EAST CAROLINA UNIVERSITY

FLETCHER MUSIC CENTER

ASSET CODE: FMUS

FACILITY CONDITION ANALYSIS

DECEMBER 22, 2009

ISES CORPORATION

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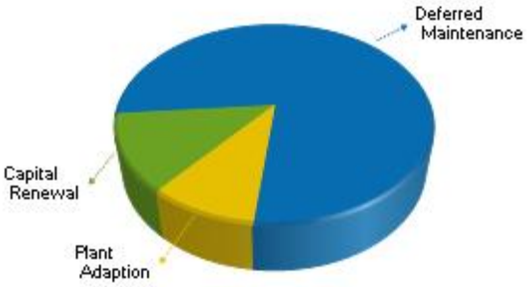
FACILITY CONDITION ANALYSIS

SECTION 1

GENERAL ASSET INFORMATION

EXECUTIVE SUMMARY - FLETCHER MUSIC CENTER

PROJECT COSTS BY CLASSIFICATION



Building Code: FMUS
Building Name: FLETCHER MUSIC CENTER
Year Built: 1966
Building Use: Classroom / Academic
Square Feet: 58,950

Project Costs by Priority

Priority 1:	$0
Priority 2:	$512,216
Priority 3:	$4,345,670
Priority 4:	$831,512
Total Project Costs:	**$5,689,398**

Facility Replacement Cost: **$16,819,000**

Facility Condition Needs Index (FCNI): **0.34**
(Project Costs / Replacement Cost)

FCNI Scale

Replacement Indicated (Unless Historic)

0.60 Poor Condition (Tol. Ten. Req)

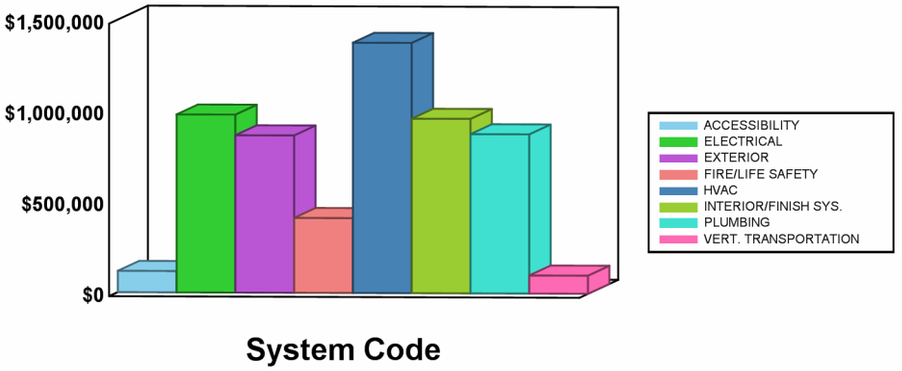
0.50 Below Ave. Condition (Major Ren. Req)

0.30 Fair Condition (Normal Ren. Req)

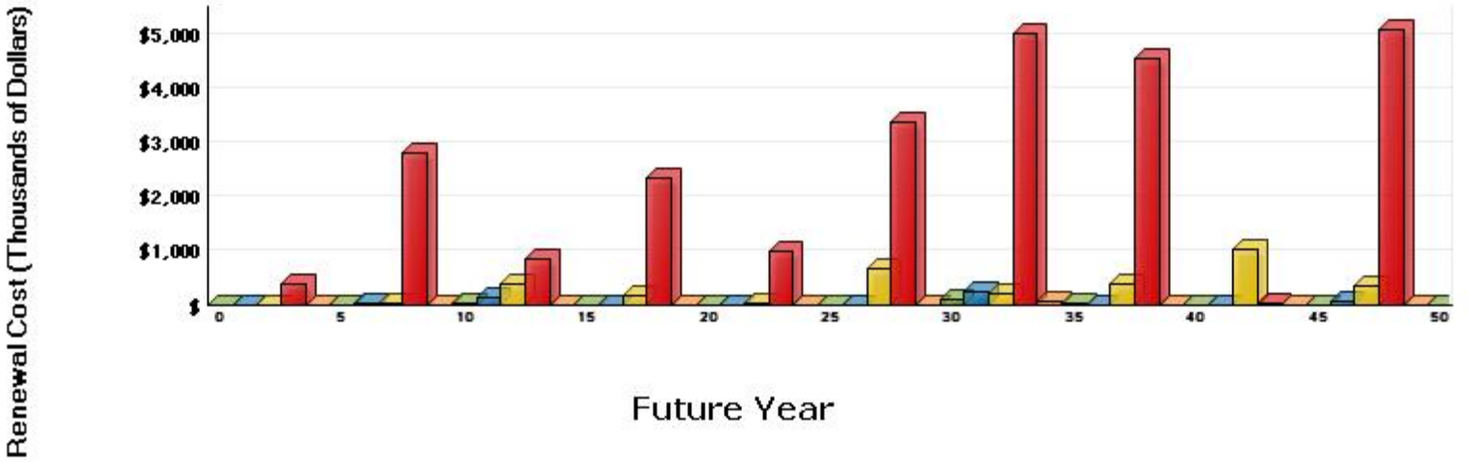
0.20 Good Condition (Maintained with Life Cycle)

0.10 Excellent Condition (Typically New Construction)

PROJECT COSTS BY SYSTEM CODE



LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt $4.36

B. ASSET SUMMARY

Fletcher Music Center is located on the East Carolina University campus in Greenville, North Carolina. Constructed in 1966 and added onto in 2005, this modern style facility has three stories and a reinforced concrete slab foundation. The 1966 section is a rectangular three-story structure. The 2005 section has three rehearsal halls and a formal recital hall with fixed seating. Totaling 58,950 gross square feet, the facility is predominately utilized as music rehearsal and recital space and also includes classrooms, practice rooms, and offices.

Information for this report was gathered during a site visit conducted on August 30, 2009.

SITE

The building sits on a flat parcel of land. Landscaping consists of ornamental planting beds, shrubbery, specimen trees, and areas of turf. Vehicular access is from the south via Tenth Street. The building is not directly served by a dedicated parking lot. The site is in overall good condition and does not require any upgrades at this time other than routine maintenance.

EXTERIOR STRUCTURE

The flat roof structure is covered with a built-up roofing system, and there are architectural accent shed roofs with mission tile at the north facade. It is recommended that the built-up roofing system be replaced. The existing stress conditions around the seams and at the perimeter flashing will lead to failure if left unattended. Replace the stressed roof and flashing with a similar application.

The exterior is brick veneer with concrete accents. While the brick and concrete are 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 1966 section of the building has aluminum-frame window systems with single-pane glazing. The 2005 section has energy-efficient thermal glazing. It is recommended that the single-pane, aluminum-frame windows be upgraded to thermal-pane systems, which will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary.

The main entrance has metal-frame glazed doors, while the secondary entrances are hollow metal. It is recommended that aged and inefficient primary and secondary entrance and service doors be replaced. The replacement units should maintain the architectural design aspects of this facility and should be modern, energy-efficient applications.

INTERIOR FINISHES / SYSTEMS

The wall finishes are generally painted sheetrock, with insulated acoustical material lining the practice rooms. The interior walls are in fair condition, with minor damage and finish discoloration. Ceilings are a

combination of painted sheetrock and suspended, acoustical tile systems. They are also in fair condition, with minor areas of damaged tile and discoloration. Floors are typically carpet, vinyl tile, or ceramic tile. The stage in the recital hall has hardwood flooring that is in overall good condition. Floor, wall, and ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

Interior doors typically have the proper labeled smoke / fire rating as required by code, but are in poor condition. Replacement is recommended as part of a comprehensive renovation effort. Install the new doors according to a code compliant plan to properly protect egress passages.

The formal recital hall on the first floor of the 2005 section has fixed seating that is lightly worn and should be upgraded towards the end of the ten-year scope of this report. Replace this seating with new folding fixed seats in a similar row configuration. Ensure that ADA requirements are followed with the new seating layout.

ACCESSIBILITY

Compliant parking spaces in the south lot lead to curb cuts and a sidewalk system serving all entrances. The south entrance is wheelchair accessible and leads to a compliant elevator system that serves all floors of the north wing.

There are various stairs and ramps that lead into the building. Most of these are equipped with metal railings that do not meet current design specifications for accessibility. To comply with the intent of ADA legislation, it is recommended that ADA compliant, painted metal handrails be installed at all entrances as required.

The men's and women's restrooms on the second and third floors are partially ADA compliant, and the new set of restrooms on the first floor outside the recital hall is fully ADA compliant. The overall level of restroom accessibility is fair, but short of full compliance with modern accessibility legislation. Restroom size is adequate, but fixture and partition spacing does not provide compliant clearances and clear floor spaces. A reduction in the number of water closets, upgrades to select plumbing fixtures, and the installation of new partitions and ADA compliant accessories is recommended.

The formal recital hall does not provide wheelchair access to the stage area, nor is it equipped with accessible seating. Current accessibility legislation requires that places of assembly be accessible to the handicapped. In order to provide adequate access, it is recommended that a wheelchair lift be installed at the stage. Also, it is recommended that accessible seating be installed, along with wall-mounted, ADA compliant, painted metal handrails, which are lacking at the ramps.

The stairs have cast-in-place concrete treads and landings and painted metal railing. Current accessibility legislation 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 4 inch diameter sphere (6 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.

Building amenities are required to be generally accessible to all persons. There are single level drinking fountains on each floor of the building. The single level configuration is a barrier to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

HEALTH

Based on the age of this facility, it is likely that lead paint or asbestos containing materials were used in the original construction, although no physical testing or sampling was performed. No lead paint or suspected asbestos was observed during the inspection. The lead paint and asbestos health risks are extremely minimal, but workers during any and all remodeling should be made aware of the potential hazards of working with such materials. There were no reports or evidence of pest or insect infestations.

FIRE / LIFE SAFETY

The path of egress is adequate with regard to the fire rating of corridor wall, floor slab, and door assemblies, elevator lobbies, and stair location. This facility is protected by a central fire alarm system. The point addressable fire alarm control panel was manufactured by Simplex and is located at the lobby entrance. The devices that serve this system include manual pull stations, audible / visible devices, and smoke detectors. The fire alarm system is adequate and in good condition. With proper testing and maintenance, it will outlast the purview of this analysis.

A portion of this facility is protected by an automatic fire suppression system. Although manual, dry chemical fire extinguishers are available in the balance of the building, it is recommended that the fire sprinkler system be extended to serve the unprotected areas. This installation will reduce overall liability and potential for loss. Cost has also been included for replacement of the existing sprinkler heads.

Exit signs are illuminated with fluorescent lamps and are connected to the emergency power network. Emergency lighting is available through unitary fixtures with battery backup power. All egress lighting systems are adequate and in good condition. There are no related projects to recommend at this time.

HVAC

This facility is on the campus steam loop. Hot water is generated via a steam to water heat exchanger, and hot water is circulated as the heating medium. The cooling medium is supplied by the campus chilled water loop, which was introduced to the facility in 2006.

The original three-story section is served by a dual duct, forced-air HVAC system. The air handling units that have hot water heating coils and chilled water cooling coils. The ventilation system delivers 100 percent outside air to specific interior spaces. The air distribution network furnishes constant volume air to the occupied spaces. Steam reheat coils are mounted in the duct. Air is returned via hallways and ductwork linking each floor to the air handler on the ground floor. The controls for this system are a hybrid configuration with pneumatic temperature controls and direct digital utility modulation and monitoring. The direct digital controls (DDCs) were manufactured by Siemens.

The original first floor section is served by a forced-air HVAC system with multizone air handling units that have hot water heating coils and chilled water cooling coils. The ventilation system delivers 100 percent

outside air to specific interior spaces. The air distribution network furnishes constant volume air to the occupied spaces. Hot water reheat coils are mounted in the duct. Air is returned through an open ceiling plenum. The controls for this system are a hybrid configuration with pneumatic temperature controls and direct digital utility modulation and monitoring. The DDCs were manufactured by Siemens. The HVAC system components in the original sections of the facility have aged beyond their statistical life cycles, and the systems are inefficient compared to modern standards. It is recommended that these portions of the HVAC system be renovated.

The portion of the facility that was added in 2006 is served by a forced-air HVAC system with single-zone air handling units. The air handling units have hot water heating coils and chilled water cooling coils. The ventilation system delivers 100 percent outside air to all of the interior spaces. The air distribution network furnishes variable air volume to the occupied spaces. Hot water reheat coils are mounted in the duct. The controls for this system are DDC and were manufactured by Siemens. The components of this portion of the HVAC system, with proper maintenance, will outlast the purview of this analysis.

Supplemental HVAC in the music library areas is provided by split systems that utilize DX cooling and heat and are controlled with electronic thermostats. In conjunction with the proposed HVAC system upgrade, it is recommended that these systems be removed and that the areas that they serve be included on the central HVAC system.

ELECTRICAL

An oil-filled transformer rated for 500 kVA service steps the incoming power down from 12,470 to 277/480 volts. The 277/480 volt power is distributed by General Electric switchgear rated for 1,000 amp service. The 277/480 volt main distribution panel and switchgear are very old and recommended for replacement. The secondary transformer and the 120/208 volt main distribution panel and switchgear are in good working order. It is improbable that they will require scheduled replacement within the scope of this analysis.

The electrical distribution network in the original portion of the facility is a dual voltage configuration. 277/480 volt power is distributed to branch transformers that step the power down to 120/208 volts. The lighting and major mechanical systems are supported by the 277/480 volt circuit. The panels were manufactured predominantly by General Electric. The electrical devices are aged and visibly worn, and the system is undersized to support the current needs of the occupants. To maintain reliable service throughout the facility, it is recommended that the aged electrical distribution network be upgraded.

The electrical distribution network in the 2006 addition is a dual voltage configuration. 277/480 volt power is distributed to branch transformers that step the power down to 120/208 volts. The lighting and major mechanical systems are supported by the 277/480 volt circuit. The panels were manufactured predominantly by Square D. This electrical distribution network is currently in adequate condition and should not require any significant work within the next ten years.

The original portions of the facility are illuminated by compact, T8, and T12 fluorescent fixtures. They are predominantly surface-mounted and have acrylic lenses. Energy-efficient ballasts and lamps were retrofitted into the original fixtures. Also, some fixtures are still fitted with inefficient incandescent lamps. The lenses on the fixtures are aged and present a dim aesthetic, and some lenses are worn or missing. The lighting system is currently sufficient, but it should be anticipated that it will require replacement

within the scope of this analysis. Specify energy-efficient fixtures, and install occupancy sensors where possible. It is recommended that the unitary emergency lighting fixtures be removed and that their functionality be incorporated into the new interior lighting systems.

The interior spaces of the 2006 addition are illuminated by fixtures that utilize compact and T8 fluorescent lamps. Most of the fluorescent lighting fixtures are recessed, compact applications. This interior lighting system is in good condition. With proper care, it will outlast the purview of this report.

The exterior areas adjacent to the building are illuminated by building-mounted HID, compact fluorescent, and stanchion-mounted fixtures that are currently in good condition. However, their replacement should be scheduled within the outlook of this report due to predictable wear. Install new energy-efficient fixtures, and place them on photocell activation.

Emergency power for this facility is produced by a local diesel-fired emergency generator. This Detroit Diesel unit has a capacity of 100 kW and generates 120/208 volt power. It is currently adequate and should remain a reliable source of stand-by power throughout the purview of this analysis.

PLUMBING

Potable water is distributed throughout this facility via a copper piping network. Sanitary waste and stormwater piping is of cast-iron construction. 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. The plumbing fixtures are also recommended for replacement. This action is detailed in the proposed restroom renovation.

Domestic water is heated by a heat exchanger that utilizes steam. This unit has served beyond its expected life cycle. The insulation is worn, and there is evidence of leakage. It is recommended that this unit be replaced.

VERTICAL TRANSPORTATION

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

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

C. INSPECTION TEAM DATA

DATE OF INSPECTION: August 30, 2009

INSPECTION TEAM PERSONNEL:

NAME	POSITION	SPECIALTY
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:

NAME	POSITION
William Bagwell	Associate Vice Chancellor, Campus Operations

REPORT DEVELOPMENT:

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

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

D. FACILITY CONDITION ANALYSIS - DEFINITIONS

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

1. REPORT DESCRIPTION

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

Section 2: Detailed Project Summaries and Totals

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

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

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

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:

PRIORITY CLASS 1

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

PRIORITY CLASS 2

CODE	PROJECT NO.	PRIORITY SEQUENCE
IS1E	0001IS06	03
EL4C	0001EL03	04

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

PRIORITY 1 - Currently Critical (Immediate)

Projects in this category require immediate action to:
a. return a facility to normal operation
b. stop accelerated deterioration
c. correct a cited safety hazard

PRIORITY 2 - Potentially Critical (Year One)

Projects in this category, if not corrected expeditiously, will become critical within a year. Situations in this category include:
a. intermittent interruptions
b. rapid deterioration
c. potential safety hazards

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

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

PRIORITY 4 - Recommended (Years Six to Ten)

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

6. COST SUMMARIES AND TOTALS

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

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

Cost factors are based on the 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

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

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

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

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

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

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			SYSTEM DESCRIPTION
AC1A	-	AC4B	ACCESSIBILITY
EL1A	-	EL8A	ELECTRICAL
ES1A	-	ES6E	EXTERIOR STRUCTURE
FS1A	-	FS6A	FIRE / LIFE SAFETY
HE1A	-	HE7A	HEALTH
HV1A	-	HV8B	HVAC
IS1A	-	IS6D	INTERIOR FINISHES / SYSTEMS
PL1A	-	PL5A	PLUMBING
SI1A	-	SI4A	SITE
SS1A	-	SS7A	SECURITY SYSTEMS
VT1A	-	VT7A	VERTICAL TRANSPORTATION

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

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	CABINETRY	R & R work to interior casework systems including cabinets, countertops, wardrobes, lockers, mail boxes, built-in bookcases, lab/work benches, reagent shelving, etc. (except as required for access by the disabled).
IS6C	GENERAL	SCREENING	Work on temporary or partial height partitioning systems including toilet partitions, urinal/vanity screens, etc.
IS6D	GENERAL	OTHER	Any work on interior elements not logically or specifically categorized elsewhere including light coves, phone booths, interior light wells, etc.
SYSTEM 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

FMUS : FLETCHER MUSIC CENTER

System Code	System Description	Priority Classes 1	2	3	4	Subtotal
AC	ACCESSIBILITY	0	0	0	117,567	117,567
EL	ELECTRICAL	0	0	917,944	61,334	979,278
ES	EXTERIOR	0	0	280,260	585,750	866,010
FS	FIRE/LIFE SAFETY	0	412,216	0	0	412,216
HV	HVAC	0	0	1,377,455	0	1,377,455
IS	INTERIOR/FINISH SYS.	0	0	893,560	66,861	960,421
PL	PLUMBING	0	0	876,452	0	876,452
VT	VERT. TRANSPORTATION	0	100,000	0	0	100,000
	TOTALS	0	512,216	4,345,670	831,512	5,689,398

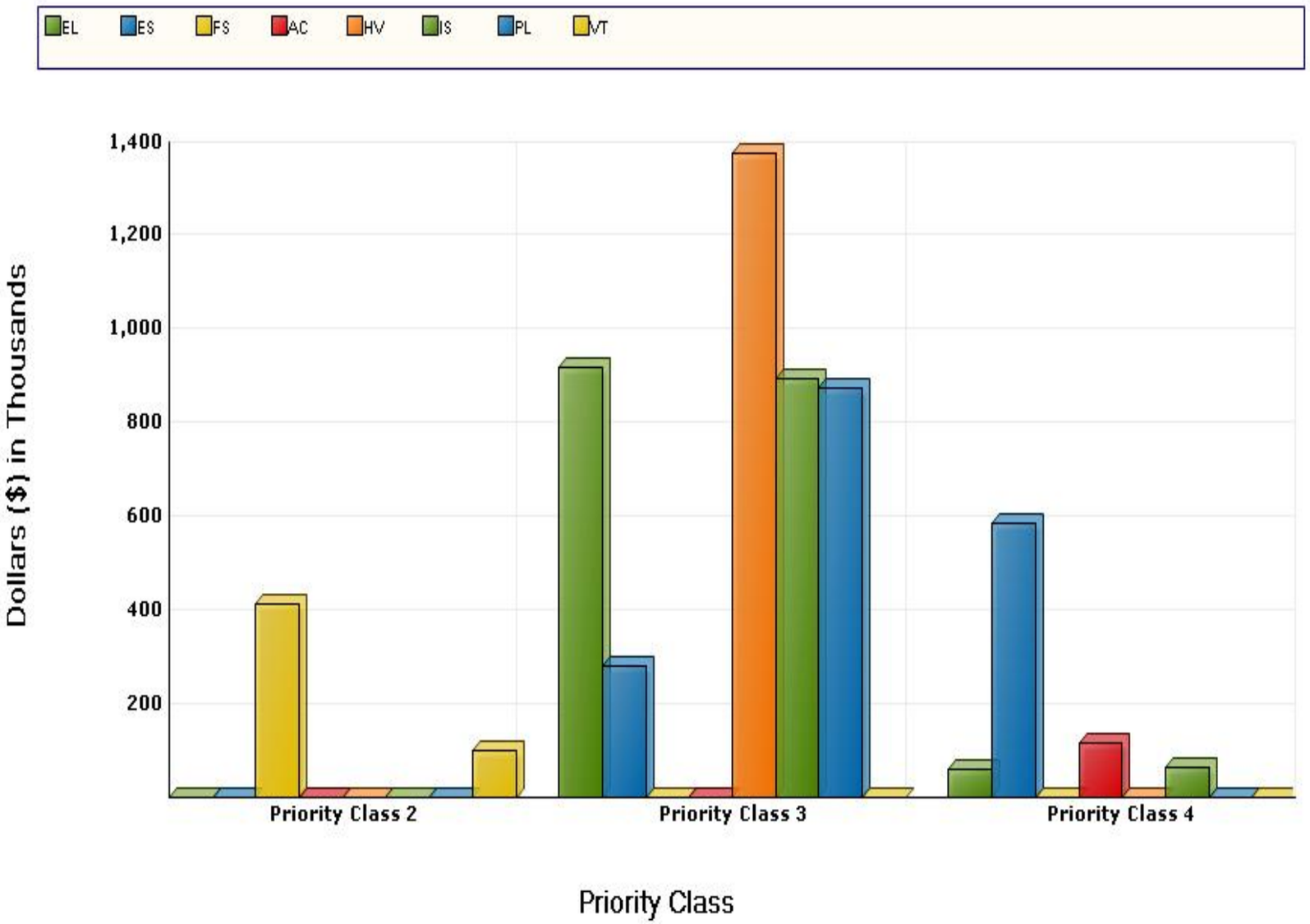
Facility Replacement Cost	$16,819,000
Facility Condition Needs Index	0.34

Gross Square Feet	58,950	**Total Cost Per Square Foot**	$96.51

FACILITY CONDITION ANALYSIS

System Code by Priority Class

FMUS : FLETCHER MUSIC CENTER



Detailed Project Totals

Facility Condition Analysis

System Code by Project Class

FMUS : FLETCHER MUSIC CENTER

System Code	System Description	Project Classes: Captial Renewal	Deferred Maintenance	Plant Adaption	Subtotal
AC	ACCESSIBILITY	0	0	117,567	117,567
EL	ELECTRICAL	61,334	917,944	0	979,278
ES	EXTERIOR	585,750	280,260	0	866,010
FS	FIRE/LIFE SAFETY	0	0	412,216	412,216
HV	HVAC	0	1,377,455	0	1,377,455
IS	INTERIOR/FINISH SYS.	66,861	893,560	0	960,421
PL	PLUMBING	0	876,452	0	876,452
VT	VERT. TRANSPORTATION	0	100,000	0	100,000
	TOTALS	713,945	4,445,670	529,783	5,689,398

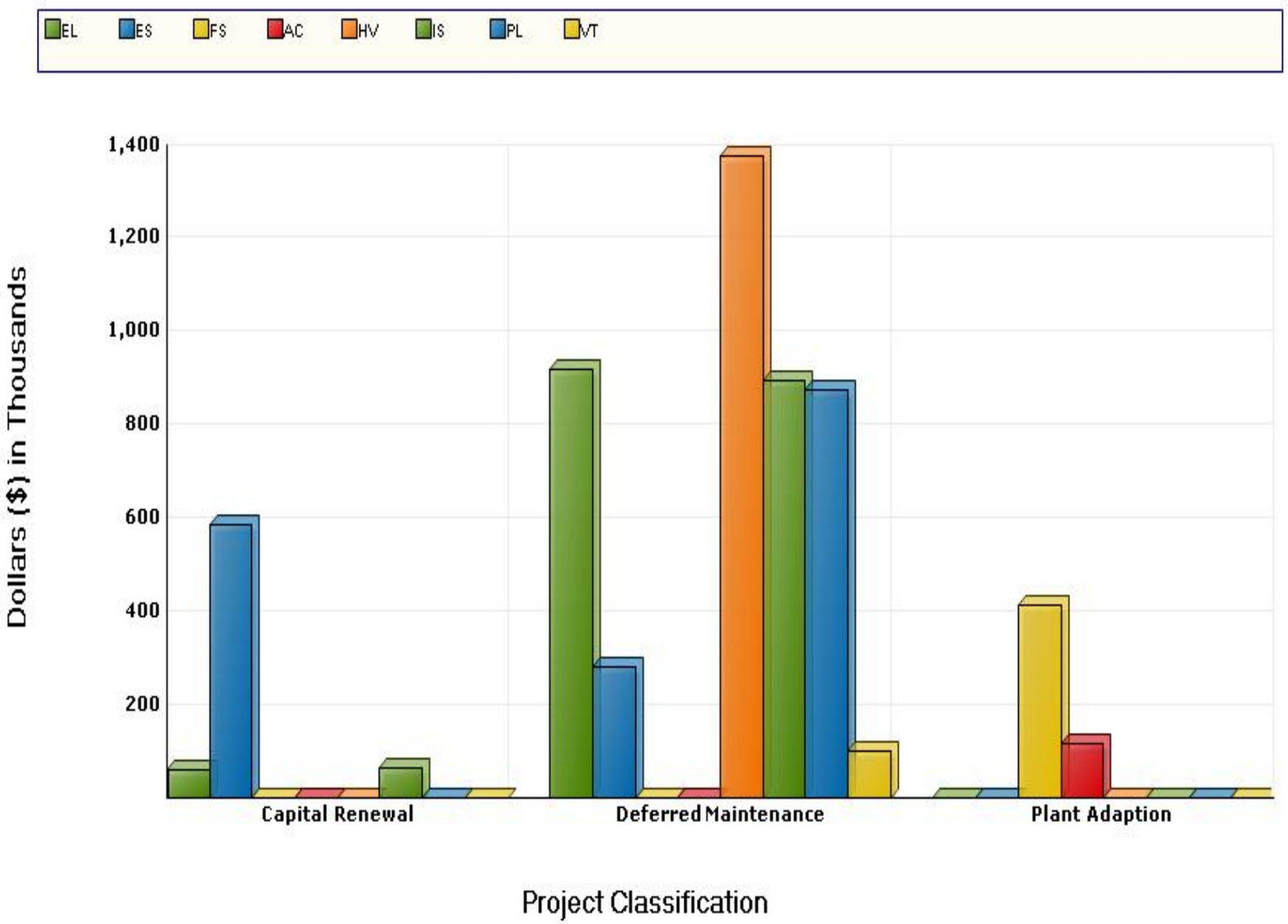
Facility Replacement Cost	$16,819,000
Facility Condition Needs Index	0.34

Gross Square Feet	58,950	**Total Cost Per Square Foot**	$96.51

FACILITY CONDITION ANALYSIS

System Code by Project Class

FMUS : FLETCHER MUSIC CENTER



Detailed Project Summary
Facility Condition Analysis
Project Class by Priority Class
FMUS : FLETCHER MUSIC CENTER

	Priority Classes				
Project Class	**1**	**2**	**3**	**4**	**Subtotal**
Capital Renewal	0	0	0	713,945	713,945
Deferred Maintenance	0	100,000	4,345,670	0	4,445,670
Plant Adaption	0	412,216	0	117,567	529,783
TOTALS	0	512,216	4,345,670	831,512	5,689,398

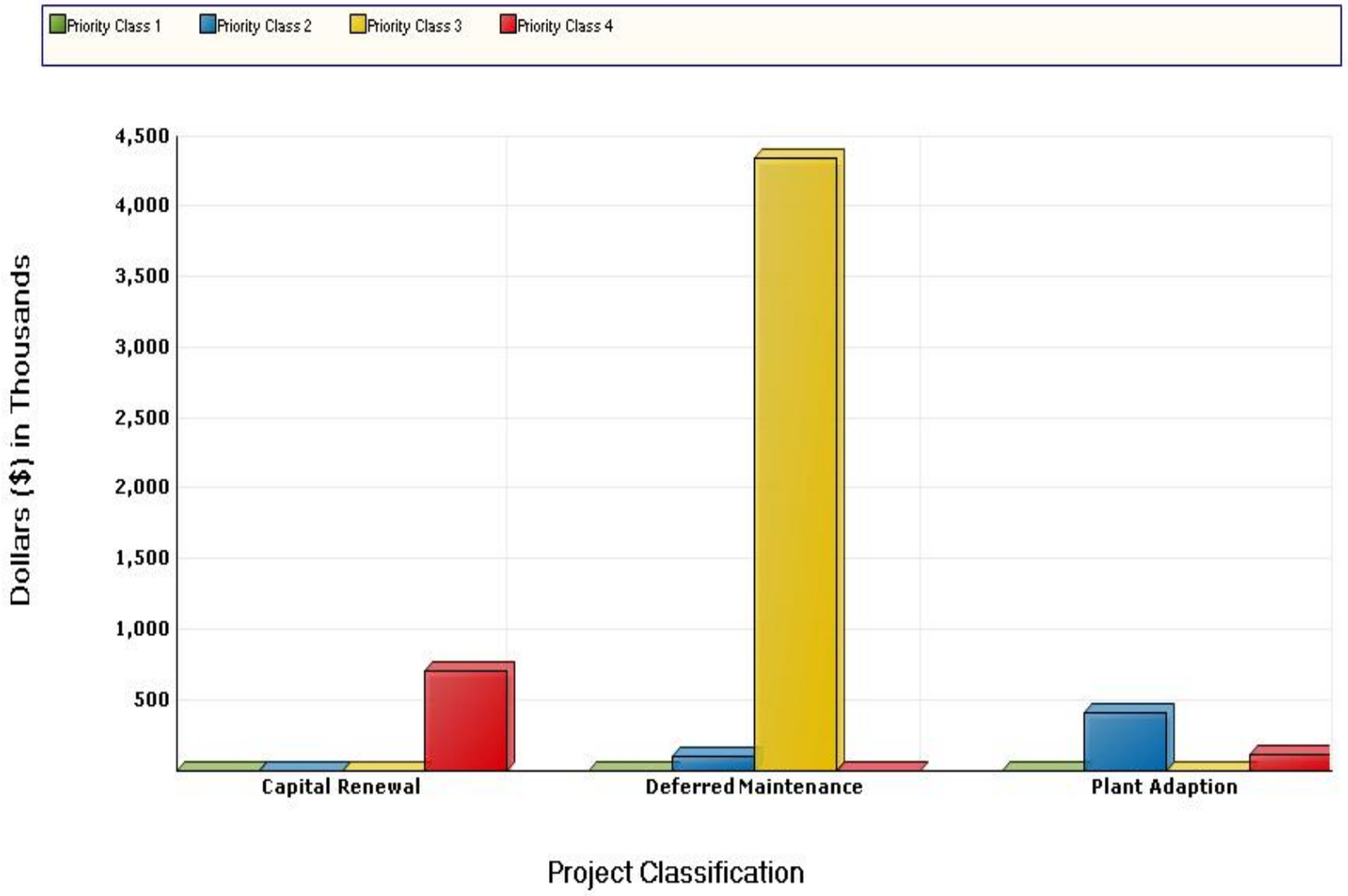
Facility Replacement Cost	$16,819,000
Facility Condition Needs Index	0.34

Gross Square Feet	58,950	**Total Cost Per Square Foot**	$96.51

FACILITY CONDITION ANALYSIS

Project Class by Priority Class

FMUS : FLETCHER MUSIC CENTER



Detailed Project Summary

Facility Condition Analysis

Priority Class - Priority Sequence

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	FMUSFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	355,358	56,857	412,216
VT7A	FMUSVT01	2	2	ELEVATOR NO. 1 UPGRADE	100,000	0	100,000
				Totals for Priority Class 2	**455,358**	**56,857**	**512,216**
ES4B	FMUSES05	3	3	BUILT-UP ROOF REPLACEMENT	193,807	31,009	224,816
ES5A	FMUSES03	3	4	EXTERIOR DOOR REPLACEMENT	25,380	4,061	29,441
ES2B	FMUSES01	3	5	RESTORE BRICK VENEER	17,933	2,869	20,803
ES2B	FMUSES02	3	6	RESTORE CONCRETE FINISH	4,483	717	5,201
HV3A	FMUSHV01	3	7	HVAC SYSTEM REPLACEMENT	1,187,461	189,994	1,377,455
EL2A	FMUSEL01	3	8	REPLACE 277/480 VOLT SWITCHGEAR	32,110	5,138	37,248
EL3B	FMUSEL03	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	516,913	82,706	599,619
EL4B	FMUSEL02	3	10	INTERIOR LIGHTING UPGRADE	242,308	38,769	281,077
IS1A	FMUSIS01	3	11	REFINISH FLOORING	230,113	36,818	266,931
IS2B	FMUSIS02	3	12	REFINISH WALLS	140,776	22,524	163,300
IS3B	FMUSIS03	3	13	REFINISH CEILINGS	104,902	16,784	121,686
IS4A	FMUSIS04	3	14	REPLACE INTERIOR DOORS	294,520	47,123	341,643
PL1A	FMUSPL02	3	15	WATER SUPPLY PIPING REPLACEMENT	293,691	46,990	340,681
PL2A	FMUSPL03	3	16	DRAIN PIPING REPLACEMENT	446,833	71,493	518,326
PL1E	FMUSPL01	3	17	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
				Totals for Priority Class 3	**3,746,268**	**599,403**	**4,345,670**
AC2A	FMUSAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	2,484	398	2,882
AC3F	FMUSAC02	4	19	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	30,378	4,860	35,238
AC3E	FMUSAC04	4	20	RESTROOM ACCESSIBILITY UPGRADES	24,799	3,968	28,767
AC4B	FMUSAC03	4	21	AUDITORIUM ACCESSIBILITY UPGRADES	15,851	2,536	18,387
AC3B	FMUSAC05	4	22	STAIR SAFETY UPGRADES	27,839	4,454	32,293
ES5B	FMUSES04	4	23	WINDOW REPLACEMENT	504,957	80,793	585,750
EL4A	FMUSEL04	4	24	EXTERIOR LIGHTING REPLACEMENT	52,874	8,460	61,334
IS6D	FMUSIS05	4	25	FIXED SEATING UPGRADE	57,638	9,222	66,861
				Totals for Priority Class 4	**716,821**	**114,691**	**831,512**
				Grand Total:	**4,918,447**	**770,951**	**5,689,398**

Detailed Project Summary

Facility Condition Analysis

Project Cost Range

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
EL2A	FMUSEL01	3	8	REPLACE 277/480 VOLT SWITCHGEAR	32,110	5,138	37,248
PL1E	FMUSPL01	3	17	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
ES2B	FMUSES01	3	5	RESTORE BRICK VENEER	17,933	2,869	20,803
ES2B	FMUSES02	3	6	RESTORE CONCRETE FINISH	4,483	717	5,201
ES5A	FMUSES03	3	4	EXTERIOR DOOR REPLACEMENT	25,380	4,061	29,441
				Totals for Priority Class 3	**94,945**	**15,191**	**110,136**
EL4A	FMUSEL04	4	24	EXTERIOR LIGHTING REPLACEMENT	52,874	8,460	61,334
AC2A	FMUSAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	2,484	398	2,882
AC3F	FMUSAC02	4	19	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	30,378	4,860	35,238
AC4B	FMUSAC03	4	21	AUDITORIUM ACCESSIBILITY UPGRADES	15,851	2,536	18,387
AC3E	FMUSAC04	4	20	RESTROOM ACCESSIBILITY UPGRADES	24,799	3,968	28,767
AC3B	FMUSAC05	4	22	STAIR SAFETY UPGRADES	27,839	4,454	32,293
IS6D	FMUSIS05	4	25	FIXED SEATING UPGRADE	57,638	9,222	66,861
				Totals for Priority Class 4	**211,864**	**33,898**	**245,762**
				Grand Totals for Projects < 100,000	**306,809**	**49,089**	**355,898**

Detailed Project Summary

Facility Condition Analysis

Project Cost Range

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	FMUSFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	355,358	56,857	412,216
				Totals for Priority Class 2	**355,358**	**56,857**	**412,216**
EL4B	FMUSEL02	3	10	INTERIOR LIGHTING UPGRADE	242,308	38,769	281,077
PL1A	FMUSPL02	3	15	WATER SUPPLY PIPING REPLACEMENT	293,691	46,990	340,681
ES4B	FMUSES05	3	3	BUILT-UP ROOF REPLACEMENT	193,807	31,009	224,816
IS1A	FMUSIS01	3	11	REFINISH FLOORING	230,113	36,818	266,931
IS2B	FMUSIS02	3	12	REFINISH WALLS	140,776	22,524	163,300
IS3B	FMUSIS03	3	13	REFINISH CEILINGS	104,902	16,784	121,686
IS4A	FMUSIS04	3	14	REPLACE INTERIOR DOORS	294,520	47,123	341,643
				Totals for Priority Class 3	**1,500,116**	**240,019**	**1,740,135**
				Grand Totals for Projects >= 100,000 and < 500,000	**1,855,475**	**296,876**	**2,152,351**

Detailed Project Summary

Facility Condition Analysis

Project Cost Range

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
HV3A	FMUSHV01	3	7	HVAC SYSTEM REPLACEMENT	1,187,461	189,994	1,377,455
EL3B	FMUSEL03	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	516,913	82,706	599,619
PL2A	FMUSPL03	3	16	DRAIN PIPING REPLACEMENT	446,833	71,493	518,326
				Totals for Priority Class 3	**2,151,207**	**344,193**	**2,495,400**
ES5B	FMUSES04	4	23	WINDOW REPLACEMENT	504,957	80,793	585,750
				Totals for Priority Class 4	**504,957**	**80,793**	**585,750**
				Grand Totals for Projects >= 500,000	**2,656,163**	**424,986**	**3,081,149**
				Grand Totals For All Projects:	**4,818,447**	**770,951**	**5,589,398**

Detailed Project Summary

Facility Condition Analysis

Project Classification

FMUS : FLETCHER MUSIC CENTER

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
ES5B	FMUSES04	23	Capital Renewal	4	WINDOW REPLACEMENT	585,750
EL4A	FMUSEL04	24	Capital Renewal	4	EXTERIOR LIGHTING REPLACEMENT	61,334
IS6D	FMUSIS05	25	Capital Renewal	4	FIXED SEATING UPGRADE	66,861
					Totals for Capital Renewal	**713,945**
VT7A	FMUSVT01	2	Deferred Maintenance	2	ELEVATOR NO. 1 UPGRADE	100,000
ES4B	FMUSES05	3	Deferred Maintenance	3	BUILT-UP ROOF REPLACEMENT	224,816
ES5A	FMUSES03	4	Deferred Maintenance	3	EXTERIOR DOOR REPLACEMENT	29,441
ES2B	FMUSES01	5	Deferred Maintenance	3	RESTORE BRICK VENEER	20,803
ES2B	FMUSES02	6	Deferred Maintenance	3	RESTORE CONCRETE FINISH	5,201
HV3A	FMUSHV01	7	Deferred Maintenance	3	HVAC SYSTEM REPLACEMENT	1,377,455
EL2A	FMUSEL01	8	Deferred Maintenance	3	REPLACE 277/480 VOLT SWITCHGEAR	37,248
EL3B	FMUSEL03	9	Deferred Maintenance	3	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	599,619
EL4B	FMUSEL02	10	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	281,077
IS1A	FMUSIS01	11	Deferred Maintenance	3	REFINISH FLOORING	266,931
IS2B	FMUSIS02	12	Deferred Maintenance	3	REFINISH WALLS	163,300
IS3B	FMUSIS03	13	Deferred Maintenance	3	REFINISH CEILINGS	121,686
IS4A	FMUSIS04	14	Deferred Maintenance	3	REPLACE INTERIOR DOORS	341,643
PL1A	FMUSPL02	15	Deferred Maintenance	3	WATER SUPPLY PIPING REPLACEMENT	340,681
PL2A	FMUSPL03	16	Deferred Maintenance	3	DRAIN PIPING REPLACEMENT	518,326
PL1E	FMUSPL01	17	Deferred Maintenance	3	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	17,445
					Totals for Deferred Maintenance	**4,445,670**
FS3A	FMUSFS01	1	Plant Adaption	2	FIRE SPRINKLER SYSTEM EXTENSION	412,216
AC2A	FMUSAC01	18	Plant Adaption	4	BUILDING ENTRY ACCESSIBILITY UPGRADES	2,882
AC3F	FMUSAC02	19	Plant Adaption	4	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	35,238
AC3E	FMUSAC04	20	Plant Adaption	4	RESTROOM ACCESSIBILITY UPGRADES	28,767
AC4B	FMUSAC03	21	Plant Adaption	4	AUDITORIUM ACCESSIBILITY UPGRADES	18,387
AC3B	FMUSAC05	22	Plant Adaption	4	STAIR SAFETY UPGRADES	32,293
					Totals for Plant Adaption	**529,783**

Detailed Project Summary

Facility Condition Analysis

Project Classification

FMUS : FLETCHER MUSIC CENTER

Grand Total:	**5,689,398**

Detailed Project Summary

Facility Condition Analysis

Energy Conservation

FMUS : FLETCHER MUSIC CENTER

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
ES4B	FMUSES05	3	3	BUILT-UP ROOF REPLACEMENT	224,816	2,900	77.52
HV3A	FMUSHV01	3	7	HVAC SYSTEM REPLACEMENT	1,377,455	24,880	55.36
EL4B	FMUSEL02	3	10	INTERIOR LIGHTING UPGRADE	281,077	13,450	20.9
				Totals for Priority Class 3	**1,883,348**	**41,230**	**45.68**
ES5B	FMUSES04	4	23	WINDOW REPLACEMENT	585,750	1,200	488.12
EL4A	FMUSEL04	4	24	EXTERIOR LIGHTING REPLACEMENT	61,334	650	94.36
				Totals for Priority Class 4	**647,084**	**1,850**	**349.78**
				Grand Total:	**2,530,432**	**43,080**	**58.74**

Detailed Project Summary

Facility Condition Analysis

Category/System Code

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC2A	FMUSAC01	4	18	BUILDING ENTRY ACCESSIBILITY UPGRADES	2,484	398	2,882
AC3F	FMUSAC02	4	19	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	30,378	4,860	35,238
AC3E	FMUSAC04	4	20	RESTROOM ACCESSIBILITY UPGRADES	24,799	3,968	28,767
AC4B	FMUSAC03	4	21	AUDITORIUM ACCESSIBILITY UPGRADES	15,851	2,536	18,387
AC3B	FMUSAC05	4	22	STAIR SAFETY UPGRADES	27,839	4,454	32,293
				Totals for System Code: ACCESSIBILITY	**101,351**	**16,216**	**117,567**
EL2A	FMUSEL01	3	8	REPLACE 277/480 VOLT SWITCHGEAR	32,110	5,138	37,248
EL3B	FMUSEL03	3	9	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	516,913	82,706	599,619
EL4B	FMUSEL02	3	10	INTERIOR LIGHTING UPGRADE	242,308	38,769	281,077
EL4A	FMUSEL04	4	24	EXTERIOR LIGHTING REPLACEMENT	52,874	8,460	61,334
				Totals for System Code: ELECTRICAL	**844,205**	**135,073**	**979,278**
ES4B	FMUSES05	3	3	BUILT-UP ROOF REPLACEMENT	193,807	31,009	224,816
ES5A	FMUSES03	3	4	EXTERIOR DOOR REPLACEMENT	25,380	4,061	29,441
ES2B	FMUSES01	3	5	RESTORE BRICK VENEER	17,933	2,869	20,803
ES2B	FMUSES02	3	6	RESTORE CONCRETE FINISH	4,483	717	5,201
ES5B	FMUSES04	4	23	WINDOW REPLACEMENT	504,957	80,793	585,750
				Totals for System Code: EXTERIOR	**746,560**	**119,450**	**866,010**
FS3A	FMUSFS01	2	1	FIRE SPRINKLER SYSTEM EXTENSION	355,358	56,857	412,216
				Totals for System Code: FIRE/LIFE SAFETY	**355,358**	**56,857**	**412,216**
HV3A	FMUSHV01	3	7	HVAC SYSTEM REPLACEMENT	1,187,461	189,994	1,377,455
				Totals for System Code: HVAC	**1,187,461**	**189,994**	**1,377,455**
IS1A	FMUSIS01	3	11	REFINISH FLOORING	230,113	36,818	266,931
IS2B	FMUSIS02	3	12	REFINISH WALLS	140,776	22,524	163,300
IS3B	FMUSIS03	3	13	REFINISH CEILINGS	104,902	16,784	121,686
IS4A	FMUSIS04	3	14	REPLACE INTERIOR DOORS	294,520	47,123	341,643
IS6D	FMUSIS05	4	25	FIXED SEATING UPGRADE	57,638	9,222	66,861
				Totals for System Code: INTERIOR/FINISH SYS.	**827,949**	**132,472**	**960,421**
PL1A	FMUSPL02	3	15	WATER SUPPLY PIPING REPLACEMENT	293,691	46,990	340,681
PL2A	FMUSPL03	3	16	DRAIN PIPING REPLACEMENT	446,833	71,493	518,326
PL1E	FMUSPL01	3	17	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
				Totals for System Code: PLUMBING	**755,562**	**120,890**	**876,452**

Detailed Project Summary

Facility Condition Analysis

Category/System Code

FMUS : FLETCHER MUSIC CENTER

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
VT7A	FMUSVT01	2	2	ELEVATOR NO. 1 UPGRADE	100,000	0	100,000
				Totals for System Code: VERT. TRANSPORTATION	**100,000**		**100,000**
				Grand Total:	**4,918,447**	**770,951**	**5,689,398**

FACILITY CONDITION ANALYSIS

SECTION 3

SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSFS01	**Title:**	FIRE SPRINKLER SYSTEM EXTENSION
Priority Sequence:	1		
Priority Class:	2		
Category Code:	FS3A	**System:**	FIRE/LIFE SAFETY
		Component:	SUPPRESSION
		Element:	SPRINKLERS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

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

Project Class:	Plant Adaption
Project Date:	10/20/2009
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
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSFS01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install a wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	58,800	$3.08	$181,104	$3.77	$221,676	$402,780
Fire sprinkler head replacement	SF	150	$0.09	$14	$0.35	$53	$66
Project Totals:				**$181,118**		**$221,729**	**$402,846**

Material/Labor Cost		$402,846
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$296,132
General Contractor Mark Up at 20.0%	+	$59,226
Construction Cost		$355,358
Professional Fees at 16.0%	+	$56,857
Total Project Cost		**$412,216**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSVT01	**Title:**	ELEVATOR NO. 1 UPGRADE
Priority Sequence:	2		
Priority Class:	2		
Category Code:	VT7A	**System:**	VERT. TRANSPORTATION
		Component:	GENERAL
		Element:	OTHER
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/12/2009		
Project Location:	Item Only: Floor(s) 1, 2, 3		

Project Description

Replace the single bottom hydraulic jack cylinder with a new jack assembly. Recommend replacement of the motion / motor / operation controller, pumping unit complete with motor, pump, valve, door operator, hangers, hanger tracks, rollers, related door hardware, car operating panel, signal fixtures, and refurbish interior of car enclosure. Should a new hole be required to be drilled for the new hydraulic jack assembly, the cost can exceed $50,000.

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSVT01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Client-reported cost to modernize elevator	EA	1	$100,000	$100,000	$0.00	$	$100,000
Project Totals:				**$100,000**		**$**	**$100,000**

Material/Labor Cost	$100,000
Material Index	100.7%
Labor Index	51.3%
Material/Labor Indexed Cost	$100,000
No GCM Required	
Construction Cost	$100,000
No Professional Fees Required	
Total Project Cost	**$100,000**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSES05	**Title:**	BUILT-UP ROOF REPLACEMENT
Priority Sequence:	3		
Priority Class:	3		
Category Code:	ES4B	**System:**	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Energy Conservation $2,900		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Floor-wide: Floor(s) R		

Project Description

It is recommended that the built-up roofing system be replaced. The existing stress conditions around the seams and at the perimeter flashing will lead to failure if left unattended. Replace the stressed roof and flashing with a similar application.

Project Cost

Project Number: FMUSES05

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Built-up roof	SF	32,840	$3.06	$100,490	$3.58	$117,567	$218,058
Project Totals:				**$100,490**		**$117,567**	**$218,058**

Material/Labor Cost		$218,058
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$161,506
General Contractor Mark Up at 20.0%	+	$32,301
Construction Cost		$193,807
Professional Fees at 16.0%	+	$31,009
Total Project Cost		**$224,816**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSES03	**Title:**	EXTERIOR DOOR REPLACEMENT
Priority Sequence:	4		
Priority Class:	3		
Category Code:	ES5A	**System:**	EXTERIOR
		Component:	FENESTRATIONS
		Element:	DOORS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

The main entrance has metal-frame glazed doors, while the secondary entrances are hollow metal. It is recommended that aged and inefficient primary and secondary entrance and service doors be replaced. The replacement units should maintain the architectural design aspects of this facility and should be modern, energy-efficient applications.

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSES03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High traffic door system	LEAF	2	$1,978	$3,956	$1,999	$3,998	$7,954
Low traffic door system	LEAF	9	$1,031	$9,279	$1,250	$11,250	$20,529
Project Totals:				**$13,235**		**$15,248**	**$28,483**

Material/Labor Cost		$28,483
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$21,150
General Contractor Mark Up at 20.0%	+	$4,230
Construction Cost		$25,380
Professional Fees at 16.0%	+	$4,061
Total Project Cost		**$29,441**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSES01	**Title:**	RESTORE BRICK VENEER
Priority Sequence:	5		
Priority Class:	3		
Category Code:	ES2B	**System:**	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
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.

Project Cost

Project Number: FMUSES01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	10,920	$0.11	$1,201	$0.22	$2,402	$3,604
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	1,092	$2.45	$2,675	$4.99	$5,449	$8,124
Applied finish or sealant	SF	10,920	$0.22	$2,402	$0.82	$8,954	$11,357
Project Totals:				**$6,279**		**$16,806**	**$23,085**

Material/Labor Cost		$23,085
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$14,944
General Contractor Mark Up at 20.0%	+	$2,989
Construction Cost		$17,933
Professional Fees at 16.0%	+	$2,869
Total Project Cost		**$20,803**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSES02	**Title:**	RESTORE CONCRETE FINISH
Priority Sequence:	6		
Priority Class:	3		
Category Code:	ES2B	**System:**	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

The concrete exterior has become visibly soiled, and the construction joints are failing. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSES02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	2,730	$0.11	$300	$0.22	$601	$901
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	273	$2.45	$669	$4.99	$1,362	$2,031
Applied finish or sealant	SF	2,730	$0.22	$601	$0.82	$2,239	$2,839
Project Totals:				**$1,570**		**$4,201**	**$5,771**

Material/Labor Cost		$5,771
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$3,736
General Contractor Mark Up at 20.0%	+	$747
Construction Cost		$4,483
Professional Fees at 16.0%	+	$717
Total Project Cost		**$5,201**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSHV01	**Title:**	HVAC SYSTEM REPLACEMENT
Priority Sequence:	7		
Priority Class:	3		
Category Code:	HV3A	**System:**	HVAC
		Component:	HEATING/COOLING
		Element:	SYSTEM RETROFIT/REPLACE
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Energy Conservation	$24,880	
Code Application:	ASHRAE	62-2004	
Project Class:	Deferred Maintenance		
Project Date:	10/20/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, R		

Project Description

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

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSHV01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Air handlers, exhaust fans, ductwork, VAVs, VFDs, DDCs, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment	SF	43,950	$13.78	$605,631	$16.84	$740,118	$1,345,749
Project Totals:				**$605,631**		**$740,118**	**$1,345,749**

Material/Labor Cost		$1,345,749
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$989,551
General Contractor Mark Up at 20.0%	+	$197,910
Construction Cost		$1,187,461
Professional Fees at 16.0%	+	$189,994
Total Project Cost		**$1,377,455**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSEL01	**Title:**	REPLACE 277/480 VOLT SWITCHGEAR
Priority Sequence:	8		
Priority Class:	3		
Category Code:	EL2A	**System:**	ELECTRICAL
		Component:	MAIN DISTRIBUTION PANELS
		Element:	CONDITION UPGRADE
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	NEC Article 230		
Project Class:	Deferred Maintenance		
Project Date:	10/20/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

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

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSEL01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
277/480 V switchgear, includes switchboard, circuit breakers, feeders, digital metering, transient surge protector, and demolition of existing equipment	AMP	1,000	$18.62	$18,620	$15.61	$15,610	$34,230
Project Totals:				**$18,620**		**$15,610**	**$34,230**

Material/Labor Cost		$34,230
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$26,758
General Contractor Mark Up at 20.0%	+	$5,352
Construction Cost		$32,110
Professional Fees at 16.0%	+	$5,138
Total Project Cost		**$37,248**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSEL03	**Title:**	UPGRADE ELECTRICAL DISTRIBUTION NETWORK
Priority Sequence:	9		
Priority Class:	3		
Category Code:	EL3B	**System:**	ELECTRICAL
		Component:	SECONDARY DISTRIBUTION
		Element:	DISTRIBUTION NETWORK
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

Code Application: NEC Articles 110, 210, 220, 230

Project Class: Deferred Maintenance

Project Date: 10/20/2009

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, could serve as fire hazards if they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification.

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSEL03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Power panels, conductors, raceways, devices, demolition, and cut and patching materials	SF	43,950	$5.52	$242,604	$8.27	$363,467	$606,071
Project Totals:				**$242,604**		**$363,467**	**$606,071**

Material/Labor Cost		$606,071
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$430,761
General Contractor Mark Up at 20.0%	+	$86,152
Construction Cost		$516,913
Professional Fees at 16.0%	+	$82,706
Total Project Cost		**$599,619**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSEL02	**Title:**	INTERIOR LIGHTING UPGRADE
Priority Sequence:	10		
Priority Class:	3		
Category Code:	EL4B	**System:**	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	INTERIOR LIGHTING
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Energy Conservation $13,450		
Code Application:	NEC Articles 210, 410		
Project Class:	Deferred Maintenance		
Project Date:	10/20/2009		
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
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSEL02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High efficiency fluorescent fixtures, occupancy sensors, and demolition of existing lighting	SF	43,950	$2.81	$123,500	$3.44	$151,188	$274,688
Project Totals:				**$123,500**		**$151,188**	**$274,688**

Material/Labor Cost		$274,688
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$201,923
General Contractor Mark Up at 20.0%	+	$40,385
Construction Cost		$242,308
Professional Fees at 16.0%	+	$38,769
Total Project Cost		**$281,077**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSIS01	**Title:**	REFINISH FLOORING
Priority Sequence:	11		
Priority Class:	3		
Category Code:	IS1A	**System:**	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Floor finishes are typically carpet, vinyl tile, or ceramic tile. 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
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSIS01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	12,560	$5.36	$67,322	$2.00	$25,120	$92,442
Vinyl floor tile	SF	18,833	$3.53	$66,480	$2.50	$47,083	$113,563
Ceramic tile	SF	1,568	$7.24	$11,352	$10.63	$16,668	$28,020
Project Totals:				**$145,154**		**$88,870**	**$234,025**

Material/Labor Cost		$234,025
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$191,761
General Contractor Mark Up at 20.0%	+	$38,352
Construction Cost		$230,113
Professional Fees at 16.0%	+	$36,818
Total Project Cost		**$266,931**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSIS02	**Title:**	REFINISH WALLS
Priority Sequence:	12		
Priority Class:	3		
Category Code:	IS2B	**System:**	INTERIOR/FINISH SYS.
		Component:	PARTITIONS
		Element:	FINISHES
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

The wall finishes are generally painted sheetrock, with insulated acoustical material lining the practice rooms. The interior walls are in fair condition, with minor damage and finish discoloration. 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
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSIS02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	59,520	$0.17	$10,118	$0.81	$48,211	$58,330
Premium wall finish (epoxy, tile, wood panel, etc.)	SF	19,130	$2.28	$43,616	$3.92	$74,990	$118,606
Project Totals:				**$53,735**		**$123,201**	**$176,936**

Material/Labor Cost		$176,936
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$117,313
General Contractor Mark Up at 20.0%	+	$23,463
Construction Cost		$140,776
Professional Fees at 16.0%	+	$22,524
Total Project Cost		**$163,300**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSIS03	**Title:**	REFINISH CEILINGS
Priority Sequence:	13		
Priority Class:	3		
Category Code:	IS3B	**System:**	INTERIOR/FINISH SYS.
		Component:	CEILINGS
		Element:	REPLACEMENT
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Ceilings are a combination of painted sheetrock and suspended, acoustical tile systems. They are in fair condition, with minor areas of damaged tile and discoloration. 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
FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSIS03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical tile ceiling system	SF	22,605	$2.12	$47,923	$2.98	$67,363	$115,286
Painted ceiling finish application	SF	7,845	$0.17	$1,334	$0.81	$6,354	$7,688
Project Totals:				**$49,256**		**$73,717**	**$122,974**

Material/Labor Cost		$122,974
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$87,418
General Contractor Mark Up at 20.0%	+	$17,484
Construction Cost		$104,902
Professional Fees at 16.0%	+	$16,784
Total Project Cost		**$121,686**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSIS04	**Title:**	REPLACE INTERIOR DOORS
Priority Sequence:	14		
Priority Class:	3		
Category Code:	IS4A	**System:**	INTERIOR/FINISH SYS.
		Component:	DOORS
		Element:	GENERAL
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	11/19/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Interior doors typically have the proper labeled smoke / fire rating as required by code, but are in poor condition. Replacement is recommended as part of a comprehensive renovation effort. Install the new doors according to a code compliant plan to properly protect egress passages.

Project Cost

Project Number: FMUSIS04

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Interior door and frame installation, with all hardware and accessible signage	EA	75	$370	$27,750	$396	$29,700	$57,450
Rated door and rated metal frame, including all hardware and accessible signage	EA	185	$672	$124,320	$812	$150,220	$274,540
Project Totals:				**$152,070**		**$179,920**	**$331,990**

Material/Labor Cost		$331,990
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$245,433
General Contractor Mark Up at 20.0%	+	$49,087
Construction Cost		$294,520
Professional Fees at 16.0%	+	$47,123
Total Project Cost		**$341,643**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSPL02	**Title:**	WATER SUPPLY PIPING REPLACEMENT
Priority Sequence:	15		
Priority Class:	3		
Category Code:	PL1A	**System:**	PLUMBING
		Component:	DOMESTIC WATER
		Element:	PIPING NETWORK
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	IPC Chapter 6		
Project Class:	Deferred Maintenance		
Project Date:	10/20/2009		
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.

Project Cost

Project Number: FMUSPL02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Copper pipe and fittings, valves, backflow prevention devices, insulation, hangers, demolition, and cut and patching materials	SF	58,950	$1.81	$106,700	$4.54	$267,633	$374,333
Project Totals:				**$106,700**		**$267,633**	**$374,333**

Material/Labor Cost		$374,333
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$244,742
General Contractor Mark Up at 20.0%	+	$48,948
Construction Cost		$293,691
Professional Fees at 16.0%	+	$46,990
Total Project Cost		**$340,681**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSPL03	**Title:**	DRAIN PIPING REPLACEMENT
Priority Sequence:	16		
Priority Class:	3		
Category Code:	PL2A	**System:**	PLUMBING
		Component:	WASTEWATER
		Element:	PIPING NETWORK
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

Code Application: IPC Chapters 7-11

Project Class:	Deferred Maintenance
Project Date:	10/20/2009
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.

Project Cost

Project Number: FMUSPL03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cast-iron drain piping and fittings, copper pipe and fittings, floor / roof drains, traps, hangers, demolition, and cut and patching materials	SF	58,950	$2.89	$170,366	$6.64	$391,428	$561,794
Project Totals:				**$170,366**		**$391,428**	**$561,794**

Material/Labor Cost		$561,794
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$372,361
General Contractor Mark Up at 20.0%	+	$74,472
Construction Cost		$446,833
Professional Fees at 16.0%	+	$71,493
Total Project Cost		**$518,326**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSPL01	**Title:**	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT
Priority Sequence:	17		
Priority Class:	3		
Category Code:	PL1E	**System:**	PLUMBING
		Component:	DOMESTIC WATER
		Element:	HEATING
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/20/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

Replacement of the domestic hot water converter is recommended. With age, heat exchanger efficiency is reduced by internal tube scaling. Internal wear will eventually lead to failure, allowing contaminates to enter the water system. Remove the existing system. Install a new heat exchanger, pumps, piping, and controls as needed.

Project Cost

Project Number: FMUSPL01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Heat exchanger, pumps, piping, valves, controls, insulation, demolition	GPM	48	$183	$8,789	$150	$7,177	$15,966
Project Totals:				**$8,789**		**$7,177**	**$15,966**

Material/Labor Cost		$15,966
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$12,532
General Contractor Mark Up at 20.0%	+	$2,506
Construction Cost		$15,039
Professional Fees at 16.0%	+	$2,406
Total Project Cost		**$17,445**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSAC01	**Title:**	BUILDING ENTRY ACCESSIBILITY UPGRADES
Priority Sequence:	18		
Priority Class:	4		
Category Code:	AC2A	**System:**	ACCESSIBILITY
		Component:	BUILDING ENTRY
		Element:	GENERAL
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

Code Application: ADAAG 403.6, 505

Project Class:	Plant Adaption
Project Date:	11/19/2009
Project Location:	Undefined: Floor(s) 1

Project Description

There are various stairs and ramps that lead into the building. Most of these are equipped with metal railings that do not meet current design specifications for accessibility. To comply with the intent of ADA legislation, it is recommended that ADA compliant, painted metal handrails be installed at all entrances as required.

Project Cost

Project Number: FMUSAC01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system, painted	LF	30	$50.50	$1,515	$35.40	$1,062	$2,577
Project Totals:				**$1,515**		**$1,062**	**$2,577**

Material/Labor Cost		$2,577
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$2,070
General Contractor Mark Up at 20.0%	+	$414
Construction Cost		$2,485
Professional Fees at 16.0%	+	$398
Total Project Cost		**$2,882**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSAC02	**Title:**	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES
Priority Sequence:	19		
Priority Class:	4		
Category Code:	AC3F	**System:**	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	DRINKING FOUNTAINS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

Code Application:	ADAAG	211, 602

Project Class:	Plant Adaption
Project Date:	11/19/2009
Project Location:	Floor-wide: Floor(s) 1, 2, 3

Project Description

Building amenities are required to be generally accessible to all persons. There are single level drinking fountains on each floor of the building. The single level configuration is a barrier to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

Specific Project Details

Facility Condition Analysis
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FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSAC02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Dual level drinking fountain	EA	6	$1,216	$7,296	$374	$2,244	$9,540
Alcove construction including finishes	EA	6	$877	$5,262	$3,742	$22,452	$27,714
Project Totals:				**$12,558**		**$24,696**	**$37,254**

Material/Labor Cost		$37,254
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$25,315
General Contractor Mark Up at 20.0%	+	$5,063
Construction Cost		$30,378
Professional Fees at 16.0%	+	$4,860
Total Project Cost		**$35,238**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSAC04	**Title:**	RESTROOM ACCESSIBILITY UPGRADES
Priority Sequence:	20		
Priority Class:	4		
Category Code:	AC3E	**System:**	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	RESTROOMS/BATHROOMS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

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

Project Class:	Plant Adaption
Project Date:	11/19/2009
Project Location:	Floor-wide: Floor(s) 1, 2, 3

Project Description

The overall level of restroom accessibility is fair, but short of full compliance with modern accessibility legislation. Restroom size is adequate, but fixture and partition spacing does not provide compliant clearances and clear floor spaces. A reduction in the number of water closets, upgrades to select plumbing fixtures, and the installation of new partitions and ADA compliant accessories is recommended.

Project Cost

Project Number: FMUSAC04

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA compliant plumbing fixture	EA	14	$810	$11,340	$692	$9,688	$21,028
Toilet partition modifications and accessories	SYS	2	$1,614	$3,228	$1,000	$2,000	$5,228
Project Totals:				**$14,568**		**$11,688**	**$26,256**

Material/Labor Cost		$26,256
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$20,666
General Contractor Mark Up at 20.0%	+	$4,133
Construction Cost		$24,799
Professional Fees at 16.0%	+	$3,968
Total Project Cost		**$28,767**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSAC03	**Title:**	AUDITORIUM ACCESSIBILITY UPGRADES
Priority Sequence:	21		
Priority Class:	4		
Category Code:	AC4B	**System:**	ACCESSIBILITY
		Component:	GENERAL
		Element:	OTHER
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG 806, 505		
Project Class:	Plant Adaption		
Project Date:	11/19/2009		
Project Location:	Undefined: Floor(s) 1		

Project Description

The formal recital hall does not provide wheelchair access to the stage area, nor is it equipped with accessible seating. Current accessibility legislation requires that places of assembly be accessible to the handicapped. In order to provide adequate access, it is recommended that a wheelchair lift be installed at the stage. Also, it is recommended that accessible seating be installed, along with wall-mounted, ADA compliant, painted metal handrails, which are lacking at the ramps.

Project Cost

Project Number: FMUSAC03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Table and seating modifications	LOT	2	$885	$1,770	$555	$1,110	$2,880
Stage wheelchair lift	SYS	1	$7,289	$7,289	$4,165	$4,165	$11,454
Wall-mounted handrail system	LF	20	$50.50	$1,010	$35.40	$708	$1,718
Project Totals:				**$10,069**		**$5,983**	**$16,052**

Material/Labor Cost		$16,052
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$13,209
General Contractor Mark Up at 20.0%	+	$2,642
Construction Cost		$15,851
Professional Fees at 16.0%	+	$2,536
Total Project Cost		**$18,387**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSAC05	**Title:**	STAIR SAFETY UPGRADES
Priority Sequence:	22		
Priority Class:	4		
Category Code:	AC3B	**System:**	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	STAIRS AND RAILINGS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		

Code Application:	IBC	1003.3
	ADAAG	505

Project Class:	Plant Adaption
Project Date:	11/19/2009
Project Location:	Floor-wide: Floor(s) 1, 2, 3

Project Description

Current accessibility legislation 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 4 inch diameter sphere (6 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
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FMUS : FLETCHER MUSIC CENTER

Project Cost

Project Number: FMUSAC05

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system per floor	FLR	9	$573	$5,157	$521	$4,689	$9,846
Center handrail / guardrail system per floor	FLR	9	$1,297	$11,673	$833	$7,497	$19,170
Project Totals:				**$16,830**		**$12,186**	**$29,016**

Material/Labor Cost		$29,016
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$23,199
General Contractor Mark Up at 20.0%	+	$4,640
Construction Cost		$27,839
Professional Fees at 16.0%	+	$4,454
Total Project Cost		**$32,293**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSES04	**Title:**	WINDOW REPLACEMENT
Priority Sequence:	23		
Priority Class:	4		
Category Code:	ES5B	**System:**	EXTERIOR
		Component:	FENESTRATIONS
		Element:	WINDOWS
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Energy Conservation $1,200		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	11/19/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

The 1966 section of the building has aluminum-frame window systems with single-pane glazing. The 2005 section has energy-efficient thermal glazing. It is recommended that the single-pane, aluminum-frame windows be upgraded to thermal-pane systems, which will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary.

Project Cost

Project Number: FMUSES04

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Typical standard glazing applications	SF	5,510	$57.27	$315,558	$36.45	$200,840	$516,397
Project Totals:				**$315,558**		**$200,840**	**$516,397**

Material/Labor Cost		$516,397
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$420,797
General Contractor Mark Up at 20.0%	+	$84,159
Construction Cost		$504,957
Professional Fees at 16.0%	+	$80,793
Total Project Cost		**$585,750**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSEL04	**Title:**	EXTERIOR LIGHTING REPLACEMENT
Priority Sequence:	24		
Priority Class:	4		
Category Code:	EL4A	**System:**	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	EXTERIOR LIGHTING
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Energy Conservation $650		
Code Application:	NEC 410		
Project Class:	Capital Renewal		
Project Date:	10/20/2009		
Project Location:	Building-wide: Floor(s) 1, 2, 3, R		

Project Description

The exterior areas adjacent to the building are illuminated by building-mounted HID, compact fluorescent, and stanchion-mounted fixtures that are currently in good condition. However, their replacement should be scheduled within the outlook of this report due to predictable wear. Install new energy-efficient fixtures, and place them on photocell activation.

Project Cost

Project Number: FMUSEL04

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
HID wall-mount fixture and demolition of existing fixture	EA	10	$406	$4,060	$190	$1,900	$5,960
Compact fluorescent, recessed exterior light and demolition of existing light	EA	10	$143	$1,430	$100	$1,000	$2,430
Replace lighting stanchion, including fixture, 30 foot	EA	10	$2,662	$26,620	$1,996	$19,960	$46,580
Project Totals:				**$32,110**		**$22,860**	**$54,970**

Material/Labor Cost		$54,970
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$44,062
General Contractor Mark Up at 20.0%	+	$8,812
Construction Cost		$52,874
Professional Fees at 16.0%	+	$8,460
Total Project Cost		**$61,334**

Specific Project Details

Facility Condition Analysis
Section Three
FMUS : FLETCHER MUSIC CENTER

Project Description

Project Number:	FMUSIS05	**Title:**	FIXED SEATING UPGRADE
Priority Sequence:	25		
Priority Class:	4		
Category Code:	IS6D	**System:**	INTERIOR/FINISH SYS.
		Component:	GENERAL
		Element:	OTHER
Building Code:	FMUS		
Building Name:	FLETCHER MUSIC CENTER		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	11/19/2009		
Project Location:	Undefined: Floor(s) 1		

Project Description

The formal recital hall on the first floor of the 2005 section has fixed seating that is lightly worn and should be upgraded towards the end of the ten-year scope of this report. Replace this seating with new folding fixed seats in a similar row configuration. Ensure that ADA requirements are followed with the new seating layout.

Project Cost

Project Number: FMUSIS05

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Basic, upholstered, folding, and fixed seating	EA	235	$160	$37,600	$84.35	$19,822	$57,422
Project Totals:				**$37,600**		**$19,822**	**$57,422**

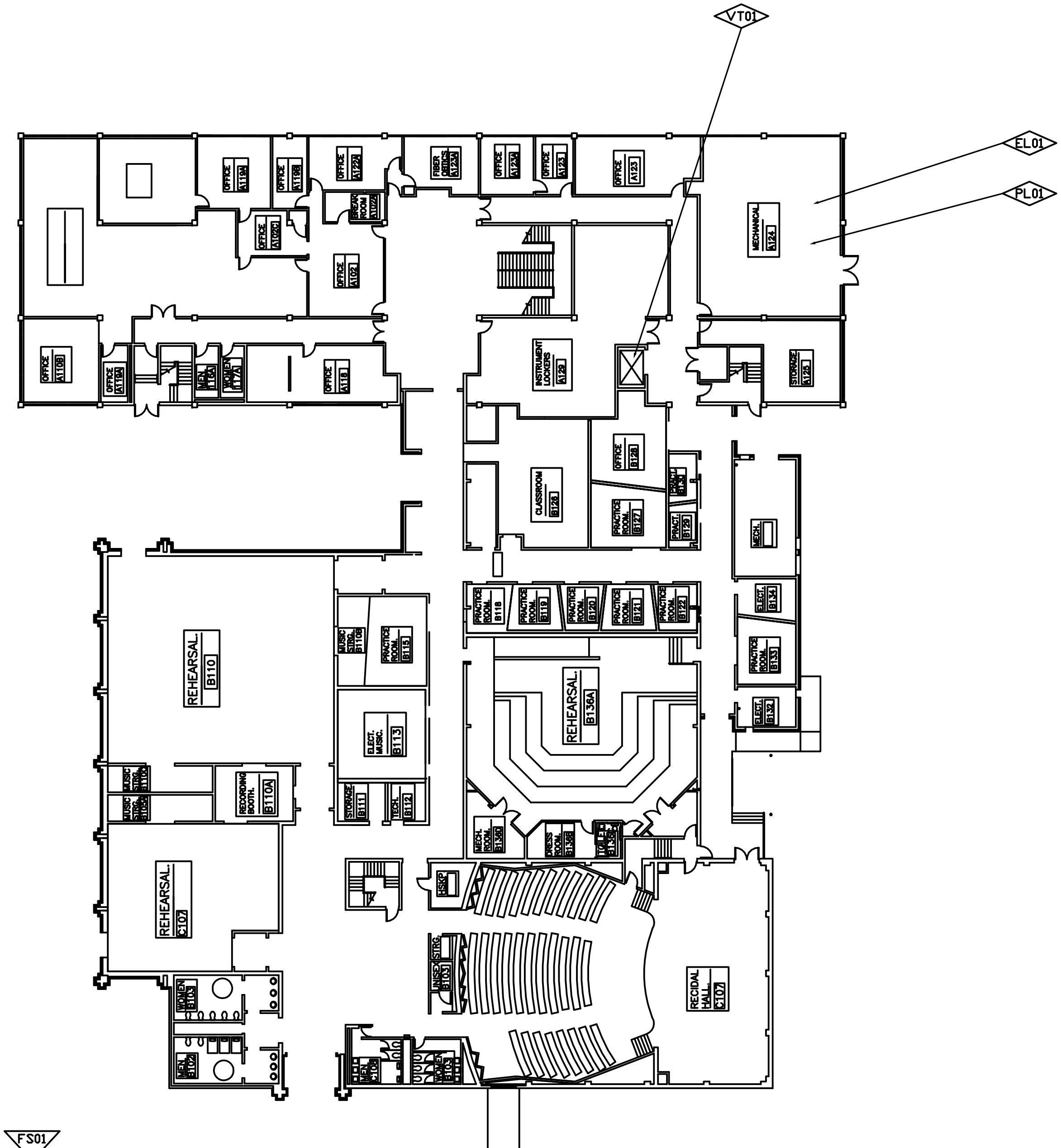
Material/Labor Cost		$57,422
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$48,032
General Contractor Mark Up at 20.0%	+	$9,606
Construction Cost		$57,638
Professional Fees at 16.0%	+	$9,222
Total Project Cost		**$66,861**

FACILITY CONDITION ANALYSIS

SECTION 4

DRAWINGS AND PROJECT LOCATIONS

EAST CAROLINA UNIVERSITY



AC01 AC03 IS05

EL04 ES01 ES02 ES03 ES04

AC02 AC04 AC05 EL02 EL03 FS01

HV01 IS01 IS02 IS03 IS04 PL02

PL03

FLETCHER
MUSIC
CENTER

BLDG NO. FMUS

ISES CORPORATION

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

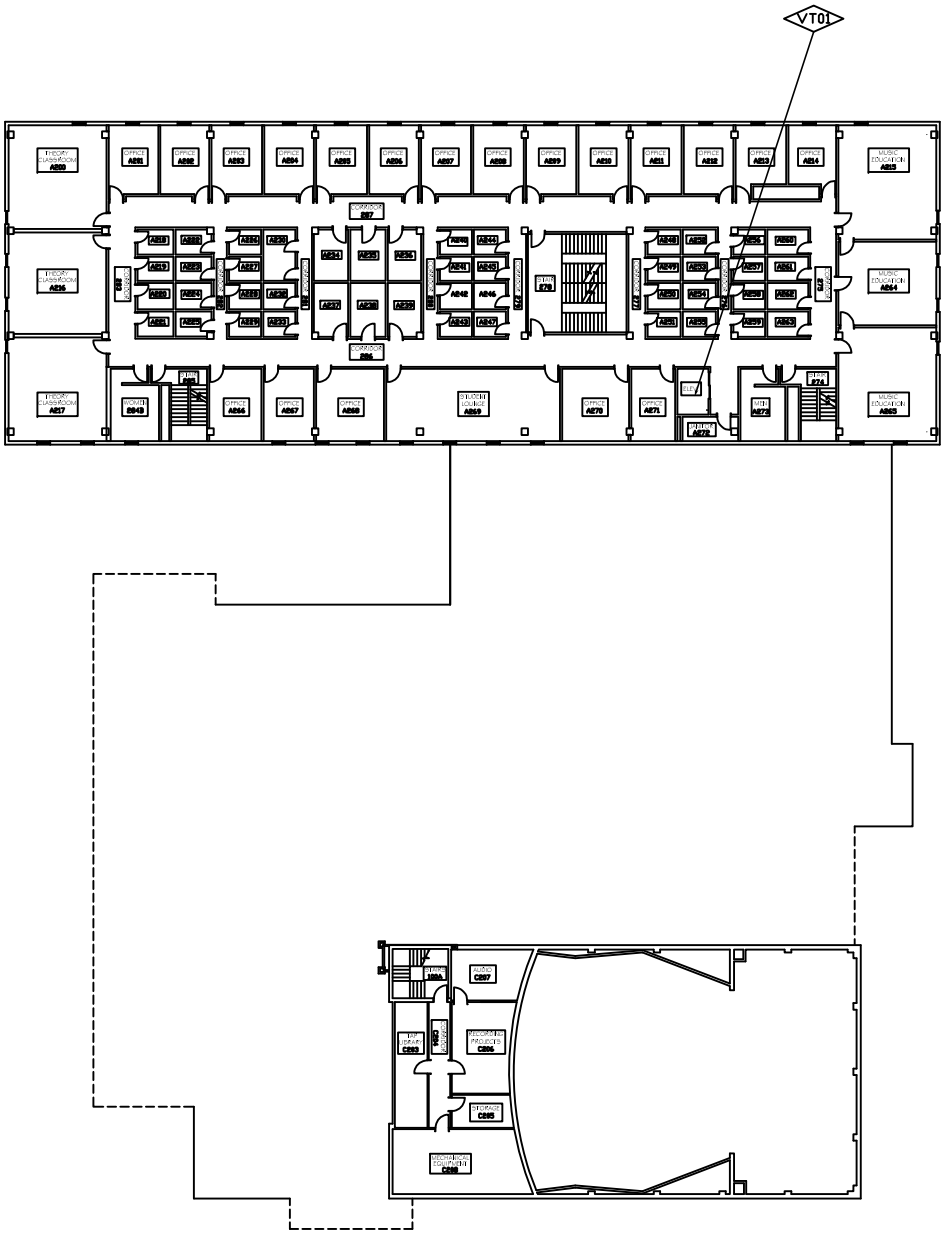
PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 11/20/09
Drawn by: J.T.V.
Project No. 09-041

FIRST
FLOOR
PLAN

Sheet No.
1 of 3

EAST CAROLINA UNIVERSITY



AC02 AC04 AC05 EL02 EL03 FS01
HV01 IS01 IS02 IS03 IS04 PL02
PL03

FLETCHER
MUSIC
CENTER

BLDG NO. FMUS

ISES CORPORATION

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: 11/20/09
Drawn by: J.T.V.
Project No. 09-041

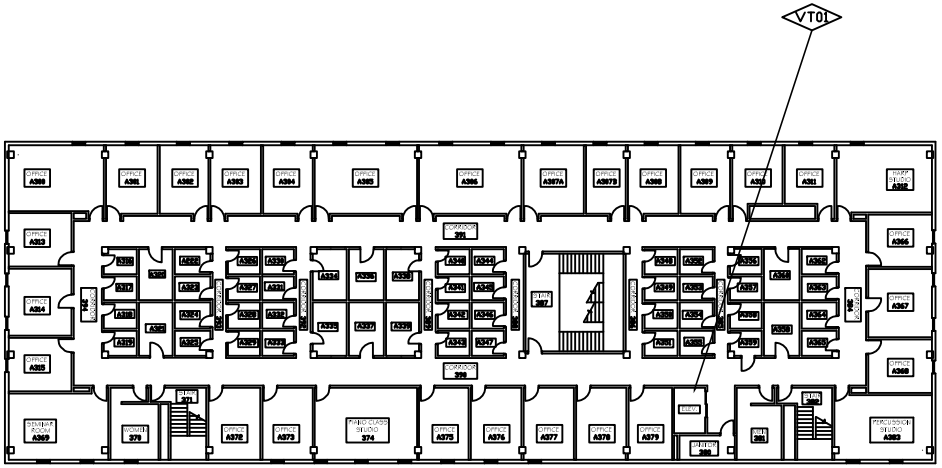
SECOND
FLOOR
PLAN

Sheet No.
2 of 3

EAST CAROLINA UNIVERSITY

ROOF

ES05 HV01



AC02 AC04 AC05 EL02 EL03 FS01

HV01 IS01 IS02 IS03 IS04 PL02

PL03

FLETCHER
MUSIC
CENTER

BLDG NO. FMUS

ISES CORPORATION

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: 11/20/09
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

FMUS : FLETCHER MUSIC CENTER

Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	2,050	SF	$1.30		$2,672	1966	10
B2010	EXTERIOR FINISH RENEWAL	680	SF	$1.30		$886	2005	10
B2010	EXTERIOR FINISH RENEWAL	8,190	SF	$1.30	.31	$3,310	1966	10
B2010	EXTERIOR FINISH RENEWAL	2,730	SF	$1.30	.31	$1,103	2005	10
B2020	STANDARD GLAZING AND CURTAIN WALL	5,510	SF	$104.04		$573,242	1966	55
B2020	STANDARD GLAZING AND CURTAIN WALL	1,840	SF	$104.04		$191,427	2005	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	2	LEAF	$4,311.24		$8,622	1966	20
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	4	LEAF	$4,311.24		$17,245	2005	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	8	LEAF	$2,863.29		$22,906	2005	40
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	9	LEAF	$2,863.29		$25,770	1966	40
B3010	BUILT-UP ROOF	32,840	SF	$6.70		$220,114	1966	20
B3010	TILE ROOF	10,950	SF	$19.15		$209,652	1966	70
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	75	LEAF	$783.68		$58,776	1966	35
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	20	LEAF	$783.68		$15,674	2005	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	185	LEAF	$1,489.06		$275,476	1966	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	47	LEAF	$1,489.06		$69,986	2005	35
C1020	INTERIOR DOOR HARDWARE	185	EA	$423.04		$78,263	1966	15
C1020	INTERIOR DOOR HARDWARE	47	EA	$423.04		$19,883	2005	15
C1020	INTERIOR DOOR HARDWARE	75	EA	$423.04		$31,728	1966	15
C1020	INTERIOR DOOR HARDWARE	20	EA	$423.04		$8,461	2005	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	44,640	SF	$0.80		$35,758	1966	10
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	14,880	SF	$0.80		$11,919	2005	10
C3010	PREMIUM WALL FINISH (EPOXY, TILE, WOOD PANEL, ETC.)	19,130	SF	$5.87		$112,218	1966	20
C3010	PREMIUM WALL FINISH (EPOXY, TILE, WOOD PANEL, ETC.)	6,380	SF	$5.87		$37,425	2005	20
C3020	CARPET	9,420	SF	$8.75		$82,392	1966	10
C3020	CARPET	3,140	SF	$8.75		$27,464	2005	10
C3020	VINYL FLOOR TILE	18,832	SF	$6.59		$124,063	1966	15
C3020	VINYL FLOOR TILE	6,278	SF	$6.59		$41,359	2005	15

Life Cycle Model

Building Component Summary

FMUS : FLETCHER MUSIC CENTER

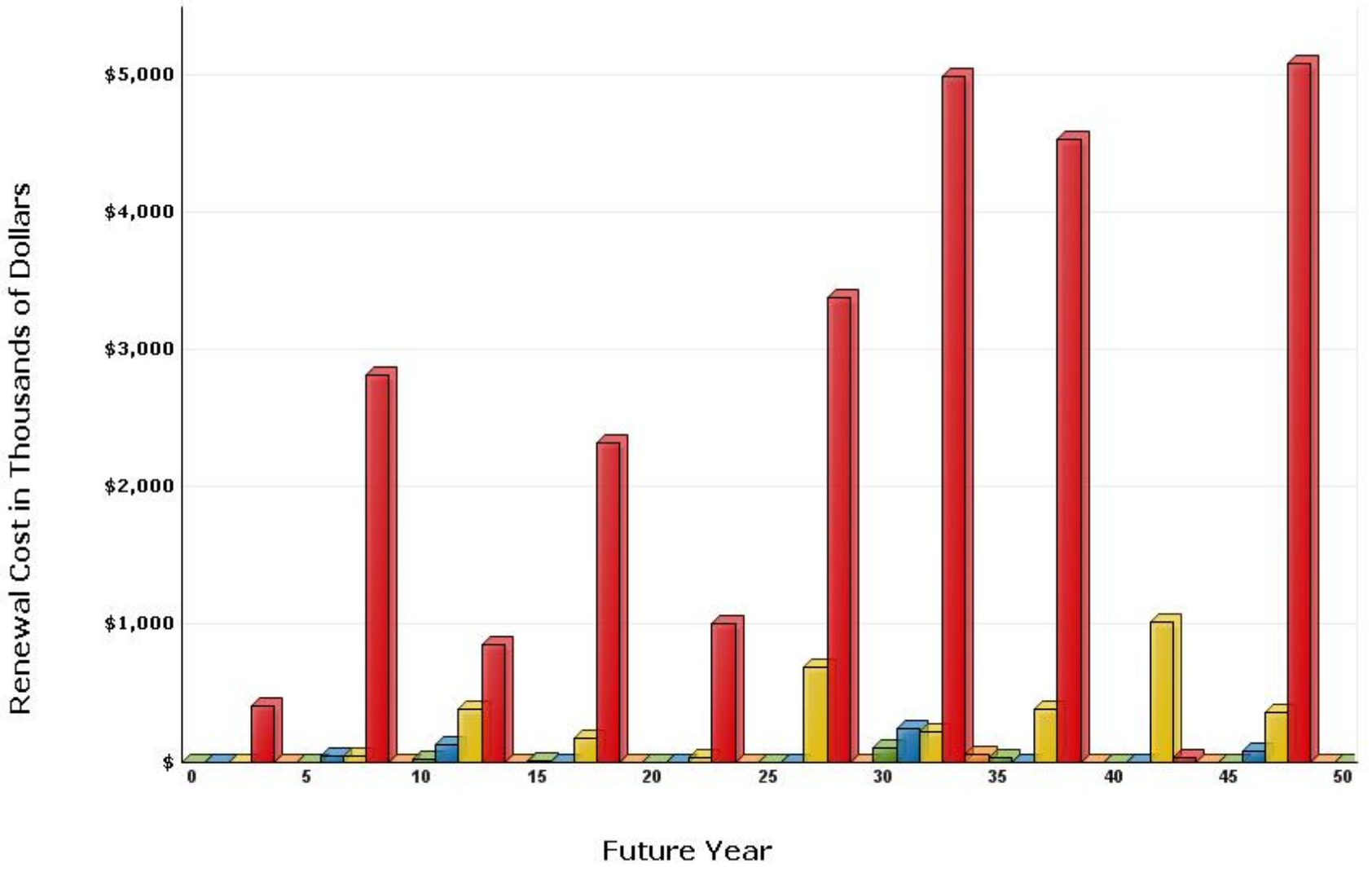
Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
C3020	CERAMIC FLOOR TILE	1,568	SF	$17.36		$27,224	1966	20
C3020	CERAMIC FLOOR TILE	522	SF	$17.36		$9,063	2005	20
C3020	HARDWOOD REPLACEMENT	2,090	SF	$23.94		$50,028	2005	50
C3020	SAND AND FINISH HARDWOOD FLOORING	2,090	SF	$3.24		$6,767	2005	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	22,605	SF	$4.99		$112,867	1966	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	7,535	SF	$4.99		$37,622	2005	15
C3030	PAINTED CEILING FINISH APPLICATION	7,845	SF	$0.80		$6,284	1966	15
C3030	PAINTED CEILING FINISH APPLICATION	2,615	SF	$0.80		$2,095	2005	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	1	EA	$158,628.64		$158,629	1966	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	1	EA	$26,616.80		$26,617	1966	12
D2010	PLUMBING FIXTURES - CLASSROOM / ACADEMIC	58,950	SF	$7.96		$469,088	1966	35
D2020	WATER PIPING - CLASSROOM / ACADEMIC	58,950	SF	$5.66		$333,820	1966	35
D2020	WATER HEATER, SHELL AND TUBE HEAT EXCHANGER	48	GPM	$355.69		$17,073	1966	24
D2030	DRAIN PIPING - CLASSROOM / ACADEMIC	58,950	SF	$8.60		$506,677	1966	40
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	$6,456.49		$6,456	1966	25
D3040	CONDENSATE RECEIVER	2	SYS	$9,504.01		$19,008	1966	15
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	2	EA	$2,768.62		$5,537	1966	20
D3040	HVAC SYSTEM - CLASSROOM / ACADEMIC	28,950	SF	$30.67		$887,885	1966	25
D3040	HVAC SYSTEM - CLASSROOM / ACADEMIC	15,000	SF	$30.67		$460,044	1966	25
D3040	HVAC SYSTEM - CLASSROOM / ACADEMIC	15,000	SF	$30.67		$460,044	2006	25
D3040	BASE MTD. PUMP - UP TO 15 HP	14	HP	$3,175.77		$44,461	2006	20
D3040	BASE MTD. PUMP - 15 HP TO 50 HP	15	HP	$1,142.19		$17,133	2006	20
D3050	SPLIT DX SYSTEM	2	TON	$2,143.89		$4,288	2006	15
D3050	SPLIT DX SYSTEM	2	TON	$2,143.89		$4,288	2006	15
D4010	FIRE SPRINKLER SYSTEM	150	SF	$6.86		$1,029	1966	80
D4010	FIRE SPRINKLER HEADS	150	SF	$0.38		$57	1966	20
D5010	ELECTRICAL SYSTEM - CLASSROOM / ACADEMIC	43,950	SF	$13.35		$586,698	1966	50
D5010	ELECTRICAL SYSTEM - CLASSROOM / ACADEMIC	15,000	SF	$13.35		$200,238	2006	50
D5010	ELECTRICAL SWITCHGEAR 277/480V	1,000	AMP	$39.56		$39,564	1966	20

Life Cycle Model
Building Component Summary
FMUS : FLETCHER MUSIC CENTER

Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
D5010	TRANSFORMER, DRY, 480-208V (30-150 KVA)	262	KVA	$96.00		$25,151	1966	30
D5010	VARIABLE FREQUENCY DRIVE (UP TO 10 HP)	14	HP	$1,020.08		$14,281	2006	12
D5010	VARIABLE FREQUENCY DRIVE (10 - 50 HP)	15	HP	$388.17		$5,823	2006	12
D5020	EMERGENCY LIGHT (BATTERY)	22	EA	$283.62		$6,240	2003	20
D5020	EXIT SIGNS (CENTRAL POWER)	26	EA	$163.78		$4,258	2003	20
D5020	EXTERIOR LIGHT (HID)	10	EA	$689.58		$6,896	1999	20
D5020	LIGHTING - CLASSROOM / ACADEMIC	14,475	SF	$6.26		$90,579	1999	20
D5020	LIGHTING - CLASSROOM / ACADEMIC	29,475	SF	$6.26		$184,444	1966	20
D5020	LIGHTING - CLASSROOM / ACADEMIC	15,000	SF	$6.26		$93,865	2006	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	58,950	SF	$2.61		$154,130	2005	15
D5040	GENERATOR, DIESEL (100-200 KW)	100	KW	$493.93		$49,393	2006	25
E2010	BASIC FOLDING FIXED SEATING	235	EA	$278.95		$65,553	1966	20
						$7,508,990		

Life Cycle Model Expenditure Projections

FMUS : FLETCHER MUSIC CENTER



Average Annual Renewal Cost Per SqFt $4.36

FACILITY CONDITION ANALYSIS

SECTION 6

PHOTOGRAPHIC LOG

Photo Log - Facility Condition Analysis

FMUS : FLETCHER MUSIC CENTER

Photo ID No	Description	Location	Date
FMUS001a	View looking south across south wing	Roof	8/30/2009
FMUS001e	Original GE panelboard	Mechanical room 124	8/30/2009
FMUS002a	View looking southwest across west wing	Roof	8/30/2009
FMUS002e	Chilled water circulation pump	Mechanical room 124	8/30/2009
FMUS003a	View looking west across west wing	Roof	8/30/2009
FMUS003e	Original air handler with hot / chilled water coils	Mechanical room 124	8/30/2009
FMUS004a	View looking west across north wing	Roof	8/30/2009
FMUS004e	Hot water circulation pumps	Mechanical room 124	8/30/2009
FMUS005a	Difficult roof access hatch and ladder	Electrical room A380	8/30/2009
FMUS005e	Square D VFDs for hot water circulation pumps	Mechanical room 124	8/30/2009
FMUS006a	Painted metal guardrail that is too low and lacks sufficient infill and painted metal wall handrails lacking recommended end geometry	Third floor, stair A382	8/30/2009
FMUS006e	Reciprocating air compressor for HVAC controls	Mechanical room 124	8/30/2009
FMUS007a	Interior stair finishes	Central stairs	8/30/2009
FMUS007e	Siemens Apogee digital / pneumatic HVAC controls	Mechanical room 124	8/30/2009
FMUS008a	Single level drinking fountain	Third floor, west end north corridor	8/30/2009
FMUS008e	Incoming water / steam service, original equipment	Mechanical room 124	8/30/2009
FMUS009a	View looking west across southwest north wing courtyard prone to flooding	Site detail outside A110	8/30/2009
FMUS009e	Outside humidity / temperature sensor	Outside mechanical room 124	8/30/2009
FMUS010a	Lack of wheelchair access between tiers	First floor, recital room B136	8/30/2009
FMUS010e	Sanyo air-cooled condensers	Outside Music Library	8/30/2009
FMUS011a	Exterior elevation	West facade, southwest wing	8/30/2009
FMUS011e	Multizone air handler	Mechanical room C208	8/30/2009
FMUS012a	Exterior elevation	North facade, north wing	8/30/2009
FMUS012e	Multizone air handler	Mechanical room B136A	8/30/2009
FMUS013a	Exterior elevation	West facade, north wing	8/30/2009
FMUS013e	Cutler Hammer motor control cabinet, original	Mechanical room 124	8/30/2009
FMUS014a	Exterior elevation	South facade, north wing	8/30/2009
FMUS014e	Transformer	Outside mechanical room 124	8/30/2009
FMUS015a	Exterior elevation	East facade	8/30/2009
FMUS015e	Exterior light fixture	Outside mechanical room 124	8/30/2009
FMUS016a	Exterior elevation	East facade	8/30/2009

Photo Log - Facility Condition Analysis

FMUS : FLETCHER MUSIC CENTER

Photo ID No	Description	Location	Date
FMUS016e	Original GE panelboard	Electrical closet A380	8/30/2009
FMUS017a	Exterior elevation	South facade, south wing	8/30/2009
FMUS017e	T12 light fixtures	Third floor, corridor	8/30/2009
FMUS018a	Handrail lacking recommended end geometry, lack of second rail, and lack of wheelchair access to stage	First floor, auditorium C107	8/30/2009
FMUS018e	Domestic hot water storage tank and heat exchanger	Mechanical room 124	8/30/2009
FMUS019a	View looking northeast across auditorium seating	First floor, auditorium C107	8/30/2009
FMUS019e	Domestic water backflow preventer	Mechanical room 124	8/30/2009
FMUS020e	Hot water circulation pumps	Mechanical room 124	8/30/2009
FMUS021e	Duplex condensate return system	Mechanical room 124	8/30/2009
FMUS022e	Emergency lighting with battery backup	Mechanical room 124	8/30/2009
FMUS023e	Emergency generator	Outside mechanical room 124	8/30/2009
FMUS024e	Mop sink (typical)	Located off hallways, each floor	8/30/2009
FMUS025e	Original GE dry-type transformer	Electrical closet A380	8/30/2009
FMUS026e	Simplex fire alarm control panel	Lobby 3101	8/30/2009
FMUS027e	Wall-mounted HID exterior light fixture	North side of building	8/30/2009
FMUS028e	Pole-mounted HID exterior light fixture	South side of building	8/30/2009

FMUS001A.jpg

FMUS001E.jpg

FMUS002A.jpg

FMUS002E.jpg

FMUS003A.jpg

FMUS003E.jpg

FMUS004A.jpg

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