

EAST CAROLINA UNIVERSITY

Facility Condition Assessment

Hardy Building

Asset 098

Inspected January 25, 2023



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FACILITY CONDITION ASSESSMENT

SECTION 1

ASSET OVERVIEW

ASSET EXECUTIVE SUMMARY

All costs shown as Present Value

ASSET CODE 098	CURRENT REPLACEMENT VALUE \$2,919,000
ASSET NAME HARDY BUILDING	FACILITY CONDITION NEEDS INDEX 0.23
ASSET USE Office / Administrative	FACILITY CONDITION INDEX 0.15
YEAR BUILT 1967	10-YEAR \$/SF 161.91
GSF 4,220	
INSPECTION DATE 01/25/2023	

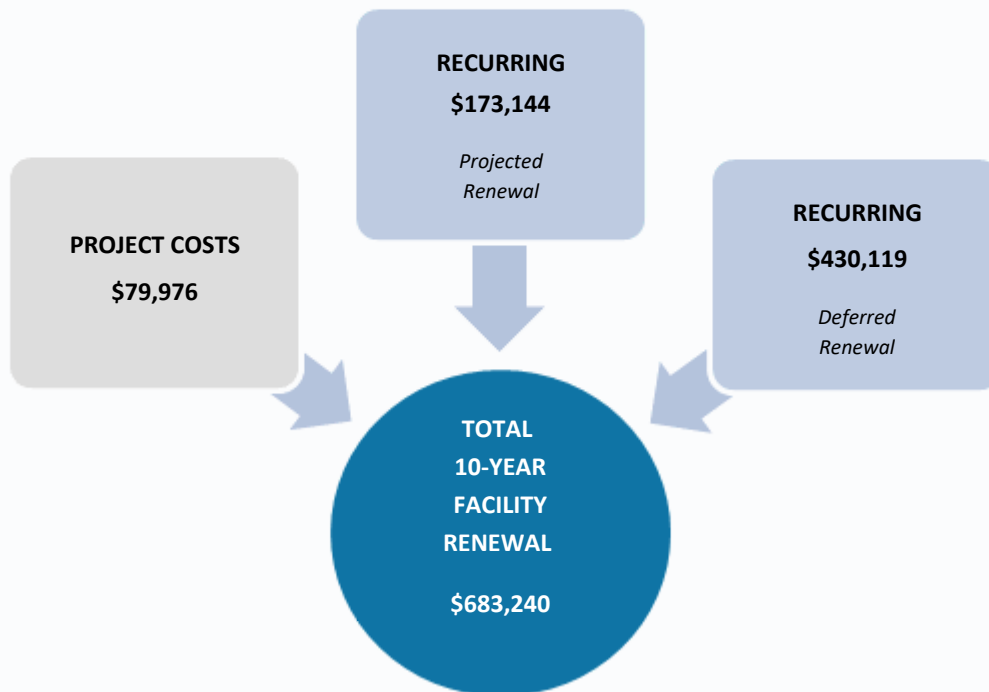
FCNI Scale

The FCNI for this asset is **0.23**

- Excellent Condition (typically new construction)
- Below Average Condition (major renovation required)
- Good Condition (maintained within lifecycle)
- Poor Condition (total renovation required)
- Fair Condition (normal renovations required)
- Replacement Indicated (unless historic)



Total Facility Renewal Costs



Project Costs

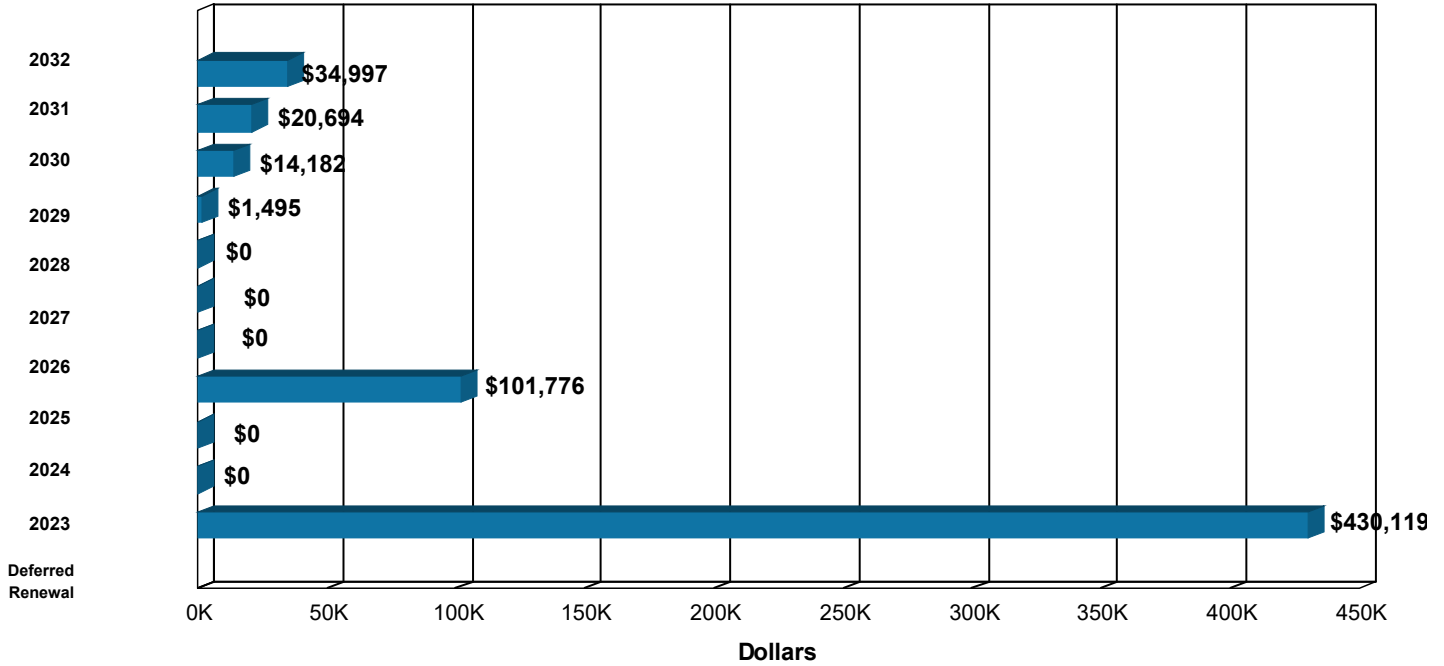
Project Cost by Priority

PLANT ADAPTION	
Priority 1	\$0
Priority 2	\$79,976
Priority 3	\$0
Priority 4	\$0
Priority 5	\$0

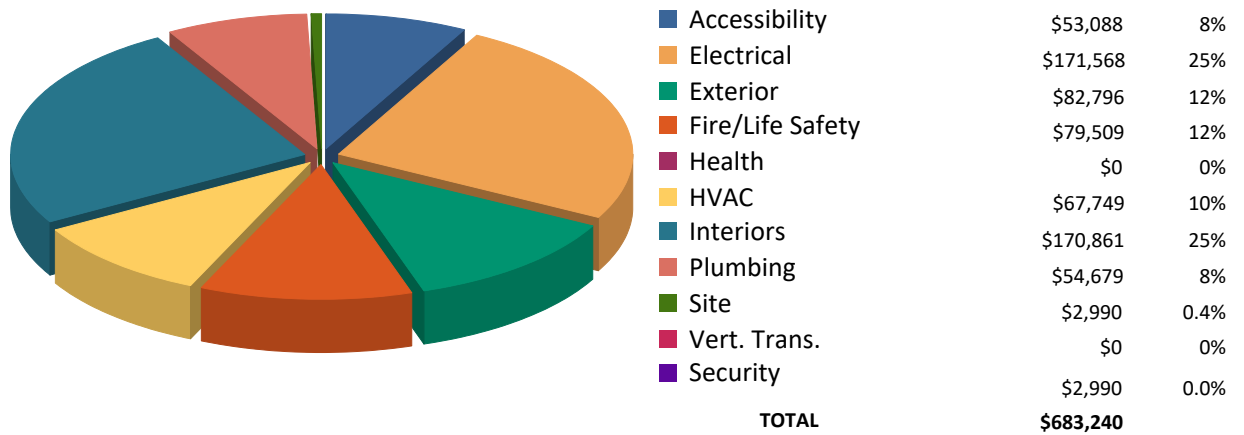
CORRECTIVE ACTION	
Priority 1	\$0
Priority 2	\$0
Priority 3	\$0
Priority 4	\$0
Priority 5	\$0

Recurring Costs

Component Replacement Cost by Year



Facilities Renewal Cost by System



ASSET SUMMARY

The Hardy Building is a single-story administrative building on the East Carolina University campus. Built in 1967, this 4,220 gross square foot building contains primarily converted offices associated with the Health Sciences campus. There have been very few finish upgrades with the last one in 2020.

The information in this report was gathered during a site visit conducted on January 25, 2023.

Site

The site is on a slight east to west slope and has a mixture of pedestrian walkways, grassy lawns, shrubbery, and trees. The walkways leading to the entrances are in good condition but have exceeded their lifecycle and should be considered for joint refill during future renovations.

Exterior Structure

The exterior is a light brick with aggregate pebble trim. These exterior systems appear to be in good condition and are not expected to need restoration or replacement within the next ten years. The metal-framed, single-pane glazing has exceeded its lifecycle and should be considered for replacement with dual-pane, energy-efficient glazing. The exterior doors are metal and glass with commercial locksets. Although in satisfactory working condition, the doors and hardware should be replaced within the next ten years. The flat EPDM roof is in fair to poor condition. Water is evacuated via roof drains which are clogged due to tree debris and there are reports of leaks and signs of water infiltration. The roof system has exceeded its lifecycle and should be replaced.

Interior Finishes/Systems

The floor finishes include carpet throughout and ceramic tile in the restroom. While the floor finishes are generally in good condition, the carpet and ceramic tile should be replaced within the next ten years. Ceilings are mostly suspended acoustical tile, with some painted drywall areas. Acoustical tile ceiling upgrades are recommended within the next ten years. Walls are painted throughout with ceramic tile in the restrooms. These finishes are in good condition as the walls were recently repainted as part of a cyclical renewal program. However, the painted walls will be due for cyclical repainting toward the end of the ten-year scope and the ceramic wall tile will be due for replacement in two to three years. Interior doors are wood with metal frames and knob hardware. Replacement of the hardware is addressed in the Accessibility section. Casework systems are laminate countertops and cabinetry in break areas. The cabinetry is in fair condition and should be considered for replacement due to age and wear.

Accessibility

The knob actuated door hardware is 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 hardware be installed on all doors that still have knobs. In addition, the signage to the permanent spaces is not ADA compliant. It is recommended that all noncompliant signage be upgraded to conform to the appropriate accessibility standards. This scope includes all directional signage.

The drinking fountains are a single-level design and should be replaced with dual-level units set in alcoves or with a tapered lower cabinet design. Also, the restrooms throughout the building are not fully compliant with ADA legislation. Installation of ADA-compliant fixtures as well as grab bars and signage should remedy the situation.

Health

No health-related issues were observed or reported at the time of the inspection.

Fire/Life Safety

Emergency egress lighting is not available. To improve occupant safety, install battery pack emergency egress lighting units and additional battery backup LED exit signs.

Fall protection is required for roofing installations to protect the welfare of workers on roofing systems located over six feet above grade. The installation of hard looped tie-off points is recommended at intervals throughout the roof to support workers associated lifelines and harness personal protective equipment.

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. These areas include data and telecom rooms. Although only these instances were noted, other fire separation compromises may exist elsewhere in this building. It is recommended that the entire building be surveyed for similar problem areas, especially in conditions and spaces that are similar to those that were observed. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly.

The fire alarm system is equipped with outdated opaque strobes and audible annunciator units. Smoke detectors are lacking in the egress corridors or unoccupied room, such as mechanical, electrical, and storage rooms or janitor's closets. The fire alarm system is at the end of its useful service life and should be replaced with a programmable multi-input fire alarm system.

This facility is not protected by any form of automatic fire suppression system. Manual, dry chemical fire extinguishers are available for immediate use.

HVAC

Heating and cooling is provided by two natural gas furnace rooftop package units. The equipment ranges in age from 6 to 12 years old but should provide reliable service for the ten year scope of this report. The metal and flexible ducts are believed to be original and should be scheduled for replacement.

Electrical

High voltage from the utility company is reduced to 120/208 volt, three-phase power via a service entrance transformer on the site. A main switchgear in the electrical room distributes 120/208 service to the 225-amp main electrical panels that have been in service for over forty years. The electrical distribution network supplies 120/208-volt power throughout the building. Aging components, such as the circuit breakers, wiring and devices serve as potential fire hazards if they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification.

The current lighting configurations consist of lay-in and surface-mounted T12 fluorescent fixtures. Based on lifecycle depletion, replacement of the interior fixtures is recommended. Install occupancy sensors in select areas for additional energy conservation.

Nighttime illumination is provided by soffit and wall-mounted compact fluorescent lighting fixtures. All of the exterior lighting should be scheduled for replacement.

Plumbing

Potable water is distributed via an insulated copper piping network. Sanitary waste and stormwater is conveyed by cast-iron, bell-and-spigot piping with some PVC that was added during recent renovations. The supply and original drain piping networks are aged and should be replaced. Failure to undertake such upgrades will likely lead to leaks, drainage issues, and other problems that will require costly maintenance.

Domestic hot water is served by a residential electric water heater that has reached the end of its useful service life and should be replaced. Restroom plumbing fixtures include wall-hung lavatories and tank-type water closets. These fixtures, as well as the utility sink, are in satisfactory working condition but are near the end of their expected service life and should be considered for replacement within the next ten years. The kitchen sinks should outlast the report scope.

Note: The renewal needs outlined in this report were identified from the visual inspection and staff interviews. Our professional architectural and engineering inspectors 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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Duluth, GA 30096

Project Manager

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Date of Inspection

January 25, 2023

Inspection Team Personnel

NAME	POSITION	SPECIALTY
Michelle Thompson	Facility Assessor	Interior Finishes, Exterior Structure, ADA Compliance, Site, Fire/Life Safety, Health
John Pasley	Facility Assessor	Mechanical, Electrical, Plumbing, Energy, Fire/Life Safety, Health

Client Contact

NAME	POSITION
Griffin L. Avin, CEFP	Director of Facilities Services, Health Sciences Campus Chief Sustainability Officer

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 Renewable 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.

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

Facility Condition Index (FCI)

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

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

Material and Labor Cost Factors and Additional Markups

The project costs are adjusted from the national averages to reflect conditions in Greenville 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. Also included in the renewal costs are the construction markup (general contractor profit and overhead, construction management, permitting, accounting, site security, insurance, bonds, sales tax, institutional fees, site utilities, refuse fees, and insurance) and professional fees (architect or engineer design fees and in-house design costs).

GLOBAL MARKUP	%
Local Labor Index	71.3
Local Materials Index	100.7
Construction Markup	20.0
Professional Fees	16.0

Recurring Costs

Renewable Component Inventory and Cost Projections

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

CATEGORY	DESCRIPTION
Component Code	A four-digit code assigned by AMS to the component
Component Description	Description of the individual component
Identifier	Identifying information can be entered as necessary.
Customer ID	Customer-provided equipment ID number
Location	The location of each component can be entered if applicable.
Quantity	The quantity of the listed component
Units	The unit of measure associated with the quantity
Complexity Factor	Adjusts the component replacement costs when it is anticipated that the actual cost will deviate from the average for that component
Total Cost	The unit cost multiplied by quantity, in today's dollars (note that this is a one-time renewal/replacement cost)
Install Date	This is the year that the component was or is estimated to have been installed. When this data is not available, the default is the year the asset was constructed.
Useful Life	Average life expectancy of the component
Useful Life Adjustment	An optional adjustment that lengthens or reduces the first lifecycle of the component
Replacement Year	Expresses when the next replacement should occur and is the sum of the install date, useful life, and any useful life adjustment

The component listing forms the basis of the Recurring Costs by Year report, which provides a year-by-year list of projected recurring renewal costs (in future year dollars) over the next ten years. Each individual component is assigned a replacement year based on lifecycles. For items 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 Renewable Component Inventory, that are past due for completion and have not yet been accomplished as part of normal maintenance or capital repair efforts. Further deferral could impair the proper functioning of the facility. Deferred Renewal upgrades 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 Renewable 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 Renewable 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 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 changing 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.

- **Priority 1 – High**
Items in this category include:
 - a. correcting a cited safety hazard
 - b. stopping accelerated deterioration
 - c. returning a facility to normal operation
- **Priority 2 – Medium**
Items in this category include:
 - a. repairs to prevent further deterioration
 - b. improvements to facility approach/entry and access to goods and services (DOJ ADA title III, priorities 1 and 2)
 - c. correction of potential safety hazards

- **Priority 3 – Low**

Items in this category include:

- a. improving access to restrooms and other amenities (DOJ ADA title III, priorities 3 and 4)
- b. bringing a facility into compliance with current building codes as grandfather clauses expire
- c. increasing usability following an occupancy or use change
- d. actions that are recommended but not required by code

Project Subclass

Subclass ratings are assigned to accessibility upgrade activities based on the four Department of Justice priority rankings recommended by the Title III regulations for planning readily achievable barrier removal projects. These ratings are:

- DOJ1 Accessible approach and entrance
- DOJ2 Access to goods and services
- DOJ3 Access to restrooms
- DOJ4 Any other necessary measures

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
VT1A – VT7A	VERTICAL TRANSPORTATION

<i>Example:</i> 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.

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

Drawings

Floor plans for this facility are provided as a reference.

Photographs

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

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

Sustainability/Energy Analysis

Energy/resource conservation measures (ECMs) are recommendations that will reduce resource consumption or the rate of growth in consumption. Examples include improving the efficiency of an HVAC system (e.g., digital motor speed controls, exhaust energy recovery, retrocommissioning) or directly reducing the consumption of a resource (e.g., low flow plumbing fixtures, high-efficiency lighting, or structural insulation improvement). Where significant conservation opportunities are evident for this facility, ECMs are identified and tabulated in Section 7 as a basis for further viability investigation.

FACILITY CONDITION ASSESSMENT

SECTION 2

COST SUMMARIES
AND TOTALS

RENEWAL NEEDS MATRIX

All dollars shown as Present Value

CATEGORY	NONRECURRING PROJECT NEEDS			RECURRING COMPONENT REPLACEMENT NEEDS											
	Immediate	Critical	Noncritical	Deferred Renewal	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
ACCESSIBILITY	0	53,088	0	0	0	0	0	0	0	0	0	0	0	0	\$53,088
EXTERIOR	0	0	0	82,796	0	0	0	0	0	0	0	0	0	0	\$82,796
INTERIOR	0	0	0	54,781	0	0	81,083	0	0	0	0	0	0	34,997	\$170,861
PLUMBING	0	0	0	40,496	0	0	0	0	0	0	0	14,182	0	0	\$54,679
HVAC	0	0	0	26,362	0	0	20,694	0	0	0	0	0	20,694	0	\$67,749
FIRE/LIFE SAFETY	0	26,889	0	52,621	0	0	0	0	0	0	0	0	0	0	\$79,509
ELECTRICAL	0	0	0	171,568	0	0	0	0	0	0	0	0	0	0	\$171,568
SITE	0	0	0	1,495	0	0	0	0	0	0	1,495	0	0	0	\$2,990
VERT. TRANS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
HEALTH/EQUIP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
SUBTOTAL	\$0	\$79,976	\$0	\$430,119	\$0	\$0	\$101,776	\$0	\$0	\$0	\$1,495	\$14,182	\$20,694	\$34,997	\$683,240
TOTAL NONRECURRING PROJECT NEEDS			\$79,976	TOTAL RECURRING COMPONENT REPLACEMENT NEEDS											\$603,264

CURRENT REPLACEMENT VALUE	\$2,919,000
FACILITY CONDITION NEEDS INDEX	0.23
FACILITY CONDITION INDEX	0.15

GSF	TOTAL 10-YEAR FACILITY RENEWAL NEEDS	10-YEAR NEEDS/SF
4,220	\$683,240	\$161.91

RENEWAL NEEDS BY SYSTEM

All costs shown as Present Value

CATEGORY	NONRECURRING PROJECT COSTS	RECURRING COMPONENT REPLACEMENT COSTS	TOTAL 10-YEAR FACILITY RENEWAL COSTS
ACCESSIBILITY	\$53,088	\$0	\$53,088
EXTERIOR	\$0	\$82,796	\$82,796
INTERIOR	\$0	\$170,861	\$170,861
PLUMBING	\$0	\$54,679	\$54,679
HVAC	\$0	\$67,749	\$67,749
FIRE/LIFE SAFETY	\$26,889	\$52,621	\$79,509
ELECTRICAL	\$0	\$171,568	\$171,568
SITE	\$0	\$2,990	\$2,990
VERT. TRANS	\$0	\$0	\$0
HEALTH	\$0	\$0	\$0
TOTALS	\$79,976	\$603,264	\$683,240

FACILITIES RENEWAL PLAN
RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
098 WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	SINGLE PANE		BLDG WIDE	B2010	Deferred Renewal	49,754
098 DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	METAL AND GLASS		ENTRY	B2030	Deferred Renewal	9,028
098 RR03	ROOF - 1-PLY, ADHERED (EPDM, PIB, CSPE, PVC)	FLAT EPDM		ROOF	B3010	Deferred Renewal	24,014
098 DR24	DOOR LOCK, COMMERCIAL-GRADE			GLASS ENTRY DRS	C1020	Deferred Renewal	1,793
098 CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		BREAK AREAS	C1030	Deferred Renewal	10,387
098 IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		THROUGHOUT	C3020	Deferred Renewal	42,601
098 PS14	SUPPLY PIPING SYSTEM - OFFICE	INSUL, COPPER		THROUGHOUT	D2020	Deferred Renewal	17,856
098 WH23	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	RUUD	19457	ELECTRICAL ROOM	D2020	Deferred Renewal	2,143
098 PD14	DRAIN PIPING SYSTEM - OFFICE	CAST IRON		THROUGHOUT	D2030	Deferred Renewal	20,498
098 HV14	HVAC DISTRIBUTION NETWORKS - OFFICE	ORIGINAL		THROUGHOUT	D3040	Deferred Renewal	26,362
098 FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	FIRE ALARM	19456	ELECTRICAL RM	D4030	Deferred Renewal	31,897
098 FA02	FIRE ALARM SYSTEM - DEVICES	ORIGINAL		THROUGHOUT	D4030	Deferred Renewal	20,724
098 SE14	ELECTRICAL DISTRIBUTION NETWORK - OFFICE	120/240		THROUGHOUT	D5010	Deferred Renewal	99,726
098 LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	FLUSH MOUNT FIXTURE		SOFFITS	D5020	Deferred Renewal	2,258
098 LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	FLOOD FIXTURE		CORNER, GABLES	D5020	Deferred Renewal	9,519
098 LI14	LIGHTING SYSTEM, INTERIOR - OFFICE	FLUORESCENT		THROUGHOUT	D5020	Deferred Renewal	60,065

FACILITIES RENEWAL PLAN
RECURRING COMPONENT REPLACEMENT COSTS

All costs shown as Present Value

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
098 SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	Deferred Renewal	1,495
098 IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		RESTROOM	C3010	2025	31,415
098 IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOM	C3020	2025	12,250
098 IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X4 GRID		THROUGHOUT	C3030	2025	37,418
098 HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	D3050	2025	20,694
098 SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	2029	1,495
098 FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOM	D2010	2030	6,405
098 FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PC		CUSTODIAL	D2010	2030	2,158
098 FX11	PLUMBING FIXTURE - WATER CLOSET, TANK-TYPE	PC LOW FLOW		RESTROOM	D2010	2030	5,619
098 HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	D3050	2031	20,694
098 IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		THROUGHOUT	C3010	2032	34,997
TOTAL							\$603,264

FACILITIES RENEWAL PLAN
 NONRECURRING PROJECT COSTS

All costs shown as Present Value

PROJECT NUMBER	PROJECT TITLE	UNI-FORMAT	PRIORITY CLASS	PROJECT CLASSIFICATION	PROJECT COST
098AC01	INTERIOR DOOR & SIGNAGE UPGRADES	C1010	2	Plant Adaption	19,833
098AC02	RESTROOM AND DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	D2010	2	Plant Adaption	33,255
098FS01	ADD ROPE DAVITS TO SUPPORT WORKER FALL PROTECTION	B3010	2	Plant Adaption	17,583
098FS02	ELIMINATE FIRE RATING COMPROMISES	C1010	2	Plant Adaption	2,190
098FS03	INSTALL EXIT SIGNS AND EMERGENCY LIGHTING	D5020	2	Plant Adaption	7,116
TOTAL					\$79,976

FACILITY CONDITION ASSESSMENT

SECTION 3

**NONRECURRING
PROJECT DETAILS**

All costs shown as Present Value

ELIMINATE FIRE RATING COMPROMISES			
Project Number:	098FS02	Category Code:	
Priority Sequence:	1	FS5C	
Priority Class:	Medium	System:	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	Component:	EGRESS PATH
Date Basis:	3/4/2023	Element:	SEPARATION RATING

Code Application:		Subclass/Savings:	Project Location:
IBC	711.3	Not Applicable	Room Only: Floor(s) 1

Description

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. These areas include data and telecom closets. Although only these instances were noted, other fire separation compromises may exist elsewhere in this building. It is recommended that the entire building be surveyed for similar problem areas, especially in conditions and spaces that are similar to those that were observed. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Minor passive firestopping efforts	LOT	1	\$500	\$500	\$1,500	\$1,500	\$2,000
Base Material/Labor Costs				\$500		\$1,500	
Indexed Material/Labor Costs				\$504		\$1,070	\$1,573
Construction Mark Up at 20.0%							\$315
Original Construction Cost							\$1,888
Date of Original Estimate:	3/4/2023		Inflation			\$0	
Current Year Construction Cost							\$1,888
Professional Fees at 16.0%							\$302
TOTAL PROJECT COST							\$2,190

All costs shown as Present Value

ADD ROPE DAVITS TO SUPPORT WORKER FALL PROTECTION			
Project Number:	098F501	Category Code:	
Priority Sequence:	2	FS6A	
Priority Class:	Medium	System:	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	Component:	GENERAL
Date Basis:	3/6/2023	Element:	OTHER

Code Application:		Subclass/Savings:	Project Location:
OSHA	29 CFR 1926.500	Not Applicable	Building-wide: Floor(s) R

Description

Fall protection is required for roofing installations to protect the welfare of workers on roofing systems located over six feet above grade. The installation of hard looped tie-off points is recommended at intervals throughout the roof to support workers associated lifelines and harness personal protective equipment.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Allocation to install metal rope davits to support PPE equipment on roof	EA	15	\$391	\$5,871	\$628	\$9,425	\$15,296
Base Material/Labor Costs				\$5,871		\$9,425	
Indexed Material/Labor Costs				\$5,912		\$6,720	\$12,632
Construction Mark Up at 20.0%							\$2,526
Original Construction Cost							\$15,158
Date of Original Estimate:	3/6/2023		Inflation				\$0
Current Year Construction Cost							\$15,158
Professional Fees at 16.0%							\$2,425
TOTAL PROJECT COST							\$17,583

All costs shown as Present Value

INSTALL EXIT SIGNS AND EMERGENCY LIGHTING			
Project Number:	098F503	Category Code:	
Priority Sequence:	3	FS1A	
Priority Class:	Medium	System:	FIRE/LIFE SAFETY
Project Class:	Plant Adaption	Component:	LIGHTING
Date Basis:	3/16/2023	Element:	EGRESS LTG./EXIT SIGNAGE

Code Application:		Subclass/Savings:	Project Location:
NFPA	1,13,13R,101	DOJ4 - Other	Building-wide: Floor(s) 1

Description

The egress path is not clearly designated by exit signs. It is recommended that new LED-type exit signs be installed. Also, install emergency batter back-up lighting.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install illuminated exit signs	EA	6	\$405	\$2,431	\$207	\$1,242	\$3,673
Install battery back-up egress lighting	EA	6	\$135	\$810	\$225	\$1,350	\$2,160
Base Material/Labor Costs				\$3,240		\$2,593	
Indexed Material/Labor Costs				\$3,263		\$1,849	\$5,112
Construction Mark Up at 20.0%							\$1,022
Original Construction Cost							\$6,134
Date of Original Estimate:	3/16/2023		Inflation			\$0	
Current Year Construction Cost							\$6,134
Professional Fees at 16.0%							\$981
TOTAL PROJECT COST							\$7,116

All costs shown as Present Value

RESTROOM AND DRINKING FOUNTAIN ACCESSIBILITY UPGRADES			
Project Number:	098AC02	Category Code:	
Priority Sequence:	4	AC3E	
Priority Class:	Medium	System:	ACCESSIBILITY
Project Class:	Plant Adaption	Component:	INTERIOR PATH OF TRAVEL
Date Basis:	3/6/2023	Element:	RESTROOMS/BATHROOMS

Code Application:		Subclass/Savings:	Project Location:
ADAAG	211, 602, 604, 605, 606, 607, 608	DOJ3 - Restrooms	Room Only: Floor(s) 1

Description

The restrooms throughout the building are not fully compliant with ADA legislation, installation of ADA-compliant fixtures as well as grab bars and signage should remedy the situation. Additionally, the drinking fountains are a single-level design and should be replaced with dual-level units set in alcoves or with a tapered lower cabinet design.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Grab bars (per stall)	SYS	4	\$232	\$929	\$546	\$2,186	\$3,115
ADA-compliant signage	EA	4	\$87.09	\$348	\$25.61	\$102	\$451
ADA-compliant lavatory	EA	4	\$1,008	\$4,032	\$375	\$1,501	\$5,534
ADA-compliant toilet	EA	4	\$1,584	\$6,334	\$418	\$1,674	\$8,008
Dual level drinking fountain	EA	1	\$1,995	\$1,995	\$613	\$613	\$2,608
Alcove construction for drinking fountain	EA	1	\$1,438	\$1,438	\$6,137	\$6,137	\$7,575
Base Material/Labor Costs				\$15,076		\$12,214	
Indexed Material/Labor Costs				\$15,182		\$8,708	\$23,890
Construction Mark Up at 20.0%							\$4,778
Original Construction Cost							\$28,668
Date of Original Estimate:	3/6/2023					Inflation	\$0
Current Year Construction Cost							\$28,668
Professional Fees at 16.0%							\$4,587
TOTAL PROJECT COST							\$33,255

All costs shown as Present Value

INTERIOR DOOR & SIGNAGE UPGRADES			
Project Number:	098AC01	Category Code:	
Priority Sequence:	5	AC3C	
Priority Class:	Medium	System:	ACCESSIBILITY
Project Class:	Plant Adaption	Component:	INTERIOR PATH OF TRAVEL
Date Basis:	3/6/2023	Element:	DOORS AND HARDWARE

Code Application:

Subclass/Savings:

Project Location:

ADAAG

309.4, 703.1

DOJ2 - Access to Goods & Services

Floor-wide: Floor(s) 1

Description

The knob actuated door hardware is 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 still have knobs. In addition, the signage to the permanent spaces is not ADA compliant. It is recommended that all noncompliant signage be upgraded to conform to the appropriate accessibility standards. This scope includes all directional signage.

All costs shown as Present Value

Project Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA-compliant signage	EA	19	\$87.09	\$1,655	\$25.61	\$487	\$2,141
Lever actuated door hardware	EA	19	\$498	\$9,465	\$200	\$3,792	\$13,257
Base Material/Labor Costs				\$11,120		\$4,278	
Indexed Material/Labor Costs				\$11,198		\$3,050	\$14,248
Construction Mark Up at 20.0%							\$2,850
Original Construction Cost							\$17,098
Date of Original Estimate:	3/6/2023					Inflation	\$0
Current Year Construction Cost							\$17,098
Professional Fees at 16.0%							\$2,736
TOTAL PROJECT COST							\$19,833

FACILITY CONDITION ASSESSMENT

SECTION 4

LIFECYCLE COMPONENT
INVENTORY

RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	SINGLE PANE		BLDG WIDE	270	SF	1.00	\$49,754	1967	40	15	DR
DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	METAL AND GLASS		ENTRY	2	LEAF	1.00	\$9,028	1995	25	2	DR
RR03	ROOF - 1-PLY, ADHERED (EPDM, PIB, CSPE, PVC)	FLAT EPDM		ROOF	2,958	SF	1.00	\$24,014	1995	20	7	DR
DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	WOOD, KNOBS		BLDG WIDE	19	LEAF	1.00	\$85,515	1995	40		2035
DR24	DOOR LOCK, COMMERCIAL-GRADE			GLASS ENTRY DRS	2	EA	1.00	\$1,793	1995	20	7	DR
CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		BREAK AREAS	16	LF	1.00	\$10,387	1995	20	7	DR
IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		THROUGHOUT	12,990	SF	1.00	\$34,997	2020	12		2032
IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		RESTROOM	680	SF	1.00	\$31,415	1995	30		2025
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		THROUGHOUT	2,890	SF	1.00	\$42,601	1995	12	15	DR
IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOM	320	SF	1.00	\$12,250	1995	30		2025
IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X4 GRID		THROUGHOUT	3,080	SF	1.00	\$37,418	1995	30		2025
IC04	CEILING FINISH - PAINTED OR STAINED, STANDARD	PT ON DRYWALL		BLDG WIDE	130	SF	1.00	\$350	2020	24		2044
FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOM	4	EA	1.00	\$6,405	1995	35		2030
FX04	PLUMBING FIXTURE - SINK, KITCHEN	SST		EXAM ROOMS	5	EA	1.00	\$12,999	1995	35	7	2037
FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PC		CUSTODIAL	1	EA	1.00	\$2,158	1995	35		2030

RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	INSTR DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
FX11	PLUMBING FIXTURE - WATER CLOSET, TANK-TYPE	PC LOW FLOW		RESTROOM	4	EA	1.00	\$5,619	1995	35		2030
PS14	SUPPLY PIPING SYSTEM - OFFICE	INSUL, COPPER		THROUGHOUT	4,220	SF	1.00	\$17,856	1967	35	20	DR
WH23	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	RUUD	19457	ELECTRICAL ROOM	40	GAL	1.00	\$2,143	2005	10	7	DR
PD14	DRAIN PIPING SYSTEM - OFFICE	CAST IRON		THROUGHOUT	3,220	SF	1.00	\$20,498	1967	40	15	DR
PD14	DRAIN PIPING SYSTEM - OFFICE	PVC		THROUGHOUT	1,000	SF	1.00	\$6,366	2005	40		2045
HV14	HVAC DISTRIBUTION NETWORKS - OFFICE	ORIGINAL		THROUGHOUT	4,220	SF	0.20	\$26,362	1967	40	15	DR
HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	4	TON	1.00	\$20,694	2016	15		2031
HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	4	TON	1.00	\$20,694	2010	15		2025
FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	FIRE ALARM	19456	ELECTRICAL RM	1	EA	0.70	\$31,897	2005	15	2	DR
FA02	FIRE ALARM SYSTEM - DEVICES	ORIGINAL		THROUGHOUT	4,220	SF	1.00	\$20,724	2005	18	-1	DR
SE14	ELECTRICAL DISTRIBUTION NETWORK - OFFICE	120/240		THROUGHOUT	4,220	SF	1.00	\$99,726	1967	40	15	DR
LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	FLUSH MOUNT FIXTURE		SOFFITS	8	EA	1.00	\$2,258	2005	15	2	DR
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	FLOOD FIXTURE		CORNER, GABLES	8	EA	1.00	\$9,519	2005	15	2	DR
LI14	LIGHTING SYSTEM, INTERIOR - OFFICE	FLUORESCENT		THROUGHOUT	4,220	SF	1.00	\$60,065	1967	20	35	DR
SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	250	LF	1.00	\$1,495	1967	7	48	DR

RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	INSTL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR	
Grand Total:								\$706,998					

RECURRING NEEDS BY YEAR

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

DEFERRED RENEWAL									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	SINGLE PANE		BLDG WIDE	B2010	270	SF	\$49,754	DR
DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	METAL AND GLASS		ENTRY	B2030	2	LEAF	\$9,028	DR
RR03	ROOF - 1-PLY, ADHERED (EPDM, PIB, CSPE, PVC)	FLAT EPDM		ROOF	B3010	2,958	SF	\$24,014	DR
DR24	DOOR LOCK, COMMERCIAL-GRADE			GLASS ENTRY DRS	C1020	2	EA	\$1,793	DR
CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		BREAK AREAS	C1030	16	LF	\$10,387	DR
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		THROUGHOUT	C3020	2,890	SF	\$42,601	DR
PS14	SUPPLY PIPING SYSTEM - OFFICE	INSUL, COPPER		THROUGHOUT	D2020	4,220	SF	\$17,856	DR
WH23	WATER HEATER - RESIDENTIAL, ELECTRIC (25-46 GAL)	RUUD	19457	ELECTRICAL ROOM	D2020	40	GAL	\$2,143	DR
PD14	DRAIN PIPING SYSTEM - OFFICE	CAST IRON		THROUGHOUT	D2030	3,220	SF	\$20,498	DR
HV14	HVAC DISTRIBUTION NETWORKS - OFFICE	ORIGINAL		THROUGHOUT	D3040	4,220	SF	\$26,362	DR
FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	FIRE ALARM	19456	ELECTRICAL RM	D4030	1	EA	\$31,897	DR
FA02	FIRE ALARM SYSTEM - DEVICES	ORIGINAL		THROUGHOUT	D4030	4,220	SF	\$20,724	DR

RECURRING NEEDS BY YEAR

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

SE14	ELECTRICAL DISTRIBUTION NETWORK - OFFICE	120/240		THROUGHOUT	D5010	4,220	SF	\$99,726	DR
LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	FLUSH MOUNT FIXTURE		SOFFITS	D5020	8	EA	\$2,258	DR
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	FLOOD FIXTURE		CORNER, GABLES	D5020	8	EA	\$9,519	DR
LI14	LIGHTING SYSTEM, INTERIOR - OFFICE	FLUORESCENT		THROUGHOUT	D5020	4,220	SF	\$60,065	DR
SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	250	LF	\$1,495	DR
TOTAL DEFERRED RENEWAL COST								\$430,119	

No Projected Component Replacement Cost for Asset No. 098 for 2023

No Projected Component Replacement Cost for Asset No. 098 for 2024

RECURRING NEEDS BY YEAR

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

2025									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		RESTROOM	C3010	680	SF	\$33,328	2025
IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOM	C3020	320	SF	\$12,996	2025
IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X4 GRID		THROUGHOUT	C3030	3,080	SF	\$39,697	2025
HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	D3050	4	TON	\$21,954	2025
2025 PROJECTED COMPONENT REPLACEMENT COST								\$107,975	

No Projected Component Replacement Cost for Asset No. 098 for 2026

RECURRING NEEDS BY YEAR

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

No Projected Component Replacement Cost for Asset No. 098 for 2027

No Projected Component Replacement Cost for Asset No. 098 for 2028

No Projected Component Replacement Cost for Asset No. 098 for 2029

2030									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOM	D2010	4	EA	\$7,878	2030
FX11	PLUMBING FIXTURE - WATER CLOSET, TANK-TYPE	PC LOW FLOW		RESTROOM	D2010	4	EA	\$6,910	2030

RECURRING NEEDS BY YEAR

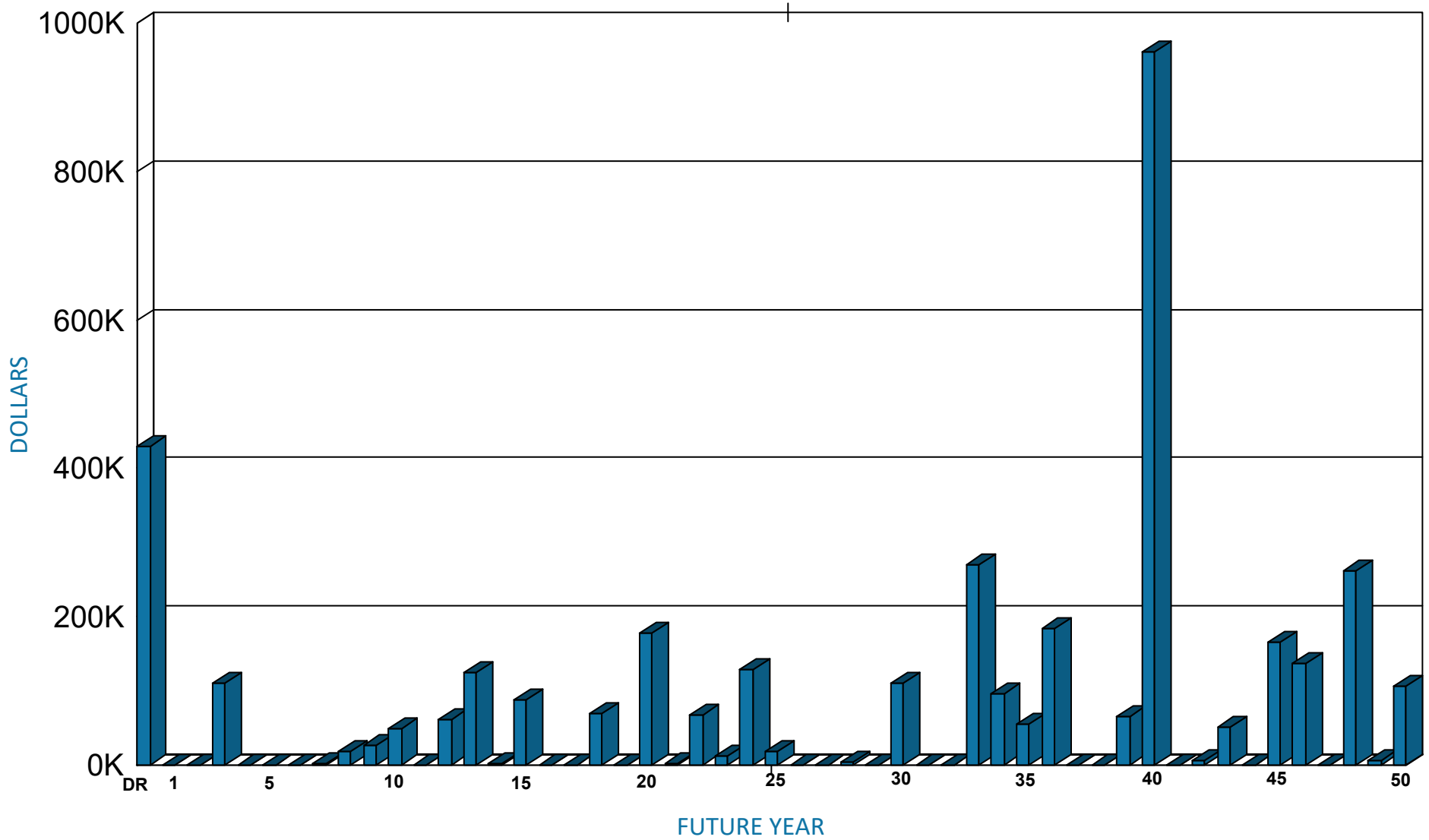
All costs shown as Future Value using a 3% average inflation rate

FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PC		CUSTODIAL	D2010	1	EA	\$2,654	2030
2030 PROJECTED COMPONENT REPLACEMENT COST								\$17,442	

2031									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
HU30	PACKAGE HVAC UNIT, DX, GAS OR ELECTRIC HEAT, SINGLE-ZONE (<= 5 TON)	CARRIER, NAT GAS		MAIN ROOF	D3050	4	TON	\$26,214	2031
2031 PROJECTED COMPONENT REPLACEMENT COST								\$26,214	

2032									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		THROUGHOUT	C3010	12,990	SF	\$45,663	2032
2032 PROJECTED COMPONENT REPLACEMENT COST								\$45,663	

RECURRING COMPONENT EXPENDITURE PROJECTIONS

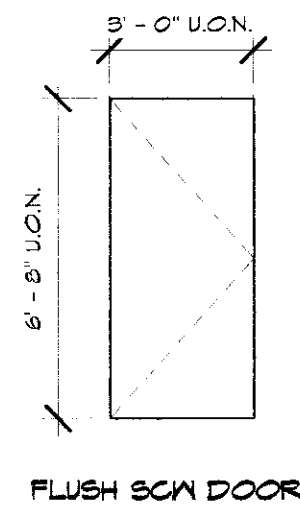


Average Annual Renewal Cost per SF \$8.42

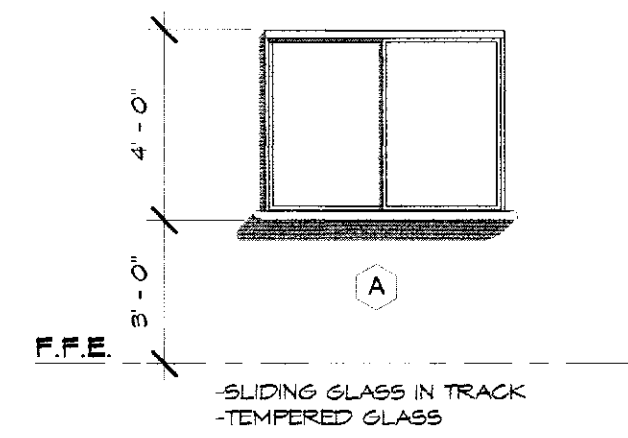
FACILITY CONDITION ASSESSMENT

SECTION 5

DRAWINGS



2 DOOR TYPES LEGEND
1/4" = 1'-0"



3 WINDOW TYPES LEGEND
1/4" = 1'-0"

WALL TYPES LEGEND			
TYPE MARK	PLAN REPRESENTATION	PLAN REPRESENTATION	DESCRIPTION
A			- NON-RATED - 5/8" GNB EACH SIDE - 3-1/2" WOOD STUDS @ 16" O.C. MAX - IV SOUND ATTENUATION BLANKETS - FLOOR TO 34" ABV. LAY-IN GLG. (7'-10" A.F.F.)
B			- NON-RATED - 5/8" GNB EACH SIDE - 3-1/2" WOOD STUDS @ 16" O.C. MAX - IV SOUND ATTENUATION BLANKETS - FLOOR TO 34" ABV. LAY-IN GLG. (7'-10" A.F.F.)
C			- NON-RATED - 5/8" GNB ON ONE SIDE ONLY - 3-1/2" WOOD STUDS @ 16" O.C. MAX - IV SOUND ATTENUATION BLANKETS - FLOOR TO 34" ABV. LAY-IN GLG. (7'-10" A.F.F.)

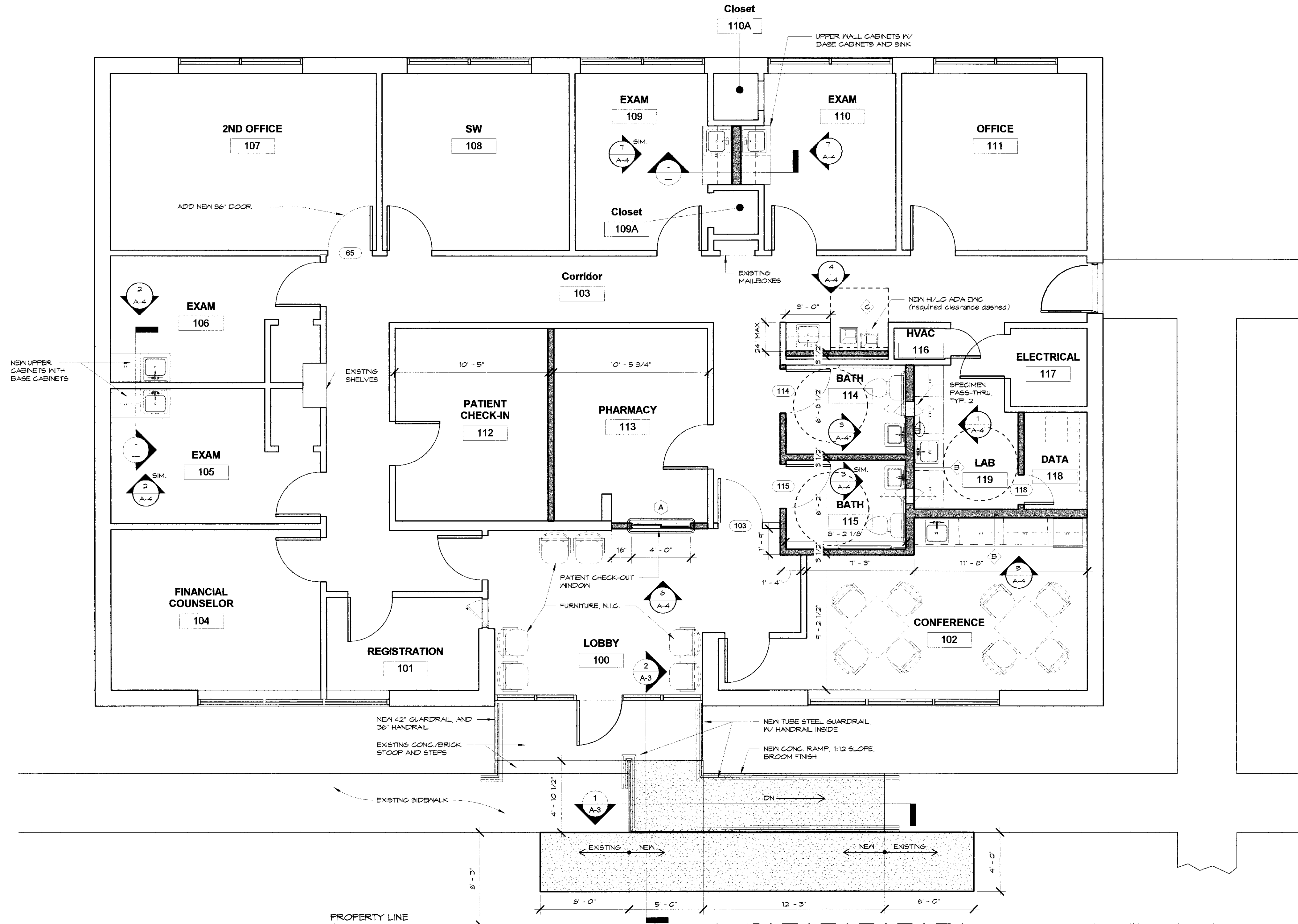
NOTE: ALL NEW INTERIOR WALLS ARE TYPE "A", UNLESS OTHERWISE NOTED.

NEW CONSTRUCTION LEGEND	
PHASE	PLAN REPRESENTATION
NEW CONSTRUCTION	
EXISTING CONSTRUCTION TO REMAIN	

GENERAL NOTES

- ALL INTERIOR FINISHES TO REMAIN. ALL NEW WALLS / ROOMS TO RECEIVE FINISHES TO MATCH THAT OF EXISTING AND ADJACENT WALLS / ROOMS.
- REUSE EXISTING CEILING TILES THAT ARE IN GOOD CONDITION, AND HAVE NO STAINING AS MUCH AS POSSIBLE.
- ALL NEW DOORS SHOWN ON PLAN BELOW ARE TYPE "1" DOORS FROM DOOR TYPES LEGEND ON LEFT.

TOILET ACCESSORIES	
MARK	MARK
A	36"x15" Ø STAINLESS STEEL GRAB BAR @ 34" A.F.F.
B	42"x15" Ø STAINLESS STEEL GRAB BAR @ 34" A.F.F.
C	TISSUE DISPENSER
D	SANITARY NAPKIN DISPOSAL
E	PAPER TOWEL DISPENSER/TRASH
F	LIQUID SOAP DISPENSER, WALL MTD. @ MIRROR
G	FULL WIDTH MIRROR
H	COAT HOOK @ 3'-10" ± 5'-0"
J	MOP/BROOM HOLDER @ 60" A.F.F.



1 RENOVATION FLOOR PLAN
1/4" = 1'-0"

Not For Construction

THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONSTRUCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT.
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SHEET NAME:
RENOVATION FLOOR PLAN

PHASE:
Design Development

REVISIONS:

ISSUE DATE: 12/15/05
PROJECT #: 4079B
DRAWN BY: JBP, MRB

SHEET NUMBER
A-1.1

FACILITY CONDITION ASSESSMENT

SECTION 6

PHOTOGRAPHS



098001a 1/25/2023
Brick exterior, stone aggregate, and glazing
Exterior



098001e 1/25/2023
Fluorescent troffer lights
Office area



098002a 1/25/2023
Brick exterior, stone aggregate, and glazing
Exterior



098002e 1/25/2023
Fluorescent light
Storage room



098003a 1/25/2023
Brick exterior, stone aggregate, and glazing
Exterior



098003e 1/25/2023
Illuminated exit lighting
Main corridor



098004a 1/25/2023
Brick exterior, stone aggregate, and glazing
Exterior



098004e 1/25/2023
HID area lighting
Roof gable



098005a 1/25/2023
Brick exterior, stone aggregate, and glazing
Exterior



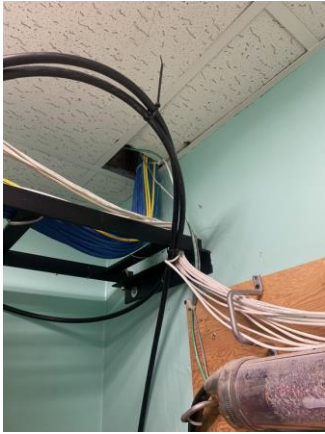
098005e 1/25/2023
Fire alarm power panel
Electrical room



098006a 1/25/2023
Tile walls and floor, ACT, tank water closet, and wall-hung
lavatory
Restroom



098006e 1/25/2023
Audio visual alarm device
Restroom wall



098007a 1/25/2023
Ceiling penetration
Data Room



098007e 1/25/2023
Smoke detector
Office ceiling



098008a 1/25/2023
Finished walls, carpet, and ACT
Office



098008e 1/25/2023
Manual alarm pull station
Rear exit door



098009a 1/25/2023
ACT, built-in cabinetry, and carpet
Work Room



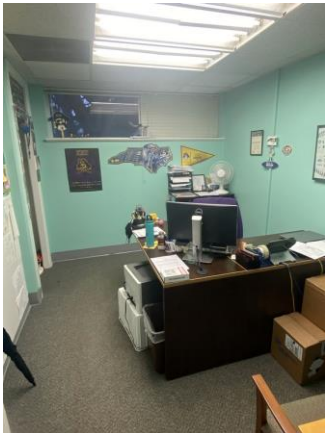
098009e 1/25/2023
Natural gas package unit
Main room



098010a 1/25/2023
Casework with sink
Break Area



098010e 1/25/2023
Natural gas package unit
Main room



098011a 1/25/2023
ACT, finished walls, and carpet
Office



098011e 1/25/2023
HVAC thermostat
Main corridor



098012a 1/25/2023
Single-level drinking fountain
Corridor



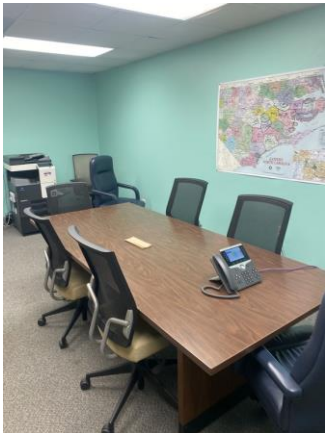
098012e 1/25/2023
HVAC distribution vent
Office



098013a 1/25/2023
Tile walls and floor, ACT, tank water closet, and wall-hung lavatory
Restroom



098013e 1/25/2023
Residential electric water heater
Mechanical room



098014a 1/25/2023
ACT, finished walls, and carpet
Conference room



098014e 1/25/2023
Electrical distribution panel
Electrical room



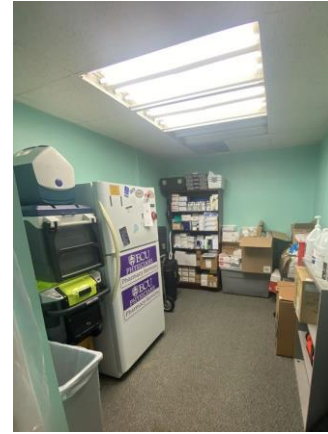
098015a 1/25/2023
ACT, brick walls, storefront glazing, and carpet
Lobby



098015e 1/25/2023
Main electrical disconnects
Electrical room



098016a 1/25/2023
Finished walls, carpet, and ACT
Corridor



098017a 1/25/2023
Finished walls, carpet, and ACT
Storage room



098018a 1/25/2023
Wood door with knob
Corridor



098019a 1/25/2023
Single-pane, metal-framed glazing
Office



098020a 1/25/2023
Black EPDM roof
Roof



098021a 1/25/2023
Black EPDM roof and clogged drain
Roof



098022a

1/25/2023

Black EPDM roof
Roof



098023a

1/25/2023

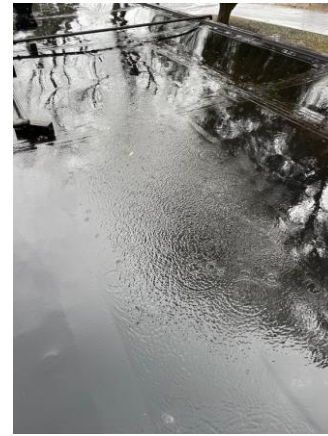
Black EPDM roof
Roof



098024a

1/25/2023

Black EPDM roof
Roof



098025a

1/25/2023

Black EPDM roof
Roof

FACILITY CONDITION ASSESSMENT

SECTION 7

PRELIMINARY ENERGY
ASSESSMENT

INTRODUCTION

A Preliminary Energy Assessment (PEA) was conducted to identify energy conservation opportunities. The PEA is intended to be a preliminary energy screening only. The goal is to identify potential energy savings opportunities in a building. It is not equivalent to an American Society of Heating, Refrigeration, or Air Conditioning Engineers (ASHRAE) Level 1, 2, or 3 audit. The PEA has two sections: 1) Benchmarking Data and 2) Energy Conservation Opportunities. Basic building information is provided in **Table 1**.

TABLE 1. BUILDING INFORMATION	
Client	East Carolina University
Asset Number	098
Asset Name	Hardy Building
Year Built or Last Energy Renovation	1967

BENCHMARKING DATA

The purpose of benchmarking building performance is to determine how well a building performs in comparison to other similar buildings. For this analysis, buildings were assessed based on their primary use (e.g., education, food sales, food service, etc.) and year constructed. Two metrics -- energy use intensity and energy end use -- are presented for the building manager to use to assess how efficiently the building performs compared to similar buildings.

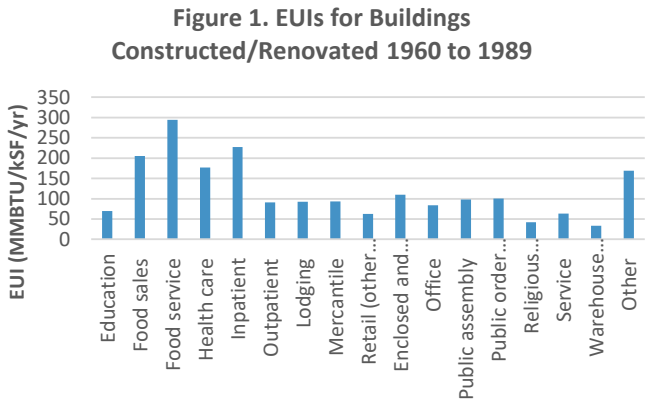
Metric #1: Energy Use Intensity (EUI)

EUI is a measure of energy consumption per square foot of building space per year. The units of measurement are million British thermal units per thousand square foot per year (MMBTU/kSF/yr). The US-DOE EUI can be compared to the actual EUI of the client building to determine how efficient the building is compared to other similar buildings. A building manager can calculate EUI by summing total energy consumption per year (in MMBTU/yr) and dividing it by the building area (in kSF). Benchmarking data from the U.S. Energy Information Administration (EIA) Commercial Building Energy Consumption Survey (CBECS) database was used for this analysis.

Basic information about the building use and the time of the most recent major HVAC or lighting upgrade is provided in **Table 2**. That information is used to determine the Benchmark EUI. The building manager can calculate the Building EUI and compare it to the Benchmark EUI to determine how building efficiency compares to similar buildings (see **Table 3**). In addition, **Figure 1** shows the EUIs of various building types for further comparison.

TABLE 2. BUILDING DETAILS	
FCA Building Type	Office
Energy Information Administration Equivalent Building Type	Office
Range of Years Constructed/Last Major Energy Renovation	1960 to 1989
Benchmark EUI (MMBTU/kSF/yr) =	84
Building EUI to be Calculated by Client (MMBTU/kSF/yr) =	

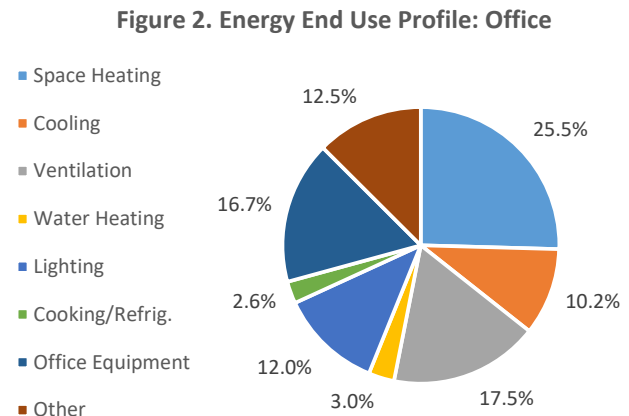
TABLE 3. EUI COMPARISON	
Very Energy Efficient (consumes more than 30% less energy)	EUI < 58.8
Energy Efficient (consumes 10% to 30% less energy)	58.8 <= EUI <= 75.6
Similar (consumes within 10% less or 10% more energy)	75.6 < EUI < 92.4
Energy Inefficient (consumes 10% to 30% more energy)	92.4 <= EUI <= 109.2
Very Energy Inefficient (consumes more than 30% more energy)	EUI > 109.2



Metric #2: Energy End Use

Energy end use data characterizes how energy is used by profiling energy consumption into end use categories such as space heating, cooling, ventilation, lighting, etc. When energy end use data is presented in a pie chart, high energy-consuming activities are readily identified. A building manager can determine the energy end use profile for a building by analyzing trend data from a Building Automation System and/or Energy Management Control System.

TABLE 4. ENERGY END USE PROFILE: OFFICE	
Space Heating	25.5%
Cooling	10.2%
Ventilation	17.5%
Water Heating	3.0%
Lighting	12.0%
Cooking/Refrig.	2.6%
Office Equipment	16.7%
Other	12.5%
Total	100.0%



References:

1. U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. "Technologies and Products by Category." Efficient Technologies and Products for Federal Facilities. DOE. <http://energy.gov/eere/femp/efficient-technologies-and-products-federal-facilities>. Accessed: June 2016.
2. U.S. Energy Information Administration [EIA]. "2012 CBECS Survey Data." Commercial Building Energy Consumption Survey. EIA. <http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption#c1-c12>, Accessed: June 2016.

ENERGY CONSERVATION OPPORTUNITIES

This section presents energy conservation measures (ECMs) recommended for further investigation. Recommended ECMs are categorized into one or more cost categories to indicate an approximate level of resources required to implement the ECM. These cost categories are:

Operation and Maintenance Measures (O&M): O&M actions usually (a) can be completed by in-house maintenance personnel and (b) result in an immediate return on investment.

Low-Cost/No-Cost Measures (LC/NC): LC/NC measures typically (a) can be done by in-house personnel, (b) require little to no investment cost, and (c) result in significant energy savings. In other words, LC/NC measures typically have a quick payback period (less than one year).

Capital Improvement Measures (CAP): CAP measures are major capital investments that usually require significant time (i.e., approximately six months to three years) for planning, design, and implementation. Oftentimes, a request for proposal, design/bid/build (D/B/B), and/or design/build (D/B) package is required. The return on investment for CAP projects ranges significantly, varying from a payback period from one to twenty plus years.

ECM CATEGORY	ECM RECOMMENDED FOR FURTHER CONSIDERATION	COST CATEGORY
Building Envelope - Window/Door Heat Gain/Loss	INCREASE THE R-VALUE OF THE WINDOWS/DOORS. ENERGY STAR qualified fenestration products such as windows and doors can minimize HVAC energy consumption by reducing solar heat gain/loss.	CAP
Building Envelope - Window/Door Air Infiltration	WEATHERSTRIP/CAULK WINDOWS/DOORS. When there is air leakage, weatherstrip around movable components and caulk around rigid components to reduce infiltration and save on heating/cooling costs.	O&M; LC/NC
Lighting - Interior, Controls	INSTALL LIGHTING CONTROLS. Oftentimes, lighting fixtures on switches do not get turned off when a space is unoccupied. Occupancy sensors, photocell sensors, and lighting control systems can help reduce lighting energy consumption. For example, consider installing occupancy sensors in offices, common areas, and other areas that have variable occupancy. In areas where there is natural lighting, consider using photocell sensors to dim or shut off fixtures that aren't needed. Alternatively, install a comprehensive light control system that uses time clock schedules, occupancy sensors, photocell sensors, etc., to monitor and control lighting throughout an entire building.	N/A, Varies
Lighting - Exterior	INSTALL EFFICIENT LIGHTING FIXTURES. While incandescent lamp fixtures have a low initial cost, the lamps are energy inefficient and have a short useful life. Consider CFL and LED lighting instead. HID lamps are necessary in some applications; however, alternatives such as high intensity T5 or LED fixtures should be considered. T12 lamps are an outdated lighting technology that should be replaced with newer technologies such as high intensity fluorescent or LED lamp fixtures.	N/A, Varies
HVAC - Air Dist. Network Insulation	INSULATE DUCTWORK. Insulating HVAC ductwork reduces heat loss and decreases energy consumption.	CAP
Plumbing - DHW Piping Insulation	INSULATE THE DOMESTIC HOT WATER PIPES. Insulating piping reduces heat loss, thereby reducing the amount of energy consumption.	LC/NC; CAP

ECM CATEGORY	ECM RECOMMENDED FOR FURTHER CONSIDERATION	COST CATEGORY
Plumbing - DHW Heater Efficiency	INSTALL A HIGH-EFFICIENCY WATER HEATER. High efficiency/ENERGY STAR water heaters consume less energy. Consider condensing water heaters that capture the latent heat from water vapor contained in the flue gases.	LC/NC; CAP