2022 PROJECT PROPOSAL CHECKLIST

2023-25 Biennium Four-year Higher Education Scoring Process

INSTITUTION	CAMPUS LOCATION
360 - University of Washington	Seattle Campus
PROJECT TITLE	OFM/CBS Project #
Intellectual House - Phase 2	40000100
PROJECT CATEGORY	FPMT UNIQUE FACILITY ID # (OR NA)
Growth - Major	NA
PROPOSAL IS	
New or Updated Proposal (for scoring)	Resubmitted Proposal (retain prior score)
☒ New proposal ☐ Resubmittal to be scored (more than 2 biennia old or significantly changed)	☐ Resubmittal from 2018 (2019-21 biennium) ☐ Resubmittal from 2020 (2021-23 biennium)
CONTACT	PHONE NUMBER
John Wetzel	206-616-5924

Proposal content

- ☒ Project Proposal Checklist: this form; one for each proposal
- ☒ Project Proposal Form: Specific to category/subcategory (10-page limit)
- ☒ Appendices: templates, forms, exhibits and supporting/supplemental documentation for scoring.

Institutional priority

- ☒ Institutional Priority Form. Sent separately (not in this packet).

Check the corresponding boxes below if the proposed project meets the minimum threshold or if the item listed is provided in the proposal submittal.

Minimum thresholds

- ☒ Project is not an exclusive enterprise function such as a bookstore, dormitory, or contract food service.
- ☒ Project meets LEED Silver Standard requirements.
- ☒ Institution has a greenhouse gas emissions reduction policy in place in accordance with RCW 70A.45.050 and vehicle emissions reduction policy in place per RCW 47.01.440 or RCW 43.160.020 as applicable.
- ☒ A complete predesign report was submitted to OFM by July 1, 2022 and approved. The original predesign for the Intellectual House (both phases) was submitted to OFM in 2010. See appendices.
- ☐ Growth proposals: Based on solid enrollment projections and is more cost-effectively providing enrollment access than alternatives such as university centers and distance learning.
- ☐ Renovation proposals: Project should cost between 60 – 80% of current replacement value and extend the useful life of the facility by at least 25 years.
- ☐ Acquisition proposals: Land acquisition is not related to a current facility funding request.
- ☐ Infrastructure proposals: Project is not a facility repair project.

☐ Stand-alone, infrastructure and acquisition proposals is a single project requesting funds for one biennium.

Required appendices

☒ Project cost estimate: Excel C-100 & Reasonableness of Cost Template **APPENDIX A**

☒ Degree Totals and Targets template to indicate the number of Bachelors, High Demand and Advanced degrees expected to be awarded in 2023. (Required for Overarching Criteria scoring criteria for Major Growth, Renovation, Replacement and Research proposals). **APPENDIX B**

☒ Availability of Space/Campus Utilization template for the campus where the project is located. (Required for all categories/subcategories except Infrastructure and Acquisition proposals). **APPENDIX C**

☒ Assignable Square Feet template to indicate program-related space allocation. (Required for Growth, Renovation and Replacement proposals, all categories/subcategories). **APPENDIX D**

Optional appendices

Attach supplemental and supporting project documentation, *limit to materials directly related to and needed for the evaluation criteria*, such as:

☐ Degree and enrollment growth projections

☐ Selected excerpts from institutional plans

☐ Data on instructional and/or research space utilization

☐ Additional documentation for selected cost comparables (acquisition)

☐ Selected materials on facility conditions

☐ Selected materials on code compliance

☐ Tables supporting calculation of program space allocations, weighted average facility age, etc.

☐ Evidence of consistency of proposed research projects with state, regional, or local economic development plans

☐ Evidence of availability of non-state matching funds

☐ Selected documentation of prior facility failures, high-cost maintenance, and/or system unreliability for infrastructure projects

☐ Documentation of professional assessment of costs for land acquisition, land cleanup, and infrastructure projects

☐ Selected documentation of engineering studies, site survey and recommendations, or opinion letters for infrastructure and land cleanup projects

☒ Other: See list below:

Appendix E House of Knowledge – Predesign 2010
Appendix F UW Intellectual House – Additional Predesign Services 2012

2022 PROJECT PROPOSAL CHECKLIST

2023-25 Biennium Four-year Higher Education Scoring Process

I certify that the above checked items indicate either that the proposed project meets the minimum thresholds, or the corresponding items have been included in this submittal.

Name: John Wetzel Title: Director – Capital Budget

Signature:  Date: August 15, 2022

INSTITUTION	CAMPUS
University of Washington	Seattle Campus
PROJECT TITLE	
Intellectual House - Phase 2	

SUMMARY NARRATIVE

- Problem statement (short description of the project – the needs and the benefits)

  The University of Washington's Diversity Blueprint 2022-2026: Actions toward Access, Inclusion, and Equity endeavors to move beyond simply assessing diversity needs by prompting us to develop opportunities for place-based education and engagement. The Intellectual House (wəɬəbʔaltxʷ) - Phase 1, completed in 2015, moved us closer toward enabling Native American students to overcome the cultural barriers they face to earning a four-year degree by creating a facility where students, faculty, staff, and Native American communities can come together in a supportive and welcoming educational environment to share their knowledge and cultures.

  wəɬəbʔaltxʷ - Phase 1 was built in the Coast Salish longhouse-style and prioritized function and related facilities tied to the community gathering activities including a large gathering hall, kitchen, and conference room. Phase 2 is envisioned to bring additional support to Native American student retention through greater connection to their culture and community in the form of a facility that includes a Native art lab, classrooms, a student resource area, student lounge, and an outdoor gathering space surrounded by educational native gardens used in the teaching of indigenous science, art, and medicine.

- History of the project or facility

  wəɬəbʔaltxʷ has become a place on campus that encourages tribes in Washington state and the Pacific Northwest to visit and actively participate in expanding the educational opportunities and achievements on campus. As a home away from home for Native students, faculty, and staff, wəɬəbʔaltxʷ fosters a Coast Salish environment that sustains the indigenous traditions of welcoming, learning, sharing, and community through programs that promote Native academic success, while engaging, enhancing, and disseminating indigenous knowledge to the broadest cross-section of people from the University community, the Pacific Northwest Tribes and the State of Washington

  wəɬəbʔaltxʷ was originally planned as a single-phase project but due to fundraising efforts being impacted by the economic climate, the amount raised did not reach the anticipated goals. As such, the University proposed to phase the project, completing Phase 1 in 2015. Originally planned as an 18,810 GSF facility, the phased refinement reduced the combined total to 16,772 GSF, an 11% reduction.

The goals for wəɬəb?altxʷ include the following:

- *To make Native people "visible" on the UW campus.*
- *To offer a meeting place for UW Native American students, faculty, and staff.*
- *To visibly manifest and symbolize the importance of Native traditions in the institutional culture.*
- *To share knowledge of Northwest Indigenous people within the UW community and among the Tribes in the area, and the broader community.*
- *To enhance recruitment and retention of Native students, faculty, and staff.*
- *To serve Tribes with resources and access to the University community.*
- *To provide appropriate learning spaces for various UW courses and programs.*
- *To edify the community with respect to the cultures and values of Indigenous people.*
- *To enhance the campus experience for all students, faculty, staff, and visitors.*

- University programs addressed or encompassed by the project

Fundamentally, wəɬəb?altxʷ speaks to everyone in the larger UW and Washington state communities, expressing contemporary Native American realities rooted in the traditions of ancient cultures. The project reflects and promotes Native spirit, sustains community, and tells stories that foster connections amongst all those that come to the UW. The project directly relates to the Washington State Priorities of Government in that it identifies a promising strategy to increase the percentage of adults completing degrees and increases retention rates for Native Americans.

OVERARCHING SCORING CRITERIA

1. Integral to achieving statewide policy goals

Provide degree targets, and describe how the project promotes improvement on 2020-21 degree production totals in the OFM Statewide Public Four-Year Dashboard. Include the degree totals and targets template in an appendix.

A. Indicate the number of bachelor's degrees awarded at the close of the 2020-21 academic year, and the number targeted for 2023.

The total number of degrees awarded is included in the Appendix B. No degrees are associated with the construction of this project. However, the project helps the University enhance recruitment and retention of Native students, faculty, and staff.

B. Indicate the number of bachelor's degrees awarded in high-demand fields at the close of the 2020-21 academic year, and the number targeted for 2023.

The total number of degrees awarded is included in the Appendix B. No degrees are associated with the construction of this project. However, the project helps the University enhance recruitment and retention of Native students, faculty, and staff.

C. Indicate the number of advanced degrees awarded at the close of the 2020-21 academic year, and the number targeted for 2023.

The total number of degrees awarded is included in the Appendix B. No degrees are associated with the construction of this project. However, the project helps the University enhance recruitment and retention of Native students, faculty, and staff.

2. Integral to campus/facilities master plan

A. Describe the proposed project's relationship and relative importance to the institution's most recent campus/facilities master plan or other applicable strategic plan.

The University of Washington 2019 Campus Master Plan (CMP) is shaped by the strategic goals and the academic, research, and service missions of the University, all of which guide the physical development of the campus. The University's growth allowance in the CMP is 6.0 million net new gross square feet accommodated on 86 potential development sites. This was based on the projected enrollment growth of 11% over the 2018 to 2028 time period.

The CMP creates a framework designed to enable the UW's continued evolution as a 21st century public higher education research and service institution. Embracing new modes of teaching and learning to create a flexible and dynamic framework that accommodates the need for growth in student enrollment and research demands complements the existing lexicon of higher education spaces with new settings for collaboration and multiple opportunities for innovative learning that extend beyond the classroom.

The proposed location for wəɬəbʔaltxʷ - Phase 2 is site C4 within Central Campus. The development site was identified specifically for the expansion of wəɬəbʔaltxʷ.

B. Does the project follow the sequencing laid out in the master plan (if applicable)? If not, explain why it is being requested now.

The University of Washington 2019 Campus Master Plan (CMP) accomplishes two objectives. It establishes a bold, long-term vision and guides the development that shall occur over its planning horizon as required by the City-University Agreement.

3. Integral to institution's academic programs plan

Describe the proposed project's relationship and relative importance to the institution's most recent academic programs plan. Must the project be initiated soon in order to:

A. Meet academic certification requirements?

Not Applicable

B. Permit enrollment growth and/or specific quality improvements in current programs?

Not Applicable

C. Permit initiation of new programs?

In support of the University of Washington's Diversity Blueprint 2022-2026: Actions toward Access, Inclusion, and Equity endeavors to move beyond simply assessing diversity needs by prompting us to develop opportunities for place-based education and engagement.

GENERAL CATEGORY SCORING CRITERIA

1. Describe how the project promotes access for underserved regions and place-bound adults through distance learning and/or university centers

A. Is distance learning or a university center a large and significant component of the total project scope? If yes, to what degree of percentage?

Not Applicable

B. Is the project likely to enroll a significant number of students who are place-bound or residents of underserved regions?

The project will help Native American students overcome the cultural barriers they face to earning a four-year degree by creating a facility where students, faculty, staff, and Native American communities can come together in a supportive and welcoming educational environment to share their knowledge and cultures.

2. Enrollment growth

A. Identify the number of additional full-time equivalent (FTE) state-supported students the project is expected to enable the institution to serve when the space is fully occupied. Describe the method by which the number of additional FTEs who can be accommodated by the proposed space has been calculated and provide and explain the enrollment analysis indicating probable student demand and enrollment from project completion to full occupancy.

Not applicable, the project is not intended to generate FTE related to a specific program. However, the project helps the University enhance recruitment and retention of Native students, faculty, and staff.

B. Using the OFM Statewide Public Four-Year Dashboard, identify how many of the additional FTE enrollments are expected to be in high-demand fields and the particular fields in which such growth is expected to occur.

Not applicable, the project is not intended to generate FTE related to a specific program. However, the project helps the University enhance recruitment and retention of Native students, faculty, and staff.

3. Availability of space/utilization on campus

Describe the institution's plan for improving space utilization and how the project will impact the following:

A. The utilization of classroom space

The University completed a Classroom Renewal Study in March 2021 which prioritized renovation and updates for the over 300 general-use classrooms on the Seattle campus. These updates take into consideration the modern academic challenges, student collaboration, and faculty/student interaction to maximize efficiency and where possible, engage in hybrid learning to maximize capacity.

This project will construct dedicated classroom space to provide courses focused on promoting Native American cultures and traditions.

B. The utilization of class laboratory space

A Native Art Lab will be constructed as part of the project, dedicated to teaching traditional Native American woodcarving and other traditional skills.

4. Efficiency of space allocation

A. For each major function in the proposed facility (classroom, instructional labs, offices), identify whether space allocations will be consistent with Facility Evaluation and Planning Guide (FEPG) assignable square feet standards. To the extent any proposed allocations exceed FEPG standards, explain the alternative standard that has been used, and why. See Chapter 4 of the scoring process instructions for an example. Include supporting information in an appendix.

All new spaces will conform with the FEPG assignable square feet standards.

B. Identify the following on C-100 form:
   1. Usable square feet (USF) in the proposed facility – *6,317 USF*
   2. Gross square feet (GSF) – *8,432 GSF*
   3. Building efficiency (USF divided GSF) – *75%*

5. Reasonableness of cost

Provide as much detailed cost information as possible, including baseline comparison of costs per square foot (SF) with the cost data provided in Chapter 5 of the scoring process instructions and a completed OFM C-100 form. Also, describe the construction methodology that will be used for the proposed project.

If applicable, provide Life Cycle Cost Analysis results demonstrating significant projected savings for selected system alternates (Uniformat Level II) over 50 years, in terms of net present savings.

A C-100 and Reasonableness of Cost form are included in Appendix A and are based on Phase 1 benchmark costs. The project is intended to be delivered using the Progressive Design Build model. A Life-Cycle Cost Analysis has not been generated at this time.

TEMPLATES REQUIRED IN APPENDIX FOR SCORING

- Degree totals and targets
- Availability of space/campus utilization
- Reasonableness of cost
- Program-related space allocation

APPENDIX A

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY
Updated June 2022

Agency	University of Washington
Project Name	Intellectual House - Phase 2
OFM Project Number	40000100

Contact Information	
Name	Kristine Kenney
Phone Number	206-218-9147
Email	kkenney@uw.edu

Statistics			
Gross Square Feet	8,432	MACC per Gross Square Foot	$699
Usable Square Feet	6,317	Escalated MACC per Gross Square Foot	$807
Alt Gross Unit of Measure			
Space Efficiency	74.9%	A/E Fee Class	B
Construction Type	Other Sch. B Projects	A/E Fee Percentage	11.51%
Remodel	Yes	Projected Life of Asset (Years)	
Additional Project Details			
Procurement Approach	DB-Progressive	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	Yes
Sales Tax Rate %	10.25%	Location Used for Tax Rate	Seattle
Contingency Rate	10%		
Base Month (Estimate Date)	April-22	OFM UFI# (from FPMT, if available)	NA
Project Administered By	Agency		

Schedule			
Predesign Start	September-09	Predesign End	July-10
Design Start	July-23	Design End	October-24
Construction Start	November-24	Construction End	December-25
Construction Duration	13 Months		

Green cells must be filled in by user

Project Cost Estimate

Total Project	**$10,485,084**	Total Project Escalated	**$11,999,770**
		Rounded Escalated Total	**$12,000,000**

Cost Estimate Summary

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

Consultant Services			
Predesign Services	$600,000		
Design Phase Services	$514,556		
Extra Services	$520,000		
Other Services	$231,177		
Design Services Contingency	$186,573		
Consultant Services Subtotal	**$2,052,306**	**Consultant Services Subtotal Escalated**	**$2,253,879**

Construction			
Maximum Allowable Construction Cost (MACC)	$5,890,000	Maximum Allowable Construction Cost (MACC) Escalated	$6,807,080
DB-Progressive Risk Contingencies	$0		$0
DB-Progressive Management	$160,000		$185,840
Owner Construction Contingency	$589,000		$684,124
Non-Taxable Items	$0		$0
Sales Tax	$680,498	Sales Tax Escalated	$786,897
Construction Subtotal	**$7,319,498**	**Construction Subtotal Escalated**	**$8,463,941**

Equipment			
Equipment	$300,000		
Sales Tax	$30,750		
Non-Taxable Items	$0		
Equipment Subtotal	**$330,750**	**Equipment Subtotal Escalated**	**$384,167**

Artwork			
Artwork Subtotal	**$59,700**	**Artwork Subtotal Escalated**	**$59,700**

Agency Project Administration			
Agency Project Administration Subtotal	$472,830		
DES Additional Services Subtotal	$200,000		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$672,830**	**Project Administration Subtotal Escalated**	**$781,493**

Other Costs			
Other Costs Subtotal	**$50,000**	**Other Costs Subtotal Escalated**	**$56,590**

Project Cost Estimate			
Total Project	**$10,485,084**	Total Project Escalated	**$11,999,770**
		Rounded Escalated Total	**$12,000,000**

Funding Summary

FUNDING SOURCES:
$9M FROM STATE 057 BOND ACCOUNT
$3M FROM LOCAL UW SOURCES

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
Acquisition					
Acquisition Subtotal	$0				**$0**
Consultant Services					
Consultant Services Subtotal	$2,253,879		$2,253,879		**$0**
Construction					
Construction Subtotal	$8,463,941		$8,463,941		**$0**
Equipment					
Equipment Subtotal	$384,167		$384,167		**$0**
Artwork					
Artwork Subtotal	$59,700		$59,700		**$0**
Agency Project Administration					
Project Administration Subtotal	$781,493		$781,493		**$0**
Other Costs					
Other Costs Subtotal	$56,590		$56,590		**$0**
Project Cost Estimate					
Total Project	**$11,999,770**	**$0**	**$11,999,770**	**$0**	**$0**
	$12,000,000	**$0**	**$12,000,000**	**$0**	**$0**
	Percentage requested as a new appropriation		**100%**		

What is planned for the requested new appropriation? (*Ex. Acquisition and design, phase 1 construction, etc.*)
Design and construction.
Insert Row Here

What has been completed or is underway with a previous appropriation?
Not applicable.
Insert Row Here

What is planned with a future appropriation?
Not applicable.
Insert Row Here

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**	

Green cells must be filled in by user

Cost Estimate Details

Consultant Services				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Pre-Schematic Design Services				
Programming/Site Analysis	$200,000			
Environmental Analysis				
Predesign Study				
Other	$400,000			functional programming
Insert Row Here				
Sub TOTAL	**$600,000**	**1.0616**	**$636,960**	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	$514,556			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	**$514,556**	**1.0939**	**$562,873**	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)				
Geotechnical Investigation	$40,000			
Commissioning	$30,000			
Site Survey	$70,000			
Testing	$30,000			hazmat + other required testing
LEED Services	$30,000			
Voice/Data Consultant	$10,000			AV
Value Engineering	$115,000			VE + Cost est
Constructability Review	$100,000			construction support
Environmental Mitigation (EIS)				
Landscape Consultant	$50,000			
Other	$45,000			interior consultant + lighting
Insert Row Here				
Sub TOTAL	**$520,000**	**1.0939**	**$568,828**	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	$231,177			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
Sub TOTAL	**$231,177**	**1.1615**	**$268,513**	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	$186,573			
Other				
Insert Row Here				

Sub TOTAL	**$186,573**	**1.1615**	**$216,705**	Escalated to Mid-Const.
CONSULTANT SERVICES TOTAL	**$2,052,306**		**$2,253,879**	

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Cost Estimate Details

Construction Contracts				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Site Work				
G10 - Site Preparation	$600,000			
G20 - Site Improvements	$200,000			
G30 - Site Mechanical Utilities	$150,000			
G40 - Site Electrical Utilities				
G60 - Other Site Construction				
Other	$200,000			temp facilities
Insert Row Here				
Sub TOTAL	**$1,150,000**	**1.1318**	**$1,301,570**	
2) Related Project Costs				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1318**	**$0**	
3) Facility Construction				
A10 - Foundations	$500,000			
A20 - Basement Construction				
B10 - Superstructure	$150,000			
B20 - Exterior Closure	$820,000			
B30 - Roofing	$250,000			
C10 - Interior Construction	$500,000			
C20 - Stairs				
C30 - Interior Finishes	$560,000			
D10 - Conveying				
D20 - Plumbing Systems	$250,000			
D30 - HVAC Systems	$400,000			
D40 - Fire Protection Systems	$100,000			
D50 - Electrical Systems	$620,000			
F10 - Special Construction	$120,000			
F20 - Selective Demolition				
General Conditions	$250,000			
Other Direct Cost	$120,000			GR
Insert Row Here	$100,000			UWIT
Sub TOTAL	**$4,740,000**	**1.1615**	**$5,505,510**	
4) Maximum Allowable Construction Cost				
MACC Sub TOTAL	**$5,890,000**		**$6,807,080**	
	$699		*$807 per GSF*	

5) GCCM Risk Contingency				
GCCM Risk Contingency				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1615**	**$0**	
6) GCCM or Design Build Costs				
GCCM Fee				
Bid General Conditions				
GCCM Preconstruction Services				
Other	$160,000			Bond Forms and payments
Insert Row Here				
Sub TOTAL	**$160,000**	**1.1615**	**$185,840**	
7) Owner Construction Contingency				
Allowance for Change Orders	$589,000			
Other				
Insert Row Here				
Sub TOTAL	**$589,000**	**1.1615**	**$684,124**	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1615**	**$0**	
9) Sales Tax				
Sub TOTAL	**$680,498**		**$786,897**	
CONSTRUCTION CONTRACTS TOTAL	**$7,319,498**		**$8,463,941**	

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Cost Estimate Details

Equipment					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
1) Equipment					
E10 - Equipment	$100,000				
E20 - Furnishings	$200,000				
F10 - Special Construction					
Other					
Insert Row Here					
Sub TOTAL	**$300,000**		**1.1615**	**$348,450**	
2) Non Taxable Items					
Other					
Insert Row Here					
Sub TOTAL	**$0**		**1.1615**	**$0**	
3) Sales Tax					
Sub TOTAL	**$30,750**			**$35,717**	
EQUIPMENT TOTAL	**$330,750**			**$384,167**	

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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	$59,700				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	**$59,700**		**NA**	**$59,700**	

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	$472,830				
Additional Services	$200,000				ES & In-Plant & EHS
Other					
Insert Row Here					
Subtotal of Other	*$0*				
PROJECT MANAGEMENT TOTAL	**$672,830**		**1.1615**	**$781,493**	

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Cost Estimate Details

Other Costs					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other	$10,000				permit expeditor
Insert Row Here	$40,000				permit
OTHER COSTS TOTAL	**$50,000**		**1.1318**	**$56,590**	

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C-100(2022)
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

Reasonableness of Cost Template

Project name:	Intellectual House - Phase 2	CBS/OFM Project #:	40000100
Institution:	University of WA	Scoring category:	Growth - Major
Campus/Location:	Seattle Campus		

	Construction Begin	Construction End	Construction mid-point	Escalation Multiplier
Construction mid-point:	November-24	December-25	May-25	1.3849

MACC from C-100: $6,807,080

	Expected MACC/GSF in 2019	Expected MACC/GSF	GSF by type	Expected MACC
Classrooms	$405	$561	-	$0
Instructional labs	$397	$550	3,697	$2,032,836
Research labs	$545	$755	-	$0
Administration	$406	$562	1,137	$639,437
Libraries	$340	$471	3,597	$1,693,830
Athletic	$385	$533	-	$0
Assembly, exhibit and meeting rooms	$428	$593	-	$0
			8,432	$4,366,103

C-100 to expected MACC variance: 156%

Score: 0

APPENDIX B

Overarching Criteria: Degree Totals and Targets Template

Project name:	Intellectual House - Phase 2	CBS/OFM Project #:	40000100	
Institution:	University of WA	Scoring category:	Growth - Major	
Campus/Location:	Seattle Campus			

		Bachelor degrees	Bachelor degree's in high-demand fields	Advanced degrees
2020-21 Public Four-Year Dashboard		11,105	5,379	6,310
Additional degrees generated by project		-	-	-
Projected degrees with building project	a	11,105	5,379	6,310
Projected growth above 2020-21 actual degrees		0.0%	0.0%	0.0%
Number of degrees targeted in 2023	b	11,934	6,059	6,761
Projected degrees as % of 2023 target	b/a =	107.5%	112.6%	107.1%
	Score:	**0**	**0**	**0**

Comments:

Data used above is from the Statewide Public Four-Year Dashboard for 2019-20 (2020-21 data is NOT available). 2023 Degree Targets from UW Insititutional Data & Analysis.

APPENDIX C

Availability of Space/Campus Utilization Template

Project name:	Intellectual House - Phase 2	CBS/OFM Project #:	40000100
Institution:	University of WA	Scoring category:	Growth - Major
Campus/Location:	Seattle Campus		

Enrollment

2021 fall on-campus student FTE:	44,157	Expected 2022 fall on-campus student FTE:	44,939
		% increase budgeted:	1.77%

Enter the average number of hours per week each for (a) classroom seat and (b) classroom lab is expected to be utilized in Fall 2022 for the campus where the project is located.

(a) General University Classroom Utilization	
Fall 2021 Weekly Contact Hours	516,214
Multiply by % FTE Increase Budgeted	1.77%
Expected Fall 2022 Contact Hours	525,356
Expected Fall 2022 Classroom Seats	21,788
Expected Hours per Week Utilization	**24.1**
HECB utilization standard (hours/GUC seat)	22.0
Difference in utilization standard	9.6%

(b) General University Lab Utilization	
Fall 2021 Weekly Contact Hours	92,814
Multiply by % FTE Increase Budgeted	1.77%
Expected Fall 2022 Contact Hours	94,458
Expected Fall 2022 Class Lab Seats	5,228
Expected Hours per Week Utilization	**18.1**
HECB utilization standard (hour/GUL seat)	16.0
Difference in utilization standard	12.9%

If the campus does not meet the 22 hours per classroom seat and/or the 16 hours per class lab HECB utilization standards, describe any institutional plans for achieving the utilization standard.

N/A

APPENDIX D

Program Related Space Allocation Template

Project name: Intellectual House - Phase 2

CBS/OFM Project #: 40000100

Institution: University of WA

Scoring category: Growth - Major

Campus/Location: Seattle Campus

Enter the assignable square feet for the proposed project for the applicable space types:

Type of Space	Points	Assignable Square Feet	Percentage of total	Score [Points x Percentage]
Instructional space (classroom, laboratories)	10	2,770	43.85	4.38
Research space	2		0.00	0.00
Office space	4	852	13.49	0.54
Library and study collaborative space	10	2,695	42.66	4.27
Other non-residential space	8		0.00	0.00
Support and physical plant space	6		0.00	0.00
Total:		**6,317**	**100.0**	**9.19**

APPENDIX E

University of Washington

House of Knowledge

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(Intellectual House in Lushootseeh)

Prepared for
Washington State Office of Financial Management

By
University of Washington
Office of Planning & Budgeting

Prepared in Cooperation with
Jones & Jones Architecture, Seattle, Washington

Predesign Report
Project 30000021
June 2010

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1.0 EXECUTIVE SUMMARY

Agency Name: University of Washington
Agency Code: 360
Project Identifier: 30000021

Project Title: House of Knowledge (Intellectual House)

The intent of the project is to construct on the Seattle Campus a "House of Knowledge: springing from the longhouse style traditions of the indigenous peoples of the Pacific Northwest and program promoting the value of cultural diversity and respect for all cultures." The House of Knowledge project will provide a "multi-service learning and gathering space for Native American students, faculty, and staff and other of various cultures and communities to come together in a supporting and welcoming education environment to share their knowledge and their cultures with one another".[1]

The House of Knowledge is envisioned as a means to change Native American student enrollment and retention dynamics and improve the Native experience at the University of Washington. The struggle to earn a four-year degree for many Native American students too often rests on the challenge to overcome cultural barriers. Student retention research shows that in order to successfully retain Native American students, they must be supported in their desire to maintain a connection to their culture and their community, and that an opportunity must be provided for the student to find a comfortable community within the broader institutional context. Such practices help address the reality that for many Native American students, academic rigor is secondary to the difficulties of adjusting to being part of an underrepresented and often misunderstood group on campus[2].

Native Americans struggle to find a place at the table of higher education. According to a 2007 report by the Institute for Higher Education Policy, only 13% of Native Americans hold bachelor's degrees as compared to 28% of the general population. Structural inequalities exist for the majority of Native American communities today in K-12 public education, and the socioeconomics of most tribal communities make college a challenge. Nevertheless, UW has made gains in recruiting Native American students, with an increase in Native American student applications in each of the last three years. The critical challenge, however, is to help Native American students stay in school and graduate. Similar to trends across the country, only 51.9% of UW's Native American students graduate in six years, a rate that is 23% lower than the graduation rate for all UW undergraduate students, and the lowest of any identified UW student group.

House of Knowledge will be a place on campus that encourages tribes in Washington State and the Pacific Northwest to visit and actively participate in expanding the educational opportunities and achievements on campus. As a home away from home for Native students, faculty and staff, the House of Knowledge will foster a Coast Salish environment that sustains the indigenous traditions of welcoming, learning, sharing, and community through programs that promote Native academic success, while engaging, enhancing and disseminating indigenous knowledge to the broadest cross-section of people from the University community, the Pacific Northwest Tribes and the State of Washington.

[1] House of Knowledge building committee mission statement.
[2] Office of Minority Affairs & Diversity, University of Washington

The House of Knowledge project will honor Coast Salish traditions in architecture and meet the project goals through three main components: a student-learning focused building, a community-gathering focused building, and a Native Northwest inspired site that connects the two buildings, bringing together Natives and non-Natives in a welcoming, natural place that fosters stronger connections and deeper understanding throughout the entire UW community.

The goals for the House of Knowledge include the following:

- To make Native people "visible" on the UW campus.
- To offer a meeting place for UW Native American students, faculty and staff.
- To visibly manifest and symbolize the importance of Native traditions in the institutional culture.
- To share knowledge of Northwest indigenous people within the UW community and among the Tribes in the area, and the broader community.
- To enhance recruitment and retention of Native students, faculty and staff.
- To serve Tribes with resources and access to the University community.
- To provide appropriate learning spaces for various UW courses and programs.
- To edify the community with respect to cultures and values of indigenous people.
- To enhance the campus experience for all students, faculty, staff and visitors.

Fundamentally, the House of Knowledge will speak to everyone in the larger UW and Washington State communities, expressing contemporary Native American realities rooted in the traditions of ancient cultures. The project reflects and promotes Native spirit, sustains community and tells stories that foster connections amongst all those that come to the UW.

The buildings encompass 18,810 gross square feet of space and include a large Gathering Hall, multipurpose rooms, Native art lab, a student resource area with supportive administrative offices and other related support spaces. The outdoor spaces include programmed outdoor gathering areas and educational gardens with native plantings that will be used in the teaching of indigenous science, art and medicine.

The total project budget is estimated to be $10,645,000. The University of Washington received $300,000 to conduct a Predesign study and plans to request an additional $2.7 million for design and contribute to the construction of the project. The remaining $7.645 million will come from other sources such as donors.

Design of the project is anticipated to take place in 2010-2012 and construction in 2013–2014, assuming sufficient funds have been raised.

2.0 PROJECT ANALYSIS

2.1 Operational Needs

The University of Washington's primary mission is the "preservation, advancement, and dissemination of knowledge."[3] The University of Washington "educates a diverse student body to become responsible global citizens and future leaders through a challenging learning environment informed by cutting-edge scholarship. It values integrity, diversity, excellence, collaboration, innovation, and respect."[4]

The mission of the House of Knowledge is "to provide a multi-service learning and gathering space for Native American students, faculty and staff, and others of various cultures and communities to come together in a supporting and welcoming educational environment to share their knowledge and their cultures with one another."

This project directly relates to the Washington State Priorities of Government in that it identifies a promising strategy to increase the percentage of adults completing degrees and increases retention rates for Native Americans. The critical challenge, however, is to help Native American students stay in school and graduate. According to a 2007 report by the Institute for Higher Education Policy, only 13% of Native Americans hold bachelor's degrees as compared to 28% of the general population. Structural inequalities exist for the majority of Native American communities today in K-12 public education, and the socioeconomics of most tribal communities make college a challenge. Nevertheless, UW has made gains in recruiting Native American students, with an increase in Native American student applications in each of the last three years. Similar to trends across the country, only 51.9% of UW's Native American students graduate in six years, a rate that is 23% lower than the graduation rate for all UW undergraduate students, and the lowest of any identified UW student group.

The project will strengthen the UW's commitment to Native American education and improve diversity on campus. It will promote and share with others Native American cultures that help define the Pacific Northwest. The project will be a significant vehicle to the recruitment and retention of Native American students, faculty, and staff while bridging relationships with the Tribes. The project will honor Coast Salish traditions and meet the project goals through three main components: a student-learning focused building, a community-gathering focused building, and an outdoor gathering place.

[3] UW Role and Mission Statement revised February 1998; Board of Regents.
[4] UW Vision & Values. http://www.washington.edu/discover/visionvalues

In 2007, the UW convened its first Tribal Leaders Summit at the Seattle campus. At the summit, the UW initiated dialogue with the Tribal Nations to lay the groundwork for continued improvements in the support of recruitment and retention of Native students, faculty, and staff. This project intends to build on that dialogue and provide a cultural learning environment for all, especially the students.

The House of Knowledge creates an environment on campus that assists students with the transition to campus, supports their need to succeed, and serves as a gathering place to connect back to their tribes, elders and culture. The project will:

- Manifest and symbolize the importance of Native traditions in the institutional culture;
- Edify the community with respect to the cultures and values of indigenous people;
- Offer a culturally relevant gathering place for Native Americans on the UW Seattle campus; and
- Share Native American culture to enhance the campus experience for all UW students, faculty, staff and visitors.

The House of Knowledge is envisioned as a means to improve the community experience at the UW. It will also fill a void in the academic campus and reinforce Native traditions and connections to the place in the center of the UW experience. It will be a place at UW for Pacific Northwest Tribes to visit and participate in expanding educational opportunities and achievement on campus. As a home away from home for Native students, faculty and staff at the UW, the House of Knowledge will be a Coast Salish environment that sustains the indigenous traditions of welcome, learning, sharing, and community through programs that promote Native academic success. The House of Knowledge will be an indigenous place in the middle of campus to engage, enhance and disseminate indigenous knowledge with the broadest cross-section of people from the University, the Pacific Northwest Tribes and the State of Washington.

The House of Knowledge project consists of two buildings and several outdoor educational spaces. One building has a student-life focus and the other a community-gathering focus. Additional project detail may be found below.

2.2 Alternatives

Currently there are no dedicated facilities on the UW campus focused on serving the needs of Native students, faculty and staff. The existing Ethnic Cultural Center provides a meeting place, offices and a student lounge space for groups of students from all backgrounds at the UW. This facility, however, does not accommodate large group community gatherings and does not include defined learning spaces that serve the unique needs of Native students, faculty and staff.

The Burke Museum displays Native American artifacts and has meeting spaces but does not support the daily activities of Native American students and provide resources for their future goals.

No Action will result in status quo. There will continue to be a low recruitment and retention rate among Native American students, faculty and staff and they will not have a place to come together that celebrates Native traditions to learn and grow into the future. Since there is not another longhouse type space on campus, renovation or co-location are not feasible alternatives.

Life Cycle Cost Comparison

Due to the lack of feasible alternatives other than no action, a life cycle cost comparison of the alternatives is not available.

2.3 Preferred Alternative

The House of Knowledge allows several co-locations of supportive functions of the Native American community. The project includes two new smaller buildings with a modern interpretation of Coast Salish architecture and outdoor gardens and gathering spaces. The total project cost is anticipated to be approximately $10,645,000. The state funded $300,000 for a Predesign study and the UW is asking for an additional $2,700,000 to finish design and contribute to the construction of the building. The remaining $7,645,000 dollars will be obtained through other sources including a fundraising program conducted by the UW Office of Minority Affairs and Diversity.

The House of Knowledge will facilitate three categories of primary functional needs, each with distinct patterns of use and activities: student life, teaching and gathering. Administrative offices and building services facilities are secondary functions associated with these primary determinants. Flexibility and adaptability were identified as important aspects of programming for all three types of program functions. As contributing students related, “the students’ activities should dominate the feeling of the place” and inform the organization of the project

Student life functions provide the space and accommodations for UW Native undergraduate, graduate and professional students to study, meet, relax and socialize in an environment informed by the ways and beliefs of Native traditions. These are generally semi-private group activities ranging in size from a few students to larger group gatherings focusing on issues related to Native students at UW, sometimes including faculty, staff and administrators. The larger group meetings, for instance, might be associated with planning the annual UW Pow Wow, Ravens Feast graduation events, or a special gathering associated with a research or study topic. Student life activities are closely associated with and overlap with

some aspects of the teaching function in frequency, pattern of use, size and overall goal of advancing academic success at the UW. Special teaching considerations at the House of Knowledge focus on Native learning processes which are characterized by the oral transmission of knowledge, closely observing skilled teachers at work, and hands-on learning. Various types of individual mentoring and informal, small group counseling also overlap these two functional categories, essential to meeting the goals of the House of Knowledge. As one contributing Native student stated, the project will be a “home away from home”, fostering and maintaining, “intellectual and spatial sovereignty for the students.”

The project’s gathering functions are characterized by their larger size, the character of the space, the frequency of use and the special accommodations necessary to support and sustain Native community-wide events on campus. When gathering activities are not scheduled, the space can be used for teaching or student life functions at the discretion of the administrative policies for space scheduling. Gathering activities will likely be organized around special events, conferences, and community celebrations that may or may not be directly associated with the regular, every day patterns of use at the House of Knowledge.

The project proposes to incorporate space for an “Elder in residence” where an Elder from across the state’s Tribes has a place at the House of Knowledge, helping to mentor and teach and providing an essential connection to the Native traditions and cultures beyond the edge of campus. Apart from the special role of Elders in Native communities, the administrative office and facility services support functions at the proposed House of Knowledge are expected to require minimal amounts of space typical to the primary functions of the facility.

2.4 Identification of Issues

Subsequent phases of design and engineering will refine the project plan, facilities and services, and operational requirements. Detailed coordination with adjacent capital projects will also occur in the next phase of the project.

Since this building is inspired by the spirit of Coast Salish architecture it will explore every avenue possible to give back to nature the resources required for its construction. Ideas include minimizing site disturbance by following the natural contours of the land, organizing the project to preserve much of the existing tree canopy, capturing rain water for use on the site, using plants that celebrate the Native cultural landscape, deploying natural ventilation systems where feasible, and the use of renewable, local resources for construction.

2.5 Prior Planning and History

More than 35 years ago, faculty, staff and students at the UW dreamed of a place, a community longhouse type facility that would celebrate their history and culture on the UW's campus. They wanted a place to teach others about the historic and contemporary realities of Native life.

Over the past 35 years several stewards of this dream planned and strategized to receive the support of the UW community. In the past several years, this dream began to materialize.

In 2007 a working group was formed of UW community members charged, by the Provost, to guide a feasibility study and to formulate an inclusive process. At the conclusion of the feasibility study in 2008 the Planning Advisory Committee was formed to provide advice to the Working Group. This advisory committee included Tribal Leaders, Elders and the Working Group. A draft campaign plan was developed. The Project was placed on the UW's capital plan to request pre-design and design funding. Members of the Working Group conducted site visits to other longhouse facilities in the Pacific Northwest. Stakeholder sessions were held with on-campus and off-campus constituents.

Subsequently, the UW conducted a site evaluation to determine a project site for the House of Knowledge, Site 7C as identified in the UW Seattle Campus Master Plan for the City of Seattle, was recommended by the Working Group members and approved by the Provost and President.

The UW requested $1.5 million of state capital funding for this project during the 2008 Supplemental Budget, however, it was not funded. In the University's 2009-11 Capital Budget, a second request of $1.5 million was made to the state. Of that amount, $300,000 was appropriated for predesign.

2.6 Stakeholders

Project stakeholders include the students, staff and faculty of the UW, Tribes across the Pacific Northwest, Elders, future generations of Native American Students and everyone else in the UW community. A concerted effort has been made to engage all stakeholders in the discussions around the House of Knowledge.

2.7 Project Description

Agency Name: University of Washington
Agency Code: 360
Project Identifier: 30000021

Project Title: House of Knowledge (Intellectual House)
Agency Contact: Colleen Pike, Director
Office of Planning & Budgeting – Capital Resource Planning
University of Washington
UW Tower T-12, Box 359445

Seattle, WA 98195-9445
(206) 685-9960

The primary mission of the University of Washington is the preservation, advancement, and dissemination of knowledge. The House of Knowledge preserves the cultural history of the indigenous people; it assists with the advancement of research relating to Native American culture and use of resources, in the past, present and future. It provides a place to pass knowledge from generation to generation, connecting and binding people together where all levels of life are honored.
Project Goals:

- To make Native people "visible" on the UW campus.
- To offer a meeting place for UW Native American students, faculty and staff.
- To visibly manifest and symbolize the importance of Native traditions in the institutional culture.
- To share knowledge of Northwest indigenous people within the UW community and among the Tribes in the area, and the broader community.
- To enhance recruitment and retention of Native students, faculty and staff.
- To serve Tribes with resources and access to the University community.
- To provide appropriate learning spaces for various UW courses and programs.
- To edify the community with respect to cultures and values of indigenous people.
- To enhance the campus experience all students, faculty, staff and visitors.

The project encompasses three components: student learning focused building, a community gathering focused building, and outdoor gathering place.

A shared value for many American Indians focuses on sustaining strong connections with the land and fostering deep respect for all parts of the natural world. In these traditions, the land itself provides enduring evidence of tribal origins and an enduring home. It is a place of spiritual renewal; a healing place and a place of continuing nourishment. In this way, all natural elements have life and power, representing the spirit world and connects us with the continuum of time. In this project, each component reconnects to the traditions, the land and tribal origins for Native Americans and the UW community to experience.

The project stakeholders determined that the House of Knowledge would be a contemporary expression of the "Longhouse" culture. As such, it will be a place for community; a place that opens its doors and invites others to come in; a place where people come together to meet. It will be a place of learning; where students can practice their individual tribal cultures, share them with others and learn about the cultures of the world. It will be a place of ceremony where traditions are practiced, handed on and taught to others; where students enjoy culture and feel like they are at home. It will be a place of comfort; where the community can receive sustenance, rest, study and feel safe. "The Longhouse should be alive. It should be like a person. It should be able to change over time. Constant movement is important." It will also be like a village, "giving Native people more agency"; "an enclosure within the community, not an isolated enclosure."

The House of Knowledge is considered to be more than a building or a site – it lives and breathes. When it is empty it is at rest. When the people enter and activities start, it wakes up. Inside, the next generation learns how to take care of the Longhouse, uphold those values, carry them on and pass them to future generations.

Generally, native plants, animals and people are traditionally inseparable. Native people view plants and animals as people having equal status with humans. All Indian peoples use, and respect, native plants; there is a strong traditional understanding of ethno botany that connects all tribes. The living cycles of nature are ceremonial times. There is an understanding of the power of plants in healing, renewal cycles of life, visioning, cleansing, and ceremonial activities. The proposed planting concept for the House of Knowledge builds upon the existing Native foundational plantings while also nurturing stronger connections between interior and exterior spaces.

The 18,810 gross square feet of building will be situated between Lewis Hall, Whitman Court, and Stevens Way. The site will include an outdoor gathering area for up to 150 people, a ceremonial place, outdoor cooking area, outdoor teaching area, Native arts exhibit area, traditional use plants and medicine garden, basket plants/bioswale garden, drop-off and welcome area, elder, service and bike parking.

The existing site is currently used as a parking lot and landscaped areas. Four parking spots will be replaced on the project site. All other parking needs will be distributed throughout the UW campus wide parking program. The project site is bordered by streets on two of its three sides, and will limit the number of curb cuts to two on Whitman Court.

Other facilities will not be significantly impacted by this project. Parking will be accommodated at other campus-wide locations.

The total project budget is estimated to $10,645,000. The UW received state funding of $300,000 to conduct a Predesign study and plans to request an additional $2.7 million for design and contribute to the construction of the project. The remaining $7.645 million will come from other sources such as donors.

There has not been any legislative or executive intent impacting this project other than those listed in the Washington State Priorities of Government.

2.8 Implementation Approach

This project will be managed by the UW Capital Projects Office with a project manager and construction manager under the supervision of the Director. The project manager will manage the various contracts required for this project. Other responsibilities include budget control and managing the technical reviews by the various university departments and committees. The University's facilities staff will conduct a review of the design documents to see that the design complies with the program and university standards.

The UW Architectural Commission and the University Landscape Advisory Committee will advise on the exterior of the building and site area. The UW Board of Regents will review and approve the design and budget.

During the construction phase, a UW construction manager will be assigned to coordinate the construction activities and have day-to-day responsibilities for managing the construction contract.

The UW will request state funding for the operations and maintenance of these buildings.

A staffing plan for the project management and operations and maintenance in table form is outlined in section 7 of this Predesign.

2.9 Project Management

The UW has a Capital Projects Office with trained professionals that will manage the design and construction of the project. Resources for Project Management from General Administration will not be used. The project will use the Design/Bid/Build method of delivery as authorized by the State Legislature in Title 39.10 RCW to accomplish this project in them most cost-effective manner.

2.10 Project Schedule

Design	2010-2012
Construction	2013-2014

The schedule is dependent on the fundraising capabilities of the UW specific to this project. It will also incorporate key cultural celebrations provided by the project advisory committee.

3.0 Program Analysis

3.1 Assumptions

Because the focus of the project is to support and advance Native students, faculty and staff at the UW, the project includes special aspects that seek to address the unique needs of people leaving their Native communities to attend or work at the UW. All public spaces at the House of Knowledge must be fully accessible to not only satisfy the regulatory statutes, but also successfully accommodate the multi-generational, special occasions associated with community gathering functions. Further, the program elements must recognize the significance and practical realities of families in Native student life by providing special accommodations for the multiple generations that are an essential part of many students' daily lives.

Student life, teaching and community-gathering all have interior and exterior spatial needs to be addressed in the program and the associated design concept. Exterior spatial needs at the House of Knowledge are associated with the long traditions of place-based knowledge gained by Native Americans. These traditions are often taught in an outdoor environment where the elements, plants and animals are integral parts of the lesson plan, indivisible from the ideas and concepts with which they can be associated. Also, community gathering activities at the House of Knowledge will flow out into the landscape before, during and after special events, expanding the sense of place and building new, stronger connections between visitors and students and adding to the vibrancy of campus life.

The variability in patterns of use amongst the student life, teaching and gathering functions means that the facility will have to simultaneously accommodate different groups coming to the House of Knowledge. For example on the same day, a conference for Native health care educators might occupy the gathering spaces while the multipurpose spaces are scheduled and Native students are conducting a planning meeting for an upcoming special event, maximizing demand for space at the facility. While not unique, this pattern of use brings together groups of community members, faculty, administrators, staff and students at one time in a relatively small place given the comparative size of many other multi-function campus facilities. Welcoming and facilitating a variety of Native group events is a core aspect of the mission of the House of Knowledge and represents, therefore, an important functional characteristic for the space program and the resultant project design solution.

Existing Facilities Inventory

There are no existing facilities on campus.

3.2 Program Functions

The House of Knowledge will facilitate three categories of primary functional needs, each with distinct patterns of use and spatial requirements: student life, teaching and gathering. Administrative offices and building services facilities are secondary functions associated with these primary determinants. Flexibility and adaptability were identified as important aspects of programming for all three types of program functions. Contributing students related that, “the inhabitation of the architecture…the students’ activities should dominate the feeling of the place.”

In Longhouse traditions, the whole environment is a place of potential teaching. At the House of Knowledge, these traditions are sustained in adaptable spaces that can accommodate chance learning opportunities but also in the way spaces, materials and surfaces are used to convey history and stories through art, craft and informal conversations.

Project Program

The three categories of the project’s program exist each in two parts; indoor functions and activities and outdoor functions and activities. Developing program areas with both indoor and outdoor functionality facilitates the project goals while rooting it deeper in Native culture and traditions and connects the project with the larger UW campus.

Note: outdoor program elements are italicized below and do not contribute to the project’s Assignable Net Area according to the Facilities Evaluation and Planning Guide.

Category	*Type*	*Program Space*	*Area (sqft)*
Gathering			
	Indoor		
		Gathering Lobby	700
		Public Lounge/Waiting Area	290
		Gathering Hall	4,600
		Table & chair storage	350
		A/V Storage	90
		Kitchen	700
		Conference Room (Green Room)	460
	Outdoor		
		Welcome Area	*800*
		Gathering Circle	*1,500*
		Outdoor Cooking	*400*
		Water Feature(s)	*200*
Student Life			
	Indoor		
		Student Life Lobby	300
		Reception Desk	430
		Staff Office 1	120
		Staff Office 2	120
		Office Service (copy, print, fax)	100
		Office Service (storage)	50
		Elder's Office	140
		Study (resource room)	800
		Student Lounge	1,300
		Kitchenette	50
		Lockers	30
		Cultural storage	200
	Outdoor		
		Private Garden	*120*
Teaching			
	Indoor		
		Native Arts Class Laboratory	1,500
		Class Laboratory Service (storage)	100
		Multipurpose Room	800
		Multipurpose Room	800
		Multipurpose Room Service	120
	Outdoor		
		Outdoor Lab Work Area	*700*
		Outdoor Classroom / Terraced Seating	*350*
		Native Arts Exhibit Areas	*tbd*
		Basket Plants Garden / Bioretention Swale	*1,500*
		Traditional Use Plants Garden	*600*
Assigned Indoor Space Program			*14,150*

Architectural Description

The project is composed of two buildings: a Student Building and a Gathering Building, and an outdoor gathering place; together they form the House of Knowledge. The Student Building houses student life activities and areas dedicated to teaching and learning while the Gathering Building houses areas dedicated to gathering and the community. The placement of the two buildings on the site maintains existing natural site features, creates opportunities for exterior spaces and reinforces the relationships between outdoor and indoor program area. Vistas and axes from the larger University campus help organize the site layout along lines of energy, movement, and orientation providing changing views into the project site as pedestrians and vehicles move around its perimeter. At key moments, the architecture unfolds along the principal east-west axis, inviting people into the Gathering Circle. This is effectively the front door to the project, welcoming and embracing visitors to the House of Knowledge in an outdoor room between the two buildings that connects both the Student and Gathering Buildings with each other and the House of Knowledge to the larger UW campus.

The architectural approach for the House of Knowledge will be a contemporary expression of Northwest Costal Longhouse architecture and associated traditional buildings of the Tribes that inhabited Elliot Bay and the waterways around the UW. The project will balance traditional materials and forms with modern functional demands and systems to describe the reality of Native life today where students, faculty and staff have one foot in their heritage and another in the contemporary world.

The project's structural system will be expressed by large, exposed peeled wood poles that form the posts and beams which will be a primary architectural feature both on the interior and exterior of the building. The skin of the buildings will be a mix of wood rain screen walls and transparent glazed curtain wall construction. The wood exterior walls will be composed horizontal boards reminiscent of the large split boards that clad traditional Coast Salish Longhouses. The graying wood siding will blend in with the natural vegetation and large trees on the site and will terminate in a concrete base that ties in with the horizontal bases of the surrounding historic and neo classical architecture of the Lewis, Clark, Music and Art Halls.

Glazed curtain wall and storefront glass systems will provide a contemporary relief to the building elevations. The transparency of the glazing will provide natural daylight and ventilation to the interior while opening up the building to the exterior by allowing the activities and life of the building to be seen and flow out into the site; literally opening the House of Knowledge and making the bones of the structure and life within visible to and engaged in the life of the campus.

Functional Description of Major Building Spaces

Community-Gathering Building

The Gathering Hall

The Gathering Hall will be designed as a gathering space under a large shed roof in the spirit of the traditional Coast Salish Longhouse. It will function as a flexible space for large assemblies, classes, dancing, presentations, storytelling and smaller, more intimate gatherings. Built-in traditional terraced benches will provide permanent seating within the space. A storage area is located adjacent to the Gathering Hall with room for movable tables, chairs and partitions. The space will require the ability to accommodate multi-media presentations with an appropriate sound system for large gatherings. The Gathering Hall will showcase the large log pole post & beam structure and open up with a window wall facing south with views into the landscape.

Outdoor Gathering Circle

For American Indian people, the circle is a central symbol. It represents home, a resting place; from a high lookout it represents the sky touching the earth, the circle within which American Indian people live. The circle represents the dwelling place created by the Great Spirit for all people. Its round form connects all American Indian people from traditional times to the present day. Central to the site development is the Gathering Circle. It references both physical and cultural dimensions of space and spirit at the House of Knowledge. Its adjacency to the Gathering and Student Buildings provides for community activities, performances and private ceremonies as well as a reflective experience at the House of Knowledge, offering a dynamic interaction opportunity in the east campus area.

Conference Room

This room will serve as a break out for large Gathering events in the Gathering Hall, as a green room or for distinct meetings or classes. Windows to the north and west provide natural light and views into the landscape. The room will provide equipment for multimedia presentations.

Kitchen

The Kitchen will be flexible to accommodate student use, group cooking and support for catered events. The kitchen is centrally located for use by the Gathering Hall and the Student Lounge. It will house plenty of storage, cabinet space and a pantry. Systems will be simple, durable and easy to clean and maintain.

Outdoor Cooking Area

Outdoor cooking is an important program element of House of Knowledge. Outside the Kitchen area of the Gathering Building is an area proposed to service the cooking of salmon an important event of the Ravens Feast at the time of student graduation.

Student-Life Building

Student Lounge

The Student Lounge is an area for studying, gathering, socializing and relaxation. The space incorporates the exposed log pole structure and ceiling above. The columns and beams march out of the student lounge and become the primary circulation element inside the building. This welcoming hall will engage the public lounge and connect the other program areas of the Student Building. A small kitchenette will be associated with the space to accommodate daily student use. This space is connected to the student resource area and has a visual connection to the administrative offices and out to the exterior gathering circle.

Student Resource Area

This area is reserved for quiet studying, computer use, group studying and as a resource area. Its character will be similar in nature to the student lounge, but able to be closed off from the Lounge.

Elders Lounge

The space will accommodate a resident Elder from the Native community. This person will be a liaison to the larger Native American community and a resource for the students, faculty and staff at the House of Knowledge.

Multipurpose Rooms

The meeting rooms are areas that will accommodate group meetings, seminars and other activities. Flexibility will be key in these spaces as they need to accommodate a large range of uses and teaching methods; including the traditional methods of instruction for Native peoples.

Native Art Lab

This space will accommodate a variety of activities that focus on Native art and hands-on work. Finishes in this space sill be durable and able to accommodate a series of uses. The ceiling opens up in this room to expose the log pole structure. This space will include storage areas and a large utility sink and counter. The east facing wall will have large uninterrupted sliding doors that open up into an outdoor art area that can be used in conjunction with the interior space.

3.3 Spatial Relationships Between the Facility and Site

The House of Knowledge is proposed to be sited on an approximately 1.7 acre portion of the central campus area immediately south of Lewis Hall currently utilized as the N-6 parking lot, an open lawn area with a few trees along Stevens Way and a dense, mature stand of trees along Whitman Court. This area once housed the Lewis Annex building which was demolished in the 1970s.

The site is bound by the main campus vehicular circulation route, Stevens Way, and a smaller drive, Whitman Court. Primary pedestrian circulation passes east-west from dorms to the center of campus, north to other dorms and NE 45th Street and south to the HUB and central campus area. The resulting intersection has created a unique configuration of activity and presents an opportunity for a culturally relevant place of welcome amongst the interactive crossing of cultures. The site has been designed to represent and recognize the diversity of indigenous students, faculty and staff and to honor the Northwest Coast culture of the Salish Sea. The project also proposes to enlarge the sidewalks along Stevens Way to better accommodate the pulse of student movement.

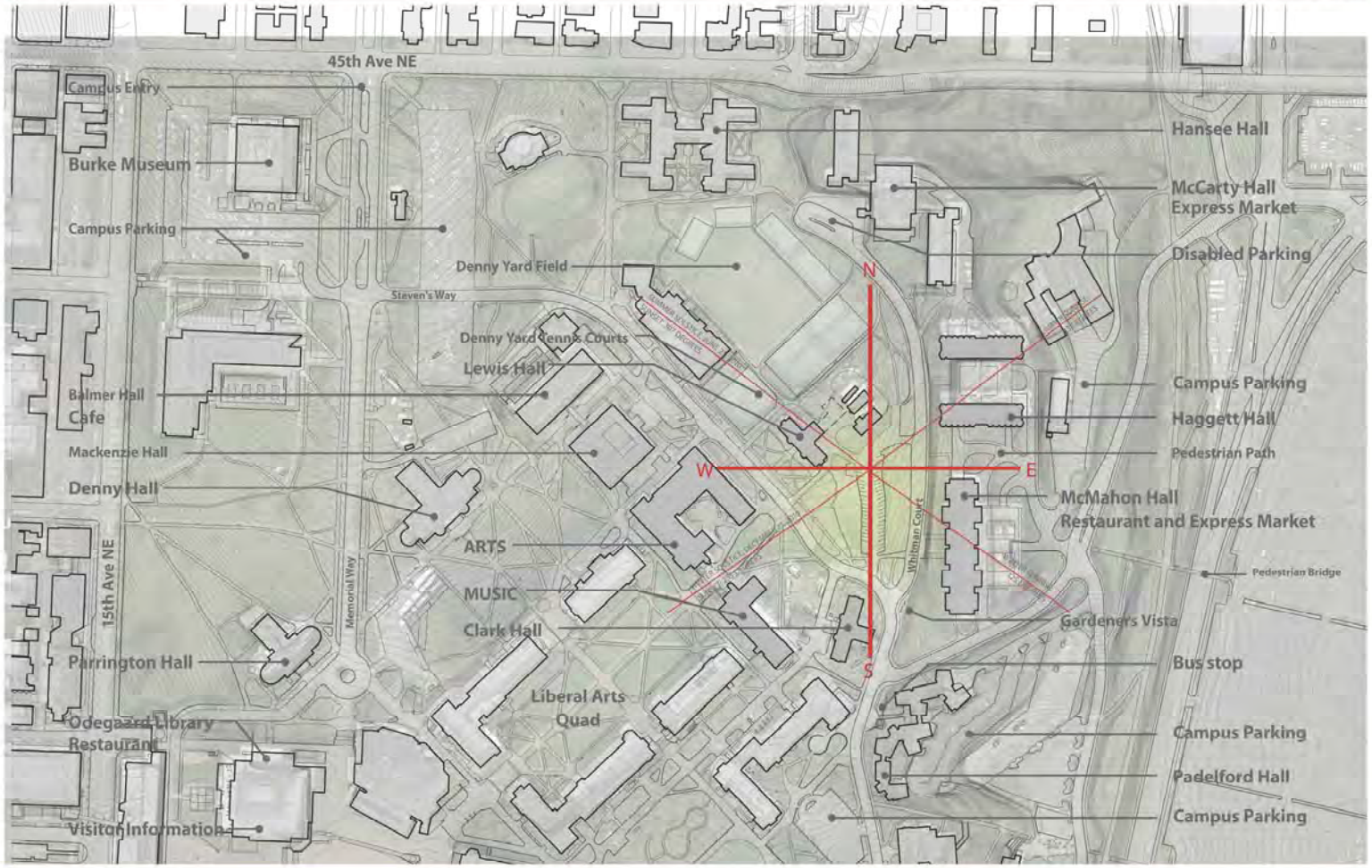
The north edge of the project site has been documented in the UW Master Plan (2001) as a possible extension of the Liberal Arts Quad, a major open space and pedestrian collector of the campus. The project proposes a linear extension of the Quad from Stephens Way to the Whitman Woodland Walk.

The west edge of the project site abuts historic Lewis Hall, which has been designed for a renovation and addition but construction has not yet been funded. Every effort in the House of Knowledge project has and will continue to be made to respect Lewis Hall. These include items such as supporting the strong edge of the formal Lewis Hall front lawn and creating view connections between the proposed public spaces to the east and back of Lewis Hall.

A large portion of the project site, about ½ acre, forms the eastern site edge of the Whitman Court Woodland and Walk. As a natural area of the campus, the native woodland area extends north of the site across to the west surrounding McMahon Hall. The grove is a bird and animal habitat and vegetative screen to the 11 story concrete dormitory across Whitman Court. It is a quiet, contemplative zone on campus and will serve as a transition into the site. The entry and drop-off for visitors and Elders is from this eastern, more natural area of the site. The drop-off area also serves as short term parking.

JONES JONES

UNIVERSITY OF WASHINGTON HOUSE OF KNOWLEDGE
Seattle, WA



CAMPUS CONTEXT MAP
June 2010

3.4 Interrelationships and Adjacencies of Functions

Please see the program description above for further discussion.

3.5 Major Equipment

Major equipment has not been identified at this time.

3.6 Special Systems

Site and Sustainability

The site design intends to have a light footprint on the UW campus. The building layouts are carefully fitted to the site to preserve existing landscaping and balance the project's functional needs with the best aspects of current reality. Grading on the site is designed to maintain existing trees and landscaping as well as to balance cut and fill in as much as possible. Stormwater Management will be designed to reduce peak flows and volumes of stormwater leaving the site and will include some reuse of stormwater on site.

Temporary Erosion and Sedimentation Control (TESC)

Existing site features will be protected and maintained where feasible. As a result, space for a temporary surface best management practice (BMP) pond may not be available. Therefore, construction stormwater may be stored in baker tanks instead of a surface trap/pond. In addition, the TESC design and/or performance specifications will emphasize erosion prevention over sedimentation treatment, although sediment treatment will be included as a TESC BMP. Erosion prevention BMPs will include minimizing the footprint of disturbed site area, ground stabilization, and covering of exposed soils.

Site Demolition and Preparation

Most of the existing parking lot will be removed and some utility lines will be removed or relocated. The existing satellite dish and transformer will be demolished as part of this project or as part of a project put in place by the University prior to the start of construction of the House of Knowledge. Site lighting and shallow communication lines will also be relocated. Other utility lines, like those in the very deep utility tunnel crossing the site from south to north, will be protected and remain in place. According to the Seattle Designation of Exceptional Trees (16-2008), several trees on site may be protected. Most of these trees will be protected where feasible and/or possible. The trees to be protected will be fenced off at the beginning of construction so that the contractors will not encroach on the trees to be saved during the construction process. As a result, tree limbs and roots will be protected from construction activities.

Vehicular Site Paving

Vehicular paving for site access, building service, delivery, and short-term and ADA parking will be provided at the new House of Knowledge buildings. Most parking on campus will be at dedicated regional parking locations on the campus in accordance with the UW Master Plan 2001. As a result, existing site features and landscaping may not need to be removed to construct vehicular paved surfaces. The existing curb cut on Stevens Way by Whitman Court will be removed. The existing curb cut on Whitman Court will be used for one of the driveways to the new buildings and a new curb cut on Whitman Court will be made for the other driveway to the new buildings.

Site Grading

Site grading at the new House of Knowledge buildings will designed to fit the existing site topography. The buildings will be one story with slightly different finished floor elevations to provide a grading design that will attempt to minimize import/export quantities and maintain a small construction foot print.

Stormwater Management

The stormwater management approach for the House of Knowledge buildings will likely include bioretention areas to manage peak flow rates and volumes of stormwater leaving the site. These bioretention areas would also be used to support new plantings of native vegetation for interpretation purposes. The stormwater management approach for the House of Knowledge buildings may also include green roofs that will be at least four inches in depth and also used for interpretation purposes. According to record information, there is a dedicated storm drain system at the corner of Stevens Way and Whitman Court. The site stormwater management systems may connect to that storm drain system to provide an outlet for large stormwater event overflows. According to record information, the dedicated storm drain system connects directly to Union Bay (not the Metro Trunk line) and has sufficient capacity to convey un-detained stormwater from the site to the bay. The record information will be confirmed and/or validated in the design phases for this project if the stormwater management approaches for this project changes during the design phases. A new storm drain lateral for the Lewis Hall renovation will also cross the site along the northerly edge of Stevens Way. It appears the Lewis Hall line will not be in conflict with the new House of Knowledge buildings so relocation of the line will not be required. Potential conflicts will be confirmed during the design phases of this project when the "installed" line location is confirmed.

Water and Fire Protection Supply

According to record information, there is a 10-inch water line along the site frontage on the north side of Stevens Way. A portion of this water line will need to be relocated to miss the new House of Knowledge Gathering Building. Services for the project buildings will connect to the 10-inch water line and will include two 1-inch domestic lines and two 3-inch fire protection/sprinkler lines for the two buildings. There are two existing fire hydrants at the site, one located on Stevens Way and one located on Whitman Court. Fire flow requirements for these hydrants will likely be 1,500 gallons per minute based on the building types, sizes, and internal sprinkler systems. The existing water system will also likely have adequate capacity to serve the hydrants because a dead-end 10-inch pipe can provide ~ 2,000 gallons per minute before water velocities rise above industry standards. The existing water system capacity will be confirmed in the traditional design phases of this project when fire flow test data for the existing hydrants has been obtained and/or provided by UW.

Sanitary Sewer

According to record information, the Lewis Hall sanitary side sewer crosses the site for the new House of Knowledge buildings. A portion of that side sewer will need to be relocated to be outside of the new House of Knowledge Student Center building envelope. There are two sewer lines that could serve the site. One sewer line is located on the west side of Clark Hall and one sewer line is located on the east side of Clark Hall. The new House of Knowledge buildings side sewers will connect to one and/or both of these sewer lines. According to the survey for Lewis Hall, the sanitary sewer lines are 8-inch diameter lines.

Structural Systems

The House of Knowledge will consist of two buildings, Gathering Building and Student building. The facility will likely be classified as Type VB Construction, allowing any materials and systems permissible in the Building Code.

The Gathering Building will be a one-story, wood-framed structure. The Gathering Building's main space will be framed with architecturally exposed round, timber logs that reflect the traditional Native American Coast Salish structural systems that were prevalent in Longhouse construction throughout the Pacific

Northwest. The main beams will be approximately 30 inches in diameter and the columns approximately 24 inches in diameter. Glu-lam purlins will span between the timber beams and support structurally-insulated panels (SIPs) for the roof sheathing. The lateral system will be wood-framed, shearwalls to resist wind and seismic loads.

The Student Building will be a one-story, wood-framed structure. Similar to the Gathering Building, the majority of the space in this building will also have architecturally exposed round, timber logs as the main beams and columns. The spans are expected to be less than in the Gathering Building building and will range between 20 to 24 inches in diameter. Glu-lam purlins will span between the timber beams and support the SIPs. This building will have a partial living roof as part of the construction. The lateral system will be wood-framed, shearwalls to resist wind and seismic loads.
Both buildings will have a mezzanine over a portion of the building to support the mechanical units. The mezzanines are expected to be framed with engineered lumber with plywood decking.

The foundations for both buildings are likely to be reinforced concrete spread footings with continuous footings between major columns to support the exterior façade. This is based on adjacent buildings on the campus, but a site specific geotechnical investigation will need to be conducted in subsequent design phases to verify this working assumption. A concrete slab on grade will be provided at the first floor. The north end of the Student Building will have a partial height retaining wall to support the existing grade that is above the finished floor elevation of the building.

The site has existing below-grade tunnels and vertical vent shafts that daylight on the site. The two buildings will sit on top of the tunnel structures. The working assumption is that these tunnels are capable of supporting the Gathering Building and Student Building structures without structural modifications.

Design Criteria

The Building Code to be enforced at the time of full design, permitting and construction is not known at this time. If the project proceeds in the next two to three years, it is likely that the 2009 International Building Code with City of Seattle amendments would be the governing code. This is expected to be adopted the summer or fall of 2010. In addition, the UW campus design guide will be incorporated where appropriate to meet UW's specific structural requirements.

Mechanical Systems

Utilities

The UW maintains a chilled water plant, and a combined heat and power plant that provide electricity and steam for campus buildings. The House of Knowledge building site is located close to high and low pressure steam lines, but doesn't have convenient access to chilled water piping. The low pressure steam distribution is nearing capacity at the building site, but the high pressure steam line likely has sufficient additional capacity for the House of Knowledge. If the high pressure steam is used to provide heat, a pressure reducing station and steam to water heat exchanger will be required.

Sustainability/Carbon Footprint

The UW has a Climate Action Plan which is targeting a 36 percent CO2 reduction by 2035, and a 57.5 percent CO2 reduction by 2050 below 2005 levels. The current CBECs energy use index for college education buildings is 120 kBtu/SF. This metric includes labs, hospitals, cafeterias, and older buildings built before current energy codes. Meeting the 2030 challenge for 2010 requires achieving a 60 percent reduction (48 kBtu/SF) and should be relatively straight forward for the House of Knowledge. A more

ambitious target would be to compare the energy use to a classroom school building (75 kBtu/SF baseline), which wouldn't include some of the more energy intensive occupancies in the college CBECs data and would more accurately reflect the occupant activities in the House of Knowledge. This would require the building to use only 30 kBtu/sf on an annual basis to achieve the 60 percent reduction target and meet the 2030 challenge. Achievement of this more ambitious goal may require including renewable energy systems such as photovoltaics in addition to a high performance envelope and energy efficient mechanical systems.

Heating & Cooling

Discussions with the user group established that cooling is only requested in the Gathering Hall, a space that will likely be rented out for functions during the summer months. The rest of the occupied spaces will be only heated with natural ventilation for cooling, in line with campus design standard 15C1.
Two main schemes were evaluated by the predesign team for heating and cooling the House of Knowledge:

1. Variable Refrigerant Volume Air to Air Heat Pumps with mixed mode natural ventilation
2. Radiant Heating/Cooling with mixed mode natural ventilation

A variable refrigerant volume (VRV) system consists of an outdoor unit with a condenser/evaporator coil and compressor connected to multiple indoor fan coils with refrigerant piping. Indoor units serving different thermal zones can operate simultaneously in either heating or cooling depending on the occupants' comfort requirements. The outdoor unit rejects heat to the outside air or removes heat from the outdoor air depending on the heat balance in the building. Generally, in the Seattle climate, VRV systems can achieve annual coefficients of performance near 2.5 which greatly reduces the energy use and CO2 production of the heating and cooling system.

Radiant heating and cooling systems condition occupied spaces through various means; either plastic piping installed directly in the floor slab, or radiators on the perimeter. Hot water is pumped through the distribution system during the heating season, and chilled water during the cooling season. Hot water could be provided by a boiler, a heat pump, or a heat exchanger on the campus central steam loop. Chilled water could be provided by a chiller, or a heat exchanger on the campus central chilled water loop depending on availability.

Radiant heating was rejected for the following reasons:

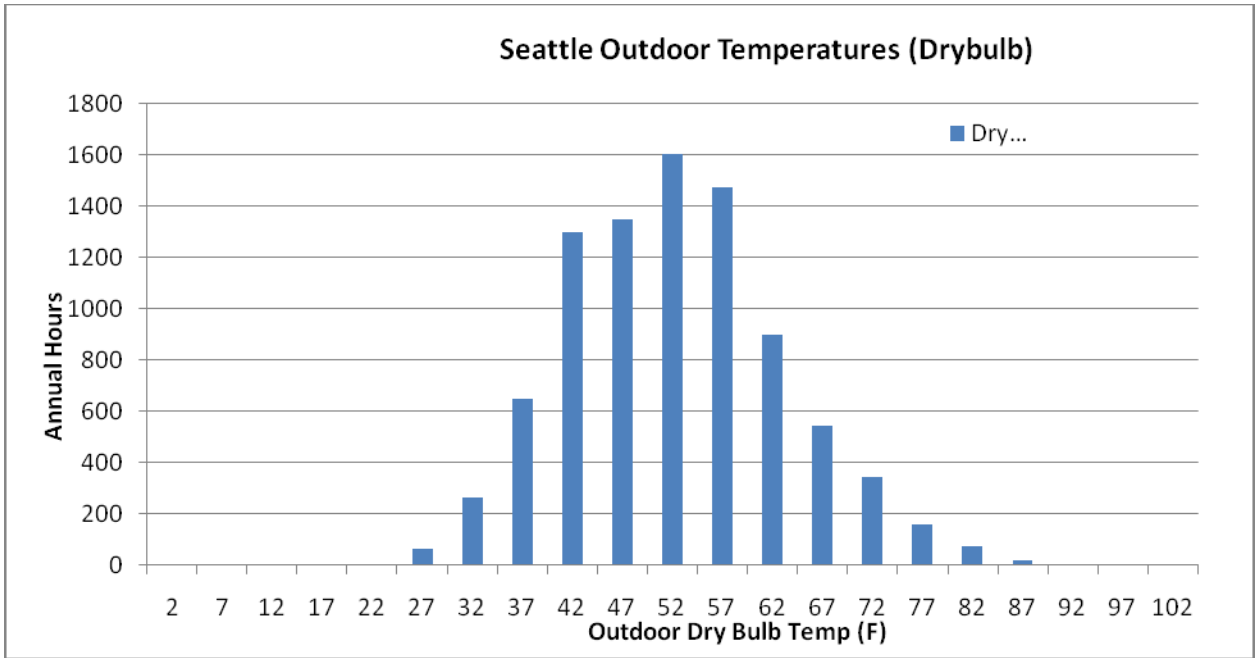
1. Churn – UW Buildings are operated by the university for as long as a century. The owner group and the pre-design team had concerns about the long-term flexibility of putting the heating and cooling systems in piping in the floor.
2. Cooling – The owner group required cooling in several of the spaces. Without access to chilled water, the building would have to install a chiller and heat rejection equipment to cool the water for use in the radiant floor. Additionally, meeting the cooling loads would be difficult to achieve with a radiant floor system in specialty spaces such as the Gathering Hall because of the large west facing glazed walls, and high occupancies.
3. Flexibility – Radiant heating and cooling in the slab limits the choice of floor surfaces to hard surfaces such as concrete or tile.
4. Control – Radiant heating and cooling in the slab provides much less responsive control compared to an air-side delivery system.

A VRV system was selected for the following reasons:

1. Sustainability – Currently, the CO2 production of Seattle City Light (before offsets) is around .5lbs per kWh. Assuming an 80 percent delivered efficiency from the central plant, and an annual COP of 2.5 for the heat pumps, the CO2 production of the VRV system will be roughly ½ that of a radiant system using central steam.
2. Flexibility – VRV systems are relatively simple to retrofit. It is not difficult to relocate indoor units and re-route refrigerant piping to meet changing program needs.
3. Cooling – A VRV system will allow full cooling in the spaces that the owner group has designated.
4. Low First Cost – VRV systems are commodity equipment with several manufacturers providing competitive systems. Compared to other systems with similarly energy efficient performance, such as a ground loop heat exchanger, the capital investment is much lower.

Natural Ventilation

Seattle is a mild heating dominated climate. A well designed envelope that minimizes western exposure and includes appropriate shading devices can maintain comfort for standard office and classroom occupancies. A natural ventilation system reduces first cost for the mechanical system, decreases energy use and utility costs associated with mechanical cooling, and improves occupant comfort and indoor air quality. In addition, naturally ventilated buildings help maintain culturally important connections between occupants and the environment. Spaces with higher equipment, people, or solar loads can need mechanical cooling to maintain comfortable indoor temperatures. A fully naturally ventilated scheme was evaluated. However, it is likely that the Gathering Building will be used for dances and other activities during the summer months which would make the space uncomfortably hot during peak outdoor temperatures.



During favorable outside conditions, the heating and cooling system serving perimeter spaces can be turned off. Except for the Gathering Building, the cooling capability of the VRV system will be disabled. Occupants will maintain their comfort through the use of operable windows during the cooling season. Certain spaces, such as the Gathering Hall, will have large doors to allow indoor/outdoor usage. Mechanical systems in these spaces will be deactivated by sensors when the doors are open.

Ventilation

The majority of VRV systems have minimum entering air temperatures in heating mode on the indoor evaporator coils. In high occupancy spaces such as classrooms and Gathering Halls where high outside air flows are required for ventilation, entering air temperatures can be below the minimum in the peak heating season. Three basic approaches can be used to deal with this design limitation:

1. Energy Recovery Ventilators – Decoupling outside air from the heating system and providing 100 percent outside air with an energy recovery ventilator can have substantial energy savings, and increase the entering air temperature above the minimum.
2. Dedicated 100 percent OA Heat Pumps – Mitsubishi has recently developed a ventilating air to air heat pump with no minimum entering air temperature. This approach requires dedicated outdoor and indoor units to provide outside air to the occupied spaces.
3. Hybrid Energy Recovery Ventilator with 100 percent OA Heat Pump in Series – An energy recovery ventilator will heat up outside air to a maximum of about 57 degrees when at design outdoor heating temperatures (23 F). This can feel cold and drafty. With a heat pump in series, the air can be heated up to the room air temperature during the heating season to prevent discomfort.

Controls

VRV systems are equipped with stand-alone controls that will control the heating and cooling system directly. The VRV control system will be integrated with a DDC system on the college network that will perform the following functions:

- Allow University maintenance staff to monitor alarms from the VRV system remotely.
- Schedule the VRV system.
- Submeter the lighting, mechanical, domestic hot water, building plug loads, and renewable energy power generation.
- Display real-time and trended information from the energy system submeters on a dashboard.

Domestic Hot Water

VRV systems can be equipped with water heating evaporator unit that can be used to pre-heat domestic hot water in a storage tank. This will cut the energy use and CO2 production of the domestic hot water by a minimum of 50 percent.

Renewable Energy Systems

The current Washington State incentives available for installing photovoltaic systems on public buildings are very favorable. Paybacks for PV panels are approaching 10 years. Depending on the final energy efficiency goals, the design team will evaluate using a grid-tied PV array located on the south facing roof of the Gathering Building.

Electrical Systems

Electrical Systems Design Criteria

The House of Knowledge Electrical Systems will be designed to meet the following Regulations, Standards and criteria:

- WAC Washington Administrative Code
- ANSI American National Standards Institute
- IEEE Institute of Electrical and Electronics Engineers
- IES Illuminating Engineering Society of North America

- NEC National Electrical Code
- NECA National Electrical Contractors Association
- NEMA National Electrical manufacturers Association
- NFPA National Fire Protection Association
- UL Underwriters Laboratories
- SEC Seattle Electrical Code
- NFPA 70, 72, 101, 110, 780
- ADA Americans with Disabilities Act Accessibility Guidelines

Normal Power

The two buildings of the House of Knowledge (the approximately 10,165 square feet Student Building and the approximately 8,645 square feet Gathering Building) will be powered by the UW campus 13.8kV primary power network. Since both buildings total only approximately 18,810 square feet, the utilization voltage will be 208/120V, three phases, 4 wires, to avoid the multi-tiered voltage transformation that would be required for a 480/277 volt system.

A new primary switch will be added to the existing lineup of primary switches in the basement of the Music Building, to provide power for the House of Knowledge. A new primary power feeder will route from this primary switch, into the UW utility tunnel system, through existing manhole NE7 and will exit the utility tunnel system at existing manhole NE8, which is located just northwest new Gathering Building. The primary power feeder will serve a pad mounted 500kVA service transformer located on the site north of the Gathering Building. The service transformer will feed a 1600A, 208/120V three phase service/distribution switchboard MSB located in the Gathering Building electrical room.

Service switchboard MSB will serve several branch panelboards, located in the main electrical room and in a secondary electrical space on the mezzanine. These branch panelboards will provide power to all of the lighting, receptacles and electrically operated equipment in the Gathering Building.

In addition to serving the power loads in the Gathering Building, switchboard MSB will feed an 800A, 208/120V, three phase service disconnect located on the ground floor of the Student Building. From the service disconnect, an 800A feeder serves an 800A power distribution panel MDB located in an electrical space on the mezzanine of the Student Building. This distribution panel will serve several branch panelboards on the mezzanine to provide power to all of the lighting, receptacles and electrically operated equipment in the Student Building.

Secondary Design Voltages

- Lighting: 120V, 1 phase, 3 wire
- Motors ½ HP and more: 208Y/120V, 3 phase, 4 wire
- Receptacles & Motors less than ½ HP, Specialty: 120V, 1 phase, 3 wire

Equipment Sizing Criteria:

- Branch Circuit Load Calculations
  - Lighting: Actual Installed VA
  - Receptacles:180 VA per outlet
  - Special Outlets: Actual installed VA of equipment
  - Motors: 100percent of Motor VA

- Demand Factors
  - Lighting: 125percent of installed VA
  - Receptacles: 100percent of first 10 KVA installed plus 50percent of balance
  - Motors: 125percent of VA of largest motor plus 100percent of VA of all other motors
  - Fixed Equipment: 100percent of total VA installed
- Minimum Bus Sizes
  - Lighting Panels: 100A
  - Equipment Panels: 225A
  - General Receptacles & Miscellaneous Panels: 225A

Power Receptacles

120V power receptacles will be 15A industrial grade receptacles, 120V, single phase, (20A for dedicated circuit receptacles). Specialty voltage receptacles will be provided where needed for specific equipment or loads. Wall mounted receptacles will be flush mounted except surface mounting will be allowed in utility spaces.

Power receptacles will be mounted in walls except there will be floor box receptacles in the Gathering Hall and the Conference Room in the Gathering Building and at the presentation walls of the Meeting Rooms in the Student Building.

Convenience receptacles will be limited to five on a circuit. Convenience outlets will be provided on each wall of offices and as needed elsewhere for general use.

Weatherproof exterior duplex receptacles will be provided in the outdoor classrooms, the outdoor cooking area, adjacent to all outdoor mechanical equipment and on all sides of the building exterior walls for general outdoor use.

Distribution

All power circuit and feeder conductors will be copper. Branch circuits will originate at the branch panels and be distributed in EMT conduit to the lighting, receptacle or fixed equipment connection. Homeruns will be limited to three circuits per conduit. Dedicated neutrals will be provided for all branch circuits.

Panel feeders will route from MSB and MDB to the branch panelboards in EMT. The feeder from the Gathering Building service/distribution switchboard MSB to the distribution panel MDB in the Student Building will route between the buildings underground.

Emergency/Standby Power

Emergency power for the Gathering and Student Buildings will come from an automatic transfer switch located in the Gathering Building electrical room. The transfer switch will be fed normal power from switchboard MSB. The emergency power feed to this transfer switch will come from the emergency power system in McMahon Hall. The emergency power in McMahon Hall derives from a 150kVA transformer served by the UW 2.4kV emergency power loop.

A 50A, 208/120V feeder will route from an existing 208/120V emergency power panelboard in McMahon Hall, via the utility tunnel system, to existing manhole NE8. It will exit NE8 and route underground to an emergency power service disconnect in the Gathering Building electrical room, which will feed the

automatic transfer switch and an associated emergency power panelboard located on the Gathering Building mezzanine. This panelboard will feed emergency loads in the Gathering building. And it will also feed an emergency power panel in the Student Building via an underground feeder. These panelboards will be fusible to facilitate the code required selective coordination of emergency power disconnecting devices.

The emergency system capacity will be reserved for code required life safety emergency loads (e.g., exit and pathway lighting, fire alarm, critical telecommunications).

Distribution

Distribution criteria for the emergency system will be similar to that for the normal power system.

Optional/Standby Power

There will be no generator power available in the building for non-code required optional standby loads.

Interior Lighting

The lighting system will be designed for aesthetic considerations, operational flexibility and energy efficiency. Consideration will be given to the nature of existing lighting systems across the University to capitalize upon existing operations and maintenance practices.

Design Criteria

Design lighting levels (In Average Maintained Foot-candles):

- Art Lab 50-70
- Offices, resource and meeting rooms 30-50
- Circulation 15-20
- Gathering Room 20-40
- Building Support 15-20

Select corridor/exit pathway and building support space lighting fixtures and all EXIT signs will be served by separate, un-switched, night lighting circuits connected to the emergency system.
Select Gathering Room lighting fixtures will be fed from the emergency power system via the Gathering Room scene select dimming lighting control system, to provide code required egress lighting. EXIT signs will be LED type. The ampacity of lighting circuits will be sized for 25 percent future growth plus 125 percent continuous loading factor per the National Electric Code.

Equipment

Lighting fixtures may include the following preliminary types described herein:

Gathering Hall:

- Dimmable T5HO fluorescent indirect cove lighting at the room perimeter
- Combination of metal halide and dimmable LED direct downlighting for room interior

Welcome Space:

- Dimmable T5HO fluorescent indirect cove lighting at the room perimeter
- Metal halide direct downlighting for room interior.

Native Arts Class Laboratory:

- Suspended direct/indirect lighting system with T5HO direct component and a direct component of LED for focused lighting on task areas.

Resource Room, Meeting Rooms, Conference Room, Offices, Admin, Student Lounge:

- Suspended T5 linear fluorescent direct/indirect lighting system.

Lamp and Ballasts:

- In general, florescent lamps will be 28 or 54 watt, T5 or T5HO, and 3500K color temperature, with a color rendering index (CRI) of 75 or greater.
- Florescent ballasts will be high frequency electronic type with less than 10percent total harmonic distortion.
- Metal Halide lamps will be color corrected, CRI of 75 or greater.
- LED modules will have CRI of 75 or greater.

Interior Lighting Control:

Lighting control will be designed to meet the 2008 Seattle Energy Code requirements. Lighting in all spaces will have automatic off controls. Except for in the Gathering Hall, and Welcome Halls, interior lighting will be controlled by occupancy sensors and local switching. The Gathering Hall will have automatic lighting switching controls via programmable low voltage relays allowing automatic off function in after hours. The Gathering Hall will have a scene control programmable zone dimming lighting control system for maximum flexibility for the multiple uses of this room. This system will allow choosing between multiple programmed scenes and will include timed automatic off, to conform to energy code. Local control of lighting scenes will be by a lighting control system touch screen controller. Lighting in all day lighted zones will be automatically dimmer controlled by low voltage, ceiling mounted photosensors for constant daylight dimming, to conform to the Seattle Energy Code.

Distribution

All lighting circuit wiring will be in conduit, routed within walls, partitions, or ceiling cavity. Surface-mounted conduit will be minimized.

Exterior Lighting

Site lighting will be provided for pedestrian walkways with pedestrian scale metal halide pole fixtures. These lights will be astronomic time clock controlled via the buildings' low voltage programmable lighting control systems. Building exterior lighting will be provided at building entrances, outdoor classrooms and outdoor cooking area, by building mounted metal halide light cutoff fixtures, controlled by the buildings' low voltage programmable lighting control systems. Key enabled local override switches will be included at the outdoor classrooms and outdoor cooking area.

Access Control System

The buildings are located on an open campus. Access to the primary public zones of the building is open and unlocked during normal operational hours, with after-hours access by an electronic key card system. Access to the buildings support spaces such as communications and mechanical rooms is by the use of keyed cylinder locks.

Fire Alarm System

The two House of Knowledge buildings will each have a Simplex 4100U addressable fire alarm system monitored by the campus McCulloh loop system via the utility tunnel. Alarm initiating devices and alarm signal appliances will be provided as necessary to comply with local codes and the University's design guidelines.

Fire Alarm Design Criteria
The system will be fully addressable, with addressable initiating devices. The system will include manual pull stations at exits, smoke detectors in air ducts at fire/smoke dampers, monitoring valve position and water flow switches on the sprinkler water system and combination horn/strobes in all common and public areas. Each Fire Alarm Control Panel (FACP) will be located in the building mechanical room and will include annunciation, monitors, and control. A remote system annunciator panel will be located at an exterior door for the use of the fire department responding to an alarm.

Equipment
All system components will be manufactured by Simplex.

Distribution
All Fire Alarm system wiring will be in dedicated conduit and labeled per the University standards.

Communications Systems
The two buildings comprising the House of Knowledge (the approximately 10,165 square foot Student Building and the approximately 8,645 square foot Gathering Building) will be connected to existing UW telecommunications systems via the existing north south utility tunnel system along the east side of the building site. There is an existing manhole, NE-8, approximately at the midpoint of the site that will provide underground access to the utility tunnel system.
The Telecommunications System will consist of the following basic elements:

- Outside plant (OSP) underground concrete encased conduit ductbank pathways.
    - To connect one of the House of Knowledge buildings to the existing UW utility tunnel system.
    - To interconnect the Student and Gathering Buildings.
- A structured cabling system (SCS) for the building interiors.
- Backbone copper and fiber optical cables between the Student and Gathering Buildings.
- Telecommunications spaces to house voice and data networking electronic equipment mounted in equipment racks.
- Building pathways consisting of conduits, outlet boxes, cable trays, and conduit sleeves.
- Work area (station) communications outlets with faceplates and outlet connector jacks.
- Testing of installed cables to TIA designated performance standards for both copper and fiber optical cables.
- A telecommunications grounding system bonded to the main electrical service panel ground system.

Communications Design Criteria
Design Codes, Standards, and methods shall include the following:

- UWTECH Facilities Design Information standards (FDI)
- Telecommunications Industry Association (TIA)
- Telecommunications Building Wiring Standards (TIA/EIA)
- Electronics Industry Alliance (EIA)
- National Fire Protection Association (NFPA)
- NFPA 70, National Electrical Code (NEC)
- Underwriters Laboratories, Inc. (UL)

- American National Standards Institute (ANSI)
- Institute of Electrical and Electronics Engineers (IEEE)
- Washington Administrative Codes (WAC)
- Americans with Disabilities Act Accessibility Guidelines (ADA)
- Local fire code, building code, mechanical code, electrical code, rules and interpretations required by the Authority Having Jurisdiction (AHJ)
- BICSI Telecommunications Design and Methods Manuals

Outside Plant Infrastructure

OSP underground infrastructure shall be re-enforced concrete encased ductbanks of 4-inch conduits connecting the existing UW utility tunnel to the House of Knowledge buildings. Under separate contract the UW Information Technology will provide the copper and fiber optical cable installation to the new buildings.

Structured Cabling System (SCS)

The SCS will consist of the following items:

- Horizontal Category 5e (CAT5e) four pair, unshielded twisted pair (UTP) cable.
- Double gang, 8-port, faceplates or device plates that contain data outlet connector jacks.
- CAT5e outlet connector jacks of 8-position, 8-pin, RJ45 type, insulation displacement contact (IDC) construction.
- CAT5e 48-port patch panels rack mounted in telecom rooms.

Building Backbone (riser) Cables

Backbone cables will be provided between the Student and Gathering Buildings consisting of multipair shielded twisted pair (STP) and singlemode fiber optical cables with the type and size designed to the most current UWTECH standards and service requirements for backbone cables in these structures.

Telecom Rooms and Spaces

Telecom Spaces and Rooms shall be designed to consider the following:

- Provide for cable terminations.
- Entrance feed cables and lightning protection when required by code.
- Backbone cables.
- Horizontal cables to work stations.
- Equipment rack installation to contain:
    - FO cable termination hardware.
    - Backbone cable termination hardware.
    - Horizontal cable patch panels.
- Provide for equipment and hardware grounding.

The campus OSP feed cables and building backbone cables will terminate in a Main Distribution Facility (MDF) room located in each of the Student and Gathering Buildings. Each room shall be minimally sized at 10-feet by 10-feet. The MDF will require environmental control for temperature and humidity to offset the heat load generated by the equipment installed in the room.

Distribution (Pathways)

Cables and pathways shall be installed in accordance with ANSI/TIA/EIA Telecommunications Building Wiring Standards, UW Facilities Design Information, and BICSI Methods.

Cable pathways shall be designed in accordance with TIA Standard 569-C and consist of conduit and boxes, cable tray, and conduit sleeves to support horizontal cable distribution between individual work station outlet locations and the MDF Equipment Room. Minimum raceway bend radii and pull box placement and sizing shall be adhered to per TIA 569-C. Cable tray shall be accessible and at an elevation range of 10-feet to 14-feet above finished floors. Outlet box conduit will extend to the nearest cable tray or be homerun to the MDF Equipment Room.

Work Area Outlets (Stations)

Work area outlets or work area stations will be double gang faceplates each with a standard bundle of 3-each CAT5e UTP cables unless noted otherwise on the drawings. Unused connector jack opening shall be filled with blank inserts. Work area outlet shall be numbered per FDI standards and listed in the Outlet Schedule. An Outlet Schedule will be created in a spreadsheet format as part of the design documents.

Testing

Installed cables, both copper and fiber optical, will be tested to the most current performance standards for the type of cable installed. 4-pair UTP cables will be tested and results recorded to Category 5e performance standards. Multipair backbone (riser) cables will be tested to Category 3 performance standards for transmission along with continuity, shorts, crossed pairs, transposed pairs, split pairs, and conductor shorts to ground or the cable metallic shield. Fiber optical cables will be tested before install, after install, and after completely terminated for performance standards relative to the type of cable installed.

Grounding

The telecommunications grounding system shall be designed in accordance with the ANSI/TIA Joint Standard 607-A. A telecommunications main grounding busbar (TMGB) will be provided in each MDF Equipment Room and bonded to the building's main electrical service ground with a 3/0 grounding conductor. Equipment racks, cable tray, metallic conduits longer than 10-feet, cable runway, electrical circuit panel in the MDF along with other hardware shall be bonded to the TMGB using a #6 AWG grounding conductor.

3.7 Future Needs and Flexibility

The site is used to allow for future or another building. The concept of a village, with multiple, smaller buildings, allows for additions to the village as future needs arise.

3.8 Sustainability and Energy Utilization

In keeping with the environmental and cultural values of the UW and the Native American community that the House of Knowledge serves, the project was approached with strong sustainable goals that enhance the cultural, ecological and educational narrative of the project. The House of Knowledge is required by the state of Washington to achieve a minimum rating of LEED silver. It will also comply with the goals developed in the UW's Climate Action Plan.

The project sustainable goals focus on:

- Enhancing the connections between the living culture of the users and the sustainable systems of the project.
- Creating a rich learning experience for the students by linking academic engagement with the project's environmental approach.

- Integrating the building and site design to develop more efficient project solutions.
- Reducing material and energy consumption during the construction and operation of the project.
- Maintaining a healthy indoor working environment for students, faculty, and staff.
- Designing the materials and systems of the project to work together to create an energy efficient, low impact, serviceable, beautiful and long lasting building and site.

Sustainable Strategies

- The main elements of this project and their role in creating a sustainable project are as follows:
- Develop the landscape and buildings to work together by sharing systems and complementing each other spatially and functionally.
- Use predominately native plantings that relate ecologically to the site and culturally to the program. This will help eliminate or significantly reduce the need for irrigation and create micro habitats for the birds and pollinators that inhabit the site.
- Reduce the development impact of the project and maintain a large number of existing trees and vegetation.
- The placement and form of the buildings are designed to take advantage of and celebrate the climate- rain, sun, wind and exposure to the natural features of the adjacent arboretum.
- The flow and movement of water will be evident in the drainage systems.
- The site is designed to create a healthy and naturally sustaining environment by fostering diversity and creating habitat for all life forms.
- Reinforce the natural patterns of the sun and the wind in the building and site design as sources to condition the spaces.
- Maximize the use of daylight throughout.
- Encourage the use of natural ventilation, reduce areas that are mechanically cooled and allow users to control their thermal environment.
- Integrate material and system designs to create energy and resource efficient solutions for the entire project. Building elements like massive floors and walls, lighting and ventilation, shading, and insulation should be integrated as part of the systems that will climatically regulate this building in the winter and summer.
- Building materials should be specified to reduce the negative environmental impact of the project. This includes responsibly harvested and certified wood and low-toxic paints, finishes and adhesives.
- Incorporate energy efficient fixtures and low flow plumbing.
- Consider the use of living roofs.
- Use durable materials and systems that reinforce the cultural relevance of the project, and its connection to place.

Preliminary LEED Checklist

The Predesign LEED checklist for the project targets a minimum goal of LEED Silver. At this level of investigation, it is possible to readily realize 51 points and possibly another 21 points with additional study, engineering and design. The remaining 38 points available are likely to prove very challenging to realize. Therefore, between 51 and 72 points seem possible as the project is now envisioned. This translates into an accreditation as either a LEED Silver or LEED Gold project. The Predesign LEED checklist may be found in Appendix C.

3.9 Applicable Codes and Regulations

This analysis identifies critical architectural issues in the Seattle Building Code which must be addressed during the design process; however, it is not intended as a complete investigation of relevant code requirements. A comprehensive code analysis must be conducted during the Schematic Design Phase.

Codes, Regulations and Ordinances

- UW Master Plan, Seattle Campus, 2001
- 2006 Seattle Building Code (2006 International Building Code with Seattle Amendments)
- 2006 Seattle Mechanical Code (2006 International Mechanical Code with Seattle Amendments)
- 2006 Uniform Plumbing Code
- 2008 Seattle Electric Code (2008 National Electric Code with Seattle Amendments)
- 2006 Seattle Fire Code (2006 International Fire Code with Seattle Amendments)
- 2007 Seattle Energy Code (2007 Washington State Energy Code with Seattle Amendments)
- NFPA 13 Sprinkler Systems
- American with Disabilities Act Accessibility Guidelines: Barrier Free Design
- Revised Code of Washington (RCW) and Washington Administrative Code (WAC) requirements for Barrier Free Design.

Standards

- UW Facility Services Design Manual.
- Univ. of Washington Building Design Standards and Guidelines for Recycling & Solid Waste

Use and Occupancy Classification (Chapter 3)

The project will be a mixed occupancy facility with the Student Building likely classified as a Business (B) Occupancy and the Gathering Building as an Assembly (A-3) Occupancy.

Building Height and Area (Chapter 5)

Predesign concept plans have determined that the building will be a maximum of 1 story in height with each building element having its own equipment platform. The project will be fully sprinkled. The Seattle Building Code allows the use of mezzanines, or equipment platforms, as described below, and as such, they do not contribute to the Building Area calculations.

SBC 505.5 Equipment Platforms.

Equipment Platforms in buildings shall not be considered as a portion of the floor below. Such equipment platforms shall not contribute to either the building area or the number of stories as regulated by Section 503.1. The area of the equipment platform shall not be included in the determining the fire area.
The code calculated Building Area is 19,950 square feet in total and as described below.

Occ.	Allowable Height	Allowable Area (sq.ft.)	Sprinkler Increase	Actual Area (sq.ft.)	Designed Area (sq.ft.)	percent Used
A-3	1 story	6,000	300 percent	18,000	9,112	50.6percent
B	2 story	9,000	300 percent	27,000	10,383	38.4percent
					Total	89percent

Because the sum of both building areas combined, as a percentage of actual allowable area with increases, is less than 100 percent, the design is compliant with the Building Code requirements identified immediately below.

SBC 503.1.2 Buildings on same lot. Two or more buildings on the same lot shall be regulated as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of buildings are within the limitations of Table 503 as modified by Sections 504 and 506. The provision of this code applicable to the aggregate building shall be applicable to each building.

Construction Type (Chapter 6)

Based upon this preliminary analysis, Construction Type VB is permissible. This allows the use of any materials identified in the Building Code to be used in the construction of the House of Knowledge.

4.0 SITE ANALYSIS

4.1 Evaluating Potential Sites

The House of Knowledge Working Group evaluated three potential sites using the following criteria:

- Site is identified within the 2001 Campus Master Plan;
- Site development is suitable to accommodate proposed program including interior and exterior space requirements;
- Site may accommodate substantially more development than proposed program or should be considered for other purposes;
- Site specific elements that would require additional costs to develop project compared to other sites;
- Site is located in close proximity of related programs;
- Site natural characteristics are appropriate to the proposed program including topography, solar orientation, vegetation, views, etc.;

Considerations specific to project program;

- Site neighboring architectural context and use appropriate to the nature of the proposed program; and
- Site is appropriately located to provide accessibility for pedestrians and vehicles.

Each criterion was weighted for priority between 0 and 3. Then each working group member scored each criterion. All the scores were added and the one with the highest value, site 7C Southeast of Lewis Hall, was chosen.

Building Footprint

The House of Knowledge site area is approximately 1.78 acres or 77,600 SF. Both buildings have a footprint of approximately 18,810 gross square feet.

Paved areas for vehicles and pedestrians will be approximately 22,405SF while planted areas on site amount to about 35,245SF. For operational efficiency, vehicle access to the facility will use an existing driveway off Whitman Court. The project will provide an additional driveway off of Whitman Court to facilitate passenger drop off, service vehicles and accessible parking.

4.2 Minimizing Costly Mitigation Requirements

The existing site is relatively flat in nature, with a slight slope from the north to the south. It is bordered by Stevens Way on the west and south, Whitman Court on the east and Lewis Hall (and its proposed addition) to the north.

It is not located near a steep slope, shoreline or wetlands. A utility tunnel runs directly under the site approximately 30 feet below the surface with a man hole access in the center of the site. The utility tunnel and man hole will not be impacted by the building.

A detailed geotechnical investigation was not included in the scope of the Predesign. However, a recent report prepared for an adjacent project (Lewis Hall Addition) provides some pertinent information as one of the boring locations was located within the footprint of the proposed House of Knowledge. The report concludes that development appears feasible from a geotechnical engineering standpoint and that new construction would be able to utilize common techniques for foundations and building detailing.

Construction lay down area will be accommodated on the site.

The UW has contacted the Department of Archeology and Historic Resources to review any historical and/or archeological assets on the site.

The project site is conducive to the LEED criteria. Efforts will be made to minimize the energy use of the building during construction and occupancy.

There are no known regulatory issues that would prohibit the project from being built in its proposed location.

4.3 Site Considerations

The central campus is zoned as a Major Institution Overlay (MIO) with a height limit of 105 feet per the Campus Master Plan as adopted by the UW Board of Regents and the City of Seattle. The UW Campus Master Plan includes policies, guidelines and development standards for campus development. For other applicable codes see section 3.9.

Utilities:

There are existing utilities that run directly through the site and others that are located along its perimeter that will need to be stubbed into the site as necessary. A branch of the University's extensive underground tunnel system bisects the middle of the site in a north south alignment. This tunnel carries communication, power and high and low pressure steam lines from the University's Central Plant. For more information please see section 3.6.

Access Issues:

The site is well suited for development and has good access from both Stevens Way and Whitman Court along the majority of its perimeter. In addition, a portion of the existing N6 parking lot paving can be utilized for construction staging for a good portion of the project duration.

The site includes a designated Significant Campus Landscape, the Whitman Court Woodland Walk. The Whitman Court Woodland is a grove of mature Douglas fir, Bigleaf Maple and Arbutus with a mixed native and non-native understory and a pedestrian path running north-south. The project's impact on this area will be minimized inasmuch as possible.

The House of Knowledge project site is approximately 1.78 acres or, 77,600 square feet (SF). Of this area, approximately 22,405 SF are drives, parking or pedestrian pathways. The remaining 35,245 SF is planted in turf, forest or mixed planting beds.

Generally, the site slopes 4 percent from the north to the south on the geographical east terrace edge of Lake Washington, falling about 12 feet, from elevation 182 to 170. The eastern portion of the site has a mature vegetated slope of 10 percent beyond which the terrace descends approximately 130 feet at a much greater slope to the lower campus area.

The eastern site area is a mature grove of deciduous and evergreen native trees that are designated a significant landscape feature of the campus. The grove occupies approximately 0.5 acres and contains a north-south pedestrian walkway know as the Whitman Court Woodland Walk. The site is bordered by Whitman Court which serves as access to two dorms (8 and 11 stories tall), the adjacent neighbors to the east. Oak trees follow Stevens Way, the main vehicle access through campus, along the west boundary of the site.

To the north of the project site is one of four of the earliest buildings on the campus, Lewis Hall (1898). Along this site edge is a paved drive which connects to the east side of Lewis Hall. The drive also connects

to the north parking exit and is a walking route for students coming from the east and north to the campus. Temporary buildings for Lewis Hall are also north of walking route. To the south across Stevens Way is Clark Hall, another early campus building (1898).

A total of 104 trees occupy the site; 72 are defined as Exceptional by the City of Seattle Ordinance 16-2008. The Exceptional trees are located both in the woodland grove and throughout the site.

Currently, the interior of the site is occupied by a 56 car asphalt surfaced parking lot. The site also has a fenced area with a utility shed and satellite dish that is no longer in use, Lewis Hall's electrical transformer and a vented access to tunnel manhole NE-8. The utility tunnel is approximately 30' below grade and runs north-south with a branch that runs east to the residence hall. Other minor services and utilities cross the site.

A 2009 Predesign study for an addition to Lewis Hall proposed a bioretention swale located on the site and utility lines (storm drain and proposed sewer connection) cross the site paralleling Stevens Way to connect to service lines.

The closest visitor parking is a terraced parking structure southeast of the site. Walking distance from this area to the site is approximately 600 feet. Alternatively, there is a parking are near the main campus entrance which is 1100 feet from to the site. A major city transit bus stop is approximately 300 feet to the south of the site.

The Burke Gilman Trail is the primary bicycle access to the University, although the surface streets are heavily utilized as well. The House of Knowledge will provide onsite bicycle parking to complement the existing facilities at the surrounding buildings.
Main building access would be from the west side of the site off Stevens Way or an adjacent pedestrian route. The facility will be one level with universal access throughout.

Transportation and Parking:
King County Metro Transit and Community Transit provide service to the UW campus, operating along Stevens Way.

Vehicular parking will be provided at the facility in the form of several ADA parking stalls and two 30 minute load/unload stalls. Longer term parking is available on upper campus in Lots N1 (212 spaces), N5 (184 spaces) and a short walk away at the Padelford Parking Garage (530 spaces). The main E1 (Montlake) Parking Lot (3,022 spaces) is a 10 minute walk from the site.

4.4 Acquisition Process

This does not apply to this project.

Projects Without Selected Sites

This does not apply to this project.

Preferred Site

Please refer to section 4.3 for a complete discussion of the preferred site.

5.0 PROJECT BUDGET ANALYSIS

5.1 Introduction

The preliminary construction cost analysis assumes that subsequent design and engineering efforts will continue to develop the project as described herein, aggressively pursuing cost controls that seek to balance the project vision, scope and schedule with capital costs described herein. The Predesign effort seeks to comprehensively identify the extent of the work included in the project and to translate this scope into a realistic cost model to assist decision-makers as the project moves forward. Because the House of Knowledge consists of special cultural dimensions unlike most other capital projects on campus, sufficient project contingency must be defined to address emergent issues not captured in this preliminary phase of work. In addition, the unique construction of the this project, including the large round timber used reminiscent of Coast Salish architecture, contractors and suppliers were not forth giving in cost estimates and comparables.

The following assumptions were incorporated into the cost exercise and serve as the basis for determining the context within which costs were modeled and discussed amongst design team members, the House of Knowledge Working Group, UW Capital Projects and UW Capital Planning departments during the entire duration of the Predesign effort.

- The experience of the project team members, historic cost data, information from suppliers and sub-contractors taking into account local construction marketplace dynamics for the type and size of similar projects.
- Project schedule:
  - Start: January 2013
  - End: March 2014
  - Duration: 15 Months
- Pricing is based on May 2010 costs and escalated to the start of construction.
- The contractor will have free access to the work areas.
- The project will be procured through a competitive hard bid process including competitive bids for all trades, unless noted otherwise.
- The contractor will be required to pay state prevailing wages for be the areas including travel and associated fringe benefits.
- The estimate does not include specific pricing information from contractors and suppliers for the exposed timber columns and beams. The proposed wood peeler poles are not standard and therefore suppliers are reluctant to give prices for these products at this time. Allowances have been included for the work based on information available; however suppliers have noted that these items would be individually selected on a tree by tree basis to suit the detailed project requirements at the time of bid.

Reasonableness of Cost

Below is a chart of cost comparisons for construction projects similar in mission to the House of Knowledge and built on college campuses. The room program for the projects have similarities in spaces but do not match exactly. For example, the House of Welcome is largely a classroom facility that converts into a conference center. The First Nations House of Learning facility includes a conference room, student center,

native program faculty offices, library, and daycare center. The Portland State facility included a conference center, classrooms, and an art gallery lobby.

Comparable Facility Name	Location	Gross SF	Total Construction Cost	Cost per SF	Construction End Date	Inflation Adjuster Applied	Adjusted Cost per SF
House of Knowledge	*University of Washington*	*18,810*	*$5,593,743*	*$297.38*	*3/2014*	*7.12%*	*$332.27*
House of Welcome	Evergreen State College	12,177	$1,450,037	$119.08	6/1995	91.2%	$227.68
First Nations House of Learning	University of British Columbia	24,420	$3,947,000	$161.63	6/1991	224.8%	$524.97
Native American Student and Community Center	Portland State University	5,200	$1,383,200	$266.00	6/2005	36.5%	$363.09

5.2 Detailed Estimate (C100)
(see the next page)

STATE OF WASHINGTON

AGENCY/INSTITUTION PROJECT COST ESTIMATE

2007 OFM A/E Schedule

FORM **C-100** UW Version Rev 06/2009

AGENCY:	University of Washington	**Analysis Date:**	6/28/2010
PROJECT NAME:	House of Knowledge	**Analysis By:**	John Wetzel
PROJECT NUMBER:	202070	**Contact Phone #:**	206-685-3856
LOCATION:	Seattle Campus		

STATISTICS:	Primary
Gross Square Feet	18,810
Net Square Feet	14,152
Efficiency	75%
Estimated Cost per S.F.	332
Building Type:	
Is project a remodel?	
A/E Fee Class	B
A/E Fee Percentage:	8.48%

Contingency Rate:	10.00%
Management Reserve:	5.00%
Tax Rate:	9.50%
Art Requirement Applies:	
Project Admin by GA:	
Higher Ed. Institution:	
Alternative Public Works Project:	

Project Schedule	Start Date	End Date
1. Predesign (mm-yyyy):	Nov-2009	Jun-2010
2. Design (mm-yyyy):	Jul-2011	Dec-2012
3. Construction (mm-yyyy):	Jan-2013	Mar-2014
5. Construction Duration (in Months):	15	
State Construction Inflation Rate:	3.50%	
Base Month:	May-2010	

Project Cost Summary	
Primary MACC (escalated):	$6,250,000
Secondary MACC (escalated):	$0
Current Project Total:	$9,652,063
Escalated Project Total:	$10,645,000

Includes Formula Overrides:	Yes

	ITEM	BASE MONTH AMOUNT	FORMULA OVERRIDE	STANDARD FORMULA	ESCALATION FACTOR	ESCALATED COST
A.	**ACQUISITION COSTS**					
1	Purchase/Lease Cost					$0
2	Appraisal and Closing Costs					$0
3	Right-of-Way Costs					$0
4	Offsite Mitigation					$0
5	Other Acquisition Costs					$0
Total: Acquisition Costs		**$0**			1.0000	**$0**
B.	**CONSULTANT SERVICES**					
1	**Pre-Schematic Design Services**					
	a. Programming/Site Analysis	$17,172				$17,172
	b. Environmental Analysis					$0
	c. Best Review					$0
	d. Functional Programming	$215,931				$215,931
	e. Site Programming					$0
	f. Technical Programming					$0
	g. Analysis and Surveys					$0
	h. Program Estimates					$0
	i. Program Schedule					$0
	SubTotal: Pre-Schematic Design Services	**$233,103**			1.0000	**$233,103**
2	**Construction Documents**					
	a. A/E Basic Design Services - Up to Bidding (71%)	$328,711	$328,711	$336,893		$350,286
						$0
	SubTotal: Construction Documents	**$328,711**			1.0656	**$350,286**
3	**Extra Services**					
	a. Acoustical Consultant	$9,895				$10,544
	b. Bid Alternatives					$0
	c. Civil Design (Above Basic Services)	$24,736				$26,360
	d. Communications Consultant					$0
	e. Constructability Review Participation	$19,789				$21,088
	f. Constructability Review/Plan Check					$0
	g. Consultant Selection Cost	$1,979				$2,109
	h. Design - Code Plan Check					$0
	i. Design - Program Changes					$0
	j. Document Reproduction	$19,789				$21,088
	k. Door Hardware Consultant					$0
	l. Electronic/Audio Visual Consultant					$0
	m. Elevator Consultant					$0
	n. Energy Conservation Report/ LEEDS Review (LCCA Review)	$59,367				$63,264
	o. GCCM Support/Selection Review					$0
	p. Geotechnical Investigation	$19,789				$21,088
	q. Graphics	$14,842				$15,816
	r. Hazardous Materials Consultant	$14,842				$15,816
	s. Hospital/Laboratory Consultant					$0
	t. Indoor Air Quality Consultant					$0
	u. Interior Design/Furnishing Consultant	$24,736				$26,360
	v. Kitchen Consultant	$9,895				$10,544
	w. Landscape Consultant	$24,736				$26,360
	x. Other					$0
	y. Quality Control Consultant					$0
	z. Permit Expeditor	$14,842				$15,816
	aa. Renderings, Presentations, and Models	$19,789				$21,088

	ITEM		BASE MONTH AMOUNT	FORMULA OVERRIDE	STANDARD FORMULA	ESCALATION FACTOR	ESCALATED COST
ab.	Security Consultant						$0
ac.	Site Survey		$19,789				$21,088
ad.	Specialty Consultants		$138,801				$147,911
ae.	Thermal Scans						$0
af.	Transportation Consultant						$0
ag.	Move Coordination						$0
ah.	Travel and Per Diem						$0
ai.	Value Engineering Study						$0
aj.	VE Participation and Implementation		$4,947				$5,272
ak.	Voice and Data Consultant						$0
al.	Electrical/Lighting Design Consultant						$0
am.	Mechanical Consultant						$0
an.	Structural Consultant						$0
ao.	Construction Phasing/Early Bid Packages						$0
ap.	Partnering						$0
aQ.	Equipment Coordination & Design						$0
	SubTotal: Extra Services		**$442,564**			1.0656	**$471,612**
4	**Other Services**						
a.	Bid/Construction/Closeout - 29% of basic services		$146,702	$146,702	$137,604		$163,913
							$0
c.	Reimbursables		$9,829				$10,982
d.	As-Builts		$9,829				$10,982
e.	Commissioning and Training		$18,874				$21,088
f.	Construction Support						$0
g.	Cost/Scheduling Consultant		$19,658				$21,964
h.	Environmental Mitigation Services		$28,311				$31,632
i.	HVAC Balancing		$14,743				$16,473
j.	On-Site Representative						$0
k.	Other						$0
l.	Small Contracts (Attorney's DRB)		$4,914				$5,491
m.	Testing		$47,184				$52,720
	SubTotal: Other Services		**$300,044**			1.1173	**$335,245**
5	**Design Services Contingency**						
a.	Change Order Design Allowance		$34,978				$39,082
b.	Design Contingency	10.00%	$129,202	$129,202	$130,442		$144,360
	SubTotal: Design Services Contingency		**$164,180**			1.1173	**$183,442**
Total: Consultant Services			**$1,468,602**				**$1,573,688**
C.	**CONSTRUCTION CONTRACTS**						
1	**Site Work**						
a.	G10 - Site Preparation						$0
b.	G20 - Site Improvements						$0
c.	G30 - Site Mechanical Utilities						$0
d.	G40 - Site HVAC Utilities						$0
e.	G50 - Electrical Utilities						$0
f.	G60 - Other Site Construction						$0
g.	General Conditions						$0
h.	Estimating Contingency						$0
	SubTotal: Site Work		**$0**			1.0937	**$0**
2	**Related Project Costs**						
a.	Off site improvements						$0
b.	City Utilities Relocation						$0
c.	Parking Mitigation						$0
d.	Stormwater Retention/Detention						$0
e.	Wetland Mitigation						$0
f.	Hazardous Materials Remediation and Removal						$0
	SubTotal: Related Project Costs		**$0**			1.0937	**$0**
3A	**Facility Construction - Primary**						
a.	A10 - Foundations						$0
b.	A20 - Basement Construction						$0
c.	B10 - Superstructure						$0
d.	B20 - Exterior Closure						$0
e.	B30 - Roofing						$0
f.	C10 - Interior Construction						$0
g.	C20 - Stairs						$0
h.	C30 - Interior Finishes						$0
i.	D10 - Conveying Systems						$0
j.	D20 - Plumbing Systems						$0
k.	D30 - HVAC Systems						$0
l.	D40 - Fire Protection Systems						$0
m.	D50 - Electrical Systems						$0
n..	F10 - Special Construction						$0
o..	F20 - Selective Demolition						$0
p.	General Conditions						$0
q.	Estimating Contingency						$0
r.	Complete Facilities		$5,593,743				$6,250,000
	SubTotal: Facility Construction - Primary		**$5,593,743**			1.1173	**$6,250,000**
	Maximum Allowable Construction Cost (MACC) - Primary		**$5,593,743**				**$6,250,000**
4	**Other Contracts**						

	ITEM		BASE MONTH AMOUNT	FORMULA OVERRIDE	STANDARD FORMULA	ESCALATION FACTOR	ESCALATED COST
	a. Telecommunications Cable Plant						$0
	b. Other						$0
	c. Hazardous Materials						$0
	d. Moving Costs						$0
	e. Other						$0
	SubTotal: Other Contracts		**$0**			1.1173	**$0**
5	**GC/CM or Design Build Costs**						
	a. Preconstruction Services						$0
	b. Fee						$0
	c. Specified General Conditions						$0
	d. GC/CM Risk Contingency Cost						$0
	e. Negotiated Support (Reimbursables)						$0
	f. Other						$0
	SubTotal: GC/CM or Design Build Costs		**$0**			1.1173	**$0**
5	**GC/CM or Design Build Costs - NOT APPLICABLE**						
6	**Construction Contingencies**						
	a. Management Reserve	5.00%	$279,687		$279,687		$312,500
	b. Allowance for Change Orders	10.00%	$559,374		$559,374		$625,000
	c. Construction Retainage						$0
	SubTotal: Construction Contingencies		**$839,061**			1.1173	**$937,500**
7	**Sales Tax**	9.50%	$611,117	$611,117	$611,116		**$682,813**
	SubTotal: Sales Tax		**$611,117**			1.1173	**$682,813**
Total: Construction Contracts			**$7,043,921**				**$7,870,313**
D.	**EQUIPMENT**						
1	E10 - Equipment		$78,631				$87,856
2	E10 - Movable Equipment						$0
3	E20 - Furnishings		$196,578				$219,640
4	Inventory Equipment						$0
5	Special Construction						$0
	SubTotal: Equipment		**$275,209**			1.1173	**$307,496**
99	**Sales Tax**	9.50%	$26,145		$26,145		$29,212
	SubTotal: Sales Tax		**$26,145**			1.1173	**$29,212**
Total: Equipment			**$301,354**				**$336,708**
E.	**ARTWORK**						
1	Project Artwork		$27,969		$27,969		$27,969
Total: Artwork			**$27,969**			1.0000	**$27,969**
F.	**OTHER COSTS**						
1	Advertising		$7,403				$8,096
2	Metro Connection Fees		$10,000				$10,937
3	Environmental Mitigation Fees						$0
4	Financing Costs						$0
5	In-Plant Services		$34,547				$37,783
6	Utilities/Temporary Facilities		$14,806				$16,193
7	Security Services						$0
8	Master Use Permits (Owner)		$50,000				$54,683
9	Building Permit (Contractor)		$68,827	$68,827	$70,623		$75,274
10	Other Permits		$10,000				$10,937
11	Performance and Payment Bond						$0
12	Claims Review Board						$0
13	Builders Risk		$14,287	$14,287	$14,474		$15,625
14	Connectivity (C&C)		$49,352				$53,975
15	Other		$19,461				$21,284
16	Capitalized Operating Expenses						$0
Total: Other Costs			**$278,683**			1.0937	**$304,787**
G.	**PROJECT MANAGEMENT**						
1	CPO Project Management		$470,736	$470,736	$465,107		$470,736
2	Pre-Active Project Management		$60,799				$60,799
3	Contract Project Management						$0
4	Contract Construction Management						$0
5	PM Other Costs						$0
Total: Project Management			**$531,535**	**6.48%**	**$8,206,234**	1.0000	**$531,535**
GRAND TOTAL			**$9,652,063**				**$10,645,000**

5.3 Cost Model Summary

UW House of Knowledge - Total Project Cost Model Summary
June 15, 2010

Consultant Services		
Total - Consultant Services	$	1,573,700
Construction Contracts		
MACC	$	5,593,743
Subtotal	$	5,593,743
Construction Contingencies	$	839,061
Subtotal	$	6,432,804
WSST @ 9.5%	$	611,117
Total - Construction Contracts	$	7,043,921
Equipment		
Equipment	$	79,000
Furnishings	$	196,000
Subtotal	$	275,000
WSST @ 9.5%	$	26,145
Total - Equipment	$	301,354
Artwork		
Total - Higher Education Artwork	$	27,969
Other Costs		
Mitigation Costs	$	10,000
Permits	$	118,827
Physical Plant Services	$	35,000
Utilities/Temporary Facilities	$	15,000
Telecommunications	$	50,000
Other	$	20,860
Total - Other Costs	$	249,680
Project Management		
Agency Project Management	$	531,500
On-Site Representative	$	-
Total - Project Management	$	531,500
Escalation		
	$	916,876
Escalated Project Total	**$**	**10,645,000**

5.4 Form C-3, Benefit and Life-Cycle Cost Analysis Summary

BENEFIT AND LIFE CYCLE COST ANALYSIS SUMMARY — FORM C-3

AGENCY:	360 University of Washington	ANALYSIS TYPE:	LCC
PROJECT:	House of Knowledge	ANALYSIS DATE:	6/28/2010
LOCATION:	Seattle Campus	ANALYSIS BY:	JRW
Economic Life: 50 Yrs	Discount Rate: 3%	FILE NAME:	HOK C-3

Description	Alternate No. 1 New Building		Alternate No. 2 No Action		Alternate No. 3 No Action	
	Estimated Cost	Present Worth	Estimated Cost	Present Worth	Estimated Cost	Present Worth
1. Initial Costs						
A. Substructure	$ 265,116	$ 265,116				
B. Shell	$ 2,566,179	$ 2,566,179				
C. Interiors	$ 876,400	$ 876,400				
D. Services	$1,358,983	$ 1,358,983				
E. Equipment and Furniture	$ 181,809	$ 181,809				
F. Demolition	$ 0	$ 0				
G. Site	$ 1,001,513	$ 1,001,513				
Total	$ 6,250,000	$ 6,250,000				
Other Initial Costs						
A. Other Costs (UW Soft Costs)	$4,395,000	$4,395,000				
Total Initial Cost (PW)	$10,645,000	$10,645,000				
Total Initial Cost Savings	N/A	N/A				

5.5 Agency Sign-off

This project budget has been reviewed and approved by the University of Washington.

6.0 MASTER PLAN AND POLICY COORDINATION

6.1 Master Plan and Policy Coordination

In 2001 the UW Seattle campus approved its Campus Master Plan for the City of Seattle as determined by the Seattle Municipal Code (SMC) Chapter 23 section 69. The Master Plan follows, builds on, and replaces the 1992 General Physical Development Plan and includes guidelines and policies for developing 3 million gross square feet of additional building space on campus.

The following goals were developed for the Campus Master Plan to support the mission of the University:

- Honor the status of the campus as a national treasure, a work of art, and a triumph of environmental design, enriching life with a harmonious marriage of space, form and participation;

- Ensure good stewardship of the existing campus, maintaining and protecting the value of the University's physical resources and character, history, architecture and open space. Changes to the campus should improve and enhance, rather than detract from, the value and quality of the campus. The Campus Master Plan identifies and encourages preservation of historic resources and open space;
- Provide for the facility and infrastructure needs of the next decade;
- Provide the maximum amount of flexibility in order to best accommodate future growth and take advantage of unforeseen opportunities;
- Create an aesthetic quality appropriate to the campus as a whole and to specific areas, conserving and improving existing buildings, open spaces, and views on campus, and looking for opportunities to create additional open spaces;
- Ensure access to and within the campus, maximizing non-vehicular travel, emphasizing pedestrian routes for all pedestrians, and promoting the design of environments to be usable by all people, to the greatest extent possible, without the need for special arrangements or adaptations;
- Create a safe and healthy environment, with personal and workplace safety considerations integral to planning and design of circulation elements, buildings, and open spaces;
- Value the environment and strive to promote the conservation of natural resources and goals of the Growth Management Act and Shoreline Management Act;
- Encourage efficiency and economy in University operations, with advantageous locations for facilities and advantageous adjacencies of uses; and
- Recognize the importance of the surrounding communities and strive to achieve compatible working relationships with these communities to improve the quality of life and public benefits for all in the vicinity.

All regulatory requirements identified in the Master Plan will be adhered to.

6.2 Other Significant State Requirements

Clean Air Act of 1991

The University of Washington's response to the Clean Air Act of 1991 is illustrated on a campus wide basis by capital improvements to the existing power plant and the University's U-*Pass* program, which has resulted in a campus wide reduction in the number of single occupancy vehicle commuters. Measures to encourage commuting by non-automobiles are incorporated in each capital project through such measures as provisions for bicycle racks and safety improvements. Design standards for emissions and indoor air quality will be implemented in the building design stages as part of a comprehensive LEED strategy.

Growth Management Act of 1990

The Growth Strategies legislation of 19921 requires state agencies to comply with local land use regulations adopted pursuant to the Growth Management Act, which the University of Washington acknowledges through the development of the Campus Master Plan.

Governor's Executive Order 90-94 for Protection of Wetlands

The University has surveyed the wetland areas on campus as required by the Growth Management Act and Governor's Executive Order. Surveys were prepared for use during capital project planning to ensure that wetland resources remain protected.

No wetlands or other environmentally sensitive areas will be affected by the project.

Governor's Executive Order 05-05 Archeological and Cultural Resources

The University's Campus Master Plans include guidelines for any project that makes exterior alterations to buildings over 50 years old, or is adjacent to a building or significant campus feature older than 50 years and public spaces identified in the plan. A Historic Resource Addendum (HRA) is prepared and becomes an attachment to all project documentation and be considered by the appropriate decision makers. The information and analysis provided in the HRA provides a framework and context to insure that important elements of the campus, its historic character and value, environmental considerations and landscape context are preserved, enhances, and valued. The HRA further insures that improvements, changes, and modifications to the physical environment may be clearly analyzed and documented. Information contained in the HRA is based on Federal Department of Interior Guidelines. The HRA may identify the need for additional archeological consultation prior to and during construction activities.

Chapter 39.35D RCW High-Performance Public Buildings

The University of Washington implements environmental stewardship and sustainability principles and practices in the development and management of buildings and capital projects. Sustainable building is an integrated framework of design, construction, operations and demolition practices that encompasses the environmental, economic and social impacts of buildings. Sustainable design includes: efficient management of energy and water resources, management of materials and waste, protection of health and indoor environmental quality, protection of the environmental and reinforcement of natural systems, and an integrated design approach. State funded University projects will be designed, constructed, and certified to at least the LEED silver standard.

Clean Water Act

The University is incorporating storm water, drainage and erosion control plan requirements into its construction documents for all major capital projects. National Pollution Discharge Elimination System (NPDES) permit requirements will be implemented through the installation and maintenance of drainage utility systems for each capital project.

Hazardous Substances

Prior to occupancy, the University prepares an inventory of all hazardous substances to be utilized in the facility; a chemical hygiene plan is prepared for all employees.

Government Options to Landfill Disposal (GOLD)

The University's Facility Design Information Manual requires that each capital project provide sufficient support service space for the storage, sorting and transport of recyclables.

State Environmental Policy Act

As the Lead Agency, the University of Washington will ensure compliance with the State Environmental Policy Act RCW 34.21C, WAC 197-11 and WAC 478 for all capital projects.

7.0 FACILITY OPERATIONS AND MAINTENANCE REQUIREMENTS

7.1 Assumptions

The House of Knowledge will add to the costs associated with operating and maintenance at the UW Seattle campus. It is anticipated that the facility will be operated on an 8 AM to 9 PM schedule. Based on the UW student, faculty and staff demographics, it is expected that additional faculty and staff will be required to manage the operations of the building. The following is a general projection of staff following an existing model on the UW Seattle campus. The University will request state funding for operations and maintenance costs.

7.2 Operating Costs

(see the following page)

Facilities Services 07-Dec-09

Average Annual Expenditures per Gross Square Foot

July 2008 - June 2009

Service	Staff Benefits Per GSF	Operating Exp Per GSF	Total Exp Per GSF	% of Total
ADMINISTRATION AND MAINTENANCE				
AVP Facilities Services	0.0206	0.0948	0.1154	1.73%
Finance and Business Services	0.0248	0.0657	0.0905	1.35%
Campus Engineering	0.0317	0.1021	0.1338	2.00%
Custodial Services	0.2601	0.9865	1.2466	18.65%
Building Maintenance	0.2228	0.8465	1.0693	16.00%
Work Management	0.0209	0.1176	0.1385	2.07%
Campus Operations	0.1219	0.5169	0.6388	9.56%
Grounds Maintenance	0.0413	0.1629	0.2042	3.06%
TOTAL ADMINISTRATION AND MAINTENANCE	**0.7442**	**2.8930**	**3.6372**	**54.43%**
UTILITIES				
Commodity Cost				
Fuel		1.1718	1.1718	17.54%
Electricity		0.9717	0.9717	14.54%
Water/Sewer		0.4496	0.4496	6.73%
Commodity Subtotal		**2.5931**	**2.5931**	**38.80%**
Power Plant	0.0411	0.2332	0.2743	4.10%
Commodity & Power Plant Subtotal	**0.0411**	**2.8263**	**2.8674**	**42.91%**
Solid Waste & Recycling				
Solid Waste	0.0033	0.0983	0.1016	1.52%
Recycling Program	0.0071	0.0280	0.0351	0.52%
Solid Waste & Recycling Subtotal	**0.0104**	**0.1263**	**0.1367**	**2.05%**
TOTAL UTILITIES	**0.0515**	**2.9526**	**3.0041**	**44.95%**
TOTAL TRANSPORTATION SERVICES	**0.0290**	**0.0123**	**0.0413**	**0.62%**
TOTAL ANNUAL EXPENDITURES PER GSF	**0.8247**	**5.8579**	**6.6826**	**100.00%**

Notes:

1. Total gross square foot (GSF) data used to calculate costs per GSF includes GSF only for Seattle main campus owned buildings, including UW Tower (buildings A,C,O,S,T) at June 30, 2009. This GSF is adjusted where appropriate to reflect service actually provided by various FS administrative and maintenance units.

2. The Commodity Costs shown above include both central and non-central systems costs. Component costs are as follows:

	Central	Non-Central
Fuel 04/74-3552	1.2004	0.6947
Electricity 04/74-3554	0.9695	0.9943
Water/Sewer 04/74-3556	0.4402	0.5235

7.3 Staffing Plan – Projection

	Project Mgmt Staff	O & M Staff
2011-2013	.50	0
2013-2015	1.25	0
2015-2017	0	.1
2017-2019	0	.1
2019-2021	0	.1

Number represented in FTE's

The biennial operating costs use a dollar per square foot average in 2010 dollars multiplied by the gross square feet. Since this building will be newly constructed there are no existing O&M costs to benchmark against.

8.0 PROJECT DRAWINGS

(see following pages)

UNIVERSITY OF WASHINGTON HOUSE OF KNOWLEDGE
Seattle, WA

ARCHITECTURAL FLOOR PLANS
June 2010

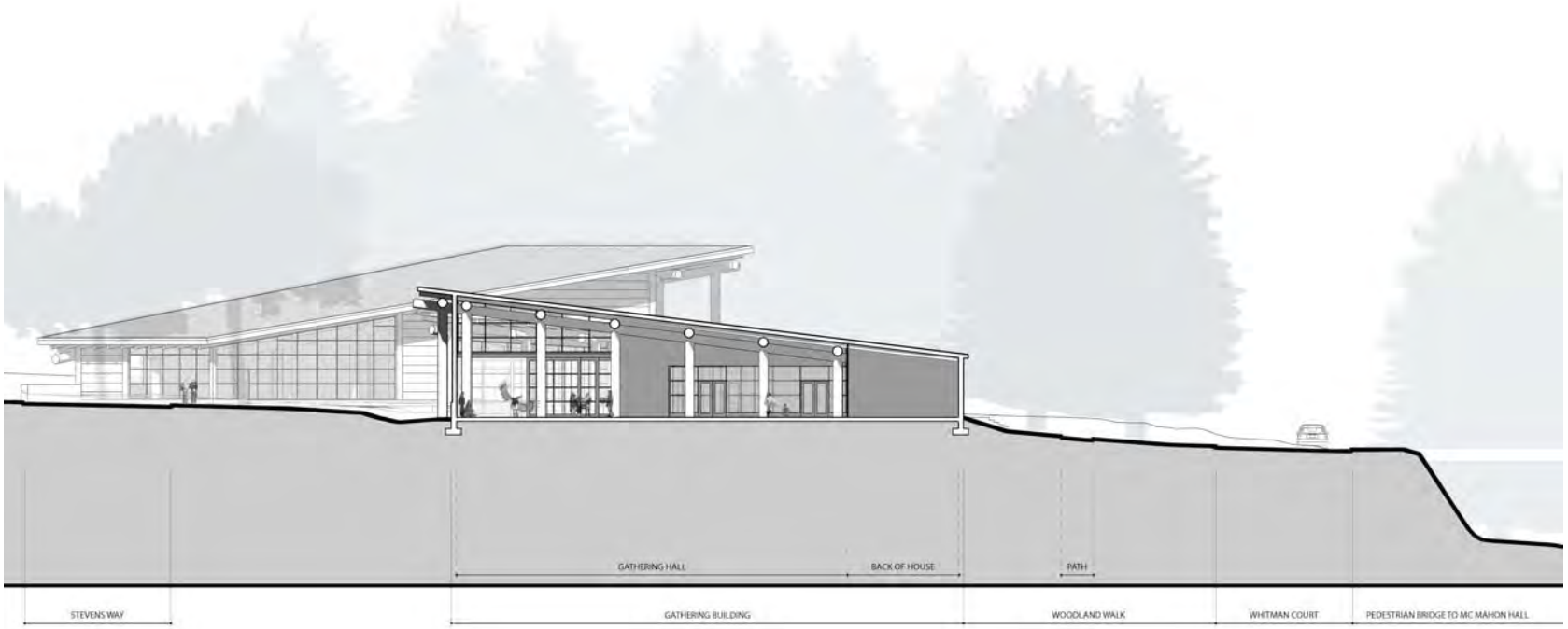
JONES JONES

SITE SECTION A
June 2010

University of Washington House of Knowledge
Seattle, WA
SITE SECTION B

University of Washington House of Knowledge
Seattle, WA
SITE SECTION C

University of Washington House of Knowledge
Seattle, WA
SITE SECTION D
June 2010



SITE SECTION E
June 2010

SITE SECTION F
June 2010

APPENDIX

A. Predesign Checklist
B. Acknowledgments
C. Project budget unit cost detail
D. Sustainable design charette summary

A. PREDESIGN CHECKLIST

☒ EXECUTIVE SUMMARY
☒ PROJECT ANALYSIS
- ☒ Discussion of operational needs
- ☒ Discussion of alternatives
- ☒ Discussion of selected alternative
- ☒ Identification of Issues
- ☒ Prior planning and history
- ☒ Stakeholders
- ☒ Project description
- ☒ Implementation approach ☒ Project management

☒ PROGRAM ANALYSIS
- ☒ Assumptions
- ☒ Functions and FTE's
- ☒ Spatial Relationships between the facility and site
- ☒ Interrelationships and adjacencies of functions
- ☒ Major Equipment *(not applicable)*
- ☒ Special systems such as environmental, information technology, etc.
- ☒ Future needs and flexibility
- ☒ Sustainability and energy utilization
- ☒ Applicable codes and regulations

☒ SITE ANALYSIS
- ☒ Potential Sites
- ☒ Building Footprint
- ☒ Site considerations such as physical, regulatory and access issues
- ☐ Acquisition process *(not applicable)*

☒ PROJECT BUDGET ANALYSIS
- ☒ Assumptions
- ☒ Detailed estimates
- ☒ Funding Sources
- ☒ Project cost estimate
- ☒ Form C-3, Benefit and Life-Cycle Cost Analysis Summary
- ☒ Sign-off by agency

☒ MASTER PLAN AND POLICY COORDINATION
- ☒ Impacts to existing plans
- ☒ Adherence to significant state policies

☒ FACILITY OPERATIONS AND MAINTENANCE REQUIREMENTS
- ☒ Assumptions
- ☒ Operating costs in table form

☒ Staffing plan (capital and operating)

☒ PROJECT DRAWINGS/DIAGRAMS
- ☒ Site Plans
- ☒ Building plans
- ☒ Building Volumes
- ☒ Elevations *(not applicable)*

☒ APPENDIX
- ☒ Predesign checklist
- ☒ Acknowledgments
- ☒ Project budget unit cost detail
- ☒ Visioning/sustainable design workshop summary

B. ACKNOWLEDGMENTS

House of Knowledge Project Advisory Committee

Dr. Charlotte Cote, Assistant Professor, Department of American Indian Studies, *Chair*
W. Ron Allen, Executive Director, Jamestown S'Klallam Tribe, *Co-Chair*
Dr. Sheila Edwards Lange, Vice President for Minority Affairs, Vice Provost for Diversity
Dr. Ron Whitener, Assistant Director, Native American Law Center
Marvin Oliver, Professor, Department of American Indian Studies
Candice Fries, Academic Counselor for Student Counseling Services
Dr. Karina Walters, Director, Indigenous Wellness Research Institute
Melvin Sheldon, Jr., Chair, Tulalip Tribes Board of Directors
Charlotte Williams, Tribal Chairwoman, Muckleshoot Tribal Council
Leonard Forsman, Chair, Suquamish Tribal Council
Andy DeLosAngeles, Traditional Chief, Snoqualmie Tribe of Indians
William "Bill" Coleman, Council Member, Nooksack Indian Tribe
Kateri Schlessman, Senior Planner, Office of Planning & Budgeting
Robin Wright Curator, Native American Art, Burke Museum
Augustine McCaffery, Manager, Academic Programs, Graduate School
Sharon Parker, Assistant Chancellor for Equity/Diversity, UW Tacoma
Cheryl Metoyer, Associate Professor, Information School
Dr. Deana Dartt-Newton, Curator, Native American Ethnology, Burke Museum
Tom Colonnese, Chair, American Indian Studies Department
Cecile Hansen, Chairperson, Duwamish Tribal Council
David Bean, Council Member, Puyallup Tribe of Indians
Marty Bluewater, CEO, United Indians of All Tribes Foundation
Denny Hurtado, Chair, Native American Advisory Board, Director, Washington State Office of Indian Instruction
Ralph Forquera, Executive Director, Seattle Indian Health Board
Marty Sands, Longhouse Specialist and Community Liaison
Karen Capuder, Native American Students in Advanced Academia
Clarity Lefthand Begay, Native American Students in Advanced Academia
Joe Dupris, American Indian Student Commission Director
President, First Nations at the University of Washington

Project Working Group

Dr. Charlotte Cote, Assistant Professor, Department of American Indian Studies
Dr. Sheila Edwards Lange, Vice President for Minority Affairs, Vice Provost for Diversity
Julian Argel, Director, Educational Talent Search, Office of Minority Affairs and Diversity
Ross Braine, Administrative Coordinator, Educational Talent Search, Office of Minority Affairs and Diversity
Thomas Segundo, Counselor/Recruiter Native American Specialist, Office of Minority Affairs and Diversity
John Wetzel, Landscape Architect, Project Manager, Capital Projects Office
David Iyall, Assistant Vice President, Development & Alumni Relations, Office of Minority Affairs and Diversity
Kateri Schlessman, Senior Planner, Office of Planning & Budgeting

Scott Pinkham, Counseling Services Coordinator, College of Engineering
Marty Sands, Longhouse Specialist and Community Liaison
Joe Dupris, American Indian Student Commission Director, ASUW
Tashina Willard, President, First Nations @ University of Washington
Augustine McCaffery, Manager, Graduate School Academic Programs
Karen Capuder, NASAA, Anthropology
Polly Olsen, Director, Community Relations & Development, Indigenous Wellness Research Institute
Clarity Lefthand Begay, NASAA, Department of Environmental & Occupational Health Sciences

House of Knowledge Elders Committee

Jones and Jones Architects
John Paul Jones, FAIA, Principal
Bruce Arnold, AIA, Senior Associate
Osama Quotah, AIA, Senior Associate
Colleen Thorpe, Senior Associate
Dottie Faris, ASLA, Associate
Jeremy Imhoff, Associate

Other Participants at the University of Washington
Ali Ferdos, Campus Engineering
Bill Earhart, Campus Engineering
Brian Davis, Grounds Department
Celeste Gilman, Transportation Services Office
Clara Simon, Capital Projects Office
Dave Ogrodnik, Campus Engineering
Fred Pitz, Campus Engineering
James Morin, Campus Engineering
Jan Arnst, Capital Projects Office
Jim Morin, Campus Engineering
John Barker, Capital Projects Office
John Kelly, Environmental Health & Safety
KC Chen, Campus Engineering
Kristine Kenney, Capital Projects Office
Lyle Zimmerman, UW Technology
Mark Murray, Environmental Health & Safety
Peter Dewey, Transportation Services Office
Robbie Avila, Campus Engineering
Scott Spencer, Custodial Services
Steven Roberts, Mailing Services
Tom Berg, Campus Engineering

B. PROJECT BUDGET UNIT COST DETAIL
C-4 Form

PREDESIGN CAPITAL PROJECT REQUEST REPORT SUMMARY		(Rev. 6/01)

AGENCY NAME	University of Washington				AGENCY CODE
					360
PROJECT TITLE				TYPE	PROJECT NUMBER
House of Knowledge (Intellectual House)				Program	30000021
PLAN PRIORITY	OFM PRIORITY	PREVIOUSLY	COUNTY	CITY	LEGISLATIVE DIST.
17			King	Seattle	43

WAS PROJECT INCLUDED IN PRIOR 10 YEARS? S?PLAN? (9)	Yes	IF YES, WHEN?	2009	PREV. PROJECT #	

PROJECT DESCRIPTION — **Project Mgmt by GA?** No

a. Problem/Justification/Why is this project needed?

The House of Knowledge Longhouse will provide " a multi-service learning and gathering space for Native American students, faculty, and staff and others of various cultures and communities to come together in a supporting and welcoming education environment to share their knowledge and their cultures with one another" (from HOK building committee mission statement). The intent of this project is to construct on the Seattle Campus a "House of Knowledge" springing from the longhouse style traditions of the indigenous peoples of the Pacific Northwest. It will serve the entire community through dissemination of knowledge of the indigenous peoples of the Pacific Northwest and programs promoting the value of cultural diversity and respect for all cultures.

b. Proposed Solution/Benefit to public service, strategic goals? — **Complies w/GMA?** Yes

This longhouse will be a significant factor in strengthening the UW commitment to Native American education and improve diversity on campus. This building will be a significant vehicle to both recruiting and retaining Native students, faculty, and staff. The Longhouse will honor Coast Salish traditional architecture and house spaces that will include: a Welcome space and Display lobby; Gathering Hall of larger meetings, exhibits and performances; Resource room and computer area; Student Organization offices; Administrative offices; and other related support spaces.

This project is an opportunity to further solidify the collaborative effort and serve as a symbol of the UW's commitment to Native recruitment and retention. The UW has convened Tribal Leaders Summits on the Seattle campus. At the summits, UW initiated dialogue with the Tribal Nations to lay the groundwork for continued improvements in the support of recruitment and retention of Native students, faculty and staff. This Longhouse is intended to provide a cultural learning environment for Native students.

This Longhouse will serve the region and state as a cultural center for Northwest Coast Native peoples. The UW is working with Native tribes to develop programming and raise funds to offset construction project costs. Following the summits, the House of Knowledge Planning and Advisory Committee (HOKPAC) has been working to create a clear vision of the project to serve as a basis of community awareness, fundraising, design, and construction. Members included University of Washington students, faculty, staff, tribal leaders, and the community.

c. Predesign Issues

The unique nature of this facility and its reminiscent Coast Salish architecture will require additional detail of engineering and structural capabilities during the next phase of design. The project also aims to give back to nature the resources required for its construction. In addition to the items above and depending on funding of other projects, the House of Knowledge will require coordination with adjacent capital projects.

RELATED COSTS Operating budget costs/savings required for this project including staff and cost of maintenance	.1 FTE; $124,922 / $ per fiscal year

PROJECT STATISTICS

PROJECT LIFE	Net Project Size (sq. ft.)			Gross Project Size (sq. ft.)				Cost Per Gross Square Foot			
	New	14,158	Remodel	n/a	New	18,810	Remode	n/a	New	$332.27	Remodel	n/a

Building Type:		PROJECT SCHEDULE (20)		ADJUSTED CAPITAL COST	
Project Phases	BASE COST (7/02)	START	COMPLETE	%	COST
ACQUISITION COSTS	0				
DESIGN CONSULTANT SERVICES	$1,468,602	2011	2014		$1,573,700
CONSTRUCTION CONTRACT COSTS:					
MACC					
10 % Contingency					
9.5 % TAX					
CONSTRUCTION SUBTOTAL	$7,043,921	2013	2014		$7,870,313
EQUIPMENT (include tax)	$301,354				$336,708
ARTWORK	$27,969				$27,969
OTHER COSTS	$278,683				$304,787
CONTRACT ADMINISTRATION	$531,535				$531,535
TOTAL COST				7.1	**$10,645,000**

ANALYSIS DATE:	June 28, 2010
PREPARED BY:	Kateri Schlessman
PHONE NUMBER:	206-543-3542

ABBREVIATIONS
Assignable Sq Feet (ASF)
Full-Time Equivalent Student (FTE)
Weekly Student Hours (WSH) = student hours per week in room
Room Utilization Rate (RUR) = hours per week room is scheduled for use
Number of Stations (N) = desks or lab stations
Station Occupancy Ratio (SOR) = percent of stations used during scheduled use

A. ROOM TYPES	ASF	N	FTE	WSH	RUR	SOR
Classroom	0	0	0	0	0	0
Dry Lab	0	0	0	0	0	0
Wet Lab	0	0	0	0	0	0
Computer Lab	0	0	0	0	0	0
Faculty Office	0	n/a	n/a	n/a	0	n/a
Student Assembly	4,600	n/a	n/a	n/a	N/A	n/a
Non-Assignable Rooms		n/a	n/a	n/a	n/a	n/a

B. OPERATING AND MAINTENANCE COSTS	$/YEAR
Utilities	56,507
Custodial	23,448
Maintenance	41,125
Security	n/a
Landscaping and Ground Maintenance	3,841
Liability and Hazard Insurance	n/a
Tenant Improvements	n/a
Capital Maintenance	n/a
Management Fees	n/a
Furniture	n/a
Moving Expenses	n/a
Telephone	n/a
Data Processing	n/a
Other Equipment	n/a
Total O&M Cost	$124,922

OPERATING IMPACT

	Est. Total	2009-11	2011-13	2013-15	2015-17	2017-19	2019-21
Annual Average FTEs (#)	$97,986	0	0	13,998	27,996	27,996	27,996
General Fund-State	$776,472	0	0	110,924	221,849	221,849	221,849
Total Funds	$874,459	0	0	124,922	249,815	249,815	249,815

PROJECT FUNDING

FUND CODE(S)	ESTIMATED TOTAL COST	TOTAL EXPENDITURES		2011-13 FISCAL PERIOD	
		Prior Biennium	Current Biennium	Reappropriation	New Appropriation
057	$3,000,000	$0	$300,000	$	$2,700,000
		FUTURE FISCAL PERIODS			
		2013-15	2015-17	2017-19	2019-21
		$0	$0	$0	$0

UW House of Knowledge

Concept Estimate

June 28, 2010

Prepared for Jones and Jones Architects

RLB | Rider Levett Bucknall

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Project Summary

BASIS OF ESTIMATE

This Concept Design cost estimate has been prepared at the request of Jones and Jones Architects.

The project comprises the construction of:

The University of Washington House of Knowledge located at Seattle, Washington.

This estimate provides an opinion of probable construction costs based upon measured quantities and built-up rates from the drawings dated May 2010.

We have utilized our experience with similar projects, our cost data and information from suppliers and sub-contractors, taking into consideration the local construction market for the type and size of similar projects.

Where information was lacking, assumptions and allowances have been made, based where possible on discussions with, and information obtained from, the design team.

There are a number of features in the concept design that are unique. Based on discussions with Jones and Jones we have been advised that the building will feature a great deal of exposed wood including exposed columns and beams.

In preparing this estimate we have spoken to contractors and suppliers for pricing information for the exposed columns and beams. The proposed 24" - 30" diameter wood columns and beams are not standard. Therefore suppliers are reluctant to give prices for these products. We have included allowances for the work based on information available however we note that the suppliers have indicated that these items would be individually selected on a tree by tree basis to suit precise measurement requirements. We understand that materials such such as these logs may be sourced directly through donations.

Pricing is based on June 2010 costs.

PROJECT SCHEDULE:

Start : 2013, January
End : 2014, March
Duration : 15 Months

A reasonable allowance of estimating contingency has been included to account for the level of the design and the complexity of the project.

It is assumed that the contractor will have free access to the work areas.

The costs used in this estimate are based on the assumption that competitive bids for all trades will be received, unless noted otherwise, and that the contractor will be required to pay state prevailing wages for the areas including travel and associated fringe benefits.

COMMENTARY ON THE ESTIMATE DETAILS:

Measured items represented by standard units. Example; lf, sy, cy, item, each etc.

Unless otherwise noted in the cost report, quantities are measured net as fixed in position. There is no allowance for waste in the quantity.

BASIS OF ESTIMATE Cont'd

UNIT RATES INCLUDE FOR:
Materials, goods and all costs in connection therewith including materials required for lapping, jointing and the like and all costs in connections therewith such as conveyance, delivery, unloading, storing, returning, packings, handling, hoisting and lowering, square and raking straight cutting, circular cutting and splay cutting, waste of materials, protection, progressive and final cleaning, samples, guarantees and warranties, labor and all costs in connection therewith, shop fabrication work, shop drawings, as built drawings, manuals, testing, establishment costs, overhead costs & profit, plant & equipment, and site allowances.

ITEMS SPECIFICALLY INCLUDED

- 6.50% - General Conditions
- 1.00% - Bonds + Insurances
- 3.00% - Contractor's Fee
- 10.00% - Estimating Contingency
- 7.12% - Escalation

ITEMS SPECIFICALLY EXCLUDED

- State sales tax
- Escalation beyond January 2013
- Piled foundation system
- Rock excavation
- Hazmat abatement
- Building permit
- Phasing
- Compression of schedule, out of hours work
- Site investigations and owners testing
- Owner supplied and installed furniture, fixtures and equipment
- Loose furniture, fixtures and equipment
- Work outside site boundaries unless noted otherwise
- Design contingency
- Owner's contingency
- Work to existing buildings unless otherwise noted
- Land purchase and legal costs
- Design fees
- Owner management costs
- Items marked as "Excl." in the estimate
- Allowance to relocate / redirect Lewis Hall power supply - potential cost $100,000 to $200,000 depending on scope

DOCUMENTS
- Drawings dated May 2010 and prepared by Jones and Jones Architects
- Civil, Structural and Mechanical Narratives dated May 2010

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Total Cost Summary

GFA: Gross floor area
Rates current at June 2010

Level	Zone		GFA SF	Cost/SF	Total Cost
A	**Building Work**		**18,810**	**$214**	**$4,020,199**
B	**Site Work**				**$767,132**
		Net Cost	**18,810**	**$255**	**$4,787,331**
	Margin & Adjustments				
	General Conditions	6.5%			311,177
	Overhead and Profit	3.0%			152,955
	Bonds and Insurances	1.0%			52,515
	Estimating Contingency	10.0%			530,398
	Escalation (to project start date)	7.1%			415,624
	State Sales Tax				Excl.
		Total Cost	**18,810**	**$332**	**$6,250,000**

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Level Elemental

Rates current at June 2010

	Element	Cost	Cost/SF
A	**Building Work**		
Gross floor area 18,810 SF			
AA	- PREAMBLE		
FD	A 1010 - STANDARD FOUNDATIONS	108,677	7
SG	A 1030 - SLAB ON GRADE	94,395	6
BE	A 2010 - BASEMENT EXCAVATION		
BW	A 2020 - BASEMENT WALLS		
FL	B 1010 - FLOOR CONSTRUCTION	29,100	2
RF	B 1020 - ROOF CONSTRUCTION	628,407	38
EW	B 2010 - EXTERIOR WALLS	277,263	17
WW	B 2020 - EXTERIOR WINDOWS	480,440	29
ED	B 2030 - EXTERIOR DOORS	150,400	9
RC	B 3010 - ROOF COVERINGS	397,013	24
RO	B 3020 - ROOF OPENINGS	3,000	0
PT	C 1010 - PARTITIONS	181,081	11
ID	C 1020 - INTERIOR DOORS	50,800	3
FT	C 1030 - FITTINGS	59,674	4
SC	C 2010 - STAIR CONSTRUCTION	6,500	0
SF	C 2020 - STAIR FINISHES		
WF	C 3010 - WALL FINISHES	138,786	8
FF	C 3020 - FLOOR FINISHES	101,368	6
CF	C 3030 - CEILING FINISHES	133,090	8
EV	D 1010 - ELEVATORS & LIFTS		
PF	D 2010 - PLUMBING FIXTURES	39,000	2
DW	D 2020 - DOMESTIC WATER DISTRIBUTION	72,600	4
SW	D 2030 - SANITARY WASTE	42,000	3
EN	D 3010 - ENERGY SUPPLY		
HC	D 3040 - DISTRIBUTION SYSTEMS	278,697	17
CI	D 3060 - CONTROLS & INSTRUMENTATION	74,165	5
HV	D 3070 - SYSTEMS TESTING AND BALANCE	16,481	1
FP	D 4010 - SPRINKLERS	49,443	3
FI	D 4030 - FIRE PROTECTION SPECIALTIES	4,120	0
SD	D 5010 - ELECTRICAL SERVICE & DISTRIBUTION	157,684	10
LP	D 5020 - LIGHTING & BRANCH WIRING	227,645	14
CM	D 5030 - COMMUNICATIONS & SECURITY	79,109	5
OE	E 1090 - OTHER EQUIPMENT	51,200	3
FX	E 2010 - FIXED FURNISHINGS	88,061	5
MF	E 2020 - MOVABLE FURNISHINGS		
HZ	F 2020 - HAZARDOUS COMPONENTS ABATEMENT		
	Total $	**4,020,199**	**244**

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Level Elemental

Rates current at June 2010

Element			Cost	Cost/SF
B	**Site Work**			
	AA	- PREAMBLE		
	CL	G 1010 - SITE CLEARING	21,375	
	SI	G 1020 - SITE DEMOLITION & RELOCATION	47,100	
	EA	G 1030 - SITE EARTHWORKS	81,480	
	RD	G 2010 - ROADWAYS	52,599	
	PK	G 2020 - PARKING LOTS	10,118	
	PE	G 2030 - PEDESTRIAN PAVING	100,925	
	DV	G 2040 - SITE DEVELOPMENT	117,175	
	LA	G 2050 - LANDSCAPING	131,360	
	XW	G 3010 - WATER SUPPLY	20,000	
	XS	G 3020 - SANITARY SEWER	45,000	
	ST	G 3030 - STORM SEWER	50,000	
	XD	G 4010 - ELECTRICAL DISTRIBUTION	70,000	
	XL	G 4020 - SITE LIGHTING	20,000	
		Total $	**767,132**	

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Item Details

Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214**				
AA	**- PREAMBLE**				
1	Slab on grade area	SF	16481.00		Incl.
2	Upper floor area - mechanical mezzanines (area not shown)	SF	3000.00		Incl.
3	Roof area - metal panel	SF	10998.00		Incl.
4	Roof area - green roof	SF	9145.00		Incl.
5	Perimeter of building - Ground Floor	LF	855.00		Incl.
6	Number of log columns	EA	63.00		Incl.
7	Floor Height - Ground Floor to Roof - Average	LF	21.00		Incl.
8	Number of floors (including ground floor)	EA	1.00		Incl.
9	Number of interior stairs - mechanical mezzanines	EA	2.00		Incl.
10	Total Exterior Wall Area (incl. windows)	SF	17979.00		Incl.
11	Exterior wall - cedar siding	SF	6909.00		Incl.
12	Exterior wall - concrete	SF	1299.00		Incl.
13	Curtain wall	SF	6405.00		Incl.
	Element AA total				
FD	**A 1010 - STANDARD FOUNDATIONS**				
1	Strip footing - average width	LF	3.00		Incl.
2	Strip footing - average depth	LF	2.00		Incl.
3	Stem wall below grade - average width	LF	1.00		Incl.
4	Stem wall below grade - average height	LF	2.00		Incl.
5	Pad footing width	LF	5.00		Incl.
6	Pad footing length	LF	5.00		Incl.
7	Pad footing depth	LF	2.00		Incl.
8	Excavation to perimeter footing	CY	200.00	8.00	1,600
9	Excavation to pad footing	CY	123.00	8.00	984
10	Remove excavated material from site to perimeter footing	CY	200.00	18.00	3,600
11	Remove excavated material from site to pad footing	CY	123.00	18.00	2,214
12	Backfill with imported material to perimeter footing	CY	57.00	25.00	1,425
13	Backfill with imported material to pad footings	CY	35.00	25.00	875
14	3000 PSI concrete to perimeter footing	CY	143.00	140.00	20,020
15	3000 PSI concrete to perimeter stem wall	CY	32.00	140.00	4,480
16	3000 PSI concrete to pad footings	CY	88.00	140.00	12,320
17	Formwork to perimeter footing	SF	3848.00	6.00	23,088
18	Formwork to stemwall	SF	1146.00	6.00	6,876
19	Formwork to pad footing	SF	1890.00	6.00	11,340
20	Rebar ratio to footings lbs/cy	Lb	80.00		Incl.
21	Rebar ratio to stemwall lbs/cy	Lb	125.00		Incl.
22	Rebar to perimeter footing	Lb	11400.00	0.70	7,980
23	Rebar to stemwall	Lb	3979.00	0.70	2,785
24	Rebar to pad footing	Lb	7000.00	0.70	4,900
25	Rigid insulation to perimeter	SF	1710.00	2.00	3,420
26	Damp proofing membrane to foundation	SF	1710.00	0.45	770
	Element FD total			**6.59/SF**	**108,677**
	Page total				**108,677**

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Item Details

Rates current at June 2010

	Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214** Cont'd					
	SG	**A 1030 - SLAB ON GRADE**				
	1	Thickness of slab on grade	in	5.00		Incl.
	2	Thickness of crushed rock base	in	4.00		Incl.
	3	4000 PSI concrete	CY	255.00	140.00	35,700
	4	Mesh reinforcement to slab on grade	SF	16481.00	0.80	13,185
	5	Cure, screed and finish slab	SF	16481.00	1.00	16,481
	6	Allowance for joints in slab	SF	16481.00	0.25	4,120
	7	Leveling compound to floor for smooth finish	SF	16481.00		Excl.
	8	15 mil vapor barrier	SF	16481.00	0.30	4,944
	9	Capillary break - gravel	CY	204.00	35.00	7,140
	10	Perimeter slab drainage	LF	855.00	15.00	12,825
	11	Underslab drainage	SF	16481.00		Excl.
		Element SG total			**5.73/SF**	**94,395**
	BE	**A 2010 - BASEMENT EXCAVATION**	**Note**			**Excl.**
		Element BE total				
	BW	**A 2020 - BASEMENT WALLS**	**Note**			**Excl.**
		Element BW total				
	FL	**B 1010 - FLOOR CONSTRUCTION**				
	1	Wood framed mezzanine floors	SF	3000.00	4.50	13,500
	2	Double layer plywood to wood framed mezzanine floors	SF	3000.00	5.20	15,600
		Element FL total			**1.77/SF**	**29,100**
	RF	**B 1020 - ROOF CONSTRUCTION**				
	1	Structural Insulated Panels (SIP)	SF	20143.00	9.00	181,287
	2	24" Dia exposed log columns	LF	1323.00	95.00	125,685
	3	30" Dia exposed log beams	LF	1789.00	110.00	196,790
	4	Glu-lam purlins, TJI and miscellaneous wood framing	SF	20143.00	3.50	70,501
	5	Blocking	SF	20143.00	0.25	5,036
	6	Miscellaneous structural steel lbs per sf	Lb	2.00		Incl.
	7	Miscellaneous structural steel framing	T	15.11	3250.00	49,108
		Element RF total			**38.13/SF**	**628,407**
	EW	**B 2010 - EXTERIOR WALLS**				
	1	Cedar wood siding including furring	SF	6909.00	24.00	165,816
	2	Concrete to exterior wall - low height	CY	33.00	150.00	4,950
	3	Formwork to sides of concrete wall - low height - exposed on exterior	SF	2598.00	12.00	31,176
	4	Rebar ratio to concrete exterior wall (lb/cy)	Lb	140.00		Incl.
	5	Rebar to concrete exterior wall - low height	Lb	4513.00	0.75	3,385
	6	Stonework to concrete wall	Note	1299.00		Excl.
		Page total				**957,229**

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Item Details

Rates current at June 2010

	Item	Description	Unit	Qty	Rate	$
A		**Building Work GFA 18,810 SF Cost/SF $214** Cont'd				
		EW B 2010 - EXTERIOR WALLS Cont'd				
	7	Wood stud framing	SF	8208.00	3.50	28,728
	8	Exterior grade GWB sheathing	SF	8208.00	2.30	18,878
	9	Insulation	SF	8208.00	1.25	10,260
	10	Vapor barrier	SF	8208.00	0.30	2,462
	11	5/8" GWB to inside face of exterior wall	SF	2873.00	2.30	6,608
	12	Wood paneling to gathering hall and welcome space included in wall finishes	Note			Incl.
	13	Allowance for louvers to exterior wall	Item			5,000
		Element EW total			**16.82/SF**	**277,263**
		WW B 2020 - EXTERIOR WINDOWS				
	1	Aluminum framed curtain wall, partially operable for natural ventilation	SF	4804.00	80.00	384,320
	2	Aluminum framed wood clad window wall, partially operable	SF	1602.00	60.00	96,120
		Element WW total			**29.15/SF**	**480,440**
		ED B 2030 - EXTERIOR DOORS				
	1	Wood framed, glazed sliding doors - 3 panels (approx 34'L x 14'H overall)	EA	2.00	60000.00	120,000
	2	Wood framed, glazed pair of doors including frame and hardware	Pr	4.00	6000.00	24,000
	3	Single SCWD including frame, hardware and finish	EA	4.00	1600.00	6,400
		Element ED total			**9.13/SF**	**150,400**
		RC B 3010 - ROOF COVERINGS				
	1	Metal panel roofing, stylized to replicate lapped cedar board	SF	10998.00	12.00	131,976
	2	Green roof system complete including drainage, soil and plantings	SF	9145.00	24.00	219,480
	3	Miscellaneous flashings, cappings and other roof accessories	SF	20143.00	0.75	15,107
	4	Gutters and downspouts	LF	256.00	15.00	3,840
	5	Fascia and eaves soffit panels	LF	887.00	30.00	26,610
		Element RC total			**24.09/SF**	**397,013**
		RO B 3020 - ROOF OPENINGS				
	1	Roof access hatches	Item			3,000
		Element RO total			**0.18/SF**	**3,000**
		PT C 1010 - PARTITIONS				
	1	Wood stud framing	SF	14042.00	3.10	43,530
	2	GWB	SF	28083.00	2.30	64,591
	3	Insulation	SF	14042.00	1.00	14,042
	4	Premium for 1/2" plywood to AV room and to shear walls	SF	2989.00	2.00	5,978
	5	Operable partition - manual	EA	1.00		Excl.
		Page total				**1,230,930**

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	Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214 Cont'd**					
	PT	**C 1010 - PARTITIONS** Cont'd				
		6 Glazed relites	SF	306.00	40.00	12,240
		7 Interior aluminum framed wood clad window wall	SF	740.00	55.00	40,700
		8 Hand railings and balustrades	SF	16481.00		Excl.
		Element PT total			**10.99/SF**	**181,081**
	ID	**C 1020 - INTERIOR DOORS**				
		1 Single door including frame, hardware and finish	EA	17.00	1600.00	27,200
		2 Pair of doors including frame, hardware and finish	Pr	1.00	3100.00	3,100
		3 Pair of interior wood framed glazed doors including hardware	Pr	3.00	5500.00	16,500
		4 Kitchenette folding door set including frame, hardware and finish	EA	1.00	1500.00	1,500
		5 Allowance for access doors	Item			2,500
		Element ID total			**3.08/SF**	**50,800**
	FT	**C 1030 - FITTINGS**				
		1 Changeroom accessories	EA	2.00	600.00	1,200
		2 Restroom accessories	EA	4.00	1000.00	4,000
		3 Toilet partition standard	EA	7.00	1400.00	9,800
		4 ADA Toilet partition	EA	4.00	1600.00	6,400
		5 Mirror	EA	6.00	500.00	3,000
		6 Urinal screen	EA	2.00	350.00	700
		7 Changeroom benches	EA	2.00	750.00	1,500
		8 Corner guards and wall protection	SF	16481.00	0.60	9,889
		9 Projector screens and brackets	EA	4.00	1500.00	6,000
		10 Marker boards and tack boards	EA	8.00	500.00	4,000
		11 Interior signage	SF	16481.00	0.30	4,944
		12 Miscellaneous specialties	SF	16481.00	0.50	8,241
		Element FT total			**3.62/SF**	**59,674**
	SC	**C 2010 - STAIR CONSTRUCTION**				
		1 Interior wood framed stair up to mechanical mezzanine	EA	1.00	4000.00	4,000
		2 Retractable stair to student building	EA	1.00	2500.00	2,500
		Element SC total			**0.39/SF**	**6,500**
	SF	**C 2020 - STAIR FINISHES**				
		1 Refer to Stair Construction	Note			Incl.
		Element SF total				
	WF	**C 3010 - WALL FINISHES**				
		1 Paint to gwb	SF	28083.00	1.00	28,083
		2 Wainscot to toilets	SF	944.00	6.00	5,664
		3 Wood paneling to inside face of exterior wall in gathering & welcome spaces	SF	5336.00	11.00	58,696
		Page total				**262,357**

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Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214 Cont'd**				
WF	**C 3010 - WALL FINISHES** Cont'd				
4	Wood paneling to interior partitions of gathering hall and welcome spaces	SF	4213.00	11.00	46,343
	Element WF total			**8.42/SF**	**138,786**
FF	**C 3020 - FLOOR FINISHES**				
1	Carpet to conference room and meeting rooms	SY	246.00	46.00	11,316
2	Carpet to offices, administration, resource room and lounge	SY	146.00	38.00	5,548
3	Colored & polished concrete floor finish to welcome space & gathering hall	SF	8117.00	6.50	52,761
4	Resilient flooring to restrooms	SF	1078.00	5.50	5,929
5	Quarry tile flooring to kitchen	SF	663.00	14.00	9,282
6	Sealed concrete to storage, MEP rooms, janitor room and native art lab	SF	2021.00	1.50	3,032
7	Rubberized sheet flooring to mezzanines	SF	3000.00	4.50	13,500
8	Baseboards	Item			Incl.
	Element FF total			**6.15/SF**	**101,368**
CF	**C 3030 - CEILING FINISHES**				
1	2'-0" x 2'-0" ACT	SF	2896.00	4.50	13,032
2	GWB ceiling including framing	SF	1023.00	6.50	6,650
3	Paint to gwb ceiling	SF	1023.00	1.00	1,023
4	Tectum ceiling system to gathering hall, welcome space, etc	SF	10656.00	9.00	95,904
5	Allowance for wood trim at SIP joints and SIP / GWB connections	SF	16481.00	1.00	16,481
6	Open to structure	SF	2021.00		Excl.
	Element CF total			**8.08/SF**	**133,090**
EV	**D 1010 - ELEVATORS & LIFTS**	**Note**			**Excl.**
	Element EV total				
PF	**D 2010 - PLUMBING FIXTURES**				
1	WC's	EA	12.00	850.00	10,200
2	Urinals	EA	2.00	850.00	1,700
3	Lavatories	EA	12.00	900.00	10,800
4	Showers	EA	2.00	1750.00	3,500
5	Sinks	EA	10.00	850.00	8,500
6	Mop sinks	EA	2.00	750.00	1,500
7	Drinking fountain	EA	2.00	1400.00	2,800
	Element PF total			**2.37/SF**	**39,000**
DW	**D 2020 - DOMESTIC WATER DISTRIBUTION**				
1	Hot water supply	EA	26.00	650.00	16,900
2	Cold water supply	EA	42.00	650.00	27,300
	Page total				**364,001**

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	Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214 Cont'd**					
	DW	**D 2020 - DOMESTIC WATER DISTRIBUTION** Cont'd				
		3 Insulation to pipework	EA	42.00	200.00	8,400
		4 Allowance for domestic water distribution equipment	Item			20,000
		Element DW total			**4.41/SF**	**72,600**
	SW	**D 2030 - SANITARY WASTE**				
		1 Sanitary waste and vent piping	EA	42.00	1000.00	42,000
		Element SW total			**2.55/SF**	**42,000**
	EN	**D 3010 - ENERGY SUPPLY**				
		1 Steam supply - including reducer	SF	16481.00		Excl.
		2 Chilled water supply	SF	16481.00		Excl.
		Element EN total				
	HC	**D 3040 - DISTRIBUTION SYSTEMS**				
		1 VRV Heating and cooling system	Note			Incl.
		2 Equipment	SF	16481.00	9.00	148,329
		3 Piping	SF	16481.00	3.50	57,684
		4 Ductwork and insulation - minimal required for VRV system	SF	16481.00	2.00	32,962
		5 Grilles, registers, etc	SF	16481.00	0.50	8,241
		6 Fire and smoke dampers, miscellaneous HVAC accessories	SF	16481.00	1.00	16,481
		7 Permits and commissioning	Item			15,000
		Element HC total			**16.91/SF**	**278,697**
	CI	**D 3060 - CONTROLS & INSTRUMENTATION**				
		1 HVAC controls	SF	16481.00	4.50	74,165
		Element CI total			**4.50/SF**	**74,165**
	HV	**D 3070 - SYSTEMS TESTING AND BALANCE**				
		1 HVAC test and balance	SF	16481.00	1.00	16,481
		Element HV total			**1.00/SF**	**16,481**
	FP	**D 4010 - SPRINKLERS**	**SF**	**16481.00**	**3.00**	**49,443**
		Element FP total			**3.00/SF**	**49,443**
	FI	**D 4030 - FIRE PROTECTION SPECIALTIES**	**SF**	**16481.00**	**0.25**	**4,120**
		Element FI total			**0.25/SF**	**4,120**
	SD	**D 5010 - ELECTRICAL SERVICE & DISTRIBUTION**				
		1 Main distribution board and panelboards	Item			55,000
		2 Transformers, ATS, misc equipment, etc	Item			20,000
		3 Feeder cables and conduit	SF	16481.00	3.50	57,684
		4 Mechanical equipment connections	Item			15,000
		Page total				**640,990**

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Item Details

Rates current at June 2010

	Item	Description	Unit	Qty	Rate	$
A	**Building Work GGFA 18,810 SF Cost/SF $214 Cont'd**					
	SD	**D 5010 - ELECTRICAL SERVICE & DISTRIBUTION** Cont'd				
		5 Permits and commissioning	Item			10,000
		Element SD total			**9.57/SF**	**157,684**
	LP	**D 5020 - LIGHTING & BRANCH WIRING**				
		1 Lighting	SF	16481.00	6.50	107,127
		2 Premium for specialty lighting to gathering and welcome spaces	SF	8117.00	5.00	40,585
		3 Lighting controls	SF	16481.00	1.25	20,601
		4 Outlets	SF	16481.00	0.60	9,889
		5 Conduit and wiring	SF	16481.00	3.00	49,443
		Element LP total			**13.81/SF**	**227,645**
	CM	**D 5030 - COMMUNICATIONS & SECURITY**				
		1 Fire alarm	SF	16481.00	2.80	46,147
		2 Intercom and clock system	SF	16481.00	0.75	12,361
		3 Communications backbone	SF	16481.00	1.25	20,601
		4 Communications fitoff - assumed OFOI	SF	16481.00		Excl.
		Element CM total			**4.80/SF**	**79,109**
	OE	**E 1090 - OTHER EQUIPMENT**				
		1 Kitchen Equipment	Item			50,000
		2 Residential appliances - bar fridge and microwave to kitchenette	Item			1,200
		3 Art kiln	Item			Excl.
		4 AV equipment to gathering hall, meeting space, etc	Item			Excl.
		5 Modular stage and equipment - assumed OFOI	Note			Excl.
		Element OE total			**3.11/SF**	**51,200**
	FX	**E 2010 - FIXED FURNISHINGS**				
		1 Storage cabinets to meeting rooms including doors	EA	2.00	2500.00	5,000
		2 Storage cabinet including doors to native art lab	EA	1.00	2000.00	2,000
		3 Walk off mats	EA	4.00	1250.00	5,000
		4 Native art lab casework with countertop	LF	16.00	600.00	9,600
		5 Restroom countertops	LF	40.00	200.00	8,000
		6 Kitchenette casework including countertop	EA	1.00	3500.00	3,500
		7 Reception desk	EA	1.00	7500.00	7,500
		8 Allowance for tiered wood benches in gathering hall	Item			20,000
		9 Miscellaneous fixed furnishings	SF	16481.00	0.50	8,241
		10 Window shades to 30% of exterior glazing	SF	1922.00	10.00	19,220
		Element FX total			**5.34/SF**	**88,061**
	MF	**E 2020 - MOVABLE FURNISHINGS**	**Note**			**Excl.**
		Element MF total				
		Page total				**456,015**

UW - HOUSE OF KNOWLEDGE - CONCEPT ESTIMATE - JUNE 2010

Item Details

Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
A	**Building Work GFA 18,810 SF Cost/SF $214 Cont'd**				
	HZ F 2020 - HAZARDOUS COMPONENTS ABATEMENT	**Note**			**Excl.**
	Element HZ total				
	A Building Work Total				**4,020,199**

UW - HOUSE OF KNOWLEDGE - CONCEPT ESTIMATE - JUNE 2010

Item Details

Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
B	**Site Work**				
AA	**- PREAMBLE**				
1	Site area	Acre	1.71		Incl.
2	Slab on grade area	SF	16481.00		Incl.
	Element AA total				
CL	**G 1010 - SITE CLEARING**				
1	Clear and grub site - including removal of mature trees	Acre	1.71	12500.00	21,375
	Element CL total				**21,375**
SI	**G 1020 - SITE DEMOLITION & RELOCATION**				
1	Demolish and remove paved surfaces, curbs, etc	Acre	1.71	10000.00	17,100
2	Demolish and remove existing utilities	Item			15,000
3	Demolish and remove existing satellite dish, communications vault and fence	Item			10,000
4	Allowance to protect / maintain existing utilities	Item			5,000
	Element SI total				**47,100**
EA	**G 1030 - SITE EARTHWORKS**				
1	Average depth of excavation - building area	in	24.00		Incl.
2	Average depth of excavation - site area	in	6.00		Incl.
3	Average depth of imported fill - building area only	in	6.00		Incl.
4	TESC - including baker tanks	Item			15,000
5	Excavate, backfill, compact and remove excess material - building area	CY	1221.00	25.00	30,525
6	Excavate, backfill, compact and remove excess material - site area	CY	1071.00	25.00	26,775
7	Imported fill	CY	306.00	30.00	9,180
	Element EA total				**81,480**
RD	**G 2010 - ROADWAYS**				
1	Asphalt roadway including drop off / delivery areas	SY	587.00	32.00	18,784
2	Concrete curb	LF	521.00	15.00	7,815
3	Sriping to roadways	Item			5,000
4	Speed control devices to roadways	Item			5,000
5	Driveway entrance / exit crossovers	EA	2.00	3000.00	6,000
6	Improvements to street frontage as a result of construction process	Item			10,000
	Element RD total				**52,599**
PK	**G 2020 - PARKING LOTS**				
1	Asphalt parking lot	SY	204.00	32.00	6,528
2	Concrete curb	LF	106.00	15.00	1,590
3	Striping to parking lot	Item			1,000
4	Wheel stops	EA	5.00	200.00	1,000
	Element PK total				**10,118**
	Page total				**212,672**

UW - HOUSE OF KNOWLEDGE - CONCEPT ESTIMATE - JUNE 2010

Item Details

Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
B	**Site Work** Cont'd				
	PE G 2030 - PEDESTRIAN PAVING				
1	Concrete paving to walkways and sidewalks	SY	1490.00	40.00	59,600
2	Concrete paving to quad pedestrian connection	SY	447.00	40.00	17,880
3	Feature paving to gathering space and sculpture areas	SY	217.00	85.00	18,445
4	Premium for steps and ramps to paved areas	Item			5,000
	Element PE total				**100,925**
	DV G 2040 - SITE DEVELOPMENT				
1	Allowance for gathering area at fire pit	Item			Excl.
2	Terraced seating including steps and handrails	SF	575.00	25.00	14,375
3	Water features	EA	2.00	12500.00	25,000
4	Sculpture and cross cultural welcome - assumed OFOI	Note			Excl.
5	Outdoor cooking and food preparation area	Item			10,000
6	Miscellaneous site walls, retaining walls and site steps	Item			20,000
7	Site signage including monumental signage	Item			10,000
8	Outdoor teaching areas	Item			10,000
9	Bike storage lockers	EA	6.00	1300.00	7,800
10	Allowance for dumpster enclosure with ornamental gate	Item			10,000
11	Bollards, site furniture, miscellaneous site items, etc	Item			10,000
	Element DV total				**117,175**
	LA G 2050 - LANDSCAPING				
1	Tree protection and maintenance	EA	30.00	400.00	12,000
2	Allowance for replacement trees	Item			15,000
3	Landscaping - groundcover, shrubs, etc	SF	15000.00	5.00	75,000
4	Irrigation to landscaped areas	SF	15000.00	1.10	16,500
5	Premium for wetland bioswale areas	SF	3215.00	4.00	12,860
	Element LA total				**131,360**
	XW G 3010 - WATER SUPPLY				
1	Water supply lines and connections	Item			20,000
	Element XW total				**20,000**
	XS G 3020 - SANITARY SEWER				
1	Sanitary sewer lines, manholes and connections	Item			30,000
2	Allowance for temporary works associated with Lewis Hall sewer diversion	Item			15,000
	Element XS total				**45,000**
	ST G 3030 - STORM SEWER				
1	Stormwater lines, manholes, catch basins and connections	Item			50,000
	Element ST total				**50,000**
	Page total				**464,460**

UW - HOUSE OF KNOWLEDGE - CONCEPT ESTIMATE - JUNE 2010

Item Details

Rates current at June 2010

Item	Description	Unit	Qty	Rate	$
B	**Site Work** Cont'd				
	XD G 4010 - ELECTRICAL DISTRIBUTION				
	1 Emergency generator	Note			Excl.
	2 Connections to emergency power supply, ATS included with building	Item			10,000
	3 Electrical distribution and connections	Item			60,000
	4 Relocate / redirect Lewis Hall power supply	Note			Excl.
	Element XD total				**70,000**
	XL G 4020 - SITE LIGHTING	**Item**			**20,000**
	Element XL total				**20,000**
	B Site Work Total				**767,132**

C. VISIONING / SUSTAINABLE DESIGN WORKSHOP SUMMARY

In keeping with the environmental and cultural values of the UW and the Native American community that the House of Knowledge serves, the project was approached with strong sustainable goals that enhance the cultural, ecological and educational narrative of the project. The House of Knowledge is required by the state of Washington to be designed, constructed and operate to a minimum of LEED Silver rating level. It will also comply with the goals developed in the UW's Climate Action Plan.

The project sustainable goals focus on:

- Enhancing the connections between the living culture of the users and the sustainable systems of the project.
- Creating a rich learning experience for the students by linking academic engagement with the project's environmental approach.
- Integrating the building and site design to develop more efficient project solutions.
- Reducing material and energy consumption during the construction and operation of the project.
- Maintaining a healthy indoor working environment for students, faculty, and staff.
- Designing the materials and systems of the project to work together to create an energy efficient, low impact, serviceable, beautiful and long lasting building and site.

Sustainable Strategies

The main elements of this project and their role in creating a sustainable project are as follows:

- Develop the landscape and buildings to work together by sharing systems and complementing each other spatially and functionally.
- Use predominately native drought tolerant plantings that relate ecologically to the site and culturally to the program. This will help eliminate or significantly reduce the need for irrigation and create micro habitats for the birds and pollinators that inhabit the site.
- Reduce the development impact of the project and maintain a large number of existing trees and vegetation.
- The placement and form of the building is designed to take advantage of and celebrate the climate- rain, sun, wind and exposure to the natural features of the adjacent arboretum.
- The flow and movement of water will be a visible element in the drainage systems.
- The site is designed to create a healthy and naturally sustaining environment by fostering diversity and creating habitat for all life forms.
- Reinforce the natural patterns of the sun and the wind in the building and site design as sources to condition the spaces.
- Maximize the use of daylight throughout.
- Encourage the use of natural ventilation, reduce areas that are mechanically cooled and allow users to control their thermal environment.
- Integrate material and system designs to create energy and resource efficient solutions for the entire project. Building elements like massive floors and walls, lighting and ventilation, shading, and insulation should be integrated as part of the systems that will climatically regulate this building in the winter and summer.
- Building materials should be specified to reduce the negative environmental impact of the project. This includes responsibly harvested and certified wood and low-toxic paints, finishes and adhesives.

- Incorporate energy efficient fixtures and low flow plumbing.
- Consider the use of living roofs.
- Use durable materials and systems that reinforce the cultural relevance of the project, and its connection to place.

The Predesign LEED checklist for the project targets a minimum goal of LEED Silver. At this level of investigation, it is possible to readily realize 51 points and possibly another 21 points with additional study, engineering and design. The remaining 38 points available are likely to prove very challenging to realize. Therefore, between 51 and 72 points seem possible as the project is now envisioned. This translates into an accreditation as either a LEED Silver or Gold project.

LEED 2009 for New Construction and Major Renovation

Project Checklist

University of Washington
House of Knowledge

Sustainable Sites — Possible Points: 26

Y	N	?			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
	1		Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
	3		Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
		1	Credit 6.1	Stormwater Design—Quantity Control	1
		1	Credit 6.2	Stormwater Design—Quality Control	1
		1	Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
1			Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y	N	?			
Y			Prereq 1	Water Use Reduction—20% Reduction	
	2	2	Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
2		2	Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y	N	?			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
4	10	5	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
		3	Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y	N	?			
Y			Prereq 1	Storage and Collection of Recyclables	
	3		Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
	1		Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
	1	1	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	N	?			
1		1	Credit 4	Recycled Content	1 to 2
1		1	Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y	N	?			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
		1	Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
		1	Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
1			Credit 1.3	Innovation in Design: Specific Title	1
1			Credit 1.4	Innovation in Design: Specific Title	1
1			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

1			Credit 1.1	Regional Priority: Specific Credit	1
1			Credit 1.2	Regional Priority: Specific Credit	1
		1	Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

53	21	36	Total	Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

APPENDIX F

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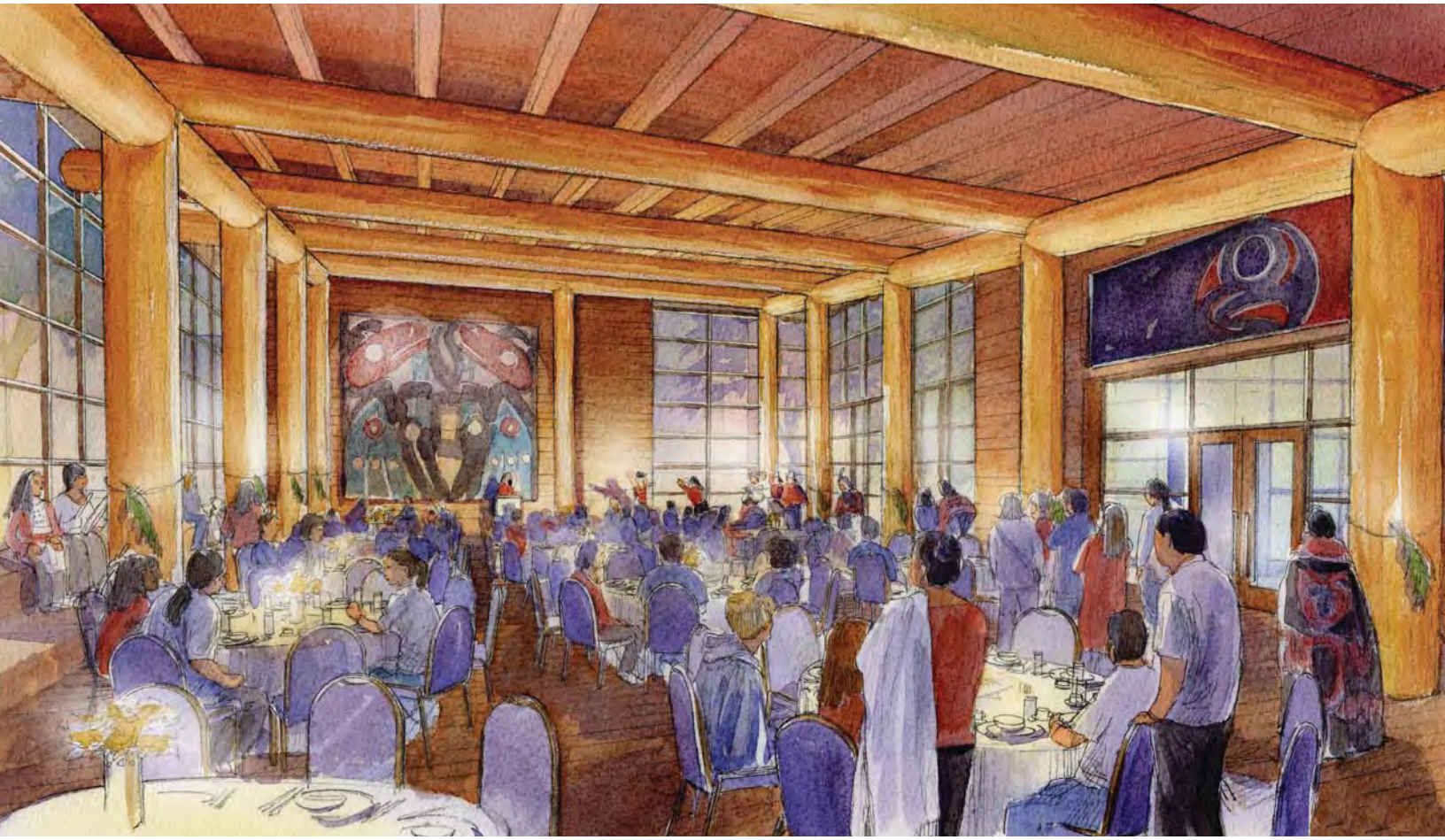


University of Washington

Intellectual House

Additional Predesign Services

May 2012

Intellectual House Mission

To provide a multi-service learning and gathering space for Native American students, faculty and staff, and others of various cultures and communities to come together in a supporting and welcoming educational environmental to share their knowledge and their cultures with one another.

JONES JONES

ARCHITECTS
LANDSCAPE ARCHITECTS
PLANNERS

UW Campus Map

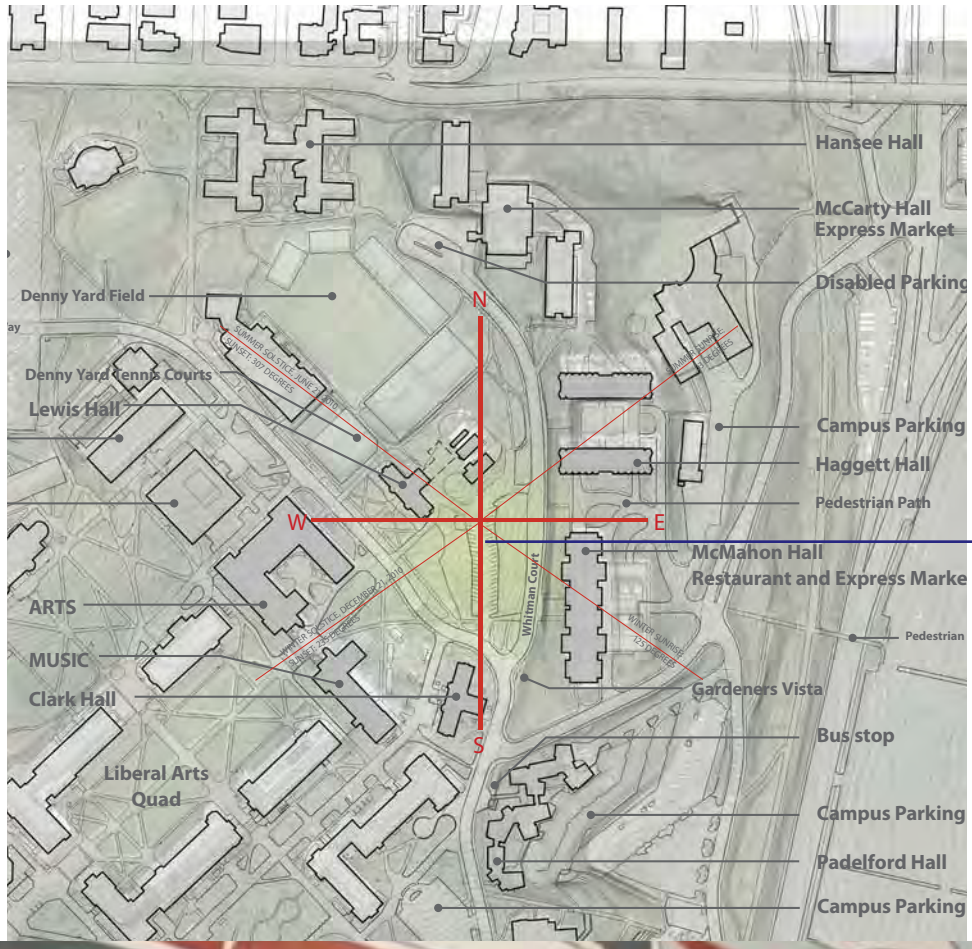


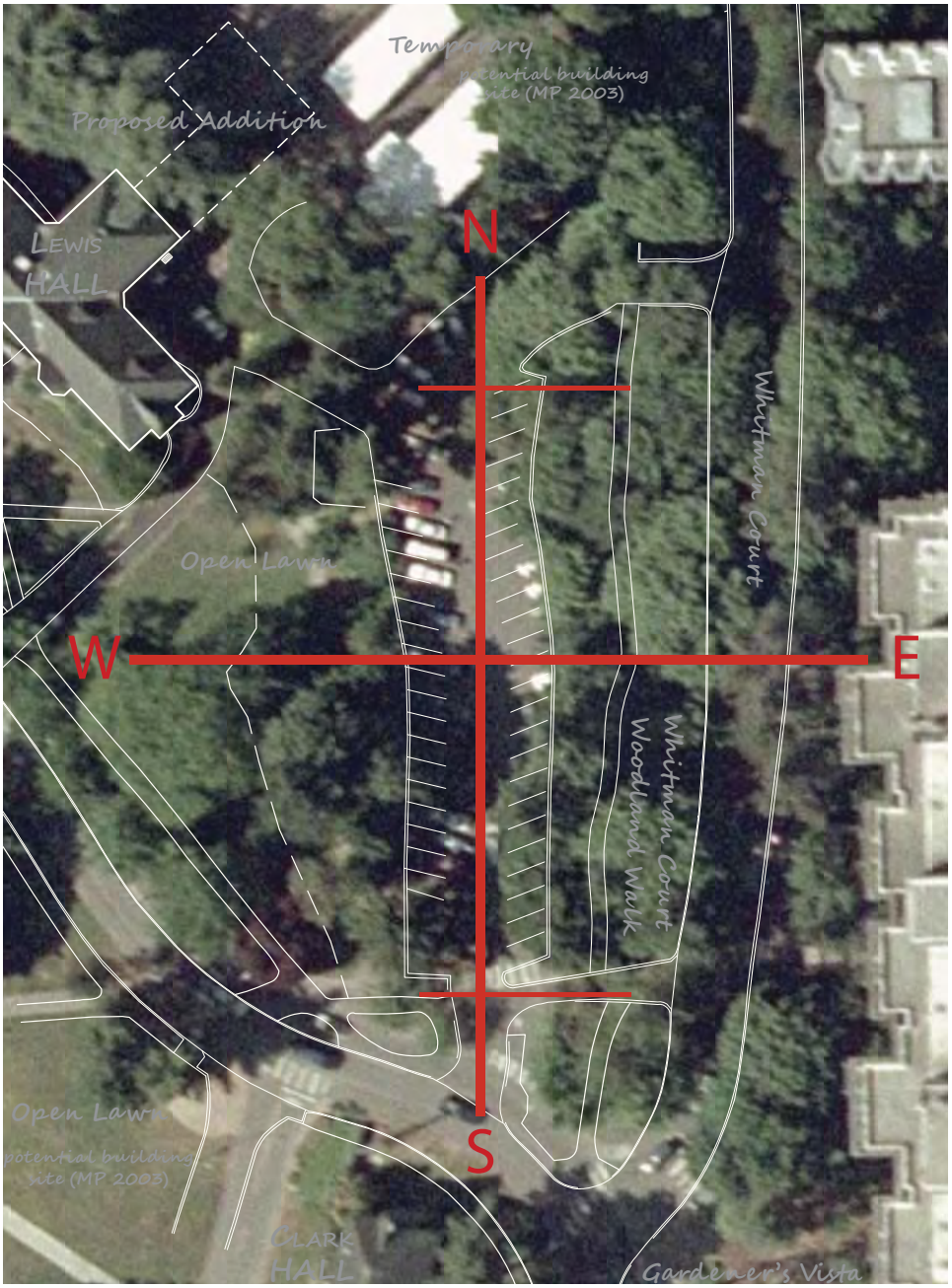
Table of Contents

Introduction

The University of Washington plans to build the Intellectual House, a longhouse-style facility, at the University's Seattle campus. A primary purpose of the Intellectual House is to increase Native American students' success at UW, preparing them for leadership roles in their tribal communities and the region. The Intellectual House will support students' ability to remain involved in their home tribes and communities through its social and academic programs and its symbolic design. We envision that tribal elders and community members will gather together at the Intellectual House for dialogue, storytelling, and sharing knowledge with our students.

In June of 2010 the University, in collaboration with Jones & Jones Architects, published a Predesign Report detailing the full scope of the project. At that time the project was called the "House of Knowledge" and was planned to be built in a single construction phase.

Due to fundraising efforts being impacted by the economic climate, the amount raised did not



Compsite aerial photo of the site

Site photo looking southeast from Stevens Way

Phase 1

Phase 2

reach the anticipated goals. As such, the UW has proposed to phase the project using the available funding and move forward with the first phase for a total project cost of $5,853,000.

This study describes the impacts arising as a result of a revised implementation approach that seeks to build Phase 1 as soon as possible with Phase 2 following at a later point in time when fundraising meets the goal for the remainder of the project. The Predesign effort was revisited to analyze impacts to: functional space programming, site design, building design, scheduling and capital budgeting. Subsequent phases of design will develop Phase 1 in more detail with ground breaking anticipated for the summer of 2013 and the facility operational by the start of the academic year in the fall of 2014.

Intellectual House Working Group members reviewed the functions and design developed during the previous phase of work and discussed the impacts to the concept stemming from a phased approach to implementation. This effort prioritized functions and related facilities tied to the community gathering activities for initial development in Phase 1 with the remaining elements assigned to Phase 2. As one student member of the Working Group commented, "we need a Native place on campus for people to gather together and share with each another." This primary need was determined to be best satisfied with the Phase 1 scope proposed herein.

Celebrating Native pride at the annual First Nations Pow Wow

Programming

The Predesign phase of work concluded in the summer of 2010, documenting a facility at 18,810 gross square feet comprised of teaching, gathering, and student-centered spaces with support functions as required. Working Group members revisited the functional space program to determine if it warranted refinement during the Additional Predesign Services phase of work.

This review process did not alter any of the project goals and therefore no major changes to the functions or their related spaces are anticipated in the revised project space program. Refinements to the Phase 1 program were made, however, in response to both the phasing concept and as a result of new or additional operational considerations.

These refinements resulted in a slightly smaller assignable net square footage compared to the Predesign program. Further efficiencies are realized in the layout and distribution of building support spaces resulting in a slightly smaller complete project gross square footage. The building functional space program is now projected at 16,772 gross square feet, or about 11% smaller than the Predesign concept.

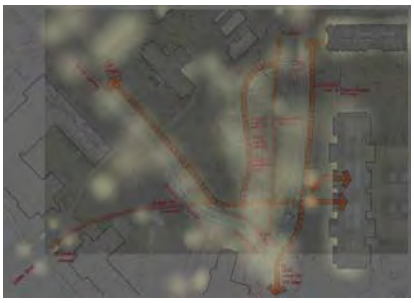
The major adjustments to the functional space program include the following:

- A staff office is now included in Phase 1 with space for standard office needs, including printing and copying, as well as small group counseling and/or mentoring which was identified by the Working Group as a necessary aspect of the staff administering the Intellectual House on a daily basis.
- The kitchen is downsized to better reflect its planned use. It was adjusted from the full commercial kitchen to become a more modest, but functional space that will support:
  1) daily use by small groups preparing/warming foods for meetings;
  2) indigenous foods classes;
  3) caterers serving large groups in the Gathering Hall;
- An entry vestibule is added;
- A mezzanine, planned previously in Predesign for building support services, is not a part of the revised design, resulting in a more efficient structure.

		June 2010		March 2012
Phase 1				
	Gathering Lobby	700	Welcome Lobby	718
	Public Lounge	290	Vestibule	107
	Gatheing Hall	4,600	Gatheing Hall	4,400
	Table & Chair Storage	350	Table & Chair Storage	392
	A/V Storage	90	A/V Storage	incl. above
	Kitchen	700	Kitchen	488
			Office	147
	Conference Room	460	Conference Room	397
Net Assignable Subtotal		**7,190**		**6,649**
Gross Square Footage Subtotal		**9,558**		**8,340**
Phase 2				
	Student Life Lobby	300	Commons	890
	Reception Desk	430	Administration	431
	Staff Office 1	120	Staff Office 1	118
	Staff Office 2	120	Staff Office 2	118
	Copy Print Fax	100	Copy Print Fax	100
	Office Storage	50	Office Storage	85
	Elder's Office	140	Elder's Office	see Phase 1
	Study (resoruce room)	800	Resource Room	537
	Student Lounge	1,300	Student Lounge	1,190
	Cultural Storage	200	Cultural Storage	incl. above
	Kitchenette	50	Kitchenette	48
	Lockers	30	Lockers	30
	Native Arts Class Laboratory	1,500	Native Arts Class Laboratory	1,200
	Class Laboratory Storage	100	Class Laboratory Storage	incl. above
	Multipurpose Room	800	Multipurpose Room	785
	Multipurpose Room	800	Multipurpose Room	785
	Multipurpose Room Storage	120	Multipurpose Room Storage	incl. above
Net Assignable Subtotal		**6,960**		**6,317**
Gross Square Footage Subtotal		**9,252**		**8,432**
Net Assignable Total		**14,150**		**12,966**
Gross Square Footage		**18,810**		**16,772**
	efficiency	*1.33*		*1.29*

Functional Space Program

Daytime pedestrian circulation



Nighttime pedestrian circulation

Existing tree inventory

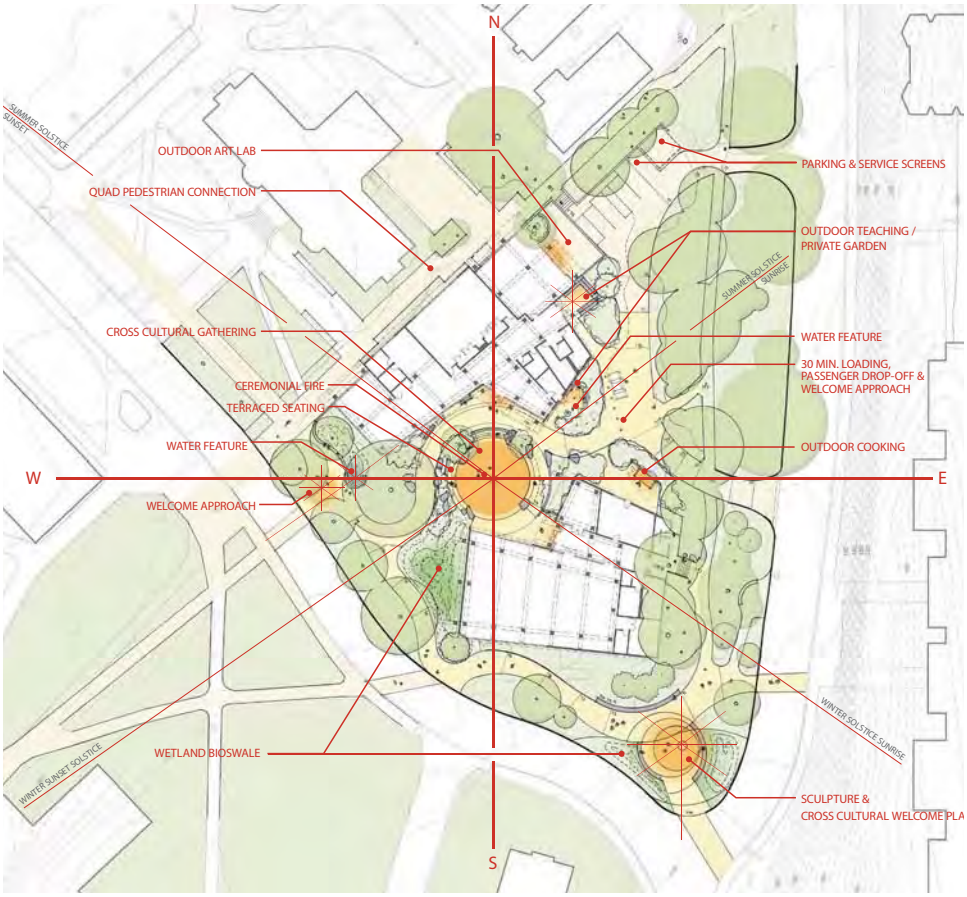
Existing terrain analysis

Phase 1

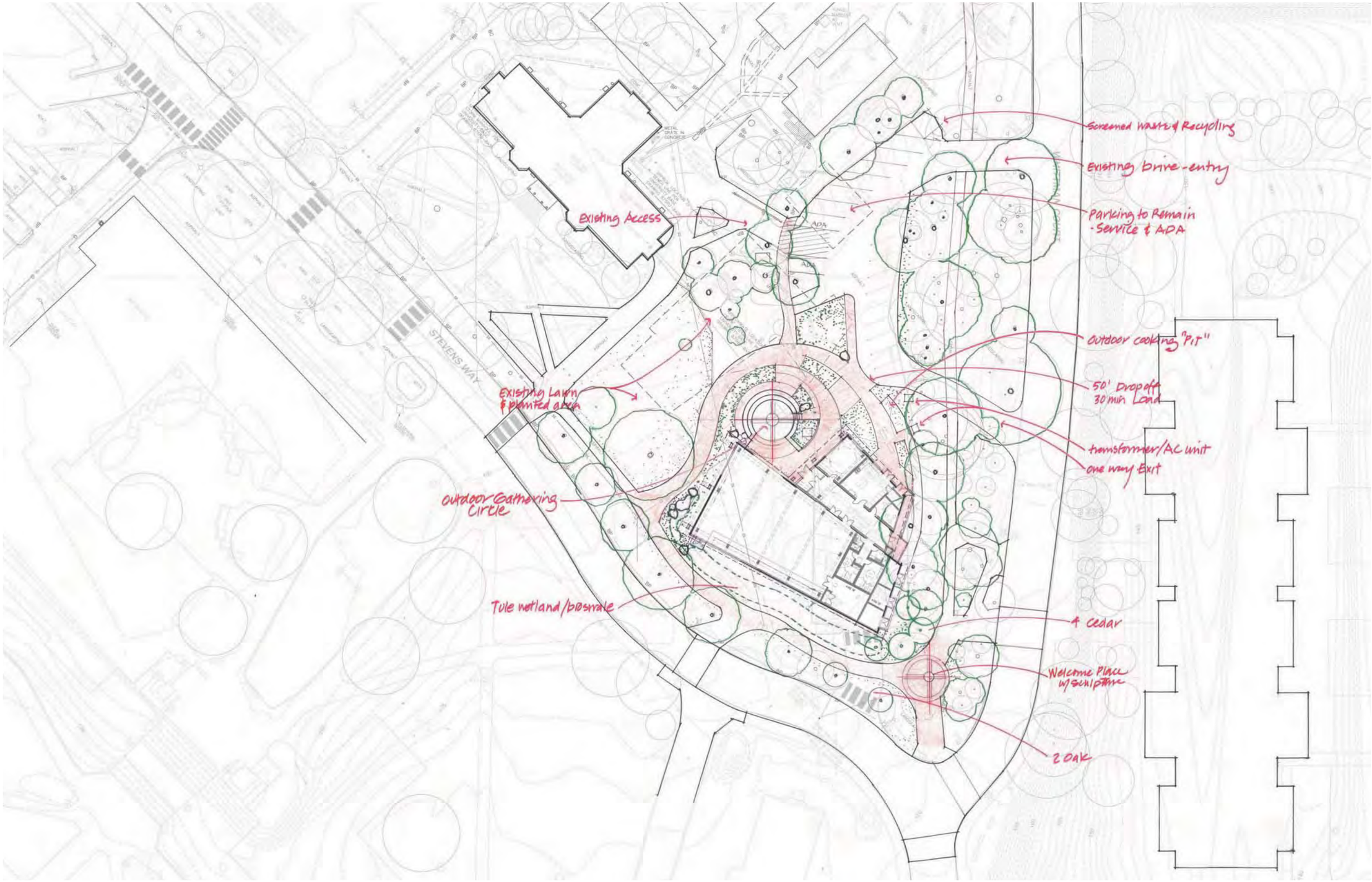
The Phase 1 site plan seeks to establish site features and improvements that actively support the mission and needs of the proposed facility. It strives for a balanced approach that preserves the existing perimeter landscape and pedestrian circulation while adding opportunities for cross-cultural exchange and meeting UW site development guidelines.

In what will eventually become the center of the entire site, the gathering courtyard will be a circular place with terraced seating both for daily use by students in between classes and also for special events inside the Gathering Hall to spill out onto a hardscaped plaza. At the southern-most edge of the site, pedestrian circulation patterns are improved near where a Salish welcome figure sculpture is planned to honor the region's indigenous inhabitants and greet all who cross it's path. Another terrace will support outdoor cooking adjacent to a kitchen entry and provide service access to the building interior.

Phase 1 preserves much of the existing northern half of the N6 parking lot, maintaining existing service access to Lewis Hall from Whitman Court. Vehicular circulation through the site will become one way, however, with a new drop-off area and exit through the Whitman Walk area on the eastern edge of the project site. Existing pedestrian circulation along the northern edge of the site, adjacent to Lewis Hall, remains unaffected by the Phase 1 plan and the dynamics between vehicles and pedestrians remains as it is currently.



Predesign version of the project site plan

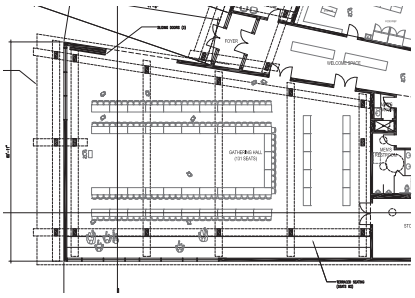


SITE PLAN - PHASE 1
March 7, 2012

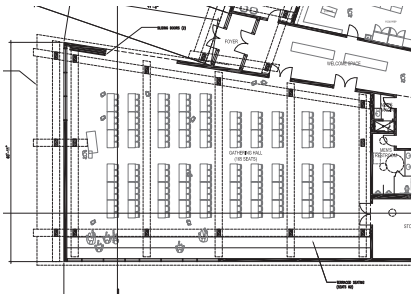
0 5 10 20 40
1" = 20'-0"

Phase 1 Building

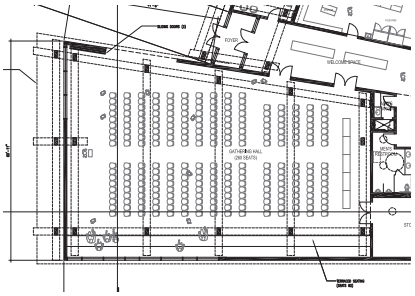
Traditional Coast Salish structure



Conference seating study



Classroom seating study

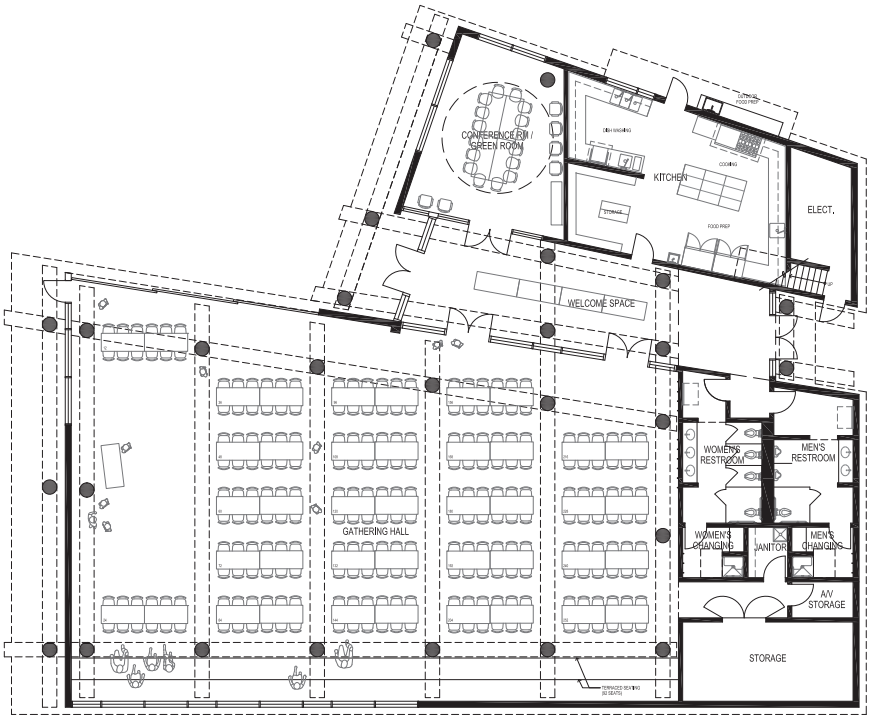


Lecture seating study

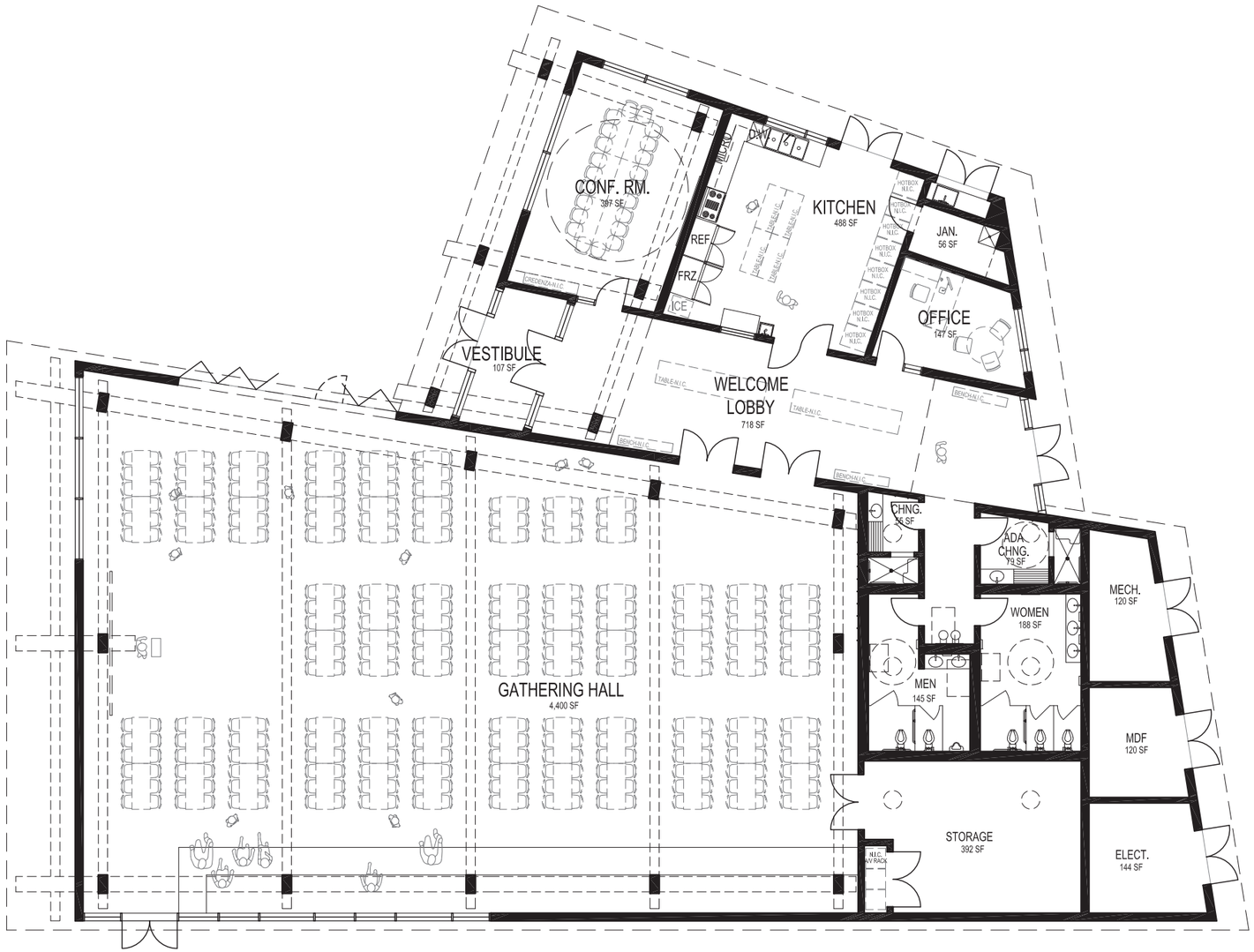
The Phase 1 building layout is very similar to the Predesign version with only minor changes to the floor plan and building systems. Modifications to the floor plan focus mostly on accommodating programming refinements described elsewhere in this report and both revised locations and sizing adjustments to the building services or support spaces.

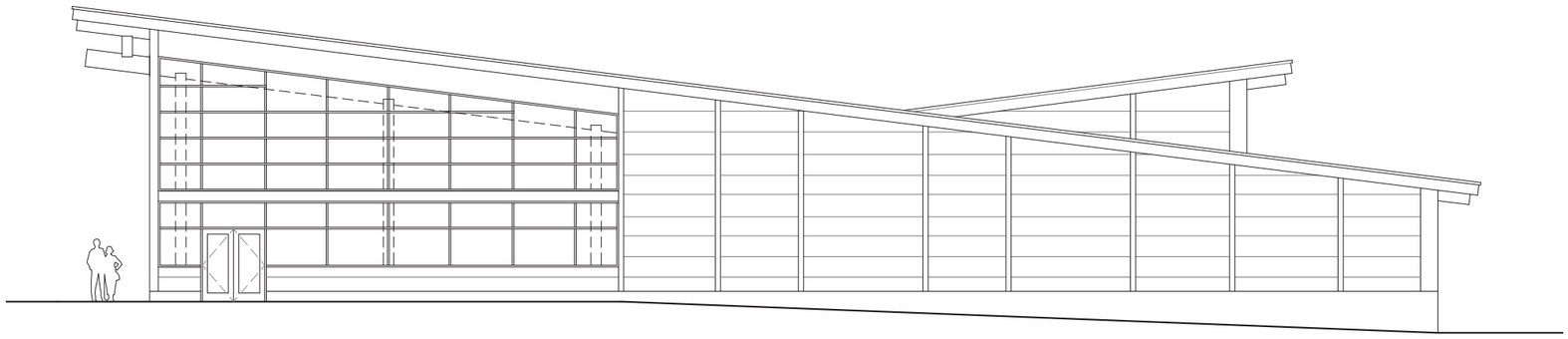
Phase 1 is organized into two program areas separated by a welcome space that serves as an entry lobby and hallway for circulation between spaces. When Native American events are held in the large assembly space, the welcome space will also function as a servery in the manner frequently used by gatherings in the Native community. The Gathering Hall hosts larger assembly events and is the largest interior space in the Phase 1 building. Opposite the Gathering Hall, a conference room exists for breakout sessions and seminars. The kitchen will support both day-to-day use as well as catered banquets. It has one area with casework and standard appliances as well as room for catering hotboxes, group food preparation work tables, or seating to support Native foods classes as envisioned by members of the Working Group. The office will support the staff member managing the facility as well as counseling sessions with small groups of students, faculty, staff or visitors to the facility.

The building systems are identical to those described during Predesign with the exception of the structural system. That design now utilizes peeled poles as contributing members in the roof structure assembly in along with glulam girders. Steel posts clad with cedar planks are planned to support the roof structure and more directly connect Intellectual House visitors with the traditional Salish structures in lieu of the the round peeled poles shown in the prior concept.

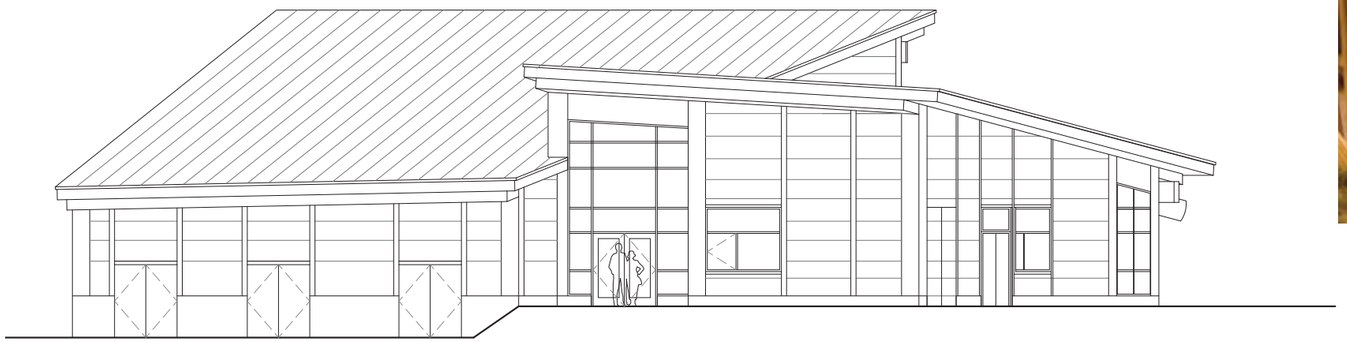


Predesign version of the gathering building floor plan

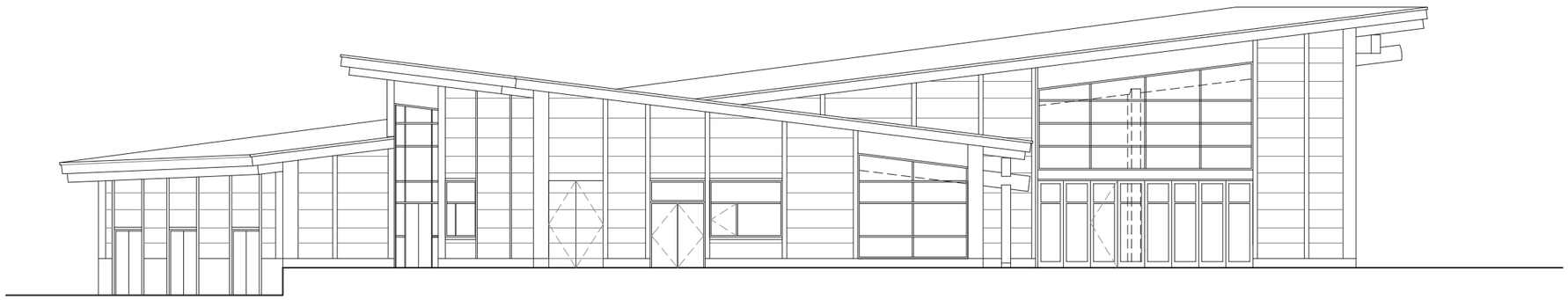

CONF. RM.
397 SF
KITCHEN
488 SF
REF.
FRZ
ICE
DW
MICRO
JAN.
56 SF
OFFICE
147 SF
VESTIBULE
107 SF
WELCOME
LOBBY
718 SF
CHNG.
76 SF
ADA
CHNG.
79 SF
MECH.
120 SF
WOMEN
188 SF
MEN
145 SF
GATHERING HALL
4,400 SF
MDF
120 SF
STORAGE
392 SF
ELECT.
144 SF
N.I.C.
AV RACK



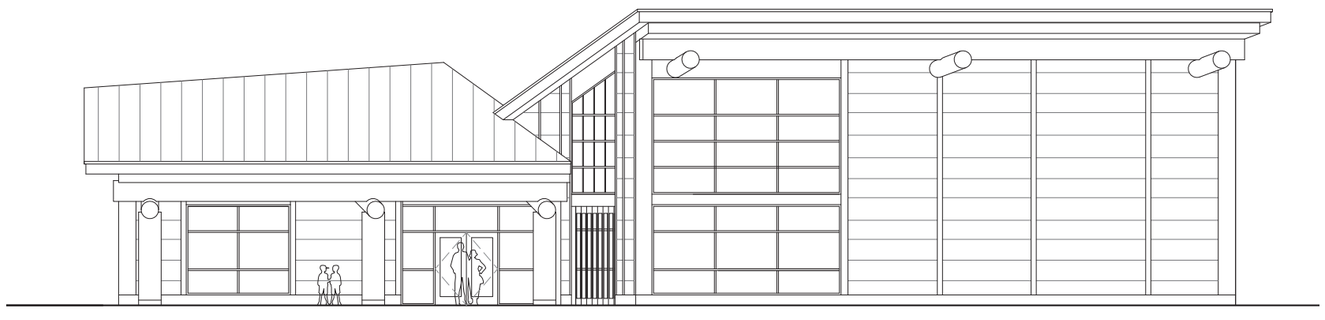
SOUTH ELEVATION



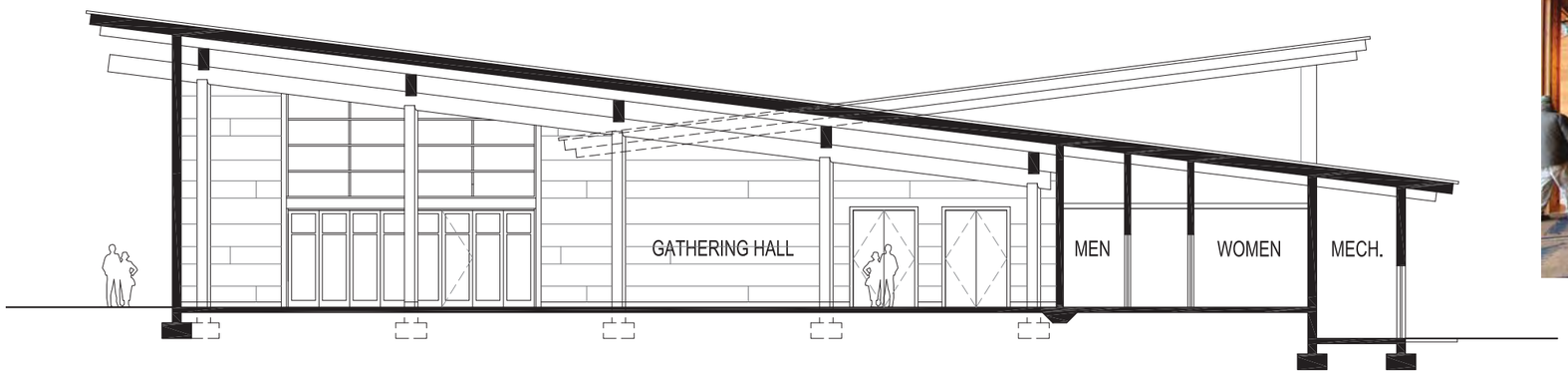
EAST ELEVATION



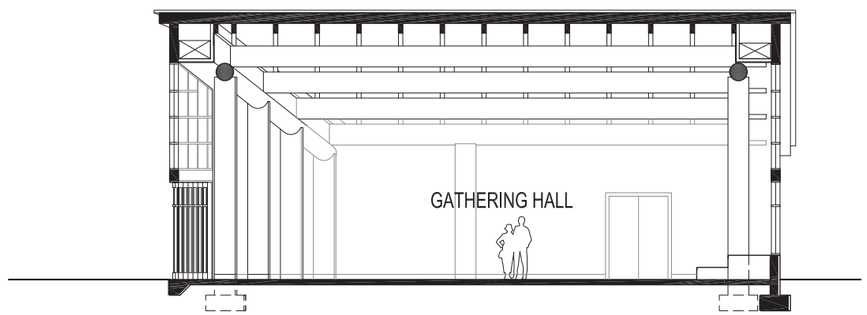
NORTH ELEVATION



WEST ELEVATION

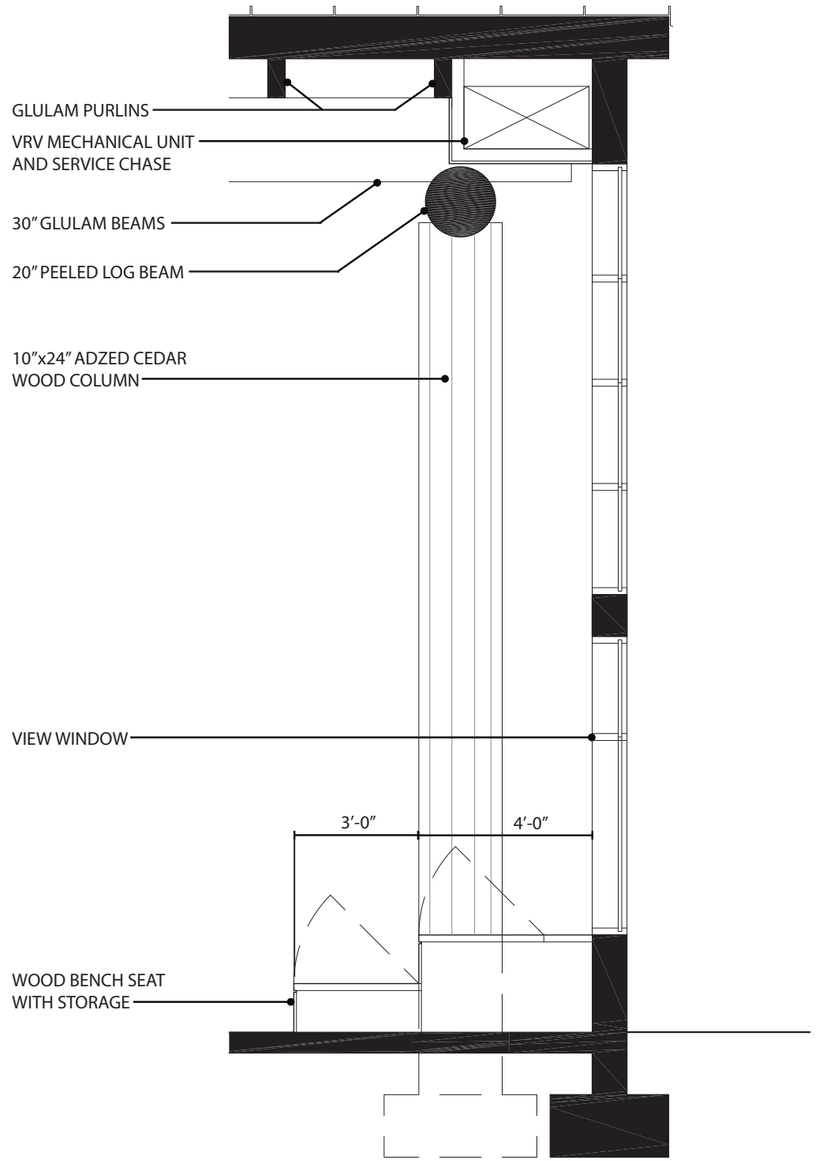


GATHERING HALL LONGITUDINAL SECTION



GATHERING HALL CROSS SECTION

CONFERENCE ROOM/KITCHEN/OFFICE LONGITUDINAL SECTION



WALL ASSEMBLY

0 3" 6" 1' 2'
3/4" = 1'-0"

Phase 2

The Phase 2 project consists of the second building and associated site improvements. After Predesign concluded, issues raised at the UW Architectural Commission were discussed informally amongst the UW and design team members. At that time, the concerns of the Architectural Commission were satisfied by two important changes to the design implemented in the current concept.

First, the building was moved a bit further to the south and east, giving more room to the open landscape area adjacent to Stevens Way as well as to the pedestrian route between Lewis Hall and the building which is also considered an extension of the Fine Arts Quad axis. Second, the building was divided into two building elements with a new multifunction courtyard. This division yields a separate Native Arts Class Laboratory pavilion that will facilitate classes focusing on indigenous art techniques and typologies. The courtyard will actively support those arts activities which are traditionally conducted outside while also providing a direct connection to Lewis Hall and what is anticipated to eventually become an addition to that facility. Opposite the Native Arts pavilion is the building housing two multi-purpose rooms, Native student support spaces, administration, and building services functions. Together these two design changes begin addressing expressed Architectural Commission concerns regarding the location and relationship of the Phase 2 building to the adjacent site context dynamics. Subsequent stages of Phase 2 design will refine its design concept in the context of ongoing campus planning and development efforts and shape the Intellectual House and its relationship to neighboring facilities.

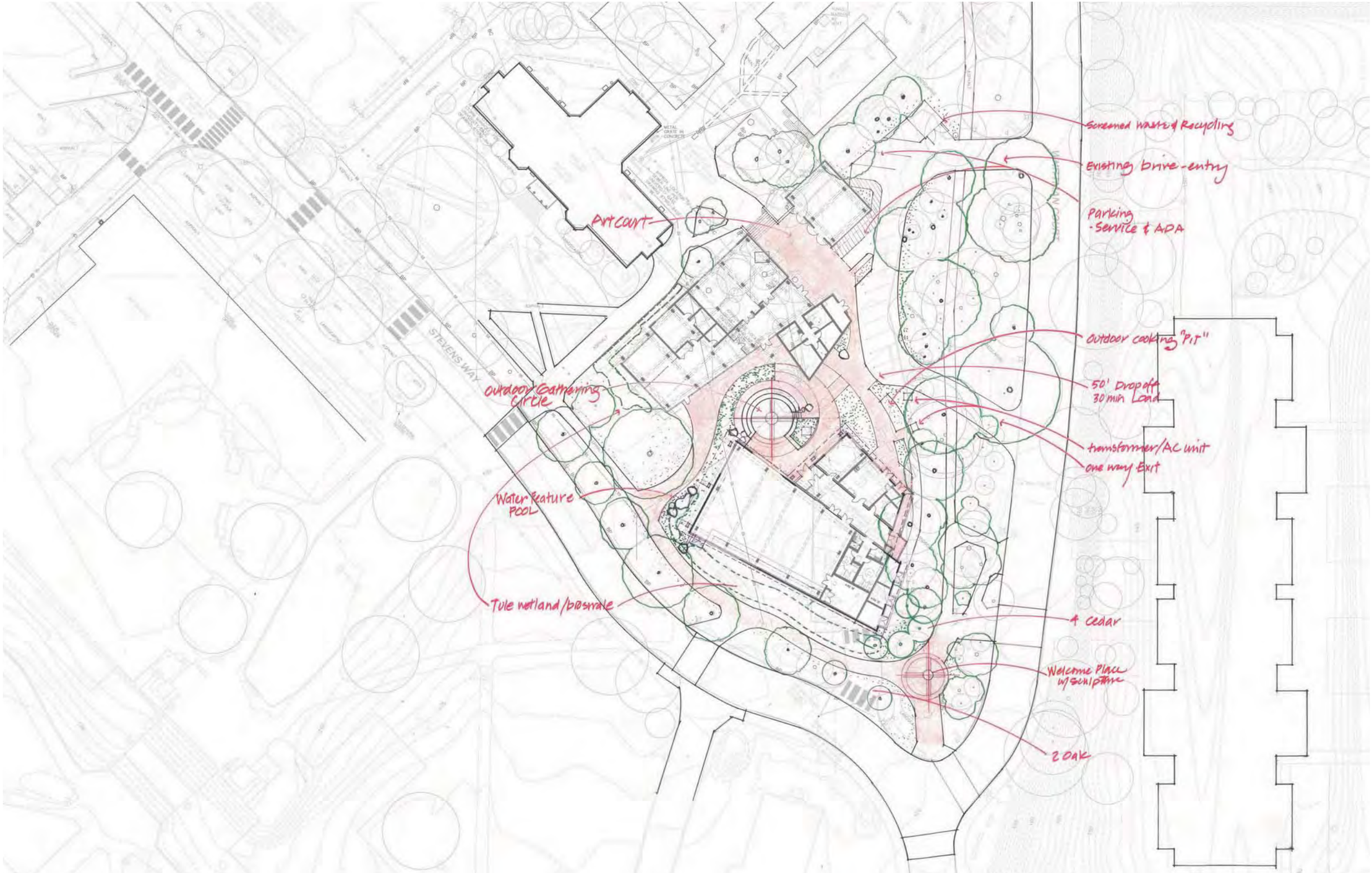
Whitman Walk

Sidewalk along Stevens Way

Driveway from Whitman Way

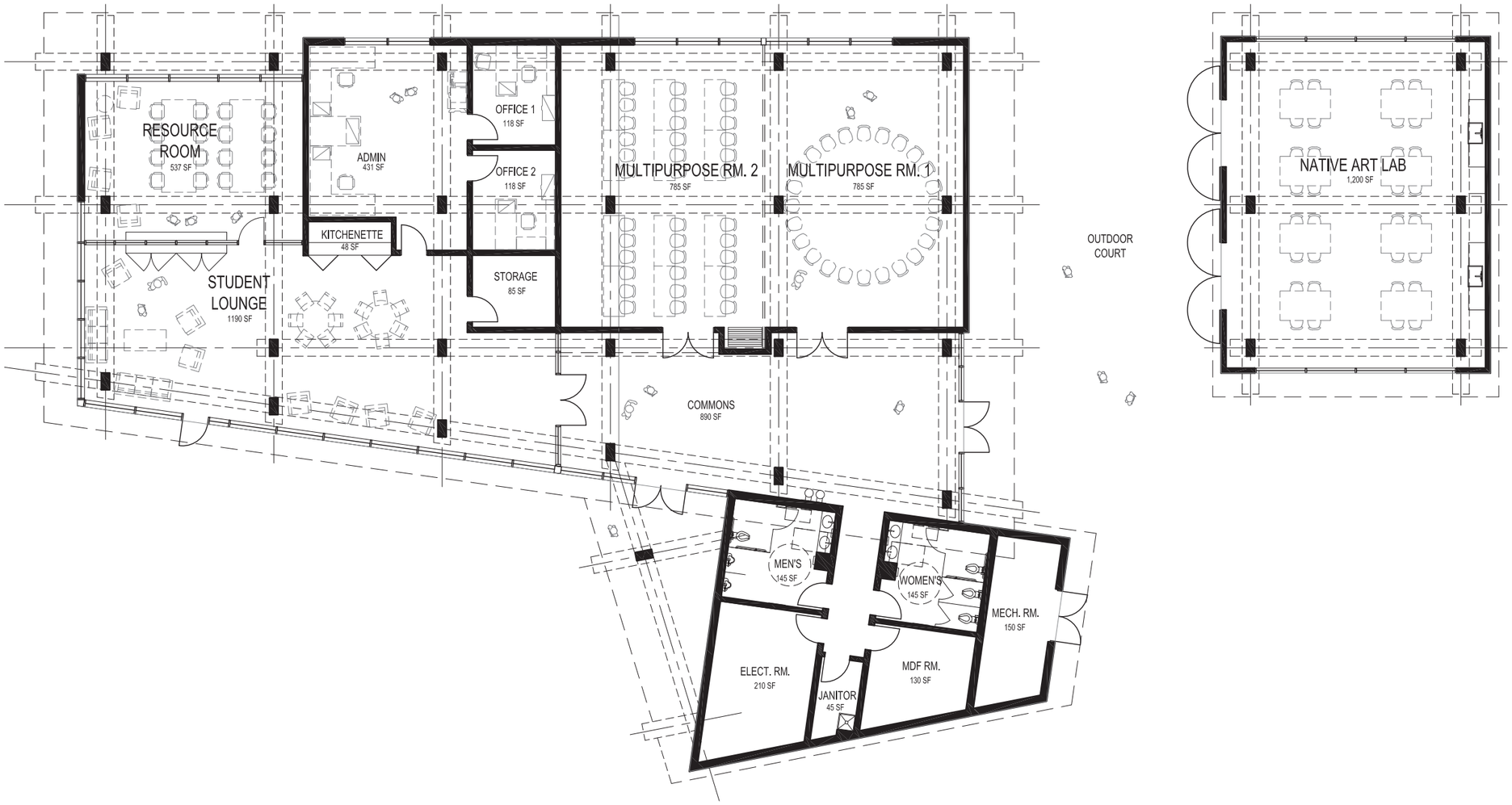
The Phase 2 site design seeks to reinforce the Phase 1 site experience by structuring the gathering courtyard's northern edge, adding to the sense of enclosure by defining its place at the center of the site. Once Phase 2 is built, the gathering courtyard will more fully be both an outdoor room and a path with pedestrian circulation around the circular plaza creating opportunities for the types of cross-cultural exchange envisioned in the project's mission. The design will replace most of the northern N6 parking lot preserved by Phase 1 with building. Phase 2 does maintain the minimum required parking spaces but relocates service access to Lewis Hall. It is anticipated that Phase 2 will also help address the pedestrian axis from the Fine Arts Quad as it reaches east to Whitman Court as plans are developed by the UW in the interim time period between Intellectual House phases of work. Vehicular circulation developed in Phase 1 will be maintained by Phase 2.

View into site looking north



SITE PLAN - PHASE 2
March 7, 2012

0 5 10 20 40
1" = 20'-0"


RESOURCE ROOM
537 SF
ADMIN
431 SF
OFFICE 1
118 SF
OFFICE 2
118 SF
KITCHENETTE
48 SF
STORAGE
85 SF
MULTIPURPOSE RM. 2
785 SF
MULTIPURPOSE RM. 1
765 SF
STUDENT LOUNGE
1190 SF
COMMONS
890 SF
OUTDOOR COURT
NATIVE ART LAB
1,200 SF
MEN'S
145 SF
WOMEN'S
145 SF
MECH. RM.
150 SF
ELECT. RM.
210 SF
JANITOR
45 SF
MDF RM.
130 SF

Schedule

The Phase 1 schedule follows. It shows a roughly eighteen month design duration, which includes permitting, followed by two months of bidding and negotiations. Construction is projected to require 10 months followed by start-up, move-in and turn over.

This will allow the project to be ready for start of the Fall 2014 academic year.

CAPITAL PROJECTS OFFICE
UNIVERSITY of WASHINGTON
Finance & Facilities

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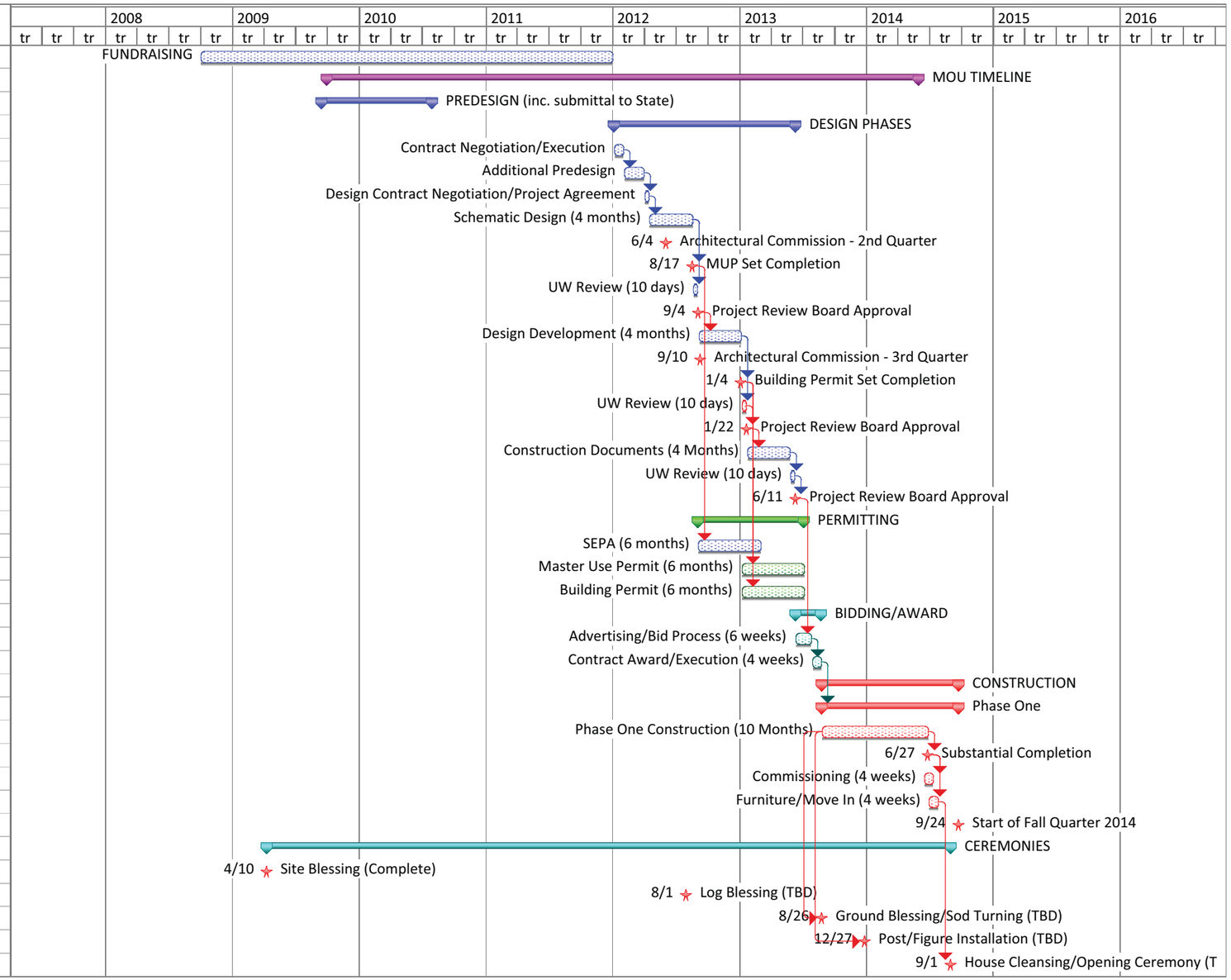
UW Intellectual House

Phase 1 Schedule - Updated 3-28-12

Project #202070

ID	Task Name	Duration	Start	Finish
1	**FUNDRAISING**	853 days	Wed 10/1/08	Sat 12/31/11
2	**MOU TIMELINE**	**1221 days**	**Thu 10/1/09**	**Sat 5/31/14**
7	**PREDESIGN (inc. submittal to State)**	**231 days**	**Mon 9/14/09**	**Fri 7/30/10**
14	**DESIGN PHASES**	**373 days**	**Thu 1/5/12**	**Tue 6/11/13**
15	Contract Negotiation/Execution	19 days	Thu 1/5/12	Tue 1/31/12
16	Additional Predesign	41 days	Fri 2/3/12	Fri 3/30/12
17	Design Contract Negotiation/Project Agreement	10 days	Mon 4/2/12	Fri 4/13/12
18	**Schematic Design (4 months)**	90 days	Mon 4/16/12	Fri 8/17/12
19	Architectural Commission - 2nd Quarter	0 days	Mon 6/4/12	Mon 6/4/12
20	MUP Set Completion	0 days	Fri 8/17/12	Fri 8/17/12
21	UW Review (10 days)	10 days	Mon 8/20/12	Fri 8/31/12
22	Project Review Board Approval	0 days	Tue 9/4/12	Tue 9/4/12
23	**Design Development (4 months)**	88 days	Wed 9/5/12	Fri 1/4/13
24	Architectural Commission - 3rd Quarter	0 days	Mon 9/10/12	Mon 9/10/12
25	Building Permit Set Completion	0 days	Fri 1/4/13	Fri 1/4/13
26	UW Review (10 days)	10 days	Mon 1/7/13	Fri 1/18/13
27	Project Review Board Approval	0 days	Tue 1/22/13	Tue 1/22/13
28	**Construction Documents (4 Months)**	88 days	Wed 1/23/13	Fri 5/24/13
29	UW Review (10 days)	10 days	Mon 5/27/13	Fri 6/7/13
30	Project Review Board Approval	0 days	Tue 6/11/13	Tue 6/11/13
31	**PERMITTING**	**220 days**	**Mon 9/3/12**	**Fri 7/5/13**
32	SEPA (6 months)	130 days	Mon 9/3/12	Fri 3/1/13
33	Master Use Permit (6 months)	130 days	Mon 1/7/13	Fri 7/5/13
34	Building Permit (6 months)	130 days	Mon 1/7/13	Fri 7/5/13
35	**BIDDING/AWARD**	**53 days**	**Wed 6/12/13**	**Fri 8/23/13**
36	Advertising/Bid Process (6 weeks)	32 days	Wed 6/12/13	Thu 7/25/13
37	Contract Award/Execution (4 weeks)	20 days	Mon 7/29/13	Fri 8/23/13
38	**CONSTRUCTION**	**282 days**	**Mon 8/26/13**	**Wed 9/24/14**
39	**Phase One**	**282 days**	**Mon 8/26/13**	**Wed 9/24/14**
40	Phase One Construction (10 Months)	220 days	Mon 8/26/13	Fri 6/27/14
41	Substantial Completion	0 days	Fri 6/27/14	Fri 6/27/14
42	Commissioning (4 weeks)	20 days	Mon 6/16/14	Fri 7/11/14
43	Furniture/Move In (4 weeks)	20 days	Mon 6/30/14	Fri 7/25/14
44	Start of Fall Quarter 2014	0 days	Wed 9/24/14	Wed 9/24/14
45	**CEREMONIES**	**1411 days**	**Fri 4/10/09**	**Mon 9/1/14**
46	Site Blessing (Complete)	0 days	Fri 4/10/09	Fri 4/10/09
47	Log Blessing (TBD)	0 days	Wed 8/1/12	Wed 8/1/12
48	Ground Blessing/Sod Turning (TBD)	0 days	Mon 8/26/13	Mon 8/26/13
49	Post/Figure Installation (TBD)	0 days	Fri 12/27/13	Fri 12/27/13
50	House Cleansing/Opening Ceremony (TBD)	0 days	Mon 9/1/14	Mon 9/1/14



We speak to the spirit of each of these things. We speak to the spirit of the salmon. We speak to the spirit of the tree and we know that these things are understood because we're speaking to the spirit. We're not speaking to the thing itself because the tree is wood. It has life. Every part of the tree is valued from the root to the bark to the way a cedar gives its' life and can be split up to create many, many things.

— Vi Hilbert, Taqwseblu
Upper Skagit Tribe

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