EAST CAROLINA UNIVERSITY

Facility Condition Assessment

Brody Medical Sciences Building
Asset BROD

Inspected April 19, 2016

ISES CORPORATION

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FACILITY CONDITION ASSESSMENT

SECTION 1

ASSET OVERVIEW

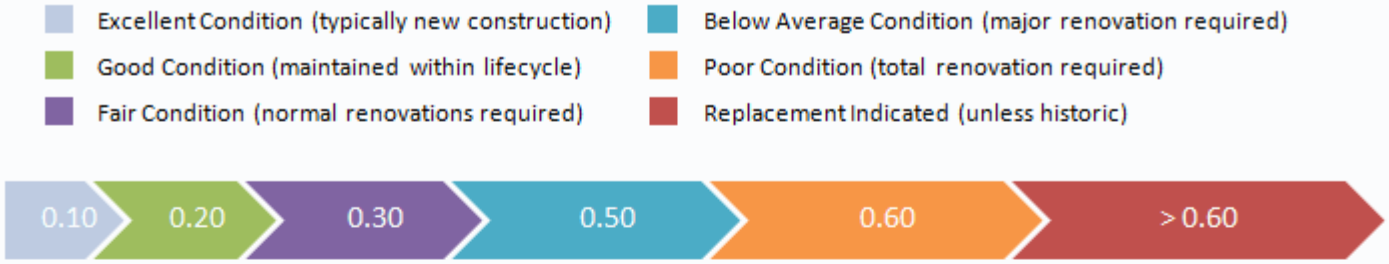
ASSET EXECUTIVE SUMMARY

All costs shown as Present Value

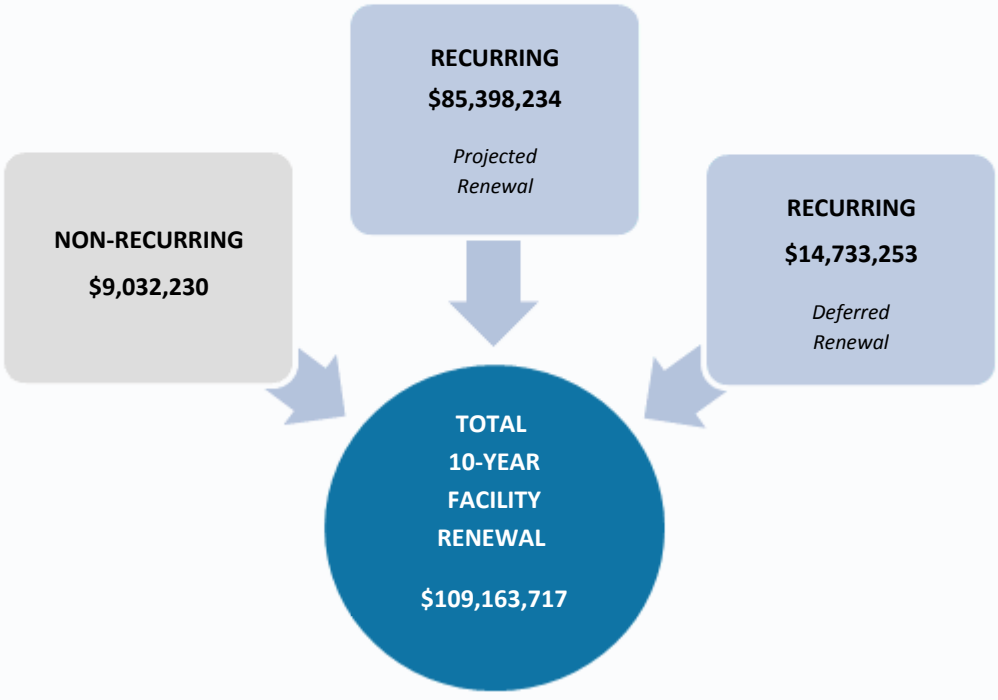
ASSET CODE	BROD	**CURRENT REPLACEMENT VALUE**	$226,089,000
ASSET NAME	BRODY MEDICAL SCIENCES BUILDING	**FACILITY CONDITION NEEDS INDEX**	0.48
ASSET USE	Laboratory	**FACILITY CONDITION INDEX**	0.07
YEAR BUILT	1982	**10-YEAR $/SF**	227.29
GSF	480,279		
INSPECTION DATE	04/19/2016		

FCNI Scale

The FCNI for this asset is **0.48**



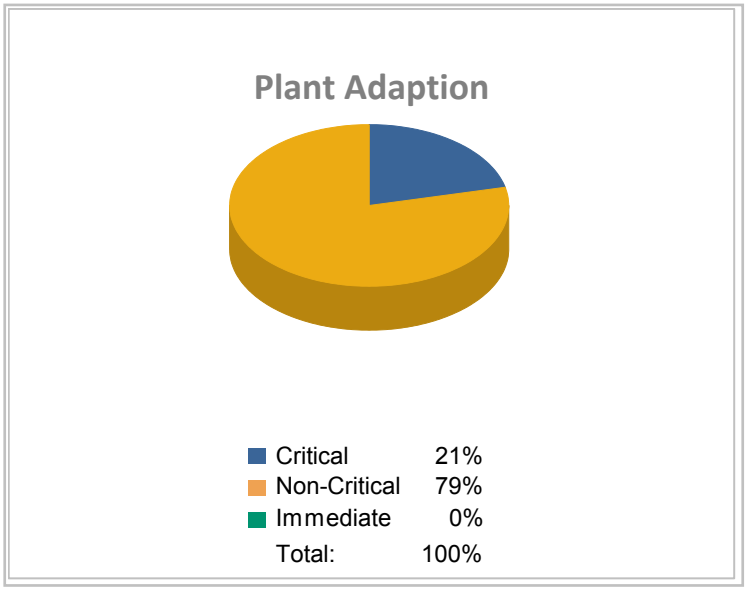
Total Facility Renewal Costs



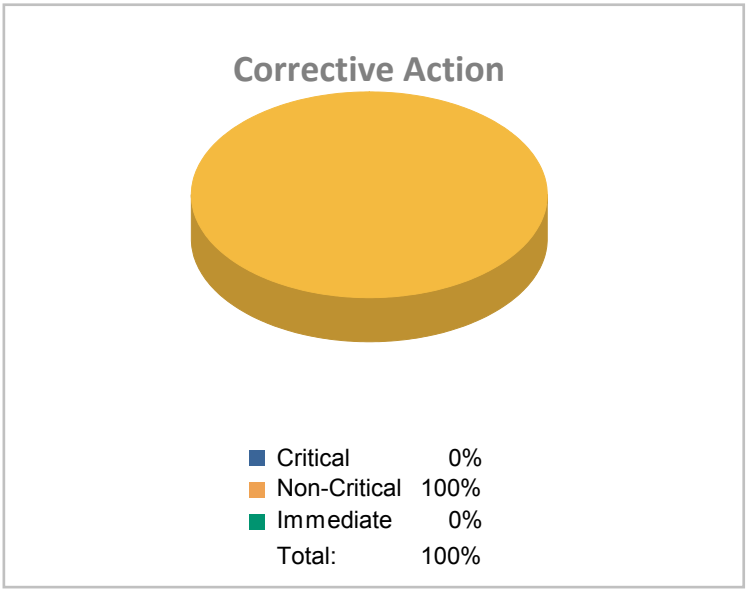
Non-Recurring Costs

Project Cost by Priority

PLANT ADAPTION	
1 - Immediate	**$0**
2 - Critical	**$732,815**
3 - Non-Critical	**$2,706,978**

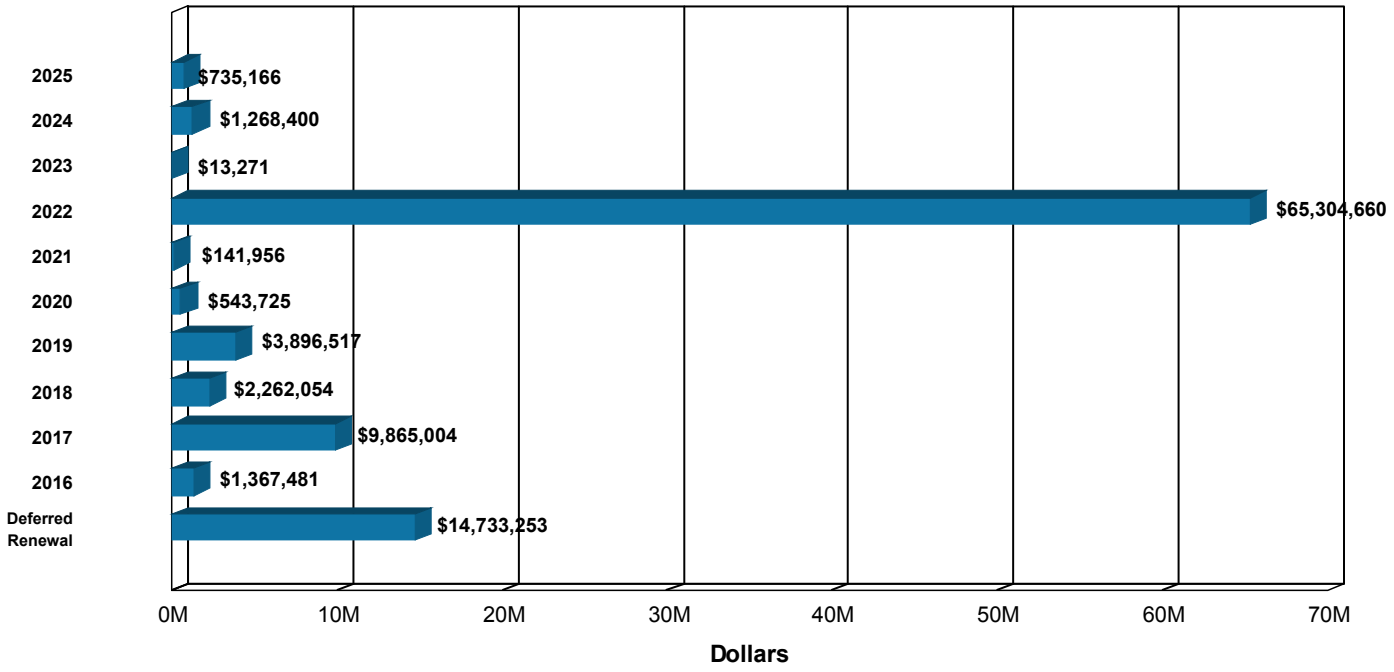


CORRECTIVE ACTION	
1 - Immediate	**$0**
2 - Critical	**$0**
3 - Non-Critical	**$5,592,436**

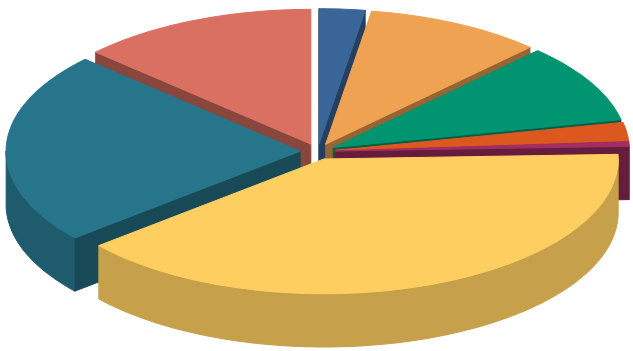


Recurring Costs

Component Replacement Cost by Year



Facilities Renewal Cost by System



Accessibility	$2,687,206	2%
Electrical	$10,649,577	10%
Exterior	$10,390,914	10%
Fire/Life Safety	$2,203,904	2%
Health	$703,285	1%
HVAC	$43,212,728	40%
Interiors	$25,171,461	23%
Plumbing	$14,144,642	13%
Site	$0	0%
Vert. Trans.	$0	0%
TOTAL	**$109,163,717**	

ASSET SUMMARY

Brody Medical Sciences Building is a 480,279 gross square foot, hands-on medical teaching facility that was built in the early 1980s and opened in 1982. The facility has several irregular shaped lower levels, with an eight-story tall hollow square tower in the center of the facility. In 1989, a three-story east wing was constructed to provide extra office and library space. The single-story auditorium addition was also later added to the south facade.

The building is constructed of a precast concrete structure and cast-in-place floors on a poured basement foundation. It is located in the central section of the ECU Health Sciences Campus just west of Moye Boulevard. This brick masonry veneer building has multiple levels of flat, asphalt, built-up roof areas. There is one basement level associated with this facility and ample shared parking all around the facility.

The facility has a first floor 500-seat auditorium along with administration and departmental space. There is a main entrance on the west side and numerous others all along the perimeter of the facility. This medical school facility contains numerous staff office spaces, a number of lecture halls, classrooms, hands-on teaching laboratories, and typical support areas, such as a conference rooms, staff and student lounges, and numerous public restrooms. The primary mechanical/electrical space occupies approximately one-half of the eighth floor. The building is mostly accessible to those in with disabilities, but not all of the amenities are fully compliant with the most recent accessibility legislation.

Many features of the original design are no longer desirable in a modern medical school classroom design, such as size and adaptation to modern technology. As part of any facility renovation, the re-evaluation of the floorplan and space concept will be required to fully retrofit this facility to modern medical school standards and amenities.

Information for this report was gathered during a site inspection that concluded on April 19, 2016.

Site

Overall the site is well maintained and visually appealing. The site landscaping is adequate and appropriate for the existing building conditions. Generally the site hardscape, which includes the concrete sidewalks and concrete curb and gutters, are in good condition. The asphalt parking lot has surface cracks which, if left unattended, will lead to premature failure of the pavement structure. Since these parking areas serve both university-owned and privately-owned medical facilities, they were not inspected nor reported on within this facility condition assessment.

Exterior Structure

The existing brick masonry veneer exterior walls from the original 1981-82 construction have exhibited moisture penetration around the windows and through the masonry wall. Numerous areas of the

exterior were investigated and found to have systematic deficiencies that are believed to be through most of the exterior. A major renovation is recommended for the exterior vertical masonry walls, including any window resealing as necessary to ensure a waterproof exterior envelope. This effort also includes the removal and replacing of any existing deficient flashing and end-wall conditions within the wall structure. Along with the brick masonry, the exterior envelope also consists of concrete panels. These panels appear to be in satisfactory condition. However they are considerably stained and soiled and are recommended for cleaning.

The original windows, some of which are dual-pane construction, are recommended for replacement. The windows are typically in fair condition, and some are associated with the exterior brick veneer moisture penetration issues. These window systems typically have a forty-year life and are approaching that age in the next five to six years. This replacement should be accomplished in conjunction with the exterior wall renewal recommendation.

The building has multi-level, flat, rolled asphalt, built-up roof systems. The upper tower, the third floor roof, and the lower first floor roofs over the auditorium, western main entrance, and north and south clinical areas all appear to have been installed at the same time, presumably 2010. These roof areas should all be satisfactory through the ten-year window of this assessment report.

Most of the exterior entrance doors are either aluminum and glass or hollow metal service type door applications. They appear to be original to the building construction and are in good to fair condition but are expected, along with their associated hardware, to need lifecycle renewal within the next ten years. There are also sliding entrance systems. These door systems are newer, but will also reach lifecycle depletion late in the scope of this report.

Interior Finishes/Systems

The interior finishes within this facility are typically original, vary in age based on the date of construction, and generally in good to fair condition. The office suites, lecture halls, conference rooms, and some classrooms within this facility are finished with wall-to-wall carpeted floors, most of which are in good to fair condition. Even though some areas on the first through third floors are newly renovated, the majority of the carpet within this facility is anticipated to need renewal within the next ten years. Areas of higher traffic circulation will always need earlier and more frequent renewal. Most of the upper floor corridors along with the laboratory areas have twelve-inch vinyl floor tile and the training hands-on classrooms typically have tile or sheet vinyl flooring. All the vinyl tile except for the newly renovated areas have or will reach lifecycle depletion within the next ten years. The original painted and sealed concrete floors should be refinished during the next ten years, but the newly renovated areas should outlast the scope of this report.

The restroom facilities in this building are constructed of original ceramic tiled floors and walls with some upgraded but not fully accessible fixtures. The ceilings in these areas are typically painted hard surfaces. The older ceramic tiled finishes in the facility are due for lifecycle replacement.

Most of the interior walls are painted sheetrock partitions with some papered walls. There are some areas within the facility that have wood paneled wall finishes, and some laboratory areas with fiberglass

medical grade interior wall finishes. The wood paneling is in good condition. However, some of the fiberglass medical paneled finishes should be scheduled for lifecycle replacement. Most ceilings are finished with suspended grid acoustical tile drop ceiling finishes that are also original to the buildings construction or the latest renovation. Ceiling areas not finished with suspended ceilings have painted sheetrock applications. The interior walls and ceilings are generally good to fair condition, and some will require lifecycle renewal within the next ten years.

The interior doors and their associated hardware are almost all original and in fair condition. They are also anticipated for lifecycle renewal within the next ten years.

The casework, including the metal and wooden casement lab cabinetry and countertops, is mostly original, in fair condition, and expected to warrant significant improvements throughout the entire facility to bring these specialized amenities up to the latest standards and functionality.

There are several lecture halls on the second floor where there are still some older premium seating that should be replaced due to age and condition. Several other lecture halls have just been renovated. The large auditorium on the first floor has upgraded seating from the original installations and should remain in good condition through the ten years of this assessment.

Accessibility

The facility was constructed in 1982, years before any ADA legislation was approved into law. However, being a public university and a hands-on medical classroom and laboratory teaching facility in a typical hospital environment, aspects of improved accessibility that weren't incorporated into the original design were subsequently retrofitted into the existing interior renovations and/or incorporated into the original design of the several facility additions that were later constructed. Even with those limited improvements, the accessibility improvements in the mostly older original spaces are only partially accessible and not fully compliant with the latest legislation. There are additional recommendations to further improve access to this facility by those handicapped or in a wheelchair.

While some of the newer interior doors are suitable for ten future years of service, the knob actuated door hardware on most doors presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with the intent of this legislation, it is recommended that lever handle door hardware be installed on all doors that currently have knobs. There are numerous doors throughout the facility that have been identified by the University as having insufficient clearances. A corrective action allotment based on University supplied data has been included in this interior accessible door recommendation.

The overall level of restroom accessibility is fair, marginally meeting full compliance with modern accessibility legislation. The restrooms throughout the facility that are in various levels of accessibility compliance to the latest accessibility legislation. Some are also totally inaccessible. However, there is at least one fully accessible restroom on every floor except the partially occupied eighth. Combining two small separate sex restrooms into one accessible restroom may be possible. One recommendation proposes that a new unisex restroom be constructed on the eighth floor, including fixtures, finishes, and

accessories. There are numerous restrooms throughout the original sections of the facility where the overall size of the restroom is inadequate, or the amenity, fixture, and/or partition spacing does not provide compliant clearances and clear floor spaces. There is a separate recommendation that encompasses the restroom accessibility upgrades required throughout the facility as identified in the field assessment and documented in University supplied data.

Drinking fountains exist throughout the facility, some original built-in single-level refrigerated units and others newer dual-level accessible units. Since at least one dual-level fountain exists on all floors, no accessibility recommendations are made that directly affect the drinking fountains. However as the existing units require replacement due to age or inoperability, they should be replaced with modern dual level units.

There is a significant amount of laboratory and non-laboratory casework within this facility that is not fully compliant with knee clearances, countertop heights, and other accessibility issues. These base and overhead casement areas are included in the building-wide lifecycle replacement costs outlined in the recurring component costs.

Health

Based on the date of construction for this facility, the use of hazardous materials during the construction, such as asbestos or lead paint, is not as likely as in older facilities since both were phased out of use beforehand, lead paint in the 1960s and asbestos in the 1970s. With proper precautions, lead paint and asbestos health risks can be minimized. All workers should be made aware of such hazards of working with such materials during any and all remodeling. There were no reports or evidence of pest or insect infestations in this building.

This facility is equipped with fifteen refrigerated cold rooms that are original to facility construction. The majority of these areas are still in proper working condition but a few have been abandoned in place and are no longer in service. All fifteen of the mechanical structures and associated mechanical equipment have reached the end of their reliable useful life and are recommended for replacement.

Additionally, this facility is equipped with three environmental chambers/ warm rooms that are also original to construction. Like the walk-in coolers, the structures and mechanical equipment are operating beyond their statistical service lives. It is recommended that the warm rooms and the associated mechanical equipment be replaced within the next ten years.

Fire/Life Safety

Structural fire separations appeared to be maintained according to code requirements applicable for the date of construction for the numerous areas of this facility. The paths of egress in this building are adequate in regard to fire rating. There were no compromises involving doors, partitions, or stairs observed during the inspection.

The four existing egress stairs within the eighth-floor central tower do not meet the latest fire and life safety code for high rise buildings. Pressurization, tactile finishes, door and hardware, possible area of refuge issues, and handrails and guardrail protection are all deficient within the tower stairs. The pressurization is addressed in HVAC upgrades, and the door and hardware is addressed in lifecycle replacement of those items. A formal recommendation has been proposed to address those architectural issues not covered already by component lifecycle replacement or other non-recurring upgrades. Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they lack adequate handrails and guardrails. Present legislation requires that top stair landings have guardrails that prevent the passage of a four-inch diameter sphere (six inches in the triangle formed by the lower rail and tread / riser angle). Guardrails are required to be forty-two inches high. Future renovation efforts should include comprehensive guard railing upgrades. The tactile finishes are also recommended for replacement as part of this effort.

This facility is equipped with a fire alarm/detection system that utilizes a point-addressable control panel that was installed in 1998. The additional equipment that serves this system includes manual pull stations, horn strobe signals, smoke/fire detection, and auto communication dialer. This system was in proper working condition on the day of inspection, and there is evidence of specific component replacement that has occurred over time. The main control panel, associated annunciator, emergency equipment installed within the emergency generator building and a vast majority of the building-wide components have reached the end of their statistical useful lives and will require an upgrade near the end of this ten-year planning horizon.

The auditorium area of this facility is currently not equipped with central fire suppression equipment. It is recommended that a wet-pipe fire system be installed. The remainder of the facility is protected through the use of a comprehensive wet and dry pipe fire suppression system. This system includes sprinkler heads, distribution piping, tamper switches, and safety valves that are currently in proper working condition and will require continued maintenance and inspection to remain serviceable beyond the planning scope of this assessment.

The fire suppression system is equipped with a relatively modern fire pump, associated jockey pump, control panel and associated electrical transfer switch (TSW-ATS-GW58) that were updated in 2013. With continued maintenance and operation, this equipment should remain reliable beyond the planning horizon of this report.

The data centers located on the ground floor contain the servers and associated equipment for all information technology utilized within this building. Currently, this area is protected by the wet-pipe fire suppression system. It is recommended that a gas-based system, such as Inergen or FM-200, be installed to provide the fire protection within these highly sensitive areas.

The exit signage and egress lighting installed throughout this facility has been subject to multiple renovation periods that include the installation of new or retrofitted signage and lighting. The majority of the exit signage has been modernized or retrofitted to use LED lamps and is in proper working condition. It is estimates that approximately 35 percent of the exit signage will need to be replaced or modernized within the next ten years. Egress lighting is provided from standard interior light fixtures

that are connected to the emergency power network. The lighting system has been modernized, and the emergency lighting system is in good condition. There are no recommendations for the egress lighting system installed within this facility at this time.

HVAC

Overall, the HVAC system installed within this facility is an antiquated design with aging components that require significant amounts of time, energy, and money to continue operating at the system's maximum achievable output. In order for the University to meet current and future energy reduction standards, it is highly recommended that a total redesign of the system be developed. It is not currently economical or mechanically feasible for the current system design to achieve the energy reductions required. Limited space within the structure does not allow for the remodel of the distribution ductwork system nor the replacement of the antiquated control network to be achieved without the large portions of the facility removed from service. The following describes the current system's individual components condition and any recommendations.

This facility utilizes chilled water and steam that is provided from the HSC Central Utility Plant. The central steam pressure is reduced through the use of eleven pressure reducing stations installed within the main and auxiliary mechanical spaces. The steam is then converted into heating hot water for distribution throughout the facility via the use of shell-and-tube heat exchangers. The pressure reducing valves and heat exchangers are currently in proper working condition. The majority of this equipment is original to facility construction and has or will reach the end of their reliable useful lives within the next five years. The heat exchanger identified as HEX-GW58 was installed in 2011 and, with continued maintenance, will remain serviceable beyond the planning scope of this assessment. The remaining heat exchangers and all of the PRVs are recommended for replacement.

Base mounted pumps circulate the heating water and chilled water to various air distribution units and coils installed throughout the facility. Pumps for the heating and chilled system identified as GHP-1, GHP-2, CHWP-1, CHWP-2 and the chilled water back-up pump were all replaced within the last five years and have been well maintained. With continued maintenance, this equipment will remain reliable beyond the scope of this report. Most of the pumps serving the HVAC system are original to facility construction and have reached the end of their statistical service lives.

Seven primary air handlers of varying capacity that are equipped with heating and chilled water coils furnish conditioned air through a ducted forced-air system that utilizes a variable air volume design. The air handlers are equipped with supply fans or fan walls and inline/ axial return fan systems. Current modifications to the central air handling equipment include the replacement of some of the cooling coils and modifications to the supply fan system that utilize energy-efficient fan walls instead of more common utility set fans. The main air handlers installed utilize 100 percent exterior return air with the exception of air handler AC6 which serves non-laboratory or research spaces. An additional seven, smaller air handlers are installed to provide conditioned air to certain lab spaces, conference areas, and the auditorium.

The physical inspection revealed that the coils installed within some of the main air handlers have started to clog and are developing moderate corrosion. This deterioration reduces the overall

performance of the equipment by limiting the maximum available heat transfer space ultimately reducing the overall efficiency of the equipment. The current replacement fee for the coils within the largest built-up air handlers is approximately $300,000, as the coil walls have to be manufactured. Additionally, the current design for these units provides conditioned air to areas, or sides, of the building rather than a more traditional floor system design. This makes repairs and replacement challenging as spaces are typically allocated to varying University departments by floors, not regions of the building. Based on the condition and age of the equipment previously described, it is recommended that all seven of the large air handlers and six of the smaller ones be removed and replaced within the planning horizon of this assessment. It is also recommended that the associated humidifiers and inline and utility set fans that serve the air handlers supply and exhaust feeds be updated as well.

Nine energy recovery units are installed within the penthouse mechanical space to recapture latent energy from exhaust air. An additional ERU is installed within air handler AC1. The penthouse units were installed in 2004 and will reach the end of their reliable efficient lives within the planning scope of this assessment. The unit installed in AC1 is also recommended for replacement.

The HVAC distribution system consists of ductwork that is equipped with approximately 1,000 variable air volume terminal boxes. The vast majority are original to facility construction. Additionally, this system is comprised of heating water pipe, chilled water pipe, condensate return pipe, steam traps and various sized isolation valves. The piping system is currently serviceable, but leaks have developed over time. Additionally, most of the steam traps are original to facility construction and in need of replacement. A systematic replacement plan is currently in place to replace the various isolation valves based on a condition need. Many of the valves have been subject to limited operation and a large quantity have developed moderate to severe corrosion. It is recommended that the entire HVAC distribution system be replaced.

The HVAC control system is a hybrid of modified electronic or direct digital control modules with the majority of the valves, dampers, and louvers operated with compressed air pneumatics. Two new compressors and three air storage tanks were installed within the last five years. The original units are still operable and provide stand-by service. The associated air dryers were installed in years 2000 and 2005. The older compressors and dryers will require replacement within the next ten years. Overall, the control system components are in proper operating condition. However, the overall design is antiquated and inefficient. The compressed air system is aged and has started to develop pinhole leaks throughout reducing the overall efficiency of the system. It is recommended that the pneumatics be removed and a redesign and installation of a complete electronic or direct digital system be installed.

General facility exhaust is achieved through the use of standard, rooftop, centrifugal type fans and thru-wall fans with propellers. Additional smoke exhaust is achieved through the use of two rooftop utility set fans. All of the general exhaust and smoke fans systems have reached the end of their statistical useful lives and are recommended for replacement.

Condensate generated from the use of the steam and heating water is recaptured by electric and vacuum type pump systems. There are approximately nine condensate return pumps of which five are recommended for replacement due to age and condition. The vacuum/ gravity pump system and the

electric pumps identified as PMP-168 and PMP-169 were installed within the last six years and are in good operating condition and only routine maintenance will be required to ensure their continued operation.

Additional central HVAC equipment include expansion tanks, water storage tanks and back-up chilled water tanks that are original to facility construction. These tanks are in proper working condition but will more than likely require replacement within the ten-year planning scope of this report.
This facility is equipped with 100+ four foot wide, horizontal sash, fume hoods, which are original to facility construction. The vast majority of the inline and utility set fans that serve the fume hoods are also original to facility construction. It is estimated that approximately 95 percent of this equipment will require replacement due to age and condition within the next ten years. The utility set exhaust fans identified as fans 8-1E, 8-2E, 8-3E and 8-4E are original to facility construction and have been abandoned in place. This equipment and associated ductwork is still connected to fume hoods that have a history of utilizing perchloric acid. Perchloric acid is a strong mineral acid that when heated becomes a strong oxidizer. This oxidization process can result in the formation of metal and non-organic salts that are shock sensitive and pose a fire and explosion hazard. Perchloric acid can also be very harmful to humans if inhaled or comes in direct contact with tissue. A small stipend has been added to fans and HVAC distribution system for the proper remediation and removal of this equipment.

The fume hood exhaust system was modified in 2007 to utilize mixed-use strobic air fans installed on the roof. These six fans have rated capacities of 37,425 CFM each and are equipped with 60 hp motors. These units are in good condition and with continued maintenance will remain reliable beyond the planning horizon of this assessment.

Supplementary HVAC is supplied throughout areas of the building through the use of fan coil units, hydronic heating elements, and ductless split systems with DX cooling. The penthouse elevator machine rooms and telecommunications room GS106 are served by an exterior air-cooled condenser with interior evaporator. These three systems are in excellent condition and with continued maintenance will remain reliable beyond the ten-year planning horizon of this assessment. The split DX system and fan coils are currently serviceable. The hydronic heating elements will require replacement within the purview of this assessment.

The north and south electrical rooms on the eighth floor are provided heating and cooling from the central HVAC system. This system is not providing enough cooling capacity during the warm months of the years, and it is recommended that these two areas be equipped with ductless split systems that utilize DX cooling.

The data centers/ server rooms located on the ground level are provided cooing from the use of an exterior air-cooled chiller that is rated for 80 tons. This chiller creates chilled water that is furnished to computer room air conditioning systems that are currently in serviceable condition. The CRAC unit and back-up unit installed in the original data center will reach the end of their reliable service lives near the end of this planning time. It is recommended that this equipment be removed and replaced at that time.

Electrical

This facility is provided primary electrical service from four exterior pad-mounted, oil-filled transformers rated for 12.47 kV. These transformers have been assessed as part of the High-Voltage Electrical Infrastructure report. These exterior transformers reduce the incoming transmission voltage to 480/277 volts that is then distributed throughout the building. The 480/277 volt service provides electricity to the major mechanical equipment installed throughout the building. This service is reduced to 120/208 volts through the use of approximately forty various sized dry-type transformers.

The main electrical disconnect for this facility is located in the exterior generator building and has a rated capacity of 3,200 amps at 480/277 volts. This closed transition switchgear includes main circuit breakers for the SSA and SSB circuits as well as the three generator breakers. This primary switchgear has been regularly operated, tested and is well maintained. There are no recommendations for this equipment at this time.
The interior of the facility is equipped with five different sections of switchboards that provide electrical service to the mechanical, electrical and secondary systems. Located in room GS58 are three sections of switchboards identified as SSE rated for 1,200 amps, LSE rated for 800 amps, and SSEB rated for 1,200 amps. Square D switchboard SSEB was updated in 2012 and is in proper working condition. The General Electric switchboards SSE and LSE are original to facility construction and are recommended for replacement within the next ten years. Located within the eighth floor electrical rooms 8N08A and 8S08B are two additional section of switchboards that that have are designated as feeds SSA and SSB containing feeder breakers A, B, C, D and two tie breakers. This equipment has also reached the end of their reliable useful lives and are recommended for replacement.

The remaining equipment that makes up the secondary distribution system includes circuit breaker panelboards, dry-type transformers, bus plugs, branch wiring and additional switchboards. There have been phases of replacement over time that has been dedicated to the removal and replacement of aging panelboards and circuit breakers. The branch wiring and the majority of the equipment is still original to facility construction. In order to ensure reliable operation of the secondary system, it is recommended that approximately 80 percent of the system be upgraded within the next ten years.

Additional electrical equipment includes two separate motor control centers that are original to facility construction. This equipment is rarely operated and tested and has reached the end of its reliable service life.

Emergency power is provided to this facility through the use of three diesel-fired, emergency generators located in the exterior generator building. Generator 1 and 2 are rated for 500 and 650 KW and were replaced in 2010. These units are in good working condition. Generator 3 is rated for 600 KW, is original to facility construction, and has reached the end of its statistical lifecycle. The generators are provided fuel from a shard 4,000 gallon underground storage tank and each one is connected to an individual day tank that is in good condition. An additional emergency service feed provided from an uninterruptable power source installed in room GE99 has been in service for eleven years and will reach the end of its statistical service life within the next five years. Multiple automatic transfer switches are installed within the mechanical spaces and generator facility to transfer electrical service in the event of a loss of utility power. Of the seven switches inspected, the units identified as TSW-ATS1, TSW-ATS2 and TSW-ATS3 are

original to facility construction and will require replacement within the planning horizon of this assessment. The remaining switches will remain reliable as long as they are subject to continued, diligent maintenance and operation practices.

Approximately 80 variable speed drives are installed throughout the facility and provide service to all major mechanical equipment. This equipment currently in proper working condition, but the vast majority will require replacement near the end of this ten year planning assessment.

The interior lighting system within the facility is primarily comprised of recessed fixtures that have been retrofitted with modern, energy-efficient, LED lamps. The entire facility has been modified or is in the process of being modified. The only area that is still utilized original fixtures with outdated lamps is the auditorium area. Overall, the interior lighting system is a well-designed system that will remain cost effective and reliable beyond the ten-year planning scope of this assessment. It is recommended that the auditorium be retrofitted to include more modern lighting system within the next ten years.

The exterior lighting system contains a combination of wall-mounted, recessed, and ground lights. Most of the wall and ground lights are equipped with LED lamps and are in proper working condition. A few will need to be modified but in general, the majority will require only minimal inspection or lamp replacement over the next ten years. The majority of the recessed light fixtures still utilize compact fluorescent bulbs, and the fixtures are original to facility construction. It is recommended that the recessed lights be modified or replaced within the scope of this assessment.

Plumbing

The domestic water supply system within this facility is a soldered copper design, and the wastewater piping system is constructed of cast-iron or black steel. Both systems are currently serviceable but will require replacement in order to prevent potential costly expenditures from failed or leaking pipe.

Ten backflow preventers (BF) installed within this facility prevent cross-contamination of the domestic, chilled and heating water systems within this facility and the municipal water service. These devices are currently serviceable but the units identified as BFP-007, BFP-008, BFP-009 and BFP-GL02 will require replacement within the next ten years.

Domestic hot water is generated through the use of two shell-and-tube heat exchangers that are in good working condition. There are no recommendations for this equipment at this time. An additional electric water heater identified as GENE-TAN-002 installed within the generator building is operating beyond the reliable useful life of this type of equipment and will require replacement.

The domestic water pumps and domestic water booster station were updated in 2011 and are in good working condition. With continued maintenance, this equipment will remain reliable beyond the ten-year planning scope of this assessment.

The standard plumbing fixtures installed throughout this facility include porcelain water closets, wall-mounted urinals, and standard lavatories. Many of the fixtures have been retrofitted to include hands-free devices, and all new replacement fixtures are designed with low flow capacities. The majorities of

these fixtures are original to facility construction and are recommended for replacement within the planning scope of this assessment. Emergency or safety fixtures installed within the building include safety showers, eyewash stations, drench hoses, and combination eyewash/safety showers. Dedicated mixing valves were identified to be in service for the majority of these fixtures. As a whole, these fixtures are in proper working condition and should remain serviceable beyond the scope of this assessment.

Additional plumbing systems utilized within the laboratory areas of this building include dedicated vacuum and compressed air systems. The duplex, vacuum pump system and air compressor are in good working condition. No recommendation for replacement of this equipment was developed at this time.

Installed within the lower level mechanical spaces are submersible sump pump systems that are original to facility construction. These units are in proper working condition but have reached the end of their reliable service life.

Vertical Transportation

This facility is equipped with five passenger elevator and two freight elevator systems. These traction type elevators are original to facility construction but have been modified within the last five years. Controls for the north and south freight elevators were retrofitted in 2010. There are no recommendations for the removal and replacement of the elevator machines or the passenger cars at this time.

The exterior loading dock is equipped with one hydraulic dock leveler that is in good working condition. With continued maintenance, this equipment should remain reliable beyond the planning scope of this assessment.

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

Report Development

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Project Manager

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Date of Inspection

April 19, 2016

Inspection Team Personnel

NAME	POSITION	SPECIALTY
Rob Camperlino	Facility Assessor	Mechanical, Electrical, Plumbing, Energy, Fire/Life Safety, Health
Carl Mason, PE, BSCP, M.ASCE	Senior Project Engineer	Interior Finishes, Exterior Structure, ADA Compliance, Site, Fire/Life Safety, Health

Client Contact

NAME	POSITION
Griffin L. Avin	Director of Facilities Services, Health Sciences Campus

DEFINITIONS

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

Overview

Recurring and Nonrecurring Facility Renewal Costs

Facility renewal costs are divided into two main categories – recurring and nonrecurring. 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 Asset Component Inventory, which is explained in detail below. Nonrecurring costs typically consist of modifications or repairs necessary to comply with fire/life safety or accessibility code requirements or to address isolated, nonrecurring deficiencies that could negatively affect the structure of the facility or the systems and components within. For these nonrecurring 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 nonrecurring 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.

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

Facility Condition Index (FCI)

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

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

Material and Labor Cost Factors and Additional Markups

The project costs are adjusted from the national averages to reflect conditions in Greenville, NC 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 renewal costs.

GLOBAL MARKUP	%
Local Labor Index	71.3
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 Renewal.

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 Renewal
  Recurring repairs, generated by the Asset 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 Renewal projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to effect the needed repairs.

- Projected Renewal
  Recurring renewal efforts, generated by the Asset Component Inventory, that will be due within the scope of the assessment. These are regular or normal facility maintenance, repair, or renovation efforts that should be planned in the near future.

Nonrecurring Costs

As previously mentioned, modifications or repairs necessary to comply with fire/life safety or accessibility code requirements and those that address isolated, nonrecurring deficiencies that could negatively affect the structure of the facility or the systems and components within are not included in the Asset 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
  Nonrecurring 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
  Nonrecurring 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 nonrecurring 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.

- 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

- 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

- Noncritical

  Projects in this category include:

  a. improvements to facilities associated with noncritical 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

Refer to the Category Code Report starting on page 1.5.1.

Example: **Category Code = EL5A**	
EL	System Description
5	Component Description
A	Element Description

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).

Example: **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, duct banks, 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, walk pad 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 nonstructural) elements, including beltlines, quoins, porticos, soffits, cornices, moldings, trim, etc.
ES6D	General	Superstructure	Finish and structural work on nonstandard 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

RENEWAL COSTS MATRIX

All dollars shown as Present Value

CATEGORY	NON-RECURRING PROJECT NEEDS			RECURRING COMPONENT REPLACEMENT NEEDS											
	Immediate	Critical	Non-Critical	Deferred Renewal	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL
ACCESSIBILITY	0	25,401	2,661,805	0	0	0	0	0	0	0	0	0	0	0	$2,687,206
EXTERIOR	0	0	5,592,436	76,570	0	0	0	0	0	0	4,655,330	0	0	66,578	$10,390,914
INTERIOR	0	0	0	385,989	0	3,332,522	2,248,193	3,896,517	443,262	0	14,217,239	0	101,028	546,712	$25,171,461
PLUMBING	0	0	0	7,304	928	5,948,581	0	0	0	0	8,187,829	0	0	0	$14,144,642
HVAC	0	0	7,599	11,877,286	0	18,756	0	0	31,159	84,181	30,419,996	0	767,929	5,822	$43,212,728
FIRE/LIFE SAFETY	0	707,414	37,574	92,362	1,366,553	0	0	0	0	0	0	0	0	0	$2,203,904
ELECTRICAL	0	0	0	2,112,892	0	42,711	13,861	0	69,304	57,775	7,824,265	13,271	399,443	116,055	$10,649,577
SITE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0
VERT. TRANS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0
HEALTH/EQUIP.	0	0	0	180,850	0	522,435	0	0	0	0	0	0	0	0	$703,285
SUBTOTAL	$0	$732,815	$8,299,415	$14,733,253	$1,367,481	$9,865,004	$2,262,054	$3,896,517	$543,725	$141,956	$65,304,660	$13,271	$1,268,400	$735,166	$109,163,717
TOTAL NON-RECURRING PROJECT NEEDS			$9,032,230	TOTAL RECURRING COMPONENT REPLACEMENT NEEDS										$100,131,487	

CURRENT REPLACEMENT VALUE	$226,089,000
FACILITY CONDITION NEEDS INDEX	0.48
FACILITY CONDITION INDEX	0.07

GSF	TOTAL 10-YEAR FACILITY RENEWAL NEEDS	10-YEAR NEEDS/SF
480,279	$109,163,717	$227.29

RENEWAL COSTS BY SYSTEM

All costs shown as Present Value

CATEGORY	NON-RECURRING ASSESSMENT RECOMENDATON	RECURRING COMPONENT REPLACEMENT COSTS	TOTAL 10-YEAR FACILITY RENEWAL COSTS
ACCESSIBILITY	$2,687,206	$0	$2,687,206
EXTERIOR	$5,592,436	$4,798,478	$10,390,914
INTERIOR	$0	$25,171,461	$25,171,461
PLUMBING	$0	$14,144,642	$14,144,642
HVAC	$7,599	$43,205,130	$43,212,728
FIRE/LIFE SAFETY	$744,989	$1,458,915	$2,203,904
ELECTRICAL	$0	$10,649,577	$10,649,577
SITE	$0	$0	$0
VERT. TRANS	$0	$0	$0
HEALTH	$0	$703,285	$703,285
TOTALS	**$9,032,230**	**$100,131,487**	**$109,163,717**

FACILITIES RENEWAL PLAN

NON-RECURRING PROJECT COST

All costs shown as Present Value

PROJECT NUMBER	PROJECT TITLE	UNI-FORMAT	PRIORITY CLASS	PROJECT CLASSIFICATION	PROJECT COST
BRODFS03	INSTALL FIRE SUPPRESSION SYSTEM IN AUDITORIUM		2	Plant Adaption	98,081
BRODFS01	TOWER STAIR SAFETY UPGRADES	C2020	2	Plant Adaption	609,334
BRODAC02	EIGHTH FLOOR UNISEX RESTROOM INSTALLATION	D2010	2	Plant Adaption	25,401
BRODAC03	BUILDING-WIDE RESTROOM ACCESSIBILITY UPGRADES		3	Plant Adaption	1,221,062
BRODFS02	INSTALL FM200 OR INERGEN FIRE SUPPRESSION SYSTEM		3	Plant Adaption	37,574
BRODES01	EXTERIOR MASONRY WALL RENEWAL	B2010	3	Corrective Action	5,592,436
BRODAC01	INTERIOR DOOR ACCESSIBILITY UPGRADES	C1010	3	Plant Adaption	1,440,743
BRODHV01	INSTALL SPLIT DX EQUIPMENT IN EIGHTH FLOOR ELECTRICAL ROOMS	D3050	3	Plant Adaption	7,599
				TOTAL	**$9,032,230**

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD DR05	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS		B2030	Deferred Renewal	76,570
BROD DR24	DOOR LOCK, COMMERCIAL-GRADE		C1020	Deferred Renewal	11,857
BROD DR24	DOOR LOCK, COMMERCIAL-GRADE		C1020	Deferred Renewal	19,762
BROD IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD		C3020	Deferred Renewal	81,014
BROD IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		C3030	Deferred Renewal	273,356
BROD BF01	BACKFLOW PREVENTER (<=1 INCH)	BFP-007	D2020	Deferred Renewal	928
BROD BF01	BACKFLOW PREVENTER (<=1 INCH)	BFP-009	D2020	Deferred Renewal	928
BROD BF02	BACKFLOW PREVENTER (1-2 INCHES)	BFP-008	D2020	Deferred Renewal	2,069
BROD WH23	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	GENE-TAN-002	D2020	Deferred Renewal	1,575
BROD PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P03	D2030	Deferred Renewal	601
BROD PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P04	D2030	Deferred Renewal	601
BROD PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-064	D2030	Deferred Renewal	601
BROD TK03	EXPANSION TANK (21-40 GAL)	TAN-001	D3020	Deferred Renewal	6,142
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-006	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-031	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-031	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-002	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-003	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-004	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-3E144	D3020	Deferred Renewal	14,417
BROD TK05	EXPANSION TANK (61-100 GAL)	TAN-065	D3020	Deferred Renewal	19,464
BROD AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-001	D3040	Deferred Renewal	7,969
BROD AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-002	D3040	Deferred Renewal	7,969
BROD AH06	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-001	D3040	Deferred Renewal	52,686
BROD AH06	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-002	D3040	Deferred Renewal	52,686
BROD AH06	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-003	D3040	Deferred Renewal	52,686

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD AH06	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-004	D3040	Deferred Renewal	52,686
BROD AH09	AIR HANDLING UNIT - INDOOR (17-23 HP)	AHU-88-2	D3040	Deferred Renewal	144,044
BROD AH12	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-AC2	D3040	Deferred Renewal	538,549
BROD AH12	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-88-1	D3040	Deferred Renewal	254,032
BROD AH15	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC6	D3040	Deferred Renewal	522,438
BROD AH15	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC7	D3040	Deferred Renewal	522,438
BROD AH15	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC5	D3040	Deferred Renewal	522,438
BROD AH15	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC1	D3040	Deferred Renewal	522,438
BROD AH15	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC3	D3040	Deferred Renewal	522,438
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	AC1	D3040	Deferred Renewal	85,325
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-001	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-002	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-047	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-048	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-062	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-085	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-063	D3040	Deferred Renewal	6,006
BROD AH46	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-064	D3040	Deferred Renewal	6,006
BROD FN18	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (10"-18" DIAMETER)	CENTURYMASTER	D3040	Deferred Renewal	3,202
BROD FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	ROOF	D3040	Deferred Renewal	5,667
BROD FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-1	D3040	Deferred Renewal	5,667
BROD FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-2	D3040	Deferred Renewal	5,667
BROD FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-3	D3040	Deferred Renewal	5,667
BROD FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	GENE-EAF-001	D3040	Deferred Renewal	5,667
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	FIRE PUMP RM	D3040	Deferred Renewal	3,721

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-27	D3040	Deferred Renewal	4,093
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-25	D3040	Deferred Renewal	3,721
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-44	D3040	Deferred Renewal	3,721
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-GL02	D3040	Deferred Renewal	3,721
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	E-11	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-30	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-11	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-10	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-43	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-41	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-31	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-33	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-35	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-15	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-81	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-83	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-58	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-57	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-53	D3040	Deferred Renewal	6,202
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-87	D3040	Deferred Renewal	8,373
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-28	D3040	Deferred Renewal	9,924

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-42	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-47	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-40	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-71	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-08	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-66	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-17	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-78	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-62	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-64	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-54	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-56	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-51	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-50	D3040	Deferred Renewal	9,924
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-2	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-61	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-3	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-1	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-55	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-39	D3040	Deferred Renewal	12,404
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-75	D3040	Deferred Renewal	18,607

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	MAF-8-74	D3040	Deferred Renewal	18,607
BROD FN21	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	RAF-003	D3040	Deferred Renewal	23,258
BROD FN27	FAN - PROPELLER WITH LOUVER, 1/4" SP (1-1.5 HP)	GENE-EAF-002	D3040	Deferred Renewal	2,990
BROD FN28	FAN - PROPELLER WITH LOUVER, 1/4" SP (1.5-2 HP)	EAF-GW58	D3040	Deferred Renewal	4,796
BROD FN29	FAN - PROPELLER WITH LOUVER, 1/4" SP (2-4 HP)	THRU-WALL 8TH MECH	D3040	Deferred Renewal	3,936
BROD FN33	FAN - UTILITY SET, 1/4" SP (1.25-4 HP)	EAF-8-48	D3040	Deferred Renewal	11,087
BROD FN34	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-1E	D3040	Deferred Renewal	12,593
BROD FN34	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-2E	D3040	Deferred Renewal	12,593
BROD FN34	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-3E	D3040	Deferred Renewal	12,593
BROD FN34	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-4E	D3040	Deferred Renewal	12,593
BROD FN35	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P09	D3040	Deferred Renewal	21,022
BROD FN35	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P10	D3040	Deferred Renewal	21,022
BROD FN38	FAN - UTILITY SET, 1/4" SP (42-62 HP)	RAF-001	D3040	Deferred Renewal	42,794
BROD FN39	FAN - UTILITY SET, 1/4" SP (>62 HP)	RAF-002	D3040	Deferred Renewal	58,230
BROD HD01	HOOD, FUME	3N80	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N86	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S07A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S07B	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S08	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S10	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S14	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S16	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3E 94	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N80	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5E 83	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7E 110	D3040	Deferred Renewal	8,391

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD HD01	HOOD, FUME	7E 118	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	GN80	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6N92	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N59	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N51	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N78	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6N59	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N43	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N45	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N72	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3N74	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N53	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N55	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N82	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N86	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6 E128	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	8 E10	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5E 85	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5E 87	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5E 89	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5N75A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4N45	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5N71A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6N55	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W27B	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W40	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W42	D3040	Deferred Renewal	8,391

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD HD01	HOOD, FUME	3W46	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4W29	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4W42	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W31	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W39	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W50	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W58	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W35	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W48	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W52	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W31	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W37	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W44A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W48	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W37	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W54	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W58	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W60	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W39	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7W58	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	1ST FLR ISO	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W43B	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W47A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4W37	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6N70	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N72	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7N76	D3040	Deferred Renewal	8,391

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD HD01	HOOD, FUME	3N66	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3E 100	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3E 98	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S22	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S15	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S19	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S21	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S28	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S16	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S18	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S09	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S20	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S07A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S09	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4S09	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S08	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S10	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S18	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4S30A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S30	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5S38	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S19	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S24	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S26	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W23	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S28	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S11	D3040	Deferred Renewal	8,391

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD HD01	HOOD, FUME	6S15	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S26	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S28	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	7S34A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S28	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6S36	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	6W27	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4S13	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4S15	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S07A	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S07B	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S08	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S10	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S14	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3S16	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	GW43E	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W60	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W62	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W66	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5W68	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	5N51	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W29	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W31	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W48	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W52	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	3W54	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	GW27	D3040	Deferred Renewal	8,391

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD HD01	HOOD, FUME	GW29	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	GW43F	D3040	Deferred Renewal	8,391
BROD HD01	HOOD, FUME	4W42	D3040	Deferred Renewal	8,391
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-003	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-007	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-008	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-009	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-005	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-010	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-011	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-004	D3040	Deferred Renewal	3,951
BROD HX09	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-006	D3040	Deferred Renewal	3,951
BROD HX10	PRESSURE REDUCING VALVE, STEAM SYSTEM (2.5")	PRS-002	D3040	Deferred Renewal	4,888
BROD HX11	PRESSURE REDUCING VALVE, STEAM SYSTEM (3")	PRS-001	D3040	Deferred Renewal	6,040
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-88-A	D3040	Deferred Renewal	2,911
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-88-B	D3040	Deferred Renewal	2,911
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-013	D3040	Deferred Renewal	4,366
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-014	D3040	Deferred Renewal	4,366
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-4	D3040	Deferred Renewal	4,366
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-5	D3040	Deferred Renewal	4,366
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-180	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-181	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-182	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-187	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-188	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-AC1	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-AC2	D3040	Deferred Renewal	2,183

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-AC4	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-AC5	D3040	Deferred Renewal	2,183
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-AC6	D3040	Deferred Renewal	2,183
BROD PH08	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-3	D3040	Deferred Renewal	61,201
BROD PH08	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-4	D3040	Deferred Renewal	61,201
BROD PH13	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-153	D3040	Deferred Renewal	14,153
BROD PH13	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-184	D3040	Deferred Renewal	14,153
BROD PH13	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-185	D3040	Deferred Renewal	14,153
BROD AC01	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	AIR-P-037	D3060	Deferred Renewal	7,936
BROD AC03	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 1	D3060	Deferred Renewal	66,683
BROD AC03	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 2	D3060	Deferred Renewal	66,683
BROD AD06	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR1	D3060	Deferred Renewal	20,727
BROD AD06	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR2	D3060	Deferred Renewal	20,727
BROD BA09	HVAC CONTROLS SYSTEM - LABORATORY, WET	BRODY	D3060	Deferred Renewal	5,700,087
BROD EL01	EXIT SIGN - CENTRAL POWER	BRODY	D4030	Deferred Renewal	37,113
BROD FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GENERATOR BLDG	D4030	Deferred Renewal	21,765
BROD FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GE95	D4030	Deferred Renewal	33,484
BROD MC02	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-8SPF	D5010	Deferred Renewal	34,072
BROD MC02	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-BE	D5010	Deferred Renewal	262,351
BROD SG07	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8S08B	D5010	Deferred Renewal	365,609
BROD SG07	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8N08A	D5010	Deferred Renewal	365,609
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS1	D5010	Deferred Renewal	13,778
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS2	D5010	Deferred Renewal	13,778
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE	COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	D5010	Deferred Renewal	22,045
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	GEN NORMAL	D5010	Deferred Renewal	22,045
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	D5010	Deferred Renewal	27,556
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	D5010	Deferred Renewal	27,556
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	D5010	Deferred Renewal	27,556
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	D5010	Deferred Renewal	27,556
BROD	SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	D5010	Deferred Renewal	27,556
BROD	SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-MAIN	D5010	Deferred Renewal	44,952
BROD	SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-SPARE	D5010	Deferred Renewal	44,952
BROD	SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB-MAIN	D5010	Deferred Renewal	44,952
BROD	SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB MAIN	D5010	Deferred Renewal	44,952
BROD	SG26	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSA-TIE	D5010	Deferred Renewal	37,775
BROD	SG26	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSB-TIE	D5010	Deferred Renewal	37,775
BROD	LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	BRODY	D5020	Deferred Renewal	5,186
BROD	LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	BRODY	D5020	Deferred Renewal	1,749
BROD	LE08	LIGHTING - EXTERIOR, WALL LANTERN or FLOOD (INC, CFL, LED)	BRODY	D5020	Deferred Renewal	734
BROD	LI09	LIGHTING SYSTEM, INTERIOR - LABORATORY, WET	AUDITORIUM	D5020	Deferred Renewal	105,438
BROD	GN05	GENERATOR - DIESEL (>500 KW)	GENE-EMG-003	D5090	Deferred Renewal	320,226
BROD	GN16	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS1	D5090	Deferred Renewal	15,381
BROD	GN16	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS3	D5090	Deferred Renewal	30,762
BROD	GN16	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS2	D5090	Deferred Renewal	30,762
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GE23/REF-002	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6N47/REF-014	E1020	Deferred Renewal	8,585

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE	COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GW37/REF-003	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6S23/REF-015	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3S17/REF-006	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	7W42/REF-017	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	LDOCK/REF-001	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4N43/REF-008	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4S17/REF-009	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5N61/REF-010	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27/REF-011	E1020	Deferred Renewal	8,585
BROD	CR02	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27A/REF-013	E1020	Deferred Renewal	8,585
BROD	CR03	REFRIGERATION SYSTEM - WALK-IN, 3 EVAP FANS, 10000 BTUH, CONDENSER	3E102A/REF007	E1020	Deferred Renewal	24,266
BROD	CR06	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N126C	E1020	Deferred Renewal	12,133
BROD	CR06	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N128C	E1020	Deferred Renewal	12,133
BROD	CR06	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	LAB-5N53	E1020	Deferred Renewal	12,133
BROD	BF01	BACKFLOW PREVENTER (<=1 INCH)	BFP-GL02	D2020	2016	928
BROD	FA02	FIRE ALARM SYSTEM - DEVICES	GENERATOR BLDG	D4030	2016	6,387
BROD	FA02	FIRE ALARM SYSTEM - DEVICES	BRODY BLDG	D4030	2016	1,360,166
BROD	DR24	DOOR LOCK, COMMERCIAL-GRADE		C1020	2017	197,620
BROD	DR24	DOOR LOCK, COMMERCIAL-GRADE		C1020	2017	658,732
BROD	IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD		C3010	2017	2,476,170
BROD	FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	D2010	2017	105,907
BROD	FX03	PLUMBING FIXTURE - LAVATORY, GANG	BRODY	D2010	2017	73,617

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD FX04	PLUMBING FIXTURE - SINK, KITCHEN	BRODY	D2010	2017	11,463
BROD FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	BRODY	D2010	2017	61,845
BROD FX08	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	BRODY	D2010	2017	7,628
BROD FX10	PLUMBING FIXTURE - URINAL	BRODY	D2010	2017	29,977
BROD FX12	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	D2010	2017	160,305
BROD FX16	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	BRODY	D2010	2017	71,253
BROD PS09	SUPPLY PIPING SYSTEM - LABORATORY, WET	BRODY	D2020	2017	5,426,588
BROD HX04	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-GL02	D3040	2017	7,502
BROD HX04	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-3E144	D3040	2017	11,253
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-2	D5010	2017	4,687
BROD VF04	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-SFAC7	D5010	2017	5,425
BROD VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-RFAC3	D5010	2017	10,866
BROD VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-1	D5010	2017	10,866
BROD VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-2	D5010	2017	10,866
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GE23/REF-002	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GW37/REF-003	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3N41/REF-004	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3S17/REF-006	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4N43/REF-008	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4S17/REF-009	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5N61/REF-010	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27/REF-011	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27A/REF-013	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6N47/REF-014	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23/REF-015	E1020	2017	28,649
BROD CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23A/REF-016	E1020	2017	28,649

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE		COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD	CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	7W42/REF-017	E1020	2017	28,649
BROD	CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	LDOCK/REF-001	E1020	2017	28,649
BROD	CR01	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3E102A/REF007	E1020	2017	57,297
BROD	CR05	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N126C	E1020	2017	21,353
BROD	CR05	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N128C	E1020	2017	21,353
BROD	CR05	ENVIRONMENTAL CHAMBER STRUCTURE	LAB-5N53	E1020	2017	21,353
BROD	IW09	WALL FINISH - WALL COVERING, ROLL		C3010	2018	89,637
BROD	IW12	WALL FINISH - PANEL, MEDICAL / LABORATORY APPLICATION		C3010	2018	426,652
BROD	IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD		C3020	2018	773,856
BROD	IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD		C3020	2018	323,999
BROD	IF04	FLOORING - VINYL SHEET, STANDARD		C3020	2018	289,282
BROD	IF04	FLOORING - VINYL SHEET, STANDARD		C3020	2018	289,282
BROD	IF15	FLOORING - FLUID APPLIED, PAINT OR CLEAR SEAL		C3020	2018	55,486
BROD	VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-1	D5010	2018	4,687
BROD	VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-HWAC1	D5010	2018	3,749
BROD	VF04	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-MAFAC7	D5010	2018	5,425
BROD	IW01	WALL FINISH - PAINT, STANDARD		C3010	2019	3,465,832
BROD	IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD		C3020	2019	430,685
BROD	CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	NON-LAB	C1030	2020	119,262
BROD	IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD		C3020	2020	323,999
BROD	PH13	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-172	D3040	2020	14,153
BROD	PH13	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-173	D3040	2020	14,153
BROD	AD03	AIR DRYER - REFRIGERATED - 26-50 CFM	DRY-P-038	D3060	2020	2,853
BROD	UP01	UNINTERRUPTIBLE POWER SUPPLY - 120/208 VOLTS	GE99 UPS	D5090	2020	69,304
BROD	AH41	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	ACU-003	D3050	2021	42,090
BROD	AH41	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	BACK-UP	D3050	2021	42,090

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE		COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD	VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU1	D5010	2021	4,496
BROD	VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU2	D5010	2021	4,496
BROD	VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU3	D5010	2021	4,496
BROD	VF06	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-AHU88-2	D5010	2021	6,277
BROD	VF09	VARIABLE FREQUENCY DRIVE (40-50 HP)	VSD-AHU88-1	D5010	2021	9,463
BROD	VF12	VARIABLE FREQUENCY DRIVE (100-150 HP)	VSD-SFAC3	D5010	2021	28,548
BROD	EW02	WALL, EXTERIOR, STUCCO OR CONCRETE RESTORE	CONCRETE PANELS	B2010	2022	471,292
BROD	WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD		B2010	2022	4,151,700
BROD	DR08	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL		B2030	2022	32,338
BROD	DR01	DOOR AND FRAME, INTERIOR, NON-RATED		C1020	2022	574,471
BROD	DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED		C1020	2022	3,307,342
BROD	CW04	CASEWORK - LABORATORY, INCLUDES REAGENT SHELF AND TOP		C1030	2022	9,561,571
BROD	IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD		C3020	2022	773,856
BROD	PD09	DRAIN PIPING SYSTEM - LABORATORY, WET	BRODY	D2030	2022	8,187,829
BROD	HV09	HVAC DISTRIBUTION NETWORKS - LABORATORY, WET	BRODY	D3040	2022	30,419,996
BROD	SE09	ELECTRICAL DISTRIBUTION NETWORK - LABORATORY, WET	BRODY	D5010	2022	7,746,029
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP3	D5010	2022	13,039
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP4	D5010	2022	13,039
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP5	D5010	2022	13,039
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP6	D5010	2022	13,039
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP1	D5010	2022	13,039
BROD	VF10	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP2	D5010	2022	13,039
BROD	VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-68	D5010	2023	6,636
BROD	VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-69	D5010	2023	6,636
BROD	IC04	CEILING FINISH - PAINTED OR STAINED, STANDARD		C3030	2024	101,028
BROD	AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-006	D3040	2024	85,325

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-007	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-008	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-001	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-009	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-002	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-003	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-004	D3040	2024	85,325
BROD AH32	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-005	D3040	2024	85,325
BROD SG11	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-E1	D5010	2024	20,979
BROD SG11	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-N1	D5010	2024	20,979
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E2	D5010	2024	27,556
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N2	D5010	2024	27,556
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E3	D5010	2024	36,742
BROD SG12	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N3	D5010	2024	36,742
BROD SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-3	D5010	2024	42,143
BROD SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-1	D5010	2024	42,143
BROD SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-2	D5010	2024	42,143
BROD SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-TIE-BKR	D5010	2024	42,143
BROD SG14	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	UTIL BKR	D5010	2024	42,143
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-50	D5010	2024	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-51	D5010	2024	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU4	D5010	2024	4,496
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	CW BACKUP CHWP3	D5010	2024	4,687
BROD DR17	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		B2030	2025	66,578
BROD IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		C3030	2025	546,712

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD PH01	PUMP - ELECTRIC (<=10 HP)	PMP-029	D3040	2025	1,455
BROD PH01	PUMP - ELECTRIC (<=10 HP)	BOPC-PMP-001	D3040	2025	4,366
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-43	D5010	2025	1,859
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-86	D5010	2025	1,859
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-87	D5010	2025	1,859
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-76	D5010	2025	1,239
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-11	D5010	2025	3,099
BROD VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-56	D5010	2025	3,099
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-66	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-54	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-71	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-40	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-42	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-28	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-78	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-83	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-62	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-64	D5010	2025	4,496
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-57	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-53	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-58	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-10	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-17	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-47	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-41	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-43	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	D5010	2025	2,810

FACILITIES RENEWAL PLAN

RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	UNI-FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-30	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-31	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	D5010	2025	2,810
BROD VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	D5010	2025	2,810
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-55	D5010	2025	4,687
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-61	D5010	2025	4,687
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-38	D5010	2025	4,687
BROD VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-39	D5010	2025	4,687
				TOTAL	**$100,131,487**

PROJECT LIST BY CLASSIFICATION

All costs shown as Present Value

CORRECTIVE ACTION				
PRI SEQ	PROJECT NUMBER	PROJECT TITLE	PRI CLS	TOTAL COST
7	BRODES01	EXTERIOR MASONRY WALL RENEWAL	3	5,592,436
		TOTAL FOR CORRECTIVE ACTION		**5,592,436**

PLANT ADAPTION				
PRI SEQ	PROJECT NUMBER	PROJECT TITLE	PRI CLS	TOTAL COST
1	BRODFS01	TOWER STAIR SAFETY UPGRADES	2	609,334
2	BRODFS03	INSTALL FIRE SUPPRESSION SYSTEM IN AUDITORIUM	2	98,081
3	BRODAC02	EIGHTH FLOOR UNISEX RESTROOM INSTALLATION	2	25,401
4	BRODFS02	INSTALL FM200 OR INERGEN FIRE SUPPRESSION SYSTEM	3	37,574
5	BRODAC03	BUILDING-WIDE RESTROOM ACCESSIBILITY UPGRADES	3	1,221,062
6	BRODAC01	INTERIOR DOOR ACCESSIBILITY UPGRADES	3	1,440,743
8	BRODHV01	INSTALL SPLIT DX EQUIPMENT IN EIGHTH FLOOR ELECTRICAL ROOMS	3	7,599
		TOTAL FOR PLANT ADAPTION		**3,439,793**
		GRAND TOTAL:		**9,032,230**

PROJECT LIST BY CATEGORY CODE

All costs shown as Present Value

PRI SEQ	PROJECT NUMBER	PRI CLS	PROJECT CLASSIFICATION	PROJECT TITLE	TOTAL COST
3	BRODAC02	2	Plant Adaption	EIGHTH FLOOR UNISEX RESTROOM INSTALLATION	25,401
5	BRODAC03	3	Plant Adaption	BUILDING-WIDE RESTROOM ACCESSIBILITY UPGRADES	1,221,062
6	BRODAC01	3	Plant Adaption	INTERIOR DOOR ACCESSIBILITY UPGRADES	1,440,743
				TOTAL FOR ACCESSIBILITY	**2,687,206**
7	BRODES01	3	Corrective Action	EXTERIOR MASONRY WALL RENEWAL	5,592,436
				TOTAL FOR EXTERIOR	**5,592,436**
1	BRODFS01	2	Plant Adaption	TOWER STAIR SAFETY UPGRADES	609,334
2	BRODFS03	2	Plant Adaption	INSTALL FIRE SUPPRESSION SYSTEM IN AUDITORIUM	98,081
4	BRODFS02	3	Plant Adaption	INSTALL FM200 OR INERGEN FIRE SUPPRESSION SYSTEM	37,574
				TOTAL FOR FIRE/LIFE SAFETY	**744,989**
8	BRODHV01	3	Plant Adaption	INSTALL SPLIT DX EQUIPMENT IN EIGHTH FLOOR ELECTRICAL ROOMS	7,599
				TOTAL FOR HVAC	**7,599**
				GRAND TOTAL:	**9,032,230**

FACILITY CONDITION ASSESSMENT

SECTION 3

NONRECURRING PROJECT DETAILS

All costs shown as Present Value

TOWER STAIR SAFETY UPGRADES

Project Number:	BRODFS01	**Category Code:** FS5E	
Priority Sequence:	1		
Priority Class:	Critical	**System:**	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	**Component:**	EGRESS PATH
Date Basis:	4/19/2016	**Element:**	STAIRS AND RAILING

Code Application:		Subclass/Savings:	Project Location:
IBC	1003.3	Not Applicable	Floor-wide: Floor(s) 1,2,3,4,5,6,7,8
ADAAG	505		

Description

The four existing egress stairs within the eighth-floor central tower do not meet the latest fire and life safety code for high rise buildings. Pressurization, tactile finishes, door and hardware, possible area of refuge issues, and handrails and guardrail protection are all deficient within the tower stairs. The pressurization is addressed in HVAC projects, and the door and hardware is addressed in lifecycle replacement of those items. This project has been proposed to address those architectural issues not covered already by component lifecycle replacement or other non-recurring upgrades. Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they lack adequate handrails and guardrails. Present legislation requires that top stair landings have guardrails that prevent the passage of a four-inch diameter sphere (six inches in the triangle formed by the lower rail and tread / riser angle). Guardrails are required to be forty-two inches high. Future renovation efforts should include comprehensive guard railing upgrades. The tactile finishes are also recommended for replacement as part of this project.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Railing system up to 42 inches high with pickets at 4 1/2 inches on center	LF	2,000	$120	$240,580	$40.87	$81,740	$322,320
Tactile interior finishes	SF	10,000	$11.50	$115,000	$3.00	$30,000	$145,000
			Base Material/Labor Costs	**$355,580**		**$111,740**	
			Indexed Material/Labor Costs	**$358,069**		**$79,671**	**$437,740**
					General Contractor Mark Up at 20.0%		**$87,548**
					Original Construction Cost		**$525,288**
Date of Original Estimate: 4/19/2016					**Inflation**		**$0**
					Current Year Construction Cost		**$525,288**
					Professional Fees at 16.0%		**$84,046**
					TOTAL PROJECT COST		**$609,334**

All costs shown as Present Value

INSTALL FIRE SUPPRESSION SYSTEM IN AUDITORIUM

Project Number:	BRODFS03	**Category Code:** FS3A	
Priority Sequence:	2		
Priority Class:	Critical	**System:**	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	**Component:**	SUPPRESSION
Date Basis:	8/15/2016	**Element:**	SPRINKLERS

Code Application:		Subclass/Savings:	Project Location:
NFPA	13	Not Applicable	Room Only: Floor(s) 1
IBC	903		

Description

Install an automatic fire sprinkler system in unprotected areas throughout the facility to include piping, valves, sprinkler heads, and piping supports. Install flow switches and sensors to interface with the fire alarm system.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install a wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	9,500	$4.08	$38,760	$4.64	$44,080	$82,840
Base Material/Labor Costs				**$38,760**		**$44,080**	
Indexed Material/Labor Costs				**$39,031**		**$31,429**	**$70,460**
General Contractor Mark Up at 20.0%							**$14,092**
Original Construction Cost							**$84,552**
Date of Original Estimate: 8/15/2016						**Inflation**	**$0**
Current Year Construction Cost							**$84,552**
Professional Fees at 16.0%							**$13,528**
TOTAL PROJECT COST							**$98,081**

All costs shown as Present Value

EIGHTH FLOOR UNISEX RESTROOM INSTALLATION

Project Number:	BRODAC02	**Category Code:** AC3E	
Priority Sequence:	3		
Priority Class:	Critical	**System:**	ACCESSIBILITY
Project Class:	Plant Adaption	**Component:**	INTERIOR PATH OF TRAVEL
Date Basis:	4/19/2016	**Element:**	RESTROOMS/BATHROOMS

Code Application:		Subclass/Savings:	Project Location:
ADAAG	604, 605, 606	Not Applicable	Undefined: Floor(s) 8

Description

There are numerous restrooms throughout the facility that are in various levels of accessibility compliance to the latest accessibility legislation. Some are also totally inaccessible, however, there is at least one fully accessible restroom on every floor except the partially occupied eighth. Combining two small separate sex restrooms into one accessible restroom may be possible. This project recommends that a new unisex restroom be constructed on the eighth floor, including fixtures, finishes, and accessories. The project scope also includes the construction of new walls and ceiling, door, door hardware, and all operating door hardware.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Installation of an accessible unisex restroom installation including toilet, lavatory, piping, and rough-in	EA	1	$7,500	$7,500	$15,000	$15,000	$22,500
Base Material/Labor Costs				**$7,500**		**$15,000**	
Indexed Material/Labor Costs				**$7,553**		**$10,695**	**$18,248**
General Contractor Mark Up at 20.0%							**$3,650**
Original Construction Cost							**$21,897**
Date of Original Estimate: 4/19/2016						**Inflation**	**$0**
Current Year Construction Cost							**$21,897**
Professional Fees at 16.0%							**$3,504**
TOTAL PROJECT COST							**$25,401**

All costs shown as Present Value

INSTALL FM200 OR INERGEN FIRE SUPPRESSION SYSTEM

Project Number:	BRODFS02	**Category Code:** FS3D	
Priority Sequence:	4		
Priority Class:	Non-Critical	**System:**	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	**Component:**	SUPPRESSION
Date Basis:	8/15/2016	**Element:**	OTHER

Code Application:		Subclass/Savings:	Project Location:
NFPA	2001	Not Applicable	Room Only: Floor(s) G
IBC	904		

Description

It is recommended that the data centers located on the ground floor be equipped with an Inergen or FM 200 fire suppression system.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
FM200 or Inergen fire suppression system upgrade	CF	7,500	$2.25	$16,875	$1.87	$14,025	$30,900
Base Material/Labor Costs				**$16,875**		**$14,025**	
Indexed Material/Labor Costs				**$16,993**		**$10,000**	**$26,993**
General Contractor Mark Up at 20.0%							**$5,399**
Original Construction Cost							**$32,392**
Date of Original Estimate: 8/15/2016						**Inflation**	**$0**
Current Year Construction Cost							**$32,392**
Professional Fees at 16.0%							**$5,183**
TOTAL PROJECT COST							**$37,574**

All costs shown as Present Value

BUILDING-WIDE RESTROOM ACCESSIBILITY UPGRADES

Project Number:	BRODAC03	**Category Code:** AC3E	
Priority Sequence:	5		
Priority Class:	Non-Critical	**System:**	ACCESSIBILITY
Project Class:	Plant Adaption	**Component:**	INTERIOR PATH OF TRAVEL
Date Basis:	7/7/2016	**Element:**	RESTROOMS/BATHROOMS

Code Application:		Subclass/Savings:	Project Location:
ADAAG	604, 605, 606, 607, 608	Not Applicable	Building-wide: Floor(s) 1

Description

The overall level of restroom accessibility is fair, marginally meeting full compliance with modern accessibility legislation. The overall size of some restrooms is inadequate, and fixture and partition spacing does not provide compliant clearances and clear floor spaces. This project encompasses the restroom accessibility upgrades required throughout the facility as identified in University supplied data.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Restroom accessibility and amenity upgrades	EA	204	$2,500	$510,000	$2,500	$510,000	$1,020,000
			Base Material/Labor Costs	**$510,000**		**$510,000**	
			Indexed Material/Labor Costs	**$513,570**		**$363,630**	**$877,200**
					General Contractor Mark Up at 20.0%		**$175,440**
					Original Construction Cost		**$1,052,640**
Date of Original Estimate: 7/7/2016					**Inflation**		**$0**
					Current Year Construction Cost		**$1,052,640**
					Professional Fees at 16.0%		**$168,422**
					TOTAL PROJECT COST		**$1,221,062**

All costs shown as Present Value

INTERIOR DOOR ACCESSIBILITY UPGRADES

Project Number:	BRODAC01	**Category Code:** AC3C	
Priority Sequence:	6		
Priority Class:	Non-Critical	**System:**	ACCESSIBILITY
Project Class:	Plant Adaption	**Component:**	INTERIOR PATH OF TRAVEL
Date Basis:	4/19/2016	**Element:**	DOORS AND HARDWARE

Code Application:		Subclass/Savings:	Project Location:
ADAAG	309.4	Not Applicable	Floor-wide: Floor(s) 1,2,3,4,5,6,7,8

Description

While most of the interior doors are suitable for ten future years of service, the knob actuated door hardware presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with the intent of this legislation, it is recommended that lever handle door hardware be installed on all doors that currently have knobs. There are numerous doors throughout the facility that have been identified by the University as having insufficient clearances. An allotment based on University supplied data has been included in this interior accessible door project.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Lever actuated door hardware	EA	1,250	$341	$425,875	$136	$170,600	$596,475
Correct insufficient door clearances	EA	165	$1,500	$247,500	$2,000	$330,000	$577,500
			Base Material/Labor Costs	**$673,375**		**$500,600**	
			Indexed Material/Labor Costs	**$678,089**		**$356,928**	**$1,035,016**
					General Contractor Mark Up at 20.0%		**$207,003**
					Original Construction Cost		**$1,242,020**
Date of Original Estimate: 4/19/2016					**Inflation**		**$0**
					Current Year Construction Cost		**$1,242,020**
					Professional Fees at 16.0%		**$198,723**
					TOTAL PROJECT COST		**$1,440,743**

All costs shown as Present Value

EXTERIOR MASONRY WALL RENEWAL

Project Number:	BRODES01	**Category Code:** ES2B	
Priority Sequence:	7		
Priority Class:	Non-Critical	**System:**	EXTERIOR
Project Class:	Corrective Action	**Component:**	COLUMNS/BEAMS/WALLS
Date Basis:	4/19/2016	**Element:**	FINISH

Code Application:	Subclass/Savings:	Project Location:
Not Applicable	Not Applicable	Building-wide: Floor(s) 1

Description

The existing brick masonry veneer exterior walls from the original 1981-82 construction have exhibited moisture penetration around the windows and through the masonry wall. Numerous areas of the exterior were investigated and found to have systematic deficiencies that are believed to be through most of the exterior. A major renovation is recommended for the exterior vertical masonry walls, including any window resealing as necessary to ensure a waterproof exterior envelope. This project also includes the removal and replacing of any existing deficient flashing and end-wall conditions within the wall structure.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Repair brick exterior wall, average bond	SF	151,200	$8.48	$1,282,176	$25.29	$3,823,848	$5,106,024
			Base Material/Labor Costs	**$1,282,176**		**$3,823,848**	
			Indexed Material/Labor Costs	**$1,291,151**		**$2,726,404**	**$4,017,555**
					General Contractor Mark Up at 20.0%		**$803,511**
					Original Construction Cost		**$4,821,066**
Date of Original Estimate: 4/19/2016					**Inflation**		**$0**
					Current Year Construction Cost		**$4,821,066**
					Professional Fees at 16.0%		**$771,371**
					TOTAL PROJECT COST		**$5,592,436**

All costs shown as Present Value

INSTALL SPLIT DX EQUIPMENT IN EIGHTH FLOOR ELECTRICAL ROOMS

Project Number:	BRODHV01	**Category Code:** HV3D	
Priority Sequence:	8		
Priority Class:	Non-Critical	**System:**	HVAC
Project Class:	Plant Adaption	**Component:**	HEATING/COOLING
Date Basis:	4/19/2016	**Element:**	CONVENTIONAL SPLIT SYSTEM

Code Application:	Subclass/Savings:	Project Location:
Not Applicable	Not Applicable	Room Only: Floor(s) 8

Description

The north and south electrical rooms on the eighth floor are provided heating and cooling from the central HVAC system. This system is not providing enough cooling capacity during the warm months of the years, and it is recommended that these two areas be equipped with ductless split systems that utilize DX cooling.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install split DX systems	TON	6	$643	$3,860	$368	$2,205	$6,065
Base Material/Labor Costs				**$3,860**		**$2,205**	
Indexed Material/Labor Costs				**$3,887**		**$1,572**	**$5,459**
General Contractor Mark Up at 20.0%							**$1,092**
Original Construction Cost							**$6,551**
Date of Original Estimate: 4/19/2016						**Inflation**	**$0**
Current Year Construction Cost							**$6,551**
Professional Fees at 16.0%							**$1,048**
TOTAL PROJECT COST							**$7,599**

FACILITY CONDITION ASSESSMENT

SECTION 4

LIFECYCLE COMPONENT SUMMARY

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
B2010	WALL, EXTERIOR, STUCCO OR CONCRETE RESTORE	CONCRETE PANELS	37,800	SF	$8.54	1.46	$471,292	1982	30	10
B2010	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD		21,000	SF	$135.41	1.46	$4,151,700	1982	40	
B2030	DOCK LEVELER	ELEV-008	1	EA	$9,953.94		$9,954	1982	50	
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS		30	LEAF	$2,552.34		$76,570	1982	25	8
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL		18	LEAF	$1,796.58		$32,338	1982	40	
B2030	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		4	EA	$16,644.40		$66,578	2010	15	
B3010	ROOF - BITUMINOUS, 2-PLY, SBS MODIFIED BITUMEN, MOP		101,000	SF	$5.98		$604,236	2010	20	
C1020	DOOR AND FRAME, INTERIOR, NON-RATED		300	LEAF	$1,914.90		$574,471	1982	40	
C1020	DOOR AND FRAME, INTERIOR, FIRE-RATED		1,000	LEAF	$3,307.34		$3,307,342	1982	40	
C1020	DOOR LOCK, COMMERCIAL-GRADE		300	EA	$658.73		$197,620	1982	20	15
C1020	DOOR LOCK, COMMERCIAL-GRADE		1,000	EA	$658.73		$658,732	1982	20	15
C1020	DOOR LOCK, COMMERCIAL-GRADE		30	EA	$658.73		$19,762	1982	20	13
C1020	DOOR LOCK, COMMERCIAL-GRADE		18	EA	$658.73		$11,857	1982	20	13
C1030	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	NON-LAB	250	LF	$477.05		$119,262	1982	20	18
C1030	CASEWORK - LABORATORY, INCLUDES REAGENT SHELF AND TOP		72,040	SF	$132.73		$9,561,571	1982	40	
C3010	WALL FINISH - PAINT, STANDARD		1,750,620	SF	$1.98		$3,465,832	2000	12	7

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
C3010	WALL FINISH - TILE, CERAMIC / STONE, STANDARD		72,940	SF	$33.95		$2,476,170	1982	30	5
C3010	WALL FINISH - TILE, CERAMIC / STONE, STANDARD		24,310	SF	$33.95		$825,277	2010	30	
C3010	WALL FINISH - WOOD PANEL, PREMIUM		19,450	SF	$38.25		$743,957	1982	70	
C3010	WALL FINISH - WALL COVERING, ROLL		19,450	SF	$4.61		$89,637	1982	20	16
C3010	WALL FINISH - PANEL, MEDICAL / LABORATORY APPLICATION		43,770	SF	$9.75		$426,652	1982	20	16
C3010	WALL FINISH - PANEL, MEDICAL / LABORATORY APPLICATION		14,590	SF	$9.75		$142,217	2010	20	
C3020	FLOORING - CARPET, TILE OR ROLL, STANDARD		71,440	SF	$10.83		$773,856	2000	12	6
C3020	FLOORING - CARPET, TILE OR ROLL, STANDARD		71,440	SF	$10.83		$773,856	2010	12	
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		57,150	SF	$5.67		$323,999	1982	20	16
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		57,150	SF	$5.67		$323,999	2000	20	
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		14,290	SF	$5.67		$81,014	1982	20	13
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		14,290	SF	$5.67		$81,014	2010	20	
C3020	FLOORING - VINYL SHEET, STANDARD		30,620	SF	$9.45		$289,282	1982	15	21
C3020	FLOORING - VINYL SHEET, STANDARD		30,620	SF	$9.45		$289,282	2000	15	3
C3020	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD		15,310	SF	$28.13		$430,685	1982	30	7
C3020	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD		5,100	SF	$28.13		$143,468	2010	30	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
C3020	FLOORING - FLUID APPLIED, PAINT OR CLEAR SEAL		20,410	SF	$2.72		$55,486	1982	10	26
C3020	FLOORING - FLUID APPLIED, PAINT OR CLEAR SEAL		20,410	SF	$2.72		$55,486	2016	10	
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		30,620	SF	$8.93		$273,356	1982	30	3
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		76,540	SF	$8.93		$683,300	2000	30	
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		91,850	SF	$8.93		$819,978	2010	30	
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		45,930	SF	$8.93		$410,034	2015	30	
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		61,240	SF	$8.93		$546,712	1995	30	
C3030	CEILING FINISH - PAINTED OR STAINED, STANDARD		51,030	SF	$1.98		$101,028	2000	24	
C3030	CEILING FINISH - PAINTED OR STAINED, STANDARD		51,030	SF	$1.98		$101,028	2010	24	
D1010	ELEVATOR MODERNIZATION - TRACTION - LOW RISE	ELV-003 C	1	EA	$216,771.42		$216,771	1982	25	19
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-005 A	1	EA	$271,967.86		$271,968	1982	25	19
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-006 B	1	EA	$271,967.86		$271,968	1982	25	32
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-001 A	1	EA	$271,967.86		$271,968	1982	25	19
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-002 B	1	EA	$271,967.86		$271,968	1982	25	19
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-007 D	1	EA	$271,967.86		$271,968	1982	25	19
D1010	ELEVATOR MODERNIZATION - TRACTION - HIGH RISE	ELV-004 D	1	EA	$271,967.86		$271,968	1982	25	19

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-005 A	1	EA	$47,120.09		$47,120	1982	12	32
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-006 B	1	EA	$47,120.09		$47,120	1982	12	32
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-001 A	1	EA	$47,120.09		$47,120	1982	12	32
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-002 B	1	EA	$47,120.09		$47,120	1982	12	32
D1010	ELEVATOR CAB RENOVATION - PASSENGER	ELV-003 C	1	EA	$47,120.09		$47,120	1982	12	32
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	90	EA	$1,176.75		$105,907	1982	35	
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	12	EA	$1,176.75		$14,121	2011	35	
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	2	EA	$1,176.75		$2,353	2016	35	
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	6	EA	$1,176.75		$7,060	1995	35	
D2010	PLUMBING FIXTURE - LAVATORY, GANG	BRODY	10	EA	$7,361.67		$73,617	1982	35	
D2010	PLUMBING FIXTURE - SINK, KITCHEN	BRODY	6	EA	$1,910.44		$11,463	1982	35	
D2010	PLUMBING FIXTURE - SINK, KITCHEN	BRODY	2	EA	$1,910.44		$3,821	1995	35	
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	BRODY	39	EA	$1,585.76		$61,845	1982	35	
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	GENERATOR	1	EA	$1,585.76		$1,586	2010	35	
D2010	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	BRODY	5	EA	$1,525.59		$7,628	1982	35	
D2010	PLUMBING FIXTURE - URINAL	BRODY	16	EA	$1,873.57		$29,977	1982	35	
D2010	PLUMBING FIXTURE - URINAL	BRODY	2	EA	$1,873.57		$3,747	2011	35	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	93	EA	$1,723.71		$160,305	1982	35	
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	12	EA	$1,723.71		$20,684	2011	35	
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	3	EA	$1,723.71		$5,171	2016	35	
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	7	EA	$1,723.71		$12,066	1995	35	
D2010	PLUMBING FIXTURE - EMERGENCY EYEWASH	BRODY	147	EA	$4,144.90		$609,300	2000	35	
D2010	PLUMBING FIXTURE - EMERGENCY EYEWASH	BRODY	4	EA	$4,144.90		$16,580	2010	35	
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	BRODY	10	EA	$7,125.26		$71,253	1982	35	
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	GENERATOR	1	EA	$7,125.26		$7,125	2010	35	
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	BRODY	1	EA	$7,125.26		$7,125	2010	35	
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-007	1	EA	$928.01		$928	2000	10	5
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-009	1	EA	$928.01		$928	2000	10	5
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-002	1	EA	$928.01		$928	2013	10	5
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-GL02	1	EA	$928.01		$928	2006	10	
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-003	1	EA	$928.01		$928	2012	10	5
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-008	1	EA	$2,069.32		$2,069	1999	10	6
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-DCW-2	1	EA	$2,069.32		$2,069	2013	10	5
D2020	BACKFLOW PREVENTER (3-4 INCHES)	BFP-DCW-1	1	EA	$7,752.34		$7,752	2013	10	5

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D2020	BACKFLOW PREVENTER (8 INCHES)	BFP-001	1	EA	$27,210.76		$27,211	2013	10	5
D2020	BACKFLOW PREVENTER (8 INCHES)	BFP-010	1	EA	$27,210.76		$27,211	2012	10	5
D2020	DOMESTIC WATER BOOSTER SYSTEM	DCW PUMP 1	10	HP	$11,406.22		$114,062	2011	20	
D2020	DOMESTIC WATER BOOSTER SYSTEM	DCW PUMP 2	10	HP	$11,406.22		$114,062	2011	20	
D2020	DOMESTIC WATER BOOSTER SYSTEM	PMP-P07	5	HP	$11,406.22		$57,031	2011	20	
D2020	DOMESTIC WATER BOOSTER SYSTEM	PMP-P08	1	HP	$11,406.22		$11,406	2011	20	
D2020	SUPPLY PIPING SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$12.15	0.93	$5,426,588	1982	35	
D2020	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	GENE-TAN-002	40	GAL	$39.37		$1,575	2005	10	
D2020	WATER HEATER - SHELL & TUBE (105-400 GPM)	HEX-015	140	GPM	$377.67		$52,874	2006	30	
D2020	WATER HEATER - SHELL & TUBE (105-400 GPM)	HEX-016	140	GPM	$377.67		$52,874	2006	30	
D2030	DRAIN PIPING SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$18.33	0.93	$8,187,829	1982	40	
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P03	1	EA	$601.20		$601	1982	20	13
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P04	1	EA	$601.20		$601	1982	20	13
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-064	1	EA	$601.20		$601	1982	20	13
D2090	VACUUM PUMP - OIL RING SEAL (3-5 HP), WITH TRAP	PMP-P01/P02	4	HP	$5,943.15		$23,773	2011	20	
D2090	COMPRESSED AIR STORAGE TANK	TAN-AR1	1	EA	$8,292.83		$8,293	1982	20	25
D2090	COMPRESSED AIR STORAGE TANK	TAN-AR2	1	EA	$8,292.83		$8,293	1982	20	25

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D2090	COMPRESSED AIR STORAGE TANK	TAN-AR3	1	EA	$8,292.83		$8,293	1982	20	25
D3020	EXPANSION TANK (21-40 GAL)	TAN-001	30	GAL	$178.03	1.15	$6,142	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-006	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-031	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-031	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-002	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-003	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-004	100	GAL	$144.17		$14,417	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-065	100	GAL	$144.17	1.35	$19,464	1982	25	8
D3020	EXPANSION TANK (61-100 GAL)	TAN-3E144	100	GAL	$144.17		$14,417	1982	25	8
D3030	CHILLER - AIR COOLED PACKAGE (75-150 TONS)	EXT DATA CHILL	80	TON	$1,151.68		$92,135	2013	30	
D3030	CONDENSER - REFRIGERANT, AIR-COOLED (<=10 TON)	ACU-001	3	TON	$1,897.19		$5,692	2010	23	
D3030	CONDENSER - REFRIGERANT, AIR-COOLED (<=10 TON)	ACU-002	3	TON	$1,897.19		$5,692	2010	23	
D3030	CONDENSER - REFRIGERANT, AIR-COOLED (<=10 TON)	ACU-004	3	TON	$1,897.19		$5,692	2009	23	
D3030	EVAPORATOR UNIT, NO HEAT (2-3 TON)	ACU-001	3	TON	$1,626.33		$4,879	2010	20	
D3030	EVAPORATOR UNIT, NO HEAT (2-3 TON)	ACU-002	3	TON	$1,626.33		$4,879	2010	20	
D3030	EVAPORATOR UNIT, NO HEAT (2-3 TON)	ACU-004	3	TON	$1,626.33		$4,879	2009	20	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3030	DUCTLESS DX SPLIT SYSTEM (1-2 TON)	MITSUBISHI	2	TON	$2,075.43		$4,151	2008	23	
D3030	PTAC, DX/ HP COOL, ELEC HEAT (>2 TON)	ROVAC-1	3	TON	$1,846.17		$5,539	2005	25	
D3030	PTAC, DX/ HP COOL, ELEC HEAT (>2 TON)	ROVAC-3	3	TON	$1,846.17		$5,539	2005	25	
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	BOPC-FCU-001	1	HP	$7,968.87		$7,969	2000	25	2
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-001	1	HP	$7,968.87		$7,969	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-002	1	HP	$7,968.87		$7,969	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	AHU-BCU-1	1	HP	$7,968.87		$7,969	2015	25	
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-001	8	HP	$6,585.72		$52,686	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-002	8	HP	$6,585.72		$52,686	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-003	8	HP	$6,585.72		$52,686	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-004	8	HP	$6,585.72		$52,686	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (17-23 HP)	AHU-88-2	20	HP	$5,761.76	1.25	$144,044	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-AC2	40	HP	$5,080.65	2.65	$538,549	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-88-1	40	HP	$5,080.65	1.25	$254,032	1990	25	
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC6	125	HP	$4,179.50		$522,438	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC7	125	HP	$4,179.50		$522,438	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC5	125	HP	$4,179.50		$522,438	1982	25	8

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC4	125	HP	$4,179.50		$522,438	1982	25	20
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC1	125	HP	$4,179.50		$522,438	1982	25	8
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC3	125	HP	$4,179.50		$522,438	1982	25	8
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	AC1	12,500	CFM	$2.28	3.00	$85,325	1982	25	8
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-006	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-007	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-008	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-001	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-009	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-002	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-003	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-004	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-005	12,500	CFM	$2.28	3.00	$85,325	2004	25	-5
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-001	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-002	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-047	1	EA	$6,005.90		$6,006	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-048	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-062	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-085	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-063	1	EA	$6,005.90		$6,006	1982	20	13
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-064	1	EA	$6,005.90		$6,006	1982	20	13
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (10"-18" DIAMETER)	CENTURYMASTER	1	EA	$3,201.57		$3,202	1990	20	5
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	ROOF	1	EA	$5,666.68		$5,667	1982	20	13
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-1	1	EA	$5,666.68		$5,667	1982	20	13
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-2	1	EA	$5,666.68		$5,667	1982	20	13
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-3	1	EA	$5,666.68		$5,667	1982	20	13
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	GENE-EAF-001	1	EA	$5,666.68		$5,667	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-87	5	HP	$1,240.44	1.35	$8,373	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-25	3	HP	$1,240.44		$3,721	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	E-11	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-28	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-30	5	HP	$1,240.44		$6,202	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-11	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-51	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-50	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-55	10	HP	$1,240.44		$12,404	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-58	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-54	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-56	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-57	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-53	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-81	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-83	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-3	10	HP	$1,240.44		$12,404	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-62	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-64	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-1	10	HP	$1,240.44		$12,404	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-15	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-66	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-17	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-78	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-61	10	HP	$1,240.44		$12,404	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	FIRE PUMP RM	2	HP	$1,240.44	1.50	$3,721	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-69	20	HP	$1,240.44		$24,809	2010	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-GL02	3	HP	$1,240.44		$3,721	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-71	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	RAF-003	15	HP	$1,240.44	1.25	$23,258	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-08	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-31	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-33	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-35	5	HP	$1,240.44		$6,202	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-68	20	HP	$1,240.44		$24,809	2010	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-27	2	HP	$1,240.44	1.65	$4,093	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-2	10	HP	$1,240.44		$12,404	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-40	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-75	15	HP	$1,240.44		$18,607	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-41	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	10	HP	$1,240.44		$12,404	1995	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-39	10	HP	$1,240.44		$12,404	1995	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	MAF-8-74	15	HP	$1,240.44		$18,607	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-10	5	HP	$1,240.44		$6,202	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-42	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-47	8	HP	$1,240.44		$9,924	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-86	5	HP	$1,240.44		$6,202	2010	20	
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-44	3	HP	$1,240.44		$3,721	1982	20	13
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-43	5	HP	$1,240.44		$6,202	1982	20	13

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UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (1-1.5 HP)	GENE-EAF-002	1	HP	$1,812.01	1.65	$2,990	1982	20	13
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (1.5-2 HP)	EAF-GW58	2	HP	$1,598.57	1.50	$4,796	1982	20	13
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (2-4 HP)	THRU-WALL 8TH MECH	3	HP	$1,312.06		$3,936	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (1.25-4 HP)	EAF-8-48	3	HP	$3,695.57		$11,087	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-1E	5	HP	$2,014.94	1.25	$12,593	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-2E	5	HP	$2,014.94	1.25	$12,593	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-3E	5	HP	$2,014.94	1.25	$12,593	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-4E	5	HP	$2,014.94	1.25	$12,593	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P09	15	HP	$1,401.47		$21,022	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P10	15	HP	$1,401.47		$21,022	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (42-62 HP)	RAF-001	50	HP	$855.88		$42,794	1982	20	13
D3040	FAN - UTILITY SET, 1/4" SP (>62 HP)	RAF-002	75	HP	$776.40		$58,230	1982	20	13
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P01	60	HP	$4,239.27		$254,356	2007	20	
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P02	60	HP	$4,239.27		$254,356	2007	20	
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P03	60	HP	$4,239.27		$254,356	2007	20	
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P04	60	HP	$4,239.27		$254,356	2007	20	
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P05	60	HP	$4,239.27		$254,356	2007	20	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	FAN - MIXED-FLOW, SHORT STACK, EXHAUST (>50 HP)	EAF-P06	60	HP	$4,239.27		$254,356	2007	20	
D3040	HOOD, FUME	3N80	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N86	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S07A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S07B	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S08	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S10	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	GW29	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	GW43F	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4W42	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W29	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W31	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W48	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W52	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W54	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	GW27	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	GW43E	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	5W60	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W62	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W66	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W68	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5N51	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S07A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S07B	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S08	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S10	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S14	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S16	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S34A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S28	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S36	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W27	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4S13	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4S15	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	3W23	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S28	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S11	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S15	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S26	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S28	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4S30A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S30	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S38	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S19	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S24	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S26	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S07A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S09	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4S09	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S08	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S10	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	5S18	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S21	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S28	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S16	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6S18	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S09	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7S20	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N66	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3E 100	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3E 98	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S22	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S15	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5S19	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W43B	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W47A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4W37	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6N70	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	7N72	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N76	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W54	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W58	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W60	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W39	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W58	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	1ST FLR ISO	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W52	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W31	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W37	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W44A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7W48	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W37	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W31	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W39	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5W50	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	5W58	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W35	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6W48	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W27B	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W40	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W42	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3W46	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4W29	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4W42	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5E 87	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5E 89	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5N75A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	4N45	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5N71A	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6N55	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N55	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N82	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	7N86	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6 E128	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	8 E10	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5E 85	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6N59	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N43	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N45	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N72	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N74	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N53	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7E 118	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	GN80	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	6N92	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N59	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N51	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3N78	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3S14	4	LF	$2,097.68		$8,391	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	HOOD, FUME	3S16	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	3E 94	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7N80	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	5E 83	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HOOD, FUME	7E 110	4	LF	$2,097.68		$8,391	1982	20	13
D3040	HVAC DISTRIBUTION NETWORKS - LABORATORY, WET	BRODY	480,279	SF	$68.11	0.93	$30,419,996	1982	40	
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-GW58	50	GPM	$150.05		$7,502	1995	35	
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-GL02	50	GPM	$150.05		$7,502	1982	35	
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-3E144	75	GPM	$150.05		$11,253	1982	35	
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-003	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-007	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-008	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-009	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-005	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-010	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-011	1	EA	$3,950.83		$3,951	1982	20	13

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-004	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-006	1	EA	$3,950.83		$3,951	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2.5")	PRS-002	1	EA	$4,887.55		$4,888	1982	20	13
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (3")	PRS-001	1	EA	$6,039.95		$6,040	1982	20	13
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-013	3	HP	$1,455.41		$4,366	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-014	3	HP	$1,455.41		$4,366	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	CWBACKUP CHWP3	10	HP	$1,455.41		$14,554	2012	25	
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-4	3	HP	$1,455.41		$4,366	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-5	3	HP	$1,455.41		$4,366	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC5	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC6	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-182	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-187	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-188	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC1	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC2	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC4	1	HP	$1,455.41	1.50	$2,183	1982	25	8

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-88-A	2	HP	$1,455.41		$2,911	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-88-B	2	HP	$1,455.41		$2,911	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	BOPC-PMP-001	3	HP	$1,455.41		$4,366	2000	25	
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-029	1	HP	$1,455.41		$1,455	2000	25	
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-180	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-181	1	HP	$1,455.41	1.50	$2,183	1982	25	8
D3040	PUMP - ELECTRIC (20 - 25 HP)	PMP-GHP-1	25	HP	$761.38		$19,035	2010	25	
D3040	PUMP - ELECTRIC (20 - 25 HP)	PMP-GHP-2	25	HP	$761.38		$19,035	2010	25	
D3040	PUMP - ELECTRIC (25 - 30 HP)	CHWP-1	30	HP	$833.59		$25,008	2013	25	
D3040	PUMP - ELECTRIC (25 - 30 HP)	CHWP-2	30	HP	$833.59		$25,008	2013	25	
D3040	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-3	75	HP	$816.02		$61,201	1982	25	8
D3040	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-4	75	HP	$816.02		$61,201	1982	25	8
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-168	1	HP	$14,153.09		$14,153	2010	20	
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-153	1	HP	$14,153.09		$14,153	1982	20	13
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-169	1	HP	$14,153.09		$14,153	2010	20	
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-172	1	HP	$14,153.09		$14,153	1982	20	18
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-173	1	HP	$14,153.09		$14,153	1982	20	18

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-184	1	HP	$14,153.09		$14,153	1982	20	13
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-185	1	HP	$14,153.09		$14,153	1982	20	13
D3040	CONDENSATE RECEIVER, PNEUMATIC (30-100 GPM)	VAC COND 1	40	GPM	$1,050.10	0.65	$27,303	2014	20	
D3040	CONDENSATE RECEIVER, PNEUMATIC (30-100 GPM)	VAC COND 2	40	GPM	$1,050.10	0.65	$27,303	2014	20	
D3050	COMPUTER ROOM AC UNIT - CHILLED WATER (5 -10 TON)	NEW DATA	10	TON	$3,881.72		$38,817	2012	15	
D3050	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	ACU-003	20	TON	$2,104.52		$42,090	2006	15	
D3050	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	BACK-UP	20	TON	$2,104.52		$42,090	2006	15	
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	AIR-P-037	5	HP	$1,587.17		$7,936	1982	20	13
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 1	40	HP	$1,667.08		$66,683	1982	20	13
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 2	40	HP	$1,667.08		$66,683	1982	20	13
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	AIR-001	50	HP	$1,667.08		$83,354	2011	20	
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	AIR-002	50	HP	$1,667.08		$83,354	2011	20	
D3060	AIR DRYER - REFRIGERATED - 26-50 CFM	DRY-P-038	1	EA	$2,853.32		$2,853	2005	15	
D3060	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR1	1	EA	$4,606.05	4.50	$20,727	2000	15	
D3060	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR2	1	EA	$4,606.05	4.50	$20,727	2000	15	
D3060	HVAC CONTROLS SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$10.99	1.08	$5,700,087	1982	18	15

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D4010	FIRE PUMP - ELECTRIC, 250 GPM, 2" ID (<=15 HP)	PMP-179	1	HP	$2,357.83		$2,358	2013	25	
D4010	FIRE PUMP - ELECTRIC, 500 GPM, 3" ID (15-65 HP)	PMP-FP178	60	HP	$730.62		$43,837	2013	25	
D4010	FIRE SPRINKLER SYSTEM	BRODY	470,779	SF	$11.11	0.93	$4,862,347	1982	80	
D4030	EXIT SIGN - CENTRAL POWER	BRODY	122	EA	$304.20		$37,113	1982	20	13
D4030	EXIT SIGN - CENTRAL POWER	BRODY	200	EA	$304.20		$60,841	2011	20	
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GE95	1	EA	$33,484.08		$33,484	1998	15	2
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GENERATOR BLDG	1	EA	$33,484.08	0.65	$21,765	1998	15	2
D4030	FIRE ALARM SYSTEM - DEVICES	BRODY BLDG	405,279	SF	$3.61	0.93	$1,360,166	1998	18	
D4030	FIRE ALARM SYSTEM - DEVICES	GENERATOR BLDG	1,500	SF	$3.61	1.18	$6,387	1998	18	
D4030	FIRE ALARM SYSTEM - DEVICES	BRODY BLDG	75,000	SF	$3.61	0.99	$267,948	2011	18	
D5010	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-8SPF	1	EA	$68,143.07	0.50	$34,072	1982	25	8
D5010	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-BE	7	EA	$68,143.07	0.55	$262,351	1982	25	8
D5010	ELECTRICAL DISTRIBUTION NETWORK - LABORATORY, WET	BRODY	380,279	SF	$21.90	0.93	$7,746,029	1982	40	
D5010	ELECTRICAL DISTRIBUTION NETWORK - LABORATORY, WET	BRODY	50,000	SF	$21.90	1.02	$1,117,028	2006	40	
D5010	ELECTRICAL DISTRIBUTION NETWORK - LABORATORY, WET	BRODY	50,000	SF	$21.90	1.02	$1,117,028	2010	40	
D5010	MAIN SWITCHBOARD W/BREAKERS (800-1200 AMP)	SSEB	1,200	AMP	$65.23		$78,282	2006	20	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8S08B	3,600	AMP	$75.23	1.35	$365,609	1982	20	13
D5010	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8N08A	3,600	AMP	$75.23	1.35	$365,609	1982	20	13
D5010	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-E1	600	AMP	$23.31	1.50	$20,979	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-N1	600	AMP	$23.31	1.50	$20,979	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$18.37	1.25	$27,556	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$18.37	1.25	$27,556	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$18.37	1.25	$27,556	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$18.37	1.25	$27,556	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$18.37	1.25	$27,556	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E2	1,200	AMP	$18.37	1.25	$27,556	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	GEN NORMAL	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS1	600	AMP	$18.37	1.25	$13,778	1982	25	8

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS2	600	AMP	$18.37	1.25	$13,778	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E3	1,600	AMP	$18.37	1.25	$36,742	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N2	1,200	AMP	$18.37	1.25	$27,556	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N3	1,600	AMP	$18.37	1.25	$36,742	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$18.37		$22,045	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-MAIN	3,200	AMP	$14.05		$44,952	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-SPARE	3,200	AMP	$14.05		$44,952	1982	25	8
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-3	3,000	AMP	$14.05		$42,143	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-1	3,000	AMP	$14.05		$42,143	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-2	3,000	AMP	$14.05		$42,143	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-TIE-BKR	3,000	AMP	$14.05		$42,143	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	UTIL BKR	3,000	AMP	$14.05		$42,143	1999	25	
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB-MAIN	3,200	AMP	$14.05		$44,952	1982	25	8

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB MAIN	3,200	AMP	$14.05		$44,952	1982	25	8
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	SSA	4	EA	$4,810.22		$19,241	1982	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	GEN-BKR-1	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	GEN-BKR-2	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	GEN-BKR-3	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	GEN-TIE-BKR	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	UTIL BKR	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	FEEDER E	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	FEEDER N	1	EA	$4,810.22	2.00	$9,620	1995	50	
D5010	MC SWGR ENCLOSURE VERT STACK SECT (2500-3200 AMP)	SSB	4	EA	$4,810.22		$19,241	1982	50	
D5010	MC SWGR INCOMING PWR CONNECT (CABLE/CONDUIT)	SSA	2	EA	$6,914.47		$13,829	1982	50	
D5010	MC SWGR INCOMING PWR CONNECT (CABLE/CONDUIT)	GENERATOR GEAR	7	EA	$6,914.47	2.00	$96,803	1995	50	
D5010	MC SWGR INCOMING PWR CONNECT (CABLE/CONDUIT)	SSB	2	EA	$6,914.47		$13,829	1982	50	
D5010	MC SWGR METERING AND INSTRUMENT SYSTEMS	SSA	2	EA	$41,486.83		$82,974	1982	50	
D5010	MC SWGR METERING AND INSTRUMENT SYSTEMS	GENERATOR GEAR	5	EA	$41,486.83	1.25	$259,293	1995	50	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	MC SWGR METERING AND INSTRUMENT SYSTEMS	SSB	2	EA	$41,486.83		$82,974	1982	50	
D5010	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSA-TIE	1	EA	$37,774.99		$37,775	1982	25	8
D5010	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSB-TIE	1	EA	$37,774.99		$37,775	1982	25	8
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-76	2	HP	$619.72		$1,239	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-43	3	HP	$619.72		$1,859	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-44	3	HP	$619.72		$1,859	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-27	2	HP	$619.72		$1,239	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-1	2	HP	$619.72		$1,239	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-7	2	HP	$619.72		$1,239	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-86	3	HP	$619.72		$1,859	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-87	3	HP	$619.72		$1,859	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-11	5	HP	$619.72		$3,099	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-56	5	HP	$619.72		$3,099	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU1	8	HP	$561.96		$4,496	2009	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU2	8	HP	$561.96		$4,496	2009	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU3	8	HP	$561.96		$4,496	2009	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-50	8	HP	$561.96		$4,496	2012	12	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-51	8	HP	$561.96		$4,496	2012	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-66	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-64	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-31	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-78	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-83	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-62	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-28	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-25	5	HP	$561.96		$2,810	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-30	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU4	8	HP	$561.96		$4,496	2012	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-47	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-41	5	HP	$561.96		$2,810	2013	12	

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UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-43	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-71	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-40	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-42	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-57	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-53	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-58	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-54	8	HP	$561.96		$4,496	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-10	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-17	5	HP	$561.96		$2,810	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-55	10	HP	$468.67		$4,687	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-2	10	HP	$468.67		$4,687	2005	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-HWAC1	8	HP	$468.67		$3,749	2006	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-61	10	HP	$468.67		$4,687	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	CW BACKUP CHWP3	10	HP	$468.67		$4,687	2012	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-38	10	HP	$468.67		$4,687	2013	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-39	10	HP	$468.67		$4,687	2013	12	

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UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-77	10	HP	$468.67		$4,687	2014	12	
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-1	10	HP	$468.67		$4,687	2006	12	
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-SFAC7	15	HP	$361.69		$5,425	2005	12	
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-MAFAC7	15	HP	$361.69		$5,425	2006	12	
D5010	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-68	20	HP	$331.79		$6,636	2011	12	
D5010	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-69	20	HP	$331.79		$6,636	2011	12	
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-HWP1	25	HP	$313.85		$7,846	2014	16	
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-HWP2	25	HP	$313.85		$7,846	2014	16	
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-AHU88-2	20	HP	$313.85		$6,277	2005	16	
D5010	VARIABLE FREQUENCY DRIVE (30-40 HP)	VSD-CHLRP1	30	HP	$256.69		$7,701	2013	16	
D5010	VARIABLE FREQUENCY DRIVE (30-40 HP)	VSD-CHLRP2	30	HP	$256.69		$7,701	2013	16	
D5010	VARIABLE FREQUENCY DRIVE (40-50 HP)	VSD-EFAC1	50	HP	$236.58		$11,829	2013	16	
D5010	VARIABLE FREQUENCY DRIVE (40-50 HP)	VSD-AHU88-1	40	HP	$236.58		$9,463	2005	16	
D5010	VARIABLE FREQUENCY DRIVE (40-50 HP)	VSD-RFAC2	40	HP	$236.58		$9,463	2010	16	1
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-RFAC3	50	HP	$217.32		$10,866	2001	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP3	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-1	50	HP	$217.32		$10,866	2001	16	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-2	50	HP	$217.32		$10,866	2001	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP4	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-SFAC1-1	60	HP	$217.32		$13,039	2010	16	1
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-SFAC1-2	60	HP	$217.32		$13,039	2010	16	1
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-CHWP3	75	HP	$217.32		$16,299	2013	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP5	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP6	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP1	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP2	60	HP	$217.32		$13,039	2006	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-CHWP4	75	HP	$217.32		$16,299	2013	16	
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-SFAC2	75	HP	$217.32		$16,299	2010	16	1
D5010	VARIABLE FREQUENCY DRIVE (100-150 HP)	VSD-SFAC6	125	HP	$228.38		$28,548	2013	20	
D5010	VARIABLE FREQUENCY DRIVE (100-150 HP)	VSD-SFAC5	125	HP	$228.38		$28,548	2013	20	
D5010	VARIABLE FREQUENCY DRIVE (100-150 HP)	VSD-SFAC3	125	HP	$228.38		$28,548	2001	20	
D5020	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	BRODY	25	EA	$207.45		$5,186	1982	15	18
D5020	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	BRODY	2	EA	$874.39		$1,749	1982	15	18
D5020	LIGHTING - EXTERIOR, WALL LANTERN or FLOOD (INC, CFL, LED)	BRODY	2	EA	$367.16		$734	1982	15	18

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
D5020	LIGHTING - EXTERIOR, WALL LANTERN or FLOOD (INC, CFL, LED)	BRODY	13	EA	$367.16		$4,773	2012	15	
D5020	LIGHTING SYSTEM, INTERIOR - LABORATORY, WET	BRODY	470,779	SF	$9.41	0.93	$4,118,067	1982	20	29
D5020	LIGHTING SYSTEM, INTERIOR - LABORATORY, WET	AUDITORIUM	9,500	SF	$9.41	1.18	$105,438	1982	20	13
D5090	GENERATOR - DIESEL (200-500 KW)	GENE-EMG-001	500	KW	$432.28		$216,139	2014	25	
D5090	GENERATOR - DIESEL (>500 KW)	GENE-EMG-002	650	KW	$533.71		$346,912	2014	25	
D5090	GENERATOR - DIESEL (>500 KW)	GENE-EMG-003	600	KW	$533.71		$320,226	1982	25	8
D5090	SWITCH - AUTO TRANSFER, 480 V (100-400 AMP)	TSW-ATS1-8N08 A	400	AMP	$36.37		$14,549	2010	25	
D5090	SWITCH - AUTO TRANSFER, 480 V (100-400 AMP)	TSW-ATS2-8S08 B	400	AMP	$36.37		$14,549	2010	25	
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS4	1,600	AMP	$25.64		$41,016	2010	25	
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS3	1,200	AMP	$25.64		$30,762	1982	25	8
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	TSW-ATS3 GW58	400	AMP	$25.64		$10,254	2013	25	
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS1	600	AMP	$25.64		$15,381	1982	25	8
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS2	1,200	AMP	$25.64		$30,762	1982	25	8
D5090	UNINTERRUPTIBLE POWER SUPPLY - 120/208 VOLTS	GE99 UPS	1	EA	$69,303.74		$69,304	2005	15	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27A/REF-013	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6N47/REF-014	80	SF	$303.48	1.18	$28,649	1982	35	

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23/REF-015	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23A/REF-016	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	7W42/REF-017	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	LDOCK/REF-001	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3S17/REF-006	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3E102A/REF007	160	SF	$303.48	1.18	$57,297	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4N43/REF-008	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4S17/REF-009	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5N61/REF-010	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27/REF-011	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GE23/REF-002	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GW37/REF-003	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3N41/REF-004	80	SF	$303.48	1.18	$28,649	1982	35	
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GE23/REF-002	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6N47/REF-014	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GW37/REF-003	1	EA	$8,584.71		$8,585	1982	10	23

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6S23/REF-015	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27/REF-011	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27A/REF-013	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3S17/REF-006	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	7W42/REF-017	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	LDOCK/REF-001	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4N43/REF-008	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4S17/REF-009	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5N61/REF-010	1	EA	$8,584.71		$8,585	1982	10	23
E1020	REFRIGERATION SYSTEM - WALK-IN, 3 EVAP FANS, 10000 BTUH, CONDENSER	3E102A/REF007	1	EA	$12,132.83	2.00	$24,266	1982	10	23
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N126C	80	SF	$226.20	1.18	$21,353	1982	35	
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N128C	80	SF	$226.20	1.18	$21,353	1982	35	
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	LAB-5N53	80	SF	$226.20	1.18	$21,353	1982	35	
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N126C	1	SYS	$12,132.83		$12,133	1982	15	18

ASSET COMPONENT SUMMARY

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	UNIT COST	CMPLX ADJ	TOTAL COST	INSTALL DATE	USEFUL LIFE	USEFUL LIFE ADJ
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N128C	1	SYS	$12,132.83		$12,133	1982	15	18
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	LAB-5N53	1	SYS	$12,132.83		$12,133	1982	15	18
E2010	SEATING, FIXED, FOLDING, STANDARD	2ND FLOOR	200	EA	$311.79		$62,357	2015	40	
E2010	SEATING, FIXED, FOLDING, STANDARD	2ND FLOOR	100	EA	$311.79		$31,179	2010	40	
E2010	SEATING, FIXED, FOLDING, PREMIUM	1ST FLOOR	500	EA	$746.87		$373,435	2000	60	
E2010	SEATING, FIXED, FOLDING, PREMIUM	2ND FLOOR	100	EA	$746.87		$74,687	1982	60	
G3060	FUEL OIL DAY TANK (101-150 GAL)	GEN1 DAY TANK	1	EA	$3,479.14		$3,479	2012	25	
G3060	FUEL OIL DAY TANK (101-150 GAL)	GEN2 DAY TANK	1	EA	$3,479.14		$3,479	2012	25	
G3060	FUEL OIL DAY TANK (101-150 GAL)	GEN3 DAY TANK	1	EA	$3,479.14		$3,479	2012	25	
G3060	FUEL OIL STOREAGE TANK - UNDERGROUND (0-2,000 GAL)	GENE-TAN-001	1	EA	$51,275.16	2.00	$102,550	1982	50	
						Grand Total:	**$124,545,028**			

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

DEFERRED RENEWAL						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, ALUMINUM AND GLASS		30	LEAF	$76,570	DR
C1020	DOOR LOCK, COMMERCIAL-GRADE		30	EA	$19,762	DR
C1020	DOOR LOCK, COMMERCIAL-GRADE		18	EA	$11,857	DR
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		14,290	SF	$81,014	DR
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		30,620	SF	$273,356	DR
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-007	1	EA	$928	DR
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-009	1	EA	$928	DR
D2020	BACKFLOW PREVENTER (1-2 INCHES)	BFP-008	1	EA	$2,069	DR
D2020	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	GENE-TAN-002	40	GAL	$1,575	DR
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P03	1	EA	$601	DR
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-P04	1	EA	$601	DR
D2030	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	PMP-064	1	EA	$601	DR
D3020	EXPANSION TANK (21-40 GAL)	TAN-001	30	GAL	$6,142	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-006	100	GAL	$14,417	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-031	100	GAL	$14,417	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-031	100	GAL	$14,417	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-002	100	GAL	$14,417	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-003	100	GAL	$14,417	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3020	EXPANSION TANK (61-100 GAL)	TAN-004	100	GAL	$14,417	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-065	100	GAL	$19,464	DR
D3020	EXPANSION TANK (61-100 GAL)	TAN-3E144	100	GAL	$14,417	DR
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-001	1	HP	$7,969	DR
D3040	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-002	1	HP	$7,969	DR
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-001	8	HP	$52,686	DR
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-002	8	HP	$52,686	DR
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-003	8	HP	$52,686	DR
D3040	AIR HANDLING UNIT - INDOOR (6-9 HP)	AHU-004	8	HP	$52,686	DR
D3040	AIR HANDLING UNIT - INDOOR (17-23 HP)	AHU-88-2	20	HP	$144,044	DR
D3040	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-AC2	40	HP	$538,549	DR
D3040	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-88-1	40	HP	$254,032	DR
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC6	125	HP	$522,438	DR
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC7	125	HP	$522,438	DR
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC5	125	HP	$522,438	DR
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC1	125	HP	$522,438	DR
D3040	AIR HANDLING UNIT - INDOOR (>88 HP)	AHU-AC3	125	HP	$522,438	DR
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	AC1	12,500	CFM	$85,325	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-001	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-002	1	EA	$6,006	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-047	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-048	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-062	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-085	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-063	1	EA	$6,006	DR
D3040	HUMIDIFIER, ELECTRIC, POINT-OF-USE	HUM-064	1	EA	$6,006	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (10"-18" DIAMETER)	CENTURYMASTER	1	EA	$3,202	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	ROOF	1	EA	$5,667	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-1	1	EA	$5,667	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-2	1	EA	$5,667	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EAF-2-3	1	EA	$5,667	DR
D3040	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	GENE-EAF-001	1	EA	$5,667	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-87	5	HP	$8,373	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-25	3	HP	$3,721	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	E-11	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-28	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-30	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-11	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-51	8	HP	$9,924	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-50	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-55	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-58	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-54	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-56	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-57	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-53	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-81	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-83	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-3	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-62	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-64	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-1	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-15	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-66	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-17	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-78	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-61	10	HP	$12,404	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	FIRE PUMP RM	2	HP	$3,721	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-GL02	3	HP	$3,721	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-71	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	RAF-003	15	HP	$23,258	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-08	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-31	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-33	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-35	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-27	2	HP	$4,093	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-88-2	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-40	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-75	15	HP	$18,607	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-41	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-38	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-39	10	HP	$12,404	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	MAF-8-74	15	HP	$18,607	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-10	5	HP	$6,202	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-42	8	HP	$9,924	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-47	8	HP	$9,924	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-44	3	HP	$3,721	DR
D3040	FAN - INLINE CENTRIFUGAL AIRFOIL, SUPPLY, 2.5" SP (<=30 HP)	EAF-8-43	5	HP	$6,202	DR
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (1-1.5 HP)	GENE-EAF-002	1	HP	$2,990	DR
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (1.5-2 HP)	EAF-GW58	2	HP	$4,796	DR
D3040	FAN - PROPELLER WITH LOUVER, 1/4" SP (2-4 HP)	THRU-WALL 8TH MECH	3	HP	$3,936	DR
D3040	FAN - UTILITY SET, 1/4" SP (1.25-4 HP)	EAF-8-48	3	HP	$11,087	DR
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-1E	5	HP	$12,593	DR
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-2E	5	HP	$12,593	DR
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-3E	5	HP	$12,593	DR
D3040	FAN - UTILITY SET, 1/4" SP (4-12 HP)	EAF-8-4E	5	HP	$12,593	DR
D3040	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P09	15	HP	$21,022	DR
D3040	FAN - UTILITY SET, 1/4" SP >12-17 HP)	SAF-P10	15	HP	$21,022	DR
D3040	FAN - UTILITY SET, 1/4" SP (42-62 HP)	RAF-001	50	HP	$42,794	DR
D3040	FAN - UTILITY SET, 1/4" SP (>62 HP)	RAF-002	75	HP	$58,230	DR
D3040	HOOD, FUME	3N80	4	LF	$8,391	DR
D3040	HOOD, FUME	3N86	4	LF	$8,391	DR
D3040	HOOD, FUME	3S07A	4	LF	$8,391	DR
D3040	HOOD, FUME	3S07B	4	LF	$8,391	DR
D3040	HOOD, FUME	3S08	4	LF	$8,391	DR
D3040	HOOD, FUME	3S10	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	GW29	4	LF	$8,391	DR
D3040	HOOD, FUME	GW43F	4	LF	$8,391	DR
D3040	HOOD, FUME	4W42	4	LF	$8,391	DR
D3040	HOOD, FUME	3W29	4	LF	$8,391	DR
D3040	HOOD, FUME	3W31	4	LF	$8,391	DR
D3040	HOOD, FUME	3W48	4	LF	$8,391	DR
D3040	HOOD, FUME	3W52	4	LF	$8,391	DR
D3040	HOOD, FUME	3W54	4	LF	$8,391	DR
D3040	HOOD, FUME	GW27	4	LF	$8,391	DR
D3040	HOOD, FUME	GW43E	4	LF	$8,391	DR
D3040	HOOD, FUME	5W60	4	LF	$8,391	DR
D3040	HOOD, FUME	5W62	4	LF	$8,391	DR
D3040	HOOD, FUME	5W66	4	LF	$8,391	DR
D3040	HOOD, FUME	5W68	4	LF	$8,391	DR
D3040	HOOD, FUME	5N51	4	LF	$8,391	DR
D3040	HOOD, FUME	3S07A	4	LF	$8,391	DR
D3040	HOOD, FUME	3S07B	4	LF	$8,391	DR
D3040	HOOD, FUME	3S08	4	LF	$8,391	DR
D3040	HOOD, FUME	3S10	4	LF	$8,391	DR
D3040	HOOD, FUME	3S14	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	3S16	4	LF	$8,391	DR
D3040	HOOD, FUME	7S34A	4	LF	$8,391	DR
D3040	HOOD, FUME	6S28	4	LF	$8,391	DR
D3040	HOOD, FUME	6S36	4	LF	$8,391	DR
D3040	HOOD, FUME	6W27	4	LF	$8,391	DR
D3040	HOOD, FUME	4S13	4	LF	$8,391	DR
D3040	HOOD, FUME	4S15	4	LF	$8,391	DR
D3040	HOOD, FUME	3W23	4	LF	$8,391	DR
D3040	HOOD, FUME	3S28	4	LF	$8,391	DR
D3040	HOOD, FUME	6S11	4	LF	$8,391	DR
D3040	HOOD, FUME	6S15	4	LF	$8,391	DR
D3040	HOOD, FUME	6S26	4	LF	$8,391	DR
D3040	HOOD, FUME	7S28	4	LF	$8,391	DR
D3040	HOOD, FUME	4S30A	4	LF	$8,391	DR
D3040	HOOD, FUME	5S30	4	LF	$8,391	DR
D3040	HOOD, FUME	5S38	4	LF	$8,391	DR
D3040	HOOD, FUME	7S19	4	LF	$8,391	DR
D3040	HOOD, FUME	7S24	4	LF	$8,391	DR
D3040	HOOD, FUME	7S26	4	LF	$8,391	DR
D3040	HOOD, FUME	7S07A	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	3S09	4	LF	$8,391	DR
D3040	HOOD, FUME	4S09	4	LF	$8,391	DR
D3040	HOOD, FUME	5S08	4	LF	$8,391	DR
D3040	HOOD, FUME	5S10	4	LF	$8,391	DR
D3040	HOOD, FUME	5S18	4	LF	$8,391	DR
D3040	HOOD, FUME	5S21	4	LF	$8,391	DR
D3040	HOOD, FUME	5S28	4	LF	$8,391	DR
D3040	HOOD, FUME	6S16	4	LF	$8,391	DR
D3040	HOOD, FUME	6S18	4	LF	$8,391	DR
D3040	HOOD, FUME	7S09	4	LF	$8,391	DR
D3040	HOOD, FUME	7S20	4	LF	$8,391	DR
D3040	HOOD, FUME	3N66	4	LF	$8,391	DR
D3040	HOOD, FUME	3E 100	4	LF	$8,391	DR
D3040	HOOD, FUME	3E 98	4	LF	$8,391	DR
D3040	HOOD, FUME	3S22	4	LF	$8,391	DR
D3040	HOOD, FUME	3S15	4	LF	$8,391	DR
D3040	HOOD, FUME	5S19	4	LF	$8,391	DR
D3040	HOOD, FUME	5W43B	4	LF	$8,391	DR
D3040	HOOD, FUME	5W47A	4	LF	$8,391	DR
D3040	HOOD, FUME	4W37	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	6N70	4	LF	$8,391	DR
D3040	HOOD, FUME	7N72	4	LF	$8,391	DR
D3040	HOOD, FUME	7N76	4	LF	$8,391	DR
D3040	HOOD, FUME	6W54	4	LF	$8,391	DR
D3040	HOOD, FUME	6W58	4	LF	$8,391	DR
D3040	HOOD, FUME	6W60	4	LF	$8,391	DR
D3040	HOOD, FUME	7W39	4	LF	$8,391	DR
D3040	HOOD, FUME	7W58	4	LF	$8,391	DR
D3040	HOOD, FUME	1ST FLR ISO	4	LF	$8,391	DR
D3040	HOOD, FUME	6W52	4	LF	$8,391	DR
D3040	HOOD, FUME	7W31	4	LF	$8,391	DR
D3040	HOOD, FUME	7W37	4	LF	$8,391	DR
D3040	HOOD, FUME	7W44A	4	LF	$8,391	DR
D3040	HOOD, FUME	7W48	4	LF	$8,391	DR
D3040	HOOD, FUME	6W37	4	LF	$8,391	DR
D3040	HOOD, FUME	5W31	4	LF	$8,391	DR
D3040	HOOD, FUME	5W39	4	LF	$8,391	DR
D3040	HOOD, FUME	5W50	4	LF	$8,391	DR
D3040	HOOD, FUME	5W58	4	LF	$8,391	DR
D3040	HOOD, FUME	6W35	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	6W48	4	LF	$8,391	DR
D3040	HOOD, FUME	3W27B	4	LF	$8,391	DR
D3040	HOOD, FUME	3W40	4	LF	$8,391	DR
D3040	HOOD, FUME	3W42	4	LF	$8,391	DR
D3040	HOOD, FUME	3W46	4	LF	$8,391	DR
D3040	HOOD, FUME	4W29	4	LF	$8,391	DR
D3040	HOOD, FUME	4W42	4	LF	$8,391	DR
D3040	HOOD, FUME	5E 87	4	LF	$8,391	DR
D3040	HOOD, FUME	5E 89	4	LF	$8,391	DR
D3040	HOOD, FUME	5N75A	4	LF	$8,391	DR
D3040	HOOD, FUME	4N45	4	LF	$8,391	DR
D3040	HOOD, FUME	5N71A	4	LF	$8,391	DR
D3040	HOOD, FUME	6N55	4	LF	$8,391	DR
D3040	HOOD, FUME	7N55	4	LF	$8,391	DR
D3040	HOOD, FUME	7N82	4	LF	$8,391	DR
D3040	HOOD, FUME	7N86	4	LF	$8,391	DR
D3040	HOOD, FUME	6 E128	4	LF	$8,391	DR
D3040	HOOD, FUME	8 E10	4	LF	$8,391	DR
D3040	HOOD, FUME	5E 85	4	LF	$8,391	DR
D3040	HOOD, FUME	6N59	4	LF	$8,391	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	HOOD, FUME	3N43	4	LF	$8,391	DR
D3040	HOOD, FUME	3N45	4	LF	$8,391	DR
D3040	HOOD, FUME	3N72	4	LF	$8,391	DR
D3040	HOOD, FUME	3N74	4	LF	$8,391	DR
D3040	HOOD, FUME	7N53	4	LF	$8,391	DR
D3040	HOOD, FUME	7E 118	4	LF	$8,391	DR
D3040	HOOD, FUME	GN80	4	LF	$8,391	DR
D3040	HOOD, FUME	6N92	4	LF	$8,391	DR
D3040	HOOD, FUME	7N59	4	LF	$8,391	DR
D3040	HOOD, FUME	3N51	4	LF	$8,391	DR
D3040	HOOD, FUME	3N78	4	LF	$8,391	DR
D3040	HOOD, FUME	3S14	4	LF	$8,391	DR
D3040	HOOD, FUME	3S16	4	LF	$8,391	DR
D3040	HOOD, FUME	3E 94	4	LF	$8,391	DR
D3040	HOOD, FUME	7N80	4	LF	$8,391	DR
D3040	HOOD, FUME	5E 83	4	LF	$8,391	DR
D3040	HOOD, FUME	7E 110	4	LF	$8,391	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-003	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-007	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-008	1	EA	$3,951	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-009	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-005	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-010	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-011	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-004	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2")	PRS-006	1	EA	$3,951	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (2.5")	PRS-002	1	EA	$4,888	DR
D3040	PRESSURE REDUCING VALVE, STEAM SYSTEM (3")	PRS-001	1	EA	$6,040	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-013	3	HP	$4,366	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-014	3	HP	$4,366	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-4	3	HP	$4,366	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-LHP-5	3	HP	$4,366	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC5	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC6	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-182	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-187	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-188	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC1	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC2	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-AC4	1	HP	$2,183	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D3040	PUMP - ELECTRIC (<=10 HP)	PMP-88-A	2	HP	$2,911	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-88-B	2	HP	$2,911	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-180	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-181	1	HP	$2,183	DR
D3040	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-3	75	HP	$61,201	DR
D3040	PUMP - ELECTRIC (50 - 75 HP)	PMP-GHP-4	75	HP	$61,201	DR
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-153	1	HP	$14,153	DR
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-184	1	HP	$14,153	DR
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-185	1	HP	$14,153	DR
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	AIR-P-037	5	HP	$7,936	DR
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 1	40	HP	$66,683	DR
D3060	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (>10 TOTAL HP)	COMP 2	40	HP	$66,683	DR
D3060	HVAC CONTROLS SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$5,700,087	DR
D3060	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR1	1	EA	$20,727	DR
D3060	AIR DRYER - REFRIGERATED - > 101 CFM	DRY-AR2	1	EA	$20,727	DR
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GE95	1	EA	$33,484	DR
D4030	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	GENERATOR BLDG	1	EA	$21,765	DR
D4030	EXIT SIGN - CENTRAL POWER	BRODY	122	EA	$37,113	DR
D5010	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-8SPF	1	EA	$34,072	DR
D5010	MOTOR CONTROL CENTER VERTICAL SECTION, 600V (400-600A) W/STARTERS	MCC-BE	7	EA	$262,351	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D5010	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8S08B	3,600	AMP	$365,609	DR
D5010	MAIN SWITCHBOARD W/BREAKERS (>2500 AMP)	8N08A	3,600	AMP	$365,609	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$27,556	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$27,556	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$27,556	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$27,556	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSA-FEEDER	1,200	AMP	$27,556	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	GEN NORMAL	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS1	600	AMP	$13,778	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	ATS2	600	AMP	$13,778	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	SSB-FEEDER	1,200	AMP	$22,045	DR
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-MAIN	3,200	AMP	$44,952	DR
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSA-SPARE	3,200	AMP	$44,952	DR
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB-MAIN	3,200	AMP	$44,952	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	SSB MAIN	3,200	AMP	$44,952	DR
D5010	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSA-TIE	1	EA	$37,775	DR
D5010	SWGR TIEBREAK SELECTOR, FME, AUTOMATIC	SSB-TIE	1	EA	$37,775	DR
D5020	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	BRODY	25	EA	$5,186	DR
D5020	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	BRODY	2	EA	$1,749	DR
D5020	LIGHTING - EXTERIOR, WALL LANTERN or FLOOD (INC, CFL, LED)	BRODY	2	EA	$734	DR
D5020	LIGHTING SYSTEM, INTERIOR - LABORATORY, WET	AUDITORIUM	9,500	SF	$105,438	DR
D5090	GENERATOR - DIESEL (>500 KW)	GENE-EMG-003	600	KW	$320,226	DR
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS3	1,200	AMP	$30,762	DR
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS1	600	AMP	$15,381	DR
D5090	SWITCH - AUTO TRANSFER, 480 V (>400 AMP)	GENE-TSW-ATS2	1,200	AMP	$30,762	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GE23/REF-002	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6N47/REF-014	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	GW37/REF-003	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	6S23/REF-015	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3N41/REF-004	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27/REF-011	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5S27A/REF-013	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	3S17/REF-006	1	EA	$8,585	DR

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	7W42/REF-017	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	LDOCK/REF-001	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4N43/REF-008	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	4S17/REF-009	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 2 EVAP FANS, 6700 BTUH, CONDENSER	5N61/REF-010	1	EA	$8,585	DR
E1020	REFRIGERATION SYSTEM - WALK-IN, 3 EVAP FANS, 10000 BTUH, CONDENSER	3E102A/REF007	1	EA	$24,266	DR
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N126C	1	SYS	$12,133	DR
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	SUP-5N128C	1	SYS	$12,133	DR
E1020	ENVIRONMENTAL CHAMBER MECHANICAL SYSTEM	LAB-5N53	1	SYS	$12,133	DR
				TOTAL DEFERRED RENEWAL COST	**$14,733,253**	

2016						
UNI-FORMAT	**COMPONENT DESCRIPTION**	**IDENTIFIER**	**QTY**	**UNITS**	**REPLACEMENT COST**	**YEAR**
D2020	BACKFLOW PREVENTER (<=1 INCH)	BFP-GL02	1	EA	$928	2016
D4030	FIRE ALARM SYSTEM - DEVICES	BRODY BLDG	405,279	SF	$1,360,166	2016
D4030	FIRE ALARM SYSTEM - DEVICES	GENERATOR BLDG	1,500	SF	$6,387	2016
	2016			**PROJECTED COMPONENT REPLACEMENT COST**	**$1,367,481**	

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2017						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D2010	PLUMBING FIXTURE - LAVATORY, WALL HUNG	BRODY	90	EA	$109,085	2017
D2010	PLUMBING FIXTURE - LAVATORY, GANG	BRODY	10	EA	$75,825	2017
D2010	PLUMBING FIXTURE - SINK, KITCHEN	BRODY	6	EA	$11,807	2017
D2010	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	BRODY	39	EA	$63,700	2017
D2010	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	BRODY	5	EA	$7,857	2017
D2010	PLUMBING FIXTURE - URINAL	BRODY	16	EA	$30,876	2017
D2010	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	BRODY	93	EA	$165,114	2017
D2010	PLUMBING FIXTURE - EMERGENCY COMBINATION SHOWER/EYEWASH	BRODY	10	EA	$73,390	2017
D2020	SUPPLY PIPING SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$5,589,385	2017
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-GL02	50	GPM	$7,727	2017
D3040	HEAT EXCHANGER - SHELL & TUBE STEAM TO WATER (20-85 GPM)	HEX-3E144	75	GPM	$11,591	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27A/REF-013	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6N47/REF-014	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23/REF-015	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	6S23A/REF-016	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	7W42/REF-017	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	LDOCK/REF-001	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3S17/REF-006	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3E102A/REF007	160	SF	$59,016	2017

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4N43/REF-008	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	4S17/REF-009	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5N61/REF-010	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	5S27/REF-011	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GE23/REF-002	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	GW37/REF-003	80	SF	$29,508	2017
E1020	WALK-IN REFRIGERATOR OR FREEZER STRUCTURE	3N41/REF-004	80	SF	$29,508	2017
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N126C	80	SF	$21,993	2017
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	SUP-5N128C	80	SF	$21,993	2017
E1020	ENVIRONMENTAL CHAMBER STRUCTURE	LAB-5N53	80	SF	$21,993	2017
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-2	10	HP	$4,827	2017
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-SFAC7	15	HP	$5,588	2017
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-RFAC3	50	HP	$11,192	2017
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-1	50	HP	$11,192	2017
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-HW-2	50	HP	$11,192	2017
C1020	DOOR LOCK, COMMERCIAL-GRADE		300	EA	$203,548	2017
C1020	DOOR LOCK, COMMERCIAL-GRADE		1,000	EA	$678,494	2017
C3010	WALL FINISH - TILE, CERAMIC / STONE, STANDARD		72,940	SF	$2,550,456	2017
	2017	**PROJECTED COMPONENT REPLACEMENT COST**			**$10,160,954**	

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2018						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-HWAC1	8	HP	$3,978	2018
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF88-1	10	HP	$4,972	2018
D5010	VARIABLE FREQUENCY DRIVE (10-15 HP)	VSD-MAFAC7	15	HP	$5,756	2018
C3020	FLOORING - CARPET, TILE OR ROLL, STANDARD		71,440	SF	$820,984	2018
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		57,150	SF	$343,731	2018
C3020	FLOORING - VINYL SHEET, STANDARD		30,620	SF	$306,899	2018
C3020	FLOORING - VINYL SHEET, STANDARD		30,620	SF	$306,899	2018
C3020	FLOORING - FLUID APPLIED, PAINT OR CLEAR SEAL		20,410	SF	$58,865	2018
C3010	WALL FINISH - WALL COVERING, ROLL		19,450	SF	$95,096	2018
C3010	WALL FINISH - PANEL, MEDICAL / LABORATORY APPLICATION		43,770	SF	$452,635	2018
	2018	**PROJECTED COMPONENT REPLACEMENT COST**			**$2,399,813**	

2019						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
C3020	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD		15,310	SF	$470,621	2019
C3010	WALL FINISH - PAINT, STANDARD		1,750,620	SF	$3,787,208	2019
	2019	**PROJECTED COMPONENT REPLACEMENT COST**			**$4,257,829**	

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2020						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-172	1	HP	$15,929	2020
D3040	CONDENSATE RECEIVER, ELECTRIC, 1 PUMP	PMP-173	1	HP	$15,929	2020
D5090	UNINTERRUPTIBLE POWER SUPPLY - 120/208 VOLTS	GE99 UPS	1	EA	$78,002	2020
C1030	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	NON-LAB	250	LF	$134,231	2020
C3020	FLOORING - VINYL COMPOSITION TILE, STANDARD		57,150	SF	$364,664	2020
D3060	AIR DRYER - REFRIGERATED - 26-50 CFM	DRY-P-038	1	EA	$3,211	2020
	2020	**PROJECTED COMPONENT REPLACEMENT COST**			**$611,967**	

2021						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D3050	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	ACU-003	20	TON	$48,794	2021
D3050	COMPUTER ROOM AC UNIT - CHILLED WATER (10 -20 TON)	BACK-UP	20	TON	$48,794	2021
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU1	8	HP	$5,212	2021
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU2	8	HP	$5,212	2021
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU3	8	HP	$5,212	2021
D5010	VARIABLE FREQUENCY DRIVE (20-25 HP)	VSD-AHU88-2	20	HP	$7,277	2021
D5010	VARIABLE FREQUENCY DRIVE (40-50 HP)	VSD-AHU88-1	40	HP	$10,970	2021
D5010	VARIABLE FREQUENCY DRIVE (100-150 HP)	VSD-SFAC3	125	HP	$33,095	2021
	2021	**PROJECTED COMPONENT REPLACEMENT COST**			**$164,566**	

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2022						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D2030	DRAIN PIPING SYSTEM - LABORATORY, WET	BRODY	480,279	SF	$9,776,696	2022
D3040	HVAC DISTRIBUTION NETWORKS - LABORATORY, WET	BRODY	480,279	SF	$36,323,067	2022
D5010	ELECTRICAL DISTRIBUTION NETWORK - LABORATORY, WET	BRODY	380,279	SF	$9,249,163	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP3	60	HP	$15,570	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP4	60	HP	$15,570	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP5	60	HP	$15,570	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP6	60	HP	$15,570	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP1	60	HP	$15,570	2022
D5010	VARIABLE FREQUENCY DRIVE (50-75 HP)	VSD-EFP2	60	HP	$15,570	2022
C1030	CASEWORK - LABORATORY, INCLUDES REAGENT SHELF AND TOP		72,040	SF	$11,417,016	2022
C1020	DOOR AND FRAME, INTERIOR, NON-RATED		300	LEAF	$685,948	2022
C1020	DOOR AND FRAME, INTERIOR, FIRE-RATED		1,000	LEAF	$3,949,139	2022
B2030	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL		18	LEAF	$38,614	2022
B2010	WALL, EXTERIOR, STUCCO OR CONCRETE RESTORE	CONCRETE PANELS	37,800	SF	$562,747	2022
C3020	FLOORING - CARPET, TILE OR ROLL, STANDARD		71,440	SF	$924,024	2022
B2010	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD		21,000	SF	$4,957,346	2022
	2022	**PROJECTED COMPONENT REPLACEMENT COST**			**$77,977,179**	

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2023						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D5010	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-68	20	HP	$8,161	2023
D5010	VARIABLE FREQUENCY DRIVE (15-20 HP)	VSD-EF8-69	20	HP	$8,161	2023
	2023	PROJECTED COMPONENT REPLACEMENT COST			$16,322	

2024						
UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-006	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-007	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-008	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-001	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-009	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-002	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-003	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-004	12,500	CFM	$108,088	2024
D3040	ENTHALPY WHEEL, ENERGY RECOVERY, AIR TO AIR (20000-50000 CFM)	ERU-005	12,500	CFM	$108,088	2024
D5010	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-E1	600	AMP	$26,576	2024
D5010	MC SWGR BREAKER - FME Adjustable (600-800 AMP)	FEED-BKR-N1	600	AMP	$26,576	2024

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E2	1,200	AMP	$34,908	2024
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-E3	1,600	AMP	$46,543	2024
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N2	1,200	AMP	$34,908	2024
D5010	MC SWGR BREAKER - FME Adjustable (800-1600 AMP)	FEED-BKR-N3	1,600	AMP	$46,543	2024
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-3	3,000	AMP	$53,385	2024
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-1	3,000	AMP	$53,385	2024
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-BKR-2	3,000	AMP	$53,385	2024
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	GEN-TIE-BKR	3,000	AMP	$53,385	2024
D5010	MC SWGR BREAKER - FME Adjustable (2500-3200 AMP)	UTIL BKR	3,000	AMP	$53,385	2024
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-50	8	HP	$5,695	2024
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-51	8	HP	$5,695	2024
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-SFAHU4	8	HP	$5,695	2024
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	CW BACKUP CHWP3	10	HP	$5,937	2024
C3030	CEILING FINISH - PAINTED OR STAINED, STANDARD		51,030	SF	$127,979	2024
	2024	**PROJECTED COMPONENT REPLACEMENT COST**			**$1,606,771**	

2025

UNI-FORMAT	COMPONENT DESCRIPTION	IDENTIFIER	QTY	UNITS	REPLACEMENT COST	YEAR
D3040	PUMP - ELECTRIC (<=10 HP)	BOPC-PMP-001	3	HP	$5,697	2025
D3040	PUMP - ELECTRIC (<=10 HP)	PMP-029	1	HP	$1,899	2025

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

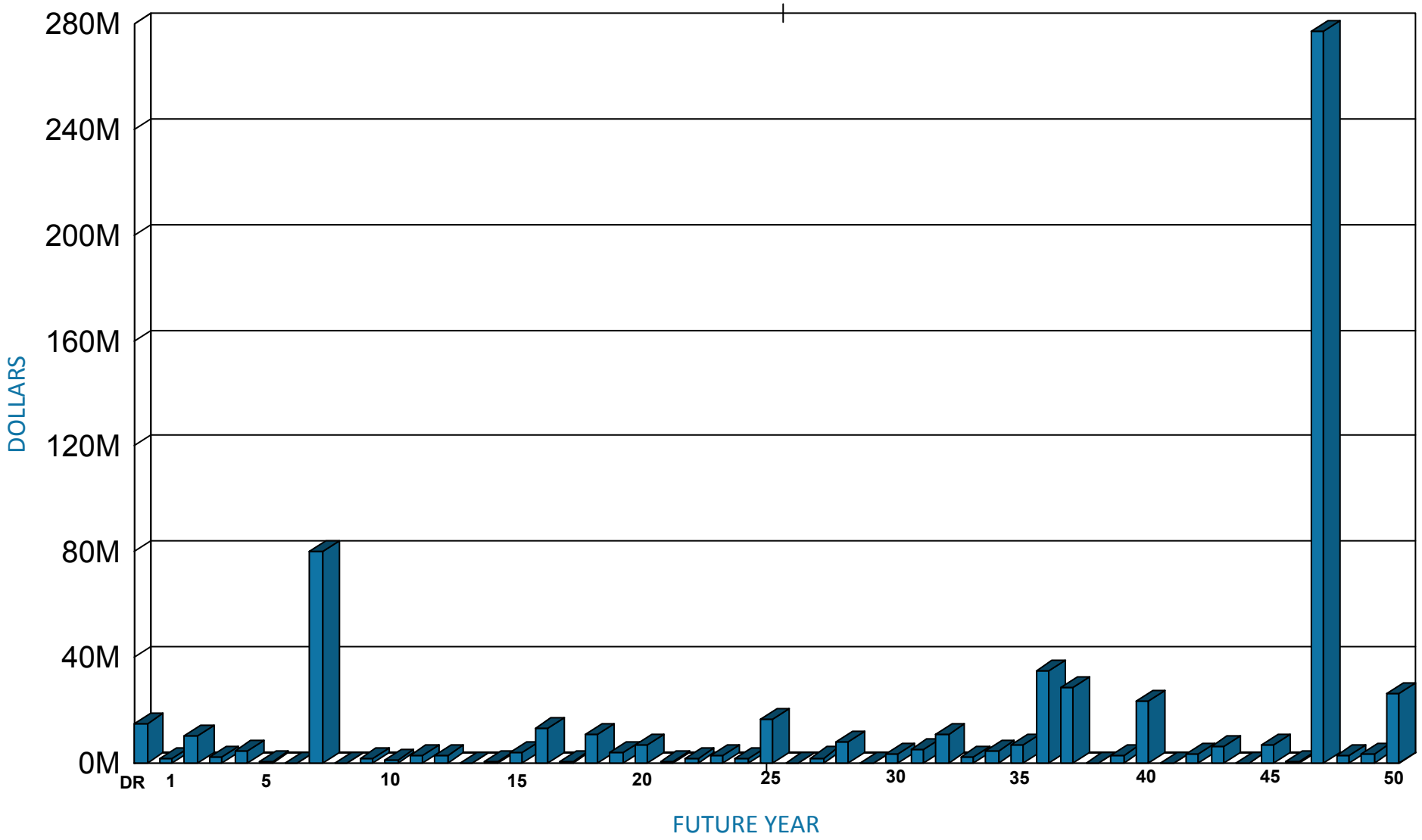
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-76	2	HP	$1,617	2025
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-43	3	HP	$2,426	2025
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-86	3	HP	$2,426	2025
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-87	3	HP	$2,426	2025
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-11	5	HP	$4,043	2025
D5010	VARIABLE FREQUENCY DRIVE (<=5 HP)	VSD-EF8-56	5	HP	$4,043	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-66	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-64	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-31	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-78	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-83	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-62	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-33	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-28	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-35	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-30	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-47	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-41	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-43	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-71	8	HP	$5,866	2025

COMPONENT RENEWAL COST BY YEAR

All costs shown as Future Value using a 3% average inflation rate

D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-40	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-42	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-57	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-53	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-58	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-54	8	HP	$5,866	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-10	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	VSD-EF8-17	5	HP	$3,666	2025
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-55	10	HP	$6,115	2025
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-61	10	HP	$6,115	2025
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-38	10	HP	$6,115	2025
D5010	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	VSD-EF8-39	10	HP	$6,115	2025
B2030	DOOR, EXTERIOR, SLIDING ENTRANCE SYSTEM, POWERED		4	EA	$86,869	2025
C3030	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD		61,240	SF	$713,335	2025
	2025	**PROJECTED COMPONENT REPLACEMENT COST**			**$959,225**	

RECURRING COMPONENT EXPENDITURE PROJECTIONS



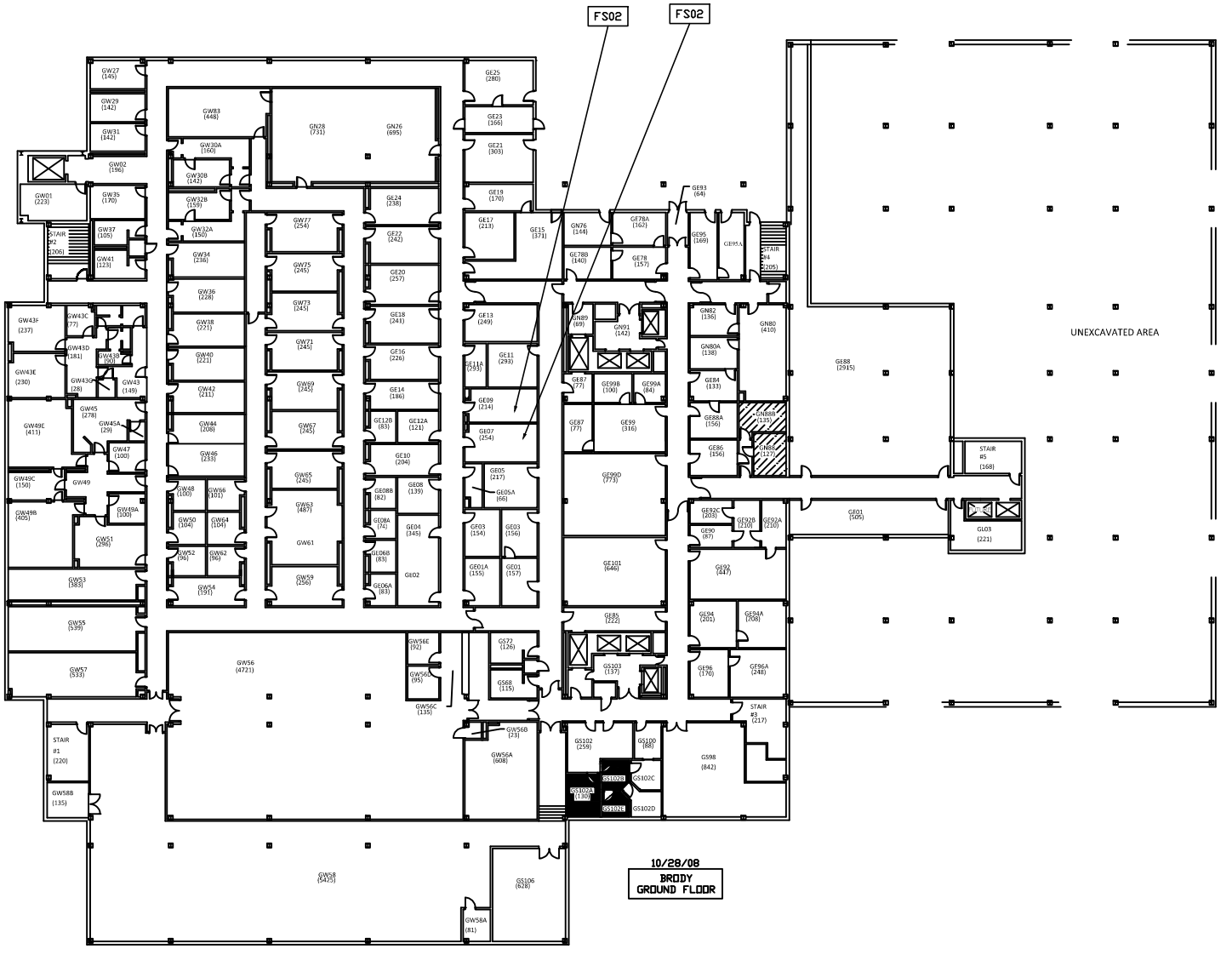
Average Annual Renewal Cost per SF $10.98

FACILITY CONDITION ASSESSMENT

SECTION 5

DRAWINGS/PROJECT LOCATIONS

EAST CAROLINA UNIVERSITY



BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

CORPORATION

FACILITY CONDITION ASSESSMENT

•

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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

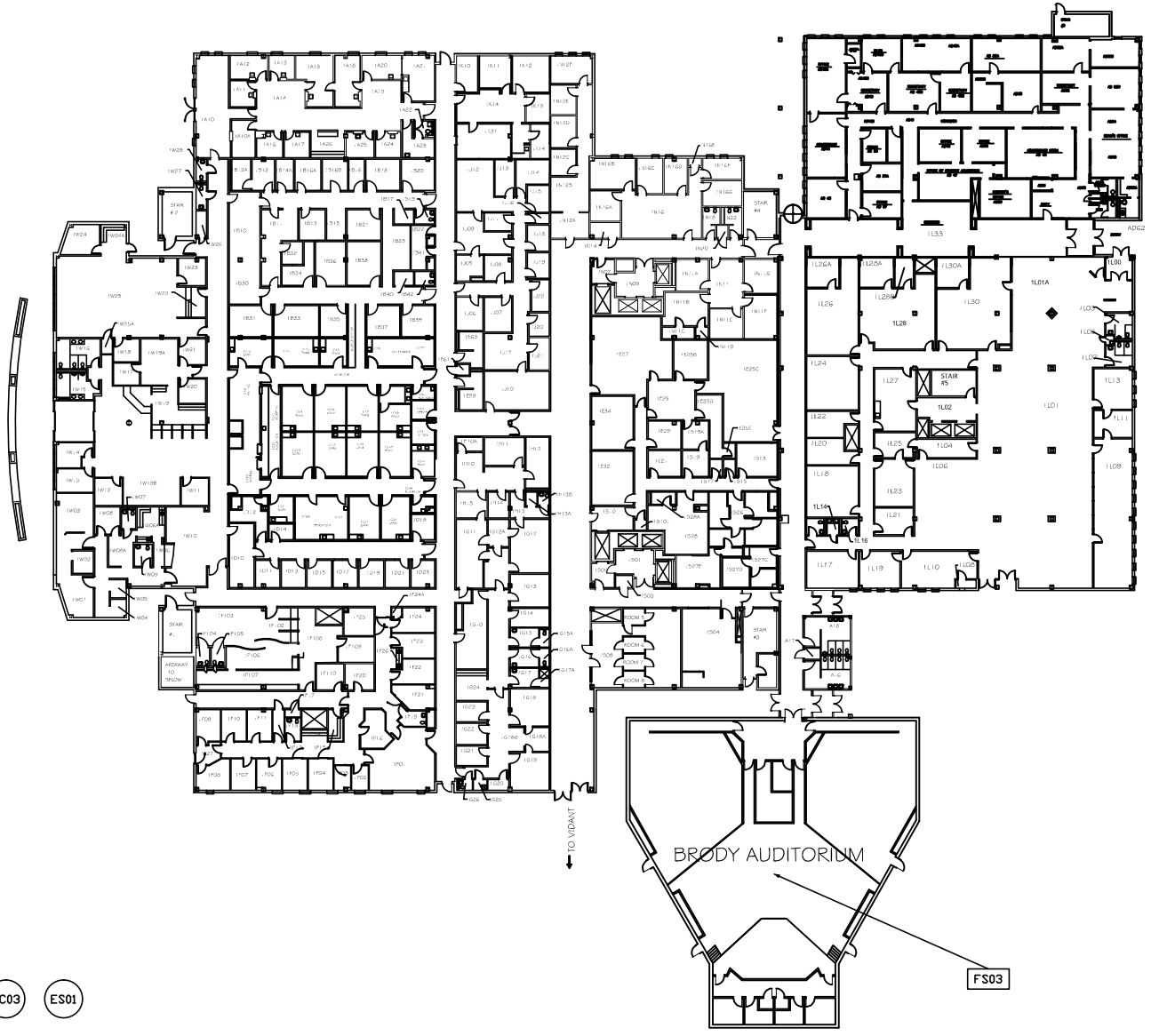
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

GROUND FLOOR PLAN

Sheet No.
1 of 9

EAST CAROLINA UNIVERSITY



AC03 ES01

AC01 FS01

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
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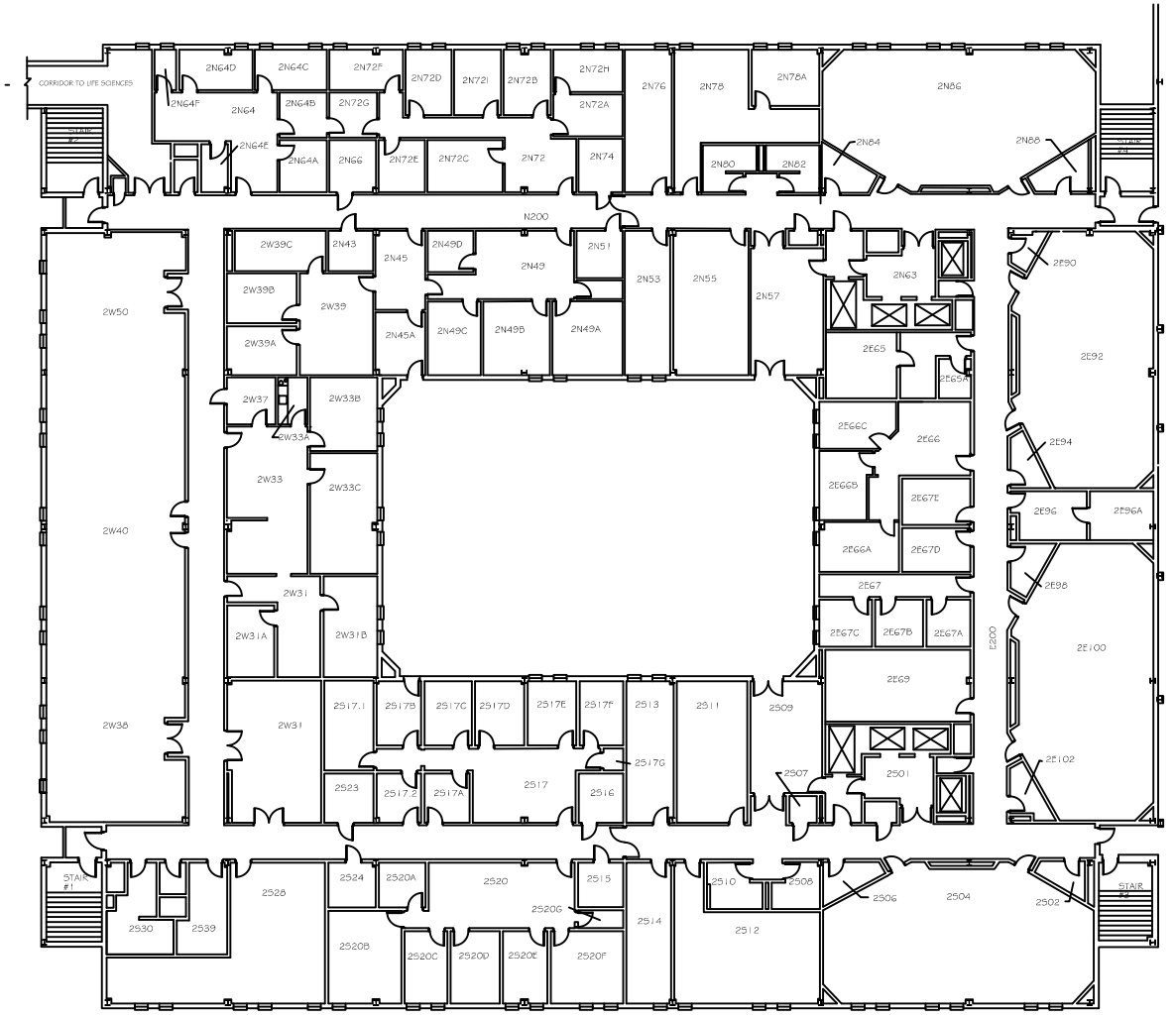
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

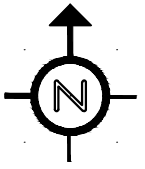
FIRST FLOOR PLAN

Sheet No.
2 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01



BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

PROJECT NUMBER APPLIES TO ONE ROOM ONLY

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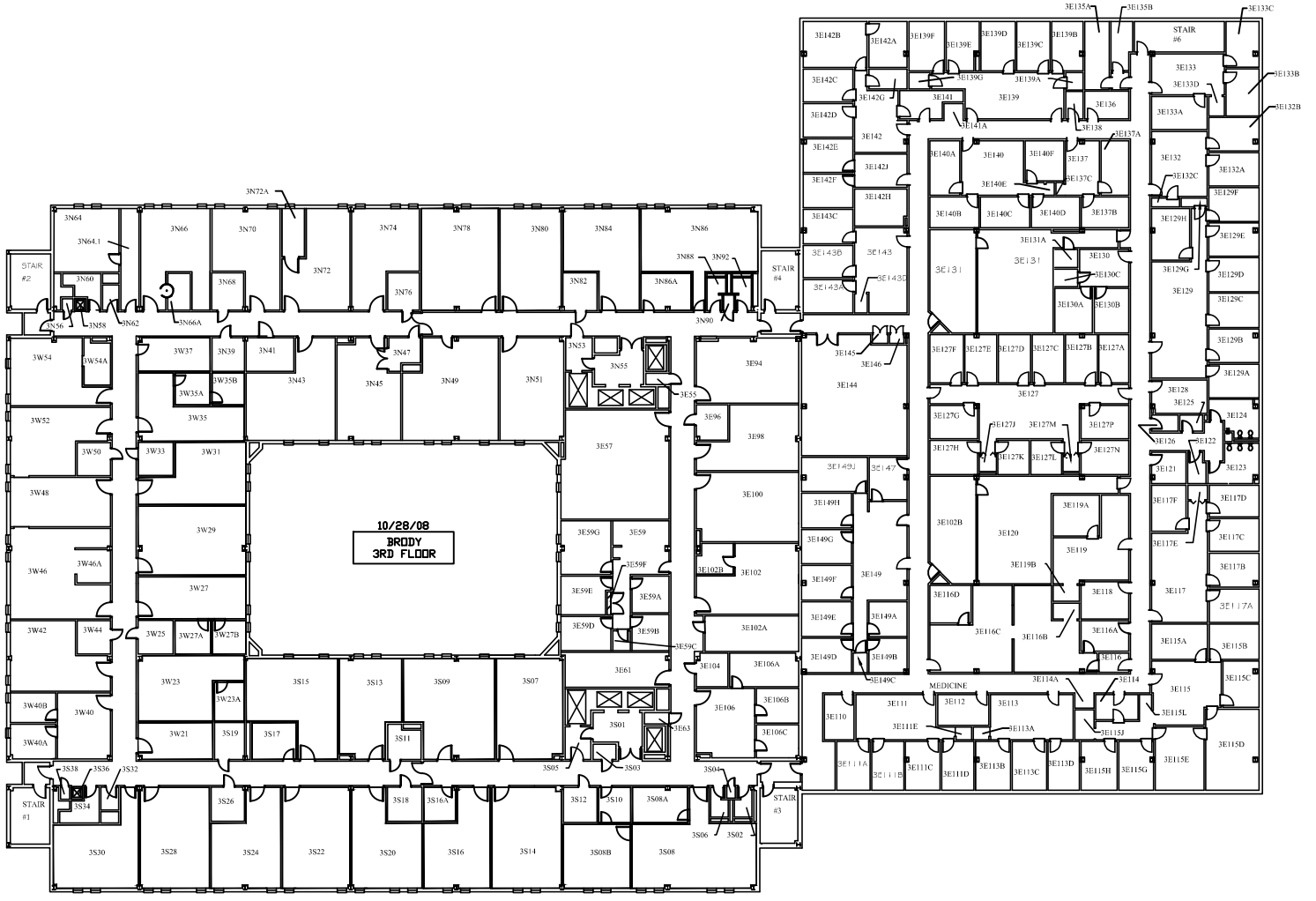
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

SECOND FLOOR PLAN

Sheet No.
3 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

ECS CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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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

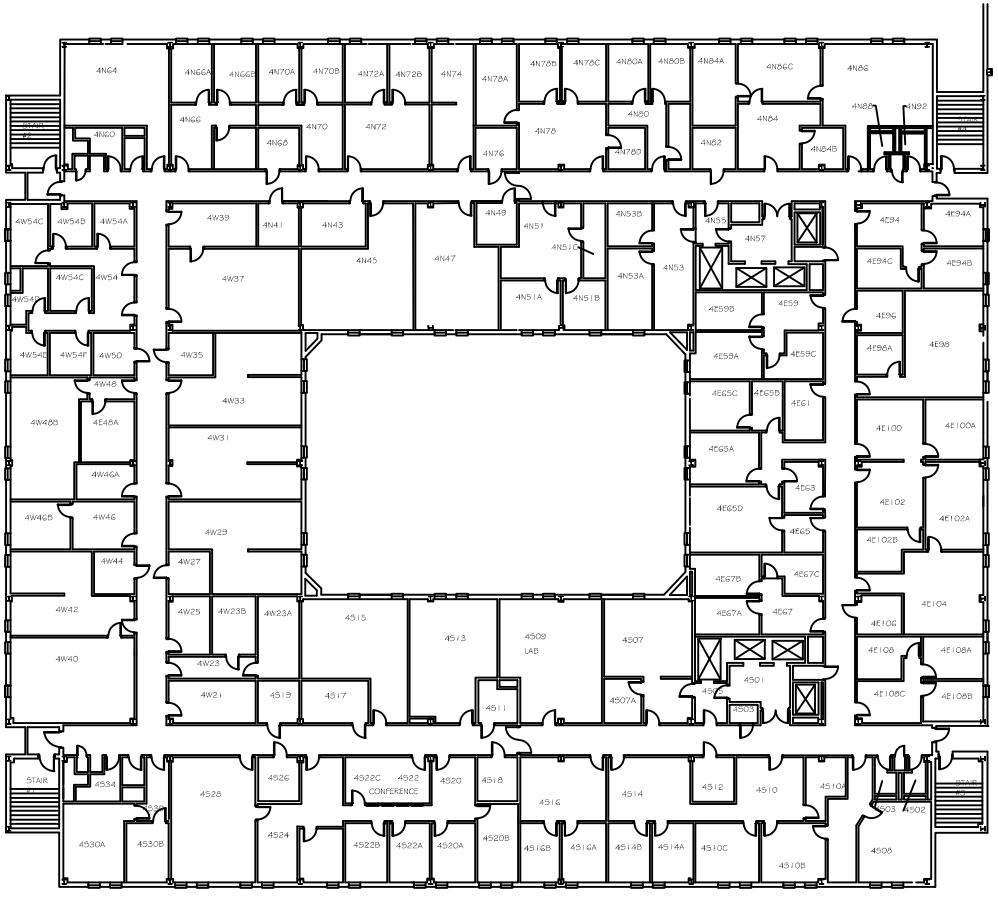
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

THIRD FLOOR PLAN

Sheet No.
4 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01

N

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

BSC CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

PROJECT NUMBER APPLIES TO ONE ROOM ONLY

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PROJECT NUMBER APPLIES TO ENTIRE BUILDING

PROJECT NUMBER APPLIES TO ENTIRE FLOOR

PROJECT NUMBER APPLIES TO A SITUATION OF UNDEFINED EXTENTS

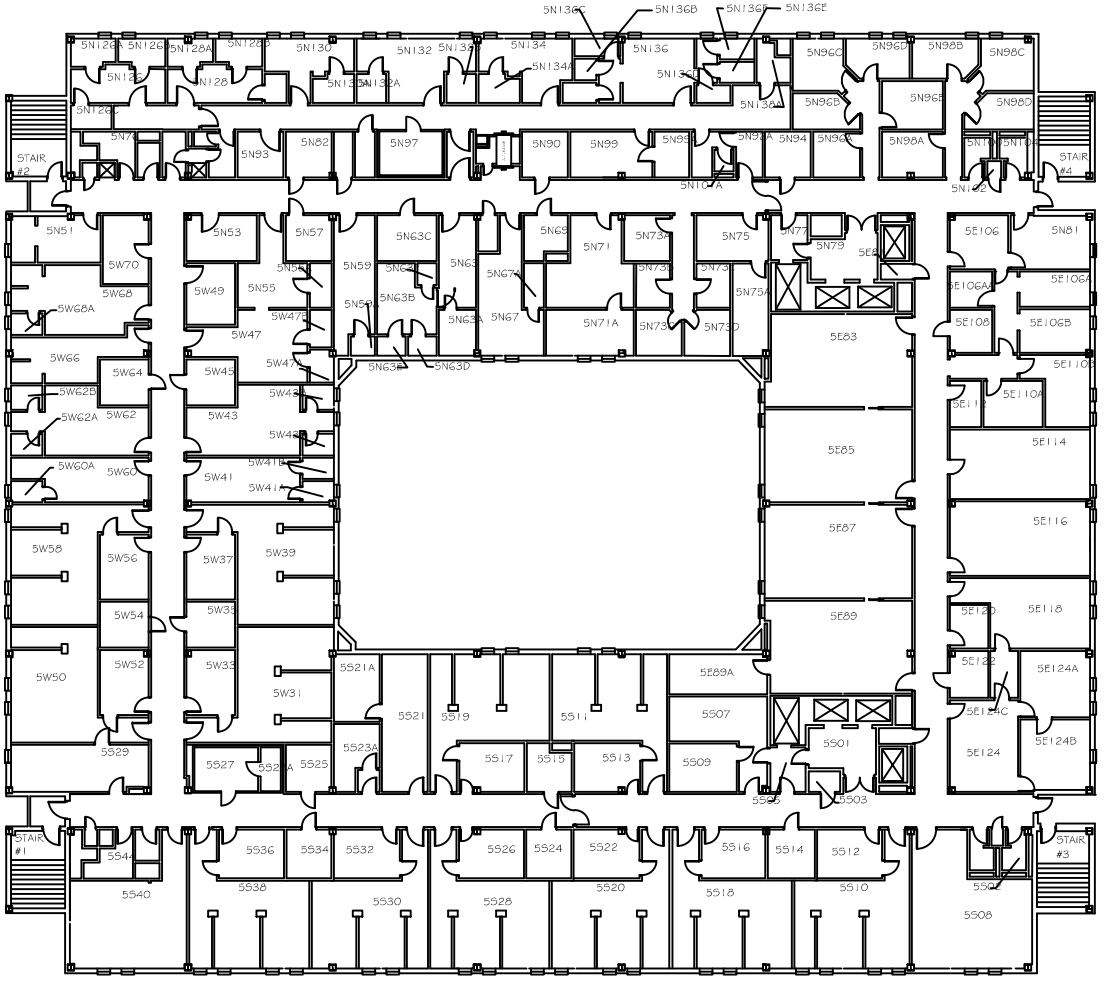
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

FOURTH FLOOR PLAN

Sheet No.
5 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

ISES CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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

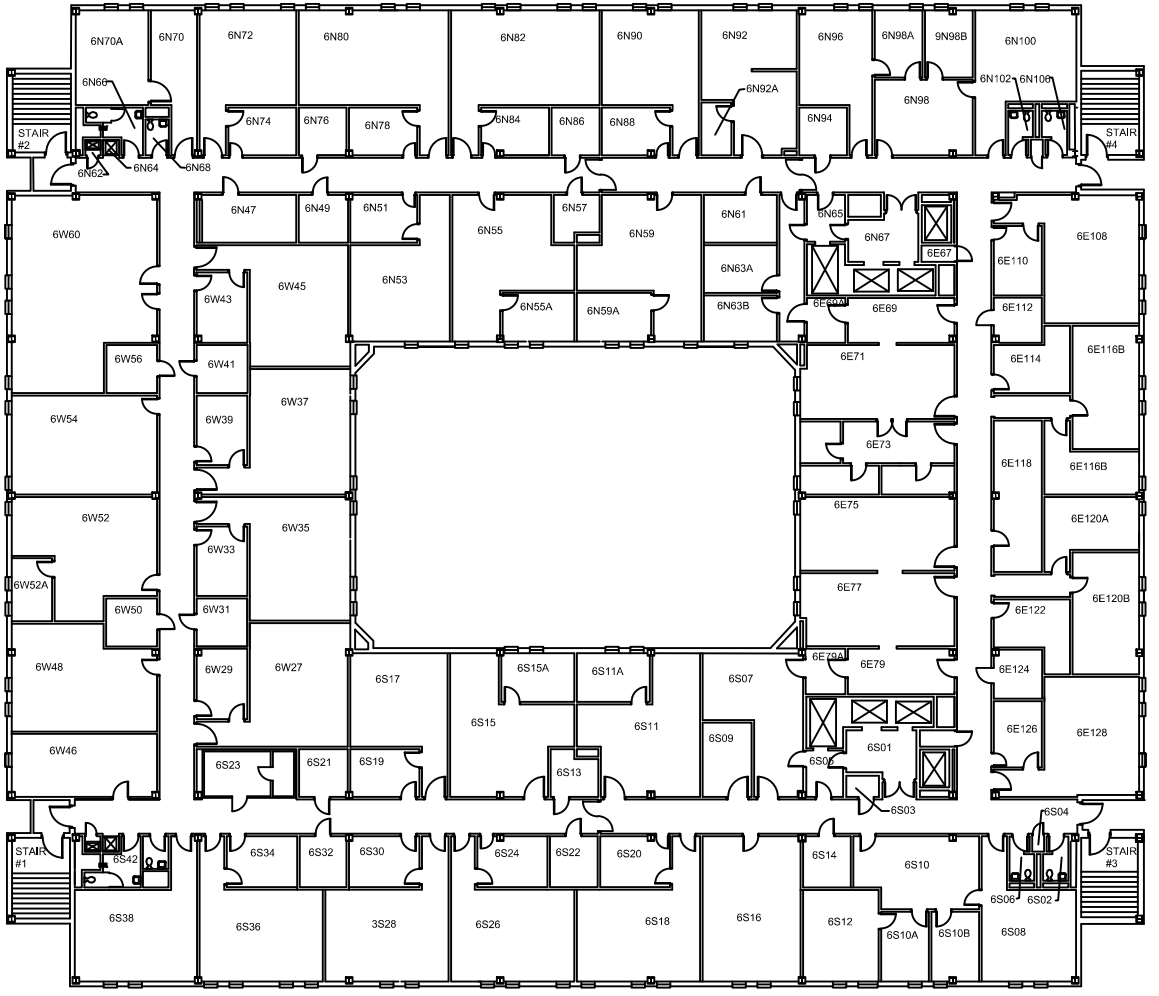
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

FIFTH FLOOR PLAN

Sheet No.
6 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

SES CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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

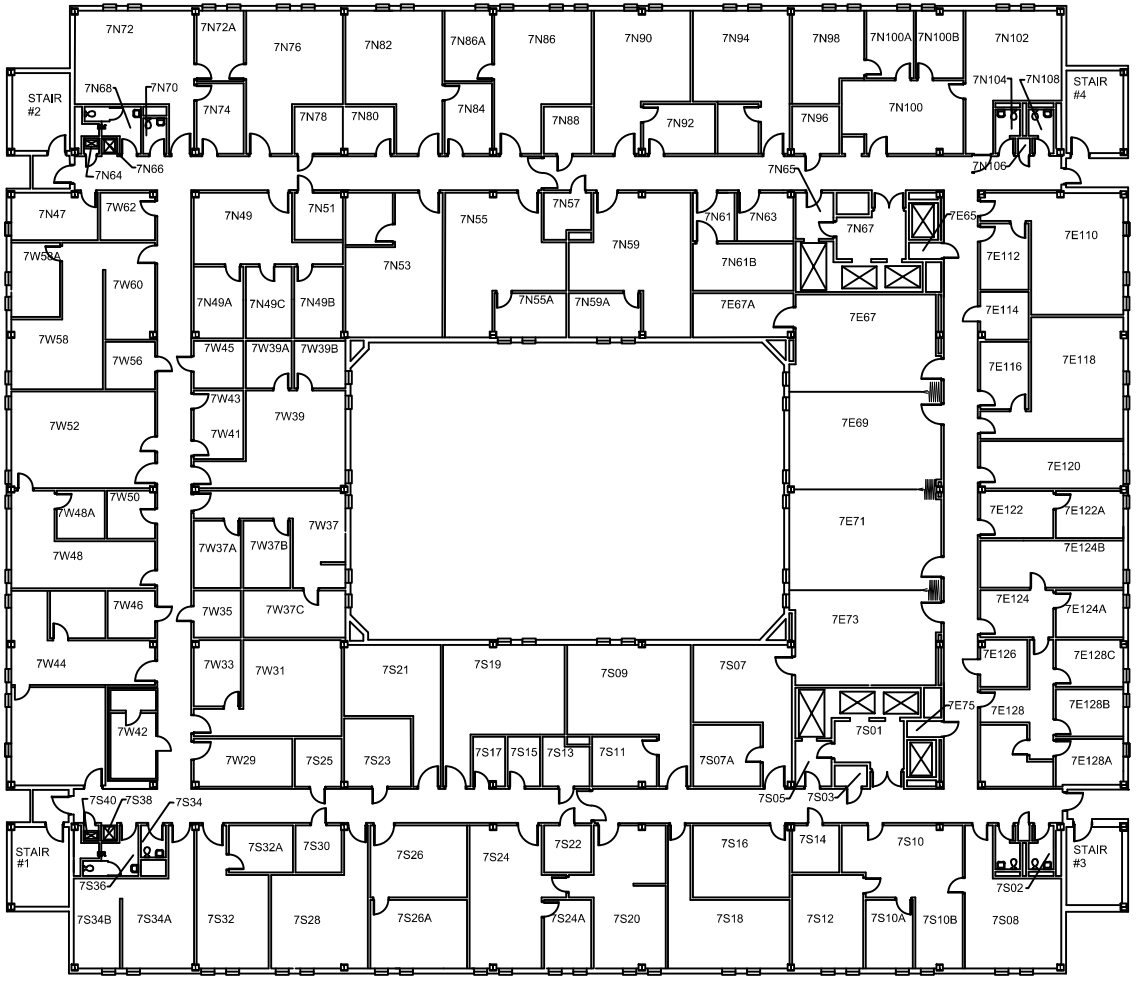
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

SIXTH FLOOR PLAN

Sheet No.
7 of 9

EAST CAROLINA UNIVERSITY



AC01 FS01

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

ECS CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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

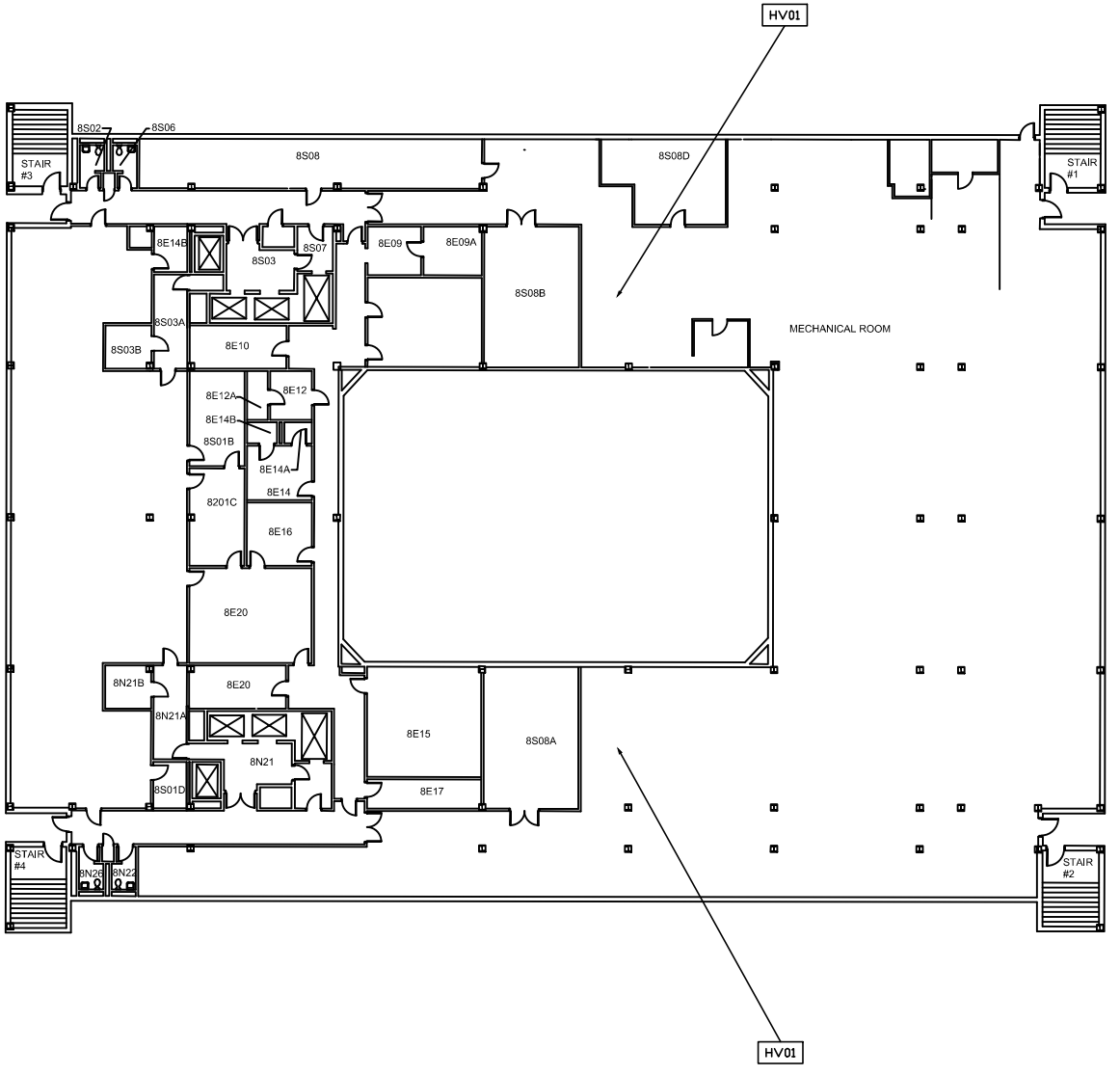
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 8/19/2016
Drawn by: A.W.
Project No. 15-124

SEVENTH FLOOR PLAN

Sheet No.
8 of 9

EAST CAROLINA UNIVERSITY



AC02

AC01 FS01

N

BRODY MEDICAL SCIENCE BUILDING

BLDG NO. BROD

BES CORPORATION

FACILITY CONDITION ASSESSMENT

3100 Breckinridge Boulevard
Suite 400, Duluth GA 30096
770.879-7825

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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: 8/19/2016
Drawn by: A.W.
Project No. 15-124

EIGHTH FLOOR PLAN

Sheet No.
9 of 9

SECTION 6

PHOTOGRAPHS

BROD001a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD001e 4/19/2016
Roof ventilator
Upper roof

BROD002a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD002e 4/19/2016
Air-cooled condenser
Upper roof

BROD003a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD003e 4/19/2016
Utility-set smoke exhaust fan P9
Upper roof

BROD004a 4/19/2016
Parapet wall flashing and lightning protection
Roof

BROD004e 4/19/2016
Utility-set smoke exhaust fan P10
Upper roof

BROD005a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD005e 4/19/2016
Original traction elevator machines
South elevator machine room

BROD006a 4/19/2016
Rolled asphalt built-up roof
Lower roof

BROD006e 4/19/2016
Updated freight elevator controls
South elevator machine room

BROD007a 4/19/2016
Rolled asphalt built-up roof
Lower roof

BROD007e 4/19/2016
Updated smoke/heat detector
South elevator machine room

BROD008a 4/19/2016
Rolled asphalt built-up roof
Lower center roof

BROD008e 4/19/2016
Pneumatic damper
South elevator machine room

BROD009a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD009e 4/19/2016
Original hydronic unit heater
South elevator machine room

BROD010a 4/19/2016
Poor paint finish on corrugated metal exterior panels
Penthouse

BROD010e 4/19/2016
Air handler
South elevator machine room

BROD011a 4/19/2016
Rolled asphalt built-up roof
Roof

BROD011e 4/19/2016
Updated and original secondary electric equipment
South elevator machine room

BROD012a 4/19/2016
Brick masonry exterior veneer finish
Roof

BROD012e 4/19/2016
Passenger elevator control cabinet
South elevator machine room

BROD013a 4/19/2016
Poor coating on steel superstructure
Penthouse

BROD013e 4/19/2016
Wall-mounted exterior light with HID lamp
Upper roof

BROD014a 4/19/2016
Compliant handrails without adequate guardrail protection
Stairwell

BROD014e 4/19/2016
Updated strobic air fan systems
Upper roof

BROD015a 4/19/2016
Compliant handrails without adequate guardrail protection
Stairwell

BROD015e 4/19/2016
Filter racks for air handlers
Penthouse, mechanical room

BROD016a 4/19/2016
Vinyl tile floor in corridors, with suspended grid ceilings and painted walls
Eighth floor

BROD016e 4/19/2016
Fire alarm system pull station
Room 8N08

BROD017a 4/19/2016
Built-in single-level drinking fountain
Eighth floor

BROD017e 4/19/2016
Variable speed drive air handler supply AC6
Room 8N08

BROD018a 4/19/2016
Aged suspended grid ceiling system
Eighth floor

BROD018e 4/19/2016
Inline fans
Room 8N08

BROD019a 4/19/2016
Knob actuated door hardware
Eighth floor

BROD019e 4/19/2016
Air handler AC6 control cabinet
Room 8N08

BROD020a 4/19/2016
Wooden lab cabinetry and stainless steel countertops
Eighth floor

BROD020e 4/19/2016
Miscellaneous variable speed drives
Room 8N08

BROD021a 4/19/2016
Inaccessible lab sink
Eighth floor

BROD021e 4/19/2016
Utility set fan 8-75
Room 8N08

BROD022a 4/19/2016
Sheet vinyl flooring with painted walls and suspended grid ceilings
Eight floor, teaching lab

BROD022e 4/19/2016
Air handler AC7
Room 8N08

BROD023a 4/19/2016
Sheet vinyl flooring with painted walls and suspended grid ceilings
Eight floor, teaching lab

BROD023e 4/19/2016
Updated inline fans 8-68 and 8-69
Room 8N08

BROD024a 4/19/2016
Wooden lab cabinetry
Eight floor, teaching lab

BROD024e 4/19/2016
Cooling return bypass backflow preventer
Room 8N08

BROD025a 4/19/2016
Wooden cabinetry with overhead closeted shelving
Seventh floor, teaching lab

BROD025e 4/19/2016
Original pumps
Room 8N08

BROD026a 4/19/2016
Wooden cabinetry with overhead closeted shelving
Seventh floor, teaching lab

BROD026e 4/19/2016
Original 1,200 amp main breakers C, D, tie, and switchgear
Room 8N08A

BROD027a 4/19/2016
Original steel lab sink and wooden cabinetry
Seventh floor, teaching lab

BROD027e 4/19/2016
480/277 volt automatic transfer switch
Room 8N08A

BROD028a 4/19/2016
Original fume hood
Seventh floor, teaching lab

BROD028e 4/19/2016
Moderate corroded chilled water butterfly valve
Room 8N08

BROD029a 4/19/2016
Vinyl tile in corridors, with suspended grid ceilings and painted walls
Seventh floor

BROD029e 4/19/2016
Biosafety filters and inline fan
Room 8N08

BROD030a 4/19/2016
Built-in single-level water fountain
Seventh floor

BROD030e 4/19/2016
Motor controller 8SPF
Room 8N08

BROD031a 4/19/2016
Partially accessible toilet
Seventh floor, men's restroom

BROD031e 4/19/2016
Abandoned fume hood fans 1E, 2E, 3E, and 4E
Room 8N08

BROD032a 4/19/2016
Partially accessible sink
Seventh floor, men's restroom

BROD032e 4/19/2016
Duct work exposed to perchloric acid fumes
Room 8N08

BROD033a 4/19/2016
Aged floor tile
Stairwell landing

BROD033e 4/19/2016
Air handler AC4, VFDs, and control cabinets
Room 8N08

BROD034a 4/19/2016
Carpeted classroom/conference room
Sixth floor

BROD034e 4/19/2016
Exposed secondary electrical wiring
Room 8N08

BROD035a 4/19/2016
Typical original wooden cabinetry
Sixth floor

BROD035e 4/19/2016
Emergency shower/eyewash station
Room 8S09

BROD036a 4/19/2016
Wooden cabinetry and original stainless sink
Break room

BROD036e 4/19/2016
Domestic water system heat exchanger
Room 8S09

BROD037a 4/19/2016
Wooden cabinetry and vinyl tiled floors and suspended ceilings
Sixth floor, teaching lab

BROD037e 4/19/2016
Updated Square D panelboard
Room 8S09

BROD038a 4/19/2016
Carpeted floors and suspended grid ceilings
Conference room

BROD038e 4/19/2016
Original air compressor and updated air dryer
Room 8S09

BROD039a 4/19/2016
Vinyl tiled floor with painted walls and inaccessible fixtures
Small private restroom

BROD039e 4/19/2016
Original fire system sprinkler head
Room 8S09

BROD040a 4/19/2016
Wooden cabinetry and original stainless sink
Break room

BROD040e 4/19/2016
Explosion proof lighting with T8 lamps
Room 8S08D

BROD041a 4/19/2016
Aged wooden cabinetry and original stainless sink
Fifth floor, break room

BROD041e 4/19/2016
Utility sink and hydronic heater
Room 8S08D

BROD042a 4/19/2016
Worn carpet
Fifth floor

BROD042e 4/19/2016
Radioluminescent tritium exit signage
Room 8S08B

BROD043a 4/19/2016
Knob actuated door hardware and no signage
Fifth floor

BROD043e 4/19/2016
Original 1,200 amp main breakers A, B, tie, and switchgear
Room 8S08B

BROD044a 4/19/2016
Stained carpet
Third floor

BROD044e 4/19/2016
Original 480/277 volt bus plugs
Room 8S08B

BROD045a 4/19/2016
Vinyl tile in corridors, with suspended grid ceilings and painted walls
Third floor

BROD045e 4/19/2016
Miscellaneous secondary electrical equipment
Room 8S08B

BROD046a 4/19/2016
Lever actuated door hardware and accessible signage
Third floor

BROD046e 4/19/2016
Original variable air volume terminal box
Room 8S08B

BROD047a 4/19/2016
Carpeted corridor with painted walls and suspended grid ceilings
Second floor

BROD047e 4/19/2016
Updated light fixture with LED lamps
Eighth floor, corridor

BROD048a 4/19/2016
Carpeted floors and suspended grid ceilings in open work area
Second floor

BROD048e 4/19/2016
Original fire system sprinkler head
Eighth floor, corridor

BROD049a 4/19/2016
Terraced classroom without adequate handrails
Second floor

BROD049e 4/19/2016
South freight elevator car
Room 8S07

BROD050a 4/19/2016
Terraced classroom without adequate handrails
Second floor

BROD050e 4/19/2016
Fire alarm system visual and audible device
Eighth floor, corridor

BROD051a 4/19/2016
Aged cushioned upholstered seating in renovated classroom
Second floor

BROD051e 4/19/2016
Updated exit signage with LED lamp
Eighth floor, corridor

BROD052a 4/19/2016
Aged cushioned upholstered seating in renovated classroom
Second floor

BROD052e 4/19/2016
Original plumbing fixtures
Room 8S06

BROD053a 4/19/2016
Terraced classroom without adequate handrails
Second floor

BROD053e 4/19/2016
Original service sink
Room 8S04

BROD054a 4/19/2016
Terraced classroom without adequate handrails
Second floor

BROD054e 4/19/2016
Eyewash/drench hose station
Room 8E18

BROD055a 4/19/2016
Ceramic tiled floor and accessible fixtures
Second floor

BROD055e 4/19/2016
Hand wash basin
Room 8E18

BROD056a 4/19/2016
Ceramic tiled floor and accessible fixtures
Second floor

BROD056e 4/19/2016
Duplex vacuum pump system
Room GW58

BROD057a 4/19/2016
Aged suspended grid ceiling system
Second floor

BROD057e 4/19/2016
Air dryers
Room GW58

BROD058a 4/19/2016
Upholstered seating in large auditorium
First floor

BROD058e 4/19/2016
Miscellaneous distribution piping
Room GW58

BROD059a 4/19/2016
Terraced auditorium without adequate aisle handrails
First floor

BROD059e 4/19/2016
3,200 amp substation SSA
Room GW58

BROD060a 4/19/2016
Steps leading to stage with no handrails
First floor

BROD060e 4/19/2016
Original power circuit breaker, spare
Room GW58

BROD061a 4/19/2016
Ceramic tiled lobby
First floor

BROD061e 4/19/2016
3,200 amp substation SSB
Room GW58

BROD062a 4/19/2016
Ceramic tiled floors and walls
First floor, men's restroom

BROD062e 4/19/2016
Secondary electrical equipment
Room GW58

BROD063a 4/19/2016
Exterior staining on the concrete and brick masonry veneer finish
Exterior

BROD063e 4/19/2016
Updated Square D switchgear SSEB
Room GW58

BROD064a 4/19/2016
Exterior staining on the brick masonry veneer finish
Exterior

BROD064e 4/19/2016
Air handler AC2 return fan
Room GW58

BROD065a 4/19/2016
Original aluminum-framed windows
Exterior

BROD065e 4/19/2016
AHU AC2 condensate return unit
Room GW58

BROD066a 4/19/2016
Exterior staining on the concrete veneer finish
Exterior

BROD066e 4/19/2016
Compressed air storage tanks
Room GW58

BROD067a 4/19/2016
Exterior masonry has moisture penetration issues
Exterior

BROD067e 4/19/2016
Air compressor
Room GW58

BROD068a 4/19/2016
Exterior masonry has moisture penetration issues
Exterior

BROD068e 4/19/2016
600 amp motor control center MCC-BE
Room GW58

BROD069a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD069e 4/19/2016
Submersible sump pumps
Room GW58

BROD070a 4/19/2016
Exterior masonry has moisture penetration issues
Exterior

BROD070e 4/19/2016
Domestic water booster pump system
Room GW58

BROD071a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD071e 4/19/2016
AHU AC1 supply fan wall VFD's
Room GW58

BROD072a 4/19/2016
Exterior masonry has moisture penetration issues
Exterior

BROD072e 4/19/2016
60 hp fire pump
Ground floor, fire pump room

BROD073a 4/19/2016
Concrete floors and CMU walls and ceilings under renovation
Basement

BROD073e 4/19/2016
Domestic water backflow preventers
Ground floor, fire pump room

BROD074a 4/19/2016
Concrete floors and CMU walls and ceilings under renovation
Basement

BROD074e 4/19/2016
75 hp chilled water pump
Room GW58

BROD075a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD075e 4/19/2016
Instantaneous water heater/heat exchanger
Room GW58

BROD076a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD076e 4/19/2016
Vacuum condensate return system
Room GW58

BROD077a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD077e 4/19/2016
Improper pipe bend at vacuum condensate system
Room GW58

BROD078a 4/19/2016
Exterior staining on the concrete and brick masonry veneer finish
Exterior

BROD078e 4/19/2016
Air separator
Room GW58

BROD079a 4/19/2016
Exterior brick masonry and original aluminum-framed windows
Exterior

BROD079e 4/19/2016
Heating water pumps 1 and 2
Room GW58

BROD080e 4/19/2016
Pressure reducing valves
Room GW58

BROD081e 4/19/2016
Lighting overview
Ground floor, corridor

BROD082e 4/19/2016
Shower stall
Room GW30

BROD083e 4/19/2016
Computer room air conditioner
Ground floor, old data room

BROD084e 4/19/2016
Damaged insulation on condensate unit
Room GL02

BROD085e 4/19/2016
Screw-type, oil-less air compressors
Room GL02

BROD086e 4/19/2016
Heating water pumps
Room 3E144

BROD087e 4/19/2016
Air handler 88-2
Room 3E144

BROD088e 4/19/2016
After-market drip pan retrofit
Room 3E144

BROD089e 4/19/2016
Energy recovery wheels
Penthouse, mechanical room

BROD090e 4/19/2016
Centrifugal rooftop exhaust fans
Lower roof

BROD091e 4/19/2016
Air-cooled chiller
Exterior

BROD092e 4/19/2016
Chilled water pumps
Exterior

BROD093e 4/19/2016
625 kVA emergency generator #1
Generator building

BROD094e 4/19/2016
Fuel oil day tank
Generator building

BROD095e 4/19/2016
600 kW emergency generator #3
Generator building

BROD096e 4/19/2016
Emergency power switchgear
Generator building

BROD097e 4/19/2016
Automatic transfer switch
Generator building

BROD098e 4/19/2016
Original transfer switches
Generator building

BROD099e 4/19/2016
Electric domestic water heater
Generator building

BROD100e 4/19/2016
Recessed exterior light fixture
Loading dock

BROD101e 4/19/2016
Updated exterior light with LED lamps
Exterior

BROD102e 4/19/2016
Walk-in cooler refrigeration equipment
Exterior

BROD103e 4/19/2016
Fire alarm system annunciator panel
First floor, main entry

BROD104e 4/19/2016
Original auditorium lighting system
Auditorium