the evergreen state college

Ten-Year Capital Plan

2027-2037

evergreen

September 14, 2026

The Honorable Bob Ferguson
State of Washington
PO Box 40002
Olympia, WA 98504-0002

Dear Governor Ferguson:

Please find attached The Evergreen State College's 2027-29 Capital Budget Request and the Ten-Year Capital Plan. Our biennial capital request seeks to 1) implement infrastructure upgrades to our utility, safety, and security systems to ensure the safety of our students and the campus community, 2) accomplish the construction of new energy systems for eighteen buildings reducing carbon emissions, and 3) continue making progress on our campus-wide preservation backlog .

Together, this biennial request and the associated ten-year plan seek to address three strategic issues: providing responsible stewardship for the state's property and aging infrastructure; upgrading the campus facilities to provide a quality educational experience with appropriately updated facilities with appropriately updated technology, ; meet state targets for decarbonization and sustainability.

This budget request is consistent with prior capital budget submissions and continues to tightly integrate operating and capital budgets. This budget request continues the last biennium's focus on campus infrastructure while working to meet/exceed new Washington State Building Codes, HB 1257 Clean Building Performance Standards and House Bill 1390 Decarbonization. The projects in our request are linked and tightly coordinated to create an integrated, multi-biennium holistic model for the College as outlined in the Office of Financial Management guidelines.

Thank you for your commitment to our higher education system and continued support for Evergreen's capital program. Please let me know if my staff or I may help as you formulate your 2027-29 capital budget policy.

Sincerely,

John Carmichael, PhD

President

Office of the President and Executive Vice President | Library 3200 | 360-867-6100 | president@evergreen.edu
The Evergreen State College | 2700 Evergreen Parkway NW | Olympia, Washington 98505 | evergreen.edu

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TAB A: Ten-Year Plan Summary Info

Introduction
The Evergreen State College Ten-Year Capital Plan Project List

The Evergreen State College has prepared its Ten-Year Capital Plan in accordance with RCW 70.235.070 and RCW 43.88D.010 and the criteria provided by the Office of Financial Management (OFM).

The College used its approved Climate Action Plan, 2020-2023 Strategic Plan, and 2014 Campus Master Plan Update as the foundations for the development of the Ten-Year Capital Plan for 2027-37. This plan considers the need to continue to renovate the College's fifty-year old buildings and infrastructure, while ensuring that the deferred maintenance is being reduced to preserve assets in a cost-efficient manner. This is a challenging time for capital investment in higher education; consequently, our Ten-Year Capital Plan focuses on our critical preservation needs, both of infrastructure and facilities.

The College's mission, strategic plan, climate action plan, and ten-year capital plan provide the basis for the individual projects. In developing this plan, the College has respected the fiduciary responsibilities vested in its Board, and therefore, the list represents a request for funding from state general obligation bonds.

The Ten-Year Capital Plan represents the funding level necessary to maintain, preserve, renovate, renew, and maximize the quality of existing capacity at the College to meet the higher education needs of Washington's citizens.

OFM

376 - The Evergreen State College
Ten Year Capital Plan by Project Class

2027-29 Biennium

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Version: P1 27-29 Agency Request

Report Number: CBS001
Date Run: 9/22/2026 10:20AM

Project Class: Preservation (State-Owned)

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2027-29	New Approp 2027-29	Estimated 2029-31	Estimated 2031-33	Estimated 2033-35	Estimated 2035-37
0	**91000042 2025-27 Minor Works Preservation and Program**									
	057-1 State Bldg Constr-State	11,675,000		6,175,000	5,500,000					
	066-1 TESC Capital Project-State									
	Project Total:	**11,675,000**		**6,175,000**	**5,500,000**					
1	**40000149 Minor Works Preservation**									
	057-1 State Bldg Constr-State	82,809,000				10,109,000	17,350,000	18,350,000	18,500,000	18,500,000
	066-1 TESC Capital Project-State	35,821,000				6,391,000	7,551,000	8,157,000	7,722,000	6,000,000
	Project Total:	**118,630,000**				**16,500,000**	**24,901,000**	**26,507,000**	**26,222,000**	**24,500,000**
3	**40000150 Seminar II Phase 1 Renovation**									
	057-1 State Bldg Constr-State	2,300,000				2,300,000				
4	**40000151 Heating Utility Distribution Upgrades**									
	057-1 State Bldg Constr-State	22,700,000				22,700,000				
6	**40000153 IT Infrastructure Upgrades**									
	057-1 State Bldg Constr-State	1,000,000				1,000,000				
7	**40000140 Preventive Facility Maintenance and Building System Repairs**									
	066-1 TESC Capital Project-State	7,860,000		880,000		880,000	1,200,000	1,500,000	1,700,000	1,700,000
Total:	**Preservation (State-Owne**	**164,165,000**		**7,055,000**	**5,500,000**	**43,380,000**	**26,101,000**	**28,007,000**	**27,922,000**	**26,200,000**

Project Class: Program Improvement (State-Owned)

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2027-29	New Approp 2027-29	Estimated 2029-31	Estimated 2031-33	Estimated 2033-35	Estimated 2035-37

OFM

376 - The Evergreen State College
Ten Year Capital Plan by Project Class

2027-29 Biennium

*

Version: P1 27-29 Agency Request

Report Number: CBS001
Date Run: 9/22/2026 10:20AM

Project Class: Program Improvement (State-Owned)

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2027-29	New Approp 2027-29	Estimated 2029-31	Estimated 2031-33	Estimated 2033-35	Estimated 2035-37
2	**40000145 Labs 1 & 2 Third Floor Renovation**									
	057-1 State Bldg Constr-State	19,533,000		298,000		2,600,000	16,635,000			
5	**40000152 Minor Works Program**									
	066-1 TESC Capital Project-State	6,500,000				500,000	1,500,000	1,500,000	1,500,000	1,500,000
Total:	**Program Improvement (St**	**26,033,000**		**298,000**		**3,100,000**	**18,135,000**	**1,500,000**	**1,500,000**	**1,500,000**

Project Class: Other

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2027-29	New Approp 2027-29	Estimated 2029-31	Estimated 2031-33	Estimated 2033-35	Estimated 2035-37
8	**40000154 Lord Mansion**									
	066-1 TESC Capital Project-State	5,000				1,000	1,000	1,000	1,000	1,000

Total Account Summary

Account-Expenditure Authority Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2027-29	New Approp 2027-29	Estimated 2029-31	Estimated 2031-33	Estimated 2033-35	Estimated 2035-37
057-1 State Bldg Constr-State	140,017,000		6,473,000	5,500,000	38,709,000	33,985,000	18,350,000	18,500,000	18,500,000
066-1 TESC Capital Project-State	50,186,000		880,000		7,772,000	10,252,000	11,158,000	10,923,000	9,201,000
Total	**190,203,000**		**7,353,000**	**5,500,000**	**46,481,000**	**44,237,000**	**29,508,000**	**29,423,000**	**27,701,000**

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376 - The Evergreen State College
Ten Year Capital Plan by Project Class

2027-29 Biennium

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Version: P1 27-29 Agency Request

Report Number: CBS001
Date Run: 9/22/2026 10:20AM

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Functional Area	*	All Functional Areas
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Include Enacted	No	No
Sort Order	Project Class	Project Class
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

OFM

376 - The Evergreen State College
Capital FTE Summary

2027-29 Biennium

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Version: P1 27-29 Agency Request

Report Number: CBS004
Date Run: 9/10/2026 10:05AM

FTEs by Job Classification

Job Class	Authorized Budget 2025-27 Biennium FY 2026	FY 2027	2027-29 Biennium FY 2028	FY 2029
AVP Facilities			0.7	0.7
Budget Analyst			0.2	0.2
Computer Maintenance Management Analyst			1.0	1.0
Construction Project Coordinator 3			2.0	2.0
Drafting Tech 1			1.0	1.0
Project Assistant			1.8	1.8
Total FTEs			**6.7**	**6.7**

Account

Account - Expenditure Authority Type	Authorized Budget 2025-27 Biennium FY 2026	FY 2027	2027-29 Biennium FY 2028	FY 2029
057-1 State Bldg Constr-State			519,000	518,000
066-1 TESC Capital Project-State			126,000	126,000
Total Funding			**645,000**	**644,000**

Narrative

The FTE costs are associated with planning, permitting, soliciting A/E services, bidding, and complying with public works procurement procedures. Staff management, support, accounting, consultant selection, contract negotiation and general management of capital construction contracts are included in the FTE costs. All FTE costs included in the capital budget request are dedicated to the construction and renovation of capital assets.

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget

Deferred Maintenance Backlog Reduction Plan

Our capital request presents a continued proactive approach to facility and infrastructure maintenance and preservation of 1.7 million square feet, and 1000 acres supported by a rapidly aging 1970's utility distribution system. We continue a shift from reactive maintenance to a preventive maintenance program by investing in developing in-house employee skills and updated technology systems to support this approach. Even with these program developments there is an essential need for increased facilities preservation funding to help us get closer to this goal, which supports our commitment to providing a physical environment conducive to academic excellence and environmental sustainability.

During the 2025-27 biennium the college addressed numerous repairs and upgrades to address various life safety and essential operational system deficiencies however there is still a significant need to continue focusing on these critical systems to ensure buildings and infrastructure operate in a safe manner and efficient manner. The minor works program request includes upgrades to; emergency generators and associated equipment, fire pumps, fire protection water supply systems, underground fuel storage and detection systems, fire notification systems, public broadcast emergency communication systems, exterior lighting systems, emergency panic button systems, building façade, ground surfaces, and utility systems.

There are still serious challenges addressing our aging infrastructure, particularly since most of the campus was built in the early 1970s. Some of these systems; the heating, ventilation and air conditioning systems and support systems, are impacting the college's operational budget more significantly because these equipment systems are much less efficient than newer systems of the same type. The reliability of the campus power system has improved with the installation of a new medium voltage switchgear during the 2019-21 biennium however other associated electrical system components in each building are still fragile such as electrical cabling, building switchgear circuit breakers, control centers, and transformers. Often parts for these system components are difficult to find since much of the equipment has become obsolete.

Each biennium we implement energy efficiency projects, both because it is in line with Evergreen's sustainability philosophy and Climate Action plan, and to reduce operating costs to keep tuition affordable for our students. We plan to continue this important work by re-commissioning our existing facilities; HVAC systems (1000 variable-airboxes, numerous building automatic controls and variable frequency drives) to minimize energy usage based on the current program. Another long- term goal toward that end is to implement the college's Decarbonization Plan developed with approved State funding in 2020 to report energy utilization by building to meet/exceed Washington State Clean Building Codes, Senate Bill 5722. The college experienced an estimated $600,000 in reduced utility expenses by deploying better maintenance planning during the last two biennium's and is striving to achieve a STAR's Platinum status soon to advance its sustainability status.

Evergreen has been performing with consultants, Facility Condition Assessments since 2003. The most recent assessment performed by an outside firm was completed in 2019 when the college engaged a third-party vendor during a three-year period as part of a greater statewide higher education project to understand the magnitude of deferred maintenance on campus. The outcome of this engagement indicated the college's deferred maintenance backlog was estimated at ***$120,000,000***. This information is being used to guide the college with determining how to prioritize minor work requests. In a separate assessment in 2016 by Meng Analysis as part of the 2016 Comparable Framework Study, administered

by OFM. Evergreen staff has been trained in the assessment method outlined by Meng Analysis and continue to perform these assessments on an annual basis.

Additionally, the college has independently surveyed all major building systems (roofing, mechanical, electrical, HVAC, elevators, etc.) and has developed a 10-year matrix detailing estimated system life, recommended major repair and/or replacement priorities, and estimated costs. Also surveyed are major campus infrastructure elements (i.e., central utility plant, electrical distribution system, campus exterior lighting, roads, walks, sewers, utility tunnels, potable water distribution, fire hydrant system, trails, athletic fields, etc.). These efforts form the core for this biennium's preservation backlog plan.

Other elements considered in the college's building assessment model are:

- Review of work order trends by building and system type to note emerging patterns of excessive failure/repair rates.
- Review of safety issues, inspection data and reports to identify trends or patterns that may indicate issues.
- Feedback from building users on perceived condition of buildings and ability to meet program needs.
- Ten-Year Capital Plan to sequence major repairs with major renovations if possible.

Criteria used to set priorities are as follows:

- life safety
- causing damage to asset
- causing loss or impaired use of asset
- causing increased cost of operating facility
- preservation of asset
- modification of existing asset to meet existing program
- modification of asset to meet new program; and
- new construction

For the 2027-29 biennium Evergreen is requesting $16.5 million to continue essential infrastructure preservation.

If the recommended Ten-Year Capital Plan is followed these renovations and the preservation programs will allow the college to reduce its deferred maintenance backlog to a point where the maintenance operating funds will be able to accomplish predictive maintenance, as well as preventative maintenance.

Funding requests for the Ten-Year Capital Plan are determined from all the information listed above and throughout this document. Estimates are based on historical data, feedback from staff, contractors, consultants, prior work experience of facilities staff, and projected system life expectancies. Evergreen's process for establishing and monitoring preservation will be continually reviewed for ways to improve.

2027-29 Minor Works Preservation Project List

Fund 066	Minor Works Preservation #40000149	
1	Pump House Emergency Systems Upgrades (CBPS) Phase 2	$900,000
2	SEM II Structural Safety Repairs	$750,000
3	Emergency Generators Upgrades	$906,000
4	Campus-wide Building Exterior Envelope Safety Repairs	$367,000
5	Campus-wide Exterior Communication system Upgrades	$400,000
6	Door Security and Access Safety Upgrades	$382,000
7	Exterior Lighting System Upgrades	$421,000
8	Utility Tunnel Safety Repairs	$400,000
9	Campus-wide Switchgear Electrical Breaker Testing	$300,000
10	Campus Utility Meter Upgrades	$440,000
11	IT Infrastructure Repairs and Upgrades	$1,125,000
		$6,391,000

Fund 057	Minor Works Preservation #40000149	
12	Campus-wide Roofing and Safety Upgrades	$590,000
13	Campus-wide Door & Lock System Repairs	$264,000
14	Steam and Condensate System Repairs	$549,000
15	Classroom Learning Enhancement Upgrades	$400,000
16	Campus-wide ADA Upgrades	$630,000
17	Campus-wide plumbing upgrades	$527,000
18	Building Elevator Upgrades	$1,300,000
19	Central Plant Boiler Equipment Upgrades (CBPS)	$450,000
20	Campus-wide Drainage & Irrigation Repairs	$276,000
21	Medium Voltage Electrical Systems Upgrades	$510,000
22	Campus-wide HVAC Systems Upgrades (CBPS)	$400,000
23	Water Mitigation Phase II	$450,000
24	Brick Paver Replacement	$250,000
25	Campus-wide Signage	$270,000
26	Pedestrian Sidewalk Repairs	$375,000
27	Campus Trail Restoration	$250,000
28	Floor Covering Replacements	$400,000
29	Campus Infrastructure Master Planning	$150,000
30	Building Equipment Control Upgrades Phase III	$700,000
31	Relocate Library Chiller	$378,000
32	Evans Hall Wooden Hand Railing Safety Upgrades	$340,000
33	Fire System Upgrades	$150,000
34	Portable Roof Safety System	$500,000
		$10,109,000

	Total Minor Works Preservation 27-29	$16,500,000

The Evergreen State College

2700 Evergreen Parkway NW

Olympia WA 98505

Reg.: dahp

The Evergreen State College doesn't have any qualifying projects this biennium.

George Phinn

Interim AVP for Facilities

TAB B: Preservation

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:21AM

Project Number: 40000149
Project Title: Minor Works Preservation

Description

Starting Fiscal Year: 2028
Project Class: Preservation (State-Owned)
Agency Priority: 1

Project Summary

This category includes work necessary to extend the useful life of college facilities and includes such projects as campus roof renovation, energy efficiency upgrades, infrastructure upgrades, steam and condensate system renovations, and upgrades to the campus telephone system and underground storage tanks.

Project Description

The request will fund a building envelope renewal project across aging campus facilities.

·**Production/Construction:** It will deliver high-performance roof replacements, structural sealants, exterior masonry repairs, and window retrofits.

·Who/What is Impacted: The core physical assets and campus infrastructure of the college are directly impacted.

·**Nature of the Impact:** These structural assets will be protected from water infiltration and severe weather decay. Additionally, campus operations will experience **lower costs,** and infrastructure will align with modern safety and environmental standards.

·**The Problem:** The college faces an aging infrastructure with water infiltration, severe weather decay, and a compounding backlog of **deferred maintenance**.

·**Why It Is a Priority:** This project is a priority to **stabilize core facilities**, protect public assets, and curb escalating operational costs.

·**Result of Not Acting:** Failing to act will lead to accelerated structural decay, higher utility and maintenance costs, unsafe environments, and an even larger, more expensive maintenance backlog.

These projects are required to protect state assets, to reduce the deferred maintenance backlog and to prevent further damage to property and extend the life of the facilities.

Most of Evergreen's buildings are nearly 50 years old. The original campus was well conceived and executed but is demonstrating the stress of aging building systems, recent changes in technology, extended hours of building use to meet student needs, changes in the modes of delivery of academic programs, and more sophisticated user demands. The design requirements of a student population 50 years ago are no longer compatible with the needs and expectations of incoming students.

Projects were identified and prioritized by the Facilities Maintenance Department. The College has ranked the condition of all building roofs and is attempting to replace one major roof per biennium, starting with the worst roof first. Beginning with the 15-17 biennium, the College has returned to cleaning and resealing it's building exteriors once every 5 years, per industry standards and recommendations. By cleaning and resealing one building each biennium, we hope to maintain this schedule.

Given the aging infrastructure, improvements are continually needed to extend the life of our electrical, fire alarm and fire sprinkler, plumbing, and HVAC systems. These are also being addressed systematically.

The proposal serves as a **strategic blueprint** for the institution. It directly supports performance by modernizing campus.

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376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
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Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:21AM

Project Number: 40000149
Project Title: Minor Works Preservation

Description

infrastructure to meet modern safety and environmental standards. By prioritizing the stabilization of core facilities, it allows the college to minimize operational inefficiencies and focus resources back onto its primary educational mission.

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Minor Works Preservation List

Growth Management impacts
none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	82,809,000				10,109,000
066-1	TESC Capital Project-State	35,821,000				6,391,000
	Total	**118,630,000**	**0**	**0**	**0**	**16,500,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State	17,350,000	18,350,000	18,500,000	18,500,000
066-1	TESC Capital Project-State	7,551,000	8,157,000	7,722,000	6,000,000
	Total	**24,901,000**	**26,507,000**	**26,222,000**	**24,500,000**

Operating Impacts

No Operating Impact

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000149	40000149
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y

User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

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376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/8/2026 9:46AM

Project Number: 40000145
Project Title: Labs 1 & 2 Third Floor Renovation

Description

Starting Fiscal Year: 2026
Project Class: Program Improvement (State-Owned)
Agency Priority: 3

Project Summary

The Labs 1&2 Third Floor Pre-Design will conclude the phased renovations that have taken place in the Labs. The third-floor office area is the final area to receive an improvement from the original construction in 1976. The Laboratory wing renovation will be evaluated with an intent to provide modular class and research facilities that suit the college's academic needs.

Project Description

1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.
The Evergreen State College has engaged in a phased approach to the lab building renovations, addressing a sign floor in one project. The office wings of the Lab building have not received a renovation and have original finishes from the 1976 construction. The pre-design will investigate and provide direction for research vs academic spaces needs and provide a path to direct the design phase documents.
2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.
The project will start in July of 2025, and will follow the OFM Predesign checklist and outline including but not limited to; identifying alternatives, conducting a detail analysis of the preferred alternatives, Cost estimates, LCCA, and consulting with DAHP. Predesign will be completed in the 25-27 biennium.
3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?
If the project is not funded the third floor would continue to be under-utilized due to the physical layout and aged facility. This project will contribute directly to a reduction in the deferred maintenance backlog through significant renovation, and rehabilitation of an existing facility.[JPR1]
4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.
a. The pre-design process will explore alternatives and provide evidence to allow the college to determine the scope and extent of the renovation. The OFM pre-design checklist will be followed and completed in the 25-27 biennium.
5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.
The Evergreen College Science staff, facility and students would be impacted by the Pre-design reports findings. The project will address approximately 24 offices, 11 academic teaching spaces, 9 research labs and the public spaces.
6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.
N/A
7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.
This proposed project is in alignment with and supports TESC's continued commitment to reinvestment in existing facilities and infrastructure while also advancing programmatic priorities. The college has taken a phased approach to the Lab renovations and the third floor is the final phase yet to be addressed.
8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services), contracts or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements)
This request does not include any Information Technology related costs.
9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 14 (Puget Sound Recovery and Governor's Salmon Strategy) in the 2025-27 Operating Budget Instructions.

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376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/8/2026 9:46AM

Project Number: 40000145
Project Title: Labs 1 & 2 Third Floor Renovation

Description

Not Applicable. This proposed project is not linked to the Puget Sound Action Agenda.
10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, clean buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate. For buildings subject to the clean building performance standards, describe your compliance pathway for the building, and include information about energy audits, metering, and energy benchmarking.
This proposed project is included in the College's Facility Maintenance Plan which incorporates the college's priorities of energy efficiency improvement, carbon reduction and water savings. This project will contribute directly to a reduction in the deferred maintenance backlog through significant renovation of the existing facilities.[JPR2] This upgrade also supports the Clean Buildings performance standards in RCW 19.27A.210 by improving the energy efficiency of the College's facilities. The project is a key component of the College's strategy to reduce carbon pollution and meet statewide decarbonization goals.
11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?
The Evergreen State College's Olympia campus serves low-income and marginalized communities in the area. The project promotes equity modernizing the third floor space for students, faculty, and staff. By upgrading the research and academic spaces the College is also addressing disparities in quality of service.
12. Is this project eligible for Direct Pay? If the answer is yes, you must include this project to the list of direct pay projects and information for submittal (see Chapter 1.7 of the capital budget instructions for additional instructions).
Not Applicable. This proposed project is not eligible for Direct Pay.
13. Is there additional information you would like decision makers to know when evaluating this request?
TESC, like many universities throughout the country, has a significant deferred maintenance backlog and is striving to improve student enrollment and retention, faculty recruitment and retention, and research growth through programmatic improvements. The capital needs of the college are significant. However, TESC recognizes the limit to funds available in any given biennium and works diligently to prioritize needs and respectfully make reasonable requests for funding.[JPR4]

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Major Projects-Remodel/Renovation

Growth Management impacts
none

New Facility: No

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Current Biennium	2027-29 Fiscal Period Reapprops	New Approps
057-1	State Bldg Constr-State	19,533,000		298,000		2,600,000
	Total	**19,533,000**	**0**	**298,000**	**0**	**2,600,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State	16,635,000			

Total	**16,635,000**	**0**	**0**	**0**

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
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Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/8/2026 9:46AM

Project Number: 40000145
Project Title: Labs 1 & 2 Third Floor Renovation

Operating Impacts

No Operating Impact

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000145	40000145
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2025

Agency	The Evergreen State College
Project Name	Lab I Third Floor Renovation
OFM Project Number	

Contact Information	
Name	George Phinn
Phone Number	360.867.6586
Email	George.Phinn@evergreen.edu

Statistics			
Gross Square Feet	13,248	MACC per Gross Square Foot	$915
Usable Square Feet	8,384	Escalated MACC per Gross Square Foot	$1,016
Alt Gross Unit of Measure			
Space Efficiency	63.3%	A/E Fee Class	B
Construction Type	Science labs (teaching)	A/E Fee Percentage	11.21%
Remodel	Yes	Projected Life of Asset (Years)	30-50 years
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	Yes
Inflation Rate	3.16%	Higher Ed Institution	Yes
Sales Tax Rate %	10.00%	Location Used for Tax Rate	Olympia
Contingency Rate	10%		
Base Month (Estimate Date)	September-26	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule			
Predesign Start	July-26	Predesign End	September-26
Design Start	July-27	Design End	June-28
Construction Start	July-29	Construction End	August-30
Construction Duration	13 Months		

Green cells must be filled in by user

Project Cost Summary

Total Project	$21,934,029	Total Project Escalated	$24,216,400
		Rounded Escalated Total	$24,216,000

Amount funded in Prior Biennia	$0
Amount in current Biennium	**$0**
Next Biennium	$3,180,000
Out Years	$21,037,000

Acquisition			
Acquisition Subtotal	**$0**	**Acquisition Subtotal Escalated**	**$0**

Consultant Services			
Predesign Services	$90,000		
Design Phase Services	$1,030,972		
Extra Services	$695,000		
Other Services	$773,190		
Design Services Contingency	$258,916		
Consultant Services Subtotal	**$2,848,078**	**Consultant Services Subtotal Escalated**	**$3,037,235**

Construction			
Maximum Allowable Construction Cost (MACC)	$12,117,119	Maximum Allowable Construction Cost (MACC) Escalated	$13,457,273
DBB Risk Contingencies	$0		
DBB Management	$0		
Owner Construction Contingency	$1,211,712		$1,345,728
Non-Taxable Items	$0		$0
Sales Tax	$1,332,883	Sales Tax Escalated	$1,480,300
Construction Subtotal	**$14,661,714**	**Construction Subtotal Escalated**	**$16,283,301**

Equipment			
Equipment	$2,921,543		
Sales Tax	$292,154		
Non-Taxable Items	$0		
Equipment Subtotal	**$3,213,697**	**Equipment Subtotal Escalated**	**$3,569,133**

Artwork			
Artwork Subtotal	**$120,480**	**Artwork Subtotal Escalated**	**$120,480**

Agency Project Administration			
Agency Project Administration Subtotal	$855,060		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$855,060**	**Project Administration Subtotal Escalated**	**$949,631**

Other Costs			
Other Costs Subtotal	**$235,000**	**Other Costs Subtotal Escalated**	**$256,620**

Project Cost Estimate			
Total Project	**$21,934,029**	Total Project Escalated	**$24,216,400**
		Rounded Escalated Total	**$24,216,000**

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:22AM

Project Number: 40000150
Project Title: Seminar II Phase 1 Renovation

Description

Starting Fiscal Year: 2028
Project Class: Preservation (State-Owned)
Agency Priority: 3

Project Summary

SEM II, a 25-year-old building, is slated for phased renovations across its five-building cluster. The upgrades will encompass both interior and exterior surfaces, integrating cutting-edge instructional technology and removal of the existing steam and cooling systems from the campus's distributed utility network, which will contribute to improved energy efficiency and a modernized infrastructure supporting the college sustainability program.

Project Description

1. **What will the request produce or construct? Who or what will be impacted by the budget request and how will they be impacted?**

This request will create A construction bid package for the capital renewal and modernization of a 22+ year-old building cluster.
· **Specific Upgrades:** Digital building automation systems (BAS), heat pump conversions, envelope moisture barriers, and Universal Design/ADA integrations.
· **Impacted Parties:** Students, faculty, and staff utilizing the hybrid and interdisciplinary learning spaces.
· **Nature of Impact:** Improved physical accessibility through ADA upgrades, modernized learning environments, and optimized indoor climate controls.

2. **Identify the problem or opportunity addressed by this request. Why is the request a priority? What would be the result of not acting?**

The facility has lacked major capital renewal since opening in 2004, resulting in deferred maintenance, envelope wear, and outdated mechanical systems.
· **Project Priority:** Urgent alignment is required with institutional asset protection goals and compliance metrics for the Washington State Clean Buildings Performance Standard (CBPS).
· **Risk of Inaction:** Accelerated structural deterioration from envelope wear, operational inefficiencies, and financial penalties for failing to meet state CBPS compliance metrics.

3.For new funding requests for programs or projects that have received previous appropriations (either a phase of construction or previous grant rounds), how much has been spent or put under contract?

No previous Appropriations were received for this project.

4.Does this project or program leverage non-state funding? If yes, how much by source?

Since this is a request for renovation and design This project will not leverage any non-state funding.

5. **Provide context on how this request fits into the agency's work. Describe how this project supports the agency's strategic plan or would improve agency performance.**

The request protects existing institutional assets and modernizes infrastructure to support evolving hybrid and interdisciplinary learning formats.
· **Performance Improvements:** Upgrading to digital building automation systems (BAS) and mechanical heat pumps directly drives operational efficiency and satisfies state energy mandates.

6. **How is your proposal impacting equity in the state? Which communities are impacted by this proposal? What are the measurable outcomes that would result from the project?**

The Impacted Communities are Campus users with mobility and accessibility needs, alongside students and educators utilizing interdisciplinary spaces.
· **Equity Initiatives:** Explicit inclusion of Universal Design and ADA integrations into the physical infrastructure.
· **Measurable Outcomes:** Attainment of compliance targets under the Washington State Clean Buildings Performance Standard and the completion of design milestones by September 2028.

7.Is there additional information you would like decision makers to know when evaluating this request?

This project will Focuses on modernizing learning spaces, resolving building envelope wear, and upgrading building electrical and mechanical systems.

8.For major construction projects, describe the viable alternative solutions you considered. Why was this alternative chosen?

This is a design request.

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:22AM

Project Number: 40000150
Project Title: Seminar II Phase 1 Renovation

Description

9.For major construction projects, what project delivery method has been or will be selected and why?
This is a design request.

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Major Projects-Rehab/Restoration.

Growth Management impacts
none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	2,300,000				2,300,000
	Total	**2,300,000**	**0**	**0**	**0**	**2,300,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State				
	Total	**0**	**0**	**0**	**0**

Operating Impacts

Total one time start up and ongoing operating costs

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000150	40000150
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated September 2026

Agency	Evergreen State College
Project Name	Seminar 2 Phase 1 Renovation
OFM Project Number	40000150

Contact Information	
Name	Amy Hall
Phone Number	(360)819-6314
Email	Amy.Hall@evergreen.edu

Statistics			
Gross Square Feet	233,190 SF	MACC per Gross Square Foot	$0
Usable Square Feet	168,085 SF	Escalated MACC per Gross Square Foot	$0
Total Site Area (SF)			
Alt Gross Unit of Measure	N/A		
Space Efficiency	72.1%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	17.08%
Remodel	Yes	Projected Life of Asset (Years)	50
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	Yes
Sales Tax Rate %	9.75%	Location Used for Tax Rate	Olympia
Contingency Rate	10%	OFM UFI# (from FPMT, if available)	
Base Month (Estimate Date)	July-27	Note: If base month is missing, form will default to 7/1/2027	
Project Administered By	Agency		

Schedule			
Predesign Start	N/A	Predesign End	
Design Start	August-27	Design End	January-28
Construction Start	March-28	Construction End	May-29
Construction Duration	14 Months		

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Project Cost Summary

Total Project	$2,824,716	Total Project Escalated	$2,892,773
		Rounded Escalated Total	$2,893,000

Amount funded in Prior Biennia	$0
Amount in current Biennium	**$0**
Next Biennium	$0
Out Years	$2,893,000

Procurement Approach Premium (escalated)			
Selected Procurement	DBB		
	Design Fee	$0	
	Construction	$0	
	Art	$0	
	Agency PM	$0	
	Total	$0	0.0%

Acquisition			
Acquisition Subtotal	**$0**	**Acquisition Subtotal Escalated**	**$0**

Consultant Services			
Predesign Services	$0		
Design Phase Services	$0		
Extra Services	$2,300,000		
Other Services	$0		
Design Services Contingency	$230,000		
Consultant Services Subtotal	**$2,530,000**	**Consultant Services Subtotal Escalated**	**$2,580,761**

Construction			
Maximum Allowable Construction Cost (MACC)	$0	Maximum Allowable Construction Cost (MACC) Escalated	$0
DBB Risk Contingencies	$0		
DBB Management	$0		
Owner Construction Contingency	$0		$0
Non-Taxable Items	$0		$0
Sales Tax	$0	Sales Tax Escalated	$0
Construction Subtotal	**$0**	**Construction Subtotal Escalated**	**$0**

Equipment			
Equipment	$0		
Sales Tax	$0		
Non-Taxable Items	$0		
Equipment Subtotal	**$0**	**Equipment Subtotal Escalated**	**$0**

Artwork			
Artwork Subtotal	**$14,392**	**Artwork Subtotal Escalated**	**$14,392**

Agency Project Administration			
Agency Project Administration Subtotal	$280,324		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$280,324**	**Project Administration Subtotal Escalated**	**$297,620**

Other Costs

Cost Estimate Details

Equipment				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
1) Equipment				
E10 - Equipment	$1,919,300			
E20 - Furnishings	$125,750			
F10 - Special Construction	$0			
Security Systems	$0			in construction contract
Signage & Environmental Graphics	$100,000			
Contingency-15%	$326,258			
Install & Delivery- 18%	$450,235			
Sub TOTAL	**$2,921,543**	**1.1106**	**$3,244,666**	
2) Non Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1106**	**$0**	
3) Sales Tax				
Sub TOTAL	**$292,154**		**$324,467**	
EQUIPMENT TOTAL	**$3,213,697**		**$3,569,133**	

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Other Costs Subtotal	$0	Other Costs Subtotal Escalated	$0

Project Cost Estimate			
Total Project	$2,824,716	Total Project Escalated	$2,892,773
		Rounded Escalated Total	$2,893,000

Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
ACQUISITION TOTAL	$0		NA	$0	

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Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
ACQUISITION TOTAL	$0		NA	$0	

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Cost Estimate Details

Consultant Services				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Pre-Schematic Design Services				
Programming/Site Analysis				
Environmental Analysis	$60,000			
Predesign Study	$0			
As-Built/Existing Systems Investigation & Documentation	$30,000			Lab I building not documented
Insert Row Here				
Sub TOTAL	**$90,000**	**1.0260**	**$92,340**	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	$1,030,972			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	**$1,030,972**	**1.0421**	**$1,074,376**	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)	$0			no site work
Geotechnical Investigation	$0			no site work
Commissioning	$60,000			New TAB, confirm exist CFM 4 vert. exhaust risers
Site Survey	$0			no site work
Testing	$25,000			owner's consultant
LEED Services	$50,000			
Voice/Data Consultant	$30,000			
Value Engineering	$30,000			owner's consultant
Constructability Review	$30,000			owner's consultant
Environmental Mitigation (EIS)	$0			
Landscape Consultant	$0			no site work
A/V Consultant	$45,000			
Acoustic Consultant	$20,000			
Laboratory Consultant	$220,000			
A/E VE & Contructability Review Participation	$30,000			
Cost Estimating Consultant	$75,000			
Interior Design	$50,000			Env. graphics, signage, furniture
Lighting Designer (public spaces)	$15,000			
Models/renderings	$15,000			
Sub TOTAL	**$695,000**	**1.0421**	**$724,260**	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	$463,190			31% of A/E Basic Services
HVAC Balancing	$30,000			
Staffing	$65,000			owner's constr coordinator

A/E Add'l Construction Administration	$175,000			contingency for owner's changes, latent conditions, schedule overruns etc.
Testing & Inspection	$20,000			owner's consultant
A/E Record Documents	$20,000			Owner deliverable
Sub TOTAL	**$773,190**	**1.1106**	**$858,706**	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	$258,916			
Other				
Insert Row Here				
Sub TOTAL	**$258,916**	**1.1106**	**$287,553**	Escalated to Mid-Const.
CONSULTANT SERVICES TOTAL	**$2,848,078**		**$3,037,235**	

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Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
1) Site Work				
G10 - Site Preparation	$0			
G20 - Site Improvements	$0			
G30 - Site Mechanical Utilities	$0			
G40 - Site Electrical Utilities	$0			
G60 - Other Site Construction	$0			
Other				
Insert Row Here				
Sub TOTAL	$0	1.0920	$0	
2) Related Project Costs				
Offsite Improvements	$0			
City Utilities Relocation	$0			
Parking Mitigation	$0			
Stormwater Retention/Detention	$0			
Other				
Insert Row Here				
Sub TOTAL	$0	1.0920	$0	
3) Facility Construction				
A10 - Foundations	$0			
A20 - Basement Construction	$0			
B10 - Superstructure	$101,139			
B20 - Exterior Closure	$128,789			
B30 - Roofing	$11,700			
C10 - Interior Construction	$941,982			
C20 - Stairs	$0			
C30 - Interior Finishes	$478,442			
D10 - Conveying	$0			
D20 - Plumbing Systems	$1,704,242			
D30 - HVAC Systems	$1,304,262			
D40 - Fire Protection Systems	$172,207			
D50 - Electrical Systems	$885,543			
F10 - Special Construction	$0			
F20 - Selective Demolition	$0			
General Conditions	$0			
D60 - Communications	$335,699			
D70 - Security	$218,142			Access control & cameras
D80 - Integrated Automation	$194,480			
E10 - Equipment	$175,800			Built-in lab equipment
E20 - Furnishings	$1,120,679			Lab casework and the like
F20 - Facility Remediation	$186,435			Haz Mat Abatement
F30 - Demolition	$348,048			
Project Requirements- 7%	$581,531			

Working Constraints- 7.5%	$623,069			Occupied bldg, third floor
General Conditions- 8%	$664,607			
GL Insurance- 2.5%	$272,177			
Design Contingency- 15%	$1,333,368			Typical at Predesign level
Contractor Fee 3%	$334,778			
Insert Row Here				
Sub TOTAL	**$12,117,119**	**1.1106**	**$13,457,273**	

4) Maximum Allowable Construction Cost			
MACC Sub TOTAL	**$12,117,119**	**$13,457,273**	
	$915	*$1,016 per GSF*	

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7) Owner Construction Contingency				
Allowance for Change Orders	$1,211,712			
Other				
Insert Row Here				
Sub TOTAL	**$1,211,712**	**1.1106**	**$1,345,728**	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1106**	**$0**	
9) Sales Tax				
Sub TOTAL	**$1,332,883**		**$1,480,300**	
CONSTRUCTION CONTRACTS TOTAL	**$14,661,714**		**$16,283,301**	

Green cells must be filled in by user

Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
1) Artwork					
Project Artwork	$0				0.5% of total project cost for new construction
Higher Ed Artwork	$120,480				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	**$120,480**		**NA**	**$120,480**	

Green cells must be filled in by user

Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
1) Agency Project Management					
Agency Project Management	$855,060				
Additional Services					
Other					
Insert Row Here					
Subtotal of Other	*$0*				
PROJECT MANAGEMENT TOTAL	**$855,060**		**1.1106**	**$949,631**	

Green cells must be filled in by user

Cost Estimate Details

Other Costs				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
Mitigation Costs	$0			
Hazardous Material Remediation/Removal	$0			
Historic and Archeological Mitigation	$30,000			
Permitting fees	$90,000			
Move out/in costs	$100,000			
Utility charges	$15,000			
OTHER COSTS TOTAL	**$235,000**	**1.0920**	**$256,620**	

Green cells must be filled in by user

C-100 (2026)
Additional Notes

Tab A. Acquisition
Insert Row Here

Tab B. Consultant Services
Insert Row Here

Tab C. Construction Contracts
Insert Row Here

Tab D. Equipment
Insert Row Here

Tab E. Artwork
Insert Row Here

Tab F. Project Management
Insert Row Here

Tab G. Other Costs
Insert Row Here

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:22AM

Project Number: 40000150
Project Title: Seminar II Phase 1 Renovation

Description

Starting Fiscal Year: 2028
Project Class: Preservation (State-Owned)
Agency Priority: 3

Project Summary

SEM II, a 25-year-old building, is slated for phased renovations across its five-building cluster. The upgrades will encompass both interior and exterior surfaces, integrating cutting-edge instructional technology and removal of the existing steam and cooling systems from the campus's distributed utility network, which will contribute to improved energy efficiency and a modernized infrastructure supporting the college sustainability program.

Project Description

1. **What will the request produce or construct? Who or what will be impacted by the budget request and how will they be impacted?**

This request will create A construction bid package for the capital renewal and modernization of a 22+ year-old building cluster.
· **Specific Upgrades:** Digital building automation systems (BAS), heat pump conversions, envelope moisture barriers, and Universal Design/ADA integrations.
· **Impacted Parties:** Students, faculty, and staff utilizing the hybrid and interdisciplinary learning spaces.
· **Nature of Impact:** Improved physical accessibility through ADA upgrades, modernized learning environments, and optimized indoor climate controls.

2. **Identify the problem or opportunity addressed by this request. Why is the request a priority? What would be the result of not acting?**

The facility has lacked major capital renewal since opening in 2004, resulting in deferred maintenance, envelope wear, and outdated mechanical systems.
· **Project Priority:** Urgent alignment is required with institutional asset protection goals and compliance metrics for the Washington State Clean Buildings Performance Standard (CBPS).
· **Risk of Inaction:** Accelerated structural deterioration from envelope wear, operational inefficiencies, and financial penalties for failing to meet state CBPS compliance metrics.

3.For new funding requests for programs or projects that have received previous appropriations (either a phase of construction or previous grant rounds), how much has been spent or put under contract?

No previous Appropriations were received for this project.

4.Does this project or program leverage non-state funding? If yes, how much by source?

Since this is a request for renovation and design This project will not leverage any non-state funding.

5. **Provide context on how this request fits into the agency's work. Describe how this project supports the agency's strategic plan or would improve agency performance.**

The request protects existing institutional assets and modernizes infrastructure to support evolving hybrid and interdisciplinary learning formats.
· **Performance Improvements:** Upgrading to digital building automation systems (BAS) and mechanical heat pumps directly drives operational efficiency and satisfies state energy mandates.

6. **How is your proposal impacting equity in the state? Which communities are impacted by this proposal? What are the measurable outcomes that would result from the project?**

The Impacted Communities are Campus users with mobility and accessibility needs, alongside students and educators utilizing interdisciplinary spaces.
· **Equity Initiatives:** Explicit inclusion of Universal Design and ADA integrations into the physical infrastructure.
· **Measurable Outcomes:** Attainment of compliance targets under the Washington State Clean Buildings Performance Standard and the completion of design milestones by September 2028.

7.Is there additional information you would like decision makers to know when evaluating this request?

This project will Focuses on modernizing learning spaces, resolving building envelope wear, and upgrading building electrical and mechanical systems.

8.For major construction projects, describe the viable alternative solutions you considered. Why was this alternative chosen?

This is a design request.

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:22AM

Project Number: 40000150
Project Title: Seminar II Phase 1 Renovation

Description

9.For major construction projects, what project delivery method has been or will be selected and why?
This is a design request.

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Major Projects-Rehab/Restoration.

Growth Management impacts
none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	2,300,000				2,300,000
	Total	**2,300,000**	**0**	**0**	**0**	**2,300,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State				
	Total	**0**	**0**	**0**	**0**

Operating Impacts

Total one time start up and ongoing operating costs

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000150	40000150
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated September 2026

Agency	Evergreen State College
Project Name	Seminar 2 Phase 1 Renovation
OFM Project Number	40000150

Contact Information	
Name	Amy Hall
Phone Number	(360)819-6314
Email	Amy.Hall@evergreen.edu

Statistics			
Gross Square Feet	233,190 SF	MACC per Gross Square Foot	$0
Usable Square Feet	168,085 SF	Escalated MACC per Gross Square Foot	$0
Total Site Area (SF)			
Alt Gross Unit of Measure	N/A		
Space Efficiency	72.1%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	17.08%
Remodel	Yes	Projected Life of Asset (Years)	50
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	Yes
Sales Tax Rate %	9.75%	Location Used for Tax Rate	Olympia
Contingency Rate	10%	OFM UFI# (from FPMT, if available)	
Base Month (Estimate Date)	July-27	Note: If base month is missing, form will default to 7/1/2027	
Project Administered By	Agency		

Schedule			
Predesign Start	N/A	Predesign End	
Design Start	August-27	Design End	January-28
Construction Start	March-28	Construction End	May-29
Construction Duration	14 Months		

Green cells must be filled in by user

Project Cost Summary

Total Project	$2,824,716	Total Project Escalated	$2,892,773
		Rounded Escalated Total	$2,893,000

Amount funded in Prior Biennia	$0
Amount in current Biennium	**$0**
Next Biennium	$0
Out Years	$2,893,000

Procurement Approach Premium (escalated)			
Selected Procurement	DBB		
	Design Fee	$0	
	Construction	$0	
	Art	$0	
	Agency PM	$0	
	Total	$0	0.0%

Acquisition			
Acquisition Subtotal	**$0**	**Acquisition Subtotal Escalated**	**$0**

Consultant Services			
Predesign Services	$0		
Design Phase Services	$0		
Extra Services	$2,300,000		
Other Services	$0		
Design Services Contingency	$230,000		
Consultant Services Subtotal	**$2,530,000**	**Consultant Services Subtotal Escalated**	**$2,580,761**

Construction			
Maximum Allowable Construction Cost (MACC)	$0	Maximum Allowable Construction Cost (MACC) Escalated	$0
DBB Risk Contingencies	$0		
DBB Management	$0		
Owner Construction Contingency	$0		$0
Non-Taxable Items	$0		$0
Sales Tax	$0	Sales Tax Escalated	$0
Construction Subtotal	**$0**	**Construction Subtotal Escalated**	**$0**

Equipment			
Equipment	$0		
Sales Tax	$0		
Non-Taxable Items	$0		
Equipment Subtotal	**$0**	**Equipment Subtotal Escalated**	**$0**

Artwork			
Artwork Subtotal	**$14,392**	**Artwork Subtotal Escalated**	**$14,392**

Agency Project Administration			
Agency Project Administration Subtotal	$280,324		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$280,324**	**Project Administration Subtotal Escalated**	**$297,620**

Other Costs

Other Costs Subtotal	$0	Other Costs Subtotal Escalated	$0

Project Cost Estimate			
Total Project	$2,824,716	Total Project Escalated	$2,892,773
		Rounded Escalated Total	$2,893,000

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:24AM

Project Number: 40000151
Project Title: Heating Utility Distribution Upgrades

Description

Starting Fiscal Year: 2028
Project Class: Preservation (State-Owned)
Agency Priority: 4

Project Summary

This project involves the next phase of decarbonization upgrades needed to the campus utility distribution system including heating and electrical systems. We received funding during the 2025-2027 biennium for the Seminar I Renovation construction which will disconnect the heating and domestic hot water systems from the distributed steam system further reducing dependency on natural gas. The only section of buried steam pipe is falling and instead of repairing the defective piping the college plans to install thermal heat pump systems to the buildings supported by this section of the distributed steam system further reducing dependency of natural gas. These projects will address aging utility infrastructure while advancing the college's sustainability program and ability to meet the Clean Building Performance Standard and House Bill 1390 Decarbonization Plan while realizing operational savings and reduce our climate impact.

Project Description

1.What will the request produce or construct? Who or what will be impacted by the budget request and how will they be impacted?

Complete structural replacement of failing underground high-temperature distribution piping with modern, vacuum-insulated piping networks. Installation of variable-flow distribution pumps and automated building-level energy management controls. Students, faculty, and staff will receive dependable, uninterrupted climate control, eliminating emergency building closures caused by utility line failures. Maintenance crews will avoid high-risk emergency repairs on volatile, high-pressure subterranean steam loops. State taxpayers benefit from immediate reductions in compounding resource waste and ongoing utility costs.

2.Identify the problem or opportunity addressed by this request. Why is the request a priority? What would be the result of not acting?

The over 50-Year-old heating water and steam distribution system has exceeded its operational lifespan. The distribution system has doubled its 25-year structural design life. Total insulation failure causes massive thermal energy to bleed directly into surrounding soil.

This project is a critical compliance path for RCW 19.27A.210. It drops the institutional Energy Use Intensity (EUI) beneath mandatory state caps. The decaying infrastructure drives the college's operational EUI up, leading to a non-compliance. Non-compliance will subject the college to heavy state financial penalties.

Postponing repairs risks total systemic winter failure, which would force emergency campus shutdowns and inflated emergency repair costs. Inaction allows thousands of millions of BTUs to continue venting into underground soil instead of heating campus classrooms.

3.For new funding requests for programs or projects that have received previous appropriations (either a phase of construction or previous grant rounds), how much has been spent or put under contract?

There were no previous apparitions for this funding.

4.Does this project or program leverage non-state funding? If yes, how much by source?

This project does not leverage non-state funding.

5.Provide context on how this request fits into the agency's work. Describe how this project supports the agency's strategic plan or would improve agency performance.

This directly supports Evergreen's institutional strategic pillar of carbon neutrality and comprehensive environmental stewardship. Drastically lowers institutional Energy Use Intensity metrics to achieve long-term compliance.

Shrinking utility and ongoing emergency maintenance expenses allows the college to reallocate critical operational dollars back toward academic support services. Prevents infrastructure-related schedule disruptions, preserving the continuity of academic instruction.

6.How is your proposal impacting equity in the state? Which communities are impacted by this proposal? What are the measurable outcomes that would result from the project?

Protects a highly diverse student population, including large numbers of low-income, first-generation, and historically underrepresented students who live on campus. Mitigating operational utility deficits helps the institution curb sudden student fee increases and inflation-driven housing adjustments.

Reduces greenhouse gas emissions, reduces campus thermal energy consumption. Generates over **$320,000 in annual savings** by eliminating make-up water, treatment of chemical waste, and thermal loss.

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:24AM

Project Number: 40000151
Project Title: Heating Utility Distribution Upgrades

Description

7.Is there additional information you would like decision makers to know when evaluating this request?
This project is the only viable path to bring the campus beneath the state-enforced EUI cap before statutory penalties take effect. Failure to comply results in state financial penalties of $5,000 per day plus $1.00 per square foot annually. Postponing this upgrade invites catastrophic steam line blowouts, which would force emergency campus evacuations and spike emergency repair costs by up to 400%.

8.For major construction projects, describe the viable alternative solutions you considered. Why was this alternative chosen?
Alternative A (Decentralized Boilers): Installing individual boiler systems in every building was rejected due to high lifecycle replacement overhead and prohibitive electrical grid upgrade costs.
Alternative B (Status Quo/Reactive Patching): Continuing patch repairs was rejected because it fails to satisfy RCW 19.27A.210 metrics and incurs higher lifetime costs than an organized replacement.
Chosen Alternative: Modernizing the centralized distribution lines preserves central operational efficiency while curing thermal loss and water leakage.

9.For major construction projects, what project delivery method has been or will be selected and why?
Selected Method: Progressive Design-Build (PDB) delivery.
Risk Reduction: PDB minimizes the unique risks of deep underground civil work on an active campus by integrating contractors early.
Procurement Speed: Allows long-lead mechanical parts, like pre-insulated piping, to be purchased early while final site clearances are secured.
Cost Stability: Facilitates an early Guaranteed Maximum Price (GMP) through close coordination between design engineers, builders, and college staff.

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Major Projects-Infrastr Replacemnt

Growth Management impacts
none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	22,700,000				22,700,000
	Total	**22,700,000**	**0**	**0**	**0**	**22,700,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State				
	Total	**0**	**0**	**0**	**0**

Operating Impacts

Total one time start up and ongoing operating costs

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:24AM

Project Number: 40000151
Project Title: Heating Utility Distribution Upgrades

Operating Impacts

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000151	40000151
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:26AM

Project Number: 40000153
Project Title: IT Infrastructure Upgrades

Description

Starting Fiscal Year: 2028
Project Class: Preservation (State-Owned)
Agency Priority: 6

Project Summary

This project request is to fund upgrades to outdated core switches to multi-gigabit throughput and installs dense Wi-Fi across academic and residential zones.

Project Description

1. **What will the request produce or construct? Who or what will be impacted by the budget request and how will they be impacted?**

Upgrades older core switches to multi-gigabit throughput and installs dense Wi-Fi 6E across academic and residential zones. Deploys a high-capacity hybrid storage matrix backed by active cloud disaster recovery systems. Implement network firewalls alongside active threat detection systems to shield critical database partitions. Upfits major lecture spaces with synchronized video streaming captures and modern beamforming micro-arrays.

- **Who/what is impacted:** Students, faculty, and the campus community at The Evergreen State College.
- **How they are impacted:** Students gain modernized hybrid learning capabilities; the wider campus community benefits from the prevention of network downtime and stronger defenses against cybersecurity threats.

2.Identify the problem or opportunity addressed by this request. Why is the request a priority? What would be the result of not acting?

The college is currently relying on critical end-of-life systems that leave the campus vulnerable to network downtime and cybersecurity threats.

3.For new funding requests for programs or projects that have received previous appropriations (either a phase of construction or previous grant rounds), how much has been spent or put under contract?

There were no previous appropriations.

4.Does this project or program leverage non-state funding? If yes, how much by source?

This does not leverage non-state funding.

5.Provide context on how this request fits into the agency's work. Describe how this project supports the agency's strategic plan or would improve agency performance.

The project directly achieves the college's strategic objectives of executing a High-Speed Network Overhaul, establishing Resilient Data Environments and building a Zero-Trust Security Fortification. It improves performance by modernizing hybrid learning infrastructure and ensuring business continuity via cloud disaster recovery.

6. **How is your proposal impacting equity in the state? Which communities are impacted by this proposal? What are the measurable outcomes that would result from the project?**

- **Community impacted:** Students Faculty and Staff, including those relying on on-campus hybrid learning tools.
- **Measurable outcomes:** Broad deployment of dense Wi-Fi 6E across all residential/academic zones, multi-gigabit throughput speeds, and zero-trust network firewall implementation.

7.Is there additional information you would like decision makers to know when evaluating this request?

This request will improve the technology infrastructure, upgrade consisting of multi-gigabit core switches, dense Wi-Fi 6E networks across academic zones, a high-capacity hybrid storage matrix, and active cloud disaster recovery systems.

8.For major construction projects, describe the viable alternative solutions you considered. Why was this alternative chosen?

This is an IT upgrade

9.For major construction projects, what project delivery method has been or will be selected and why?

This is an IT upgrade

Location

City: Olympia **County:** Thurston **Legislative District:** 022

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/9/2026 9:26AM

Project Number: 40000153
Project Title: IT Infrastructure Upgrades

Description

Project Type
Preservation - Unidentified

Growth Management impacts
none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	1,000,000				1,000,000
	Total	**1,000,000**	**0**	**0**	**0**	**1,000,000**

Acct Code	Account Title	Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State				
	Total	**0**	**0**	**0**	**0**

Operating Impacts

Total one time start up and ongoing operating costs

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000153	40000153
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/8/2026 9:33AM

Project Number: 40000140
Project Title: Preventive Facility Maintenance and Building System Repairs

Description

Starting Fiscal Year: 2026
Project Class: Preservation (State-Owned)
Agency Priority: 7

Project Summary

This project is designed to assist the college in its preventive maintenance efforts to ensure the longevity of existing facilities and building systems in the newly renovated and constructed spaces.

Project Description

A majority of the college's facilities are nearly 50 years old. While several buildings have had major renovations, a majority of the campus facilities and infrastructure is in its original condition. This project alleviates the accumulation of deferred maintenance campus wide, enhances energy efficiency, maintains the learning environment, and ensures the safe operation of the building systems in these spaces. This project ensures that the students, staff and faculty have a safe and comfortable environment conducive to learning.

·**Who/What is Impacted:** The **core physical assets and campus infrastructure** of the college are directly impacted.

·**Nature of the Impact:** These structural assets will be protected from water infiltration and severe weather decay. Additionally, campus operations will experience **lower costs** and infrastructure will align with modern safety and environmental standards.

·**The Problem:** The college faces an aging infrastructure with water infiltration, severe weather decay, and a compounding backlog of **deferred maintenance**.

·**Why It Is a Priority:** This project is a priority to **stabilize core facilities**, protect public assets, and curb escalating operational costs.

·**Result of Not Acting:** Failing to act will lead to accelerated structural decay, higher utility and maintenance costs, unsafe environments, and an even larger, more expensive maintenance backlog.

Location

City: Olympia **County:** Thurston **Legislative District:** 022

Project Type

Minor Works Preservation List

Growth Management impacts

none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
066-1	TESC Capital Project-State	7,860,000		880,000		880,000
	Total	**7,860,000**	**0**	**880,000**	**0**	**880,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
066-1	TESC Capital Project-State	1,200,000	1,500,000	1,700,000	1,700,000

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Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/8/2026 9:33AM

Project Number: 40000140
Project Title: Preventive Facility Maintenance and Building System Repairs

Funding

Total	**1,200,000**	**1,500,000**	**1,700,000**	**1,700,000**

Operating Impacts

No Operating Impact

Narrative
none

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000140	40000140
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/10/2026 11:30AM

Project Number: 91000042
Project Title: 2025-27 Minor Works Preservation and Program

Description

Starting Fiscal Year: 2026
Project Class: Preservation (State-Owned)
Agency Priority: 0

Project Summary

This request is to reappropriate funds for this project for current projects that are entering into the contracting phase.

Project Description

CRC Roof Upgrade:
The Evergreen State College formally requests the reappropriation of $1,100,000 in unspent Capital Budget funds from the Minor Works project budget #91000042 to the upcoming biennium (2027-2029). These funds are urgently required to address catastrophic, unforeseen structural damage at the Costantino Recreation Center on the Olympia campus. Due to the scale of the damage discovered during recent architectural inspections, this critical repair project cannot be completed within the current 2025-2027 biennium.
Evans Hall Roof Upgrade:
The Evergreen State College formally requests the reappropriation of $1,000,000 in unspent Capital Budget funds from the 2025-2027 Minor Works project budget to the (2027-2029) Minor Works budget. These funds will be used to complete critical, ongoing emergency repairs to the Evans Hall roof, which suffered severe water intrusion that cannot be accommodated under the current biennium's standard maintenance allocations.
Seminar 2 Roof Upgrade:
The Evergreen State College formally requests the reappropriation of $1,200,000 in unexpended Capital Budget funds from the 2025–2027 Minor Works project allocation. These funds are urgently required to complete vital emergency repairs that could not be fully executed within the current fiscal cycle due to unexpected project expansion.
Campus Walkway Improvements:
The Evergreen State College formally requests the reappropriation of $1,100,000 inMinor Works project funding from the**2025–2027 biennial capital budget**. These funds were left unspent during the current biennium because the project's civil engineer determined that the remaining timeline was insufficient to safely design, permit, and execute the full scope of work before the close of the biennium. Reappropriating these funds will allow the college to immediately carry forward this critical capital and successfully complete the project in the upcoming cycle.
Water Reservoir Upgrade:

The Evergreen State College formally requests the reappropriation of $1,100,000 in unspent 2025–2027 Capital Budget funds from the Minor Works project budget. These funds will be immediately redirected to address critical, emergency infrastructure deficiencies in the campus water reservoir system to prevent catastrophic failure.

Location

City: Olympia **County:** Thurston **Legislative District:** 022

Project Type

Minor Works Preservation List

Growth Management impacts

none

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/10/2026 11:30AM

Project Number: 91000042
Project Title: 2025-27 Minor Works Preservation and Program

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
057-1	State Bldg Constr-State	11,675,000		6,175,000	5,500,000	
066-1	TESC Capital Project-State					
	Total	**11,675,000**	**0**	**6,175,000**	**5,500,000**	**0**

Acct Code	Account Title	Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
057-1	State Bldg Constr-State				
066-1	TESC Capital Project-State				
	Total	**0**	**0**	**0**	**0**

Operating Impacts

No Operating Impact

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications
Capital Project Number	91000042	91000042
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

TAB C: Program

Agency Code – Agency Name
2027-29 Capital Budget Request
Project Description | Project ID: 91000042
Use this form to copy and paste responses into CBS

Requests for reappropriations only

Describe the project (and each subproject, if applicable), including the original appropriation year, status of the project, and an explanation why a reappropriation is needed.

The Evergreen State College formally requests the reappropriation of $1,100,000 in unspent 2025–2027 Capital Budget funds from the Minor Works project budget. These funds will be immediately redirected to address critical, emergency infrastructure deficiencies in the campus water reservoir system to prevent catastrophic failure.

PROJECT BACKGROUND

The Evergreen State College relies on two 1.0-million-gallon water reservoirs to support campus operations. Built over 50 years ago, these reservoirs serve as the primary source of potable water for the campus community and provide the necessary water pressure and volume for critical emergency firefighting capabilities.

JUSTIFICATION AND URGENCY

During a recent routine inspection, project engineers discovered that one of the two reservoirs is actively leaking. A subsequent, comprehensive structural inspection to locate the source of the leak revealed severe, systemic deficiencies that require immediate remediation:

- **Structural Compromise:** The inspection identified widespread, severe corrosion throughout the interior and exterior of the reservoir and its structural appurtenances.
- **Coating System Failure:** Engineers documented extensive delamination and a widespread loss of adhesion in the reservoir's protective coating system, exposing the underlying structure to accelerated degradation.
- **Operational Risk:** If left unaddressed, these issues present an immediate threat of catastrophic failure, which would abruptly terminate the campus potable water supply and leave the college without adequate fire suppression capabilities.

PROPOSED USE OF FUNDS

The requested $1.1 million will be used to execute emergency repairs, including stopping the active leak, sandblasting and recoating the interior and exterior surfaces, replacing corroded appurtenances, and restoring structural integrity to ensure compliance with health and safety standards.

Given the immediate risk to campus life-safety and operational continuity, The Evergreen State College requests expedited approval to reappropriate these minor works funds to initiate repairs as soon as possible.

Agency Code – Agency Name
2027-29 Capital Budget Request
Project Description | Project ID: 91000042
Use this form to copy and paste responses into CBS

Requests for reappropriations only

Describe the project (and each subproject, if applicable), including the original appropriation year, status of the project, and an explanation why a reappropriation is needed.
The Evergreen State College formally requests the reappropriation of $1,100,000 in unspent Capital Budget funds from the Minor Works project budget #91000042 to the upcoming biennium (2027-2029). These funds are urgently required to address catastrophic, unforeseen structural damage at the Costantino Recreation Center on the Olympia campus. Due to the scale of the damage discovered during recent architectural inspections, this critical repair project cannot be completed within the current 2025-2027 biennium.

2. Background & Incident Description

In April 2026, a severe mechanical failure occurred within the Costantino Recreation Center's exhaust fan system.

- **The Cause:** The exhaust fan system failed completely, causing immediate and extreme over-pressurization inside the building.
- **The Impact:** The intense internal pressure forced the building's roofing membrane to entirely separate from the structural roof deck.

3. Architectural Findings & Project Scope

Following the incident, the college retained an architect to inspect the facility and design a repair plan. During this comprehensive assessment, significant hidden roofing damage was discovered beneath the surface. The scope of the underlying damage is far more extensive than initially anticipated, requiring a complete structural remediation rather than a localized patch repair.

4. Justification for Reappropriation

While Minor Works funds are available from the 2025-2027 allocation, the project timeline has shifted due to the newly discovered damage. The architect has formally determined that there is insufficient time remaining in the current biennium to finalize engineering designs, secure permits, and complete the physical construction.

Reappropriating these funds ensures that:

- The $1,100,000 in dedicated capital funding remains secured specifically for this emergency project.
- The college can proceed with a thorough, safe, and code-compliant reconstruction of the Costantino Recreation Center roof without interrupting other vital minor works projects.

Agency Code – Agency Name
2027-29 Capital Budget Request
Project Description | Project ID: 91000042
Use this form to copy and paste responses into CBS

Requests for reappropriations only

Describe the project (and each subproject, if applicable), including the original appropriation year, status of the project, and an explanation why a reappropriation is needed.
The Evergreen State College formally requests the reappropriation of $1,000,000 in unspent Capital Budget funds from the 2025-2027 Minor Works project budget to the (2027-2029) Minor Works budget. These funds will be used to complete critical, ongoing emergency repairs to the Evans Hall roof, which suffered severe water intrusion that cannot be accommodated under the current biennium's standard maintenance allocations.

2. Justification and Background

During the spring of 2026, the Evans Hall roof began leaking significantly, prompting immediate intervention. Upon commencing repairs, contracted engineers and roofing specialists discovered widespread, underlying water intrusion areas across the facility.

These extensive structural issues directly stem from decades of deferred maintenance that had hidden until the outer layers were breached. The scope of the damage is far greater than originally anticipated, requiring a comprehensive structural remedy rather than localized patching.

3. Consequences of Non-Funding

Evans Hall is a core facility on the Evergreen State College campus. Leaving the roof in its current compromised state poses immediate risks, including:

- Accelerated structural rot and mold growth
- Potential damage to high-value interior educational equipment and classrooms
- Escalating repair costs if the building is subjected to another winter rainy season without proper containment

4. Financial Summary

- **Source of Funds:** 2025-2027 Minor Works Project Budget (Unspent Allocation)
- **Requested Reappropriation Amount:** $1,000,000
- **Project Destination:** Evans Hall Emergency Roof Repair

The college has halted non-essential minor works to preserve these funds, ensuring that this request requires no new revenue or net increases to the overall state capital budget. We appreciate your consideration of this urgent request to safeguard state assets and ensure student safety.

Agency Code – Agency Name
2027-29 Capital Budget Request
Project Description | Project ID: 91000042
Use this form to copy and paste responses into CBS

Requests for reappropriations only

Describe the project (and each subproject, if applicable), including the original appropriation year, status of the project, and an explanation why a reappropriation is needed.
The Evergreen State College requests the reappropriation of $1,100,000 in unspent Minor Works project funding from the **2025–2027 biennial capital budget**.

These funds were left unspent during the current biennium because the project's civil engineer determined that the remaining timeline was insufficient to safely design, permit, and execute the full scope of work before the close of the biennium. Reappropriating these funds will allow the college to immediately carry forward this critical capital and successfully complete the project in the upcoming cycle.

2. Justification and Project Scope

The deferred funds are strictly dedicated to rectifying campus-wide walkway infrastructure failures. The funding will directly address two urgent categories of institutional need:

- **ADA Code Compliance:** Numerous pedestrian pathways throughout the campus currently fail to meet Americans with Disabilities Act (ADA) standards. These non-compliant paths restrict accessibility, isolate sections of the campus, and create unlawful barriers for students, staff, and visitors with mobility challenges.
- **Life-Safety and Liability Mitigations:** The targeted walkways have suffered severe structural damage, resulting in major upheavals, deep cracking, and uneven surfaces. These degradation zones present immediate, high-risk tripping hazards. Without immediate remediation, these paths pose an ongoing threat of severe physical injury to campus personnel and pedestrians, exposing the institution to significant legal and financial liability.

3. Conclusion

Securing these reappropriated funds ensures that The Evergreen State College can fulfill its statutory obligation to provide a safe, accessible, and code-compliant environment. Granting this request allows the civil engineering team to resume the project immediately at the start of the new biennium with a viable construction schedule.

Agency Code – Agency Name
2027-29 Capital Budget Request
Project Description | Project ID: 91000042
Use this form to copy and paste responses into CBS

Requests for reappropriations only

Describe the project (and each subproject, if applicable), including the original appropriation year, status of the project, and an explanation why a reappropriation is needed.
The Evergreen State College formally requests the reappropriation of $1,200,000 in unexpended Capital Budget funds from the 2025–2027 Minor Works project allocation. These funds are urgently required to complete vital emergency repairs that could not be fully executed within the current fiscal cycle due to unexpected project expansion.

Justification and Background
During the spring of 2026, severe structural failures occurred when various roofs within the Seminar 2 Classroom Pods began to leak. The college immediately deployed contractors to initiate emergency repairs. However, upon opening and inspecting the building envelopes, contractors discovered extensive, systemic water intrusion areas that had developed silently over several years as a direct result of cumulative deferred maintenance.

The scope of work required to secure the facility safely and correctly expanded exponentially beyond the initial diagnostic assessments.

Project Status and Scope of Work
The requested $1,200,000 in reappropriated funds will be specifically directed toward completing three critical, high-priority roof repairs on the affected Seminar 2 Classroom Pods. Due to the late-biennium discovery of these deeper structural failures and the time required to engineer long-term solutions, these projects could not be finalized before the closing of the current expenditure window.

Impact of Non-Approval
Failing to reappropriate these funds will halt these active roof remediations mid-process. This will leave active learning spaces vulnerable to immediate weather damage, accelerate structural rot, compromise classroom availability, and ultimately force significantly higher emergency repair costs on the state in future budget cycles. Reauthorizing these unspent funds ensures that the university can preserve an existing public asset and maintain a safe learning environment for students.

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/10/2026 3:04PM

Project Number: 40000152
Project Title: Minor Works Program

Description

Starting Fiscal Year: 2028
Project Class: Program Improvement (State-Owned)
Agency Priority: 5

Project Summary

This category is intended to meet the unanticipated needs and demands to complete minor modifications to the size, location or arrangement of space as programmatic needs arise.

Project Description

1.What will the request produce or construct? Who or what will be impacted by the budget request and how will they be impacted?

The budget request will produce a modernized classroom infrastructure and lighting system across key instructional buildings at The Evergreen State College. Specifically, it will replace failing, inefficient legacy systems with networked LED systems and flexible learning furniture.

· Impacted Parties: Students, faculty, and institutional facilities staff.
· Nature of Impact:
a. Students and Faculty: Will experience enhanced Instructional outcomes due to high-quality, dimmable, and daylight-harvesting learning environments alongside flexible classroom layouts.
b. Facilities & Institution: Will benefit from a significantly decreased carbon footprint, lower energy consumption, and the mitigation of escalating maintenance liabilities.

2. **Identify the problem or opportunity addressed by this request. Why is the request a priority? What would be the result of not acting?**

The college is facing outdated, failing, and inefficient legacy classroom infrastructure and lighting systems that create escalating maintenance liabilities and high energy consumption.

· **Why it is a Priority:** This project directly supports compliance with Washington State's **Clean Buildings Performance Standard (RCW 19.27A.210)** and aligns with state carbon reduction goals.
· **Result of Not Acting:** Inaction will result in escalating maintenance costs, continued high energy consumption, failure to progress toward State Clean Buildings standards, and a stagnant learning environment with failing infrastructure.

3.For new funding requests for programs or projects that have received previous appropriations (either a phase of construction or previous grant rounds), how much has been spent or put under contract?

This is a Minor Works program request

4. **Does this project or program leverage non-state funding? If yes, how much by source?**

This Minor Works program request does not leverage non state funding.

5. **Provide context on how this request fits into the agency's work. Describe how this project supports the agency's strategic plan or would improve agency performance.**

Strategic Alignment: The project fits into the Evergreen State College operational work by modernizing its core instructional spaces. It improves agency performance by reducing energy consumption and lowering operational maintenance demands. Furthermore, it aligns with broader state-level mandates by transitioning the campus toward compliance with RCW 19.27A.210.

6. **How is your proposal impacting equity in the state? Which communities are impacted by this proposal? What are the measurable outcomes that would result from the project?**

· **Impacted Communities:** The primary communities impacted are the students, faculty, and staff at The Evergreen State College who utilize these key instructional buildings.
· **Measurable Outcomes:** The measurable outcomes of the project include decreased institutional carbon footprints, reduced energy consumption metrics, and eliminated maintenance backlogs for classroom lighting.

7.Is there additional information you would like decision makers to know when evaluating this request?

This project presents a dual-benefit opportunity: it solves an immediate facilities maintenance and compliance liability (Clean Buildings Act) while simultaneously improving the day-to-day academic environment for students through updated furniture and optimized lighting.

OFM

376 - The Evergreen State College
Capital Project Request
2027-29 Biennium
*

Version: P1 27-29 Agency Request

Report Number: CBS002
Date Run: 9/10/2026 3:04PM

Project Number: 40000152
Project Title: Minor Works Program

Description

8.For major construction projects, describe the viable alternative solutions you considered. Why was this alternative chosen?
Because this request is categorized as a **Minor Works Program project** rather than a major stand-alone construction project, a formal analysis of major structural alternatives was not detailed. The chosen alternative networked LED retrofits represents the standard efficient baseline for modern facility renewals.

9.For major construction projects, what project delivery method has been or will be selected and why?
Minor works projects of this scale are typically executed via standard agency Job Order Contracting (JOC) or traditional competitive bidding processes managed by campus facilities.

Location
City: Olympia **County:** Thurston **Legislative District:** 022

Project Type
Program Improvement - Unidentified

Growth Management impacts
none

New Facility: No

Funding

Acct Code	Account Title	Estimated Total	Expenditures Prior Biennium	Expenditures Current Biennium	2027-29 Fiscal Period Reapprops	2027-29 Fiscal Period New Approps
066-1	TESC Capital Project-State	6,500,000				500,000
	Total	**6,500,000**	**0**	**0**	**0**	**500,000**

		Future Fiscal Periods 2029-31	2031-33	2033-35	2035-37
066-1	TESC Capital Project-State	1,500,000	1,500,000	1,500,000	1,500,000
	Total	**1,500,000**	**1,500,000**	**1,500,000**	**1,500,000**

Operating Impacts

No Operating Impact

Parameter	Entered As	Interpreted As
Biennium	2027-29	2027-29
Agency	376	376
Version	P1-A	P1-A
Project Classification	*	All Project Classifications

Capital Project Number	40000152	40000152
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	Y	Y
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

THE EVERGREEN STATE COLLEGE

LORD MANSION
Mechanical and Electrical Systems Review

June 26, 2019

HULTZ BHU
engineers inc

Hultz/BHU Engineers
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Tacoma, WA 98402
Project No. 19-092

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EXECUTIVE SUMMARY

This report is a review of the condition of the mechanical and electrical systems in the Lord Mansion and adjoining Coach House. The buildings were originally built in 1923, and have a had a number of revisions and upgrades over the years; but they still retain their historic nature. Overall the mechanical and electrical systems are in fair condition, and are operating satisfactorily now. The exceptions are some plumbing issues which require immediate attention.

The other most significant repair items are the aged domestic water piping, aged heating piping system, fire alarm system, and portions of the electrical power systems. These items are recommended for improvements in the next five years.

The most significant plumbing issue involves the main sewer line from the building having back-ups into the basement. A camera survey of the main building sewer was performed which indicated a damaged sewer main approximately 100 feet from the building. The exact cause of the problem (blockage or damaged line) could not be determined; an added sewer cleanout and further investigation is required. The repair would involve either replacing or re-lining a section of the site sewer line. It also appears that one the building rain water lines connects into this sewer; that line should be located and connected to the site storm piping if feasible. In addition there is a plumbing leak below the main floor restrooms that requires repair.

The heating water piping in the main building s aged and is recommended to be replaced. Many of these lines are accessible (in the basement or attic) but vertical drops in the second floor walls to radiators will require cutting/patching for the replacement (assuming the historic nature of the building is to be retained). The domestic water piping is also aged in many areas, and should be replaced. Most of this piping is in the basement area.

The electrical power system in the main building is in good condition; we do recommend replacement of the older boiler room electrical panel and the Coach House electrical panels and power distribution. Lighting in the non-historical areas of both buildings could be upgraded to the LED type. The fire alarm system (which serves both buildings) should be replaced with a new addressable type.

The main building is partially covered with a wet pipe fire sprinkler systems (basement and parts of the main floor). This system should be considered for revision to a pre-action type to minimize the likelihood of an accidental discharge, especially if the basement area continues to be used for storage of museum quality artifacts.

Summary of recommended work and costs:

Immediate replacement work recommended:

• Repair Leak at Women's RR	$ 3,000
• Repair Drinking Fountain	$ 500
• Add Main Sewer Cleanout/Review Solution	$ 5,000
• Repair Site Sewer	$ 40,000
• Replace Boiler Room Sump Pump	$ 500
• Add Electrical Outlets - Basement Area	$ 500

• Replace Coach House Porch Light	$ 250
Sub-Total "Immediate" Costs:	*$ 49,750*

Replacement work recommended in the next one to five years:

• Replace Heating Water Piping & Accessories	$ 350,000
• Replace Radiator Controls	$ 25,000
• Replace Domestic Water Piping	$ 100,000
• Convert Fire Sprinkler System to Pre-Action	$ 35,000
• Replace Fire Sprinkler Heads	$ 20,000
• Replace Fire Sprinkler Piping	$ 50,000
• Replace UG Heating Water Piping to Coach House	$ 20,000
• Replace UG Domestic Water Main to Coach House	$ 5,000
• Replace Panel A	$ 2,500
• Replace Power Distribution - Coach House	$ 17,000
• Replace Lighting and Controls - Main Building	$ 47,500
• Replace Fire Alarm System	$ 60,000
Sub-Total one to five year Costs:	*$ 732,000*

Replacement work recommended in the next five to ten years:

• Replace Both Building Plumbing Fixtures	$ 30,000
• Relocate Fire Department Connection	$ 15,000
• Add Fire Main Post Indicator Valve	$ 5,000
• Replace Lighting and Controls - Coach House	$ 15,000
Sub-Total five to ten year Costs:	*$ 65,000*

Total for all recommended work = $ 846,750

Any replacement work needs to consider of the long term plan for the facility, as the type of systems to be used depends on the proposed use and the long term plan. Our recommendations assume that the facility will continue with the same use and occupancy as it has now, and will maintain the historical nature of the building.

The estimated costs do not include sales tax, engineering, or project management costs; but do include a 10% contingency.

BACKGROUND INFORMATION

This report is an evaluation of the mechanical and electrical systems of the Lord Mansion. The review is to assess the condition of these systems to aid in making decisions regarding future repair work, budgeting, and future use of the facility.

The Mansion was built in 1923, is approximately 12,500 square feet, consisting of two floors above a basement. The adjacent building, the Coach House, was originally constructed as a garage at the same time as the main building. The Coach house is approximately 3,000 square feet, and is two story. The buildings are located at 211 21st Avenue SW, in Olympia.

The Mansion building currently has the basement used for storing and maintaining State museum level artifacts. The main floor and grounds are rented for special events (weddings, parties, etc.). The Coach House main floor has a large meeting room used for conferences, and the upper floor is an office area which is rented out.

The scope did not include any destructive investigation (cutting into piping, removing wiring, etc.). If recommended repairs move ahead some added investigation may be warranted to confirm details for the work.

Documents provided for this review:

- 1923 Architectural Drawings (original building)
- 1923 Mechanical and Electrical Plans (original building)
- 1982 Mechanical and Electrical Plan (added fire alarm and miscellaneous)
- 1992 Electrical (lighting revisions)
- 1994 Architectural and Electrical (added elevator, restrooms, upgraded electrical)
- 2009 Mechanical and Electrical (boiler replacement)

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LORD MANSION - HVAC SYSTEM

GENERAL

The main building does not have any air conditioning and is heated only. The main heating system uses a gas-fired boiler with hot water circulated to radiators located in the various rooms. Exhaust fans provide air circulation and exhaust for various parts of the building. Staff has been using portable dehumidifiers (and humidifiers) to control humidity in the basement area.

BOILER SYSTEM

The boiler system uses a Cleaver Brooks "Clear-Fire", installed in 2009, with 750,000 Btu/hour capacity. The boiler is a high efficiency condensing hot water type, using natural gas, and appears to be in good condition. The system has two in-line circulating pumps, one serving the main building and one serving the Coach House. The main building circulation pump was replaced at the same time the new boiler was installed. The Coach house pump appears to be approximately 10 years older (i.e. 20 years old). A new heating system expansion tank was installed in 2009.

Figure 1 - Basement Boiler

The piping system is primarily black steel, with some copper for smaller lines and where upgrades or revisions have been made. There is insufficient data regarding the age of the piping, but some of the piping could be part of the original construction. The piping was not disassembled to review the extent of corrosion, but without continued chemical treatment the condition of aged piping is a significant concern. The existing chemical treatment pot-feeder and associated valves are corroded. Insulation on the piping in some areas is labeled as containing asbestos. Some piping is uninsulated or the insulation has come loose.

The hot water from the boiler is distributed to cast iron and steel radiators located throughout the building. Many of these could be original to the building. Control of the heating is typically by thermostatic control valves with a manual dial adjustment; or in some cases simply a manual valve

Figure 2 - Heating Radiator

ELECTRIC HEAT

Two electric unit heaters serve the basement area.

VENTILATION FAN AND DUCTWORK

An attic exhaust fan is ducted to ceiling grilles of offices on the second floor, southwest side of the building, and to ceiling grilles located in the first floor. A basement fan provides exhaust for part of the

basement. Small ceiling exhaust fans serve the first floor restrooms. The ductwork for these fans is constructed of galvanized steel. The age of the fans is not certain, but appears to be before 1982.

RECOMMENDATIONS

The primary concern is the condition of the heating system piping and system accessories (chemical feed tank, valves, air vents, and controls). All of this piping and system accessories are old and should be considered for replacement. Many of the piping mains are accessible (in basement or attic), but replacement of the piping drops in walls (from attic down to the upper floor) would be expensive due to the cutting/patching required. New automatic control valves for the radiators are recommended. The boiler should have at least another 15 years of life.

If improved comfort is required due to the use of the facility, air conditioning could be considered or fans (and ductwork) could be added to allow improved air movement. Equipment (fans or indoor air handlers) could be installed in the basement and in the attic to allow serving the first floor from below, and the upper floor from above. There are also a number of ductless options that could be pursued, but refrigerant piping would need to be routed from any indoor units to outdoor units.

If the basement will be used to store important artifacts, then a permanent HVAC system that will maintain proper humidification and temperatures should be considered (versus use of portable equipment).

ESTIMATED COSTS

Immediate: Nothing noted

One to Five Years:

Replace Piping & Accessories	$ 350,000	(includes cutting/patching costs for concealed piping)
Replace Radiator Controls	$ 25,000	

Five to Ten Years: Nothing noted

LORD MANSION - PLUMBING SYSTEM

WATER HEATER

The building hot water system is served by an electric water heater located in the basement boiler room. The unit was manufactured by Rheem, is 50 gallon capacity, and with a 4500 watt capacity element.

PLUMBING PIPING

The water distribution piping is a combination of copper and galvanized steel. The main water header is located in the basement boiler room, and has aged galvanized steel piping and aged valves. The copper piping has soldered joints. The water service meter to the building is on the east side of the property. The original drawings indicate a galvanized iron pipe looping around the entire building and entering the boiler room on the west side. We assume that this site piping has been replaced and is not the original.

Waste and vent piping is primarily of cast iron construction inside the building, with ABS and PVC used for more recent plumbing work. Sewer piping on the site is the clay tile type. There are two main site waste lines that serve the building; one exists at the northeast corner of the building and is visible at the ceiling of the basement level. The other exists near the southeast area of the building, and is located below the basement floor slab.

Figure 3 - Domestic Water Header

On days with heavy rains water backs up out of the service sink located in the basement, in the southeast area of the building. In this same area, with heavy rains, water seeps up through the basement floor.

The waste line leaving the southeast area of the building was surveyed with a camera to determine signs of blockage. The camera used a cleanout located on a vertical waste pipe in the basement At a point approximately 40 feet from the building the sewer pipe was about half full of water. At the approximate 80 foot and continuing to the extent of the survey (approximately 100 feet out) the sewer line was full of water. It appears that there is a blockage downstream of this point, near large trees at the east side of the property, or due a large tree near the sidewalk. We suspect that one of the building downspouts connects into this sewer line causing the drainage issues in the basement.

A site cleanout located further to the south (in garden path area) was checked and this serves the exterior downspouts and the Coach House restroom. This line also had standing water (visible at the cleanout), but did flow when fixtures were operated.

PLUMBING FIXTURES

Restrooms are located on the first floor. One restroom is historic in nature, with non-functional "original" type fixtures. The main Men's and Women's restroom was remodeled in 1994, and has vitreous china floor mounted water closets, a wall mounted urinal, and wall mounted lavatories. The fixtures appear to be in fair condition. A handicap accessible dual drinking fountain is located at the restrooms, but was out of order at the time of our site visit. The kitchen (used for serving only) has a small stainless steel sink. The boiler room has small sump with a small sump pump; the pump appears to be aged.

RECOMMENDATIONS

The main domestic water piping is aged and should be considered for replacement. Staff reports that there is a water leak located below the Women's restroom; the source has not been identified or repaired.

The site sewer piping appears to be damaged and requires repair. WE recommend adding an exterior cleanout and performing additional survey work to have more information regarding the issue. Once that is determined it can be decided if it is best to replace the pipe, line it, or pursue another solution. The roof drains and storm drains should also be checked to find which storm drain is connected into the sewer and revise that piping.

ESTIMATED COSTS

Immediate:

Repair Leak at Women's RR	$ 3,000
Repair Drinking Fountain	$ 500
Add Sewer Cleanout/Review	$ 5,000
Repair Site Sewer	$ 40,000
Replace Boiler Rm Sump Pump	$ 500

One to Five Years:

Replace Domestic Piping $ 100,000 (includes cutting/patching costs for concealed piping)

Five to Ten Years:

Replace Plumbing Fixtures $ 25,000

LORD MANSION - FIRE SPRINKLER SYSTEM

GENERAL

The building is partially covered with a wet pipe fire sprinkler system. The basement and first floor have partial coverage, with heads in the main rooms but not in the restrooms or similar small areas. No coverage of the second floor or attic is provided.

FIRE SPRINKLER PIPING

The fire sprinkler piping is black steel. The age of the piping is not certain, but appears to be prior to 1992, when a new fire main was routed to the building. Much of the basement piping was revised in 2009 as part of a seismic upgrade. The piping main enters the basement area, in the southeast portion of the building. The system has a double backflow preventer. The fire department connection (FDC) is located immediately outside the building. Typically this is preferred to be located remote for safer fire department access; a revision would require an extended line or a relocation of the backflow preventer.

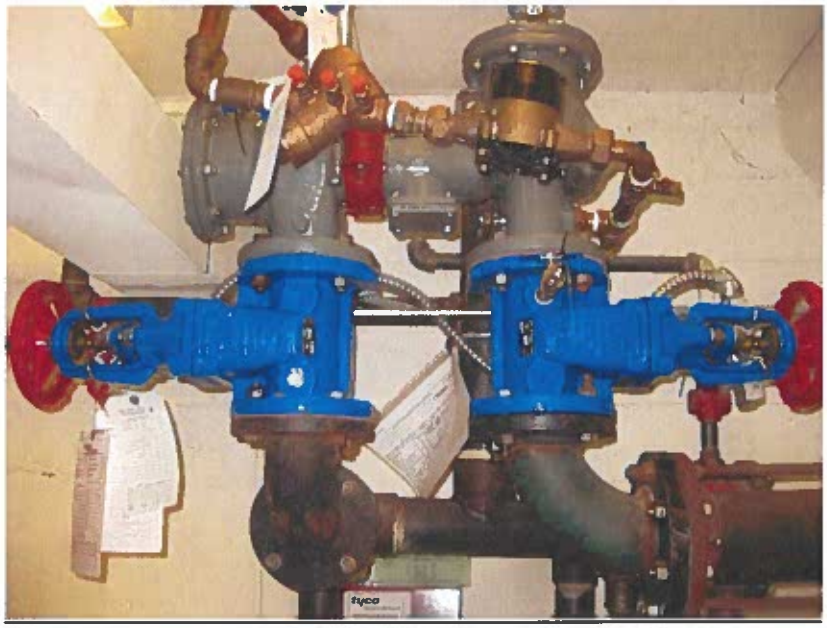


Figure 4 - Fire Sprinkler Backflow

RECOMMENDATIONS

If the basement area will continue to store valuables we would recommend converting the system to a pre-action type; this would require both a head to fuse and a heat detector to alarm before water could be discharged. With the existing arrangement it would be easy to damage a head and have an accidental release of water.

The age of the piping and heads is a concern, along with the partial coverage of the building. Since water release could do significant damage, and considering the historic value of the building we would recommend converting the entire system to a pre-action type. With a total coverage fire alarm system we do not see the need to expand sprinkler coverage to the entire building. All of the existing heads could be replaced at the same time, and the condition of the piping examined more closely. Any changes in the system and sprinkler partial coverage would have to be coordinated closely with the local code officials. Some of the decisions on the fire sprinkler system are of course affected by the planned use of the building. If the sprinkler system is kept, and especially if its coverage is expanded, the FDC should be located remote from the building and a post indicator valve added.

Figure 5 - Basement Sprinkler Head

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

Convert System to Pre-Action	$ 35,000
Replace Heads	$ 20,000
Replace Piping	$ 50,000

Five to Ten Years:

Relocate FDC	$ 15,000
Add Post Indicator Valve	$ 5,000

COACH HOUSE - HVAC SYSTEM

GENERAL

The Coach House is served by three split system air conditioning units with hot water heat; with the hot water from the main building boiler system.

HVAC EQUIPMENT

The air conditioning units were manufactured by Carrier, and were in the 2008 to 2009 period. Two units serve the lower floor (main meeting room) and one unit serves the second floor offices. The condensers are located on the west side of the building. The units are controlled by 7-day programmable electronic thermostats.

The HVAC equipment and overall system appears to be in good condition. The underground hot water piping from the main building is of unknown age and condition, and so is a concern.

Figure 6 - Coach House Indoor HVAC Unit (Overhead)

HVAC DISTRIBUTION

Ductwork is constructed of galvanized steel, and is typically ducted to wall grilles to serve each area. The hot water piping is copper, connecting to underground mains from the main building.

Figure 7 - Coach House Outdoor HVAC Units

RECOMMENDATIONS

The existing HVAC system has a number of years life left and so no immediate work is required. The underground hot water piping from the main building is of concern since no information is available on its age; so it should be considered for replacement. The upstairs plumbing fixtures are aged and will be needing replacement in the future.

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

Replace UG Heating Water Piping	$ 20,000

Five to Ten Years: Nothing Noted

COACH HOUSE - PLUMBING SYSTEM

WATER HEATER

The building hot water system is served by an electric water heater located on the second floor. The unit has a 50 gallon tank and 4500 watt electric element.

PLUMBING PIPING

The water distribution piping is a combination of copper and galvanized steel. The copper piping has soldered joints. The as-builts do not indicate the water service to the building but it appears to be fed from the water header in the basement of the main building.

Waste and vent piping is of cast iron construction inside the building, and is clay tile type on site.

PLUMBING FIXTURES

One restroom is located on the first floor and one on the second. The first floor restroom has one vitreous china floor mounted water closets, flush valve type, and a wall mounted lavatory. The second floor has a vitreous china water closet, flush tank type, bathtub, and lavatory. A stainless steel utility sink is located on the first floor. The first floor fixtures appear to be in good condition; the second floor fixtures are in poor condition.

A site storm sewer cleanout was checked and the main floor restroom is connected to this storm line. This could be revised so the two lines are separated, but the public sewer in the area is a combination storm/sewer type.

RECOMMENDATIONS

The first floor fixtures appear to be in good condition; the second floor fixtures are in poor condition. If continued long term use of the second floor is planned, then the fixtures should be replaced. The condition of the water main is suspect, as it is galvanized steel construction; we would recommend replacement along with the piping in the main building.

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

Replace UG Water Main	$ 5,000 (assumed to be done when heating mains are done)

Five to Ten Years:

Replace Upper Floor Fixtures	$ 5,000

LORD MANSION – POWER SYSTEM

GENERAL

The house has a 208Y/120 volt, 3-phase, 4-wire electrical distribution system which was upgraded in 1996 with a new 600 amp main distribution board and replacement of most of the downstream panels. The distribution system is in acceptable condition and could quite possibly continue to be so for another 20 years. In the broiler room is Panel A that wasn't replaced in 1996 and may have been part of the 1982 remodel.

Figure 9 - Main Distribution Panel

All of the outlets in the building appear to be functional and may also be part of the 1982 remodel. Records show that many were replaced in the 1996 remodel. No tests were performed to determine if all of the outlets are functional. Also, the condition of the wiring within the walls and surface-mounted raceways is unknown. Some of the wiring may date back to 1923. All receptacles appear to have a ground post. We are not aware if there are any grounding wires within the system the receptacle grounds are connected to. The ones inspected did not have covers on and it did not appear to have a ground wire.

Figure 10 – Panel A

RECOMMENDATIONS

All of the distribution system can remain "as-is." Panel A should be replaced within 5 years even if it has not experienced any nuisance tripping due to its age and environment it's in.

The branch circuitry should be studied and, if necessary, replaced. During that time a ground wiring could be added if it doesn't already.

During the site visit a recommendation by an employee was made to add receptacles in the northwest storage area. The need to control the temperature and humidity of this area is important due to the records stored there.

ESTIMATED COSTS

Immediate:

Add Outlets - Basement	$ 500

One to Five Years:

Replace Panel A	$ 2,500

Five to Ten Years: Nothing Noted

LORD MANSION - LIGHTING SYSTEMS

GENERAL

All of the lighting switches and fixtures within the historic section of the house are in good condition and can remain "as-is." The non-historic areas of the house have a wide variety of light fixtures that are in various states of wear, show abuse, and are generally fluorescent. We believe the age, styles, and wear of these fixtures detract from, rather than add to, the historical nature of the house.

Figure 11 –Office & Hallway Light Fixtures

There is adequate emergency egress lighting and exit signage throughout the house. This is accomplished with self-contained battery backed up fixtures positioned along the appropriate pathways to a building exit.

The exterior fixtures on the west, south, and east sides of the building are commonly referred to as "wall packs." The lamps within the wall packs are high pressure sodium which cast an orange-tinted light. They appear to be functioning as some were on in the daylight hours.

RECOMMENDATIONS

There are two choices for the lighting fixtures in the non-historic parts of the house.

1) Retrofit existing fixtures with LED lamps and controls.
2) Standardize and replace all of the fixtures with LED fixtures.

Retrofitting Fixtures:

It is possible to retrofit 4-foot fluorescent lamps with LED lamps but unless first cost is the primary consideration we do not recommend this option as the labor cost may be similar to the price of a new LED fixture. The cost advantage to retrofit is that the controls would not need to be upgraded and ceiling finishes would not be impacted. The disadvantage to retrofit is that the LED fluorescent replacement does not have the same life expectancy of an integrated fixture.

Replace Fixtures:

As stated above the price of new standard LED fixtures have come down to be competitive with the price of retrofitting existing. The areas of concern within the house will not require "architectural-grade" fixtures so more cost-effective options can be used.

Replacing the fixtures will require the controls to be upgraded to state Non-Residential Energy Code standards. Photocells are now required for dimming the lights based upon the amount of light coming in the windows of rooms with more than two fixtures in the area in front of a window. Also required is motion detection that will turn off the lights after a preset amount of time a room is vacant. These strategies (and the LED fixtures) are intended to save on energy costs. As an incentive to their customers Puget Sound Energy has rebates available to those upgrading to LED; which should be pursued as part of any upgrade..

The exterior wall-pack fixtures, as on owner-option, could be replaced with a smaller, more attractive LED fixture with better lighting output and control.

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

Replace Fixtures & Controls	$ 47,500

Five to Ten Years: Nothing Noted

LORD MANSION – LOW VOLTAGE SYSTEMS

GENERAL

The low voltage systems observed in this building include telecommunications, fire alarm, and security alarm. The telephone backboard is located in the basement and appears to functioning as desired by the occupants. The system is comprised of both data jacks and wireless access points.

The fire alarm system is by Simplex and is located in the kitchen on the south wall. It also tracks a zone in the Coach House. The remote annunciator is located outside the south door. The system was installed during a 1982 remodel. The building smoke and heat detection are divided into zones – meaning multiple sensing devices part of a zone. Modern fire alarm systems have addressable devices that allow first responders to know exactly where an event occurs. The building appears to have fully functional smoke and heat detection throughout. The security system is by Sonitrol and located in a south wing office on the second floor.

Figure 12 – Simplex Fire Alarm Panel

RECOMMENDATIONS

The fire alarm system is approaching 38 years in service. Some municipalities are requiring new fire alarm systems to have addressable capabilities for the reasons stated above. We recommend replacing the entire system, including detection devices, to meet current standards.

No recommendations for the telecommunications or security alarm system.

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years: (Includes both the Lord Mansion and Coach House)
Replace Fire Alarm System $60,000

Five to Ten Years: Nothing Noted

COACH HOUSE – POWER SYSTEM

GENERAL

The Coach House has a 208Y/120 volt, 3-phase, 4-wire electrical distribution system which was installed in a remodel within the last forty years. Its main distribution panel is 200 amps and subfeeds several downstream panels of the same age in the building. Panel A appears to be from an early unidentified date and may be over fifty years old. Panel B, a load center, was installed after the panels in the power system to feed some new equipment. Typical distribution equipment has a thirty through forty year life span and, as it ages, becomes less responsive to tripping.

The outlets appear to part of a more recent remodel and are in good condition. The wiring was probably installed the same time as the outlets and should be in equal condition as the outlets.

Figure 13 – Coach House Main & Sub Panel

RECOMMENDATIONS

The entire core distribution system should be replaced within one to five years. Within it is equipment of a variety of ages but all of it is nearing the end of it best performance life span.

The branch devices and circuitry can remain "as-is."

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

Replace Power Distribution	$ 17,000

Five to Ten Years: Nothing Noted

COACH HOUSE – LIGHTING SYSTEM

Figure 14 – Coach House Main Meeting Area Typical Lighting

GENERAL

The lighting fixtures inside the Coach House within the main meeting area are relatively new having been installed perhaps within the past 20 years. They are made up of both recessed compact fluorescent can lights and track-mounted PAR fixtures. Outside of the meeting area are incandescent fixtures of a more historic nature. All of them appear to be in good working condition and will be for another ten years. There is adequate exit signage and egress lighting for safe exiting of the building. All of the light switches are in good working condition and require no replacement.

Since none of the fixtures in the Coach House are based upon LED-technology it may be more difficult to purchase replacement lamps in ten years' time. The current lighting configure doesn't take advantage of energy savings from LED fixtures or dimming & occupancy controls.

RECOMMENDATIONS

As LED fixtures become competitive with all other fixtures combined with the apparent cost savings in energy usage with the lighting system should be replaced with a fully controlled system within the five to ten years.

The porch light should be replaced immediately.

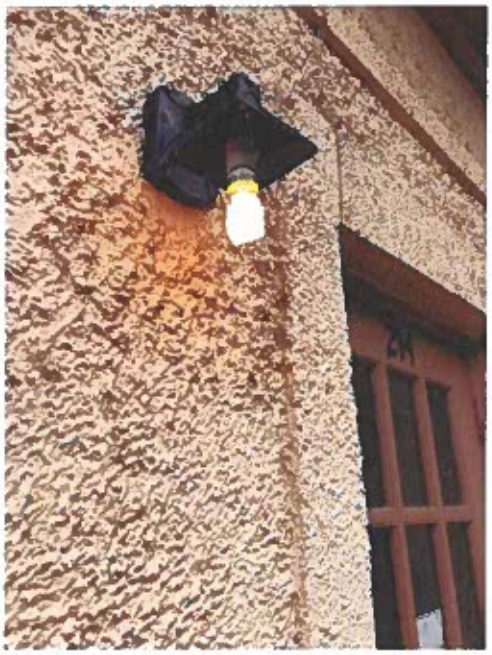


Figure 15 – Coach House Porch Light

ESTIMATED COSTS

Immediate:

Replace Porch Light	$ 250

One to Five Years: Nothing Noted

Five to Ten Years:

Replace Fixtures & Controls	$ 15,000

COACH HOUSE – LOW VOLTAGE SYSTEMS

GENERAL

The low voltage systems observed in this building include telecommunications, fire alarm, and security alarm. The telephone backboard is served by the main house and appears to functioning as desired by the occupants. The system is comprised of both data jacks and wireless access points. The fire alarm system is connected to the Simplex control panel in the main house. The building appears to have fully functional smoke and heat detection throughout. The security system is by Sonitrol and located in the first level.

RECOMMENDATIONS

Replacing the fire alarm system in the main house will automatic cause the system in the Coach House to be replaced at the same time since it subfeeds to the main house.

ESTIMATED COSTS

Immediate: Nothing Noted

One to Five Years:

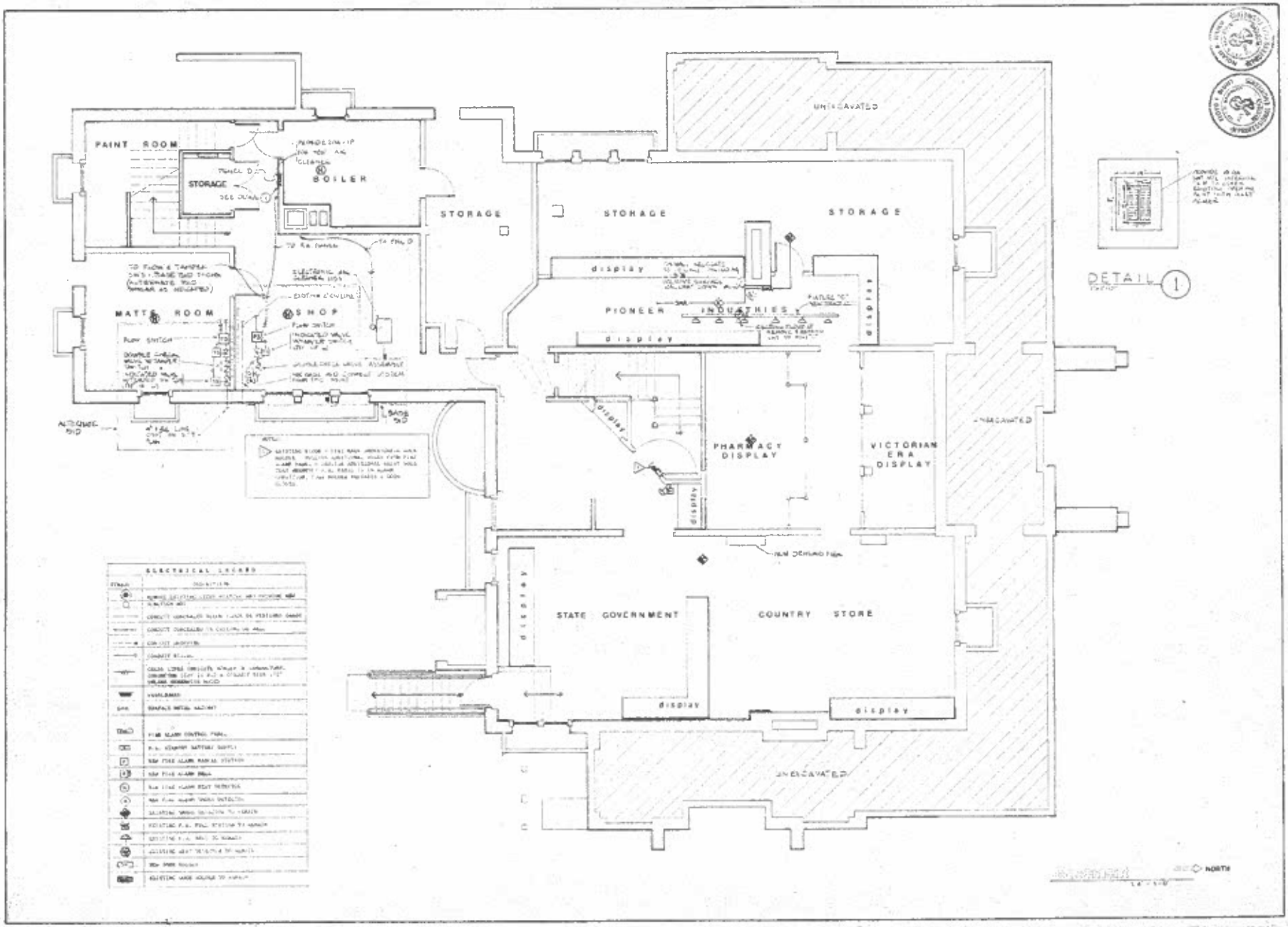
Replace Fire Alarm System	See Lord Mansion Fire Alarm Estimate

Five to Ten Years: Nothing Noted

Appendix

Building Key Plans (1982)

- ME-1 Basement Plan
- ME-2 Main Floor Plan
- ME-3 Upper Floor Plan
- ME-4 Site Plan and Coach House Plan



Museum

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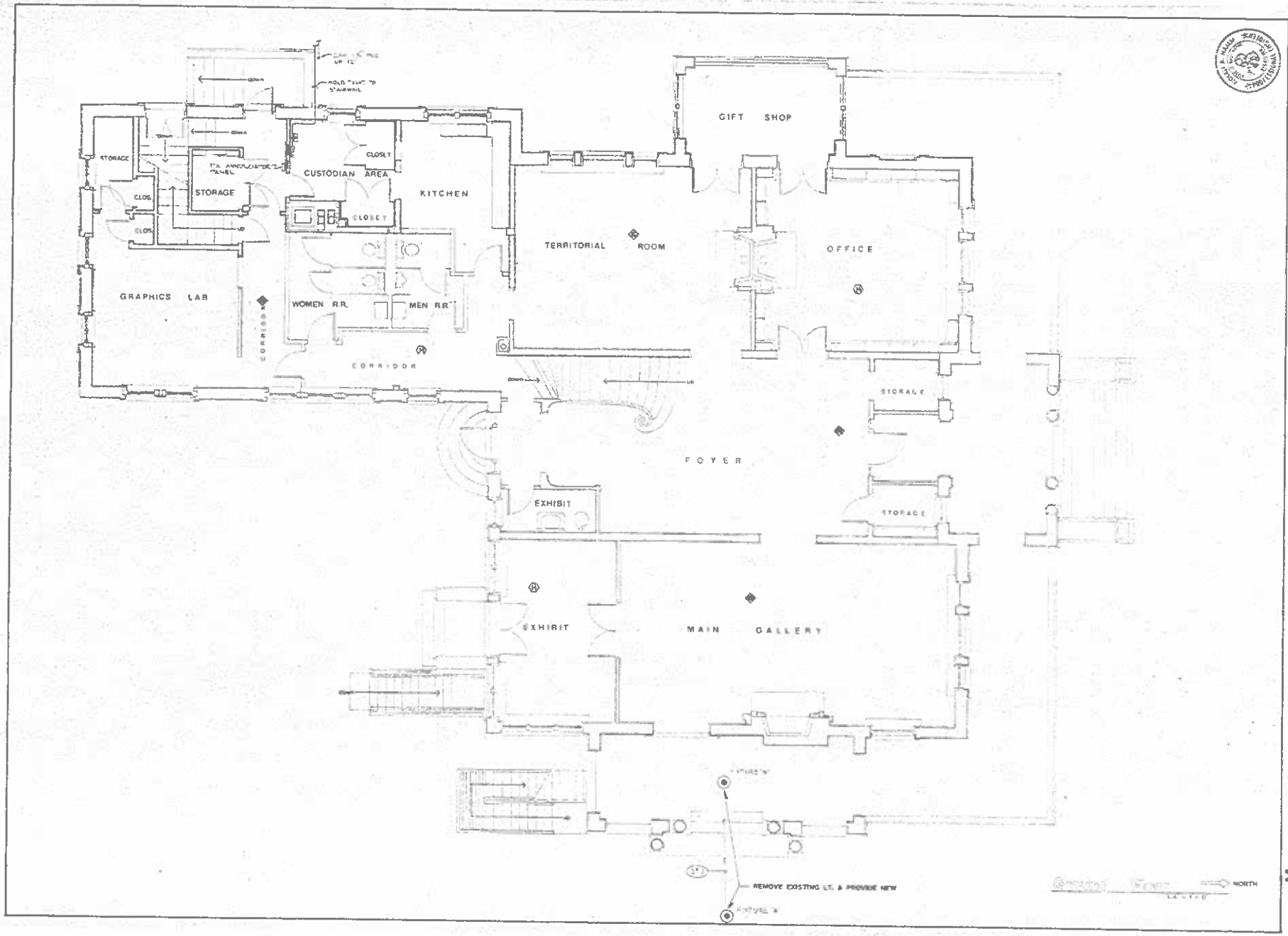

Museum

rotunda of the

211 west 21st

olympia, washington 98504

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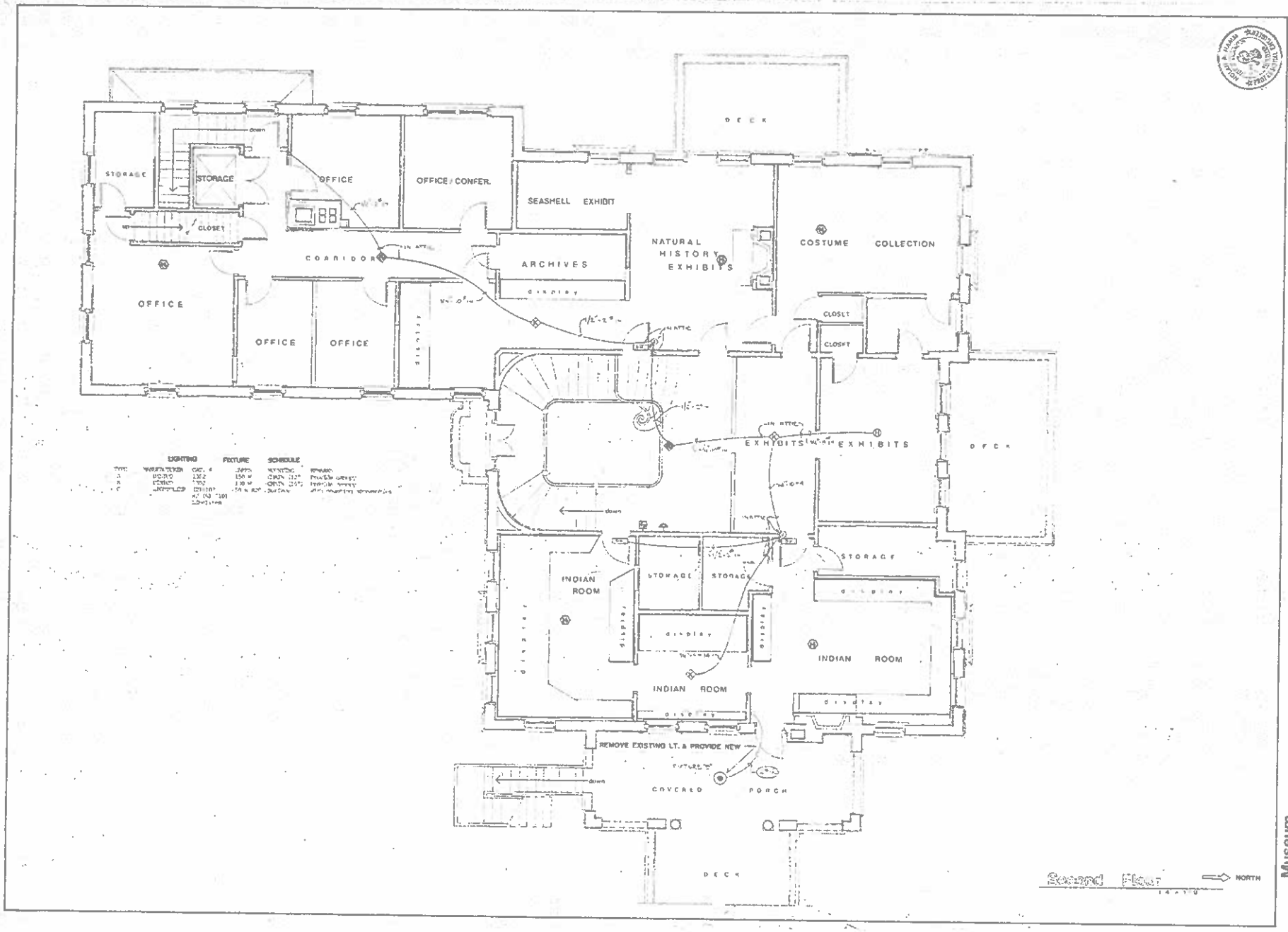
ata architects

M1.2


STORAGE
STORAGE
OFFICE
OFFICE / CONFER.
SEASHELL EXHIBIT
DECK
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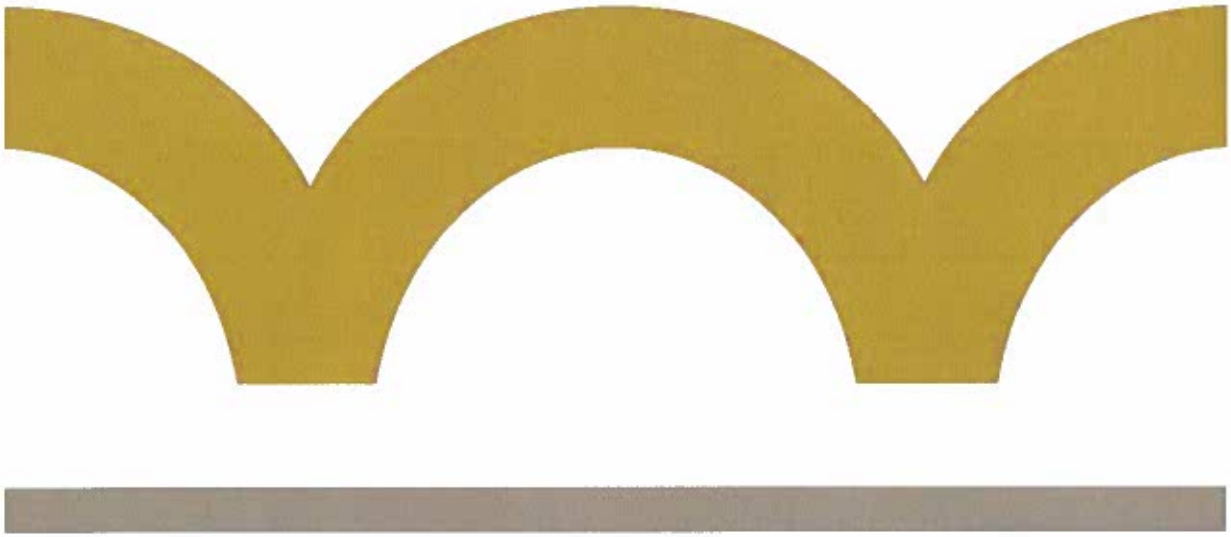
INDIAN ROOM
INDIAN ROOM
REMOVE EXISTING LT. & PROVIDE NEW
COVERED PORCH
down
DECK
Second Floor
NORTH
Museum
renovation of the
211 west 21st
olympia, washington 98504
Florea-scogg partnership aia architects
MF3

Coach House & SERVICE PLAN

WASHINGTON STATE
HISTORICAL
SOCIETY

10-YEAR ARCHITECTURAL NEEDS ASSESSMENT
2015-2025



State Capital Museum Lord Mansion and Coach House

E. WSHS - State Capital
Museum Lord Mansion

Washington State Historical Society
State Capital Museum - Lord Mansion and Coach House
2015-25 10-Year Architectural Needs Assessment

The future use of the Historic Lord Mansion and Coach House is under evaluation by WSHS. The building was closed to the public for renovations to the roof and electrical systems on April 12th of this year. The issues listed in this assessment address the continued preservation of the building itself, as well as improvements incorporating flexibility for future use.

As a Registered National Historic Landmark, all work at the Lord Mansion and Coach House must meet the U.S. Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings.*

State Capital Museum - Lord Mansion and Coach House Narrative

Each assessment item has been given its OFM-assigned unique identifying number, preceded with the designation "LM". For ease of reference, this number is used in the detailed narrative that follows as well as in the Summary and Detail matrices and the drawings and photographs that locate and illustrate each item under discussion.

LM 1.0.2

LM 1.0 Site Work

LM 1.0.1
Drainage Repairs: Replace both drywell and City sewer connections. Replace piping and connect the lines to perk tank, separating from sanitary sewer line. Replace decaying sanitary sewer lines and connect to City sanitary sewer line.

LM 1.0.2
Site Lighting: Provide additional site lighting at walks and parking lot, using historically-appropriate fixtures, to enhance safety and security for users.

LM 1.1 Building Exterior: Lord Mansion

LM 1.1.1
General exterior: Paint cement plaster walls, doors, window trim.

LM 1.2 Building Exterior: Coach House

LM 1.2.1
General exterior: Paint cement plaster walls, doors, window trim.

LM 1.2.2

LM 1.2.2
Roofing: Remove, clean and re-install existing tile; supplementing with new material as required. The copper dormers have recently been redone; the low slope roof areas retain their original flat-seam copper roofing. Gutters and rainwater leaders need periodic cleaning and sealing. Asbestos is present in the attic insulation of the Coach House and will need to be abated.

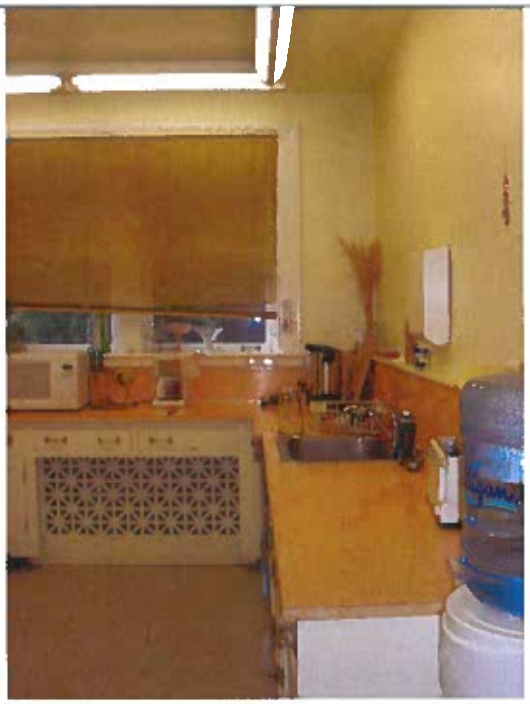
LM 1.2.3

LM 1.2.3
Windows and Doors: Restore wood windows, paint. Install gasketing and weather seals at main Coach House doors.

LM 1.3 Building Interior: Lord Mansion

LM 1.3.1
Structure: Implementation of structural upgrades as recommended by seismic/structural study. Include demolition, patching and restoration of interior finishes.

LM 1.3.2
Architectural work for office conversion: Remodel existing kitchen; provide new cabinetry and appliances. Provide historically-appropriate doors to separate public and private spaces. Remove display panels covering windows, patch walls and paint. Restore windows and trim, paint and install shades.



LM 1.3.2

LM 1.3.3

LM 1.4.4

LM 1.3.3
Finishes: Paint walls and ceilings. Provide and install new carpet, first and second floors. The presence of lead paint will require special work protocols when disturbed by renovation activities.

LM 1.4 Plumbing, Mechanical and Electrical: State Capital Museum - Lord Mansion and Coach House

LM 1.4.1
Plumbing: Replace existing kitchen sink; install dishwasher.

LM 1.4.2
Plumbing: install three radiators; use one existing.

LM 1.4.3
Fire Protection: Install sprinkler system on both floors of Lord Mansion and Coach House. Include demolition, patching and restoration of interior finishes.

LM 1.4.4
Fire Alarm: Replace fire alarm system, including panel. Include demolition, patching and restoration of interior finishes.

LM 1.4.8.1
The existing structured cabling infrastructure should be augmented with additional Category 6 cabling to support higher bandwidth applications and increased wireless coverage. Additional costs will need to be included to provide an installation that preserves the historical nature of this facility.

LM 1.4.8.2
The existing telecommunications room should be provisioned with mechanical cooling or at a minimum an exhaust fan to mitigate the heat gain within the space and allow the room to be secured behind a closed door. Based upon the limited needs for data and voice connectivity in this facility, the existing telecommunications room should not require relocation or expansion. Should the overall use of this facility be changed in the future, there may be a need to explore an enlarged space to serve as the telecommunications room.

LM 1.4.8.3
WSHS should consider deploying an enterprise class wireless solution within this facility to support staff and visitor access to digital resources. Based upon the historic nature of this facility, the installation of wiring to support wireless access may present higher than typical costs. A wireless bridge from the Mansion to the Coach House may be a cost effective solution for providing network backbone connectivity between these two separate structures.

LM 1.4.8.4
Assuming that a network based access control system is deployed to support the Museum, that investment should be leveraged to provide electronic access control at (4) doors of the Mansion. The access control and identity management for this facility should be integrated into a single platform that can be centrally managed and administered. WSHS should upgrade/ update the physical key system to enhance the overall security of the facility. WSHS should migrate to an electronic only credential system (with manual keys for emergency backup only) for normal access to the facility.

LM 1.4.8.5
The existing intrusion detection system should be replaced with a current vintage solution that provides and integration path for access control and surveillance video. The replacement intrusion detection system should utilize a system head-end and detection devices that can be monitored by different alarm management companies to avoid a single source for these services.

There does not appear to be a need for surveillance video to be implemented at this facility. Should surveillance video be required in the future, leveraging a network based solution that is integral to other WSHS facilities is recommended.

LM 1.4.9.1

LM 1.4.9.1
Electrical: Provide and install new lighting appropriate to facility use. Relocate and supplement existing receptacles. Install automatic controls.

LM 1.4.9.2
IT: Provide IT backbone and conduit.

LM 1.5 Data and Communications – Coach House

LM 1.5.1
New pathway (conduit) should be established between the Lord Mansion and the Coach House and structured cabling required for wireless and/or data connections should be routed to the telecommunications room in the Lord Mansion. This approach assumes that approximately (8) new additional cable runs will be required to support the facility. Based upon the size and typical use of this facility, the adjacency of the Lord Mansion, and the historic nature of this facility, a complete structured cabling system with a dedicated telecommunications room is not recommended.

LM 1.5.2.1
Provide Category 6 cabling, raceway and panels.

LM 1.5.2.2
Establish new conduit pathway from Mansion.

LM 1.5.2.3
WSHS should deploy an enterprise class wireless solution within this facility to support staff and visitor access to digital resources. Based upon the historic nature of this facility, the installation of wiring to support wireless access may present higher than typical costs. Based upon the size and use of this facility, (2) wireless access points should be sufficient to provide dense coverage throughout the coach house.

LM 1.6 Inspections, Assessments & Studies

LM 1.6.1
Architectural assessment report: updating costs and completed items; site inspections and recommendations.

LM 1.6.2
Roof Inspection: inspection of tiled roof areas every four years, including cleaning of low-slope roof areas.

LM 1.6.3
Planning: Develop phased plan for continuing seismic upgrade of Lord Mansion.

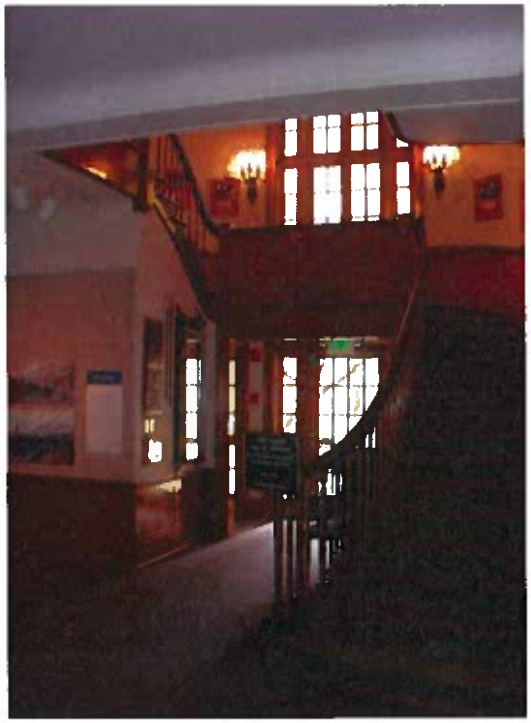
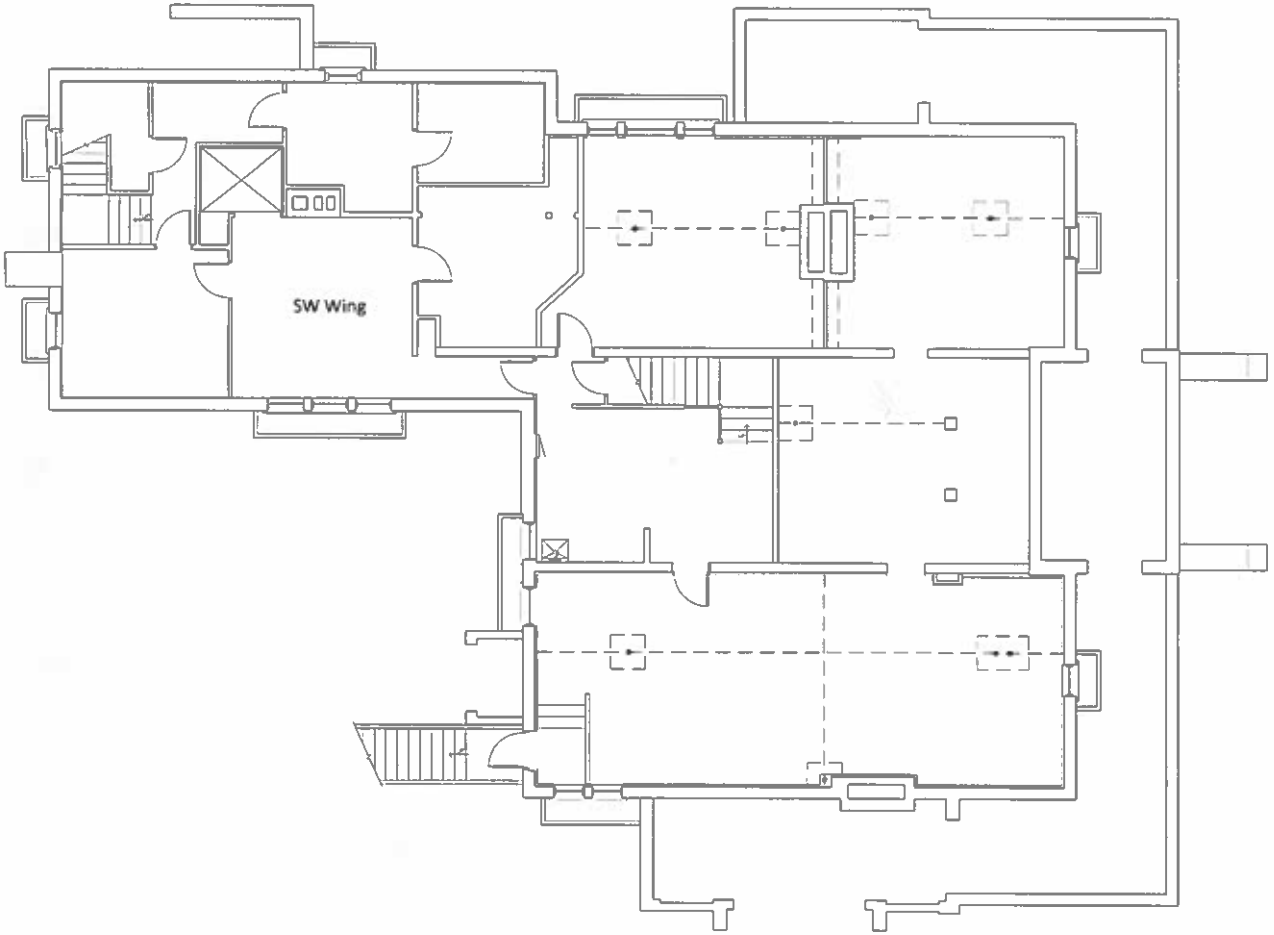


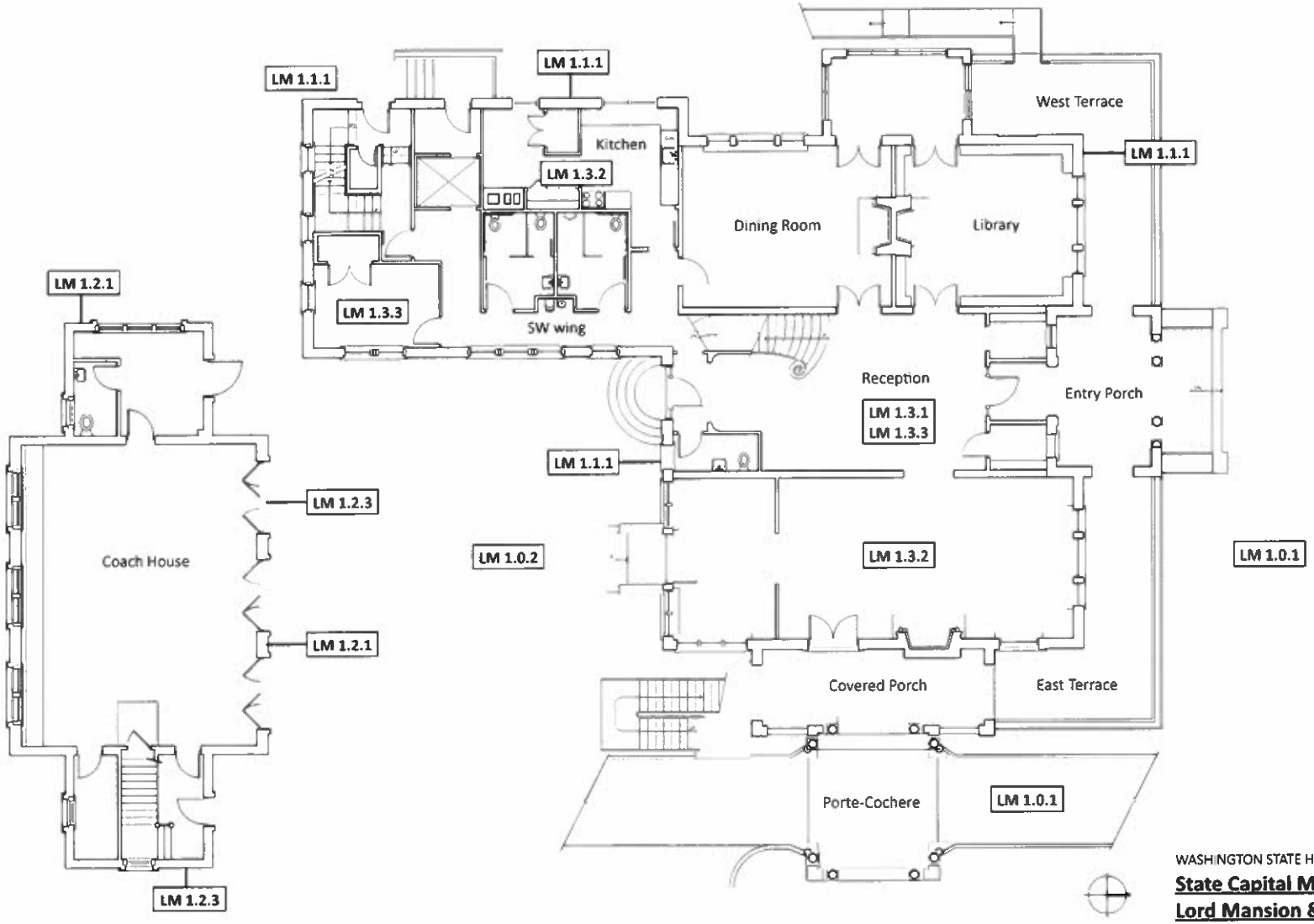
FIGURE LM 1



WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum
Lord Mansion & Coach House
Basement Floor Plan

FIGURE LM 2



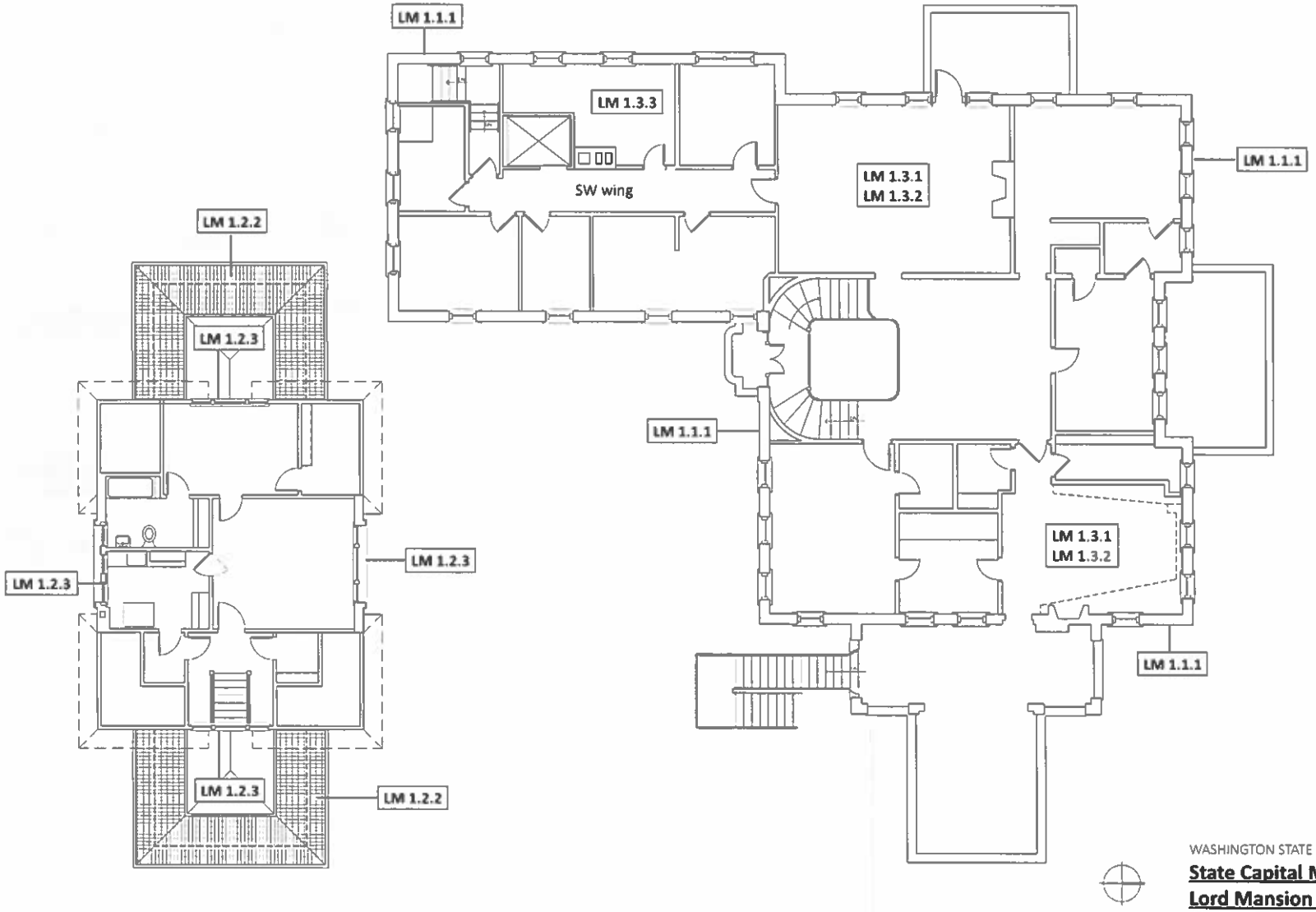
WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum

Lord Mansion & Coach House

First Floor Plan

FIGURE LM 3



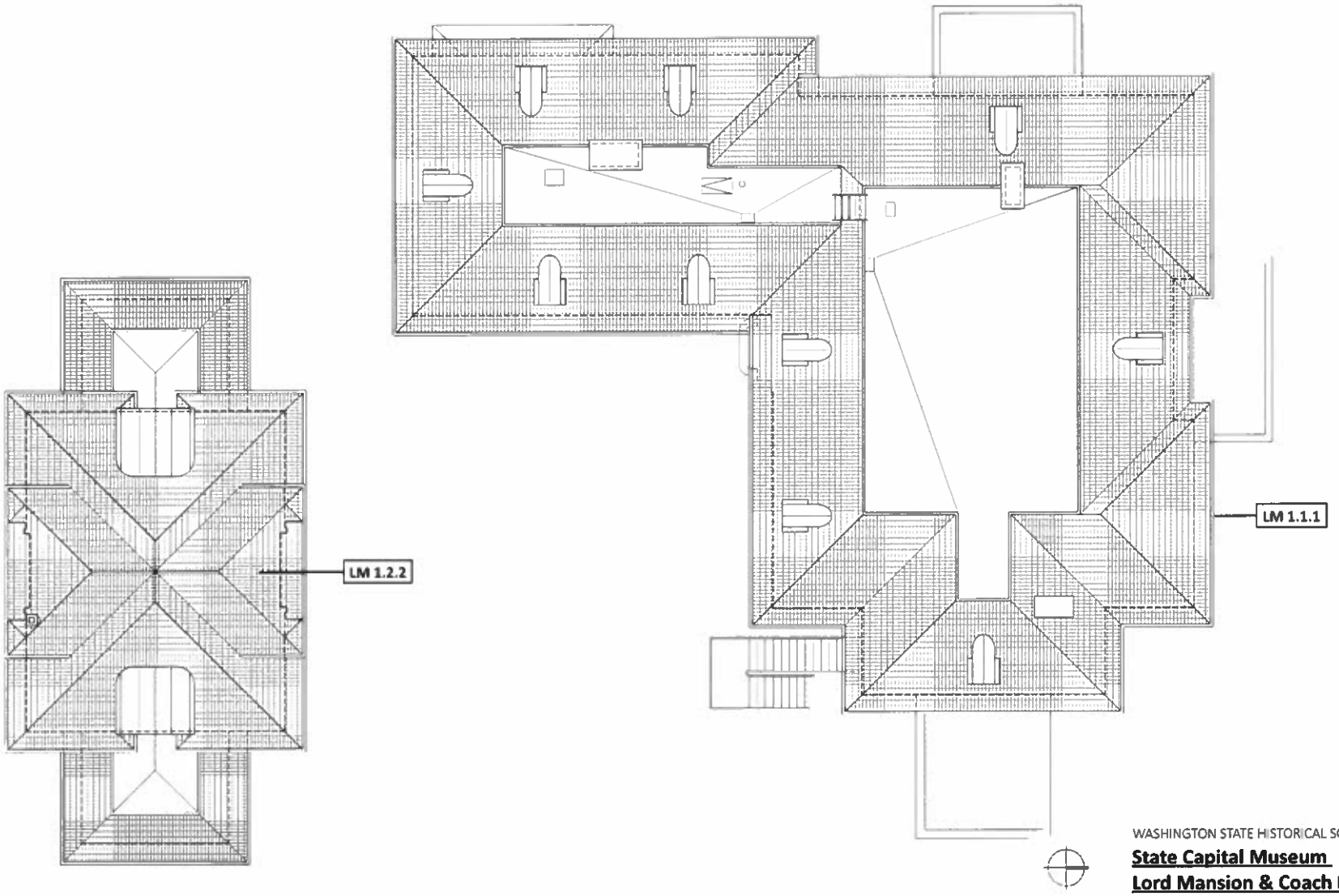
WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum

Lord Mansion & Coach House

Second Floor Plan

FIGURE LM 4



WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum

Lord Mansion & Coach House

Roof Plan

WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum - Lord Mansion and Coach House

211 21st Avenue Southwest, Olympia, WA
UFI #A02063

Project Team: Buffalo Design/Project Delivery Analysts LLC
State Project No. 2014-210A

10-Year Architectural Needs Assessment SUMMARY Matrix 2015 - 2025

ITEM #	Item / Location	Description	Biennium 2015 - 2017	Biennium 2017 - 2019	Biennium 2019 - 2021	Biennium 2021 - 2023	Biennium 2023-2025
	SUMMARY	**All work, by Biennium - TOTALS**	**$444,958**	**$166,367**	**$497,907**	**$238,450**	**$222,350**
LM 1.0	**SITE WORK**	**Total Project Costs**	**$56,000**	**$91,000**	**$0**	**$0**	**$0**
LM 1.0.1	Site Repairs - Drainage	Replace drywell drainage connection to City stormwater. Replace sanitary sewer line from house to city connection. Replace 80 year old underground drain lines as required. Replace damaged cover grates at area wells as needed.		$65,000			
LM 1.0.2	Site Lighting	Provide additional site lighting for walks and parking lot.	$40,000				
		Construction Subtotals	**$40,000**	**$65,000**	**$0**	**$0**	**$0**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$16,000	$26,000	$0	$0	$0
		Sitework Totals	$56,000	$91,000	$0	$0	$0
LM 1.1	**BUILDING EXTERIOR - HISTORIC LORD MANSION**	**Total Project Costs**	**$0**	**$0**	**$84,000**	**$0**	**$0**
LM 1.1.1	General Exterior	Paint exterior walls, doors, windows and trim.			$60,000		
		Construction Subtotals	**$0**	**$0**	**$60,000**	**$0**	**$0**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$0	$0	$24,000	$0	$0
		Historic Lord Mansion Exterior Totals	$0	$0	$84,000	$0	$0
LM 1.2	**BUILDING EXTERIOR - COACH HOUSE**	**Total Project Costs**	**$0**	**$0**	**$136,436**	**$0**	**$0**
LM 1.2.1	General Exterior	Paint exterior walls, doors and trim			$11,790		
LM 1.2.2	Roofing	Relay tile roof and replace underlayment, flashings and accessories			$75,000		
LM 1.2.3	Weather seal doors, Restore & Refinish Windows	Restore wood windows and paint. Provide gaskets and weather seal at Garage doors.			$9,950		
		Construction Subtotals	**$0**	**$0**	**$96,740**	**$0**	**$0**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$0	$0	$38,696	$0	$0
		Coach House Exterior Totals	$0	$0	$135,436	$0	$0
LM 1.1 & LM 1.2	**BUILDING EXTERIORS FOR BOTH HISTORIC LORD MANSION AND COACH HOUSE**	**Total Project Costs**	**$0**	**$0**	**$219,436**	**$0**	**$0**
LM 1.3	**BUILDING INTERIOR - HISTORIC LORD MANSION**	**Total Project Costs**	**$156,247**	**$0**	**$210,000**	**$210,000**	**$210,000**
LM 1.3.1	Structure	Structural Upgrade, after Seismic / Struct. Study			$150,000	$150,000	$150,000
LM 1.3.2	Architectural work to convert the use of the Lord Mansion to offices.	Remodel existing kitchen. Remove display panels covering walls and windows in office areas. Install historically accurate doors to separate public areas from offices. Provide Lighting and HVAC as shown in respective breakdowns	$77,720				

WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum - Lord Mansion and Coach House

211 21st Avenue Southwest, Olympia, WA
UFI #A02063

Project Team: Buffalo Design/Project Delivery Analysts LLC
State Project No. 2014-210A

10-Year Architectural Needs Assessment SUMMARY Matrix 2015 - 2025

ITEM #	Item / Location	Description	Biennium 2015 - 2017	Biennium 2017 - 2019	Biennium 2019 - 2021	Biennium 2021 - 2023	Biennium 2023-2025
LM 1.3.3	Finishes (1st and 2nd Floors)	Replace worn carpet (present carpet is a tripping hazard), paint walls and ceilings, install new resilient flooring in kitchen	$33,885				
		Construction Cost Subtotals	**$111,605**	**$0**	**$150,000**	**$150,000**	**$150,000**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$44,642	$0	$60,000	$60,000	$60,000
		Historic Lord Mansion Interior Totals	$156,247	$0	$210,000	$210,000	$210,000

LM 1.4	**PLUMBING, MECHANICAL AND ELECTRICAL - HISTORIC LORD MANSION**	**Total Project Costs**	**$159,061**	**$60,417**	**$40,761**	**$7,700**	**$0**
LM 1.4.1	Plumbing	Upgrade kitchen	$1,500				
LM 1.4.2	Plumbing	Install radiators	$7,500				
LM 1.4.3	Fire Protection	Sprinkler System, 1st & 2nd Floors and Attic.		$43,155			
		Sprinkler System, 1st & 2nd Floors Coach House			$8,015		
LM 1.4.4	Fire Alarm System	Repair deficiencies, Study/Gift Shop and Living/Annex w/finish work. Change out detectors	$32,150				
LM 1.4.8	**Telecom**						
LM 1.4.8.1	Supplement existing structured cabling	Category 6 cabling, raceways, patch panels			$12,600		
LM 1.4.8.2	Provide mechanical cooling for telecom space	HVAC split system			$8,500		
LM 1.4.8.3	Add wireless throughout	Wireless Access Points, software and installation				$5,500	
	Electronic Security						
LM 1.4.8.4	Add electronic access control	Prox based card readers, door controllers, power supplies, electric locksets, door/jamb modifications	$20,400				
LM 1.4.8.5	Replace existing intrusion detection	motion sensors, door contacts, wiring	$5,700				
LM 1.4.9	**Electrical and IT**						
LM 1.4.9.1	Electrical - Lighting, Power	Provide new lighting; relocate receptacles.	$46,365				
LM 1.4.9.2	Electrical - IT	IT backbone installation and distribution and relocation of existing system.	$0				
		Construction Cost Subtotals	**$113,615**	**$43,155**	**$29,115**	**$5,500**	**$0**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$45,446	$17,262	$11,646	$2,200	$0
		Historic Lord Mansion MEP Totals	$159,061	$60,417	$40,761	$7,700	$0
LM 1.4	**PLUMBING, MECHANICAL, ELECTRICAL AND DATA HISTORIC LORD MANSION**	**Total Project Costs**	**$159,061**	**$60,417**	**$40,761**	**$7,700**	**$0**

LM 1.5	**DATA & COMMUNICATIONS - COACH HOUSE**	**Total Project Costs**	**$48,300**	**$0**	**$16,650**	**$3,850**	**$0**
LM 1.5.1	Technology	Conduit & connections,VOIP & telecon, temporary office use. (Allowance for High speed cable connection and service) Upgrade of router room for ventilation and security	$34,500				
LM 1.5.2	**Telecom & Electronic Security**						
LM 1.5.2.1	Provide new structured cabling from Lord Mansion	Category 6 cabling, raceways, patch panels			$4,400		
LM 15.2.2	Establish new conduit pathway from mansion to coach house	Category 6 cabling, raceways, patch panels			$7,500		

WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum - Lord Mansion and Coach House

211 21st Avenue Southwest, Olympia, WA
UFI #A02063

Project Team: Buffalo Design/Project Delivery Analysts LLC
State Project No. 2014-210A

10-Year Architectural Needs Assessment SUMMARY Matrix 2015 - 2025

ITEM #	Item / Location	Description	Biennium 2015 - 2017	Biennium 2017 - 2019	Biennium 2019 - 2021	Biennium 2021 - 2023	Biennium 2023-2025
LM 1.5.2.3	Add wireless thorughout	Wireless Access Points, software and installation				$2,750	
		Construction Cost Subtotals	**$34,500**	**$0**	**$11,900**	**$2,750**	**$0**
	40%	< Soft Costs: Permits, Inspections, Design Fees, Printing, Taxes, and Project Management.	$13,800	$0	$4,760	$1,100	$0
		Coach House IT Totals	**$48,300**	**$0**	**$16,660**	**$3,850**	**$0**
LM 1.5	**ELECTRICAL AND DATA COACH HOUSE**	**Total Project Costs**	**$48,300**	**$0**	**$16,660**	**$3,850**	**$0**

LM 1.6	**INSPECTIONS, ASSESSMENTS & STUDIES**	**Total Project Costs**	**$25,350**	**$14,950**	**$11,050**	**$16,900**	**$12,350**
LM 1.6.1	Assessment	Architectural Assessment & Pres. Report, ea. Biennium	$7,500	$8,000	$8,500	$9,000	$9,500
LM 1.6.2	Inspection	Periodic Roof inspections (4 year intervals)		$3,500		$4,000	
LM 1.6.3	Planning	Structural Engineer / Architect / Cost Estimator	$12,000				
		Assessment Subtotals	**$19,500**	**$11,500**	**$8,500**	**$13,000**	**$9,500**
	30%	Soft Costs: Printing & Project Management	$5,850	$3,450	$2,550	$3,900	$2,850
		Assessment Totals	$25,350	$14,950	$11,050	$16,900	$12,350

		GRAND TOTAL	$444,958	$166,367	$497,907	$238,450	$222,350

WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum - Lord Mansion and Coach House

211 21st Avenue Southwest, Olympia, WA
UFI #A02063

Project Team: Buffalo Design/Project Delivery Analysts LLC
State Project No. 2014-210A

Back-up Detail Matrix

Item	Item/Location	Item Components	Scope of Item / Notes	Quantity	Unit Cost	Sub-total	Total Const. Cost
			GRAND TOTAL CONSTRUCTION COST (no soft costs included)				**$1,141,121**
LM 1.0	**SITE WORK**						**$105,000**
LM 1.0.1	Site repairs - Drainage	Replace drywell drainage connection to City storm water. Replace sanitary sewer line from house to city connection. Replace 80 year old underground drain lines as required. Replace damaged cover grates at area wells as needed.					**$65,000**
			There are two storm sewer connections on site: one to a drywell and one to City Sewer. Both are at the end of their useful lives. Replace storm drain piping. Connect both lines together on one perk tank to recharge ground water with overflow drawing to City Storm sewer.	1 ls	$35,000	$35,000	
			Replace existing decayed sanitary sewer line with new lines from the Coach House and the Mansion. Connect new line to exist cast iron pipe at two locations and rout to the City sanitary sewer on Columbia St. Disconnect all storm lines from this line and rout to the storm drain perk tank.	1 ls	$30,000	$30,000	
LM 1.0.8	Site Lighting	Provide additional site lighting for public to access on walks and from parking lot.					**$40,000**
			Existing exterior lighting is inadequate to provide security and illumination for staff and visitors, particularly in the late winter days and evenings when daylight is minimal. Provide additional lighting on walks and parking areas to the North east south and west on site. The lighting will need to be historically appropriate lamp posts. - 10 units	10 ea	$4,000	$40,000	
	Subtotal	SITEWORK - TOTAL CONSTRUCTION COST					**$105,000**
LM 1.1	**BUILDING EXTERIOR - HISTORIC LORD MANSION**						**$60,000**
LM 1.1.1	General Exterior	Paint exterior walls, doors, windows and trim.	Periodic painting of exterior stucco walls, painted doors trim and window sash and frames, refurbishment of stained/varnished exterior doors.				**$60,000**
			Paint Mansion exterior walls and soffit.	1 ls	$30,000	$30,000	
			Paint and stain of exterior doors and trim	1 ls	$15,000	$15,000	
			Paint exterior windows frames, mullions and trim	1 ls	$15,000	$15,000	
	Subtotal	BUILDING EXTERIOR - HISTORIC LORD MANSION TOTAL CONSTRUCTION COST					**$60,000**

WASHINGTON STATE HISTORICAL SOCIETY

State Capital Museum - Lord Mansion and Coach House

211 21st Avenue Southwest, Olympia, WA
UFI #A02063

Project Team: Buffalo Design/Project Delivery Analysts LLC
State Project No. 2014-210A

Back-up Detail Matrix

Item	Item/Location	Item Components	Scope of Item / Notes	Quantity	Unit Cost	Sub-total	Total Const. Cost
LM 1.2	**BUILDING EXTERIOR - COACH HOUSE**						**$96,740**
LM 1.2.1	General Exterior						**$11,790**
		Paint exterior walls, doors and trim	Preservation of the Coach House requires periodic painting of the exterior stucco and soffits.	1 ls	$11,790	$11,790	
LM 1.2.2	Roofing	Complete tile roof replacement					**$75,000**
			Complete removal, cleaning and reinstallation of approximately 1,700 s.f. Ludowici tile roofs. Assume 20% new material. Replace accessories and flashing.	1 ls	$75,000	$75,000	
LM 1.2.3	Weather seal doors, Restore & Refinish Windows						**$9,950**
		Restore wood windows and paint. Provide gaskets and weather seal at Garage doors.	Wood windows on the Coach House must be preserved through periodic painting and replacement of caulk, repairs to glazing, hardware and sash members. The exterior doors, which are designed to emulate the original wood garage door of the Coach House, allow air and minor water leaks, and should be fitted with gaskets. This work will help address heat loss and infiltration.	1 ls	$9,950	$9,950	
		BUILDING EXTERIOR - COACH HOUSE TOTAL CONSTRUCTION COST					**$96,740**

LM 1.3	**BUILDING INTERIOR - HISTORIC LORD MANSION**						**$579,346**
LM 1.3.1	Structure	Structural Upgrade, after Seismic / Struct. Study	To be accomplished in three phases in separate biennniums				
		placeholder	Structural Upgrade in SW wing	1 ls	$150,000	$150,000	**$150,000**
		placeholder	Structural Upgrade in main house, 1st floor	1 ls	$150,000	$150,000	**$150,000**
		placeholder	Structural Upgrade in main house, 2nd floor	1 ls	$150,000	$150,000	**$150,000**
LM 1.3.2	Architectural work to convert the use of the Lord Mansion to offices.	Remodel existing kitchen. Remove display panels covering walls and windows in office areas. Install historically accurate doors to separate public areas from offices. Provide Lighting and HVAC as shown in respective breakdowns					**$77,720**
			Selective demolition; including removal of flooring and base, patching and repair of walls and removal of kitchen cabinetry. Include removal/hauling	1 ls	$15,470	$15,470	
			Provide and install historically appropriate doors to secure office areas; include hardware	3 ea	$3,000	$9,000	
			Installation of kitchen cabinets and solid surface countertop.	23 lf	$300	$6,900	
			Provide new dishwasher and refrigerator	1 ls	$2,000	$2,000	
			Restore existing exterior windows, repair millwork.	2,340 sf	$15	$35,100	
			Provide and install window shades, 1st and 2nd floors.	37 ea	$250	$9,250	

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Back-up Detail Matrix

Item	Item/Location	Item Components	Scope of Item / Notes	Quantity	Unit Cost	Sub-total	Total Const. Cost
LM 1.3.3	Finishes	Paint walls, ceiling, floor, kitchen cabinetry. Replace carpets / rugs. 1st and 2nd floors. Install resilient flooring and base in kitchen					$33,885
			Restore and paint walls and ceilings on the 1st floor (excluding the S.W. wing).	5,175 sf	$2.50	$12,938	
			Restore and paint walls and ceilings on the 2nd floor (excluding the S.W. wing).	8,179 sf	$2.50	$20,448	
			Paint kitchen cabinetry	1 ls	$500.00	$500	
		Provide and install new carpet, both floors. Move oriental rug from living room to dining room.					$17,741
			Carpet - 1st floor	2,073 sf	$3.50	$7,256	
			Carpet - 2nd floor	2,647 sf	$3.50	$9,265	
			Install resilient flooring in kichen	268 sf	$4	$1,072	
			Install resilient base in kitchen	85 lf	$1.75	$149	
	Subtotal	BUILDING INTERIOR - LORD MANSION TOTAL CONSTRUCTION COST					$579,346
LM 1.4	**PLUMBING, MECHANICAL & ELECTRICAL**						**$191,385**
	Plumbing and Mechanical						**$92,320**
LM 1.4.1	Plumbing	Upgrade kitchen	Replace existing sink, connect dishwasher	1 ls	$1,500	$1,500	
LM 1.4.2	Plumbing	Install radiators		1 ls		$0	
			One radiator is in storage; supply historically accurate units	3 3	$2,500	$7,500	
LM 1.4.5	Fire Protection	Sprinkler System, 1st & 2nd Floors and Attic.					
			1st floor (4,230 S.F.)	4,230 sf	$3.50	$14,805	
			2nd floor (4,050 S.F.) and attic (4,050 S.F.).	8,100 sf	$3.50	$28,350	
		Sprinkler System, Coach House	1st and 2nd Floors	2,290 sf	$3.50	$8,015	
LM 1.4.6	Fire Alarm System	Repair deficiencies, Study/Gift Shop and Living/Annex w/finish work.					
			Replace complete fire alarm system including panel. Conceal all wires above ceiling and in walls. Make system addressable	1 ls	$5,850	$5,850	
			Repair finishes as needed to match existing.	1 ls	$11,000	$11,000	
			Change out heat detectors to smoke detectors	45 ea	$340	$15,300	
LM 1.4.8	**Telecom**						**$26,600**
LM 1.4.8.1	Supplement existing structured cabling	Category 6 cabling, raceways, patch panels		24 ea	$525	$12,600	
LM 1.4.8.2	Provide mechanical cooling for telecom space	HVAC split system	VE options possible for exhaust fan only.	1 ls	$8,500	$8,500	
LM 1.4.8.3	Add wireless thorughout	Wireless Access Points, software and installation	Intergate with existing controller.	4 ea	$1,375	$5,500	
	Electronic Security						**$26,100**
LM 1.4.8.4	Add electronic access control	Prox based card readers, door controllers, power supplies, electric locksets, door/jamb modifications	Integrate with system at museum, historic preservation.	4 ea	$5,100	$20,400	
LM 1.4.8.5	Replace existing intrusion detection	motion sensors, door contacts, wiring	avoid single source.	1 ls	$5,700	$5,700	

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Back-up Detail Matrix

Item	Item/Location	Item Components	Scope of Item / Notes	Quantity	Unit Cost	Sub-total	Total Const. Cost
LM 1.4.9	**Electrical and IT**						$46,385
LM 1.4.9.1	Electrical	Lighting and Power	Install new lighting	1 ls	$5,000	$5,000	
			Relocate/add receptacles	1 ls	$10,000	$10,000	
			Install automatic controls for all areas in accordance with the Washington State Energy Code.	45 ea	$97	$4,365	
LM 1.4.9.2	IT	IT backbone installation and distribution and relocation of existing system.	Provide IT backbone and conduit raceways to allow for expansion of the system while areas are open for conduit installation.	1 ls	$27,000	$27,000	
		PLUMBING, MECH. & ELEC. - LORD MANSION TOTAL CONSTRUCTION COST					$191,385
LM 1.5	**DATA & COMMUNICATIONS - COACH HOUSE**						$34,500
LM 1.5.1	Technology	Exterior pathway, conduit & connections,VOIP & telecon, System Upgrade	Provide connectivity to Mansion with conduit for IT and phone. Conduit to be terminated in the existing IT cabinets. Provide conduit and connectivity cable from outlets into Coach House cabinet and link to Mansion IT room. Include trenching.	1 ls	$7,500	$7,500	
			Lord Mansion renovation to provide a proper location for the router, racks, panels and wiring. It will need ventilation / air conditioning and a locked room.	1 ls	$27,000	$27,000	
LM 1.5.2	**Technology & Electronic Security**						$14,650
LM 1.5.2.1	Provide new structured cabling from Lord Mansion	Category 6 cabling, raceways, patch panels	Coach House.	8 ea	$550	$4,400	
LM 1.5.2.2	Establish new wiring and connection from mansion to coach house	Category 6 cabling, raceways, patch panels	Coach House interior.	1 ls	$7,500	$7,500	
LM 1.5.2.3	Add wireless thorughout	Wireless Access Points, software and installation	Integrate with existing controller.	2 ea	$1,375	$2,750	
		DATA AND COMMUNICATIONS COACH HOUSE TOTAL CONSTRUCTION COST					$49,150
LM 1.6	**INSPECTIONS, ASSESSMENTS AND STUDIES**						$59,500
LM 1.6.1	Assessment	Architectural Assessment & Pres. Report, ea. Biennium					
			Update the Biennium budget 2015-2017	1 ls	$7,000	$7,000	$7,000
			Update the Biennium budget 2017-2019	1 ls	$7,500	$7,500	$7,500
			Update the Biennium budget 2019-2021	1 ls	$8,000	$8,000	$8,000
			Update the Biennium budget 2021-2023	1 ls	$8,500	$8,500	$8,500
			Update the Biennium budget 2023-2025	1 ls	$9,000	$9,000	$9,000
LM 1.6.2	Inspection	Periodic Roof inspections (4 year intervals)					
			Roof inspection 2017-2019	1 ls	$3,500	$3,500	$3,500
			Roof inspection 2021-2023	1 ls	$4,000	$4,000	$4,000

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Back-up Detail Matrix

Item	Item/Location	Item Components	Scope of Item / Notes	Quantity	Unit Cost	Sub-total	Total Const. Cost
LM 1.6.3	Planning	Structural Engineer / Architect / Cost Estimator	Develop Preliminary Plan and Cost Estimate for implementing a three-phase seismic upgrade. Using previously accomplished seismic work as a starting point, develop a plan for seismic upgrade that would begin with phase 1, Southwest wing; continue with phase 2, Main House, first floor; conclude with Main House, second floor and attic.	1 ls	$12,000	$12,000	$12,000
		INSPECTIONS, ASSESSMENTS, STUDIES TOTAL					$59,500

		GRAND TOTAL CONSTRUCTION COST					$1,141,121

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Structural Evaluation

Lord Mansion
Washington State Capital Museum
November 2010

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STRUCTURAL EVALUATION FOR
LORD MANSION – WASHINGTON STATE CAPITAL MUSEUM
OLYMPIA, WA

November 22, 2010

INTRODUCTION

The Lord Mansion is being evaluated in accordance with the ASCE31-03 "Seismic Evaluation of Existing Buildings." This evaluation is intended to assist with planning for future rehabilitation projects.

SCOPE OF WORK

Initial Review of Construction Drawings

- Through review of the available drawings, identify the vertical and lateral load path for each portion of the building.
- Completed the ASCE 31-03 "Seismic Evaluation of Existing Buildings" Structural and Non-Structural Checklists.
- Statements requiring testing (as noted below) and field verification were performed or assumptions made based on visual observations and past rehabilitation experience.

Field Investigation

- Walk through each portion of the Lord Mansion looking for signs of structural distress, differential settlement or deterioration.
- Verify vertical and lateral systems identified on the original construction drawings.

- Review of structural concerns identified with ASCE 31-03 Checklists.
- View structure where exposed.
- Selective demolition at in-plane shear test locations.

Field Testing

- In place shear test of existing structural unreinforced masonry walls, to help estimate shear capacity.
- Coordinated locations for the testing and assisted both the testing agency and mason in preparing the test.

Structural Analysis

- Assess live load capacity of the main floor structure.
- Seismic analysis of global lateral resisting system. Our analysis consisted of the initial quick check procedure and a more detailed tier 2 analysis of each major component.

Conceptualize Recommended Structural Upgrade Work

- Brain stormed potential seismic upgrade work to mitigate the structural concerns of the ASCE 31-03 evaluation and results of the live load assessment.
- Discussed with the owner and architect to strategize phases and potential partial rehabilitation options to minimize disruption of the historic fabric of the building.
- With the basement ceiling being open at this time work that can be done at this time has been identified.

Report Preparation and Further Construction Drawing Review

- Structural Report:
  - Describe vertical and lateral load resisting system for each portion of the building.
  - Visual observations of building condition, signs of structural distress, earthquake damage and differential settlement.
  - Identify structural concerns. Concerns are itemized in order of importance.
  - Summary of structural recommendations for a Life-Safety Performance Level.
  - Conceptual plans of potential seismic upgrade work.

Cost Estimate

- Coordinate solutions with a Cost Estimator to determine the approximate cost of implementing the strengthening scheme.

STRUCTURAL EVALUATION FOR
LORD MANSION – WASHINGTON STATE CAPITAL MUSEUM
OLYMPIA, WA

November 22, 2010

METHODOLOGY

Evaluation:

The Lord Mansion was evaluated using ASCE 31-03 "Seismic Evaluation of Existing Buildings" tier 1 evaluation with full tier 2 analysis utilizing a Life/Safety Performance level. The ASCE 31-03 document provides building checklists that identify commons seismic concerns for common building types (i.e. Unreinforced Masonry Bearing Wall Buildings with Flexible Diaphragms). Each question on the checklist may be answered by "compliant" or "non compliant" or "not applicable". For those items that do not conform additional evaluation or mitigation of the structural concern is recommended. Building Checklist is found in Appendix A.

The ASCE 31-03 is a performance based design/evaluation manual. The two performance levels addressed are "Life/Safety" and "Immediate Occupancy". The "Life/Safety" performance level is the basis of this evaluation and is focused on protecting the occupants of the building. In the event of a major earthquake the building may suffer moderate damage with a margin against collapse or partial collapse and may possibly be unusable after an earthquake with low overall risk of injury from the structural damage.

"Immediate Occupancy" is a higher level performance focused on the building being functional after an earthquake. Light damage is anticipated in the event of a major earthquake maintaining the original structural margin. Fire Stations, Hospitals, Police Stations are buildings that are designed for "Immediate Occupancy".

There are three tiers of evaluations using the ASCE 31-03 document. Tier 1 is a screening process utilizing Building Checklists to help identify common structural deficiencies for typical buildings types and Quick Check calculations for specific structural elements. Tier 2 is an evaluation process utilizing a special procedure analysis for URM buildings. The owner/designer has the option of mitigating the structural concern identified by Tier 1 and Tier 2 or performing the more detailed analysis outlined in Tier 3 (not included in this evaluation).

The Quick Check procedures used for Tier 1 weighs each building, determines pseudo seismic forces and ultimately checks them against the calculated strength or stiffness of building components to determine whether they are in compliance with the evaluation criteria. The evaluation procedures of Tier 2 are a more detailed structural analysis than tier 1 quick check procedures. A tier 2 is used to assess deficiencies identified by tier 1 procedures. Calculations for Quick Check procedures and tier 2 analyses are found in Appendixes B and C, respectively.

A limited non-structural checklist was used and was limited to addressing unreinforced masonry partitions, exterior veneers, stair construction, parapets and appendages. Evaluation of other non-structural components such as ceilings, partitions, lights, mechanical piping and equipment are beyond the scope of this evaluation. In renovated or modernized buildings these non-structural components are commonly removed and replaced.

Structural Recommendations:

Recommendations provided are based on past experience in renovating similar structures in the Puget Sound region. The recommendations are based on an ASCE 31-03 rehabilitation and are similar to those required for the International Existing Building Code (IEBC).

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STRUCTURAL EVALUATION FOR
LORD MANSION – WASHINGTON STATE CAPITAL MUSEUM
OLYMPIA, WA

November 22, 2010

EXECUTIVE SUMMARY

The Lord Mansion, currently know as the Washington State Capital Museum, was originally constructed in 1923. The original construction documents were available for our review, but only some renovation drawings were available. Overall, the structural concerns noted are common for the structure's age and type of construction. From a gravity load standpoint, the structure appears to have performed well over the years. We did not observe significant signs of structural distress or differential settlement. The majority of the structural concerns identified relate to the building's global lateral resisting system and details of construction not consistent with current seismic detailing.

Building codes and construction methods have changed over the years incorporating lessons learned from past experience in relation to vertical and lateral (wind and seismic) design. The current state of the art in structural design is focused on performance based design. A Life/Safety seismic performance objective level has been used in determining the recommended structural upgrades. This level of performance addresses the life/safety of the building occupants. The structural concerns deal with the potential for partial or total collapse of the building systems and/or components.

The recommendations provided are intended to preserve the safety of the building occupants, and limit the potential for loss of life due to structural failure. They are consistent with currently accepted rehabilitation methods, and while not intended to bring the buildings into full compliance with current building codes, they should greatly improve the structural performance of the building. Even with the structural improvements the building may still have the potential to be heavily damaged, and be left in a condition that renders the building non-occupiable in a post-earthquake scenario.

It is our understanding that the proposed recommendations may be implemented over a period of up to 10 years. Costs due to finishes may be reduced if structural work is accomplished in as few phases as possible in a given area. Also, increased costs may occur if structural work performed in early phases is re-worked in future phases. Depending on the options pursued by the owner, intermediate steps can be taken to seismically upgrade the structure in phases. If structural work is to be phased, structural concerns which lack a load path, or have a severely weak load path should be considered a higher priority than those with a load path (although may it be an inadequate load path) or those non-structural in nature. Structural concerns including masonry wall anchorage and the global lateral force resisting system should be considered high priority concerns.

Below is a brief summary of the structural concerns noted relating to the life/safety of the building's occupants.

- **Masonry Wall Anchorage**: Without proper anchorage to the roof and floor structure, masonry walls are subject to separation from the building under moderate to severe wind or seismic loading. This may result in partial collapse of the walls, as well as any supported structure. The anchorage of masonry to roof and floor framing against out-of-plane wind and seismic forces has historically been a common deficiency. Code

provisions were first introduced in 1973 to address this deficiency. This has been noted as a deficient condition in buildings constructed as recently as the early 1990's. Current code requirements have been increased substantially in the past years to minimize this condition.

- **Diaphragms Connections/Capacity**: In many cases older buildings lack proper connection between shear wall elements and floor/roof diaphragms to transfer required lateral forces. This condition limits the overall capacity of the building to resist lateral forces, leaving the building susceptible to heavy damage and possible partial collapse under severe wind and seismic loading conditions.
- **Shear Wall/Lateral Resisting Upgrade**: The structure does not appear to have adequate lengths of shear wall and with the current building configuration there are strategic wall locations that are missing. Masonry shear walls are anticipated to be overstressed due to their limited capacity and lack of ductility when used as lateral load resisting elements.
- **Unreinforced Masonry Walls**: Without vertical steel reinforcing, masonry walls are susceptible to significant damage and possible collapse under moderate to severe seismic loading conditions.
- **Unreinforced Masonry Chimneys**: Without vertical steel reinforcing, tall/narrow masonry chimneys are susceptible to significant damage and possible collapse under moderate to severe seismic loading conditions. Also, lack of anchorage to the floor and roof framing, creates potential for damage to the chimney and/or framing under moderate to severe seismic loading conditions. Collapse of chimneys poses a threat to the safety of individuals below, whether inside the building (if the chimney is large enough to inter the building through the roof framing) or adjacent to the building near the chimney at the time of collapse.

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STRUCTURAL EVALUATION FOR
LORD MANSION – WASHINGTON STATE CAPITAL MUSEUM
OLYMPIA, WA

November 22, 2010

Summary Table
(In Order of Importance)

Item	Structural Concern	Demand/Capacity Ratio[1]	Recommendation
1	**Masonry Wall Anchorage**	Not Present	Anchor walls at floors and attic levels.
2	**Global Lateral Force Resisting System**	Up to 8.7 Average 2.26	Add plywood to interior stud walls in strategic locations.
3	**Collectors/Diaphragm Openings/Reentrant Corners**	Not Present	Add plywood to interior stud walls in strategic locations along with strapping at joists to replace need for collectors.
4	**URM Parapet Bracing**	H/T of 3.5 vs. 1.5	Anchor parapets to the floor framing.
5	**Canopy Anchorage**	Not Present	Anchor the canopies to the main floor framing.
6	**Chimney Anchorage**	Not Present	Anchor the chimneys to the floor and attic levels.
7	**Chimney Bracing**	H/T of 2.4 vs. 2.0	Brace the chimney from the top of the chimney down to the roof structure.
8	**Cladding Anchors**	Not Present	Anchor precast elements to the wall.

1 See evaluation section D for more details Demand/Capacity Ratio descriptions.

STRUCTURAL EVALUATION

A. TYPE OF CONSTRUCTION/STRUCTURAL SYSTEM

The Lord Mansion is a two story structure originally constructed in 1923, with seismic repairs made to the porte-cochere in 2002 and an elevator renovation at an unknown date. Drawings available for our review were from the 1923 original construction and the 2002 seismic repairs.

Vertical Load Resisting System: Concrete spread footings foundations, slab on grade basement floor construction, interior and exterior concrete basement walls, exterior "Ideal Wall" unreinforced multi-wythe brick walls with voids between wythes at the 1st and 2nd levels, wood floor, attic and roof framing with wood floor and roof sheathing.

Lateral Force Resisting System: Interior and exterior concrete basement walls, exterior "Ideal Wall" unreinforced multi-wythe brick walls with voids between wythes at the 1st and 2nd levels, flexible wood shiplap floor, attic and roof diaphragms. The interior plaster partition walls provide a secondary lateral load path. (Removing interior nonstructural partitions would affect the seismic performance of the structure.)

B. OBSERVATIONS AND COMMENTS

We did not observe significant signs of structural distress, differential settlement or deterioration during our walk through evaluation of the building.

C. ASCE31-03 TIER 1 STRUCTURAL DEFECIENCIES

The Lord Mansion was evaluated as an Unreinforced Masonry Bearing Wall Building with Flexible Diaphragms. ASCE 31-03 checklists used include Unreinforced Masonry Bearing Walls with Flexible Diaphragms (Checklist URM) basic and supplemental, Geologic Site Hazards and Foundations Checklist, Basic Non-structural component checklist and the Intermediate nonstructural component checklist. The ASCE 31-03 checklists help to identify building details that have historically resulted in earthquake structural damage. The checklists identify each item as being "compliant", having adequate strength or detailing characteristics, or as being "non-compliant". The non-compliant statements assist in determining where further analysis is required or structural concerns that should be mitigated. The completed ASCE 31-03 Checklists are located in Appendix A. Quick check calculations for the checklists are found in Appendix B.

The following is a summary of the non-compliant ASCE 31-03 Checklist statements.

BASIC STRUCTURAL CHECKLIST

LATERAL FORCE RESISTING SYSTEM
- Shear Stress Check

CONNECTIONS
- Wall Anchorage (out-of-plane anchorage)
- Transfer to Shear Walls (in-plane load transfer)
- Girder/Column Connection

SUPPLEMENTAL STRUCTURAL CHECKLIST

LATERAL FORCE RESISTING SYSTEM
- Proportions (height to thickness ratio)

DIAPHRAGMS
- Openings Adjacent to Shear Walls
- Openings Adjacent to Exterior Masonry Shear Walls
- Straight Sheathing
- Spans

BASIC NONSTRUCTURAL COMPONENT CHECKLIST

CLADDING AND GLAZING
- Cladding anchors

PARAPETS, CORNICES, ORNAMENTATION, AND APPENDAGES
- URM Parapets
- Canopies (Porches & Porte Cochere)

MASONRY CHIMNEYS
- URM Chimneys (Bracing of tall/narrow chimney)

INTERMEDIATE NONSTRUCTURAL COMPONENT CHECKLIST

MASONRY CHIMNEYS
- Anchorage

D. ASCE 31-03 TIER 2 SUMMARY

A full tier 2 analysis was performed per ASCE31-03. A tier 2 analysis is a more comprehensive analysis requiring more calculations noting the required demand and corresponding capacities. Many times a demand in excess of the capacity is allowed, while other calculations require demand less than the capacity.

The following is a summary of the tier 2 analysis. Tier 2 calculations are located in appendix C.

- **In-Place Mortar Tests**
  - 6 tests were performed in various locations throughout the building.
  - Mortar shear test values range from 46psi to 74psi
  - Mortar shear strength, 48psi, is the shear value exceeded by 80% of all the test values and used in our analysis.
- **Masonry Shear Strength**
  - Shear strength capacities vary from 29psi to 30psi at the upper story, and 39psi to 53psi at the lower story.
- **Diaphragm Shear Strength**
  - All DCRs with the corresponding diaphragm widths correlate to regions 2 or 3 per figure 4-1.
  - Roof level
    - E-W Direction: DCR=3.3 – Region 2: **OK**
    - N-S Direction: DCR=2.2 – Region 3: **OK**
  - Attic Level
    - E-W Direction: DCR=2.6 – Region 3: **OK**
    - N-S Direction: DCR=1.4 – Region 3: **OK**
  - 2nd Floor Level
    - E-W Direction: DCR=1.6 – Region 3: **OK**
    - N-S Direction: DCR=0.9 – Region 3: **OK**
- **Diaphragm Chords and Collectors**
  - Diaphragm flexure is not considered, diaphragm chords need not be present.
  - Collectors are required where walls do not extend the full length of the diaphragm. Collectors are not shown in the existing drawings. **NG**
- **Diaphragm Openings**
  - DCRs range from 1.1 to 3.5 at the first level and 0.9 to 2.0 at the second level. All DCRs with the corresponding diaphragms widths correlate to regions 2 or 3 per figure 4-1: **OK**.
- **Diaphragm Shear Transfer**
  - No shear transfer between the diaphragm and the shear walls is detailed in the existing drawings. **NG**
- **Wall Out-of-Plane Demands**
  - Allowable h/t ratios per table 4-4 are 9 for the top story and 15 for the lower story.
  - Walls are 12" thick at the upper story and 14" thick at the lower story.
  - Wall height at the upper story are 8'-6" at the servant's quarters and 9'-6" for the main portion, while the lower story height are 12'-4".
  - h/t ratios are as follows
    - Upper level servant quarter
      - h/t = 8.5 – Limit 9.0: **OK**
    - Upper level main portion
      - h/t = 9.5 – Limit 9.0: **NG**
    - Lower level
      - h/t = 10.6 – Limit 15: **OK**

- **Wall Out-of-Plane Anchorage**
  - Wall anchorage is not indicated in the existing drawings. Portions of the diaphragms were exposed to view during our visit; anchors were not present at the locations observed. **NG**
- **Girder/Column Connection**
  - Connection between girder and column is not indicated in the existing drawings nor observed in the field. No tier 2 evaluation procedure is available. This condition occurs in the basement (1) time. **NG**
- **Cladding Anchorage**
  - Cladding anchors are not indicated in the existing drawings. **NG**
- **URM Parapets**
  - Parapet anchorage is not indicated in the existing drawings nor observed in the field. **NG**
- **Canopy Anchorage (Porches and Porte Cochere)**
  - Canopy anchorage is not indicated in the existing drawings. **NG**
- **URM Chimneys**
  - Chimney anchorage is not indicated in the existing drawings nor observed in the field. **NG**

- **Shear Wall Action**

Wall		Controlling Action	Ratio	Limiting Ratio 1.0
North Wall				
	2nd Level	Rocking	3.04	NG
	1st Level	Rocking	2.13	NG
South Wall				
9.5 ft portion				
	2nd Level	Rocking	3.97	NG
	1st Level	Rocking	8.72	NG
8.5 ft portion				
	2nd Level	Rocking	2.56	NG
	1st Level	Rocking	1.17	NG
East Wall				
9.5 ft portion				
	2nd Level	Rocking	1.23	NG
	1st Level	Sliding	1.29	NG
8.5 ft portion				
	2nd Level	Rocking	1.16	NG
	1st Level	Sliding	1.20	NG
West Wall				
9.5 ft portion				
	2nd Level	Rocking	1.72	NG
	1st Level	Sliding	1.50	NG
8.5 ft portion				
	2nd Level	Rocking	1.24	NG
	1st Level	Rocking	0.73	OK

3	Inadequate load path	**Collectors/Diaphragm Openings/Reentrant Corners** The reentrant corner of the building and the main stair opening, create diaphragm discontinuities, which limit the ability of the diaphragm to transfer loads to the existing shear walls. Collectors do not exist at the reentrant corner to tie the building wings together at the corner. Collectors also do not existing at the stair opening to transfer loads around this large diaphragm opening. Without collector beams or shear walls at reentrant corners and large diaphragm openings, these diaphragms are susceptible to damage in the event of a major earthquake.	Shear walls may be added at the edges of the stair opening to eliminate the need for the diaphragm to transfer loads around the stair opening. These wall locations include the east-west wall aligned with the south edge of the stair and the north-south walls aligned with the east and west edges of the stair. These walls are already included in item number 2. Other options include collectors located in each direction at the reentrant corner, as well as around the stair opening.
4	Non-structural	**URM Parapet Bracing** The unreinforced masonry parapets do not meet height to thickness ratios and are susceptible to failure in the event of a major earthquake.	Brace unreinforced masonry parapets (at canopies) to the canopy floor with steel angle braces or steel angle "L" brackets or to perpendicular walls with a horizontal steel beam at the top of the parapet.
5	Non-structural	**Canopy Anchorage** The canopies last positive anchorage to the upper floor diaphragm. Without adequate anchorage the canopies may separate from the wall in the event of a major earthquake.	Anchor the canopies to the main building floor framing with thru wall ties and straps/hardware at 4ft on center.
6	Non-structural	**Chimney Anchorage** The chimneys lack positive anchorage at the floor and roof levels. Without adequate anchorage, the chimney may pound against and cause damage to the floor/roof in the event of a major earthquake.	Anchor the chimneys to the floor/roof levels with epoxy grouted anchors and strapping/hardware to the existing framings or new blocking.

7	Non-structural	**Chimney Bracing** The unreinforced masonry chimneys do not meet height to thickness ratios and are susceptible to failure in the event of a major earthquake.	Brace the chimney with steel angle or tube/pipe members located near the top of the chimney and attached to the roof structure.
8	Non-structural	**Cladding Anchors** The precast elements at the exterior of the building potentially lack ties/anchors to the main body of the wall. Without adequate anchorage these cladding elements may separate from the wall in the event of a major earthquake.	Field verify anchorage is present in mortar joist. If not present, anchor the precast elements to the main body of the exterior walls with grouted anchors located in the mortar joint at the perimeter of the precast.

G. CONCLUSION

The structural concerns for the Lord Mansion are common for an unreinforced masonry shear wall building with wood framed diaphragms built in the 1920's. The primary structural concerns are the masonry wall anchorage, the strength of the global lateral force resisting system (and the fact that the building is fully reliant of unreinforced masonry shear walls), and the diaphragm continuity at the reentrant corner/main stair opening. The concern for the unreinforced masonry construction is that, when it begins to crack, there is no reinforcing to stop the crack from propagating, thereby leading to further damage of the wall affecting its structural integrity.

Phases should be completed in sections of the building (main house vs. servants quarters) and not broken up by level, with exception of the roof and basement work. If phasing by floor must occur, work should occur from the bottom up.

In the case of a partial rehabilitation project, the following work should occur: wall anchorage at the roof, attic and floor levels, brace URM parapets, brace and anchor chimneys. Also, the south wall of the main house, and the wall line between the main house and the servants quarters are the most critical shear wall lines for upgrades.

H. APPENDIX

PCS
Structural *Solutions*

STRUCTURAL EVALUATION FOR
LORD MANSION – WASHINGTON STATE CAPITAL MUSEUM
OLYMPIA, WA

November 22, 2010

COMMON SEISMIC TERMINOLOGY – SEISMIC PERFORMANCE GOALS

Major Earthquake: Also known as the "Design" earthquake since its criteria is used for most codes. It is an earthquake that produces ground motions (shaking) at the site under consideration that have a 10% probability of being exceeded in 50 years. A 30% of gravity (0.3g) ground acceleration would be anticipated in the Puget Sound area.

Moderate Earthquake: An earthquake that produces ground motions (shaking) at the site under consideration that have a 50% probability of being exceeded in 50 years. The 1949, 1965 and 2001 earthquakes in the Puget Sound area are classified as moderate earthquakes.

Minor Earthquake: An earthquake that produces ground motions (shaking) at the site under consideration less than a moderate earthquake and would be short in duration. The recent Richter scale 5.5 earthquakes in the Puget Sound area would be considered minor earthquakes.

Probability of Exceedence: The probability that the ground shaking level or damage level will be exceeded.

Uniform Building Code (UBC): Common building code standard for the Western United States. The UBC has been superseded by the International Building Code as the common building standard.

International Building Code (IBC): The IBC is a comprehensive set of national regulations for building systems consistent with and inclusive of the scope of existing model building codes: Uniform Building Code (UBC), Building Officials and Code Administrators (BOCA) and Southern Building Code Congress International (SBCCI). The IBC is the current nationally recognized building code and has been adopted by a majority of states and building jurisdictions. The seismic provisions vary from the 1997 UBC (Last version of the UBC). In most cases throughout the state, the seismic design forces are similar to the 1997 UBC; however, design forces as you approach the Seattle metro area are 20% to 30% higher. An importance factor of 1.25 (25% increase) has been added for most K-12 schools and higher education buildings.

Anticipated Seismic Performance of New Construction Built to Comply with the International Building Code:

1. Resist a minor level earthquake ground motion without structural or nonstructural damage.
2. Resist moderate level of earthquake ground motion without structural damage, but possibly experience some nonstructural damage.
3. Resist a major level of earthquake ground motion having an intensity equal to the strongest either experienced or forecast for the building site, without collapse, but possibly with some structural, as well as nonstructural damage.
4. Essential facilities are designed for force levels 50% greater than standard buildings. The building is intended to have minimal structural and nonstructural damage after a major earthquake. The repair of the damage that has occurred would generally not be required prior to reoccupancy, or in other words, be in an operable condition after a major earthquake. Hospitals, Police and Fire Stations are common essential facilities.
5. K-12 schools are designed for force levels 25% greater than standard buildings.

Uniform Code for Building Conservation (UCBC): Building Code Standard that addresses older buildings not constructed under current codes and specifically older unreinforced masonry buildings. The UCBC has been superseded by the International Existing Building Code

International Existing Building Code (IEBC): Building Code Standard that addresses older buildings not constructed under current codes and specifically older unreinforced masonry buildings, concrete tilt-up building, wood buildings and concrete buildings. Its provisions for rehabilitation of unreinforced masonry buildings are less stringent requirements than are demanded for new construction, and were developed considering and balancing the expense of retrofit, the value of the existing building stock and the desired reduction in seismic risk.

ASCE 31-03 – American Society of Civil Engineers, Seismic Evaluation of Existing Buildings: It identifies areas of seismic vulnerability with each common building type based on past seismic performance. It addresses life/safety and immediate occupancy performance objectives. Tier 1 analysis intended to be a screening tool to quickly identifying structural deficiencies. Tier 2 requires more rigorous analysis and used on larger buildings that don't meet tier 1 requirements. Tier 3 is even a more rigorous or detailed analysis and refers to ASCE 41-06. The criteria for unreinforced masonry bearing wall buildings are less than those for other building types in the handbook. It can be adopted as a standard for seismic habilitation of a building. This is a common reference in lease agreements for Federal and State Buildings.

ASCE 41-06 – Seismic Rehabilitation of Existing Building: This comprehensive standard is based on performance based design. It is intended to be a tier three or more complete analysis of existing buildings. Tier 1 and 2 are part of ASCE 31-03. The performance level design criteria include Collapse Prevention, Life Safety, Immediate Occupancy and Operational.

Anticipated Seismic Performance of Building Renovated to International Existing Building Code or ASCE 31-03 Life/Safety Performance Level: The seismic performance would be less than that of new construction. The goal is to reduce life/safety hazards as best as possible with available resources. This code is directed at insuring a coherent load path for lateral loads, reduction of out-of-plane wall failures, reduction of loss of support for floors and roofs and reduction of falling parapets or ornamentation. Anticipated post earthquake condition would be similar to life/safety design performance for moderate earthquakes and near collapse for major earthquakes as described below.

Immediate Occupancy Seismic Performance Level: Post earthquake condition of the building would be such that only limited structural damage has occurred. The basic vertical and lateral load resisting systems of the building retain nearly all of their pre-earthquake strength and stiffness. The risk of life- threatening injury as a result of structural damage is very low, although some minor structural repairs may be appropriate, these would generally not be required prior to re-occupancy.

Life/Safety Performance Level: The post earthquake condition of the building would be that the building may suffer significant structural damage with some anticipated margin against either partial, or total structural collapse. Injuries may occur during the earthquake; however, it is expected that the overall risk of life-threatening injury as a result of structural damage is low. It should be possible to repair the structure; however, for economic reasons this may not be practical. While the damaged structure is not an imminent collapse risk, it would be prudent to implement structural repairs or install temporary bracing prior to re-occupancy.

Collapse Prevention Seismic Performance Level: The post earthquake condition of the building would be such that the building would be on the verge of experiencing partial or total collapse. Substantial damage to the structure has occurred, potentially including significant degradation in stiffness and strength of the lateral force resisting system, large permanent lateral deformation of the structure and to a more limited extent, degradation in the vertical load carrying capacity. The primary vertical gravity load resisting system should still be able to support its load demand. Significant risk of injury due to falling hazards from structural debris may exist. The structure may not be technically practical to repair and is not safe for re-occupancy, as aftershock activity could induce collapse.

Life/Safety: Criteria is met when the post earthquake condition of the building is such that the building or components of the building do not collapse, or fall away, and exit routes to the building are not blocked.

Hazard Reduction/Mitigation of Seismic Hazard: Objective is met with the removal or strengthening of elements of the building which have commonly performed poorly in past earthquakes or present a life/safety threat to the building occupants.

Structural Damage: Damage to the structural elements of the building. A building with structural damage may require evacuation after an earthquake until structural components are repaired.

Nonstructural Damage: Damage to architectural, mechanical, electrical or building components that do not affect the overall structural integrity of the building. Examples are window breakage, shelves overturning, and ceilings falling down. This is the most common and may be the most expensive damage caused by an earthquake.

Lateral Force Resisting System: Those elements of the structure that provide its basic lateral strength and stiffness (to resist lateral forces due to wind or earthquake motion), and without which the structure would be laterally unstable.

Vertical Load Resisting System: Those elements of the structure that provide a load path for the gravity loads to the foundation.

Load Path (Lateral): A path that seismic forces pass through to the foundation of the structure and ultimately the soil. Typically, the load travels from the diaphragm through the connections to the vertical lateral-force-resisting elements, and then proceeds to the foundation by way of additional connections.

Ductility: A measure of the ability of a material, elements or system to deform beyond yield. (Yielding after material, element, system has exceeded its initial design strength without a significant loss in load-carrying capacity).

Redundancy: The presence of multiple structural support systems, such that if one or several elements have substantial strength or stiffness loss, continuing lateral displacement and vertical loads may be resisted by the other structural or nonstructural elements in the system.

Brittle Systems: Systems that do not have a defined yield phase (ductility) and that have a significant strength degradation immediately after the displacement associated with peak strength. (Unreinforced clay tile and brick masonry bearing wall systems would be considered brittle systems.)

Diaphragm: A horizontal, or nearly horizontal system designed to transmit lateral forces to vertical elements (shear walls, braced frames, etc.) of the lateral-force-resisting system. Common diaphragm types are plywood sheathing, reinforced concrete, metal decking or concrete topping over metal decking.

Shear Wall: A wall designed to resist lateral forces acting in the plane of the wall (parallel to the wall). Common shear wall types are plywood, reinforced masonry or concrete walls.

Braced Frame: An essentially vertical truss, or its equivalent. Two common braced frame types are concentric (members meet at a common point) or eccentric (to resist lateral loads, some members do not meet at common point). Braced frames are most commonly constructed of steel members.

Redundant Load Path: Secondary load path, normally independent of primary load path, to provide vertical support of floors and roof, if bearing walls or vertical frame fail.

Unreinforced Masonry Wall: Masonry walls, such as solid brick masonry, hollow clay tile or concrete masonry unit (CMU), that rely on the tensile strength of masonry units, mortar and grout to provide structural support. (Current code (IBC) requires reinforcing steel to resist tensile forces in our seismic risk zone.)

Unreinforced Concrete Wall: Concrete walls lacking reinforcing that rely on the tensile strength of the concrete to provide structural support. Nominally or minimally reinforced concrete walls act in a similar manner. (Current code (IBC) requires reinforcing steel to resist tensile forces in our seismic risk zone.)

Seismic Risk Zone: The UBC defines seismic risk zones from 0 to 4. The Puget Sound area is in seismic risk zone 3. The IBC does not have seismic risk zones but ground motion acceleration maps and Seismic Design Categories.

Seismic Design Category: A classification assigned to a structure based on its Occupancy Category and the severity of the design earthquake ground motion at the site. ASCE 7-05 defines seismic design categories from A to F. Most building in the Puget Sound area will be in category D.

Occupancy Category: A category used to determine structural requirements based on occupancy. The IBC defines occupancy categories from I to IV. Schools and jails are in category III, while essential facilities, such as hospitals, police stations and fire stations, are in category IV.

Occupancy: The purpose for which a building or other structure, or part thereof, is used or intended to be used.

Shotcrete: Concrete that is pneumatically sprayed on vertical, or near vertical, surfaces typically with a minimum use of concrete form work.

Re-Entrant Corner: Plan irregularity in a building, such as an extending wing, plan inset or E, T, X, and L shaped configuration, where large tensile and compression forces can develop at "inside corner configurations".

Strong Back System: A secondary system, such as a wood or steel frame wall or columns, used to provide out-of-plane support to an unreinforced or under-reinforced masonry wall.

Sub-Diaphragm: A portion of a larger diaphragm used to distribute loads between members. Sub-diaphragms are commonly used to distribute tension loads from anchorage of masonry or concrete walls to tension ties (crossties) across the building.

Crosstie: A beam, girder, or other structural member that accumulates tension loads from wall anchorage and distributes them over the entire width of the building (diaphragm).