# **PORTLAND STATE UNIVERSITY**

## UNIVERSITY CENTER BUILDING

BUILDING NUMBER: UCB

FACILITY CONDITION ANALYSIS

MAY 20, 2008



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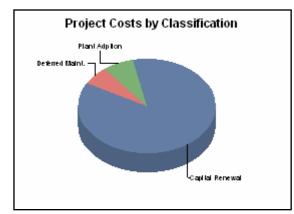
## A. EXECUTIVE SUMMARY - UNIVERSITY CENTER BUILDING

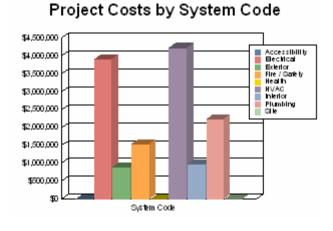


UCB **Building Code: Building Name:** UNIVERSITY CENTER BUILDING 1969 **Building Use:** Multi-use Square Feet: 185,319 **Project Costs by Priority Priority 1:** \$0 Priority 2: \$1,345,147 **Priority 3:** \$6,853,759 **Priority 4:** \$6.149.683 \$14,348,589 **Total Project Costs: Facility Replacement Cost:** \$50,934,141 Facility Condition Needs Index (FCNI): 0.28

**0.60** Poor Condition

Condition





(Project Costs / Replacement Cost)

Condition (Tot. Ren. Req) 0.50 Below Ave.

**FCNI Scale** 

Replacement

Indicated

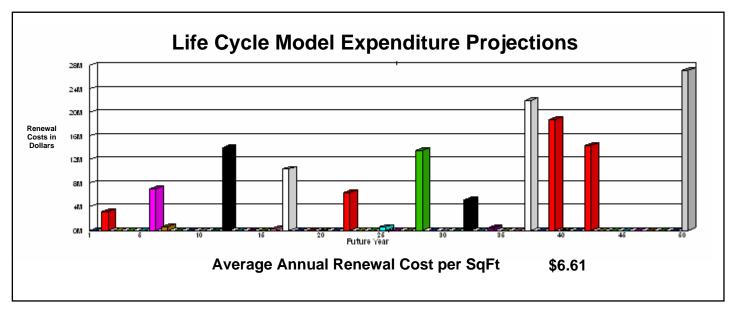
(Unless Historic)

(Major Ren. Req)

**0.30** Fair Condition (Normal Ren. Req.)

**0.20** Good Condition (Maintained within Life Cycle)

**0.10** Excellent Condition (Typically New Construction)



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

The University Center Building was constructed in 1969 and acquired by Portland State University approximately ten years ago. This multi-story facility is located due south of the Portland Center for Advanced Technology and due north of the Ondine Residence and Annex. It is occupied by various tenants, including the School of Social Work, the Northwest Portland Area Indian Health Board, athletic administration offices, the student health clinic, a dental clinic, and a wellness center. A parking deck occupies the basement, as well as portions of the first through third floors. In addition, the first-level contains a McDonald's franchise that was not inspected during this site visit. This facility is reported to comprise 185,319 gross square feet.

Information for this report was gathered during a site visit on February 20, 2008.

#### SITE

This urban site is adequately landscaped along city streets. Parking for this building is provided by a multi-level parking deck. An additional parking deck is also located due west of this building.

#### EXTERIOR STRUCTURE

The aging built-up roof is pooling water and leaking. To prevent further deterioration of interior finishes due to roof leaks, tear off and replace this deteriorated roof with a new roofing system, including new flashings. Exterior concrete facades and metal paneling are currently in acceptable condition, and the windows in the health clinic have been upgraded. However, the remaining windows in this building are single glazed, and the floor to ceiling glazing does not appear to be safety glass. By installing new thermal, safety glazing where needed should lower energy consumption. As part of this effort, also replace the deteriorated service doors on the roof. The remaining exterior doors appear to be in satisfactory working condition at this time.

#### INTERIOR FINISHES / SYSTEMS

Interior paint finishes are still in satisfactory condition, although cyclical repainting should continue as part of routine building maintenance. The lay-in ceilings in interior spaces are also adequate, but isolated stained or damaged fourth floor ceiling tiles should be replaced after the roof has been upgraded. This minor effort should be dealt with as part of routine building maintenance. Although upgraded sections of the lay-in ceilings in the parking deck are still acceptable, the remaining badly deteriorated ceiling grids should also be replaced.

Interior doors are generally in good working order, but a few remaining doors should be fitted with codecompliant lever hardware as part of the accessibility upgraded. Most built-in cabinetry is also satisfactory for its age, although a section of the Northwest Portland Area Indian Health Board reception desk should be lowered to an accessible height. This work is detailed in the Accessibility section of this report.

The ceramic tile floors in the restrooms are currently adequate, as is the majority of the sheet vinyl flooring in some restrooms and break areas. However, the cracked sheet vinyl in the fourth floor women's restroom and nearby break room should be replaced. Also, upgrade stained or damaged carpeting throughout the building.

#### ACCESSIBILITY

This building generally features accessible passenger elevators, ADA restrooms, power assisted door openers, accessible signage, and lever door hardware. However, a project has been added to install accessible signage and door hardware where it is lacking. To further improve handicapped use of this facility, also lower a section of the service counter to an accessible height. In addition, exposed piping beneath accessible restroom lavatories should be wrapped to protect against contact. This minor effort should de dealt with during routine building maintenance.

#### HEALTH

No significant health violations were identified during the walk-through of this facility. However, it is recommended that the broken and potentially friable panels on the east wall of the third floor parking deck be tested for asbestos content and dealt with accordingly. If the acoustical ceiling tiles in the parking deck are suspect, they should also be tested for asbestos content prior to their recommended replacement. Due to lack of adequate data, no estimated asbestos abatement costs have been included in this report.

#### FIRE / LIFE SAFETY

On a relatively high priority basis, the open guardrail system on the exterior stair landings should be infilled to prevent access to the uncaged exterior ladders. In addition, the makeshift infill on parking deck guardrails should be upgraded, and bollards should be installed to minimize wall damage from vehicle impacts.

Occupancy loads should be monitored to determine the need for additional panic hardware on interior fire doors. Due to the long distances and poor sight lines to exit doors in some locations, building occupants should remain diligent in maintaining adequate egress pathways at all times.

A seismic evaluation of this building has revealed major structural deficiencies and the potential for significant structural damage in a major earthquake. No cost estimates were provided to improve the seismic stability of this 1969 structure.

This facility is monitored by a Landis and Gyr Apogee fire alarm system that features strobes, audible annunciators, and fire pulls. Smoke detectors are missing in unoccupied space, such as janitorial closets and mechanical rooms. The restrooms lack visual strobes. The fire alarm system and devices appears to have been installed in the late 1980s. Based on historical life cycle, it is anticipated to reach the end of its useful service life within the next six years. Budgetary consideration is allocated for replacement of the fire alarm system within the ten-year purview of this assessment.

The basement parking garage is protected by a wet pipe fire sprinkler system. The building fire sprinkler system is equipped with fusible link sprinkler heads. The statistical life cycle for a sprinkler head is approximately twenty years. Scale can accumulate inside the head and cause it to malfunction when needed. It is recommended that the original fusible link sprinkler heads be replaced to ensure that proper protection is available. By modern code, the remaining areas of the building should be automatically protected by a fire sprinkler system. A cost estimate was created for the installation of a wet pipe sprinkler system to serve the first through the fourth floor.

Emergency exits are indicated by aging / damaged compact fluorescent exit signs with battery backup power. New exit signs in the dental and clinical areas of the first floor are served by new LED exit signs connected to the generator power. In an effort to modernize the facility, replacement of the original compact fluorescent exit signs with LED-type units is recommended. LED exit signs are recommended for their energy efficiency and low maintenance features.

The path of egress is illuminated by select interior light fixtures connected to the building emergency network. Battery backup emergency lighting units serve part of the renovated third floor. Based on the daytime inspection, visual assessment of the emergency lighting illumination level was not easily identified. It is assumed there is proper emergency egress illumination level.

The natural gas main enters the building at the northeast facade. There is no seismic shutoff valve on the gas main. Seismic gas shutoff valves are devices designed to automatically shut off the supply of natural gas to a building to prevent a fire or explosion due to accumulation of gas within the building in the event of a major earthquake. The installation of a seismic shutoff valve is recommended.

#### HVAC

The fourth floor is served by newer packaged rooftop air handling units equipped with DX cooling and natural gas heating. The remaining areas of the building are served by an original dual-deck air handling unit located in the first floor mechanical room. The heating medium is steam, produced by an original steam boiler. A new stack chiller was installed within the past few years. Heat rejection for the chilled water system is provided by the cooling tower located on the roof. Based on historical life cycle, the original air handling system and boiler is anticipated to become inefficient and maintenance intensive. A complete redesign and replacement of the original HVAC system is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with variable air volume (VAV) and constant volume air distribution as needed. This includes new air handlers, ductwork, terminal units, heat exchangers, pumps, piping, controls, and electrical connections. Specify direct digital controls (DDC) for the new equipment. Incorporate variable frequency drives (VFD) into the new HVAC design as applicable. Cost estimate is based on 60 percent of the building square footage.

#### ELECTRICAL

There are two 12,470 volt feeds supplied from Portland Gas and Electric (PG&E) into this structure. High voltage power enters the building at the first floor electrical room. The two substations are equipped with a 500 kilovolt-amp, dry-type service entrance transformer, and a related 1,600 amps, 120/208 volt and 277/480 volt, three-phase, four-wire switchboards. Both switchboards and service entrance transformers are outdated and in need of replacement. A formal project was created for this effort.

The building electrical network has been in service for over forty years. Aging components, such as the circuit breakers, serve as potential fire hazards if they fail to open a circuit in an overload or short circuit condition. Outlets and light switches are timeworn and their integrity is questionable. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case, thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute electrical loads to the appropriate areas in order to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification. Two electrical upgrade projects have been recommended for replacement of the secondary distribution system and electrical repairs.

Emergency power for the dental and clinical area is provided by a new Cummins generator. The generator is in good condition, and should outlast the ten-year scope of this report. Interior lighting application consists of modern parabolic / indirect T8 and compact fluorescent fixtures, with the exception of original T12 lighting fixtures observed in the kitchen and unoccupied rooms (such as electrical / mechanical rooms and janitorial closets). An upgrade of the original lighting fixtures is recommended to reduce electrical consumption. A formal project was created to upgrade approximately 20 percent of the lighting fixtures. Nighttime illumination is provided by recessed, compact fluorescent fixtures and street lighting. During the daytime inspection, nighttime illumination level was not easily identified. Based on their present location, there appears to be sufficient nighttime illumination.

#### PLUMBING

Backflow preventers prevent cross-contamination on the incoming municipal and fire water mains. Domestic potable water is fed to the building through original copper piping, with sanitary and storm drainage conveyed by cast-iron, bell-n-spigot piping network. Both piping systems are recommended for replacement, since they are at the end of their useful service life. Failure to replace the water and drain piping will result in frequent leaks and escalating maintenance costs. Replacement is recommended within the next ten years.

The plumbing fixtures consist of non-water conserving units. The scheduled replacement of the original plumbing fixtures is recommended. Install modern, water conserving type plumbing fixtures equipped with automatic flush and automatic assemblies. Domestic hot water is provided by multiple electric hot water heaters of various capacity and age. Replacement of the 60 gallon electric domestic hot water heater located in the room 491 is recommended. The 120 and 50 gallon units are in good condition, no upgrade is required.

#### VERTICAL TRANSPORTATION

Vertical transportation between the basement and fourth floor is provided by three original traction type elevators. The elevator motors and controllers are timeworn and in need of replacement. It is recommended that a comprehensive modernization be done in the next five years.

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: February 20, 2008

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

NAME	POSITION	SPECIALTY
Imelda Bacate	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Richard Gadd	Facility Analyst	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Rob Gasaway	Facility Analyst	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Mike Sabo	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Norm Teahan, AIA	Project Architect	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health

#### FACILITY CONTACTS:

NAME	POSITION
Ken Irwin	Plant Operations Manager

#### **REPORT DEVELOPMENT:**

Report Development by:	ISES CORPORATION 2165 West Park Court Suite N Stone Mountain, GA 30087
Contact:	Michael Sabo, 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 [ $\geq$  \$100,000 < \$500,000 ]
  - E. Detailed Projects by Cost within range [  $\geq$  \$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 college 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. Energy Conservation - 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 CLASS 1

CODE	PROJECT NO.	PRIORITY SEQUENCE
HV2C	0001HV04	01
PL1D	0001PL02	02

#### **PRIORITY CLASS 2**

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 Portland City Index and are adjusted for material and labor cost factors (2008). Refer to the project related labor report found later in this section.

Global Markup Percentages		R.S. MEANS
Local Labor Index: Local Materials Index:	102.7 % 101.8 %	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 Numbe	r
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- EL System Code, EL represents Electrical
- 04 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	<u>Arch / Eng / VT</u>
0001	006	е

#### 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 <u>not</u> inflated. This figure can be utilized to assess the adequacy of existing capital renewal and repair budgets.

#### 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

#### **CATEGORY CODE**

AC1A	-	AC4B
EL1A	-	EL8A
ES1A	-	ES6E
FS1A	-	FS6A
HE1A	-	HE7A
HV1A	-	HV8B
IS1A	-	IS6D
PL1A	-	PL5A
SI1A	-	SI4A
SS1A	-	SS7A
VT1A	-	VT7A

#### SYSTEM DESCRIPTION

ACCESSIBILITY ELECTRICAL EXTERIOR STRUCTURE FIRE / LIFE SAFETY HEALTH HVAC **INTERIOR FINISHES / SYSTEMS** PLUMBING SITE SECURITY SYSTEMS VERTICAL TRANSPORTATION

	CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION		
SYSTEM DESCRIPTION: 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 DES	SCRIPTION: 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, bearns, 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.		
ES6E	GENERAL	OTHER	Any exterior work not specifically categorized elsewhere including finish and structural work on		

CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION	
			freestanding boiler stacks.	
SYSTEM DESCRIPTION: FIRE / LIFE SAFETY				
FS1A	LIGHTING	EGRESS LIGHTING/EXIT SIGNAGE	R & R work on exit signage and packaged AC/DC emergency lighting.	
FS2A	DETECTION/ALARM	GENERAL	Repair or replacement of fire alarm/detection system/components including alarms, pull boxes, smoke/heat detectors, annunciator panels, central fire control stations, remote dialers, fire station communications, etc.	
FS3A	SUPPRESSION	SPRINKLERS	Repair or installation of water sprinklers type automatic fire suppressions including wet pipe & dry pipe systems, heads, piping, deflectors, valves, monitors, associated fire pump, etc.	
FS3B	SUPPRESSION	STANDPIPE/HOSE	Repair or installation of standpipe system or components including hardware, hoses, cabinets, nozzles, necessary fire pumping system, etc.	
FS3C	SUPPRESSION	EXTINGUISHERS	Repairs or upgrades to F.E. cabinets/wall fastenings and handheld extinguisher testing/replacement.	
FS3D	SUPPRESSION	OTHER	Other fire suppression items not specifically categorized elsewhere including fire blankets, carbon dioxide automatic systems, Halon systems, dry chemical systems, etc.	
FS4A	HAZARDOUS MATERIALS	STORAGE ENVIRONMENT	Installation or repair of special storage environment for the safe holding of flammable or otherwise dangerous materials/supplies including vented flammables storage cabinets, holding pens/rooms, cages, fire safe chemical storage rooms, etc.	
FS4B	HAZARDOUS MATERIALS	USER SAFETY	Improvements, repairs, installation, or testing of user safety equipment including emergency eyewashes, safety showers, emergency panic/shut-down system, etc.	
FS5A	EGRESS PATH	DESIGNATION	Installation, relocation or repair of posted diagrammatic emergency evacuation routes.	
FS5B	EGRESS PATH	DISTANCE/ GEOMETRY	Work involving remediation of egress routing problems including elimination of dead end corridors, excessive egress distance modifications and egress routing inadequacies.	
FS5C	EGRESS PATH	SEPARATION RATING	Restoration of required fire protective barriers including wall rating compromises, fire rated construction, structural fire proofing, wind/safety glazing, transom retrofitting, etc.	
FS5D	EGRESS PATH	OBSTRUCTION	Clearance of items restricting the required egress routes.	
FS5E	EGRESS PATH	STAIRS RAILING	Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.	
FS5F	EGRESS PATH	FIRE DOORS/ HARDWARE	Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutters, closers, magnetic holders, panic hardware, etc.	
FS5G	EGRESS PATH	FINISH/FURNITURE RATINGS	Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.	
FS6A	GENERAL	OTHER	Life/fire safety items not specifically categorized elsewhere.	
SYSTEM DE	SCRIPTION: HEALTH			
HE1A	ENVIRONMENTAL CONTROL	EQUIPMENT AND ENCLOSURES	Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and all associated mechanical equipment.	
HE1B	ENVIRONMENTAL CONTROL	OTHER	General environmental control problems not catalogued elsewhere.	
HE2A	PEST CONTROL	GENERAL	Includes all measures necessary to control and destroy insects, rodents and other pests.	
HE3A	REFUSE	GENERAL	Issues related to the collection, handling and disposal of refuse.	
HE4A	SANITATION EQUIPMENT	LABORATORY AND PROCESS	Includes autoclaves, cage washers, steam cleaners, etc.	
HE5A	FOOD SERVICE	KITCHEN EQUIPMENT	Includes ranges, grilles, cookers, sculleries, etc.	
HE5B	FOOD SERVICE	COLD STORAGE	Includes the cold storage room and all associated refrigeration equipment.	
HE6A	HAZARDOUS MATERIAL	STRUCTURAL ASBESTOS	Testing, abatement and disposal of structural and building finish materials containing asbestos.	

CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION	
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 DES	SCRIPTION: 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 UPGRADE	Replacement of HVAC control systems.	

	CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION		
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 DES	SCRIPTION: INTERIOR FINISHES	/ 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	GENERAL	OTHER	Any work on interior elements not logically or specifically categorized elsewhere including light coves, phone booths, interior light wells, etc.		
SYSTEM DES	SCRIPTION: PLUMBING				
PL1A DOMESTIC WATER PIPING NETWORK Repair or replacement of domestic water supply piping network, insulation, hangers, etc.					

	CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION		
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 DES	SCRIPTION: 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 DES	SCRIPTION: SECURITY SYSTEMS				
SS1A	LIGHTING	EXTERIOR	Fixtures, stanchions, foliage interference, cleanliness, locations, etc.		
SS2A	SITE	FENCING	Perimeter campus fencing, individual building fencing, includes both pedestrian and vehicular control fences.		

	CATEGORY CODE REPORT				
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION		
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 DES	SYSTEM DESCRIPTION: VERTICAL TRANSPORTATION				
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.		

# **FACILITY CONDITION ANALYSIS**



DETAILED PROJECT SUMMARIES AND TOTALS

#### Detailed Project Totals Facility Condition Analysis System Code by Priority Class UCB : UNIVERSITY CENTER BUILDING

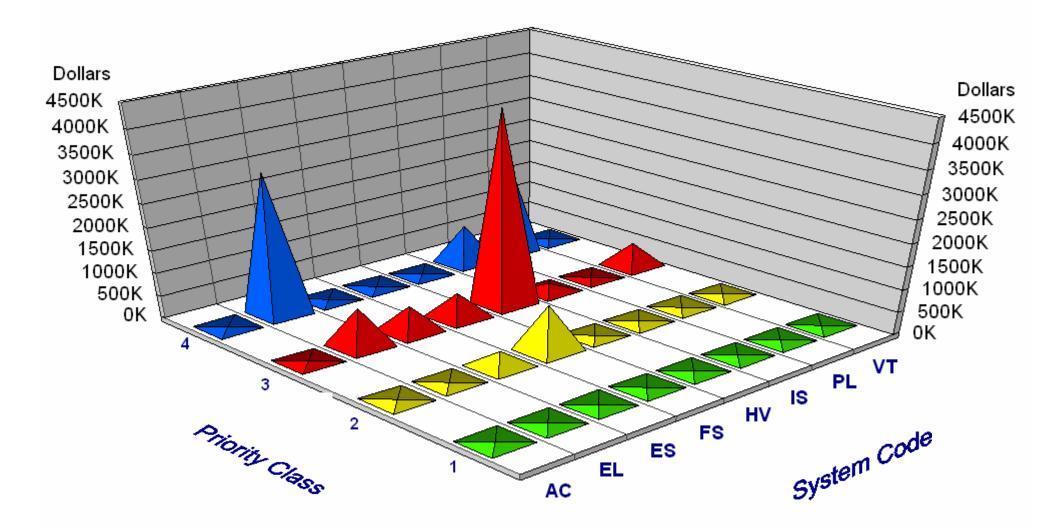
System	Priority Classes							
Code	System Description	1	2	3	4	Subtotal		
AC	ACCESSIBILITY	0	0	15,007	0	15,007		
EL	ELECTRICAL	0	0	840,519	3,070,329	3,910,849		
ES	EXTERIOR	0	336,686	570,834	0	907,521		
FS	FIRE/LIFE SAFETY	0	1,008,461	533,620	0	1,542,081		
HV	HVAC	0	0	4,214,744	0	4,214,744		
IS	INTERIOR/FINISH SYS.	0	0	144,767	850,078	994,845		
PL	PLUMBING	0	0	6,961	2,229,275	2,236,237		
VT	VERT. TRANSPORTATION	0	0	527,306	0	527,306		
	TOTALS	\$0	\$1,345,147	\$6,853,759	\$6,149,683	\$14,348,589		

Facility Replacement Cost	\$50,934,141
Facility Condition Needs Index	0.28

Gross Square Feet	185,319

Total Cost Per Square Foot\$77.43

## FACILITY CONDITION ANALYSIS System Code by Priority Class UCB : UNIVERSITY CENTER BUILDING



#### Detailed Project Totals Facility Condition Analysis System Code by Project Class UCB : UNIVERSITY CENTER BUILDING

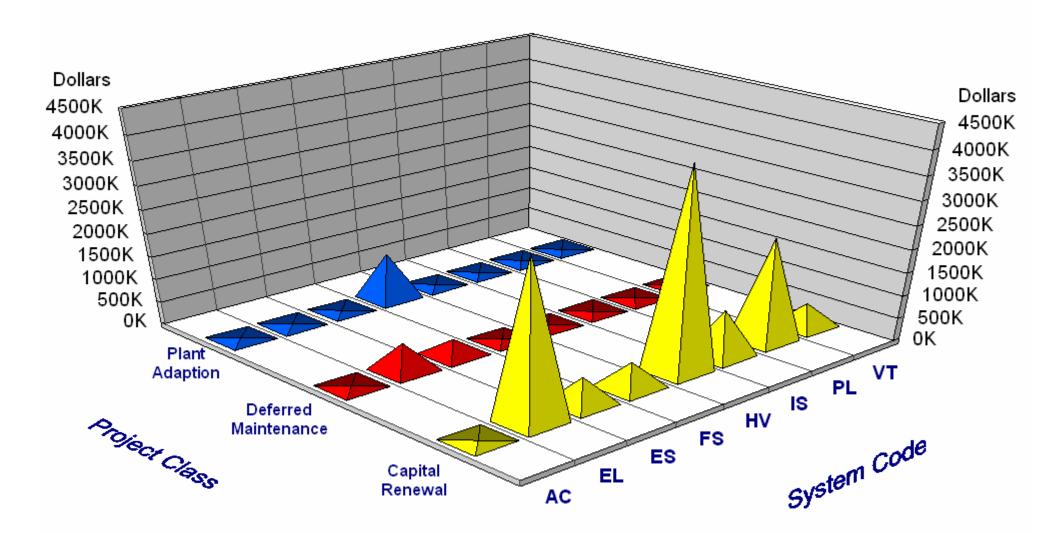
System	Project Classes							
Code	System Description	Capital Renewal	Deferred Maintenance	Plant Adaption	Subtotal			
AC	ACCESSIBILITY	0	0	15,007	15,007			
EL	ELECTRICAL	3,332,309	578,539	0	3,910,849			
ES	EXTERIOR	570,834	336,686	0	907,521			
FS	FIRE/LIFE SAFETY	533,620	6,780	1,001,680	1,542,081			
HV	HVAC	4,214,744	0	0	4,214,744			
IS	INTERIOR/FINISH SYS.	994,845	0	0	994,845			
PL	PLUMBING	2,236,237	0	0	2,236,237			
VT	VERT. TRANSPORTATION	527,306	0	0	527,306			
	TOTALS	\$12,409,895	\$922,006	\$1,016,688	\$14,348,589			

Facility Replacement Cost	\$50,934,141
Facility Condition Needs Index	0.28

Gross Square Feet	185,319
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Total Cost Per Square Foot\$77.43

## FACILITY CONDITION ANALYSIS System Code by Project Class UCB : UNIVERSITY CENTER BUILDING



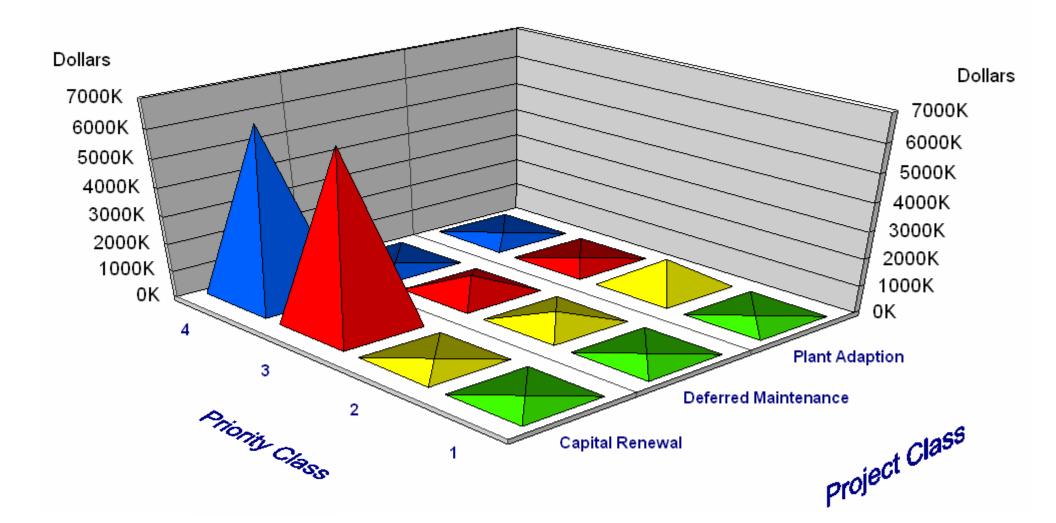
#### Detailed Project Summary Facility Condition Analysis Project Class by Priority Class UCB : UNIVERSITY CENTER BUILDING

Priority Classes										
Project Class	1	2	3	4	Subtotal					
Capital Renewal	0	0	6,260,212	6,149,683	12,409,895					
Deferred Maintenance	0	343,467	578,539	0	922,006					
Plant Adaption	0	1,001,680	15,007	0	1,016,688					
TOTALS	\$0	\$1,345,147	\$6,853,759	\$6,149,683	\$14,348,589					

Facility Replacement Cost	\$50,934,141
Facility Condition Needs Index	0.28

Gross Square Feet 185,319		Total Cost Per Square Foot	\$77.43
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FACILITY CONDITION ANALYSIS Project Class by Priority Class UCB : UNIVERSITY CENTER BUILDING



#### Facility Condition Analysis

Section Two

#### Priority Class - Priority Sequence UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	UCBFS06	2	1	EXPAND FIRE SPRINKLER SYSTEM	861,334	137,813	999,147
FS6A	UCBFS01	2	2	MODIFY GUARDRAILS	5,845	935	6,780
FS6A	UCBFS05	2	3	INSTALL SEISMIC SHUTOFF VALVE	2,184	349	2,533
ES4B	UCBES01	2	4	REPLACE AGING ROOF	290,247	46,439	336,686
				Totals for Priority Class 2	1,159,609	185,538	1,345,147
FS2A	UCBFS02	3	5	FIRE ALARM SYSTEM RENEWAL	431,514	69,042	500,556
FS1A	UCBFS04	3	6	MODERNIZE EXIT SIGNS	12,532	2,005	14,537
FS3A	UCBFS03	3	7	FIRE SPRINKLER HEAD RENEWAL	15,971	2,555	18,527
AC3D	UCBAC01	3	8	MINOR ACCESSIBILITY UPGRADES	12,937	2,070	15,007
ES5B	UCBES02	3	9	NEW EXTERIOR SERVICE DOORS AND WINDOWS	492,099	78,736	570,834
HV3A	UCBHV01	3	10	HVAC SYSTEM RENEWAL	3,633,400	581,344	4,214,744
EL3B	UCBEL02	3	11	ELECTRICAL SYSTEM REPAIR	204,828	32,772	237,600
EL2A	UCBEL01	3	12	REPLACE MAIN SWITCHBOARDS	225,845	36,135	261,980
EL4B	UCBEL04	3	13	INTERIOR LIGHTING UPGRADE	293,913	47,026	340,939
IS3B	UCBIS02	3	14	ACOUSTICAL CEILINGS IN PARKING DECK	124,799	19,968	144,767
PL1E	UCBPL04	3	15	UPGRADE DOMESTIC HOT WATER HEATER	6,001	960	6,961
VT7A	UCBVT01	3	16	COMPREHENSIVE ELEVATOR MODERNIZATION	454,574	72,732	527,306
				Totals for Priority Class 3	5,908,413	945,346	6,853,759
EL3B	UCBEL03	4	17	UPGRADE BUILDING ELECTRICAL NETWORK	2,646,836	423,494	3,070,329
IS1A	UCBIS01	4	18	UPGRADE CARPET AND DAMAGED VINYL FLOORING	732,826	117,252	850,078
PL1G	UCBPL03	4	19	PLUMBING FIXTURE UPGRADE	65,257	10,441	75,699
PL2A	UCBPL02	4	20	UPGRADE DRAIN PIPING NETWORK	1,113,851	178,216	1,292,067
PL1A	UCBPL01	4	21	RENEW POTABLE WATER SUPPLY PIPING	742,681	118,829	861,510
				Totals for Priority Class 4	5,301,451	848,232	6,149,683
				Grand Total:	12,369,473	1,979,116	14,348,589

#### Facility Condition Analysis

Section Two

# Priority Class - Priority Sequence - Projects < 100,000 UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS6A	UCBFS01	2	2	MODIFY GUARDRAILS	5,845	935	6,780
FS6A	UCBFS05	2	3	INSTALL SEISMIC SHUTOFF VALVE	2,184	349	2,533
				Totals for Priority Class 2	8,029	1,285	9,314
FS1A	UCBFS04	3	6	MODERNIZE EXIT SIGNS	12,532	2,005	14,537
FS3A	UCBFS03	3	7	FIRE SPRINKLER HEAD RENEWAL	15,971	2,555	18,527
AC3D	UCBAC01	3	8	MINOR ACCESSIBILITY UPGRADES	12,937	2,070	15,007
PL1E	UCBPL04	3	15	UPGRADE DOMESTIC HOT WATER HEATER	6,001	960	6,961
				Totals for Priority Class 3	47,442	7,591	55,033
PL1G	UCBPL03	4	19	PLUMBING FIXTURE UPGRADE	65,257	10,441	75,699
				Totals for Priority Class 4	65,257	10,441	75,699
	Grand Tot	als Fo	r Proje	cts < 100,000	120,729	19,317	140,045

#### Facility Condition Analysis

#### Section Two

#### Priority Class - Priority Sequence - Projects >= 100,000 and < 500,000 UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES4B	UCBES01	2	4	REPLACE AGING ROOF	290,247	46,439	336,686
				Totals for Priority Class 2	290,247	46,439	336,686
EL3B	UCBEL02	3	11	ELECTRICAL SYSTEM REPAIR	204,828	32,772	237,600
EL2A	UCBEL01	3	12	REPLACE MAIN SWITCHBOARDS	225,845	36,135	261,980
EL4B	UCBEL04	3	13	INTERIOR LIGHTING UPGRADE	293,913	47,026	340,939
IS3B	UCBIS02	3	14	ACOUSTICAL CEILINGS IN PARKING DECK	124,799	19,968	144,767
				Totals for Priority Class 3	849,385	135,902	985,286
	Grand Totals For Projects >= 100,000 and < 500,000					182,341	1,321,972

#### Facility Condition Analysis

Section Two

# Priority Class - Priority Sequence - Projects >= 500,000 UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	UCBFS06	2	1	EXPAND FIRE SPRINKLER SYSTEM	861,334	137,813	999,147
				Totals for Priority Class 2	861,334	137,813	999,147
FS2A	UCBFS02	3	5	FIRE ALARM SYSTEM RENEWAL	431,514	69,042	500,556
ES5B	UCBES02	3	9	NEW EXTERIOR SERVICE DOORS AND WINDOWS	492,099	78,736	570,834
HV3A	UCBHV01	3	10	HVAC SYSTEM RENEWAL	3,633,400	581,344	4,214,744
VT7A	UCBVT01	3	16	COMPREHENSIVE ELEVATOR MODERNIZATION	454,574	72,732	527,306
				Totals for Priority Class 3	5,011,586	801,854	5,813,440
EL3B	UCBEL03	4	17	UPGRADE BUILDING ELECTRICAL NETWORK	2,646,836	423,494	3,070,329
IS1A	UCBIS01	4	18	UPGRADE CARPET AND DAMAGED VINYL FLOORING	732,826	117,252	850,078
PL2A	UCBPL02	4	20	UPGRADE DRAIN PIPING NETWORK	1,113,851	178,216	1,292,067
PL1A	UCBPL01	4	21	RENEW POTABLE WATER SUPPLY PIPING	742,681	118,829	861,510
				Totals for Priority Class 4	5,236,194	837,791	6,073,985
	Grand Tot	als Fc	or Proje	cts >= 500,000	11,109,113	1,777,458	12,886,572
				Grand Total for All Projects:	12,369,473	1,979,116	14,348,589

Facility Condition Analysis

Section Two

#### Project Classification UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Priority Sequence	Project Classification	Priority Class	Project Title	Total Cost
FS2A	UCBFS02	5	Capital Renewal	3	FIRE ALARM SYSTEM RENEWAL	500,556
FS1A	UCBFS04	6	Capital Renewal	3	MODERNIZE EXIT SIGNS	14,537
FS3A	UCBFS03	7	Capital Renewal	3	FIRE SPRINKLER HEAD RENEWAL	18,527
ES5B	UCBES02	9	Capital Renewal	3	NEW EXTERIOR SERVICE DOORS AND WINDOWS	570,834
HV3A	UCBHV01	10	Capital Renewal	3	HVAC SYSTEM RENEWAL	4,214,744
EL2A	UCBEL01	12	Capital Renewal	3	REPLACE MAIN SWITCHBOARDS	261,980
IS3B	UCBIS02	14	Capital Renewal	3	ACOUSTICAL CEILINGS IN PARKING DECK	144,767
PL1E	UCBPL04	15	Capital Renewal	3	UPGRADE DOMESTIC HOT WATER HEATER	6,961
VT7A	UCBVT01	16	Capital Renewal	3	COMPREHENSIVE ELEVATOR MODERNIZATION	527,306
EL3B	UCBEL03	17	Capital Renewal	4	UPGRADE BUILDING ELECTRICAL NETWORK	3,070,329
IS1A	UCBIS01	18	Capital Renewal	4	UPGRADE CARPET AND DAMAGED VINYL FLOORING	850,078
PL1G	UCBPL03	19	Capital Renewal	4	PLUMBING FIXTURE UPGRADE	75,699
PL2A	UCBPL02	20	Capital Renewal	4	UPGRADE DRAIN PIPING NETWORK	1,292,067
PL1A	UCBPL01	21	Capital Renewal	4	RENEW POTABLE WATER SUPPLY PIPING	861,510
			Totals for Capital Renewal			12,409,895
FS6A	UCBFS01	2	Deferred Maintenance	2	MODIFY GUARDRAILS	6,780
ES4B	UCBES01	4	Deferred Maintenance	2	REPLACE AGING ROOF	336,686
EL3B	UCBEL02	11	Deferred Maintenance	3	ELECTRICAL SYSTEM REPAIR	237,600
EL4B	UCBEL04	13	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	340,939
			Totals for Deferred Maintenance			922,006
FS3A	UCBFS06	1	Plant Adaption	2	EXPAND FIRE SPRINKLER SYSTEM	999,147
FS6A	UCBFS05	3	Plant Adaption	2	INSTALL SEISMIC SHUTOFF VALVE	2,533

#### Detailed Project Summary

#### Facility Condition Analysis

Section Two

## Project Classification UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Priority Sequence	Project Classification	Priority Class	Project Title	Total Cost
AC3D	UCBAC01	8	Plant Adaption	3	MINOR ACCESSIBILITY UPGRADES	15,007
			Totals for Plant Adaption			1,016,688
			Grand Total:			14,348,589

## Detailed Project Summary

#### Facility Condition Analysis

Section Two

## Energy Conservation UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback	
ES5B	UCBES02	3	9	NEW EXTERIOR SERVICE DOORS AND WINDOWS	570,834	2,019	282.71	
НУЗА	UCBHV01	3	10	HVAC SYSTEM RENEWAL	4,214,744	23,779	177.25	
	Totals for Priority Class 3		Totals for Priority Class 3	4,785,578	25,798	185.50		
				Grand Total:	4,785,578	25,798	185.50	

## Detailed Project Summary Facility Condition Analysis Section Two Category/System Code UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC3D	UCBAC01	3	8	MINOR ACCESSIBILITY UPGRADES	12,937	2,070	15,007
	Totals for	System	Code	ACCESSIBILITY	12,937	2,070	15,007
EL3B	UCBEL02	3	11	ELECTRICAL SYSTEM REPAIR	204,828	32,772	237,600
EL2A	UCBEL01	3	12	REPLACE MAIN SWITCHBOARDS	225,845	36,135	261,980
EL4B	UCBEL04	3	13	INTERIOR LIGHTING UPGRADE	293,913	47,026	340,939
EL3B	UCBEL03	4	17	UPGRADE BUILDING ELECTRICAL NETWORK	2,646,836	423,494	3,070,329
	Totals for	System	Code	ELECTRICAL	3,371,421	539,427	3,910,849
ES4B	UCBES01	2	4	REPLACE AGING ROOF	290,247	46,439	336,686
ES5B	UCBES02	3	9	NEW EXTERIOR SERVICE DOORS AND WINDOWS	492,099	78,736	570,834
	Totals for	System	Code	EXTERIOR	782,345	125,175	907,521
FS3A	UCBFS06	2	1	EXPAND FIRE SPRINKLER SYSTEM	861,334	137,813	999,147
FS6A	UCBFS01	2	2	MODIFY GUARDRAILS	5,845	935	6,780
FS6A	UCBFS05	2	3	INSTALL SEISMIC SHUTOFF VALVE	2,184	349	2,533
FS2A	UCBFS02	3	5	FIRE ALARM SYSTEM RENEWAL	431,514	69,042	500,556
FS1A	UCBFS04	3	6	MODERNIZE EXIT SIGNS	12,532	2,005	14,537
FS3A	UCBFS03	3	7	FIRE SPRINKLER HEAD RENEWAL	15,971	2,555	18,527
	Totals for	System	Code	FIRE/LIFE SAFETY	1,329,380	212,701	1,542,081
HV3A	UCBHV01	3	10	HVAC SYSTEM RENEWAL	3,633,400	581,344	4,214,744
	Totals for	r System	Code	HVAC	3,633,400	581,344	4,214,744
IS3B	UCBIS02	3	14	ACOUSTICAL CEILINGS IN PARKING DECK	124,799	19,968	144,767
IS1A	UCBIS01	4	18	UPGRADE CARPET AND DAMAGED VINYL FLOORING	732,826	117,252	850,078
	Totals for	r System	Code	INTERIOR/FINISH SYS.	857,625	137,220	994,845
PL1E	UCBPL04	3	15	UPGRADE DOMESTIC HOT WATER HEATER	6,001	960	6,961
PL1G	UCBPL03	4	19	PLUMBING FIXTURE UPGRADE	65,257	10,441	75,699

## Detailed Project Summary Facility Condition Analysis Section Two Category/System Code UCB : UNIVERSITY CENTER BUILDING

Cat. Code	Project Pri Project Number Cls Seq Title		Construction Cost	Professional Fee	Total Cost		
PL2A	UCBPL02	4	20	UPGRADE DRAIN PIPING NETWORK	1,113,851	178,216	1,292,067
PL1A	UCBPL01	4	21	RENEW POTABLE WATER SUPPLY PIPING	742,681	118,829	861,510
	Totals for S	System	Code	PLUMBING	1,927,790	308,446	2,236,237
VT7A	UCBVT01	3	16	COMPREHENSIVE ELEVATOR MODERNIZATION	454,574	72,732	527,306
	Totals for S	System	Code	VERT. TRANSPORTATION	454,574	72,732	527,306
	Grand To	otal:			12,369,473	1,979,116	14,348,589

# **FACILITY CONDITION ANALYSIS**



SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBFS06		Title:	EXPAND FIRE SPRINKLER SYSTEM			
Priority Sequence:	1						
Priority Class:	2						
Category Code:	FS3A		System: Component Element:	FIRE/LIFE SAFETY : SUPPRESSION SPRINKLERS			
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	NING				
Subclass/Savings:	Not Applicabl	e					
Code Application:	NFPA IBC	13 903					
Project Class:	Plant Adaptio	n					
Project Date:	05/14/2008	05/14/2008					
Project Location:	Floor-wide: Fl	loor(s) 1, 2, 3, 4					

## **Project Description**

The basement is protected with a wet pipe sprinkler system. Install an automatic fire sprinkler system throughout the facility to include piping, valves, sprinkler heads, and piping supports. Install flow switches and sensors that interface with the fire alarm system. This project will reduce overall liability and risk of loss.

## Project Cost

Project Number: UCBFS06

Task Cost Estimate Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install a wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	148,255	\$1.80	\$266,859	\$2.93	\$434,387	\$701,246
	Proje	ect Totals:		\$266,859		\$434,387	\$701,246

Material/Labor Cost Material Index Labor Index		\$701,246 101.8% 102.7%
Material/Labor Indexed Cost		\$717,778
General Contractor Mark Up at 20.0% Inflation	+ +	\$143,556 \$0
Construction Cost		\$861,334
Professional Fees at 16.0%	+	\$137,813
Total Project Cost		\$999,147

## **Facility Condition Analysis**

## **Section Three**

#### **Project Description**

Project Number:	UCBFS01	Title:	MODIFY GUARDRAILS
Priority Sequence:	2		
Priority Class:	2		
Category Code:	FS6A	System: Componen <sup>:</sup> Element:	FIRE/LIFE SAFETY GENERAL OTHER
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILI	DING	
Subclass/Savings:	Not Applicable		
Code Application:	NFPA 5-2.2.4		
Project Class:	Deferred Maintenance		
Project Date:	04/27/2008		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, 4		

## **Project Description**

To minimize the risk of falling and prevent access to unsafe exterior ladders, modify or replace guardrails on exterior stair landings. Also, upgrade or replace the makeshift infill on the parking deck guardrails, and add bollards to prevent further wall damage from vehicles. To minimize any potential liability to the university, it is recommended that this work be completed on a relatively high priority basis.

## Project Cost

Project Number: UCBFS01

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Guardrail modification and bollard installation	LF	200	\$16.60	\$3,320	\$7.26	\$1,452	\$4,772
	Projec	ct Totals:		\$3,320		\$1,452	\$4,772

Material/Labor Cost		\$4,772
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$4,871
General Contractor Mark Up at 20.0%	+	\$974
Inflation	+	\$0
Construction Cost		\$5,845
Professional Fees at 16.0%	<u>+</u>	\$935
Total Project Cost		\$6,780

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBFS05	Title:	INSTALL SEISMIC SHUTOFF VALVE
Priority Sequence:	3		
Priority Class:	2		
Category Code:	FS6A	System: Component Element:	FIRE/LIFE SAFETY GENERAL OTHER
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILD	ING	
Subclass/Savings:	Not Applicable		
Code Application:	IMC		
Project Class:	Plant Adaption		
Project Date:	05/09/2008		
Project Location:	Item Only: Floor(s) 1		

## **Project Description**

The natural gas main enters the building at the northeast facade. There is no seismic shutoff valve on the gas main. Seismic gas shutoff valves are devices designed to automatically shut off the supply of natural gas to a building to prevent a fire or explosion due to accumulation of gas within the building in the event of a major earthquake. The installation of a seismic shutoff valve is recommended.

## Project Cost

Project Number: UCBFS05

Task Cost Estimate Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Seismic shutoff valve and all connections	EA	1	\$900	\$900	\$880	\$880	\$1,780
	Projec	t Totals:		\$900		\$880	\$1,780

Material/Labor Cost Material Index Labor Index		\$1,780 101.8% 102.7%
Material/Labor Indexed Cost		\$1,820
General Contractor Mark Up at 20.0% Inflation	+ +	\$364 \$0
Construction Cost		\$2,184
Professional Fees at 16.0%	+	\$349
Total Project Cost		\$2,533

## **Facility Condition Analysis**

## Section Three

#### **Project Description**

Project Number:	UCBES01	Title:	REPLACE AGING ROOF
Priority Sequence:	4		
Priority Class:	2		
Category Code:	ES4B	System: Componen Element:	EXTERIOR t: ROOF REPLACEMENT
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILD	NG	
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	04/25/2008		
Project Location:	Floor-wide: Floor(s) R		

#### **Project Description**

The aging roof on this building is ponding water in various locations and appears to be leaking. To eliminate ongoing damage to interior finishes due to roof leaks, tear off and replace this roof with a new built-up roof (or other suitable roofing application). After a new roof is installed, replace isolated stained ceiling tiles as part of routine building maintenance.

## **Project Cost**

Project Number: UCBES01

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Roof replacement	SF	37,064	\$2.94	\$108,968	\$3.44	\$127,500	\$236,468
	Projec	t Totals:		\$108,968		\$127,500	\$236,468

Material/Labor Cost		\$236,468
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$241,872
General Contractor Mark Up at 20.0%	+	\$48,374
Inflation	+	\$0
Construction Cost		\$290,247
Professional Fees at 16.0%	+	\$46,439
Total Project Cost		\$336,686

## Facility Condition Analysis

Section Three

#### **Project Description**

Project Number:	UCBFS02		Title:	FIRE ALARM SYSTEM RENEWAL
Priority Sequence:	5			
Priority Class:	3			
Category Code:	FS2A		System: Component Element:	FIRE/LIFE SAFETY : DETECTION ALARM GENERAL
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING	
Subclass/Savings:	Not Applicable	e		
Code Application:	NFPA ADAAG IBC	72 702.1 907		
Project Class:	Capital Renev	wal		
Project Date:	05/09/2008			
Project Location:	Floor-wide: Fl	oor(s) 1, 2, 3, 4, I	В	

#### **Project Description**

The fire alarm system appears to have been in service since the renovation in the late 1980s. Based on historical life cycle, the fire alarm system will reach the end of its useful service life within the next six years and will become inefficient with age. Replacement is recommended. Install a modern zone-type fire alarm system. Specify a point addressable, multizone, four-wire, Class A, supervised fire alarm panel with an annunciator. This work includes pull stations, audible and visual alarms, smoke and heat detectors, and wiring network. Install all devices in accordance with current NFPA and ADA requirements. The system should report activation or trouble to an applicable receiving station, such as campus security and / or the local fire department.

## **Facility Condition Analysis Section Three**

## **Project Cost**

Project Number: UCBFS02

**Task Cost Estimate** 

Qnty Unit C	ost Cost	Unit Cost	Cost	Cost
85,319 \$ <sup>.</sup>	1.21 \$224,236	\$0.69	\$127,870	\$352,106
	85,319 \$′	85,319 \$1.21 \$224,236	85,319 \$1.21 \$224,236 \$0.69	85,319 \$1.21 \$224,236 \$0.69 \$127,870

Project 1	Totals:
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\$224,236

\$127,870 \$352,106

Material/Labor Cost Material Index Labor Index		\$352,106 101.8% 102.7%
Material/Labor Indexed Cost		\$359,595
General Contractor Mark Up at 20.0% Inflation	+ +	\$71,919 \$0
Construction Cost		\$431,514
Professional Fees at 16.0%	+	\$69,042
Total Project Cost		\$500,556

## **Facility Condition Analysis**

## **Section Three**

#### **Project Description**

Project Number:	UCBFS04		Title:	MODERNIZE EXIT SIGNS		
Priority Sequence:	6					
Priority Class:	3					
Category Code:	FS1A		System: Component Element:	FIRE/LIFE SAFETY LIGHTING EGRESS LTG./EXIT SIGNAGE		
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING			
Subclass/Savings:	Not Applicable					
Code Application:	NFPA IBC	101-47 1003.2.10				
Project Class:	Capital Renev	val				
Project Date:	05/09/2008					
Project Location:	Floor-wide: Fl	oor(s) 1, 2, 3, 4, I	3			

## **Project Description**

The original compact fluorescent exit signs are timeworn and in need of an upgrade. Replace the battery backup exit signs and install additional signs as required by code. LED exit signs are recommended for their low maintenance and energy-efficient features. New exit signs should be connected to the proposed emergency circuit

## Project Cost

Project Number: UCBFS04

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Installation of new LED exit signs, including all connections	EA	30	\$118	\$3,540	\$222	\$6,660	\$10,200
	Projec	ct Totals:		\$3,540		\$6,660	\$10,200

Project Totals: \$3,540	oject Totals:	\$
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Material/Labor Cost		\$10,200
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$10,444
General Contractor Mark Up at 20.0%	+	\$2,089
Inflation	<u>+</u>	\$0
Construction Cost		\$12,532
Professional Fees at 16.0%	+	\$2,005
Total Project Cost		\$14,537

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBFS03		Title:	FIRE SPRINKLER HEAD RENEWAL
Priority Sequence:	7			
Priority Class:	3			
Category Code:	FS3A		System: Component Element:	FIRE/LIFE SAFETY : SUPPRESSION SPRINKLERS
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	DING	
Subclass/Savings:	Not Applicabl	e		
Code Application:	NFPA IBC	13 903		
Project Class:	Capital Renev	wal		
Project Date:	05/09/2008			
Project Location:	Floor-wide: F	loor(s) B		

## **Project Description**

The wet pipe sprinkler system is equipped with original fusible link sprinkler heads, with the exception of glass-bulb sprinkler heads observed in localized renovations. The statistical life cycle for a sprinkler head is approximately twenty years. Scale can accumulate inside the head and cause it to malfunction when needed. It is recommended that the sprinkler heads be replaced to ensure that proper protection is available. Cost estimate is based on 30 percent of the building square footage.

## Project Cost

Project Number: UCBFS03

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fire sprinkler head replacement	SF	37,064	\$0.04	\$1,483	\$0.31	\$11,490	\$12,972
	Proje	ct Totals:		\$1,483		\$11,490	\$12,972

Material/Labor Cost		\$12,972
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$13,309
General Contractor Mark Up at 20.0%	+	\$2,662
Inflation	+	\$0
Construction Cost		\$15,971
Professional Fees at 16.0%	+	\$2,555
Total Project Cost		\$18,527

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBAC01	Title:	MINOR ACCESSIBILITY UPGRADES
Priority Sequence:	8		
Priority Class:	3		
Category Code:	AC3D	System: Component Element:	ACCESSIBILITY INTERIOR PATH OF TRAVEL SIGNAGE
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILD	DING	
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG 703.1, 309.4,	Chapter 9	
Project Class:	Plant Adaption		
Project Date:	04/27/2008		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, 4		

## **Project Description**

A small percentage of this facility lacks accessible signage, such as in the offices of the Northwest Portland Area Indian Health Board. This area and a few other locations also lack accessible door hardware. In addition, this reception counter does not conform to current ADA standards. To improve compliance, install ADA signage and lever hardware. Also, lower a portion of this service counter to an accessible height.

## Project Cost

Project Number: UCBAC01

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA signage	EA	50	\$51.00	\$2,550	\$15.00	\$750	\$3,300
Accessible lever door hardware, including installation	EA	20	\$262	\$5,240	\$67.00	\$1,340	\$6,580
Counter modification	LF	3	\$150	\$450	\$80.00	\$240	\$690
	Projec	t Totals:		\$8,240		\$2,330	\$10,570

Material/Labor Cost		\$10,570
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$10,781
General Contractor Mark Up at 20.0%	+	\$2,156
Inflation	+	\$0
Construction Cost		\$12,937
Professional Fees at 16.0%	+	\$2,070
Total Project Cost		\$15,007

# Facility Condition Analysis

## Section Three

### **Project Description**

Project Number:	UCBES02	Title:	NEW EXTERIOR SERVICE DOORS AND WINDOWS
Priority Sequence:	9		
Priority Class:	3		
Category Code:	ES5B	System: Component Element:	EXTERIOR FENESTRATIONS WINDOWS
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILI	DING	
Subclass/Savings:	Energy Conservation \$	\$2,019.12	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	04/25/2008		
Project Location:	Building-wide: Floor(s) 1, 2, 3	, 4, B, R	

#### **Project Description**

With the exception of the upgraded windows in the health clinic, exterior glazing is single-pane and not energyefficient. Floor to ceiling glazing in offices, etc., also lacks adequate safety markings or guardrails. In addition, exterior service doors on the roof are weathered and / or delaminating. Install new thermal pane glazing to lower energy consumption, and replace aging doors and frames with new doors, including code-compliant hardware.

## Project Cost

Project Number: UCBES02

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Exterior glazing	SF	4,296	\$55.00	\$236,280	\$35.00	\$150,360	\$386,640
Low use exterior door and frame, including installation and hardware	EA	4	\$1,950	\$7,800	\$1,750	\$7,000	\$14,800
	Projec	ct Totals:		\$244,080		\$157,360	\$401,440

Material/Labor Cost		\$401,440
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$410,082
General Contractor Mark Up at 20.0%	+	\$82,016
Inflation	+	\$0
Construction Cost		\$492,099
Professional Fees at 16.0%	+	\$78,736
Total Project Cost		\$570,834

## **Facility Condition Analysis**

Section Three

#### **Project Description**

Project Number:	UCBHV01		Title:	HVAC SYSTEM RENEWAL
Priority Sequence:	10			
Priority Class:	3			
Category Code:	HV3A		System: Component: Element:	HVAC HEATING/COOLING SYSTEM RETROFIT/REPLACE
Building Code: Building Name:	UCB UNIVERSITY (	CENTER BUIL	DING	
Subclass/Savings:	Energy Conservation \$23		\$23,779.00	
Code Application:	ASHRAE IMC	62-2004 Chapters M1	-M6, M12	
Project Class:	Capital Renew	al		
Project Date:	05/09/2008			
Project Location:	Floor-wide: Flo	or(s) 1, 2, 3, 4	, В	

#### **Project Description**

The fourth floor is served by newer packaged rooftop air handling units equipped with DX cooling and natural gas heating. The remaining areas of the building are served by an original dual-deck air handling unit located in the first floor mechanical room. The heating medium is steam, produced by an original steam boiler. A new, stack chiller was installed within the past few years. Heat rejection for the chilled water system is provided by the cooling tower located on the roof. Based on historical life cycle, the original air handling system and boiler is anticipated to become inefficient and maintenance intensive. A complete redesign and replacement of the original HVAC system is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with VAV and constant volume air distribution as needed. This includes new air handlers, ductwork, terminal units, heat exchangers, pumps, piping, controls, and electrical connections. Specify DDCs for the new equipment. Incorporate VFDs into the new HVAC design as applicable. Cost estimate is based on 60 percent of the building square footage.

## Project Cost

Project Number: UCBHV01

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Air handlers, ductwork, VAVs, VFDs, DDCs, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment	SF	111,191	\$11.98	\$1,332,068	\$14.64\$	51,627,836	\$2,959,904
	Proje	ect Totals:		\$1,332,068	\$	1,627,836	\$2,959,904

Material/Labor Cost Material Index Labor Index		\$2,959,904 101.8% 102.7%
Material/Labor Indexed Cost		\$3,027,833
General Contractor Mark Up at 20.0% Inflation	+ +	\$605,567 \$0
Construction Cost		\$3,633,400
Professional Fees at 16.0%	+	\$581,344
Total Project Cost		\$4,214,744

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBEL02		Title:	ELECTR	RICAL SYSTEM REPAIR
Priority Sequence:	11				
Priority Class:	3				
Category Code:	EL3B		System: Componen Element:	t: SE	LECTRICAL ECONDARY DISTRIBUTION STRIBUTION NETWORK
Building Code: Building Name:	UCB UNIVERSITY C	ENTER BUILD	ING		
Subclass/Savings:	Not Applicable				
Code Application:	NEC	Chapters 1-4			
Project Class:	Deferred Mainte	enance			
Project Date:	05/09/2008				
Project Location:	Floor-wide: Floo	or(s) 1, 2, 3, 4, E	3		

## **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.

## Project Cost

Project Number: UCBEL02

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Switches, receptacles, cover plates, breakers, and miscellaneous materials	SF	185,319	\$0.36	\$66,715	\$0.54	\$100,072	\$166,787

Material/Labor Cost		\$166,787
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$170,690
General Contractor Mark Up at 20.0%	+	\$34,138
Inflation	+	\$0
Construction Cost		\$204,828
Professional Fees at 16.0%	+	\$32,772
Total Project Cost	_	\$237,600

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBEL01		Title:	REP	LACE MAIN SWITCHBOARDS
Priority Sequence:	12				
Priority Class:	3				
Category Code:	EL2A		System: Component Element:	t:	ELECTRICAL MAIN DISTRIBUTION PANELS CONDITION UPGRADE
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING		
Subclass/Savings:	Not Applicabl	e			
Code Application:	NEC	230			
Project Class:	Capital Renev	wal			
Project Date:	05/09/2008				
Project Location:	Item Only: Flo	oor(s) 1			

## **Project Description**

The original switchboards are recommended for replacement. The existing aged circuit breakers could pose a potential fire hazard should they fail to interrupt a circuit in an overload or short circuit condition. The existing switchboard should be replaced in its entirety. New switchboards components should include a ground fault main circuit breaker, draw-out distribution breakers for ease of maintenance, digital metering for remote control / monitoring, and transient surge protection. Cost estimate includes replacement of the dry-type service entrance transformers.

## Project Cost

Project Number: UCBEL01

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
1,600 amp switchgear, includes switchboard, circuit breakers, feeders, digital metering, transient surge protector, and demolition of existing equipment	EA	2	\$26,280	\$52,560	\$23,580	\$47,160	\$99,720
Service entrance transformers, includes demolition	EA	2	\$36,700	\$73,400	\$5,620	\$11,240	\$84,640
	Projec	t Totals:		\$125,960		\$58,400	\$184,360

Material/Labor Cost Material Index Labor Index		\$184,360 101.8% 102.7%
Material/Labor Indexed Cost		\$188,204
General Contractor Mark Up at 20.0% Inflation	+ +	\$37,641 \$0
Construction Cost		\$225,845
Professional Fees at 16.0%	+	\$36,135
Total Project Cost	_	\$261,980

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBEL04		Title:	INTERIOR LIGHTING UPGRADE
Priority Sequence:	13			
Priority Class:	3			
Category Code:	EL4B		System: Component Element:	ELECTRICAL : DEVICES AND FIXTURES INTERIOR LIGHTING
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING	
Subclass/Savings:	Energy Conse	ervation		
Code Application:	NEC	410		
Project Class:	Deferred Mair	ntenance		
Project Date:	05/19/2008			
Project Location:	Floor-wide: Fl	oor(s) 1, 2, 3, 4,	В	

## **Project Description**

Original T12 fluorescent fixtures were observed in the kitchen and unoccupied mechanical / electrical / janitorial space. Replace existing light fixtures with modern fixtures of the latest energy-efficient design. Select lamps with the same color temperatures and rendering indexes for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation. Cost estimate is based on 20 percent of the building square footage.

## Project Cost

Project Number: UCBEL04

Task Cost Estimate	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	37,064	\$2.91	\$107,856	\$3.55	\$131,577	\$239,433
	Proje	ct Totals:		\$107,856		\$131,577	\$239,433

Material/Labor Cost Material Index Labor Index		\$239,433 101.8% 102.7%
Material/Labor Indexed Cost		\$244,927
General Contractor Mark Up at 20.0% Inflation	+ +	\$48,985 \$0
Construction Cost		\$293,913
Professional Fees at 16.0%	+	\$47,026
Total Project Cost		\$340,939

## Facility Condition Analysis Section Three

#### **Project Description**

Project Number:	UCBIS02	Title:	ACOUSTICAL CEILINGS IN PARKING DECK
Priority Sequence:	14		
Priority Class:	3		
Category Code:	IS3B	System: Componen <sup>:</sup> Element:	INTERIOR/FINISH SYS. t: CEILINGS REPLACEMENT
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILD	ING	
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	04/25/2008		
Project Location:	Floor-wide: Floor(s) 2, 3		

## **Project Description**

Except for stained ceiling tiles on the fourth floor, interior acoustical grid systems are generally in good overall condition. More recently upgraded ceiling grids in the parking deck are also adequate. However, older ceilings in some areas of the parking deck are badly stained or damaged. To improve the general aesthetic of the parking deck, replace these dilapidated ceilings.

## **Project Cost**

Project Number: UCBIS02

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical ceiling replacement	SF	20,742	\$2.04	\$42,314	\$2.86	\$59,322	\$101,636
	Proje	ct Totals:		\$42,314		\$59,322	\$101,636

Material/Labor Cost Material Index		\$101,636 101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$103,999
General Contractor Mark Up at 20.0%	+	\$20,800
Inflation	+	\$0
Construction Cost		\$124,799
Professional Fees at 16.0%	+	\$19,968
Total Project Cost		\$144,767

## Facility Condition Analysis Section Three

## **Project Description**

Project Number:	UCBPL04		Title:		RADE DOMESTIC HOT WATER
Priority Sequence:	15				
Priority Class:	3				
Category Code:	PL1E		System: Componen Element:	ıt:	PLUMBING DOMESTIC WATER HEATING
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILDING				
Subclass/Savings:	Not Applicable				
Code Application:	IPC	Chapter P5			
Project Class:	Capital Renewal				
Project Date:	05/14/2008				
Project Location:	Item Only: Flo	oor(s) 4			

## **Project Description**

Domestic hot water is provided by multiple electric hot water heaters of various capacity and age. Replacement of the 60 gallon, electric, domestic hot water heater located in the room 491 is recommended. The 120 and 50 gallon units are in good condition, no upgrade is required.

## Project Cost

Project Number: UCBPL04

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Electric, commercial-grade water heater replacement, including demolition	GAL	60	\$73.34	\$4,400	\$8.46	\$508	\$4,908

Project Totals:	\$4,400	\$508	\$4,908

Material/Labor Cost		\$4,908
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$5,001
General Contractor Mark Up at 20.0%	+	\$1,000
Inflation	+	\$0
Construction Cost		\$6,001
Professional Fees at 16.0%	+	\$960
Total Project Cost		\$6,961

## Facility Condition Analysis Section Three

#### **Project Description**

Project Number:	UCBVT01	Title:	COMPREHENSIVE ELEVATOR MODERNIZATION		
Priority Sequence:	16				
Priority Class:	3				
Category Code:	VT7A	System: Componen Element:	VERT. TRANSPORTATION GENERAL OTHER		
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILDING				
Subclass/Savings:	Not Applicable				
Code Application:	ASME A17.1				
Project Class:	Capital Renewal				
Project Date:	05/14/2008				
Project Location:	Item Only: Floor(s) 1, 2, 3, 4,	В			

#### **Project Description**

The traction elevators in this building are at the end of their useful service life. Comprehensive modernization will need to take place within the next two to five years. Modernization should include replacing or rebuilding the traction elevator hoist machine and installing a new AC motor, installing new digital controls, rebuilding the drive and secondary sheaves and replacing the ropes, travel cables, selector, and all non-compliant code related items in the hoistway and pit as needed. Install new hoistway door hardware. Verify that rail bracket spacing is compliant with current code. Renovate cab interior, including all finishes, ceiling, floor, and fixtures. Upgrade the car operating panel, including fire service and instructions. Install ventilation fan and car doors, including hardware, door operators, and door restrictors. Hall fixtures should be replaced. All work and equipment are to meet ADA and code requirements in place at the time of modernization. Additional work may be required in the machine room to meet code.

# **Specific Project Details Facility Condition Analysis Section Three**

## Project Cost

Project Number: UCBVT01

**Task Cost Estimate** 

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Comprehensive modernization	LOT	3	\$53,877	\$161,631	\$69,546	\$208,638	\$370,269

Project Totals:	\$161,631	\$208,638	\$370,269
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Material/Labor Cost		\$370,269
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$378,812
General Contractor Mark Up at 20.0%	+	\$75,762
Inflation	+	\$0
Construction Cost		\$454,574
Professional Fees at 16.0%	+	\$72,732
Total Project Cost		\$527,306

#### **Specific Project Details**

#### Facility Condition Analysis Section Three

#### **Project Description**

Project Number:	UCBEL03	Title:	UPGRADE BUILDING ELECTRICAL NETWORK
Priority Sequence:	17		
Priority Class:	4		
Category Code:	EL3B	System: Component Element:	ELECTRICAL SECONDARY DISTRIBUTION DISTRIBUTION NETWORK
Building Code: Building Name:	UCB UNIVERSITY CENT	ER BUILDING	
Subclass/Savings:	Not Applicable		
Code Application:	NEC Char	oters 1-4	
Project Class:	Capital Renewal		
Project Date:	05/09/2008		
Project Location:	Floor-wide: Floor(s)	1, 2, 3, 4, B	

#### **Project Description**

The building electrical network has been in service for over forty years. Based on historical life cycle, replacement of the building electrical system is recommended. Aging components, such as the circuit breakers, serve as potential fire hazards if they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case, thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute electrical loads to the appropriate areas in order to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification.

## **Specific Project Details Facility Condition Analysis Section Three**

### **Project Cost**

Project Number: UCBEL03

**Task Cost Estimate** 

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Power panels, conductors, raceways, devices, demolition, and cut and patch	SF	185,319	\$4.65	\$861,733	\$6.98\$	1,293,527	\$2,155,260

Project Totals:

\$861,733

\$1,293,527 \$2,155,260

Material/Labor Cost Material Index Labor Index		\$2,155,260 101.8% 102.7%
Material/Labor Indexed Cost		\$2,205,696
General Contractor Mark Up at 20.0% Inflation	+ +	\$441,139 \$0
Construction Cost		\$2,646,836
Professional Fees at 16.0%	+	\$423,494
Total Project Cost		\$3,070,329

#### **Specific Project Details**

#### Facility Condition Analysis Section Three

#### **Project Description**

Project Number:	UCBIS01	Title:	UPGRADE CARPET AND DAMAGED VINYL FLOORING
Priority Sequence:	18		
Priority Class:	4		
Category Code:	IS1A	System: Componen Element:	INTERIOR/FINISH SYS. FLOOR FINISHES-DRY
Building Code: Building Name:	UCB UNIVERSITY CENTER BUILD	ING	
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	04/25/2008		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, 4		

#### **Project Description**

The carpeting in this building is overall in fairly good condition, especially in those areas that have been more recently renovated. However, these floor finishes will continue to deteriorate with time and have been recommended for low priority replacement. To maintain a reasonable interior aesthetic, replace stained or damaged carpeting with new commercial-grade carpeting. As part of this effort, also replace the damaged vinyl flooring in the fourth floor womens restrooms and nearby break room.

# **Specific Project Details Facility Condition Analysis Section Three**

## Project Cost

Project Number: UCBIS01

#### **Task Cost Estimate**

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet replacement	SF	84,150	\$5.15	\$433,373	\$1.92	\$161,568	\$594,941
Vinyl flooring	SF	606	\$3.39	\$2,054	\$2.40	\$1,454	\$3,509
	Projec	t Totals:		\$435,427		\$163,022	\$598,449

Material/Labor Cost Material Index Labor Index		\$598,449 101.8% 102.7%
Material/Labor Indexed Cost		\$610,689
General Contractor Mark Up at 20.0% Inflation	+ +	\$122,138 \$0
Construction Cost		\$732,826
Professional Fees at 16.0%	+	\$117,252
Total Project Cost		\$850,078

#### **Specific Project Details**

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBPL03		Title:	PLU	MBING FIXTURE UPGRADE
Priority Sequence:	19				
Priority Class:	4				
Category Code:	PL1G		System: Component Element:	::	PLUMBING DOMESTIC WATER FIXTURES
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING		
Subclass/Savings:	Not Applicable	e			
Code Application:	IPC	Chapter P4			
Project Class:	Capital Renew	wal			
Project Date:	05/09/2008				
Project Location:	Item Only: Flo	oor(s) 3, 4			

#### **Project Description**

The majority of the plumbing fixtures have been in service for over forty years. A few restrooms were completely upgraded with modern water conserving type water closets and urinals. Original water closets and urinals are equipped with automatic flush assemblies. The scheduled upgrade of the original plumbing fixtures is recommended. Remove the existing plumbing fixtures and install new fixtures, including rough-ins. Specify automatic, hands-free faucets and flush valves for the restroom fixtures. These should be hard-wired, not battery-type. Specify vacuum breaker faucets for service sinks and other sinks with hose connections. Automatic flush valves help to maintain clean and sanitary facilities, while automatic faucets conserve water.

# Specific Project Details Facility Condition Analysis Section Three

### Project Cost

Project Number: UCBPL03

#### **Task Cost Estimate**

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Water closet, automatic flush valve, rough- in, and demolition	EA	18	\$960	\$17,280	\$670	\$12,060	\$29,340
Urinal, automatic flush valve, rough-in, and demolition	EA	4	\$540	\$2,160	\$730	\$2,920	\$5,080
Service sink, vacuum breaker faucets, rough-in, and demolition	EA	2	\$1,100	\$2,200	\$895	\$1,790	\$3,990
Toilet seats and demolition	EA	14	\$28.00	\$392	\$25.00	\$350	\$742
Lavatory, automatic faucets, trap, tough-in, and demolition	EA	10	\$655	\$6,550	\$750	\$7,500	\$14,050
	Projec	t Totals:		\$28,582		\$24,620	\$53,202

Material/Labor Cost Material Index Labor Index		\$53,202 101.8% 102.7%
Material/Labor Indexed Cost		\$54,381
General Contractor Mark Up at 20.0% Inflation	+ +	\$10,876 \$0
Construction Cost		\$65,257
Professional Fees at 16.0%	+	\$10,441
Total Project Cost		\$75,699

#### **Specific Project Details**

# Facility Condition Analysis

## Section Three

#### **Project Description**

Project Number:	UCBPL02		Title:	UPG	RADE DRAIN PIPING NETWORK
Priority Sequence:	20				
Priority Class:	4				
Category Code:	PL2A		System: Component Element:	:	PLUMBING WASTEWATER PIPING NETWORK
Building Code: Building Name:	UCB UNIVERSITY CE	ENTER BUILD	ING		
Subclass/Savings:	Not Applicable				
Code Application:	IPC (	Chapter P7, P1	1		
Project Class:	Capital Renewal	I			
Project Date:	05/09/2008				
Project Location:	Floor-wide: Floo	r(s) 1, 2, 3, 4, I	3		

#### **Project Description**

The original cast-iron, bell-n-spigot drain piping network has been in service for over forty years. Failure to replace the drain piping will result in frequent leaks and escalating maintenance costs. Remove the existing sanitary and storm drain piping. Install new cast-iron drain piping networks with copper runouts to the fixtures. Install new floor drains, roof drains, and traps as well.

# **Specific Project Details Facility Condition Analysis**

## **Section Three**

## Project Cost

Project Number: UCBPL02

**Task Cost Estimate** 

Task Cost Estimate	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cast-iron drain piping and fittings, copper pipe and fittings, floor / roof drains, traps, hangers, demolition, and cut and patching materials	SF	185,319	\$1.48	\$274,272	\$3.41	\$631,938	\$906,210
	Proje	ct Totals:		\$274,272		\$631,938	\$906,210

Material/Labor Cost		\$906,210
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$928,209
General Contractor Mark Up at 20.0%	+	\$185,642
Inflation	+	\$0
Construction Cost		\$1,113,851
Professional Fees at 16.0%	+	\$178,216
Total Project Cost		\$1,292,067

#### **Specific Project Details**

### Facility Condition Analysis Section Three

#### **Project Description**

Project Number:	UCBPL01		Title:	RENEW POTABLE WATER SUPPLY PIPING
Priority Sequence:	21			
Priority Class:	4			
Category Code:	PL1A		System: Component Element:	PLUMBING t: DOMESTIC WATER PIPING NETWORK
Building Code: Building Name:	UCB UNIVERSITY	CENTER BUILD	ING	
Subclass/Savings:	Not Applicable	e		
Code Application:	IPC	Chapter P6		
Project Class:	Capital Renew	wal		
Project Date:	05/09/2008			
Project Location:	Floor-wide: Fl	loor(s) 1, 2, 3, 4, I	3	

#### **Project Description**

Failure to replace the water piping will result in frequent leaks and escalating maintenance costs. Remove the existing water supply network. Install new copper water supply piping with fiberglass insulation. Install isolation valves, pressure regulators, shock absorbers, backflow preventers, and vacuum breakers as needed.

# **Specific Project Details Facility Condition Analysis Section Three**

## Project Cost

Project Number: UCBPL01

**Task Cost Estimate** 

Task Cost Estimate Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Copper pipe and fittings, valves, backflow prevention devices, insulation, hangers, demolition, and cut and patching materials	SF	185,319	\$0.93	\$172,347	\$2.33	\$431,793	\$604,140

Project Totals:	\$172,347	\$431,793	\$604,140

Material/Labor Cost		\$604,140
Material Index		101.8%
Labor Index		102.7%
Material/Labor Indexed Cost		\$618,901
General Contractor Mark Up at 20.0%	+	\$123,780
Inflation	+	\$0
Construction Cost		\$742,681
Professional Fees at 16.0%	+	\$118,829
Total Project Cost		\$861,510

# DRAWINGS AND PROJECT LOCATIONS

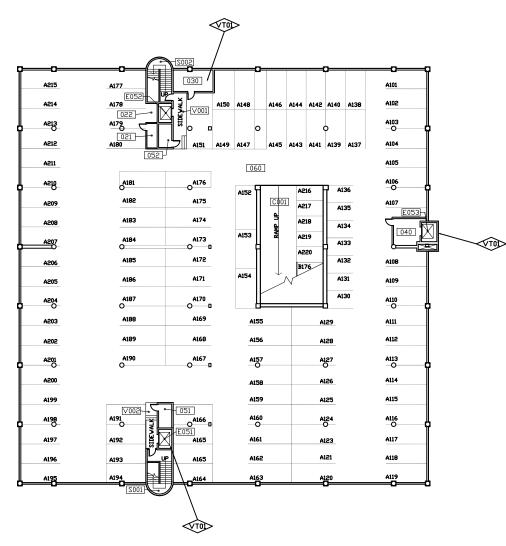


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(770) 879-7376

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UNIVERSITY CENTER BUILDING

BLDG NO. UCB

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(776) 879-7376

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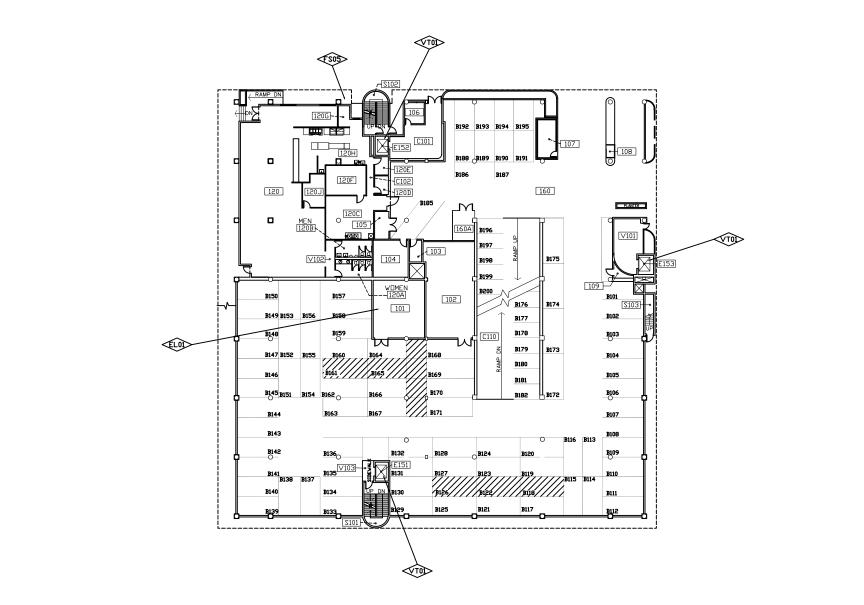
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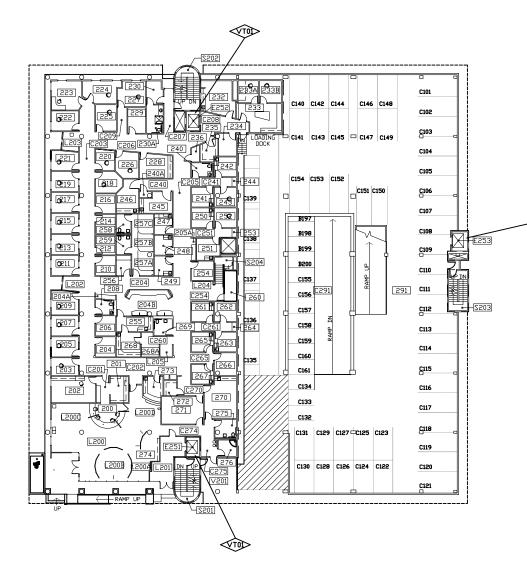
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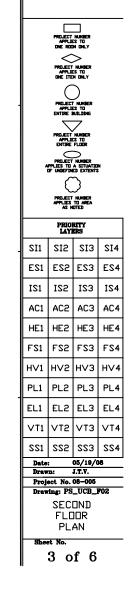
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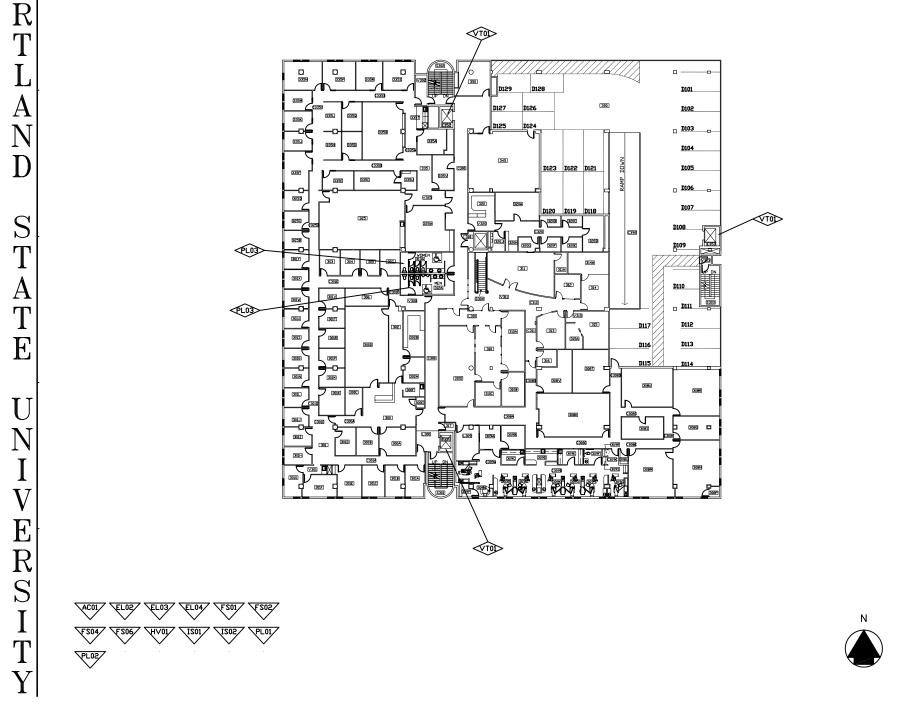
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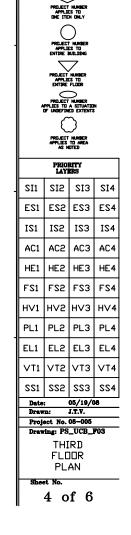
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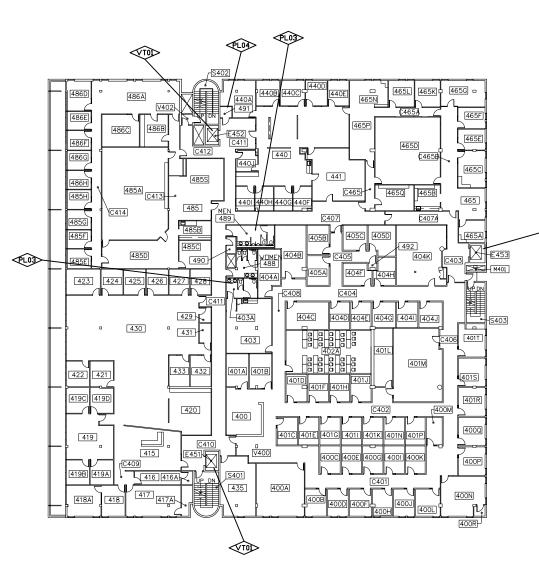
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PL1	PL2	PL3	PL4			
EL1	EL2	EL3	EL4			
VT1	VT2	∨тз	VT4			
SS1	885	223	SS4			
Date: 05/19/08						
Draw		J.T.V. 08-005				
Project No. 08-005 Drawing: PS_UCB_F04 F DURTH F L DDR PLAN						
Sheet No. 5 of 6						



PACILITY

CONDITION

2165 West Park Court Suite N Stone Mountain, GA 30067

(770) 879-7376

PROJECT NUMBER APPLIES TO DNE ROOM DNLY

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UNIVERSITY CENTER BUILDING

BLDG NO. UCB

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FACILITY CONDITION ANALYSIS

2165 Test Park Court Suite N Stone Mountain, GA 30067

(770) 879-7376

PROJECT NUMBER APPLIES TO DNE ROOM DNLY PROJECT NUMBER APPLIES TO DNE ITEM DNLY

PREJECT NUMBER APPLIES TO ENTIRE BUILDING

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APPLIES TO ENTIRE FLOOR

PROJECT NUMBER APPLIES TO A SITUATI OF UNDEFINED EXTEN

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PRIJECT NUMBER APPLIES TO AREA AS NOTED

PRIORITY LAYERS SI2 SI3 SI4

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HE2 HE3

FS2 FS3

HV5 HV3

VT1 VT2 VT3 VT4 SS1 SS2 SS3 SS4

PL2 PL3 PL4

EL2 EL3 EL4

05/19/08

J.T.V.

Drawing: PS\_UCB\_FOR ROOF

FLOOR PLAN

Project No. 08-005

ES2 ES3 ES4

IS4

HE4

FS4

HV4

SI1

ES1

IS1

AC1 AC2 AC3 AC4

HE1

FS1

HV1

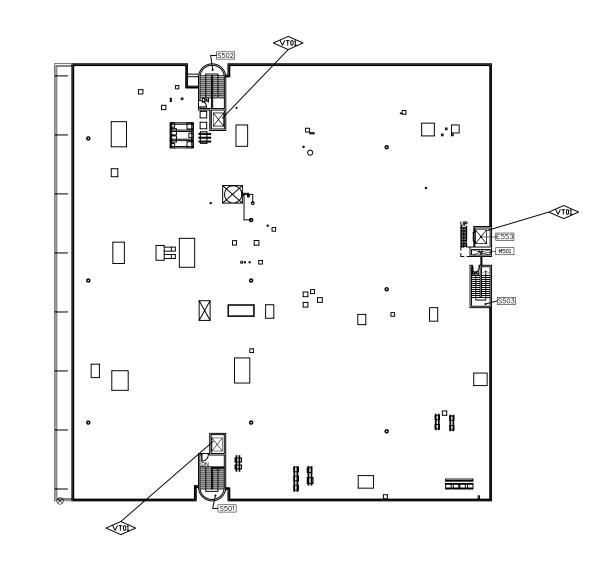
PL1

EL1

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**FACILITY CONDITION ANALYSIS** 



# Life Cycle Model Building Component Summary

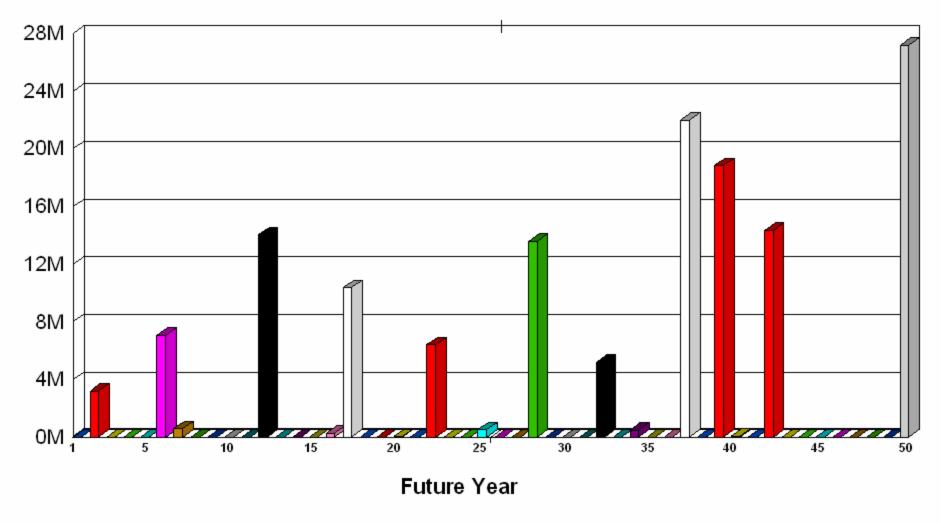
# UCB : UNIVERSITY CENTER BUILDING

Uniformat Code	Component Description	Qty	Units	Unit Cost	Cmplx Total Adj Cost	Install Date	Life Exp
B2010	GALVANIZED STEEL SIDING	13,488	SF	\$11.52	\$155,382	1969	35
B2010	PRE-CAST CONCRETE PANELS	20,232	SF	\$41.07	\$830,928	1969	60
B2020	EXTERIOR CURTAIN WALL AND WINDOWS	4,296	SF	\$77.58	\$333,284	1969	55
B2020	EXTERIOR CURTAIN WALL AND WINDOWS	384	SF	\$77.58	\$29,791	2003	55
B2030	EXTERIOR METAL DOORS INCL. HARDWARE	36	EA	\$3,661.44	\$131,812	1969	30
B3010	BUILT-UP BITUMEN ROOFING SYSTEM (BUR)	37,064	SF	\$5.04	\$186,803	1969	18
C3010	INTERIOR FINISH - OFFICE / ADMINISTRATION	185,319	SF	\$32.07	\$5,943,180	1969	11
D2010	PLUMBING FIXTURES - STUDENT UNION	185,319	SF	\$5.56	\$1,030,374	1969	35
D2020	WATER PIPING - STUDENT UNION	185,319	SF	\$4.55	\$843,201	1969	35
D2020	WATER HEATER (COMMERCIAL, ELECTRIC)	120	GAL	\$113.36	\$13,603	2007	20
D2020	WATER HEATER (RES., ELECTRIC)	50	GAL	\$53.56	\$2,678	1994	10
D2030	DRAIN PIPING - STUDENT UNION	185,319	SF	\$6.82	\$1,263,876	1969	40
D3030	CHILLER - WATER COOLED (UP TO 200 TONS)	180	TON	\$1,120.50	\$201,690	2007	25
D3040	CONDENSATE RECEIVER	1	SYS	\$10,370.14	\$10,370	1969	15
D3040	HVAC SYSTEM - STUDENT UNION	185,319	SF	\$37.04	\$6,864,216	1969	25
D3040	BASE MTD. PUMP - UP TO 15 HP	5	HP	\$1,852.35	\$9,262	2007	20
D4010	FIRE SPRINKLER SYSTEM	185,319	SF	\$6.09	\$1,128,593	1969	80
D4010	FIRE SPRINKLER HEADS	185,319	SF	\$0.50	\$92,660	1969	20
D5010	ELECTRICAL SYSTEM - STUDENT UNION	185,319	SF	\$16.18	\$2,998,461	1969	50
D5010	ELECTRICAL SWITCHGEAR 120/208V	1,600	AMP	\$35.75	\$57,200	1969	20
D5010	ELECTRICAL SWITCHGEAR 277/480V	1,600	AMP	\$42.91	\$68,656	1969	20
D5010	TRANSFORMER, DRY, 15KV (500 TO 1500 KVA)	1,250	KVA	\$100.50	\$125,625	1969	30
D5020	EXIT SIGNS (CENTRAL POWER)	43	EA	\$235.36	\$10,120	1969	20
D5020	LIGHTING - STUDENT UNION	185,319	SF	\$8.24	\$1,527,029	1969	20
D5030	FIRE ALARM SYSTEM	185,319	SF	\$2.63	\$487,389	1969	15
D5040	GENERATOR, DIESEL (100-200 KW)	113	KW	\$473.05	\$53,455	2007	25

\$24,399,636

# Life Cycle Model Expenditure Projections

**UCB : UNIVERSITY CENTER BUILDING** 



Average Annual Renewal Cost per SqFt \$6.61

# **FACILITY CONDITION ANALYSIS**



PHOTOGRAPHIC LOG

## Photo Log - Facility Condition Analysis UCB : UNIVERSITY CENTER BUILDING

Photo ID No.	Description	Location
UCB001a	Aging roof	Roof
UCB001e	Original elevator controller	Elevator room
UCB002a	Additional view of flat roof	Roof
UCB002e	Original elevator motor	Elevator room
UCB003a	Example of ponding water	Roof
UCB003e	Rooftop unit RTU1	Roof
UCB004a	Additional view of ponding water	Roof
UCB004e	New rooftop unit	Roof
UCB005a	Vegetation on roof	Roof
UCB005e	HVAC equipment serving McDonalds area	Roof
UCB006a	Ponding water and elevator tower	Roof
UCB006e	Cooling tower	Roof
UCB007a	Unsafe exterior ladder and non-compliant guardrail	Exterior landing
UCB007e	Aging rooftop unit	Roof
UCB008a	Uncaged exterior ladder	Beside stair tower
UCB008e	Typical RTU	Roof
UCB009a	Lay-in ceiling, carpet, compliant signage, and lever hardware	Fourth floor, corridor
UCB009e	Rusting condensing unit	Roof
UCB010a	Stained ceiling tile, possibly due to roof leaks	Fourth floor
UCB010e	Original exhaust fan	Roof
UCB011a	Additional view of stained ceiling tile	Fourth floor
UCB011e	Retrofit xenon strobe	Fourth floor
UCB012a	Carpeting, wall finishes, lever hardware, and floor to ceiling glazing	Fourth floor, typical office
UCB012e	Damaged exit sign	Fourth floor
UCB013a	Built-in cabinetry and sheet vinyl flooring	Fourth floor, break room
UCB013e	Non-GFCI receptacle	Room 403
UCB014a	Cracked sheet vinyl and grab bars	Womens restroom, 403A
UCB014e	Original elevator	Elevator 453
UCB015a	Floor to ceiling glazing	Fourth floor
UCB015e	Electric domestic hot water heater	Room 491
UCB016a	Evidence of roof leaks	Fourth floor, janitorial closet
UCB016e	Original electrical panel	Room 490

## Photo Log - Facility Condition Analysis UCB : UNIVERSITY CENTER BUILDING

UCB017a		
OODOTTa	Low guardrail and uncaged exterior ladder	Fourth floor, landing
UCB017e	Combination emergency lighting and exit sign	Third floor
UCB018a	Ceramic tile finishes and lack of insulation on exposed piping	Fourth floor, mens restroom
UCB018e	Fire alarm system	Room 317
UCB019a	Non-accessible reception counter	Third floor, Indian Health Board office
UCB019e	Battery backup emergency lighting unit	Room 317
UCB020a	General level of finish	Third floor, corridor
UCB020e	Compressed air for the dental clinic room 3090	Mechanical room 309L
UCB021a	Built-in cabinetry	Third floor, break area
UCB021e	T8 lighting fixture in parking garage	Parking garage
UCB022a	Handrail / guardrail configuration	Stair 4
UCB022e	Domestic hot water heater	Room 103
UCB023a	Sheet vinyl floor	X-ray room, Third floor, x-ray room
UCB023e	New emergency generator	First floor, parking garage
UCB024a	Accessible unisex restroom	Third floor
UCB024e	Original air handling unit	Mechanical room 102
UCB025a	Damaged panels that may contain asbestos	Third floor, parking deck
UCB025e	New multi-stack chiller	Mechanical room 102
UCB026a	Makeshift infill	Third floor, parking deck guardrail
UCB026e	Domestic hot water heater	Mechanical room 102
UCB027a	Wall damage near ramp	Second floor, parking deck
UCB027e	Condensate return unit	Mechanical room 102
UCB028a	Cabinetry and sheet vinyl	Second floor, health clinic typical finishes
UCB028e	Steam boiler	Mechanical room 102
UCB029a	Accessible fixture layout	Second floor, unisex restroom
UCB029e	Control air compressor	Mechanical room 102
UCB030a	Carpeting and wall finishes	Second floor, corridor
UCB030e	Primary load interrupter switches	Mechanical room 102
UCB031a	Striping on ramp	Parking deck
UCB031e	GE switchboard	Mechanical room 102
UCB032a	Ticket booth	Parking deck
UCB032e	Automatic transfer switch	Mechanical room 102

## Photo Log - Facility Condition Analysis UCB : UNIVERSITY CENTER BUILDING

Photo ID No.	Description	Location
UCB033a	Bicycle storage	Bike coop, parking deck
UCB033e	Original dry-type service entrance transformer	Mechanical room 102
UCB034a	Elevator access	Parking deck
UCB034e	Original sprinkler head	Basement
UCB035a	Exterior facade and urban landscaping	East elevation
UCB035e	Old outlet	Parking garage
UCB036a	Exterior elevation and parking deck	Partial north facade
UCB036e	Fire water main	Parking garage
UCB037a	Deteriorated ceiling finish	Parking deck
UCB037e	Old exhaust fan	Mechanical room 030
UCB038a	Exterior glazing	South elevation
UCB038e	Original cast-iron, bell-n-spigot drain piping	Mechanical room 030
UCB039a	Exterior facade	East elevation
UCB039e	Natural gas main without automatic shutoff valve	Electrical room
UCB040a	Perimeter landscaping and city sidewalks	North elevation
UCB041a	Exterior elevation	West facade
UCB042a	Uncaged exterior ladder	North elevation

## Facility Condition Analysis - Photo Log







UCB004A.jpg



UCB004E.jpg



UCB003A.jpg



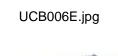










































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UCB009A.jpg



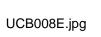
UCB007E.jpg







UCB010A.jpg





UCB010E.jpg

UCB009E.jpg

## Facility Condition Analysis - Photo Log



UCB011A.jpg



UCB011E.jpg



UCB012A.jpg



UCB012E.jpg



UCB013A.jpg



UCB013E.jpg



UCB014A.jpg





UCB014E.jpg









UCB018E.jpg



UCB015A.jpg

UCB017A.jpg



UCB015E.jpg

UCB017E.jpg



UCB016A.jpg

UCB018A.jpg







UCB019A.jpg

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UCB020A.jpg

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# UCB029A.jpg



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UCB025A.jpg



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UCB026E.jpg



UCB023A.jpg



UCB023E.jpg





UCB024A.jpg















UCB022E.jpg



UCB021A.jpg

Facility Condition Analysis - Photo Log

UCB021E.jpg

UCB022A.jpg



UCB030E.jpg

UCB030A.jpg

UCB028A.jpg

UCB026A.jpg





# UCB039A.jpg



UCB037A.jpg



UCB039E.jpg

UCB037E.jpg



UCB038A.jpg

UCB040A.jpg



UCB041A.jpg

UCB038E.jpg



UCB035A.jpg



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UCB036A.jpg



UCB036E.jpg





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UCB034E.jpg





UCB031E.jpg

UCB032A.jpg



UCB032E.jpg

Facility Condition Analysis - Photo Log



UCB042A.jpg