



# Museum of Natural and Cultural History

University of Oregon

Phase 3 - Reassessment

## CONCEPTUAL DESIGN REPORT

June 2011 (Revised December 2011)

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**MNCH ENTRY TO GLENN STARLIN COURTYARD**

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# MNCH Expansion - Phase 3

## Conceptual Design Reassessment

### Background

In February of 2007 the Curation and Research Facility study was completed for the Museum of Natural and Cultural History (Oregon State Museum of Anthropology) at the University of Oregon. The purpose of the study was to create a conceptual design for 1) a new collection processing and storage facility to meet the OSMA's legislatively mandated Curation obligations, particularly the need to accommodate ongoing archeological work in support of Oregon Department of Transportation (ODOT) activities, and 2) a consolidated and expanded research facility associated with the Museum. Portions of the project were to be funded by the Federal Highway Administration through ODOT. This study established the following primary goals:

1. Provide adequate Curation space to support ODOT funded research and Curation.
2. Consolidate and modernize processing of artifacts.
3. Consolidate and modernize collection storage.
4. Consolidate research division staff currently housed in multiple separate facilities.
5. Plan for growth of collections.
6. Locate research functions and collections storage close to or adjacent to the existing Museum.
7. Maintain ability to implement expansion of the Museum exhibit space and outdoor education courtyard identified in a 1998 conceptual design study.

The study recommended a two-phase expansion. Phase 1 was identified as a new addition consisting of a collections storage vault and associated collections division offices and processing areas in addition to related site work. Phase 2 would construct remaining research addition consisting of the Research Division and its related support spaces and completion of surface site access and displaced parking spaces.

From 2008-2010 Phase 1 was implemented and the addition was completed in December of 2009. The collections vault began receiving materials from the existing museum storage vault and off-site storage areas over the course of 2010.

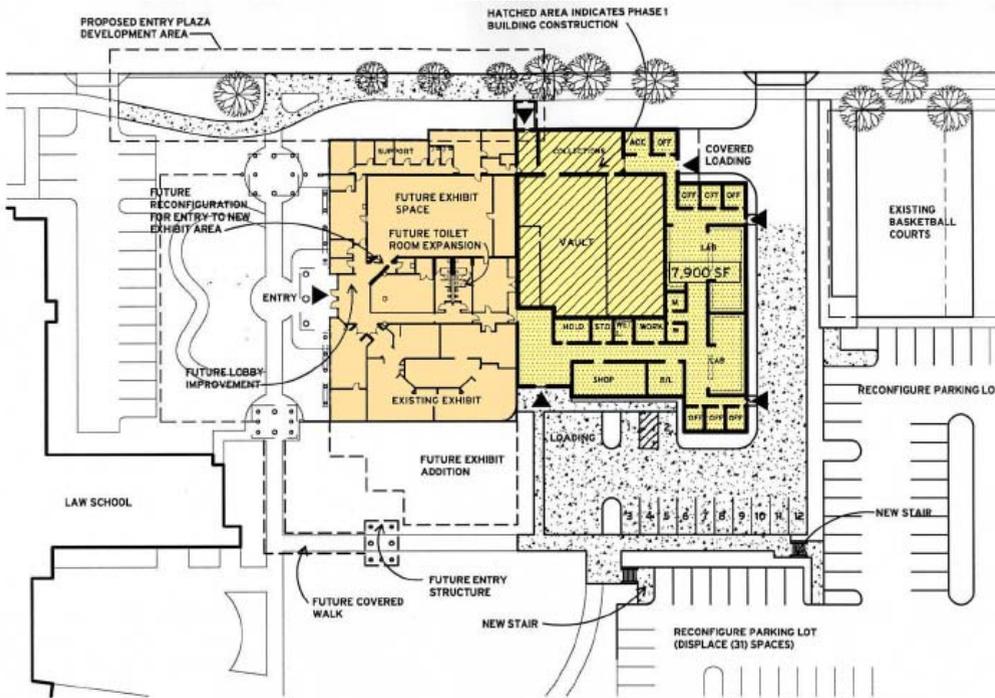
Following completion of Phase 1, the opportunity to raise funds for identifying improvements to spaces in the existing museum vacated by the collections resulted in a Phase 2 project in preparation for expanding the exhibit space within the museum. Consequently, the Phase 2 project for research facility consolidation from the original study has been renamed Phase 3 and is the subject of this study reassessment. As Phase 1 was nearing completion the East Campus Residence Hall Project Planning and the East Campus Open-Space Framework were initiated and discussions related to that project and planning for pedestrian routes through the area now required that the relocation and reorientation of the Phase 3 be reassessed. In addition, there have been changes to the scope of research programs and collections to be considered for inclusion under the Museum umbrella. The final configuration of academic research labs and collections storage facilities associated with the Museum need to be considered as a part of this reassessment study.

Issues include:

1. Inefficiencies inherent in museum collection and research staff being located in multiple buildings across campus.
2. Logistical problems associated with transporting materials and artifacts between multiple locations and service access to the Museum.
3. Security and preservation concerns related to collection materials being stored in multiple locations with questionable security systems and limited environmental control.

Fundamental questions to be answered include:

1. Will the new space configuration (limitations) accommodate MNCH expansion and consolidation plans?
2. Have the earlier space needs changed?



Conceptual Plan Illustrating Phase 2 (now Phase 3) from 2007 Study

## Conceptual Design Reassessment User Group

### Jon Erlandson

Director, Museum of Natural and Cultural History

### Thomas Connolly

Director, MNCH Research Division

### Patricia Krier

Director, MNCH Programs and Development

### Edward Davis

Condon Collection Manager

### Greg Retallack

Professor, Geologic Sciences

## Staff

### Martina Bill

Project Planner, UO Campus Planning

## Design Team

### Carl Sherwood, AIA

Principal, Robertson/Sherwood/Architects

### John Bramwell, AIA

Architect, Robertson/Sherwood/Architects

## Process

The Concept Design Reassessment User Group comprised of many of the same individuals involved in the previous concept study met over the course of several months from January 2010 through May 2010. This group identified the following:

1. Confirmation of program elements to be included from the original study.
2. Identification of additional program elements to be considered for accommodation in the research and collections wing of the Museum.
3. Identification of preferred solutions to site access and service constraints.
4. Consideration of opportunities and constraints presented by original museum construction.
5. Consideration of potential phasing required by funding or practical limitations.

## Goals

The timing and context within which this reassessment took place enabled the group to re-visualize the archeological research wing and other museum needs, many of which were identified in the original 2007 study. Nevertheless, the fundamental goal is still to consolidate museum research operations that are currently housed in multiple (9) separate facilities to improve efficiencies and provide greater security of resources and collections:

1. The original study identified the MNCH Archeological Research Lab (Building 107), the John Day Archeological Research Lab (Building 116), 1724 Moss Street, 1115 Moss Street, and MNCH Prep Lab and Storage (Building 115) and it was agreed that these spaces would continue to be accommodated in the planned research wing.
2. The original study established the need to replace the Wood Workshop, as it becomes displaced by other expansions

### Additional goals for consolidation of research facilities are desired as follows:

1. Coastal Archeology and Human Ecology Lab (Building 112).
2. Zooarchaeology Lab (Faunal Collection - Condon 264).
3. Careful consideration of the needs of the research staff for ready access to field equipment and vehicles. (Research staff currently enjoys a close adjacency to field equipment and vehicle storage areas. It is anticipated that it would create a hardship if they were to remain in their current locations, while staff moved their research operations. Consequently, the program envisions inclusion of field equipment storage and vehicular parking for loading/unloading within the facility as the preferred alternative, or ready access to such facilities nearby.)

### Additional goals for consolidation of collections include the following:

1. Relocation of the Condon Collection and related functions (Pacific Hall 013 & 014, and Volcanology 204 and 205).
2. Creation of a "Bio-Vault" for biological collections currently housed in sub-standard spaces (MNCH 104A and Condon Hall 302 & 304).
3. Provide a new Exhibit Assembly area.

### Additional goals pertaining to Museum access and experience:

1. Extend public spaces to interface with appropriate lab and processing areas to enhance Museum experience.
2. Work with site opportunities and constraints to meet project goals and address functional requirements and enhance the neighborhood.



MNCH Archeological Research Lab



John Day Archeological Research Lab



1724 Moss Street



MNCH Prep Lab/Field Equipment Storage



Coastal Archaeology/Human Ecology Lab



Condon Collection (Pacific Hall)



Faunal Lab (Condon Hall)



MNCH Bio-Vault

## Program

The additional academic research labs and collections facilities identified for possible inclusion in the Phase 3 research wing were visited, and space requirements were identified and calculated. These requirements were consolidated with those from the original study into a single program statement, which resulted in total space needs of approximately 19,000 sf, if all functional areas were to be accommodated. By comparison, a two-story building on the available site area would yield approximately 18,000 sf, thus the entire program may be feasible with some modifications subject to funding and other practical considerations. However, funding limitations may dictate that only the previously approved scope of program (2007 Study) can be accommodated at this time, or something in between.

Consequently the program was developed for three scenarios:

### *Original Program:*

This identified all of the originally approved components for this phase of expansion, and added a few elements to address the possibility of a two story expansion.

### *Improved Program:*

This identified additional lab spaces and collections that would address the fundamental goal of consolidation of staff and research associated with the Museum and its related collections. The Improved Program includes all areas presented in the Program Area Descriptions below

### *Optimal Program:*

This program addresses the needs of all identified labs and collections, and brings vehicular access and/or storage, and field equipment storage into the building, for maximum staff operational efficiency.

## Program Area Descriptions

### Museum Support Spaces

The new addition will need to accommodate several spaces that provide direct support of Museum operations. A new workshop is needed for exhibit construction, repair and maintenance, and may be jointly used with the research labs located within the addition as well. Because of this joint use a separate exhibit assembly and staging area should also be provided and could be located to be in public view so that exhibit staging operations can be observed. In addition to these spaces additional rest rooms will need to be provided in order to accommodate the code requirements established by the Museum expansion.



### Archaeological Research Labs

As proposed in the original study, the Museum of Natural and Cultural History Archaeological Research Lab located in Building



107; the John Day Archaeological Research Lab located in Building 116 and labs located in 1724 Moss Street will be moved into the new addition. The requirements for these labs include private offices for faculty and graduate personnel, open lab areas with extensive counter tops and workstations. These labs may be co-located to provide flexibility between the various labs as research projects grow and shrink. Additional spaces will need to include a lab for wet processing of some materials, a resource library for filing of documents, office workroom for report production, lunch break and meeting rooms, and rest rooms to serve the lab area.

The activities within these archaeological research labs include the movement of personnel and equipment to and from the field, which will present certain challenges to the Museum. Included in the program will be space for bringing vehicles either to or into the building, and provisions for cleaning and processing of materials and holding of materials prior to being taken to the lab. In addition it will be necessary to address the need for tool and equipment storage related to work in the field. These materials are currently housed in Building 115 adjacent to the other labs currently located across Franklin Boulevard. These labs will also benefit from access to the workshop, for fabrication and repair of materials and equipment to be used in the field and in the processing or storage of archaeological materials.



#### **Coastal Archaeology and Human Ecology Lab**

This lab, currently located in Building 112, is also proposed to be relocated to the museum addition. This lab was not included in the previous planning study, but would benefit by being co-located with the other archaeological research labs. Needs for this lab include a single private office and adjacent wet lab and open lab space with counter tops and work stations. If located adjacent to the other archeological research lab spaces the continuity of lab space would allow for a maximum flexibility between all of the research labs.



#### **Condon Collection**

The Condon Collection is based on the personal fossil collection of Dr. Thomas Condon, first professor of Geology at the University of Oregon. The collection is currently housed in Pacific Hall on the university campus. The research collection is continuously being curated and new specimens are being added from both field work and donations of privately held specimens. The needs of the collection include offices for a director and curator, curator's work space, a prep lab and collection storage including space for growth of about 50% over the current collection.

In addition, the Paleontology Lab, which is closely associated with the research and growth of the Condon Collection, and currently located in the Volcanology Building on the university campus, is proposed to be moved to the research addition. This lab is to be located open to public view so that museum patrons can observe the operations of the work being prepared either for exhibit or for processing and placing in the collection. In addition, an adjacent office work area is needed for this lab.

## Forensics Lab

A portion of the 1724 Moss Street facility includes a separately operated forensics laboratory, which consists of a secure work space and storage area for items brought in for forensic analysis and an adjacent office area. It is important this lab have separate security and access due to the sensitive materials that are brought in for processing. This lab was envisioned to have been part of the original Phase 3 study, although it had not been separately identified as the distinct work space it needs to be.



## Zooarchaeology Lab (Faunal Collection)

The Zooarchaeology Lab consists of a working collection of faunal specimens that is currently located in Condon Hall on the university campus. The collection is organized into cabinets that line the walls, with drawers containing faunal remains, that are used for comparative research and analysis of unidentified remains brought to the lab. Needs of the lab include a work space that incorporates storage cabinets for the working collection and private adjacent office space. This lab was not envisioned as part of the original scope of Phase 3 and has since been added due to the benefits of co-location with other labs and collections.



## Bio-Vault

There are a few locations on campus where other biological collections are in storage under less than ideal conditions. These tend to be working or specialized collections that have come under the Museum's purview and would benefit from proper storage and more centralized access. Integration of all University of Oregon biological collections, in the name of data accessibility, is a shared aspiration among this community for the near future. This would include bird specimens currently located in the secure vault adjacent to the former Collections Vault in the existing museum and the Grand Collection (UO Comparative Primate Collection) located in Condon Hall on the university campus. A new vault with adequate capacity and growth, and with appropriate temperature and humidity controls and security, is proposed to provide for these collections.

## Galleria Extension

The Phase 1 expansion included construction of a Galleria space that provides both circulation amongst the various components of the Museum as well as serving as a public meeting space and flexible exhibit space within the heart of the museum. At the time this was planned it was also envisioned as a space that could be extended to the south in order to serve as a general organizing element for future additions to the Museum. This Galleria space would serve as either flexible exhibit or lobby space depending on its access and configuration.

## General Building Support Spaces

The proposed addition is envisioned as a two-story structure and will require new elevator and elevator machine room and two sets of access and egress stairs. In addition, centralized data closets, custodial service areas, toilet rooms and support and supply storages spaces will be accommodated.

## Design Considerations

The following design considerations were identified early in the reassessment process and were influential as the program and design concepts developed.

1. Consider a multiple story design in order to maximize project area.
2. Do something distinctive.
3. Consider this phase in context with additional long-term needs.
4. Enhance the neighborhood.

Museum of Natural and Cultural History- Phase 3 Reassessment Program  
University of Oregon  
Eugene, Oregon

Phase 3 Scenarios

Space Needs	Required	Net Area	Total	Original Program	Improved Program	Optimal Program
<b>Museum of Natural and Cultural History</b>						
Workshop (joint use with Research)	1	400 SF	400	400 <sup>1</sup>	400 <sup>1</sup>	400 <sup>1</sup>
Exhibit Assembly/Staging Area	1	200 SF	200	200	200	200
Restrooms	2	60 SF	120	120 <sup>2</sup>	120 <sup>2</sup>	120 <sup>2</sup>
<b>Subtotal - Net Area</b>		<u>720 SF</u>				
<b>Subtotal - Gross Area</b>		<u>972 SF</u>				
<b>Research Division</b>						
<b>MNCH Archaeological Research Lab, Bldg 107; John Day Archaeological Research Lab, Bldg. 116, 1724 Moss Street</b>						
Vehicle Bay	1	500 SF	500	outdoor	outdoor	500
Cleaning and Processing Area	1	200 SF	200	200	200	200
Material Holding Area	1	200 SF	200	200	200	200
Tool and Equipment Storage	1	800 SF	800			800
Screen Storage	1	200 SF	200			200
Workshop (joint use with Exhibits)	0	200 SF	0			0
Offices, Private	9	120 SF	1,080	1,080 <sup>3</sup>	1,080 <sup>3</sup>	1,080 <sup>3</sup>
Office, Private, Accountant	0	120 SF	0			0
Workstations, Counterop with Computers	17	100 SF	1,700	1,700	1,700	1,700
Wet Lab	1	120 SF	120	120	120	120
Resource Library / Files	1	150 SF	150	150 <sup>4</sup>	150 <sup>4</sup>	150 <sup>4</sup>
Office Work Room, Report Production	1	120 SF	120	120 <sup>5</sup>	120 <sup>5</sup>	120 <sup>5</sup>
Restrooms	2	120 SF	240	240 <sup>2</sup>	240 <sup>2</sup>	240 <sup>2</sup>
Lunch/Break/Meeting Room	1	225 SF	225	225	225	225
<b>Coastal Archeology and Human Ecology Lab, Bldg. 112 (1/2)</b>						
Office, Private	1	120 SF	120		120	120
Wet Lab	0	120 SF	0		0	0
Lab with counters/Workstations	1	750 SF	750		750	750
<b>Subtotal - Net Area</b>		<u>6,405 SF</u>				
<b>Subtotal - Gross Area</b>		<u>8,647 SF</u>				
<b>Condon Collection</b>						
Director's Office, Private	1	180 SF	180		180	180
Curator's Office, Private	1	120 SF	120		120	120
Curator's Office, Private	1	230 SF	230		230	230
Curator Space	1	750 SF	750		750	750
Collections Storage (current+Greg's)	1	330 SF	330		330	330
Collections Storage (50% growth = 50 years)	1	250 SF	250		250	250
Prep Lab	1	400 SF	400		400	400
Paleo Lab	1	180 SF	180		180	180
Paleo Work Office Area	1	180 SF	180		180	180
<b>Subtotal - Net Area</b>		<u>2,440 SF</u>				
<b>Subtotal - Gross Area</b>		<u>3,294 SF</u>				

Space Needs	Required	Net Area	Total	Original Program	Improved Program	Optimal Program
<b>Forensics Lab</b>						
Office, Private	1	120 SF	120	120	120	120
Workspace/ Secure Storage	1	250 SF	250	250	250	250
<b>Subtotal - Net Area</b>			<b>370 SF</b>			
<b>Subtotal - Gross Area</b>			<b>500 SF</b>			
<b>Faunal Lab</b>						
Office, Private	1	120 SF	120		120	120
Workspace/ Working Collection	1	750 SF	750		750	750
<b>Subtotal - Net Area</b>			<b>870 SF</b>			
<b>Subtotal - Gross Area</b>			<b>1,175 SF</b>			
<b>Bio-Vault</b>						
Storage Vault for Biological Collections	1	1,000 SF	1,000			1,000
<b>Subtotal - Net Area</b>			<b>1,000 SF</b>			
<b>Subtotal - Gross Area</b>			<b>1,350 SF</b>			
<b>General Building Support</b>						
Lobby/Galleria Extension	1	1,500 SF	1,500	500 <sup>6</sup>	1,500 <sup>6</sup>	1,500 <sup>6</sup>
Elevator	2	60 SF	120	120 <sup>7</sup>	120 <sup>7</sup>	120 <sup>7</sup>
Elevator Machine Room	1	42 SF	42	42 <sup>7</sup>	42 <sup>7</sup>	42 <sup>7</sup>
Stairs	2	320 SF	640	640 <sup>7</sup>	640 <sup>7</sup>	640 <sup>7</sup>
Copier / Work Area	1	100 SF	100	100	100	100
Data Closets	2	64 SF	128	128 <sup>7</sup>	128 <sup>7</sup>	128 <sup>7</sup>
Toilet Rooms						0
Custodial Rooms	2	48 SF	96	96 <sup>7</sup>	96 <sup>7</sup>	96 <sup>7</sup>
<b>Subtotal - Net Area</b>			<b>2,626 SF</b>			
<b>Subtotal - Gross Area (except on Galleria)</b>			<b>3,020 SF</b>			
<b>Total Net Area</b>			<b>14,431 SF</b>	<b>6,451 SF</b>	<b>11,931 SF</b>	<b>14,431 SF</b>
<b>Gross Area @ 1.35 (except on Galleria)</b>			<b>18,957 SF</b>	<b>8,534 SF</b>	<b>15,582 SF</b>	<b>18,957 SF</b>
<b>Existing BUILDABLE AREA</b>						
First Floor Addition		8,150 SF				
Second Floor Addition		8,150 SF				
Galleria		1,700 SF				
<b>Total Gross Buildable Area</b>		<b>18,000 SF</b>				

<sup>1</sup> Changed need from original, net increase 200sf  
<sup>2</sup> Increase in restrooms, net increase 100sf  
<sup>3</sup> More private offices, net increase 120sf  
<sup>4</sup> Larger resource library, net increase 50sf  
<sup>5</sup> Reduced workroom, net decrease 80sf  
<sup>6</sup> Added for connection to museum, net increase 500sf  
<sup>7</sup> Added for 2 story construction

## Campus Plan

As with the previous 2007 Conceptual Design Study and later Phase 1 Implementation, the project defined in this study for an archaeological research and collections addition to the Museum of Natural and Cultural History would be developed under the policies and guidelines established in the University of Oregon's *Campus Plan*, May 31, 2005.

### Policies:

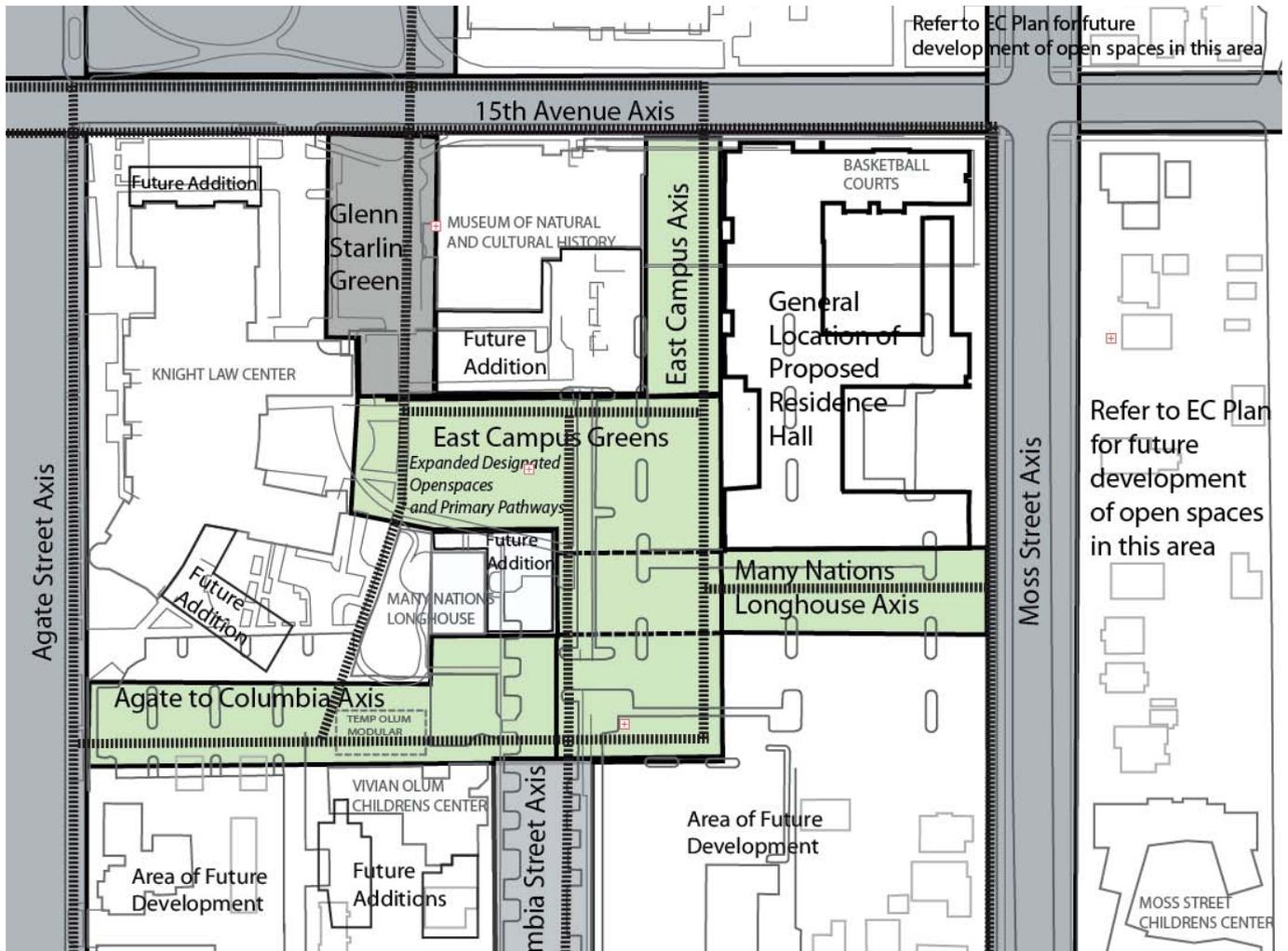
- Policy 1: Process and Participation
- Policy 2: Open-space Framework
- Policy 3: Densities
- Policy 4: Space Use and Organization
- Policy 5: Replacement of Displaced Uses
- Policy 6: Maintenance and Building Service
- Policy 7: Architectural Style and Historic Preservation
- Policy 8: Universal Access
- Policy 9: Transportation
- Policy 10: Sustainable Design
- Policy 11: Patterns
- Policy 12: Design Area and Special Conditions

## Policy 2 and Policy 12

Of special concern to the reassessment study is the influence of **Policy 2 and Policy 12** and more specifically the *Campus Plan* Amendment for the **East Campus Open-space Framework Plan and Design Area Special Conditions**. The East Campus Residence Hall project, located in the block bounded by 15th and 17th Avenues and Agate and Moss Streets, triggered the requirement to prepare and adopt an open-space framework plan for the affected area. This resulted in a series of amendments to the *Campus Plan* resulting in the East Campus Open-space Framework shown below. The Museum is encompassed by open spaces defined as the Glenn Starlin Green, 15th Avenue Axis, East Campus Axis and East Campus Green. The amendment includes special conditions that apply to each of these areas, and must be considered by this and future Museum expansions. The text of the amendment is included in the Appendix of this report.

### Policy 9

Access to parking is of special concern to the Museum and the Long House, due to many public access events in these facilities. Future development in the area is a concern.



## Policy 11: Patterns

The 2007 Conceptual Design study pertaining to improvements and additions to the Museum, addressed the Campus-Wide Patterns as prescribed by the *Campus Plan*, and others that were felt pertinent to the proposed expansions. These were not revisited during the course of the reassessment study but their further re consideration will be a requirement of the implementation of Phase 3.

### A. Site Repair

*Take advantage of opportunities offered by building projects to improve the overall quality of that part of the campus in which the project is situated. Build on the worst part of the site, preserve the best.*

### B. Four Storey Limit

*Generally avoid buildings which exceed four stories in height above grade.*

### C. Quiet Backs

*Connect buildings to a quiet space, removed and buffered from adjacent sources of noise.*

### D. Accessible Green

*Maintain an open space in proximity to all buildings.*

### E. Small Public Squares

*At activity nodes along important pathways, create small squares, between 45 and 60 feet in width, to accommodate small gatherings.*

### F. South Facing Outdoors

*Buildings should be designed to create south-facing outdoor spaces whenever possible.*

### G. Main Gateways

*Mark major entrances to the campus in a way that identifies the campus as a special precinct within the larger community.*

### H. Positive Outdoor Space

*Place and form buildings to define and partially enclose outdoor space.*

### I. Building Complex

*Generally, campus buildings should be built at a human scale; large space requirements should be met by grouping smaller buildings and connecting them.*

### J. University Streets

*Major campus activities should front on public streets which are essentially pedestrian in nature; new buildings should either connect to or extend these streets.*

### K. Main Entrance

*Main entrances to buildings should be distinctive and easily identifiable from principal approaches.*

### L. Family of Entrances

*Outside entrances to separate realms of a building or to separate buildings in a complex should be roughly similar and visible from each other.*

### M. Promenade

*A major pedestrian way, centrally located with main attractors at each end, should be developed in a way that links principal activity nodes.*

### N. Activity Nodes

*Create small centers of activity, separated by quiet space.*

### O. Connected Buildings

*Connect new buildings to existing structures wherever possible.*

### P. Operable Windows

*In the absence of compelling reasons to the contrary, all exterior windows of University buildings must be able to be opened wholly or in part.*

### Q. Open University

*Encourage the dissolution of the boundary between university and campus. Encourage parts of town to grow up within the university, and parts of the university to grow up within the town.*

### R. University Shape and Diameter

*Plan all classes, evenly distributed, within a circular zone not more than 3000 feet in diameter. Place non-class activities within a wider circle, not more than 5000 feet in diameter.*

### S. Path Shape

*Make a bulge in the middle of a public path, and make the ends narrower, so that the path forms an enclosure which is a place to stay, not just a place to pass through.*

### T. Public Outdoor Room

*In every neighborhood and work community, make a piece of the common land into an outdoor room—a partly enclosed place, with some roof, columns, without walls, perhaps with a trellis; place it beside an important path and within view of many homes and workshops.*

### U. Arcades

*Whenever paths pass beside buildings, create deep arcades over the paths, and open the group territory inside the building to these arcades. Gradually knit these arcades together until they form a covered system of paths throughout the community.*

The 2009-2011 Biennial Capacity Plan establishes policies and standards which prescribe site coverage and floor area ratios in order to control density of growth in specific areas of campus. Area Detail 71 and Area Detail 72 includes all of the Museum of Natural and Cultural History and its proposed additions, as well as portions of the the other surrounding buildings. It appears that with this development of the Phase 3 and future possible additions to the Museum, and surrounding uses these ratios may be exceeded. An update of Area Detail 71 and Area Detail 72 should be included in the next Biennial Capacity Plan.

The Museum of Natural and Cultural History is also included in the area covered by the 2003 Development Policy for the East Campus Area, and is subject to the guiding patterns and policies contained therein.

## Site Opportunities and Constraints

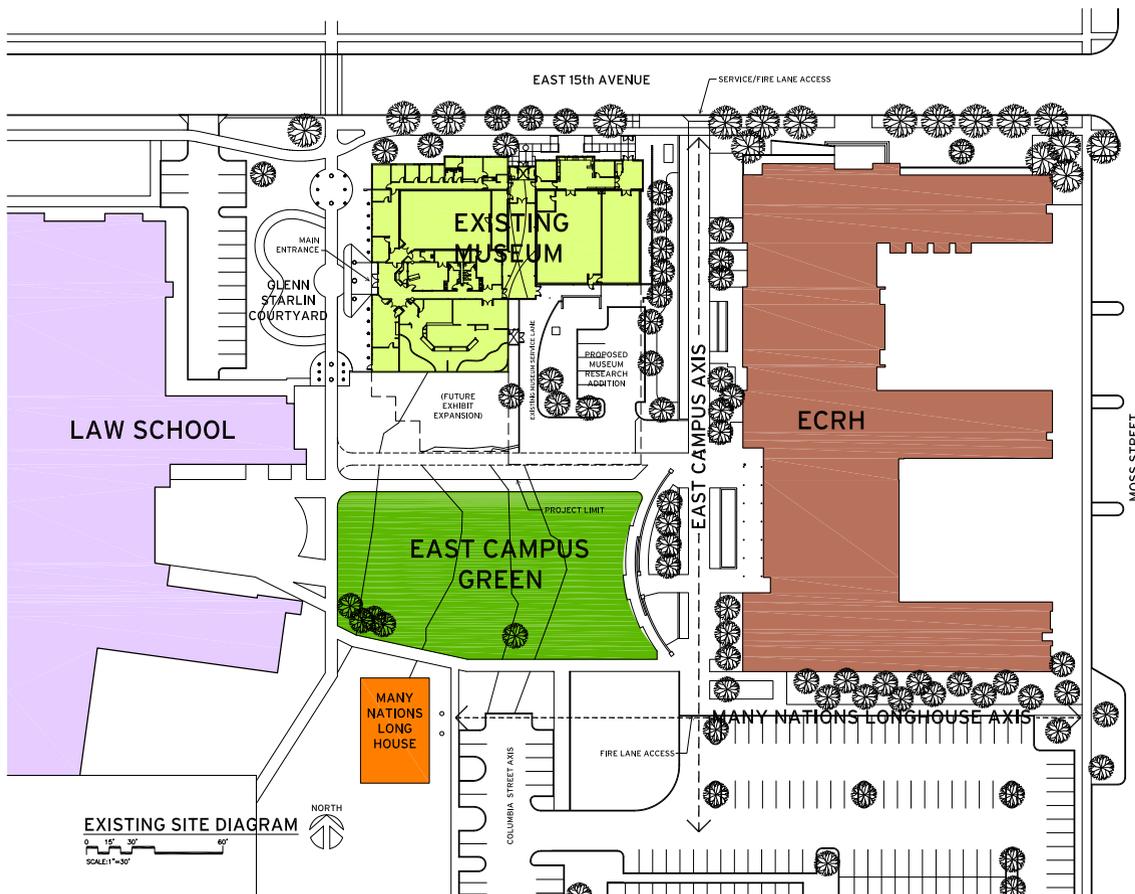
The area identified for the Phase 3 archaeological research wing is located in the southeast portion of the site. It is bordered on the west by the original museum exhibit space, on the north by the collections addition (Phase 1), on the east by the East Campus Axis, and on the south by the East Campus Green. The area for Phase 3 totals approximately 10,165sf.

The East Campus Axis special area considerations limit the use of this area to occasional vehicular service activities within a predominantly pedestrian zone. The service needs for the Museum and Research Wing must be met, but also must accommodate the primarily pedestrian nature of this area.

The floor level of the Museum (444 Ft.) and the grades of the East Campus Axis (447-450 Ft.), present a challenge for the service requirements for the Museum relative to the desired design characteristics of the pedestrian way. Several access options were considered as part of this study, and are illustrated on pages 16-18.

## Floor Area Ratio Calculations

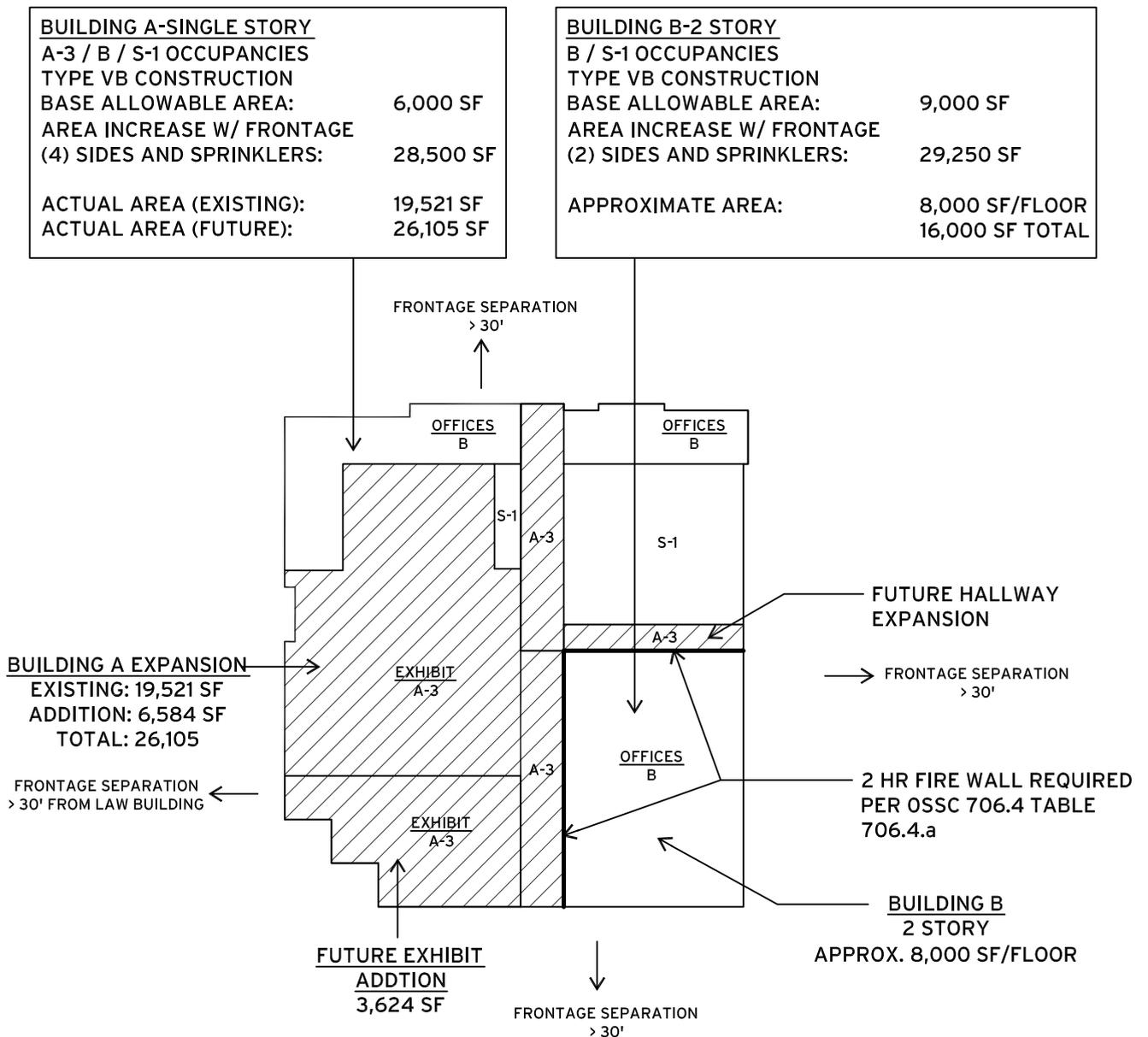
Development densities are established by Policy 3 of the *Campus Plan*, in order to preserve the historic character of the university campus while at the same time allowing for accommodation of new facilities. The research addition footprint falls within the East Campus Design Area and specifically Sub-Area 28 and Sub-Area 29, contributing to the overall densities in these planning areas. The Floor Area Ratio and Coverage calculations for the proposed museum expansion for these Sub-Areas are included in the Appendix. These calculations will need to be combined with the contributions from other facilities to complete the analysis, but it appears that the ratios will not be exceeded.



## Building Code Constraints

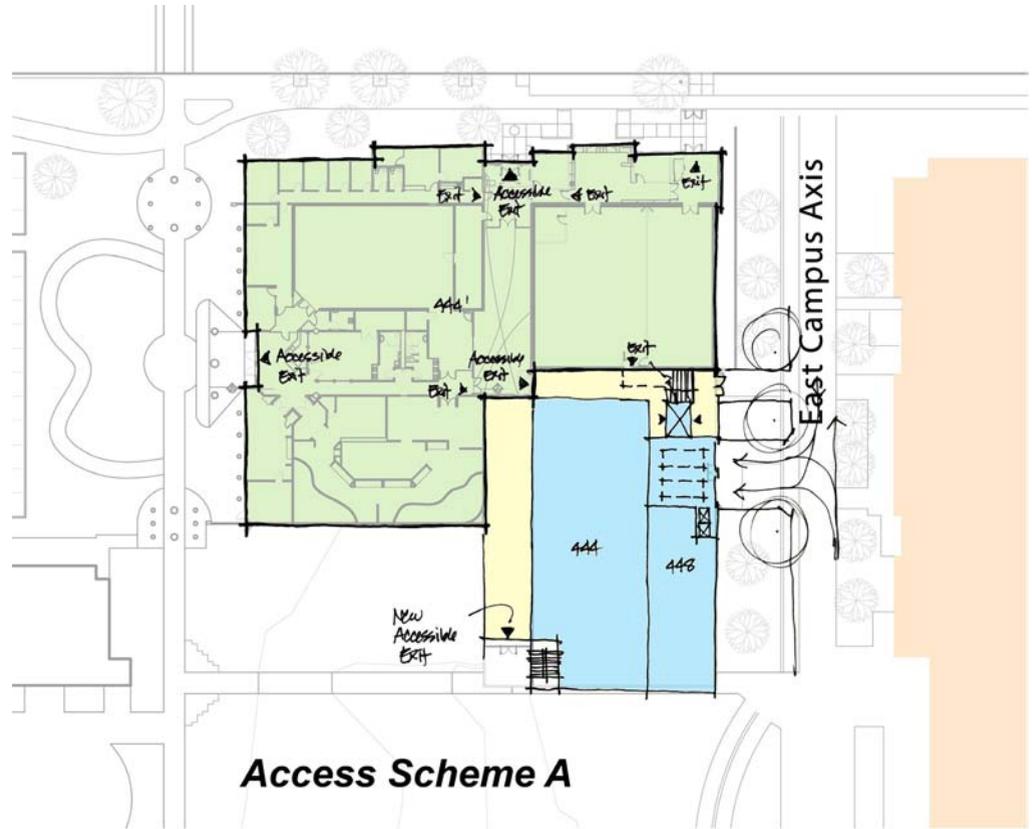
In reference to the 2010 Oregon Structural Specialty Code, the existing building is of Type VB (non-rated) construction and is limited to one-story and 28,500 total square feet. The needs of this program and future expansions dictate that a two-story addition would need to be separated by a 2-hour fire barrier (refer to the diagram below).

The original Museum expansion (1998 Study) to the south could still be accommodated as a Type VB (non-rated) addition to the existing Museum. The new Phase 3 research wing would be constructed as a "separate" two-story building, limited by the buildable area imposed by the East Campus Axis, East Campus Green and the existing building.



## Access Alternatives

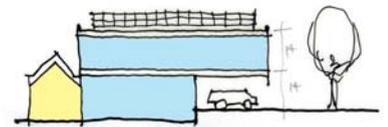
There exists a three to five foot differential in the existing museum floor elevation and the grade along the East Campus Axis service drive. Design alternatives need to address the mitigation of this differential in order to provide service access to the museum, accommodate movement of people and materials in the buildings, and provide for accessible egress.



**Access Scheme A**

*Access Scheme A*

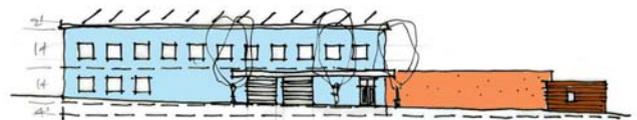
This alternative explored an at-grade drive and loading area, resulting in a split level first floor.



*Cross Section*

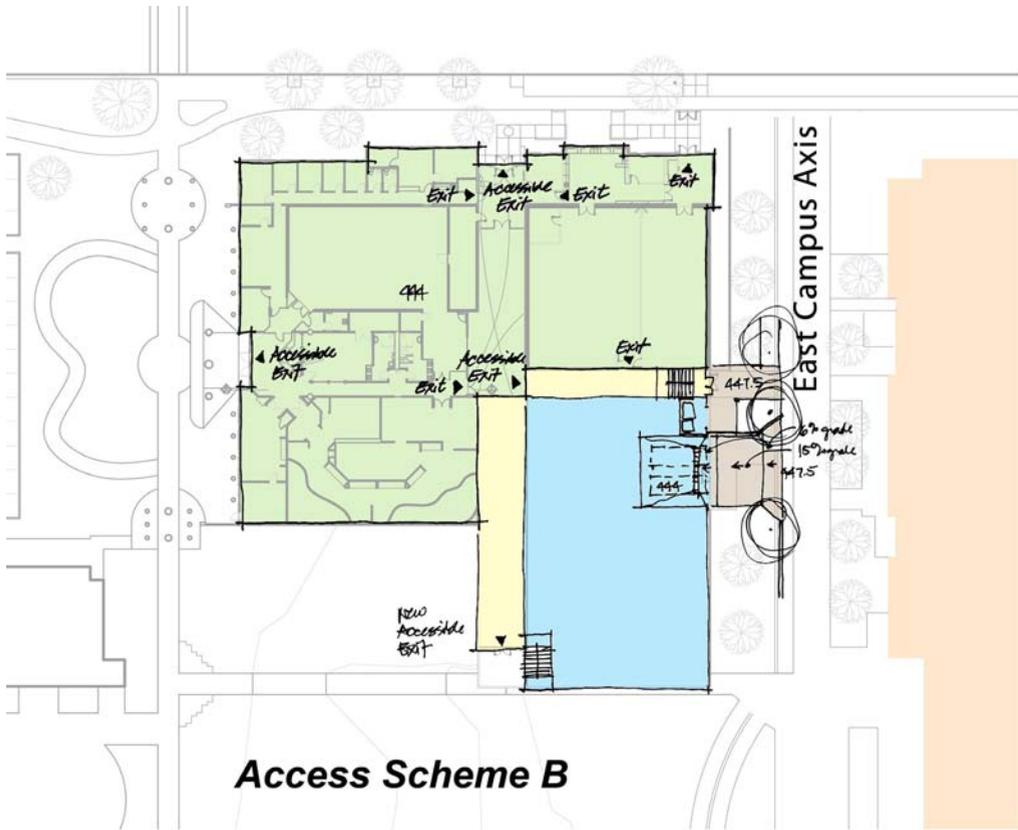


*South Elevation*



*East Elevation*

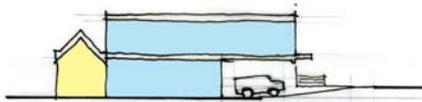
**Access Scheme A**



**Access Scheme B**

*Access Scheme B*

This alternative explored a sloped drive into an internal loading area, resulting in a level first floor. The further north the drive, the shorter the slope and penetration into the building.



*Cross Section*



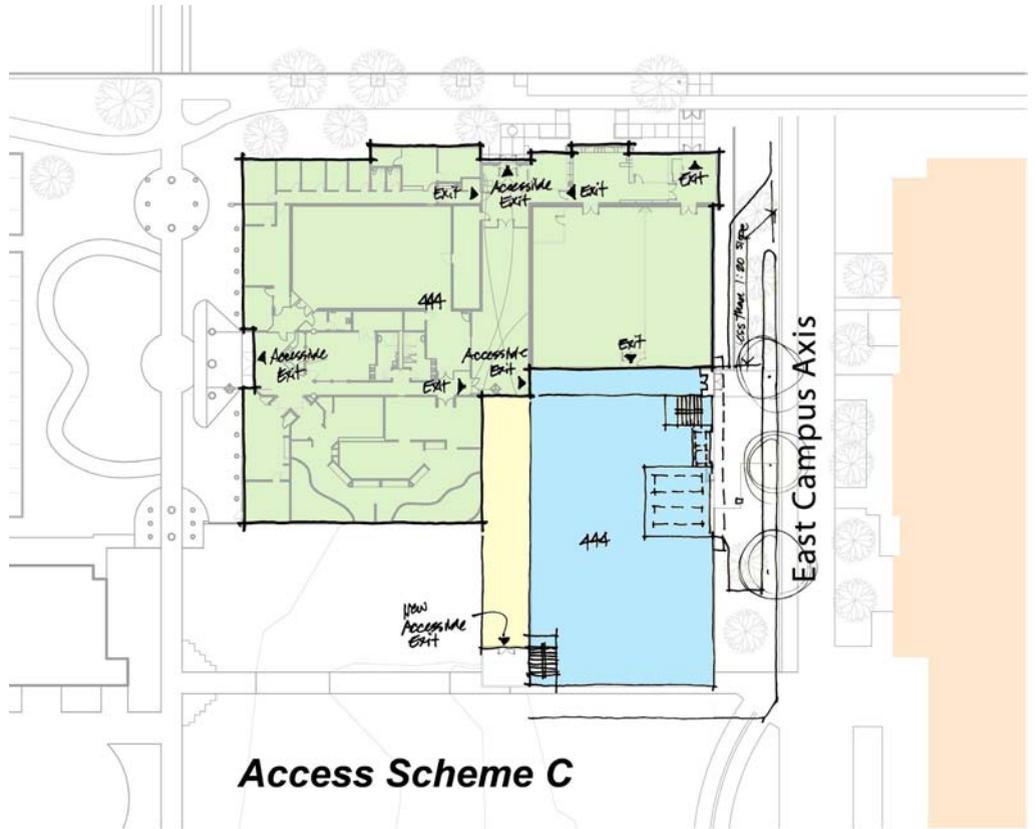
*South Elevation*



*East Elevation*

**Access Scheme B**

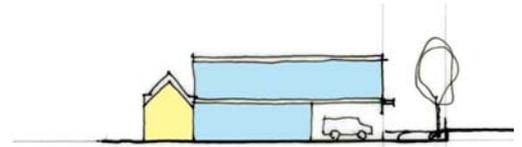




## Access Scheme C

Access Scheme C

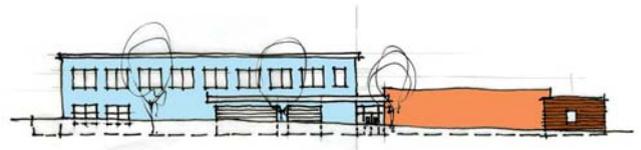
This alternative explored the development of a sloped drive parallel to the service drive to get down to a first floor loading area.



Cross Section



South Elevation



East Elevation

## Access Scheme C

# Concept Plan Alternatives

## Concept Plan Alternatives

As an initial test of the program and project site a Concept Plan was developed for each of the three program scenarios. A brief description is provided below, and an image of each are found of the pages to follow:

### Original Program

Contains basic programmatic elements of the expansion proposed in the 2007 Conceptual Study including: a new workshop, Archaeological Research Lab, John Day Research Lab, private offices, wet lab, processing area, material holding area, resource library, lunch/meeting room, the Forensics Lab and associated general building support. For the basis of this exercise and in anticipation of the need for future additions, a multi-story building illustrated. Thus, the program deviates from the 2007 study by adding an extension of the existing Galleria, additional stairs and an elevator. The gross square footage is approximately at 8,500 sf.

Due to the relatively small footprint, the space required for an elevator and stair on each floor, and the fact that most of the program spaces are programmed for the second level this concept is not recommended. It would be very resource inefficient to build spaces on one level only to move them to another in the future. This program would best be constructed on one level.

### Improved Program

The Improved Program contains all of the elements included in the Original Program plus the addition of an exhibit staging area, the Coastal Archeological and Human Ecology research labs, the Condon Collection, Paleo labs and the Zooarchaeology Lab. The gross square footage is estimated at approximately 15,500 sf. This program envisions a better balance of program spaces distributed between each level such that the floor plates are roughly equal. The larger floor areas also allow for better distribution of the vertical circulation elements, increasing overall efficiency.

The Improved Program Concept presents a viable option, and can be recommended for further development. In addition, because the plan does not utilize the full build-able area, an alternative concept that moves the addition to the southern project limit and creates a courtyard between the new addition and the Collections wing to the north (not previously presented or discussed) could also be considered as the project is further developed.

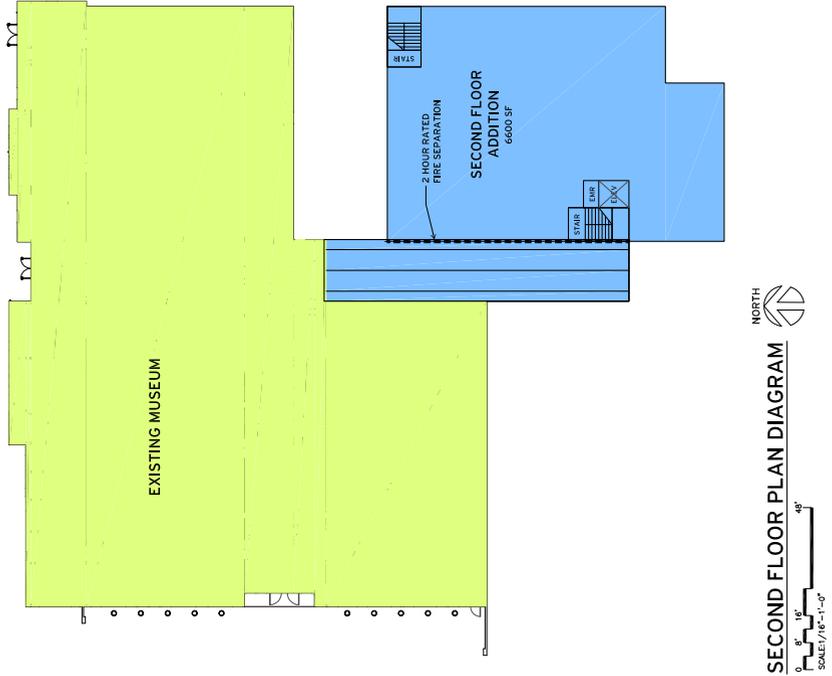
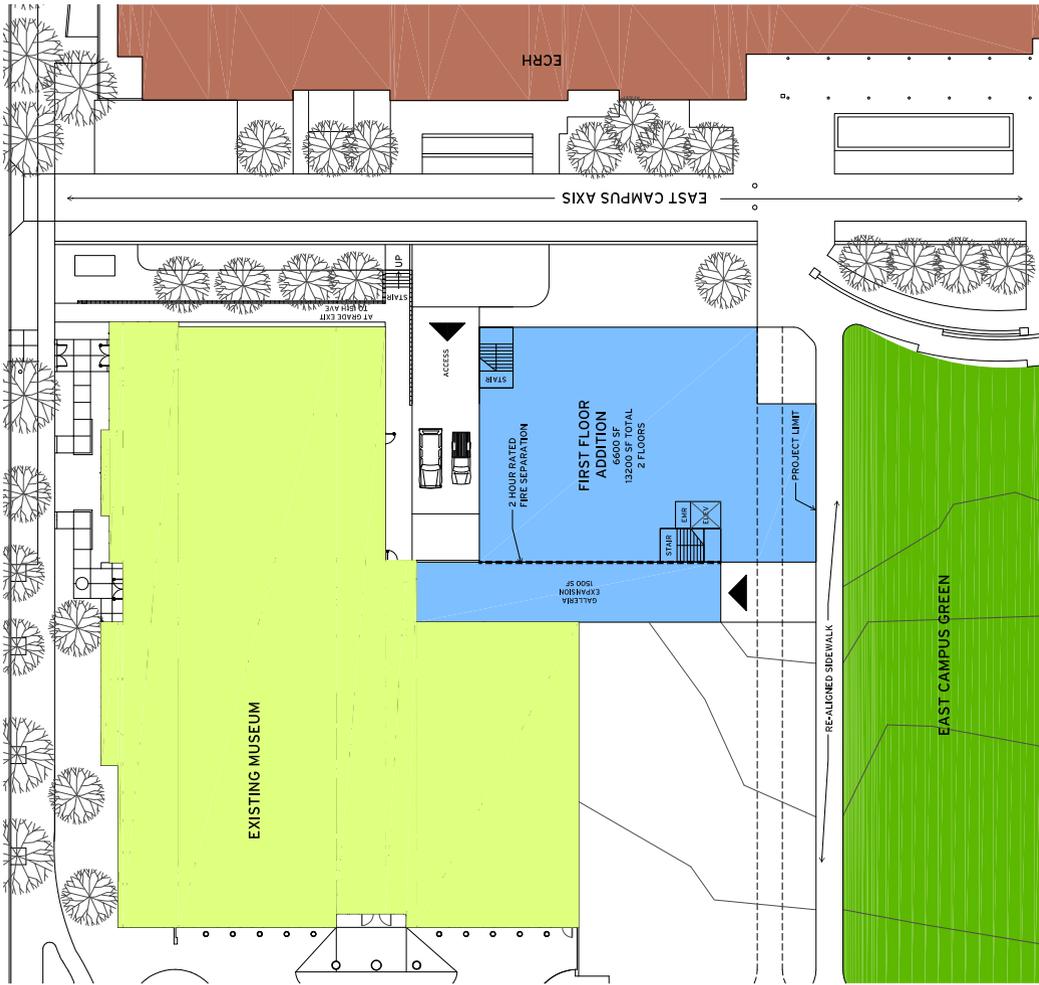
### Optimal Program

The Optimal Program includes all elements of the Original Program and the Improved Program plus the addition of a vehicle garage, tool storage, screen storage and the addition of a biological vault. The gross square footage is estimated at approximately 19,000 sf. This concept illustrates a good fit with the build-able site area and may present the most efficient approach from a functional standpoint. It is the only approach that resolves the need of getting research personnel in close proximity to their field equipment and resources. As with the Improved program this concept presents a good balance of program elements between floors, and is even more efficient in the location of vertical circulation elements.

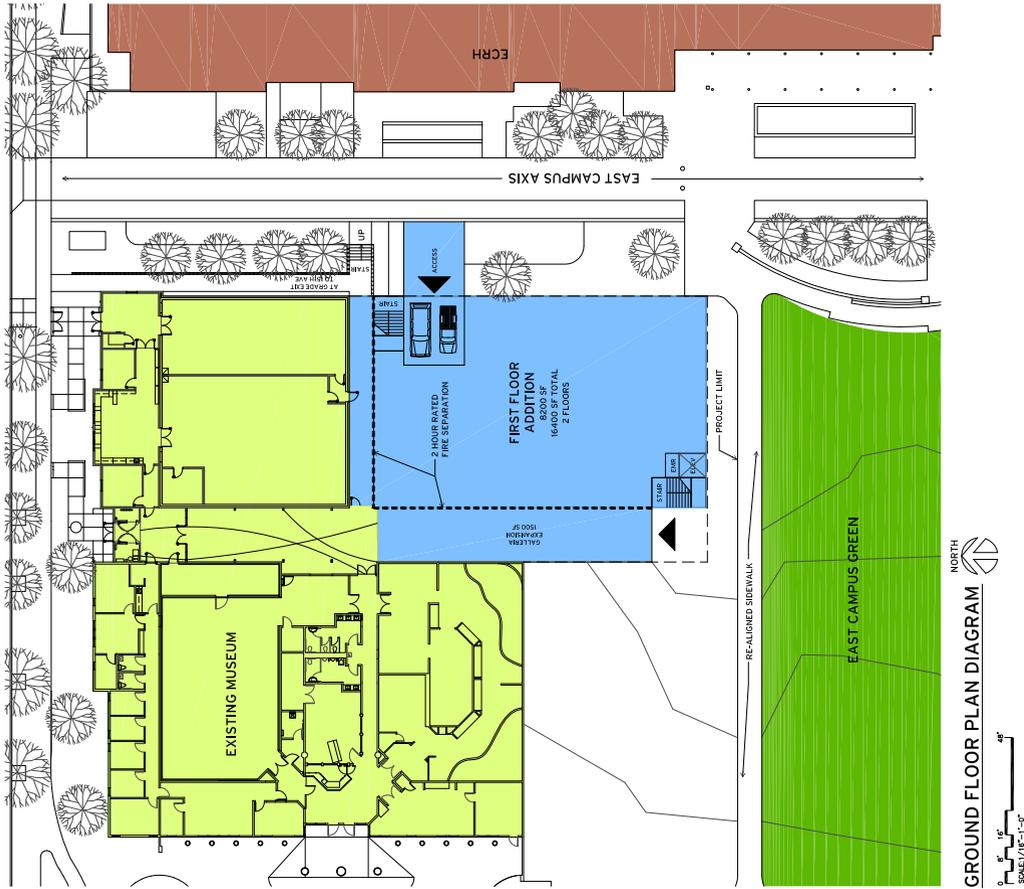
The Optimal Program presents a viable option, and can also be recommended for further development.







# Improved Program with Courtyard



Robertson Sherwood Architects

**UO- Museum of Natural & Cultural History - Phase 3**  
 Optimal Program



# Improved Program Conceptual Design

## Preferred Concept Design

Ultimately, the Phase 3 Reassessment User Group identified the **Improved Program** alternative as the preferred approach for more detailed design analysis. This decision was primarily based on the perception that funding for the Optimal Scope may be harder to achieve in the short term.

The Concept Design provides a good test of the projected program area, and based on the layout illustrated on each floor it was recommended that the Program area increase the net to gross ratio in the program from 35% to 40%. This recognizes that the circulation areas are increased due to the split level on the first floor, as well as a need for wider than average hallways due to the movement of potentially heavy and larger materials in this building.

The plan layout that is illustrated is just one way to arrange the program elements on each level, but it does address many of the key relationships and features that the User Group defined:

- Exhibit Staging area at edge of Galleria and public view.
- Paleontology Lab at edge of Galleria and public view.
- Shared workshop area.
- Offices and work areas with access to natural light and view.
- Research labs primarily on one floor.
- Collections and collections processing area primarily on one floor.
- Vehicular access to the loading area.
- Entrance from research functions separate from public access to the Museum.
- Appropriate connection to the East Campus Axis, but limits service access conflict.
- Contributes to the use and vitality of the East Campus Green.

The program need that this concept does not address, but must be captured for further discussion is the loss of connection for the research staff to their field equipment and vehicles. Currently these are right outside the door of their existing laboratories. With this plan they will need to be located elsewhere, and for efficiency of their time and resources they need to be as close as possible. Leaving them across Franklin Blvd. in the buildings and areas where they are located today is not seen as practical. In addition, this approach does not provide for the Bio-Vault that would accommodate the additional collections that would benefit from being located at the museum.

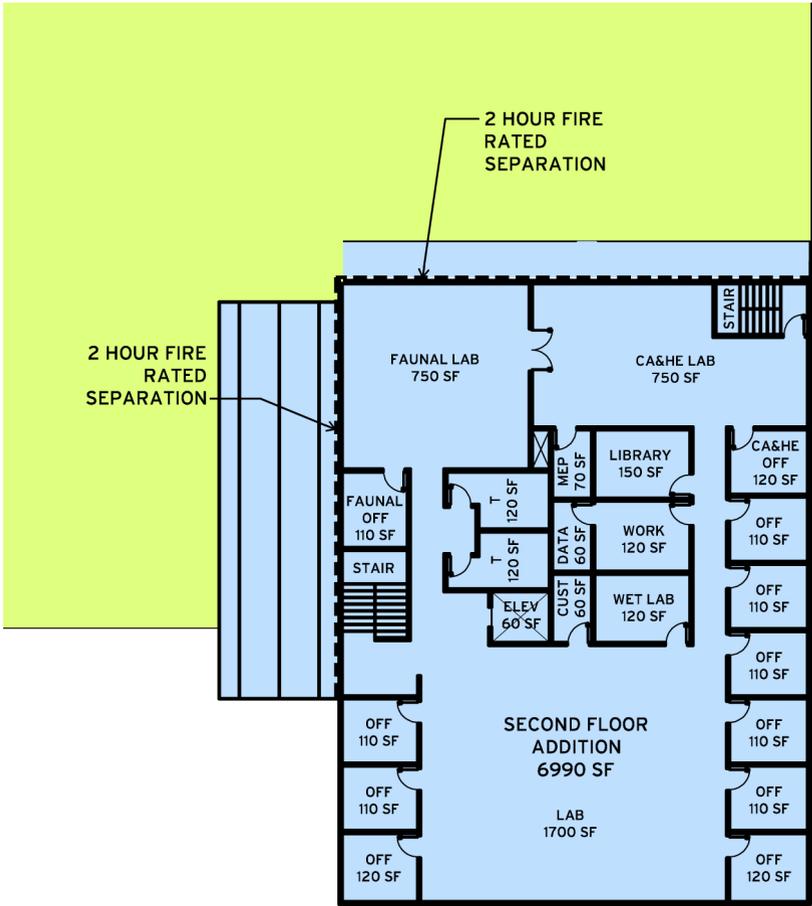
The Concept Design is illustrated and described on the following pages as follows:

- Ground Floor Plan
- Second Floor Plan
- Exterior Design Concept - Option 1
- Exterior Design Concept - Option 2
- Building and Site Systems Descriptions

- Exhibit Staging area at edge of Galleria and public view.
- Paleontology Lab at edge of Galleria and public view.

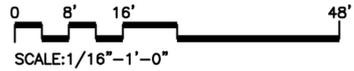
Shared workshop area. The proposed Phase 3 Project Budget is summarized in the Section immediately following.





## SECOND FLOOR

### Improved Program Conceptual Design





*Exterior Concept Option 1 - View from Northeast along East Campus Axis*



*Exterior Concept Option 1 - View from Southwest over the East Campus Green*



*Exterior Concept Option 1 - View from the Southwest from the East Campus Green*



*Exterior Concept Option 1 - View from the Southeast along the East Campus Axis*



*Exterior Concept Option 2 - View from Northeast along East Campus Axis*



*Exterior Concept Option 2 - View from Southwest over the East Campus Green*



*Exterior Concept Option 2 - View from the Southwest from the East Campus Green*



*Exterior Concept Option 2 - View from the Southeast along the East Campus Axis*

## Building and Site Systems Review

The following is the result of a review / discussion meeting held at the University of Oregon Museum of Natural and Cultural History on May 4, 2011. The concept for the potential expansion to the facility was presented, along with a review of the site constraints, for initial consideration by the specialty consultants in attendance.

### Landscape / Site Design

The potential expansion of the Museum of Natural and Cultural History (MNCH) will extend south from the existing building towards the East Campus Green. The East Campus Green is a designated open space whose north edge is defined by the south face of the Law School's north-building bar. This is as far south as the MNCH expansion can occur. The East Campus Green is being developed as a part of East Campus Residence Hall (ECRH) housing project, and the proposed east/west walk along the green will need to be relocated to allow for the Museum expansion to the south.

The existing topography and planned improvements for the ECRH elevate the grades at the southeast corner of the proposed museum addition to approximately 5.5 ft. above the museum's finish floor elevation. This grade change creates both challenges and opportunities for building access and site design. Site work along the north edge of the East Campus Green will be studied closely to create an attractive entry that relates to the existing elevations and site context. Allowance for both electrical and data at-grade vaults will need to be a part of this study.

The 60 ft. wide East Campus Axis, another designated open space, runs north/south between ECRH and MNCH. The axis serves as both a major pedestrian corridor and fire lane. This area is also being developed as a part of the ECRH project. A mid-point vehicle service access (with limited use) will be located along the East Campus Axis to serve the Museum. This new delivery area eliminates the existing surface parking at the southeast corner of MNCH. An at-grade walk is proposed along the existing east face of the Museum building to connect to East 15th Avenue. Modifications to the proposed landscape development along the East Campus Axis will be required in order to integrate the Museum expansion to its surroundings.

### Site Utilities

#### Stormwater

The stormwater destination for the Phase 3 expansion will be via existing storm system constructed with the Phase 1 project. A 12-inch diameter storm sewer exists south of the existing building that has sufficient capacity to serve the expansion. In addition, there is an existing stormwater treatment manhole south of the Phase 3 building that meets the City of Eugene's stormwater treatment requirements. This treatment manhole was sufficiently sized to accommodate the additional impervious areas in the Phase 3 project.

Stormwater source controls maybe triggered with this project. It appears the Phase 3 building will displace the trash enclosure

area. New trash enclosures require a roof cover and a sanitary drain.

#### Water and Fire

Currently, the Museum of Natural and Cultural History is served by a 3-inch domestic water lateral with a 2-inch meter from a 16-inch diameter public main in East 15<sup>th</sup> Avenue. With the Phase 1 project, a 2-inch diameter water supply stub was extended just south of the Phase 1 building. It is anticipated this stub will be utilized to serve Phase 3.

A 4-inch diameter fire line was extended across East 15<sup>th</sup> Avenue to serve the Phase 1 building. It is anticipated this existing fire line can accommodate Phase 3.

#### Sanitary Sewer

Sanitary sewer service to the building is via a 6-inch diameter lateral connected to the public main in East 15<sup>th</sup> Avenue. This lateral was extended through the Phase 1 portion of the building and stubbed out to the south to serve future phases. It is anticipated this 6-inch diameter stub will have sufficient capacity to serve Phase 3.

City of Eugene's stormwater standards require trash enclosures to drain to sanitary sewer. It is anticipated the building sewer will need to be extended to the relocated trash enclosure.

#### Electrical/Telecommunications

There is significant electrical and telecommunications infrastructure that will be displaced with the Phase 3 construction. The relocation of large vaults and conduit mains should be anticipated and coordinated with UO personnel.

### Mechanical Systems

The potential expansion would include a total of approximately 16,000 square feet, and connect to the existing building on the southeast side. The expansion would be two stories in height. Receiving and handling of materials would be housed on the first floor. The second floor would house primarily research space and ancillary areas. Two single occupant toilet rooms are expected on each floor. An elevator is anticipated.

The new space is expected to require standard heating, ventilation, and air conditioning. Neither tight temperature control, nor special humidification / dehumidification requirements are anticipated for the spaces in general, or special requirements for cascading room pressurization schemes. A small bio-vault is expected which will have specific temperature, humidity, and ventilation requirements.

Discussed / Identified Mechanical System Impacts & Expectations:

#### General

The expected size of this project exceeds 10,000 square feet, hence it will need to meet the requirements associated with Class I SEED. Predicted energy use for the facility will need to be

better than the current Oregon Energy Efficiency Specialty Code by a minimum of 20%. This will influence requirements for the building for the architectural (insulation, windows), mechanical (equipment efficiencies, controls), and electrical (lighting) systems, and will necessitate provision of energy modeling and SEED compliance services.

#### HVAC & Exhaust

- The existing air cooled chiller, currently located on the east side of the building, will need to be relocated to the roof of the new addition. With this addition, space at grade level for this type of equipment will be eliminated.
- It is anticipated that the cooling load for the new building will be at most 50 tons. Anticipate 5 to 6 roof mounted packaged HVAC units on the upper roof. Assume gas-fired electric air cooled as the baseline unit, with likely upgrade to high efficiency electric heat pumps, with VAV operational capability and electric terminal reheat coils, for SEED energy savings.
- Bringing Campus chilled water to the new facility was briefly considered, but seemed to be cost prohibitive.
- HVAC for the extended Galleria is expected to be similar to the previously provided system.
- Assume that there will be several general roof mounted exhaust fans. Expect one exhaust fan for the new toilet rooms. Expect two more for general purpose dust control hoods. Research laboratory fume hoods are not anticipated.
- It is anticipated that the bio-vault will be served by separate equipment similar to a constant temperature room, capable of specific control in accordance with the needs associated with the specific material stored there at any given time.
- The Siemens DDC system would be extended to control the mechanical systems for this new facility.

#### Plumbing

- In addition to toilets and lavatories associated with the new toilet rooms, also anticipate various sinks needed throughout the facility, and a drinking fountain. Assume use of water efficient fixtures.
- Cold water to be supplied from the two inch service stubbed into the general area for this expansion from the last facility expansion.
- Anticipate a small electric tank type (30 gallons) water heater to serve the hot water needs for these new fixtures, with a recirculation loop for temperature maintenance.
- Connect to the six inch sanitary main stubbed into the general area for this expansion from the last facility expansion.
- Assume scupper drainage and exterior downspouts to serve this new flat roof.
- Gas service for the new HVAC equipment, if needed, will be extended from the existing service currently located at the north side of the building. The existing gas meter may need to be upgraded. There is also a stubbed gas line in the general area for this expansion which will need to be removed further south to clear the footprint of the new building.

#### Fire Sprinkler

Based on the two hour separation expected between this new wing and the rest of the building (essentially treating it as a separate building), it is anticipated that this will need to be treated as a separate fire sprinkler zone. It is then anticipated that a separate supply will need to be routed from the existing fire sprinkler service riser, upstream of the current zone flow monitor, or provide a new vault / service from the northeast corner of the site.

#### Other

It is anticipated that compressed air will be desired for the research areas on the second floor. Provide a small air compressor, air distribution piping, regulators, and hoses for use by research staff. It was suggested that a machine room-less elevator be considered to reduce the cooling load and increase overall building efficiency.

#### Electrical Systems

##### Electrical Service

The existing oil filled transformer and main distribution switchboard are not adequately sized to accommodate the expansion. Based upon the size of the addition and the existing load it is anticipated the new service will be 2,000 amps at 208 volts. A new 750 kva transformer will be located on the east side of the site. The 2,000 amp switchboard will be located in the addition and will feed the existing switchboard. An existing medium voltage vault will need to be re-located to the south of the building and the existing feeders re-routed.

##### Emergency and Standby Power

Egress lighting in the existing building is fed from an emergency lighting inverter. The load on the inverter is at its maximum capacity. The inverter will be removed with the new and existing egress lights to be fed from the new emergency distribution system.

The campus standby system can be extended from the East Campus Residence Hall to the Museum. This will require a new medium voltage feeder routed from the utility tunnel underneath Moss Street and extended through the basement of the Residence Hall. The existing oil filled transformer will be relocated and will serve the standby system. A new sub-distribution switchboard and automatic transfer switch will be required.

##### Communications

An existing communications vault is located on the site of the expansion. The vault will need to be relocated to the south end of the site. New conduit banks will need to be installed and existing conduits extended to allow for extension of existing phone and fiber cables. The existing conduits are approximately 8' below grade. A smaller vault will also need to be relocated. This work will need to be completed prior to the start of construction to allow for continued communication service to the Museum and other buildings fed from the vault.

# Phase 3 Project Budget

The Concept Plan Project Budget has been based on the costs of previous work at the Museum and more recent projects of similar size and construction. A Direct Construction Estimate is provided and it is anticipated that additional project costs would be on the order of 40% of the value of the Direct Construction, as follows. Pro-rated comparative budgets for the Original Program and the Optimal Program are also noted.

## Phase 3 Project Budget

### Construction Costs

Demolition/Sitework/Utilities Relocate	\$ 250,000
Replacement of Displaced Parking	-0-
New Construction, 15,582 sf	<u>3,895,500</u>

**Subtotal**      **\$ 4,145,500**

Contractor General Conditions, Overhead & Profit @ 15%	622,000
Design/Estimating Contingency @5%	238,375
BOLI and Bond	52,175
Inflation Contingency	<u>?</u>

**Subtotal**      **\$ 912,550**

UO Direct Construction Costs	<u>128,685</u>
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**Subtotal**      **\$ 128,685**

**Subtotal Direct Construction Estimate**      **\$ 5,186,735**

### Other Items

Project Cost (Administration, Fees, Expenses) @ ~37%	\$ 1,925,265
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**Subtotal Other Costs**      **\$ 1,925,265**

**Recommended Phase 3 Project Budget**      **\$ 7,112,000**

Original Program @ 8,500 sf	\$ 4,250,000
Optimal Program @ 19,000 sf	\$ 8,945,000



# Appendix

## **Phase 3 Reassessment User Group Meeting Notes**

### **East Campus Open-space Framework Plan and Design Area Special Conditions.**

# MNCH Phase 3 Reassessment Study

Project User Group/Steering Committee/Neighbors Meeting

February 23, 2011

## Project Overview/Kick-Off

3:00 – 5:00 pm

### 1. Welcome and Introductions

- a. Review Meeting Agenda

### 2. Study Goal and Objectives

- a. Re-Assess Conceptual Plan for Museum Research Expansion

### 3. Background Presentation

- a. 2007 MNCH Expansion Study – Curation and Research
  - i. Phase 1 – Curation and Collection Storage
  - ii. Phase 2 – Research Consolidation
  - iii. Site Access and Parking
- b. Phase 1 Implementation
  - i. CPC Approval January 2008 (showed future expansion)
  - ii. Curation and Collection Storage Construction
  - iii. Development of Galleria (Grand Hall)
  - iv. Phase 2 became interior modifications to prepare for New Exhibit Hall
  - v. Phase 3 designated as Research Expansion
- c. Current Context
  - i. East Campus Open Space Framework
    1. East Campus Green
    2. East Campus Axis
- d. Current Program Needs and Analysis
  - i. Museum Needs – *exhibit production, restrooms*
  - ii. Research Needs – *Archeology, John Day, Coastal, Forensics, Faunal*
  - iii. Collection Needs – *Condon Collection*
  - iv. Preliminary Analysis = 17,700 sf of space needs
- e. Opportunities/Constraints
  - i. Available Area
  - ii. Site challenges/constraints
  - iii. Existing building challenges/constraints
  - iv. Utility services strategies for East Campus

### 4. Open Discussion

- a. Issues and Concerns
- b. Opportunities

### 5. What's next?

- a. Schedule of Meetings



**Museum of Natural and Cultural History  
Research Expansion Project  
University of Oregon  
February 23, 2011, 3-5 p.m.**

**User Group Conceptual Design Meeting 1 Notes:**

**1. Present:**

Martina Bill, Campus Planning  
George Bleekman, UO Facilities  
Jon Erlandson, Director of Museum of Natural and Cultural History  
Tom Connolly, Director of Research Division  
Edward Davis, Museum of Natural and Cultural History, Condon Collection Manager  
Gordon Bettles, Many Nations Longhouse Steward  
Carl Sherwood, Architect  
John Bramwell, Architect

**2. Review Previous Meeting Notes:**

- a. No comments.

**3. Discussion:**

- a. Martina provided a re-cap of the project goals and objectives as a reassessment of the Conceptual Study (2007). These included a brief discussion of the newly established East Campus Green located between the MNCH, the Longhouse and the Law School. She also indicated the establishment of the East Campus Axis between the MNCH and the new residence hall to the east. The East Campus Axis is intended to provide pedestrian access from 15<sup>th</sup> Avenue to the east campus area, as well as service and fire truck access to the MNCH and the new residence hall.
- b. Carl provided a re-cap of the 2007 MNCH Expansion Study. This included a discussion of the curation and collections expansion project and the subsequent exhibit expansion project. In addition, the main site constraints were illustrated. This included the re-alignment of the sidewalk to the south of the MNCH. The intention is to move the sidewalk to the south to allow the new MNCH research expansion project to align with the south edge of the north wing of the Law School. The East Campus Open-Space Framework plan amended the East Campus Green north boundary to reflect this future expansion.

Service access to the new research wing of the MNCH will be from a 26 foot wide fire lane between the new residence hall and the MNCH. Of major concern regarding this access is the fact that there is a significant grade change between the service drive and the finish floor elevation of the MNCH, on the order of 4-6 feet.

- c. Carl discussed the program needs from the 2007 study and current intentions. The 2007 study indicated 5-6 thousand additional square feet of collections/curation space and another 7-8 thousand square feet of research space. During preliminary programming for the research addition, museum staff expressed a desire to consolidate as much of their entire program needs into the new addition. This would result in an addition of approximately 18,000 square feet. This could be accommodated in a 1,500-2,000 square foot single story expansion of the Galleria and a 16,000 square foot, two story, research addition.
- d. The new addition would contain research lab space, artifact storage, field vehicle access for drop off and pick up, offices, workshop, restrooms, public education space, and circulation, electrical and mechanical spaces.
- e. The design should accommodate the Condon Collection, but needs be flexible enough that due to funding constraints the space be utilized, temporarily, for other uses.

- f. The eventual construction project will be funded through federal funds and bonds from the UO.
- g. Jon reported that an agreement was made that would allow the museum to recover the cost of any differences between the originally proposed expansion and the new concept that are directly related to conditions imposed by changes in the immediate surroundings.
- h. Artifact storage space would be best accommodated on the ground floor.
- i. There will probably be a need for a fire separation wall between the existing museum and the new research addition.
- j. There is a desire to provide a 'friendly face' to the East Campus Green.
- k. A single 'dirty' lab (cleaning and prep) could be shared by multiple disciplines, if located near the service access.
- l. Public viewing windows into the paleo and/or exhibit prep lab space could provide an informal educational setting. This could be supplemented with video monitors. Exhibit staging and prep could also be similarly located.
- m. Matching the finish floor elevation of the existing museum would provide the most efficient use of space in the new addition rather than a split level layout.
- n. Field vehicle access. The MNCH currently has four field vehicles. It would be desirable to accommodate at least two of these inside the new addition. Vehicle access tends to be seasonal, with heavier use during the summer months. Paleo lab would access the garage 3-4 times a year. This space could be used for vehicle storage or just loading and unloading. Additional nearby parking spaces could be secured for additional vehicles. In a split level design a material hoist may be required.
- o. Need to identify dumpster locations.
- p. A coffee bar with interactive lounge space in Galleria expansion may be desirable.

**4. Action Items:**

- a. RSA will email preliminary project program to user group for review.
- b. Vehicle access to the east side of the proposed addition will be studied.

**5. Next Meeting:**

- a. Program review meeting, February 25, 2011, 10:00 a.m. at the MNCH.

# MNCH Phase 3 Reassessment Study

Project User Group Meeting

March 18, 2011

1:00 – 3:00 pm

1. **Program Review**
  - a. Addition of Grand Collection
  - b. Addition of Bio-Vault
2. **Building Code Analysis**
  - a. Area Review
  - b. Fire Separation
3. **Vehicle Access Study and Sketch-Up Images**
  - a. Access Scheme A
  - b. Access Scheme B
  - c. Access Scheme C
4. **Building Program/Floor Plan Options**
  - a. Option 1
  - b. Option 2
  - c. Option 3
  - d. Option 4
5. **Open Discussion**
  - a. Issues and Concerns
  - b. Directions
  - c. Opportunities
6. **What's next?**
  - a. Next Meeting



**Museum of Natural and Cultural History  
Research Expansion Project  
University of Oregon  
March 18, 2011, 1-3 p.m.**

**Conceptual Design User Group Meeting 2 Notes:**

**1. Present:**

Jon Erlandson, Director of Museum of Natural and Cultural History  
Tom Connolly, Director of Research Division  
Edward Davis, Museum of Natural and Cultural History, Condon Collection Manager  
Patricia Krier, Director of Development  
Martina Bill, Campus Planning  
Carl Sherwood, Architect  
John Bramwell, Architect

**2. Review Previous Meeting Notes:**

- a. No comments.

**3. Discussion:**

- a. It was confirmed that an 800 s.f. bio-vault would be added to the program. This vault would include specimens currently housed in the small vault at the east end of the old collections vault.
- b. Vault space may be required for the Grand Collection from Condon Hall. This collection is relatively small and would require about 200 s.f. to accommodate it. The collection may or may not be moved from its current location, but if it is moved, it could be combined with the bio-vault material.
- c. Individual offices for the Director and Curator of the Condon Collection were requested.
- d. A building code review revealed that a 2 hour fire separation wall would be required between the existing museum and the new research addition. This addition can be a maximum of 2 stories.
- e. Research addition vehicle access:
  - i. Scheme A would establish a driveway from the fire/service lane between the new residence hall and the museum at the same level as the fire/service lane, 448'. This scheme assumes that approximately 1/3 of the ground floor of the building area would be at 448'; the remainder would be placed at 444' to match the floor level of the rest of the museum.
  - ii. Scheme B would utilize a fairly steeply sloped (6% initial grade transitioning to a 15% grade) drive from the fire/service drive at approximately 447.5' to a finished floor level of 444'. A trench drain would be needed somewhere inside the garage to drain any rain water that may find its way inside. This scheme may or may not have a garage door.
  - iii. Scheme C would bring a second drive parallel to the fire/service lane at a slope of less than 1:20. This drive would be dedicated for museum use. Planter areas would be sloped from the 448' grade to the 444' elevation.
- f. Scheme B was considered the least desirable.
- g. Jon suggested a drive or wide sidewalk for hand trucks 'at grade' immediately along the east edge of the museum.
- h. Garbage collection is provided by the UO.

- i. Three options for internal organization were reviewed.
  - i. Option 1, using Scheme A access, the first floor included cleaning, processing and tool storage at the 448' level. The Condon Collection and workshop would be housed at the 444' level. A lift would be provided to move material vertically in addition to a passenger elevator near the south side of the addition. The second floor would cluster the archeological and John Day research labs on the east side of the building with forensics, faunal, coastal archeology and human ecology to the west. A hearth/ meeting area would also be accommodated.
  - ii. Option 2, using Scheme B access, at the first floor places the Condon Collection and the workshop along the east side of the building with cleaning, processing, tool storage, etc. along the edge of the Galleria extension. The second floor locates the archeological and John Day labs along the west edge and the forensics, faunal, coastal archeological and human ecology labs along the east edge.
  - iii. Option 3, using Scheme C access, at the first floor places the Condon Collection and tool storage along the east side of the building. Cleaning, processing and holding are along the Galleria edge with 'pods' for the Paleo Lab and the workshop. The second floor utilizes 'pods' for the forensics, faunal, coastal archeology and human ecology labs. Archeological and John Day labs are along the east side of the building.
- j. A central location for the workshop was preferred.
- k. Several suggestions were made to reduce the scope of the project, including; off site screen storage, eliminating the garage all together and provide a loading/unloading area only. Initially, the space allocated for the Condon Collection could be unfinished and used as storage. When resources become available the space could be finished and the collection moved in.
- l. Having access to vehicles on site, or very near by, was considered important.
- m. Initial cleaning and processing of material could occur in the loading area.
- n. Three approaches to the overall program were identified. The original phase 3 program as established in the 2007 Conceptual Master Plan. A program with an increased scope for lab space, but no storage of field equipment or vehicles. A third program with increased lab space, field equipment storage and vehicle storage will be explored.

**4. Action Items:**

- a. RSA will update the project program.
- b. RSA will develop additional conceptual floor plans.

**5. Next Meeting:**

- a. To be announced.

# **MNCH Phase 3 Reassessment Study**

Project User Group Meeting

April 7, 2011

3:00 – 5:00 pm

1. **Program Review**
  - a. Original Program
  - b. Reduced Program
  - c. Preferred Program
  
2. **Floor Plan Studies and Sketch-Up Images**
  - a. Original Program
  - b. Reduced Program
  - c. Preferred Program
  
3. **Building Phasing/Expansion**
  - a. Fixed Elements: Elevator, Stairs
  - b. Move most ground floor elements to second floor.
  - c. Bio-Vault Addition
  
4. **Open Discussion**
  - a. Issues and Concerns
  - b. Directions
  - c. Opportunities
  
5. **What's next?**
  - a. Next Meeting



**Museum of Natural and Cultural History  
Research Expansion Project  
University of Oregon  
April 7, 2011, 3-5 p.m.**

**Conceptual Design User Group Meeting 3 Notes:**

**1. Present:**

Jon Erlandson, Director of Museum of Natural and Cultural History  
Edward Davis, Museum of Natural and Cultural History, Condon Collection Manager  
Greg Retallack, Professor, Geological Sciences  
Patricia Krier, Director of Development  
Martina Bill, Campus Planning  
Carl Sherwood, Architect  
John Bramwell, Architect

**2. Review Previous Meeting Notes:**

- a. No comments.

**3. Discussion:**

- a. Carl provided an overview of three program options:
  - i. Original Program: Contains basic programmatic elements of the expansion proposed in the 2007 Conceptual Study including; a new workshop, Archaeological Research Lab, John Day Research Lab, private offices, wet lab, processing area, material holding area, resource library, lunch/meeting room, the Forensics Lab and associated general building support. The program deviates from the 2007 study by adding an extension of the existing Galleria, additional stairs and an elevator. Due to the construction of the East Campus Residence Hall and other site constraints a multi-story addition will be required. The gross square footage is estimated at 8,500 sf.
  - ii. Reduced Program: The Reduced Program contains all of the elements included in the Original Program plus the addition of an exhibit staging area, the Coastal Archeological and Human Ecology research labs, the Condon Collection, Paleo labs and the Faunal Lab. The gross square footage is estimated at 15,000 sf.
  - iii. Preferred Program: Including all elements of the Original Program and the Reduced Program plus the addition of a vehicle garage, tool storage, screen storage and the addition of a biological vault. The gross square footage is estimated at 19,000 sf.
- b. After reviewing conceptual floor plans of all three programs, the following comments were noted:
  - i. All three plans could be made more efficient by eliminating some of the Commons areas.
  - ii. A location for a dumpster will need to be accounted for.
  - iii. A two hour fire separation wall will be required between the existing museum and the research addition.
  - iv. RSA will research whether the NE exit from the new addition will need to be designed for accessibility.
  - v. Greg felt that a truck bed height loading platform would be helpful.
  - vi. Using the total project budget of \$2.6M for the Curation Expansion Project, it was estimated that that project cost approximately \$400/sf. Using that as a basis for

estimating, the Original Program was estimated at \$3.4M, the Reduced Program at \$6.0M and the Preferred Program at \$7.6M.

- vii. Carl commented that it is more cost effective to pull a discrete piece of the program, for instance, the bio-vault, and plan to build it as a separate future addition than it is to shell in unfinished space.
- viii. Edward indicated that additional geological storage space may be required.
- ix. Martina asked whether specific programmatic elements had been identified for the Galleria extension. They included a coffee bar, additional photography display space and possibly interactive kiosks for the paleo lab. She indicated that a feasibility study would be required to determine the viability of a coffee bar.
- x. Service access was discussed. Martina indicated that Campus Planning would not look favorably on the "dedicated service drive" scheme. It was generally agreed that the "steep drive" scheme was less than optimal due to the potential for rain water entering the building. The "level drive" scheme would require a portion of the building to be 3-4 feet higher than the floor level of the existing museum.
- xi. Jon was hoping to hear a final decision on the availability of federal funding in the next week or so.

#### **4. Action Items:**

- a. RSA will develop a split level conceptual floor plan for the Reduced Program.
- b. RSA will consult mechanical, electrical, plumbing and civil engineers for input pertaining to their particular disciplines.

#### **5. Next Meeting:**

- a. To be announced.

# MNCH Phase 3 Reassessment Study

Facilities/Systems Review Meeting

May 4, 2011

3:00 – 5:00 pm

## 1. Program Review

- a. Update from Curation Expansion Project
- b. East Campus Residence Hall Project
- c. Building Code Analysis
- d. Program Scenarios

## 2. Structural

- a. Construction Type, Assuming Type VB
- b. Two Story Design
- c. Fire Separation
- d. Connection(s) to Existing Structure
- e. Potential Structural System(s)

## 3. Civil (Utility Relocation)

- a. Underground Electrical Feed(s)
- b. Electrical Transformer Relocation
- c. Underground Data/Communications
- d. Data/Communications Vault Relocation
- e. Sanitary Sewer Stub-Out
- f. Storm Sewer Connections
- g. Fire Sprinkler Backflow Preventer Vault
- h. Sidewalk Relocation

## 4. Landscape

- a. Grading Issues Relative to the Fire/Service Drive for ECRH
- b. Phase 3 Building Access/Egress/Loading
- c. Sidewalk Relocation, Impact on ECRH Plaza

## 5. Mechanical

- a. HVAC Equipment Relocation at Existing Service Drive
- b. Integration of New HVAC with Existing
- c. Bio-Vault HVAC Requirements
- d. Potential Use of Fume Hoods

## 6. Electrical

- a. Electrical Transformer Relocation
- b. Potential Electrical Service Upgrade



**Museum of Natural and Cultural History  
Research Expansion Project  
University of Oregon  
May 4, 2011, 3-5 p.m.**

**Facilities/Systems Meeting Notes:**

**1. Present:**

George Bleekman, UO Facilities  
Dell \_\_\_\_\_, UO Facilities  
Quentin Hartman, Information Services  
Mark Penrod, Balzhiser & Hubbard Engineers, Mechanical  
Dale Stadler, Balzhiser & Hubbard Engineers, Electrical  
Vikki Boucier, Hohbach Lewin, Inc., Structural  
Larry Gilbert, Cameron McCarthy, Landscape  
Aaron Olsen, Cameron McCarthy, Landscape  
Lane Branch, Branch Engineering, Civil  
Carl Sherwood, Architect  
John Bramwell, Architect

**2. Program Review:**

- a. Carl provided an update/overview of the Curation Expansion Project (Phase 1) and the Exhibit Expansion Project (Phase 2).
- b. A brief description of the East Campus Residence Hall Project (ECRH) followed, including discussion of the East Campus Axis (ECA) and its impact on the Research Addition Project (Phase 3) at the museum. The ECA consists 60 foot wide pedestrian way between the ECRH, currently under construction, and the museum. Construction is not permitted within the ECA. As a consequence, the Research Addition to the museum will need to be constructed between the curation vaults and the East Campus Green (ECG) to the south. The existing sidewalk between the museum and the ECG will be relocated to the south to align with the south edge of the north wing of the Law School.
- c. The current building code analysis for the building assumes B and S1 occupancies and Type VB construction. A 2 hour fire separation will be constructed between the existing museum and the new research addition.
- d. Program diagrams were reviewed for the Original Program at 7,400 square feet, the Improved Program at 14,380 square feet and the Optimal Program at 17,900 square feet. Currently, it is assumed that the Improved Program will be developed.
- e. Three building access/loading schemes were reviewed. The first would match the grade of the ECA which would mean that a portion of the new addition would be at that level and require an elevator nearby to move material down to the new floor matching the existing museums finish floor and up to the second floor. The second scheme would incorporate a steep drive down from the ECA to a new finish floor matching the existing museum. This would require a trench drain inside the building to intercept any rain water traveling down the drive. This approach was not favored by the user group. The third scheme would construct a new service drive parallel to the ECA at a relatively low slope and terminate at the floor level of the existing museum.

**3. Structural:**

- a. Mark indicated that the existing chiller located by the service drive will be relocated to the roof of the new addition. It should be located on the roof to allow crane access if necessary. It may be enclosed in a small penthouse.
- b. Vikki felt that wood roof construction will be the most economical and could be designed to support concrete equipment pads if necessary.
- c. Dell felt that elevator access to the roof is critical. A small rooftop penthouse could serve as a lobby to the elevator.

#### 4. Civil & Utility Relocation:

- a. Lane indicated that floors of any new dumpster enclosures will need to be drained to the sanitary sewer.
- b. Lane felt that the existing 12 inch storm sewer line running diagonally across the ECG will be more than adequate to handle storm water run off. The existing treatment manhole in the ECG still meets City of Eugene storm water standards
- c. The 6 inch sanitary sewer stubbed to the south of the curation vault will be adequate. This pipe flows north to 15<sup>th</sup> Avenue.
- d. The existing electrical transformer and vault will need to be relocated. In addition, due to the increased electrical loads, an additional transformer will be required. The transformers could be mounted on pads near the SE corner of the addition or they could be installed in an underground vault, however, the issue of maintenance personnel having to service the transformers in a confined space was a concern.
- e. New electrical conduits will be encased in red dyed concrete.
- f. The data/comm pull box at the south end of the service drive will need to be relocated either in the re-aligned sidewalk or the ECG.
- g. The existing large (8'x8'x10') data/comm vault south of the curation vaults will need to be relocated to the south. Quentin indicated that the new vault would need to be installed first and brought on line prior to the demolition of the existing vault to maintain service. This vault will require a sump pump. The existing conduits feeding the vault are approximately 8' below grade.
- h. A dedicated telecom room will be required in the new addition.

#### 5. Landscape:

- a. There is a 3-5 foot difference in grade between the ECA and the proposed finish floor elevation of the new addition. Larry felt that sloping the grade from the ECA to the foundation of the new addition was preferable to a retaining wall.
- b. There may need to be an at grade accessible sidewalk from the NE corner of the new addition to the sidewalk at 15<sup>th</sup> Avenue.
- c. Access to the new electrical vault could be located in the landscaped area between the re-aligned sidewalk and the south side of the building or in the sidewalk itself.

#### 6. Mechanical:

- a. Air cooled packaged HVAC units will located on the roof. Mark estimated that the anticipated loads would be around 50 tons, resulting in 5-6 units.
- b. Since the addition will be a separate building in the eyes of the building code, it will require a separate fire sprinkler zone. It was not clear whether a new backflow preventer and vault would be necessary or if the existing equipment at the 15<sup>th</sup> Avenue entrance would be adequate.
- c. An elevator with no machine room would reduce the cooling load that would normally be dedicated to a machine room.
- d. The mechanical design should anticipate at least two non-chemical fume hoods.
- e. Due to the proposed size of the new addition, a SEED energy analysis will be necessary. Mark thought that consultant fees for this study would be in the \$25K-\$30K range.
- f. Low flow plumbing fixtures should be incorporated into the design.
- g. The HVAC system for the Galleria expansion would be similar to the system currently serving the existing Galleria.
- h. If included in the final design, the vehicle garage would have a garage door.
- i. Exterior shell insulation should be increased beyond code minimums.
- j. High efficiency HVAC equipment should be utilized.
- k. New mechanical systems will be incorporated into the existing buildings DDC system.
- l. If the bio-vault is included in the final design it will have its own dedicated HVAC system. Temperature and humidity control are not as critical as the curation vaults but chemical off gassing from the specimens is a concern,

#### 7. Electrical:

- a. A new 1,600 – 2,000 amp electrical service will be necessary.

- b. The existing CT can currently located on the SE corner of the original museum building will need to be relocated to a dedicated electrical room inside the new addition..

DRAFT

# **MNCH Phase 3 Reassessment Study**

Draft Final Report Review Meeting

June 9, 2011

10:30 a.m. – noon

## **1. Report Review**

- a. Background
- b. Conceptual Design Committee
- c. Process
- d. Goals
- e. Program Development
- f. Program Area Descriptions
- g. Design Considerations
- h. Phase 3 Program Scenarios  
Original, Improved, Optimal
- i. Campus Plan: Policies and Patterns
- j. Site Opportunities & Constraints
- k. Building Code Constraints
- l. Access Alternatives
- m. Conceptual Plan Alternatives  
Original, Improved, Optimal

## **2. Proposed Conceptual Design**

- a. Site/Connection to East Campus Green
- b. Entry/Connection to existing building
- c. First Floor Plan Organization
- d. Second Floor Plan Organization
- e. Building/Site Systems Review

## **3. Proposed Phase 3 Project Budget**

- a. Overall project costs
- b. Direct construction costs



**Museum of Natural and Cultural History  
Research Expansion Project  
University of Oregon  
June 9, 2011, 10:30 - Noon p.m.**

**Conceptual Design User Group Meeting 4 Notes:**

**1. Present:**

Edward Davis, Museum of Natural and Cultural History, Condon Collection Manager  
Tom Connolly, Director of Research Division  
Patricia Krier, Director of Development  
Pam Endzweig, Director of Collections Division  
Martina Bill, Campus Planning  
Carl Sherwood, Architect  
John Bramwell, Architect

**2. Review Previous Meeting Notes:**

- a. No comments.

**3. Discussion: Carl led a review of the Draft MNCH Phase 3 Reassessment Study Final Report**

- a. Background: Martina provided some edits of the content of this section, otherwise there were no proposed changes or discussion.
- b. Conceptual Design Committee: No proposed changes or discussion.
- c. Process: No proposed changes or discussion.
- d. Goals:
  - i. 1115 Moss Street should be included in the summary of the scope of the original study.
  - ii. The goal regarding the Workshop should be included as one of the original study goals.
  - iii. Goals 4, 5 and 6 should be in their own category.
  - iv. Goal 7 should be included under the research facilities goals.
- e. Program Development/Program Area Descriptions: Tom questioned the decision made at the last meeting regarding elimination of the vehicle garage from the *Improved Program*. He feels that this creates an untenable situation for the research staff regarding their ability to conveniently access their vehicles. The second paragraph on Page 7 addresses this issue. It was agreed that the topic should be resolved with further discussion with Jon Erlandson.
- f. Design Considerations: No proposed changes or discussion.
- g. Phase 3 Program Scenarios: No proposed changes or discussion, unless decision is made to modify the *Improved Program*.
- h. Campus Plan - Policies and Patterns: Reviewed the applicable policies and patterns, and changes to the east campus development areas. Patti commented that it appeared that future development in the area would eliminate most parking. It was noted that parking is critical to both the museum and the Long House. These concerns will be noted in the report.
- i. Site Opportunities and Constraints: No proposed changes or discussion.
- j. Building Code Constraints: No proposed changes or discussion.
- k. Access Alternatives: No proposed changes or discussion.
- l. Conceptual Plan Alternatives: Carl noted that only the *Improved Program* or the *Optimal Program* are recommended alternatives. He also noted that the *Improved Program* has the option of constructing the addition to the southern project limit in order to create a courtyard to the north. The group felt this was an alternative that should be included.

**4. Proposed Conceptual Design**

- a. Agreed to change the name of this section to Improved Program Conceptual Design
- b. Martina suggested moving the Building and Ste Systems Reviews to the pages after the plan diagrams, and to correct the names on the plan diagrams.
- c. Pam wondered about restroom access for the collections office area of the existing museum. Access to restrooms in the other areas of the museum are complicated by access controls.

- d. Reviewed SketchUp images of the proposed concept design and discussed range of alternatives.. (Martina later recommended that the report include a range of options and focus on capturing design goals and material alternatives for future consideration.)

**5. Proposed Phase 3 Project Budget**

- a. Carl reviewed the proposed project budget based on the *Improved Program* alternative (perhaps to be modified).
- b. Martina suggested the Project Cost include a markup of 40%

**6. Action Items:**

- a. It was agreed that the final draft should include resolution of the vehicle storage issue. This issue will be discussed with Jon Erlandson and if agreed Carl will make the final changes and provide Martina with a revised final draft for distribution.

**5. Next Meeting:**

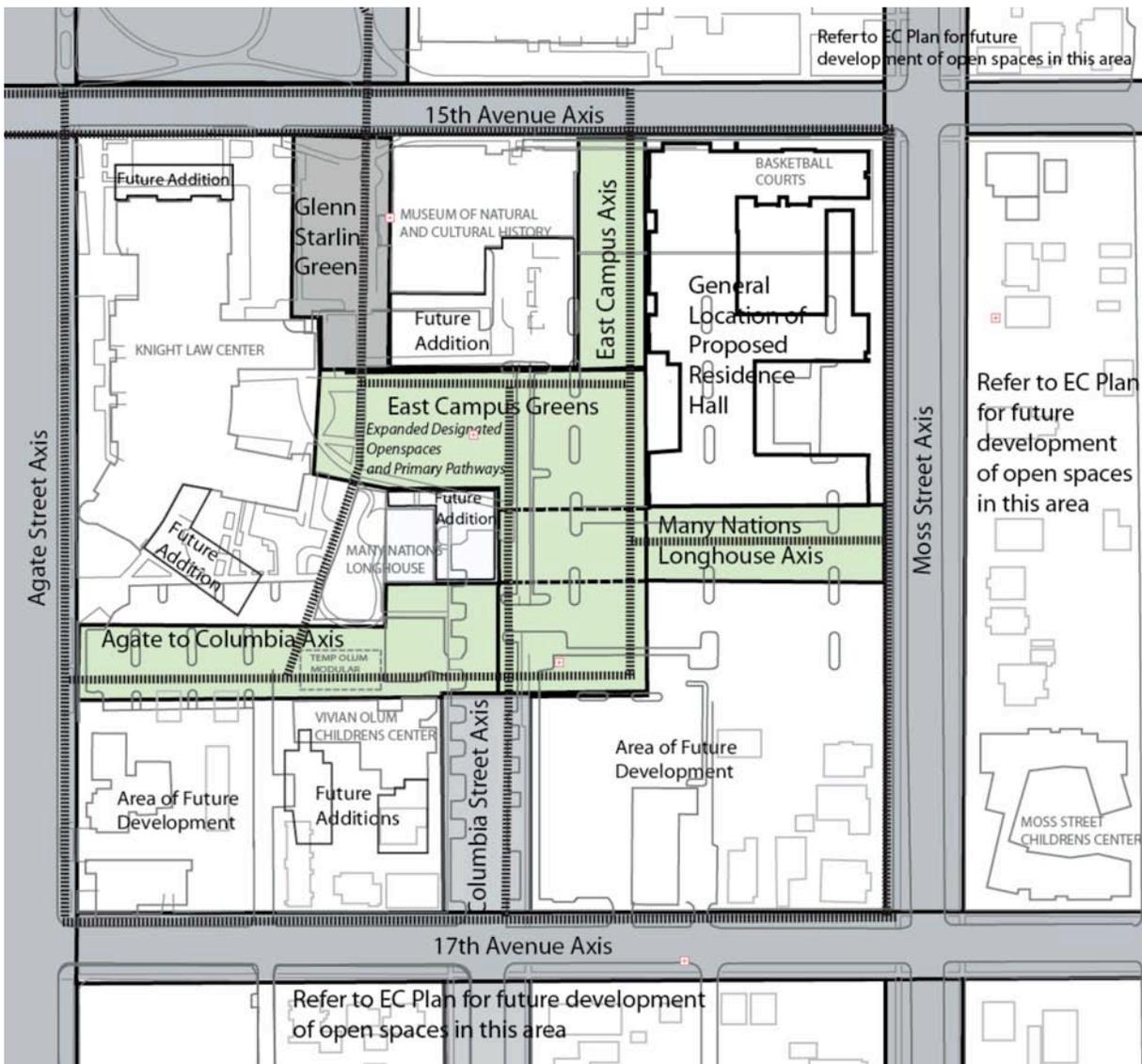
- a. To be announced, if required.

## *Campus Plan Amendments* East Campus Open-space Framework Expansion

Public Hearing, November 10, 2009  
Campus Planning Committee Review, February 4, 2010  
UO Administration Approval, March 12, 2010  
Conformance with the local acknowledged Comprehensive Plan, April 26, 2010

The East Campus Residence Hall project, located in the block bounded by 15th and 17th Avenues and Agate and Moss Streets, triggered the requirement to prepare and adopt an open-space framework plan for the affected area. This resulted in a series of amendments to the *Campus Plan* resulting in the following East Campus Open-space Framework:

### Policy 2: Open-Space Framework Map 2



## Policy 12: Design Area Special Conditions

### Area F: Athletics and Recreation (pp. 103-105)

*Note: The following text is written with the understanding that the proposed schematic design for the East Campus Residence Hall is constructed.*

#### **AGATE STREET AXIS: 15TH AVENUE TO 18TH AVENUE**

##### **Current Use**

Agate Street, classified as a minor arterial, is owned by the city and is used heavily by autos and bicycles. Many visitors enter the campus by turning onto Agate Street from Franklin Boulevard.

##### **Form**

It has a typical street configuration (two lanes of auto travel with sidewalks). Much of its form comes from its mature street trees. Buildings that front the street, such as the Knight Law Center and Agate Hall, partially form the east edge of this space.

##### **Pathways/Gateways**

The improvements at the intersection of this axis with 15th Avenue (entry pylons and Powell Plaza) form a gateway to the campus that lies both east and west of the intersection. It is an important pedestrian crossing to the East Campus area. The southern end of this axis is the point at which many encounter the university for the first time. As such, it is a gateway to those traveling from the south. In addition, this axis intersects with the 17th Avenue Axis and the mid-block Agate to Columbia Axis.

##### **Tress/Landscape**

The Agate Street Axis has the character of a typical tree-lined street. It is lined in a formal arrangement with large-canopy deciduous trees consisting mostly of American sweetgums, scarlet oaks, and American elms interspersed with other deciduous trees.

##### **Opportunities and Constraints**

Proposals in this area should preserve and strengthen the Agate Street Axis and acknowledge the importance of the intersection of 15th Avenue and Agate Street. Further enhancement of the axis through buildings and tree canopy is desirable to improve the appearance, to help connect East Campus to central campus, and to shade the street surface. Refer to the *2003 Development Policy for the East Campus Area* for additional information. An opportunity to mark the beginning of the campus with a gateway element exists at or near the intersection of the 18th and Agate. An opportunity exists to enhance the connection to and view into the Agate to Columbia Axis as well as enhance the Hayward Field main entrance. Opportunities to work with the city to enhance the pedestrian and bike crossing at the Agate Street intersection should be considered.

Connections to future east/west open spaces should be explored when the open-space framework is established for the area south of 17th Avenue. Refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework* for more details.

### Design Area Special Conditions for Area G: Student Residence Halls (pp. 106 -108)

#### **15TH AVENUE AXIS: AGATE STREET TO VILLARD STREET**

##### **Current Use**

This portion of the 15th Avenue Axis is a city street with two-way traffic, curbside parking, and sidewalks.

**Form**

It has the character of a typical tree-lined street and is partially defined by the East Campus Residence Hall and the Museum of Natural and Cultural History along the south edge.

**Pathways/Gateways**

This axis is an important link from the East Campus to the main campus. It intersects with a series of north/south pathways and open spaces including the Agate Street Axis, East Campus Axis, Moss Street Axis, and the pathways through the Humpy Lumpy Green and the Glenn Starlin Green.

**Trees/Landscape**

Large canopy deciduous trees line the north and south edges of the axis.

**Opportunities and Constraints**

Proposals in this area should preserve and strengthen the axis, which provides an important connection to the main campus and merits enhancement. Special attention should be given to preserving and enhancing connections with and views into intersecting pathways and axes. Future opportunities exist to create a campus gateway at Villard Street as a transition to surrounding neighborhood development.

Connections to future open spaces should be explored when the open-space framework is established for the area east of Moss Street. For more details refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework*.

**Design Area Special Conditions for Area H: East Campus (p. 110)****Area-wide Space-use Comments**

This area includes a mix of institutional structures and low-density student-housing units. It is within the boundaries established in the *2003 Development Policy for the East Campus Area* and the *Fairmount/UO Special Area Study* (1981, as amended). Development shall follow the policies and standards adopted in the development policy and the special-area refinement plan.

Designated Open Spaces in the East Campus area are described below. Requirements described in the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework* are designed to expand the open-space framework throughout East Campus.

The area south of Agate Hall is included in the *19th and Agate Special Area Study* (1988). Proposals for the area's redevelopment are to consider applicable policies articulated in that study and conform to development standards imposed by the City of Eugene.

**Campus Edge: Villard Street: Refer to 2003 Development Policy for the East Campus Area.**

**EAST CAMPUS GREEN****Current Use**

It is used for both passive and active outdoor recreation and events by its building neighbors. Its path system serves significant pedestrian connections to main campus. The eastern edge of the green serves as a fire lane for the East Campus Residence Hall.

**Form**

This green is a mix of hardscape and landscape with a change in topography rising to the east. It is partially defined by building edges.

**Pathways/Gateways**

A path system connects north/south and east/west. It is bisected by the Many Nations Longhouse Axis. Secondary building entrances face out onto the green.

**Trees/Landscape**

The open space contains a large open grassy area with a mix of evergreen and deciduous trees primarily along the north and south edges. The Dave Bowers Sequoia is a good example of its species. The Oregon White Oaks are relatively young but a nice grouping. An area of native grasses creates a bioswale east of the Many Nations Longhouse. While outside the open space boundaries, the Many Nations Longhouse green roof and surrounding natural vegetation also contribute to the open space.

**Opportunities and Constraints**

Preserve and enhance this green as the heart of East Campus and the path system that serves significant pedestrian connections to main campus and the rest of East Campus. Future development, such as the eventual southward expansion of the Museum of Natural and Cultural History and the Many Nations Longhouse expansion should further define the edges and enliven the green. Refer to the Memorandum of Understanding for the Museum of Natural and Cultural History Phase 3 Expansion and East Campus Residence Hall Project (November 9, 2009).

Relocation of the parking elements within this open space is essential to the formation of a pedestrian-oriented open space. Because the Many Nations Longhouse has a special relationship with Oregon's Nine Federally Recognized tribes and the elders of those nations, and because the Longhouse has special ceremonial functions, parking/drop off needs of the Many Nations Longhouse will be considered and addressed at all stages of the future development of the East campus region. However, the goal should be to do so while giving priority to pedestrians. The details of meeting the parking drop/off needs will be implemented in accordance with the Memorandum of Understanding between the University of Oregon and Oregon's Nine Federally Recognized Tribes at the time of the dedication of the Many Nations Longhouse in January 2005. (Memorandum is on file in the Longhouse, the President's Office and the University Archives.)

Preserve and enhance passive and active outdoor recreation within the green or adjacent to it. Provide open sunny spaces to allow for active recreation. Pay attention to the unique attributes of adjacent landscapes and uses (i.e., Many Nations Longhouse and Museum of Natural and Cultural History). An outdoor Many Nations Longhouse "Expression Place" will be established east of the longhouse in alignment with the Many Nations Longhouse Axis (refer to the Many Nations Longhouse Axis).

**EAST CAMPUS AXIS****Current Use**

Intended as a primary pedestrian access route to East Campus from the main campus and a view corridor to the East Campus Green, this axis also serves as access to the Museum of Natural and Cultural History's service zone and as a fire lane for the East Campus Residence Hall.

**Form**

Buildings define the edges.

**Pathways/Gateways**

A north/south pedestrian pathway serves as a primary entrance to the East Campus Green with a gateway demarking access to the green at the 15<sup>th</sup> Avenue intersection. Secondary building entrances face out onto the axis.

### **Trees/Landscape**

Landscape elements define the linear path.

### **Opportunities and Constraints**

Preserve and enhance the axis as a primary pedestrian access into the East Campus Green from 15th Avenue. It is recognized that the axis must still meet limited service needs for the Museum of Natural and Cultural History and serve as a fire lane; however, the goal should be to do so while giving priority to pedestrians. Refer to the Memorandum of Understanding for the Museum of Natural and Cultural History Phase 3 Expansion and East Campus Residence Hall Project (November 9, 2009).

An opportunity exists to enhance the view corridor from 15th Avenue. As redevelopment occurs on the Bean Hall site, consider extending the pedestrian access across 15th Avenue to create a stronger connection to main campus.

## **AGATE TO COLUMBIA AXIS**

### **Current Use**

This axis is used by pedestrians and is a view corridor to the East Campus Green. Portions of the axis currently serve as parking and provide service vehicle access.

### **Form**

It is defined by building edges, but currently functions as a parking lot.

### **Pathways/Gateways**

The east/west pathway connects the Agate Street Axis, the East Campus Green and the Columbia Street Axis.

### **Trees/Landscape**

The unique native landscaping associated with the Many Nations Longhouse helps define the northern edge of the axis.

### **Opportunities and Constraints**

Relocation of the non-service parking elements and the temporary Olum modular within this axis is essential to the formation of a green pedestrian access. It is recognized that service needs for adjacent buildings and special drop off/parking needs for the Vivian Olum Child Development Center and the Many Nations Longhouse still must be met. Because the Many Nations Longhouse has a special relationship with Oregon's Nine Federally Recognized tribes and the elders of those nations, and because the Longhouse has special ceremonial functions, parking/drop off needs of the Many Nations Longhouse will be considered and addressed at all stages of the future development of the East campus region.; However, the goal should be to do so while giving priority to pedestrians. Future development should further define the edges and enhance pedestrian routes and views. Pay attention to the unique attributes of adjacent landscapes and outdoor uses (i.e., Many Nations Longhouse and the Vivian Olum Child Development Center). Recognize that plans for a southern expansion of the Law Center do not yet have exact dimensions defined and may result in a request to adjust the open space boundary to the south of the law school. Such an amendment would be favorably considered if it meets the intent of the open space.

## **MANY NATIONS LONGHOUSE AXIS**

### **Current Use**

This axis is used by pedestrians and it is an eastern view corridor from the planned Many Nations Longhouse "Expression Place." Portions of the axis currently serve as parking.

### **Form**

The northern side is landscaped and defined by the East Campus Residence Hall.

### **Pathways/Gateways**

The east/west pathway connects the Agate to Columbia Axis and the East Campus Green.

### **Trees/Landscape**

Landscaping delineates the axis and act as a buffer for first-floor residents.

### **Opportunities and Constraints**

Relocation of the parking elements within this axis is essential to the formation of a green pedestrian access. Future development should further define the edges, enhance pedestrian routes, and consider solar access.

Pay attention to the unique attributes of landscapes and uses associated with the Many Nations Longhouse. An outdoor Many Nations Longhouse “Expression Place” will be established in alignment with the Axis. Preserve eastern views from the planned “Expression Place.” Accommodate places for art in the view corridor.

There is potential to connect to future development and pathway systems east of Moss. For more details refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework*.

## **GLENN STARLIN GREEN (also known as the Glenn Starlin Courtyard)**

### **Current Use**

This quiet green serves only pedestrians as a primary entrance to East Campus from the main campus. It also is an outdoor classroom associated with the Museum of Natural and Cultural History.

### **Form**

The Museum of Natural and Cultural History and clusters of native plantings and trees form the edges of the green. Large timber gateways mark the north and south entrances.

### **Pathways/Gateways**

A north/south pedestrian pathway runs along the eastern edge serving as a primary entrance to the East Campus Green from the 15th Avenue Axis and the Humpy Lumpy Green pathway. It also leads to the entrance of the Museum of Natural and Cultural History. A pathway circles the green with sunny seating areas and a display of native plants.

### **Trees/Landscape**

A variety of evergreen and deciduous trees and native plants create an outdoor classroom. The Western Larch is the only example of this species.

### **Opportunities and Constraints**

The Glenn Starlin Green can be enhanced to serve additional outdoor activities associated with the museum, preserve native plantings, and buffer adjacent service and parking areas. Every effort should be made to create a stronger public connection and enhance views from Humpy Lumpy and 15th Avenue into the East Campus Green. **Enhance the visual connection from the intersection at Agate Street and 15<sup>th</sup> Avenue to the Museum.**

## **COLUMBIA STREET AXIS: EAST CAMPUS GREEN TO 17TH AVENUE**

Note: Further work is required to describe the special conditions of this axis south of 17th Avenue. In addition, connections to other open spaces should be explored when the open-

space framework is expanded in this area. For more details refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework*.

#### **Current Use**

This axis is used moderately by pedestrians, bicyclists, and vehicles (access and parking) and is owned by the UO. It serves as the principle pedestrian access to the East Campus Green from the south.

#### **Form**

It has a typical street configuration (two lanes of auto travel with sidewalks). Trees in the green parking strips help define the form.

#### **Pathways/Gateways**

North/south pedestrian pathways exist along the street edge. The axis intersects with the 17th Avenue Axis and the Agate to Columbia Axis and the Many Nations Longhouse Axis.

#### **Trees/Landscape**

Double rows of deciduous trees with a generous sidewalk between them create a green buffer between people and cars. The Dolgo Crabapple trees are the only examples this species on campus.

#### **Opportunities and Constraints**

Opportunities exist to reduce traffic and speed to enhance pedestrian access and safety, particularly for children of the Vivian Olum Child Development Center as well as the children, elderly and handicapped that come to the UO Many Nations Longhouse. It is also important to recognize that the Many Nations Longhouse is located at the end of Columbia Avenue and should not become landlocked. Therefore, it is recognized that service needs for adjacent buildings and special drop off/parking needs for the Vivian Olum Child Development Center and the Many Nations Longhouse still must be met.

### **MOSS STREET AXIS: 15TH AVENUE TO 17TH AVENUE**

Note: Further work is required to describe the special conditions of this axis north of 15<sup>th</sup> Avenue and south of 17th Avenue. In addition, connections to other open spaces should be explored when the open-space framework is expanded in these areas. For more details refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework*.

#### **Current Use**

This axis is used moderately by pedestrians, bicyclists, and vehicles and is owned by the city.

#### **Form**

This axis has a typical street configuration (two lanes of auto travel with sidewalks), and some of the surrounding buildings have entrances facing this axis. Trees occupy the green parking strips. Speed bumps and narrowing of the road at the intersections help reinforce the slowing of traffic.

#### **Pathways/Gateways**

North/south pathways extend along the street edge and intersect the 15th Avenue Axis, a major pedestrian and bike connection to campus. In addition, the axis intersects the Many Nations Longhouse Axis and the 17th Avenue Axis.

#### **Trees/Landscape**

Broad green strips of grass with large canopy trees provide shade and a buffer between sidewalks and parking.

### **Opportunities and Constraints**

Opportunities exist to reduce traffic and speed and enhance pedestrian and bicycle access. Local traffic and parking, Arena special event traffic, and service vehicles could use it, but priority would be given to pedestrian and bike movement. Pay particular attention to creating a safe environment for children of the Moss Street Children's Center. It is desirable to better define the form and edges through buildings and trees. Use trees to shade the street surface. Future development should treat this axis as a transition area between larger-scale development and smaller-scale development. Research options for the UO to purchase this street between 15th and 17th Avenues to further enhance these opportunities.

### **17TH AVENUE AXIS: AGATE STREET TO MOSS STREET**

Note: Further work is required to describe the special conditions of this axis east of Moss Street. In addition, connections to other open spaces should be explored when the open-space framework is expanded in this area.

For more details refer to the *2003 Development Policy for the East Campus Area* and the *East Campus Open Space Framework*.

#### **Current Use**

This city-owned street is used moderately by pedestrians, bicyclists, and vehicles.

#### **Form**

It has a typical street configuration (two lanes of auto travel with sidewalks). A row of mature street trees occupies the green parking strips.

#### **Pathways/Gateways**

This axis's east / west pedestrian pathways intersect with, Moss Street Axis, Columbia Street Axis, and Agate Street Axis.

#### **Trees/Landscape**

The 17th Avenue Axis has the character of a typical tree-lined street. The large deciduous trees consist mainly of American Elms and European White Birch.

### **Opportunities and Constraints**

Development in this area should preserve and enhance connections to the East Campus Green and to the main campus. Building edges and front doors facing 17th Avenue can strengthen the form. Additional trees can shade the street surface and further define the form. Opportunities to work with the city to enhance the pedestrian and bike crossing at the Agate Street intersection should be considered. The opportunity exists to encourage the use of 17<sup>th</sup> Avenue for automobile entrances and exits to and from the area.

**AGATE HALL GREEN – Complete at a future date.**

FLOOR AREA RATIO CALCULATOR

			Area 28	Area 29
Original Museum Area		12,400 sf		
Curation Addition Area		7,495 sf		
Total Existing Museum Area		19,895 sf	15,916	3,979
Research Addition Area	Ground Floor - Improved Program	8,592 sf	3,437	5,155
	Second Floor - Improved Program	6,990	2,796	4,194
Exhibit Addition Area	(future)	3,624 sf	3,624	0
Museum Area, (all floors)		39,101 sf	25,773	13,328
Coverage Area (footprint)	(Total Area minus Research Addition 2nd Fl.)	32,111 sf	22,977	9,134
Lot Area (sub area 28)		106,146 sf		
Lot Area (sub area 29)		261,005 sf		
FAR (sub area 28)	Maximum Allowable FAR =	0.50	0.24 Actual FAR contribution from Musuem	
Coverage (sub area 28)	Maximum Coverage =	0.35	0.22 Actual Coverage contribution from Musuem	
FAR (sub area 29)	Maximum Allowable FAR =	0.90	0.05 Actual FAR contribution from Musuem	
Coverage (sub area 29)	Maximum Coverage =	0.30	0.03 Actual Coverage contribution from Musuem	

