# **EAST CAROLINA UNIVERSITY**

### **LEO JENKINS CANCER CENTER**

ASSET CODE: LJCC

**FACILITY CONDITION ANALYSIS** 

**DECEMBER 8, 2009** 





# EAST CAROLINA UNIVERSITY Facility Condition Analysis

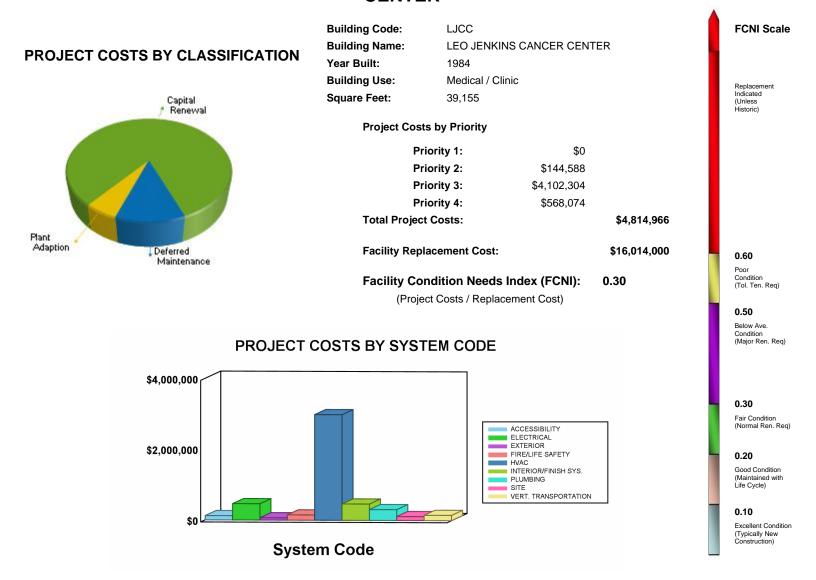
#### **TABLE OF CONTENTS**

Section 1:	GENERAL ASSET INFORMATION	
A.	Asset Executive Summary	1.1.1
	Asset Summary	
	Inspection Team Data	
D.	Facility Condition Analysis - Definitions	
	Report Description	
	2. Project Classification	
	3. Project Subclass Type	
	4. Priority Class / Sequence	
	5. Priority Class	
	6. City Index Material / Labor Cost / Cost Summaries	1.4.3
	7. Project Number	
	8. Photo Number	
	9. Life Cycle Cost Model Description and Definitions	
	10. Category Code	1.4.5
E.	Category Code Report	1.5.1
Section 2:	DETAILED PROJECT SUMMARIES AND TOTALS	
A.	Detailed Project Totals – Matrix with FCNI Data and Associated Charts	2.1.1
	Detailed Projects by Priority Class / Priority Sequence	
C.	Detailed Projects by Cost within range [\$0 - < \$100,000]	2.3.1
D.	Detailed Projects by Cost within range [ ≥ \$100,000 - < \$500,000 ]	2.3.2
E.	Detailed Projects by Cost within range [ > \$500,000 ]	2.3.3
	Detailed Projects by Project Classification	
G.	Detailed Projects by Project Subclass - Energy Conservation	2.5.1
H.	Detailed Projects by Category / System Code	2.6.1
Section 3:	SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST	311
Section 4:	DRAWINGS / PROJECT LOCATIONS	
Section 5:	LIFE CYCLE MODEL SUMMARY AND PROJECTIONS	
	Building Component Summary	
B.	Expenditure Projections	5.2.1
Section 6:	PHOTOGRAPHIC LOG	6.1.1

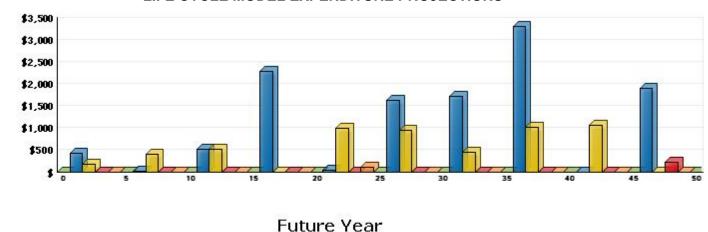


# **GENERAL ASSET INFORMATION**

# EXECUTIVE SUMMARY - LEO JENKINS CANCER CENTER



#### LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt \$4.13

Renewal Cost (Thousands of Dollars)



#### **B. ASSET SUMMARY**

Built in 1984, the Leo Jenkins Cancer Center is a two-story medical clinic. It has a concrete structure on a slab-on-grade foundation. The exterior finishes are brick and single-ply membrane roofing. The building is attached by a corridor to the Brody Medical Science Building and serves as a clinic for cancer treatment and research. Both floors have exam rooms, office areas, and waiting rooms. The first floor has three large radiation treatment rooms. The Leo Jenkins Cancer Center totals 39,155 square feet and is located at the Health Science Campus of East Carolina University in Greenville, North Carolina.

The information in this report was gathered during a site visit that concluded on September 3, 2009.

#### SITE

Landscaping around the building consists of grassy lawns, ornamental shrubs, and some mature trees. It is in average condition, but should outlast the ten-year scope of this report with routine maintenance. Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. This includes the brick paving in the courtyard. New systems, including excavation, grading, base compaction, and paving, are recommended. Vehicular paving systems are in good condition but will need minor upgrades.

#### **EXTERIOR STRUCTURE**

The single-ply membrane roofing appears to be in good condition. Although its exact age could not be determined, the roof should outlast the ten-year scope of this report. Brick veneer is the primary exterior finish. While the brick is fundamentally sound, exposure to the elements has caused some deterioration of the mortar joints and expansion joints. Cleaning, surface preparation, selective repairs, and applied finish or penetrating sealant upgrades are recommended to restore the aesthetics and integrity of the building envelope.

Replacement of the metal-framed glass primary entrance doors is recommended. The replacement doors should maintain the architectural design aspects of this facility and be modern, energy-efficient applications. Glazing around the building consists of dual-pane windows in metal frames. The windows appear to be original, but are in good condition and should not require an upgrade in the next ten years.

#### **INTERIOR FINISHES / SYSTEMS**

Interior floor finishes include carpet, vinyl tile, and some sheet vinyl. Walls are painted plaster or vinyl wall covering. Ceiling finishes consist of lay-in, acoustical tile or painted plaster. The interior finish applications vary in age and condition from area to area. Floor, wall, and ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts. Interior doors appear to be in good condition. They are also properly fire rated and equipped with lever hardware. No interior door replacements should be needed in the next ten years.

# EAST CAROLINA UNIVERSITY Facility Condition Analysis Section One



#### **ACCESSIBILITY**

Wheelchair access is provided by the main entry doors on the east facade. Once inside, two elevators provide vertical transportation between the floors. Interior stairs have been designed with proper handrails and guardrails, and doors have lever hardware and proper Braille signage. Amenities such as single-user accessible restrooms and dual level drinking fountains have been added in select areas. However, several other amenities are recommended for upgrade to comply with accessibility legislation.

Current accessibility legislation requires that building entrances be accessible and that site stairs have proper handrails. To comply with the intent of this legislation, it is recommended that ADA compliant painted metal handrails be installed at all entrances as required.

Building amenities are also required to be generally accessible to all persons. The configurations of the break room kitchenette and select drinking fountains are barriers to accessibility. The installation of wheelchair accessible kitchenette cabinetry is recommended where applicable, along with dual level, refrigerated drinking fountains.

Select areas of the building have single-user, ADA compliant restrooms. The remaining restroom fixtures and finishes are mostly original to the year of construction or latest major renovation. The fixtures are sound but dated and are spaced such that clearances are not ADA compliant. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories, is recommended. Restroom expansion may be necessary in order to meet modern minimum fixture counts and accessibility legislation.

#### **HEALTH**

There were no reports or evidence of any asbestos-containing material or lead based paint. No other health related issues were noted during the inspection.

#### FIRE / LIFE SAFETY

The paths of egress in this building are adequate with regard to fire rating. There are no compromises involving doors, partitions, elevators lobbies, or stairs. No fire / life safety issues related to architectural features were observed during the inspection of this facility.

This building has a recently installed addressable Simplex 4100 fire alarm system that is equipped with combination audible annunciators and xenon strobes, smoke detectors, and fire pulls. The fire alarm system is in excellent condition and should remain serviceable for the scope of this assessment.

The first floor is not protected by any form of automatic fire suppression. Manual, dry chemical fire extinguishers are available for immediate use. The second floor is protected by a wet-pipe fire suppression system with fusible link sprinkler heads. To reduce overall liability and potential for loss, it is recommended that an automatic fire suppression system be installed in the unprotected areas of the facility. The estimate also includes the cost for replacement of the original fusible link sprinkler heads.

# EAST CAROLINA UNIVERSITY Facility Condition Analysis Section One



Emergency exits are indicated by outdated LED exit signs connected to the emergency power network. The exit signs are at the end of their useful service life and should be replaced within the next five years. Install modern, efficient LED exit signs, including additional units to comply with current NFPA life safety codes.

The path of egress is illuminated by select interior light fixtures connected to the generator power. Because of the daytime inspection, the emergency egress illumination level was not easily identified. It is assumed that there is sufficient emergency egress lighting, since no deficiencies were reported.

#### **HVAC**

The primary heating medium is steam supplied from the central plant. The low pressure steam is reduced to heating hot water via two hot water heat exchangers located in mechanical rooms 126 and 250. Outdated base-mounted hot water pumps circulate the heating hot water to the hot water reheat boxes for air handling units AHU1 and AC8. Steam condensate is returned to the central plant by a condensate return unit located in mechanical room 126.

Chilled water is the primary cooling media and is also supplied from the central plant. Base-mounted, one horsepower chilled water pumps circulate chilled water to the cooling coils of the two air handlers. The heating and cooling equipment has been in service for over twenty years and will reach the end of its useful service life within the next five years. Renewal is recommended, and project cost is allocated in the overall HVAC recommendation addressed below.

Air distribution throughout the structure is provided by two variable air volume Carrier air handling units AHU1 and AC2. The air handler supply and return fans are equipped with ABB variable frequency drives. Building exhaust is provided by approximately fourteen centrifugal exhaust fans and a through-wall exhaust fan. Building automation is provided by an outdated pneumatic control system. The air distribution equipment is in fair operating condition, considering it has been in service since 1984. The HVAC equipment is anticipated to become inefficient and maintenance intensive with age. A complete upgrade is recommended.

A fume hood was observed in chemotherapy room 239. This fume hood and its associated mechanical exhaust fan have been in service beyond their intended life cycles. It is recommended that they be replaced within the scope of this analysis.

#### **ELECTRICAL**

The building receives two separate power feeds from the nearby Brody building. A high voltage feeder provides 480/277 volt power to the 1,600 amp General Electric switchboard located in electrical room 125. A second feeder supplies 120/208 volt power to the 1,200 amp GE switchboard. Both switchboards are approaching the end of their useful service life and will require an upgrade. Budgetary consideration is allocated for the renewal of the switchboards within the next five years.

The electrical distribution network is a dual voltage configuration, primarily with 277/480 and 120/208 volt service. However, one step-down 300 kW transformer was observed in electrical closet 251. The reliability of this transformer is questionable, since it is operating loudly and dispersing excessive heat. Replacement of the dry-type transformer is recommended within the next five years. Additionally, it is

# EAST CAROLINA UNIVERSITY Facility Condition Analysis Section One



recommended that minor deficiencies in the electrical distribution network be rectified. Such remedies include, but are not limited to, installing additional circuits, replacing worn switches and receptacles, replacing circuit breakers, and updating panel directories.

The current lighting configuration consists of lay-in / surface-mounted, T8, T12, and compact fluorescent fixtures. Based on life cycle depletion, the replacement of all interior fixtures is recommended. Select lamps with the same color temperature and rendering index for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation.

Nighttime illumination is provided by approximately nine wall-mounted HID fixtures installed in the mid-1980s. Due to the daytime inspection, the illumination level was not easily identified. Based on their present location, the fixtures appear to be sufficient in quantity. However, due to life cycle depletion, a formal cost estimate was created for exterior lighting renewal within the next five years.

#### **PLUMBING**

Potable water is distributed via a copper piping network. Sanitary waste and stormwater is conveyed by cast-iron, no-hub piping with copper run-outs. The supply piping network will reach the end of its expected life cycle within the next ten years and should be replaced. Failure to undertake such upgrades will likely lead to leaks, drainage issues, and other problems that will require costly maintenance. No upgrade is recommended for the sanitary and storm drain piping network. Domestic hot water is supplied from the nearby Brody building. The plumbing fixtures are recommended for replacement. This action is detailed in the proposed restroom renovation

#### **VERTICAL TRANSPORTATION**

The University commissioned an outside contractor to perform an elevator condition study in 2009. The capital project recommendations from this study have been included as projects in the ISES database.

Note: The deficiencies outlined in this report were noted from a visual inspection. ISES engineers and architects developed projects with related costs that are needed over the next ten-year period to bring the facility to "like-new" condition. The costs developed do not represent the cost of a complete facility renovation. Soft costs not represented in this report include telecommunications, 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. However, existing fixed building components and systems were thoroughly inspected. The developed costs represent correcting existing deficiencies and anticipated life cycle failures (within a ten-year period) to bring the facility to modern standards without any anticipation of change to facility space layout or function. Please refer to Section Three of this report for recommended Specific Project Details.



#### **C. INSPECTION TEAM DATA**

**DATE OF INSPECTION:** September 3, 2009

#### **INSPECTION TEAM PERSONNEL:**

<u>NAME</u>	<u>POSITION</u>	<u>SPECIALTY</u>
Thomas Ferguson, AIA, LEED <sup>®</sup> AP	Project Architect	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Rob Gasaway, Q.E.I.	Facility Analyst	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
John Holder, Q.E.I.	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Imelda Jordan	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
James Lewis	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Carl Mason, PE, BSCP	Project Engineer	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Paul Southwell	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Norm Teahan, RA, AIA, NCARB	Project Architect	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health

#### **FACILITY CONTACTS:**

NAME POSITION

William Bagwell Associate Vice Chancellor, Campus Operations

**REPORT DEVELOPMENT:** 

Report Development by: ISES Corporation

2165 West Park Court

Suite N

Stone Mountain, GA 30087

Contact: Kyle Thompson, Project Manager

770-879-7376



#### D. FACILITY CONDITION ANALYSIS - DEFINITIONS

The following information is a clarification of Asset Report Sections using example definitions.

#### 1. REPORT DESCRIPTION

Section 1: Asset Executive Summary, Asset Summary, and General Report Information

Section 2: Detailed Project Summaries and Totals

- A. Detailed Project Totals Matrix with FCNI Data and Associated Charts
- B. Detailed Projects by Priority Class / Priority Sequence
- C. Detailed Projects by Cost within range [\$0 < \$100,000]
- D. Detailed Projects by Cost within range [≥ \$100,000 < \$500,000 ]
- E. Detailed Projects by Cost within range [≥ \$500,000]
- F. Detailed Projects by Project Classification
- G. Detailed Projects by Project Rating Type Energy Conservation
- H. Detailed Projects by Category / System Code

FCNI = Facility Condition Needs Index, Total Cost vs. Replacement Cost. The FCNI provides a life cycle cost comparison. Facility replacement cost is based on replacement with current construction standards for 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 = Deferred Maintenance / Modernization +

<u>Capital Renewal + Plant Adaption</u>

Plant / Facility Replacement Cost

Section 3: Specific Project Details Illustrating Description / Cost

Section 4: Drawings with Iconography

The drawings for this facility are marked with ICONS (see legend), denoting the specific location(s) for each project. Within each ICON is the last four characters of the respective project number (e.g., 0001IS01 is marked on plan by IS01). There is one set of drawings marked with ICONS representing all priority classes (1, 2, 3, and 4).

Section 5: Life Cycle Model Summary and Projections

Section 6: Photographic Log



#### 2. PROJECT CLASSIFICATION

- A. <u>Plant / Program Adaption</u>: Expenditures 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).
- B. <u>Deferred Maintenance</u>: Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs estimated for deferred maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to affect the needed repairs. Deferred maintenance projects represent catch up expenses.
- C. <u>Capital Renewal:</u> A subset of regular or normal facility maintenance which refers to major repairs or the replacement / rebuilding of major facility components (e.g., roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its normal useful life is deferred maintenance).

#### 3. PROJECT SUBCLASS TYPE

A. <u>Energy Conservation</u>: Projects with energy conservation opportunities, based on simple payback analysis.

#### 4. PRIORITY SEQUENCE BY PRIORITY CLASS (Shown in Sections 2 and 3)

All projects are assigned both a Priority Sequence number and Priority Class number for categorizing and sorting projects based on criticality and recommended execution order.

#### Example:

	PRIORITY CLA	SS 1
CODE	PROJECT NO.	PRIORITY SEQUENCE
HV2C	0001HV04	01
PL1D	0001PL02	02
	PRIORITY CLA	<u>SS 2</u>
CODE	PROJECT NO.	PRIORITY SEQUENCE
IS1E	0001IS06	03
EL4C	0001EL03	04



#### 5. PRIORITY CLASS (Shown in Sections 2 and 3)

#### PRIORITY 1 - Currently Critical (Immediate)

Projects in this category require immediate action to:

- a. return a facility to normal operation
- b. stop accelerated deterioration
- c. correct a cited safety hazard

#### PRIORITY 2 - Potentially Critical (Year One)

Projects in this category, if not corrected expeditiously, will become critical within a year. Situations in this category include:

- a. intermittent interruptions
- b. rapid deterioration
- c. potential safety hazards

#### PRIORITY 3 - Necessary - Not Yet Critical (Years Two to Five)

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

#### PRIORITY 4 - Recommended (Years Six to Ten)

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 4 projects will either improve overall usability and / or reduce long-term maintenance.

#### 6. COST SUMMARIES AND TOTALS

The cost summaries and totals are illustrated by Detailed Projects sorted in multiple formats (shown in Sections 2 and 3).

City Index material / labor cost factors: (shown in Sections 2 and 3)

Cost factors are based on the Greenville City Index and are adjusted for material and labor cost factors (2009). Refer to the project related labor report found later in this section.

Global Markup Percentages		R.S. MEANS
Local Labor Index: Local Materials Index:	51.3 % 100.7 %	of National Average of National average
General Contractor Markup: Professional Fees:	20.0 % 16.0 %	Contractor profit & overhead, bonds & insurance Arch. / Eng. Firm design fees and in-house design cost



#### 7. PROJECT NUMBER (Shown in Sections 2 and 3)

#### Example:

Project Number = 0001-EL-04 (unique for each independent project)

0001 - Building Identification Number

EL - System Code, EL represents Electrical

- Sequential Assignment Project Number by Category / System

#### 8. PHOTO NUMBER (Shown in Section 6)

A code shown on the Photographic Log identifies the building number, photo sequence, and architect, engineer, or vertical transportation.

Example: 0001006e

Building Number Photo Sequence Arch / Eng / VT 0001 006 e

#### 9. LIFE CYCLE COST MODEL DESCRIPTION AND DEFINITIONS (Shown in Section 5)

Included in this report is a Life Cycle Cost Model. This model consists of two elements, one is the component listing (starting on page 5.1.1) and the other is the Life Cycle Cost Projections Graph (page 5.2.1). The component list is a summary of all major systems and components within the facility. Each indicated component has the following associated information:

Uniformat Code	This is the standard Uniformat Code that applies to the component
Component Description	This line item describes the individual component
Qty	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)
Total Cost	Unit cost multiplied by Quantity, also in today's dollars. Note that this is a
	one time renewal / replacement cost
Install Date	Year that the component was installed. Where this data is not available,
	it defaults to the year the asset was constructed
Life Exp	Average life expectancy for each individual component

The component listing forms the basis for the Life Cycle Cost Projections Graph shown on page 5.2.1. This graph represents a projection over a fifty-year period (starting from the date the report is run) of expected component renewals based on each individual item's renewal cost and life span. Some components might require renewal several times within the fifty-year model, while others might not occur at all. Each individual component is assigned a renewal year based on life cycles, and the costs for each item are inflated forward to the appropriate year. The vertical bars shown on the graph represent the accumulated (and inflated) total costs for each individual year. At the bottom of the graph, the average annual cost per gross square foot (\$/GSF) is shown for the facility. In this calculation, all costs are not inflated. This figure can be utilized to assess the adequacy of existing capital renewal and repair budgets.

# EAST CAROLINA UNIVERSITY

Facility Condition Analysis

Section One -



#### 10. CATEGORY CODE (Shown in Sections 2 and 3)

Refer to the following Category Code Report.

Example: Category Code = EL5A

EL = System Description
5 = Component Description
A = Element Description

CATEG	ORY	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



	CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION	
SYSTEM DE	SCRIPTION: ACCESSIBILITY			
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 ADA.	
AC3E	INTERIOR PATH OF TRAVEL	RESTROOMS/ BATHROOMS	Modifications to and installation of accessible public restrooms and bathrooms. Bathrooms, which 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, which are integral to efficiency suites, are catalogued here.	
AC4B	GENERAL	OTHER	All accessibility issues not catalogued elsewhere.	
SYSTEM DE	SCRIPTION: ELECTRICAL			
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 stepdown 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.	



	CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION	
EL4D	DEVICES AND FIXTURES	GFCI PROTECTION	Ground fault protection including GFCI receptacles and breakers.	
EL4E	DEVICES AND FIXTURES	LIGHTNING PROTECTION	Lightning arrestation systems including air terminals and grounding conductors.	
EL5A	EMERGENCY POWER SYSTEM	GENERATION/ DISTRIBUTION	Includes generators, central battery banks, transfer switches, emergency power grid, etc.	
EL6A	SYSTEMS	UPS/DC POWER SUPPLY	Uninterruptible power supply systems and DC motor-generator sets and distribution systems.	
EL7A	INFRASTRUCTURE	ABOVE GROUND TRANSMISSION	Includes poles, towers, conductors, insulators, fuses, disconnects, etc.	
EL7B	INFRASTRUCTURE	UNDERGROUND TRANSMISSION	Includes direct buried feeders, ductbanks, conduit, manholes, feeders, switches, disconnects, etc.	
EL7C	INFRASTRUCTURE	SUBSTATIONS	Includes incoming feeders, breakers, buses, switchgear, meters, CTs, PTs, battery systems, capacitor banks, and all associated auxiliary equipment.	
EL7D	INFRASTRUCTURE	DISTRIBUTION SWITCHGEAR	Stand-alone sectionalizing switches, distribution switchboards, etc.	
EL7F	INFRASTRUCTURE	AREA AND STREET LIGHTING	Area and street lighting systems including stanchions, fixtures, feeders, etc.	
EL8A	GENERAL	OTHER	Electrical system components not catalogued elsewhere.	
SYSTEM DI	ESCRIPTION: EXTERIOR			
ES1A	FOUNDATION/FOOTING	STRUCTURE	Structural foundation improvements involving structural work on foundation wall/footing, piers, caissons, piles including crack repairs, shoring & 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 & stain removal, grouting, surfacing, chimney repairs, etc.	
ES3A	FLOOR	STRUCTURE	Work concerning the structural integrity of the load supporting floors both exposed and unexposed including deformation, delamination, spalling, shoring, crack repair, etc.	
ES4A	ROOF	REPAIR	Work on waterproof horizontal finish (roof) involving repair and/or limited replacement (<40% total) including membrane patching, flashing repair, coping caulk/resetting, PPT wall parging/coating, walkpad installation, skylight and roof hatch R&R, etc.	
ES4B	ROOF	REPLACEMENT	Work involving total refurbishment of roofing system including related component rehab.	
ES5A	FENESTRATIONS	DOORS	Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.	
ES5B	FENESTRATIONS	WINDOWS	Work on exterior fenestration closure & 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 light wells, areaways, basement access stairs, etc.	
ES6C	GENERAL	TRIM	Work on ornamental exterior (generally non-structural) elements including beltlines, quoins, porticos, soffits, cornices, moldings, trim, etc.	
ES6D	GENERAL	SUPERSTRUCTURE	Finish and structural work on non-standard structures with exposed load-bearing elements such as stadiums, bag houses, bleachers, freestanding towers, etc.	



Friedrich   System Description: Fire / Life SAFETY		CATEGORY CODE REPORT					
SYSTEM DESCRIPTION: FIRE / LIFE SAFETY  FS1A LIGHTING  ECRESS LICHTING/EXIT SIGNAGE  FS2A DETECTIONALARM GENERAL Repair or replacement of line alternividencion systemicomponents including alterns, pull look productions, etc.  FS2A SUPPRESSION SPRINKLERS Repair or replacement of line alternividencion systemicomponents including alterns, pull look productions, etc.  FS3A SUPPRESSION SPRINKLERS Repair or replacement of line alternividencion systemicomponents including values, pull look productions, etc.  FS3B SUPPRESSION SPRINKLERS Repair or upgrades to F.E. cobinetishers, per outcombine, accordance in looking particles, etc.  FS3D SUPPRESSION STANDPIPEHOSE Repair or upgrades to F.E. cobinetishers including hardware, hoses, cabinetis, nozal necessary fire pumping system, etc.  FS3D SUPPRESSION OTHER Repair or upgrades to F.E. cobinetishers including hardware, hoses, cabinetish, nozal decided the pumping system, etc.  Chief, fire segregation fires not specifically calegorized elevations including hardware, hoses, cabinetish, nozal decided automatic systems, health systems, etc.  FS4B HAZARDOUS MATERIALS STORAGE ENVIRONMENT Installation or repair of special storage environment for the safe holding of fireminate or other dangement, exprise, resultations, or repair of special storage environment for the safe holding of fireminate or other dangement, express, resultations, or estend gol user safety equipment including emergency eyexeabs safety showers, emergency paracita-drown speciment or express or special parameters or company and parameters or expression or repair of special discriptions or the safe holding of fireminate or other dangement, express, resultations, or estending of user safety equipment including emergency eyexeabs safety showers, emergency paracita-drown speciment or design parameters, etc.  FS4B EGRESS PATH DESCRIPTION Installation relocation or nepair of posted diagrammatic environment. The decidence of pages solution or pages or other pages repaired pages repaired designations, etc.  FS5C EGRESS P	CODE			DEFINITION			
FS1A LIGHTING EGRES LIGHTING/EXIT SICHAGE  FS2A DETECTIONALARM GENERAL Repair or inglacement of fice absendencion, systemicoreponents including alarms, pull box annohalheat delectors, annunciator panels, central fire control stations, renormal stations, service dialetis, fire stat communications, etc.  FS2A SUPPRESSION SPRINKLERS Regair or installation of visiting systems, social communications, etc.  FS3B SUPPRESSION STANDPIPEAROSE Regair or installation of statingle system or components including with pipe 8 day propriets, social control of the accordance in the	ES6E	GENERAL	OTHER	Any exterior work not specifically categorized elsewhere including finish and structural work on freestanding boiler stacks.			
FS2A DETECTIONALARM GENERAL Repair or replacement of fire alamydelection systemicomponents including alarms, pull box senderal fire control stations, remote dialetrs, fire alamydelection systemicomponents including alarms, pull box senderal fire control stations, remote dialetrs, fire alamydelection systems, the control stations, remote dialetrs, fire alamydelection, valves, monitors, associated fire pump, etc.  FS3B SUPPRESSION STANDPIPENOSE Repair or installation of stating-paystem or components including hardware, house, cabriets, nozzi reseasing fire pumping systems, etc.  FS3B SUPPRESSION EXTINGUISHERS Repairs or upgrades to F.E. cabriets valid faterings and handheld extinguisher testing/replacement.  FS3D SUPPRESSION OTHER Other in suppression items not specificatly categorized elsewhere including fire blankets, cart dioxid automatic systems, their systems, fishin systems, dirth of their systems, fishin systems, dirth or their systems, fishing systems, etc.  FS3D SUPPRESSION OTHER Other in suppression items not specificatly categorized elsewhere including fire blankets, cart dioxid automatic systems, fishing systems, dirth official automatic systems, fishing systems, etc.  FS4A HAZARDOUS MATERIALS USER SAFETY Improvements, require, installation or repair of special storage environment for the safe holding of filamonable accepts, filips and chemical storage from sets or capse, filips and chemical storage of surgery equipment including emergency evenuals category shreems, mindplanty parts chuld death of special storage environment for the safe holding or otherwish damped and storage or common sets.  FS5B EGRESS PATH DESIGNATION Installation, notication or repair of popular diagrammatic emergency evenuals category shreems, mindplanty special storage environment including elimination of dead and corride decommental storage and surgery equipment including elimination of dead and corride secretary experience and surgery equipment including simination of dead and corride secretary experience and surgery experien	SYSTEM DI	ESCRIPTION: FIRE / LIFE SAFE	TY				
smokeheat detectors, annunciator panels, central fire control statons, remote dialeter, fire stat commissions, etc.  FS3A SUPPRESSION SPRINKLERS Repair or installation of water spirislations by the authoritism, and the pump, ref.  FS3B SUPPRESSION STANDPIPEHOSE Repair or installation of duster spirislations promoters including wet pipe & dry pydents, heigh, plant, deflectors, where, monitors, associated fire pump, ref.  FS3D SUPPRESSION EXTINGUISHERS Repairs or upgrades to F.E. cabriers wall fastenings and handhold extinguisher resting/replacement.  FS3D SUPPRESSION OTHER OTHER Experiescion fame, not specifically categorized eleventees including fire blankets, cart dioxide automatic systems, etc.  FS4A HAZARDOUS MATERIALS STORAGE ENVIRONMENT disconsists systems, Halon systems, dry chemical systems, etc.  FS4B HAZARDOUS MATERIALS USER SAFETY installation or repair of special storage convincement for the design personal conges. Fire said eleventicis storage convincement for the safety bedding of flammable or other dangerous constructives/popilise including varieties and flammables storage colorists, holding personal conges. Fire said eleventicis storage convincements and special frammables storage colorists, holding personal conges. Fire said eleventicis storage constructives/popilise including varieties and flammables storage colorists, holding personal conges. Fire said eleventicis storage constructives, which is safety showers, emergency paraliciphical-down system, etc.  FS5B EGRESS PATH DESIGNATION Installation, relocation or repair of posted diagrammatic emergency evacuation routes.  FS5C EGRESS PATH SEPARATION RATING Restoration of required fire protective barriers including alteriation of dead and confide exceeds the signess distance multifications including pelimination of dead and confide exceeds the signess distance multifications including pelimination of dead and confide exceeds the signess of protective barriers including pelimination of dead and confide exceeds the signess of protective barriers rou	FS1A	LIGHTING		R & R work on exit signage and packaged AC/DC emergency lighting.			
systems, heads, piping, deflectors, whee, monitors, associated fire pump, etc.  FS3B SUPPRESSION STANDPIPEHOSE Repair or installation of standpipe system or components including hardware, hoose, cabinets, nozzi necessary fire pumping systems, etc.  FS3C SUPPRESSION EXTINGUISHERS Repairs or upgrades to F.E. cabinets/wall fasterings and handheld extinguisher festing/replacement.  FS3D SUPPRESSION OTHER Other fire suppression items not specifically categorized elsewhere including fire blankets, cart dioxide automatic systems, fallon systems, that on systems channels systems.  FS4A HAZARDOUS MATERIALS STORAGE ENVIRONMENT Installation or repair of special storage environment for the safe holding of flammable or otherw dangerous materials/supplies including vertice flammables storage cabinets, holding personator against the safe holding of flammable or otherw dangerous materials/supplies including vertice flammables storage cabinets, holding personator against fire safe chemical systems, etc.  FS4B HAZARDOUS MATERIALS USER SAFETY Improvements, repairs, installation, or testing of user safety equipment including emergency eyewash safety showers, emergency panoic/shut-doubles storage cabinets, holding personator against solving properties including emergency eyewash safety showers, emergency panoic/shut-doubles storage cabinets, holding personator data specifically capital storage control systems, etc.  FS5B EGRESS PATH DESIGNATION Installation, relocation or repair of posted dagrammatic emergency evacuation routes.  FS5B EGRESS PATH DISTANCE/ Work involving remediation of geress routing problems including elimination of dead end corridor excessaive ejesses distance modifications and agriss routing inidequates.  FS5B EGRESS PATH SPARATION RATING Retroit of stair/leading configurations/structure, railing beights/geometries, etc.  FS5B EGRESS PATH STARS RAILING Retroit of stair/leading configurations/structure, railing beights/geometries, etc.  FS5F EGRESS PATH FIRE DOORS/ Includes alternation of improper fine/amote rati	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.			
FSSC SUPPRESSION EXTINGUISHERS Repairs or organizes to F.E. calabratival fasterings and handheid extinguisher testing/replacement.  FS3D SUPPRESSION OTHER Other fire suppression items not specifically categorized elsewhere including fire blankets, cart 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 suppression including ventred frammables storage cabinets, holding pens'hord dangerous materials suppressions including ventred frammables storage cabinets, holding pens'hord dangerous materials suppressions including ventred frammables storage cabinets, holding pens'hord dangerous materials suppressions, helding ventred frammables storage cabinets, holding pens'hord dangerous materials suppressions in the safe holding of flammable or otherwise dangerous materials suppressions, the safe holding of flammable or otherwise dangerous materials suppressions, from the formed storage comment for the safe holding of flammable or otherwise dangerous materials suppressions, from the formed storage comment for the safe holding of flammable or otherwise dangerous materials suppressions, from the safe holding pensions of the safety showers, emergency panichshuf-drown system, etc.  FS5B EGRESS PATH DESIGNATION Installation or repair of posted diagrammatic emergency evacuation routes.  FS5C EGRESS PATH SEPARATION RATING Restoration of required fire protective barriers including wall rating compromises, fire rated constructs structural fire proteing, windsafety glamp, stratum restorations, darking structural from protective barriers including wall rating compromises, fire rated constructs structural from proteing, windsafety glamp, stratum restoration, and agrees routes.  FS5D EGRESS PATH STARS RAILING Retorior of statirsanding configurations/structure, railing heights/geometries, etc.  FS5C EGRESS PATH FIRE DOORS' Installation/regories and hardwa	FS3A	SUPPRESSION	SPRINKLERS	Repair or installation of water sprinklers type automatic fire suppressions including wet pipe & dry pipe systems, heads, piping, deflectors, valves, monitors, associated fire pump, etc.			
FS3D SUPPRESSION OTHER CONTROL OTHER CONTROL OTHER CONTROL OF THE SUPPRESSION INSURED THE STATE OF THE STATE	FS3B	SUPPRESSION	STANDPIPE/HOSE	Repair or installation of standpipe system or components including hardware, hoses, cabinets, nozzles, necessary fire pumping system, etc.			
FS4A HAZARDOUS MATERIALS STORAGE ENVIRONMENT Installation or repair of special storage environment for the safe holding of flammable or other dangerous materials/supplies including verted flammables storage cabinets, holding pens/roor cages, fire safe chemical storage rooms, etc.  FS4B HAZARDOUS MATERIALS USER SAFETY Improvements, repairs, installation, or retenting of user safety equipment including emergency eyewash 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 agress routing problems including elimination of dead end corrido excessive egress distance modifications and egress routing including elimination of dead end corrido excessive egress distance modifications and egress routing indediquacies.  FS5C EGRESS PATH SEPARATION RATING Restoration of required fire protective barriers including wall rating compromises, fire rated constructions and egress routing safe protective barriers including wall rating compromises, fire rated constructions of the required egress routes.  FS5D EGRESS PATH STAIRS RAILING Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.  FS5F EGRESS PATH FIRE DOORS/ Installation/replacementrepair of fire doors and hardware including labeled fire doors, fire shutts closes, magnetic holders, panic path charges, etc.  FS5G EGRESS PATH FINISH/FURNITURE RATINGS Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.  FS5G GERESS PATH FINISH/FURNITURE RATINGS Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.  FS5G GERESS PATH FINISH/FURNITURE RATINGS Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.  FS5G GERESS PATH FINISH/FURNITURE RATINGS Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.  FS5G GERESS PATH FINISH/FURNITUR	FS3C	SUPPRESSION	EXTINGUISHERS	Repairs or upgrades to F.E. cabinets/wall fastenings and handheld extinguisher testing/replacement.			
dangerous materials/supplies including verted flammables storage cabinets, holding pens/roor cages, fire safe chemical storoms, etc.  FS4B HAZARDOUS MATERIALS USER SAFETY Improvements, repairs, installation, or testing of user safety equipment including emergency eyewash 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 corrido 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 constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers including vall rating compromises, fire rated constructs structural fire protective barriers restricting the required egress routes.  FS5E EGRESS PATH FIRE DOONS!  Installation, relocation or repair of protective barriers including vall rating compromises, fire rated constructs of struct	FS3D	SUPPRESSION	OTHER	Other fire suppression items not specifically categorized elsewhere including fire blankets, carbon dioxide automatic systems, Halon systems, dry chemical systems, etc.			
Safety showers, emergency panio/shut-down system, etc.  FSSA EGRESS PATH DESIGNATION Installation, relocation or repair of posted diagrammatic emergency evacuation routes.  FSSB EGRESS PATH DISTANCE/ GEOMETRY Work involving remediation of egress routing problems including elimination of dead end corride excessive egress distance modifications and egress routing inadequacies.  FSSC EGRESS PATH SEPARATION RATING Restoration of required fire protein; wind/safety glazing, transom retrofiting, etc.  FSSD EGRESS PATH OBSTRUCTION Clearance of items restricting the required egress routes.  FSSE EGRESS PATH STAIRS RAILING Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.  FSSF EGRESS PATH FIRE DOORS/ Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutte closers, magnetic holders, panic hardware, etc.  FSSG EGRESS PATH FINISH/FURNITURE RATINGS Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.  FSGA GENERAL OTHER Life/fire safety items not specifically categorized elsewhere.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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 Includes autoclaves, cage washers, steam cleaners, etc.  HE5A FOOD SERVICE KITCHEN EQUIPMENT Includes autoclaves, cage washers, steam cleaners, 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.			
FS5B EGRESS PATH DISTANCE/ GEOMETRY Excessive egress distance modifications and egress routing problems including elimination of dead end corrido excessive egress distance modifications and egress routing hadequacies.  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/fanding configurations/structure, railing heights/geometries, etc.  FS5F EGRESS PATH FIRE DOORS/ Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutte 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Tomosphere and associated mechanical equipment.  HE1B ENVIRONMENTAL CONTROL GENERAL Includes all measures necessary to control and destroy insects, rodents and other pests.  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.	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.			
FSSC EGRESS PATH SEPARATION RATING Restoration of required fire protective barriers including vall rating compromises, fire rated construction structural fire proofing, wind/safety glazing, transom retrofitting, etc.  FSSD EGRESS PATH OBSTRUCTION Clearance of items restricting the required egress routes.  FSSE EGRESS PATH STAIRS RAILING Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.  FSSF EGRESS PATH FIRE DOORS/ HARDWARE Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutte closers, magnetic holders, panic hardware, etc.  FSSG 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES  Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS5A	EGRESS PATH	DESIGNATION	Installation, relocation or repair of posted diagrammatic emergency evacuation routes.			
structural fire proofing, wind/safety glazing, transom retrofitting, etc.  FSSD EGRESS PATH OBSTRUCTION Clearance of items restricting the required egress routes.  FSSE EGRESS PATH STAIR RAILING Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.  FSSF EGRESS PATH FIRE DOORS/ HARDWARE Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutte closers, magnetic holders, panic hardware, etc.  FSSG 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS5B	EGRESS PATH		Work involving remediation of egress routing problems including elimination of dead end corridors, excessive egress distance modifications and egress routing inadequacies.			
FSSE EGRESS PATH STAIRS RAILING Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.  FSSF EGRESS PATH FIRE DOORS/ HARDWARE Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutte closers, magnetic holders, panic hardware, etc.  FSSG 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	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.			
FSSF EGRESS PATH FIRE DOORS/ HARDWARE Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutter closers, magnetic holders, panic hardware, etc.  FSSG 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS5D	EGRESS PATH	OBSTRUCTION	Clearance of items restricting the required egress routes.			
HARDWARE 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.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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 ranges, grilles, cookers, sculleries, etc.	FS5E	EGRESS PATH	STAIRS RAILING	Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.			
FS6A GENERAL OTHER Life/fire safety items not specifically categorized elsewhere.  SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS5F	EGRESS PATH		Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutters, closers, magnetic holders, panic hardware, etc.			
SYSTEM DESCRIPTION: HEALTH  HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS5G	EGRESS PATH	FINISH/FURNITURE RATINGS	Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.			
HE1A ENVIRONMENTAL CONTROL EQUIPMENT AND ENCLOSURES  Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and 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.	FS6A	GENERAL	OTHER	Life/fire safety items not specifically categorized elsewhere.			
ENCLOSURES 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.	SYSTEM DI	ESCRIPTION: HEALTH					
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.	HE1A	ENVIRONMENTAL CONTROL		Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and all associated mechanical equipment.			
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.	HE1B	ENVIRONMENTAL CONTROL	OTHER	General environmental control problems not catalogued elsewhere.			
HE4A SANITATION EQUIPMENT LABORATORY AND PROCESS Includes autoclaves, cage washers, steam cleaners, etc.  HE5A FOOD SERVICE KITCHEN EQUIPMENT Includes ranges, grilles, cookers, sculleries, etc.	HE2A	PEST CONTROL	GENERAL	Includes all measures necessary to control and destroy insects, rodents and other pests.			
HE5A FOOD SERVICE KITCHEN EQUIPMENT Includes ranges, grilles, cookers, sculleries, etc.	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.	HE5B	FOOD SERVICE	COLD STORAGE	Includes the cold storage room and all associated refrigeration equipment.			



	CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION		
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.		
SYSTEM DE	ESCRIPTION: HVAC				
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 & 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	Replacement of HVAC control systems.		



	CATEGORY CODE REPORT					
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION			
		UPGRADE				
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, 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.			
SYSTEM D	ESCRIPTION: INTERIOR FINI	SHES / SYSTEMS				
IS1A	FLOOR	FINISHES-DRY	R & R of carpet, hardwood strip flooring, concrete coating, vinyl linoleum & tile, marble, terrazzo, rubber flooring, 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 & 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	IS6D GENERAL OTHER Any work on interior elements not logically or specifically categorized elsewhere including light coves, phone booths, interior light wells, etc.					
SYSTEM D	SYSTEM DESCRIPTION: PLUMBING					



	CATEGORY CODE REPORT					
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, sanitary sewer systems; including combined systems.			
PL4D	INFRASTRUCTURE	STORM WATER COLLECTION	Storm water collection systems, 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.			
SYSTEM D	ESCRIPTION: SITE					
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.			
SYSTEM D	ESCRIPTION: SECURITY SYS	TEMS				
SS1A	LIGHTING	EXTERIOR	Fixtures, stanchions, foliage interference, cleanliness, locations, etc.			



		CATEG	ORY CODE REPORT
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
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.
SYSTEM DE	ESCRIPTION: VERTICAL TRANS	SPORTATION	
VT1A	MACHINE ROOM	GENERAL	Machine, worm gear, thrust bearing, brake, motors, sheaves, generator, controller, selector, governor, pump(s), valves, oil, access, lighting, ventilation, 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, ventilation.
VT3A	HOISTWAY	GENERAL	Enclosure, fascia, interlock, doors, hangers, closers, sheaves, rails, hoistway switches, ropes, traveling cables, selector tape, weights, compensation.
VT4A	HALL FIXTURES	GENERAL	Operating panel, position indicator, hall buttons, lobby panel, hall lanterns, fire fighter service, audible signals, card/key access.
VT5A	PIT	GENERAL	Buffer(s), guards, sheaves, hydro packing, floor, lighting, safety controls.
VT6A	OPERATING CONDITIONS	GENERAL	Door open time, door close time, door thrust, acceleration, deceleration, leveling, dwell time, speed, OFR time, nudging.
VT7A	GENERAL	OTHER	General information/projects relating to vertical transportation system components.



# DETAILED PROJECT SUMMARIES AND TOTALS

#### **Detailed Project Totals**

#### **Facility Condition Analysis**

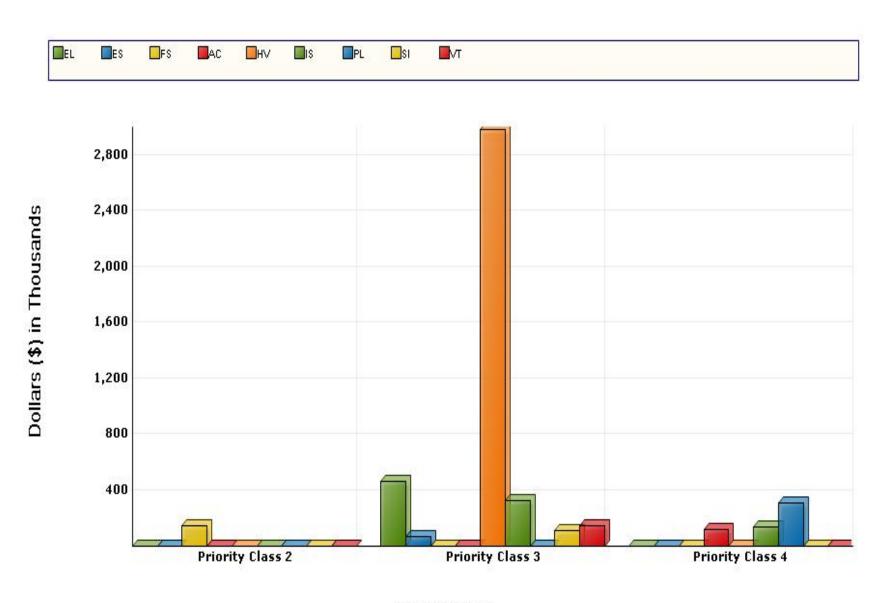
#### **System Code by Priority Class**

System	Priority Classes							
Code	System Description	1	2	3	4	Subtotal		
AC	ACCESSIBILITY	0	0	0	122,096	122,096		
EL	ELECTRICAL	0	0	461,268	0	461,268		
ES	EXTERIOR	0	0	65,605	0	65,605		
FS	FIRE/LIFE SAFETY	0	144,588	4,682	0	149,271		
HV	HVAC	0	0	2,984,565	0	2,984,565		
IS	INTERIOR/FINISH SYS.	0	0	323,713	139,004	462,717		
PL	PLUMBING	0	0	0	306,974	306,974		
SI	SITE	0	0	112,470	0	112,470		
VT	VERT. TRANSPORTATION	0	0	150,000	0	150,000		
	TOTALS	0	144,588	4,102,304	568,074	4,814,966		

Facility Replacement Cost	\$16,014,000
Facility Condition Needs Index	0.30

Gross Square Feet	39 155	Total Cost Per Square Foot	\$122.97
Gross Square Feet	39,133	Total Cost Fel Square Foot	φ122.91

**System Code by Priority Class** 



**Priority Class** 

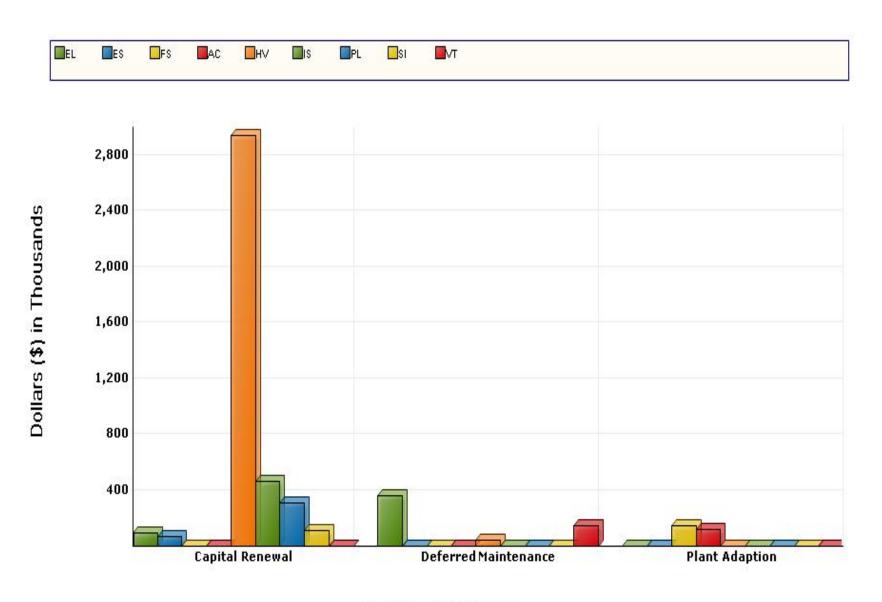
# Detailed Project Totals Facility Condition Analysis System Code by Project Class

	Project Classes						
System Code	System Description	Captial Renewal	Deferred Maintenance	Plant Adaption	Subtotal		
AC	ACCESSIBILITY	0	0	122,096	122,096		
EL	ELECTRICAL	98,285	362,984	0	461,268		
ES	EXTERIOR	65,605	0	0	65,605		
FS	FIRE/LIFE SAFETY	0	4,682	144,588	149,271		
HV	HVAC	2,942,452	42,113	0	2,984,565		
IS	INTERIOR/FINISH SYS.	462,717	0	0	462,717		
PL	PLUMBING	306,974	0	0	306,974		
SI	SITE	112,470	0	0	112,470		
VT	VERT. TRANSPORTATION	0	150,000	0	150,000		
	TOTALS	3,988,503	559,779	266,684	4,814,966		

Facility Replacement Cost	\$16,014,000
Facility Condition Needs Index	0.30

	Gross Square Feet	39,155	Total Cost Per Square Foot	\$122.97
- 1				

# **System Code by Project Class**



**Project Classification** 

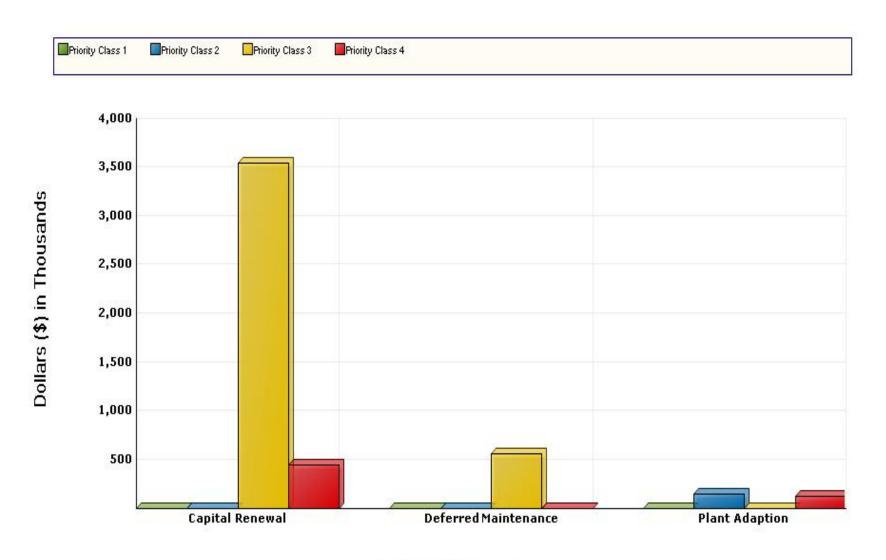
#### Detailed Project Summary Facility Condition Analysis Project Class by Priority Class

Priority Classes							
Project Class	1	2	3	4	Subtotal		
Capital Renewal	0	0	3,542,525	445,978	3,988,503		
Deferred Maintenance	0	0	559,779	0	559,779		
Plant Adaption	0	144,588	0	122,096	266,684		
TOTALS	0	144,588	4,102,304	568,074	4,814,966		

Facility Replacement Cost	\$16,014,000
Facility Condition Needs Index	0.30

Gross Square Feet 39,155	Total Cost Per Square Foot \$122.97
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# **Project Class by Priority Class**



**Project Classification** 

#### Detailed Project Summary Facility Condition Analysis

#### **Priority Class - Priority Sequence**

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	LJCCFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	124,645	19,943	144,588
				Totals for Priority Class 2	124,645	19,943	144,588
FS1A	LJCCFS02	3	2	REPLACE EXIT SIGNS	4,037	646	4,682
ES5A	LJCCES02	3	3	EXTERIOR DOOR REPLACEMENT	28,966	4,635	33,601
ES2B	LJCCES01	3	4	RESTORE BRICK VENEER	27,590	4,414	32,004
HV4B	LJCCHV02	3	5	FUME HOOD REPLACEMENT	36,305	5,809	42,113
HV3A	LJCCHV01	3	6	HVAC SYSTEM REPLACEMENT	2,536,597	405,855	2,942,452
EL3B	LJCCEL04	3	7	ELECTRICAL SYSTEM REPAIRS	90,148	14,424	104,572
EL4B	LJCCEL03	3	8	INTERIOR LIGHTING UPGRADE	217,300	34,768	252,068
EL4A	LJCCEL05	3	9	EXTERIOR LIGHTING REPLACEMENT	5,468	875	6,343
EL2A	LJCCEL01	3	10	REPLACE 120/208 VOLT SWITCHGEAR	32,116	5,139	37,255
EL2A	LJCCEL02	3	11	REPLACE 277/480 VOLT SWITCHGEAR	38,532	6,165	44,697
EL1A	LJCCEL06	3	12	UPGRADE 300 KVA DRY TYPE TRANSFORMER IN ROOM 251	14,080	2,253	16,333
IS1A	LJCCIS01	3	13	REFINISH FLOORING	189,745	30,359	220,105
IS2B	LJCCIS02	3	14	REFINISH WALLS	89,318	14,291	103,608
SI4A	LJCCSI01	3	15	SITE PAVING UPGRADES	96,957	15,513	112,470
VT7A	LJCCVT01	3	16	UPGRADE ELEVATOR NO. 1	75,000	0	75,000
VT7A	LJCCVT02	3	17	UPGRADE ELEVATOR NO. 2	75,000	0	75,000
				Totals for Priority Class 3	3,557,159	545,145	4,102,304
AC2A	LJCCAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	4,141	663	4,803
AC4A	LJCCAC02	4	19	INTERIOR AMENITY ACCESSIBILITY UPGRADES	22,333	3,573	25,907
AC3E	LJCCAC03	4	20	RESTROOM RENOVATION	78,781	12,605	91,386
IS3B	LJCCIS03	4	21	REFINISH CEILINGS	119,831	19,173	139,004
PL1A	LJCCPL01	4	22	WATER SUPPLY PIPING REPLACEMENT	264,633	42,341	306,974
				Totals for Priority Class 4	489,719	78,355	568,074
				Grand Total:	4,171,523	643,444	4,814,966

#### Detailed Project Summary Facility Condition Analysis

#### **Project Cost Range**

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES2B	LJCCES01	3	4	RESTORE BRICK VENEER	27,590	4,414	32,004
ES5A	LJCCES02	3	3	EXTERIOR DOOR REPLACEMENT	28,966	4,635	33,601
VT7A	LJCCVT01	3	16	UPGRADE ELEVATOR NO. 1	75,000	0	75,000
VT7A	LJCCVT02	3	17	UPGRADE ELEVATOR NO. 2	75,000	0	75,000
FS1A	LJCCFS02	3	2	REPLACE EXIT SIGNS	4,037	646	4,682
HV4B	LJCCHV02	3	5	FUME HOOD REPLACEMENT	36,305	5,809	42,113
EL2A	LJCCEL01	3	10	REPLACE 120/208 VOLT SWITCHGEAR	32,116	5,139	37,255
EL2A	LJCCEL02	3	11	REPLACE 277/480 VOLT SWITCHGEAR	38,532	6,165	44,697
EL4A	LJCCEL05	3	9	EXTERIOR LIGHTING REPLACEMENT	5,468	875	6,343
EL1A	LJCCEL06	3	12	UPGRADE 300 KVA DRY TYPE TRANSFORMER IN ROOM 251	14,080	2,253	16,333
				Totals for Priority Class 3	337,094	29,935	367,029
AC2A	LJCCAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	4,141	663	4,803
AC4A	LJCCAC02	4	19	INTERIOR AMENITY ACCESSIBILITY UPGRADES	22,333	3,573	25,907
AC3E	LJCCAC03	4	20	RESTROOM RENOVATION	78,781	12,605	91,386
				Totals for Priority Class 4	105,255	16,841	122,096
				Grand Totals for Projects < 100,000	442,349	46,776	489,124

#### Detailed Project Summary Facility Condition Analysis Project Cost Range

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	LJCCFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	124,645	19,943	144,588
				Totals for Priority Class 2	124,645	19,943	144,588
IS1A	LJCCIS01	3	13	REFINISH FLOORING	189,745	30,359	220,105
IS2B	LJCCIS02	3	14	REFINISH WALLS	89,318	14,291	103,608
SI4A	LJCCSI01	3	15	SITE PAVING UPGRADES	96,957	15,513	112,470
EL4B	LJCCEL03	3	8	INTERIOR LIGHTING UPGRADE	217,300	34,768	252,068
EL3B	LJCCEL04	3	7	ELECTRICAL SYSTEM REPAIRS	90,148	14,424	104,572
				Totals for Priority Class 3	683,468	109,355	792,823
IS3B	LJCCIS03	4	21	REFINISH CEILINGS	119,831	19,173	139,004
PL1A	LJCCPL01	4	22	WATER SUPPLY PIPING REPLACEMENT	264,633	42,341	306,974
				Totals for Priority Class 4	384,464	61,514	445,978
				Grand Totals for Projects >= 100,000 and < 500,000	1,192,578	190,812	1,383,390

### Detailed Project Summary Facility Condition Analysis

### **Project Cost Range**

LJCC: LEO JENKINS CANCER CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
HV3A	LJCCHV01	3	6	HVAC SYSTEM REPLACEMENT	2,536,597	405,855	2,942,452
				Totals for Priority Class 3	2,536,597	405,855	2,942,452
				Grand Totals for Projects >= 500,000	2,536,597	405,855	2,942,452
				Grand Totals For All Projects:	4,171,523	643,444	4,814,966

# Detailed Project Summary Facility Condition Analysis Project Classification

# LJCC: LEO JENKINS CANCER CENTER

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
ES5A	LJCCES02	3	Capital Renewal	3	EXTERIOR DOOR REPLACEMENT	33,601
ES2B	LJCCES01	4	Capital Renewal	3	RESTORE BRICK VENEER	32,004
HV3A	LJCCHV01	6	Capital Renewal	3	HVAC SYSTEM REPLACEMENT	2,942,452
EL2A	LJCCEL01	10	Capital Renewal	3	REPLACE 120/208 VOLT SWITCHGEAR	37,255
EL2A	LJCCEL02	11	Capital Renewal	3	REPLACE 277/480 VOLT SWITCHGEAR	44,697
EL1A	LJCCEL06	12	Capital Renewal	3	UPGRADE 300 KVA DRY TYPE TRANSFORMER IN ROOM 251	16,333
IS1A	LJCCIS01	13	Capital Renewal	3	REFINISH FLOORING	220,105
IS2B	LJCCIS02	14	Capital Renewal	3	REFINISH WALLS	103,608
SI4A	LJCCSI01	15	Capital Renewal	3	SITE PAVING UPGRADES	112,470
IS3B	LJCCIS03	21	Capital Renewal	4	REFINISH CEILINGS	139,004
PL1A	LJCCPL01	22	Capital Renewal	4	WATER SUPPLY PIPING REPLACEMENT	306,974
					Totals for Capital Renewal	3,988,503
FS1A	LJCCFS02	2	Deferred Maintenance	3	REPLACE EXIT SIGNS	4,682
HV4B	LJCCHV02	5	Deferred Maintenance	3	FUME HOOD REPLACEMENT	42,113
EL3B	LJCCEL04	7	Deferred Maintenance	3	ELECTRICAL SYSTEM REPAIRS	104,572
EL4B	LJCCEL03	8	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	252,068
EL4A	LJCCEL05	9	Deferred Maintenance	3	EXTERIOR LIGHTING REPLACEMENT	6,343
VT7A	LJCCVT01	16	Deferred Maintenance	3	UPGRADE ELEVATOR NO. 1	75,000
VT7A	LJCCVT02	17	Deferred Maintenance	3	UPGRADE ELEVATOR NO. 2	75,000
					Totals for Deferred Maintenance	559,779
FS3A	LJCCFS01	1	Plant Adaption	2	FIRE SPRINKLER SYSTEM EXTENSION	144,588
AC2A	LJCCAC01	18	Plant Adaption	4	BUILDING ENTRY ACCESSIBILITY UPGRADES	4,803
AC4A	LJCCAC02	19	Plant Adaption	4	INTERIOR AMENITY ACCESSIBILITY UPGRADES	25,907
AC3E	LJCCAC03	20	Plant Adaption	4	RESTROOM RENOVATION	91,386
					Totals for Plant Adaption	266,684
					Grand Total:	4,814,966

# Detailed Project Summary Facility Condition Analysis

### **Energy Conservation**

LJCC: LEO JENKINS CANCER CENTER

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
FS1A	LJCCFS02	3	2	REPLACE EXIT SIGNS	4,682	463	10.11
HV3A	LJCCHV01	3	6	HVAC SYSTEM REPLACEMENT	2,942,452	25,000	117.7
EL4B	LJCCEL03	3	8	INTERIOR LIGHTING UPGRADE	252,068	11,980	21.04
EL4A	LJCCEL05	3	9	EXTERIOR LIGHTING REPLACEMENT	6,343	590	10.75
				Totals for Priority Class 3	3,205,546	38,033	84.28
				Grand Total:	3,205,546	38,033	84.28

### Detailed Project Summary Facility Condition Analysis Category/System Code

# LJCC : LEO JENKINS CANCER CENTER

Cat. Code	Project Number		Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC2A	LJCCAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	4,141	663	4,803
AC4A	LJCCAC02	4	19	INTERIOR AMENITY ACCESSIBILITY UPGRADES	22,333	3,573	25,907
AC3E	LJCCAC03	4	20	RESTROOM RENOVATION	78,781	12,605	91,386
				Totals for System Code: ACCESSIBILITY	105,255	16,841	122,096
EL3B	LJCCEL04	3	7	ELECTRICAL SYSTEM REPAIRS	90,148	14,424	104,572
EL4B	LJCCEL03	3	8	INTERIOR LIGHTING UPGRADE	217,300	34,768	252,068
EL4A	LJCCEL05	3	9	EXTERIOR LIGHTING REPLACEMENT	5,468	875	6,343
EL2A	LJCCEL01	3	10	REPLACE 120/208 VOLT SWITCHGEAR	32,116	5,139	37,255
EL2A	LJCCEL02	3	11	REPLACE 277/480 VOLT SWITCHGEAR	38,532	6,165	44,697
EL1A	LJCCEL06	3	12	UPGRADE 300 KVA DRY TYPE TRANSFORMER IN ROOM 251	14,080	2,253	16,333
				Totals for System Code: ELECTRICAL	397,645	63,623	461,268
ES5A	LJCCES02	3	3	EXTERIOR DOOR REPLACEMENT	28,966	4,635	33,601
ES2B	LJCCES01	3	4	RESTORE BRICK VENEER	27,590	4,414	32,004
				Totals for System Code: EXTERIOR	56,556	9,049	65,605
FS3A	LJCCFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	124,645	19,943	144,588
FS1A	LJCCFS02	3	2	REPLACE EXIT SIGNS	4,037	646	4,682
				Totals for System Code: FIRE/LIFE SAFETY	128,682	20,589	149,271
HV4B	LJCCHV02	3	5	FUME HOOD REPLACEMENT	36,305	5,809	42,113
HV3A	LJCCHV01	3	6	HVAC SYSTEM REPLACEMENT	2,536,597	405,855	2,942,452
				Totals for System Code: HVAC	2,572,901	411,664	2,984,565
IS1A	LJCCIS01	3	13	REFINISH FLOORING	189,745	30,359	220,105
IS2B	LJCCIS02	3	14	REFINISH WALLS	89,318	14,291	103,608
IS3B	LJCCIS03	4	21	REFINISH CEILINGS	119,831	19,173	139,004
				Totals for System Code: INTERIOR/FINISH SYS.	398,894	63,823	462,717
PL1A	LJCCPL01	4	22	WATER SUPPLY PIPING REPLACEMENT	264,633	42,341	306,974
				Totals for System Code: PLUMBING	264,633	42,341	306,974
SI4A	LJCCSI01	3	15	SITE PAVING UPGRADES	96,957	15,513	112,470
				Totals for System Code: SITE	96,957	15,513	112,470
VT7A	LJCCVT01	3	16	UPGRADE ELEVATOR NO. 1	75,000	0	75,000
VT7A	LJCCVT02	3	17	UPGRADE ELEVATOR NO. 2	75,000	0	75,000
				Totals for System Code: VERT. TRANSPORTATION	150,000		150,000

# Detailed Project Summary Facility Condition Analysis

# Category/System Code LJCC: LEO JENKINS CANCER CENTER

Grand Total: 4,171,523 643,444 4,814,966

# **FACILITY CONDITION ANALYSIS**



# SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCFS01 Title: FIRE SPRINKLER SYSTEM EXTENSION

Priority Sequence: 1

Priority Class: 2

Category Code: FS3A System: FIRE/LIFE SAFETY

Component: SUPPRESSION

Element: SPRINKLERS

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: NFPA 1, 13, 13R, 101

Project Class: Plant Adaption

**Project Date:** 10/14/2009

**Project** 

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Install an automatic fire sprinkler system in unprotected areas throughout the facility. This includes piping, valves, sprinkler heads, and piping supports. Install flow switches and sensors to interface with the fire alarm system. Additionally, replace the sprinkler heads on the existing system.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCFS01

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	19,577	\$3.08	\$60,297	\$3.77	\$73,805	\$134,102
Fire sprinkler head replacement	SF	19,578	\$0.09	\$1,762	\$0.35	\$6,852	\$8,614
Project Totals	 ::			\$62,059		\$80,658	\$142,717

Material/Labor Cost		\$142,717
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$103,871
General Contractor Mark Up at 20.0%	+	\$20,774
Construction Cost		\$124,645
Professional Fees at 16.0%	+	\$19,943
Total Project Cost		\$144,588

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCFS02 Title: REPLACE EXIT SIGNS

Priority Sequence: 2

Priority Class: 3

Category Code: FS1A System: FIRE/LIFE SAFETY

Component: LIGHTING

Element: EGRESS LTG./EXIT SIGNAGE

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Energy Conservation \$463

Code Application: NFPA 101-47

IBC 1011

Project Class: Deferred Maintenance

**Project Date:** 10/14/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Replace the existing exit signage throughout the building, and install new exit signs as needed. The new units should be connected to the emergency power network. LED type exit signs are recommended, because they are energy efficient and require minimal maintenance.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCFS02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replacement of existing exit signs with LED units	EA	28	\$76.00	\$2,128	\$85.00	\$2,380	\$4,508
Project Total	 s:			\$2.128		\$2.380	\$4.508

Material/Labor Cost		\$4,508
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$3,364
General Contractor Mark Up at 20.0%	+	\$673
Construction Cost		\$4,037
Professional Fees at 16.0%	+	\$646
Total Project Cost		\$4,682

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCES02 Title: EXTERIOR DOOR REPLACEMENT

Priority Sequence: 3

Priority Class: 3

Category Code: ES5A System: EXTERIOR

Component: FENESTRATIONS

Element: DOORS

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal

**Project Date:** 10/8/2009

Project

**Location:** Building-wide: Floor(s) 1

### **Project Description**

Replacement of the metal-framed glass primary entrance doors is recommended. The replacement doors should maintain the architectural design aspects of this facility and be modern, energy-efficient applications.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCES02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High traffic door system	LEAF	8	\$1,978	\$15,824	\$1,999	\$15,992	\$31,816
Project <sup>-</sup>	Totals:			\$15,824		\$15,992	\$31,816

Material/Labor Cost		\$31,816
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$24,139
General Contractor Mark Up at 20.0%	+	\$4,828
Construction Cost		\$28,966
Professional Fees at 16.0%	+	\$4,635
Total Project Cost		\$33,601

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCES01 Title: RESTORE BRICK VENEER

Priority Sequence: 4

Priority Class: 3

Category Code: ES2B System: EXTERIOR

Component: COLUMNS/BEAMS/WALLS

Element: FINISH

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal

**Project Date:** 10/8/2009

**Project** 

Location: Building-wide: Floor(s) 1

### **Project Description**

Brick veneer is the primary exterior finish. While the brick is fundamentally sound, exposure to the elements has caused some deterioration of the mortar joints and expansion joints. Cleaning, surface preparation, selective repairs, and applied finish or penetrating sealant upgrades are recommended to restore the aesthetics and integrity of the building envelope.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCES01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	16,800	\$0.11	\$1,848	\$0.22	\$3,696	\$5,544
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	1,680	\$2.45	\$4,116	\$4.99	\$8,383	\$12,499
Applied finish or sealant	SF	16,800	\$0.22	\$3,696	\$0.82	\$13,776	\$17,472
Project Totals	 ::		1	\$9,660		\$25,855	\$35,515

Material/Labor Cost		\$35,515
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$22,991
General Contractor Mark Up at 20.0%	+	\$4,598
Construction Cost		\$27,590
Professional Fees at 16.0%	+	\$4,414
Total Project Cost		\$32,004

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCHV02 Title: FUME HOOD REPLACEMENT

Priority Sequence: 5

Priority Class: 3

Category Code: HV4B System: HVAC

Component: AIR MOVING/VENTILATION

Element: EXHAUST FANS

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: ASHRAE 62-2004, 110-1995

Project Class: Deferred Maintenance

**Project Date:** 10/14/2009

Project

**Location**: Floor-wide: Floor(s) 1, 2, R

### **Project Description**

Replacement of the aging fume hood is recommended. Demolish the fume hood and its related mechanical systems. Install a new modern fume hood system, including hoods, fans, ductwork, piping, and electrical connections. Provide modern direct digital controls that interface with the HVAC system.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCHV02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fume hood replacement, including mechanical systems, controls, demolition and disposal fees	SYS on,	1	\$24,990	\$24,990	\$9,920	\$9,920	\$34,910
Project Tota	als:		,	\$24,990		\$9,920	\$34,910

Material/Labor Cost		\$34,910
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$30,254
General Contractor Mark Up at 20.0%	+	\$6,051
Construction Cost		\$36,305
Professional Fees at 16.0%	+	\$5,809
Total Project Cost		\$42,113

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCHV01 Title: HVAC SYSTEM REPLACEMENT

Priority Sequence: 6

Priority Class: 3

Category Code: HV3A System: HVAC

Component: HEATING/COOLING

Element: SYSTEM RETROFIT/REPLACE

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Energy Conservation \$25,000

Code Application: ASHRAE 62-2004

Project Class: Capital Renewal

**Project Date:** 10/14/2009

**Project** 

**Location:** Floor-wide: Floor(s) 1, 2, R

#### **Project Description**

A complete redesign and replacement of the HVAC system is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with variable air volume and constant volume air distribution as needed. This includes new air handlers, exhaust fans, ductwork, terminal units, heat exchangers, pumps, piping, controls, and related electrical components. Specify direct digital controls for the new equipment. Incorporate variable frequency drives into the new HVAC design as applicable.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCHV01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Air handlers, exhaust fans, ductwork, VAVs, VFDs, DDCs, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment	SF	39,155	\$33.04	\$1,293,681	\$40.38	\$1,581,079	\$2,874,760
Project Tota	ls:			\$1,293,681		\$1,581,079	\$2,874,760

Material/Labor Cost		\$2,874,760
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$2,113,830
General Contractor Mark Up at 20.0%	+	\$422,766
Construction Cost		\$2,536,597
Professional Fees at 16.0%	+	\$405,855
Total Project Cost		\$2,942,452

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCEL04 Title: ELECTRICAL SYSTEM REPAIRS

Priority Sequence: 7

Priority Class: 3

Category Code: EL3B System: ELECTRICAL

Component: SECONDARY DISTRIBUTION

Element: DISTRIBUTION NETWORK

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: NEC Articles 100, 210, 410

Project Class: Deferred Maintenance

**Project Date:** 10/14/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Aging devices, including wall switches and receptacles, are potential shock and fire hazards. Replace all worn or damaged switches, receptacles, and cover plates. Install GFCI receptacles where required by code. Test power panels for proper operation, replacing faulty breakers as needed. Update power panel directories for circuit identification.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL04

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Switches, receptacles, cover plates, breakers, miscellaneous materials	SF	39,155	\$1.08	\$42,287	\$1.62	\$63,431	\$105,719
Project Total	als:			\$42,287	,	\$63,431	\$105,719

Material/Labor Cost		\$105,719
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$75,124
General Contractor Mark Up at 20.0%	+	\$15,025
Construction Cost		\$90,148
Professional Fees at 16.0%	+	\$14,424
Total Project Cost		\$104,572

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCEL03 Title: INTERIOR LIGHTING UPGRADE

Priority Sequence: 8

Priority Class: 3

Category Code: EL4B System: ELECTRICAL

Component: DEVICES AND FIXTURES

Element: INTERIOR LIGHTING

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Energy Conservation \$11,980

Code Application: NEC Articles 210, 410

Project Class: Deferred Maintenance

**Project Date:** 10/14/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

An interior lighting upgrade is recommended. Replace existing aged and / or inefficient light fixtures with modern fixtures of the latest energy-efficient design. Select lamps with the same color temperature and rendering index for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL03

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High efficiency fluorescent fixtures, occupancy sensors, and demolition of existing lighting	SF	39,155	\$2.83	\$110,809	\$3.46	\$135,476	\$246,285
Project Total	ls:			\$110.809		\$135,476	\$246.285

Material/Labor Cost		\$246,285
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$181,084
General Contractor Mark Up at 20.0%	+	\$36,217
Construction Cost		\$217,300
Professional Fees at 16.0%	+	\$34,768
Total Project Cost		\$252,068

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCEL05 Title: EXTERIOR LIGHTING REPLACEMENT

Priority Sequence: 9

Priority Class: 3

Category Code: EL4A System: ELECTRICAL

Component: DEVICES AND FIXTURES

Element: EXTERIOR LIGHTING

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Energy Conservation \$590

Code Application: NEC 410

Project Class: Deferred Maintenance

**Project Date:** 10/14/2009

Project

**Location:** Building-wide: Floor(s) 1

### **Project Description**

Nighttime illumination is provided by approximately nine wall-mounted HID fixtures installed in the mid-1980s. Due to the daytime inspection, the illumination level was not easily identified. Based on their present location, the fixtures appear to be sufficient in quantity. However, due to life cycle depletion, a formal cost estimate was created for exterior lighting renewal within the next five years.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL05

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
HID wall-mount fixture and demolition of existing fixture	EA	9	\$406	\$3,654	\$190	\$1,710	\$5,364
Project Totals	:		-	\$3.654		\$1.710	\$5.364

Material/Labor Cost		\$5,364
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$4,557
General Contractor Mark Up at 20.0%	+	\$911
Construction Cost		\$5,468
Professional Fees at 16.0%	+	\$875
Total Project Cost		\$6,343

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCEL01 Title: REPLACE 120/208 VOLT SWITCHGEAR

Priority Sequence: 10

Priority Class: 3

Category Code: EL2A System: ELECTRICAL

Component: MAIN DISTRIBUTION PANELS

Element: CONDITION UPGRADE

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: NEC Article 230

Project Class: Capital Renewal

**Project Date:** 10/14/2009

**Project** 

Location: Item Only: Floor(s) 1

#### **Project Description**

The 120/208 volt switchgear is recommended for replacement. The existing aged circuit breakers could serve as fire hazards should they fail to interrupt a circuit in an overload or short circuit condition. The switchgear should be replaced in its entirety. New switchgear components should include a ground fault main circuit breaker, digital metering for remote control / monitoring, and transient surge protection.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
120/208 V switchgear, includes switchboard, circuit breakers, feeders, digital metering, transient surge protector and demolition of existing equipment	AMP r,	1,200	\$15.52	\$18,624	\$13.01	\$15,612	\$34,236
Project Totals	s:			\$18,624		\$15,612	\$34,236

Material/Labor Cost		\$34,236
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$26,763
General Contractor Mark Up at 20.0%	+	\$5,353
Construction Cost		\$32,116
Professional Fees at 16.0%	+	\$5,139
Total Project Cost		\$37,255

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Description**

Project Number: LJCCEL02 Title: REPLACE 277/480 VOLT SWITCHGEAR

Priority Sequence: 11

Priority Class: 3

Category Code: EL2A System: ELECTRICAL

Component: MAIN DISTRIBUTION PANELS

Element: CONDITION UPGRADE

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: NEC Article 230

Project Class: Capital Renewal

**Project Date:** 10/14/2009

**Project** 

Location: Item Only: Floor(s) 1

### **Project Description**

The 277/480 volt switchgear is recommended for replacement. The existing aged circuit breakers could serve as fire hazards should they fail to interrupt a circuit in an overload or short circuit condition. The switchgear should be replaced in its entirety. New switchgear components should include a ground fault main circuit breaker, digital metering for remote control / monitoring, and transient surge protection.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
277/480 V switchgear, includes switchboard, circuit breakers, feeders, digital metering, transient surge protector and demolition of existing equipment	AMP	1,200	\$18.62	\$22,344	\$15.61	\$18,732	\$41,076
Project Totals	:			\$22,344		\$18,732	\$41,076

Material/Labor Cost		\$41,076
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$32,110
General Contractor Mark Up at 20.0%	+	\$6,422
Construction Cost		\$38,532
Professional Fees at 16.0%	+	\$6,165
Total Project Cost		\$44,697

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCEL06 Title: UPGRADE 300 KVA DRY TYPE

**TRANSFORMER IN ROOM 251** 

Priority Sequence: 12

Priority Class: 3

Category Code: EL1A System: ELECTRICAL

Component: INCOMING SERVICE

Element: TRANSFORMER

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: NEC 230, 450

Project Class: Capital Renewal

**Project Date:** 10/14/2009

Project

Location: Item Only: Floor(s) 2

#### **Project Description**

The secondary dry-type transformer in electrical closet 251 is exhibiting failure characteristics. The transformer is operating noisily and emitting a lot of heat. It is recommended for replacement. Issues related to transformer failure include high replacement cost for burned-out motors associated with phase loss, loss of computer data, and loss in productivity due to unavailable power. The existing transformer should be replaced prior to failure.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCEL06

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
300 kVA, dry-type transformer, connections, and demolition of existing equipment	KVA	300	\$35.04	\$10,512	\$7.46	\$2,238	\$12,750
Project Tota	als:		-	\$10,512	-	\$2,238	\$12,750

Material/Labor Cost		\$12,750
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$11,734
General Contractor Mark Up at 20.0%	+	\$2,347
Construction Cost		\$14,080
Professional Fees at 16.0%	+	\$2,253
Total Project Cost		\$16,333

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCIS01 Title: REFINISH FLOORING

Priority Sequence: 13

Priority Class: 3

Category Code: IS1A System: INTERIOR/FINISH SYS.

Component: FLOOR

Element: FINISHES-DRY

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal

**Project Date:** 10/8/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Interior floor finishes include carpet, vinyl tile, and some sheet vinyl areas. The applications vary in age and condition from area to area. Floor finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCIS01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	8,930	\$5.36	\$47,865	\$2.00	\$17,860	\$65,725
Vinyl floor tile	SF	20,830	\$3.53	\$73,530	\$2.50	\$52,075	\$125,605
	Project Totals:			\$121,395		\$69,935	\$191,330

Material/Labor Cost		\$191,330
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$158,121
General Contractor Mark Up at 20.0%	+	\$31,624
Construction Cost		\$189,745
Professional Fees at 16.0%	+	\$30,359
Total Project Cost		\$220,105

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCIS02 Title: REFINISH WALLS

Priority Sequence: 14

Priority Class: 3

Category Code: IS2B System: INTERIOR/FINISH SYS.

Component: PARTITIONS

Element: FINISHES

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal

**Project Date:** 10/8/2009

**Project** 

**Location:** Floor-wide: Floor(s) 1, 2

#### **Project Description**

Interior wall finishes are painted plaster or vinyl wall covering. The applications vary in age and condition from area to area. Wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

# **Project Cost**

Project Number: LJCCIS02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	126,860	\$0.17	\$21,566	\$0.81	\$102,757	\$124,323
Project Totals	:			\$21,566		\$102,757	\$124,323

Material/Labor Cost		\$124,323
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$74,431
General Contractor Mark Up at 20.0%	+	\$14,886
Construction Cost		\$89,318
Professional Fees at 16.0%	+	\$14,291
Total Project Cost		\$103,608

# Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCSI01 Title: SITE PAVING UPGRADES

Priority Sequence: 15

Priority Class: 3

Category Code: SI4A System: SITE

Component: GENERAL

Element: OTHER

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: ADAAG 502

Project Class: Capital Renewal

**Project Date:** 10/8/2009

**Project** 

Location: Undefined: Floor(s) 1

### **Project Description**

Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. This includes the brick paving in the courtyard. New systems, including excavation, grading, base compaction, and paving, are recommended. Vehicular paving systems are in good condition but will need minor upgrades.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCSI01

			Material Unit	Total Material	Labor Unit	Total Labor	Total
Task Description	Unit	Qnty	Cost	Cost	Cost	Cost	Cost
Concrete pedestrian paving	SF	5,000	\$2.97	\$14,850	\$3.64	\$18,200	\$33,050
Brick pedestrian paving	SF	5,000	\$6.98	\$34,900	\$6.77	\$33,850	\$68,750
Vehicular paving sealcoat and striping allowance	SY	2,600	\$0.89	\$2,314	\$1.25	\$3,250	\$5,564
Project Total	s:			\$52,064		\$55,300	\$107,364

Material/Labor Cost		\$107,364
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$80,797
General Contractor Mark Up at 20.0%	+	\$16,159
Construction Cost		\$96,957
Professional Fees at 16.0%	+	\$15,513
Total Project Cost		\$112,470

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCVT01 Title: UPGRADE ELEVATOR NO. 1

Priority Sequence: 16

Priority Class: 3

Category Code: VT7A System: VERT. TRANSPORTATION

Component: GENERAL

Element: OTHER

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Deferred Maintenance

**Project Date:** 10/12/2009

**Project** 

Location: Item Only: Floor(s) 1

### **Project Description**

Perform a complete modernization of the elevator. Replace the pumping unit complete, motor, pump, valve, controller, door hangers, track, door rollers, related door hardware, door operator, car operating panel, and signal fixtures, and refurbish the car interior.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCVT01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Client-reported cost to modernize elevator	EA	1	\$75,000	\$75,000	\$0.00	\$	\$75,000
Project To	tals:		,	\$75,000	·	\$	\$75,000

Material/Labor Cost	\$75,000
Material Index	100.7%
Labor Index	51.3%
Material/Labor Indexed Cost	\$75,000
No GCM Required	
Construction Cost	\$75,000
No Professional Fees Required	
Total Project Cost	\$75,000

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCVT02 Title: UPGRADE ELEVATOR NO. 2

Priority Sequence: 17

Priority Class: 3

Category Code: VT7A System: VERT. TRANSPORTATION

Component: GENERAL

Element: OTHER

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Deferred Maintenance

**Project Date:** 10/12/2009

**Project** 

Location: Item Only: Floor(s) 1

### **Project Description**

Perform a complete modernization of the elevator. Replace the pumping unit complete, motor, pump, valve, controller, door hangers, track, door rollers, related door hardware, door operator, car operating panel, and signal fixtures, and refurbish the car interior.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCVT02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Client-reported cost to modernize elevator	EA	1	\$75,000	\$75,000	\$0.00	\$	\$75,000
Project To	tals:			\$75,000	_	\$	\$75,000

Material/Labor Cost	\$75,000
Material Index	100.7%
Labor Index	51.3%
Material/Labor Indexed Cost	\$75,000
No GCM Required	
Construction Cost	\$75,000
No Professional Fees Required	
Total Project Cost	\$75,000

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCAC01 Title: BUILDING ENTRY ACCESSIBILITY

**UPGRADES** 

Priority Sequence: 18

Priority Class: 4

Category Code: AC2A System: ACCESSIBILITY

Component: BUILDING ENTRY

Element: GENERAL

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: ADAAG 403.6, 505

Project Class: Plant Adaption

**Project Date:** 10/8/2009

Project

Location: Undefined: Floor(s) 1

#### **Project Description**

Current accessibility legislation requires that building entrances be accessible and that site stairs have proper handrails. To comply with the intent of this legislation, it is recommended that ADA compliant painted metal handrails be installed at all entrances as required.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCAC01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system, painted	LF	50	\$50.50	\$2,525	\$35.40	\$1,770	\$4,295
Project Totals	s:			\$2,525		\$1,770	\$4,295

Material/Labor Cost		\$4,295
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$3,451
General Contractor Mark Up at 20.0%	+	\$690
Construction Cost		\$4,141
Professional Fees at 16.0%	+	\$663
Total Project Cost		\$4,803

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCAC02 Title: INTERIOR AMENITY ACCESSIBILITY

**UPGRADES** 

Priority Sequence: 19

Priority Class: 4

Category Code: AC4A System: ACCESSIBILITY

Component: GENERAL

Element: FUNCTIONAL SPACE MOD.

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: ADAAG 211, 602, 804

Project Class: Plant Adaption

**Project Date:** 10/8/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

#### **Project Description**

Building amenities are also required to be generally accessible to all persons. The configurations of the break room kitchenette and select drinking fountains are barriers to accessibility. The installation of wheelchair accessible kitchenette cabinetry is recommended where applicable, along with dual level, refrigerated drinking fountains.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCAC02

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA compliant kitchenette unit with base cabinetry, overhead cabinetry, and amenities	SYS	1	\$4,894	\$4,894	\$1,999	\$1,999	\$6,893
Dual level drinking fountain	EA	3	\$1,216	\$3,648	\$374	\$1,122	\$4,770
Alcove construction including finishes	EA	3	\$877	\$2,631	\$3,742	\$11,226	\$13,857
Project Totals	:		'	\$11,173		\$14,347	\$25,520

Material/Labor Cost		\$25,520
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$18,611
General Contractor Mark Up at 20.0%	+	\$3,722
Construction Cost		\$22,333
Professional Fees at 16.0%	+	\$3,573
Total Project Cost		\$25,907

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCAC03 Title: RESTROOM RENOVATION

Priority Sequence: 20

Priority Class: 4

Category Code: AC3E System: ACCESSIBILITY

Component: INTERIOR PATH OF TRAVEL

Element: RESTROOMS/BATHROOMS

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

**Code Application:** ADAAG 604, 605, 606, 607, 608

Project Class: Plant Adaption

**Project Date:** 10/8/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Select areas of the building have single-user, ADA compliant restrooms. The remaining restroom fixtures and finishes are mostly original to the year of construction or latest major renovation. The fixtures are sound but dated and are spaced such that clearances are not ADA compliant. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories, is recommended. Restroom expansion may be necessary in order to meet modern minimum fixture counts and accessibility legislation.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCAC03

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Major restroom renovation, including fixtures, finishes, partitions, accessories, and expansion if necessary (assumes 55 square feet of restroom area per fixture)	FIXT	23	\$1,969	\$45,287	\$1,699	\$39,077	\$84,364
Project Totals	 5:			\$45,287		\$39,077	\$84,364

Material/Labor Cost		\$84,364
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$65,651
General Contractor Mark Up at 20.0%	+	\$13,130
Construction Cost		\$78,781
Professional Fees at 16.0%	+	\$12,605
Total Project Cost		\$91,386

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCIS03 Title: REFINISH CEILINGS

Priority Sequence: 21

Priority Class: 4

Category Code: IS3B System: INTERIOR/FINISH SYS.

Component: CEILINGS

Element: REPLACEMENT

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal

**Project Date:** 10/8/2009

**Project** 

**Location:** Floor-wide: Floor(s) 1, 2

#### **Project Description**

Ceiling finishes are lay-in, acoustical tile or painted plaster. The applications vary in age and condition from area to area. Ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCIS03

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical tile ceiling system	SF	26,780	\$2.12	\$56,774	\$2.98	\$79,804	\$136,578
Painted ceiling finish application	SF	2,980	\$0.17	\$507	\$0.81	\$2,414	\$2,920
Project To	otals:			\$57,280		\$82,218	\$139,498

Material/Labor Cost		\$139,498
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$99,859
General Contractor Mark Up at 20.0%	+	\$19,972
Construction Cost		\$119,831
Professional Fees at 16.0%	+	\$19,173
Total Project Cost		\$139,004

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

#### **Project Description**

Project Number: LJCCPL01 Title: WATER SUPPLY PIPING REPLACEMENT

Priority Sequence: 22

Priority Class: 4

Category Code: PL1A System: PLUMBING

Component: DOMESTIC WATER

Element: PIPING NETWORK

Building Code: LJCC

Building Name: LEO JENKINS CANCER CENTER

Subclass/Savings: Not Applicable

Code Application: IPC Chapter 6

Project Class: Capital Renewal

**Project Date:** 10/14/2009

Project

**Location:** Floor-wide: Floor(s) 1, 2

### **Project Description**

Replace water supply and process piping as needed throughout the facility. Remove the aging water supply and process piping. Install new copper water supply piping with fiberglass insulation. Provide isolation valves, pressure regulators, shock absorbers, and backflow prevention devices in appropriate areas. Install new process piping as needed such as gas lines, vacuum lines, compressed air lines, purified water lines, process steam lines, etc., along with related isolation valves and gas cocks. Clearly label exposed piping for identification of the conveyed fluids and gases.

## Facility Condition Analysis Section Three

LJCC: LEO JENKINS CANCER CENTER

### **Project Cost**

Project Number: LJCCPL01

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Water and specialty pipe and fittings, valves, backflow prevention devices, insulation, hangers, labels, demolition, and cut and patching materials	SF	39,155	\$2.46	\$96,321	\$6.15	\$240,803	\$337,125
Project Tota	ls:			\$96,321		\$240,803	\$337,125

Material/Labor Cost		\$337,125
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$220,528
General Contractor Mark Up at 20.0%	+	\$44,106
Construction Cost		\$264,633
Professional Fees at 16.0%	+	\$42,341
Total Project Cost		\$306,974

## **FACILITY CONDITION ANALYSIS**

SECTION 4

DRAWINGS AND PROJECT LOCATIONS

BLDG NO. LJCC CORPORATION FACILITY CONDITION ANALYSIS 2165 West Park Court Suite N Stone Mountain GA 30087 0ffice 1726 770.879.7376 **₹101**> PROJECT NUMBER APPLIES TO ONE ROOM ONLY PROJECT NUMBER ONE ITEM ONLY PROJECT NUMBER 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: 12/09/09 (ES01) (ES02) AC01 SI01 (EL05) **€**L02> Drawn by: J.T.V. Project No. 09-041 FIRST FLOOR PLAN Sheet No.

LEO JENKINS CANCER CENTER

1 of 2

ROOF HV01/ HV02/



LEO JENKINS CANCER CENTER

BLDG NO. LJCC



CORPORATION

FACILITY CONDITION ANALYSIS

2165 West Park Court Suite N Stone Mountain GA 30087 770.879.7376



PROJECT NUMBER APPLIES TO ONE ITEM ONLY

PROJECT NUMBER
APPLIES TO
ENTIRE BUILDING

PROJECT NUMBE

PROJECT NUMBER APPLIES TO ENTIRE FLOOR

PROJECT NUMBER APPLIES TO A SITUATION OF UNDEFINED EXTENTS



APPLIES TO AREA AS NOTED

Date: 12/09/09 Drawn by: J.T.V.

Project No. 09-041

SECOND FLOOR PLAN

Sheet No.

2 of 2



**FACILITY CONDITION ANALYSIS** 

SECTION 5

LIFE CYCLE MODEL SUMMARY AND PROJECTIONS

## Life Cycle Model

## **Building Component Summary**

## LJCC : LEO JENKINS CANCER CENTER

Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	16,800	SF	\$1.30	.31	\$6,789	1984	10
B2020	STANDARD GLAZING AND CURTAIN WALL	5,600	SF	\$104.04		\$582,605	1984	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	8	LEAF	\$4,311.24		\$34,490	1984	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	6	LEAF	\$2,863.29		\$17,180	1984	40
B3010	MEMBRANE ROOF	19,580	SF	\$6.41		\$125,445	2005	15
B3020	SKYLIGHT	720	SF	\$104.04		\$74,906	2005	30
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	150	LEAF	\$1,489.06		\$223,359	2000	35
C1020	INTERIOR DOOR HARDWARE	150	EA	\$423.04		\$63,456	2000	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	126,860	SF	\$0.80		\$101,620	2000	10
C3020	CARPET	8,930	SF	\$8.75		\$78,106	2000	10
C3020	VINYL FLOOR TILE	20,830	SF	\$6.59		\$137,225	2000	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	26,780	SF	\$4.99		\$133,713	2000	15
C3030	PAINTED CEILING FINISH APPLICATION	2,980	SF	\$0.80		\$2,387	2000	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	2	EA	\$158,628.64		\$317,257	1984	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	2	EA	\$26,616.80		\$53,234	1984	12
D2010	PLUMBING FIXTURES - MEDICAL / CLINIC	39,155	SF	\$5.61		\$219,687	1984	35
D2020	WATER / PROCESS PIPING - MEDICAL / CLINIC	39,155	SF	\$3.99		\$156,184	1984	35
D2030	DRAIN PIPING - MEDICAL / CLINIC	39,155	SF	\$6.06		\$237,371	1984	40
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1984	25
D3040	CONDENSATE RECEIVER	2	SYS	\$9,504.01		\$19,008	1984	15
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	14	EA	\$2,768.62		\$38,761	1984	20
D3040	EXHAUST FAN - UTILITY SET OR SIMILAR	1	EA	\$3,660.81		\$3,661	1984	20
D3040	FUME HOOD INCLUDING MECH. SYS	1	SYS	\$41,216.93		\$41,217	1984	20
D3040	BASE MTD. PUMP - UP TO 15 HP	4	HP	\$3,175.77		\$12,703	1984	20
D3040	BASE MTD. PUMP - UP TO 15 HP	4	HP	\$3,175.77		\$12,703	1984	20
D4010	FIRE SPRINKLER SYSTEM	19,578	SF	\$6.86		\$134,326	1984	80
D4010	FIRE SPRINKLER HEADS	19,578	SF	\$0.38		\$7,384	1984	20
D5010	ELECTRICAL SYSTEM - MEDICAL / CLINIC	39,155	SF	\$10.88		\$425,901	1984	50
D5010	ELECTRICAL SWITCHGEAR 120/208V	1,200	AMP	\$32.96		\$39,556	1984	20
D5010	ELECTRICAL SWITCHGEAR 277/480V	1,200 5.1.1	AMP	\$39.56		\$47,476	1984	20

## Life Cycle Model

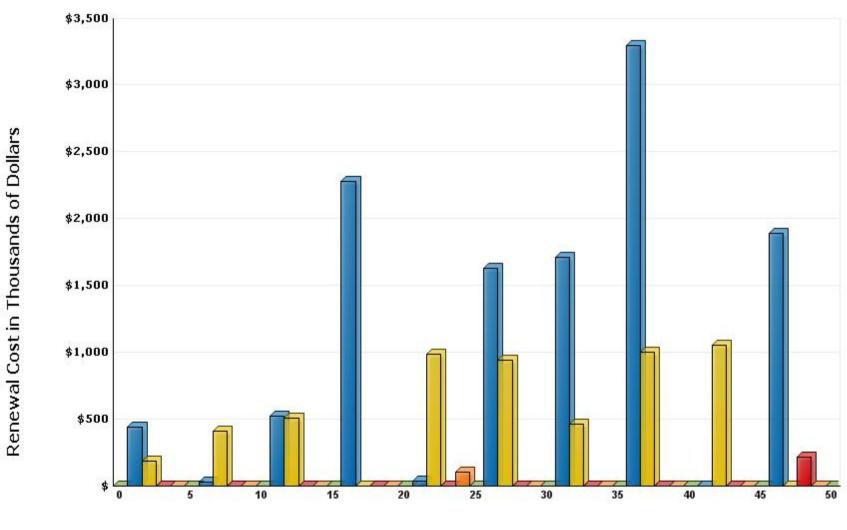
## **Building Component Summary**

## LJCC : LEO JENKINS CANCER CENTER

Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
D5020	EXIT SIGNS (CENTRAL POWER)	28	EA	\$163.78		\$4,586	1984	20
D5020	EXTERIOR LIGHT (HID)	9	EA	\$689.58		\$6,206	1984	20
D5020	LIGHTING - MEDICAL / CLINIC	39,155	SF	\$20.54		\$804,242	1984	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	39,155	SF	\$2.61		\$102,374	2009	15
E2010	KITCHENETTE UNIT WITH CABINETRY AND AMENITIES	1	LOT	\$5,940.22		\$5,940	1984	20
						\$4,277,515		

# **Life Cycle Model Expenditure Projections**

**LJCC: LEO JENKINS CANCER CENTER** 



**Future Year** 

**Average Annual Renewal Cost Per SqFt \$4.13** 

## **FACILITY CONDITION ANALYSIS**

SECTION 6

# PHOTOGRAPHIC LOG

### Photo Log - Facility Condition Analysis

### LJCC: LEO JENKINS CANCER CENTER

Photo ID No	Description	Location	Date
LJCC001a	Stairwell design	Second floor	9/3/2009
LJCC001e	Overview of exhaust fans	Roof	9/3/2009
LJCC002a	Roof detail	Roof	9/3/2009
LJCC002e	Fume hood exhaust fans	Roof	9/3/2009
LJCC003a	Roof detail	Roof	9/3/2009
LJCC003e	Original exhaust fan	Roof	9/3/2009
LJCC004a	Lower roof detail	Roof	9/3/2009
LJCC004e	Air-cooled ???	Lower roof	9/3/2009
LJCC005a	Corridor finishes	Second floor	9/3/2009
LJCC005e	Condensing unit	Lower roof	9/3/2009
LJCC006a	Door detail and signage	Second floor	9/3/2009
LJCC006e	Typical exit sign	Second floor	9/3/2009
LJCC007a	Single level drinking fountain	Second floor	9/3/2009
LJCC007e	Xenon strobe	Elevator lobby	9/3/2009
LJCC008a	Stairwell design	Second floor	9/3/2009
LJCC008e	Fusible link sprinkler head	Second floor, corridor	9/3/2009
LJCC009a	Window detail	Second floor	9/3/2009
LJCC009e	Typical T12 lighting fixture	Second floor, corridor	9/3/2009
LJCC010a	Dual level drinking fountain	Second floor	9/3/2009
LJCC010e	Original dry-type transformer	Electrical closet 251	9/3/2009
LJCC011a	Corridor finishes	Second floor	9/3/2009
LJCC011e	Base-mounted chilled water pumps	Mechanical room 250	9/3/2009
LJCC012a	Corridor finishes	First floor	9/3/2009
LJCC012e	Heat exchanger	Mechanical room 250	9/3/2009
LJCC013a	Conference room finishes	First floor	9/3/2009
LJCC013e	Base-mounted hot water pumps	Mechanical room 250	9/3/2009
LJCC014a	Break room sink	First floor	9/3/2009
LJCC014e	Typical T12 lighting fixture	Mechanical room 250	9/3/2009
LJCC015a	Corridor finishes	First floor	9/3/2009
LJCC015e	Trans-logic tube system	Near mechanical room 250	9/3/2009
LJCC016a	South facade	Exterior elevation	9/3/2009
LJCC016e	Hydraulic elevator	Elevator machine room 279	9/3/2009
LJCC017a	Loading dock	Exterior elevation	9/3/2009

### Photo Log - Facility Condition Analysis

### LJCC: LEO JENKINS CANCER CENTER

Photo ID No	Description	Location	Date
LJCC017e	Condensate return unit	Mechanical room 126	9/3/2009
LJCC018a	South facade	Exterior elevation	9/3/2009
LJCC018e	Hot water heat exchanger	Mechanical room 126	9/3/2009
LJCC019a	Entry point on south facade	Exterior elevation	9/3/2009
LJCC019e	Chilled water pumps	Mechanical room 126	9/3/2009
LJCC020a	Ramp at south facade	Exterior elevation	9/3/2009
LJCC020e	Control air compressor	Mechanical room 126	9/3/2009
LJCC021a	East facade	Exterior elevation	9/3/2009
LJCC021e	VAV air handling unit AC8	Mechanical room 126	9/3/2009
LJCC022a	East facade	Exterior elevation	9/3/2009
LJCC022e	Through-wall exhaust fan	Mechanical room 126	9/3/2009
LJCC023a	North facade	Exterior elevation	9/3/2009
LJCC023e	Main 1,200 amp, 480/277 volt switchboard	Electrical room 125	9/3/2009
LJCC024a	North facade	Exterior elevation	9/3/2009
LJCC024e	Main 1,200 amp, 120/208 volt switchboard	Electrical room 125	9/3/2009
LJCC025a	North facade at courtyard	Exterior elevation	9/3/2009
LJCC025e	Simplex 4100 addressable fire alarm panel	Electrical room 125	9/3/2009
LJCC026e	Hydraulic elevator	West elevator machine room 177	9/3/2009
LJCC027e	Original LED exit sign	First floor	9/3/2009
LJCC028e	Original HID exterior fixture	East facade	9/3/2009

## Facility Condition Analysis - Photo Log









LJCC001A.jpg

LJCC001E.jpg

LJCC002A.jpg

LJCC002E.jpg









LJCC003A.jpg

LJCC003E.jpg

LJCC004A.jpg

LJCC004E.jpg









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## Facility Condition Analysis - Photo Log









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LJCC021E.jpg

LJCC022A.jpg

LJCC022E.jpg









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LJCC024A.jpg

LJCC024E.jpg









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