

EAST CAROLINA UNIVERSITY

WRIGHT AUDITORIUM

ASSET CODE: WRIG

FACILITY CONDITION ANALYSIS

AUGUST 25, 2010



EAST CAROLINA UNIVERSITY
Facility Condition Analysis

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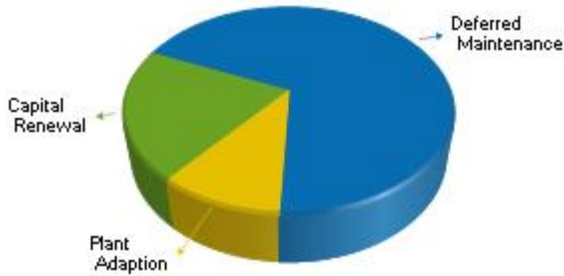
FACILITY CONDITION ANALYSIS

SECTION 1

GENERAL ASSET INFORMATION

EXECUTIVE SUMMARY - WRIGHT AUDITORIUM

PROJECT COSTS BY CLASSIFICATION



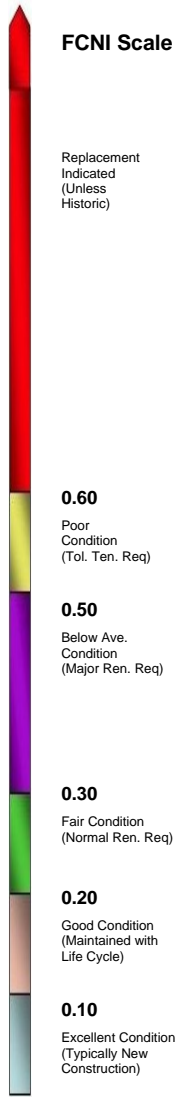
Building Code: WRIG
Building Name: WRIGHT AUDITORIUM
Year Built: 1925
Building Use: Theater / Auditorium
Square Feet: 33,986

Project Costs by Priority

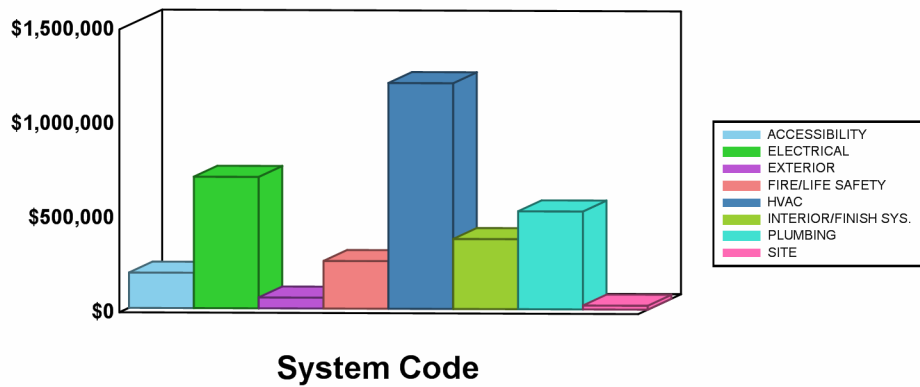
Priority 1:	\$0
Priority 2:	\$152,685
Priority 3:	\$2,847,440
Priority 4:	\$303,801
Total Project Costs:	\$3,303,926

Facility Replacement Cost: \$10,788,429

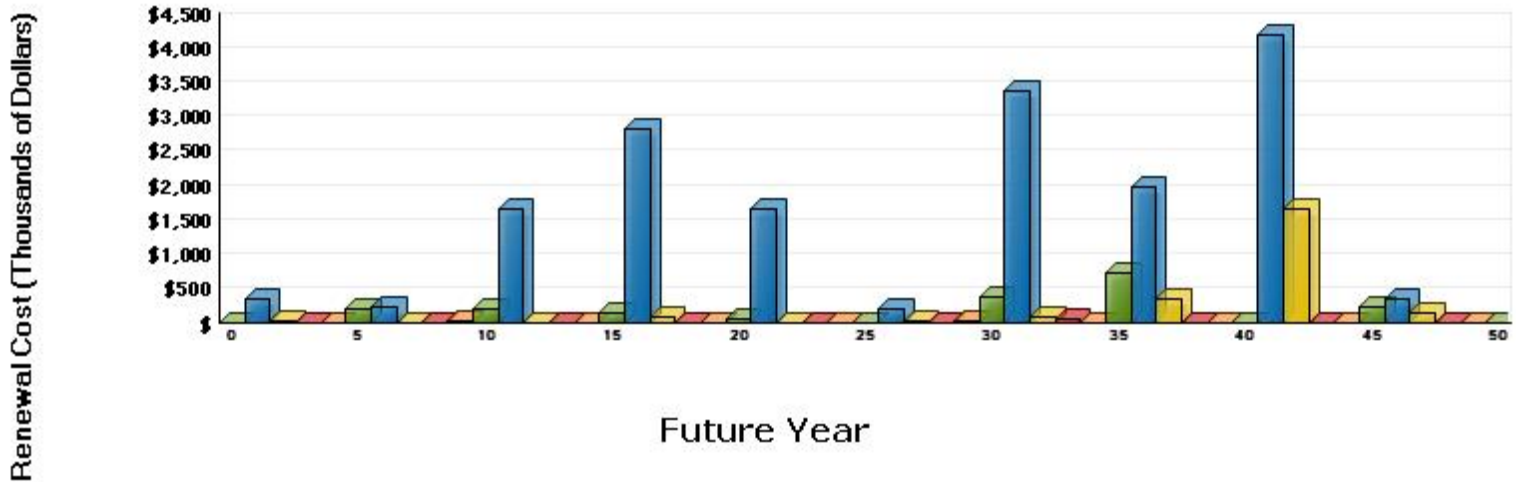
Facility Condition Needs Index (FCNI): 0.31
 (Project Costs / Replacement Cost)



PROJECT COSTS BY SYSTEM CODE



LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt \$5.64

B. ASSET SUMMARY

Built in 1925, the Wright Auditorium is a three-story auditorium and bookstore. The building is constructed of a concrete structure on a slab-on-grade foundation. The exterior finish consists of brick facades and there is a clay tile roof system. The building houses a two-story auditorium with balcony seating area. The first floor houses a bookstore and retail space. The building appears to have undergone several remodeling efforts over the years and many of the interior finishes appear to be newer. An addition was made to the east facade in 1968. The addition is known as the Wright Annex and is covered by a separate report. The Wright Auditorium totals 33,986 square feet and is located at the main campus of East Carolina University in Greenville, North Carolina.

The information in this report was gathered during a site visit that concluded on September 4, 2009.

SITE

Landscaping around the building consists of grassy lawns, ornamental shrubs, and some mature trees. The landscaping is in average condition, but should outlast the ten-year scope of this report with routine maintenance.

Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. The installation of new systems, including excavation, grading, base compaction, and paving, is recommended.

EXTERIOR STRUCTURE

Brick veneer is the primary exterior finish. While the brick is fundamentally sound, exposure to the elements has caused some deterioration of the mortar joints and expansion joints. Cleaning, surface preparation, selective repairs, and applied finish or penetrating sealant upgrades are recommended to restore the aesthetics and integrity of the building envelope. The roof consists of pitched clay tile and a few sections of flat single-ply membrane. The clay tile was reportedly reworked in the mid-1990s and is in good condition. The single-ply membrane roofing is not expected to outlast the scope of this analysis. Future budget modeling should include a provision for the replacement of all failing roofing systems. Replace this roof with a similar application.

The client reported that the front porch area gets slippery during wet days. The concrete surface itself is in good condition. To prevent slipping and a potential liability for the University, an applied non-slip surface should be used at this location to prevent slippery conditions.

Windows around the building are dual-pane glazing in metal frames. The windows appear to be part of an exterior renovation and should outlast the ten-year scope of this report. Exterior doors consist of metal framed glass at primary entrances and painted metal at secondary and service entrances. The doors appear to be in good condition as well.

INTERIOR FINISHES / SYSTEMS

Interior floor finishes include carpet, vinyl tile, and wood flooring. Interior wall finishes consist of painted plaster or concrete walls. Ceiling finishes include lay-in acoustical tile and painted ceilings. The applications vary in age and condition. Floor, wall, and ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

Interior doors in the building appeared to be in good condition. While the knob-actuated hardware will need to be replaced as part of an accessibility upgrade, the doors themselves should have ten future years of use. No replacements to the interior doors are needed.

The auditorium consists of at least twelve hundred fixed seats. The seats were reportedly replaced in 2000. These new seats should have ten years future life and are not recommended for replacement at this time.

ACCESSIBILITY

Access to the building is provided by an at-grade main entrance on the south facade. This provides access to the first floor bookstore and the elevator that provides service to the Wright Annex. A second at-grade entrance on the south facade provides access to a single passenger elevator that serves the auditorium. Several recommendations are made to improve accessibility inside the auditorium.

Present accessibility legislation requires that building amenities be generally available to all persons. The configuration of break room kitchenettes and drinking fountains is a barrier to accessibility. The installation of wheelchair-accessible kitchenette cabinetry is recommended where applicable. All single-level refrigerated drinking fountains should be replaced with dual-level units.

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

While the interior doors are suitable for ten future years of service, the knob-actuated door hardware presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with this legislation, it is recommended that lever-handle door hardware be installed on all doors that currently still have knobs.

Present legislation regarding building accessibility by the handicapped requires that stairs have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a four inch diameter sphere (six inches in the triangle formed by the lower rail and tread / riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future renovation efforts should include comprehensive stair railing upgrades.

HEALTH

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

FIRE / LIFE SAFETY

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

Fire and life safety protection within the structure is provided by a relatively new addressable Simplex 4100U fire alarm panel residing in the first floor lobby of the Wright Annex. However, the majority of fire alarm devices appear to have been in service for more than fifteen years. Outdated smoke detectors and opaque visual strobes were observed throughout the second floor. The bookstore on the first floor is lacking in smoke detectors and visible strobes. In order to comply with current fire codes, an upgrade of the fire alarm system is recommended within the next year

A portion of the second and third floors of the Auditorium is equipped with an automatic fire suppression system installed approximately in 1990. The remaining areas of the facility are unprotected. Although manual, dry chemical fire extinguishers are available for immediate use, it is recommended that an automatic fire suppression system be installed throughout the unprotected areas of the facility. This project will reduce overall liability and potential for loss. The budget estimate includes cost for the renewal of the original fusible link sprinkler heads.

Emergency exits are indicated by 1990s vintage LED exit signs connected to the building emergency power network. A few units were observed with battery back-up power, since the generator is currently undersized. The exit signs are approaching the end of their useful service life and renewal is recommended within the next five years. Replace the existing exit signs with modern, efficient LED units, and install additional units to comply with current NFPA life safety codes. The path of egress is illuminated by select interior light fixtures connected to the generator power. Because of the daytime inspection, emergency egress illumination level was not easily identified. It is assumed there is sufficient emergency egress lighting, since no deficiencies were reported.

HVAC

The primary heating medium is steam supplied from the central plant. Chilled water is the primary cooling medium, produced by the 1989 vintage York centrifugal chiller located in the first floor mechanical room. This chiller utilizes the non-environmental safe R123 refrigerant. Chilled water is circulated throughout the building via a 60 horsepower chilled water pump equipped with a variable frequency drive. Heat rejection for the chilled water system is provided by a relatively new cooling tower equipped with a 40 horsepower condenser water pump. The cooling tower also provides heat rejection for the adjacent building and is in good condition. However, the outdated chiller is anticipated to become maintenance intensive and inefficient with age. An upgrade of the chiller with an energy efficient unit utilizing environmentally friendly refrigerant is recommended within the next five years.

Air distribution throughout the structure is provided by antiquated heating and ventilating units, constant volume air handling units and various four-pipe fan coil units. Building exhaust is provided by timeworn, centrifugal exhaust fans addressed in the Annex building. HVAC automation control is provided by an outdated, hybrid pneumatic Johnson Control System. The current HVAC design scheme is inefficient, and the mechanical systems are at the end of their useful service life. A complete upgrade of the HVAC system is recommended.

ELECTRICAL

High voltage from the utility company is reduced to 277/480 volt, three-phase building service via a relatively new 300 kW liquid service entrance transformer, located at the northwest facade. The main switchboard was not easily identified, and is assumed to be relatively new, based on the design scheme of the attached Annex. The service entrance equipment is less than five years old and should remain serviceable throughout the scope of this assessment.

However, the electrical distribution equipment has been in service for over forty years. Aging components, such as the circuit breakers, serve as fire hazards should they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case thermal-magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required and clearly label all panels for circuit identification. Budgetary consideration is allocated for the renewal of the building electrical system within the next five years.

The current lighting configuration for this facility consists primarily of lay-in / surface-mounted, T12 fluorescent and decorative incandescent fixtures. Based on life cycle depletion, replacement of the interior fixtures is recommended. Select lamps with the same color temperature and rendering index for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation. The estimated budget excludes the square footage related to the lecture room.

Nighttime illumination is provided by a few discolored HID fixtures installed approximately in the mid-1980s. Due to the daytime inspection, verification of the illumination level was not easily identified. Based on their present location, there appears to be a sufficient quantity.

PLUMBING

Potable water is distributed throughout this facility via a copper piping network. Sanitary waste and stormwater is conveyed by cast-iron, no-hub piping construction with copper run-outs. The supply and drain piping networks are aged and should be replaced. Failure to undertake such upgrades will likely lead to leaks, drainage issues, and other problems that will require costly maintenance. Domestic hot water is supplied by a few small electric domestic water heaters. Due to the insignificant replacement cost, no upgrade recommendation is included. The plumbing fixtures are recommended for replacement, however, and this action is detailed in the proposed restroom renovation. Duplex sump pump systems facilitate the drainage of stormwater from this facility. This system has served beyond its statistical life cycle and should be replaced in order to preclude failure.

VERTICAL TRANSPORTATION

The University commissioned an outside contractor to perform an elevator condition study in 2009. The aforementioned study did not identify any deficiencies requiring capital funding.

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

C. INSPECTION TEAM DATA

DATE OF INSPECTION: September 4, 2009

INSPECTION TEAM PERSONNEL:

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

FACILITY CONTACTS:

<u>NAME</u>	<u>POSITION</u>
William Bagwell	Associate Vice Chancellor, Campus Operations

REPORT DEVELOPMENT:

Report Development by: ISES Corporation
2165 West Park Court
Suite N
Stone Mountain, GA 30087

Contact: Kyle Thompson, Project Manager
770-879-7376

D. FACILITY CONDITION ANALYSIS - DEFINITIONS

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

1. REPORT DESCRIPTION

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

Section 2: Detailed Project Summaries and Totals

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

FCNI = Facility Condition Needs Index, Total Cost vs. Replacement Cost. The FCNI provides a life cycle cost comparison. Facility replacement cost is based on replacement with current construction standards for facility use type, and not original design parameters. This index gives the University a comparison within all buildings for identifying worst case / best case building conditions.

$$\text{FCNI} = \frac{\text{Deferred Maintenance / Modernization} + \text{Capital Renewal} + \text{Plant Adaption}}{\text{Plant / Facility Replacement Cost}}$$

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. Plant / Program Adaption: 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. Deferred Maintenance: 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. Capital Renewal: 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:

	<u>PRIORITY CLASS 1</u>	
CODE	PROJECT NO.	PRIORITY SEQUENCE
HV2C	0001HV04	01
PL1D	0001PL02	02

	<u>PRIORITY CLASS 2</u>	
CODE	PROJECT NO.	PRIORITY SEQUENCE
IS1E	0001IS06	03
EL4C	0001EL03	04

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

PRIORITY 1 - Currently Critical (Immediate)

Projects in this category require immediate action to:

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

PRIORITY 2 - Potentially Critical (Year One)

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

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

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

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

PRIORITY 4 - Recommended (Years Six to Ten)

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

6. COST SUMMARIES AND TOTALS

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

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

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

Global Markup Percentages

R.S. MEANS

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

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

Example:

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

- 0001 - Building Identification Number
- EL - System Code, EL represents Electrical
- 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

<u>Building Number</u>	<u>Photo Sequence</u>	<u>Arch / Eng / VT</u>
0001	006	e

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

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

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

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

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 DESCRIPTION: 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 DESCRIPTION: 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	DAMP/PROOFING/DEWATERING	Foundation/footing waterproofing work including, damp proofing, dewatering, insulation, etc.
ES2A	COLUMNS/BEAMS/WALLS	STRUCTURE	Structural work to primary load-bearing structural components aside from floors including columns, beams, bearing walls, lintels, arches, etc.
ES2B	COLUMNS/BEAMS/WALLS	FINISH	Work involving restoration of the appearance and weatherproof integrity of exterior wall/structural envelope components including masonry/pointing, expansion joints, efflorescence & stain removal, grouting, surfacing, chimney repairs, etc.
ES3A	FLOOR	STRUCTURE	Work concerning the structural integrity of the load supporting floors both exposed and unexposed including deformation, delamination, spalling, shoring, crack repair, etc.
ES4A	ROOF	REPAIR	Work on waterproof horizontal finish (roof) involving repair and/or limited replacement (<40% total) including membrane patching, flashing repair, coping caulk/resetting, PPT wall parging/coating, walkpad installation, skylight and roof hatch R&R, etc.
ES4B	ROOF	REPLACEMENT	Work involving total refurbishment of roofing system including related component rehab.
ES5A	FENESTRATIONS	DOORS	Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.
ES5B	FENESTRATIONS	WINDOWS	Work on exterior fenestration closure & related components including glass/metal/wood curtain walls, fixed or operable window sashes, glazing, frames, sills, casings, stools, seats, coatings, treatments, screens, storm windows, etc.
ES6A	GENERAL	ATTACHED STRUCTURE	Work on attached exterior structure components not normally considered in above categories including porches, stoops, decks, monumental entrance stairs, cupolas, tower, etc.
ES6B	GENERAL	AREAWAYS	Work on attached grade level or below structural features including subterranean light wells, areaways, basement access stairs, etc.
ES6C	GENERAL	TRIM	Work on ornamental exterior (generally non-structural) elements including beltlines, quoins, porticos, soffits, cornices, moldings, trim, etc.
ES6D	GENERAL	SUPERSTRUCTURE	Finish and structural work on non-standard structures with exposed load-bearing elements such as stadiums, bag houses, bleachers, freestanding towers, etc.

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



CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
HE6A	HAZARDOUS MATERIAL	STRUCTURAL ASBESTOS	Testing, abatement and disposal of structural and building finish materials containing asbestos.
HE6B	HAZARDOUS MATERIAL	MECHANICAL ASBESTOS	Testing, abatement and disposal of mechanical insulation materials containing asbestos.
HE6C	HAZARDOUS MATERIAL	PCBs	Includes testing, demolition, disposal and cleanup of PCB contaminated substances.
HE6D	HAZARDOUS MATERIAL	FUEL STORAGE	Includes monitoring, removal and replacement of above and below ground fuel storage and distribution systems. Also includes testing and disposal of contaminated soils.
HE6E	HAZARDOUS MATERIAL	LEAD PAINT	Testing, removal and disposal of lead-based paint systems.
HE6F	HAZARDOUS MATERIAL	OTHER	Handling, storage, and disposal of other hazardous materials.
HE7A	GENERAL	OTHER	Health related issues not catalogued elsewhere.
SYSTEM DESCRIPTION: HVAC			
HV1A	HEATING	BOILERS/STACKS/ CONTROLS	Boilers for heating purposes including their related stacks, flues, and controls.
HV1B	HEATING	RADIATORS/ CONVECTORS	Including cast iron radiators, fin tube radiators, baseboard radiators, etc.
HV1C	HEATING	FURNACE	Furnaces and their related controls, flues, etc.
HV1D	HEATING	FUEL SUPPLY/STORAGE	Storage and/or distribution of fuel for heating purposes, including tanks and piping networks and related leak detection/monitoring.
HV2A	COOLING	CHILLERS/ CONTROLS	Chiller units for production of chilled water for cooling purposes, related controls (not including mods for CFC compliance).
HV2B	COOLING	HEAT REJECTION	Repair/replacement of cooling towers, dry coolers, air-cooling and heat rejection. (Includes connection of once-through system to cooling tower.)
HV3A	HEATING/COOLING	SYSTEM RETROFIT/ REPLACE	Replacement or major retrofit of HVAC systems.
HV3B	HEATING/COOLING	WATER TREATMENT	Treatment of hot water, chilled water, steam, condenser water, etc.
HV3C	HEATING/COOLING	PACKAGE/SELF-CONTAINED UNITS	Repair/replacement of self-contained/package type units including stand up units, rooftop units, window units, etc; both air conditioners and heat pumps.
HV3D	HEATING/COOLING	CONVENTIONAL SPLIT SYSTEMS	Repair, installation, or replacement of conventional split systems; both air conditioners and heat pumps including independent component replacements of compressors and condensers.
HV4A	AIR MOVING/ VENTILATION	AIR HANDLERS/ FAN UNITS	Includes air handlers & coils, fan coil units, unit ventilators, filtration upgrades, etc., not including package/self-contained units, split systems or other specifically categorized systems.
HV4B	AIR MOVING/ VENTILATION	EXHAUST FANS	Exhaust fan systems including fans, range and fume hoods, controls, and related ductwork.
HV4C	AIR MOVING/ VENTILATION	OTHER FANS	Supply, return, or any other fans not incorporated into a component categorized elsewhere.
HV4D	AIR MOVING/ VENTILATION	AIR DISTRIBUTION NETWORK	Repair, replacement, or cleaning of air distribution network including ductwork, terminal reheat/cool, VAV units, induction units, power induction units, insulation, dampers, linkages, etc.
HV5A	STEAM/HYDRONIC DISTRIBUTION	PIPING NETWORK	Repair/replacement of piping networks for heating and cooling systems including pipe, fittings, insulation, related components, etc.
HV5B	STEAM/HYDRONIC DISTRIBUTION	PUMPS	Repair or replacement of pumps used in heating and cooling systems, related control components, etc.
HV5C	STEAM/HYDRONIC DISTRIBUTION	HEAT EXCHANGERS	Including shell and tube heat exchangers and plate heat exchangers for heating and cooling.
HV6A	CONTROLS	COMPLETE SYSTEM	Replacement of HVAC control systems.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
		UPGRADE	
HV6B	CONTROLS	MODIFICATIONS/ REPAIRS	Repair or modification of HVAC control system.
HV6C	CONTROLS	AIR COMPRESSORS/ DRYERS	Repair or modification of control air compressors and dryers.
HV7A	INFRASTRUCTURE	STEAM/HOT WATER GENERATION	Generation of central steam and/or hot water including boilers and related components.
HV7B	INFRASTRUCTURE	STEAM/HOT WATER DISTRIBUTION	Distribution system for central hot water and/or steam.
HV7C	INFRASTRUCTURE	CHILLED WATER GENERATION	Generation of central chilled water including chillers and related components.
HV7D	INFRASTRUCTURE	CHILLED WATER DISTRIBUTION	Distribution system for central chilled water.
HV7E	INFRASTRUCTURE	TUNNELS/ MANHOLES/ TRENCHES	Repairs, installation, replacement of utility system access chambers.
HV7F	INFRASTRUCTURE	OTHER	HVAC infrastructure issues not specifically categorized elsewhere.
HV8A	GENERAL	CFC COMPLIANCE	Chiller conversions/replacements for CFC regulatory compliance, monitoring, etc.
HV8B	GENERAL	OTHER	HVAC issues not catalogued elsewhere.
SYSTEM DESCRIPTION: 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	CABINETY	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 DESCRIPTION: PLUMBING			

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
PL1A	DOMESTIC WATER	PIPING NETWORK	Repair or replacement of domestic water supply piping network, insulation, hangers, etc.
PL1B	DOMESTIC WATER	PUMPS	Domestic water booster pumps, circulating pumps, related controls, etc.
PL1C	DOMESTIC WATER	STORAGE/ TREATMENT	Equipment or vessels for storage or treatment of domestic water.
PL1D	DOMESTIC WATER	METERING	Installation, repair, or replacement of water meters.
PL1E	DOMESTIC WATER	HEATING	Domestic water heaters including gas, oil, and electric water heaters, shell and tube heat exchangers, tank type and instantaneous.
PL1F	DOMESTIC WATER	COOLING	Central systems for cooling and distributing drinking water.
PL1G	DOMESTIC WATER	FIXTURES	Plumbing fixtures including sinks, drinking fountains, water closets, urinals, etc.
PL1H	DOMESTIC WATER	CONSERVATION	Alternations made to the water distribution system to conserve water.
PL1I	DOMESTIC WATER	BACKFLOW PROTECTION	Backflow protection devices including backflow preventers, vacuum breakers, etc.
PL2A	WASTEWATER	PIPING NETWORK	Repair or replacement of building wastewater piping network.
PL2B	WASTEWATER	PUMPS	Pump systems used to lift wastewater including sewage ejectors and other sump systems.
PL3A	SPECIAL SYSTEMS	PROCESS GAS/FLUIDS	Generation and/or distribution of process steam, compressed air, natural and LP gas, process water, vacuum, etc.
PL4A	INFRASTRUCTURE	POTABLE WATER STORAGE/ TREATMENT	Storage and treatment of potable water for distribution.
PL4B	INFRASTRUCTURE	INDUSTRIAL WATER DISTRIBUTION/ TREATMENT	Storage and treatment of industrial water for distribution.
PL4C	INFRASTRUCTURE	SANITARY WATER COLLECTION	Sanitary water collection systems, sanitary sewer systems; including combined systems.
PL4D	INFRASTRUCTURE	STORM WATER COLLECTION	Storm water collection systems, storm sewer systems; storm water only.
PL4E	INFRASTRUCTURE	POTABLE WATER DISTRIBUTION	Potable water distribution network.
PL4F	INFRASTRUCTURE	WASTEWATER TREATMENT	Wastewater treatment plants, associated equipment, etc.
PL5A	GENERAL	OTHER	Plumbing issues not categorized elsewhere.
SYSTEM DESCRIPTION: 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 DESCRIPTION: SECURITY SYSTEMS			
SS1A	LIGHTING	EXTERIOR	Fixtures, stanchions, foliage interference, cleanliness, locations, etc.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
SS2A	SITE	FENCING	Perimeter campus fencing, individual building fencing, includes both pedestrian and vehicular control fences.
SS2B	SITE	GENERAL	Hidden areas due to foliage, fencing, parking, walls, etc.
SS3A	COMMUNICATIONS	EMERGENCY PHONES	Access, locations, visibility, function, reliability, etc.
SS4A	ACCESS CONTROL	DOORS	Access, locks, keys, two way speakers, reliability, redundancy, etc.
SS4B	ACCESS CONTROL	WINDOWS	Locks, screens, access, reliability, etc.
SS4C	ACCESS CONTROL	SYSTEMS	Card key, proximity devices, data control, data use, reliability, system design, etc.
SS5A	MONITORING	SYSTEMS	Cameras, audio communication, monitoring stations, locations, system design, etc.
SS6A	CIRCULATION	PEDESTRIAN	On campus as well as to and from off campus housing and class locations, etc.
SS6B	CIRCULATION	VEHICULAR	Guard gates, access, systems, data control and use, identification, etc.
SS7A	GENERAL	OTHER	General information/projects pertaining to security issues.
SYSTEM 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

SECTION 2

**DETAILED PROJECT SUMMARIES
AND TOTALS**

**Detailed Project Totals
 Facility Condition Analysis
 System Code by Priority Class
 WRIG : WRIGHT AUDITORIUM**

System Code	System Description	Priority Classes				Subtotal
		1	2	3	4	
AC	ACCESSIBILITY	0	0	0	187,511	187,511
EL	ELECTRICAL	0	0	696,888	0	696,888
ES	EXTERIOR	0	0	57,707	0	57,707
FS	FIRE/LIFE SAFETY	0	152,685	99,870	0	252,555
HV	HVAC	0	0	1,197,319	0	1,197,319
IS	INTERIOR/FINISH SYS.	0	0	276,202	95,368	371,570
PL	PLUMBING	0	0	519,454	0	519,454
SI	SITE	0	0	0	20,922	20,922
	TOTALS	0	152,685	2,847,440	303,801	3,303,926

Facility Replacement Cost	\$10,788,429
Facility Condition Needs Index	0.31

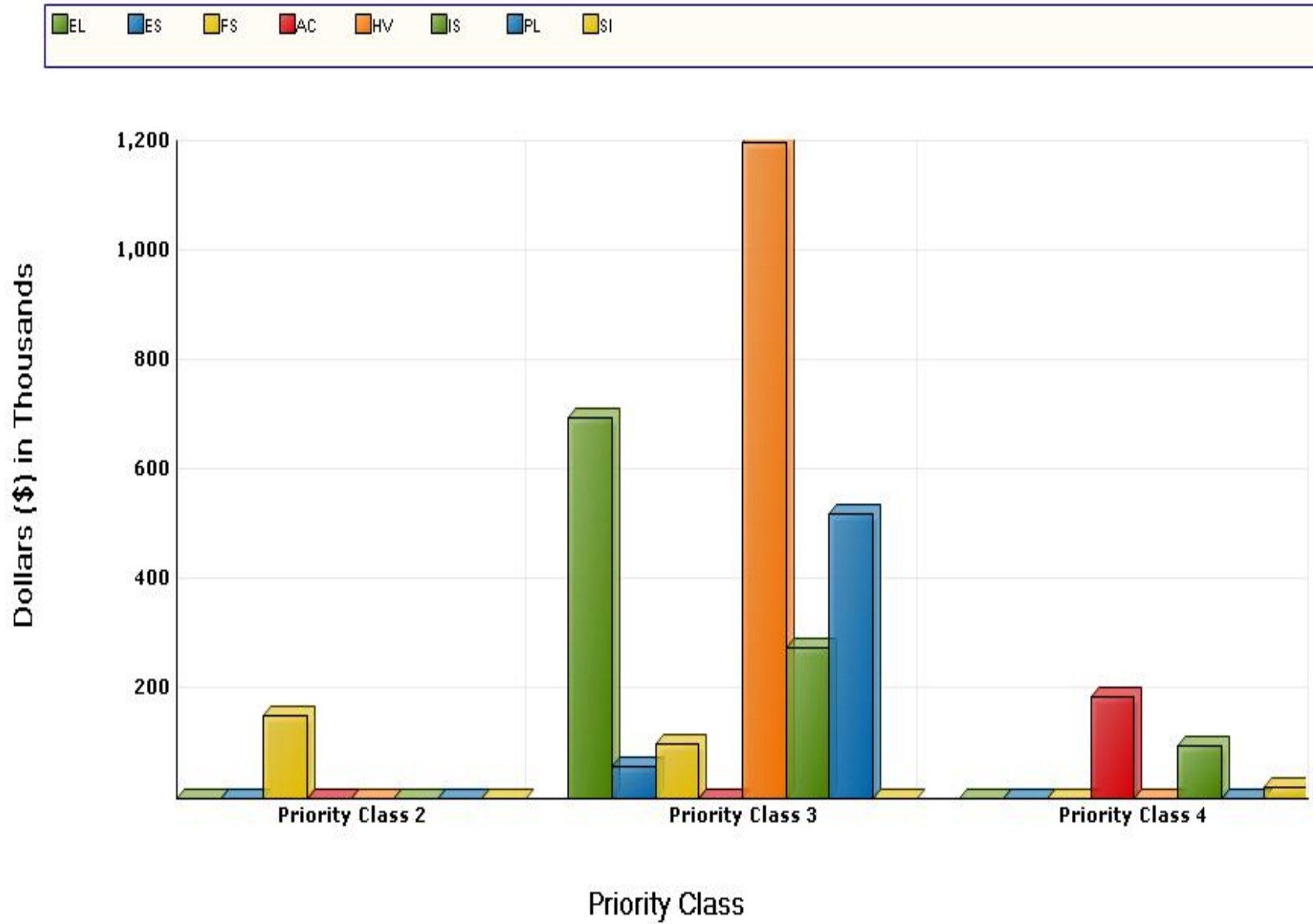
Gross Square Feet	33,986
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Total Cost Per Square Foot	\$97.21
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FACILITY CONDITION ANALYSIS

System Code by Priority Class

WRIG : WRIGHT AUDITORIUM



**Detailed Project Totals
 Facility Condition Analysis
 System Code by Project Class
 WRIG : WRIGHT AUDITORIUM**

System Code	System Description	Project Classes			Subtotal
		Capital Renewal	Deferred Maintenance	Plant Adaption	
AC	ACCESSIBILITY	0	0	187,511	187,511
EL	ELECTRICAL	0	696,888	0	696,888
ES	EXTERIOR	20,339	36,306	1,061	57,707
FS	FIRE/LIFE SAFETY	99,870	0	152,685	252,555
HV	HVAC	166,351	1,030,968	0	1,197,319
IS	INTERIOR/FINISH SYS.	371,570	0	0	371,570
PL	PLUMBING	0	519,454	0	519,454
SI	SITE	20,922	0	0	20,922
	TOTALS	679,054	2,283,616	341,256	3,303,926

Facility Replacement Cost	\$10,788,429
Facility Condition Needs Index	0.31

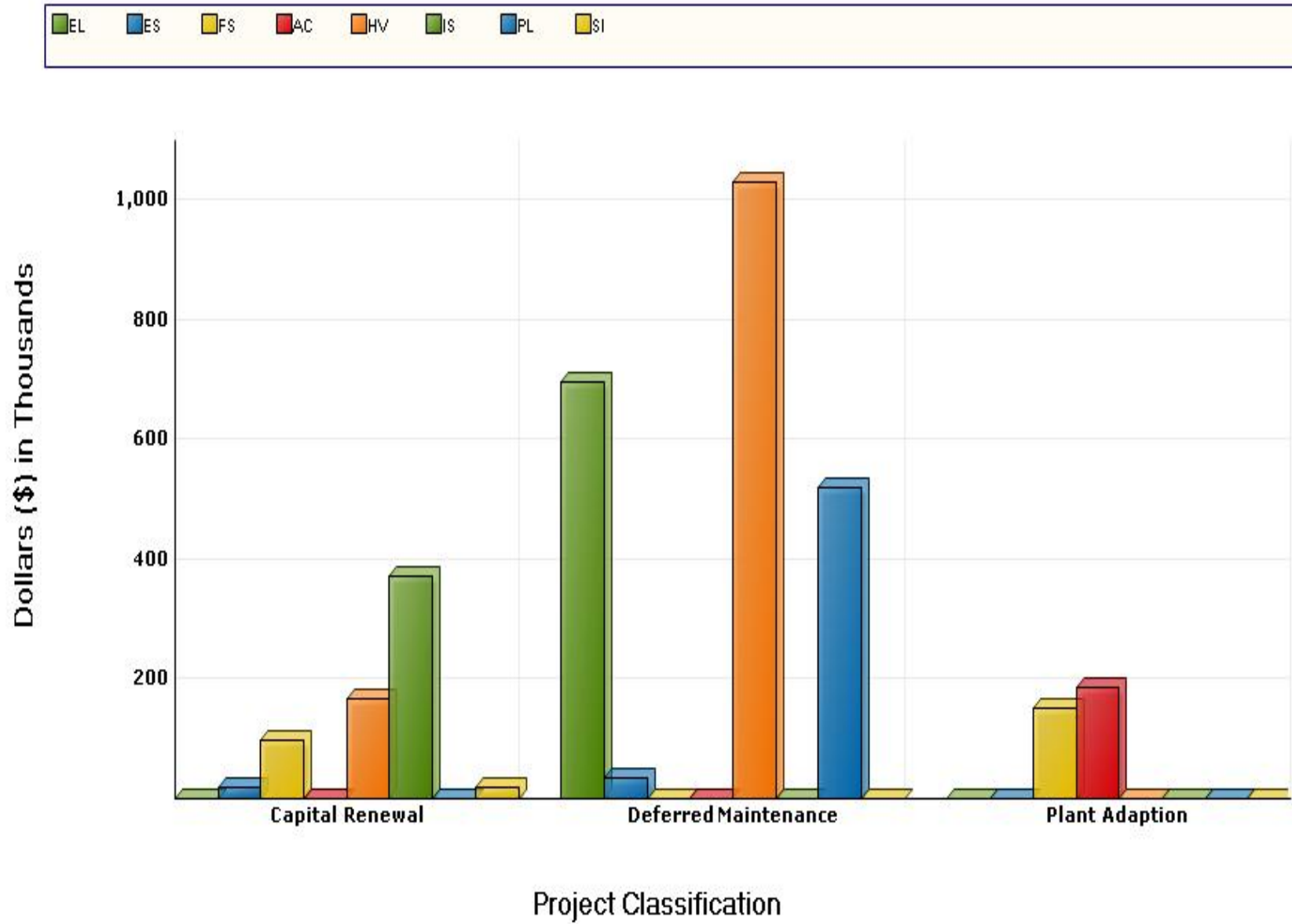
Gross Square Feet	33,986
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Total Cost Per Square Foot	\$97.21
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FACILITY CONDITION ANALYSIS

System Code by Project Class

WRIG : WRIGHT AUDITORIUM



Detailed Project Summary
Facility Condition Analysis
Project Class by Priority Class
WRIG : WRIGHT AUDITORIUM

Project Class	Priority Classes				Subtotal
	1	2	3	4	
Capital Renewal	0	0	562,763	116,291	679,054
Deferred Maintenance	0	0	2,283,616	0	2,283,616
Plant Adaption	0	152,685	1,061	187,511	341,256
TOTALS	0	152,685	2,847,440	303,801	3,303,926

Facility Replacement Cost	\$10,788,429
Facility Condition Needs Index	0.31

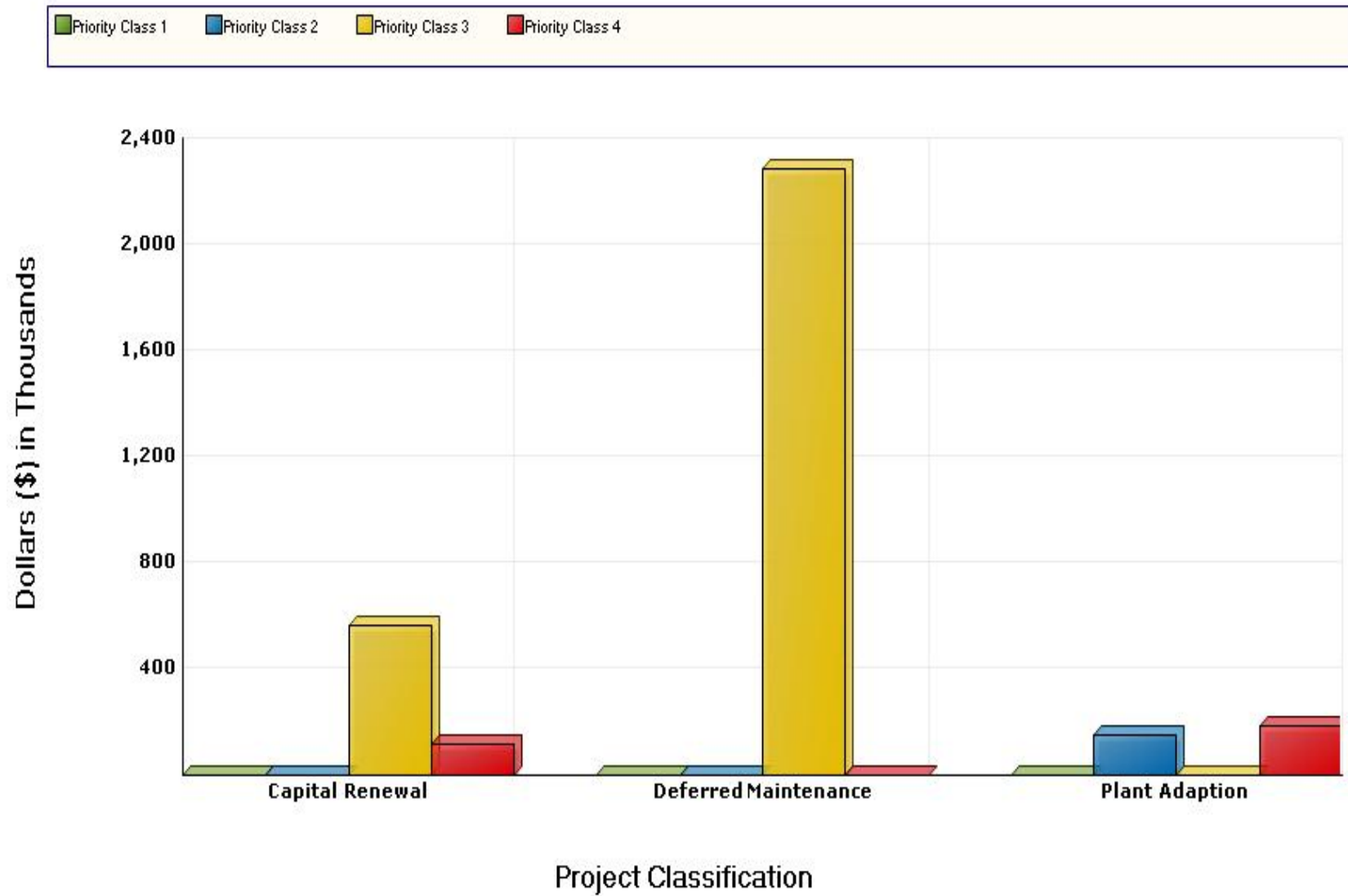
Gross Square Feet	33,986
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Total Cost Per Square Foot	\$97.21
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FACILITY CONDITION ANALYSIS

Project Class by Priority Class

WRIG : WRIGHT AUDITORIUM



Detailed Project Summary
Facility Condition Analysis
Priority Class - Priority Sequence
WRIG : WRIGHT AUDITORIUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	WRIGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	131,625	21,060	152,685
Totals for Priority Class 2					131,625	21,060	152,685
FS2A	WRIGFS01	3	2	FIRE ALARM SYSTEM REPLACEMENT	81,040	12,966	94,007
FS1A	WRIGFS03	3	3	REPLACE EXIT SIGNS	5,055	809	5,864
ES2B	WRIGES01	3	4	RESTORE BRICK VENEER	31,298	5,008	36,306
ES4B	WRIGES02	3	5	MEMBRANE ROOF REPLACEMENT	17,534	2,805	20,339
ES6E	WRIGES03	3	6	FRONT PORCH CONCRETE APPLIED FINISH UPGRADE	915	146	1,061
HV3A	WRIGHV01	3	7	HVAC SYSTEM REPLACEMENT	888,766	142,202	1,030,968
HV2A	WRIGHV02	3	8	REPLACE WATER-COOLED CHILLER	143,406	22,945	166,351
EL3B	WRIGEL02	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	394,517	63,123	457,639
EL4B	WRIGEL01	3	10	INTERIOR LIGHTING UPGRADE	206,249	33,000	239,248
IS1A	WRIGIS01	3	11	REFINISH FLOORING	218,929	35,029	253,957
IS2B	WRIGIS02	3	12	REFINISH WALLS	19,176	3,068	22,245
PL1A	WRIGPL01	3	13	WATER SUPPLY PIPING REPLACEMENT	174,619	27,939	202,558
PL2A	WRIGPL02	3	14	DRAIN PIPING REPLACEMENT	265,672	42,508	308,180
PL2B	WRIGPL03	3	15	REPLACE SUMP PUMPS	7,514	1,202	8,716
Totals for Priority Class 3					2,454,690	392,750	2,847,440
AC4A	WRIGAC01	4	16	INTERIOR AMENITY ACCESSIBILITY UPGRADES	23,033	3,685	26,718
AC3C	WRIGAC03	4	17	INTERIOR DOOR UPGRADES	23,071	3,691	26,762
AC3E	WRIGAC02	4	18	RESTROOM RENOVATION	105,974	16,956	122,929
AC3B	WRIGAC04	4	19	STAIR SAFETY UPGRADES	9,570	1,531	11,101
IS3B	WRIGIS03	4	20	REFINISH CEILINGS	82,214	13,154	95,368
SI1A	WRIGSI01	4	21	SITE PAVING UPGRADES	18,037	2,886	20,922
Totals for Priority Class 4					261,898	41,904	303,801
Grand Total:					2,848,212	455,714	3,303,926

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
WRIG : WRIGHT AUDITORIUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES2B	WRIGES01	3	4	RESTORE BRICK VENEER	31,298	5,008	36,306
IS2B	WRIGIS02	3	12	REFINISH WALLS	19,176	3,068	22,245
FS2A	WRIGFS01	3	2	FIRE ALARM SYSTEM REPLACEMENT	81,040	12,966	94,007
FS1A	WRIGFS03	3	3	REPLACE EXIT SIGNS	5,055	809	5,864
PL2B	WRIGPL03	3	15	REPLACE SUMP PUMPS	7,514	1,202	8,716
ES4B	WRIGES02	3	5	MEMBRANE ROOF REPLACEMENT	17,534	2,805	20,339
ES6E	WRIGES03	3	6	FRONT PORCH CONCRETE APPLIED FINISH UPGRADE	915	146	1,061
Totals for Priority Class 3					162,533	26,005	188,538
AC4A	WRIGAC01	4	16	INTERIOR AMENITY ACCESSIBILITY UPGRADES	23,033	3,685	26,718
AC3C	WRIGAC03	4	17	INTERIOR DOOR UPGRADES	23,071	3,691	26,762
AC3B	WRIGAC04	4	19	STAIR SAFETY UPGRADES	9,570	1,531	11,101
IS3B	WRIGIS03	4	20	REFINISH CEILINGS	82,214	13,154	95,368
SI1A	WRIGSI01	4	21	SITE PAVING UPGRADES	18,037	2,886	20,922
Totals for Priority Class 4					155,924	24,948	180,872
Grand Totals for Projects < 100,000					318,457	50,953	369,410

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 WRIG : WRIGHT AUDITORIUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	WRIGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	131,625	21,060	152,685
Totals for Priority Class 2					131,625	21,060	152,685
IS1A	WRIGIS01	3	11	REFINISH FLOORING	218,929	35,029	253,957
HV2A	WRIGHV02	3	8	REPLACE WATER-COOLED CHILLER	143,406	22,945	166,351
EL4B	WRIGEL01	3	10	INTERIOR LIGHTING UPGRADE	206,249	33,000	239,248
EL3B	WRIGEL02	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	394,517	63,123	457,639
PL1A	WRIGPL01	3	13	WATER SUPPLY PIPING REPLACEMENT	174,619	27,939	202,558
PL2A	WRIGPL02	3	14	DRAIN PIPING REPLACEMENT	265,672	42,508	308,180
Totals for Priority Class 3					1,403,392	224,543	1,627,934
AC3E	WRIGAC02	4	18	RESTROOM RENOVATION	105,974	16,956	122,929
Totals for Priority Class 4					105,974	16,956	122,929
Grand Totals for Projects >= 100,000 and < 500,000					1,640,990	262,558	1,903,548

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 WRIG : WRIGHT AUDITORIUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
HV3A	WRIGHV01	3	7	HVAC SYSTEM REPLACEMENT	888,766	142,202	1,030,968
				Totals for Priority Class 3	888,766	142,202	1,030,968
				Grand Totals for Projects >= 500,000	888,766	142,202	1,030,968
				Grand Totals For All Projects:	2,848,212	455,714	3,303,926

Detailed Project Summary
Facility Condition Analysis
Project Classification
WRIG : WRIGHT AUDITORIUM

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
FS2A	WRIGFS01	2	Capital Renewal	3	FIRE ALARM SYSTEM REPLACEMENT	94,007
FS1A	WRIGFS03	3	Capital Renewal	3	REPLACE EXIT SIGNS	5,864
ES4B	WRIGES02	5	Capital Renewal	3	MEMBRANE ROOF REPLACEMENT	20,339
HV2A	WRIGHV02	8	Capital Renewal	3	REPLACE WATER-COOLED CHILLER	166,351
IS1A	WRIGIS01	11	Capital Renewal	3	REFINISH FLOORING	253,957
IS2B	WRIGIS02	12	Capital Renewal	3	REFINISH WALLS	22,245
IS3B	WRIGIS03	20	Capital Renewal	4	REFINISH CEILINGS	95,368
SI1A	WRIGSI01	21	Capital Renewal	4	SITE PAVING UPGRADES	20,922
Totals for Capital Renewal						679,054
ES2B	WRIGES01	4	Deferred Maintenance	3	RESTORE BRICK VENEER	36,306
HV3A	WRIGHV01	7	Deferred Maintenance	3	HVAC SYSTEM REPLACEMENT	1,030,968
EL3B	WRIGEL02	9	Deferred Maintenance	3	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	457,639
EL4B	WRIGEL01	10	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	239,248
PL1A	WRIGPL01	13	Deferred Maintenance	3	WATER SUPPLY PIPING REPLACEMENT	202,558
PL2A	WRIGPL02	14	Deferred Maintenance	3	DRAIN PIPING REPLACEMENT	308,180
PL2B	WRIGPL03	15	Deferred Maintenance	3	REPLACE SUMP PUMPS	8,716
Totals for Deferred Maintenance						2,283,616
FS3A	WRIGFS02	1	Plant Adaption	2	FIRE SPRINKLER SYSTEM EXTENSION	152,685
ES6E	WRIGES03	6	Plant Adaption	3	FRONT PORCH CONCRETE APPLIED FINISH UPGRADE	1,061
AC4A	WRIGAC01	16	Plant Adaption	4	INTERIOR AMENITY ACCESSIBILITY UPGRADES	26,718
AC3C	WRIGAC03	17	Plant Adaption	4	INTERIOR DOOR UPGRADES	26,762
AC3E	WRIGAC02	18	Plant Adaption	4	RESTROOM RENOVATION	122,929
AC3B	WRIGAC04	19	Plant Adaption	4	STAIR SAFETY UPGRADES	11,101
Totals for Plant Adaption						341,256
Grand Total:						3,303,926

Detailed Project Summary
Facility Condition Analysis
Energy Conservation
 WRIG : WRIGHT AUDITORIUM

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
FS1A	WRIGFS03	3	3	REPLACE EXIT SIGNS	5,864	10	586.38
ES4B	WRIGES02	3	5	MEMBRANE ROOF REPLACEMENT	20,339	200	101.7
HV3A	WRIGHV01	3	7	HVAC SYSTEM REPLACEMENT	1,030,968	21,700	47.51
EL4B	WRIGEL01	3	10	INTERIOR LIGHTING UPGRADE	239,248	6,930	34.52
Totals for Priority Class 3					1,296,420	28,840	44.95
Grand Total:					1,296,420	28,840	44.95

Detailed Project Summary
Facility Condition Analysis
Category/System Code
WRIG : WRIGHT AUDITORIUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC4A	WRIGAC01	4	16	INTERIOR AMENITY ACCESSIBILITY UPGRADES	23,033	3,685	26,718
AC3C	WRIGAC03	4	17	INTERIOR DOOR UPGRADES	23,071	3,691	26,762
AC3E	WRIGAC02	4	18	RESTROOM RENOVATION	105,974	16,956	122,929
AC3B	WRIGAC04	4	19	STAIR SAFETY UPGRADES	9,570	1,531	11,101
Totals for System Code: ACCESSIBILITY					161,647	25,864	187,511
EL3B	WRIGEL02	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	394,517	63,123	457,639
EL4B	WRIGEL01	3	10	INTERIOR LIGHTING UPGRADE	206,249	33,000	239,248
Totals for System Code: ELECTRICAL					600,765	96,122	696,888
ES2B	WRIGES01	3	4	RESTORE BRICK VENEER	31,298	5,008	36,306
ES4B	WRIGES02	3	5	MEMBRANE ROOF REPLACEMENT	17,534	2,805	20,339
ES6E	WRIGES03	3	6	FRONT PORCH CONCRETE APPLIED FINISH UPGRADE	915	146	1,061
Totals for System Code: EXTERIOR					49,747	7,960	57,707
FS3A	WRIGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	131,625	21,060	152,685
FS2A	WRIGFS01	3	2	FIRE ALARM SYSTEM REPLACEMENT	81,040	12,966	94,007
FS1A	WRIGFS03	3	3	REPLACE EXIT SIGNS	5,055	809	5,864
Totals for System Code: FIRE/LIFE SAFETY					217,720	34,835	252,555
HV3A	WRIGHV01	3	7	HVAC SYSTEM REPLACEMENT	888,766	142,202	1,030,968
HV2A	WRIGHV02	3	8	REPLACE WATER-COOLED CHILLER	143,406	22,945	166,351
Totals for System Code: HVAC					1,032,172	165,147	1,197,319
IS1A	WRIGIS01	3	11	REFINISH FLOORING	218,929	35,029	253,957
IS2B	WRIGIS02	3	12	REFINISH WALLS	19,176	3,068	22,245
IS3B	WRIGIS03	4	20	REFINISH CEILINGS	82,214	13,154	95,368
Totals for System Code: INTERIOR/FINISH SYS.					320,319	51,251	371,570
PL1A	WRIGPL01	3	13	WATER SUPPLY PIPING REPLACEMENT	174,619	27,939	202,558
PL2A	WRIGPL02	3	14	DRAIN PIPING REPLACEMENT	265,672	42,508	308,180
PL2B	WRIGPL03	3	15	REPLACE SUMP PUMPS	7,514	1,202	8,716
Totals for System Code: PLUMBING					447,805	71,649	519,454
SI1A	WRIGSI01	4	21	SITE PAVING UPGRADES	18,037	2,886	20,922
Totals for System Code: SITE					18,037	2,886	20,922
Grand Total:					2,848,212	455,714	3,303,926

FACILITY CONDITION ANALYSIS

SECTION 3

SPECIFIC PROJECT DETAILS
ILLUSTRATING DESCRIPTION / COST

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGFS02	Title:	FIRE SPRINKLER SYSTEM EXTENSION
Priority Sequence:	1		
Priority Class:	2		
Category Code:	FS3A	System:	FIRE/LIFE SAFETY
		Component:	SUPPRESSION
		Element:	SPRINKLERS
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	NFPA	1, 13, 13R, 101	
Project Class:	Plant Adaption		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGFS02

Task Cost Estimate

Task Description	Unit	Qty	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	20,392	\$3.08	\$62,807	\$3.77	\$76,878	\$139,685
Fire sprinkler head replacement	SF	13,594	\$0.09	\$1,223	\$0.35	\$4,758	\$5,981
Project Totals:				\$64,031		\$81,636	\$145,667

Material/Labor Cost		\$145,667
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$106,358
General Contractor Mark Up at 20.0%	+	\$21,272
Inflation	+	\$3,995
Construction Cost		\$131,625
Professional Fees at 16.0%	+	\$21,060
Total Project Cost		\$152,685

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGFS01	Title:	FIRE ALARM SYSTEM REPLACEMENT
Priority Sequence:	2		
Priority Class:	3		
Category Code:	FS2A	System:	FIRE/LIFE SAFETY
		Component:	DETECTION ALARM
		Element:	GENERAL
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	702.1	
	NFPA	1, 101	
Project Class:	Capital Renewal		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Upgrade the existing fire alarm system with a modern application. Specify a point addressable supervised main fire alarm panel with an annunciator. This work includes pull stations, audible and visible alarms, smoke and heat detectors, and a wiring network. Install all devices in accordance with current NFPA and ADA requirements. The system should be monitored to report activation or trouble to an applicable receiving station.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGFS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fire alarm control panel(s), annunciator, smoke and heat detectors, manual pull stations, audible and visual alarms, wiring, raceways, and cut and patching materials	SF	33,986	\$1.46	\$49,620	\$0.89	\$30,248	\$79,867
Project Totals:				\$49,620		\$30,248	\$79,867

Material/Labor Cost		\$79,867
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$65,484
General Contractor Mark Up at 20.0%	+	\$13,097
Inflation	+	\$2,460
Construction Cost		\$81,040
Professional Fees at 16.0%	+	\$12,966
Total Project Cost		\$94,007

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGFS03	Title:	REPLACE EXIT SIGNS
Priority Sequence:	3		
Priority Class:	3		
Category Code:	FS1A	System:	FIRE/LIFE SAFETY
		Component:	LIGHTING
		Element:	EGRESS LTG./EXIT SIGNAGE
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Energy Conservation	\$10	
Code Application:	NFPA	101-47	
	IBC	1011	
Project Class:	Capital Renewal		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGFS03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replacement of existing exit signs with LED units	EA	34	\$76.00	\$2,584	\$85.00	\$2,890	\$5,474
Project Totals:				\$2,584		\$2,890	\$5,474

Material/Labor Cost		\$5,474
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$4,085
General Contractor Mark Up at 20.0%	+	\$817
Inflation	+	\$153
Construction Cost		\$5,055
Professional Fees at 16.0%	+	\$809
Total Project Cost		\$5,864

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGES01	Title:	RESTORE BRICK VENEER
Priority Sequence:	4		
Priority Class:	3		
Category Code:	ES2B	System:	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/8/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGES01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	18,480	\$0.11	\$2,033	\$0.22	\$4,066	\$6,098
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	1,848	\$2.45	\$4,528	\$4.99	\$9,222	\$13,749
Applied finish or sealant	SF	18,480	\$0.22	\$4,066	\$0.82	\$15,154	\$19,219
Project Totals:				\$10,626		\$28,441	\$39,067

Material/Labor Cost		\$39,067
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$25,290
General Contractor Mark Up at 20.0%	+	\$5,058
Inflation	+	\$950
Construction Cost		\$31,298
Professional Fees at 16.0%	+	\$5,008
Total Project Cost		\$36,306

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGES02	Title:	MEMBRANE ROOF REPLACEMENT
Priority Sequence:	5		
Priority Class:	3		
Category Code:	ES4B	System:	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Energy Conservation	\$200	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	8/9/2010		
Project Location:	Floor-wide: Floor(s) R		

Project Description

The single-ply membrane roofing system is not expected to outlast the scope of this analysis. Future budget modeling should include a provision for the replacement of all failing roofing systems. Replace this roof with a similar application.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGES02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Membrane roof	SF	2,550	\$3.79	\$9,665	\$3.73	\$9,512	\$19,176
Project Totals:				\$9,665		\$9,512	\$19,176

Material/Labor Cost		\$19,176
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$14,612</u>
General Contractor Mark Up at 20.0%	+	<u>\$2,922</u>
Construction Cost		<u>\$17,534</u>
Professional Fees at 16.0%	+	<u>\$2,805</u>
Total Project Cost		<u>\$20,339</u>

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGES03	Title:	FRONT PORCH CONCRETE APPLIED FINISH UPGRADE
Priority Sequence:	6		
Priority Class:	3		
Category Code:	ES6E	System:	EXTERIOR
		Component:	GENERAL
		Element:	OTHER
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Plant Adaption		
Project Date:	8/9/2010		
Project Location:	Undefined: Floor(s) 2		

Project Description

The client reported that the front porch area gets slippery during wet days. The concrete surface itself is in good condition. To prevent slipping and a potential liability for the University, an applied non-slip surface should be used at this location to prevent slippery conditions.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGES03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Applied non-slip surface to concrete porch	LOT	1	\$375	\$375	\$750	\$750	\$1,125
Project Totals:				\$375		\$750	\$1,125

Material/Labor Cost		\$1,125
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$762
General Contractor Mark Up at 20.0%	+	\$152
Construction Cost		\$915
Professional Fees at 16.0%	+	\$146
Total Project Cost		\$1,061

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGHV01	Title:	HVAC SYSTEM REPLACEMENT
Priority Sequence:	7		
Priority Class:	3		
Category Code:	HV3A	System:	HVAC
		Component:	HEATING/COOLING
		Element:	SYSTEM RETROFIT/REPLACE
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Energy Conservation	\$21,700	
Code Application:	ASHRAE	62-2004	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, R		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGHV01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Air handlers, exhaust fans, ductwork, VAVs, VFDs, DDCs, pressure reducing valves, pumps, piping, electrical connections, and demolition of existing equipment	SF	33,986	\$12.93	\$439,439	\$15.81	\$537,319	\$976,758
Project Totals:				\$439,439		\$537,319	\$976,758

Material/Labor Cost		\$976,758
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$718,160
General Contractor Mark Up at 20.0%	+	\$143,632
Inflation	+	\$26,974
Construction Cost		\$888,766
Professional Fees at 16.0%	+	\$142,202
Total Project Cost		\$1,030,968

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGHV02	Title:	REPLACE WATER-COOLED CHILLER
Priority Sequence:	8		
Priority Class:	3		
Category Code:	HV2A	System:	HVAC
		Component:	COOLING
		Element:	CHILLERS/CONTROLS
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	ASHRAE	15-2004	
Project Class:	Capital Renewal		
Project Date:	11/23/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

It is recommended that the chiller be replaced with a new energy-efficient unit that contains the latest ozone-friendly refrigerant. The project cost includes removal and disposal of the existing chiller, installation of a new chiller, electrical and piping connections, and related controls and programming. Install refrigeration safety systems in accordance with the ASHRAE safety code for mechanical refrigeration. This includes refrigerant leak detection equipment and an interconnected emergency exhaust system.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGHV02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Chiller, all connections and mounting, controls, and demolition of existing unit	TON	230	\$409	\$94,003	\$180	\$41,359	\$135,362
Project Totals:				\$94,003		\$41,359	\$135,362

Material/Labor Cost		\$135,362
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$115,878
General Contractor Mark Up at 20.0%	+	\$23,176
Inflation	+	\$4,352
Construction Cost		\$143,406
Professional Fees at 16.0%	+	\$22,945
Total Project Cost		\$166,351

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGEL02	Title:	UPGRADE ELECTRICAL DISTRIBUTION NETWORK
Priority Sequence:	9		
Priority Class:	3		
Category Code:	EL3B	System:	ELECTRICAL
		Component:	SECONDARY DISTRIBUTION
		Element:	DISTRIBUTION NETWORK
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	Articles 110, 210, 220, 230	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

An upgrade of the building electrical system is recommended. Aging components, such as the circuit breakers, serve as fire hazards should they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case thermal-magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide GFCI protection where required, and clearly label all panels for circuit identification.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGEL02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Power panels, conductors, raceways, devices, demolition, and cut and patching materials	SF	33,986	\$5.28	\$179,446	\$7.92	\$269,169	\$448,615
Project Totals:				\$179,446		\$269,169	\$448,615

Material/Labor Cost		\$448,615
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$318,786
General Contractor Mark Up at 20.0%	+	\$63,757
Inflation	+	\$11,974
Construction Cost		\$394,517
Professional Fees at 16.0%	+	\$63,123
Total Project Cost		\$457,639

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGEL01	Title:	INTERIOR LIGHTING UPGRADE
Priority Sequence:	10		
Priority Class:	3		
Category Code:	EL4B	System:	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	INTERIOR LIGHTING
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Energy Conservation	\$6,930	
Code Application:	NEC	Articles 210, 410	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGEL01

Task Cost Estimate

Task Description	Unit	Qty	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	33,986	\$3.00	\$101,958	\$3.67	\$124,729	\$226,687
Project Totals:				\$101,958		\$124,729	\$226,687

Material/Labor Cost		\$226,687
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$166,657
General Contractor Mark Up at 20.0%	+	\$33,332
Inflation	+	\$6,260
Construction Cost		\$206,249
Professional Fees at 16.0%	+	\$33,000
Total Project Cost		\$239,248

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGIS01	Title:	REFINISH FLOORING
Priority Sequence:	11		
Priority Class:	3		
Category Code:	IS1A	System:	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/8/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGIS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	23,450	\$5.36	\$125,692	\$2.00	\$46,900	\$172,592
Vinyl floor tile	SF	3,130	\$3.53	\$11,049	\$2.50	\$7,825	\$18,874
Sand and finish hardwood flooring	SF	4,690	\$0.36	\$1,688	\$3.92	\$18,385	\$20,073
Project Totals:				\$138,429		\$73,110	\$211,539

Material/Labor Cost		\$211,539
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$176,904
General Contractor Mark Up at 20.0%	+	\$35,381
Inflation	+	\$6,645
Construction Cost		\$218,929
Professional Fees at 16.0%	+	\$35,029
Total Project Cost		\$253,957

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGIS02	Title:	REFINISH WALLS
Priority Sequence:	12		
Priority Class:	3		
Category Code:	IS2B	System:	INTERIOR/FINISH SYS.
		Component:	PARTITIONS
		Element:	FINISHES

Building Code: WRIG
Building Name: WRIGHT AUDITORIUM
Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal
Project Date: 10/8/2009

Project Location: Floor-wide: Floor(s) 1, 2, 3

Project Description

Interior wall finishes consist of painted plaster or concrete walls. The applications vary in age and condition. Wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGIS02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	26,410	\$0.17	\$4,490	\$0.81	\$21,392	\$25,882
Project Totals:				\$4,490		\$21,392	\$25,882

Material/Labor Cost		\$25,882
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$15,495</u>
General Contractor Mark Up at 20.0%	+	<u>\$3,099</u>
Inflation	+	<u>\$582</u>
Construction Cost		<u>\$19,176</u>
Professional Fees at 16.0%	+	<u>\$3,068</u>
Total Project Cost		<u>\$22,245</u>

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGPL01	Title:	WATER SUPPLY PIPING REPLACEMENT
Priority Sequence:	13		
Priority Class:	3		
Category Code:	PL1A	System:	PLUMBING
		Component:	DOMESTIC WATER
		Element:	PIPING NETWORK
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapter 6	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Replacement of the aging water piping network is recommended. 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
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGPL01

Task Cost Estimate

Task Description	Unit	Qty	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	33,986	\$1.81	\$61,515	\$4.54	\$154,296	\$215,811
Project Totals:				\$61,515		\$154,296	\$215,811

Material/Labor Cost		\$215,811
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$141,099
General Contractor Mark Up at 20.0%	+	\$28,220
Inflation	+	\$5,300
Construction Cost		\$174,619
Professional Fees at 16.0%	+	\$27,939
Total Project Cost		\$202,558

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGPL02	Title:	DRAIN PIPING REPLACEMENT
Priority Sequence:	14		
Priority Class:	3		
Category Code:	PL2A	System:	PLUMBING
		Component:	WASTEWATER
		Element:	PIPING NETWORK
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapters 7-11	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Replacement of the aging drain piping is recommended throughout the facility. Failure to replace the old piping will result in frequent leaks and escalating maintenance costs. Remove sanitary and storm drain piping as needed. Install new cast-iron drain piping networks with copper run-outs to the fixtures. Install new floor drains, roof drains, and traps.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGPL02

Task Cost Estimate

Task Description	Unit	Qty	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	33,986	\$2.89	\$98,220	\$6.64	\$225,667	\$323,887
Project Totals:				\$98,220		\$225,667	\$323,887

Material/Labor Cost		\$323,887
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$214,674
General Contractor Mark Up at 20.0%	+	\$42,935
Inflation	+	\$8,063
Construction Cost		\$265,672
Professional Fees at 16.0%	+	\$42,508
Total Project Cost		\$308,180

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGPL03	Title:	REPLACE SUMP PUMPS
Priority Sequence:	15		
Priority Class:	3		
Category Code:	PL2B	System:	PLUMBING
		Component:	WASTEWATER
		Element:	PUMPS
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	712	
Project Class:	Deferred Maintenance		
Project Date:	11/23/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

Replacement of the sump pump system is recommended. Remove the existing pump assembly. Install a new duplex sump pump system, including pit, pumps, alternating controls, alarms, piping, and electrical connections.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGPL03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Sump pump system, including pit, pumps, controls, connections, and demolition of existing system	SYS	1	\$4,440	\$4,440	\$3,120	\$3,120	\$7,560
Project Totals:				\$4,440		\$3,120	\$7,560

Material/Labor Cost		\$7,560
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$6,072
General Contractor Mark Up at 20.0%	+	\$1,214
Inflation	+	\$228
Construction Cost		\$7,514
Professional Fees at 16.0%	+	\$1,202
Total Project Cost		\$8,716

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGAC01	Title:	INTERIOR AMENITY ACCESSIBILITY UPGRADES
Priority Sequence:	16		
Priority Class:	4		
Category Code:	AC4A	System:	ACCESSIBILITY
		Component:	GENERAL
		Element:	FUNCTIONAL SPACE MOD.
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	211, 602, 804	
Project Class:	Plant Adaption		
Project Date:	10/8/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Present accessibility legislation requires that building amenities be generally available to all persons. The configuration of break room kitchenettes and drinking fountains is a barrier to accessibility. The installation of wheelchair-accessible kitchenette cabinetry is recommended where applicable. All single-level refrigerated drinking fountains should be replaced with dual-level units.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGAC01

Task Cost Estimate

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

Material/Labor Cost		\$25,520
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$18,611
General Contractor Mark Up at 20.0%	+	\$3,722
Inflation	+	\$699
Construction Cost		\$23,033
Professional Fees at 16.0%	+	\$3,685
Total Project Cost		\$26,718

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGAC03	Title:	INTERIOR DOOR UPGRADES
Priority Sequence:	17		
Priority Class:	4		
Category Code:	AC3C	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	DOORS AND HARDWARE
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	309.4	
Project Class:	Plant Adaption		
Project Date:	10/8/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

While the interior doors are suitable for ten future years of service, the knob-actuated door hardware presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with the intent of this legislation, it is recommended that lever handle door hardware be installed on all doors that currently still have knobs.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGAC03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Lever-actuated door hardware	EA	60	\$273	\$16,380	\$69.77	\$4,186	\$20,566
Project Totals:				\$16,380		\$4,186	\$20,566

Material/Labor Cost		\$20,566
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$18,642</u>
General Contractor Mark Up at 20.0%	+	\$3,728
Inflation	+	<u>\$700</u>
Construction Cost		\$23,071
Professional Fees at 16.0%	+	<u>\$3,691</u>
Total Project Cost		<u>\$26,762</u>

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGAC02	Title:	RESTROOM RENOVATION
Priority Sequence:	18		
Priority Class:	4		
Category Code:	AC3E	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	RESTROOMS/BATHROOMS
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	604, 605, 606, 607, 608	
Project Class:	Plant Adaption		
Project Date:	10/8/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGAC02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Major restroom renovation, including fixtures, finishes, partitions, accessories, and expansion if necessary (assumes 55 square feet of restroom area per fixture)	FIXT	30	\$1,969	\$59,070	\$1,699	\$50,970	\$110,040
Project Totals:				\$59,070		\$50,970	\$110,040

Material/Labor Cost		\$110,040
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$85,631
General Contractor Mark Up at 20.0%	+	\$17,126
Inflation	+	\$3,216
Construction Cost		\$105,974
Professional Fees at 16.0%	+	\$16,956
Total Project Cost		\$122,929

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGAC04	Title:	STAIR SAFETY UPGRADES
Priority Sequence:	19		
Priority Class:	4		
Category Code:	AC3B	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	STAIRS AND RAILINGS
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	IBC	1003.3	
	ADAAG	505	
Project Class:	Plant Adaption		
Project Date:	10/8/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Present legislation regarding building accessibility by the handicapped requires that stairs have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a four inch diameter sphere (six inches in the triangle formed by the lower rail and tread / riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future renovation efforts should include comprehensive stair railing upgrades.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGAC04

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system per floor	FLR	3	\$573	\$1,719	\$521	\$1,563	\$3,282
Center handrail / guardrail system per floor	FLR	3	\$1,297	\$3,891	\$833	\$2,499	\$6,390
Project Totals:				\$5,610		\$4,062	\$9,672

Material/Labor Cost		\$9,672
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$7,733
General Contractor Mark Up at 20.0%	+	\$1,547
Inflation	+	\$290
Construction Cost		\$9,570
Professional Fees at 16.0%	+	\$1,531
Total Project Cost		\$11,101

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGIS03	Title:	REFINISH CEILINGS
Priority Sequence:	20		
Priority Class:	4		
Category Code:	IS3B	System:	INTERIOR/FINISH SYS.
		Component:	CEILINGS
		Element:	REPLACEMENT

Building Code: WRIG
Building Name: WRIGHT AUDITORIUM
Subclass/Savings: Not Applicable

Code Application: Not Applicable

Project Class: Capital Renewal
Project Date: 10/8/2009

Project Location: Floor-wide: Floor(s) 1, 2, 3

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGIS03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical tile ceiling system	SF	15,630	\$2.12	\$33,136	\$2.98	\$46,577	\$79,713
Painted ceiling finish application	SF	15,630	\$0.17	\$2,657	\$0.81	\$12,660	\$15,317
Project Totals:				\$35,793		\$59,238	\$95,030

Material/Labor Cost		\$95,030
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$66,432
General Contractor Mark Up at 20.0%	+	\$13,286
Inflation	+	\$2,495
Construction Cost		\$82,214
Professional Fees at 16.0%	+	\$13,154
Total Project Cost		\$95,368

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Description

Project Number:	WRIGSI01	Title:	SITE PAVING UPGRADES
Priority Sequence:	21		
Priority Class:	4		
Category Code:	SI1A	System:	SITE
		Component:	ACCESS
		Element:	PEDESTRIAN
Building Code:	WRIG		
Building Name:	WRIGHT AUDITORIUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/8/2009		
Project Location:	Undefined: Floor(s) 1		

Project Description

Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. New systems, including excavation, grading, base compaction, and paving, are recommended.

Specific Project Details
Facility Condition Analysis
Section Three
WRIG : WRIGHT AUDITORIUM

Project Cost

Project Number: WRIGSI01

Task Cost Estimate

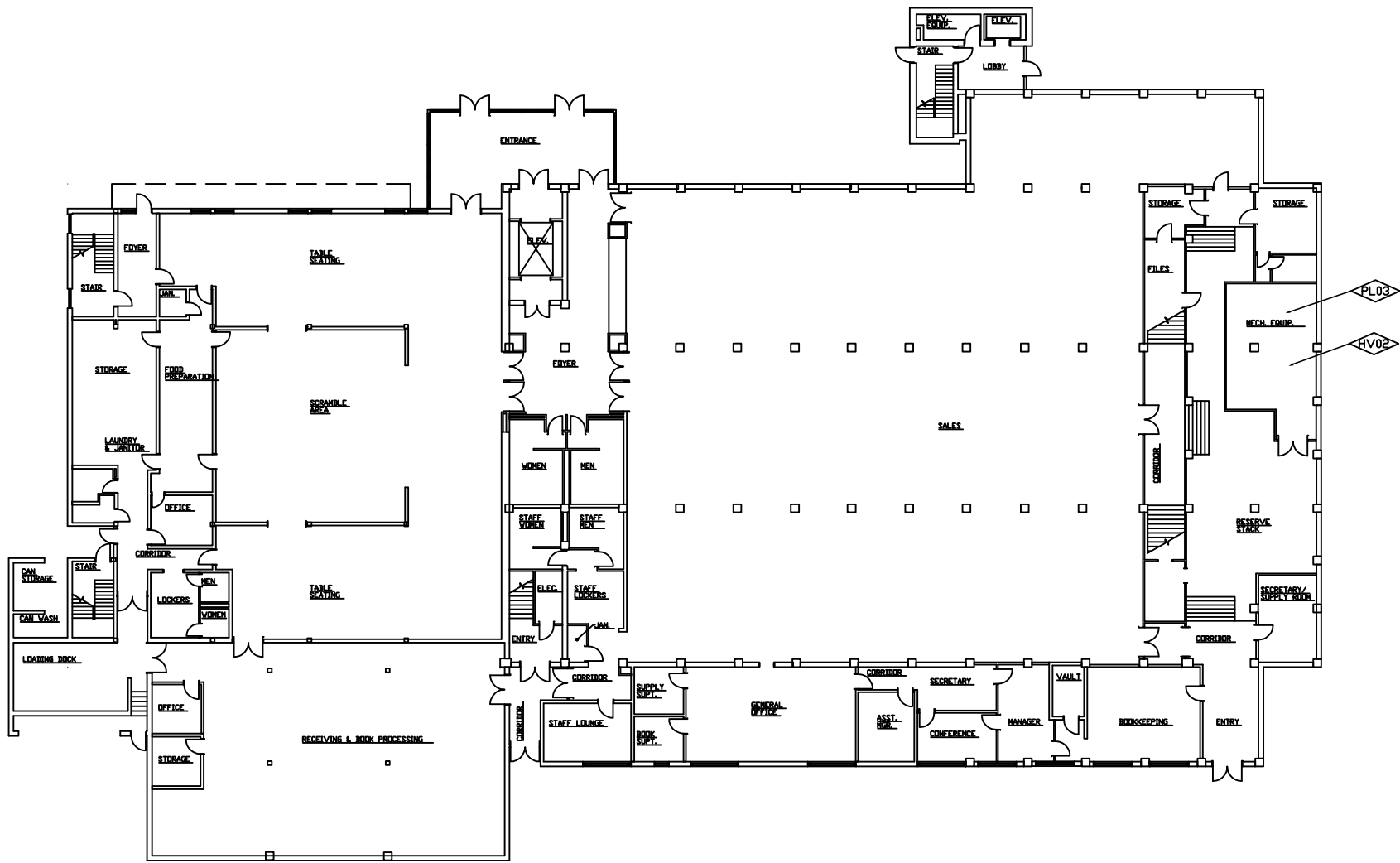
Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Concrete pedestrian paving (1000 sf minimum)	SF	3,000	\$2.97	\$8,910	\$3.64	\$10,920	\$19,830
Project Totals:				\$8,910		\$10,920	\$19,830

Material/Labor Cost		\$19,830
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$14,574</u>
General Contractor Mark Up at 20.0%	+	<u>\$2,915</u>
Inflation	+	<u>\$547</u>
Construction Cost		<u>\$18,037</u>
Professional Fees at 16.0%	+	<u>\$2,886</u>
Total Project Cost		<u>\$20,922</u>

FACILITY CONDITION ANALYSIS

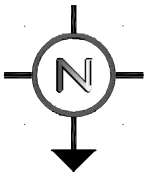
SECTION 4

**DRAWINGS
AND PROJECT LOCATIONS**



SI01 ES01

AC01 AC02 AC03 AC04 EL01 EL02
 FS01 FS02 FS03 HV01 IS01 IS02
 IS03 PL01 PL02



WRIGHT
AUDITORIUM

BLDG NO. WRIG



FACILITY
CONDITION
ANALYSIS

2165 West Park Court
Suite N
Stone Mountain GA 30087
770.879.7376

PROJECT NUMBER
APPLIES TO
ONE ROOM ONLY

PROJECT NUMBER
APPLIES TO
ONE ITEM ONLY

PROJECT NUMBER
APPLIES TO
ENTIRE BUILDING

PROJECT NUMBER
APPLIES TO
ENTIRE FLOOR

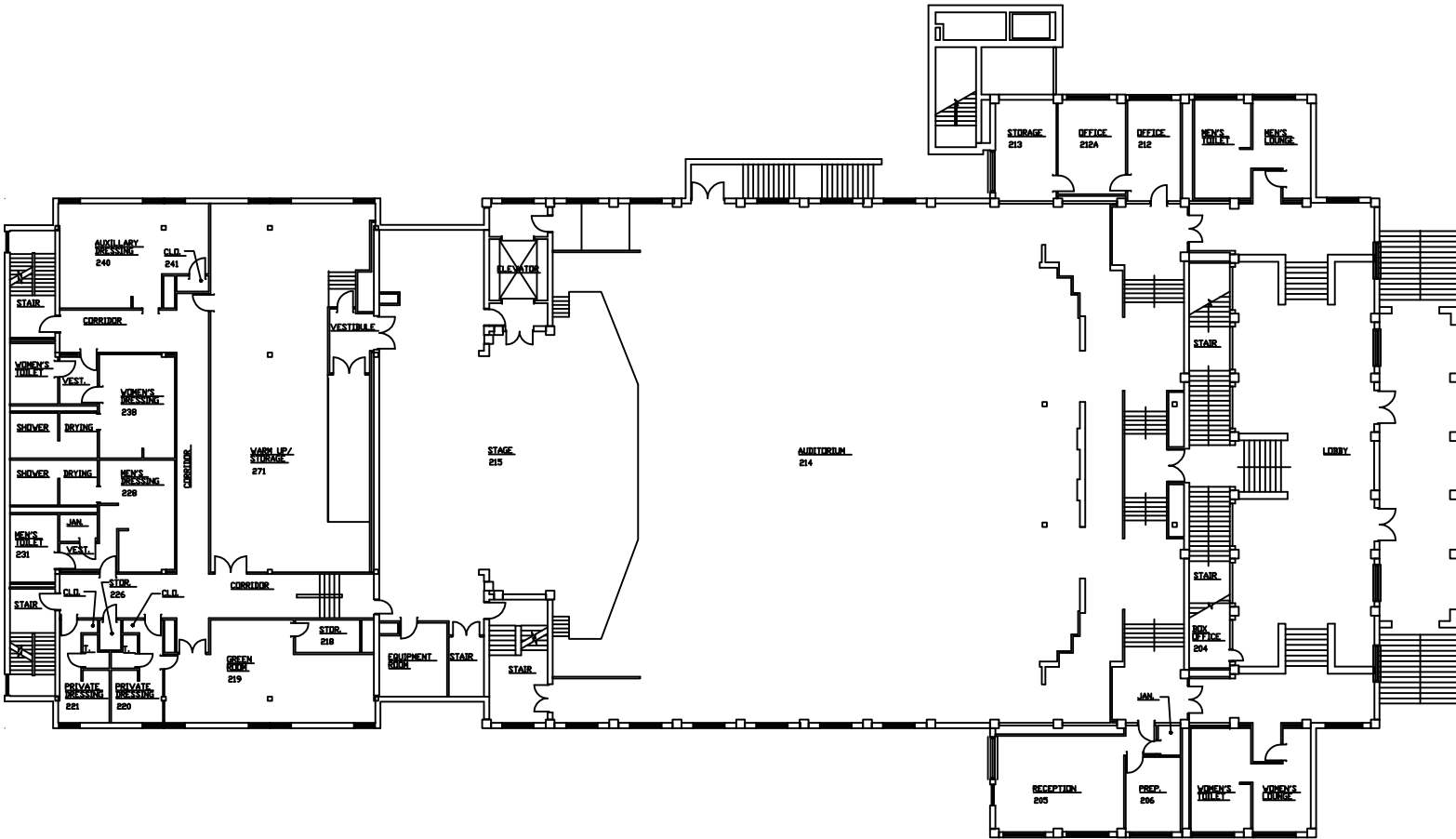
PROJECT NUMBER
APPLIES TO A SITUATION
OF UNDEFINED EXTENTS

PROJECT NUMBER
APPLIES TO AREA
AS NOTED

Date: 12/11/09
 Drawn by: J.T.V.
 Project No. 09-041

FIRST
FLOOR
PLAN

Sheet No.
1 of 3



ES03

- AC01 AC02 AC03 AC04 EL01 EL02
- FS01 FS02 FS03 HV01 IS01 IS02
- IS03 PL01 PL02

WRIGHT
AUDITORIUM

BLDG NO. WRIG



FACILITY
CONDITION
ANALYSIS

2165 West Park Court
Suite N
Stone Mountain GA 30087
770.879.7376

PROJECT NUMBER
APPLIES TO
ONE ROOM ONLY

PROJECT NUMBER
APPLIES TO
ONE ITEM ONLY

PROJECT NUMBER
APPLIES TO
ENTIRE BUILDING

PROJECT NUMBER
APPLIES TO
ENTIRE FLOOR

PROJECT NUMBER
APPLIES TO A SITUATION
OF UNDEFINED EXTENTS

PROJECT NUMBER
APPLIES TO AREA
AS NOTED

Date: 12/11/09

Drawn by: J.T.V.

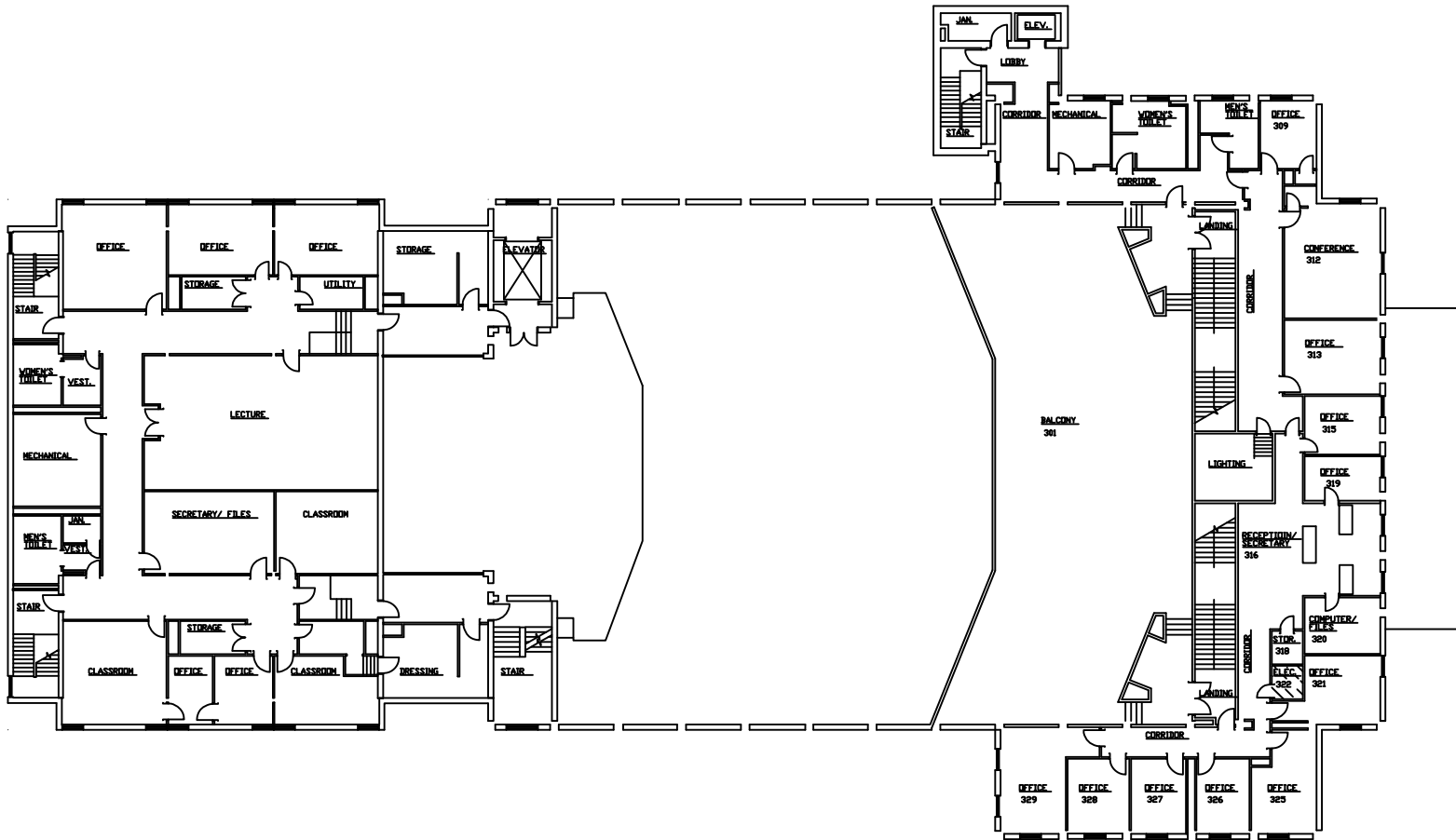
Project No. 09-041

SECOND
FLOOR
PLAN

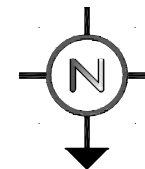
Sheet No.

2 of 3

ROOF
 ES02 HV01



- AC01 AC02 AC03 AC04 EL01 EL02
- FS01 FS02 FS03 HV01 IS01 IS02
- IS03 PL01 PL02



WRIGHT
 AUDITORIUM

BLDG NO. WRIG



FACILITY
 CONDITION
 ANALYSIS

2165 West Park Court
 Suite N
 Stone Mountain GA 30087
 770.879.7376

PROJECT NUMBER
 APPLIES TO
 ONE ROOM ONLY

PROJECT NUMBER
 APPLIES TO
 ONE ITEM ONLY

PROJECT NUMBER
 APPLIES TO
 ENTIRE BUILDING

PROJECT NUMBER
 APPLIES TO
 ENTIRE FLOOR

PROJECT NUMBER
 APPLIES TO A SITUATION
 OF UNDEFINED EXTENTS

PROJECT NUMBER
 APPLIES TO AREA
 AS NOTED

Date: 12/11/09

Drawn by: J.T.V.

Project No. 09-041

THIRD
 FLOOR
 PLAN

Sheet No.
 3 of 3

FACILITY CONDITION ANALYSIS

SECTION 5

LIFE CYCLE MODEL SUMMARY
AND PROJECTIONS

Life Cycle Model
Building Component Summary
WRIG : WRIGHT AUDITORIUM

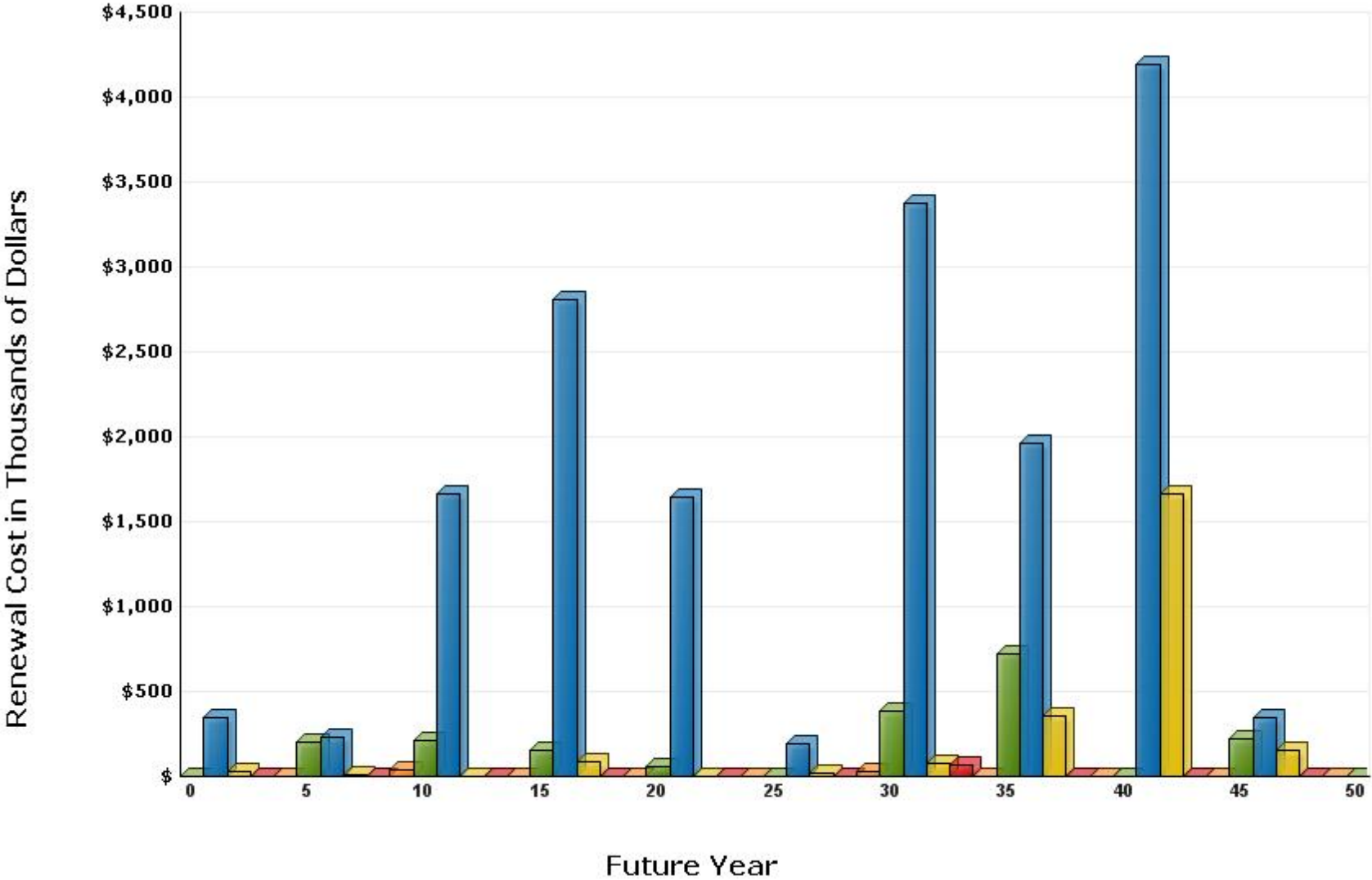
Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	18,480	SF	\$1.30	.31	\$7,468	1996	10
B2020	STANDARD GLAZING AND CURTAIN WALL	4,620	SF	\$104.04		\$480,649	1996	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	7	LEAF	\$4,311.24		\$30,179	2000	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	6	LEAF	\$2,863.29		\$17,180	2000	40
B3010	MEMBRANE ROOF	2,550	SF	\$6.41		\$16,337	1996	15
B3010	TILE ROOF	14,440	SF	\$19.15		\$276,473	1996	70
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	60	LEAF	\$1,489.06		\$89,344	2000	35
C1020	INTERIOR DOOR HARDWARE	60	EA	\$423.04		\$25,383	2000	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	26,410	SF	\$0.80		\$21,155	2000	10
C3020	CARPET	23,450	SF	\$8.75		\$205,104	2000	10
C3020	VINYL FLOOR TILE	3,130	SF	\$6.59		\$20,620	2000	15
C3020	HARDWOOD REPLACEMENT	4,690	SF	\$23.94		\$112,263	1996	50
C3020	SAND AND FINISH HARDWOOD FLOORING	4,690	SF	\$3.24		\$15,185	1996	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	15,630	SF	\$4.99		\$78,041	2000	15
C3030	PAINTED CEILING FINISH APPLICATION	15,630	SF	\$0.80		\$12,520	2000	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	1	EA	\$158,628.64		\$158,629	1994	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	1	EA	\$26,616.80		\$26,617	1994	12
D2010	PLUMBING FIXTURES - STUDENT UNION	33,986	SF	\$7.96		\$270,440	1925	35
D2020	WATER PIPING - STUDENT UNION	33,986	SF	\$5.66		\$192,455	1925	35
D2020	WATER HEATER (RES., ELEC.)	10	GAL	\$47.95		\$479	1990	10
D2020	WATER HEATER (RES., ELEC.)	20	GAL	\$47.95		\$959	1990	10
D2030	DRAIN PIPING - STUDENT UNION	33,986	SF	\$8.60		\$292,111	1925	40
D2030	SUMP PUMP SYS (2 PUMPS, CONTROLS)	1	SYS	\$8,276.49		\$8,276	1925	20
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1925	25
D3030	CHILLER - WATER COOLED (200-1000 TONS)	230	TON	\$686.38		\$157,868	1989	25
D3030	COOLING TOWER (OVER 300 TONS)	400	TON	\$184.81		\$73,925	2004	20
D3040	CONDENSATE RECEIVER	1	SYS	\$9,504.01		\$9,504	1925	15
D3040	EXHAUST FAN - UTILITY SET OR SIMILAR	1	EA	\$3,660.81		\$3,661	1925	20
D3040	HVAC SYSTEM - STUDENT UNION	33,986	SF	\$28.79		\$978,397	1925	25
D3040	BASE MTD. PUMP - 50 HP TO 150 HP	60	HP	\$782.99		\$46,979	1990	25

**Life Cycle Model
Building Component Summary
WRIG : WRIGHT AUDITORIUM**

Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
D3040	BASE MTD. PUMP - 50 HP TO 150 HP	40	HP	\$782.99		\$31,319	2004	25
D4010	FIRE SPRINKLER SYSTEM	13,594	SF	\$6.86		\$93,270	1990	80
D4010	FIRE SPRINKLER HEADS	13,594	SF	\$0.38		\$5,127	1990	20
D5010	ELECTRICAL SYSTEM - STUDENT UNION	33,986	SF	\$12.78		\$434,192	1925	50
D5010	ELECTRICAL SWITCHGEAR 277/480V	600	AMP	\$39.56		\$23,738	2004	20
D5010	VARIABLE FREQUENCY DRIVE (OVER 50 HP)	60	HP	\$237.46		\$14,248	1990	12
D5020	EXIT SIGNS (BATTERY)	34	EA	\$280.76		\$9,546	1990	20
D5020	EXTERIOR LIGHT (HID)	4	EA	\$689.58		\$2,758	1980	20
D5020	LIGHTING - STUDENT UNION	33,986	SF	\$6.68		\$227,150	1925	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	33,986	SF	\$2.61		\$88,859	1995	15
E2010	KITCHENETTE UNIT WITH CABINETS AND AMENITIES	1	LOT	\$5,940.22		\$5,940	1970	20
E2010	PREMIUM FOLDING FIXED SEATING	1,200	EA	\$781.63		<u>\$937,957</u>	2000	20
						\$5,508,762		

Life Cycle Model Expenditure Projections

WRIG : WRIGHT AUDITORIUM



Average Annual Renewal Cost Per SqFt \$5.64

FACILITY CONDITION ANALYSIS

SECTION 6

PHOTOGRAPHIC LOG

**Photo Log - Facility Condition
Analysis**

WRIG : WRIGHT AUDITORIUM

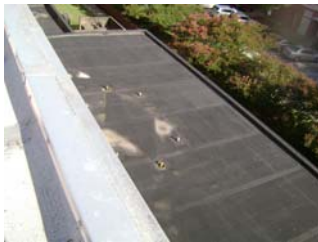
Photo ID No	Description	Location	Date
WRIG001a	Roof detail	Roof	9/4/2009
WRIG001e	Worn insulation on original supply air duct	Attic	9/4/2009
WRIG002a	Roof detail	Roof	9/4/2009
WRIG002e	Original heating and ventilating unit	Attic	9/4/2009
WRIG003a	Roof over entry	Roof	9/4/2009
WRIG003e	Void	Void	9/4/2009
WRIG004a	Attic design	Attic	9/4/2009
WRIG004e	Void	Void	9/4/2009
WRIG005a	Attic design	Attic	9/4/2009
WRIG005e	Original electrical panel	Third floor	9/4/2009
WRIG006a	Window detail	Third floor	9/4/2009
WRIG006e	Fusible link sprinkler head	North exterior	9/4/2009
WRIG007a	Stairwell design	Third floor	9/4/2009
WRIG007e	Outdated opaque strobe	North exterior	9/4/2009
WRIG008a	Auditorium seating	Second floor	9/4/2009
WRIG008e	Aged smoke detector and fusible link sprinkler head	North exterior	9/4/2009
WRIG009a	Fixed seating detail	Second floor	9/4/2009
WRIG009e	Aged LED exit sign	North exterior	9/4/2009
WRIG010a	Stair design inside auditorium	Second floor	9/4/2009
WRIG010e	Non GFCI receptacle	Restroom	9/4/2009
WRIG011a	Break room kitchenette	Second floor	9/4/2009
WRIG011e	Decorative incandescent lighting	Auditorium lobby	9/4/2009
WRIG012a	Single-level drinking fountain	Second floor	9/4/2009
WRIG012e	Ionization smoke detector	Auditorium lobby	9/4/2009
WRIG013a	Lobby area	Second floor	9/4/2009
WRIG013e	Timeworn air handling unit AHU2	First floor, mechanical room	9/4/2009
WRIG014a	Balcony seating	Third floor	9/4/2009
WRIG014e	Hydraulic elevator	Elevator room	9/4/2009
WRIG015a	North facade	Exterior elevation	9/4/2009
WRIG015e	T12 fluorescent lighting	Bookstore	9/4/2009
WRIG016a	West facade	Exterior elevation	9/4/2009
WRIG016e	New 300 kW service entrance transformer	Northwest facade	9/4/2009
WRIG017a	South facade	Exterior elevation	9/4/2009

**Photo Log - Facility Condition
Analysis**

WRIG : WRIGHT AUDITORIUM

Photo ID No	Description	Location	Date
WRIG017e	Fire water main	First floor, northwest lobby	9/4/2009
WRIG018a	South facade	Exterior elevation	9/4/2009
WRIG018e	Void	Void	9/4/2009
WRIG019e	Original York chiller	Mechanical room	9/4/2009
WRIG020e	Variable frequency drives	Mechanical room	9/4/2009
WRIG021e	Control air compressor	Mechanical room	9/4/2009
WRIG022e	Chilled water pump	Mechanical room	9/4/2009
WRIG023e	Condenser water pump	Mechanical room	9/4/2009
WRIG024e	Utility exhaust fan for chiller refrigerant	Mechanical room	9/4/2009
WRIG025e	Timeworn sump pump	Mechanical room	9/4/2009
WRIG026e	Outdated Johnson Control system	Mechanical room	9/4/2009
WRIG027e	Refrigerant monitoring system	Mechanical room	9/4/2009
WRIG028e	Condensate return unit	Mechanical room	9/4/2009
WRIG029e	Four-pipe fan coil unit	Mechanical room	9/4/2009
WRIG030e	Original AHU2 air handler	Bookstore, mechanical room	9/4/2009
WRIG031e	Two-pipe fan coil unit with electric heat	Corridor	9/4/2009
WRIG032e	Simplex addressable fire alarm panel	Lobby	9/4/2009
WRIG033e	Main distribution panel MDP-1	Electrical room	9/4/2009
WRIG034e	Simplex fire alarm annunciator panel	Lobby	9/4/2009
WRIG035e	Walk-in cooler condenser unit	Loading dock	9/4/2009
WRIG036e	Typical HID lighting fixture	North facade	9/4/2009

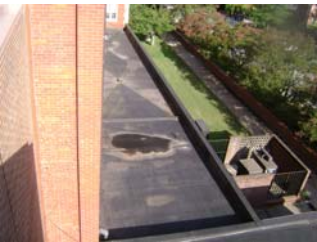
Facility Condition Analysis - Photo Log



WRIG001A.jpg



WRIG001E.jpg



WRIG002A.jpg



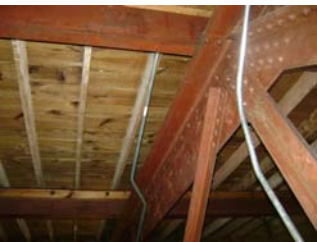
WRIG002E.jpg



WRIG003A.jpg



WRIG004A.jpg



WRIG005A.jpg



WRIG005E.jpg



WRIG006A.jpg



WRIG006E.jpg



WRIG007A.jpg



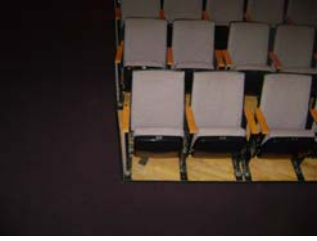
WRIG007E.jpg



WRIG008A.jpg



WRIG008E.jpg

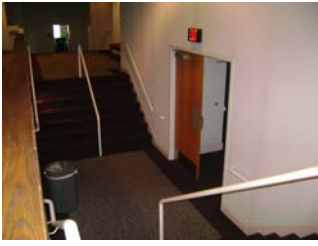


WRIG009A.jpg



WRIG009E.jpg

Facility Condition Analysis - Photo Log



WRIG010A.jpg



WRIG010E.jpg



WRIG011A.jpg



WRIG011E.jpg



WRIG012A.jpg



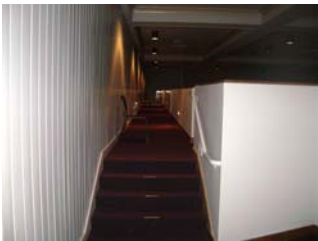
WRIG012E.jpg



WRIG013A.jpg



WRIG013E.jpg



WRIG014A.jpg



WRIG014E.jpg



WRIG015A.jpg



WRIG015E.jpg



WRIG016A.jpg



WRIG016E.jpg



WRIG017A.jpg



WRIG017E.jpg

Facility Condition Analysis - Photo Log



WRIG018A.jpg



WRIG019E.jpg



WRIG020E.jpg



WRIG021E.jpg



WRIG022E.jpg



WRIG023E.jpg



WRIG024E.jpg



WRIG025E.jpg



WRIG026E.jpg



WRIG027E.jpg



WRIG028E.jpg



WRIG029E.jpg



WRIG030E.jpg



WRIG031E.jpg



WRIG032E.jpg



WRIG033E.jpg

Facility Condition Analysis - Photo Log



WRIG034E.jpg



WRIG035E.jpg



WRIG036E.jpg