Macomb Community College

Education • Enrichment • Economic Development

CENTER CAMPUS

MACOMB COMMUNITY COLLEGE FACILITIES ASSESSMENT AND DEFERRED MAINTENANCE CAPITAL PLANNING REPORT

UPDATED March 2018

H+B Project #17-718

Table of Contents

EXECUTIVE SUMMARY.....Tab 1

- Overview
- Purpose of Study
- Glossary of Terms
- DMB Summaries
- CRV Summaries
- FCI Summaries

GENERAL INFORMATION.....Tab 2

- Location Map
- Study Team
- Code/Barrier Free Requirements
- Assessment Summaries

APPENDIX.....Tab 3

- Building Data Sheets

Overview pp. 1.1
Purpose of Study pp. 1.1
Glossary of Terms pp. 1.2 – 1.3
DMB Summaries pp. 1.4 - 1.5
CRV Summaries pp. 1.6 - 1.7
FCI Summaries 1.8. 1.10

1 Executive Summary

Overview

Macomb Community College commissioned Hobbs+Black Associates, Inc. (H+B) to update the facilities condition analysis (FCA) for Center Campus.

There are 22 buildings on Center Campus included in this update.

Purpose of the Study

This Facilities Assessment and deferred Maintenance Capital Planning Study, was updated using recent project data, contractor bids and Construction Manager estimates in order to accomplish the following objectives.

- Provide an inventory of the College's facilities in a database format to be easily updated and maintained.
- Determine the general condition of the facilities owned by Macomb Community College and provide the data in a concise format, allowing quick determination of the current replacement value and condition of each facility.
- Determine a Facilities Condition Index (FCI) for each assessed building and an aggregate FCI for all facilities at Macomb Community College. The FCI is a benchmark index that rates the condition of existing College buildings and is used by facilities managers nationwide to quantify and prioritize deferred maintenance projects for capital planning purposes.
- Assist Macomb Community College in meeting its Mission Statement, Strategic Goals and Institutional Vision through timely maintenance of the physical backbone of the College – the buildings of MCC.
- A Summary and detailed narrative description of the findings related to the building deficiencies for the following elements and systems is provided:
    - Roof
    - Building Enclosure
    - Interior Finishes
    - HVAC
    - Plumbing
    - Fire Protection
    - Temperature Controls
    - Primary Power
    - Secondary Power
    - Electrical Distribution
    - Lighting
    - Voice/Data
    - Code/Barrier Free

Estimated costs are itemized by architectural, mechanical and electrical trades, and are totaled under Construction Costs and include any material and labor costs without additional mark-ups. The Project Cost total includes a 45 percent mark-up on construction costs to include such items as A/E design fees, construction contingencies, reimbursable expenses and commissioning. All costs have been expressed in 2017 dollars. Therefore, any work implemented later than 2017 will require an adjustment. In some cases, due to the nature of the work, quantities were estimated and assumptions made in order to establish the course of action. Further development and investigation during future implementation phases will be necessary to determine a more accurate scope of work and a more precise budget estimate.

Glossary of Terms

Building Components

The table below shows the building components used in the report. These are the basic components having a major influence on the replacement value of a building.

Category	Component Name
Envelope	Roof
	Glazing
	Cladding
Mechanical	HVAC Equipment
	Plumbing
	Fire Protection
Electrical	Primary Power
	Secondary Power
	Lighting
Code/ADA	

Building Use Types

The table below shows general building use types and their respective current construction costs per square foot used to develop this database. These costs, based on regionally weighted, preliminary construction cost data provided by contractors, historical cost databases and data from RS Means are for typical college and university buildings. Buildings may contain various uses, and each use is portioned to create the overall building replacement value per square foot.

Use Type	Cost/SF
Administration	$230
Auditorium	$235
Student Services	$247
Classroom	$230
Lab	$321
Library	$239

Building Replacement Value (CRV)

The CRV is the cost to construct a typical replacement building in today's dollars. The figure is based on the square footage of the current structure and the estimated current construction cost for that type of structure. Since some buildings are conglomerations of different uses (i.e.: classroom, library, administration) the CRV is based on estimated proportions of use types in each building. By the nature of the calculations and square foot construction costs, the current replacement value has a ±20% margin of error and will change annually due to market demands.

Facilities Condition Index (FCI)
Simply put, the FCI is the current DMB divided by the CRV. The resulting number is compared against nationally accepted standards and used to determine the condition of the building.
The Association of Higher Education Facilities Officers (APPA) recommends that the FCI for any given building should not exceed 5% for the building to be considered in "Good" condition. The rating of "Fair" indicates that the building requires some attention to bring it up to standard, with some problem areas potentially requiring immediate attention. The rating of "Poor" indicates that the building needs urgent attention to prevent the existing problems from affecting other building systems and compounding future repair costs.

The APPA FCI Ratings, indicating the general condition of the building, are shown here along with the corresponding "traffic signals" that give a quick visual indication of the FCI rating.







Deferred Maintenance Budget (DMB)
This is the cost of upkeep of buildings and equipment postponed from the normal operating budget cycle.

DMB Equilibrium (Annual Cost to maintain current DMB)
This is the dollar amount to be invested annually to keep the FCI (and DMB) from deteriorating – regardless of the current condition of the building.

The number is based on a nationally accepted rule of 2% of the CRV and assumes that building components have a 50-year renewal cycle and depreciate along a straight line. The assumptions were made to simplify calculations; in reality, building components DO NOT expire according to straight-line depreciation, and most components will require replacement within 30-40 years (excluding structure and foundation).

To restate – this annual investment will only maintain the existing FCI and do little or nothing to reduce any existing backlog.

Five Year Cumulative Deferred Maintenance Budget (5YR DMB)
Similar to the One Year DMB, the Five Year DMB represents the total value of projects that will require attention within the next five years, including those that fall under the One Year DMB. This value is included to help determine the investment required over the next five years to repair and/or replace problem items before they become critical.

The Five Year DMB is often more telling of a buildings' condition than the One Year DMB, since the first year number focuses primarily on life safety, code compliance and collateral damage. Most maintenance issues are not so critical as to fall into this category but often become so within 5 years.0

Five Year DMB Excess
Similar to the One Year DMB Excess value, this amount represents the investment to bring the DMB in line with the APPA benchmark of 5% of the Current Replacement Value. In situations where a building is in better than "Good" condition – a bit more difficult over a five year span, the five year DMB excess is shown as zero.

This number is a good starting point for determining budgets – it allows the college to see what to spend to bring buildings into the APPA 'Good" range – with the understanding that complete elimination of the deferred Maintenance Budget is not a likely scenario.

Observation Highlights
This is a focused list of field observations, highlighting major repair/replacement items and recently completed work.

Vital Statistics
Basic building information – building use types, year built, building area in square feet, and number of floors.

Deferred Maintenance Budgets

The total 5 year DMB building are as follows:
(Refer to the Building Data Sheets for detailed information)

	Comments	5 year DMB
Building CA (Business and Public Services)	Renovated Summer 2016	NA
Building CB (General Classrooms)	Renovation scheduled Summer 2019	$2,161,491
Building CC (Library)	Renovated Summer 2017	$670,505
Building CD (Meter)	Partially Renovated in Summer 2013	$125,377
Building CE (Health and Human Services)	Renovation Scheduled Summer 2018	$4,801,013
Building CF (General Classrooms)	Renovated Summer 2015	NA
Building CG (Student Services)	Renovated Summer 2012	$343,867
Building CH (Student Services/Classrooms)	Renovated Summer 2011	$6,830
Building CI (Campus Police/Plant Ops.)	-	$533,657
Building CJ (Science Building)	Mechanical Exhaust and Temp. Controls Replaced in summer 2014	$1,733,673

	Comments	5 year DMB
Building CK (Cultural Center)	Generator replaced Summer 2017	$1,401,226
Building CL (Fine Arts)	Renovation scheduled Summer 2018	$4,273,312
Building CM (Performing Arts)	Renovation scheduled Summer 2018	$4,769,271
Building CN (General Classrooms)	Renovated Summer 2012	$53,911
Building CP (Student Center/Bookstore)		$731,212
Building CR (Health Science Technology)		$460,532
Building CS (Administrative Center)	Renovated CIT Suite Summer 2015	$832,057
Building UC-1 (Professional Development Center)	Renovated Summer 2014	$364,470
Building UC-2 (Engineering and Technical Center)		$697,340
Building UC-3 (Classroom and Lab Building)	Added generator Spring 2016 for MSU UC-4	$678,743
Building UC-4 (Osteopathic Medicine)	MSU Suite was Renovated Summer 2010	$184,875
Salt Storage Building	Completed in 2011	$3,741

Current Replacement Values

The CRV per building are as follows:

Building CA (Business and Public Services)	37,607 S.F.	x	$230 / S.F.=	$8,649,610
Building CB (General Classrooms)	18,298 S.F.	x	$230 / S.F.=	$4,208,540
Building CC (Library)	57,489 S.F.	x	$239/ S.F. =	$13,739,871
Building CD (Meter)	1,581 S.F.	x	$874 / S.F. =	$1,381,794
Building CE (Health and Human Services)	64,420 S.F.	x	$261 / S.F. =	$16,813,620
Building CF (General Classrooms)	19,469 S.F.	x	$251/ S.F. =	$4,886,719
Building CG (Student Services)	18,747 S.F.	x	$247/ S.F.=	$4,630,509
Building CH (Student Services/Classrooms)	31,402 S.F.	x	$239/ S.F.=	$7,505,078
Building CI (Campus Police/Plant Ops.)	19,538 S.F.	x	$185 / S.F. =	$3,614,530
Building CJ (Science Building)	36,524 S.F.	x	$271 / S.F. =	$9,898,004
Building CK (Cultural Center)	51,878 S.F.	x	$254 / S.F. =	$13,177,012
Building CL (Fine Arts)	44,461 S.F.	x	$298 / S.F. =	$13,249,378

Building CM (Performing Arts)	72,178 S.F.	x	$235 / S.F. =	$16,961,830
Building CN (General Classrooms)	65,934 S.F.	x	$230 / S.F. =	$15,164,820
Building CP (Student Center/Bookstore)	31,759 S.F.	x	$247 / S.F. =	$7,844,473
Building CR (Health Science Technology)	41,242 S.F.	x	$249 / S.F. =	$10,269,258
Building CS (Administrative Center)	41,599 S.F.	x	$205 / S.F. =	$8,527,795
Building UC-1 (Professional Development Center)	91,543 S.F.	x	$234 / S.F. =	$21,421,062
Building UC-2 (Engineering and Technical Center)	56,537 S.F.	x	$273 / S.F. =	$15,434,601
Building UC-3 (Classroom and Lab Building)	40,962 S.F.	x	$248 / S.F. =	$10,158,576
Building UC-4 (Classroom and Lab Building)	25,468	x	$276 / S.F.=	$7,029,168
Salt Storage Building	?-S.F.	x	$120 / S.F=	$80,640

Facility Condition Indices

The 5 year FCI (DMB ÷ CRV) per building are as follows:

Building CA (Business and Public Services)	Renovated Summer 2016	÷	$8,649,610	=	NA
Building CB (General Classrooms)	$2,161,491	÷	$4,208,540	=	51.4%
Building CC (Library)	$670,505	÷	$13,739,871	=	4.9%
Building CD (Meter)	$125,377	÷	$1,381,794	=	9.1%
Building CE (Health and Human Services)	$4,801,013	÷	$16,813,620	=	28.6%
Building CF (General Classrooms)	Renovated Summer 2015	÷	$4,886,719	=	NA
Building CG (Student Services)	$343,867	÷	$4,630,509	=	7.4%
Building CH (Student Services/Classrooms)	$6,830	÷	$7,505,078	=	NA
Building CI (Campus Police/Plant Ops.)	$533,657	÷	$3,614,530	=	14.8%
Building CJ (Science Building)	$1,733,673	÷	$9,898,004	=	17.5%
Building CK (Cultural Center)	$1,401,226	÷	$13,177,012	=	10.6%
Building CL (Fine Arts)	$4,273,312	÷	$13,249,378	=	32.2%

Building CM (Performing Arts)	$4,769,271	÷	$16,961,830	=	28.1%
Building CN (General Classrooms)	$53,911	÷	$15,164,820	=	0.4%
Building CP (Student Center/Bookstore)	$731,212	÷	$7,844,473	=	9.3%
Building CR (Health Science Technology)	$460,532	÷	$10,269,258	=	4.5%
Building CS (Administrative Center)	$832,057	÷	$8,527,795	=	9.8%
Building UC-1 (Professional Development Center)	$364,470	÷	$21,421,062	=	1.7%
Building UC-2 (Engineering and Technical Center)	$697,340	÷	$15,434,601	=	4.5%
Building UC-3 (Classroom and Lab Building)	$678,643	÷	$10,158,576	=	6.7%
Building UC-4 (Classroom and Lab Building)	$190,414	÷	$7,029,168	=	2.7%
Salt Storage Building	$3,741	÷	$80,640	=	4.6%

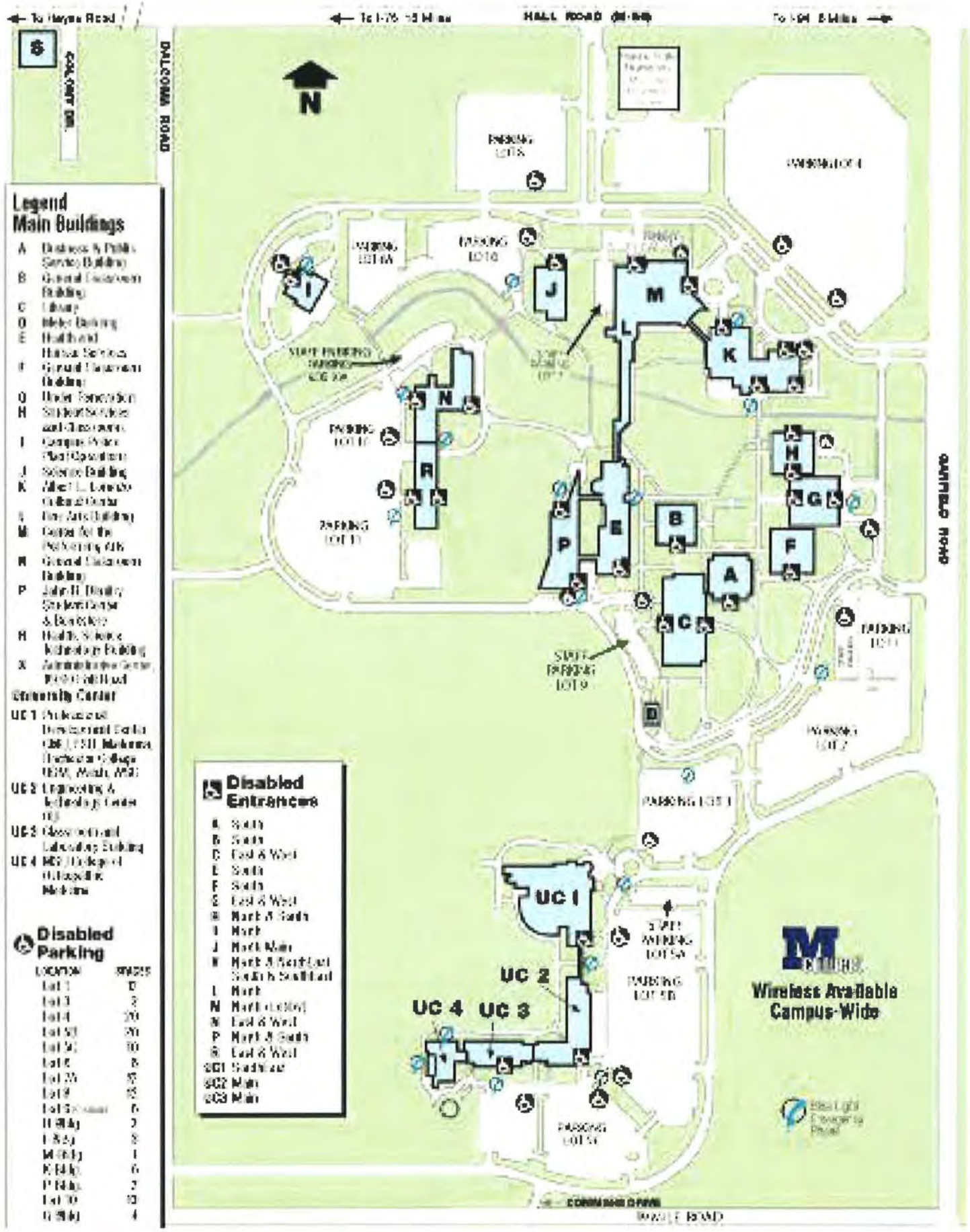
1.10 Executive Summary

Location Map p. 2.1

Study Team p. 2.2

Code/Barrier Free Requirements pp. 2.3 – 2.7

Assessment Summaries pp. 2.8 - 2.43



2.1 General Information

INFRASTRUCTURE STUDY TEAM

Administrative Team:	
MCC Director of Administrative Services:	William Simonson
H+B Project Manager:	Brian Bagnick
Inspection Team:	
Architectural:	William Harvey, H+B
Mechanical:	George Hopkins, PBA
Electrical:	Lindsey Stefaniak, PBA
MCC Facilities Team:	
Manager of Engineering Services:	Bernard Jacobs
Physical Plant:	Steve Alton
Project Foreman:	Ted Leszkiewicz

Code and Barrier Free Requirements

Building and barrier free codes have changed extensively since many of the buildings on campus were constructed. Attempting to apply today's codes to these buildings is not always practical, but nonetheless, provides a benchmark to evaluate existing conditions. While there is no code mandated requirement to bring an existing building up to current code requirements, any new work would be required to meet current codes.

Renovation work will be governed by the Michigan Rehabilitation Code for Existing Buildings as well as current NFPA life safety requirements. Additionally, renovation work in excess of 50 percent of the building's area will likely require total building code compliance.

Contributing factors that make current code compliance problematic include limitations imposed by existing infrastructure that may prevent or make code compliance extremely difficult, both physically and monetarily. As a result, it may be necessary to consider equivalent code measures or combinations of code systems to achieve a desired life safety improvement or code compliance objective.

In addition to the Michigan Barrier Free Design Code, there are continuing obligations under the Americans with Disabilities Act (ADA) to remove barriers. The ADA is a civil rights act, not a code or standard and therefore, no agency verifies compliance. The Act expects compliance with the intent of the Act, which is to eliminate discrimination of the disabled. Portions of the buildings that are accessible to the public and students fall under the 'public accommodations" classification. These areas are governed by Title III of the ADA that requires the owner to make "readily achievable" changes that are in compliance with the ADA. The barrier free noncompliance issues in this report are based on full compliance to all requirements, although for reasons stated above, removal of all barriers may not be required at this time.

Applicable Codes and Standards

The following codes and standards represent the primary regulations in effect at the time of this report and that would apply to the college. At the time projects are actually implemented, the most current codes and standards that are in effect at the time must be utilized.

Building:	Michigan Department of Energy, Labor and Economic Growth; Bureau of Construction Codes, 2015 Michigan Building Code Incorporating the 2015 Edition of the International Building Code.
	Michigan Department of Energy, Labor and Economic Growth; Bureau of Construction Codes, 2015 Michigan Rehabilitation Code for Existing Buildings incorporating the 2009 Edition of the International Existing Building Code.
	Michigan Department of Energy, Labor and Economic Growth; Bureau of Fire Services, 2012 Edition of the NFPA Life Safety Code.
Barrier Free:	Michigan Department of Energy, Labor and Economic Growth Bureau of Construction Codes, 2015 Michigan Building Code Incorporating the 2015 Edition of the International Building Code.
	Americans with Disabilities Act (ADA), 2010, Accessibility Guidelines for Buildings and Facilities.
	American National Standard, Accessible and Usable Buildings and Facilities, ICC/ANSI A117.1-2010.
Elevator:	Michigan Department of Energy, Labor and Economic Growth, Elevator Safety Division, Elevator Rules, 2005, Incorporating ASME A17.1-2004.
Structural:	Michigan Department of Energy, Labor and Economic Growth; Bureau of Construction Codes, 2015 Michigan Building Code Incorporating the 2015 Edition of the International Building Code.
Mechanical:	Michigan Department of Energy, Labor and Economic Growth; Bureau of Construction Codes, 2015 Michigan Mechanical Code Incorporating the 2015 Edition of the International Mechanical Code.
	ANSI/ASHRAE/IESNA 90.1-2010 Energy Standard for Buildings Except Low-Rise Residential Buildings.
	NFPA 13 – Installation of Sprinkler Systems – 2012 Edition.
Plumbing:	Michigan Department of Energy, Labor and Economic Growth; Bureau of Construction Codes, 2015 Michigan Plumbing Code Incorporating the 2015 Edition of the International Plumbing Code.
Electrical:	Michigan Department of Energy, Labor and Economic Growth; 2015 Michigan Electrical Code Incorporating the 2015 Edition of the National Electrical Code.
	ANSI/ASHRAE/IESNA Standard 90.1-2010 Michigan Energy Code
Fire Alarm:	NFPA 72 – National Fire Alarm Code, 2012 Edition.

Minimum Code Requirements

The following is a general summary of the life safety and barrier free code requirements for all buildings utilizing current applicable codes and standards. The summary is based on the requirements for new construction, only as a benchmark to evaluate existing conditions within each building.

Building Fire and Occupancy Separations

2-hour fire rated separation between different users.

Means of Egress and Fire Ratings

A minimum of two exits from all floors and a maximum common path of egress travel of 75 feet in non sprinklered buildings and 100 feet in fully sprinklered buildings.

Doors shall swing in the direction of egress where serving an occupant load of 50 or more. Doors shall be equipped with panic hardware where serving an occupant load of 50 or more.

Dead end corridors cannot exceed 20 feet in length in non-sprinklered buildings and 50 feet in fully sprinklered buildings.

Maximum total exit access travel distance cannot exceed 200 feet in non-sprinklered buildings and 300 feet in fully sprinklered buildings.

The total width of a level means of egress shall not be less than the total occupant load served multiplied by a factor of 0.2" per occupant, but shall not be less than may be specified elsewhere in the code.

The total width of a means of egress stair shall not be less than the total occupant load served multiplied by a factor of 0.3" per occupant.

Rooms or spaces with an occupant load exceeding 50 or a total square footage greater than 1,000 are required to have two exits or exit access doorways.

Rooms or spaces with an occupant load exceeding 500 require a minimum of three exits.

Stairs and ramps shall have handrails on each side and shall be continuous without interruption.

Guards 42" high shall be provided at all open sided walking surfaces, stairs and ramps higher than 30" above the floor or grade below.

1-hour fire rated corridor walls with 20 minute fire rated doors are typically required in non-sprinklered buildings.

1-hour fire rated stair enclosures with 60 minute B label fire rated doors are typically required where connecting less than 4 floors.

1-hour fire rated elevator shafts and elevator equipment rooms.

Signage is required of the following:

- Tactile "EXIT" sign adjacent to each stairway egress door, exit passageway and exit discharge.
- Elevator floor designation at hoistway.
- Assembly space maximum occupant load. (Spaces with an occupant load exceeding 50.)

Exit Signage

Exits and exit access doors shall be marked with readily visible exit signs.

Viewing distance in and exit access corridor shall not exceed 100 feet.

Emergency Egress Lighting

Lighting along all means of egress to provide not less than an average of 1 footcandle and a minimum of 0.1 footcandle measured along the path of egress at the floor level. Furthermore, a maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

In the event of a power failure, an emergency electrical system shall automatically illuminate the following areas for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator:

- Exit access corridors
- Exit access passageways and aisles in rooms and spaces required to have two or more exits
- Exit stairways

Occupancy Sensors

Michigan Energy Code requires that all buildings over 5,000 square feet be equipped with automatic control devices capable of shutting off light in all spaces without occupant intervention.

Fire Alarm Systems

Manual fire alarm system at Assembly occupancies with an occupant load of 300 or more.

Manual fire alarm system at Business occupancies with a combined occupant load of all floors greater than 500 or an occupant load of more than 100 above or below the lowest level of exit discharge.

Fire Suppression Systems

An automatic sprinkler system at Assembly occupancies with a fire area exceeding 12,000 square feet

Barrier Free Requirements

At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site. Where more than one means of egress is required, there shall be at least 2 accessible means of egress.

At least 60 percent of all building public entrances shall be accessible.

When a building or portion thereof is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways, and a public way.

Changes in floor level between ¼" minimum to ½" high maximum is to be beveled with a slope no steeper than 1:2.

The minimum width of each door opening shall be sufficient for the occupant load thereof and provide a clear width of at least 32 inches.

Swinging doors must have maneuvering clearances in compliance with ICC/ANSI A117.1.

Door handles, pulls latches, locks and other operating devices on doors required to be accessible must not require tight grasping, tight pinching or twisting of th wrist to operate.

Code compliant signage shall be provided at the following locations:

- Accessible areas of refuge
- Accessible entrances where not all are accessible
- Directional signage at inaccessible entrances
- Unisex toilets
- Accessible toilets where not all are accessible
- Directional signage to accessible toilets at inaccessible toilets

Wall mounted or free standing protruding objects must comply with MBC.

Passenger elevators on an accessible route shall be accessible and comply with applicable provisions of the code.

Plumbing elements and facilities required to be accessible must comply with applicable provisions of the code. At least one of each type of fixture, element, control or dispenser in each accessible toilet room and bathing facility must be accessible.

Existing Building Code Application

The legal occupancy of any structure existing on the date of adoption of the code shall be permitted to continue without change unless deemed necessary by the building official for the general safety and welfare of the occupants and the public.

Existing buildings undergoing repair, alterations or additions and change of occupancy shall be permitted to comply with the Michigan Rehabilitation Code for existing Buildings.

New work, including renovations and additions to any structure shall conform to the code requirements for new construction. Modifications and repairs shall not cause the existing structure to be in violation of the code. Portions not altered or affected by the modifications need not comply with the current building code.

OVERVIEW

CRV = $ 8,649,610

Use: General Classroom

Year Built: 1968

Gross Area: 18,298 SF

Stories: One, plus Mechanical Penthouse

Date of Assessment: October 2017

Five Year
FCI
NA

DMB
NA





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Roofing was replaced in summer 2016 with Firestone EPDM.

Enclosure:
•Exterior was cleaned, tuck pointed and sealed in summer 2016.

Finishes:
•All finishes and casework were replaced summer 2016.

HVAC:
•HVAC systems were replaced summer 2016.

Plumbing:
•Plumbing systems were replaced in summer 2016.

Fire Protection:
•Full fire suppression system was added in summer 2016.

Temperature Controls:
•Temperature controls were replaced summer 2016.

Electrical Distribution:
•Electrical equipment was upgraded in summer 2016.

Lighting:
•Lighting was replaced with LED and controls were added in summer 2016.

Code/Barrier Free:
•Toilet rooms and door hardware were upgraded in summer 2016.

OVERVIEW

CRV = $4,208,540

Use: General Classroom

Year Built: 1968

Gross Area: 18,298 SF

Stories: One, plus Mechanical Penthouse

Date of Assessment: October 2017

Five Year FCI 51.4%

DMB $2,161,491



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Single Ply HPG SR-50 membrane was installed in 1997 and is in servicable condition; however, repairs to flashings are necessary to extend the life of the system until 2023.

Enclosure:
•Brick and precast should be cleaned, tuck pointed and sealed to restore their appearance and control water infiltration.
•The mechanical penthouse requires repairs and insulation

Finishes:
•Old and worn finishes throughout require replacement.

HVAC:
•Systems should be commissioned, tested and balanced.
•Chiller was replaced in 2010.

Plumbing:
•Portions of the plumbing are galvanized pipe and should be replaced.

Fire Protection:
•Not required for this building. In lieu of fire suppression, the corridors may be one hour fire rated.

Temperature Controls:
•Pneumatic controls should be replaced with DDC.

Electrical Distributions:
•Equipment is servicable, but past its useful life expectancy and should be replaced with any major renovation.

Lighting:
•Emergency lighting is not adequate, flourescent lamps are outdated (T-12) and there are no lighting controls. All should be upgraded.

Code/Barrier Free:
•Toilet stalls, door hardware and door clearances do not comply with barrier free requirements.

•Ramp and exterior stair do not have railings.

•Lavatories need pipe protection and mixing valves.

OVERVIEW

CRV = $ 13,739,871

Use: Library

Year Built: 1969

Gross Area: 57,489 SF

Stories: Two, plus penthouse

Date of Assessment: October 2017

Five Year FCI
4.9%

DMB
$ 670,505





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Singly Ply Trocal SR-50 roof system was installed in 1994 and should be replaced summer 2020.

Finishes:
•Carpet replaced. Chipped and delaminating plastic Laminate replaced summer 2017.

Enclosure:
•Precast cracks should be repaired and joints sealed.

HVAC:
•Mechanical system was renovated summer 2017. Reconditioned AHU's and replaced equipment, have a 10-15 year expected life.

Plumbing:
•Galvanized steel plumbing should be replaced.

Temperature Controls:
•Temperature controls replaced summer 2017.

Electrical Distribution:
•Equipment from 1992 addition was left in place and should remain serviceable through 2020. Legacy equipment from original 1968 was left in place; but, should be replaced with the next renovation.

Lighting:
•Emergency lighting upgraded.
•Automatic lighting controls provided, summer 2017
•New LED lighting provided.

Code/Barrier Free:
•Toilet stalls, door hardware and door clearances upgraded summer 2017.
•Guardrails and handrails are non-compliant

•Lavatories pipe protection provided summer 2017.

OVERVIEW

CRV = $ 1,381,794

Use: Meter

Year Built: 1968 original
2004 addition

Gross Area: 1,581 SF

Stories: One

Date of Assessment: October 2017

Five Year FCI
9.1%

DMB
$125,377





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Main low slope roof was installed in 1998 and requires replacement by 2024.

Finishes:
•Patch CMU in water meter room.

Enclosure:
•Doors, frames and hardware should be replaced. Mansard should be repaired.

HVAC:
•Ventilation added for the transformer room summer 2013.

Plumbing:
•Gas line at grade should be protected.

Temperature Controls:
•Controls added to the transformer room ventilation in summer 2013.

Electrical Distributions:
•Signage and non-grounding protection added to address inadequte clearance in summer 2013.
• Original 1968 primary switches should be replaced.

Lighting:
•Outdated lights (T-12) in water meter room should be replaced.

OVERVIEW

CRV = $ 16,813,620

Use: Health and Human Services

Year Built: 1981

Gross Area: 64,420 SF

Stories: Two

Date of Assessment: October 2017

Project Scheduled for Summer 2018

Five Year FCI
28.6%

DMB
$4,801,013



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•EDPM/SE6A/Johns-Manville installed in 2013 and shouldn't require replacement until 2039.
Clerestory windows were removed as part of 2012 maintenance.

Finishes:
•All finishes are dated and should be replaced.

Enclosure:
•Brick needs to be tuck pointed and cleaned.

HVAC:
•Air handlers and ductwork are scheduled to be replaced in summer of 2018.

Plumbing:
•Boiler flow will be corrected as part of Building CL work; scheduled for summer of 2018.

Temperature Controls:
•Will be replaced as part of summer 2018 work.

Electrical Distribution:
•Perform an infrared and visual inspection of the distribution equipment.

Lighting:
•Emergency lighting is not adequate, fluorescent lamps (T-12) are outdated, and there are no lighting controls. All are scheduled to be replaced, summer 2018.

Code/Barrier Free:
•Center stair does not have proper nosing.

•Guardrails and handrails are not code compliant.

•Stairwell is not fire rated.

•Door hardware is not compliant.

•Lavatories need pipe protection and mixing valves.

OVERVIEW

CRV = $ 4,886,719

Use: General Classrooms

Year Built: 1970

Gross Area: 19,469 SF
Stories: One

Date of Assessment: October 2017

Five Year
FCI
NA

DMB
NA



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Roof system replaced summer 2015 with single ply Firestone EPDM.

Finishes:
•All new finishes provided summer 2015.
•Temporary walls replaced with permanent walls, summer 2015.

Enclosure:
•Brick and precast cleaned, tuck pointed and sealed summer 2015
•Windows replaced summer 2015.

HVAC:
•All new HVAC equipment provided, including ductwork; summer 2015.

Plumbing:
•Plumbing replaced summer 2015.

Fire Protection:
•Fire rated walls in lieu of Automatic fire suppression system were added summer 2015.

Temperature Controls:
•Replaced summer 2015.

Electrical Distribution:
•Electrical distribution equipment, including equipment serving Buildings CG and CH. Replaced summer 2015.

Lighting:
•Emergency lighting and automatic lighting controls provided summer 2015.
•All new LED lighting was provided summer 2015.

Code/Barrier Free:
•Classroom door knob hardware replaced summer 2015.

•Lavatory pipe protection provided summer 2015.

OVERVIEW

CRV = $ 4,630,509

Use: Student Sevices

Year Built: 1969

Gross Area: 18,747 SF

Stories: One

Date of Assessment:October 2017

Five Year FCI 7.4%

DMB $343,867





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Patched in 2012. PVC roof membrane was installed in 1995 and near the end of its expected life and should be replaced.

Enclosure:
•Brick and precast were cleaned in 2012. Glazing and cast stone infills also new in 2012.

Finishes:
•New carpet and tile throughout in 2012. Expected life of carpet 15 years. Expected life of tile 30 years.

HVAC:
•All new HVAC branch duct systems in 2012. And, boilers were replaced again in 2017 after premature failure.

•Existing RTU's were refurbished.

Plumbing:
•Toilets renovated and piping replaced in 2012.

Fire Protection:
•Corridors were fire rated in lieu of adding fire suppression.

Temperature Controls:
•All new controls in 2012.

Electrical Distribution:
•New equipment in 2012.

Lighting:
•New in 2012.
Not LED

Code/Barrier Free:
•Toilet rooms upgraded in 2012.
•Door hardware upgraded in 2011.

OVERVIEW

CRV = $ 7,505,078

Use: Classroom and Student Services

Year Built: 1968

Gross Area: 31,402 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI
NA

DMB
$6,830





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Single Ply Trocal roof was installed in 1998 and patched in 2011 and should be repalced by 2024.

Finishes:
•New carpet and tile throughout in 2011. Expected life of carpet 12 years. Expected life of tile 30 years.

HVAC:
•All new HVAC systems in 2011.

Enclosure:
•Brick and precast were cleaned in 2011. All new glass and aluminum framing in 2011.

Plumbing:
•Toilets renovated and piping replaced in 2011.

Fire Protection:
•Fire suppression added in 2011.

Temperature Controls:
•All new controls in 2011.

Electrical Distribution:
•New equipment in 2011.

Lighting:
•New in 2011
Not LED

Code/Barrier Free:
•Toilet Rooms upgraded in 2011.
•Railings upgraded in 2011.
•Door hardware upgraded in 2011.

OVERVIEW

CRV = $ 3,614,530

Use: Campus Police/ Police Operations

Year Built: 2003

Gross Area: 19,538 SF

Stories: One and One Half

Date of Assessment: October 2017

Five Year FCI 14.8%

DMB $533,657



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Repair roof leak near transluscent glazing system.
•Single ply Johns-Manville installed in 2003.

Enclosure:
•Damaged metal panels should be replaced. Windows should be re-sealed.

Finishes:
•Numerous cracks should be reapired and control joints added.

HVAC:
•Paint Room and Lawn Equipment Room require ventilation.

•Provide retro-commissioning and re-balance system.

Temperature Controls:
•Update temperature controls with electronic devices.

Electrical Distribution:
•Perform infrared and visual inspection of Primary & distribution equipment.

Lighting:
•Replace EBU battery.
•Provide lighting controls.
•Lighting is fluorescent and metal halide; and should be replaced with LED.

Code/Barrier Free:
•Mezzanine Guardrail is not high enough.

•Install dampers in corridor transfer grills.

•Change water closets to low flow type.

OVERVIEW

CRV = $ 9,898,004

Use: Science Building

Year Built: 1991

Gross Area: 36,524 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI 17.5%

DMB $1,733,673





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
• Single ply membrane installed in 1991 and is in fair condition, but near the end of it's expected servicable life.
•Metal copings should be replaced.

Enclosure:
•Miscellaneous brick patching and cleaning.
•Miscellaneous glazing caps need replacement.

Finishes:
•Ceiling was partially replaced summer 2014.

HVAC:
•Chiller was replaced in 2014. The screen wall was vented to the extend the life of the chiller.
•Exhaust system was replaced summer 2014.

Temperature Controls:
•Partially replaced as related to exhaust replacement summer 2014.

Electrical Distribution:
•Perform infrared and visual inspection.

•There are inadequate clearances above the main gear and around the MCC and distriub-tion panels.

Lighting:
•Replace the EBU battery.

•Exit discharge lighting is not adequate.

•There are no lighting controls.

•Existing lighting is fluorescent and should be replaced with LED.

Code/Barrier Free:
•Handrails and guardrails do not comply.

•Door knobs do not comply.

•Lab tops do not have barrier free stations.

•Lavatories need pipe protection and mixing valves.

OVERVIEW

CRV = $ 13,177,012

Use: Cultural Center

Year Built: 1976 Original
2005
Addition+Renovation

Gross Area: 51,878 SF

Stories: One

Date of Assessment: October 2017

Five Year
FCI
10.6%

DMB
1,401,226



FIVE
YEAR

ASSESSMENT SUMMARY

Roof:
- High roof EPDM installed in 2016.
- East roof Durolast installed in 2005.
- West roof Johns-Manville installed in 2010.

Enclosure:
- Curved entry canopy should be cleaned, sealed and re-finished.
- Tuck point and clean brick.
- Completely rework connector to Building CM.

Finishes:
- Ceiling was partially repalced summer 2017 to accomodate new generator installation.

HVAC:
- Perform retro-commissioning.
- Replace Heating Ventilating/Make up Air Units #1, 2 and 3.
- Replace exhaust fans #2 and 12.

Plumbing:
•Replace water heaters to address flame-out issue.

Temperature Controls:
•Replace controls with new electronic controls.

Electrical Distribution:
•Perform infrared and visual inspection.
•Generator for emergency lighting was added spring 2017.

Lighting:
•Replace dimming system in meeting rooms.

•Provide automatic lighting controls in toilet rooms and concourse.

•Fluorescent lighting should be replaced with LED.

Code/Barrier Free:
•Lockers and toilet rooms in kitchen are are not barrier free compliant.

OVERVIEW

CRV = $ 13,249,378

Use: Fine Arts

Year Built: 1982

Gross Area: 44,461 SF

Stories: One

Date of Assessment: October 2017

(Renovation is scheduled for summer 2018)

Five Year FCI
32.2%

DMB
$4,273,312



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Replace entire roof system.
•Provide new full width metal coping.

Finishes:
•Replace finishes throughout.

Enclosure:
•Remove and replace birck to correct rusting metal ties.

•Replace damaged insulated glass units.

HVAC:
•HVAC and duct systems are at or beyond their expected life, and should be replaced.
•AHU above gallery replaced summer 2017.

Plumbing:
•Replace water heater and flue.

Temperature Controls:
•Replace/upgrade all temperature controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Emergency lighting is not adequate, fluorescent lamps (T-12) are outdated, and there are no lighting controls. All are scheduled to be replaced in summer 2018.

Code/Barrier Free:
•Ramps need railings.

•Lecture hall needs railings.

•Toilet stall is not compliant.

•Door knobs are not compliant.

•Lavatories require pipe protection and mixing valves.

OVERVIEW

CRV = $ 16,961,830

Use: Performing Arts

Year Built: 1982

Gross Area: 72,178 SF

Stories: Two

Date of Assessment: October 2017
(Renovation is scheduled for summer 2018)

Five Year
FCI
28.1%

DMB
$4,769,271





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Numerous repairs are necessary at fasteners, copings and flashings to extend the life of the system.
•Roofing should be replaced

HVAC:
•HVAC and duct systems are at or beyond their expected life, and should be replaced.

•MCC has already addressed stratification problem in theater.

Enclosure:
•Tuck point and clean brick.
•Add sill flashing at curtainwall.
•Patch and re-finish plaster soffit.

Plumbing:
•Portion of the plumbing is galvanized steel and should be replaced.

Temperature Controls:
•Replace/upgrade all temperature controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Emergency lighting is not adequate, fluorescent lamps (T-12) are outdated, and there are no lighting controls. All are scheduled to be replaced in summer 2018; except for the theater and theater lobby.

Code/Barrier Free:
•Doorknobs are not compliant.

•Toilet room doors do not have adequate clearance.

•Main stair railings do not comply with graspability requirements.

•Barrier free seating no dispersed throughout auditorium.

•Lavatories require pipe protection and mixing valves.

OVERVIEW

CRV = $ 15,164,820

Use: General Classroom

Year Built: 1996

Gross Area: 65,934 SF

Stories: Two

Date of Assessment:October 2017

Five Year FCI 0.4%

DMB $53,911





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Roof membrane was replaced summer 2017.
•No overflows were provided.

Enclosure:
•Mechanical screen wall was reworked to accommodate new chiller buffer tank summer 2017.

Finishes:
•All new finishes provided summer 2017.
•Miscellaneous cracks in walls repaired summer 2017.
•New window treatments provided in summer 2017.

HVAC:
•New chiller buffer tank provided to reduce cycling of chiller summer 2017.

•Air handling Units, boilers and pumps were repalced summer 2017.

Plumbing:
•A portion of the plumbing is galvanized steel and should be replaced.

Temperature Controls:
•Temperature controls were upgraded summer 2017.

Electrical Distribution:
•Visual inspection was performed and equipment was found servicable.

Lighting:
•LED light fixtures and lighting controls were provided summer 2017.

Code/Barrier Free:
•Lavatories should have mixing valves.

OVERVIEW

CRV = $ 7,844,473

Use: Student Center/Bookstore

Year Built: 2004

Gross Area: 31,759 SF

Stories: One plus penthouse

Date of Assessment: October 2017

Five Year FCI
9.3%

DMB
$731,212





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Single ply roof system installed in 2004 is in good condition, but minor rework of overflow drains and damaged coping is required to extend the life of the system.

Finishes:
•Minor repairs to vinyl flooring and plastic laminate.

Enclosure:
•Add a sill flashing at the curtainwall.
•Clean the efflourescese off the brick, especially the screen walls and re-work the coping.
•Repair damaged metal panels.

HVAC:
•Perform retro-commissioning to optimize efficiency.

Temperature Controls:
•Replace pneumatic controls with electronic controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Automatic light controls should be provided.

•Exit discharge lights should be emergency lights.

•Existing lighting is fluorescent and should be replaced with LED.

Code/Barrier Free:
•Lavatories require pipe protection and mixing valves.

OVERVIEW

CRV = $ 10,269,258

Use: Health Science Technology

Year Built: 2008

Gross Area: 41,242 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI
4.5%

DMB
$460,532





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Roof is in good condition, except overflow drains at the canopies should be reworked so they do not pond water.

Finishes:
•Replace water damaged floor tile.
•Re-glue loose base throughout.

Enclosure:
•Clean miscellaneous areas of efflourescense on brick.
•Replace loose or missing mullion caps.

HVAC:
•Perform retro-commissioning to optimize performance.

Temperature Controls:
•Replace pneumatic controls with electronic controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Central Inverter is not functioning.

OVERVIEW

CRV = $ 8,527,795

Use: Administrative Center

Year Built: 1988

Gross Area: 41,599 SF

Stories: Four

Data of Assessment=October 2017

Five Year FCI 9.8%

DMB $832,057





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Membrane is in fair condition, remedial work to extend the life of the system was performed summer 2015.

Enclosure:
•Clean all metal panels.
•Damaged mechanical equipment screen on roof was repaired summer 2015.
•Replaced skylight above atrium summer 2015.

Finishes:
•Renovated CIT suite summer 2015.
•Repaired water damage at skylight summer 2015.

HVAC:
•Roof top Units were replaced summer 2015.

•Repaired existing Atrium Smoke exhaust.

•Ventilate Boiler Room.

•Perform retro-commissioning.

Plumbing:
•Portion of plumbing is galvanized and should be replaced.

Temperature Controls:
•Provide battery back-up for temperature control panel.

•Replace pneumatic controls with electronic controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Provide automatic lighting controls.

•Provide additional emergency lights.

Code/Barrier Free:
•Reworked Atruim guardrail for loading requirements.

•Guardrail spacing in stairs does not comply.

•Seal fire rated walls at Boiler Room.

•Lavatories require pipe protection and mixing valves.

•Reworked toilet stall for barrier requirement.

OVERVIEW

CRV = $ 21,421,062

Use: Professional Development Center

Year Built: 1991

Gross Area: 91,543 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI 1.7%

DMB $364,470



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Replaced the roof system over the PDC with EPDM in 2014.
•Repair the standing seam metal roofing over the lecture halls.

Enclosure:
•Clean and seal limestone.

Finishes:
•Replaced finishes summer 2014.

HVAC:
•Air handling units, boilers and pumps replaced summer 2014.

Plumbing:
•Replace portion of the galvanized steel, plumbing.

Temperature Controls:
•Replaced controllers and control components for added efficiency.

Electrical Distribution:
•Revised electrical to support HVAC replacement.

Lighting:
•Provided new 80,000 hr. fluorescent lamps in existing 2x4 fixtures and new LED downlights; and new controls summer 2014.

Code/Barrier Free:
•Replaced Door Knobs and thumb latches, summer 2014.
•Added mixing valves at lavatories, summer 2014.

OVERVIEW

CRV = $ 15,434,601

Use: Engineering and Technical Center

Year Built: 1999

Gross Area: 56,537 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI 4.5%

DMB $697,340





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Reseal stone coping joints.
•Rework overflow drains ponding water.
•Single Ply Johns-Manville roof was installed in 1999 and should be replaced by 2025.

Enclosure:
•Refinish and seal metal panels at connector bridge.

Finishes:
•Repair and re-finish all walls with marker boards.

•Replace carpet and reslieint tile at access floor.

HVAC:
•Chiller was replaced as a 2012 project, and a buffer tank was added.

•Provide retro-commissioning.

Temperature Controls:
•Replace pneumatic operators with electronic controls.

Electrical Distribution:
•Perform infrared and visual inspection.

Lighting:
•Provide automatic lighting controls.

•Existing lighting control panels.

•Exisitng light fixtures are fluorescent.

Code/Barrier Free:
•Lavatories require pipe protection and mixing valves.

OVERVIEW

CRV = $10,158,576

Five Year FCI 6.7%

DMB $678,643

Use: Classrooms and Labs

Year Built: 2007

Gross Area: 40,962 SF

Stories: Two

Date of Assessment: October 2017



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
• Durolast membrane installed in 2007 is severely billowing, placing stress on seams and ponding water.The membrane should be re-installed.

Finishes:
•Investigate slab settlement along southwest corner and replace cracked porcelain tile and loose resilient tile.

Enclosure:
•Repair/replace miscellaneous cracked bricks.
•Seal joints in granite base.

HVAC:
•Perform retro-commissioning.

•Ventilate Boiler Room.

•Neutralize condensate from the boiler stack drains.

Fire Protection:
•Sprinkler heads need to be cleaned, especially of paper and tape.

Temperature Controls:
•Replace pneumatic controls with electronic controls.

•Provide battery back-up for control panel.

Electrical Distribution:
•Perform infrared and visual inspection.
•Added generator for UC-4 in spring 2016 for MSU Suite.

Lighting:
•Electrical lighting controls should be replaced.

Code/Barrier Free:
•Lavatories require mixing valves.

OVERVIEW

CRV = $10,158,576

Five Year FCI 2.7%

DMB $190,414

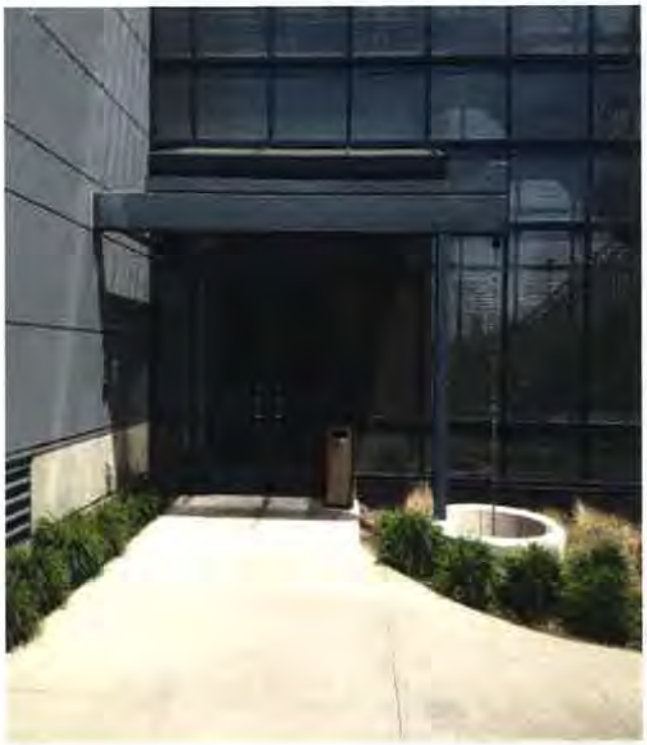
Use: Classrooms and Labs

Year Built: 2008

Gross Area: 25,468 SF

Stories: Two

Date of Assessment: October 2017



FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•PVC membrane has life expectancy of 25+ years.

Finishes:
•No comments

HVAC:
•Retro-commissioning is recommended.

Enclosure:
•No Comments

BUILDING UC-4 Assessment Summary

Fire Protection:
•No comments

Temperature Controls:
•No comments

Electrical Distribution:
•No comments

Lighting:
•No comments

Code/Barrier Free:
•No comments

OVERVIEW

CRV = $80,640

Use: Classrooms and Labs

Year Built: 2008

Gross Area: 672 SF

Stories: Two

Date of Assessment: October 2017

Five Year FCI
4.6%

DMB
$3,741





FIVE YEAR

ASSESSMENT SUMMARY

Roof:
•Asphalt shingles have expected life of 25+ years.

Finishes:
•Not applicable

Enclosure:
•Wood siding requires painting every 8-10 years.

HVAC:
•Not applicable

Fire Protection:
•Not applicable

Temperature Controls:
•Not applicable

Electrical Distribution:
•Not applicable

Lighting:
•Not applicable

Code/Barrier Free:
•Not applicable

Building Data Sheets pp. 3.1-3.165

Building: CA
Gross Area: 37,607 S.F.
Year Built: 1969
No. of Floors: 2
Evaluation Date: October 2017

Use Types:
75% Classroom
10% Lab
15% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 1 yr. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Roofing was replaced in summer 2016				

Enclosure System Age: Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Exterior was cleaned, tuck pointed and sealed in summer 2016.				

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All finishes were replaced summer 2016.				

Fixed Equipment

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All casework was replaced summer 2016.				

MECHANICAL

HVAC System Age: 1 yr Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		HVAC systems were replaced summer 2016				

Plumbing System Age: 43 yrs. Life Expectancy: 20 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Plumbing systems were replaced in summer 2016.				

Fire Protection

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Full fire suppression system was added in summer 2016.				

Temperature Controls

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Temperature controls were replaced summer 2016.				

ELECTRICAL

Primary Power System Age: 43 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Electrical equipment was upgraded in summer 2016.				
		Provide maintenance and IR testing for all substations, swithcboards and distribution panels on a 5 year interval.				

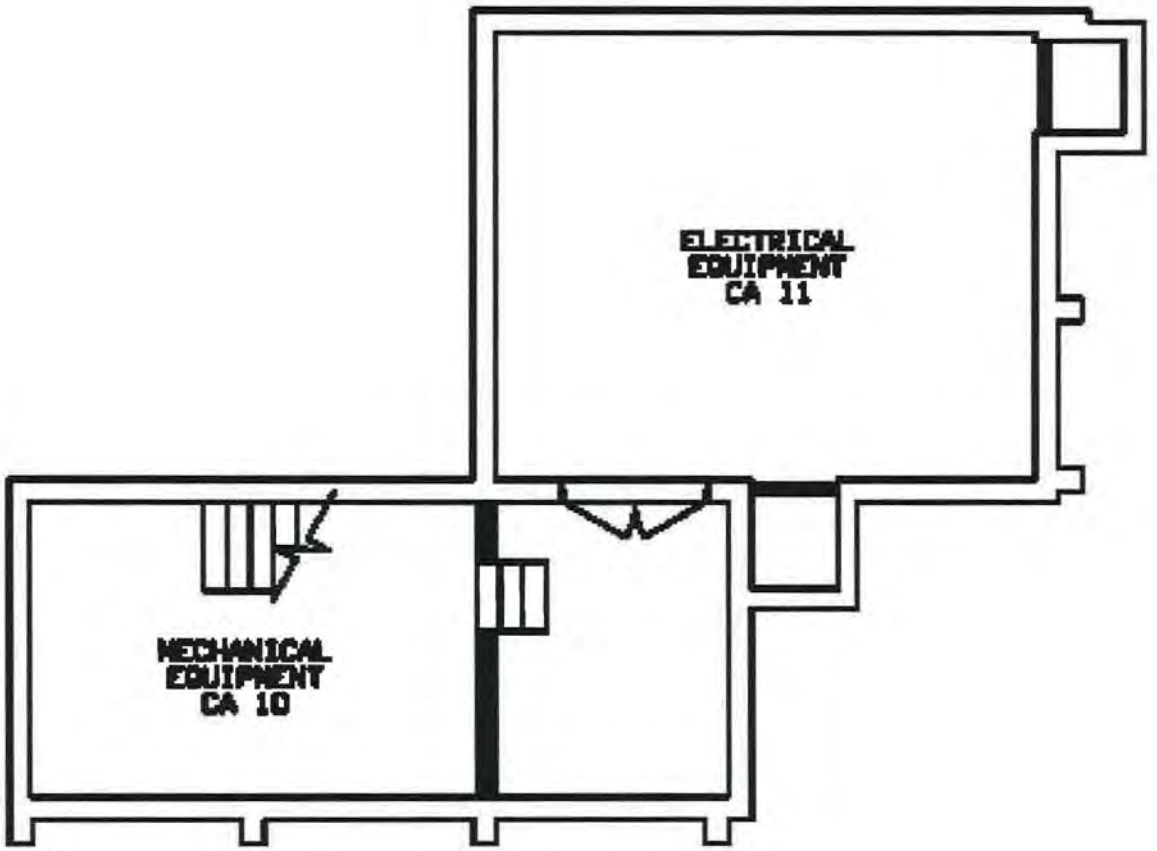
Lighting System Age: 43 yrs Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Lighting was replaced with LED and controls were added in summer 2016.				

CODE AND BARRIER FREE

Code Systems and Barrier Free

Item	Location	Comments	Quanti-ty/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Toilet rooms and door hardware were upgraded in sum-mer 2016.				



BUILDING 'CA' BASEMENT

NORTH

UPPER LEVEL FLOOR PLAN

MAIN LEVEL FLOOR PLAN

Building: CB
Gross Area: 18,298 S.F.
Year Built: 1968
No. of Floors: One
Evaluation Date: October 2017

Use Types:
84% Classrooms
16% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 20 yrs. Life Expectancy: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
PVC Membrane	Roof Surface and Perimeter	Roofing is near the end of its life	18,298	$12.50	$228,725	$331,651
Precast Concrete	Sreen Wall	Spalling of precast concrete screen wall. Debris found scattered on roof.	L.S.	$1,100	$1,100	$1,595
Gas Line	Roof	Gas line is unsupported, not painted and rusting.	L.S.	$1,650	$1,650	$1,815

Enclosure System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Metal Wall Panels	Penthouse East Wall	Metal wall panel pulled away and separating	L.S.	$1,650	$1,650	$2,393
Precast Concrete	North elevation	Preast concrete soffit is spalling. Precast concrete columns have rusting exposed rebar.	L.S.	$2,200	$2,200	$3,190
Building Sealant	Brick to Precast	Sealants dried out, cracking and pulling away from substrate.	L.S.	$4,400	$4,400	$6,380

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Interior Doors	All	Laminate doors are chipped and delaminating (replace)	42 ea.	$550/ea.	$23,100	$33,495
Interior Doors	CB106/CB107	Cracked vision lites. (replaced w/door)	-	-	-	-
Interior Walls	Various	Gyp. bd. walls cracked in various locations, misc. holes, etc. (Patch & Paint)	L.S.	$2,750	$2,750	$3,988
Ceramic Tile	CB125	Ceramic floor tile missing. (Patch Only)	L.S.	$550	$550	$798
Ceiling Tile	Throughout	Stained, chipped sagging and repainted acoustical ceiling tile past useful life expectancy. (replace)	10,000 sf	$3.3/sf	$33,000	$47,850
Carpet Tile	CB131	Older worn carpet tile. (replace)	8,000 sf	$6.6/s.f.	$52,800	$76,560

MECHANICAL

HVAC System Age: 15-48 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	The HVAC systems are in need of replacement	18,298	$27.60	$505,025	$732,286
Ductwork	Building	Supply and return ductwork needs rework/replacement	Incl Above			
Exhaust Fans	Roof	Replace exhaust fans	Incl Above			
Ventilation	Print Shop	Increase ventilation	Incl Above			
			Incl Above			

Plumbing System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the domestic cold water distribution system are galvanized steel. Due to it's age the piping is showing signs of deterioration and should be replaced.	100 l.f.	$55.00	$5,500	$7,975

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 15 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	18,298 s.f.	$6.38	$116,741	$169,274

ELECTRICAL

Primary Power System Age: 48 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Fed from CA @ 480V. Provide maintenance and IR testing for all substations, switch boards and distribution panels on a 5 year interval.				

Secondary Power System Age: 48 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Replace all distribution equipment except the generator.	18,298	$10.00	$182,980	$265,321
HVAC Replace-ment	All listed units	Electrical revisions in support of HVAC replacement	18,298	$2.00	$36,596	$53,064

Distribution System Age: 48 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Receptacles	Throughout	Update all wiring devices throughout	18,298	$5.00	$91,490	$132,661
Exterior Recep-tacles	Exterior	Cost included above				

Lighting System Age: 48 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	Regular Class-rooms & Offices	Light fixtures have T12 lamps-Replace with LED fix-tures	18,298 S.F.	$8.18	$149,678	$217,033
Lighting Control	All	No automatic lighting control devices or lighting control relays	18,298 S.F.	$1.68	$30,741	$44,574
Exit Discharge	All Exits	Light fixtures are not emergency	LS	$3,960	$3,960	$5,742

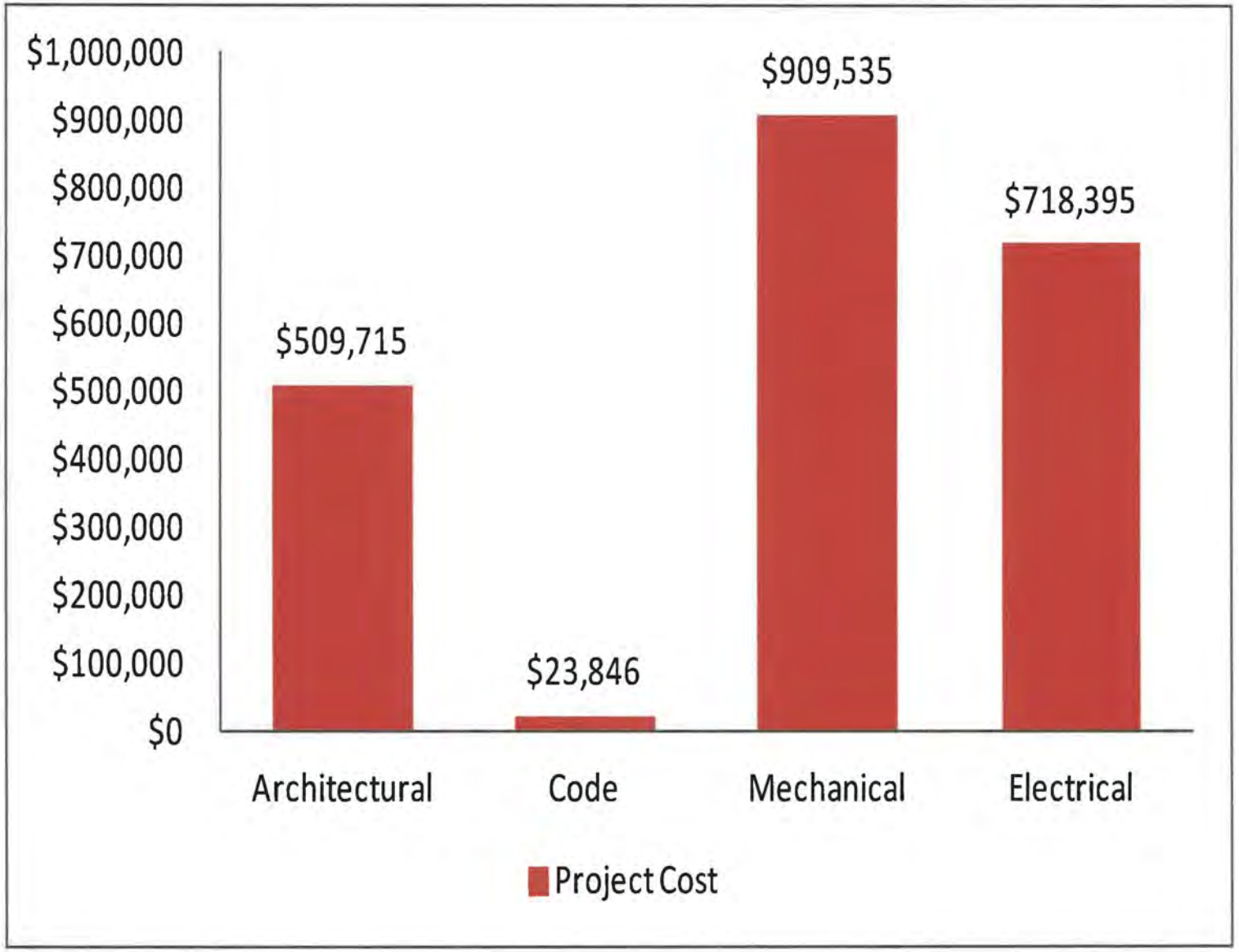
CODE AND BARRIER FREE

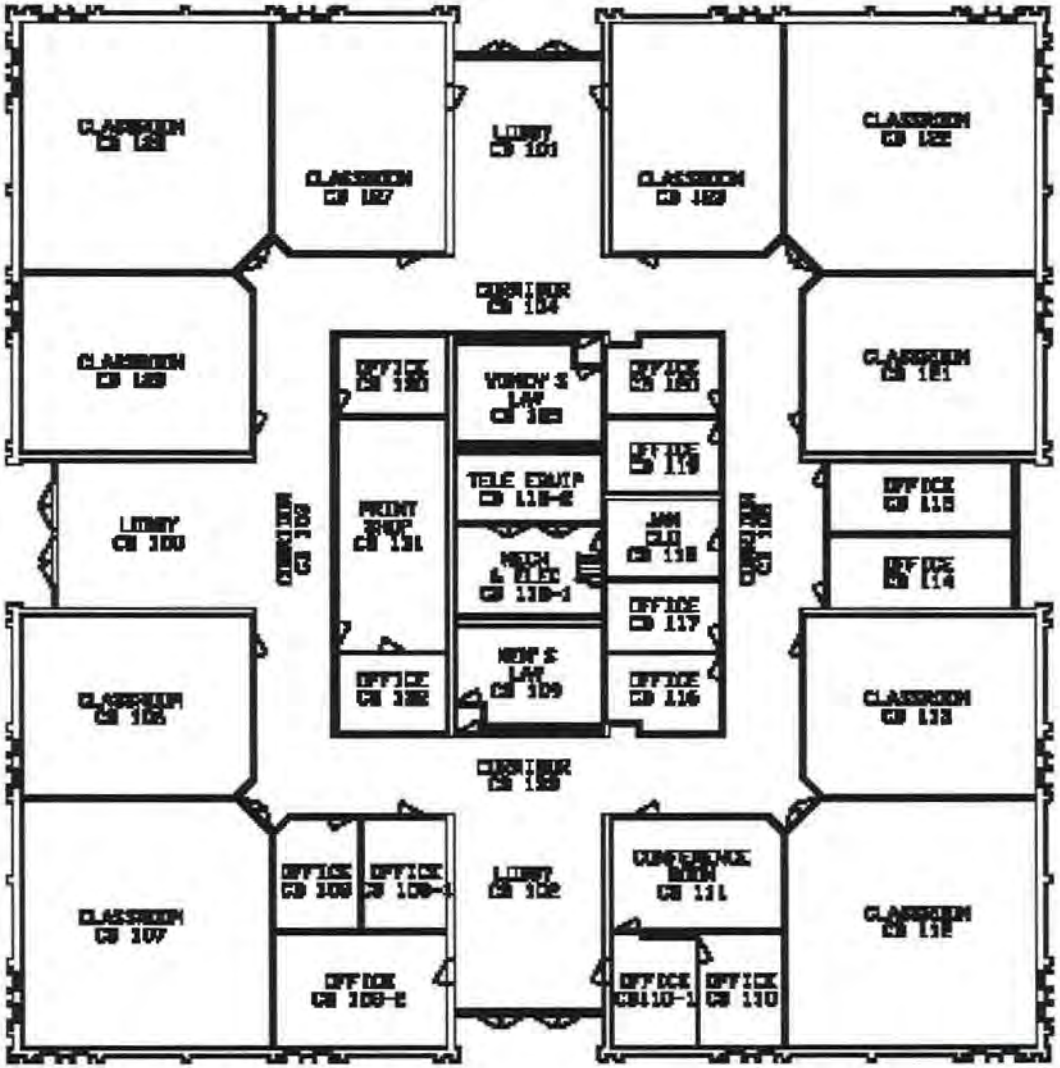
Code System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Stairs	All	Exterior means of egress stairs do not have handrails. (add)	L.S.	$2,200/L.S.	$2,200	$3,190
Interior Ramp	CB100	Lobby ramp has 16" rise with no hand-rails. Slope may be non-conforming. (add)	L.S.	$1,100/L.S.	$1,100	$1,595
Lavatory mixing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/ burn protection at accessible fixtures. Provide point of use mixing valves.	6 ea.	$330 ea.	$1,980	$2,871

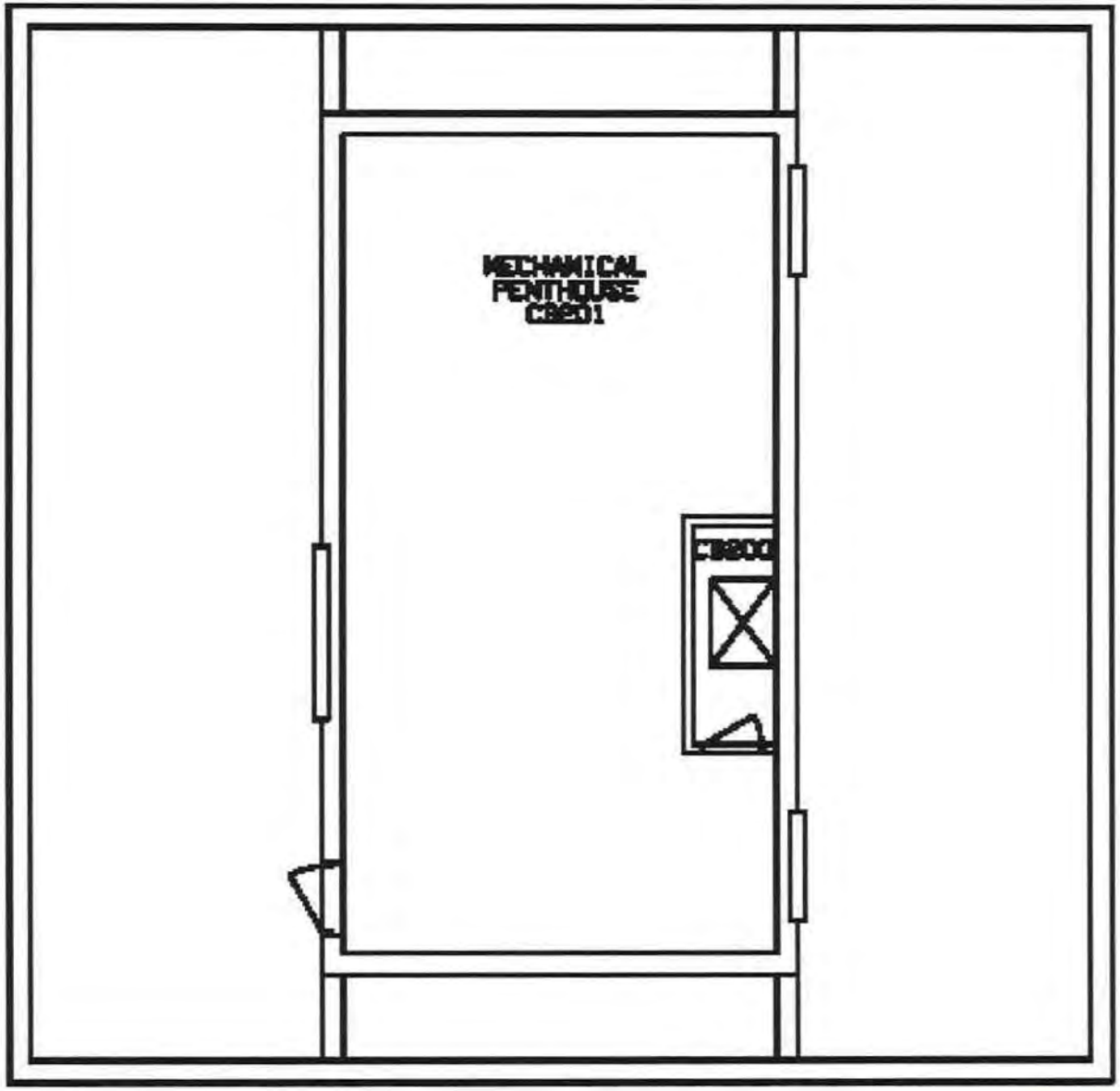
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Toilet Rooms	All	Barrier Free stalls are non-compliant. No BF urinal (rework)	L.S.	$3,300	$3,300	$4,785
Door hardware	Various	Perimeter office doors have knobs as opposed to lever style hardware (replace)	15 ea.	$165/ea.	$2,475	$3,589
Interior Doors	CB109/ CB125	Toilet room doors open less than 32" clear with no latch side clearance. (rework opening)	L.S.	$4,400	$4,400	$6,380
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA accessibility. Provide protective piping.	6 ea.	$165 ea.	$990	$1,436


$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
$509,715
$23,846
$909,535
$718,395
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CB" MAIN FLOOR



BUILDING 'CB' PENTHOUSE

Building: CC
Gross Area: 57,489 S.F.
Year Built: 1969
No. of Floors: Two
Evaluation Date:October 2017

Use Types:
100% Library

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 23 yrs. Life Expectancy: 25 yrs. Single Ply

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Roof	Throughout	Roof is near the end of its life and should be replaced	28,750	$12.50	$359,375	$521,094

Enclosure System Age: Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Window Mullions	North and West	Window mullion caps are popping off at arched windows (re-install)	L.S.	$2,200	$2,200	$3,190
Masonry	North and East	Mortar is coming out at facebrick and precast concrete. (tuck-point)	L.S.	$5,500	$5,500	$7,975
Sealant	East	Sealant is gapping and pulling away from substrate at control joint. (replace)	L.S.	$550	$550	$798
Precast Concrete	East	Precast concrete is cracked at entry piers. Sealant and mortar is coming out of joints.	L.S.	$2,200	$2,200	$3,190
CIP Concrete	West	Cast concrete below window sill is cracked and spalling (tuck-point)	L.S.	$1,650	$1,650	$2,393*
Louver	West	Bird/Animal screen pulled away at electrical room louver. (re-install)	L.S.	$330	$330	$479

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Carpet repalced. Chipped and delaminatiing plastic Laminare replaced summer 2017.				

MECHANICAL - NORTH & SOUTH

HVAC System Age: 0 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Mechanical system was renovated summer 2017. Reconditioned AHU's and replaced equipment.				

Plumbing System Age: 48 yrs. Life Expectancy: 50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the domestic cold water distribution piping system are galvanized steel. Due to it's age the piping is showing signs of deterioration and should be replaced	60 LF	$55	$3,300	$4,785
Piping	Building	Portion of the cold and hot water piping have missing and damaged insulation. The insulation should be replaced.	19,791 SF	$0.77	$15,239	$22,097

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 0 yrs. Life Expectancy:15 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Temperature controls replaced summer 2017				

ELECTRICAL

Primary Power System Age: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$2,200	$2,200	$3,190

Secondary Power System Age: 25 yrs and 50 yrs

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$3,520	$3,520	$5,104
	Elec Rm 104	Upgrade 1968 equipment.	LS	$35,000	$35,000	$50,750

Distribution System Age: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Recep-tacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785
		Interior receptacles were replaced 2017.				

Lighting System Age: 0 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Emergency lighting upgraded. Automatic lighting controls provided, summer 2017. New LED lighting provided.				

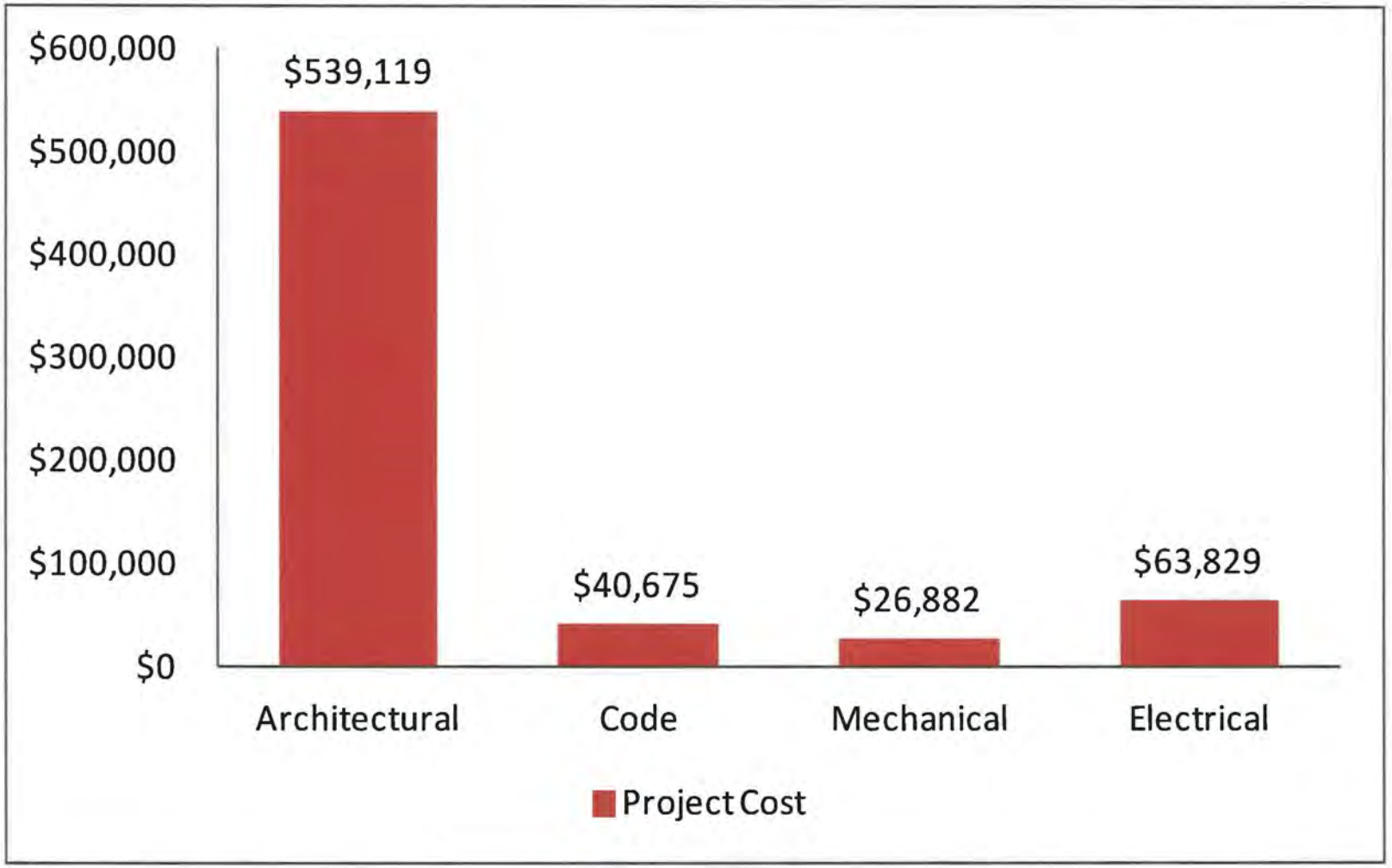
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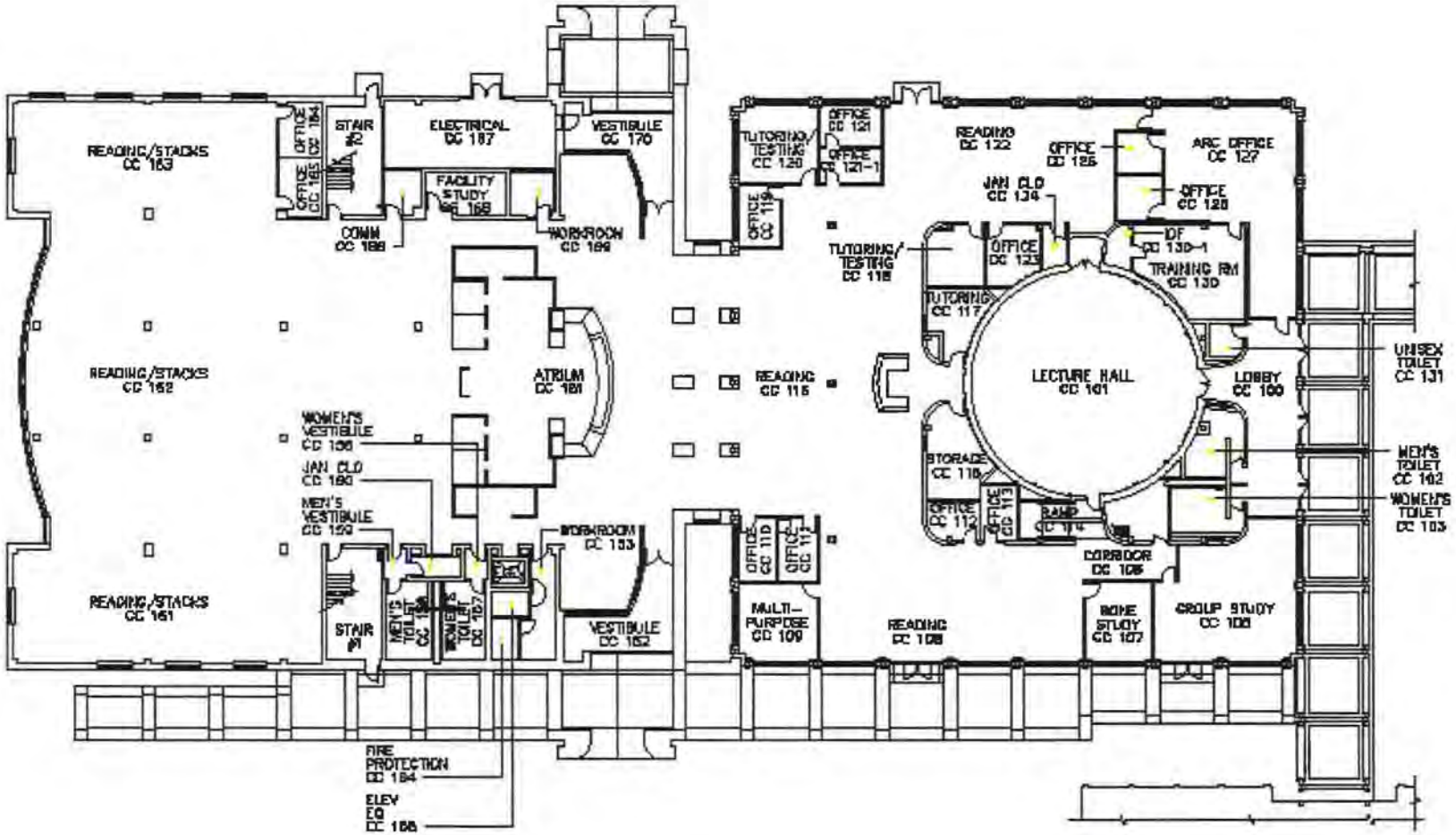
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Entry Doors	North	Entrance doors are less than 80" tall. (re-place)	6 ea.	$2,750	$16,500	$23,925
Stairs	All	Guardrails are not compliant with current code. Balluster spacing greater than 4". No cane rail where below 8" aff. (replace)	2 stairs	$5,500 ea.	$11,000	$15,950
Stairs	West	No handrail at steps to lecture hall CC101. (add)	L.S.	$550	$550	$798

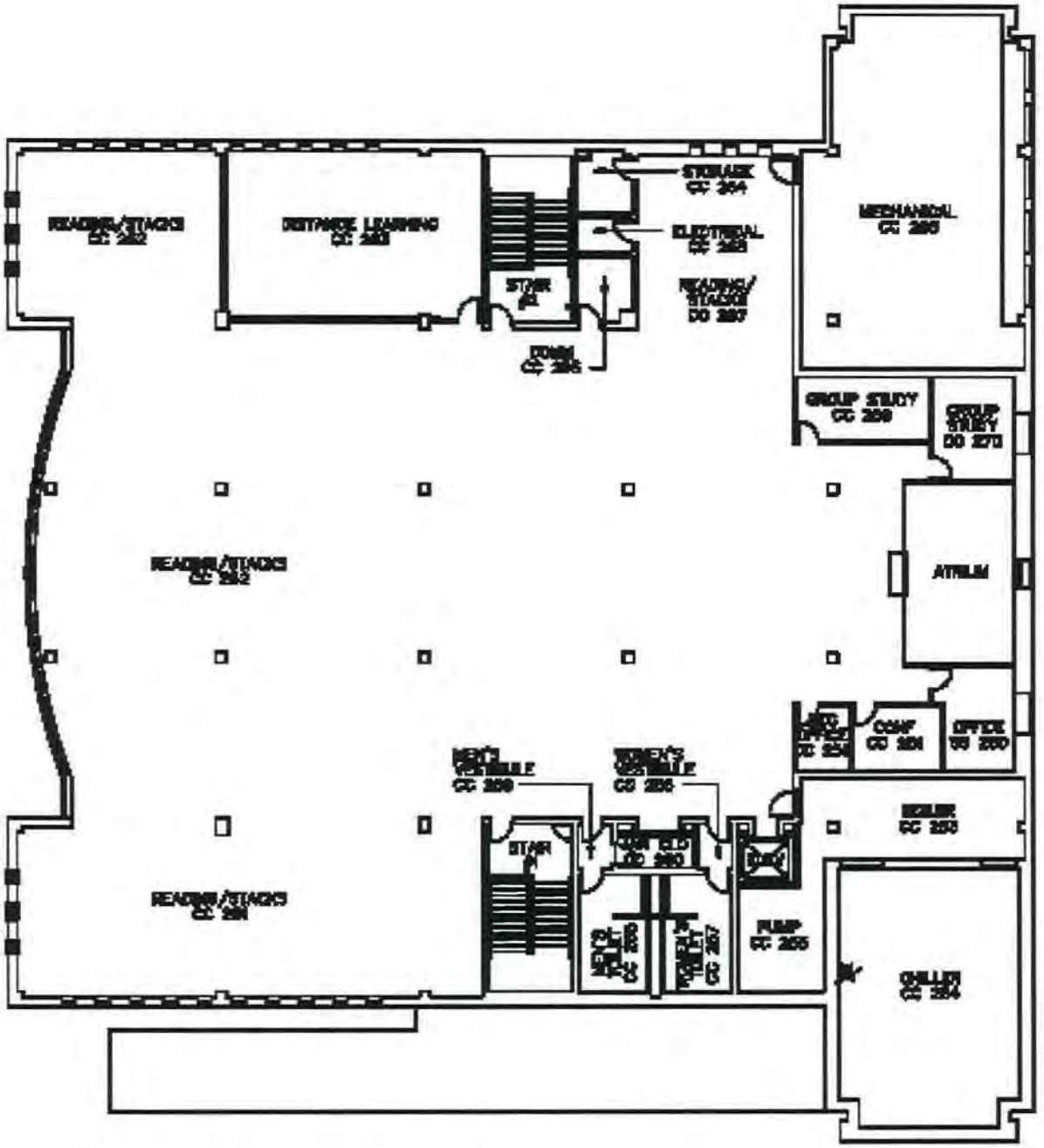
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Toilet stalls, door hardware and door clearances upgraded summer 2017.				


$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
$539,119
$40,675
$26,882
$63,829
Architectural
Code
Mechanical
Electrical
Project Cost

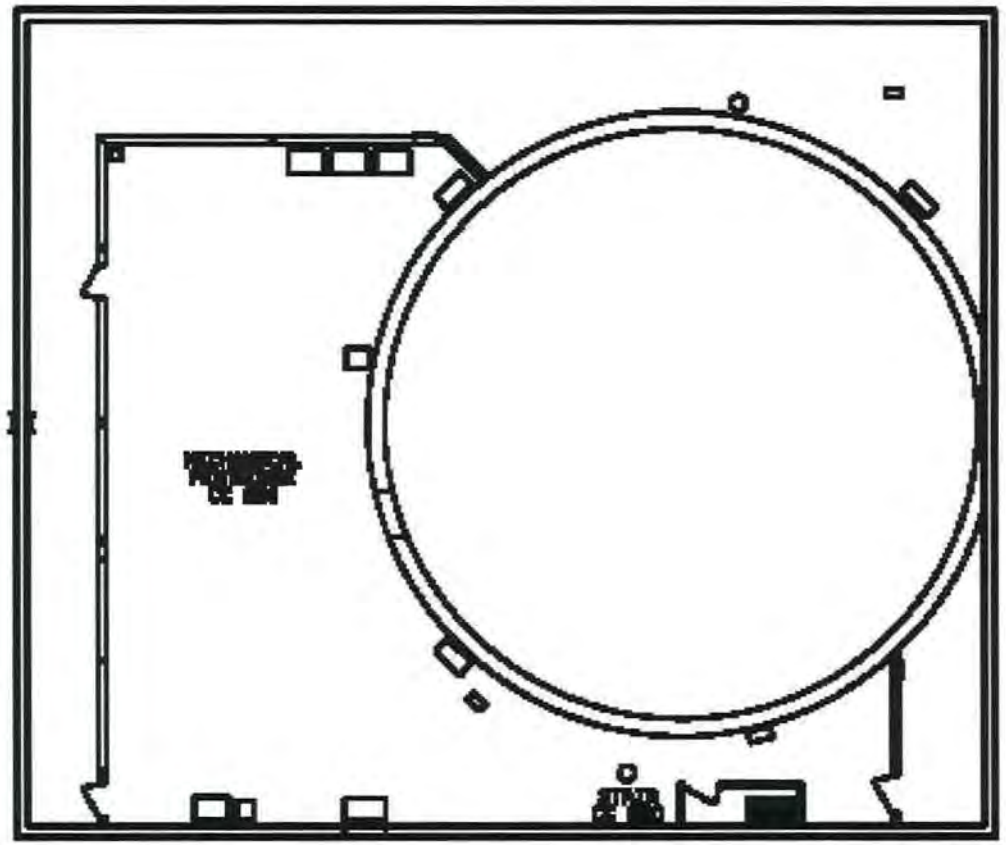


BUILDING "CC" MAIN FLOOR



BUILDING "CC" SECOND FLOOR

NORTH



BUILDING 'CC' PENTHOUSE













Building: CD
Gross Area: 1,581 S.F.
Year Built:
No. of Floors: One
Evaluation Date:October 2017

Use Types:
100% Meter

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 19 years Life Expectancy: 25 yrs. Single Ply

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Metal Mansard	SE Corner	Standing seam metal is bent and damaged at the corner.	L.S.	$1,100	$1,100	$1,595

Enclosure System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Exterior Doors	North and South	Hollow metal doors are rusting and dented and damaged.	5	$1,650 ea.	$8,250	$11,963

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
CMU	CD 103	CMU is broken out of the wall in the water meter room.	LS	$550	$550	$798

MECHANICAL

HVAC System Age: 48 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Ventilation added for the transformer room summer 2013.				
Heat	Building	Replace electric units heaters	3 ea.	$1,650	$4,950	$7,178

Plumbing System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Not Applicable				

Fire Protection

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Not Applicable				

Temperature Controls

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Controls added to the transformer room ventilation in summer 2013.				

ELECTRICAL

Primary Power System Age: 43 yrs. Original 9 years Addition

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment, on 5 year basis.		0	0	0
		Original primary switches are old and should be replaced.	LS	$60,000	$60,000	$87,000

Secondary Power System Age: 43 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment on a 5 yr basis.				
HVAC Replacement	All listed units	Electrical distribution revisions in support of added ventilation in main electrical room and replacement of electric heaters.	LS	$3,300	$3,300	$4,785

Distribution System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Receptacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785

Lighting System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	Water Meter Rm	Light fixtures have T12 lamps & should be replaced w/ LED	522 S.F.	$5.5	$2,871	$4,163

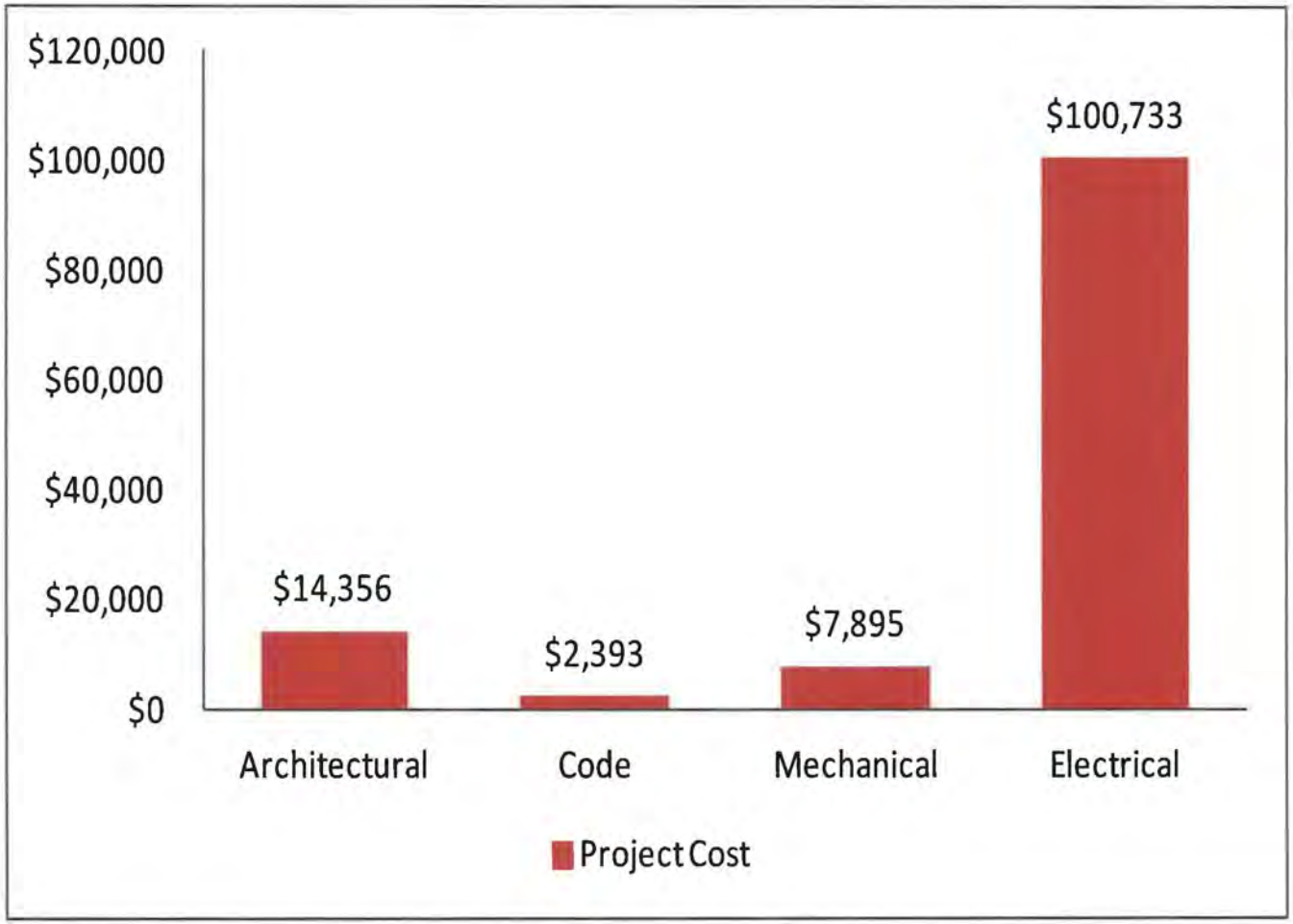
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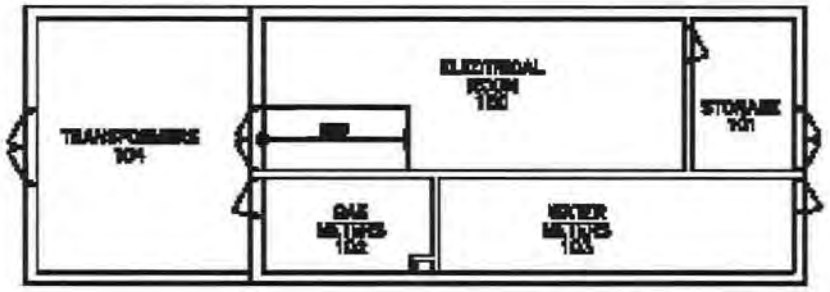
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Fire Separation	Between Gas Meter and Electric	Infill openings, and louvers between rooms	L.S.	$1,650	$1,650	$2,393

Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Door hard-ware	All	Doors have knobs as opposed to lever style hardware.				Included w/ Door replacement


$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$14,356
$2,393
$7,895
$100,733
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CD" MAIN FLOOR

Building: CE
Gross Area: 64,420 S.F.
Year Built: 1981
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
60% Classrooms
34% Labs
6% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age:4 yrs Life Expectancy: 25 yrs. Single Ply

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Coping	Receiving Connector	Gaps in seams of coping at low roof.	320 l.f.	$13.20	$4,224	$6,125
Sealant	Low Roof	Many areas where sealant failures have been relealed numerous times. Joints should be cleanted and new sealant tooled.	L.S.	$1,650	$1,650	$2,393
Gas Line	Low Roof	Gas line needs to be repainted.	320 l.f.	$1.40	$448	$650

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Water Damage	East Wall/CE114	Evidence of water infiltration along the east wall below the skylights on the main floor and in the NW corner of lecture hall.	L.S.	$8,250	$8,250	$11,963
Floor Slab	115/116/117/118	Floor slab has settled along the east wall. VCT has cracked wall to wall as a result.	L.S.	$5,500	$5,500	$7,975
Entrance Doors	Various	Missing and gapping thresholds. Entrance systems not weather tight.	9 ea.	$1,650	$14,850	$21,533
Face Brick	Site Walls	Efflourescing of face brick on site screen walls.	L.S.	$11,000	$11,000	$15,950
Face Brick	Exterior Corner	Face brick popping out a corner below curtain wall.	L.S.	$2,750	$2,750	$3,988

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Ceiling	Throughout	Stained and damaged ACT in areas that have not been previously renovated.	32,000 S.F.	$3.3/S.F.	$105,600	$153,120
Carpet Tile	122/225/114	Older worn carpet tile. Stair nosings are peeling away in CE114 creating a trip hazard.	2,700 S.F.	$6.6/S.F.	$17,820	$25,839
Wall Cracks	112/113/121/105/ 155/109/224/219-5/225	Building movement cracks in gypsum board walls at various locations.	L.S.	$2,475	$2,475	$3,589
Dented Door	150	Receiving room doors dented and damaged. Exterior door does not latch on return. Worn weatherstripping not sealing to door.	L.S.	$2,200	$2,200	$3,190
CMU	101	South wall of the general storage room has a crack from the floor to ceiling. Cracked joints to be sawcut and tuck pointed. Cracked CMU to be replaced.	L.S.	$550	$550	$798
Quarry Tile	155/255	Tile flooring has various locations of missing or loose quarry tile wall base.	L.S.	$1,100	$1,100	$1,595
Wall Damage	Throughout	Various locations of wall chips, scuffs and gouges. (Patch/Paint)	180,000 S.F.	$0.39/S.F.	$70,200	$101,790
Janitor's Closet	111	Damaged gyp. bd. walls and ceiling. Missing quarry tile base.	L.S.	$1,650	$1,650	$2,393
VCT	121-3	VCT flooring is stained throughout the room.	100 S.F.	$4.4/S.F.	$440	$638
Doors	221/220-14/220-16/121-2	Damaged doors, laminate veneer chipped away, lockset mortise separating.	4 ea.	$1,650	$6,600	$9,570
Walk off carpet	Entrances	Older walk-off carpets worn and frayed.	400 S.F.	$6.6/S.F.	$2,640	$3,828

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Fume hood	119	Older fume hood in the hematology lab.	L.S.	$5,500	$5,500	$7,975
Tiered Seating	114	Tiered lecutre seating worksurface is cracked.	L.S.	$275	$275	$399
Laminate Counter	105-3	Laminate Counter is cracked.	L.S.	$275	$275	$399
Elevaotr	-	Laminate chipped away at cab finish panels.	L.S.	$1,100	$1,100	$1,595

MECHANICAL

HVAC System Age: 36 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	The buildings HVAC systems are in poor condition and are in need of replacement including the following:	64,420 S.F.	$34.50	$2,222,490	$3,222,611
		Air handling units		Incl. Above		
		Air cooled condensing units		Incl. Above		
Duct System	Building	The duct system is mostly original and appears to be lined. Due to the age and potential indoor air quality issues the entire supply air duct system should be replaced.		Incl. Above		
Exhaust Fans	Roof	Replace exhaust fans		Incl. Above		
Piping	Building	Portion of the refrigerant piping and the hot water heating piping have missing and damaged insulation. The insulation should be replaced.		Incl. Above		

Plumbing System Age: 36 yrs. Life Expectancy: 20-50 years.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the cold and hot water piping have missing and damaged insulation. The insulation should be replaced.	64,420 S.F.	$0.77	$49,603	$71,924
Med. Gas	Vet Tech	Remove Nitrous/ Add 02	LS	17,241	$17,241	$25,000

Fire Protection Age: Life Expectancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 36 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Replace/Upgrade Controls	Buidling	Replace and upgrade controllers and control components for added efficiency and enhanced maintenance functions.	64,420 S.F.	$4.83	$311,149	$451,166

ELECTRICAL

Primary Power System Age: 36 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Primary loop switches and main transformer are being re-placed in 2018.	LS	65,000	$65,000	$94,250

Secondary Power System Age: 36 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Emergency Power	Electrical Room 214	Lighting in 2018 will be served by batteries.				
Testing	Elec Rm	Perform infrared and visual inspection distribution equipment.	LS	$3,520	$3,520	$5,104
HVAC Replace-ment	All liste units	Electrical distribution revisions in support of HVAC equipment replacement (AHUs, air cooled condensing units, and exhaust fans.(To be included in 2018 project)	64,420 S.F.	$2.00	$128,840	$186,818

Distribution System Age: 36 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Recep-tacles	Exterior	Receptacles do not have weather proof in use covers. (To be included in 2018 project)	LS	$3,300	$3,300	$4,785
Vending	Corridor 155	Vending machines are not plugged into a GFI receptacle	LS	$2,200	$2,200	$3,190
Receptables	Throughout	Upgrade wiring devices in 2018 project.	64,420 S.F.	$1.50	$96,630	$140,114

Lighting System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	First Floor & Hlaf of Second Floor	Light fixtures have T12 lamps	64,420 S.F.	$7.00	$450,940	$653,863
Lighting Control	All	No automatic lighting control devices or lighting control relays	64,420 S.F.	$1.50	$96,630	$140,114
Exit Discharge	All Exits	Light fixtures are not emergency (will be up-graded with batteries in 2018) (cost included in lighting above.				

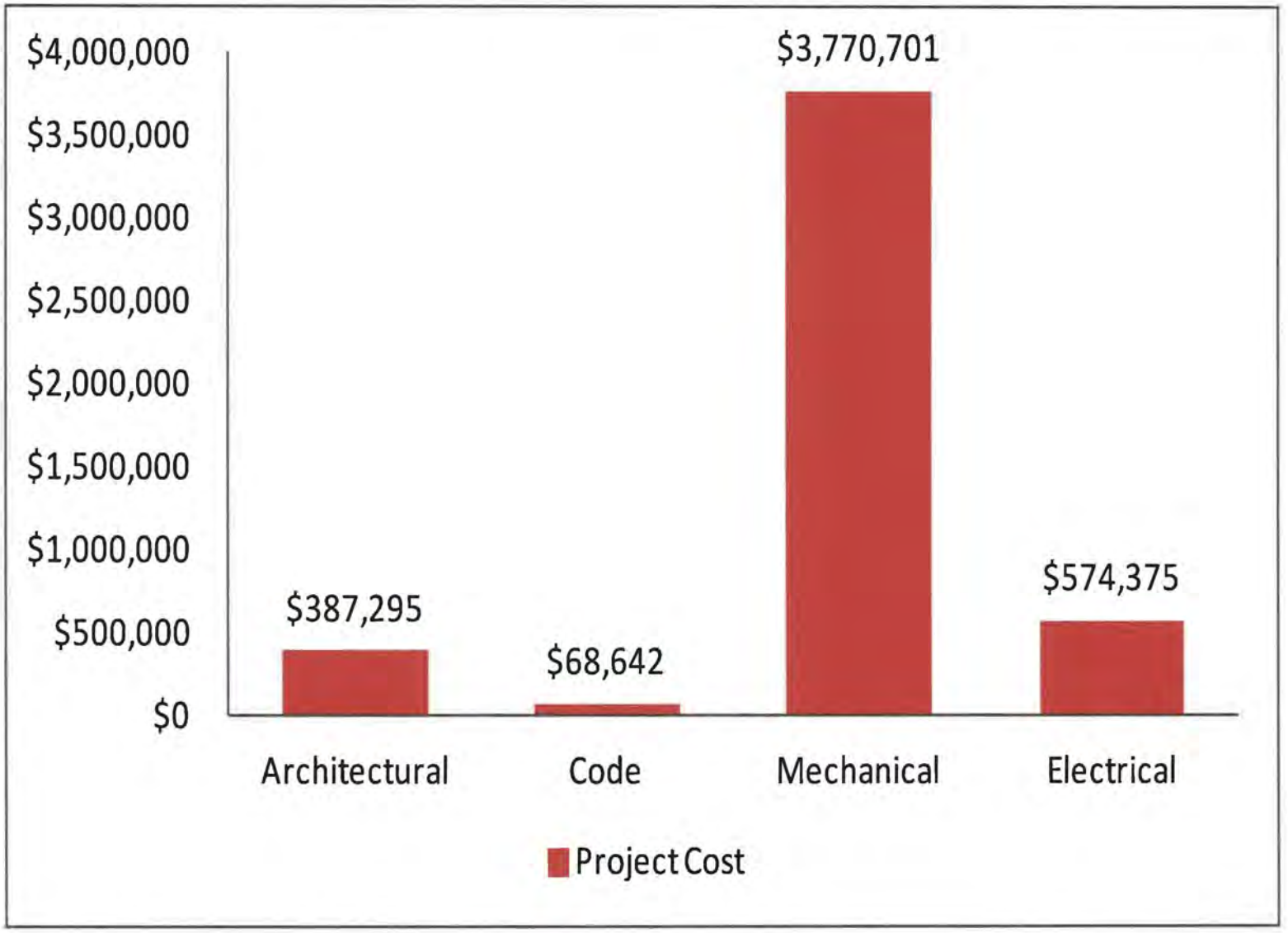
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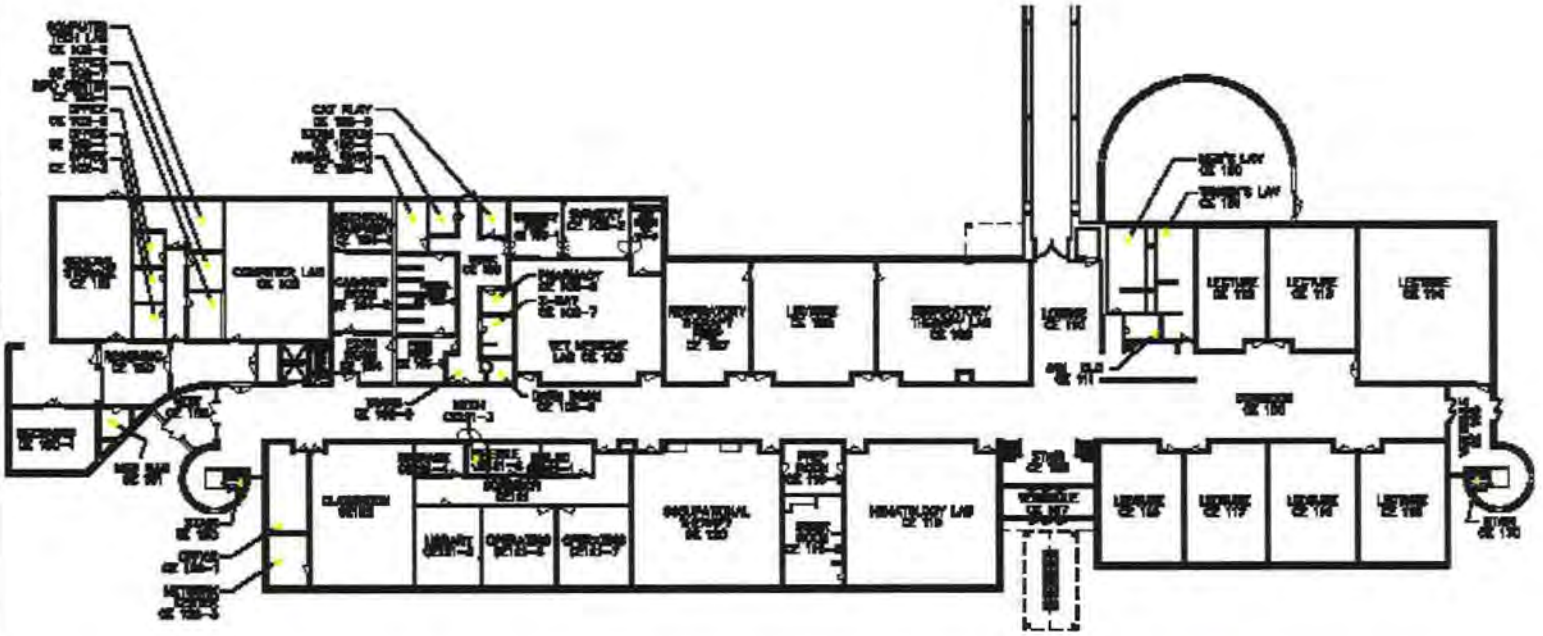
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Stairs	All	Guardrails and handrails are not compliant with current code. Balluster spacing greater than 4" and handrail non-compliant for graspability.	4 stairs	$5,500 ea.	$22,000	$31,900
Stairwells	All	Stairwell is not rated and open to the upper level.	3 locations	$2,750 ea.	$8,250	$11,963
Door Hardware	224	Panic devices provided on double door to corridor, but not on second means of egress through 225.1. Door is also obstructed.	1 ea.	$1,320	$1,320	$1,914
Lavatory Mixing Valve	Toilet Rooms and Sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/burn protection at accessible fixtures. Provide point of use mixing valves.	8 ea.	$330	$2,640	$3,828

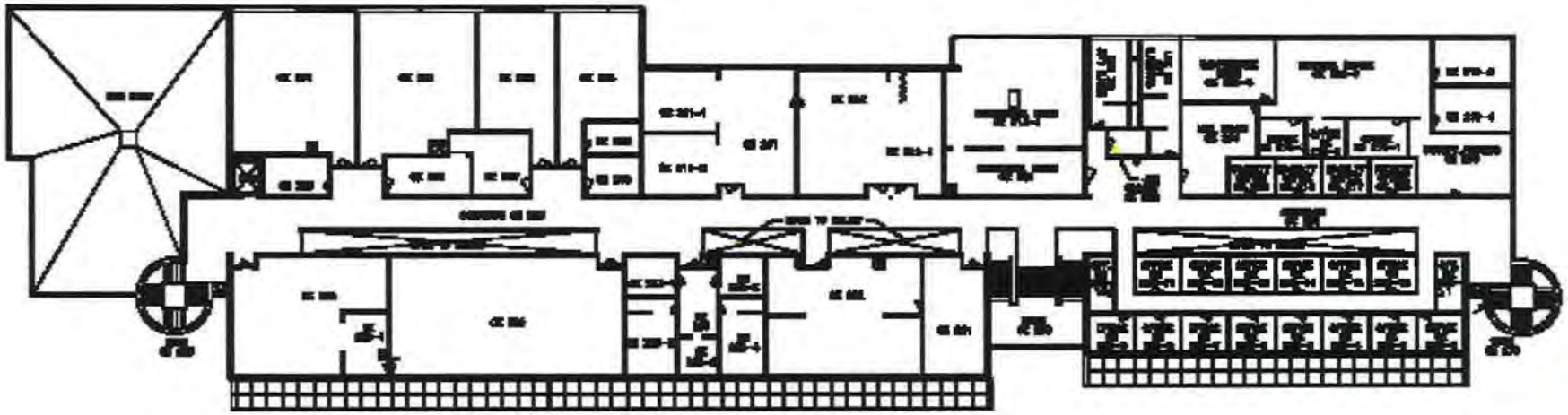
Barrier Free System Age: Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Door Hardware	Various	Areas that have not been renovated in recent years have knob style door hardware. Many knobs/locksets in need of repair.	50	$193	$9,650	$13,933
Tiered Seating	114	Tiered lecture hall seating does ot have barrier free space alloction interspersed, only at rear of hall				No Action
Stairwells	Lower Level	No cane/guardrail protection for stringers below 80".	4 locations	$550	$2,200	$3,190
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA accessibility. Provide protective pipe covering	8 ea.	$165	$1,320	$1,914


$4,000,000
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
$387,295
$68,642
$3,770,701
$574,375
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CE" MAIN FLOOR



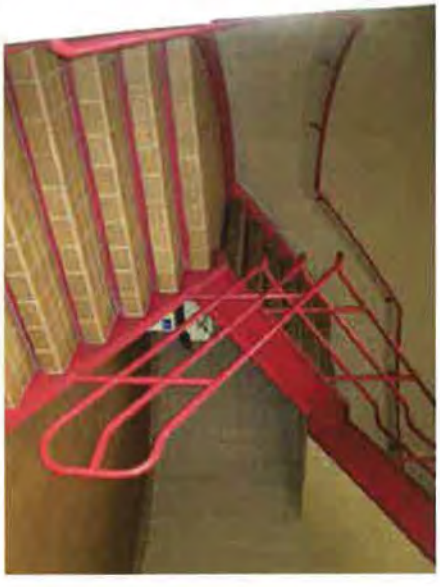
BUILDING "CE" SECOND FLOOR













Building: CF
Gross Area: 19,469
Year Built: 1970
No. of Floors: One
Evaluation Date: October 2017

Use Types:
77% Classrooms
23% Labs

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 2 years Life Expectancy: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Roof system replaced summer 2015.				

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Brick and precast cleaned, tuck pointed and sealed summer 2015. Windows replaced summer 2015.				

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All new finishes provided . Summer 2015 Temporary walls replaced with permanent walls, summer 2015.				

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All new casework summer 2015.				

MECHANICAL

HVAC System Age: 2 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		All new HVAC equipment provided, including ductwork summer 2015.				

Plumbing System Age: 2 yrs. Life Expectancy: 20 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Plumbing replaced summer 2015.				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Fire rated walls in lieu of Automatic fire suppression system were added in 2015.				

Temperature Controls Age: 2 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Replaced summer 2015				

ELECTRICAL

Distribution System Age: 2 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Electrical distribution equipment, including equipment serving buildings CG and CH. Replaced summer 2015.				
		Provide maintenance and IR testing on a 5 year basis.				

Lighting System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Emergency lighting and automatic lighting controls provided summer 2015.				
		All new LED lighting was provided summer 2015.				

CODE AND BARRIER FREE

Code System/Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Classroom door knob hardware replaced summer 2015.				
		Lavatory pipe protection provided summer 2015.				

GENERAL NOTES
MAIN FLOOR PLAN

Building: CG
Gross Area: 18,747
Year Built: 1969 Reno. 2012
No. of Floors: 1
Evaluation Date: October 2017

Use Types:
Student Services

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 22 years Life Expectancy: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Roof Membrane	Throughout	Membrane was patched at new HVAC equipment in 2012; but should be replaced by 2021.	18,747 S.F.	12.50/ S.F.	$234,338	$339,790

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Brick and precast cleaned in 2012. Glazing and cast stone infills also new in 2012.				

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		New carpet and tile throughout in 2012. expected life of carpet12 years. Expected life of tile 30 years.				

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost

MECHANICAL

HVAC System Age: Life Expectancy

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		All new HVAC systems in 2012. And, boilers were replaced again in 2017 after premature failure.				
		Existing RTU's were refurbished				

Plumbing System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Toilets renovated and piping replaced in 2012.				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Corridors were fire rated in lieu of adding fire suppression.				

Temperature Controls

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All new controls in 2012.				

ELECTRICAL

Distribution System Age:

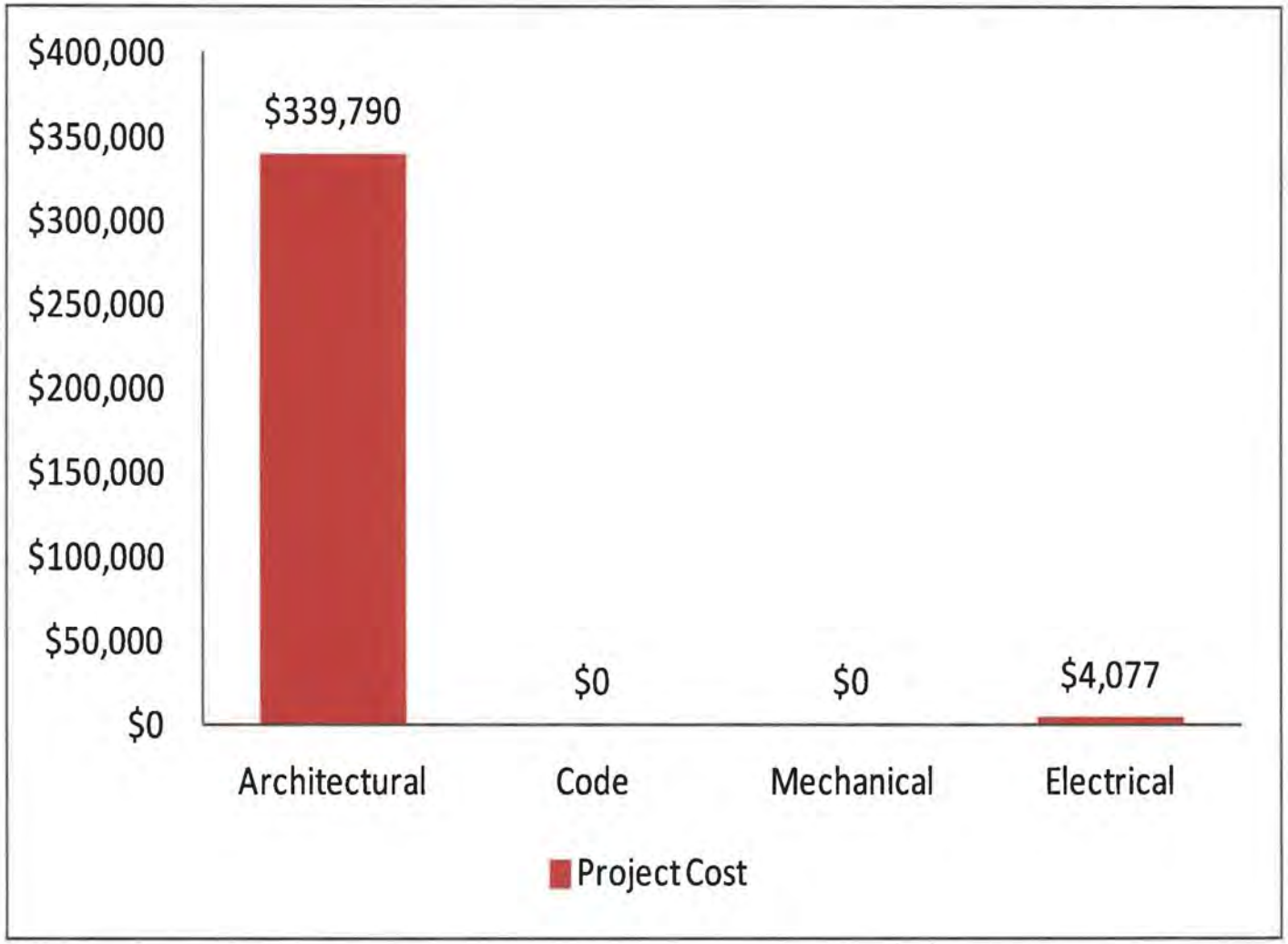
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		New distirbution and panel boards in 2012.				
		Provide maintenance and IR testing on a 5 year basis.				

Lighting System Age:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Fluorescent lamps installed in 2012. Life expectancy is approxi-matley 5 years. Group re-lamping needed.	18,747 SF	$0.15	$2,812	$4,077

CODE AND BARRIER FREE

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Toilet rooms upgraded in 2012. Door hardware upgraded in 2011.				


$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$339,790
$0
$0
$4,077
Architectural
Code
Mechanical
Electrical
Project Cost

Building: CH
Gross Area: 31,402 S.F.
Year Built: 1968
No. of Floors: 2
Evaluation Date: October 2017

Use Types:
50% Classroom
50% Student Services

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 19 years Life Expectancy: 25 yrs

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Roof Membrane	Throughout	Roof was patched at new HVAC equipment in 2011; but should be replaced by 2024.				

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Brick and precast cleaned in 2011. All new glass and aluminum framing in 2011.				

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		New carpet and tile throughout in 2011. Expected life of carpet 12 years. Expected life of tile 30 years.				

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost

MECHANICAL

HVAC System Age: Life Expectancy

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		All new HVAC systems in 2011.				

Plumbing System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Toilets renovated and piping replaced in 2011.				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Fire suppression added in 2011.				

Temperature Controls

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All new controls added in 2011.				

ELECTRICAL

Distribution System Age: 6 yrs

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		New distribution and panel boards in 2011.				

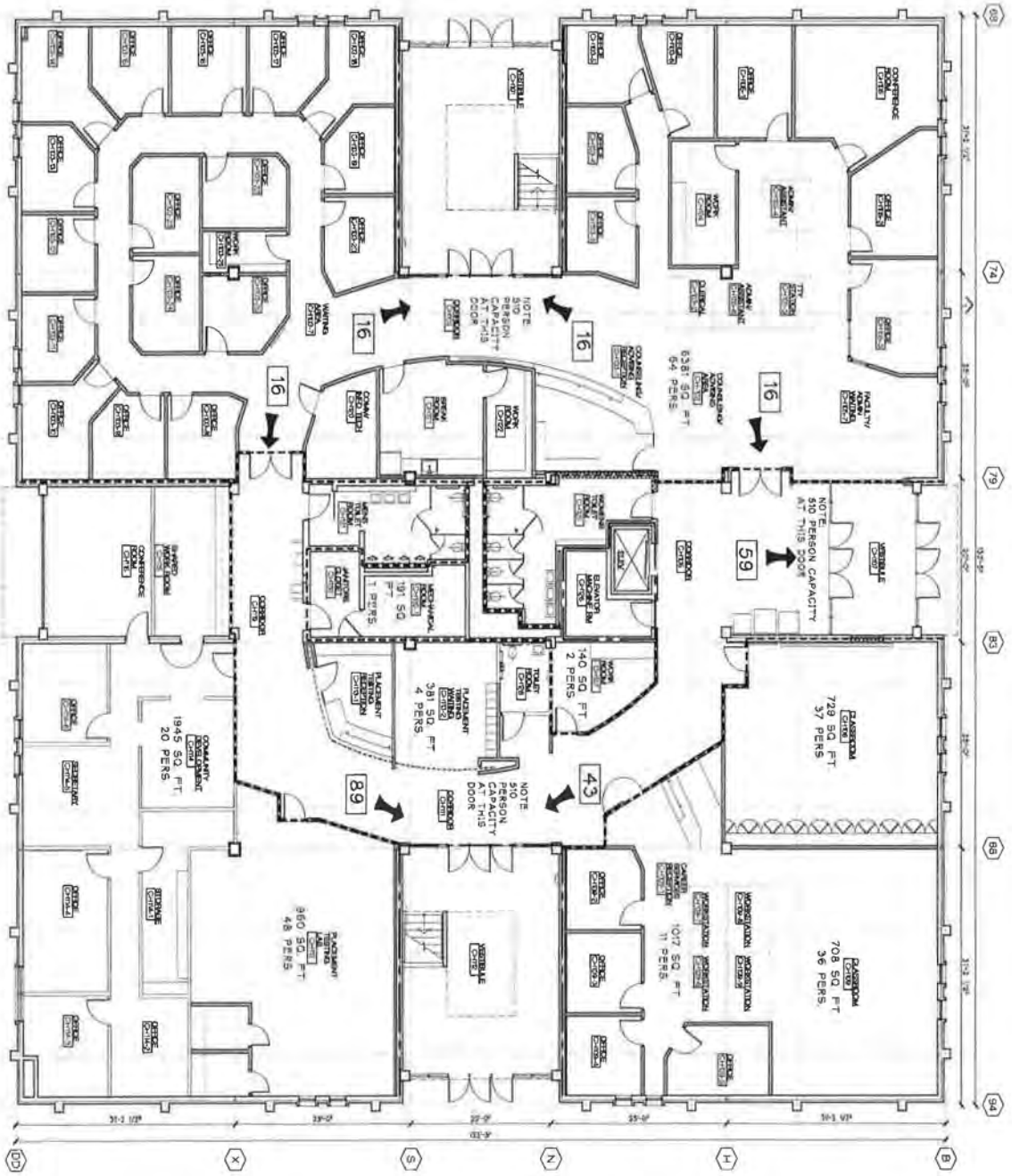
Lighting System Age: 6 yrs

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		New fluorescent lamps installed in 2011. Life expectancy of lamps is approximataly 5 years. Group lamping needed.	31,402 S.F.	$0.15	$4,710	$6,830

CODE AND BARRIER FREE

Code System/Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Toilet Rooms upgraded in 2011. Railings upgraded in 2011.				
		Door hardware upgraded in 2011.				



FIRST FLOOR

3.55 BUILDING CH DATA SHEETS



NORTH

SECOND FLOOR LIFE SAFETY PLAN

SCALE : 1/8"= 1'-0"

Building: CI
Gross Area: 19,538 S.F.
Year Built: 1970
No. of Floors: One aond One Half
Evaluation Date: October 2017

Use Types:
11% Office
59% Storage
30% Shop

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 14 years Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Coping	Roof Perimeter	Coping joints are fastened through the top. Sealant is gapping. In some instances coping is dented channeling water under.	320 l.f.	$13.20	$4,224	$6,125
Flashing	Pipe Penetration	Single pipe boot missing collar.	L.S.	$110	$110	$160
Canopies	Entrances	Steel framing around Kalwall system is rusting and in need of repainting	L.S.	$550	$550	$798

Enclosure System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Overhead Doors	South Elevation	Weather seals on the overhead door jambs are brittle decayed and in need of replace-ment.	4 ea.	$275	$1,100	$1,595
Wall Panels	South Elevation	Wall panels damaged at jamb of overhead door.	L.S.	$550	$550	$798
Supported Slab	Storage Mez-zanine	Structural slab cracked on the upper level. Full length of the mezzanine and across. (epoxy injection)	100 l.f.	$11	$1,100	$1,595
CMU	North Elevation	CMU cracked at base of window system behind column/pier and at the head of the windows at the East end.	L.S.	$550	$550	$798
Metal Siding	West Elevation	Horizontal metal siding buckling at panel lap joint.	L.S.	$550	$550	$798
Sealant	Windows	Sealants at the perimeter of the window systems are in need of replacement.	L.S.	$2,750	$2,750	$3,988

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Interior Door	113	Door leaf is warped at the head	1 ea.	$550	$550	$798
CMU	123	West wall has a crack near the roof. Cracked joints to be sawcut and tuck pointed. Cracked CMU to be replaced.	L.S.	$550	$550	$798
Floor Slab	117	Floor slab is cracked and evidence of moisture beneath the janitor's sink.	50 S.F.	$6.6/S.F.	$325	$471
Interior Walls	105/108/109/ 110	Building movement cracks evident in gyp. bd. walls. (Add control joints)	L.S.	$4,400	$4,400	$6,380

MECHANICAL

HVAC System Age: 14 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the building mechanical system back to the original design intent and complete an air and water system balance report to identify potential operational issues.	1 LS	$47,300	$47,300	$68,585
HVAC System	Building	Implementation of the recommendations that come out of retro-commissioning activities	19,538 SF	$1.38	$26,962	$39,095

Plumbing System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 14-29 yrs. Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission Controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	19,538 S.F.	$4.0	$78,152	$113,320

ELECTRICAL

Primary Power System Age: 14 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Exterior	Maintenance and testing of the two primary loop switches and main switch for building	LS	$5,000	$5,000	$7,250

Secondary Power System Age: 14 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$2,860	$2,860	$4,147
Generator	Exterior	Maintenance & load test generator	LS	$1,500	$1,500	$2,175

Distribution System Age: 14 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Panelboard RP-Mech	Mechanical Rm 202	Insufficient clearance side to side	LS	$2,200	$2,200	$3,190
Exterior Receptacles	Exterior	Receptacles do not have weather proof covers	LS	$3,300	$3,300	$4,785

Lighting System Age: 14 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lighting Control	All	No automatic lighting control devices or lighting control relays	19538 S.F.	$1.50	$29,307	$42,495
EBU	Electrical Rm 203	Battery of EBU failed.	LS	$330	$300	$479
Lighting	Throughout	Upgrade fluorescent and metal halide light fixtures to LED.	19,538	$7.00	$136,766	$198,311

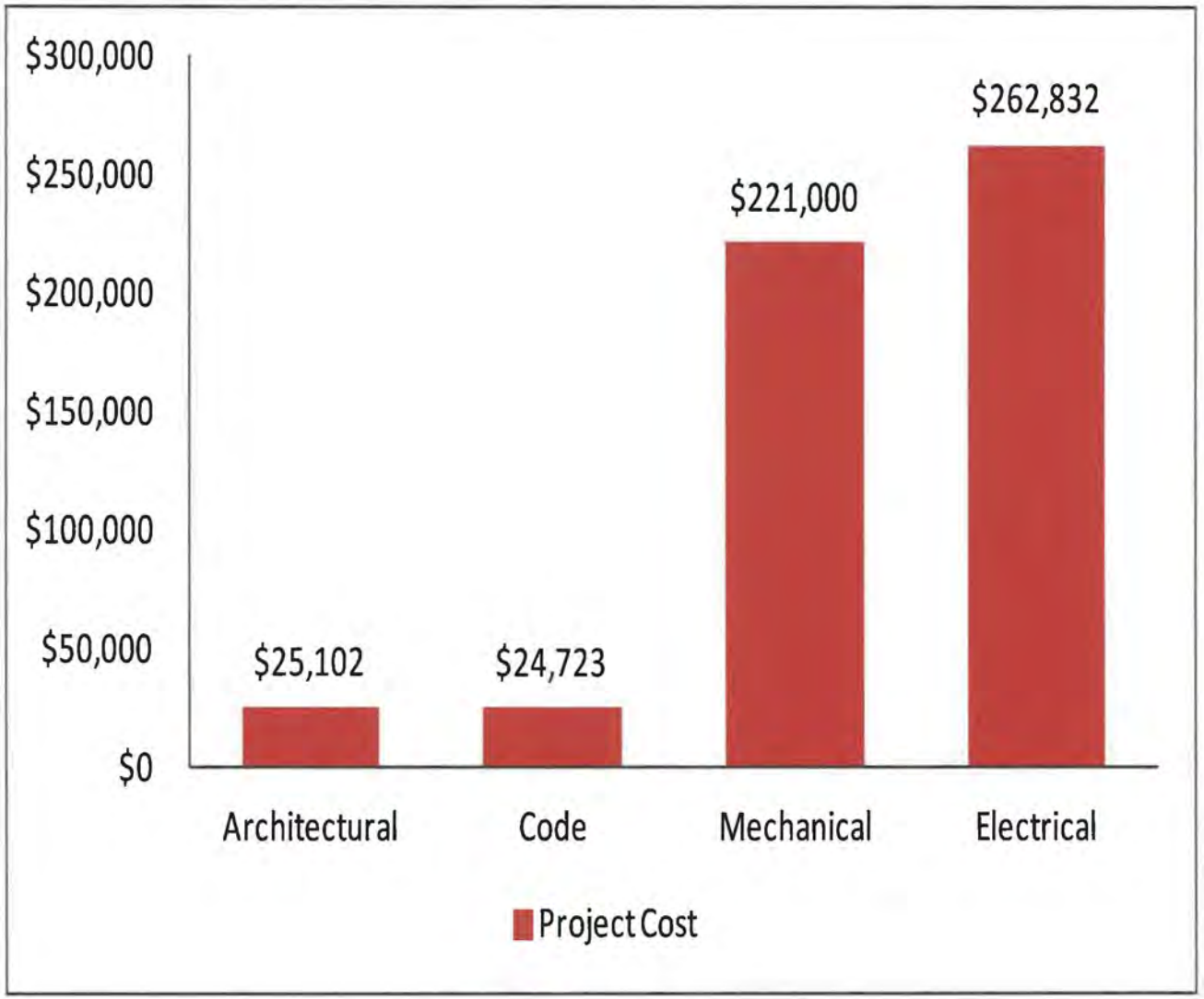
CODE AND BARRIER FREE

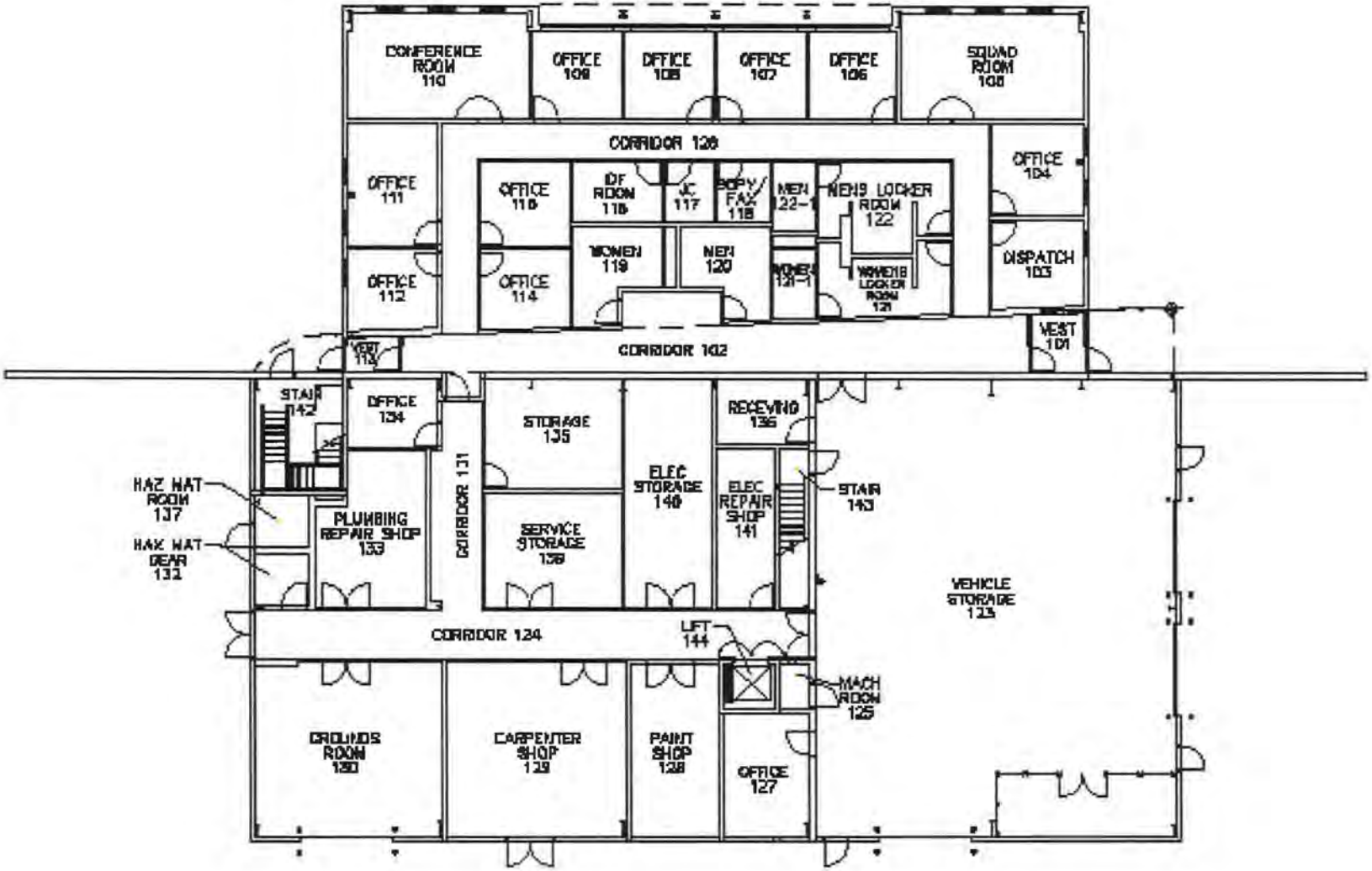
Code System

Item	Location	Comments	Quanti-ty/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Stairs	Northwest	Guardrail is not compliant with current code < 42"h.	L.S.	$5,500	$5,500	$7,975
Water Closets	Toilet Rooms	Water closets are the 3.5 GPF type. Current Code allows for a maximum of 1.6 GPF type water closets.	3 ea.	$2,750	$8,250	$11,963
Fire Barrier	Corr. 124	Air transfer openings in corridor wall are not rated. Install fire dampers.	2 ea.	$1,650	$3,300	$4,785

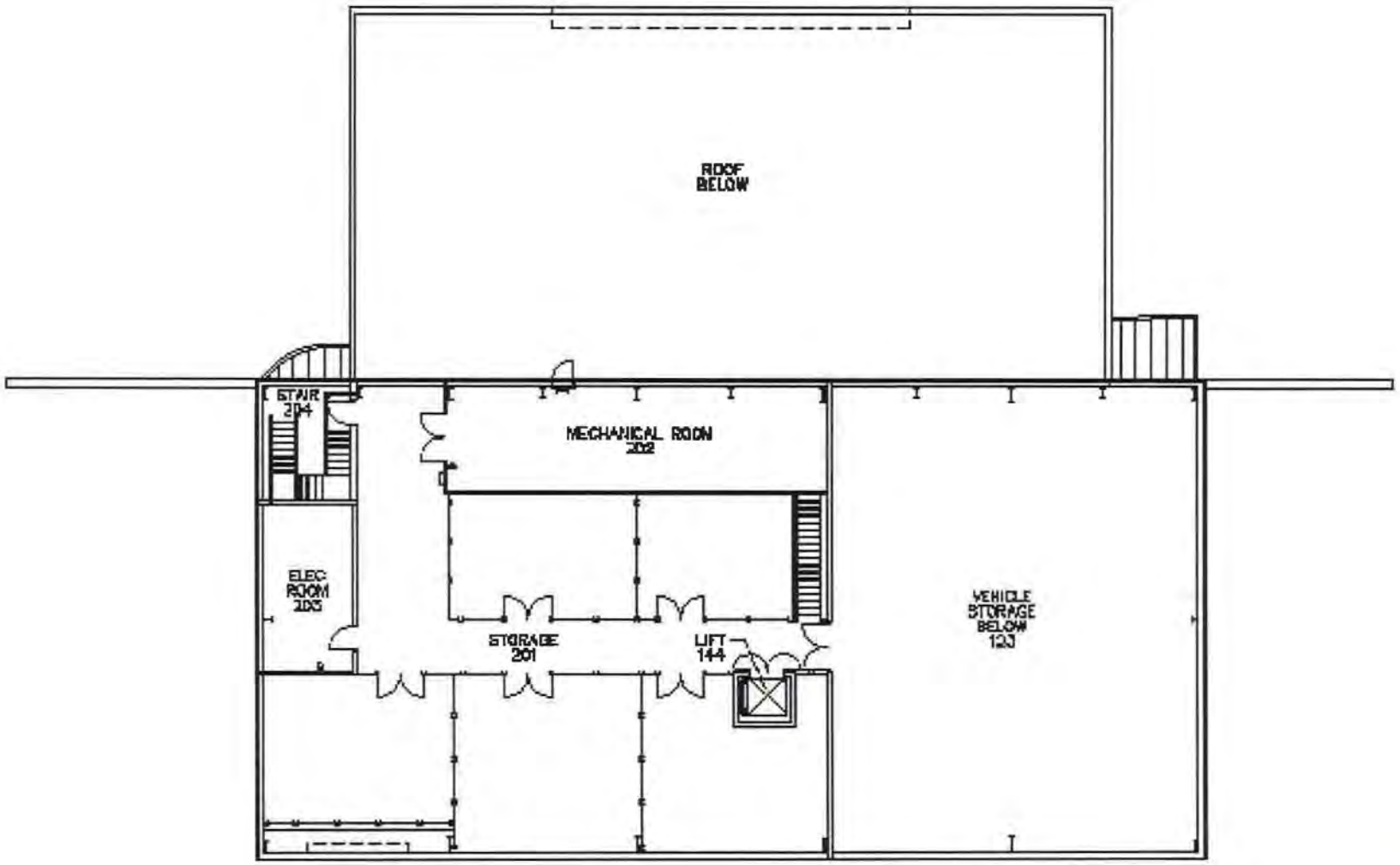
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				


$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$25,102
$24,723
$221,000
$262,832
Architectural
Code
Mechanical
Electrical
Project Cost

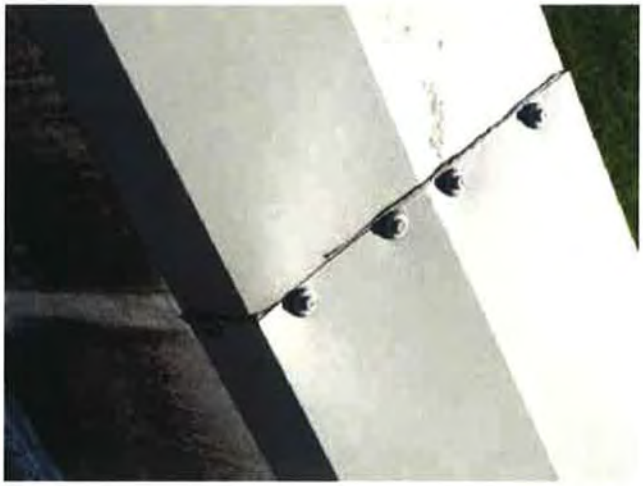


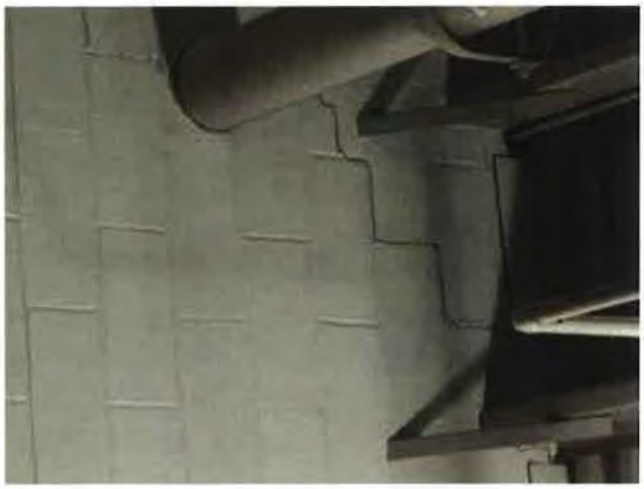
BUILDING "CI" FIRST FLOOR



BUILDING "CI" MEZZANINE













Building: CJ
Gross Area: 36,524
Year Built: 1992
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
50% Classrooms
5% Labs
45% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 26 yrs. Life Expectancy: 25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
PVC Membrane	Throught	Roofing is in good condition, but near the end of it's servicable life	18,000 s.f.	$12.50/s.f.	$225,000	$326,250
Coping	Perimeter	Coping should be replaced and extend down over face of brick to alleviate water infiltration, resulting in efflourescence.				

Enclosure System Age: 26 yrs. Life Expectancy: Brick; 100+ yrs. Alum./Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Brick	NW Corner	Replace cracked bricks	36 s.f.	$33/s.f.	$1,188	$1,723
	SW Corner	Replace loose brick	1 ea.	$220 ea.	$220	$319
	N Wall	Clean Efflourescense	1440 s.f.	$2.2/s.f.	$3,168	$4,594
	SE Wall	Clean Efflourescense	240 s.f.	$2.2/s.f.	$528	$766
Alum/Glass	East Elev.	Re-attach loose mullions	2 ea.	$110 ea	$220	$319
		Replace aged gaskets	4000 l.f.	$2.2/l.f.	$8,800	$12,760
Doors	Mech. Screen	Replace rusted doors & frame	2 ea.	$1,750 ea.	$3,500	$5,075

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
CMU	Corridor101 Lab 105 Corridor 201	sawcut control joints, replace cracked blocks and tuck point joints	50 s.f.	$33/s.f.	$1,650	$2,393
Ceiling Tile	Throughout	Replace water stained and warped acoustical tile pads	3,500 s.f.	$2.2/s.f.	$7,700	$11,165
Vinyl Wall Covering	Work Room 106	Replace vinyl wall covering where seams are peeling	120 s.f.	$6.6/s.f.	$792	$1,148
Carpet Tile	Classrms. 102 & 104	Replace where edges are curling	2,800 s.f.	$6.6/s.f.	$18,480	$26,796
Railings	Stair Shafts	Repaint handrails, guardrails, and stringers	2 ea.	$1,750 ea.	$3,500	$5,075
Vinyl Tile	Elevator Floor	Provide new vinyl composition floor tile	35 s.f.	$4.4/s.f.	$154	$223
Glazing	CR 104 Door	Replace broken glass in door	1 ea.	$220 ea.	$220	$319

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Lab Equipment	Science Labs	Replace epoxy tops in Natural Science Lab 109	8 tops	$550 ea.	$4,400	$6,380

MECHANICAL

HVAC System Age: 26 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the building mechanical system back to the original design intent and complete an air and water system balance report to identify potential operational issues.	1 LS	$69,630.00	$69,630.00	$100,964.00
Humidification	Mech Room	Humidifiers are past their useful life expectancy and should be replaced	3 ea.	$7,500	$22,500	$32,625
Ductwork	Building	Clean supply and return ductwork	36,524 S.F.	$0.77	$28,123	$40,778
Piping	Building	Portion of the chilled water and hot water heating piping have missing and damaged insulation. The insulation should be replaced.	36,524 S.F.	$0.77	$28,123	$40,778
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	36,524 S.F.	$1.38	$50,403	$73,084
HVAC Piping	Building	Piping system is not completely labeled, add pipe labeling as needed.	36,524 S.F.	$0.11	$4,018	$5,826

Plumbing System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 26 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Buidling	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	36,524 S.F.	$4.0	$146,096	$211,839

ELECTRICAL

Primary Power System Age: 26 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
13.2kV Switchgear	Electrical Room 108	Insufficient clearance above the gear, cable tray routed over gear	LS	$82,500	$82,500	$119,625
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	L.S.	$2,200	$2,200	$3,190

Secondary Power System Age: 26 years

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Motor Control Center	Mechanical 110	insufficient clearance above MCC, cable try routed over MCC	LS	$5,500	$5,500	$7,975
Distribution Panel	Elec Rm 211	Insufficient clearance above panel, cable tray routed over panel	LS	$5,500	$5,500	$7,975
Testing	Elec Rm	Perform IR and visual inspection of distribution equipment	LS	$2,530	$2,530	$3,669
HVAC Replacement	All listed units	Electrical distribution revisions in support of HVAC rework.	36,524	$1.00	$36,524	$52,960

Distribution System Age: 26 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Receptacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785
Lab Receptacles and Fume Hood Receptacles	All Labs	Receptacles next to sink are not GFI	LS	$22,000	$22,000	$31,900
General Receptacles	throughout	Replace receptacles and cover plates throughout	36,524	$1.50	$54,786	$79,440

Lighting System Age: 26 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	Stairways	Light fixtures have T12 lamps	900 S.F.	$5.5/S.F.	$4,950	$7,178
Lighting Control	All	No automatic lighting control devices or lighting control relays	36,524 S.F.	$1.38	$50,403	$73,084
Exit Discharge	South and North Exits	Light fixtures are full of debris and not on emergency power.	LS	$3,600	$3,960	$5,742
EBU	Microbiology Lab 101-1	Battery of EBU failed	LS	$300	$330	$479
Lighting	Throughout	Replace fluorescent lighting with LED.	36,524	$7.00	$255,668	$370,719

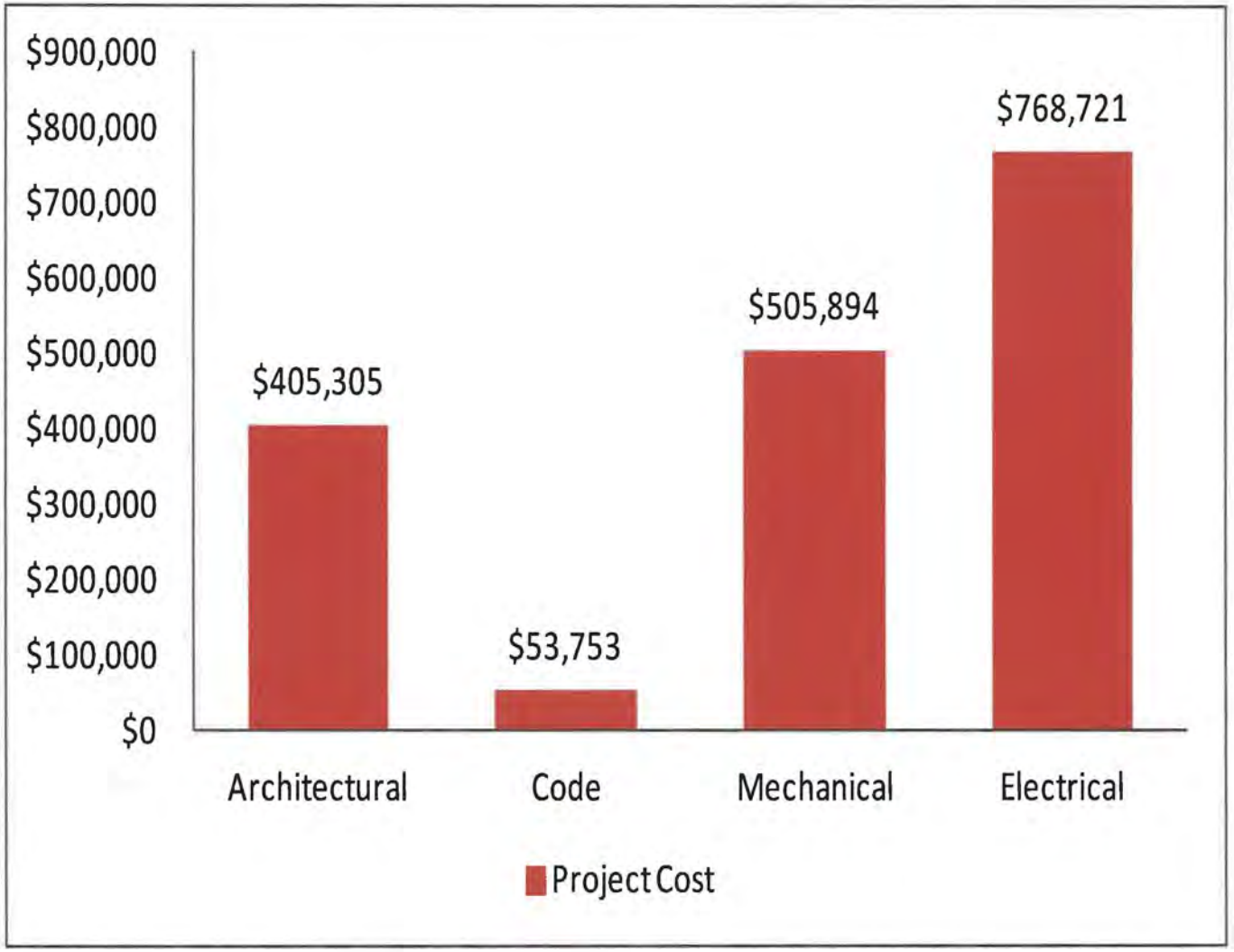
CODE AND BARRIER FREE

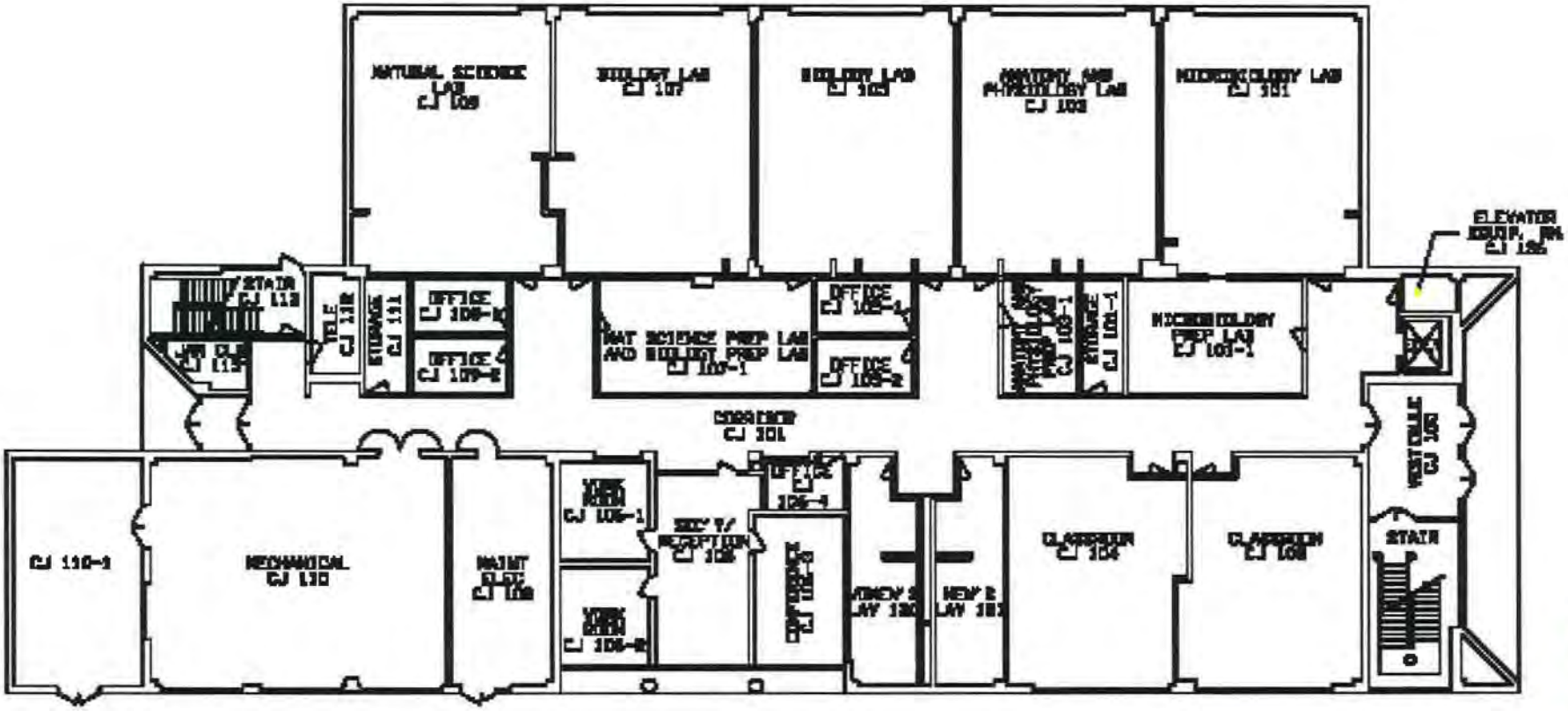
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Guardrails	Stair Shafts	Spacing of ballusters exceeds maximum allowable 4 inches clear	2 stairs	$5,500	$11,000	$15,950
Lavatory Mixing Valve	Toilet Rooms and Sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/burn protection at accessible fixtures. Provide point of use mixing valves.	12 ea.	$330	$3,960	$5,742

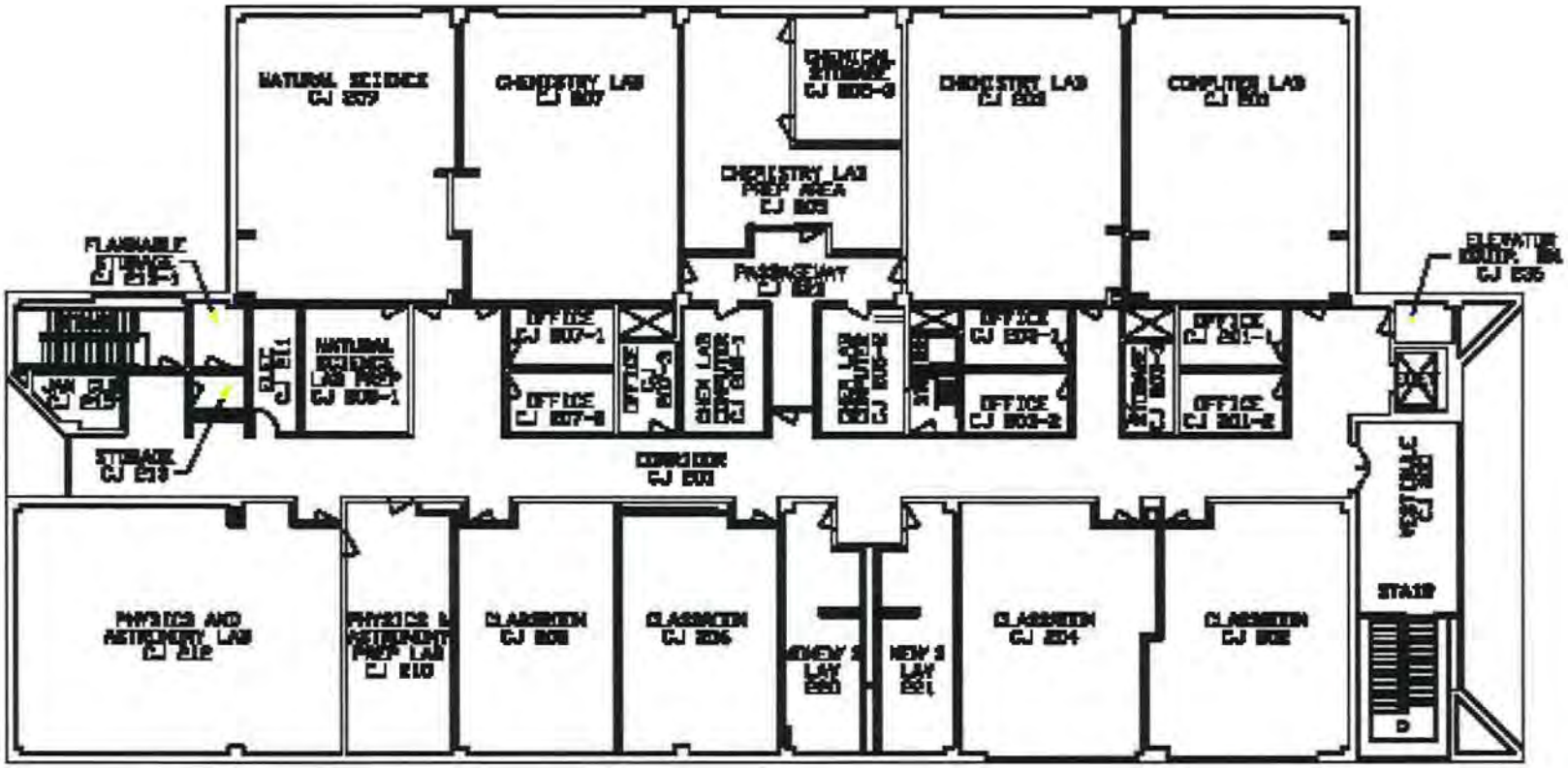
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Door Hardware	throughout	Knobs in lieu of lever handles	60 ea.	$82.50	$4,950	$7,178
Lab Tops	Science Lab	Need Wheelchair accessible locations	9 ea.	$550	$4,950	$7,178
Fume Hoods	Chemistry Labs	Need Wheelchair accessible locations	3 ea.	$1,650	$4,950	$7,178
Toilet Stall	Toilet Rooms	Barrier free stall is old 3'-6" wide standard. Current Std. is 5'-0" wide	4 ea.	$1,320	$5,280	$7,656
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA accessibility. Provide protective pipe covering.	12 ea.	$165	$1,980	$2,871


$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
$405,305
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Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CJ" MAIN FLOOR

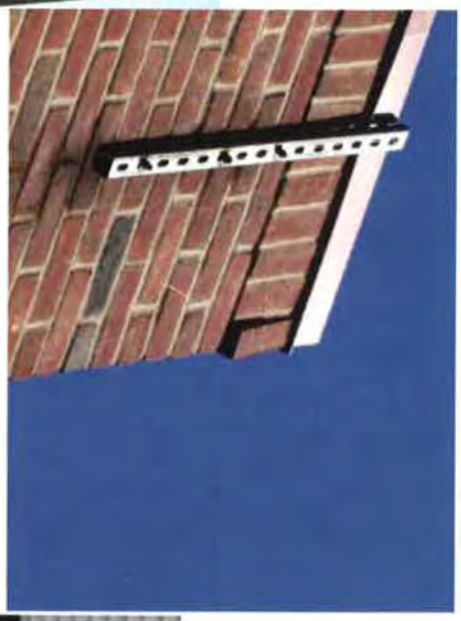


BUILDING 'CJ' SECOND FLOOR

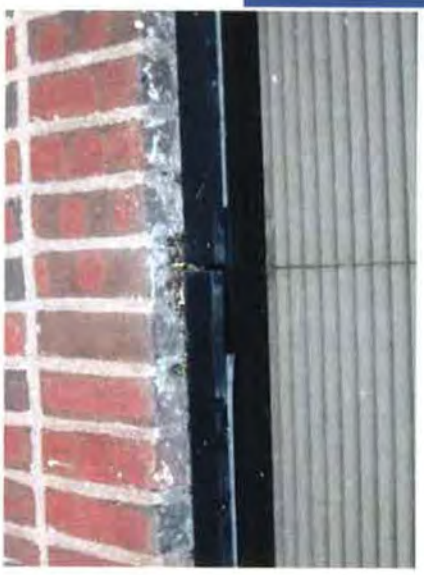












Building: CK
Gross Area: 51,878 S.F.
Year Built: 1976
No. of Floors: One
Evaluation Date: October 2017

Use Types:
22% Food Service
78% Conference

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System

Age: High Roof 1 yr; Life Exp: Single Ply 25 yrs; East Roof 12 yrs=West Roof 7 yrs

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Overflow Drains	Addition Roof	Rework the overflow drain details so they do not pond water	8 each	$550	$4,400	$6,380
Roof Membrane	Mechanical Enclosure Above CK111 and breezeway to CM	Replace roofing	3,000 s.f.	$11/s.f.	$33,000	$47,850
Metal Coping	Breezeway to CM and above Meeting Rm CK 130	Replace Metal Coping	336 l.f.	$13.2/l.f.	$4,435	$6,431
Transluscent Sloped Glazing	Above Stage CK 130 and Reception CK 100	Remove mullion caps, reseal and replace caps with new grommeted screws	1,200 l.f.	$3.3/l.f.	$3,960	$5,742
Gutters	S.W. Corner	Rework gutter at downspout and patch brick	L.S.	$550	$550	$798

Enclosure System

Age: 41 yrs orig; 12 yrs new

Life Expectancy: Brick; 100 yrs. Alum/Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Dock Bumpers	Loading Dock	Provide new laminated rubber dock bumpers	10 l.f.	$82.5/l.f.	$825	
Arcade	Entry Drop-Off	Scrape, clean and paint metal; and clean and seal stone	L.S.	$55,000	$55,000	$79,750
Brick	N.E. corner S.W. corner S. wall	Clean efflourescence (seal at lights) Replace damaged brick Tuck-point near base	600 s.f. L.S. L.S.	$3.3/s.f. $550 $550	$1,980 $550 $550	$2,871 $798 $798
Granite	S.W. Corner	Re-seal joints	L.S.	$550	$550	$798
H.M. Doors	S. Kitchen	Replace rusted door & frame	L.S.	$2,200	$2,200	$3,190
Alum. Doors	W. Vestibule	Replace aluminum framing and glass doors at breezeway to CM	10 ea	$2,750/ea.	$27,500	$39,875

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Fin Tube Cover and Steel cols.	Connector to Bldg. CM	Clean and refinish	L.S.	$1,750	$1,750	$2,538
Ceiling Tile	Mtg. Rm 109 Corr. 146	Replace damaged ceiling tiles	L.S.	$550	$550	$798
Carpet Tile	Room 114	Replace carpet tile with curling edges	1056 s.f.	$6.6/s.f.	$6,970	$10,107
Drywall soffit	N. Corridor 146	Repair and refinish water damaged soffit	L.S.	$1,750	$1,750	$2,538
Alum. Trim	Near Jan. Clos. 139	Replace missing aluminum trim above door	L.S.	$275	$275	$399
Operable Wall	Meeting Rm. 130	Replaced damaged covering at end of panel	L.S.	$1,100	$1,100	$1,595

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Food Service Equipment	Kitchen 113, 124, 143, 121	Equipment appears to be in servicable condition				

MECHANICAL

HVAC System Age: 12-41 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the building mechancial system back to the original design intent and complete an air and water system balance report to identify potential operational issues.	1 LS	$91,850	$91,850	$133,183
HV/MUA	Roof	Replace HV/MUA units #1, 2, and 3.	3 ea.	$9,075	$27,225	$39,476
Exhaust Fans	Roof	Replace exhaust fans EF-2 and EF-12	2 ea.	$6,050	$12,100	$17,545
MUA	Roof	Replace damaged powered supply unit.	1 ea.	$6,650	$6,650	$9,643
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	51,878 S.F.	$1.38	$71,592	$103,808

Plumbing System Age: 12-41 yrs. Life Expectancy: 20-50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Domestic Hot Water	Mech CK 148	Water heaters continue to have issues/problems and are always being fixed. Replace the two water heaters with high efficiency units.	1 LS	$18,150	$18,150	$26,318

Fire Protection Age: Life Expectancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 12-41 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	57,878 S.F.	$4.0	$231,512	$335,692

ELECTRICAL

Primary Power System Age: Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Secondary Power System Age: Life Expectancy:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	L.S.	$2,530	$2,530	$3,669
HVAC Replacement	All listed units	Electrical distribution revisions in support of HVAC equipment replacement (HV/MUAs, exhaust fans, and supply units	51,878 S.F.	$1.50	$77,817	$112,835

Distribution System Age: Life Expectancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Ext. Receptacles	Exterior	Receptacles do not have weatherproof covers	LS	$3,300	$3,300	$4,785

Lighting System Age: Life Expectancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	West Vestibule	Downlights are incandescent	LS	$2,200	$2,200	$3,190
Lighting Control	Restrooms, West Concourse	No automatic lighting control devices or lighting control relays	5,100 SF	$1.38	$7,038	$10,205
Lighting	Throughout except Gallery Space	Replace fluorescent lighting with LED.	31,000	$7.00	$217,000	$314,650

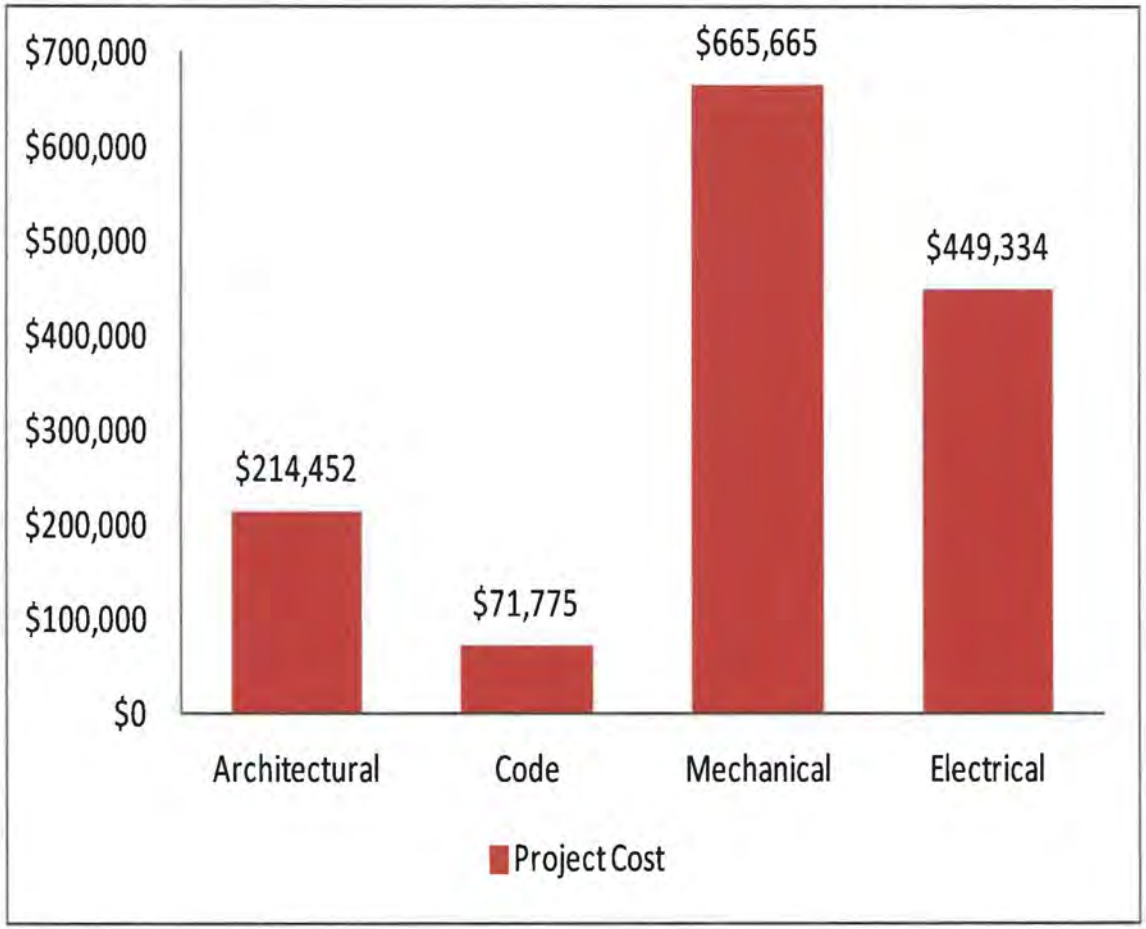
CODE AND BARRIER FREE

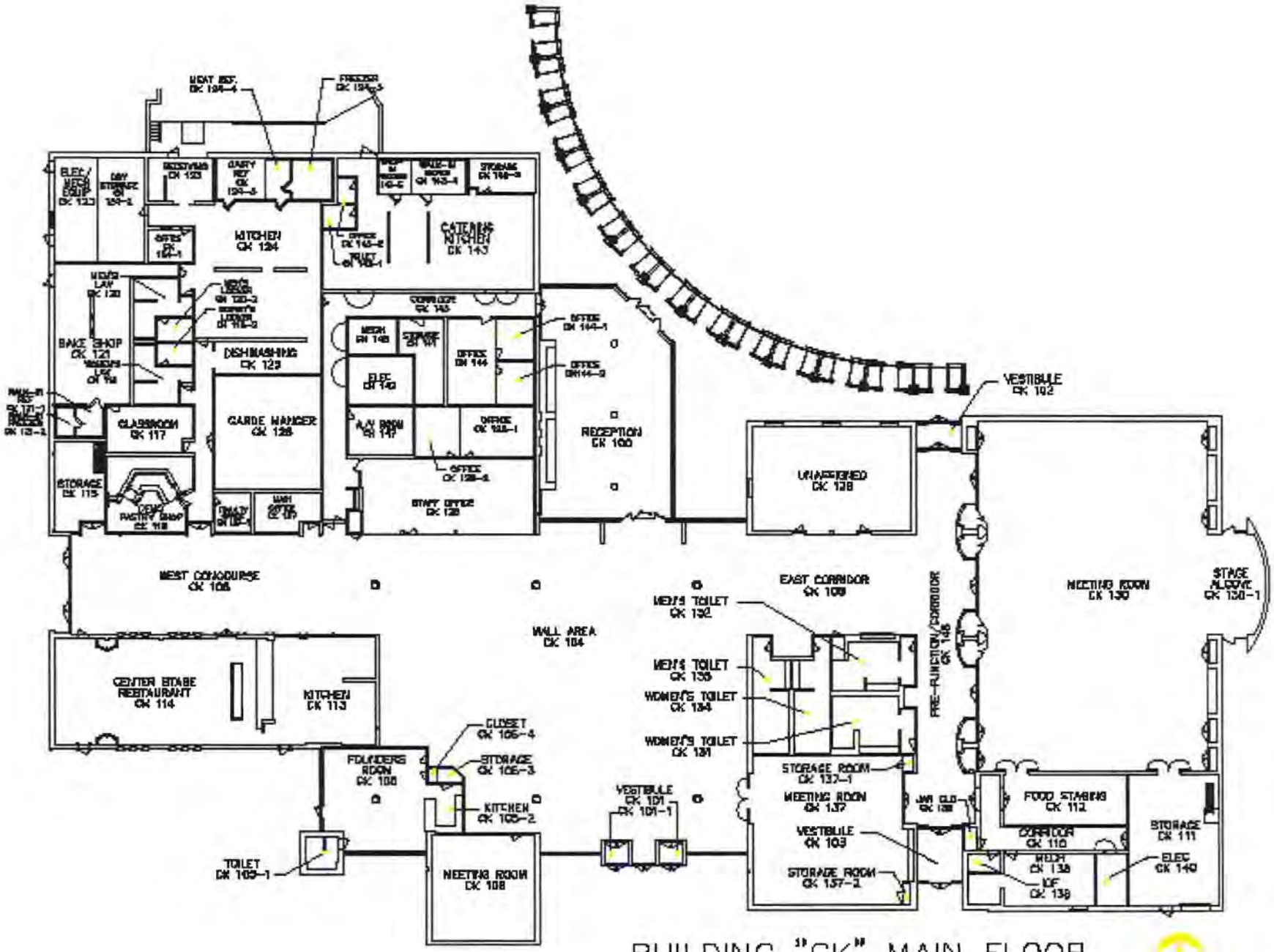
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Concrete Retaining Wall	South Side of Building	The exterior concrete retaining wall is adjacent to and elevated walking surface and should conform to guardrail requirements. Railings may be added atop the concrete.	100 l.f.	$55/l.f.	$5,500	$7,975

Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Toilet Rooms and Locker Rooms	N.W. Kitchen	Toilet rooms are not accessible at all, including toilet stalls, Lavatories and entry doors. They will require complete remodel Accessible locker and bench should also be provided.	L.S.	$44,000	$44,000	$63,800


$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
$214,452
$71,775
$665,665
$449,334
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CK" MAIN FLOOR













Building: CL
Gross Area: 44,461 S.F.
Year Built: 1982
No. of Floors: One
Evaluation Date: October 2017

Use Types:
22% Classrooms
3% Offices
75% Labs

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: Unknown Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Roof Membrane	Throughout	Replace entire roof membrane	44,461 S.F.	$11.00	$489,071	$709,153
Copings	Throughout	Replace all copings with Full width copings	1,000 l.f.	$13.20	$13,200	$19,140

Enclosure System Age:. Life Expectancy: Brick; 100 yrs. Alum/Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Brick	Northwest and South	Remove and replace as required to cut back deteriorated wall ties.	6,400 S.F.	$27.50	$176,000	$255,200
Glass	East	Replace approximately 22 failed insulated glass units.	22 ea.	$660	$14,520	$21,054
Screen Walls	West	Replace coping and clean efflourescense	50 l.f.	$13.20	$660	$957
Retaining Wall	Northwest	Rebuild existing loose loose laid wall	800 S.F.	$27.50	$22,000	$31,900
Railings	N.E. Stair East Ext.Walkway	Re-anchor railing. Repair/replace damaged sections of guard rail.	L.S.	$2,200	$2,200	$3,190
Curtainwall	Northeast	Add sill flashing to direct water away from brick. Clean and tuck point brick as required.	L.S.	$3,300	$3,300	$4,785
Overhead Door	Foundry 109	Replace lintel over opening.	L.S.	$2,750	$2,750	$3,988

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Acoustical Ceilings	Suite 117; Offices 110-114; Rehearsal Rooms; Corridor 152; Connector to "E" Bldg.	Replace with new Lay-in ceiling.	4,000 S.F.	$3.3	$13,200	$19,140
Exposed Ceilings	Art Classrooms	Re-paint	6,000 S.F.	$0.72	$4,320	$6,264
Carpet	Suite 117; Piano Room	Replace carpet tile with curled edges	2,200 S.F.	$6.6	$14,520	$21,054
Paint	Lecture 101, Connector to "E" Bldg.; Corridor 152	Re-paint walls	5,000 S.F.	$0.72	$3,600	$5,220
Storefront	Connector to "E" Bldg.	Replace vestibule doors	L.S.	$5,500	$5,500	$7,975
Tile	Corridor 152	Replace at expansion Joint	L.S.	$550	$550	$798
Metal Ceiling	Lecture 101	Replace with acoustical ceiling.	900 S.F.	$3.3	$2,970	$4,307

Fixed Equipment

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Ceramics Tables & Kiln	Ceramics & Kiln Rm. 107	Appear to be in servicable condition				-

MECHANICAL

HVAC System Age: 35 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	The buildings HVAC systems are in poor condition and are in need of replacement including the following:	44,461 S.F.	$31.25	$1,389,406	$2,014,639
		Air handling units (excluding AHU-1 above gallery)		Incl. Above		
		Hot water heating system - boilers and pumps		Incl. Above		
		Air cooled chiller and pumps		Incl. Above		
Exhaust Fans	Roof	Replace exhaust fans	7 ea.	Incl. Above	0	0

Plumbing System Age: 12 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Hot Water	Boiler Room CL 116	Water heater and flue damaged from water. Needs to be replaced.	1 LS	$4,275	$4,275	$6,199

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 35 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Replace/Upgrade Controls	Building	Replace and upgrade controllers and control components for added efficiency and enhanced maintenance functions.	44,461 S.F.	$4.83	$214,747	$311,383

ELECTRICAL

Primary Power System Age: 4 years (Life expectancy: 30-40 yrs.)

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Primary transformer replaced 2013.				
		Provide maintenance and IR testing on 5 year basis.				

Secondary Power System Age: 35 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Emergency Power	Electrical Room	Emergency power is tapped ahead of the main	44,461 SF	$0.55	$24,454	$35,458
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment	LS	$3,190	$3,190	$4,626
HVAC Replacement	All listed units	Electrical distribution revisions in support of HVAC equipment replacement (AHUs (except AHU-1), boilers and pumps, air cooled chiller and pumps, and exhaust fans).	44,461 SF	$1.50	$66,692	$96,703

Distribution System Age: 35 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Wiring Devices	Inerior and Exterior	Receptacles and cover plates will be replaced in 2018 project.	44,461	$1.50	$66,692	$96,703

Lighting System Age: 35 years

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	Various	Light fixtures have T12 lamps/Downlights are Incandescent to be replaced in 2018.	44,461 SF	$7.00	$311,227	$451,279
Lighting Control	All	No automatic lighting control divices or lighting control relays to be replaced in 2018.	44,461 SF	$1.50	$66,692	$96,703
Exit Discharge	All Exits	Included above				

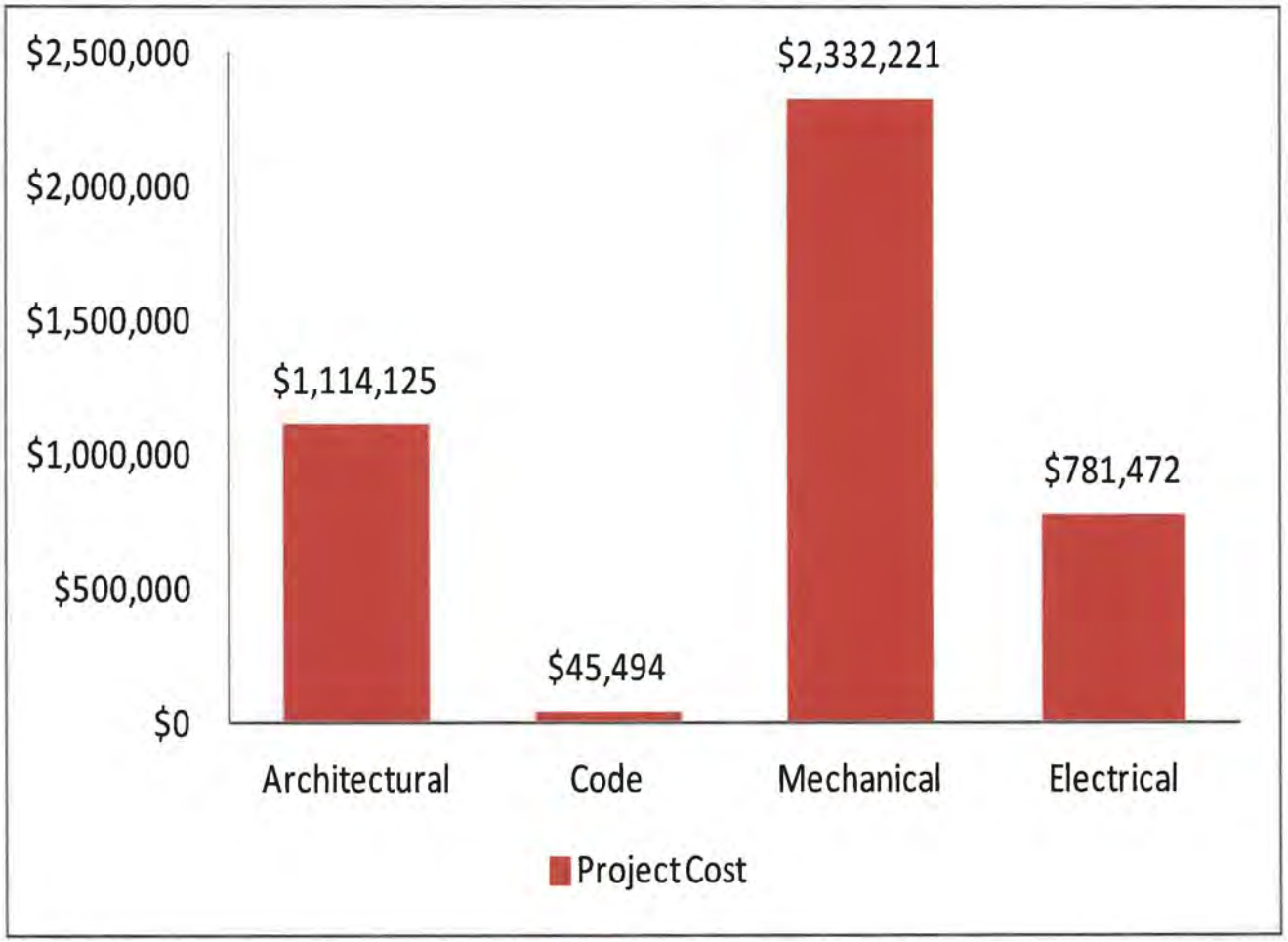
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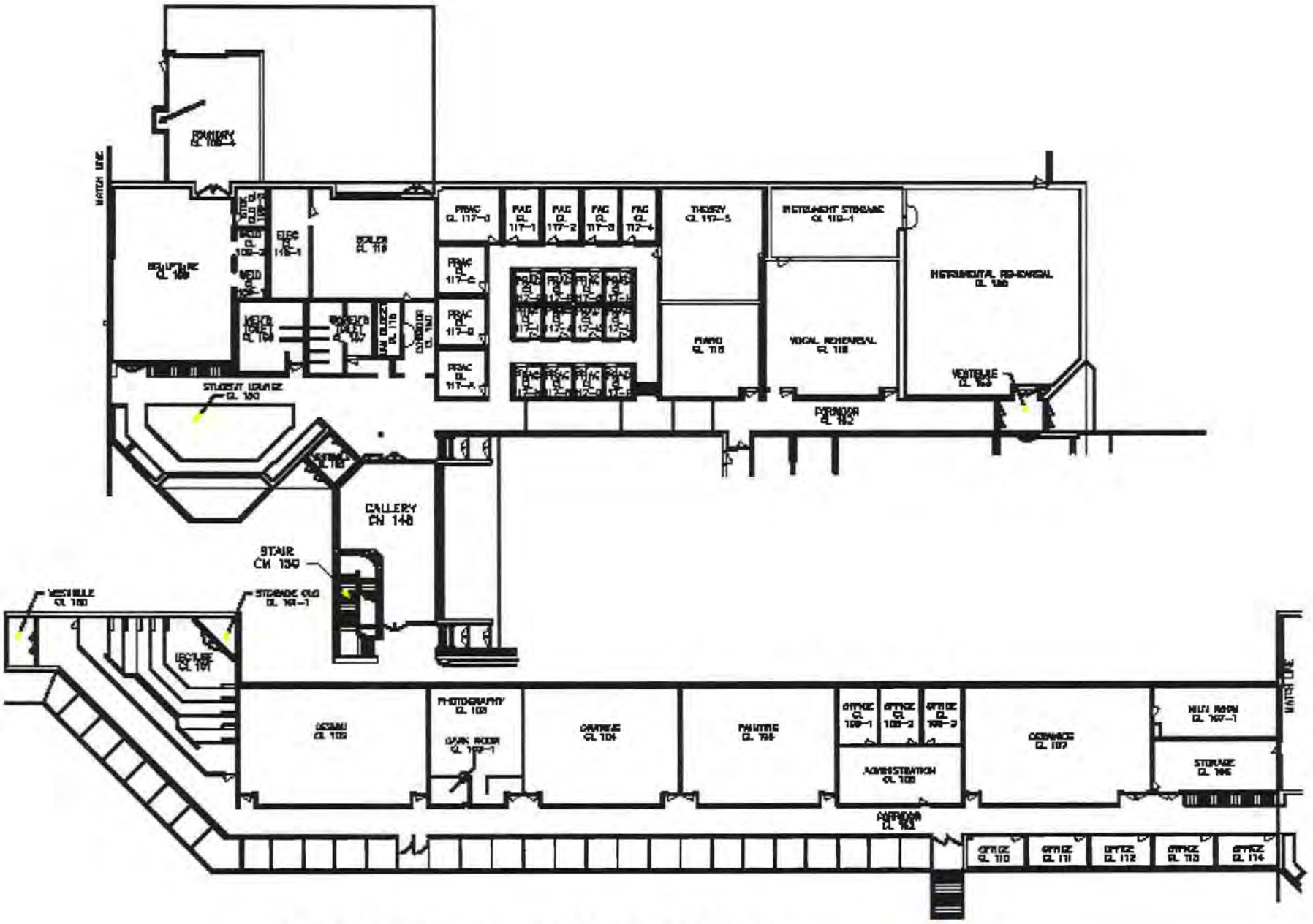
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Steps	Lecture 101	Need handrails				
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to be covered for ADA accessibility. Provide protective pipe covering.	8 ea.	$330	$2,640	$3,828

Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Ramps	Corr. 162	Need handrails	L.S.	$1,650	$1,650	$2,393
Door Hard-ware	Throughout	Replace knobs w/ levers	105	$193	$20,265	$29,384
Toilet Rms.	Rms. 156 & 157	Barrier Free stalls are old 3'-6" std.	L.S.	$5,500	$5,500	$7,975
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA accessibility. Pro-vide protective pipe covering.	8 ea.	$165	$1,320	$1,914


$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
$1,114,125
$45,494
$2,332,221
$781,472
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CL" MAIN FLOOR

Building: CM
Gross Area: 72,178 S.F.
Year Built: 1982
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
100% Theater

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: Unknown Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Membrane	Throughout	Numerous insulation fasteners are backing out and will puncture membrane - Roof should be replaced.	36,000 S.F.	$11	$396,000	$574,200
Coping	Perimeter	Coping should be replaced with a coping that goes down over the face of the brick.	800 l.f.	$13.20	$10,560	$15,312
Drains	East Side	Replace damaged and missing strainers	L.S.	$1,750	$1,750	$2,538

Enclosure System Age: Life Expectancy: Brick; 100 yrs. Alum./Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Brick	Throughout	Clean brick after coping is replaced.	25,000 S.F.	$1.38	$34,500	$50,025
O.H. Doors	Loading Dock	Replace with new O.H. Doors.	L.S.	$5,500	$5,500	$7,975
Dock Bumpers	Loading Dock	Replace with new laminated dock bumpers	L.S.	$1,750	$1,750	$2,538
Curtainwall	South	Add sill flashing to direct water away from brick. Clean brick and tuck point	180 l.f.	$13.20	$2,376	$3,445
Screeen Walls	North & East	Repair coping and clean efflourescence from brick	L.S.	$3,300	$3,300	$4,785
Soffit	South	Repair damaged plaster and refinish with elas-tomeric coating	900 S.F.	$6.60	$5,940	$8,613
Storefront	Connector to "K' Bldg.	Replace entirely. Add sill flashing. Clean and tuck-point brick.	L.S.	$110,000	$110,000	$159,500

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Plastic Laminate	Toilet Rooms	Replace damaged p. lam. stalls.	LS	$1,750	$1,750	$2,538
Light Cove	Main Lobby	Replace decorative egg crate light cove covers	LS	$1,750	$1,750	$2,538

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Orchestra Pit	Auditorium	Platform equipment is at the end of it's expected servicable life.	LS	$27,500	$27,500	$39,875

MECHANICAL

HVAC System Age: 35 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	The buildings HVAC systems are in poor condition and are in need of replacement including the following:	72,178 S.F.	$27.60	$1,992,113	$2,888,564
		Air handling units		Incl. Above		
Ductwork	Building	Clean supply and return ductwork		Incl. Above		
Exhaust Fans	Roof	Replace exhaust fans	10 ea.	Incl. Above		

Plumbing System Age: 35 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the domestic cold water distribution piping system are galvanized steel. Due to it's age the piping is showing signs of deterioration and should be replaced.	600 LF	$55	$33,000	$47,850
Piping	Building	Portion of the cold and hot water piping have missing and damaged insulation. The insulation should be replaced.	72,178 S.F.	$0.77	$55,577	$80,587

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 35 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Replace/Upgrade Controls	Building	Replace and upgrade controllers and control components for added efficiency and enhanced maintenance functions.	72,178 S.F.	$4.83	$348,620	$505,499

ELECTRICAL

Primary Power System Age: 35 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Secondary Power System Age: 35 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment	LS	$3,850	$3,850	$5,583

Distribution System Age: 35 years

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Power Dist. Upgrade	Stage Production & Corridor	Upgraad distribution to accommodate equipment.	LS	$5,500	$5,500	$7,975
HVAC Replace-ment	All listed units	Electrical distribution revisions in support of HVAC equipment re-placement (AHUs, exhaust fans)	72,178 S.F.	$1.50	$108,267	$156,987
Exterior Receptacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785

Lighting System Age: 35 years

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lamp Type	Various	Downlights are incandescent and Light fixtures have T12 lamps LED light fixtures will be provided for back of house and theater in 2018.	7,218 S.F.	$5.5	$39,699	$57,564
Lighting Control	All	No automatic lighting control devices or lighting control relays. Lighting controls will be provided for back of house areas in 2018.	36,089 S.F.	$1.38	$49,803	$72,214
Emergency Lighting	House 101	Not sufficient number of emergency light fixtures	3,609 S.F.	$0.55	$1,985	$2,878

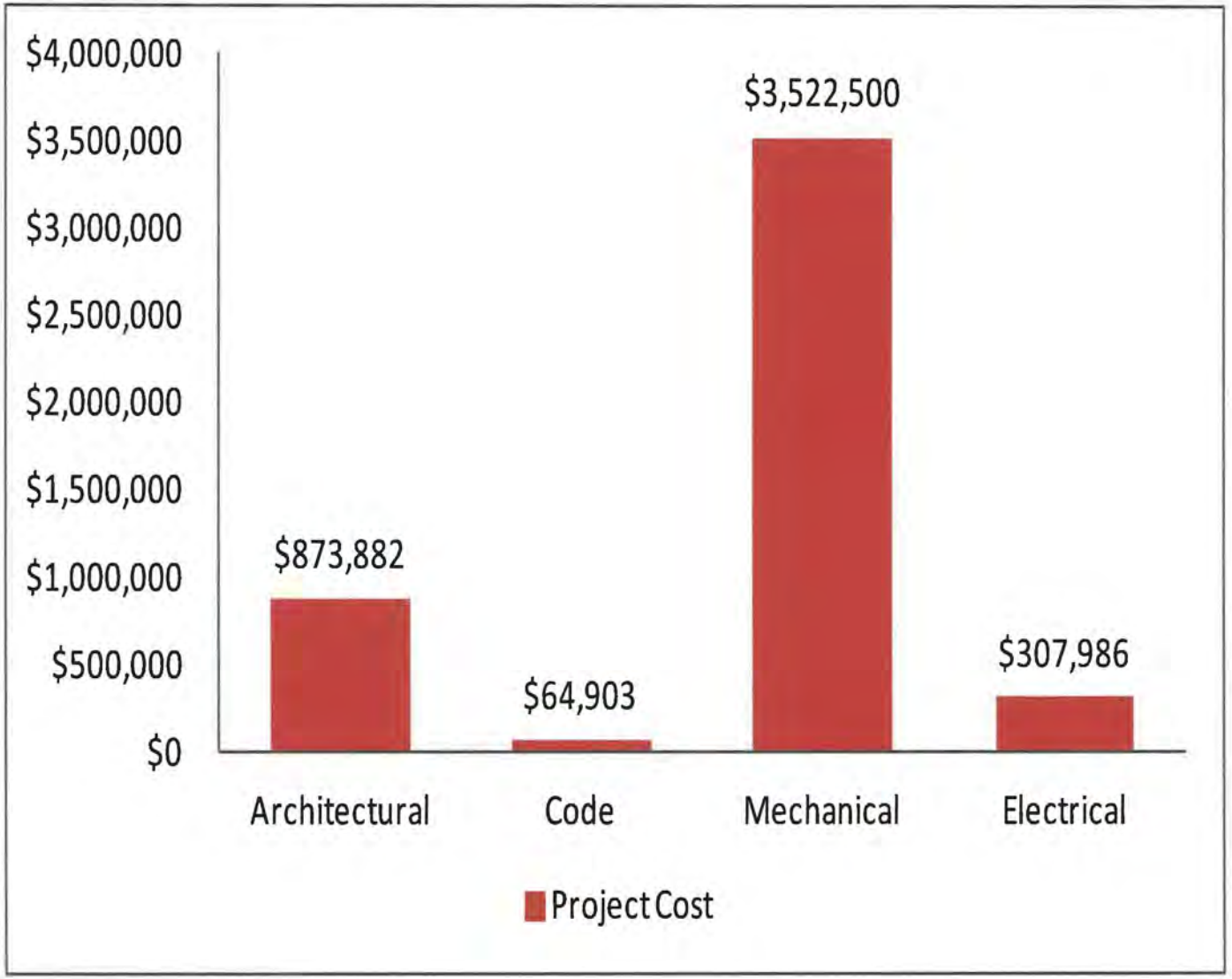
CODE AND BARRIER FREE

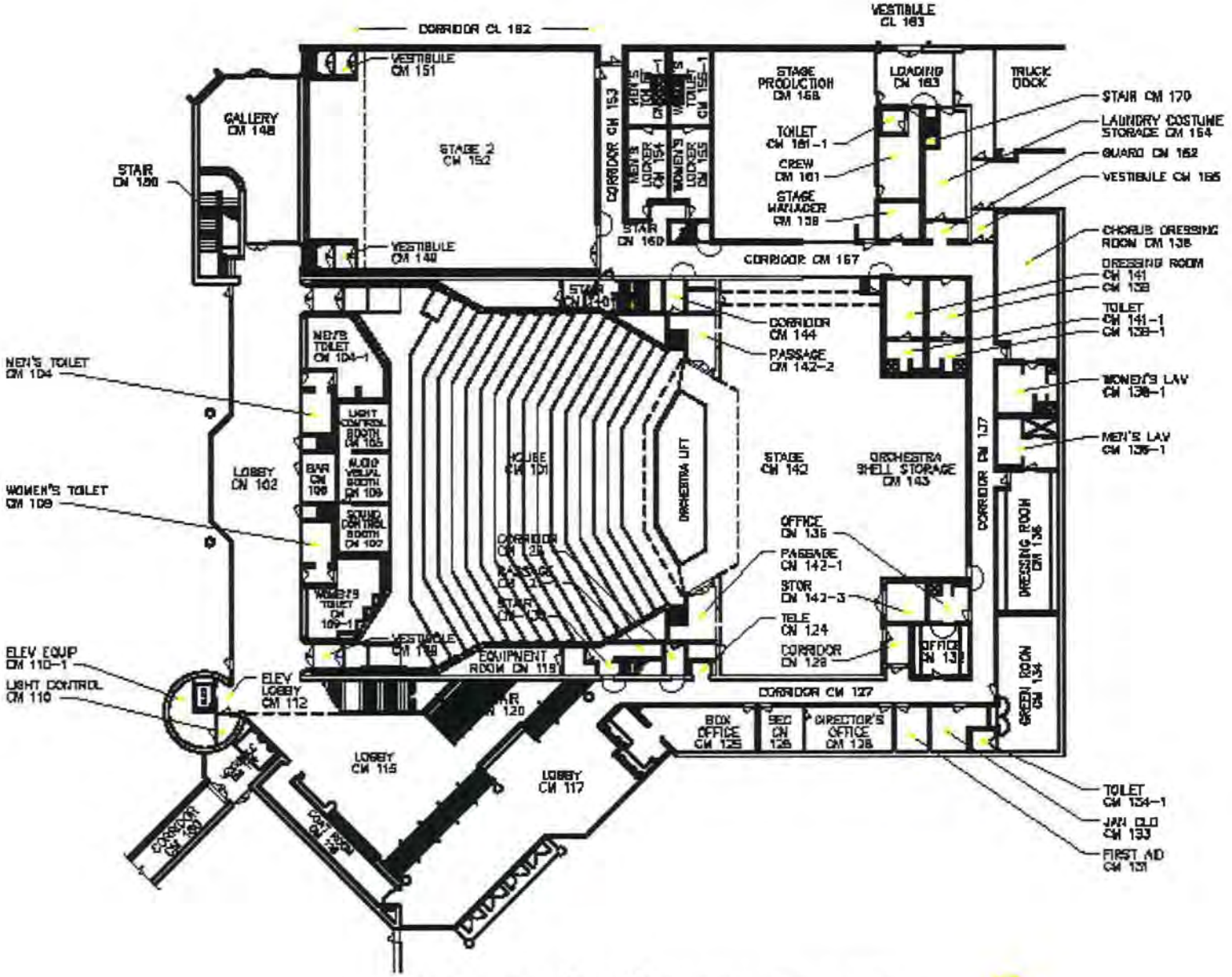
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are re-quired to have point of use mixing valves for scald/burn protection at accessible fixtures. Provide point of use mixing valves.	22 ea.	$330	$7,260	$10,527

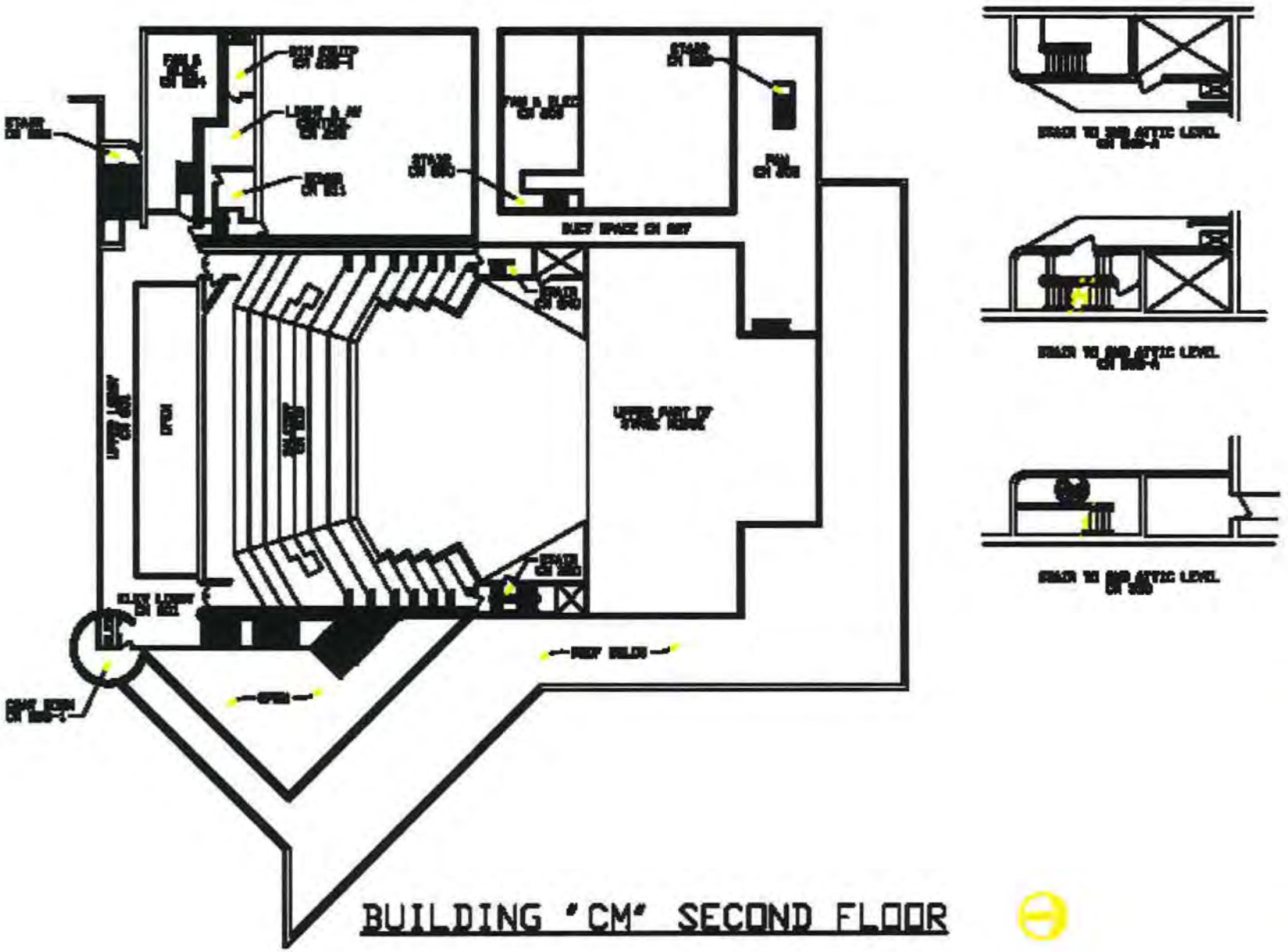
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Ramp	Southeast Interior	Railing not graspable and land-ings not adequate	LS	$1,100	$1,100	$1,595
Stairs	Main Lobby	Railing design is not graspable	LS	$7,700	$7,700	$11,165
Doors	Throughout Toilet Rooms	Replace knobs with levers Lacking Pull side clearance	90 LS	$193 ea $2,200	$17,370 $2,200	$25,187 $3,190
Seating	Auditorium	Barrier Free Seating not dis-persed.	LS	$2,200	$2,200	$3,190
Toilet Stalls	Toilet Rms. 104 & 109	B.F. stall is old 3' - 6" wide std.	LS	$3,300	$3,300	$4,785
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lava-tories and sink. The piping is required to be covered for ADA accessibility. Provide protective pipe covering.	22 ea.	$165	$3,630	$5,264

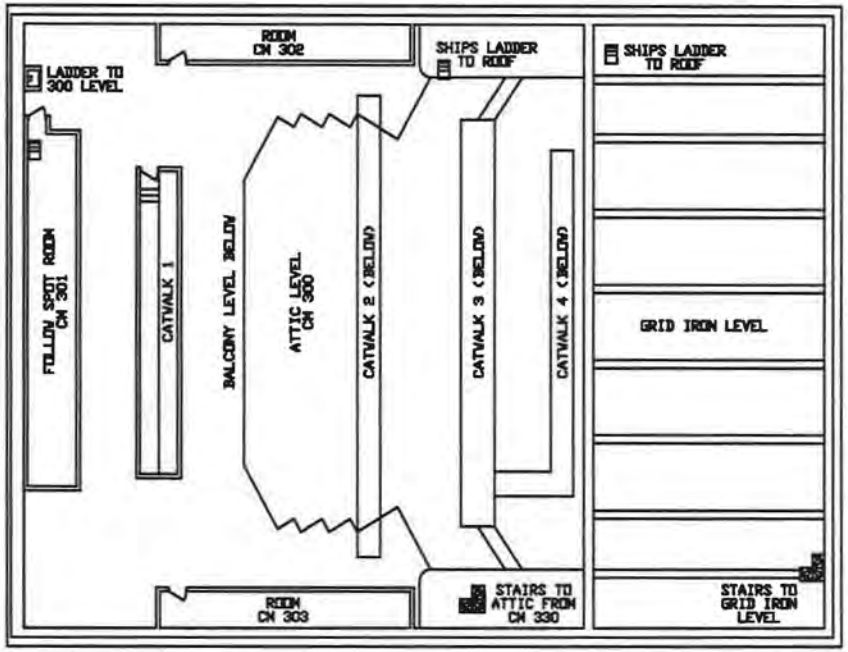

$4,000,000
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
$873,882
$64,903
$3,522,500
$307,986
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CM" MAIN FLOOR



BUILDING "CM" SECOND FLOOR



CM ATTIC



CM BASEMENT

BUILDING "CM" BASEMENT/ATTIC FLOOR













Building: CN
Gross Area: 65,934 S.F.
Year Built: 1996: Renovation 2017
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
96% Classroom
4% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age:0 yrs. Life Expectancy: Single Ply 25 years

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Roof membrane was replaced summer 2017				
		No overflows were provided				

Enclosure System Age: 21 yrs. Life Expectancy: Brick; 100 yrs. Alum./Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Soffits	Entrances	Patch and re-finish plaster soffits with elasto-meric coating.	500 S.F.	6.6/S.F	$3,300	$4,785
Bridge	N.E. to Pkg. Lot	Repair rusted decking below and paint below and rails.	L.S.	22000	$22,000	$31,900

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		All new finishes provided summer 2017.				
		Miscellanous cracks in walls repaired summer 2017.				
		New window treatments provided summer 2017.				

MECHANICAL

HVAC System Age: 0 yrs. Life Expectancy: 20-25 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		New chiller buffer tank provided to reduce cycling of chiller summer 2017.				
		Air handling Units, boilers and pumps were re-placed summer 2017.				

Plumbing System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				-

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				-

Temperature Controls Age: 16 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Were upgraded summer 2017				

ELECTRICAL

Power System Age: 21 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Visual inspection was performed and equipment was found servicable				
		Provide maintenance and IR testing for all substations, switchboards and distribution panels on a 5 year basis.				

Distribution System Age: 21 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Receptacles were all replaced in summer 2017.				

Lighting System Age: 0 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		All new LED light fixtures and automatic lighting controls were provided, summer 2017.				

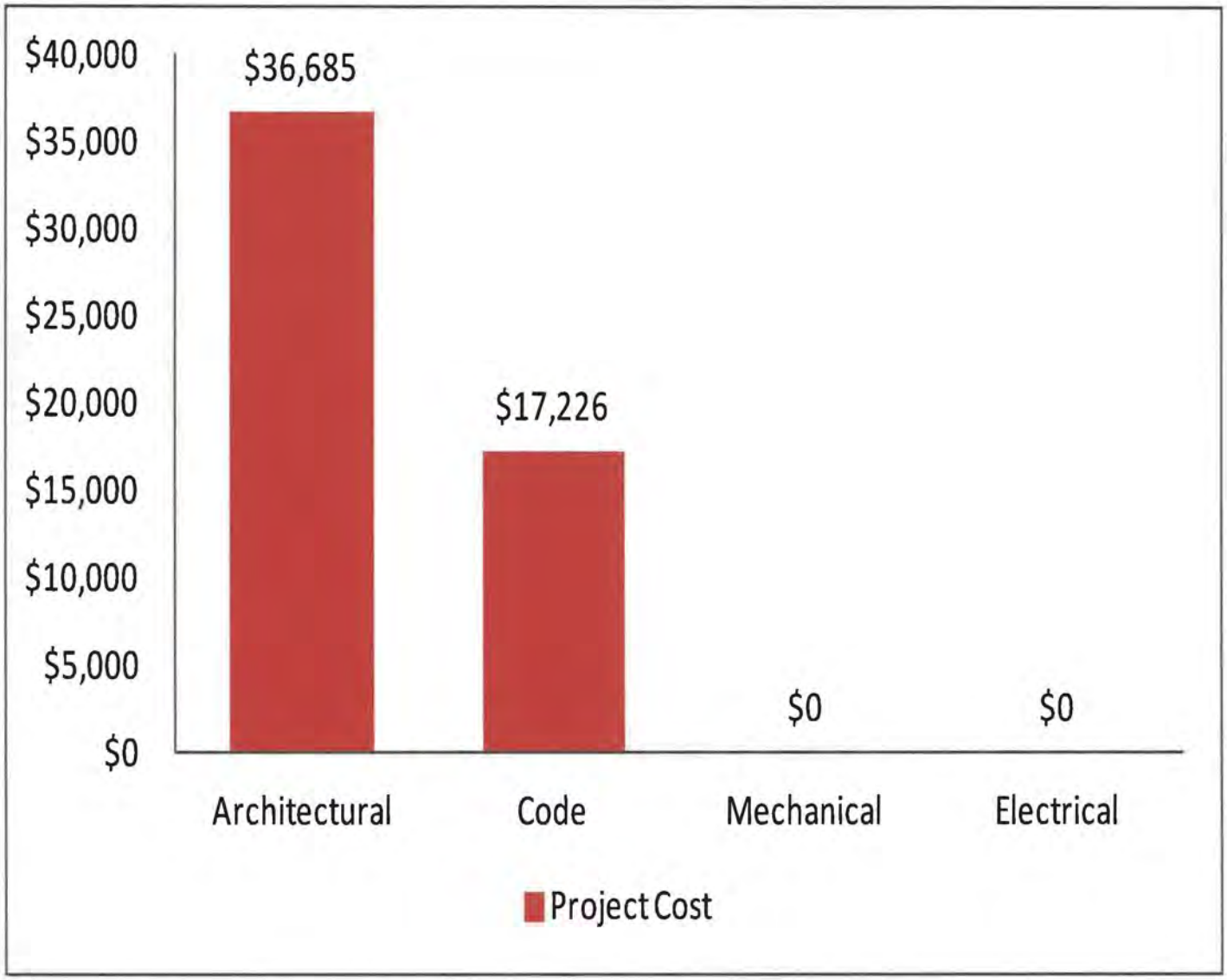
CODE AND BARRIER FREE

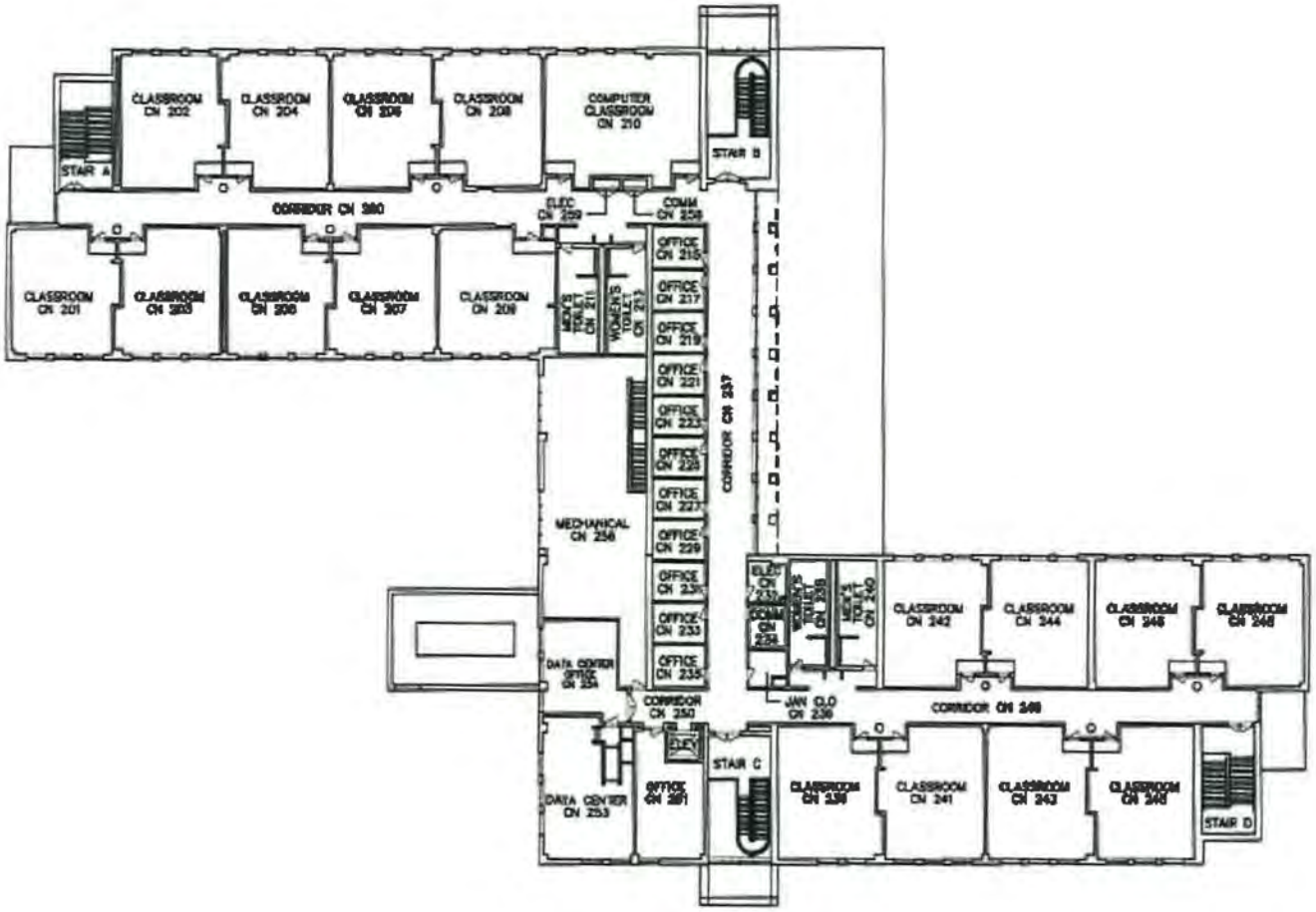
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/burn protection at accessible fixtures. Provide point of use mixing valves.	24 ea.	$330.00	$7,920	$11,484

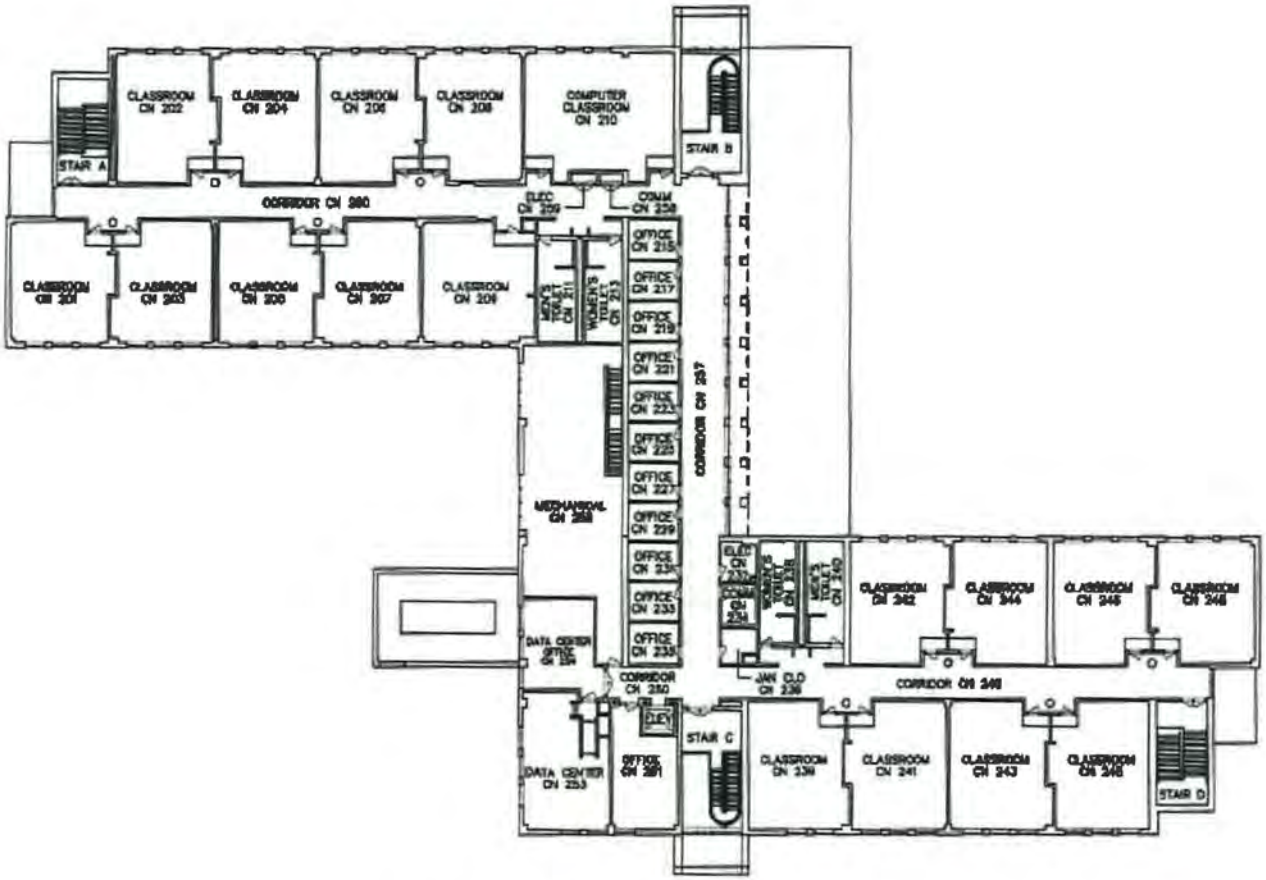
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exposed lav/ sink piping	Toilet Rooms and Sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA Accessibility. Provide protective pipe covering.	24 ea.	$165	$3,960	$5,742


$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$36,685
$17,226
$0
$0
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CN" SECOND FLOOR



BUILDING "CN" SECOND FLOOR













Building: CP
Gross Area: 31,759 S.F.
Year Built: 2004
No. of Floors: One
Evaluation Date:October 2017

Use Types:
26% Food Service
36% Conference
38% Bookstore

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 13 yrs. Life Expectancy: Single Ply. 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Overflow Drains	Throughout	Tapered Insulation around drains collect water	4 each	$1650	$6600	$9,570
Coping	N. Canopy	Bent & holds water	20 l.f.	$20	$400	$580

Enclosure System Age: Life Expectancy: Brick; 100 yrs. Metal Panels - 20 yr. fin. Alum./Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Expansion Joint	N.E. Corner	E.J. has pulled out of wall	20 l.f.	$55	$1,100	$1,595
Metal Panels	S. Entry	Panels dented	60 S.F.	$83	$4,980	$7,221
Railings	Loading dock	Secure anchors & paint	60 l.f.	$28	$1,680	$2,436
Screen Walls	N & S	Reseal coping clean brick	150 l.f.	$28	$4,200	$6,090

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Vinyl Wall Covering	E. Game Rm.	Damage at chair ht./add wainscot	120 S.F.	$55	$6600	$9,570
Benches	Main Corridor	Supports broken & tops delaminating	4 ea.	$550	$2200	$3,190
Ceramic Tile	Lobby Base	Repair tile at corner	2 l.f.	$110	$220	$319
Sheet Vinyl	Lobby and Corridor Flr.	Repair damaged seams	30 l.f.	$22	$660	$957
Toilet Partitions	Men's Room	Repair laminate	2 ea.	$110	$220	$319

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No noted equipment deficiencies				

MECHANICAL

HVAC System Age: 13 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the buidling mechanical system back to the original design intent and complete an air and water system balance report to identify potential operational issues.	1 LS	$71,610	$71,610	$103,835
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	31,579 sq.ft.	$1.38	$43,579	$63,190

Plumbing System Age: 13 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection Age: 13 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	31,579 S.F.	$4.0	$126,316	$183,158

ELECTRICAL

Primary Power System Age:13 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testinf for all substations, switchboards and distribution panels on 5 year basis.				

Secondary Power System Age: 13 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Panelboard	Corridor 112	Items are stored in front panelboard				-
Testing	Elec Rm	Provide maintenance and IR testing for all substations, switchboards and distribution panels on a 5 year basis.				

Distribution System Age: 13 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Vending	Vending 102-1	Vending machines are not plugged into a GFI receptacle	L.S.	$1,650	$1,650	$2,393
Exterior Receptacles	Exterior	Receptacles do not have weather proof in use covers	L.S.	$3,300	$3,300	$4,785

Lighting System Age: 13 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lighting Control	Restroom	No automatic lighting control devices or lighting control relays	953 S.F.	$1.38	$1,315	$1,907
Exit Discharge	All Exits	Light fixtures are not emergency	L.S.	$2,640	$2,640	$3,828
Lighting	Throughout	Existing fluorescent light fixtures can be replaced with LED light fixtures.	31,579	$7.00	$221,053	$320,527

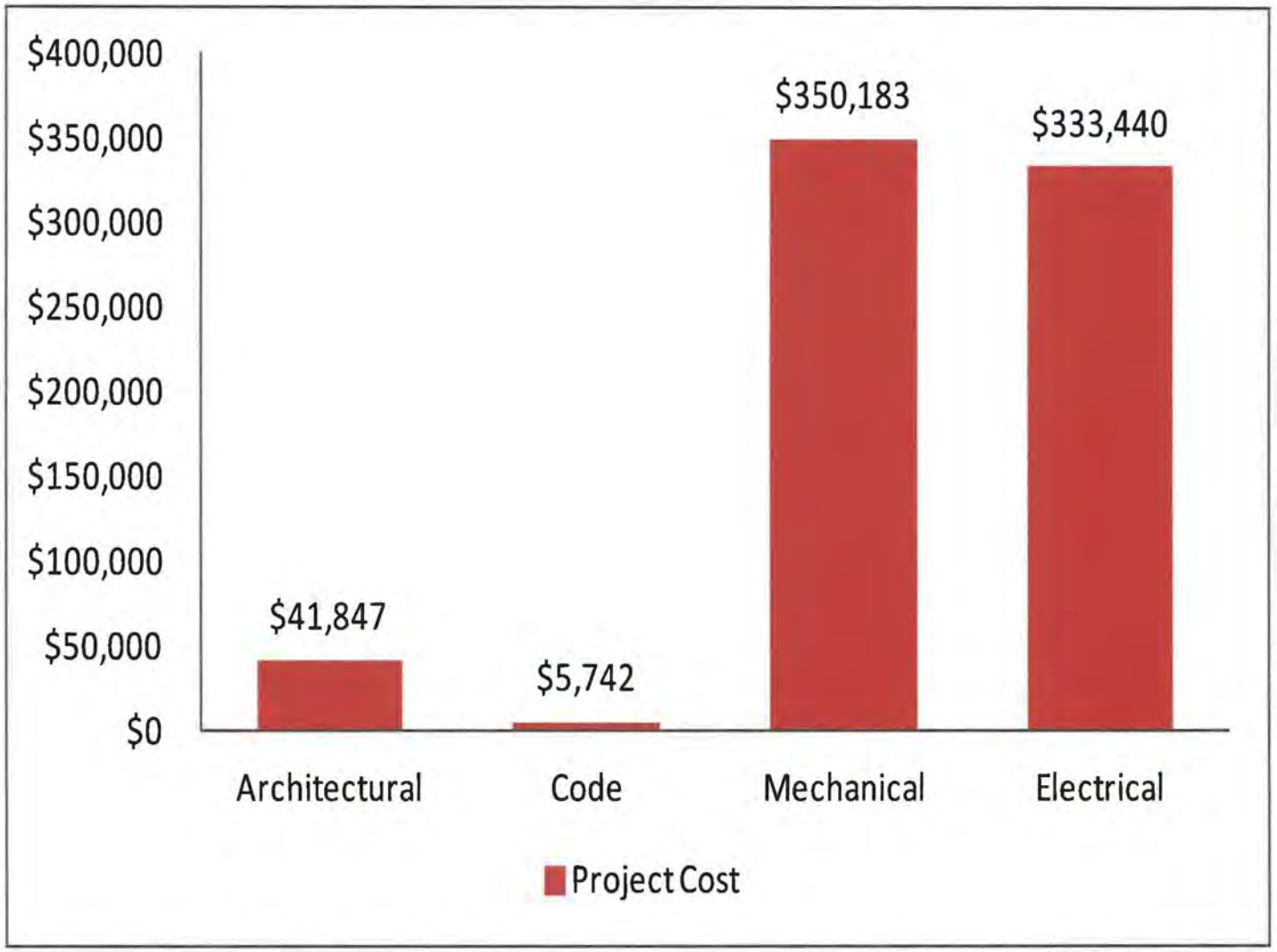
CODE AND BARRIER FREE

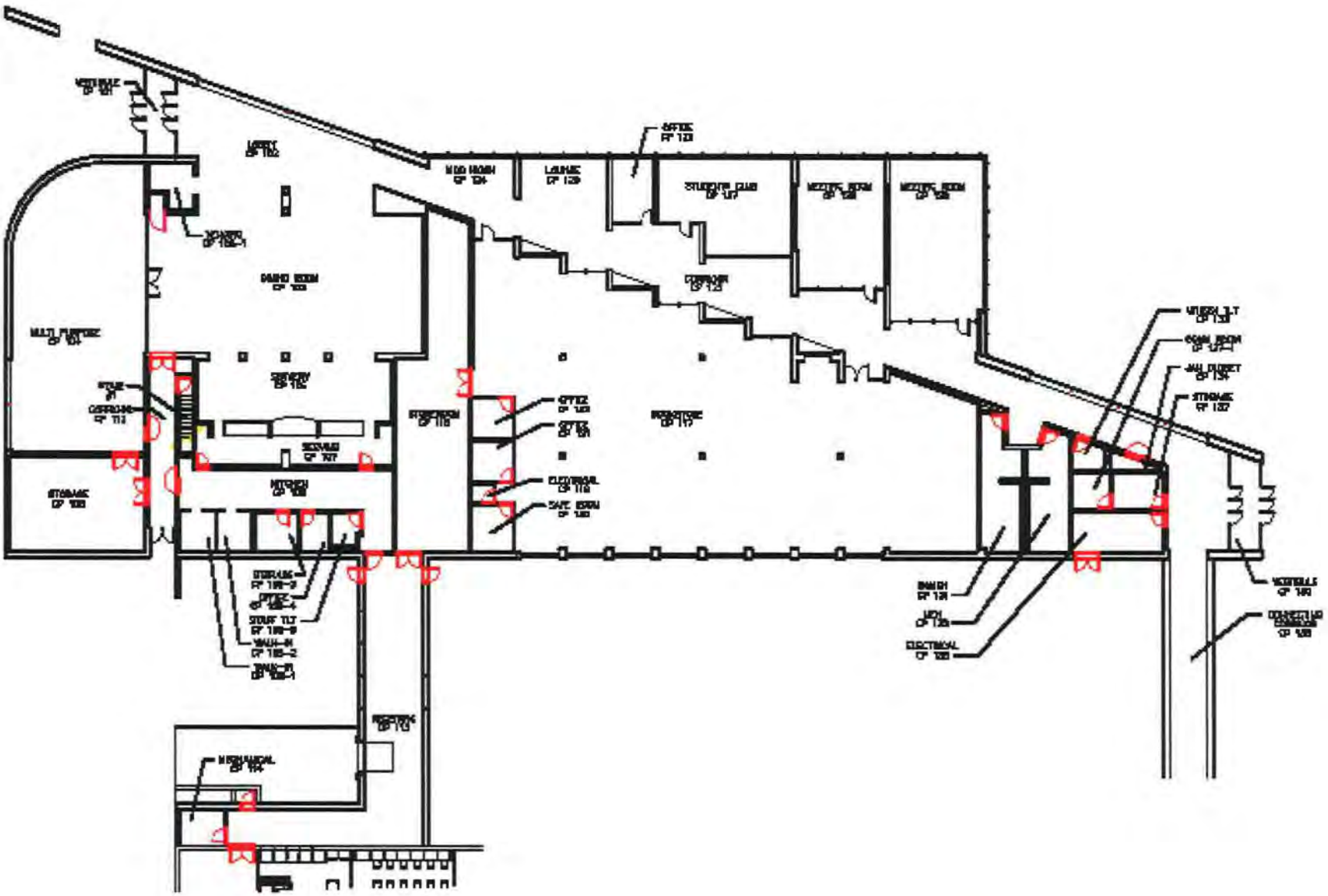
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/burn protection at accessible fixtures. Provide point fo use mixing valves.	8 ea.	$330	$2,640	$3,828

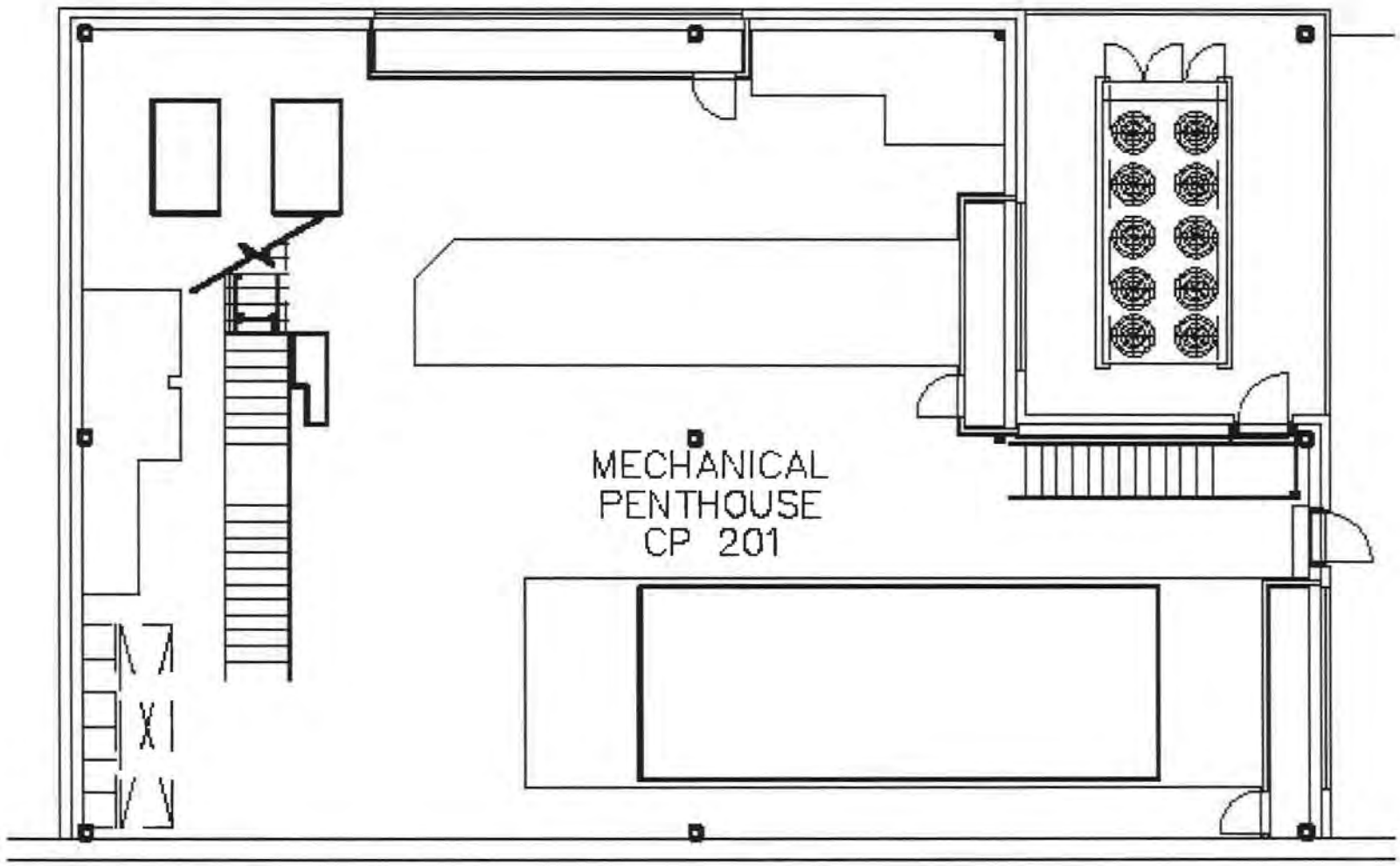
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exposed lav/ sink piping	Toilet Rooms and Sinks	Piping is exposed below lavatories and sinks. The piping is required to be covered for ADA accessibility. Provide protective pipe covering.	8 ea.	$165	$1,320	$1,914


$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$41,847
$5,742
$350,183
$333,440
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "CP" MAIN FLOOR


MECHANICAL
PENTHOUSE
CP 201

Building: CR
Gross Area: 41,242 S.F.
Year Built: ??
No. of Floors: Two
Evaluation Date:October 2017

Use Types:
75% Classroom
4% Offices
21% Labs

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 9 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Drains	Canopies	Overflow drains pond water and need to be reworked	2	$1,650	$3,300	$4,785

Enclosure System Age: 9 yrs. Life Expectancy: Brick; 100 yrs. Alum/Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Brick	East Wall	Check window sills for water infiltration and clean efflourescence	L.S.	$3,300	$3,300	$4,785
Storefront	East	Replace missing mullion cap	L.S.	$275	$275	$399

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Resilient Tile	Jan. Cl. 174	Replaced water damaged tile	300 S.F.	$4.4	$1,320	$1,914
Resilient Base	Throughout	Re-glue loose base	L.S.	$1,100	$1,100	$1,595
Ceiling	Observation 166	Replace stained ceiling tile	L.S.	$165	$165	$239

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No Comments				–

MECHANICAL

HVAC System Age: 9 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the building mechanical system back to the original design intent and complete air and water system balance report to identify potential operational issues.	1 LS	$76,780	$76,780	$111,331
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	41,242 S.F.	$1.38	$56,914	$82,525

Plumbing System Age: 9 yrs. Life Expectancy 10-50 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection Age: 9 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 9 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	41,242 S.F.	$4.0	$164,968	$239,204

ELECTRICAL

Primary Power System Age: 9 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testing for all substations, switch boards and distribution panels on a 5 year basis.				

Secondary Power System Age: 9 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testing for all sub-stations, switch boards and distribution panels on a 5 year basis.				

Distribution System Age: 9 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Recep-tacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785

Lighting System Age: 9 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Sweep Switch	Elec Rm	No lighting control allowed by code. Replace switch.	LS	$275	$275	$399
Lighting	Throughout	Life expectancy of fluorescent lighting lamps is 5 years. Group lamping needed	41,242	$0.15	$6,186	$8,970

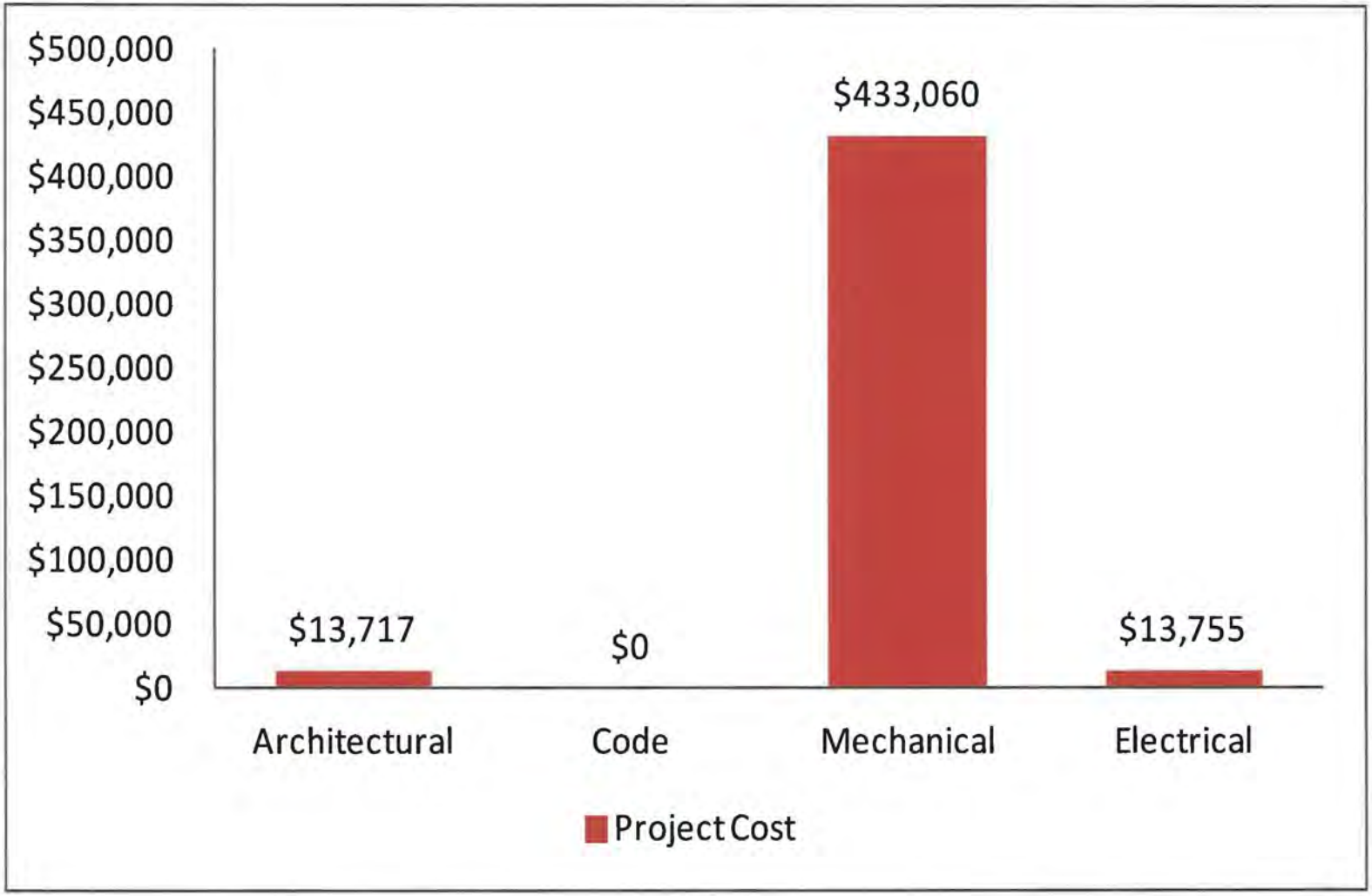
CODE AND BARRIER FREE

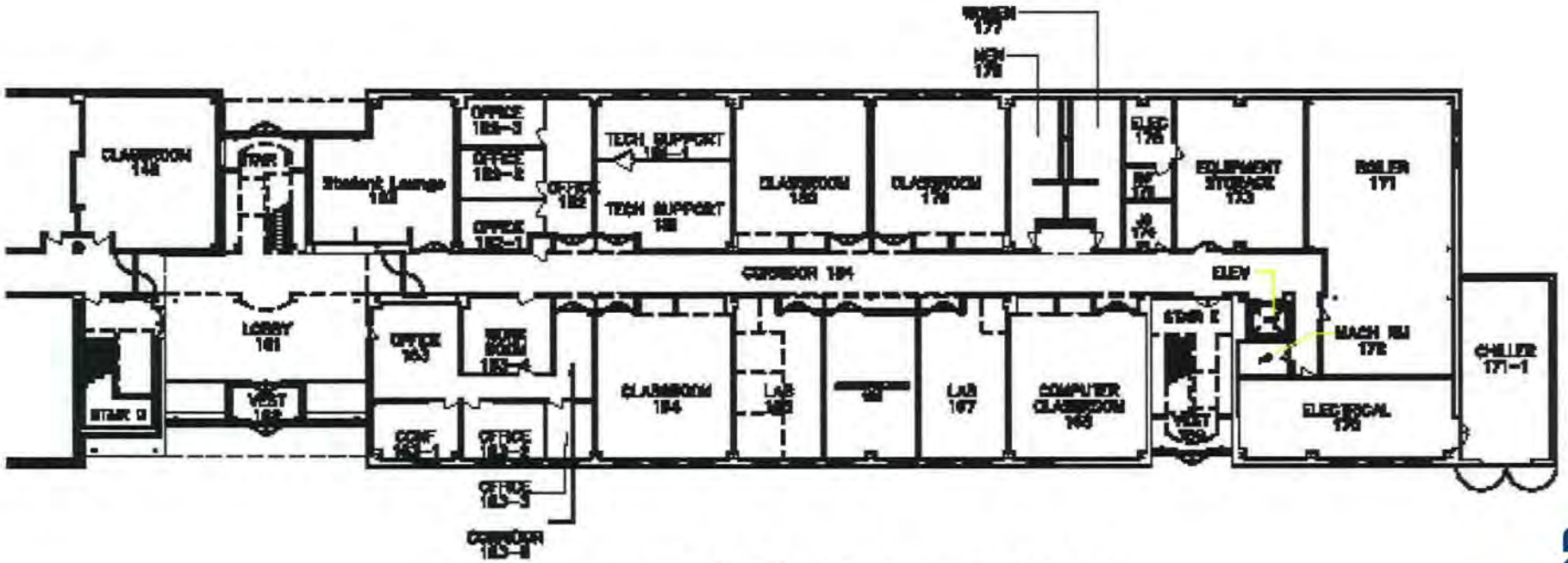
Code System Age:

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				--

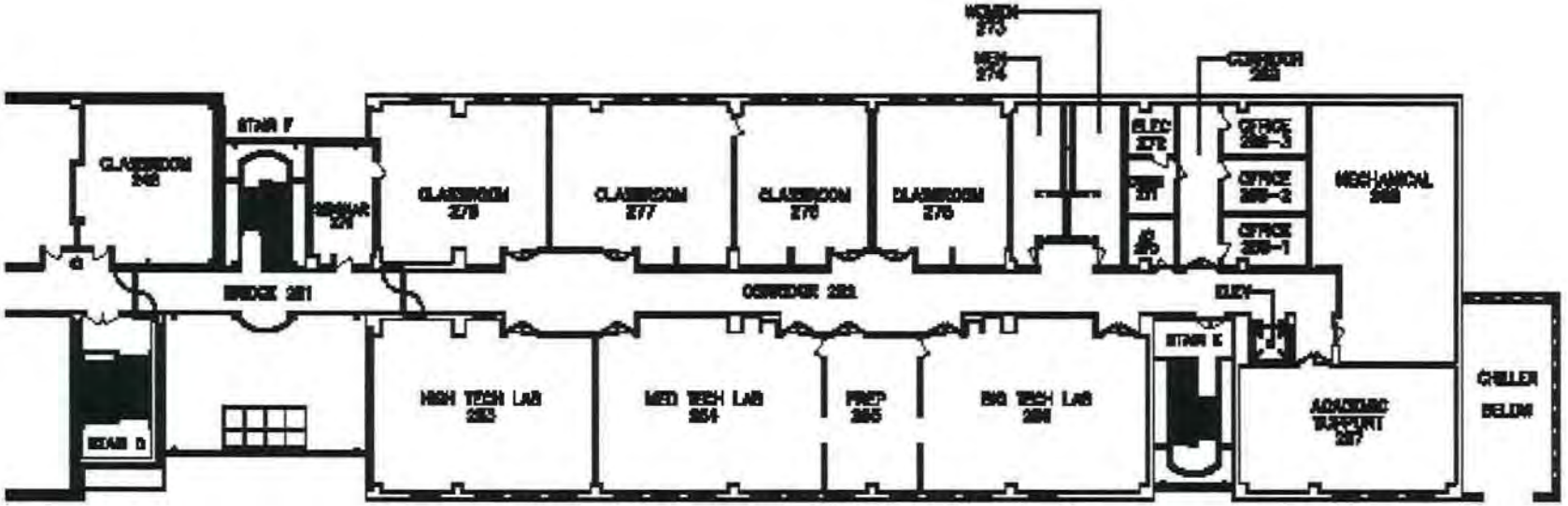
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				--


$500,000
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$13,717
$0
$433,060
$13,755
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "R" MAIN FLOOR



BUILDING "R" SECOND FLOOR

Building: CS
Gross Area: 41,600 S.F.
Year Built: 1988
No. of Floors: Four
Evaluation Date: October 2017

Use Types:
75% Offices
25% Unassigned

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 12 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Downspouts	Canopies	Rework downspouts so they do not drain onto sidewalks	2	$550	$1,100	$1,595
Coping	Perimeter	Remove coping, extend roofing under coping and re-install.	40 l.f.	$13.20	$528	$766
Hatch	Stair A	Replace latch at roof hatch	LS	$165	$165	$239
Drains	Throughout	Provide overflow drains/scuppers	3	$1,750	$5,250	$7,613

Enclosure System Age: Life Expectancy: Metal Panels; 20 yr. fin. Alum/Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Benches	North Entry	Repair deteriorating bench supports	LS	$1,100	$1,100	$1,595
Metal Panels	Throughout	Clean metal panels	16,000 SF	$0.55	$8,800	$12,760
Doors	West Stair	Replace full glass door with H.M. door at exit stair	1	$2,200	$2,200	$3,190
Penetrations	East Side	Remove duct tape and properly patch conduits and soffit	LS	$550	$550	$798
Stairs	East Side	Rework exit only stair to provide primary access to upper levels	LS	$5,500	$5,500	$7,975

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Hard tile	First Flr. Lobby	Replace cracked floor tile	LS	$275	$275	$399
Elevator Doors	All Floors	Refinish Brass doors	LS	$1,100	$1,100	$1,595
Vinyl Wall Covering	Misc. Areas	Patch or replace areas of damaged vinyl wall covering	LS	$1,750	$1,750	$2,538
Glass Ceilings	Vestibules	Replace glass ceilings in vestibules.	LS	$1,750	$1,750	$2,538
Fire Safing	Boiler Room	Repair fire rated wall at southeast corner of Boiler Room	LS	$1,100	$1,100	$1,595
Office Suite	Second Floor	Provide new finishes in rooms 210, 211, 212, 213, 214, 215, 216 and 209	1,000 S.F.	$33	$33,000	$47,850
Counters	Toilet Room	Re-support loose vanity tops	LS	$4,400	$4,400	$6,380

MECHANICAL

HVAC System Age: 2-11 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Boiler Room Ventilation	Boiler Room 445	The boiler room is not ventilated to remove the heat generated by the boilers.	1 LS	$18,150	$18,150	$26,318
System Identification	Buildng	The piping system is not completely labeled. Label the piping.	33,099 S.F.	$0.15	$4,965	$7,199

Plumbing System Age: 29 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the domestic cold water distribution piping system are galvanized steel. Due to it's age the piping is showing signs of deterioration and should be replaced.	100 LF	$55	$5,500	$7,975
Piping	Building	Portion of the cold and hot water piping have missing and damaged insulation. The insulation should be replaced.	33,099 S.F.	$0.06	$1,986	$2,880

Fire Protection Age: 29 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				-

Temperature Controls Age: 11 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	33,099 S.F.	$4.0	$132,396	$191,974
Battery Back-up	Boiler Room 445	Provide battery back-up on central TC panel.		Incl. Above		

ELECTRICAL

Primary Power System Age: 29 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$2,200	$2,200	$3,190

Secondary Power System Age: 29 yrs. (But with some more recent equipment)

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$2,860	$2,860	$4,147

Distribution System Age: 29 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Ext. Recp.	Exterior	Receptacles do not have weatherproof covers	LS	$3,300	$3,300	$4,785

Lighting System Age: 29 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lighting Control	Open Office 317, Reception 312	No automatic lighting control devices or lighting control relays	824 SF	$1.50	$1,236	$1,792
Light Levels	Stair B	No light fixture at bottom of stairwell	LS	$550	$550	$798
Lamp Type	Elec Rooms, Penthouse	Light fixtures have T12 lamps	9,930 SF	$5.5/SF	$54,615	$79,192
Emergency Lighting	Penthouse	Not sufficient number of emergency light fixtures	8,275 SF	$0.55	$4,551	$6,599
Lighting	1st, 2nd, 3rd floor suites; except CIT	Replace existing fluorescent lighting with LED.	33,099	$7.00	$231,693	$335,955

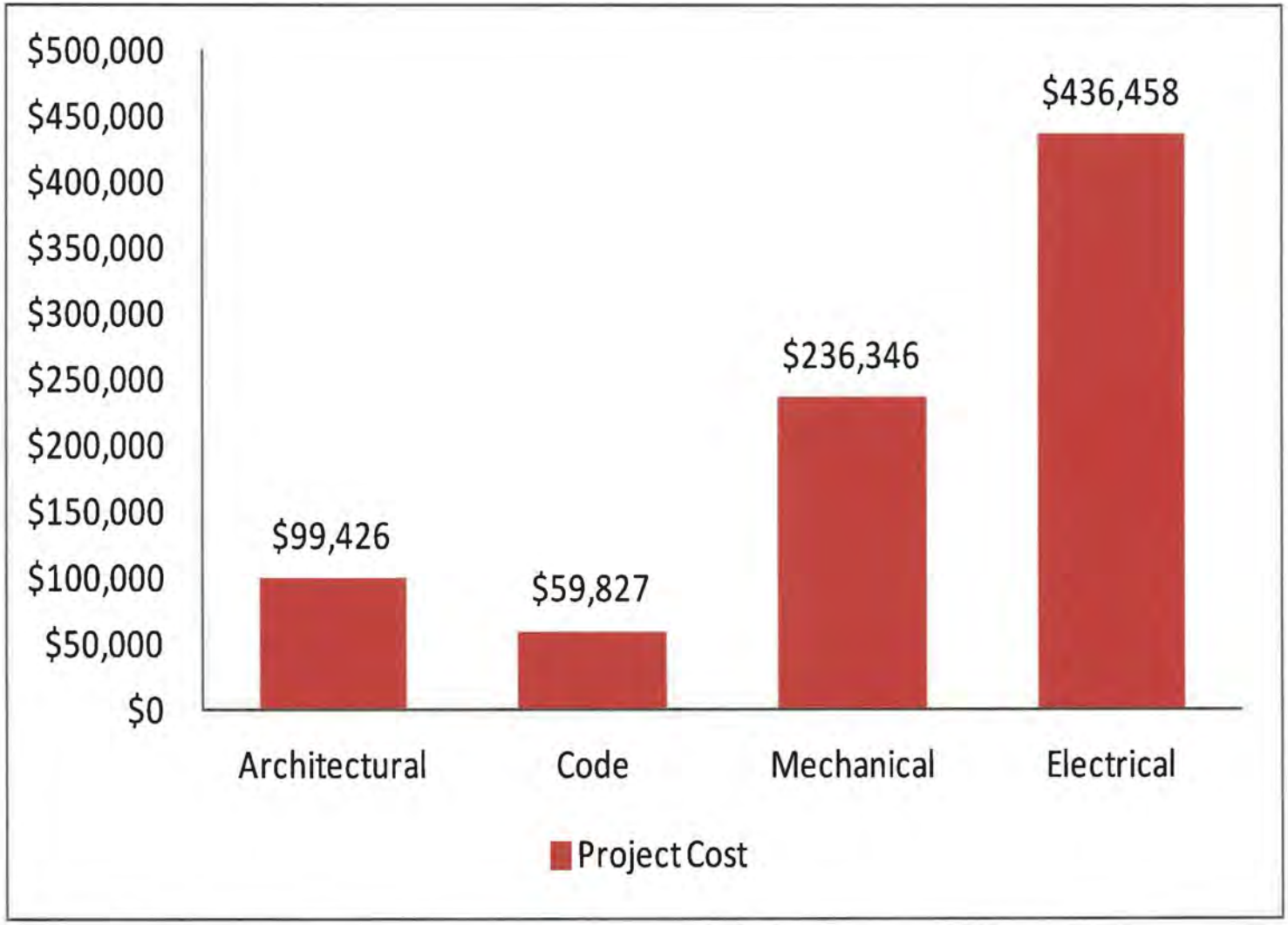
CODE AND BARRIER FREE

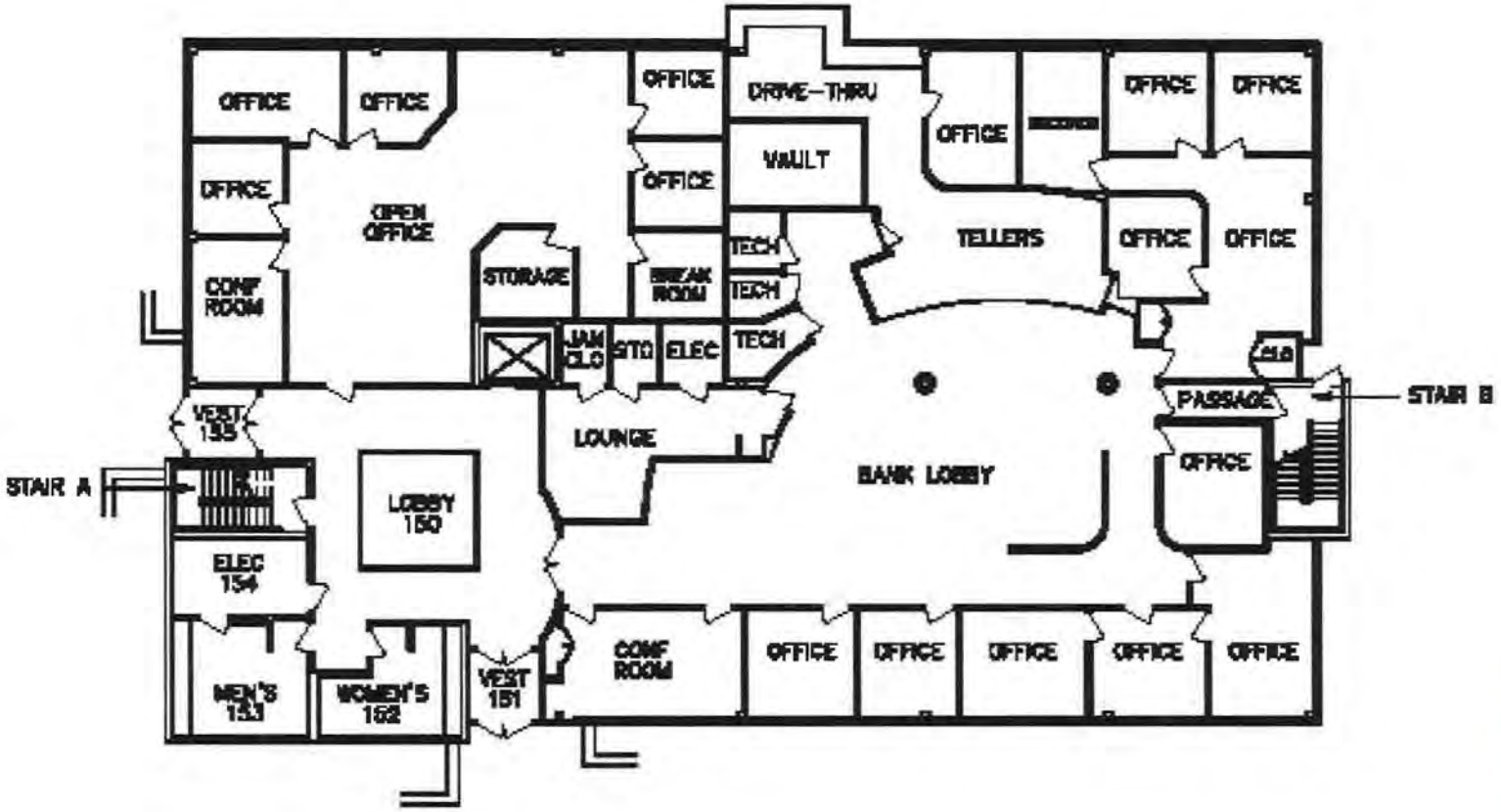
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Railings	Stairs	Bullustrade spacing greater than 4 inches	LS	$22,000	$22,000	$31,900
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to have point of use mixing valve.	12 ea.	$330.00	$3,960	$5,742

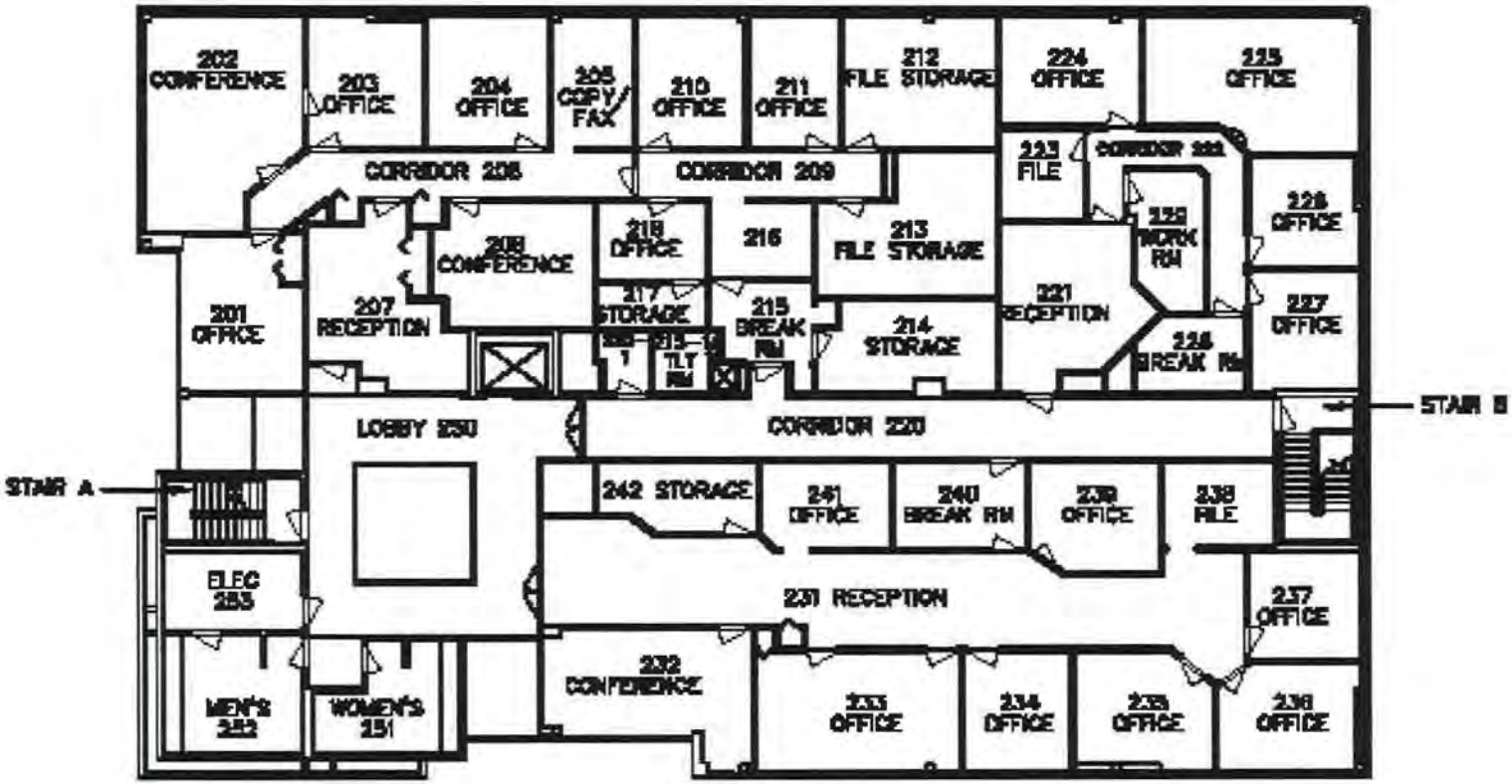
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Toilet Rooms	All Floors	Barrier Free Water closet is old 3'-6" wide std.	LS	$13,200	$13,200	$19,140
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lava-tories and sinks. The piping is required to be covered for ADA accessibility. Provide protective pipe covering.	12 ea.	$175	$2,100	$3,045

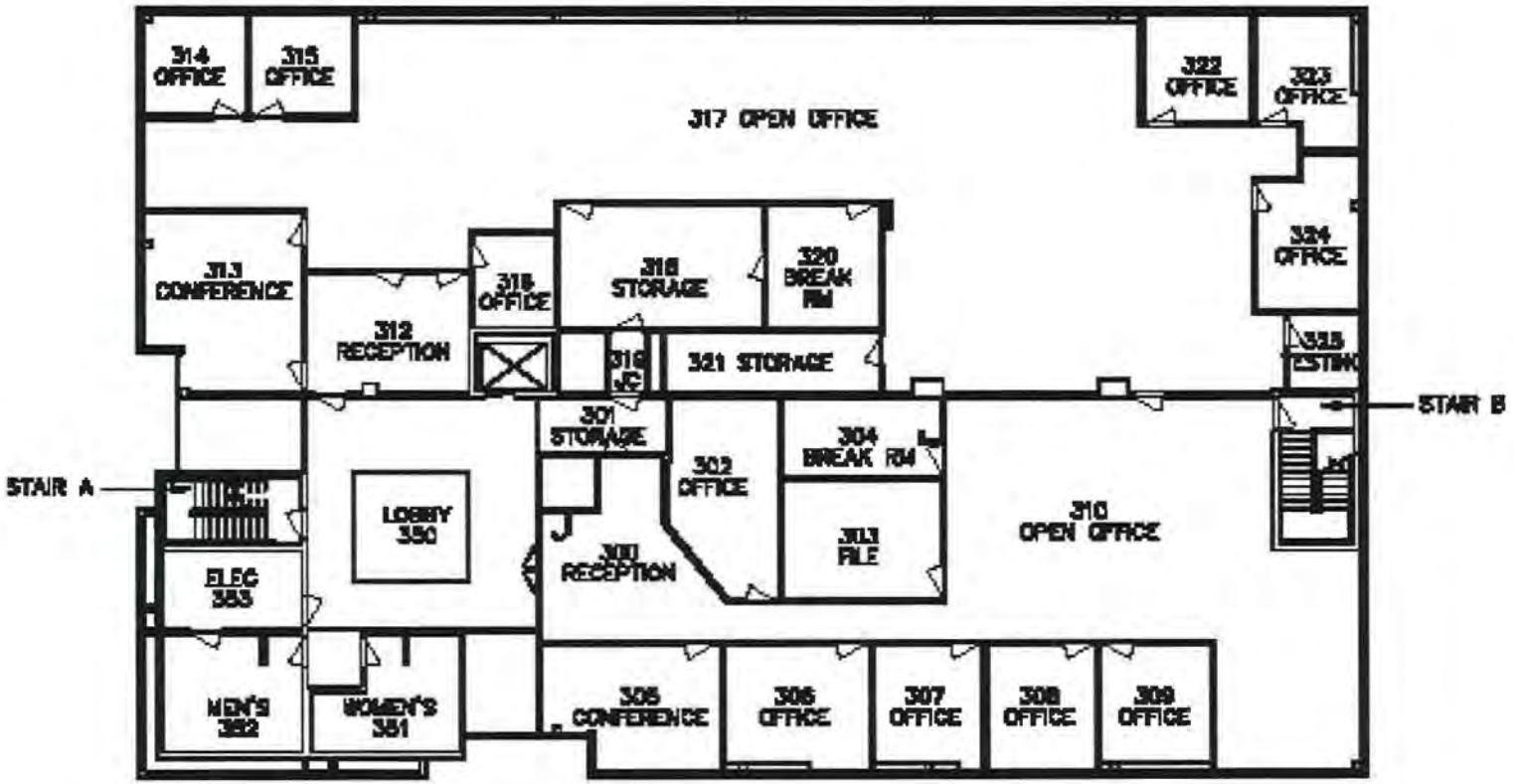

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$350,000
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$250,000
$200,000
$150,000
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$0
$99,426
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$436,458
Architectural
Code
Mechanical
Electrical
Project Cost



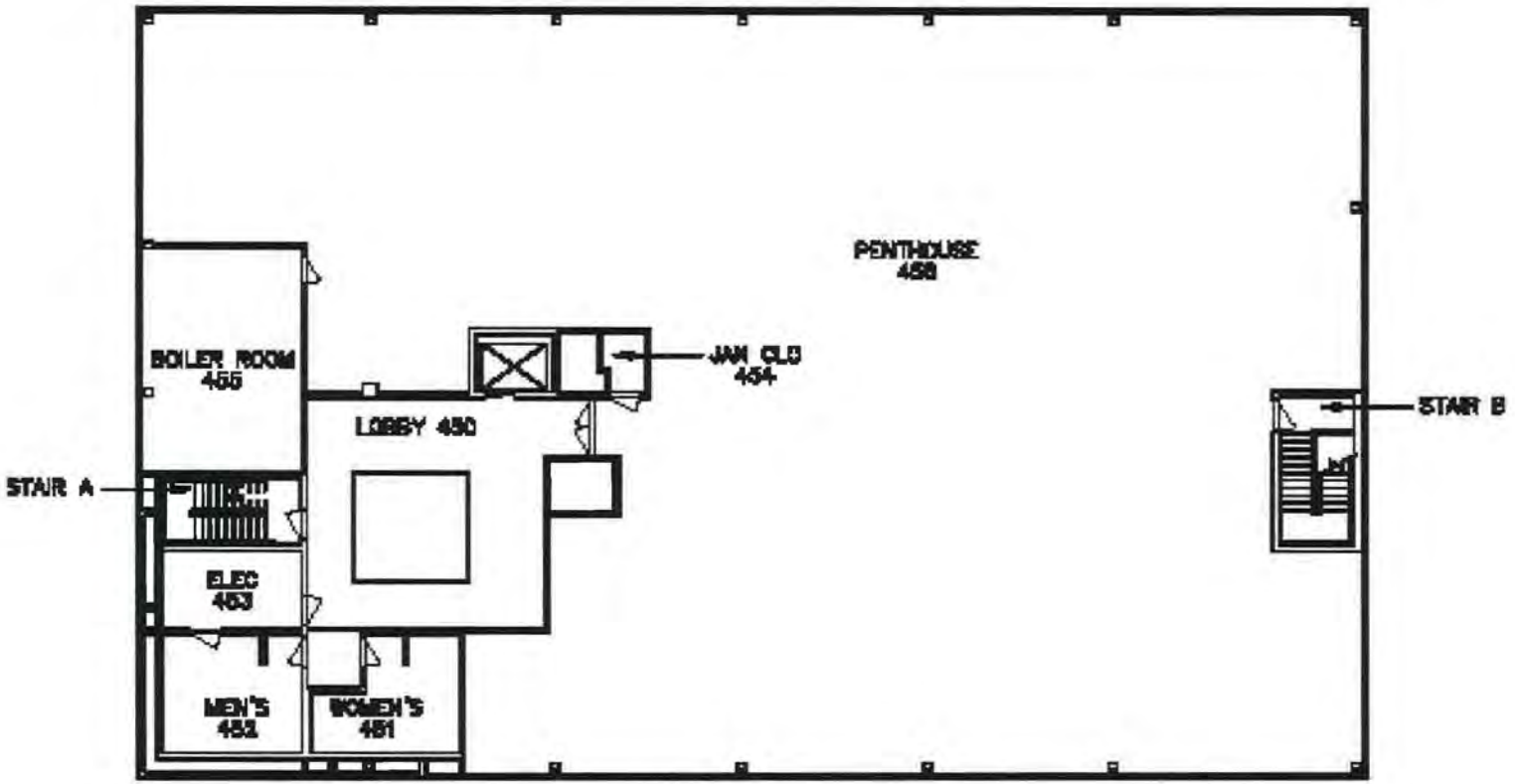
CS "MAC" BUILDING FIRST FLOOR



CS "MAC" BUILDING SECOND FLOOR



CS "MAC" BUILDING THIRD FLOOR



CS "MAC" BUILDING PENTHOUSE

Building: UC-1
Gross Area: 91,543 S.F.
Year Built: 1991
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
18% Classrooms
71% Conference
11% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 3 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Metal Roofing	Above lecture area	Remove and re-install all standing seam caps	5,000 S.F.	$22	$110,000	$159,500
Drains	Above dining, lecutre area	Rework overflow drains so they do not pond water.	8	$1,750	$14,000	$20,300
Gas Piping	Across roof	Re-paint gas piping	250 l.f.	$1.32	$330	$479

Enclosure System Age: 26 yrs. Life Expectancy: Brick; 100 yrs. Alum./Glass; 20 yrs. Sealants; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Pavers	Main Entry	Reset low pavers	LS	$2,200	$2,200	$3,190
Signage	S.E. Entry	Provide new signage	LS	$1,100	$1,100	$1,595
Plaster soffits	S.E. Entry & Main Entry	Patch and re-finish plaster.	1,200 S.F.	8.8	$10,560	$15,312

Finish System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Replaced finishes summer 2014				

MECHANICAL

HVAC System Age: 3 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Air handling units, boilers and pumps replaced summer 2014.				

Plumbing System Age: 26 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Piping	Building	Portion of the domestic cold water distribution piping system are galvanized steel. Due to it's age the piping is showing signs of deterioration and should be replaced.	600 LF	$55	$33,000	$47,850
Piping	Building	Portion or the cold and hot water piping have missing and damaged insulation. The insulation should be replaced.	91,543 S.F.	$0.77	$70,488	$102,208

Fire Protection Age: 26 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				-

Temperature Controls Age: 3 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Replaced controllers and control components for added efficiency.				

ELECTRICAL

Primary Power System Age: 26 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment	LS	$2,200	$2,200	$3,190

Secondary Power System Age: 26 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Perform infrared and visual inspection of distribution equipment.	LS	$4,180	$4,180	$6,061

Distribution System Age: 21 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exterior Receptacles	Exterior	Receptacles do not have weather proof in use covers	LS	$3,300	$3,300	$4,785

Lighting System Age: 3 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Provided new 80,000 fluorescent lamps in existing 2x4 fixtures and new LED downlights and new lighting controls summer 2014.				

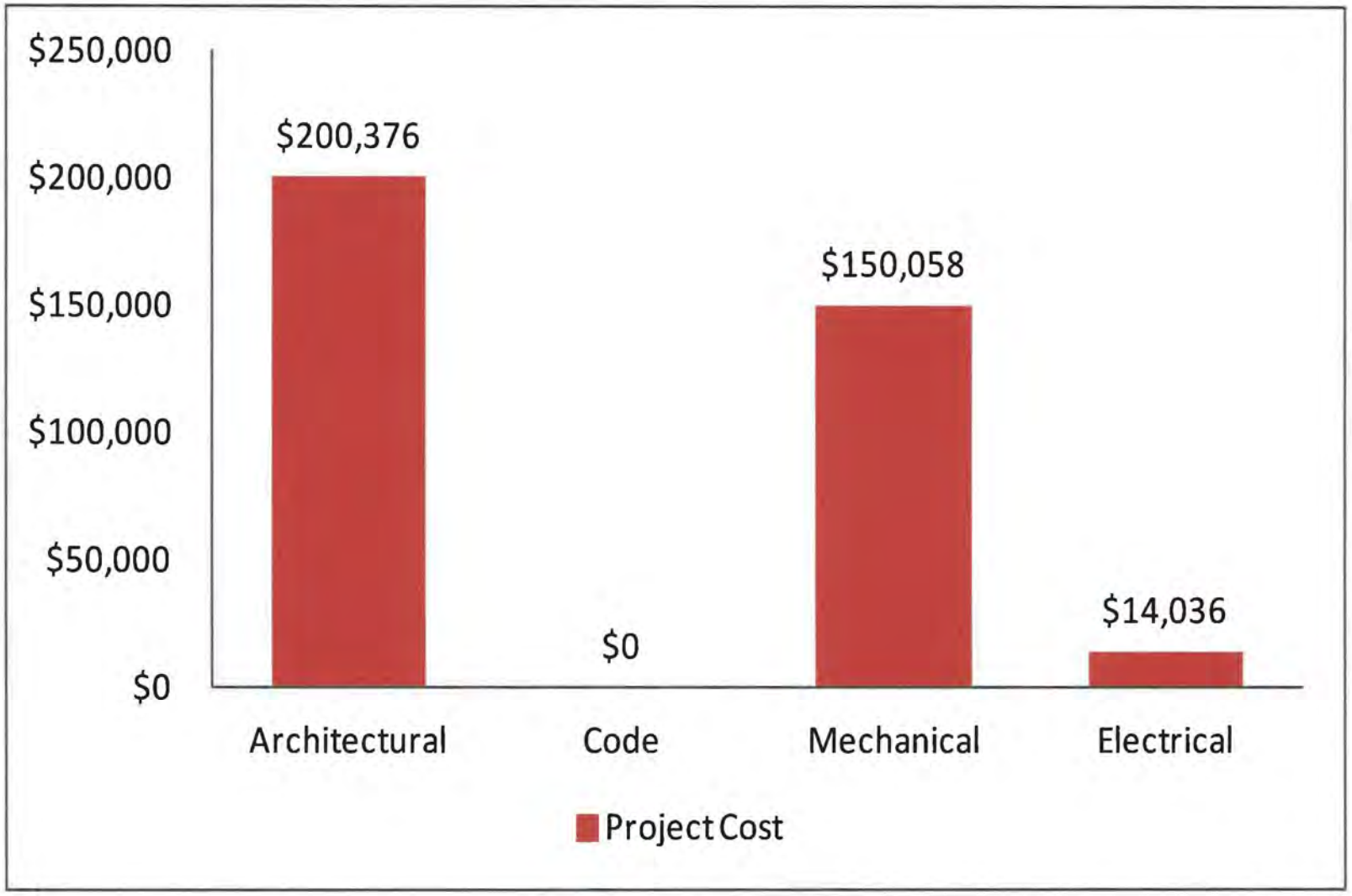
CODE AND BARRIER FREE

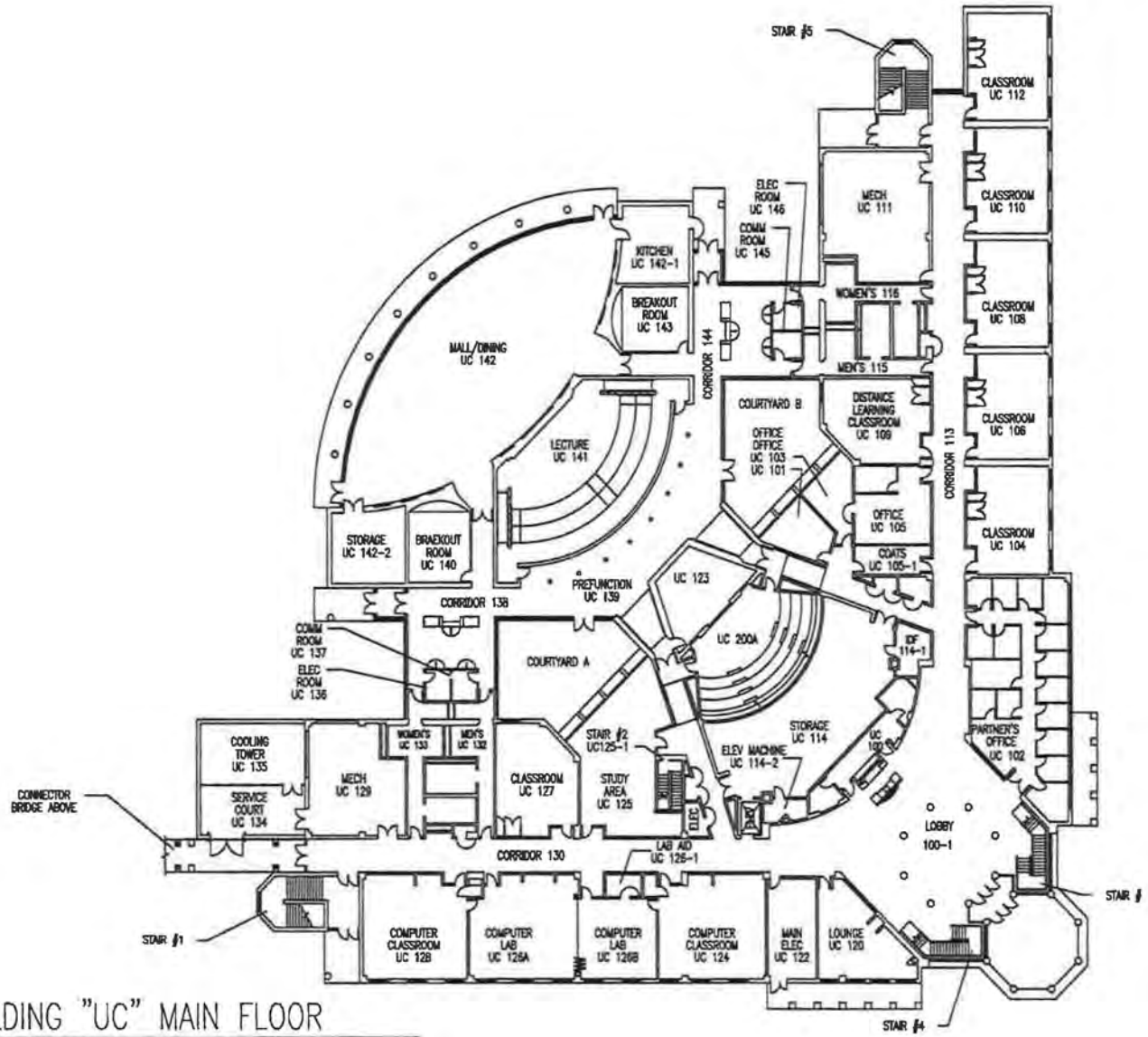
Code System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Added mixing valves at lavatories, summer 2014				

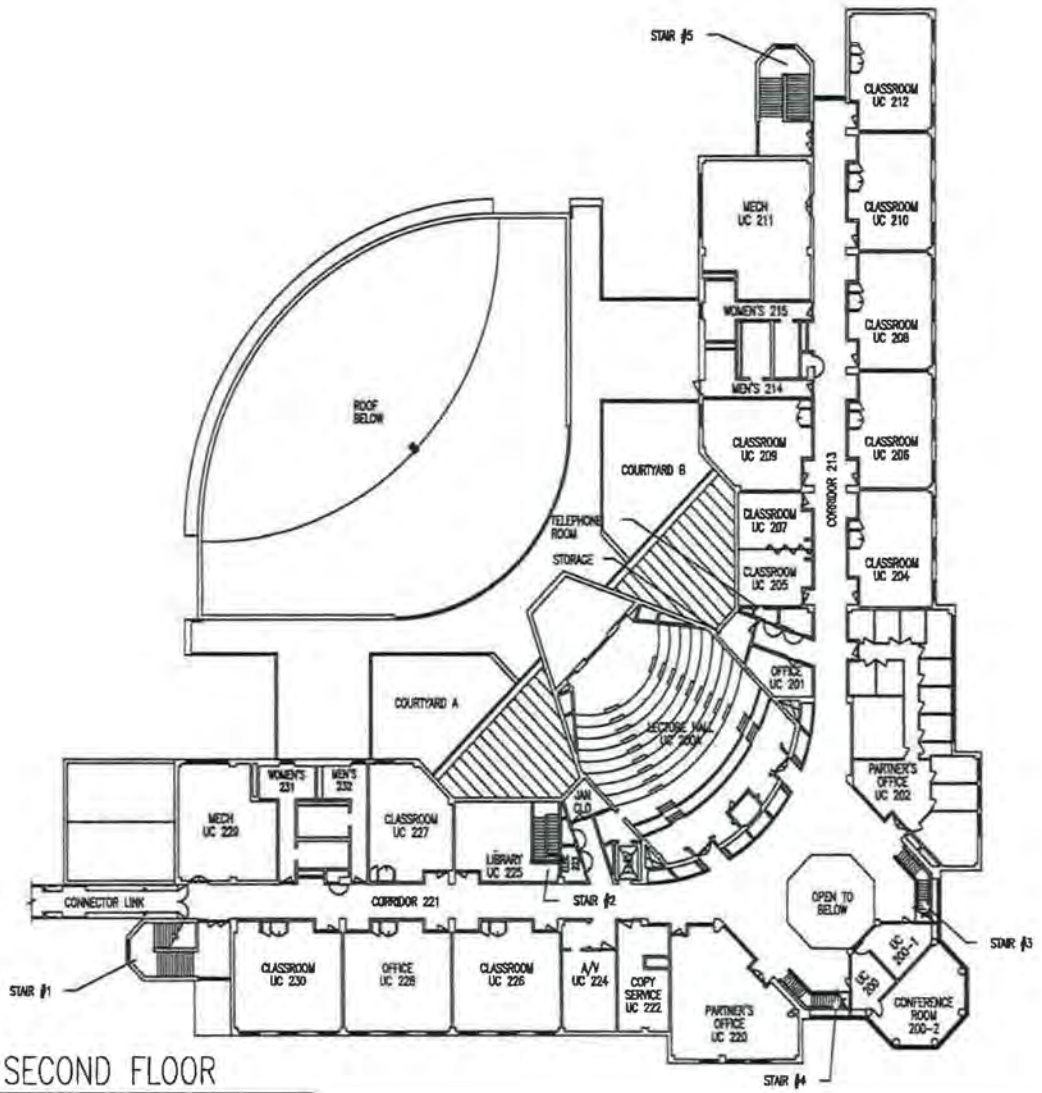
Barrier Free System

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		Replaced Door knobs and thumb latches, summer 2014.				


$250,000
$200,000
$150,000
$100,000
$50,000
$0
$200,376
$0
$150,058
$14,036
Architectural
Code
Mechanical
Electrical
Project Cost



BUILDING "UC" MAIN FLOOR



BUILDING "UC" SECOND FLOOR

UC1

Building: UC-2
Gross Area: 56,537
Year Built: 1999
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
35% Classrooms
12% Lab
53% Offices

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 17 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Drains	Throughout	Reset overflow drains so they do not collect water	8	$1,650	$13,200	$19,140
Cast Coping	Perimeter	Re-seal coping joints	LS	$5,500	$5,500	$7,975
Skylight	Above Lobby	Re-seal Kal wall system	LS	$1,100	$1,100	$1,595
Gas Piping	Across Roof	Re-paint Gas piping	250 l.f.	$1.32/l.f.	$330	$479

Enclosure System Age: Life Expenctancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Metal Panels	Bridge	Refinish and re-seal metal panels	LS	$16,500	$16,500	$23,925
Signage	Stair 3	Provide new sign	LS	$550	$550	
Doors	Elec. Room 109	Replace door and frame	2	$2,200	$4,400	

Finish System Age: 17 yrs. Life Expectancy: Brick; 100 yrs. Alum./Glass; 20 yrs. Sealants; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Drywall	Classroom 129, Corridor 137, Corridor 138	Patch gypsum board and re-finish	LS	$1,650	$1,650	$2,393
Paint	All walls with marker boards	Re-paint entire wall with marker boards	LS	$3,300	$3,300	$4,785
Carpet	Classrooms & Labs with access floor	Replace curling and delaminating carpet tile	3,600 S.F.	$6.6/S.F.	$23,760	$34,452
Resilient Tile	Corridor 138	Replace damaged resilient tile at access floor-ing	300 S.F.	$4.4/S.F.	$1,320	$1,914
Concrete Block	Men's Tlt., Lab 135	Patch cracks in wall	LS	$275	$275	$399
Ceiling Tile	Rooms 214 and 205	Replace stained and damaged ciling tile	$1,600	$3.3/S.F.	$5,280	$7,656

MECHANICAL

HVAC System Age: 17 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechanical system retro-commissioning to restore the building mechanical system back to the original design intent and complete an air and water system balance report to identify portential operational issues.	1 LS	$89,980	$91,980	$130,471
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	56,637 S.F.	$1.38	$78,159	$113,331

Plumbing System Age: 17 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection Age: 17 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Temperature Controls Age: 17 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	56,537 S.F.	$4.0	$226,148	$327,915

ELECTRICAL

Primary Power System Age: 17 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testing for all sub-stations, switchboards and distribution panels on a 5 year basis.				

Secondary Power System Age: 17 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testing for all substations, switchboards and distribution panels on a 5 year basis.				

Distribution System Age: 17 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Lighting System Age: 17 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lighting	Throughout	Life expectancy of fluorescent light lamps is approximatley 5 years. Group lamping needed.	56537 SF	$0.15	$8,481	$12,297

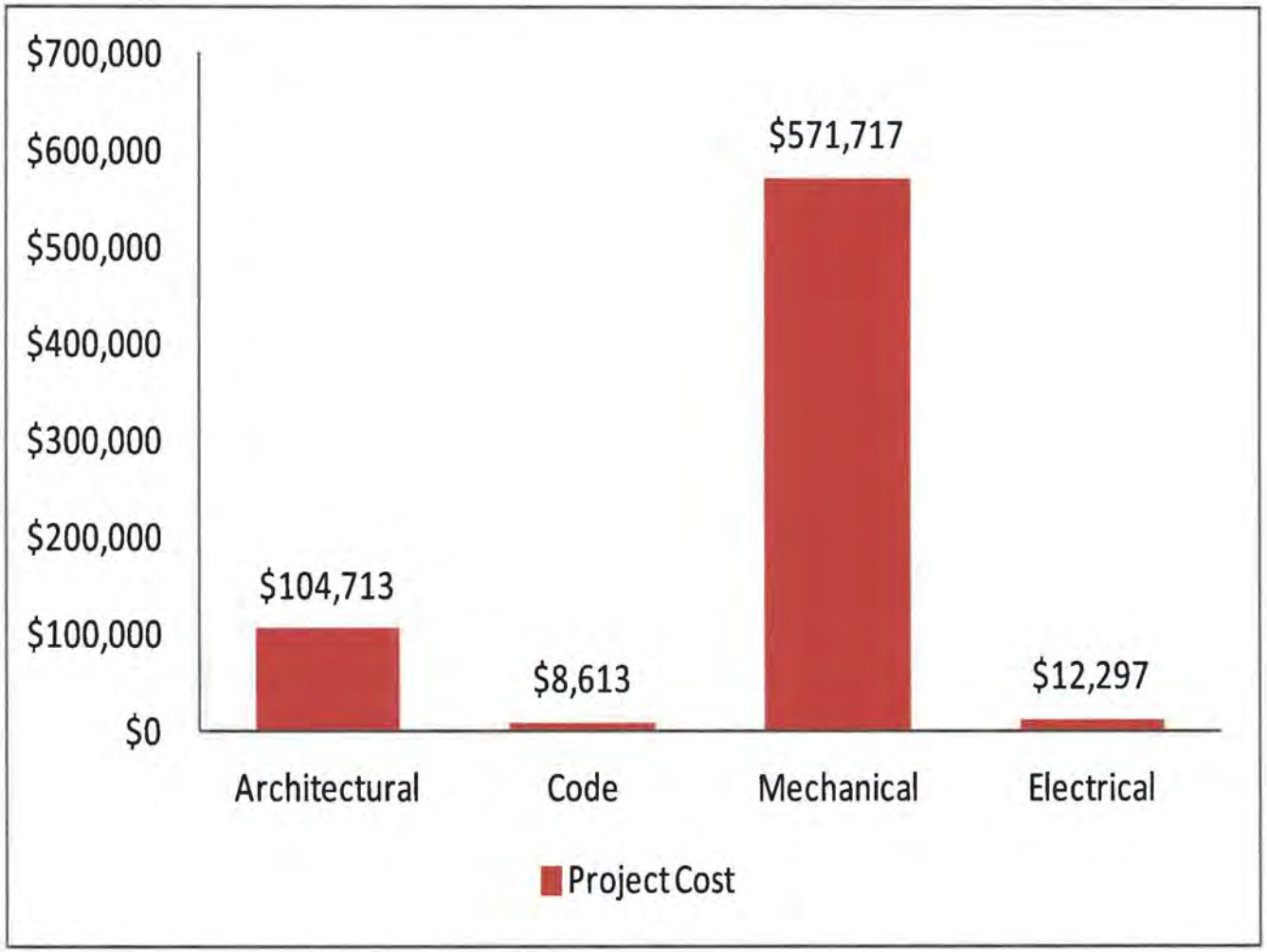
CODE AND BARRIER FREE

Code System

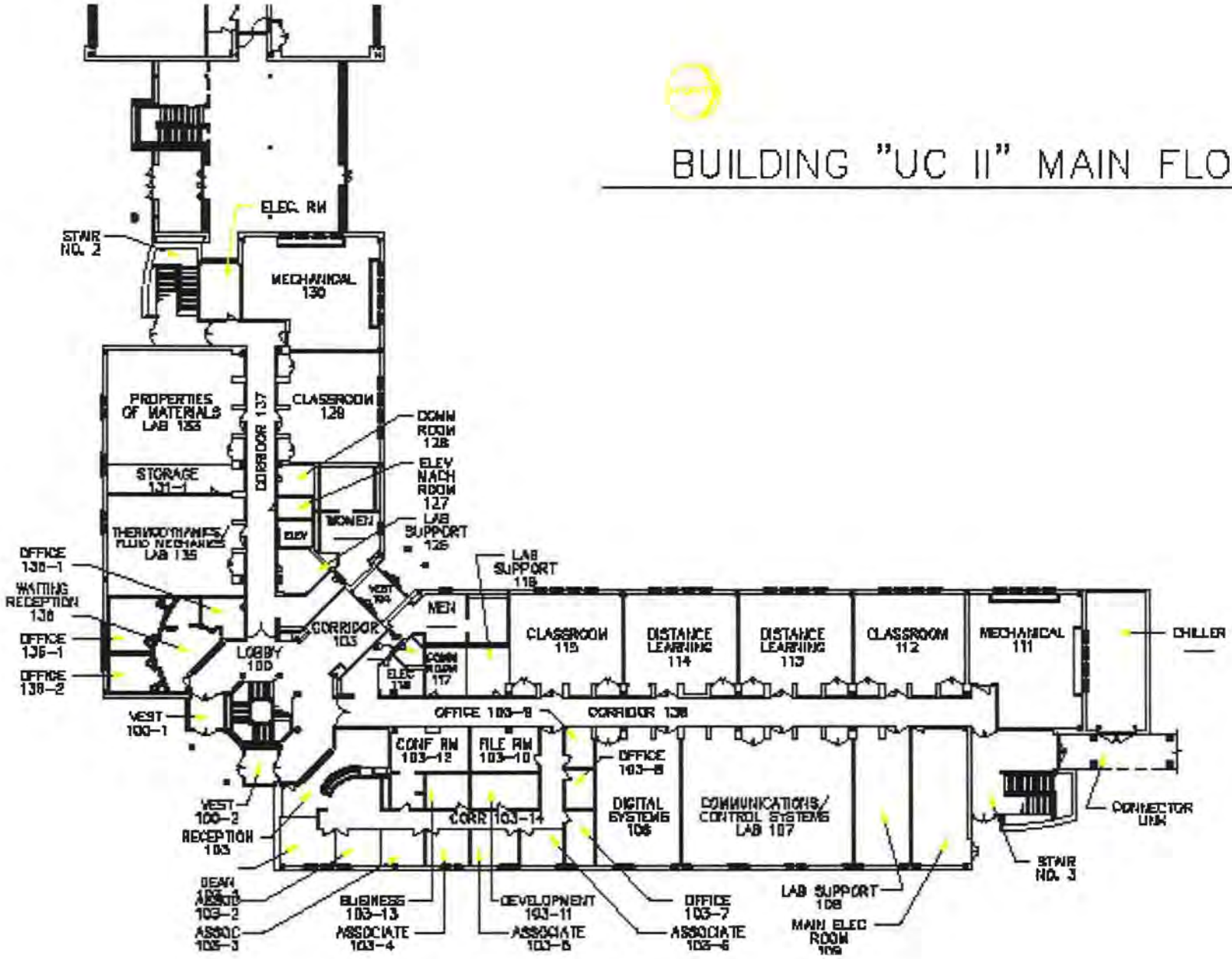
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lavatory mix-ing valve	Toilet Rooms and sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/ burn protection at accessible fixtures. Provide point fo use mixing valves.	12 ea.	$330	$3,960	$5,742

Barrier Free System

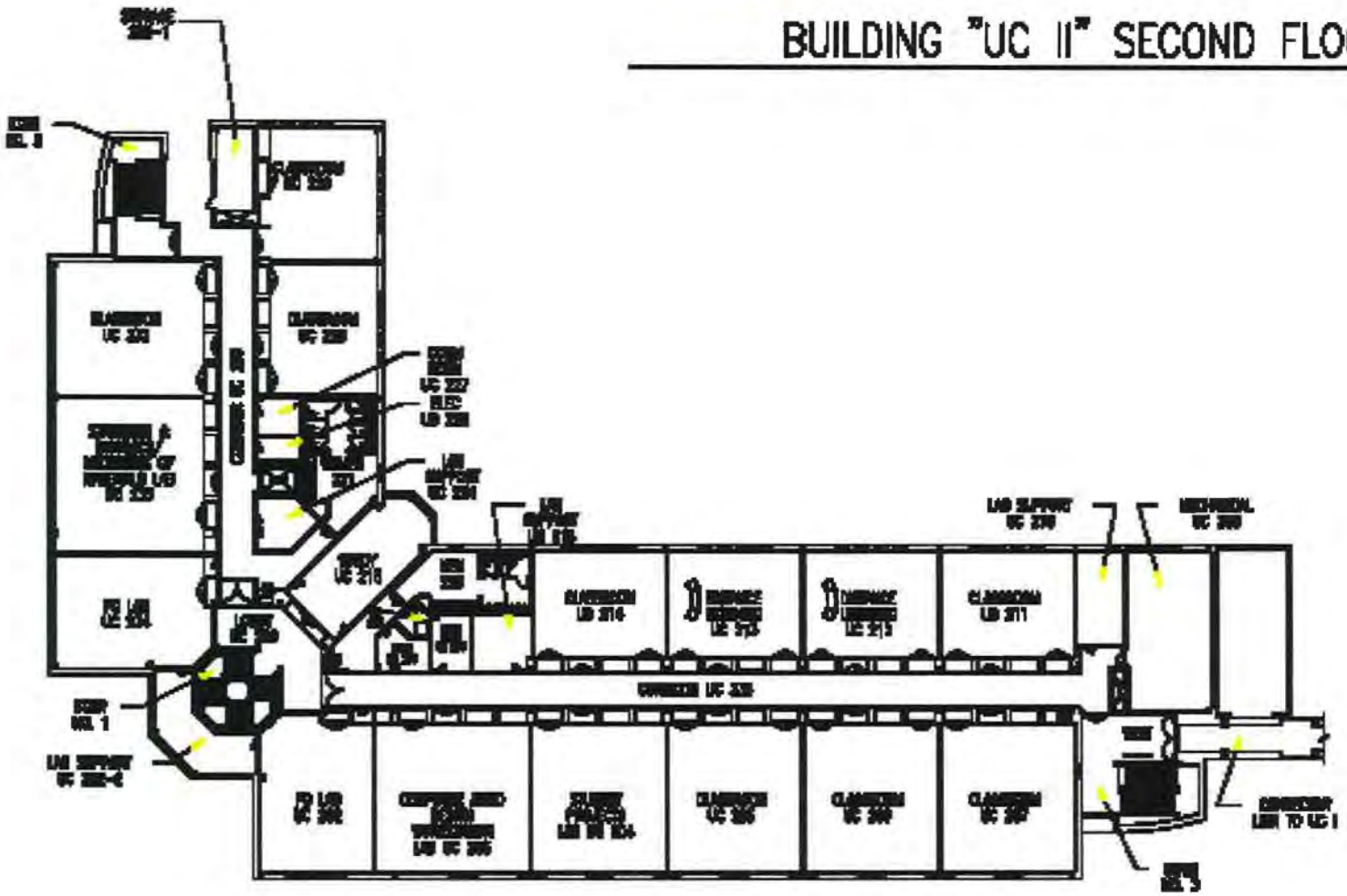
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Exposed lav/ sink piping	Toilet Rooms and sinks	Piping is exposed below lava-tories and sinks. The piping is required to be covered for ADA accessibility. Provide protective pipe covering	12 ea.	$165	$1,980	$2,871


$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
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$571,717
$12,297
Architectural
Code
Mechanical
Electrical
Project Cost

BUILDING "UC II" MAIN FLOOR

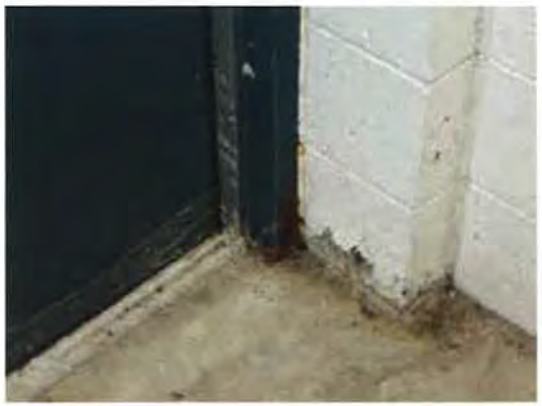


BUILDING "UC II" SECOND FLOOR



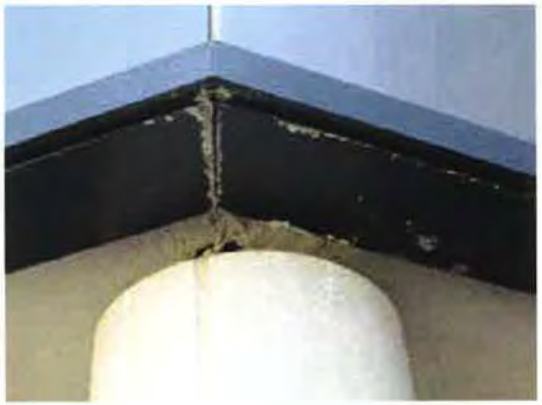












Building: UC-3
Gross Area: 40,962
Year Built: 2007
No. of Floors: Two
Evaluation Date: October 2017

Use Types:
75% Classrooms
25% Lab

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 10 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Membrane	Throughout	Membrane has excessive pillowing, does not drain properly and should be re-installed.	20,500 S.F.	$5.5	$112,750	$163,488
Drains	Throughout	Reset overflow drains so they do not collect water	8	$1,650	$13,200	$19,140
Coping	Perimeter	Re-seal joints in cast stone coping	LS	$4,950	$4,950	$7,178

Enclosure System Age: 10 yrs. Life Expectancy: Brick; 100 yrs. Alum./Glass; 20 yrs. Sealant; 10 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Storefront	Several locations	Missing or loose mullion caps	LS	$825	$825	$1,196
Granite Base	Perimeter at First Floor	Provide sealant at all joints	LS	$1,650	$1,650	$2,393
Brick	Perimeter	Reseal control joints. Replace cracked bricks at S.W. Corner	LS	$2,200	$2,200	$3,190

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
CMU	Classrooms 209, 218, 219, 122	Repair cracks and seal control joints	LS	$2,200	$2,200	$3,190
Resilient Tile	Labs 110 & 111 Corridor 204	Replace loose tile along S. wall Replace tile at expansion joint	450 S.F.	$4.4	$1,980	$2,871
Hard Tile	Stair 2	Replace loose and broken tiles at S.W. corner	LS	$1,100	$1,100	$1,595
Carpet	Classroom 107	Repair damaged carpet tile	LS	$275	$275	$399
Counter Tops	Classroom 217	Secure loose plastic laminate top	LS	$165	$165	$239
Doors	Classroom 219	Refinish rusted door frame	LS	$275	$275	$399
Toilet Partitions	Men 116	Repair broken and loose trim. Patch or replace chipped laminate.	LS	$550	$550	$798

MECHANICAL

HVAC System Age: 10 yrs. Life Expectancy: 20-30 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
HVAC System	Building	Perform mechancial system retro-commissioning to restore the building mechanical system back to the original design intent and complete an air and water system balance report to identify potential operational issues.	1 LS	$72,490	$72,490	$105,111
Boiler Room Ventilation	Boiler Room 114	The boiler room is not ventilated to remove heat generated by the boilers.	1 LS	$18,150	$18,150	$26,318
Corrosion Control	Boiler Room 114	The stacks from the high efficiency condensing boilers have stack drains. The consensate from the stacks is highly corrosive and needs to be neutralized before it can be dumped into the plumbing drainage system. Add acid neutrilization to stack drains.	1 LS	$1,500	$1,500	$2,175
Corrosion Control	Boiler Room 114	Replace the limestone chips in the boiler acid neutralization devices.	1 LS	$275	$275	$399
HVAC System	Building	Implementation of the recommendations that come out of the retro-commissioning activities.	40,962 S.F.	$1.38	$56,528	$81,966
Exposed insulation	Roof	The exposed refrigerant piping insulation on the roof is deteriorating. Replace.	1 LS	$1,100	$1,100	$1,595

Plumbing System Age: 10 yrs. Life Expectancy: 10-50 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Fire Protection Age: 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Sprinklers	Boiler Room	Sprinkler heads still have tape and paper covering heads. Remove tape and paper covering heads.	25 LS	$110	$2,750	$3,988

Temperature Controls Age: 10 yrs. Life Expectancy: 15 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Update and commission controls	Building	Update and commission controls, replace pneumatic operators with electric, calibrate devices, review sequences of operation, etc.	40,962 S.F.	$4.0	$163,848	$237,580
Back-up power supply	Central Panel	Provide battery back-up for control panel.	1 LS	Included Above		

ELECTRICAL

Primary Power System Age: 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenance and IR testing for all sub-stations, switch boards and distribution panels on a 5 year basis.				

Secondary Power System Age: 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Testing	Elec Rm	Provide maintenacne and IR testing for all substations, switch boards and distribution panels on a 5 year basis.				

Distribution System Age: 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Lighting System Age: 10 yrs.

Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Timer and Sweep Switch	Elec Rm	No lighting control allowed by code. Replace Switch	LS	$550	$550	$798
Lighting	Through-out	Life expectancy of fluorescent light lamps is approx. 5 years. Group lamping needed.	40,962	$0.15	$6,144	$8,909

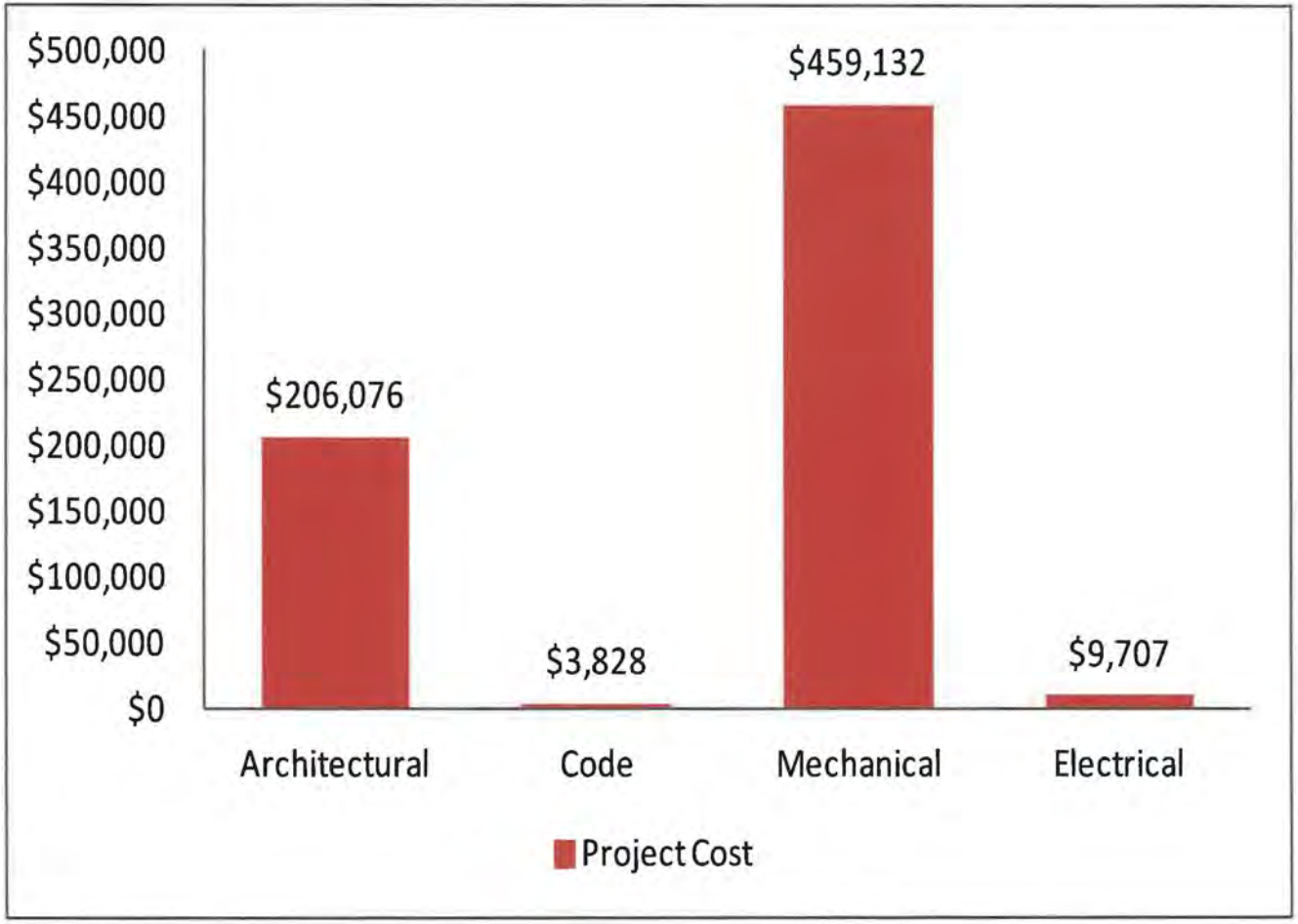
CODE AND BARRIER FREE

Code System

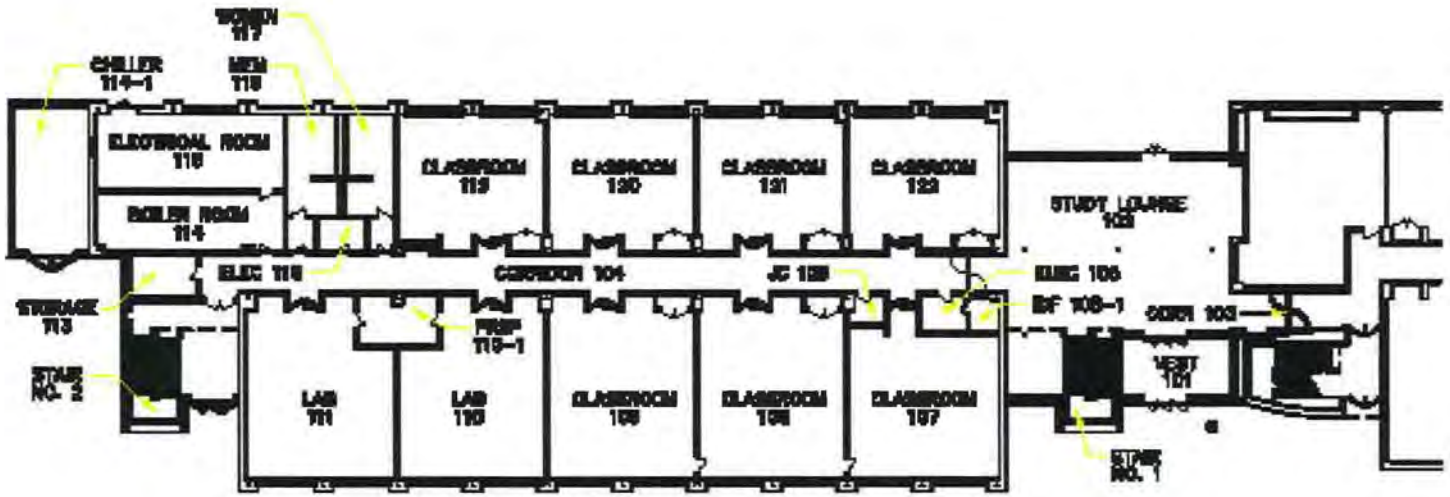
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
Lavatory mix-ing valve	Toilet Rooms and Sinks	Lavatory and sink faucets are required to have point of use mixing valves for scald/ burn protection at accessible fixtures. Provide point of use mixing valves.	8 ea.	$330	$2,640	$3,828

Barrier Free System

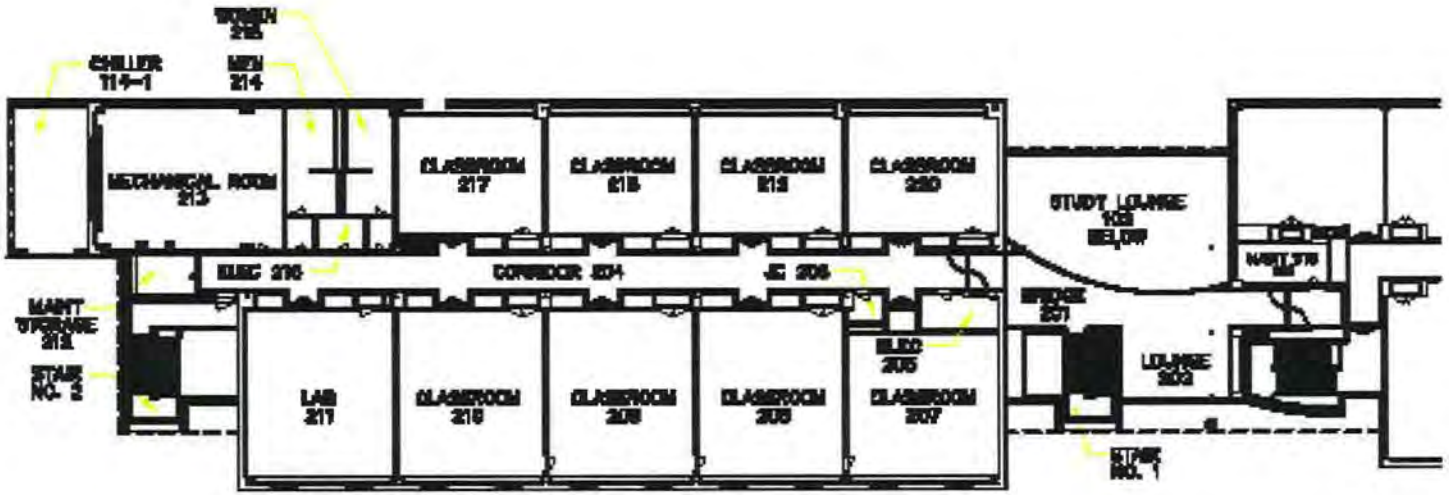
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				--


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$100,000
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$206,076
$3,828
$459,132
$9,707
Architectural
Code
Mechanical
Electrical
Project Cost

BUILDING "UC III" MAIN FLOOR



BUILDING "UC III" SECOND FLOOR



Building: UC-4
Gross Area: 25,468
Year Built: 2008
No. of Floors: 2
Evaluation Date: October 2017

Use Types:
50% Classrooms
50% Lab

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 9 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		PVC membrane life expectancy 25 yrs +				

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Carpet	Rooms/offices	Carpet is near the end of its expected life	15,000 SF	5.5/SF	$82,500	$119,625

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

MECHANICAL

HVAC System Age: 9 yrs. Life Expectancy: Single Ply 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Retro- Commissioning is recommended	1 L.S.	45,000	$45,000	$65,250

Plumbing System Age: 9 yrs

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

Temperature Controls

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

ELECTRICAL

Primary Power System Age: 9 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Provide maintenance and IR testing for all sub-stations, switch boards and distribution panels on a 5 year basis.				

Secondary Power System Age: 9 yrs

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Provide maintenance and IR testing for all sub-stations, switch boards and distribution panels on a 5 year basis.				

Distribution System Age: 9 yrs

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

Lighting System Age: 9 yrs

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Lighting	Throughout	Life expectancy of fluorescent light lamps is approx. 5 years. Group relamping needed.	25,468	$0.15	$3,820	$5,539

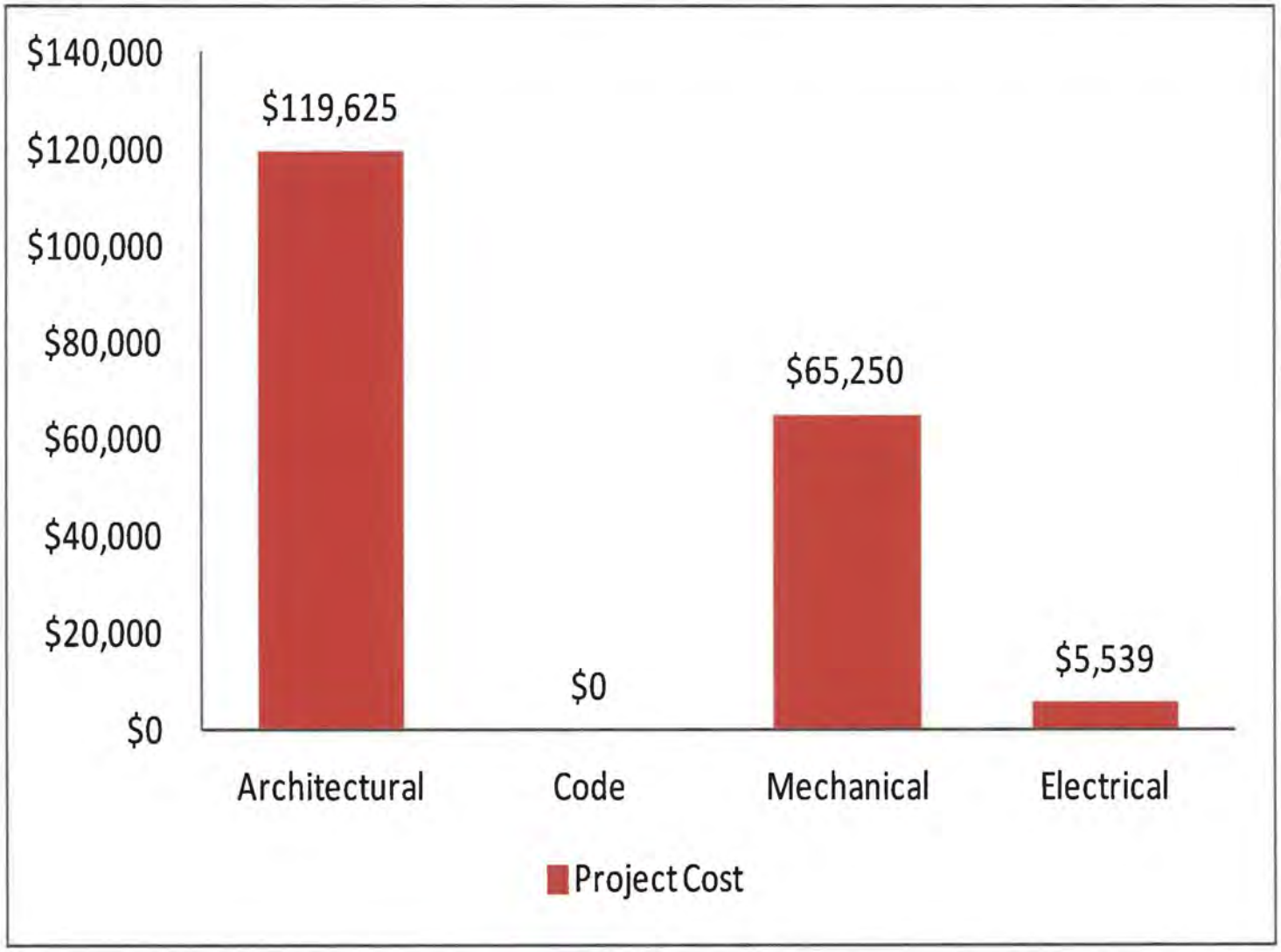
CODE AND BARRIER FREE

Code System

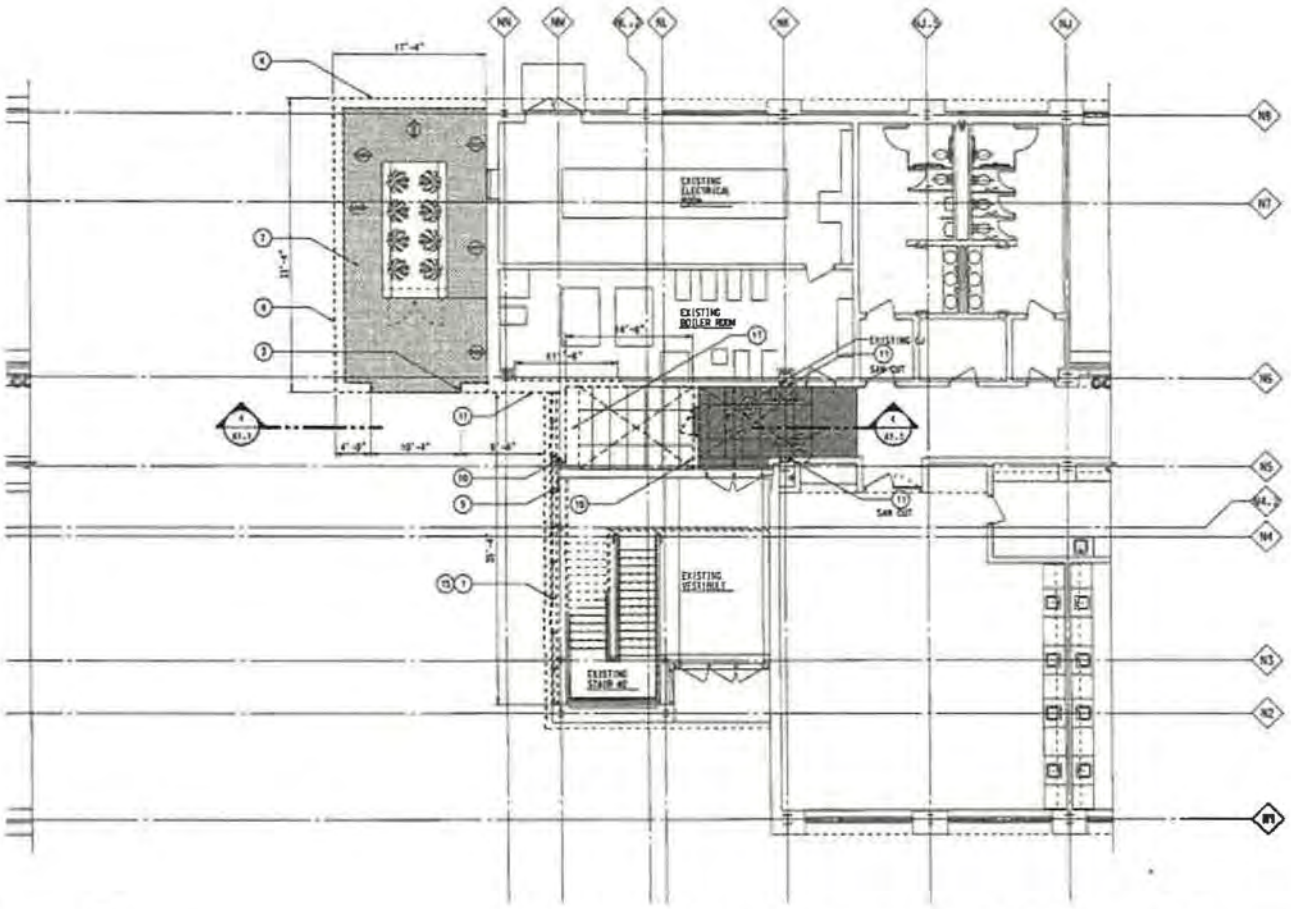
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				

Barrier Free System

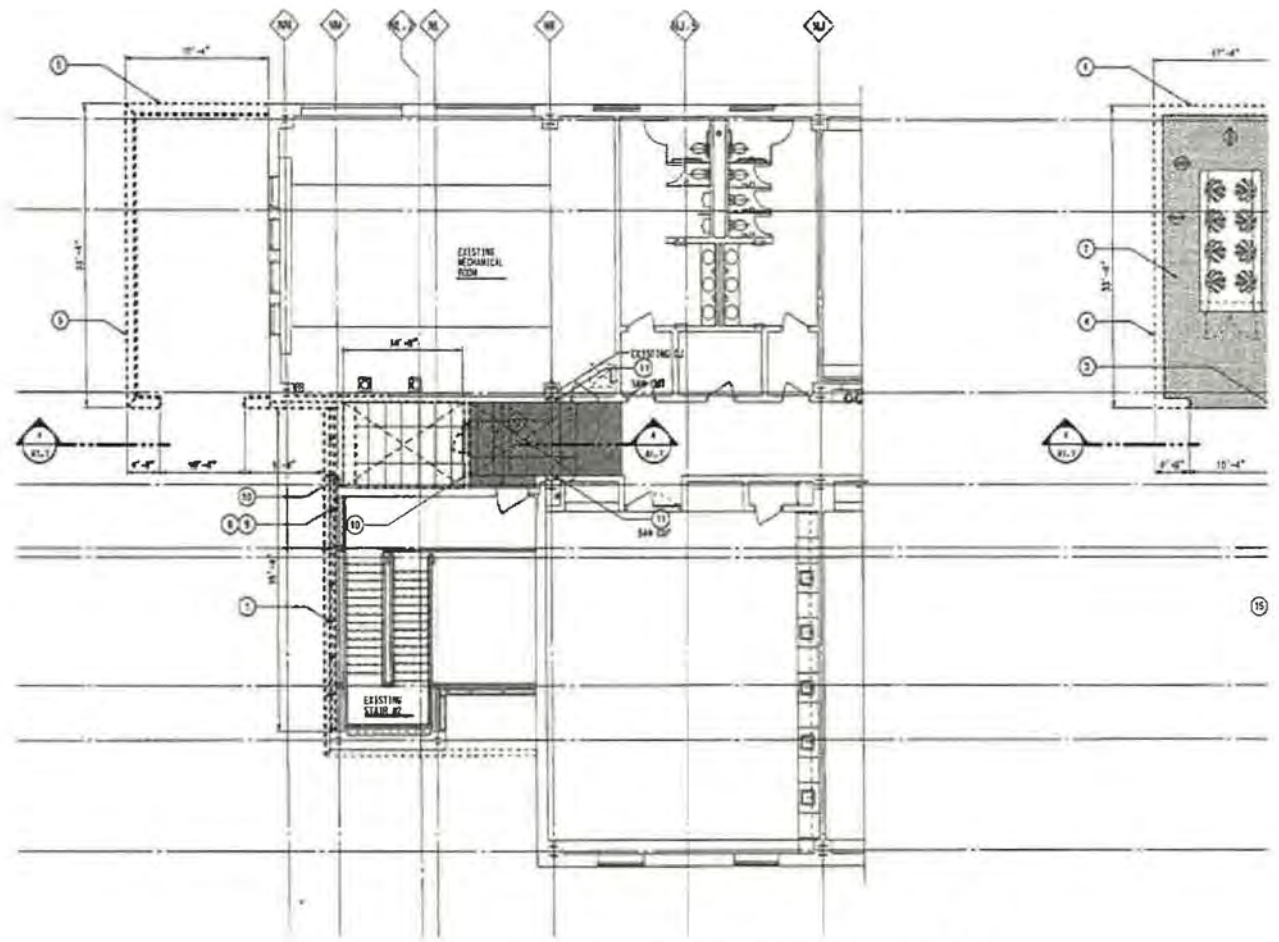
Item	Location	Comments	Quantity/ Units	Cost per Unit	Sub-total Trade Cost	Sub-total Project Cost
		No Comments				--


$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$119,625
$0
$65,250
$5,539
Architectural
Code
Mechanical
Electrical
Project Cost

N)



1 / A0.2 PARTIAL FIRST FLOOR PLAN
1/8" = 1'-0"



BUILDING UC-4
Data Sheets

Building: Salt Storage
Gross Area: 672 SF
Year Built: 2011
No. of Floors: 2
Evaluation Date: October 2017

Use Types:
Storage

Notes:
1. Project cost is 1.45 times construction cost.
2. Costs are in 2017 dollars and will need to be adjusted to market value at time of work.
3. Support Spaces are divided evenly between uses.

ARCHITECTURAL

Roof System Age: 6 yrs. Life Expectancy: Asphalt Shingles 25 yrs.

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Asphalt shingles have life expectancy 25 + yrs.				

Enclosure System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
Siding/trim	Throughout	Wood siding & Trim require paint every 8-10 yrs.	1200 SF	2.15	$2,580	$3,741

Finish System

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

Fixed Equipment

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		No comments				

MECHANICAL

HVAC System Age: Life Expectancy:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not applicable				

Plumbing System Age:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not applicable				

Fire Protection

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not applicable				

Temperature Controls

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not applicable				

ELECTRICAL

Primary Power System Age:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not Applicable				

Secondary Power System Age:

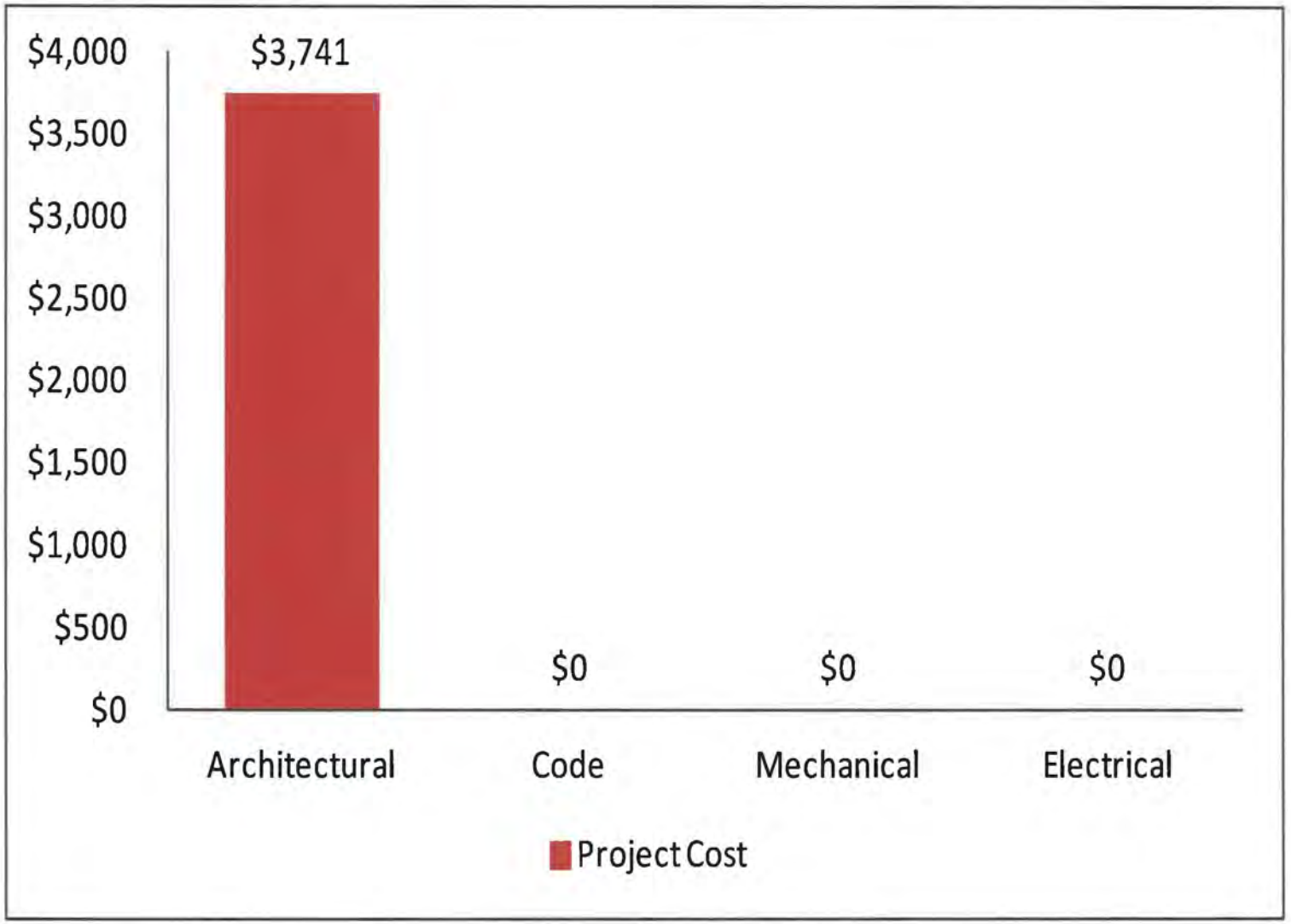
Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not Applicable				

Distribution System Age:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not Applicable				

Lighting System Age:

Item	Location	Comments	Quantity/Units	Cost per Unit	Sub-total Trade Cost	Sub-Total Project Cost
		Not Applicable				


$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$3,741
$0
$0
$0
Architectural
Code
Mechanical
Electrical
Project Cost

BUILDING Salt Storage
Data Sheets