UO Columbia Hall 150
Lecture Hall Renovation
Concept Study

Summary Report

University of Oregon
Eugene, Oregon

Project #
1420

Rowell Brokaw Architects

September 30, 2014
UO Columbia Hall 150 – Lecture Hall Renovation
Concept Study Report

VOLUME 1:

01 – EXECUTIVE SUMMARY
1.01 – Executive Summary

02 – PROJECT NARRATIVES
2.01 – Architectural Narrative
2.02 – Detailed Option Descriptions
2.03 – Audio Visual Systems Narrative
2.04 - Audio Visual Systems Engineering Report

03 – PLANS & RENDERINGS
3.01 – Architectural Diagrams
   • Existing
   • Option 0.75
   • Option 1
   • Option 2
   • Option 3
   • Site/Lobby

04 – PROJECT COST AND SCHEDULE INFORMATION
4.01 – Executive Cost Summary of Options
4.02 – Detailed Cost Breakdowns of Options
4.03 – Audio Video Systems Budget
4.04 – Schedule Diagram for Options

05 – CODE COMPLIANCE
5.01 – Code Compliance Narrative

06 – MEETING NOTES
6.01 – 2014/07/28 Walk with Facilities maintenance Personnel
6.02 – 2014/08/14 User Group Review Meeting
6.03 – UO CMET A/V System Review Comments w/ Consultant Response
Columbia Hall Room 150 is currently the only lecture hall on the University of Oregon campus with a seating capacity in excess of 500 students. Built in 1960, the only major upgrade to the space has been a lighting upgrade in 1986. The other finishes and systems in the space are largely original.

With the new 500+ seat lecture hall at Straub Hall scheduled to be available for the Spring academic term of 2015, there will be an opportunity for Columbia 150 to be renovated without an impact to the University of Oregon’s large lecture class schedule. Impact will be much greater if renovation is deferred to a time when two large lecture classrooms become the status quo for class scheduling. It is assumed that the renovation of Columbia 150 will decrease seating capacity by approximately 10% to account for current seat dimensions. The target capacity for the renovated space is therefore a minimum of 450 seats.

The following report describes four levels of potential renovation for this space and includes conceptual cost estimates and scheduling diagrams for each. Option 0.75 was developed as a reduced scope version of Option 1 based on review of draft options with the Project Advisory Group on 2014-09-10 with new seating, basic freshening of finishes, and replacement of electrical (lighting) and AV systems in place. Option 1 entails a basic freshening of the finishes and seating with replacement of lighting and AV systems in the space. Also included are an exterior ramp for wheelchair access to the lower level of seats, an upgraded fire alarm system and new sprinkler system for the space. The second option assumes the scope described in Option 1 and studies what further improvements can be economically made to the organization and function of the space within the existing shell through architectural interventions. The third option is a study of what could be expected with a tear down of the existing building and the construction of a new large lecture hall within the same basic campus footprint of the existing lecture hall, its lobby and an additional strip defined by the width of the existing exit stairs on the west side of the building. In addition, the potential impact on the existing lecture hall space of modifications to the existing lobby and site/entry sequence are presented.

This report includes a narrative description, engineering report, and conceptual cost estimate for new audio video systems for the lecture hall space prepared by the Shalleck Collaborative. These updates are assumed to be part of the project scope described in Options 1, 2 and 3.

This report includes conceptual cost and construction scheduling estimates for all options presented. These were prepared by Fortis Construction and were used for the preparation of overall project scheduling diagrams and description. It should be noted that the costs shown represent direct construction costs only. Total project costs would include additional expenses in the form of soft costs including design fees, Owner project management, etc.
UO PROJECT PLANNING & MANAGEMENT
Gene Mowery, Planning Assoc.  Campus Planning, Design and Construction

DESIGN & CONSTRUCTION CONSULTANTS
Architect      Rowell Brokaw Architects
AV/Auditorium Consultant   The Shalleck Collaborative
Construction Cost and Sched. Estimating Fortis Construction

PROJECT ADVISORY GROUP
Ken Doxsee (Project Sponsor) Assoc. Vice Provost, Academic Affairs
Darin Dehle, Director, Campus Design and Construction
Fred Tepfer, Project Planning Manager, Campus Planning, Design and Construction

ADDITIONAL UO CONTRIBUTORS
See attendee lists of 2014-07-28 Site Walk and 2014-08-14 Review meetings in meeting notes attached.
PROJECT DESCRIPTION

This report is a study of potential renovation scope options, including budget and design/construction schedule implications, for Columbia Hall 150, a 509 seat lecture hall on the University of Oregon campus. With a new large lecture hall on campus scheduled for completion prior to the Spring 2015 academic term there will be an opportunity to renovate this space. Originally constructed in 1960 the space has seen only one major upgrade in the intervening period, a lighting upgrade in 1986.

This report presents three conceptual options for renovation scope for Columbia Hall 150:

**Option 0.75** is a reduced scope variation of Option 1 developed based on Project Advisory Group request for a lower cost option following initial review of options 1 through 3 at a meeting on 2014-09-10. The main reduction in scope from Option 1 described below is it assumes the existing ceiling is left in place with ceiling mounted lighting and A/V components to be replaced in place (note, existing floor mounted projectors would be replaced with new ceiling mounted projectors). It also limits accessibility upgrades and omits a new sprinkler system. This approach takes existing conditions as grandfathered and assumes no upgrades to be required by Oregon building code based on the project including finish work and equipment replacement only with no changes to existing structure or occupancy proposed (this approach needs to be verified with Authorities Having Jurisdiction as part of the design process).

**Option 1** is a renovation scope for the space consisting of new finishes throughout, new ceiling construction, new fixed seating, new audio/visual systems, new lighting including controls, life safety improvements including new fire alarm and sprinkler systems, and minor modifications to instructional and seating space layout for improved function. Also included is an exterior ramp for wheelchair access to the lower level of seating and teaching area.

**Option 2** includes all elements in Option 1 scope as well as several discrete interventions to seating, instructional and circulation areas intended to improve the instructional quality of the space. Modifications proposed in this scope can occur within the existing structural envelope without extensive demolition and reconstruction of the space.

**Option 3** is a study of what could be expected of new construction for a large fixed seat lecture hall built to current standards within the existing footprint of the Columbia 150 lecture hall, lobby, and exterior exit stair. This option assumes demolition of the existing lecture hall, lobby and associated basement mechanical spaces with new mechanical systems to be located in a rooftop penthouse.

In addition to the above options, studies of improvements to the existing lobby and exterior site/entry sequence are included as additive alternates to the renovation scope.

MAIN PROGRAM ELEMENTS

Initial programming needs are defined as the modernization and replacement of existing...
building elements: Provide options for the renovation of a large lecture hall, maximizing overall instructional quality of the space with defined budgetary and schedule implications. Program elements in the included conceptual options include:

- **Large Lecture Hall:** (Current capacity is 509 students) Final size and capacity will depend on renovation scope. This room is the fundamental requirement and main focus of the project. The minimum capacity is 450 students. Chemistry lecture classes are currently a main function of the space, and necessary infrastructure for chemistry demonstrations are considered a prerequisite for any renovation or reconstruction scope.

- **Prep Area:** Storage and preparation adjacent to instructional area for general lecture hall use and storage of chemistry demonstration supplies and apparatus.

- **Lobby / Waiting area:** Indoor area for students waiting for class. Existing space is undersized and the door configuration creates a bottle-neck during class changes. As currently laid out there is no acoustical vestibule separating the lecture hall space from the waiting area other than single sets of doors. It may be desirable to introduce a vestibule in the lobby area.

- **Mechanical room:** The lecture hall space is served by a basement mechanical room located under the eastern half of the room. Additionally there is a concrete duct run beneath the lecture space from the SE corner running to the NW corner of the space.

- **Support and Utility Spaces:** A/V Control Room for the lecture hall; Electrical and IT rooms; Stairs and ramps; Trash/Recycling casework.

**PROJECT PATTERNS**

Project Patterns were not generated specifically for this study. General campus patterns and project-specific patterns from the Straub lecture hall that apply to this renovation are listed below.

**PRIMARY DESIGN GENERATORS**

In developing the organization and layout of the concepts presented the following patterns and design goals were primary generators of the design:

- **450 Students:** The movement and flow of large numbers of students going to and from the lecture halls will require ample circulation space designed to allow unrestricted flow of traffic. Circulation space, seating areas and lobby/waiting area should be modified for quick and efficient exit and entry during class changes.

- **Places to Wait:** Provide areas outside of lecture halls and classrooms with benches and seating for continuing discussions between faculty and students, but not so much as to attract large groups that might make excessive noise.

- **Daylit Lecture Hall (and other spaces):** Existing space has no provisions for daylighting. Existing precast concrete roof structure limits possibilities for top lighting in remodel scenarios. Side lighting opportunities should be studied as part of renovation strategies, with top lighting being considered as part of any new construction approaches to provide well-designed daylighting to the zone of the audience, while maintaining good lighting control at presentation areas.

- **Positive Outdoor Space:** The lobby/waiting areas and exterior site entry sequences should augment use of the lecture hall by providing well laid out, weather
protected waiting areas while encouraging logical and efficient entry and exit from the lecture hall for a large number of students.

- **Universal Access:** Design improvements in ways that ensure welcoming, graceful access for all members of its community. See below for more detailed discussion.

- **Main Building Entrance:** As a standalone use, the lecture hall, in essence, serves as its own building. As such, the entry should be immediately visible from the main avenues of approach. The current entry at the corner of the Lobby is undersized, congested, and visibly hidden from main circulation routes along 13th Ave.

**ACCESSIBILITY**
Universal access is a primary campus pattern, establishing a goal of equal access for all users and occupants. Constructed in 1960, the existing lecture hall does not meet current federal or University of Oregon standards for universal access, providing accessible seating only along the main cross aisle of the space at the ends of each wing. The concepts presented attempt to improve universal access. The main areas addressed include:

- **Option 0.75:** Additional accessible and built in-table seating could be provided centrally along the main cross aisle of the space. New seating throughout will provide bariatric seating per current accessibility standards.

- **Option 1:** Additional accessible and built in-table seating is provided centrally along the main cross aisle of the space. New seating throughout will provide bariatric seating per current accessibility standards. A new exterior accessible route down to main instructional level (note: current access is by basement level ramp which does not conform to current standards) would allow for further dispersion of accessible seating in the front of the lecture hall. Assistive listening devices would be provided as part of new audio/video systems.

- **Option 2:** All scope as described in Option 1. Raising of instructional area (Option 2.4) would positively impact length or grade of exterior ramp described in option 1 and could allow for further distribution of accessible seating throughout the front quarter of the seating area.

- **Option 3:** New construction will meet or exceed Federal, State and UO ADA requirements.

- **Exterior Approaches and Entries:** See Option 1 for accessible access ramp to instructional area. Redesign of waiting and site entry areas will meet or exceed Federal, State and UO ADA requirements.

**BUILDING CONSTRUCTION AND MATERIALS**
Refer to detailed descriptions on Options 1, 2, and 3 for additional information on assumed construction and materials for each option.

**BUDGET AND COST ESTIMATE**
Refer to the Cost Estimate information in Section of this report.

**CODE AND PERMIT**
Refer to the Code Compliance information Section of this report.
HAZARDOUS MATERIALS ABATEMENT
Scope unknown. Pending UO Environmental Health and Safety survey of space.

SUSTAINABILITY
Discussion of sustainable building approaches for potential renovation is not included in the scope of this conceptual study. As a renovations of limited scope, Options 0.75, 1 and 2 are not required to follow the Oregon Model for Sustainable Development, and have somewhat limited impact on the policy’s goals related to Energy, Water and People. However, opportunities to improve energy efficiency, resource use and indoor environmental quality would be considered where possible. Option 3, as new development, would presumably follow the directives of the Oregon Model.
Option 0.75

Capacity: ±470 Seats (decrease from 509 existing)

Option 0.75 is a reduced scope version of Option 1. It includes basic freshening of the existing interior space including new seating. Existing wall and ceiling finishes would remain with new paint. Lighting fixtures would be replaced with new in place. Existing Audio Visual equipment would be replaced with new in place except as noted below. Existing layout of the space is left largely as is with only minor modifications as noted below and as shown in the Option 0.75 diagram.

The main elements included in this option are the minimum scope for renewal of the space and are included in some form in all three options.

Scope included in this option is as follows:

**Walls:** New paint at plaster walls. Replace existing acoustical panels with new.

**Floors:** Remove existing vinyl composition tile (asbestos content unknown). Scrape and polish concrete at seating areas. Install new carpet at circulation areas.

**Ceiling:** Existing ceiling would remain with new paint at plaster finish. Areas of laid in and direct glued acoustic tile would be demolished with new lay in ACT tile system replacing these areas. Lighting and Audio Visual components would be replaced in place with new.

**Seating:** Full replacement of existing fixed seating with new tablet arm seating. New seating to include dispersion of bariatric seating.

**Casework:** New podium and new chemistry demonstration casework at instructional area.

**Openings:** Replace all existing doors and hardware leading into lecture area with new. Assume full electronic access control.

**Accessibility:** Improvements to seating distribution along main cross aisle is possible with this scheme. Assisted listening (incl. in AV scope). Additional variety of accessible seating types (incl. in seating scope)

**Mechanical:** Existing system to remain as is.

**Electrical:** Upgrades to electrical infrastructure as necessary (to be determined). Distribution (plug) layout to remain as is with minor modifications as needed.

**Lighting:** Replace lighting with new energy efficient fixtures in existing locations. New controls per UO campus standards and as possible with the reuse of existing infrastructure to largest extent possible.

**Audio / Video:** Replace existing ceiling mounted components in place. Replace existing floor mounted projector(s) with ceiling mounted. Upgrade to existing system based on use of
new components with basic layout and functionality to remain. This would be a reduced version of the total A/V system replacement described in the attached A/V systems narrative document.

**Information Technology**: Expand wireless access in space to be determined.

**Plumbing**: No scope.

**Life Safety**: Upgrade fire alarm system.

**Lobby**: New paint at walls and ceiling. New ceramic tile floor. New lighting fixtures in existing locations. Upgrade of fire alarm system. General renovation consistent with lecture hall scope described.

**Estimated Construction Cost**: $1,019,974.00
See detailed cost summary prepared by Fortis Construction and included in this report for additional information

**Conceptual Schedule**
Design/Permit Bid: 4 Months
Construction: 4 Months
**Option 1**

**Capacity:** ±470 Seats (decrease from 509 existing)

Option 1 is a basic freshening of the existing interior space including seating and finishes with a full replacement of lighting and audio/video systems and controls. It includes an exterior ramp for wheelchair access to the lower level of seating and teaching area, which helps to meet the 25% cost required for accessibility upgrades. It also includes the addition of an automatic sprinkler system and modernization of the fire alarm system serving the space. The existing layout of the space is left largely as is with only minor modifications as noted below and as shown in the Option 1 diagram.

Scope included in this option is as follows:

**Walls:** New paint at plaster walls. Replace existing acoustical panels with new.

**Floors:** Remove existing vinyl composition tile (asbestos content unknown). Scrape and polish concrete at seating areas. Install new carpet at circulation areas.

**Ceiling:** Remove existing ceiling, including lighting, in its entirety. Install new ceiling clouds constructed of light gage metal framing and gypsum wall board. Integrated with existing mechanical and new lighting and audio/video components.

**Seating:** Full replacement of existing fixed seating with new tablet arm seating. New seating to include dispersion of bariatric seating.

**Casework:** New podium and new chemistry demonstration casework at instructional area.

**Openings:** Replace all existing doors and hardware leading into lecture area with new. Assume full electronic access control.

**Accessibility:** New exterior accessible ramp (slope <1:12) to access instructional area level. Improvements to seating distribution along main cross aisle. Assisted listening (incl. in AV scope). Additional variety of accessible seating types (incl. in seating scope)

**Mechanical:** Minor reworking of existing air distribution as needed to coordinate with new ceiling and systems. It is assumed existing mechanical equipment will remain in service with miscellaneous repair and component replacement to be determined. Inclusion of down draft hood at demonstration area (note this may require more extensive modification of mechanical systems serving the space).

**Electrical:** Upgrades to electrical infrastructure as necessary (to be determined). Distribution (plug) layout to remain as is with minor modifications as needed.

**Lighting:** Replace existing lighting in its entirety with new energy efficient fixtures and new controls per UO campus standards.

**Audio / Video:** Replace existing system in its entirety. See A/V systems narrative document included in this report.

**Information Technology:** Expand wireless access in space to be determined.

**Plumbing:** Miscellaneous rework of existing systems at chemistry demonstration area.

**Life Safety:** New sprinkler system, new fire alarm system.

**Lobby:** New paint at walls and ceiling. New ceramic tile floor. New lighting and fire/life safety systems. General renovation consistent with lecture hall scope described.
Estimated Construction Cost: $1,740,347.00
See detailed cost summary prepared by Fortis Construction and included in this report for additional information

Conceptual Schedule
Design/Permit Bid: 5-6 Months
Construction: 4 Months
Option 2 (Option 1 + incremental improvement to existing space)

Capacity: ±470 to ±445 Seats depending on options (decrease from 509 existing)

Option 2 includes all scope described in Option 1 as well as several distinct modifications intended to improve the instructional quality of the space. All modifications proposed in Option 2 need not be included in scope. Individual modifications may be selected for inclusion based on Owner priorities and budget impacts.

Proposed modifications included in Option 2:

2.1: Exterior accessible access ramp - moved to base scope included in Option 1 as code required accessibility upgrade

2.2: Infill / widen lower seating tiers:

The existing lower concrete tiers in the lecture hall space are 3'-2" deep, making it difficult to pass in front of a seated student to enter or exit a row, and inhibiting access to center seating in crowded classes. This modification would increase the depth of lower seating tiers to 3'-6", in line with contemporary standards, improving access. This would be accomplished by infilling new concrete atop the existing structure at the leading edge of each tier in the lower seating areas. There is no seating capacity loss associated with this modification.

2.2 estimated cost: $81,382.00

2.3: Infill / widen upper seating tiers:

The existing upper concrete tiers in the lecture hall space are 3'-2" deep, making it difficult to pass in front of a seated student to enter or exit a row, and inhibiting access to center seating in crowded classes. This modification would increase the depth of the upper seating tiers to 3'-6", in line with contemporary standards, improving access. This would be accomplished by infilling new concrete atop the existing structure at the leading edge of each tier in the lower seating areas. There would be a loss of seating capacity of approximately 16 seats associated with this modification.

2.3 estimated cost: $27,054.00

2.4: Raise floor level of instructional platform and lecture hall preparation areas:

This modification raises the floor level of the instructional area 6” to improve sight lines to instructors and presentation screens. This modification would also require raising the floor level of associated preparation rooms to the north of the instructional area 6” to allow for cart access between the spaces. Basement access to prep spaces would be changed from non-accessible ramp to steps, with new accessibility compliant access to the raised level provided by the exterior ramp included in Option 1 scope. The ramp would be constructed by infilling new concrete atop the existing structural slab. There is no seating capacity loss associated with this modification.
2.4 estimated cost: $53,118.00

2.5: Second entry to lecture hall from lobby:

Note this modification assumes expansion of the lobby area as described in Lobby/Site expansion options. This modification proposes adding an additional entry to the SE corner of the lecture hall at the upper tier level, from the eastern side of an expanded lobby (from what is now a covered exterior area - see lobby and site option notes for additional information). Providing an additional entry and exit point to the space from the main entry lobby on the south side of the lecture hall would help ease the bottlenecking that currently occurs at the SW entry and provide for more efficient “spilling and filling” of the space between classes. This would be accomplished by constructing new stairs and entry corridor into the back of the lecture hall space through the current projection room. An alternate location for an AV control room will need to be defined, likely as part of the preparation area adjacent to the instructional platform. There is no seating capacity loss associated with this modification.

2.5 estimated cost: $58,009.00 (This does not include costs for expansion of the waiting lobby. Those are defined in the site and entry sequence option descriptions).

See Option 1 description for additional scope included in Option 2.

**Estimated Construction Cost:** $1,959,909.00
This includes costs for all modification described as part of this option.
See detailed cost summary prepared by Fortis Construction and included in this report for additional information

**Conceptual Schedule**
Design/Permit Bid: 7-8 Months
Construction: 6 Months
Option 3 (Build New)

Capacity: ±385 to ±465 Seats depending on total size (decrease from 509 existing)

Option 3 is a conceptual study of what would be expected from a lecture hall space built to contemporary standards given the same approximate footprint as Columbia Hall 150 and associated support spaces. It includes demolition of the existing lecture hall space, preparation rooms, lobby, covered porch, west exterior exit stair and basement mechanical spaces. It assumes construction of a new lecture hall and associated accessory areas in its place. In order to provide for higher ceilings and better site lines without increasing the height of the lecture hall roof structure and impacting adjacent windows it is assumed mechanical spaces would be relocated to a rooftop penthouse and the lecture hall space height would be increased by lowering the floor level down into current basement space where it exists, and excavating new area where it does not.

Estimated Construction Cost: $5,998,154.00
See detailed cost summary prepared by Fortis Construction and included in this report for additional information

Conceptual Schedule
Design/Permit Bid: 12 Months
Construction: 8 Months


**Lobby / Site Entry Sequence**

**L2: Enlarged Lobby**

The existing Lobby is undersized for a large lecture hall and its layout creates a bottleneck during class changes. Enlarging the lobby by enclosing the existing covered porch area adjacent provides for a more ample waiting area for students waiting for the next class. Additionally, providing entry doors into the newly enclosed eastern half of the lobby, while removing hardware from the exterior of the existing door location at the southwest corner of the lobby, may improve circulation patterns and encourage more efficient “spill and fill” of the lecture hall space between classes.

L2 estimated cost: $262,961.00

**L3: Revised Site Entry Sequence**

A large planter currently screens the entry to the lobby and lecture hall from the south along 13th Avenue, a highly trafficked student circulation path and main axis through the core of the University. Uncovered bike parking sandwiched between the planter and the building restricts access to this sunken entry plaza from the University Street axis to the west. This modification includes relocating the bike parking, removing or reducing in size the concrete planter and reworking the sunken plaza to open it up to both the University Street axis and the 13th Avenue axis. In combination with enlarging the lobby, as described above, this would redirect entry into the lobby from the south through new entry doors, and maintain the exit path through exit only doors located at the southwest corner of the lobby. The modified circulation would promote a more efficient “spill and fill” of the lecture hall space.

L3 estimated cost: $259,180.00

**Total Estimated Construction Cost: $522,141.00**

**Conceptual Schedule**

Design/Permit Bid: Concurrent with lecture hall work
Construction: Concurrent with lecture hall work
Audio:
- Voice and music amplification system to provide clear, intelligible audio to all seats.
- The system would use simple volume controls on a touchpanel for each source.
- Wireless microphones (handheld and/or lavaliere) would be provided.
- Wired microphones would also be accommodated, at the lectern and other locations as needed.
- Audio from laptop computers or other portable devices would be accommodated, with separate volume controls.
- An input for portable equipment, such as a portable mixing console or other audio devices would be provided at the stage.
- Connection points at the cross aisle for portable equipment, including power & data would be provided.
- If audio and/or video conferencing is provided, the audience members would need to use wireless handheld microphones, as the room is too big to provide useful ambient microphones.
- An assistive listening system would be provided.

Video:
- (2) motorized roll-down projection screens with projectors will be provided. The screens will flank the presentation area. Exact location of video projectors is to be determined, based on the options outlined above.
- HD/1080p video projectors would be adequately bright for use in ambient light conditions, and room lighting will be designed so it does not wash the screen.
- Portable laptops, tablets, and fixed computers can connect to the system, and both analog (VGA) and digital (HDMI/DVI/DisplayPort) would be supported. Connection will be via pull-out cabling.
- Pending campus testing, an AppleTV may be added for wireless connection to Apple products (iPad, iPhone, etc.)
- Pending campus testing, a whiteboard capture device may be provided that will display whiteboard content on the projection screen, and allow the instructor to capture whiteboard content for later use (ie: mimio or ebeam)
- Two overhead fixed document cameras would be provided for display of science experiments and/or written documents.
- A DVD/blu-ray player would be provided.
- A composite video input would be provided for legacy equipment.

Capture/Webcast
- A lecture capture unit, such as the Crestron “Capture HD” would be provided to allow simple capture and/or streaming, in conjunction with one fixed camera. The capture device would record the presentation materials, the video camera, and the audio feed. The file could then be uploaded for later use by instructors or students, or the content can be streamed live via network connection.
- ALTERNATE: a broadcast-style system utilizing four HD remote pan/tilt/zoom cameras would be provided to allow for multi-camera capture, video conferencing, and high quality video production. This would require 2-3 operators, located in the control room, to produce an event,

Note: See UO CMET A/V System Review Comments w/ Consultant Response (report item 6.03) for additional information
as well as post-production services after the event. Conduit and associated infrastructure to support this function would be provided in the base scope.

- ALTERNATE: a rolling audio mix cart would be provided for use in the large lecture hall.

**Controls**

- A touchscreen controller would be provided at the teaching station and in the control room. The touchscreen would allow control over source & microphone volume, video displays, and capture devices.
- The touchscreen would also be able to control other room systems, such as lighting and darkening shades, allowing for simple macro recall, such as “lecture” or “movie.”
- If desired, the control system can be connected to the campus data network to enable remote help-desk functions, monitoring, and scheduled system startup/shutdown.

<end of report>

Note: See UO CMET A/V System Review Comments w/ Consultant Response (report item 6.03) for additional information
U of O Columbia 150

AV Systems Engineering Report- PGM

August 19, 2014

The following report outlines the theatrical productions systems electrical, mechanical and structural requirements for U of O Columbia 150- AV Systems.

1. Electrical Engineering Criteria

Scope

The Shalleck Collaborative will design and specify the AV system equipment and devices in dedicated drawings and in Division 11 specifications. The system will be installed in its entirety under Div. 11. The Electrical Engineer is responsible for designing and documenting all power related systems including specifying the conduit size and route, back boxes, and all junction boxes etc. The Shalleck Collaborative will provide CAD layers of devices to facilitate the Electrical Engineers documentation and will review and coordinate the AV power systems with the electrical documents.

All power to AV systems must be on a dedicated K-13 rated transformer, combined with an isolated ground system. AV power will be identified with orange outlets throughout the facility.

Isolated Ground Systems

The AV systems isolated ground (IG) system is of paramount importance in providing a clean power source for AV equipment. Care is required to ensure the IG system is designed correctly. We will require a star isolated ground system, meaning that all AV power system grounds ultimately reference the building ground at only one point, typically located in the main electrical service room.

The main branches for the IG system (from main electrical room to branch AV power panels) will be fed with #3/0 AWG insulated ground cable. From these main points, branch load circuits connect to an IG busbar using standard-size (12 or 14 AWG) conductors. In addition, a #3/0 AWG IG conductor must be brought to the AV equipment racks, for termination to an equipment rack busbar, provided by the AV contractor.

AV System Power Requirements

<table>
<thead>
<tr>
<th>Main Panel AV-1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Location:</td>
<td>Electrical Room nearby</td>
</tr>
<tr>
<td>Electrical load:</td>
<td>10.0 kW (50% diversity, plus 10% spare)</td>
</tr>
<tr>
<td>Transformer:</td>
<td>25 KVA (assumed power factor of 0.9)</td>
</tr>
<tr>
<td>Feed:</td>
<td>Dedicated 120/208VAC 3-phase from K-13 rated Delta-Wye transformer with dual electrostatic shield or equivalent HMT type</td>
</tr>
</tbody>
</table>

Note: See UO CMET A/V System Review Comments w/ Consultant Response (report item 6.03) for additional information.
Configuration: Motorized breakers with sequencer-controlled load center with internal IG busbar. Lyntec Mfg RPC series. #3/0 cable & lug from main technical ground panel.

Distribution: Feeds branch load circuits described below.

Configuration: Single breaker or disconnect.

Ground: Isolated Ground busbar, located in separate NEMA enclosure with #3/0 AWG lugs. Label front of box “TECHNICAL GROUND” with screw-on lamicoid label. See IG section of this report for further information. 

Note: This separate NEMA enclosure is part of the Lyntec Panel.

Branch Loads:

Phase A:
• 4- 120V, 20A circuits to control room AV racks

Phase B:
• 4- 120V, 20A circuits to control room outlets

Phase C:
• 2- 120V, 20A circuits to video projectors
• 2- 120V, 20A circuits to LCD monitors
• 2- 120V, 20A circuits to room outlets

**AV Low-Voltage Conduit**

All AV low-voltage wiring shall be in dedicated metal raceway to provide EMI/RFI and mechanical isolation. This includes conduit run within concrete slabs. The SC will size the low-voltage conduit and show conduit requirements on a single-line diagram. Division 16 is required to install the conduit and back boxes, per our drawings and specifications. We typically ask that a drawing note is placed on the electrical sheets to indicate to the electrical contractor that they are also responsible for the low-voltage A/V conduit work.

The low-voltage portion of the AV system will comprise a significant amount of EMT conduit. The AV system is divided into five signal groups, which EACH requires its own conduit raceway:

A: Mic Level
B: Line Level
C: Video & Communications Level
D: Loudspeaker Level
E: Empty

As becomes clear, the amount of conduit becomes a significant cost factor, and should be accounted for accordingly. While the exact design is forthcoming, see the cost estimate for rough guidelines.

**Additional AV Requirements**

The AV system may require a cable TV feed from the local head-end. Coordination of this feed shall be the responsibility of the electrical engineer. Type of feed is to be determined by the owner.

Note: See UO CMET A/V System Review Comments w/ Consultant Response (report item 6.03) for additional information
Several high-bandwidth data connections will be required. Coordinate with owner and IT consultant.

2. Mechanical Engineering Criteria

AV rooms should be kept at 68-degrees Fahrenheit, with a 60% relative humidity target.

Columbia 150 Control Room:
In addition to the equipment loads shown below, the average occupant load will be four.
Equipment Load: 4.0 kW

3. Structural

Minor AV-related loads, such as projection screens, video projectors and AV equipment racks.

End of Report

Note: See UO CMET A/V System Review Comments w/ Consultant Response (report item 6.03) for additional information
1ST FLOOR
1/16" = 1'-0"

EXISTING: (509 seats)

- Finishes - Worn and dated. Showing signs of old water damage.
- Seating - Mismatched and Damaged.
- Layout - Rear seats too far from instructional area, cross aisle is a major separation.
- Accessibility - poor dispersion. No route to front or rear of room.
- Lighting - Inefficient and not suitable for use of space. No natural Light.
- A/V - Speakers do not work well, hard to hear. Screens are too small.
- Wireless coverage insufficient. Slow.
- NW exterior door seeps in water in heavy rain.

Indicates accessible seating dispersion
Undersize A/V screens
Existing acoustic panels: 600 SF

Scale: 1/32" = 1'-0"

Mechanical space below
Lay in acoustic tile
Acoustic tile glued to plaster
Plaster

North Elevation
East Elevation
South Elevation
West Elevation / Site Section
New finishes:
- Floor: New carpet at circulation, grind and polish existing slab beneath seats (Demo existing VCT).
- Walls: New paint and replace acoustic panels with new.
- Ceiling: See note on plan diagram

New seats (minor reconfiguration possible)
- New A/V systems in place with projector(s) moved to ceiling mount, minimum upgrade only.
- New podium/demonstration space
- Additional wireless coverage

1ST FLOOR

1/16" = 1'-0"

1ST FLOOR

OPTION 0.75 (470 seats)

- New finishes:
  - Floor: New carpet at circulation, grind and polish existing slab beneath seats (Demo existing VCT).
  - Walls: New paint and replace acoustic panels with new.
  - Ceiling: See note on plan diagram
- New seats (minor reconfiguration possible)
- New lighting in place.
- New A/V systems in place with projector(s) moved to ceiling mount, minimum upgrade only.
- New podium/demonstration space
- Additional wireless coverage

North Elevation

South Elevation

East Elevation

West Elevation / Site Section

Diagonal Section

1ST FLOOR

1/16" = 1'-0"

1ST FLOOR

OPTION 0.75 (470 seats)

- New finishes:
  - Floor: New carpet at circulation, grind and polish existing slab beneath seats (Demo existing VCT).
  - Walls: New paint and replace acoustic panels with new.
  - Ceiling: See note on plan diagram
- New seats (minor reconfiguration possible)
- New lighting in place.
- New A/V systems in place with projector(s) moved to ceiling mount, minimum upgrade only.
- New podium/demonstration space
- Additional wireless coverage

North Elevation

South Elevation

East Elevation

West Elevation / Site Section

Diagonal Section

1ST FLOOR

1/16" = 1'-0"

1ST FLOOR

OPTION 0.75 (470 seats)

- New finishes:
  - Floor: New carpet at circulation, grind and polish existing slab beneath seats (Demo existing VCT).
  - Walls: New paint and replace acoustic panels with new.
  - Ceiling: See note on plan diagram
- New seats (minor reconfiguration possible)
- New lighting in place.
- New A/V systems in place with projector(s) moved to ceiling mount, minimum upgrade only.
- New podium/demonstration space
- Additional wireless coverage
New finishes:
- Floor: New carpet at circulation, grind and polish existing slab beneath seating (Demo existing VCT).
- Walls: New paint and new acoustic panels.
- Ceiling: Clouds - acoustic panels and GWB.

New seats (minor reconfiguration possible)

New lighting. Some electrical upgrades

New AV systems.

New podium/demonstration space

New acoustic wall panels and acoustic treatment

Additional wireless coverage

New accessible exterior ramp at west side of space

1ST FLOOR

1/16" = 1'-0"

- New finishes:
  - Floor: New carpet at circulation, grind and polish existing slab beneath seating (Demo existing VCT).
  - Walls: New paint and new acoustic panels.
  - Ceiling: Clouds - acoustic panels and GWB.

- New seats (minor reconfiguration possible)
- New lighting. Some electrical upgrades
- New AV systems.
- New podium/demonstration space
- New acoustic wall panels and acoustic treatment
- Additional wireless coverage
- New accessible exterior ramp at west side of space

1ST FLOOR

OPTION 1

(470 seats)

New wall finish (paint and acoustic panels)

New A/V screens

New WAP. Vfy qty layout w/ UO

Scrape and polish existing concrete floor at seating

Replace ceiling, lighting, new projectors and speakers

Renovate lobby

New <1:12 Concrete ramp ADA access.

Frame up tier, new built in table and flexible/accessible seating across cross aisle

14 seats removed at rear for proctoring

Replace seats, typ. Look at mounting to riser

Replace acoustic panels: 600 SF

Minor demo new ramps and landings from instructional area to accessible seats in front row

New side podium with chem display on rolling tables

Indicates potential accessible seating dispersion

Front 2 rows shown deleted to move instructional forward

New doors w/ access control

New doors w/ access control

(N) Doors w/ access control

(N) Doors w/ access control

Replace carpet at circulation paths

New carpet at circulation paths

New accessible exterior ramp at west side of space

New side podium with  chem display on rolling tables

Replace acoustic panels: 600 SF

Minor demo new ramps and landings from instructional area to accessible seats in front row

New side podium with chem display on rolling tables

Indicates potential accessible seating dispersion

Front 2 rows shown deleted to move instructional forward

New doors w/ access control

New doors w/ access control

(N) Doors w/ access control

(N) Doors w/ access control
2.2: Infill/Widen lower tiers to 3' 6" with new concrete doweled to existing. No seat loss.

2.3: Infill/Widen upper tiers to 3' 6" with new concrete doweled to existing. Loss of approx. 16 seats.

2.4: Raise instructional platform and rear prep areas 6". New steps in basement corridor. Cart access through exterior ramp.

2.5: Second lobby entrance to lecture hall. No loss of seats, impacts A/V control room - relocate.

2.0: Baseline Work as noted in Option 1

OPTION 2 (470 seats - 445 Seats)

Replace acoustic panels: 600 SF

Note first row of seating level w/ instructional area allows for accessible seating at center or edges

Planter
Beyond Plaza

West Elevation / Site Section

Diagonal Section

North Elevation

East Elevation

South Elevation

Lobby

1ST FLOOR
1/16" = 1'-0"
Reorganize prep, new A/V control, faculty staging/storage

First level Straub Lecture Hall seating overlayed on Columbia 150 footprint

One more row than Straub

Reconfigured lobby / waiting area required to allow for additional rows of seating and 465 seat capacity

Potential for larger screens and improved site lines if floor level is lowered into existing basement / grade level

Option 3 (465 seats)
L1 - Base Scenario

• Existing layout remains.
• Refresh interior finishes and lighting consistent with work in lecture hall.
• New sprinklering and fire alarm extended to this space.
• New recycling and trash receptacles?
• Budget for new furniture?

L2 - Enlarge Lobby

• Infill south side of covered exterior with new storefront. 13th Ave
• Refresh interior finishes and lighting consistent with work in lecture hall. Note this extends to newly enclosed area.
• Relocate west entry into lobby to south to allow for vestibule to lecture hall.
• New recycling and trash receptacles?
• Budget for new furniture?

L3 - New Site Work

• Additive to L2
• Demolish existing planter and stairs to south of lobby.
• Relocate bicycle parking.
• New at grade plaza (concrete) to south of lobby with concrete stairs and accessible path to sidewalk elevation.
• Include allowance for additional site improvement (i.e. covered bike parking, new exterior lighting to campus standard, patterned concrete or pavers)?
UO - 150 Columbia
Eugene, OR

Cost Model
Estimate No: 1 Rev. 0
September 1, 2014

Prepared For:

University of Oregon

As prepared by

FORTIS
CONSTRUCTION INC
### EXECUTIVE COST SUMMARY

**UO - 150 Columbia**  
Cost Model Estimate No. 1 Rev. 0  
Drawings dated: 9/12/2014

#### Project Details
- **Location:** Eugene, OR
- **Architect:** RBA
- **Owner:** University of Oregon

#### Area Summary

<table>
<thead>
<tr>
<th>Option</th>
<th>UO - 150 Columbia (Total)</th>
<th>UO - 150 Columbia (Base)</th>
<th>UO - 150 Columbia (Option 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Schedule - 4-5 Months</strong></td>
<td><strong>Schedule - 5-6 Months</strong></td>
<td><strong>Schedule - 5-6 Months</strong></td>
</tr>
<tr>
<td>Basement</td>
<td></td>
<td><strong>6,213 GSF</strong></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td><strong>6,213 GSF</strong></td>
<td><strong>6,213 GSF</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Total Construction Area - Base Option

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
<th>$/Gsf</th>
<th>Total</th>
<th>$/Gsf</th>
<th>Total</th>
<th>$/Gsf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denon</td>
<td>$32,809</td>
<td>$5.33</td>
<td>$32,809</td>
<td>$5.33</td>
<td>$32,809</td>
<td>$5.33</td>
</tr>
<tr>
<td>Site Work</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Foundations</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Substructure</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Superstructure</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Exterior Skin</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roofing</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Interior Construction</td>
<td>$149,752</td>
<td>$24.34</td>
<td>$233,982</td>
<td>$37.66</td>
<td>$539,756</td>
<td>$80.43</td>
</tr>
<tr>
<td>Conveying</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Special Construction</td>
<td>$158,000</td>
<td>$30.55</td>
<td>$188,000</td>
<td>$36.50</td>
<td>$346,000</td>
<td>$56.86</td>
</tr>
<tr>
<td>Plumbing</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Mechanical</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td>Electrical</td>
<td>$559,786</td>
<td>$8.17</td>
<td>$247,859</td>
<td>$4.04</td>
<td>$806,646</td>
<td>$13.15</td>
</tr>
<tr>
<td>Audio Visual</td>
<td>$75,500</td>
<td>$12.17</td>
<td>$77,427</td>
<td>$12.76</td>
<td>$152,927</td>
<td>$25.93</td>
</tr>
<tr>
<td>Job Est Management</td>
<td>$199,542</td>
<td>$33.13</td>
<td>$199,542</td>
<td>$33.13</td>
<td>$399,085</td>
<td>$66.26</td>
</tr>
<tr>
<td>Site Requirements</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$1,396,817</td>
<td>$224.82</td>
<td>$1,571,840</td>
<td>$229.33</td>
<td>$4,751,657</td>
<td>$770.16</td>
</tr>
</tbody>
</table>

#### Margins & Adjustment

<table>
<thead>
<tr>
<th>Description</th>
<th>Base Options</th>
<th>LOBBY &amp; SITE</th>
<th><strong>SUBTOTAL</strong></th>
<th><strong>TOTAL CURRENT ESTIMATE - LOBBY &amp; SITE</strong></th>
<th><strong>TOTAL CURRENT ESTIMATE - Base + Lobby &amp; Site</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Builder's Risk</td>
<td>$2,069</td>
<td>$5.33</td>
<td>$2,069</td>
<td>$5.33</td>
<td>$2,243</td>
</tr>
<tr>
<td>Subguard (SD)</td>
<td>$14,271</td>
<td>$4.48</td>
<td>$14,271</td>
<td>$4.48</td>
<td>$15,742</td>
</tr>
<tr>
<td>Bods</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
</tr>
<tr>
<td>Design Contingency</td>
<td>$72,199</td>
<td>$11.82</td>
<td>$72,199</td>
<td>$11.82</td>
<td>$94,198</td>
</tr>
<tr>
<td>Construction Contingency</td>
<td>$38,309</td>
<td>$6.50</td>
<td>$38,309</td>
<td>$6.50</td>
<td>$45,954</td>
</tr>
<tr>
<td>Fee</td>
<td>$23,270</td>
<td>$3.78</td>
<td>$23,270</td>
<td>$3.78</td>
<td>$35,480</td>
</tr>
<tr>
<td>Preconstruction</td>
<td>$21,816</td>
<td>$3.32</td>
<td>$21,816</td>
<td>$3.32</td>
<td>$34,002</td>
</tr>
<tr>
<td>Escalation</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
<td>$0.00</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total Current Estimate</strong></td>
<td>$1,396,817</td>
<td>$224.82</td>
<td>$1,571,840</td>
<td>$229.33</td>
<td>$4,751,657</td>
</tr>
</tbody>
</table>

#### Notes & Comments

- **Soft Cost Not Included in Estimate**: Discount Seat Loss  
- Site work - additive to L2?  
- Plan for Additional AV  
- No Abatement Included

---

Cost breakout for Option 0.75 amended to end of report.
### UNIVERSITY OF OREGON - 150 Columbia

**OPTION 1 - COST MODEL EST1 REVO**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEMOLITION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk</td>
<td>775</td>
<td>sf</td>
<td>10.00</td>
</tr>
<tr>
<td>Flooring</td>
<td>6,213</td>
<td>sf</td>
<td>1.50</td>
</tr>
<tr>
<td>Misc Wall Demo</td>
<td>1</td>
<td>ln</td>
<td>10,000</td>
</tr>
<tr>
<td>Acoustic Panels</td>
<td>600</td>
<td>sf</td>
<td>1.50</td>
</tr>
<tr>
<td>Doors/Frames</td>
<td>12</td>
<td>ft</td>
<td>60.00</td>
</tr>
<tr>
<td>Paint/Drywall Ceilings</td>
<td>6,213</td>
<td>sf</td>
<td>1.50</td>
</tr>
<tr>
<td>Seating</td>
<td>509</td>
<td>ea</td>
<td>25.00</td>
</tr>
<tr>
<td>HVAC/AFS/Plumbing</td>
<td>6,213</td>
<td>sf</td>
<td>0.50</td>
</tr>
<tr>
<td>Electrical</td>
<td>6,213</td>
<td>sf</td>
<td>1.50</td>
</tr>
<tr>
<td><strong>SITEWORK</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grading/Excavation/Backfill</td>
<td>200</td>
<td>cy</td>
<td>50.00</td>
</tr>
<tr>
<td>Utilities - Storm, Sanitary (Rework Drain@ Landing)</td>
<td>1</td>
<td>ea</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Tap Water Line/Vault/ODC</td>
<td>1</td>
<td>ea</td>
<td>45,000</td>
</tr>
<tr>
<td>Sidewalls</td>
<td>370</td>
<td>sf</td>
<td>8.00</td>
</tr>
<tr>
<td>Concrete Retaining Wall Footings</td>
<td>7</td>
<td>cy</td>
<td>510.00</td>
</tr>
<tr>
<td>Concrete Retaining Wall</td>
<td>269</td>
<td>sf</td>
<td>60.00</td>
</tr>
<tr>
<td>Ramps/Steps/Add</td>
<td>405</td>
<td>sf</td>
<td>10.00</td>
</tr>
<tr>
<td>Guardrail/Handrail (incl Paint)</td>
<td>135</td>
<td>ft</td>
<td>100.00</td>
</tr>
<tr>
<td>Site Electrical</td>
<td>-</td>
<td>ea</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>FOUNDATIONS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation for seismic - 4th SW</td>
<td>-</td>
<td>if</td>
<td>400.00</td>
</tr>
<tr>
<td><strong>SUBSTRUCTURE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cab on Grade Repairs</td>
<td>4,000</td>
<td>sf</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>SUPERSTRUCTURE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16&quot; Shear Walls @ Stairs</td>
<td>-</td>
<td>sf</td>
<td>50.00</td>
</tr>
<tr>
<td><strong>EXTERIOR SKIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window Refinish</td>
<td>-</td>
<td>ea</td>
<td>1,100.00</td>
</tr>
<tr>
<td><strong>ROOFING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Roofing (no flat roof) Asphalt Shingles</td>
<td>-</td>
<td>sf</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>INTERIOR CONSTRUCTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough Carpentry</td>
<td>6,213</td>
<td>sf</td>
<td>1.25</td>
</tr>
<tr>
<td>Misc Metals</td>
<td>6,213</td>
<td>sf</td>
<td>2.50</td>
</tr>
<tr>
<td>Carpet</td>
<td>1,333</td>
<td>sf</td>
<td>8.50</td>
</tr>
<tr>
<td>Polished Floors</td>
<td>3,765</td>
<td>sf</td>
<td>6.50</td>
</tr>
<tr>
<td>Ceramic Tile Floor</td>
<td>655</td>
<td>sf</td>
<td>22.00</td>
</tr>
<tr>
<td>Doors/Frame/Hardware</td>
<td>5</td>
<td>ea</td>
<td>3,500.00</td>
</tr>
<tr>
<td>Patch Walls</td>
<td>1</td>
<td>ln</td>
<td>10,000</td>
</tr>
<tr>
<td>Painting Walls</td>
<td>7,992</td>
<td>sf</td>
<td>8.00</td>
</tr>
<tr>
<td>Paint Ceilings</td>
<td>6,213</td>
<td>sf</td>
<td>1.20</td>
</tr>
<tr>
<td>Paint Doors &amp; Frames</td>
<td>8</td>
<td>ea</td>
<td>250.00</td>
</tr>
<tr>
<td>Ceilings - Drywall</td>
<td>6,213</td>
<td>sf</td>
<td>12.00</td>
</tr>
<tr>
<td>Acoustic Panels</td>
<td>600</td>
<td>sf</td>
<td>20.00</td>
</tr>
<tr>
<td>Classroom Allowance (misc work)</td>
<td>6,213</td>
<td>sf</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>CONVEYING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator - Misc Work</td>
<td>-</td>
<td>ls</td>
<td>40,000.00</td>
</tr>
<tr>
<td><strong>SPECIAL CONSTRUCTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>470</td>
<td>ea</td>
<td>400.00</td>
</tr>
<tr>
<td><strong>PLUMBING - Domestic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground</td>
<td>-</td>
<td>ls</td>
<td>50,000.00</td>
</tr>
<tr>
<td><strong>FIRE PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>6,213</td>
<td>sf</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>MECHANICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical - Reuse Existing System</td>
<td>6,213</td>
<td>sf</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - Main Panel Rework &amp; Metering</td>
<td>6,213</td>
<td>sf</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**AREA SUMMARY:**

- **Basement:** 6,153 sq ft
- **1st Floor:** 5,513 sq ft
- **Lobby:** 640 sq ft

**TOTAL BLDG AREA:**

- **222,923 sq ft**
- **50,000.00 sf**
- **40,000.00 sf**
- **10,000.00 sf**
- **45,000.00 sf**
- **10,000.00 sf**
- **400.00 sf**
- **250.00 sf**
- **7,456 sf**
- **7,766 sf**
- **220,923 sq ft**

**COST MODEL OPTION 1**

- **Total Site Work:** $775
- **Total Building Area:** 222,923 sq ft

**COST MODEL EST1 REVO**

- **Current Estimate:** 30.55%
- **Siting:** 36.23%
- **Electrical:** 15.68%
- **HVAC/AFS/Plumbing:** 12.28%
- **Seating:** 10.00%
- **Doors/Frames/Hardware:** 7.45%
- **Acoustic Panels:** 5.00%
- **Flooring:** 3.00%
- **Paint Doors & Frames:** 2.54%
- **Paint Ceilings:** 2.41%
- **Paint Walls:** 1.84%
- **Painting Walls:** 1.84%
- **Conveying:** 1.40%
- **Superstructure:** 1.38%
- **Exterior Skin:** 1.32%
- **Foundations:** 1.18%
- **Substructure:** 1.05%
- **Demolition:** 1.02%
- **Demolition:** 0.98%
- **Other:** 0.00%

**Option 1 Estimate:**

- **Total:** $222,923
- **Electrical:** $41,639
- **Other:** $18,639

**Date:** 9/1/2014
### UNIVERSITY OF OREGON - 150 Columbia
#### OPTION 1 - COST MODEL EST1 RE0

**PROJECT:** 150 COLUMBIA  
**DATE:** 9/1/2014  
**LOCATION:** EUGENE, OR  
**ARCHITECT:** ROWELL BROKAW  
**OWNER:** UNIVERSITY OF OREGON

### AREA SUMMARY

<table>
<thead>
<tr>
<th>Basement</th>
<th>1st Floor</th>
<th>Lobby</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,513</td>
<td>640</td>
</tr>
<tr>
<td><strong>TOTAL BLDG AREA</strong></td>
<td><strong>6,153</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL SITEWORK</strong></td>
<td></td>
<td>775</td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Current Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical - Secondary Panel Rework</td>
<td>6,213</td>
<td>sf</td>
<td>1.00</td>
<td>$6,213</td>
</tr>
<tr>
<td>Electrical - Misc Distribution Repair</td>
<td>6,213</td>
<td>sf</td>
<td>1.50</td>
<td>$9,320</td>
</tr>
<tr>
<td>Electrical - Raceways</td>
<td>6,213</td>
<td>sf</td>
<td>2.00</td>
<td>$12,426</td>
</tr>
<tr>
<td>Electrical - Lighting &amp; Controls</td>
<td>6,213</td>
<td>sf</td>
<td>14.00</td>
<td>$86,982</td>
</tr>
<tr>
<td>Electrical - Misc Equipment</td>
<td>6,213</td>
<td>sf</td>
<td>9.50</td>
<td>$3,107</td>
</tr>
<tr>
<td>Electrical - Emergency Power</td>
<td>-</td>
<td>of</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - UPS</td>
<td>-</td>
<td>of</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - Emergency Power</td>
<td>-</td>
<td>of</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - Access Controls</td>
<td>6</td>
<td>ea</td>
<td>3,500.00</td>
<td>$21,000</td>
</tr>
<tr>
<td>Electrical - Fire Alarm</td>
<td>6,213</td>
<td>sf</td>
<td>3.50</td>
<td>$21,746</td>
</tr>
<tr>
<td>Electrical - Telecom/Data</td>
<td>6,213</td>
<td>sf</td>
<td>7.00</td>
<td>$43,491</td>
</tr>
</tbody>
</table>

### 14.1 AUDIO VISUAL

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Current Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Visual - Shallack Estimate</td>
<td>5,573</td>
<td>sf</td>
<td>48.00</td>
<td>$267,504</td>
</tr>
<tr>
<td>Misc Architectural</td>
<td>5,573</td>
<td>sf</td>
<td>1.00</td>
<td>$5,573</td>
</tr>
<tr>
<td>Mechanical Additional</td>
<td>5,573</td>
<td>sf</td>
<td>3.00</td>
<td>$17,865</td>
</tr>
<tr>
<td>Electrical Additional</td>
<td>5,573</td>
<td>sf</td>
<td>5.00</td>
<td>$27,865</td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE SUBTOTAL (COST OF WORK)

- **Total:** $1,219,927  
- **Margin & Adjustments:** 70.10%

### MARGINS & ADJUSTMENTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Amount</th>
</tr>
</thead>
</table>
| GENERAL CONDITIONS | 14.00% | $170,790  
| 27.76% | 9.81% |
| TEMPORARY PROTECTION | 0.50% | $6,100  
| 0.99% | 0.35% |
| TEMPORARY MEP SYSTEMS | 0.00% | -  
| - | - |
| OT PREMIUMS/LOP | 0.00% | -  
| - | - |
| LEED REQUIREMENTS | 0.00% | -  
| - | - |
| BONDS/SDI | 2.10% | $29,333  
| 4.77% | 1.69% |
| BUILDERS RISK | 0.40% | $5,705  
| 0.93% | 0.33% |
| DESIGN CONTINGENCY (cow) | 10.00% | $121,993  
| 19.83% | 7.01% |
| CM/GC CONSTR.CONTINGENCY | 5.00% | $77,692  
| 12.63% | 4.46% |
| FEE | 3.20% | $52,209  
| 8.49% | 3.00% |
| ESCALATION/MARKET CONDITIONS | 3.00% | $36,598  
| 5.95% | 2.10% |
| PRECONSTRUCTION | 1 | ls | 20,000 | $20,000 | $3.25 | 1.15% |

### MARGIN & ADJUSTMENT SUBTOTALS

- **Total:** $520,419  
- **Margin & Adjustments:** 29.90%

### CONSTRUCTION TOTALS

- **Total:** $1,740,347  
- **Margin & Adjustments:** 100.00%

### SUMMARY:
<table>
<thead>
<tr>
<th>AREA SUMMARY:</th>
<th>COST MODEL OPTION 2.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Floor</td>
<td>Lobby</td>
</tr>
<tr>
<td>5,513</td>
<td>640</td>
</tr>
<tr>
<td>TOTAL BLDG AREA</td>
<td>6,153</td>
</tr>
<tr>
<td>TOTAL SITEWORK</td>
<td>-</td>
</tr>
</tbody>
</table>

**DESCRIPTION** | **Qty** | **Unit** | **Unit Pricing** | **Cost** | **$/sf** | **% of Total Cost**
---|---|---|---|---|---|---
**CURRENT ESTIMATE**
1 DEMOLITION | - | sf | 5.00 | $ | - | 0.00%
2 SITWORK | - | cy | 50.00 | $ | - | 0.00%
3 FOUNDATIONS | - | lf | 400.00 | $ | - | 0.00%
4 SUBSTRUCTURE | 760 | lf | 75.00 | $ | 57,000 | 9.26 | 70.04%
5 SUPERSTRUCTURE | - | sf | 50.00 | $ | - | 0.00%
6 EXTERIOR SKIN | - | ea | 1,100.00 | $ | - | 0.00%
7 ROOFING | - | sf | 5.00 | $ | - | 0.00%
8 INTERIOR CONSTRUCTION | - | sf | 1.25 | $ | - | 0.00%
9 CONVEYING | - | ls | 40,000.00 | $ | - | 0.00%
10 SPECIAL CONSTRUCTION | - | ea | 400.00 | $ | - | 0.00%
11 PLUMBING - Domestic | - | ls | 50,000.00 | $ | - | 0.00%
12 FIRE PROTECTION | - | sf | 3.50 | $ | - | 0.00%
13 MECHANICAL | - | sf | 5.00 | $ | - | 0.00%
14 ELECTRICAL | - | sf | - | $ | - | 0.00%
14.1 AUDIO VISUAL | - | sf | 48.00 | $ | - | 0.00%
**CURRENT ESTIMATE SUBTOTAL (COST OF WORK)** | $ | 57,000 | $ | 9.26 | 70.04%

**MARGINS & ADJUSTMENTS**
15 GENERAL CONDITIONS | 14.00% | $ | 7,980 | $ | 1.30 | 9.81%
16 TEMPORARY PROTECTION | 0.50% | $ | 285 | $ | 0.05 | 0.35%
17 TEMPORARY MEP SYSTEMS | 0.00% | $ | - | $ | - | 0.00%
18 OT PREMIUMS/LOP | 0.00% | $ | - | $ | - | 0.00%
19 LEED REQUIREMENTS | 0.00% | $ | - | $ | - | 0.00%
20 BONDS/SDH | 2.10% | $ | 1,371 | $ | 0.22 | 1.68%
21 BUILDERS RISK | 0.40% | $ | 267 | $ | 0.04 | 0.33%
22 DESIGN CONTINGENCY (cow) | 10.00% | $ | 5,700 | $ | 0.93 | 7.00%
23 CM/GC CONSTR.CONTINGENCY | 5.00% | $ | 3,630 | $ | 0.59 | 4.46%
24 FEE | 3.20% | $ | 2,439 | $ | 0.40 | 3.00%
25 ESCALATION/MARKET CONDITIONS | 3.00% | $ | 1,710 | $ | 0.28 | 2.10%
26 PRECONSTRUCTION | 1 | ls | 1,000 | $ | 1,000 | $ | 0.16 | 1.23%
**MARGIN & ADJUSTMENT SUBTOTALS** | $ | 24,382 | $ | 3.96 | 29.96%
**CONSTRUCTION TOTALS** | $ | 81,382 | $ | 13.23 | 100.00%

**SUMMARY:**
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MARGINS &amp; ADJUSTMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DESCRIPTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OWNER:</strong> UNIVERSITY OF OREGON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ARCHITECT:</strong> ROWELL BROKAW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOCATION:</strong> EUGENE, OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROJECT:</strong> 150 COLUMBIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CURRENT ESTIMATE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.1 AUDIO VISUAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.054</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>SUMMARY:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL AREA NARR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL SITEWORK</strong></td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AREA SCHEDULE</th>
<th>COST MODEL OPTION 2.3</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Floor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lobby</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5,513</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>640</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL BUILD AREA</td>
<td>6,313</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DEMOLITION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drywall Walls</td>
<td>500</td>
<td>sf</td>
<td>6.00</td>
<td>3,000</td>
<td>11.09%</td>
</tr>
<tr>
<td>2 SITEWORK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architect - by Owner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 FOUNDATIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Perimeter Existing</td>
<td>225</td>
<td>sf</td>
<td>75.00</td>
<td>16,875</td>
<td>62.38%</td>
</tr>
<tr>
<td>4 SUBSTRUCTURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior - Insulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 SUPERSTRUCTURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dowel to Ext Wall for New Site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 EXTERIOR SKIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historic Exterior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 ROOFING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rework/Flash Penetrations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 INTERIOR CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Drywall Walks</td>
<td>500</td>
<td>sf</td>
<td>10.00</td>
<td>5,000</td>
<td>18.48%</td>
</tr>
<tr>
<td>9 CONVEYING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator - Misc Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 SPECIAL CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>144</td>
<td>ea</td>
<td>400.00</td>
<td>57,600</td>
<td>-23.66%</td>
</tr>
<tr>
<td>11 PLUMBING - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 FIRE PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 MECHANICAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical - Reuse Existing System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 ELECTRICAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - Telecom/Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.1 AUDIO VISUAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Visual - Telecom Estimate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 GENERAL CONDITIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 TEMPORARY MEP SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 OT PREMIUMS/LOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 LEED REQUIREMENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 BONDS/SDI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 BUILDERS RISK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 DESIGN CONTINGENCY (low)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 CM/GC CONSTR.CONTINGENCY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 FEE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 ESCALATION/MARKET CONDITIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UNIVERSITY OF OREGON - 150 Columbia</strong></td>
<td>OPTION 2.3 - COST MODEL EST1 REV0</td>
<td>9/1/2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DATE:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ESTIMATE:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ARCHITECT:</strong> ROWELL BROKAW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OWNER:</strong> UNIVERSITY OF OREGON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOCATION:</strong> EUGENE, OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROJECT:</strong> 150 COLUMBIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CURRENT ESTIMATE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.1 AUDIO VISUAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.054</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>SUMMARY:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL SITEWORK</strong></td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AREA NARR</strong></td>
<td>6,313</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL BUILD AREA</strong></td>
<td>6,313</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL BLDG AREA</strong></td>
<td>27,054</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CONSTRUCTION</strong></td>
<td>18,475</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL PROJECT</strong></td>
<td>36,929</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MARGINS & ADJUSTMENTS

CURRENT ESTIMATE

DESCRIPTION
OWNER: UNIVERSITY OF OREGON
ARCHITECT: ROWELL BROKAW
LOCATION: EUGENE, OR
PROJECT: 150 COLUMBIA

14.1 AUDIO VISUAL

15 GENERAL CONDITIONS
16 TEMPORARY PROTECTION
17 TEMPORARY MEP SYSTEMS
18 OT PREMIUMS/LOP
19 LEED REQUIREMENTS
20 BONDS/SDI
21 BUILDERS RISK
22 DESIGN CONTINGENCY (cow)
23 CM/GC CONSTR.CONTINGENCY
24 FEE
25 ESCALATION/MARKET CONDITIONS
26 PRECONSTRUCTION

MARGIN & ADJUSTMENT SUBTOTALS

CONSTRUCTION TOTALS

SUMMARY:
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 DEMOLITION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal Concrete (Stair &amp; Slab on Grade)</td>
<td>257</td>
<td>sf</td>
<td>10.00</td>
<td>$5,195</td>
<td>$0.84</td>
<td>8.96%</td>
</tr>
<tr>
<td>Vertical Exterior Concrete Cut</td>
<td>75</td>
<td>sf</td>
<td>35.00</td>
<td>$2,570</td>
<td>$0.42</td>
<td></td>
</tr>
<tr>
<td><strong>2 SITEWORK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3 FOUNDATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations Perimeter Existing</td>
<td>-</td>
<td>lf</td>
<td>475.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>4 SUBSTRUCTURE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New 6&quot; Slab w Dowels</td>
<td>247</td>
<td>sf</td>
<td>8.00</td>
<td>$1,976</td>
<td>$0.20</td>
<td>0.22%</td>
</tr>
<tr>
<td>New Slab</td>
<td>55</td>
<td>lf</td>
<td>125.00</td>
<td>$6,875</td>
<td>$1.50</td>
<td>0.78%</td>
</tr>
<tr>
<td>HandRail</td>
<td>41</td>
<td>lf</td>
<td>225.00</td>
<td>$9,225</td>
<td>$2.13</td>
<td>1.00%</td>
</tr>
<tr>
<td>Step Walls/Excavation</td>
<td>175</td>
<td>sf</td>
<td>75.00</td>
<td>$13,125</td>
<td>$2.09</td>
<td>0.33%</td>
</tr>
<tr>
<td><strong>5 SUPERSTRUCTURE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dowel to Exit Wall for New SW (5500 sf)</td>
<td>-</td>
<td>ea</td>
<td>22.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>6 EXTERIOR SKIN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historic Exterior</td>
<td>-</td>
<td>lf</td>
<td>25,000.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>7 ROOFING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofwork/Flash Penetrations</td>
<td>-</td>
<td>lf</td>
<td>25,000.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>8 INTERIOR CONSTRUCTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors/Frame/Hardware</td>
<td>1</td>
<td>ea</td>
<td>3,500.00</td>
<td>$1,500</td>
<td>$0.49</td>
<td>0.05%</td>
</tr>
<tr>
<td>Painting Walls</td>
<td>130</td>
<td>sf</td>
<td>280.80</td>
<td>$36,500</td>
<td>$2.80</td>
<td>6.80%</td>
</tr>
<tr>
<td>Paint Doors &amp; Frames</td>
<td>1</td>
<td>ea</td>
<td>250.00</td>
<td>$250</td>
<td>$0.42</td>
<td>0.05%</td>
</tr>
<tr>
<td><strong>9 CONVEYING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator - Misc Work</td>
<td>-</td>
<td>lf</td>
<td>40,000.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>10 SPECIAL CONSTRUCTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>-</td>
<td>ea</td>
<td>400.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>11 PLUMBING - Domestic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixtures</td>
<td>-</td>
<td>ea</td>
<td>3,200.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>12 FIRE PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>-</td>
<td>sf</td>
<td>3.50</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>13 MECHANICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical - Reuse Existing System</td>
<td>-</td>
<td>sf</td>
<td>5.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>14 ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - Telecom/Data</td>
<td>-</td>
<td>sf</td>
<td>7.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>14.1 AUDIO VISUAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Visual - Shalleck Estimate</td>
<td>-</td>
<td>sf</td>
<td>48.00</td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>CURRENT ESTIMATE SUBTOTAL (COST OF WORK)</strong></td>
<td></td>
<td></td>
<td></td>
<td>$40,426</td>
<td>$6.57</td>
<td>69.69%</td>
</tr>
<tr>
<td><strong>MARGINS &amp; ADJUSTMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>15 GENERAL CONDITIONS</strong></td>
<td>14.00%</td>
<td></td>
<td>$5,660</td>
<td>$0.92</td>
<td>9.76%</td>
<td></td>
</tr>
<tr>
<td><strong>16 TEMPORARY PROTECTION</strong></td>
<td>0.50%</td>
<td></td>
<td>$202</td>
<td>$0.03</td>
<td>0.35%</td>
<td></td>
</tr>
<tr>
<td><strong>17 TEMPORARY MEP SYSTEMS</strong></td>
<td>0.00%</td>
<td></td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td><strong>18 OT PREMIUMS/LOP</strong></td>
<td>0.00%</td>
<td></td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td><strong>19 LEED REQUIREMENTS</strong></td>
<td>0.00%</td>
<td></td>
<td>$ -</td>
<td>$ -</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td><strong>20 BONDS/SDI</strong></td>
<td>2.10%</td>
<td></td>
<td>$972</td>
<td>$0.16</td>
<td>1.68%</td>
<td></td>
</tr>
<tr>
<td><strong>21 BUILDERS RISK</strong></td>
<td>0.40%</td>
<td></td>
<td>$189</td>
<td>$0.03</td>
<td>0.33%</td>
<td></td>
</tr>
<tr>
<td><strong>22 DESIGN CONTINGENCY (cow)</strong></td>
<td>10.00%</td>
<td></td>
<td>$4,043</td>
<td>$0.66</td>
<td>6.97%</td>
<td></td>
</tr>
<tr>
<td><strong>23 CM/GC CONSTR-CONTINGENCY</strong></td>
<td>5.00%</td>
<td></td>
<td>$2,575</td>
<td>$0.42</td>
<td>4.44%</td>
<td></td>
</tr>
<tr>
<td><strong>24 FEE</strong></td>
<td>3.20%</td>
<td></td>
<td>$1,730</td>
<td>$0.28</td>
<td>2.98%</td>
<td></td>
</tr>
<tr>
<td><strong>25 ESCALATION/MARKET CONDITIONS</strong></td>
<td>3.00%</td>
<td></td>
<td>$1,213</td>
<td>$0.20</td>
<td>2.09%</td>
<td></td>
</tr>
<tr>
<td><strong>26 PRECONSTRUCTION</strong></td>
<td>1</td>
<td>ls</td>
<td>1,000</td>
<td>$1,000</td>
<td>$1.61</td>
<td>1.72%</td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$17,583</td>
<td>$2.86</td>
<td>30.31%</td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$58,009</td>
<td>$9.43</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
## UNIVERSITY OF OREGON - 150 Columbia
### OPTION 3 - COST MODEL EST1 REVO

**PROJECT:** UO 150 Columbia  
**LOCATION:** EUGENE, OR  
**ARCHITECT:** ROWELL BROKAW  
**OWNER:** UNIVERSITY OF OREGON

### AREA SUMMARY:
- **COST MODEL OPTION 3**
  - Basement: 2,202 sf
  - 1st Floor: 8,785 sf
  - Penthouse: 1,500 sf
  - TOTAL BLDG AREA: 10,285 sf

### TOTAL SITEWORK AREA: 1,920 sf

### DESCRIPTION

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DEMOLITION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Demolition</td>
<td>1,920</td>
<td>sf</td>
<td>7.50</td>
<td>$14,400</td>
<td>$1.40</td>
<td>2.44%</td>
</tr>
<tr>
<td>Building Demolition</td>
<td>8,785</td>
<td>sf</td>
<td>12.00</td>
<td>$105,420</td>
<td>$10.50</td>
<td>12.35%</td>
</tr>
<tr>
<td>Basement Demolition</td>
<td>1,202</td>
<td>sf</td>
<td>13.00</td>
<td>$26,424</td>
<td>$2.57</td>
<td>4.38%</td>
</tr>
<tr>
<td>2 SITEWORK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grading/Excavation/Backfill</td>
<td>142</td>
<td>cy</td>
<td>50.00</td>
<td>$7,100</td>
<td>$0.49</td>
<td>0.69%</td>
</tr>
<tr>
<td>Grading/Excavation/Backfill - Building</td>
<td>3,000</td>
<td>cy</td>
<td>25.00</td>
<td>$75,000</td>
<td>$2.50</td>
<td>7.92%</td>
</tr>
<tr>
<td>Structural Fill</td>
<td>782</td>
<td>cy</td>
<td>25.00</td>
<td>$19,550</td>
<td>$2.54</td>
<td>2.44%</td>
</tr>
<tr>
<td>Erosion Control/Water Pump Etc</td>
<td>1</td>
<td>%</td>
<td>50,000.00</td>
<td>$50,000</td>
<td>$5.00</td>
<td>6.16%</td>
</tr>
<tr>
<td>Utilities - Storm, Sanitary (Rework Drain@ Landing)</td>
<td>1</td>
<td>ea</td>
<td>2,000.00</td>
<td>$2,000</td>
<td>$0.20</td>
<td>0.19%</td>
</tr>
<tr>
<td>Tap Water Line/Vault/DGC</td>
<td>1</td>
<td>ea</td>
<td>45,000.00</td>
<td>$45,000</td>
<td>$4.50</td>
<td>4.88%</td>
</tr>
<tr>
<td>Sidewalls</td>
<td>1,941</td>
<td>sf</td>
<td>8.00</td>
<td>$15,328</td>
<td>$7.88</td>
<td>1.51%</td>
</tr>
<tr>
<td>Concrete Retaining Wall footings</td>
<td>7</td>
<td>cy</td>
<td>550.00</td>
<td>$3,850</td>
<td>$0.70</td>
<td>0.37%</td>
</tr>
<tr>
<td>Concrete Retaining Wall</td>
<td>302</td>
<td>sf</td>
<td>60.00</td>
<td>$18,120</td>
<td>$0.60</td>
<td>1.76%</td>
</tr>
<tr>
<td>Ramp/Steps/AOA</td>
<td>241</td>
<td>ft</td>
<td>100.00</td>
<td>$24,100</td>
<td>$0.22</td>
<td>2.44%</td>
</tr>
<tr>
<td>Guardrails/Handrails (incl Paint)</td>
<td>50</td>
<td>ft</td>
<td>100.00</td>
<td>$5,000</td>
<td>$0.05</td>
<td>0.49%</td>
</tr>
<tr>
<td>Site Electrical</td>
<td>5</td>
<td>ea</td>
<td>5,000.00</td>
<td>$25,000</td>
<td>$5.00</td>
<td>2.41%</td>
</tr>
<tr>
<td>Misc Bike Racks/User etc</td>
<td>25</td>
<td>ea</td>
<td>750.00</td>
<td>$18,750</td>
<td>$0.75</td>
<td>1.82%</td>
</tr>
<tr>
<td>Covered Bike Parking Allowance</td>
<td>377</td>
<td>sf</td>
<td>125.00</td>
<td>$47,125</td>
<td>$1.26</td>
<td>4.58%</td>
</tr>
<tr>
<td>3 FOUNDATIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Footings</td>
<td>60</td>
<td>cy</td>
<td>550.00</td>
<td>$33,000</td>
<td>$0.55</td>
<td>3.22%</td>
</tr>
<tr>
<td>Footings</td>
<td>50</td>
<td>cy</td>
<td>475.00</td>
<td>$23,750</td>
<td>$0.48</td>
<td>2.31%</td>
</tr>
<tr>
<td>Stem Walls</td>
<td>1,000</td>
<td>sf</td>
<td>45.00</td>
<td>$45,000</td>
<td>$0.45</td>
<td>4.38%</td>
</tr>
<tr>
<td>Foundations Perimeter Existing</td>
<td>1</td>
<td>fs</td>
<td>15,000.00</td>
<td>$15,000</td>
<td>$1.00</td>
<td>1.46%</td>
</tr>
<tr>
<td>4 SUBSTRUCTURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6&quot; Slab on Grade</td>
<td>2,860</td>
<td>sf</td>
<td>6.00</td>
<td>$17,160</td>
<td>$0.60</td>
<td>1.78%</td>
</tr>
<tr>
<td>Slab Area - Step Framing</td>
<td>2,469</td>
<td>sf</td>
<td>6.00</td>
<td>$14,814</td>
<td>$0.59</td>
<td>1.44%</td>
</tr>
<tr>
<td>8&quot; Slipped Floor Area</td>
<td>1,549</td>
<td>sf</td>
<td>7.50</td>
<td>$19,118</td>
<td>$1.24</td>
<td>1.88%</td>
</tr>
<tr>
<td>Stage Frame Area</td>
<td>933</td>
<td>ft</td>
<td>25.00</td>
<td>$23,325</td>
<td>$0.25</td>
<td>2.27%</td>
</tr>
<tr>
<td>Concrete Ramp</td>
<td>227</td>
<td>sf</td>
<td>25.00</td>
<td>$5,675</td>
<td>$0.22</td>
<td>0.55%</td>
</tr>
<tr>
<td>Rock Prep</td>
<td>10,000</td>
<td>sf</td>
<td>3.00</td>
<td>$30,000</td>
<td>$0.30</td>
<td>4.88%</td>
</tr>
<tr>
<td>5 SUPERSTRUCTURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel Structure 18'/14'</td>
<td>88</td>
<td>tn</td>
<td>4,200.00</td>
<td>$369,600</td>
<td>$4.20</td>
<td>45.94%</td>
</tr>
<tr>
<td>Structural/Steel Penthouse 13'/16'</td>
<td>12</td>
<td>tn</td>
<td>4,200.00</td>
<td>$50,400</td>
<td>$4.20</td>
<td>4.90%</td>
</tr>
<tr>
<td>Rough Carpentry Superstructure</td>
<td>10,258</td>
<td>sf</td>
<td>2.00</td>
<td>$20,518</td>
<td>$2.00</td>
<td>1.99%</td>
</tr>
<tr>
<td>Structural Steel Stairs/Pan Fill</td>
<td>50</td>
<td>trd</td>
<td>1,000.00</td>
<td>$50,000</td>
<td>$1.00</td>
<td>4.88%</td>
</tr>
<tr>
<td>Misc Structural/Metals</td>
<td>10,258</td>
<td>sf</td>
<td>2.50</td>
<td>$25,645</td>
<td>$0.25</td>
<td>2.49%</td>
</tr>
<tr>
<td>Slab for Mech Units</td>
<td>1,308</td>
<td>sf</td>
<td>10.00</td>
<td>$13,080</td>
<td>$0.10</td>
<td>1.46%</td>
</tr>
<tr>
<td>Spray Fireproofing ???</td>
<td>227</td>
<td>sf</td>
<td>25.00</td>
<td>$5,675</td>
<td>$0.25</td>
<td>0.55%</td>
</tr>
<tr>
<td>Concrete Wall</td>
<td>1,000</td>
<td>sf</td>
<td>50.00</td>
<td>$50,000</td>
<td>$0.50</td>
<td>4.88%</td>
</tr>
<tr>
<td>6 EXTERIOR SKIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Wall Framing/Board/Blueskin</td>
<td>10,675</td>
<td>sf</td>
<td>20.00</td>
<td>$213,500</td>
<td>$20.76</td>
<td>21.78%</td>
</tr>
<tr>
<td>Framing Penthouse (no blueskin/insul)</td>
<td>1,760</td>
<td>sf</td>
<td>15.00</td>
<td>$26,400</td>
<td>$2.00</td>
<td>2.57%</td>
</tr>
<tr>
<td>Entry Storefront/Cut In Window</td>
<td>600</td>
<td>sf</td>
<td>75.00</td>
<td>$45,000</td>
<td>$0.75</td>
<td>4.38%</td>
</tr>
<tr>
<td>Flashing/Lentils</td>
<td>8,008</td>
<td>sf</td>
<td>28.00</td>
<td>$224,000</td>
<td>$2.80</td>
<td>23.78%</td>
</tr>
<tr>
<td>Exterior Doors [HM]</td>
<td>4</td>
<td>ea</td>
<td>2,000.00</td>
<td>$8,000</td>
<td>$2.00</td>
<td>0.78%</td>
</tr>
<tr>
<td>Glass Exterior Doors</td>
<td>68</td>
<td>ea</td>
<td>500.00</td>
<td>$34,000</td>
<td>$0.50</td>
<td>3.40%</td>
</tr>
<tr>
<td>Penthouse Skin - MF</td>
<td>1,760</td>
<td>sf</td>
<td>45.00</td>
<td>$79,200</td>
<td>$4.49</td>
<td>7.70%</td>
</tr>
<tr>
<td>Misc Exterior</td>
<td>1,000</td>
<td>sf</td>
<td>50.00</td>
<td>$50,000</td>
<td>$0.50</td>
<td>4.88%</td>
</tr>
<tr>
<td>7 ROOFING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Roof</td>
<td>8,785</td>
<td>sf</td>
<td>14.00</td>
<td>$122,990</td>
<td>$11.96</td>
<td>13.03%</td>
</tr>
<tr>
<td>Rework/Flash Penetrations</td>
<td>500</td>
<td>ft</td>
<td>22.00</td>
<td>$11,000</td>
<td>$0.22</td>
<td>1.07%</td>
</tr>
<tr>
<td>8 INTERIOR CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough Carpentry</td>
<td>10,000</td>
<td>sf</td>
<td>1.25</td>
<td>$12,500</td>
<td>$1.25</td>
<td>1.22%</td>
</tr>
<tr>
<td>Housekeeping Pads</td>
<td>750</td>
<td>sf</td>
<td>20.00</td>
<td>$15,000</td>
<td>$2.00</td>
<td>1.46%</td>
</tr>
<tr>
<td>Misc Metals</td>
<td>10,000</td>
<td>sf</td>
<td>2.50</td>
<td>$25,000</td>
<td>$0.25</td>
<td>2.43%</td>
</tr>
<tr>
<td>Concrete Stop Framing/Concrete</td>
<td>2,469</td>
<td>sf</td>
<td>30.00</td>
<td>$74,070</td>
<td>$3.00</td>
<td>7.20%</td>
</tr>
<tr>
<td>Sheeted Concrete Floor</td>
<td>1,921</td>
<td>sf</td>
<td>1.50</td>
<td>$2,882</td>
<td>$0.15</td>
<td>0.21%</td>
</tr>
<tr>
<td>Carpet</td>
<td>1,532</td>
<td>sf</td>
<td>6.00</td>
<td>$9,192</td>
<td>$0.60</td>
<td>0.89%</td>
</tr>
<tr>
<td>Wood Base</td>
<td>500</td>
<td>ft</td>
<td>15.00</td>
<td>$7,500</td>
<td>$0.05</td>
<td>0.73%</td>
</tr>
<tr>
<td>Rubber Base</td>
<td>1,000</td>
<td>ft</td>
<td>7.50</td>
<td>$7,500</td>
<td>$0.08</td>
<td>0.73%</td>
</tr>
<tr>
<td>Polished Floors</td>
<td>4,435</td>
<td>sf</td>
<td>7.00</td>
<td>$31,045</td>
<td>$7.00</td>
<td>3.22%</td>
</tr>
<tr>
<td>Coating Mechanical Room</td>
<td>1,500</td>
<td>sf</td>
<td>7.00</td>
<td>$10,500</td>
<td>$0.70</td>
<td>1.02%</td>
</tr>
<tr>
<td>Door Frames/Hardware</td>
<td>7</td>
<td>ea</td>
<td>2,500.00</td>
<td>$17,500</td>
<td>$2.50</td>
<td>1.70%</td>
</tr>
<tr>
<td>Interior Drywall Walls</td>
<td>4,600</td>
<td>sf</td>
<td>9.00</td>
<td>$41,400</td>
<td>$9.00</td>
<td>4.03%</td>
</tr>
<tr>
<td>Allowance Special Sound Board</td>
<td>2,000</td>
<td>sf</td>
<td>15.00</td>
<td>$30,000</td>
<td>$1.50</td>
<td>3.17%</td>
</tr>
<tr>
<td>Interior Glass Partitions &amp; Glass Doors - Vest?</td>
<td>-</td>
<td>sf</td>
<td>87.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Cost Summary**
- **Total Cost:** $959,786
- **Percentage of Total Cost:** 10.86%
## UNIVERSITY OF OREGON - 150 Columbia

### OPTION 3 - COST MODEL EST1 REV0

#### PROJECT: UO 150 Columbia
#### LOCATION: EUGENE, OR
#### ARCHITECT: ROWELL BROKAW
#### OWNER: UNIVERSITY OF OREGON

### AREA SUMMARY:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Cost Model Option 3</th>
<th>NIC area calc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>2,202</td>
<td></td>
</tr>
<tr>
<td>1st Floor</td>
<td>8,785</td>
<td></td>
</tr>
<tr>
<td>Penthouse</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL BLDG AREA</strong></td>
<td><strong>10,285</strong></td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL SITEWORK

<table>
<thead>
<tr>
<th>AREA</th>
<th>1,920</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 CONVEYING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator - Misc Work</td>
<td></td>
<td>%</td>
<td>40,000.00</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10 SPECIAL CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seat</td>
<td>465</td>
<td>ea</td>
<td>400.00</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>11 PLUMBING - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storm Drainage System</td>
<td>10,000</td>
<td>sf</td>
<td>1.00</td>
<td>$15,000</td>
<td>1.46%</td>
<td></td>
</tr>
<tr>
<td>Misc Plumb Watr &amp; Fixture</td>
<td>1</td>
<td>%</td>
<td>10,000.00</td>
<td>$10,000</td>
<td>0.97%</td>
<td></td>
</tr>
<tr>
<td>12 FIRE PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>10,285</td>
<td>sf</td>
<td>3.50</td>
<td>$35,998</td>
<td>3.50%</td>
<td></td>
</tr>
<tr>
<td>13 MECHANICAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Mechanical Unit</td>
<td>12,000</td>
<td>cfm</td>
<td>9.75</td>
<td>$117,000</td>
<td>11.38%</td>
<td></td>
</tr>
<tr>
<td>Piping &amp; Insulation</td>
<td>10,285</td>
<td>sf</td>
<td>8.00</td>
<td>$82,280</td>
<td>8.00%</td>
<td></td>
</tr>
<tr>
<td>Split System</td>
<td>1</td>
<td>ea</td>
<td>10,000.00</td>
<td>$10,000</td>
<td>0.97%</td>
<td></td>
</tr>
<tr>
<td>Equipment - Misc</td>
<td>10,285</td>
<td>sf</td>
<td>1.75</td>
<td>$18,562</td>
<td>1.75%</td>
<td></td>
</tr>
<tr>
<td>Exhaust</td>
<td>10,285</td>
<td>sf</td>
<td>1.00</td>
<td>$10,285</td>
<td>1.00%</td>
<td></td>
</tr>
<tr>
<td>Ductwork (1.25k/ft)/Acoustic Line</td>
<td>15,000</td>
<td>lb</td>
<td>10.00</td>
<td>$150,000</td>
<td>14.58%</td>
<td></td>
</tr>
<tr>
<td>Air Distribution</td>
<td>10,285</td>
<td>sf</td>
<td>1.75</td>
<td>$17,999</td>
<td>1.75%</td>
<td></td>
</tr>
<tr>
<td>Controls/Balancing</td>
<td>10,285</td>
<td>sf</td>
<td>7.00</td>
<td>$71,995</td>
<td>7.00%</td>
<td></td>
</tr>
<tr>
<td>14 ELECTRICAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power &amp; Distribution</td>
<td>10,285</td>
<td>sf</td>
<td>6.00</td>
<td>$61,710</td>
<td>6.00%</td>
<td></td>
</tr>
<tr>
<td>Raceways</td>
<td>10,285</td>
<td>sf</td>
<td>1.50</td>
<td>$15,428</td>
<td>1.50%</td>
<td></td>
</tr>
<tr>
<td>Branch Circuiting</td>
<td>10,285</td>
<td>sf</td>
<td>1.50</td>
<td>$15,428</td>
<td>1.50%</td>
<td></td>
</tr>
<tr>
<td>Lighting &amp; Controls</td>
<td>10,285</td>
<td>sf</td>
<td>14.00</td>
<td>$143,990</td>
<td>14.00%</td>
<td></td>
</tr>
<tr>
<td>Equipment/Misc</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Distributed Antenna System</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>UPS</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Emergency Power</td>
<td>10,285</td>
<td>sf</td>
<td>3.50</td>
<td>$35,998</td>
<td>3.50%</td>
<td></td>
</tr>
<tr>
<td>Access Controls</td>
<td>10,285</td>
<td>ea</td>
<td>2.00</td>
<td>$25,570</td>
<td>2.40%</td>
<td></td>
</tr>
<tr>
<td>Fire Alarm</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Telecom/Data</td>
<td>10,285</td>
<td>sf</td>
<td>5.00</td>
<td>$51,425</td>
<td>5.00%</td>
<td></td>
</tr>
<tr>
<td>14.1 AUDIO VISUAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc Architectural</td>
<td>10,285</td>
<td>sf</td>
<td>1.00</td>
<td>$10,285</td>
<td>1.00%</td>
<td></td>
</tr>
<tr>
<td>Mechanical Additional</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Electrical Additional</td>
<td>10,285</td>
<td>sf</td>
<td>3.00</td>
<td>$30,855</td>
<td>3.00%</td>
<td></td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE SUBTOTAL (COST OF WORK)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 GENERAL CONDITIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 TEMPORARY MEP SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 OT PREMIUMS/LOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 LEED REQUIREMENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 BONDS/SDI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 BUILDERS RISK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 DESIGN CONTINGENCY (cow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 CM/GC CONSTR.CONTINGENCY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 FEE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MARGINS & ADJUSTMENTS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 GENERAL CONDITIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 TEMPORARY MEP SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 OT PREMIUMS/LOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 LEED REQUIREMENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 BONDS/SDI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 BUILDERS RISK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 DESIGN CONTINGENCY (cow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 CM/GC CONSTR.CONTINGENCY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 FEE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 GENERAL CONDITIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 TEMPORARY MEP SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 OT PREMIUMS/LOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 LEED REQUIREMENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 BONDS/SDI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 BUILDERS RISK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 DESIGN CONTINGENCY (cow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 CM/GC CONSTR.CONTINGENCY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 FEE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL SITEWORK AREA:** 1,920

**TOTAL COST:** $4,225,029

**% of Total Cost:** 70.44%
## UNIVERSITY OF OREGON - 150 Columbia
### OPTION 3 - COST MODEL EST1 RE0

**PROJECT:** UO 150 Columbia  
**DATE:** 9/1/2014  
**LOCATION:** EUGENE, OR  
**ARCHITECT:** ROWELL BROKAW  
**OWNER:** UNIVERSITY OF OREGON

### AREA SUMMARY:

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>2,202</td>
<td>NIC area calc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Floor</td>
<td>8,785</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penthouse</td>
<td>1,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL BLDG AREA</strong></td>
<td><strong>10,285</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL SITEWORK AREA

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL SITEWORK AREA</strong></td>
<td><strong>1,920</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DESCRIPTION

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT ESTIMATE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 ESCALATION/MARKET CONDITIONS</td>
<td>3.00%</td>
<td></td>
<td></td>
<td>$126,751</td>
<td>$12.32</td>
<td>2.11%</td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td>1</td>
<td>ls</td>
<td>40,000</td>
<td>$40,000</td>
<td>$3.89</td>
<td>0.67%</td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$1,773,125</td>
<td>$172.40</td>
<td>29.56%</td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$5,998,154</td>
<td>$583.19</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### SUMMARY:
## UNIVERSITY OF OREGON - 150 Columbia

### OPTION LOBBY (L2) - EST1 REV0

**DATE:** 9/1/2014

**LOCATION:** EUGENE, OR

**ARCHITECT:** ROWELL BROKAW

**OWNER:** UNIVERSITY OF OREGON

### AREA SUMMARY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liftway</td>
<td>1</td>
<td>sfl</td>
<td>$12,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate Work</td>
<td>1</td>
<td>sfl</td>
<td>$2,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mason Work</td>
<td>1</td>
<td>sfl</td>
<td>$1,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc Work</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lift Work</td>
<td>1</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk Grading</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Paint</td>
<td>1</td>
<td>sfl</td>
<td>$2,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>1</td>
<td>ea</td>
<td>$400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fixtures</td>
<td>1</td>
<td>ea</td>
<td>$3,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>1</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL BLD AREA

- Lobby: 610
- Expanded Lobby: 610

### CURRENT ESTIMATE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>1</td>
<td>sfl</td>
<td>$12,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk Grading</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Paint</td>
<td>1</td>
<td>sfl</td>
<td>$2,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>1</td>
<td>ea</td>
<td>$400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fixtures</td>
<td>1</td>
<td>ea</td>
<td>$3,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>1</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>1</td>
<td>sfl</td>
<td>$12,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk Grading</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Paint</td>
<td>1</td>
<td>sfl</td>
<td>$2,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>1</td>
<td>ea</td>
<td>$400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fixtures</td>
<td>1</td>
<td>ea</td>
<td>$3,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>1</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>1</td>
<td>sfl</td>
<td>$12,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sidewalk Grading</td>
<td>641</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Glass Doors</td>
<td>6</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sxn Painting</td>
<td>1</td>
<td>sfl</td>
<td>$1,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior Paint</td>
<td>1</td>
<td>sfl</td>
<td>$2,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td>1</td>
<td>ea</td>
<td>$400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbing - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fixtures</td>
<td>1</td>
<td>ea</td>
<td>$3,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td>1</td>
<td>sfl</td>
<td>$1,200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### UNIVERSITY OF OREGON - 150 Columbia

**OPTION LOBBY (L2) - EST1 REVO**

**PROJECT:** 150 Columbia  
**DATE:** 9/1/2014  
**LOCATION:** Eugene, OR  
**ARCHITECT:** Rowell Brokaw  
**OWNER:** University of Oregon

#### AREA SUMMARY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>UNIT PRICING</th>
<th>COST</th>
<th>% OF TOTAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT ESTIMATE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MECHANICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical - Reuse Existing System</td>
<td>641</td>
<td>sf</td>
<td>20.00</td>
<td>$12,820</td>
<td>4.89%</td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - Branch Circuiting</td>
<td>641</td>
<td>sf</td>
<td>2.00</td>
<td>$1,282</td>
<td>0.47%</td>
</tr>
<tr>
<td>Electrical - Lighting &amp; Controls</td>
<td>641</td>
<td>sf</td>
<td>14.00</td>
<td>$8,974</td>
<td>3.37%</td>
</tr>
<tr>
<td>Electrical - Access Controls</td>
<td>2</td>
<td>ea</td>
<td>3,500.00</td>
<td>$7,000</td>
<td>2.65%</td>
</tr>
<tr>
<td>Mechanical - Fire Alarm</td>
<td>641</td>
<td>sf</td>
<td>7.00</td>
<td>$4,487</td>
<td>1.68%</td>
</tr>
<tr>
<td><strong>AUDIO VISUAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Visual - Shalleck Estimate</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>CURRENT ESTIMATE SUBTOTAL (COST OF WORK)</strong></td>
<td></td>
<td></td>
<td></td>
<td>$183,613</td>
<td>70.10%</td>
</tr>
<tr>
<td><strong>MARGINS &amp; ADJUSTMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Conditions</td>
<td>14.00%</td>
<td></td>
<td></td>
<td>$25,706</td>
<td>9.81%</td>
</tr>
<tr>
<td>Temporary Protection</td>
<td>0.50%</td>
<td></td>
<td></td>
<td>$918</td>
<td>0.33%</td>
</tr>
<tr>
<td>Temporary MEP Systems</td>
<td>0.00%</td>
<td></td>
<td></td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>SST Premiums/SOP</td>
<td>0.00%</td>
<td></td>
<td></td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>LED Requirements</td>
<td>0.00%</td>
<td></td>
<td></td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Bonds/SDI</td>
<td>2.10%</td>
<td></td>
<td></td>
<td>$4,415</td>
<td>1.60%</td>
</tr>
<tr>
<td>Builders Risk</td>
<td>0.40%</td>
<td></td>
<td></td>
<td>$859</td>
<td>0.31%</td>
</tr>
<tr>
<td>Design Continuity (cont)</td>
<td>10.00%</td>
<td></td>
<td></td>
<td>$18,361</td>
<td>7.01%</td>
</tr>
<tr>
<td>CM/GC Constr.Contingency</td>
<td>5.00%</td>
<td></td>
<td></td>
<td>$11,694</td>
<td>4.46%</td>
</tr>
<tr>
<td>PTE</td>
<td>3.20%</td>
<td></td>
<td></td>
<td>$7,858</td>
<td>2.90%</td>
</tr>
<tr>
<td>Escalation/Market Conditions</td>
<td>3.00%</td>
<td></td>
<td></td>
<td>$5,508</td>
<td>2.10%</td>
</tr>
<tr>
<td>Preconstruction</td>
<td>11%</td>
<td></td>
<td>3,000</td>
<td>$3,000</td>
<td>1.15%</td>
</tr>
<tr>
<td><strong>MARGIN &amp; ADJUSTMENT SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$78,319</td>
<td>29.90%</td>
</tr>
<tr>
<td><strong>CONSTRUCTION TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td>$261,932</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

**SUMMARY:**
### Current Estimate

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Demolition</td>
<td>1,920</td>
<td>sf</td>
<td>7.50</td>
<td>$14,400</td>
<td>$7.50</td>
<td>5.53%</td>
</tr>
<tr>
<td>2 Site Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grading/Excavation/Backfill</td>
<td>142</td>
<td>cy</td>
<td>50.00</td>
<td>$7,100</td>
<td></td>
<td>3.70%</td>
</tr>
<tr>
<td>Utility - Storm, Sanitary (Rework Drain@ Lending)</td>
<td>1</td>
<td>ea</td>
<td>1,000.00</td>
<td>$2,000</td>
<td></td>
<td>1.04%</td>
</tr>
<tr>
<td>Tap Water Line/Vault/DDC</td>
<td></td>
<td>ea</td>
<td>45,000.00</td>
<td>$ -</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>1,941</td>
<td>sf</td>
<td>8.00</td>
<td>$15,528</td>
<td></td>
<td>8.09%</td>
</tr>
<tr>
<td>Concrete Retaining Wall Footings</td>
<td>7</td>
<td>cy</td>
<td>550.00</td>
<td>$3,850</td>
<td></td>
<td>2.01%</td>
</tr>
<tr>
<td>Concrete Retaining Wall</td>
<td>102</td>
<td>sf</td>
<td>60.00</td>
<td>$18,120</td>
<td></td>
<td>9.44%</td>
</tr>
<tr>
<td>Ramps/Steps/ADA</td>
<td>241</td>
<td>ft</td>
<td>100.00</td>
<td>$24,100</td>
<td></td>
<td>12.55%</td>
</tr>
<tr>
<td>Guardrail/Handrail (incl Paint)</td>
<td>50</td>
<td>ft</td>
<td>100.00</td>
<td>$5,000</td>
<td></td>
<td>2.60%</td>
</tr>
<tr>
<td>Site Electrical</td>
<td>5</td>
<td>ea</td>
<td>5,000.00</td>
<td>$25,000</td>
<td></td>
<td>13.02%</td>
</tr>
<tr>
<td>Misc Bike Rack/Urni etc</td>
<td>25</td>
<td>ea</td>
<td>750.00</td>
<td>$18,750</td>
<td></td>
<td>9.77%</td>
</tr>
<tr>
<td>Covered Bike Parking Allowance</td>
<td>377</td>
<td>sf</td>
<td>125.00</td>
<td>$47,125</td>
<td></td>
<td>24.54%</td>
</tr>
<tr>
<td>3 Foundations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Foundations Perimeter Existing</td>
<td></td>
<td>fl</td>
<td>475.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Substructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Step Walls/Excavation</td>
<td></td>
<td>sf</td>
<td>75.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Superstructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Dowel to Ext Wall for New SW (5500 sf)</td>
<td></td>
<td>ea</td>
<td>22.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Exterior Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Historic Exterior</td>
<td></td>
<td>ls</td>
<td>25,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Roofing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Rework/Flash Penetrations</td>
<td></td>
<td>ls</td>
<td>25,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Interior Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Classroom Allowance (misc work)</td>
<td></td>
<td>sf</td>
<td>5.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Conveying</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Elevator - Misc Work</td>
<td></td>
<td>ls</td>
<td>40,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Special Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>New Classroom Seats</td>
<td></td>
<td>ea</td>
<td>400.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Plumbing - Domestic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Fixtures</td>
<td></td>
<td>ea</td>
<td>3,200.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Fire Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>New Fire Protection System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Mechanical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Mechanical - Reuse Existing System</td>
<td></td>
<td>sf</td>
<td>5.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Electrical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Electrical - Telecom/Data</td>
<td></td>
<td>sf</td>
<td>7.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.1 Audio Visual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Audio Visual - Shalleck Estimate</td>
<td></td>
<td>sf</td>
<td>48.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Current Estimate Subtotal (Cost of Work)

| | | | | | $180,973 | $94.26 | 69.55% |

### Margins & Adjustments

<p>| | | | | | | |
| | | | | | | |
| 15 General Conditions | 14.00% | | | | $25,336 | $13.20 | 9.74% |
| 16 Temporary Protection | 0.50% | | | | $905 | $0.47 | 0.35% |
| 17 Temporary MEP Systems | 0.00% | | | | $ - | $ - | - |
| 18 OT Premiums/LOP | 0.00% | | | | $ - | $ - | - |
| 19 LEED Requirements | 0.00% | | | | $ - | $ - | - |
| 20 Bonds/SDI | 2.10% | | | | $4,351 | $2.27 | 1.67% |
| 21 Builders Risk | 0.40% | | | | $846 | $0.44 | 0.33% |
| 22 Design Contingency (cow) | 10.00% | | | | $18,097 | $9.43 | 6.95% |
| 23 CM/GC Constr. Contingency | 5.00% | | | | $11,525 | $6.00 | 4.43% |
| 24 Fee | 3.20% | | | | $7,745 | $4.03 | 2.98% |
| 25 Escalation/Market Conditions | 3.00% | | | | $5,429 | $2.83 | 2.09% |</p>
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
<th>Cost</th>
<th>$/sf</th>
<th>% of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT ESTIMATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td>1</td>
<td>l/s</td>
<td>5,000</td>
<td>$ 5,000</td>
<td>2.60</td>
<td>1.92%</td>
</tr>
<tr>
<td>MARGIN &amp; ADJUSTMENT SUBTOTALS</td>
<td></td>
<td></td>
<td></td>
<td>$ 79,236</td>
<td>41.27</td>
<td>30.45%</td>
</tr>
<tr>
<td>CONSTRUCTION TOTALS</td>
<td></td>
<td></td>
<td></td>
<td>$ 260,209</td>
<td>135.53</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

SUMMARY:
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DEMOLITION</td>
<td></td>
<td></td>
<td>$32,808</td>
</tr>
<tr>
<td>Flooring</td>
<td>6,213</td>
<td>sf</td>
<td>$5,330</td>
</tr>
<tr>
<td>Acoustic Panels</td>
<td>600</td>
<td>sf</td>
<td>$1,510</td>
</tr>
<tr>
<td>Doors/Frame</td>
<td>12</td>
<td>ft</td>
<td>$200</td>
</tr>
<tr>
<td>Interiors/Drywall Ceilings</td>
<td>3,958</td>
<td>sf</td>
<td>$12,540</td>
</tr>
<tr>
<td>Electrical</td>
<td>6,213</td>
<td>sf</td>
<td>$9,320</td>
</tr>
<tr>
<td>2 SITEWORK</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>Sewer/Exhaust</td>
<td>200</td>
<td>cy</td>
<td>$10,000</td>
</tr>
<tr>
<td>Water Line/Drain/Soil</td>
<td>1</td>
<td>ea</td>
<td>$1,000</td>
</tr>
<tr>
<td>Pumps</td>
<td>1</td>
<td>ea</td>
<td>$45,000</td>
</tr>
<tr>
<td>Concrete Retaining Wall Footings</td>
<td>7</td>
<td>cy</td>
<td>$3,850</td>
</tr>
<tr>
<td>Concrete Retaining Wall</td>
<td>269</td>
<td>sf</td>
<td>$16,140</td>
</tr>
<tr>
<td>Septic Manholes</td>
<td>406</td>
<td>sf</td>
<td>$4,550</td>
</tr>
<tr>
<td>Handrails/Railing</td>
<td>135</td>
<td>ft</td>
<td>$13,500</td>
</tr>
<tr>
<td>3 FOUNDATIONS</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>4 SUBSTRUCTURE</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>5 SUPERSTRUCTURE</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>6 EXTERIOR SKIN</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>7 ROOFING</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>8 INTERIOR CONSTRUCTION</td>
<td></td>
<td></td>
<td>$149,752</td>
</tr>
<tr>
<td>Carpet</td>
<td>1,133</td>
<td>sf</td>
<td>$11,313</td>
</tr>
<tr>
<td>Polished Floors</td>
<td>3,765</td>
<td>sf</td>
<td>$24,473</td>
</tr>
<tr>
<td>Ceramic Tile Floor</td>
<td>655</td>
<td>sf</td>
<td>$14,410</td>
</tr>
<tr>
<td>Doors/Frame/Hardware</td>
<td>5</td>
<td>ea</td>
<td>$17,500</td>
</tr>
<tr>
<td>Painting Walls</td>
<td>7,392</td>
<td>sf</td>
<td>$6,394</td>
</tr>
<tr>
<td>Paint Ceilings</td>
<td>2,628</td>
<td>sf</td>
<td>$3,154</td>
</tr>
<tr>
<td>Paint Doors &amp; Frames</td>
<td>8</td>
<td>ea</td>
<td>$2,500</td>
</tr>
<tr>
<td>Acoustic Panels</td>
<td>600</td>
<td>sf</td>
<td>$12,000</td>
</tr>
<tr>
<td>Framing Allowance (misc work)</td>
<td>6,213</td>
<td>sf</td>
<td>$12,065</td>
</tr>
<tr>
<td>Ceilings - ACT</td>
<td>3,585</td>
<td>sf</td>
<td>$17,925</td>
</tr>
<tr>
<td>9 CONVYINGING</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>10 SPECIAL CONSTRUCTION</td>
<td></td>
<td></td>
<td>$188,000</td>
</tr>
<tr>
<td>New Classroom Seat</td>
<td>470</td>
<td>ea</td>
<td>$188,000</td>
</tr>
<tr>
<td>11 PLUMBING - Domestic</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>12 FIRE PROTECTION</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>13 MECHANICAL</td>
<td></td>
<td></td>
<td>$0.00%</td>
</tr>
<tr>
<td>14 ELECTRICAL</td>
<td></td>
<td></td>
<td>$201,628</td>
</tr>
</tbody>
</table>

**Area Summary:**

- Basement: -
- 1st Floor: 5,513
- Lobby: 640
- TOTAL BLDG AREA: 6,153

**Estimated Values:**

- Option 0.75 Pricing derived from Option 1 Pricing.
- 2014-09-22, RBA

**Price Breakdown:**

- Electrical - Main Panel Rework & Metering: 6,213 sf, $18,639
- Miscellaneous Work: 470 ea, 400.00
- demolition: 3,958 sf, 6,213
- SUBSTRUCTURE: 6,213 sf, 1,510
- INTERIOR CONSTRUCTION: 1,133 sf, 8.50
- Other: 2,990 sf, 3,958
- Special Construction: 406 ea, 1,000.00
- PLUMBING: Domestic: 5 ea, 5.00
- MECHANICAL: 8 ea, 1,000.00
- FIRE PROTECTION: 6,213 sf, 1,000.00

**Total Estimated Cost:**

- $32,808
- $12,540
- $9,320
- $10,000
- $24,473
- $17,500
- $6,394
- $3,154
- $2,500
- $12,000
- $12,065
- $17,925
- $188,000

**Total Estimated Cost:** $201,628
**UNIVERSITY OF OREGON - 150 Columbia**

**Option 0.75**

**DATE:** 2014-09-22  
**ESTIMATE:** RBA

**LOCATION:** EUGENE, OR

**ARCHITECT:** ROWELL BROKAW

**OWNER:** UNIVERSITY OF OREGON

### AREA SUMMARY:

<table>
<thead>
<tr>
<th>Level</th>
<th>Area (sf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>-</td>
</tr>
<tr>
<td>1st Floor</td>
<td>5,513</td>
</tr>
<tr>
<td>Lobby</td>
<td>640</td>
</tr>
<tr>
<td><strong>TOTAL BLDG AREA</strong></td>
<td><strong>6,153</strong></td>
</tr>
</tbody>
</table>

### DESCRIPTION

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical - Secondary Panel Rework</td>
<td>6,213</td>
<td>sf</td>
<td>1.00</td>
</tr>
<tr>
<td>Electrical - Misc Distribution Repair</td>
<td>6,213</td>
<td>sf</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - Lighting &amp; Controls</td>
<td>6,213</td>
<td>sf</td>
<td>14.00</td>
</tr>
<tr>
<td>Electrical - Misc Equipment</td>
<td>6,213</td>
<td>sf</td>
<td>0.50</td>
</tr>
<tr>
<td>Electrical - Emergency Power</td>
<td>-</td>
<td>sf</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - UPS</td>
<td>-</td>
<td>sf</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - Emergency Power</td>
<td>-</td>
<td>sf</td>
<td>-</td>
</tr>
<tr>
<td>Electrical - Access Controls</td>
<td>6</td>
<td>ea</td>
<td>3,500.00</td>
</tr>
<tr>
<td>Electrical - Fire Alarm</td>
<td>6,213</td>
<td>sf</td>
<td>3.50</td>
</tr>
<tr>
<td>Electrical - Telecom/Data</td>
<td>6,213</td>
<td>sf</td>
<td>7.00</td>
</tr>
</tbody>
</table>

### 14.1 AUDIO VISUAL

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Visual - Shalleck Estimate</td>
<td>5,573</td>
<td>sf</td>
<td>48.00</td>
</tr>
<tr>
<td>Misc Architectural</td>
<td>5,573</td>
<td>sf</td>
<td>1.00</td>
</tr>
<tr>
<td>Electrical Additional</td>
<td>5,573</td>
<td>sf</td>
<td>3.00</td>
</tr>
</tbody>
</table>

### CURRENT ESTIMATE SUBTOTAL (COST OF WORK)

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### MARGINS & ADJUSTMENTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
<th>Total (Cost of Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 GENERAL CONDITIONS</td>
<td>14.00%</td>
<td>$101,806</td>
</tr>
<tr>
<td>16 TEMPORARY PROTECTION</td>
<td>0.50%</td>
<td>$3,638</td>
</tr>
<tr>
<td>17 TEMPORARY MEP SYSTEMS</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>18 OT PREMIUMS/LOP</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>19 LEED REQUIREMENTS</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>20 BONDS/SDI</td>
<td>2.10%</td>
<td>$15,271</td>
</tr>
<tr>
<td>21 BUILDERS RISK</td>
<td>0.40%</td>
<td>$2,909</td>
</tr>
<tr>
<td>22 DESIGN CONTINGENCY (cow)</td>
<td>10.00%</td>
<td>$72,719</td>
</tr>
<tr>
<td>23 CM/GC CONSTR.CONTINGENCY</td>
<td>5.00%</td>
<td>$36,359</td>
</tr>
<tr>
<td>24 FEE</td>
<td>3.20%</td>
<td>$23,270</td>
</tr>
<tr>
<td>25 ESCALATION/MARKET CONDITIONS</td>
<td>3.00%</td>
<td>$21,818</td>
</tr>
<tr>
<td>26 PRECONSTRUCTION</td>
<td>1</td>
<td>Is</td>
</tr>
</tbody>
</table>

### MARGIN & ADJUSTMENT SUBTOTALS

<table>
<thead>
<tr>
<th>Description</th>
<th>Total (Cost of Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### CONSTRUCTION TOTALS

<table>
<thead>
<tr>
<th>Description</th>
<th>Total (Cost of Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### SUMMARY:

<table>
<thead>
<tr>
<th>Description</th>
<th>Total (Cost of Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**2014-09-11, RBA**

Option 0.75 Pricing derived from Option 1 Pricing.
Chris,

Below are listed the budget recommendations for auditorium systems within the U of O Columbia 150 project. Please forward this to the Cost Estimators for the project for inclusion in the total estimate. It is important to note that not all sections represent a complete and installed cost. In particular, the Cost Estimator(s) who is/are responsible for structural and electrical costs will need to include presentation systems infrastructure and installation (in the case of electrical) that normally falls under Structural and Electrical. Those major needs are described below.

The recommendations below are listed in 2013 dollars and do not include General Contractors mark-up and general conditions, escalation or overall contingencies.

1. Columbia 150

AV Systems – Section 274116  $250,000
Installed cost for AV systems including voice reinforcement system, audio DSP, wireless mics, column loudspeakers and ceiling loudspeakers, assistive listening, (2) HD projectors with roll-down screens, (3) ceiling-mounted LCD screens for rear-seated students, matrix video switcher, instructor’s lectern, touchpanel control system, and accessories. Includes wire, pull and system integration and installation. Related Exclusions: Electrical work including all line voltage connections (complete), and providing and installing all low-voltage conduit and backboxes required by the AV system.

2. Opt #1- Broadcast Systems

AV Systems – Section 274116  $125,000
Installed cost for HD broadcast systems with (4) PTZ cameras, switcher, recording, streaming, furniture and utility items, similar to Straub Hall. Includes wire, pull and system integration and installation. Related Exclusions: Electrical work including all line voltage connections (complete), and providing and installing all low-voltage conduit and backboxes required by the AV system.
3. **Opt #2- Whiteboard Capture & Fixed Document Cameras**

AV Systems – Section 274116  
$30,000

Installed cost for whiteboard capture system and (2) overhead fixed document cameras for science experiment display.  
Includes wire, pull and system integration and installation.

4. **Loose Equipment (FF&E)**

Allowance  
$20,000

Includes assistive listening receivers, mics, stands, portable equipment, cables, etc.

5. **Miscellaneous Aspects To Be Included By Cost Estimator In Other Sections**

**Electrical:**  (See engineering drawings)

**Mechanical:**  (See engineering drawings)

**Miscellaneous:**  
Blackout shades on all exterior windows in rooms with video projection.

**END OF REPORT**
Dates on chart are Mondays. Start dates are generally the Monday of the week indicated.

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/1/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/8/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/15/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/22/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/29/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/13/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/20/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/27/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/3/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/10/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/17/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/1/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/8/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/15/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/22/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/29/14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/5/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/12/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/19/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/26/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/2/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/9/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/16/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/23/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/2/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/9/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/16/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/23/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/30/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/6/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/13/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/20/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/27/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/4/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/11/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/18/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/25/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/1/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/8/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/15/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/22/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/29/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/6/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/13/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/20/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/27/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/3/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/10/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/17/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/24/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/31/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/7/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/14/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/21/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/28/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/5/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/12/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/19/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/26/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/2/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/9/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/16/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/23/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/30/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/7/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/14/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/21/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/28/15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/11/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/18/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/25/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/1/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/8/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/15/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/22/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/29/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/7/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/14/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/21/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/28/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/4/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/11/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/18/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/25/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/2/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/9/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/16/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/23/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/30/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/6/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/13/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/20/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/27/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/4/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/11/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/18/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/25/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/1/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/8/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/15/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/22/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/29/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/5/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/12/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/19/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/26/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/3/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/10/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/17/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/24/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/31/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/7/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/14/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/21/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/28/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/5/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/12/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/19/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/26/16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2/17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/9/17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/16/17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/23/17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/30/17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Schedules shown on chart assume selected design team given notice to proceed mid-October.
As existing construction, without modification Columbia Hall 150 is not required to meet current building code standards, but is “grandfathered” to meet only those building code standards in place at the time of its construction. All new or renovation construction within the space would be subject to current building code and any such new or renovated elements would have to meet current building code standards in their construction. This requirement does not apply to the space as a whole, only those elements newly constructed or affected by the renovation.

There is also a requirement for a percentage of overall construction budget of any renovation project to be dedicated to the removal of barriers to universal access to the space beyond the requirement for new/renovated construction to meet current building code.

Specific items which will need to be considered:

- **Seismic Upgrades:** Seismic upgrade of the space has not been considered as part of these studies. With no change of occupancy or significant structural alteration, Options 0.75, 1 and 2 will not require mandatory seismic upgrades to the building structure, but new ceiling construction including lighting, audio visual and other equipment mounted at ceiling would be required to meet current code seismic requirements at the time of its construction. New construction in Option 3 would be required to comply with current code seismic requirements at the time of its construction.

- **Accessibility:** Option 0.75 includes minimal accessibility upgrades. As this project consists of renewal and replacement of finishes in place, with no structural modifications included, there should be no mandatory requirement for the removal of architectural barriers as in Options 1 and 2 (This interpretation should be verified with Authorities Having Jurisdiction during project design).

  For Options 1 and 2, ORS 447.241 requires that, to the maximum extent feasible, paths of travel to renovated areas be made accessible. ORS 447.241 also states that alterations to the path of travel made for increased accessibility may be deemed disproportionate when their cost exceeds 25 percent of the cost of the overall alteration. Where alterations are deemed disproportionate, the path of travel is to be made accessible to the maximum extent possible without incurring disproportionate cost. Options 1 and 2 include provisions for proportional accessibility upgrades. A final plan for barrier removal will need to be negotiated with the Authorities Having Jurisdiction during design of renovation scope. Option 3, as new construction, would be required to be fully compliant with current federal and University accessibility standards.

- **Automatic Sprinkler System and Fire Alarm System:** Currently this space is served by a fire alarm system, but no sprinkler system. Based on occupancy (A3, Lecture Hall) and occupant load (in excess of 300 occupants) this space would
require an automatic sprinkler system if constructed new. It is possible the authorities having jurisdiction could consider the existing lack of a sprinkler system to be “grandfathered” in. This is not guaranteed. Given the large occupant load of the space as well as current standards, the addition of a sprinkler system at the time of renovation is recommended, even if not required, and is included in costing for Options 1, 2 and 3. It is omitted in Option 0.75 as a grandfathered condition (This interpretation should be verified with Authorities Having Jurisdiction during project design).

Based on experience with past renovation projects it is also very likely that Authorities Having Jurisdiction at the time of renovation will require the fire alarm in the space be modernized to current standards. If the space is sprinklered, manual activation of the fire alarm system will not be required, and if present may be removed.

• **Energy:** Existing building envelope, where left in place, would not require improvement to current code standards. New envelope as part of renovation would be required to meet current standards only for new construction and not for the building as a whole. New lighting and lighting controls systems would be required to meet current standards. Only mechanical equipment and construction which is replaced would be required to meet current energy efficiency standards, compliance for the mechanical system as a whole where existing elements are largely reused would not be required. New construction as proposed in Option 3 would be required to be fully compliant with current energy code standards.
Meeting Notes – Columbia 150 Site Walk with UO

Project: UO Columbia Hall 150 – Concept Study
Date: July 28, 2014  Time: 3pm – 4pm
Report By: Chris Andrejko

Present at Meeting:

User/Advisor Group (UO): Chris (Janitorial), Jeff Madsen, Gene Mowery, Stan Hall, Kevin Bloom (Campus Ops), Doug G. (UO HVAC), Simon Ditton (EHS), Ken Doxsee

Architect - Rowell Brokaw Architects (RBA): John Rowell, Mark Young, Chris Andrejko

Review of existing space:

- **SEATING:** Three kinds of seats, not in good condition.
  - New seats need to be durable.
  - Availability of replacement parts for broken seats is a big issue for UO.
  - Look at Allen Hall seats – mount to back of risers. Easy to clean floor.

- **FIRE/LIFE SAFETY:** Space is unsprinklered and has no fire alarm panel.
  - As an assembly space these would likely be required upgrades with any significant remodel.
  - Possible closest location of water for tie in would be across courtyard to west? (UO to verify)

- **HVAC:** It is all original (1960) equipment in fair condition.
  - Likely to “Keep box and replace components” – UO to clarify scope.
  - Steam and chilled water loops in box.

- **LIGHTING/ELECTRICAL:**
  - Existing is a mix of fluorescent and incandescent.
  - Existing does not work for lecture hall use at all.
  - Incandescent dimmers in basement mech space.
  - Assume full replacement of lighting.
  - No general complaints about electrical beyond lighting, but infrastructure is original and could use updating (1960).
  - Consider additional outlets in lobby space for student charging of devices. DO not add outlets in seating for this purpose.

- **AUDIO / VIDEO and ACOUSTICS:**
  - Sound in space is terrible.
  - Likely full replacement if remodeled.
  - Funding to replace existing functionality would come from Maintenance funds (UO to verify), funding for expanded capabilities would need to be discussed.
  - Students complain about insufficient wireless coverage in space.

- **JANITORIAL:**
  - Prefer not to have carpet in space = more maintenance.
• If carpeted, distributed electrical outlets for vacuums required
- GENERAL:
  • Leak at door sill at west exit stair during heavy rain.
  • Evidence of water damage at walls and ceilings. Verify if this is recent ongoing water damage or from prior to recent (2010) roof replacement.
  • Consider extending seating into lobby/enclosing exterior covered porch.
  • Need hazardous materials survey for space.
  • Blackboard and projection screens both too small.

Action Items:
- **UO** Scope for required upgrades to mechanical unit.
- **UO** Locate of closest tie in for new sprinkler system.
- **UO** Expected Audio Video equipment funding sources.
- **UO** Hazardous materials survey.
- **RBA** Verify code requirements on sprinklering and fire alarm.
- **RBA** Discuss ADA approach/requirements with City.
Meeting Notes – 2014/08/14 UO Review Meeting

**Project:** UO Columbia Hall 150 – Concept Study  
**Date:** August 14th, 2014  
**Time:** 2:30pm – 3:30pm  
**Report By:** Chris Andrejko

**Present at Meeting:**
- User/Advisor Group (UO): Gene Mowery (CPDC); Cathy Soutar (CAS); Sue Eveland, Mike Jefferis (Registrar), Chris Sinclair, Mike Price, Hal Sodofsky (Math); Frances White (Anthropology); Sara Hodges (Psych); Randy Sullivan (Chem)

**Architect** - Rowell Brokaw Architects (RBA): John Rowell, Mark Young, Chris Andrejko

---

**Review of existing space:**
- **General Space**
  - Noisy doors. They bang.
  - Worn out finishes and seating.
  - A/V and lighting systems need update/replacement.
  - “Siberia” back rows of seating very disconnected from instructor.

- **Instructional Area (Front)**
  - Verify permanent utilities required by chemistry. Plumbing, waste, hood?
  - Wasted space behind podium.

**Review of Project Goal:**
- To understand constraints and opportunities presented by existing construction and location.
- To define potential projects in context of schedule and budget.

**Review of concepts:**
- **Diagrams Attached.**
- **Option 1:**
  - Existing layout and basic infrastructure remains.
  - Note: Existing dimensions of seating tiers and seating do not meet contemporary standards, tend to be smaller. Selection of replacement seating would be impacted.

- **Option 2:**
  - Better access and seating dispersion is a result of re-grading front half of room.
  - Sight lines to instructor and screen are negatively impacted.
  - Opens up presentation area.
  - Equipment ramp access route changed from adjacent basement into space to exterior route with new ramping.
  - Prep room floor would be raised.
- More variety of seating, including accessible seat dispersion, seat widths, option of tables and chairs.
- Need to study version with instructional area raised less – less impact on sight lines.
- Also, study version with non-ramped infill of tiers (i.e. adding 2”-4” per tier, reducing number of tiers)

- **Option 3:**
  - Equivalent of new building in current location.
  - Approximately 385 seats with existing classroom footprint or possible to provide 450 seats if expand the building footprint to the west and south. Balcony not feasible so distance to instructor would still be large.
  - Would allow for a raised stage which is optimal for site lines and instructional area.
  - Will be a high cost per sf to build just a lecture hall alone and not in the context of a larger development.

- **Lobby and Site:**
  - Opportunity to improve the function of the lecture hall.
  - Possible to expand and relocate entry to lobby for more efficient use of space. Offset entry into lobby away from entry into lecture hall = better acoustic separation and use of waiting area.
  - Expansion of lobby would allow for construction of acoustically isolated vestibule into lecture hall.
  - Existing door into lobby could be changed to “exit only” to promote better fill and spill of lecture space.
  - Revised site work to south of lobby could allow for better utilization of land access to lobby/waiting.

**Discussion:**

- **Project Parameters**
  - 450-460 minimum seating
  - Goal to be open Fall 2015
  - Will be heavily used by Chemistry (needs demonstration space and infrastructure)

- **Instructional Area**
  - More demonstration space (Chem). Fixed versus movable demonstration table (associated with hood placement).
  - Lectern to one side to allow for more screen height.
  - Need 2 Video feeds, each visible to any seat (multi-screen)
  - Theatrical lighting desired for Chemistry lab demonstrations. Three (or four?) theatrical fixtures required.
  - Down draft hood required for Chemistry lab demonstrations.
  - Study effect of raising platform but less than shown in option 2.
  - Consider use of back of stage area as the stage becomes very deep as the front pushes out.

- **Seating Area**
  - Study taking out back row for proctor use/aisle. Maybe use projector room space?
- Look at impact of widening tier width at lower bowl.

**Lobby/Entry/Site**
- Study cost/benefit of second entry to space from lobby
- Look at double door, bigger landing, ramp at NW exit door. Potentially reorient access to south.

**Next Steps:**
- **Options variations to study:**
  - Similar to option 2 with raising instructional area less (3”-12”).
  - Study widening existing tiers to contemporary standards, impact on seating.
  - Option with proctoring aisle behind farthest seats.
  - Use of back of stage area
  - Study cost/benefit of second entry to space from lobby

- **Draft costing and schedule information for UO review**

**Action Items:**
- **UO** Scope for required upgrades to mechanical unit.
- **UO** Hazardous materials survey.
- **RBA** Discuss ADA approach/requirements with City.
- **RBA** See next steps.
Three documents from The Shalleck Collaborative were reviewed by staff at UO Libraries CMET.

1) AV systems Narrative: The narrative is helpful in its description of a 2 projector system with ceiling mounted LCD panels for the rear seating areas. The description included assisted listening and options for classroom capture, input for additional audio mixer, and videoconferencing capabilities; all of which we would recommend considering for this upgrading process. We would recommend changing the present system to include 2 or 3 projectors in a ceiling mounted or control room arrangement, thus consolidating the cable and electrical paths. The cost estimate in this document included many changes to the room lectern and infrastructure for the AV system. It would be preferable that cost for the AV equipment itself should be considered as a different expenditure than the electrical or construction needed for this proposal.

2) AV Systems Budget: The budget proposal includes desirable options for videoconferencing and capture functionality. The equipment described and the optional systems are logical and desirable. The dollar amount listed is likely based on list pricing and includes commercial installation costs, and should not be considered the bottom line. For example, if CMET purchases the equipment, many equipment vendors provide a significant educational discount.

3) Engineering Report: The described requirements for adding multiple conduit paths may add greatly to the cost of the project. Conduit pathway from the lectern to the control room is already in existence. Hopefully, this was taken into consideration for the engineering report.

However, CMET would expect that all existing control and signal wiring to the control room from the lectern would be replaced with fewer but more modern Cat5 or Cat6 cables, which may mean that existing conduit can be reused. To add multiple runs of conduit for signal type separation may require core drilling and, as stated in the report, much expense for conduit. It may be possible to minimize the runs for microphones and other lone signals by using equipment stacks in both the control room and the lectern.

[TSC] Agreed.