacement year is shown as Deferred Maintenance.

For a longer term perspective, the Recurring Component Expenditure Projections Graph presents recurring renewal cost projections over a 50-year period (starting from the date the report is run) based on each individual item's renewal cost and life span. Some components might require renewal several times within the 50-year model, while others might not occur at all. The vertical bars on the graph represent the accumulated total costs for each individual year. The average annual cost per gross square foot (\$/GSF) is shown at the bottom of the graph. In this calculation, costs are not escalated. This figure can be utilized to assess the adequacy of existing capital renewal and repair budgets.

Recurring Cost Classifications

- **Deferred Maintenance**
Recurring repairs, generated by the Lifecycle Component Inventory, that are past due for completion but have not yet been accomplished as part of normal maintenance or capital repair efforts. Further deferral of such renewal could impair the proper functioning of the facility. Costs estimated for Deferred Maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to effect the needed repairs.
- **Recurring Component Replacement**
Recurring renewal efforts, generated by the Lifecycle Component Inventory, that will be due within the scope of the assessment. These projects represent regular or normal facility maintenance, repair, or renovation that should be planned in the near future.

Non-Recurring Costs

As previously mentioned, modifications or repairs necessary to comply with fire/life safety or accessibility code requirements and those that address isolated, non-recurring deficiencies that could negatively affect the structure of the facility or the systems and components within are not included in the Lifecycle Component Inventory. For each such deficiency identified during the facility inspection, a project with an estimated cost to rectify said deficiency is recommended. These projects each have a unique identifier and are categorized by system type, priority, and classification, which are defined below. The costs in these projects are also indexed to local conditions and markups applied as the situation dictates.

Project Number

Each project has a unique number consisting of three elements, the asset identification number, system code, and a sequential number assigned by the FCA software. For example, the third fire/life safety project identified for asset 0001 would have a project number of 0001FS03 (0001 for the asset number, FS for fire/life safety, and 03 being the next sequential number for a fire/life safety project).

Project Classifications

- **Plant/Program Adaption**
Non-recurring expenditures, stored in the Projects module, required to adapt the physical plant to the evolving needs of the institution and to changing codes or standards. These are expenditures beyond normal maintenance. Examples include compliance with changing codes (e.g., accessibility), facility alterations required by changed teaching or research methods, and improvements occasioned by the adoption of modern technology (e.g., the use of personal computer networks).
- **Corrective Action**
Non-recurring expenditures, stored in the Projects module, for repairs needed to correct random and unpredictable deficiencies. Such projects are not related to aligning a building with codes or standards. Deficiencies classified as Corrective Action could have an effect on building aesthetics, safety, or usability.

Priority Classes

Recurring renewal needs do not receive individual prioritization, as the entire data set of needs in this category is year-based. Each separate component has a distinct need year, rendering further prioritization unnecessary. Each non-recurring renewal project, however, has a priority assigned to indicate the criticality of the recommended work. The prioritization utilized for this subset of the data is as follows.

- **Priority 1 – Immediate**
Projects in this category require immediate action to:
 - a. correct a cited safety hazard
 - b. stop accelerated deterioration
 - c. and/or return a facility to normal operation

- **Priority 2 – Critical**

Projects in this category include actions that must be addressed in the short-term:

- a. repairs to prevent further deterioration
- b. improvements to facilities associated with critical accessibility needs
- c. potential safety hazards

- **Priority 3 – Non-Critical**

Projects in this category include:

- a. improvements to facilities associated with non-critical accessibility needs
- b. actions to bring a facility into compliance with current building codes as grandfather clauses expire
- c. actions to improve the usability of a facility following an occupancy or use change

Category Codes

CATEGORY CODE*	SYSTEM DESCRIPTION
AC1A – AC4B	ACCESSIBILITY
EL1A – EL8A	ELECTRICAL
ES1A – ES6E	EXTERIOR STRUCTURE
FS1A – FS6A	FIRE/LIFE SAFETY
HE1A – HE7A	HEALTH
HV1A – HV8B	HVAC
IS1A – IS6D	INTERIOR FINISHES/SYSTEMS
PL1A – PL5A	PLUMBING
SI1A – SI4A	SITE
SS1A – SS7A	SECURITY SYSTEMS
VT1A – VT7A	VERTICAL TRANSPORTATION

<i>Example:</i> Category Code = EL5A	
EL	System Description
5	Component Description
A	Element Description

*Refer to the Category Code Report starting on page 1.5.1.

Priority Sequence

A Priority Sequence number is automatically assigned to each project to rank the projects in order of relative criticality and show the recommended execution order. This number is calculated based on the Priority Class and identified system of each project.

Example:

Priority Class	Category Code	Project Number	Priority Sequence
1	HV2C	0001HV04	01
1	PL1D	0001PL02	02
2	IS1E	0001IS06	03
2	EL4C	0001EL03	04

Project Subclass Type

- **Energy Conservation**
 Projects with energy conservation opportunities, based on simple payback analysis.

Drawings/Project Locations

The drawings for this facility are marked with icons (see legend on plans) denoting the specific location(s) for each project. Within each icon are the last four characters of the respective project number (e.g., 0001IS01 is marked on the plan as IS01).

Photographs

A code shown on the Photo Log identifies the asset number, photo sequence, and a letter designation for architect (a) or engineer (e).

<i>Example:</i> Photo Number: 0001006e	
0001	Asset Number
006	Photo Sequence
e	Engineering Photo

CATEGORY CODE REPORT

ACCESSIBILITY

CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
AC1A	Site	Stair and Railings	Includes exterior stairs and railings which are not part of the building entrance points.
AC1B	Site	Ramps and Walks	Includes sidewalks, grade change ramps (except for a building entrance), curb ramps, etc.
AC1C	Site	Parking	Designated parking spaces, including striping, signage, access aisles and ramps, etc.
AC1D	Site	Tactile Warnings	Raised tactile warnings located at traffic crossing and elevation changes.
AC2A	Building Entry	General	Covers all aspects of entry into the building itself, including ramps, lifts, doors and hardware, power operators, etc.
AC3A	Interior Path of Travel	Lifts/Ramps/Elevators	Interior lifts, ramps and elevators designed to accommodate level changes inside a building. Includes both installation and retrofitting.
AC3B	Interior Path of Travel	Stairs and Railings	Upgrades to interior stairs and handrails for accessibility reasons.
AC3C	Interior Path of Travel	Doors and Hardware	Accessibility upgrades to the interior doors including widening, replacing hardware power, assisted operators, etc.
AC3D	Interior Path of Travel	Signage	Interior building signage upgrades for compliance with THE ADA.
AC3E	Interior Path of Travel	Restrooms/Bathrooms	Modifications to and installation of accessible public restrooms and bathrooms. Bathrooms that are an integral part of residential suites are catalogued under HC4A.
AC3F	Interior Path of Travel	Drinking Fountains	Upgrading/replacing drinking fountains for reasons of accessibility.
AC3G	Interior Path of Travel	Phones	Replacement/modification of public access telephones.
AC4A	General	Functional Space Modifications	This category covers all necessary interior modifications necessary to make the services and functions of a building accessible. It includes installation of assistive listening systems, modification of living quarters, modifications to laboratory workstations, etc. Bathrooms that are integral to efficiency suites are catalogued here.
AC4B	General	Other	All accessibility issues not catalogued elsewhere.

ELECTRICAL

CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
EL1A	Incoming Service	Transformer	Main building service transformer.
EL1B	Incoming Service	Disconnects	Main building disconnect and switchgear.
EL1C	Incoming Service	Feeders	Incoming service feeders. Complete incoming service upgrades, including transformers, feeders, and main distribution panels are catalogued here.
EL1D	Incoming Service	Metering	Installation of meters to record consumption and/or demand.
EL2A	Main Distribution Panels	Condition Upgrade	Main distribution upgrade due to deficiencies in condition.
EL2B	Main Distribution Panels	Capacity Upgrade	Main distribution upgrades due to inadequate capacity.
EL3A	Secondary Distribution	Step-Down Transformers	Secondary distribution step-down and isolation transformers.
EL3B	Secondary Distribution	Distribution Network	Includes conduit, conductors, sub-distribution panels, switches, outlets, etc. Complete interior rewiring of a facility is catalogued here.

EL3C	Secondary Distribution	Motor Controllers	Mechanical equipment motor starters and control centers.
EL4A	Devices and Fixtures	Exterior Lighting	Exterior building lighting fixtures, including supply conductors and conduit.
EL4B	Devices and Fixtures	Interior Lighting	Interior lighting fixtures (also system wide emergency lighting), including supply conductors and conduits.
EL4C	Devices and Fixtures	Lighting Controllers	Motion sensors, photocell controllers, lighting contactors, etc.
EL4D	Devices and Fixtures	GFCI Protection	Ground fault protection, including GFCI receptacles and breakers.
EL4E	Devices and Fixtures	Lightning Protection	Lightning arrestation systems including air terminals and grounding conductors.
EL5A	Emergency Power System	Generation/ Distribution	Includes generators, central battery banks, transfer switches, emergency power grid, etc.
EL6A	Systems	UPS/DC Power Supply	Uninterruptible power supply systems and DC motor-generator sets and distribution systems.
EL7A	Infrastructure	Above Ground Transmission	Includes poles, towers, conductors, insulators, fuses, disconnects, etc.
EL7B	Infrastructure	Underground Transmission	Includes direct buried feeders, ductbanks, conduit, manholes, feeders, switches, disconnects, etc.
EL7C	Infrastructure	Substations	Includes incoming feeders, breakers, buses, switchgear, meters, CTs, PTs, battery systems, capacitor banks, and all associated auxiliary equipment.
EL7D	Infrastructure	Distribution Switchgear	Stand-alone sectionalizing switches, distribution switchboards, etc.
EL7F	Infrastructure	Area and Street Lighting	Area and street lighting systems, including stanchions, fixtures, feeders, etc.
EL8A	General	Other	Electrical system components not catalogued elsewhere.

EXTERIOR STRUCTURE

CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
ES1A	Foundation/ Footing	Structure	Structural foundation improvements involving structural work on foundation wall/footing, piers, caissons, and piles, including crack repairs, shoring, and pointing
ES1B	Foundation/ Footing	Dampproofing/ Dewatering	Foundation/footing waterproofing work, including, damp-proofing, dewatering, insulation, etc.
ES2A	Columns/Beams/ Walls	Structure	Structural work to primary load-bearing structural components aside from floors, including columns, beams, bearing walls, lintels, arches, etc.
ES2B	Columns/Beams/ Walls	Finish	Work involving restoration of the appearance and weatherproof integrity of exterior wall/structural envelope components, including masonry/pointing, expansion joints, efflorescence and stain removal, grouting, surfacing, chimney repairs, etc.
ES3A	Floor	Structure	Work concerning the structural integrity of the load supporting floors, both exposed and unexposed, including deformation, delamination, spalling, shoring, crack repair, etc.
ES4A	Roof	Repair	Work on waterproof horizontal finish (roof) involving repair and/or limited replacement (<40% total), including membrane patching, flashing repair, coping caulk/resetting, PPT wall parging/coating, walkpad installation, skylight and roof hatch R&R, etc.
ES4B	Roof	Replacement	Work involving total refurbishment of roofing system, including related component rehab.
ES5A	Fenestrations	Doors	Work on exterior exit/access door, including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.
ES5B	Fenestrations	Windows	Work on exterior fenestration closure and related components, including glass/metal/wood curtain walls, fixed or operable window sashes, glazing, frames, sills, casings, stools, seats, coatings, treatments, screens, storm windows, etc.

ES6A	General	Attached Structure	Work on attached exterior structure components not normally considered in above categories, including porches, stoops, decks, monumental entrance stairs, cupolas, tower, etc.
ES6B	General	Areaways	Work on attached grade level or below structural features, including subterranean lightwells, areaways, basement access stairs, etc.
ES6C	General	Trim	Work on ornamental exterior (generally non-structural) elements, including beltlines, quoins, porticos, soffits, cornices, moldings, trim, etc.
ES6D	General	Superstructure	Finish and structural work on non-standard structures with exposed load-bearing elements, such as stadiums, bag houses, bleachers, freestanding towers, etc.
ES6E	General	Other	Any exterior work not specifically categorized elsewhere, including finish and structural work on freestanding boiler stacks.

FIRE/LIFE SAFETY			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
FS1A	Lighting	Egress Lighting/Exit Signage	R&R work on exit signage and packaged AC/DC emergency lighting.
FS2A	Detection/Alarm	General	Repair or replacement of fire alarm/detection system/components, including alarms, pull boxes, smoke/heat detectors, annunciator panels, central fire control stations, remote dialers, fire station communications, etc.
FS3A	Suppression	Sprinklers	Repair or installation of water sprinkler type automatic fire suppressions, including wet-pipe and dry-pipe systems, heads, piping, deflectors, valves, monitors, associated fire pump, etc.
FS3B	Suppression	Standpipe/Hose	Repair or installation of standpipe system or components, including hardware, hoses, cabinets, nozzles, necessary fire pumping system, etc.
FS3C	Suppression	Extinguishers	Repairs or upgrades to F.E. cabinets/wall fastenings and handheld extinguisher testing/replacement.
FS3D	Suppression	Other	Other fire suppression items not specifically categorized elsewhere, including fire blankets, carbon dioxide automatic systems, Halon systems, dry chemical systems, etc.
FS4A	Hazardous Materials	Storage Environment	Installation or repair of special storage environment for the safe holding of flammable or otherwise dangerous materials/supplies, including vented flammables storage cabinets, holding pens/rooms, cages, fire safe chemical storage rooms, etc.
FS4B	Hazardous Materials	User Safety	Improvements, repairs, installation, or testing of user safety equipment, including emergency eyewashes, safety showers, emergency panic/shut-down system, etc.
FS5A	Egress Path	Designation	Installation, relocation or repair of posted diagrammatic emergency evacuation routes.
FS5B	Egress Path	Distance/Geometry	Work involving remediation of egress routing problems, including elimination of dead end corridors, excessive egress distance modifications, and egress routing inadequacies.
FS5C	Egress Path	Separation Rating	Restoration of required fire protective barriers, including wall rating compromises, fire-rated construction, structural fire proofing, wind/safety glazing, transom retrofitting, etc.
FS5D	Egress Path	Obstruction	Clearance of items restricting the required egress routes.
FS5E	Egress Path	Stairs Railing	Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.
FS5F	Egress Path	Fire Doors/Hardware	Installation/replacement/repair of fire doors and hardware, including labeled fire doors, fire shutters, closers, magnetic holders, panic hardware, etc.
FS5G	Egress Path	Finish/Furniture Ratings	Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.
FS6A	General	Other	Life/fire safety items not specifically categorized elsewhere.

HEALTH			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
HE1A	Environmental Control	Equipment and Enclosures	Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and all associated mechanical equipment.
HE1B	Environmental Control	Other	General environmental control problems not catalogued elsewhere.
HE2A	Pest Control	General	Includes all measures necessary to control and destroy insects, rodents, and other pests.
HE3A	Refuse	General	Issues related to the collection, handling, and disposal of refuse.
HE4A	Sanitation Equipment	Laboratory and Process	Includes autoclaves, cage washers, steam cleaners, etc.
HE5A	Food Service	Kitchen Equipment	Includes ranges, grilles, cookers, sculleries, etc.
HE5B	Food Service	Cold Storage	Includes the cold storage room and all associated refrigeration equipment.
HE6A	Hazardous Material	Structural Asbestos	Testing, abatement, and disposal of structural and building finish materials containing asbestos.
HE6B	Hazardous Material	Mechanical Asbestos	Testing, abatement, and disposal of mechanical insulation materials containing asbestos.
HE6C	Hazardous Material	PCBs	Includes testing, demolition, disposal, and cleanup of PCB contaminated substances.
HE6D	Hazardous Material	Fuel Storage	Includes monitoring, removal, and replacement of above and below ground fuel storage and distribution systems. Also includes testing and disposal of contaminated soils.
HE6E	Hazardous Material	Lead Paint	Testing, removal, and disposal of lead-based paint systems.
HE6F	Hazardous Material	Other	Handling, storage, and disposal of other hazardous materials.
HE7A	General	Other	Health related issues not catalogued elsewhere.

HVAC			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
HV1A	Heating	Boilers/Stacks/Controls	Boilers for heating purposes, including their related stacks, flues, and controls.
HV1B	Heating	Radiators/Convectors	Including cast-iron radiators, fin tube radiators, baseboard radiators, etc.
HV1C	Heating	Furnace	Furnaces and their related controls, flues, etc.
HV1D	Heating	Fuel Supply/Storage	Storage and/or distribution of fuel for heating purposes, including tanks and piping networks and related leak detection/monitoring.
HV2A	Cooling	Chillers/Controls	Chiller units for production of chilled water for cooling purposes, related controls (not including mods for CFC compliance).
HV2B	Cooling	Heat Rejection	Repair/replacement of cooling towers, dry coolers, air-cooling, and heat rejection. Includes connection of once-through system to cooling tower.
HV3A	Heating/Cooling	System Retrofit/Replace	Replacement or major retrofit of HVAC systems.
HV3B	Heating/Cooling	Water Treatment	Treatment of hot water, chilled water, steam, condenser water, etc.
HV3C	Heating/Cooling	Package/Self-Contained Units	Repair/replacement of self-contained/package type units, including stand-up units, rooftop units, window units, etc; both air conditioners and heat pumps.
HV3D	Heating/Cooling	Conventional Split Systems	Repair, installation, or replacement of conventional split systems, both air conditioners and heat pumps, including independent component replacements of compressors and condensers.

HV4A	Air Moving/ Ventilation	Air Handlers/ Fan Units	Includes air handlers and coils, fan coil units, unit ventilators, filtration upgrades, etc., not including package/self-contained units, split systems, or other specifically categorized systems.
HV4B	Air Moving/ Ventilation	Exhaust Fans	Exhaust fan systems, including fans, range and fume hoods, controls, and related ductwork.
HV4C	Air Moving/ Ventilation	Other Fans	Supply, return, or any other fans not incorporated into a component categorized elsewhere.
HV4D	Air Moving/ Ventilation	Air Distribution Network	Repair, replacement, or cleaning of air distribution network, including ductwork, terminal reheat/cool, VAV units, induction units, power induction units, insulation, dampers, linkages, etc.
HV5A	Steam/Hydronic Distribution	Piping Network	Repair/replacement of piping networks for heating and cooling systems, including pipe, fittings, insulation, related components, etc.
HV5B	Steam/Hydronic Distribution	Pumps	Repair or replacement of pumps used in heating and cooling systems, related control components, etc.
HV5C	Steam/Hydronic Distribution	Heat Exchangers	Including shell-and-tube heat exchangers and plate heat exchangers for heating and cooling.
HV6A	Controls	Complete System Upgrade	Replacement of HVAC control systems.
HV6B	Controls	Modifications/ Repairs	Repair or modification of HVAC control system.
HV6C	Controls	Air Compressors/ Dryers	Repair or modification of control air compressors and dryers.
HV7A	Infrastructure	Steam/Hot Water Generation	Generation of central steam and/or hot water, including boilers and related components.
HV7B	Infrastructure	Steam/Hot Water Distribution	Distribution system for central hot water and/or steam.
HV7C	Infrastructure	Chilled Water Generation	Generation of central chilled water, including chillers and related components.
HV7D	Infrastructure	Chilled Water Distribution	Distribution system for central chilled water.
HV7E	Infrastructure	Tunnels/ Manholes/ Trenches	Repairs, installation, or replacement of utility system access chambers.
HV7F	Infrastructure	Other	HVAC infrastructure issues not specifically categorized elsewhere.
HV8A	General	CFC Compliance	Chiller conversions/replacements for CFC regulatory compliance, monitoring, etc.
HV8B	General	Other	HVAC issues not catalogued elsewhere.

INTERIOR FINISHES/SYSTEMS

CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
IS1A	Floor	Finishes-Dry	R&R of carpet, hardwood strip flooring, concrete coating, vinyl linoleum and tile, marble, terrazzo, rubber flooring, and underlayment in predominantly dry areas ("dry" includes non-commercial kitchens)
IS1B	Floor	Finishes-Wet	Flooring finish/underlayment work in predominantly "wet" areas, including work with linoleum, rubber, terrazzo, concrete coating, quarry tile, ceramic tile, epoxy aggregate, etc.
IS2A	Partitions	Structure	Structural work on full height permanent interior partitions, including wood/metal stud and drywall systems, CMU systems, structural brick, tile, glass block, etc.
IS2B	Partitions	Finishes	Work on full height permanent interior partitions, including R&R, to gypsum board, plaster, lath, wood paneling, acoustical panels, wall coverings, column coverings, tile, paint, etc.
IS3A	Ceilings	Repair	Repair of interior ceilings (<40% of total), including tiles, gypsum board, plaster, paint, etc.
IS3B	Ceilings	Replacement	Major refurbishments (>40% of total) to interior ceiling systems, including grid system replacements, structural framing, new suspended systems, paint, plastering, etc.

IS4A	Doors	General	Any work on interior non-fire-rated doors, roll-up counter doors, mechanical/plumbing access doors, and all door hardware (except for reasons of access improvement).
IS5A	Stairs	Finish	Any finish restorative work to stair tower walking surfaces, including replacement of rubber treads, safety grips, nosings, etc. (except as required to accommodate disabled persons).
IS6A	General	Molding	R&R to interior trim/molding systems, including rubber/vinyl/wood base, crown/chair/ornamental moldings, cased openings, etc.
IS6B	General	Cabinetry	R&R work to interior casework systems, including cabinets, countertops, wardrobes, lockers, mail boxes, built-in bookcases, lab/work benches, reagent shelving, etc. (except as required for access by the disabled).
IS6C	General	Screening	Work on temporary or partial height partitioning systems, including toilet partitions, urinal/vanity screens, etc.
IS6D	General	Other	Any work on interior elements not logically or specifically categorized elsewhere, including light coves, phone booths, interior lightwells, etc.

PLUMBING			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
PL1A	Domestic Water	Piping Network	Repair or replacement of domestic water supply piping network, insulation, hangers, etc.
PL1B	Domestic Water	Pumps	Domestic water booster pumps, circulating pumps, related controls, etc.
PL1C	Domestic Water	Storage/ Treatment	Equipment or vessels for storage or treatment of domestic water.
PL1D	Domestic Water	Metering	Installation, repair, or replacement of water meters.
PL1E	Domestic Water	Heating	Domestic water heaters, including gas, oil, and electric water heaters, shell-and-tube heat exchangers, tank type, and instantaneous.
PL1F	Domestic Water	Cooling	Central systems for cooling and distributing drinking water.
PL1G	Domestic Water	Fixtures	Plumbing fixtures, including sinks, drinking fountains, water closets, urinals, etc.
PL1H	Domestic Water	Conservation	Alternations made to the water distribution system to conserve water.
PL1I	Domestic Water	Backflow Protection	Backflow protection devices, including backflow preventers, vacuum breakers, etc.
PL2A	Wastewater	Piping Network	Repair or replacement of building wastewater piping network.
PL2B	Wastewater	Pumps	Pump systems used to lift wastewater, including sewage ejectors and other sump systems.
PL3A	Special Systems	Process Gas/Fluids	Generation and/or distribution of process steam, compressed air, natural and LP gas, process water, vacuum, etc.
PL4A	Infrastructure	Potable Water Storage/ Treatment	Storage and treatment of potable water for distribution.
PL4B	Infrastructure	Industrial Water Distribution/ Treatment	Storage and treatment of industrial water for distribution.
PL4C	Infrastructure	Sanitary Water Collection	Sanitary water collection systems and sanitary sewer systems, including combined systems.
PL4D	Infrastructure	Stormwater Collection	Stormwater collection systems and storm sewer systems; storm water only.
PL4E	Infrastructure	Potable Water Distribution	Potable water distribution network.
PL4F	Infrastructure	Wastewater Treatment	Wastewater treatment plants, associated equipment, etc.
PL5A	General	Other	Plumbing issues not categorized elsewhere.

SITE			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
SI1A	Access	Pedestrian	Paved pedestrian surfaces, including walks, site stairs, step ramps, paths, pedestrian signage, sidewalk bridges/canopies, pedestrian plaza/mall areas, etc.
SI1B	Access	Vehicular	Paved vehicular surfaces, including roads, paths, curbs, guards, bollards, bridges, skyways, joints, shoulder work, culverts, ditches, vehicular signage, etc.
SI2A	Landscape	Grade/Flora	Landscape related work, including new grass/turf refurbishment, grade improvements, catch basins, swales, berms, pruning, new ornamental flora, etc.
SI3A	Hardscape	Structure	Permanent hard site features, predominantly ornamental, including terraces, fences, statues, freestanding signage, fountains, benches, etc.
SI4A	General	Other	Other site work not specifically categorized elsewhere.

SECURITY SYSTEMS			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
SS1A	Lighting	Exterior	Fixtures, stanchions, foliage interference, cleanliness, locations, etc.
SS2A	Site	Fencing	Perimeter campus fencing, individual building fencing, includes both pedestrian and vehicular control fences.
SS2B	Site	General	Hidden areas due to foliage, fencing, parking, walls, etc.
SS3A	Communications	Emergency Phones	Access, locations, visibility, function, reliability, etc.
SS4A	Access Control	Doors	Access, locks, keys, two-way speakers, reliability, redundancy, etc.
SS4B	Access Control	Windows	Locks, screens, access, reliability, etc.
SS4C	Access Control	Systems	Card key, proximity devices, data control, data use, reliability, system design, etc.
SS5A	Monitoring	Systems	Cameras, audio communication, monitoring stations, locations, system design, etc.
SS6A	Circulation	Pedestrian	On campus as well as to and from off-campus housing and class locations, etc.
SS6B	Circulation	Vehicular	Guard gates, access, systems, data control and use, identification, etc.
SS7A	General	Other	General information/projects pertaining to security issues.

VERTICAL TRANSPORTATION			
CODE	Component Description	Element Description	DEFINITION
VT1A	Machine Room	General	Machine, worm gear, thrust bearing, brake, motors, sheaves, generator, controller, selector, governor, pump(s), valves, oil, access, lighting, ventilation, and floor.
VT2A	Car	General	Position indicator, lighting, floor, gate-doors, operation devices, safeties, safety shoe, light ray/detection, emergency light, fire fighter service, car top, door operator, stop switch, car frame, car guides, sheaves, phone, and ventilation.
VT3A	Hoistway	General	Enclosure, fascia, interlock, doors, hangers, closers, sheaves, rails, hoistway switches, ropes, traveling cables, selector tape, weights, and compensation.
VT4A	Hall Fixtures	General	Operating panel, position indicator, hall buttons, lobby panel, hall lanterns, fire fighter service, audible signals, and card/key access.
VT5A	Pit	General	Buffer(s), guards, sheaves, hydro packing, floor, lighting, and safety controls.
VT6A	Operating Conditions	General	Door open time, door close time, door thrust, acceleration, deceleration, leveling, dwell time, speed, OFR time, and nudging.
VT7A	General	Other	General information/projects relating to vertical transportation system components.

FACILITY CONDITION ASSESSMENT

SECTION 2

COST SUMMARIES
AND TOTALS

Detailed Facility Cost Summary
Facilities Renewal Budget Pro-Forma
UTIL : HSC CENTRAL UTILITY PLANT

	Non-Recurring Project Costs			Recurring Component Replacement Cost											Total
	Immediate	Critical	Non-Critical	Deferred Maint.	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Accessibility	0	0	4,423	0	0	0	0	0	0	0	0	0	0	0	\$4,423
Exterior	0	0	0	0	8,809	0	0	32,931	0	17,971	0	0	0	0	\$59,711
Interior	0	0	0	0	0	0	606	0	0	1,212	0	0	0	\$1,817	
Plumbing	0	0	0	0	71,187	0	17,331	0	0	48,709	0	0	0	\$137,227	
HVAC	0	0	0	158,970	88,061	0	0	0	79,212	52,558	0	0	0	96,908	\$475,710
Fire/Life Safety	0	0	0	0	0	0	0	0	0	0	0	34,344	0	58,996	\$93,339
Electrical	0	0	0	134,811	0	0	21,278	0	0	134,700	6,968	79,673	0	0	\$377,429
Site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
Conveying	0	0	0	0	0	0	38,400	0	0	0	0	0	0	0	\$38,400
Equipment	0	0	0	0	0	0	17,224	0	0	0	0	0	0	0	\$17,224
	0	0	4,423	293,781	168,056	0	94,839	32,931	79,212	255,150	6,968	114,017	0	155,904	\$1,205,281

Non-Recurring Project Cost	\$4,423
Recurring Component Replacement Cost	\$1,200,858
Total 10-Year Facility Cost	\$1,205,281

CRV	\$9,715,000
FCNI	0.12
FCI	0.03

Building SqFt.	28,535
10-Yr \$ / SqFt	\$42.24

All costs shown as Present Value

Detailed Facility Cost Summary
Facilities Renewal Needs by System
UTIL : HSC CENTRAL UTILITY PLANT

	Non-Recurring Project Costs	Recurring Component Replacement Cost	Total 10-Yr. Facility Renewal Costs
Accessibility	\$4,423	\$0	\$4,423
Exterior	\$0	\$59,711	\$59,711
Interior	\$0	\$1,817	\$1,817
Plumbing	\$0	\$137,227	\$137,227
HVAC	\$0	\$475,710	\$475,710
Fire/Life Safety	\$0	\$93,339	\$93,339
Electrical	\$0	\$377,429	\$377,429
Site	\$0	\$0	\$0
Conveying	\$0	\$38,400	\$38,400
Equipment/Other	\$0	\$17,224	\$17,224
	\$4,423	\$1,200,858	\$1,205,281

**Detailed Facility Cost Summary
Facilities Renewal Plan
UTIL : HSC CENTRAL UTILITY PLANT**

Non-Recurring Project Costs

Project Number	Title	Uniformat	Priority Class	Project Classification	Project Cost (Present Val.)
UTILAC01	INSTALL DUAL LEVEL DRINKING FOUNTAIN		Non-Critical	Plant Adaption	4,423
					4,423

Recurring Component Replacement Cost

Component	Uniformat	Repl. Year	Repl. Cost (Present Val.)
AH18 AIR HANDLING UNIT - OUTDOOR PACKAGE (5-8 HP)	AHU-002	D3040	Deferred Maint. \$111,114
FN19 FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-005	D3040	Deferred Maint. \$4,954
FN19 FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES CHILLER F	D3040	Deferred Maint. \$4,954
FN19 FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	D3040	Deferred Maint. \$4,954
FN19 FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	D3040	Deferred Maint. \$4,954
FN20 FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES CHILLER F	D3040	Deferred Maint. \$6,226
FN40 FAN - MIXED-FLOW, SHORT STACK, EXHAUST (<=30 HP)	EAF-013	D3040	Deferred Maint. \$11,578
HX09 PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	ROOM 130	D3040	Deferred Maint. \$3,833
BA20 HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	D3060	Deferred Maint. \$6,404
SG06 MAIN SWITCHBOARD W/BREAKERS (1600-2500 AMP)	ROOM 105 480V	D5010	Deferred Maint. \$134,811
DR30 DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	LOADING DOCK	B2030	2015 \$1,762
DR30 DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	MECH ROOM	B2030	2015 \$7,047
FX02 PLUMBING FIXTURE - LAVATORY, WALL HUNG	ORIGINAL	D2010	2015 \$1,078
FX05 PLUMBING FIXTURE - SINK, LABORATORY-USE	ORIGINAL	D2010	2015 \$2,548
FX06 PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	ORIGINAL	D2010	2015 \$1,469
FX12 PLUMBING FIXTURE - WATER CLOSET, TANKLESS	ORIGINAL	D2010	2015 \$1,606
FX16 PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	ORIGINAL	D2010	2015 \$13,394
BF02 BACKFLOW PREVENTER (1-2 INCHES)	BFP-001	D2020	2015 \$1,983
BF02 BACKFLOW PREVENTER (1-2 INCHES)	BFP-004	D2020	2015 \$1,983
BF02 BACKFLOW PREVENTER (1-2 INCHES)	BFP-005	D2020	2015 \$1,983
BF03 BACKFLOW PREVENTER (2-3 INCHES)	BFP-002	D2020	2015 \$6,560
BF03 BACKFLOW PREVENTER (2-3 INCHES)	BFP-003	D2020	2015 \$6,560

**Detailed Facility Cost Summary
Facilities Renewal Plan
UTIL : HSC CENTRAL UTILITY PLANT**

PS20	SUPPLY PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	D2020	2015	\$32,025
RH01	HEATING SYSTEM, STEAM OR HYDRONIC	ORIGINAL	D3040	2015	\$88,061
DR24	DOOR LOCK, COMMERCIAL-GRADE	SHOP EXIT	C1020	2017	\$606
VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELV-001	D1010	2017	\$38,400
BF03	BACKFLOW PREVENTER (2-3 INCHES)	BFP-007	D2020	2017	\$6,560
BF05	BACKFLOW PREVENTER (4-6 INCHES)	BFP-006	D2020	2017	\$10,771
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-007	D5010	2017	\$559
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-011	D5010	2017	\$2,794
VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-013	D5010	2017	\$4,040
VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-010	D5010	2017	\$4,190
VF04	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP1	D5010	2017	\$4,848
VF04	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP2	D5010	2017	\$4,848
CR04	REFRIGERATION SYSTEM - WALK-IN, 4 EVAP FANS, 26500 BTUH, CONDENSER	THERMAL KING	E1020	2017	\$17,224
RR07	ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH	ROOF #2	B3010	2018	\$32,931
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES 2ND FLR	D3040	2019	\$4,954
FN20	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	D3040	2019	\$6,226
FN20	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	D3040	2019	\$6,226
FN26	FAN - PROPELLER WITH LOUVER, 1/4" SP (.5-1 HP)	EAF-008	D3040	2019	\$2,302
FN34	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-016	D3040	2019	\$9,424
PH16	CONDENSATE RECEIVER, PNEUMATIC (<=30 GPM)	ROOM 116	D3040	2019	\$50,081
DR05	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS	SHOP EXIT	B2030	2020	\$2,283
DR17	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		B2030	2020	\$15,688
DR24	DOOR LOCK, COMMERCIAL-GRADE	GENERATOR, PRKC	C1020	2020	\$1,212
PD20	DRAIN PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	D2030	2020	\$48,709
HV20	HVAC DISTRIBUTION NETWORKS - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	D3040	2020	\$39,384
BA20	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	2002 OFFICE	D3060	2020	\$13,174
SE20	ELECTRICAL DISTRIBUTION NETWORK - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	D5010	2020	\$134,700
VF06	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-009	D5010	2021	\$6,968
EL01	EXIT SIGN - CENTRAL POWER		D4030	2022	\$5,062
FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	4100U, RM 105	D4030	2022	\$29,282
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)		D5020	2022	\$19,039
LI14	LIGHTING SYSTEM, INTERIOR - OFFICE	2002 OFFICE	D5020	2022	\$60,634

**Detailed Facility Cost Summary
Facilities Renewal Plan
UTIL : HSC CENTRAL UTILITY PLANT**

RH01	HEATING SYSTEM, STEAM OR HYDRONIC	1999 ADDITION	D3040	2024	\$96,908
FP12	FIRE PUMP - ELECTRIC, 1000 GPM, 5" ID (120-150 HP)	ORIGINAL	D4010	2024	\$58,996
					<hr/>
					\$1,200,858

All costs shown as Present Value

Detailed Project Summary
Facility Condition Assessment
Project Classification
 UTIL : HSC CENTRAL UTILITY PLANT

Cat. Code	Project Number	Pri Seq	Project Classification	Pri Cls	Project Title	Construction Cost	Prof Fees	Actual Cost to Date	Remaining Cost
AC3F	UTILAC01	1	Plant Adaption	3	INSTALL DUAL LEVEL DRINKING FOUNTAIN	3,813	610	0	4,423
			Totals for Plant Adaption			3,813	610	0	4,423
					Grand Total:	3,813	610	0	4,423

Detailed Project Summary
Facility Condition Assessment
Category/System Code Update Report
 UTIL : HSC CENTRAL UTILITY PLANT

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fees	Actual Cost to Date	Remaining Cost
AC3F	UTILAC01	3	1	INSTALL DUAL LEVEL DRINKING FOUNTAIN	3,813	610	0	4,423
Totals for System Code: ACCESSIBILITY					3,813	610	0	4,423
Grand Total:					3,813	610	0	4,423

FACILITY CONDITION ASSESSMENT

SECTION 3

PROJECT DETAILS

Specific Project Details
Facility Condition Assessment
Section Three

Project Description

Project Number:	UTILAC01	Title:	INSTALL DUAL LEVEL DRINKING FOUNTAIN
Priority Sequence:	1		
Priority Class:	3		
Category Code:	AC3F	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	DRINKING FOUNTAINS
Building Code:	UTIL		
Building Name:	HSC CENTRAL UTILITY PLANT		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	211, 602	
Project Class:	Plant Adaption		
Project Date:	06/09/2015		
Project Location:	Undefined: Floor(s) 1,2		

Project Description

The single level drinking fountains have bottle fillers, which is not compliant with current ADA standards. To equally serve all potential users, it is recommended that dual level drinking fountains be installed.

Specific Project Details
Facility Condition Assessment
Section Three

Project Cost

Project Number: UTILAC01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Dual level drinking fountain	EA	2	\$1,364	\$2,728	\$419	\$839	\$3,567
Project Totals:				\$2,728		\$839	\$3,567

Material/Labor Cost		\$3,567
Material Index		100.70
Labor Index		51.30
Material/Labor Indexed Cost		\$3,177
General Contractor Mark Up at 20.0%	+	\$635
Inflation	+	\$0
Construction Cost		\$3,813
Professional Fees at 16.0%	+	\$610
Total Project Cost		\$4,423

FACILITY CONDITION ASSESSMENT

SECTION 4

LIFECYCLE COMPONENT
INVENTORY

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj
B2010	WALL, EXTERIOR, MASONRY POINTING		13,130	SF	\$5.02	1.12	\$73,798	1980	30	15
B2010	WALL, EXTERIOR, PANEL JOINT RESTORATION		3,280	SF	\$14.69	1.12	\$53,964	2003	25	
B2010	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD		860	SF	\$120.38	1.12	\$115,952	2003	40	
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS	SHOP EXIT	1	LEAF	\$2,283.18		\$2,283	1980	25	15
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL	SHOP EXIT	2	LEAF	\$1,680.78		\$3,362	2010	40	
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL	GENERATOR, PRKG	2	LEAF	\$1,680.78		\$3,362	2000	40	
B2030	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		1	EA	\$15,687.89		\$15,688	1980	15	25
B2030	DOOR, EXTERIOR, OVERHEAD ROLLING METAL, LOCK	LOADING DOCK	160	SF	\$76.82		\$12,291	2000	30	
B2030	DOOR, EXTERIOR, OVERHEAD ROLLING METAL, LOCK	MECH ROOM	640	SF	\$76.82		\$49,163	2000	30	
B2030	DOOR, EXTERIOR, OVERHEAD ROLLING METAL, LOCK	MECH ROOM	320	SF	\$76.82		\$24,582	2014	30	
B2030	DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	LOADING DOCK	1	EA	\$1,761.75		\$1,762	2000	15	
B2030	DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	MECH ROOM	4	EA	\$1,761.75		\$7,047	2000	15	
B2030	DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	MECH ROOM	2	EA	\$1,761.75		\$3,524	2014	15	
B3010	ROOF - 1-PLY, ADHERED (EPDM, PIB, CSPE, PVC)	ROOF #3	13,600	SF	\$5.27		\$71,683	2003	20	5
B3010	ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH	ROOF #2	9,300	SF	\$3.54		\$32,931	1980	20	18
B3010	ROOF - PANEL, ALUMINUM OR GALVANIZED, STANDING SEAM	PARKING	2,100	SF	\$15.48		\$32,498	2003	40	
C1020	DOOR AND FRAME, INTERIOR, NON-RATED		11	LEAF	\$1,747.12		\$19,218	2007	40	
C1020	DOOR AND FRAME, INTERIOR, FIRE-RATED		20	LEAF	\$3,109.63		\$62,193	2007	40	
C1020	DOOR LOCK, COMMERCIAL-GRADE	INTERIOR	31	EA	\$605.80		\$18,780	2007	20	
C1020	DOOR LOCK, COMMERCIAL-GRADE	SHOP EXIT, DOCK	3	EA	\$605.80		\$1,817	2010	20	
C1020	DOOR LOCK, COMMERCIAL-GRADE	SHOP EXIT	1	EA	\$605.80		\$606	1980	20	17
C1020	DOOR LOCK, COMMERCIAL-GRADE	GENERATOR, PRKG	2	EA	\$605.80		\$1,212	2000	20	
C1030	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	BREAK ROOM	20	LF	\$429.18		\$8,584	2007	20	
C3010	WALL FINISH - PAINT, STANDARD		67,870	SF	\$1.50		\$101,707	2007	12	6

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj
C3020	FLOORING - CARPET, TILE OR ROLL, STANDARD		5,420	SF	\$10.25		\$55,538	2007	12	8
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		4,340	SF	\$4.97		\$21,562	2007	20	
C3020	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD		3,250	SF	\$23.97		\$77,906	2007	30	
C3020	FLOORING - FLUID APPLIED, PAINT OR CLEAR SEAL		8,680	SF	\$2.26		\$19,634	1980	10	35
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		5,140	SF	\$7.64		\$39,295	2007	30	
C3030	CEILING FINISH - PAINTED OR STAINED, STANDARD		1,710	SF	\$1.50		\$2,563	2007	24	
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	ELV-001	1	EA	\$228,855.19		\$228,855	2002	25	
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-001	1	EA	\$38,400.32		\$38,400	2002	12	3
D2010	PLUMBING FIXTURE - LAVATORY, COUNTER	1999 ADDITION	4	EA	\$1,062.96		\$4,252	1999	35	
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	ORIGINAL	1	EA	\$1,078.41		\$1,078	1980	35	
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	1999 ADDITION	3	EA	\$1,078.41		\$3,235	1999	35	
D2010	PLUMBING FIXTURE - SINK, KITCHEN	1999 ADDITION	1	EA	\$1,780.26		\$1,780	1999	35	
D2010	PLUMBING FIXTURE - SINK, LABORATORY-USE	ORIGINAL	1	EA	\$2,547.52		\$2,548	1980	35	
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	ORIGINAL	1	EA	\$1,468.86		\$1,469	1980	35	
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	1999 ADDITION	1	EA	\$1,468.86		\$1,469	1999	35	
D2010	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	1999 ADDITION	2	EA	\$1,398.79		\$2,798	1999	35	
D2010	PLUMBING FIXTURE - URINAL	1999 ADDITION	1	EA	\$1,722.47		\$1,722	1999	35	
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	ORIGINAL	1	EA	\$1,606.00		\$1,606	1980	35	
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	1999 ADDITION	6	EA	\$1,606.00		\$9,636	1999	35	
D2010	PLUMBING FIXTURE - EMERGENCY EYEWASH	1999 ADDITION	1	EA	\$3,918.51		\$3,919	1999	35	
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	ORIGINAL	2	EA	\$6,696.75		\$13,394	1980	35	
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	1999 ADDITION	1	EA	\$6,696.75		\$6,697	1999	35	
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-001	1	EA	\$1,982.55		\$1,983	1999	10	6

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-004	1	EA	\$1,982.55		\$1,983	1980	10	25
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-005	1	EA	\$1,982.55		\$1,983	1980	10	25
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-002	1	EA	\$6,560.05		\$6,560	1980	10	25
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-003	1	EA	\$6,560.05		\$6,560	1980	10	25
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-007	1	EA	\$6,560.05		\$6,560	2007	10	
D2020	BACKFLOW PREVENTER (4-6 INCHES)	BFP-006	1	EA	\$10,770.73		\$10,771	1999	10	8
D2020	DOMESTIC WATER BOOSTER SYSTEM	ROOM 113	30	HP	\$10,706.68		\$321,200	2005	20	
D2020	SUPPLY PIPING SYSTEM - OFFICE	2002 OFFICE	5,760	SF	\$2.50	1.18	\$17,016	2002	35	
D2020	SUPPLY PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$2.66	1.18	\$32,025	1980	35	
D2020	SUPPLY PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	1999 ADDITION	8,160	SF	\$2.66	1.18	\$25,582	1999	35	
D2020	SUPPLY PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$2.66	1.18	\$13,794	2007	35	
D2030	DRAIN PIPING SYSTEM - OFFICE	2002 OFFICE	5,760	SF	\$3.79	1.18	\$25,750	2002	40	
D2030	DRAIN PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$4.04	1.18	\$48,709	1980	40	
D2030	DRAIN PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	1999 ADDITION	8,160	SF	\$4.04	1.18	\$38,910	1999	40	
D2030	DRAIN PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$4.04	1.18	\$20,981	2007	40	
D3030	CONDENSER - REFRIGERANT, AIR-COOLED (<=10 TON)	mitsubishi, ROOF	3	TON	\$1,670.70		\$5,012	2007	23	
D3030	EVAPORATOR UNIT, NO HEAT (2-3 TON)	MITSUBISHI	3	TON	\$1,488.56		\$4,466	2007	20	
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FAN COIL UNITS	5	HP	\$7,466.65		\$37,333	2007	25	
D3040	AIR HANDLING UNIT - INDOOR (3.25-6 HP)	AHU-001	5	HP	\$7,586.51		\$37,933	2014	25	
D3040	AIR HANDLING UNIT - OUTDOOR PACKAGE (5-8 HP)	AHU-002	8	HP	\$13,889.30		\$111,114	1980	23	11
D3040	FAN - AXIAL, SUPPLY, 2.5" SP (<=3 HP) 3800 CFM	TUNNEL	1	HP	\$3,067.80		\$3,068	2014	20	
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES 2ND FLR	1	EA	\$4,953.73		\$4,954	1999	20	
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-009	1	EA	\$4,953.73		\$4,954	2014	20	

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES CHILLER RM	1	EA	\$4,953.73		\$4,954	1980	20	14
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	1	EA	\$4,953.73		\$4,954	1980	20	14
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	1	EA	\$4,953.73		\$4,954	1980	20	14
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-005	1	EA	\$4,953.73		\$4,954	1980	20	14
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	1	EA	\$6,226.11		\$6,226	1999	20	
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	1	EA	\$6,226.11		\$6,226	1999	20	
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES CHILLER RM	1	EA	\$6,226.11		\$6,226	1980	20	14
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-CFC-001	1	HP	\$1,199.86		\$1,200	2007	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-CFC-002	1	HP	\$1,199.86		\$1,200	2007	20	
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (.5-1 HP)	EAF-008	1	HP	\$2,301.60		\$2,302	1999	20	
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-016	5	HP	\$1,884.78		\$9,424	1999	20	
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (<=30 HP)	EAF-013	3	HP	\$3,859.32		\$11,578	1980	20	14
D3040	HOOD, FUME	ROOM 118	4	LF	\$1,903.09		\$7,612	1999	20	6
D3040	HVAC DISTRIBUTION NETWORKS - OFFICE	2002 OFFICE	5,760	SF	\$19.57	1.18	\$133,044	2002	40	
D3040	HVAC DISTRIBUTION NETWORKS - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	2,800	SF	\$11.92	1.18	\$39,384	1980	40	
D3040	HVAC DISTRIBUTION NETWORKS - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$11.92	1.18	\$61,889	2007	40	
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (>85 GPM)	ROOM 117	100	GPM	\$124.47		\$12,447	1999	35	
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	ROOM 130	1	EA	\$3,832.63		\$3,833	1980	20	14
D3040	PUMP - ELECTRIC (<=10 HP)	HHW RM 105	1	HP	\$1,320.68		\$1,321	2002	25	
D3040	PUMP - ELECTRIC (<=10 HP)	HHW RM 117	3	HP	\$1,320.68		\$3,962	2002	25	
D3040	PUMP - ELECTRIC (<=10 HP)	WELL PUMP	10	HP	\$1,320.68		\$13,207	2005	25	

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj
D3040	PUMP - ELECTRIC (<=10 HP)	WELL PUMP	5	HP	\$1,320.68		\$6,603	2005	25	
D3040	PUMP - ELECTRIC (20 - 25 HP)	WELL PUMP	25	HP	\$683.57		\$17,089	2005	25	
D3040	CONDENSATE RECEIVER, PNEUMATIC (<=30 GPM)	ROOM 116	30	GPM	\$1,669.37		\$50,081	1999	20	
D3040	CONDENSATE RECEIVER, PNEUMATIC (30-100 GPM)	ROOM 111	60	GPM	\$1,023.85		\$61,431	2007	20	
D3040	HEATING SYSTEM, STEAM OR HYDRONIC	ORIGINAL	7,415	SF	\$10.06	1.18	\$88,061	1980	25	10
D3040	HEATING SYSTEM, STEAM OR HYDRONIC	1999 ADDITION	8,160	SF	\$10.06	1.18	\$96,908	1999	25	
D3050	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, ROOF	5	TON	\$3,559.74		\$17,799	2014	15	
D3060	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	2,800	SF	\$1.94	1.18	\$6,404	1980	18	16
D3060	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$1.94	1.18	\$10,064	2007	18	
D3060	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	2002 OFFICE	5,760	SF	\$1.94	1.18	\$13,174	2002	18	
D4010	FIRE PUMP - ELECTRIC, 1000 GPM, 5" ID (120-150 HP)	ORIGINAL	125	HP	\$471.96		\$58,996	1999	25	
D4010	FIRE SPRINKLER SYSTEM		28,535	SF	\$9.47	0.35	\$94,585	1999	80	
D4030	EXIT SIGN - CENTRAL POWER		20	EA	\$253.10		\$5,062	2002	20	
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	4100U, RM 105	1	EA	\$29,281.79		\$29,282	2007	15	
D4030	FIRE ALARM SYSTEM - DEVICES		28,535	SF	\$3.21	0.57	\$52,259	2007	18	
D5010	ELECTRICAL DISTRIBUTION NETWORK - OFFICE	2002 OFFICE	5,760	SF	\$14.57	1.18	\$99,005	2002	40	
D5010	ELECTRICAL DISTRIBUTION NETWORK - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$11.17	1.18	\$134,700	1980	40	
D5010	ELECTRICAL DISTRIBUTION NETWORK - SHOPS / TRADES, DRY LABORATORY	1999 ADDITION	8,160	SF	\$11.17	1.18	\$107,602	1999	40	
D5010	ELECTRICAL DISTRIBUTION NETWORK - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$11.17	1.18	\$58,020	2007	40	
D5010	MAIN SWITCHBOARD W/BREAKERS (1600-2500 AMP)	GENERATOR	2,500	AMP	\$67.41		\$168,514	2005	20	
D5010	MAIN SWITCHBOARD W/BREAKERS (1600-2500 AMP)	ROOM 105 480V	2,000	AMP	\$67.41		\$134,811	1980	20	14
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-007	1	HP	\$558.77		\$559	2005	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-011	5	HP	\$558.77		\$2,794	2005	12	

Asset Component Inventory
UTIL : HSC CENTRAL UTILITY PLANT

Uni-format	Component Description	Identifier	Qty	Units	Unit Cost	Cmplx Adj	Total Cost	Install Date	Life Exp	Lf Adj	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-014	5	HP	\$558.77		\$2,794	2014	12		
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-013	8	HP	\$504.99		\$4,040	2005	12		
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-010	10	HP	\$418.99		\$4,190	2005	12		
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP1	15	HP	\$323.17		\$4,848	2005	12		
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP2	15	HP	\$323.17		\$4,848	2005	12		
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-009	25	HP	\$278.72		\$6,968	2005	16		
D5020	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)		25	EA	\$761.55		\$19,039	2007	15		
D5020	LIGHTING SYSTEM, INTERIOR - OFFICE	2002 OFFICE	5,760	SF	\$8.92	1.18	\$60,634	2002	20		
D5020	LIGHTING SYSTEM, INTERIOR - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$3.59	1.18	\$43,326	2014	20		
D5020	LIGHTING SYSTEM, INTERIOR - SHOPS / TRADES, DRY LABORATORY	1999 ADDITION	8,160	SF	\$3.59	1.18	\$34,610	2014	20		
D5020	LIGHTING SYSTEM, INTERIOR - SHOPS / TRADES, DRY LABORATORY	2007 ADDITION	4,400	SF	\$3.59	1.18	\$18,662	2014	20		
D5090	GENERATOR - DIESEL (>500 KW)	EMG-001	1,250	KW	\$518.07		\$647,584	2005	25		
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	TSW-ATS1 LS	1,000	AMP	\$24.47		\$24,468	2005	25		
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	THERMAL KING	400	SF	\$279.80	1.18	\$132,066	2007	35		
E1020	REFRIGERATION SYSTEM - WALK-IN, 4 EVAP FANS, 26500 BTUH, CONDENSER	THERMAL KING	1	EA	\$17,224.02		\$17,224	2007	10		
G2020	ASPHALT VEHICULAR PAVING - SEALCOAT AND STRIPE		500	SY	\$2.76		\$1,380	1980	7	38	
G2030	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE		300	LF	\$3.63		\$1,089	2007	7	11	
							\$4,729,027				

Recurring Component Renewal Schedule

UTIL : HSC CENTRAL UTILITY PLANT

Uniformat Code	Component Description		Qty	Units	DM Replacement Cost	Year
D3040	AIR HANDLING UNIT - OUTDOOR PACKAGE (5-8 HP)	AHU-002	8	HP	\$111,114	DM
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES CHILLER RM	1	EA	\$4,954	DM
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	1	EA	\$4,954	DM
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES RM 113	1	EA	\$4,954	DM
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-005	1	EA	\$4,954	DM
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES CHILLER RM	1	EA	\$6,226	DM
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	ROOM 130	1	EA	\$3,833	DM
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (<=30 HP)	EAF-013	3	HP	\$11,578	DM
D3060	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	2,800	SF	\$6,404	DM
D5010	MAIN SWITCHBOARD W/BREAKERS (1600-2500 AMP)	ROOM 105 480V	2,000	AMP	\$134,811	DM
Deferred Maintenance Cost for Asset No. UTIL					\$293,781	

Uniformat Code	Component Description		Qty	Units	2015 Replacement Cost	Year
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	ORIGINAL	1	EA	\$1,078	2015
D2010	PLUMBING FIXTURE - SINK, LABORATORY-USE	ORIGINAL	1	EA	\$2,548	2015
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	ORIGINAL	1	EA	\$1,469	2015

Recurring Component Renewal Schedule

D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	ORIGINAL	1	EA	\$1,606	2015
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	ORIGINAL	2	EA	\$13,394	2015
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-001	1	EA	\$1,983	2015
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-004	1	EA	\$1,983	2015
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-005	1	EA	\$1,983	2015
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-002	1	EA	\$6,560	2015
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-003	1	EA	\$6,560	2015
D2020	SUPPLY PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$32,025	2015
D3040	HEATING SYSTEM, STEAM OR HYDRONIC	ORIGINAL	7,415	SF	\$88,061	2015
B2030	DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	LOADING DOCK	1	EA	\$1,762	2015
B2030	DOOR OPERATOR, OVERHEAD DOOR, COMMERCIAL, PADS	MECH ROOM	4	EA	\$7,047	2015

Projected Component Replacement Cost for Asset No. UTIL for 2015

\$168,056

No Projected Component Replacement Cost for Asset No. UTIL for 2016

Uniformat Code	Component Description		Qty	Units	2017 Replacement Cost	Year
D2020	BACKFLOW PREVENTER (2-3 INCHES)	BFP-007	1	EA	\$6,960	2017
D2020	BACKFLOW PREVENTER (4-6 INCHES)	BFP-006	1	EA	\$11,427	2017
E1020	REFRIGERATION SYSTEM - WALK-IN, 4 EVAP FANS, 26500 BTUH, CONDENSER	THERMAL KING	1	EA	\$18,273	2017
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-007	1	HP	\$593	2017
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-011	5	HP	\$2,964	2017
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-013	8	HP	\$4,286	2017
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-010	10	HP	\$4,445	2017
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP1	15	HP	\$5,143	2017
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-DWP2	15	HP	\$5,143	2017
C1020	DOOR LOCK, COMMERCIAL-GRADE	SHOP EXIT	1	EA	\$643	2017

Recurring Component Renewal Schedule

D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-001	1	EA	\$40,739	2017
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Projected Component Replacement Cost for Asset No. UTIL for 2017 **\$100,614**

Uniformat Code	Component Description		Qty	Units	2018 Replacement Cost	Year
B3010	ROOF - BITUMINOUS, 2-PLY, APPLIED MODIFIED BITUMEN, TORCH	ROOF #2	9,300	SF	\$35,984	2018

Projected Component Replacement Cost for Asset No. UTIL for 2018 **\$35,984**

Uniformat Code	Component Description		Qty	Units	2019 Replacement Cost	Year
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	SERVES 2ND FLR	1	EA	\$5,575	2019
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	1	EA	\$7,008	2019
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (25"-30" DIAMETER)	SERVES BOILER RM	1	EA	\$7,008	2019
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (.5-1 HP)	EAF-008	1	HP	\$2,590	2019
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-016	5	HP	\$10,607	2019
D3040	CONDENSATE RECEIVER, PNEUMATIC (<=30 GPM)	ROOM 116	30	GPM	\$56,367	2019

Projected Component Replacement Cost for Asset No. UTIL for 2019 **\$89,154**

Uniformat Code	Component Description		Qty	Units	2020 Replacement Cost	Year
D2030	DRAIN PIPING SYSTEM - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$56,468	2020
D3040	HVAC DISTRIBUTION NETWORKS - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	2,800	SF	\$45,657	2020
D3060	HVAC CONTROLS SYSTEM - SHOPS / TRADES, DRY LABORATORY	2002 OFFICE	5,760	SF	\$15,273	2020
D5010	ELECTRICAL DISTRIBUTION NETWORK - SHOPS / TRADES, DRY LABORATORY	ORIGINAL	10,215	SF	\$156,154	2020

Recurring Component Renewal Schedule

B2030	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS	SHOP EXIT	1	LEAF	\$2,647	2020
B2030	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		1	EA	\$18,187	2020
C1020	DOOR LOCK, COMMERCIAL-GRADE	GENERATOR, PRKG	2	EA	\$1,405	2020

Projected Component Replacement Cost for Asset No. UTIL for 2020 \$295,789

Uniformat Code	Component Description		Qty	Units	2021 Replacement Cost	Year
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-009	25	HP	\$8,320	2021

Projected Component Replacement Cost for Asset No. UTIL for 2021 \$8,320

Uniformat Code	Component Description		Qty	Units	2022 Replacement Cost	Year
D5020	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)		25	EA	\$23,415	2022
D5020	LIGHTING SYSTEM, INTERIOR - OFFICE	2002 OFFICE	5,760	SF	\$74,572	2022
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	4100U, RM 105	1	EA	\$36,013	2022
D4030	EXIT SIGN - CENTRAL POWER		20	EA	\$6,226	2022

Projected Component Replacement Cost for Asset No. UTIL for 2022 \$140,226

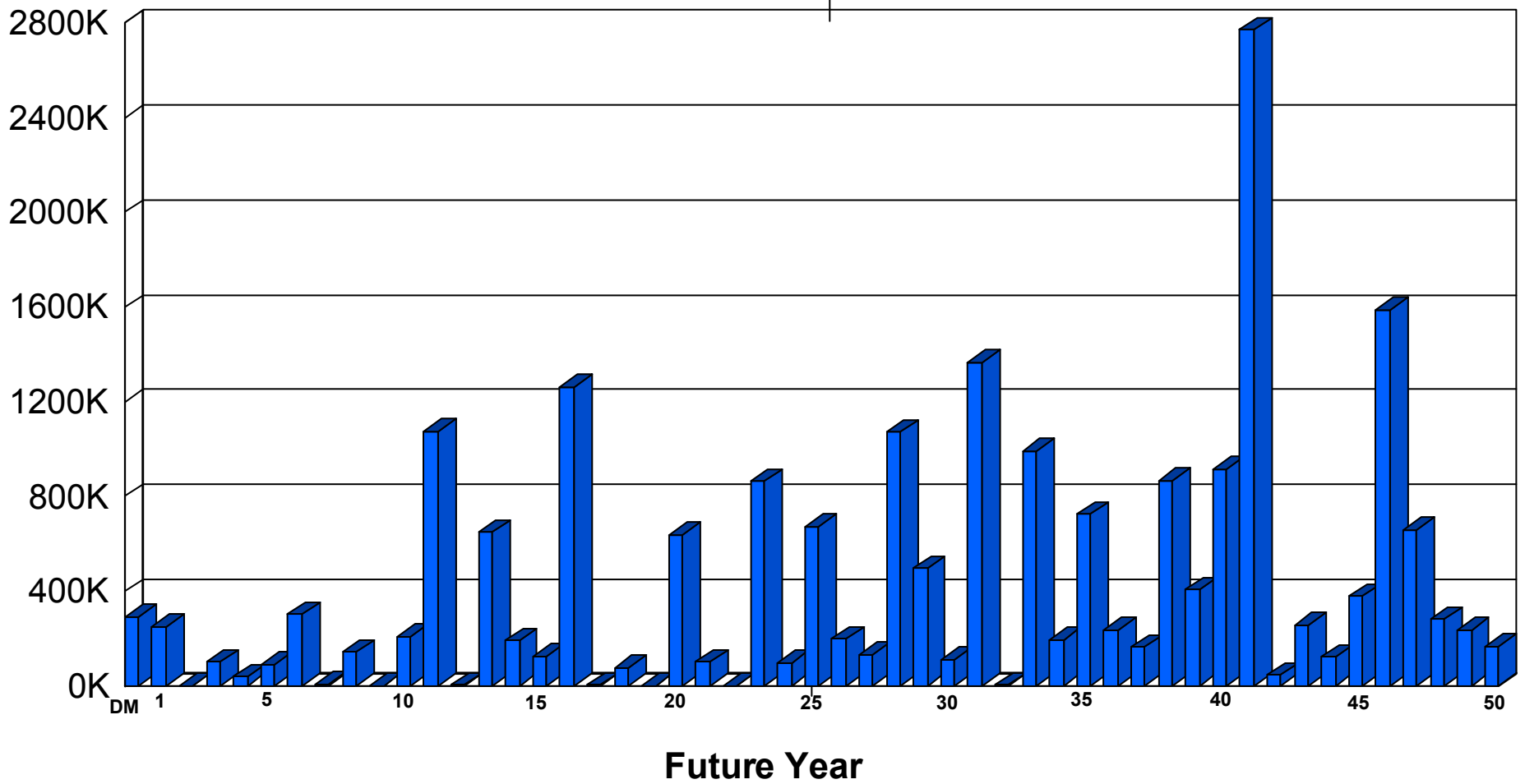
No Projected Component Replacement Cost for Asset No. UTIL for 2023

Uniformat Code	Component Description		Qty	Units	2024 Replacement Cost	Year
D3040	HEATING SYSTEM, STEAM OR HYDRONIC	1999 ADDITION	8,160	SF	\$126,443	2024
D4010	FIRE PUMP - ELECTRIC, 1000 GPM, 5" ID (120-150 HP)	ORIGINAL	125	HP	\$76,976	2024

Projected Component Replacement Cost for Asset No. UTIL for 2024 \$203,419

Recurring Component Expenditure Projections

UTIL : HSC CENTRAL UTILITY PLANT

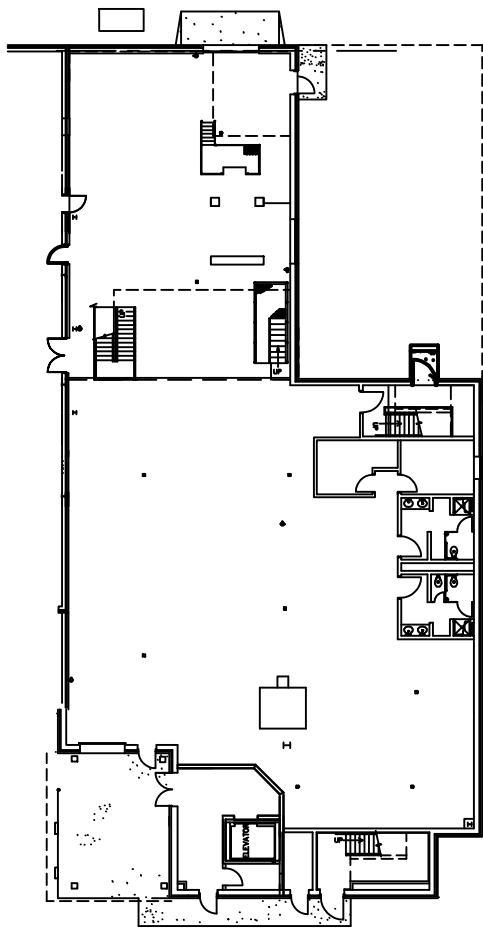


Average Annual Renewal Cost per SqFt \$6.45

FACILITY CONDITION ASSESSMENT

SECTION 5

DRAWINGS/
PROJECT LOCATIONS



SECOND

AC01

AC01



FACILITY
CONDITION
ANALYSIS

2165 West Park Court
Suite N
Stone Mountain GA 30087
770.879.7376

PROJECT NUMBER
APPLIES TO
ONE ROOM ONLY

PROJECT NUMBER
APPLIES TO
ONE ITEM ONLY

PROJECT NUMBER
APPLIES TO
ENTIRE BUILDING

PROJECT NUMBER
APPLIES TO
ENTIRE FLOOR

PROJECT NUMBER
APPLIES TO A SITUATION
OF UNDEFINED EXTENTS

PROJECT NUMBER
APPLIES TO AREA
AS NOTED

Date: 05/28/2015

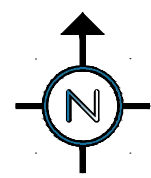
Drawn by: T.C.

Project No. 15-008

FIRST
FLOOR
PLAN

Sheet No.

1 of 1



FACILITY CONDITION ASSESSMENT

SECTION 6

PHOTOGRAPHS

Photo Log - Facility Condition Assessment
UTIL : HSC CENTRAL UTILITY PLANT

Photo ID No.	Description	Location	Date
UTIL001a	Exterior finishes and paving	Southeast side	03/16/2015
UTIL001e	Exhaust fan for the former incinerator room	Roof	03/16/2015
UTIL002a	Exterior signage	Site	03/16/2015
UTIL002e	Outdoor air handler (AHU-002)	Roof	03/16/2015
UTIL003a	Built-up roof	Roof	03/16/2015
UTIL003e	Several exhaust fans above boiler room	Roof	03/16/2015
UTIL004a	Lightning arrester system	Roof	03/16/2015
UTIL004e	Kitchen sink	Room 211	03/16/2015
UTIL005a	Metal roof	Roof	03/16/2015
UTIL005e	Modern audible/visible fire device	Second floor corridor	03/16/2015
UTIL006a	Metal roof	Roof	03/16/2015
UTIL006e	Lavatory and water closet	Room 209	03/16/2015
UTIL007a	EPDM roof	Roof	03/16/2015
UTIL007e	Exit sign	Second floor corridor	03/16/2015
UTIL008a	EPDM roof	Roof	03/16/2015
UTIL008e	Fluorescent lighting in office area	Room 216	03/16/2015
UTIL009a	EPDM roof	Roof	03/16/2015
UTIL009e	Hydraulic pump for passenger elevator	Room 126	03/16/2015
UTIL010a	Roof hatch	Roof	03/16/2015
UTIL010e	Pneumatic condensate receiver	Room 116	03/16/2015
UTIL011a	Painted walls	Main storage bay	03/16/2015
UTIL011e	Heating hot water pump	Room 117	03/16/2015
UTIL012a	Industrial railing	Storage bay stairs	03/16/2015
UTIL012e	Shell-and-tube heat exchanger for heating hot water	Room 117	03/16/2015
UTIL013a	Painted wall	Storage bay	03/16/2015
UTIL013e	Older backflow preventer	Room 117	03/16/2015
UTIL014a	Steel frame and metal decking	Storage bay	03/16/2015
UTIL014e	Older water closet and lavatory	Room 104	03/16/2015
UTIL015a	Vinyl floor tile	Hallway to storage bay	03/16/2015
UTIL015e	2,000 amp FPE switchboard	Room 105	03/16/2015
UTIL016a	Lever door hardware	Typical	03/16/2015
UTIL016e	GE Zenith ATS for life/safety	Room 105	03/16/2015

Photo Log - Facility Condition Assessment
 UTIL : HSC CENTRAL UTILITY PLANT

Photo ID No.	Description	Location	Date
UTIL017a	Painted ceiling	Break room	03/16/2015
UTIL017e	Simplex 4100U fire alarm control panel	Room 105	03/16/2015
UTIL018a	Kitchen countertop and millwork	Break room	03/16/2015
UTIL018e	ABB variable frequency drives for well pumps	Room 105	03/16/2015
UTIL019a	ADA signage	Women's restroom	03/16/2015
UTIL019e	Fume hood	Room 118	03/16/2015
UTIL020a	ADA water closet and grab rails	Women's restroom	03/16/2015
UTIL020e	Combination eyewash and safety shower	Room 118	03/16/2015
UTIL021a	ADA signage	Men's restroom	03/16/2015
UTIL021e	Backflow preventers	Room 111	03/16/2015
UTIL022a	Acoustical tile ceiling	Hallway near restrooms	03/16/2015
UTIL022e	125 hp fire pump	Room 113	03/16/2015
UTIL023a	Carpeting	Hallway near restrooms	03/16/2015
UTIL023e	Domestic water booster pump system	Room 113	03/16/2015
UTIL024a	Single level, wall-mounted drinking fountain	Hallway near restrooms	03/16/2015
UTIL024e	Backflow preventer for fire suppression system	Room 113	03/16/2015
UTIL025a	Rated door tag	Office door	03/16/2015
UTIL025e	New 5 hp Trane air handler	Room 110	03/16/2015
UTIL026a	Stair handrail	Exit stairs	03/16/2015
UTIL026e	Outdated pneumatic controls for air handler	Room 110	03/16/2015
UTIL027a	Painted brick wall	Critical storage area	03/16/2015
UTIL027e	Modern McQuay fan coil unit	Room 133	03/16/2015
UTIL028a	Fenced-in secure area	Critical storage area	03/16/2015
UTIL028e	Small set of steam pressure reducing valves	Room 130	03/16/2015
UTIL029a	Interior signage	Critical storage area	03/16/2015
UTIL029e	Modern T5 fluorescent light fixture	Room 130	03/16/2015
UTIL030a	Minor damage to ceiling tile	Control room	03/16/2015
UTIL030e	Modern Siemens Apogee controls	Room 130	03/16/2015
UTIL031a	Single level, wall-mounted drinking fountain	Control room hallway	03/16/2015
UTIL031e	Wall-mounted exterior light fixture	Southeast exterior	03/16/2015
UTIL032a	Exterior brick finish and safety railing	Loading dock	03/16/2015
UTIL032e	5 ton Carrier packaged unit	Roof	03/16/2015
UTIL033a	Roll-up door	Loading dock	03/16/2015

Photo Log - Facility Condition Assessment
UTIL : HSC CENTRAL UTILITY PLANT

Photo ID No.	Description	Location	Date
UTIL033e	Strobic exhaust fan for the chemical storage area and fume hood	Roof	03/16/2015
UTIL034a	Exterior metal siding	Exterior elevation	03/16/2015
UTIL034e	Supply air fan for the tunnel	Roof	03/16/2015
UTIL035a	Exterior brick finish	Exterior elevation	03/16/2015
UTIL035e	Exhaust fan	South exterior	03/16/2015
UTIL036a	Asphalt drive and gravel parking area	Parking lot	03/16/2015
UTIL036e	Thermal King refrigeration system	Northwest exterior	03/16/2015
UTIL037a	Fenced-in secure area	Parking lot	03/16/2015
UTIL037e	Caterpillar 1,250 kW diesel generator	North exterior	03/16/2015
UTIL038a	Exterior brick finish	North side	03/16/2015
UTIL039a	View of the exterior from the park side creek	Northeast side	03/16/2015
UTIL040a	Exterior brick finish and service door	East side	03/16/2015
UTIL041a	Exterior stairs and railing	East side	03/16/2015
UTIL042a	EPDM roof	Roof	03/16/2015
UTIL043a	EPDM roof	Roof	03/16/2015

Facility Condition Assessment - Photographs



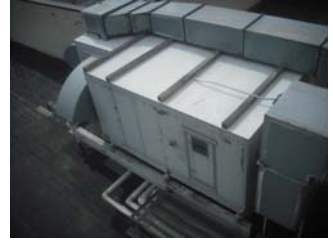
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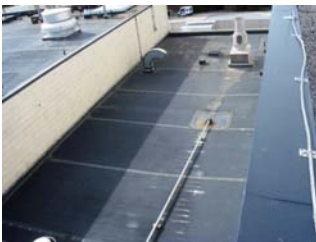
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Facility Condition Assessment - Photographs



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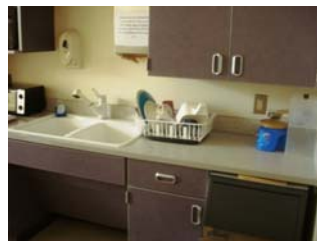
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Facility Condition Assessment - Photographs



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Facility Condition Assessment - Photographs



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