

Higher Education Coordinating Commission

Oregon State University Legislative Funding Request

Capital Construction Projects

2015-17 Biennium

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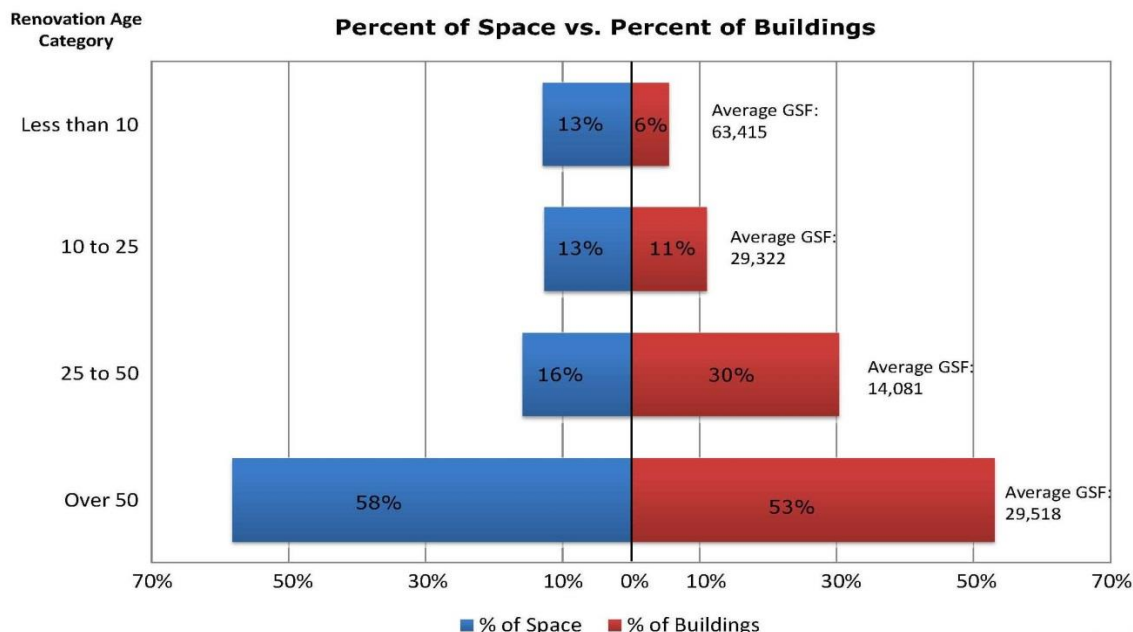
GENERAL CAPITAL FUNDING REQUEST INFORMATION

Deferred Maintenance and Facility Management

1. Estimate of Oregon State University's Deferred Maintenance Backlog for Education and General Service Facilities, and Description of Oregon State University's "facilities plan for managing facilities and reducing the deferred maintenance backlog."

Through investments spanning approximately 146 years, the value of state-supported buildings at Oregon State University now totals approximately four billion dollars. Renewing and extending the life of these public assets is the foundation of a forward-looking Oregon State University Ten-Year Capital Plan. Approximately \$60M or 32% of the University's 2015-17 State Capital Funding Request of state-issued-debt is directed towards backlog reduction and building renewal projects. OSU also remains firmly committed to working carefully with our colleagues in each of Oregon's public higher education institutions to craft a collaborative approach which will highlight our mutual and critical concerns regarding deferred maintenance capital needs.

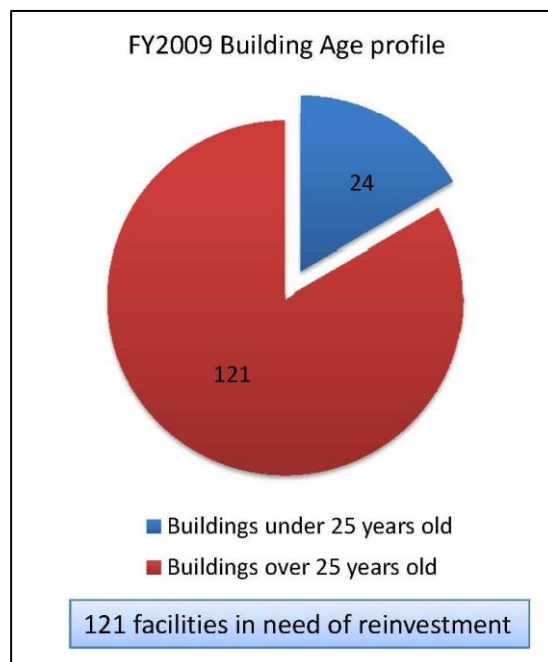
The average age of an Oregon State University facility is approximately 54 years. The normal life expectancy for major building systems such as mechanical, electrical, and roofing, is approximately 30 years. Due to the limits of funding availability, the replacement of many of these systems has been deferred – creating a significant and growing backlog of capital asset repair. The OSU 2015-17 State Capital Funding Request and OSU's Ten-Year Capital Plan represents our recommended strategy for reducing the significant backlog of deferred maintenance by increasing the investment in minor capital building and program renewal, continuing the investment in major building renovations, and campus-wide Information Technology infrastructure improvements.



The OSU Plan's emphasis on Minor Capital building and program renewal investments of existing buildings and infrastructure represents acknowledgement of OUS's Sightlines Higher Education benchmark studies, our ongoing assessment of the condition of capital assets, mutual agreement university-wide, and endorsement by our Board of Trustees on the critical need to reverse the deterioration of a wide range of buildings and infrastructure on the OSU Corvallis campus.

Assessments taken from the OUS-funded Sightlines Study Update 2009 of state-owned educational and general buildings at Oregon State University identifies a total of approximately \$400,000,000 in building systems renewal backlog. The OSU Ten-Year Capital Plan includes both code-required and site infrastructure repairs and improvements. These areas were not included in the OUS Sightlines Study Update 2009 and increase the projected OSU deferred maintenance backlog total by an additional \$350,000,000.

The process of creating a rigorous backlog reduction assessment program has begun at Oregon State University. In 2015-17, OSU intends to continue to accelerate the development of a comprehensive and cost efficient building audit and integrated energy financial decision-making model/tool to create more operationally cost effective and sustainable life cycle strategies prioritizing capital investments, which will reduce operating costs, greenhouse gas emissions, and identify return-on-investment criteria.



The OSU 10-Year Capital Plan will significantly and cost-effectively reduce the deferred maintenance backlog, improve the condition and extend the life of the buildings, enhance health and safety, contribute to meeting state wide public sustainability and higher education space utilization goals, and increase academic quality through the renewal of deteriorated facilities and modernization of facilities that are programmatically deficient. Our 2015-17 capital funding request and requests in future biennia, prioritize a partnership with the State of Oregon in backlog reduction and minor capital building and program renewal projects.

Collaborative Funding for Backlog Reduction and Renewal Projects

State XI-Q Bonds: We are proposing a special partnership with the State of Oregon with the goal of more than doubling Deferred Maintenance funding over the 2013-15 level provided to OSU through the Oregon University System. Over the next three biennia, we project that our Minor Capital building and program renewal-funding request (deferred maintenance funding) will remain one of OSU's highest capital funding request priorities.

Federal and State Energy Grants: OSU continues to step up its efforts to obtain capital grants, especially for energy efficiency projects. OSU will continue to pursue funding from the U.S. Department of Energy and utility rebates from other third party sources to leverage, for example, capital investment for installing a smart grid on campus. Smart grids are electrical systems that track exactly how much power is being used at any given time to let the University view and manage consumption. This project has the potential of successfully replacing aging electrical equipment and installed meters where none existed. The smart grid will provide data for building condition assessments and help determine where to make the most cost effective energy efficiency investments. We will pursue other state and regional grants to replace aging and inefficient heating system controls along with other improvements. These grants – along with similar potential grants in energy efficiencies at OSU’s statewide facilities – ensure that we will continue to search public and private areas for potential grant sources.

Energy Conservation Measures (OSU’s Energy Conservation Measures Program with SELP Program Integration): Energy and utility conservation projects will continue to be aggressively pursued by OSU. The large majority of projects potentially utilizing SELP Program funding or similar will replace aging building system mechanical equipment, building and piping insulation, and additional building envelope improvements including window replacements, thereby also contributing to our deferred maintenance backlog reduction goals.

Deferred Maintenance Backlog Reduction and Renewal Projects - Summary

For maximum cost efficiency OSU combines backlog-reduction projects with each of our proposed building and program renewal projects. For example, during a major renovation project, replacing a sixty-year-old heating system is defined as a backlog reduction project while adding an elevator to a building where none had existed is defined as a renewal project. It would not be cost effective to do one without the other and including renewal needs is often a building code requirement. Similarly, for a minor capital renewal project, it is often more cost effective to upgrade all utilities in an individual building area while it is being gutted/demolished and rebuilt.

Renewal projects are often necessary to make a building functional for modern teaching and research. For example, communications upgrades are not considered deferred maintenance projects in the OUS Sightlines Studies, but a building does not meet baseline functional teaching needs without reliable and efficient modern communications systems in place.

Infrastructure Preservation

The projected cost of renewing the infrastructure between buildings and key infrastructure related facilities such as the OSU Energy Center steam and power distribution network, the campus utility tunnel network, OSU’s large public roadway network, sanitary and storm sewer systems, voice/data communication fiber networks, our unreliable medium voltage electrical grid distribution and redundant power support system is currently under evaluation but expected to

exceed \$300,000,000. Preserving the value and functionality of OSU's infrastructure is equally important to renewing buildings systems, reducing our deferred maintenance backlog, and extending the useful life of our existing buildings.

Capital reinvestment is required over an extended period of time to address the aging infrastructure between buildings. OSU's 2015-17 state capital funding request is specifically intended to move those improvements forward effectively and cost efficiently.

Facility Condition Auditing and Maintenance Planning

Oregon State University is in transition from a general facilities condition audit tracking system to a qualitative, systems-based condition reporting approach. A large number of facilities will be surveyed and scored with the same systems-based condition survey as used in the States of Washington and Michigan for higher education systems with whole building scores 1-5, by translating various building condition studies and reports as well as previous building audit conclusions to substantiate the results.

Backlog items are input when maintenance employees, familiar with OSU buildings, recognize critical needs; the cyclic renewal schedule flags systems at the end of their useful life, and key buildings will undergo a comprehensive conditions audit in a regular and consistent schedule, and highest priority areas will be targeted annually. Items are removed once the backlog component is funded. OSU Facilities Operations and Maintenance continually reviews backlog lists and performs annual, comprehensive reviews to ensure items accurately reflect current campus conditions. In some cases, technical or specialized facilities, such as STEM classrooms for class laboratories, data centers, and electrical distribution components are more specifically evaluated.

OSU Facilities Operations and Maintenance also performs regular building maintenance and manages a preventive maintenance program to maintain facilities and systems and help curb future backlog. Also important is a mutual understanding of the importance of integrating building and infrastructure renewal needs with maintenance backlog reduction efforts in a comprehensive deferred maintenance backlog-reduction program.

Oregon State University On-Going Maintenance Performance

OSU Facilities Operations and Maintenance has an operation and maintenance program which assists management of maintenance backlog growth although it does not by itself solve the growth challenge. A maintenance management systems-approach is used to schedule preventive maintenance and inspections of facilities and building equipment. In addition to performing routine maintenance, which prolongs the life of the facilities and equipment, corrective maintenance and repairs are performed in order to avert degradation of facilities or failure of equipment.

Backlog Reduction Prioritization Process

The OSU Minor Capital resource allocation prioritization process is based on the ongoing facility condition auditing and maintenance planning described above. OSU Capital Planning & Development (CPD) personnel work in conjunction with representatives from OSU Facilities and Maintenance, Environmental Health and Safety, and OSU Information Systems to evaluate proposed building renewal projects. CPD provides additional technical assistance. Colleges and other OSU units are solicited for their needs and recommendations. Projects are reviewed and weighted with respect to such factors as backlog reduction, health, facility renewal, safety, security, protection of the campus environment, the promotion of effective and economical ongoing operations, and alignment with OSU strategic goals.

The OSU Minor Capital resource allocation prioritization process is also grounded in the facility condition auditing process. The size and complexity of major capital projects involves additional information gathering and prioritization approval steps. Discussions with University Deans and other key academic leaders are often included because major building renovations create a unique opportunity for more significant academic program adjustments. OSU's goal is the cost efficient integration of a wide range of planning goals including but not limited to backlog reduction. OSU's 2015-17 State Legislative Funding Request for the comprehensive renovation of Fairbanks Hall is an example of a current OSU Major Capital Project Request that supports our deferred maintenance backlog reduction program through a comprehensive building renovation.

OSU's program of major building renovations will significantly contribute to our progress towards reducing the backlog of many of our most critical deferred maintenance and building renewal areas. Because major building renovations usually require moving the occupants during the construction phase, consideration is given to cost-efficient temporary or surge space location options. Proposed capital investment priorities are reviewed and approved annually by the President, the Executive Vice President/Provost, the Vice President for Finance & Administration, University Committees, and most recently, the OSU Board of Trustees.

Seismic Improvement Needs

2. Estimate of Oregon State University's Seismic Improvement Needs for Education and General Service Facilities

In July 2003, an OUS Advisory Work Group consisting of academic civil engineering and facilities representatives of PSU, OSU, and Oregon's Department of Geology and Mineral Industries (DOGAMI) conducted a preliminary review of OSU Corvallis buildings. The review included campus visits and "structural drawing and building surveys" using the Federal Emergency Management Administration (FEMA) 154 screening protocol as the building performance evaluation guideline carefully applied to OSU facilities by subject-matter experts.

FEMA 154 "scores" were developed for approximately 60 major buildings on the OSU Corvallis campus and the workgroup recommended to Mr. Robert Simonton, OUS Director of Capital Construction, Planning, and Budgeting, that the OSU buildings with low FEMA 154 scores be "further evaluated by a structural engineer." As the oldest public university campus in Oregon, a large number of OSU's Education and General Service buildings are constructed of unreinforced masonry (URM). URM building structures are particularly vulnerable to severe damage in major earthquakes.

As a result, OSU began mitigating individual building seismic risk during comprehensive renovations of OSU's oldest buildings including Apperson Hall (now Kearney Hall), and Furman Hall. Strand Agricultural Hall is currently undergoing a major renovation including seismic strengthening. These renovations, which include major seismic improvement to meet current Oregon Building Code requirements, have been and are being completed with combined state and gift funds. OSU remains very concerned about the availability of state capital to continue our seismic improvement program due to potential significant reductions in state capital availability.

The OSU 10-Year Capital Plan has identified seismic improvements for 30 additional campus buildings under a proposed Seismic Resilient OSU initiative. The \$10M proposal in the 2015-17 OSU Legislative Funding Request for the renovation of the 1898 Fairbanks Hall – the second oldest building on the OSU Corvallis campus – continues OSU's commitment to continuation of the Seismic Resilient OSU program. In addition, OSU's Minor Capital building and program renewal request for \$30M for the 2015-17 biennium will provide significant incremental seismic strengthening to each area of buildings renewed. OSU intends to propose a similar capital-funding request in future biennia as a means to reduce our deferred maintenance backlog, while we are at the same time investing to improve OSU's safety, seismic resilience, and ability to recover in the event of a major seismic event, to continue to meet our diverse and critically important public missions state wide.

Concurrent with the capital investment needs, effective emergency response planning has advanced continuously at OSU and now includes a business continuity component, a campus emergency operations center, and increased collaboration and integration with the Oregon State Patrol and individual Colleges and OSU administrative units at individual campuses and state wide regarding seismic resilience. Even with the ongoing high level of emergency response planning, it is expected that OSU may experience significant infrastructure damage and extended closure periods after an earthquake event. We are taking steps now – by utilizing our capital investments wisely – to ensure we can significantly improve OSU’s ability to absorb a major earthquake and quickly recover to meet our critical state wide missions.

OSU plans to continue to evolve our emergency response plans in the following operational areas:

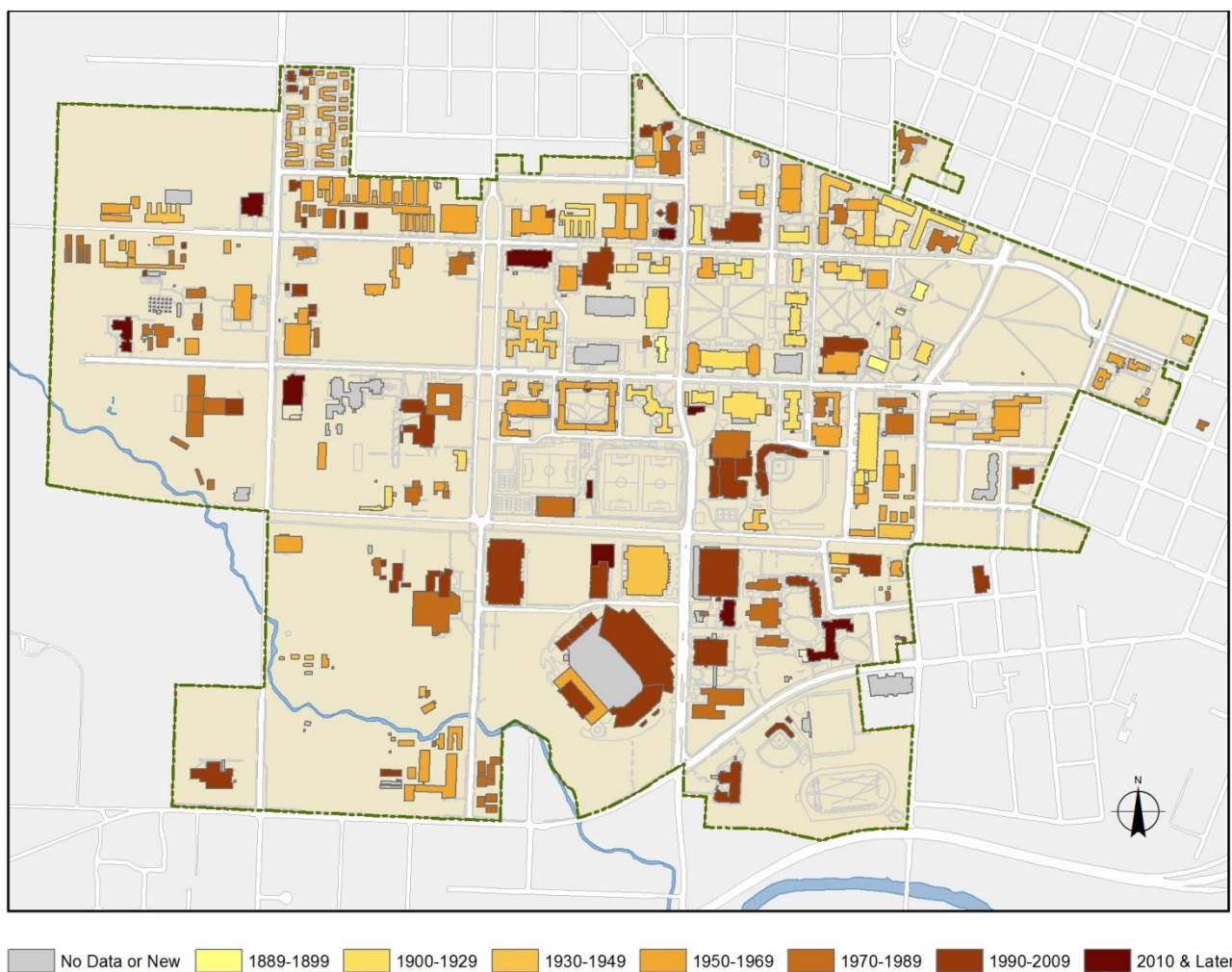
1. Fully implement and annually update University-wide business continuity/disaster response planning.
2. Review the ability of the governance structure and decision making process to prioritize preparedness, response, and recovery efforts.
3. Expand the distance-learning infrastructure to support continuing instruction post-seismic event.

OSU will also continue to evolve our seismic resilience capital planning in the following areas:

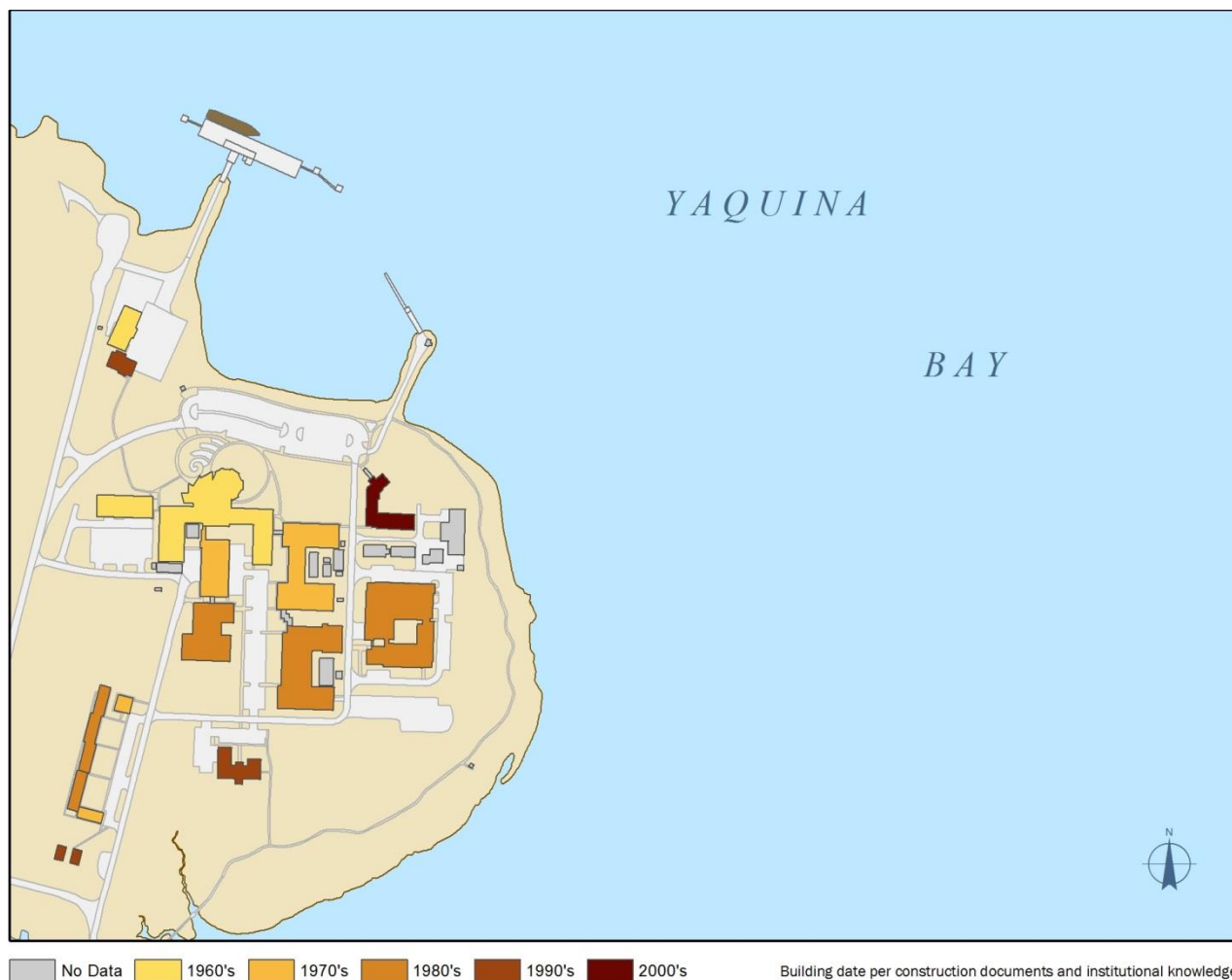
1. Build all Infrastructure to resilient standards by setting design and construction criteria stated in terms of the following performance goals:
 - a. Infrastructure that supports emergency response must be operational.
 - b. Infrastructure that supports critical long term research projects must be operational to the extent needed to protect research activities.
 - c. Infrastructure that is needed to support reconstruction and recovery needs and to be usable within 2 months.
 - d. Infrastructure that supports the University programs which need to be repairable and put back into service to retain institutional continuity

With sufficient state-capital support, OSU desires to seismically improve high-priority and eventually all OSU buildings and infrastructure for improved resilience:

- a. Revalidate the University infrastructure and determine the expected performance for each building/infrastructure system starting with the most critical.
- b. Develop, maintain, and regularly update a listing of the seismic vulnerability of major capital facilities including infrastructure distribution systems.
- c. Develop and update OSU’s Capital Plan (10-Year Plan) prioritizing resiliency as a performance objective.
- d. Regardless of funding levels, keep working to reduce the seismic risk year by year and make resiliency a consistent priority in OSU capital improvement programs.



OSU Corvallis Building Age



OSU Hatfield Marine Science Center Building Age

Facilities Master Plan

4. Does Oregon State University have a Master Facilities Plan, and if so, the date on which it was adopted and/or last amended.

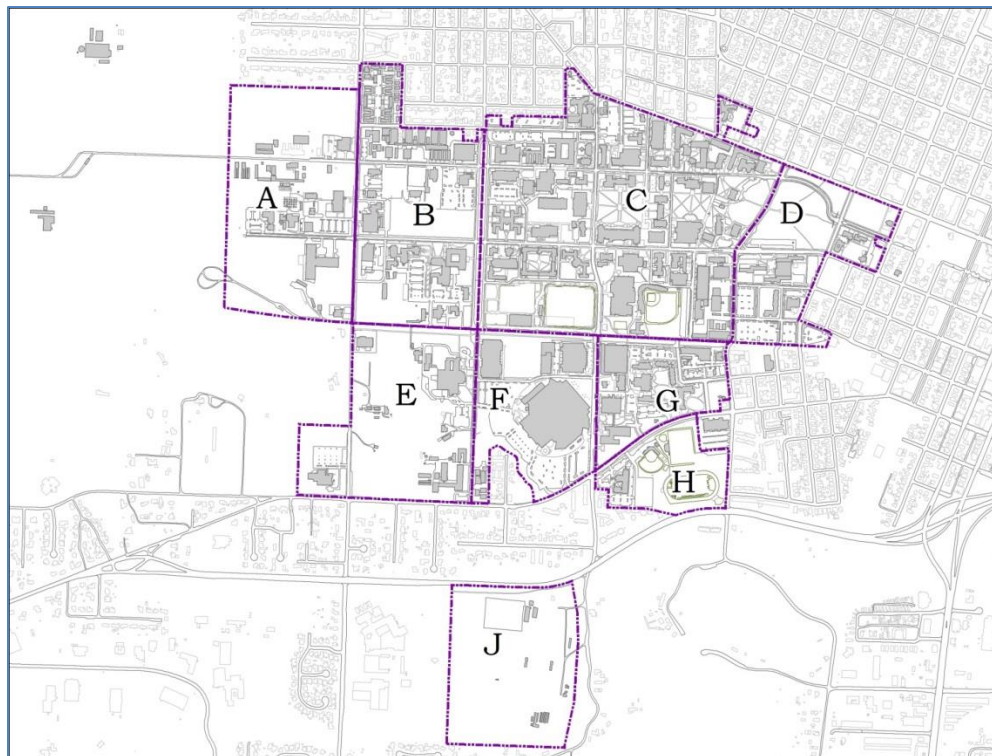
Oregon State University's current Campus Master Plan ("OSU District Plan") was developed in 2003-2004 and adopted by the City of Corvallis on December 2, 2004. There has been only one amendment to the plan – an adjustment adopted the City Council on May 20, 2013 that allowed a redistribution of the building square footage allocation from Sector C to Sector D. Please note the OSU District Plan Sector Diagrams attached at the end of this Item No 4.

As the state's land-, sea-, sun-, and space-grant institution - one of only two universities with such designation in the country - OSU has programs and faculty located in every county of the state. OSU views the state of Oregon as its campus, and works in partnership with Oregon community colleges and other State of Oregon higher education institutions to provide access to educational programs.

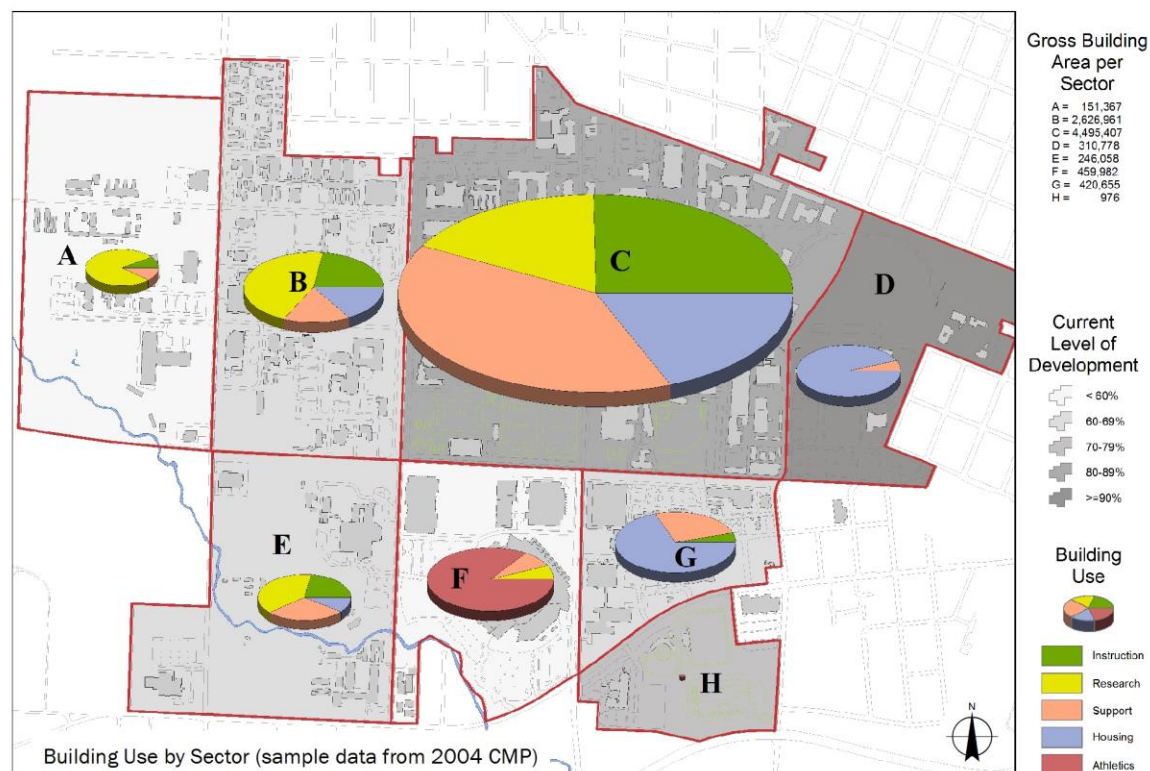
The OSU District Plan focuses on the 570 acres of land recognized as the main OSU campus within the city limits of Corvallis, Oregon. This OSU campus acreage is situated west of the City of Corvallis Central Business District on the banks of the Willamette River, although OSU owns significant additional acreage within and around the City of Corvallis.

The OSU District Plan was formulated to maintain and enhance the university's fundamental mission, its roles in undergraduate, graduate, and professional education, and its public service. The growth proposed in the OSU District Plan is necessary to accommodate the projected growth in the number of people seeking higher education and to support educational and research initiatives. The OSU District Plan is intended to provide flexibility in meeting the challenge of providing a compelling learning environment, while establishing general guideline standards that direct future growth, guide future design decisions, and conserve and enhance the open space of the campus. In balancing these various concerns, Oregon State University is a public amenity for all citizens in the State of Oregon.

The current OSU District Plan 2004 -2015 updated the previous 1986 OSU Physical Development Plan and was developed with contributions of administrators, faculty, staff, students, and the Corvallis community. In addition, the OSU District Plan contains land use development code language to support implementation of specific facilities projects and improvements through the City's land development regulatory authority. The current OSU Plan District boundary and sectors within the overall boundary are noted in the following sector diagram:

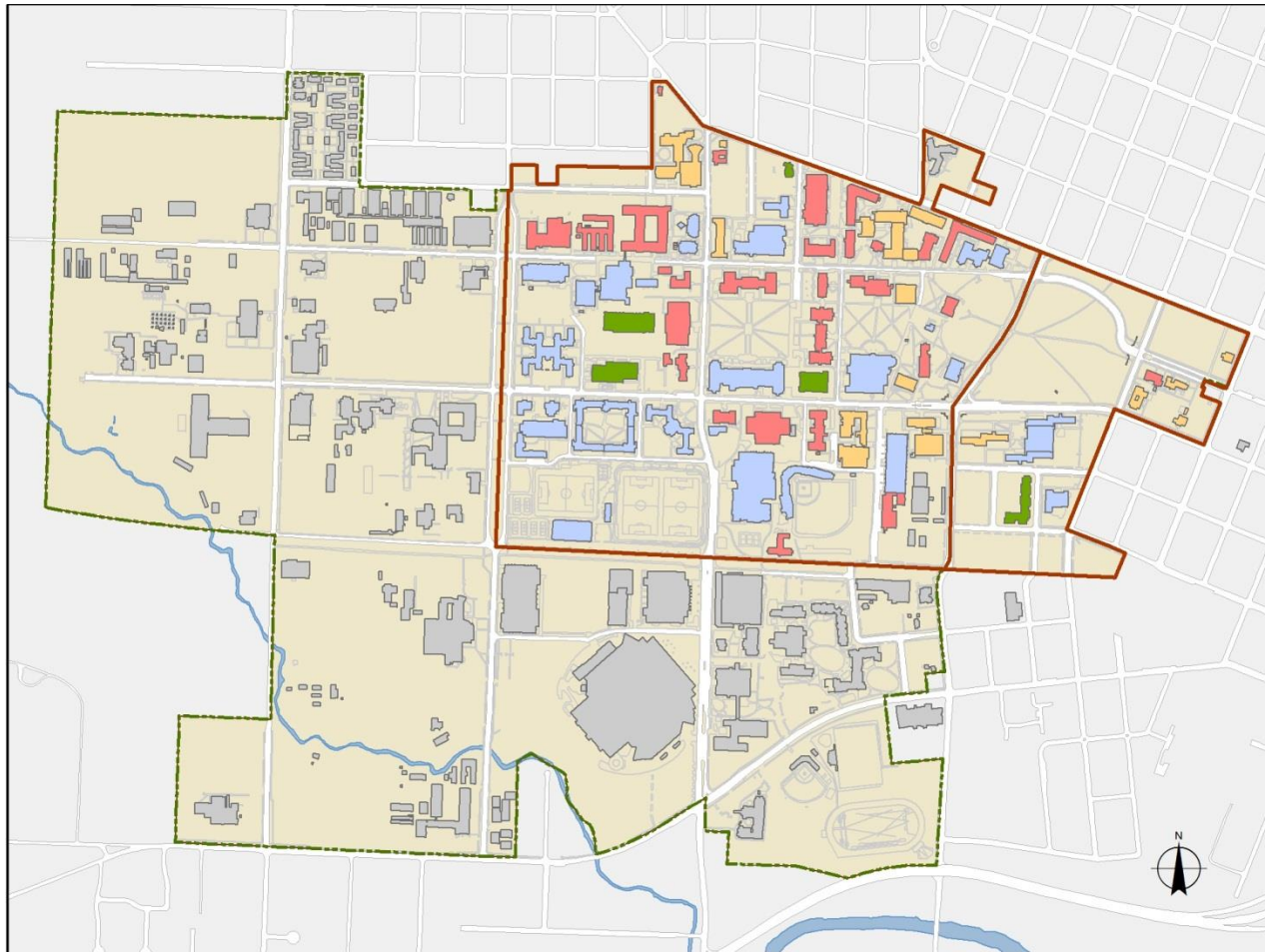


City of Corvallis' OSU District Plan – Sectors Diagram



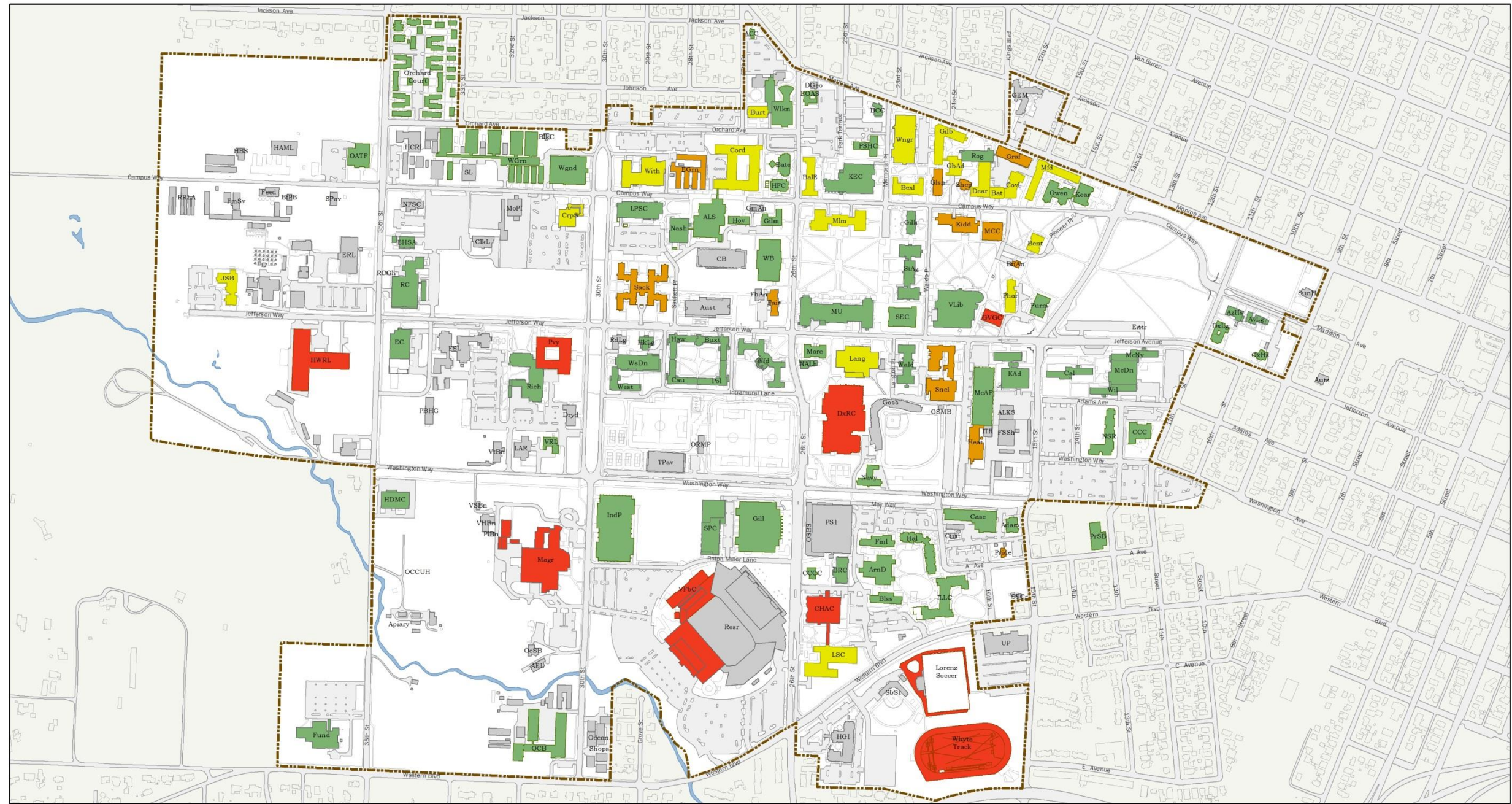
City of Corvallis' OSU District Plan – Sectors Diagram and Facilities 2004

The following planning and master facilities and infrastructure diagrams are illustrative of the ongoing comprehensive development planning and other activities associated with determination and assessment of OSU infrastructure and space needs and our ongoing assessment of the capacity of the OSU built-environment and the impacts of this data on our comprehensive capital prioritization and investment decisions:



■ No Data ■ Good ■ Fair ■ Poor ■ Under Construction

OSU Corvallis Building Condition



 Major Capital: New and Additions
  Renovation
  Phased Renewal
  Minor Capital: On-going Renewal

Draft - For Discussion Only



Geospatial
Information
Services

Data Source: Apr 2014



OFFICE of
CAPITAL PLANNING & DEVELOPMENT

Corvallis Campus: Facilities Master Plan

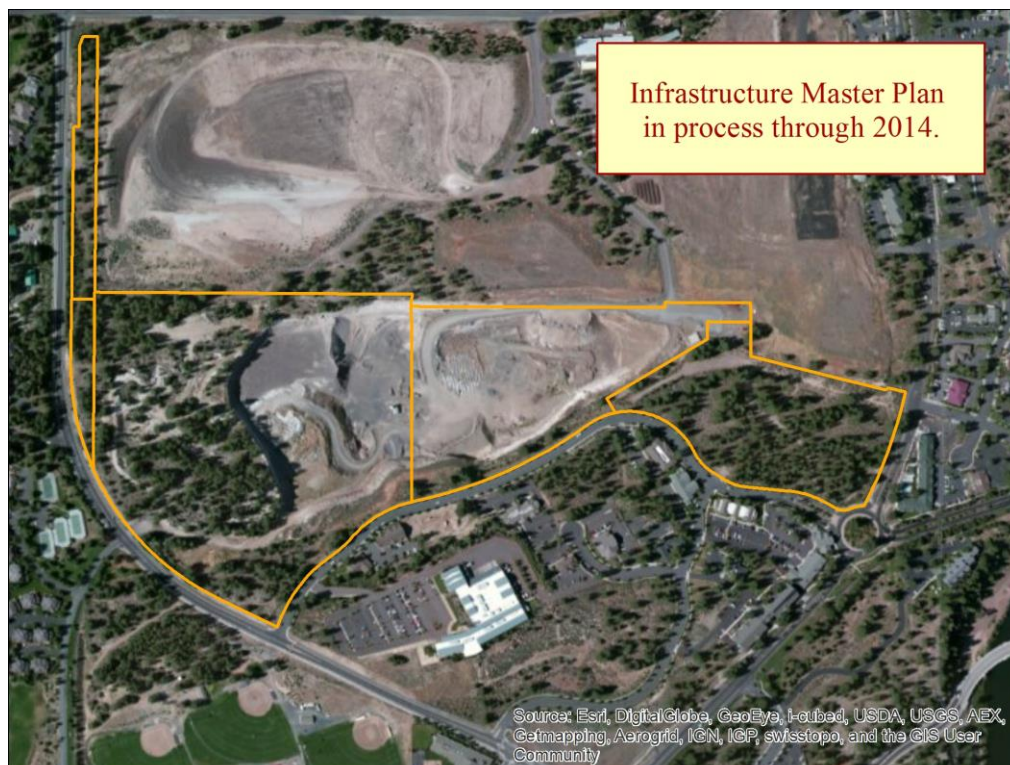
Buildings & Facilities

Presentation Date: Apr 25, 2014

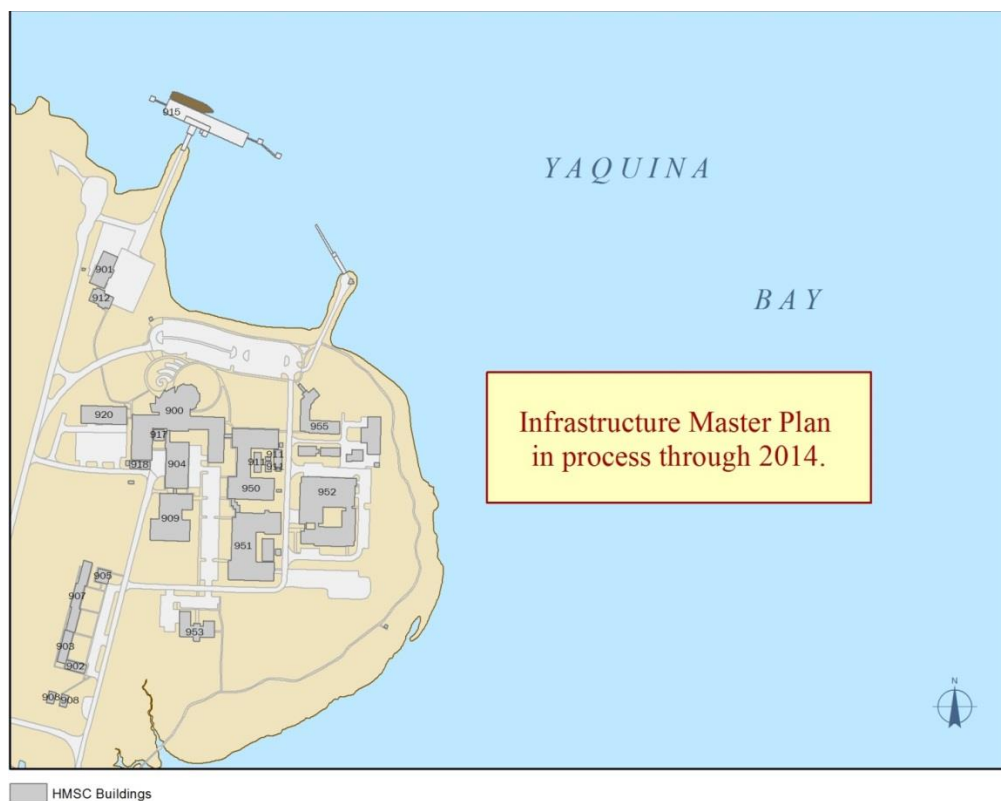
Figure 1: OSU Corvallis Master Plan, Buildings and Facilities



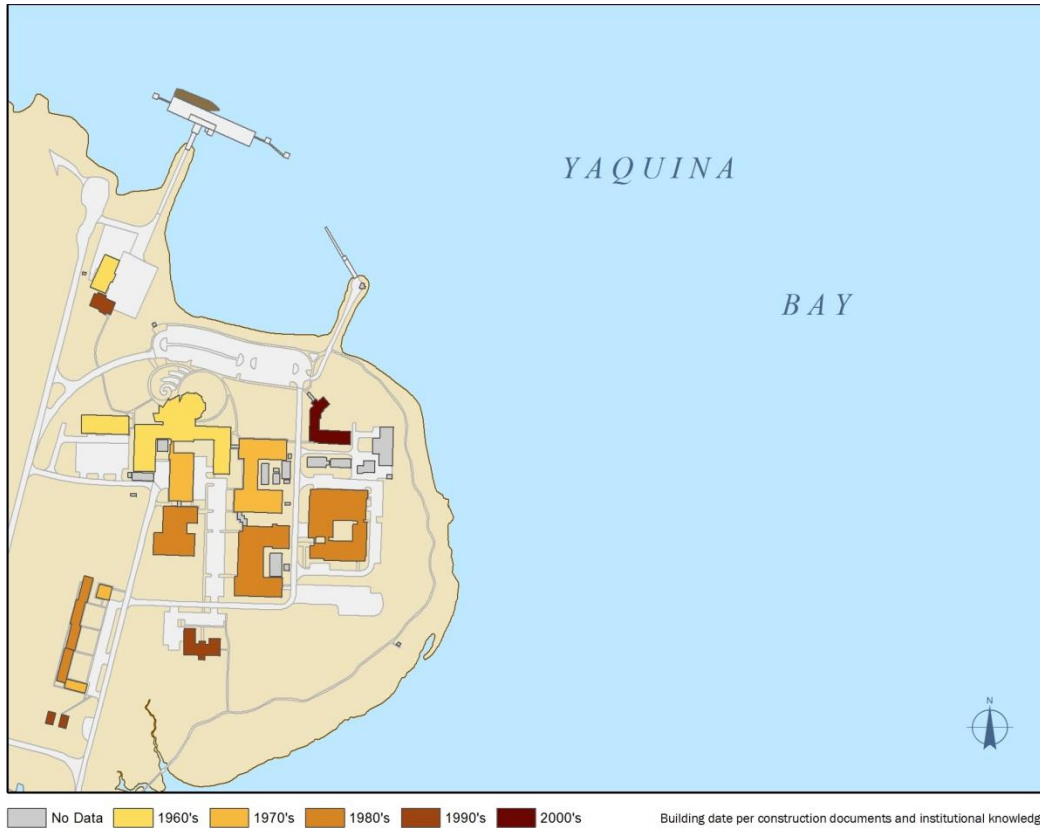




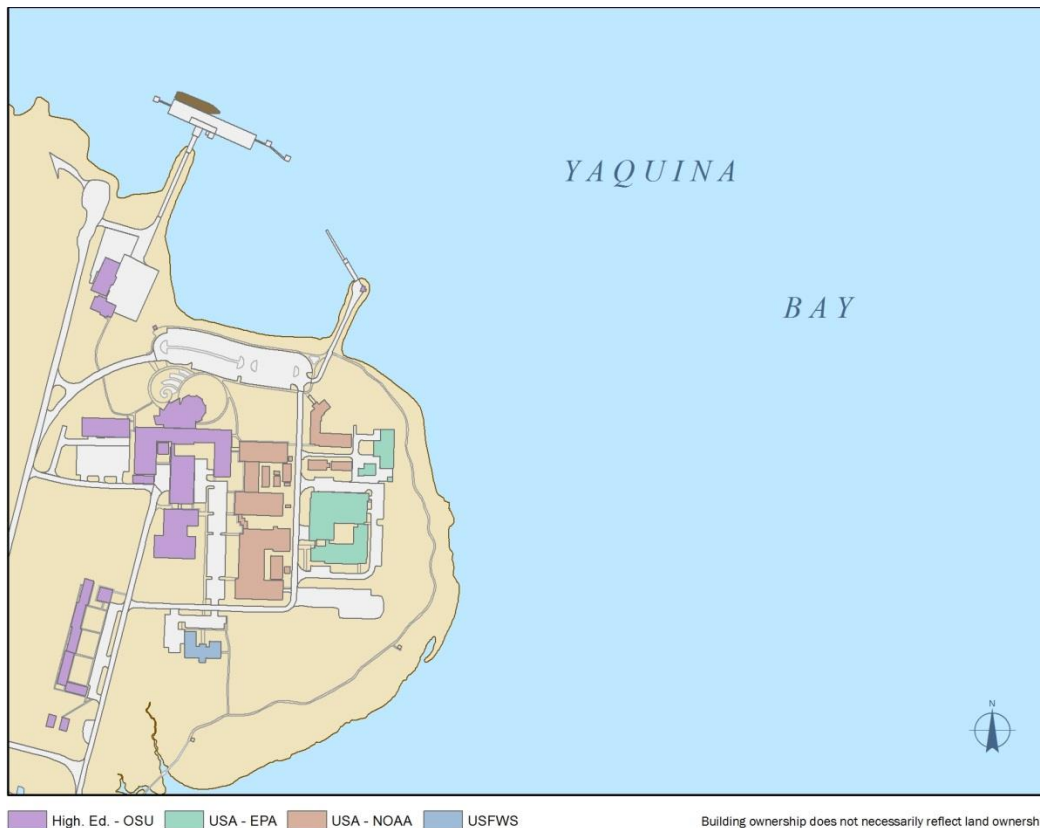
OSU Cascades Infrastructure Master Plan



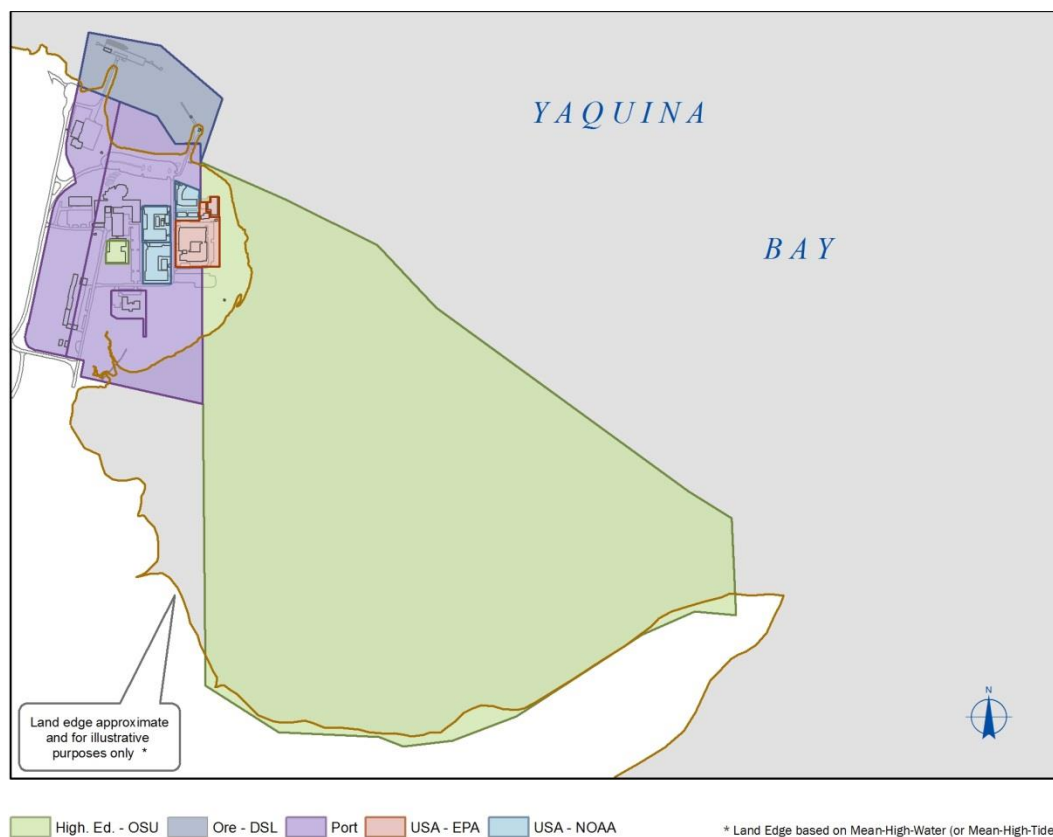
OSU Hatfield Marine Science Center Infrastructure Master Plan



OSU Hatfield Marine Science Center Building Age



OSU Hatfield Marine Science Center Building Ownership



OSU Hatfield Marine Science Center Property Ownership

State Bond Funded Projects

5. Provide the following if a proposed Oregon State University capital project requests that state bonds are repaid with campus-paid debt:

5.A. "A 10-year proforma that documents projected revenues, operations costs, and debt service payments to demonstrate the long-term financial sustainability of the project:"

Oregon State University is not proposing capital projects requiring campus-paid debt.

5.B. An estimate of the institution's debt load for the subsequent 10 years based on all projects which campus funds will be used to pay the debt on state-issued bonds and Certificates of Participation and campus-issued debt. The calculation should include all existing debt, all projects included in the 2015-17 State Capital Funding Request, and any planned large future requests.

Oregon State University is not proposing capital projects requiring campus-paid debt.

6. "Identify any bond-funded projects that were authorized in prior biennia that will require reauthorization by the 2015 legislature. Include the name of the project, when it was authorized, the amount that needs to be reauthorized, and description of any changes to the project since it was originally authorized (include changes in project cost and funding)."

The 2013-15 Legislatively Adopted Reauthorization for the Oregon State University \$7.0M Modular Data Center Project - reauthorized with campus-paid XI-Q bonds – is requested for reauthorization in the 2015-17 biennium. There are no changes to the project since it was originally authorized. There are no changes proposed in project cost or funding.

PROJECT SPECIFIC CAPITAL FUNDING REQUEST INFORMATION

OSU Legislative Funding Request Capital Construction Project Summary

Oregon State University Legislative Funding Request Capital Construction Projects, 2015-17 Biennium					
Capital Project:	State-paid Bonds (A)	OSU-paid State Bonds (B)	OSU Gifts, Grants, Other Funds (C)	Subtotal OSU Contributions (B+C)	Total Projected Costs (A+B+C)
Accessibility Improvements	\$10,000,000	\$0	\$0	\$0	\$10,000,000
IT Systems Infrastructure Phase II	5,000,000	0	0	0	5,000,000
Building and Program Renewal	30,000,000	0	0	0	30,000,000
Fairbanks Hall Renovation	10,000,000	0	0	0	10,000,000
Magruder Hall Expansion	7,500,000	0	7,500,000	7,500,000	15,000,000
Center for Advanced Wood Materials	30,000,000	0	30,000,000	30,000,000	60,000,000
College of Engineering	39,000,000	0	39,000,000	39,000,000	78,000,000
OSU Cascades Academic Building II	30,000,000	0	10,000,000	10,000,000	40,000,000
Marine Studies Campus Phase I	25,000,000	0	25,000,000	25,000,000	50,000,000
Total Requests	\$186,500,000	\$0	\$111,500,000	\$111,500,000	\$298,000,000

Project Working Title
Accessibility Improvements
Project Location
Corvallis, Oregon

OSU Corvallis Campus Locational Diagrams

Final Sites Will be Determined during Pre Design Phase



Path of Travel and Accessible Classrooms



Path of Travel, College Hill

1. Project Narrative Description and Justification

A critical component of OSU's long-range comprehensive accessibility improvement plan, the proposed work will provide increased safety and access for students and faculty and visitors – especially those with physical limitations. These improvements include creating safer, more efficient, and accessible paths of travel between all buildings and will provide critically required accessible classroom facilities on OSU's Corvallis campus to accommodate all community members. These improvements will have significant positive impacts for the academic careers of OSU students.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Large number of students and faculty served
- 2) Projected improvement for student retention and student 'time-to-degree' metrics
- 3) Improved utilization of existing instructional space through provision of improved student and faculty access
- 4) Lower capital-cost renovation/seat v. higher capital-cost new building/seat – extends use of existing resources at lowest cost

2. Detailed Project Description

Key Project Metrics

Site Area Acres	N/A
Building Gross SF (GSF)	N/A
Building Assignable SF (ASF)	N/A
Building Space Efficiency	N/A
Project Type	N/A
No. Building Floor Levels	N/A

Key Space Allocation Metrics

N/A

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

The path of travel and accessible classroom projects, while separate and unique, are interconnected towards the OSU goal of working for the widest possible audience. This accessibility improvement funding request comes after many discussions amongst campus leadership over recent years, as OSU has realized that we need a more comprehensive approach to improving the safety and navigability of campus for people with disabilities. This is partly because the Corvallis campus has grown to the extent that older strategies used to provide access to our programs are an increasingly challenging proposition. It is also because OSU aspires to provide programs, services, and activities in the safest most universally accessible settings possible. The status-quo approach of incremental barrier removal has not achieved either of these comprehensive goals.

Path of Travel Improvements

Accessibility improvements to the exterior built-environment will help increase the safety of sidewalks, curbing, roads, parking lots and other paths of travel by eliminating significant safety hazards such as overly steep pathways and ramps, absent detectable warnings, no or unnavigable

curb ramps, too steep or unbeveled building entry thresholds, absent handrails on ramps, raised or broken areas of pathways, inadequate parking spaces, and unmarked pathways.

While Oregon State University implemented barrier removal to improve the campus environment for people with disabilities and all OSU students, staff, faculty, and visitors since the 1970s, mostly through individual renovations, certain parts of OSU campus remain to be connected to other parts of campus for people with disabilities. Examples of this include; sidewalks with cross slopes that could potentially cause wheelchair users to tip over, or veer into unsafe right-of-way areas, parking spaces with slopes that make it unsafe for someone with a lift van to deploy that lift, and intersections that force those with mobility and visual disabilities to walk in less safe directions. Slope barriers also take a lot more effort for a wheelchair user to navigate than a pathway that has been built with proper slopes. Addressing these issues will significantly improve the life, health, and safety of individuals with mobility disabilities. Focusing on improving street crossings not up to current standards will improve intersections for many, including those with mobility disabilities and those with visual disabilities.

OSU has commissioned analysis of the campus built environment focused on the mobility challenges people with disabilities face. From these analyses we've learned that we need to be smart stewards of the fiscal and physical resources entrusted to OSU. In meeting these goals, and with our technical and community outreach, we've identified all barriers on campus and have created a comprehensive plan that will allow cost-effective implementation of these improvements. OSU expects to continue to seek state capital funding in future biennia to complete implementation of our comprehensive accessibility improvement plan.

Accessible Classroom Improvements

Accessibility improvements to classrooms at Oregon State University will help increase the safety of the classrooms by eliminating significant safety hazards such as overly steep ramps, seating that is falling apart, and lighting that is too dim. Additionally, the project will improve classrooms that have not been remodeled to be inclusive of people with disabilities. Some of the proposed classrooms do not have any seating for students with disabilities, thus those students don't have the opportunity to enjoy the breadth of the universities facilities. While the university is constructing significantly more fully accessible new classroom space with the capital support of the State of Oregon, we remain committed to the goal that all classrooms become accessible. This proposal furthers this goal of the most universally designed campus possible that works for the widest possible audience in every facility, and supports OSU's commitment to the State of Oregon 40-40-20 goal.

Summary

By focusing on improving the environments on campus for people with disabilities, these environments will improve the life, health, and safety needs of all Oregonians through an easier, more inviting, more navigable campus. Improving pathways, parking spaces, and street crossings are a reinvestment in the campus pedestrian and transportation infrastructure that everyone will use. Replacing broken, narrow, outdated pathways will make the campus safer for all. Renovating classrooms that haven't been updated in decades will make these spaces truly accessible for the first time, but will also make these spaces more vibrant, safe, and usable by faculty, students, and any community member who visits them. Improving seating and lighting, removing materials with

higher levels of VOCs and asbestos in many of our older classrooms will benefit all. These projects will also emphasize beautification and upkeep of the campus, another benefit that all will enjoy.

4. Total Project Cost Model

Total Project Cost Model Summary

Project Cost Summary	
Total Cost of Construction Contracts	\$ 8,502,500
Total Project Cost	\$ 10,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	5/1/2014
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ 20,000
Construction Documents and Administration Services	\$ 787,500
Other Services	\$ 37,500
Consultant Services Cost Total	\$ 845,000
Construction Contracts	
Site Work - Preparation and Infrastructure	\$ 3,450,000
Facility Construction	
Substructure	\$ -
Super Structure & Shell	\$ -
Interiors	\$ 1,500,000
Building Systems	\$ 165,000
Fixed Equipment	\$ 450,000
Special Construction and Demolition	\$ 70,000
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$ 622,500
Construction General Conditions and Requirements	\$ 825,000
Construction Contingencies	\$ 600,000
Escalation to Mid-Point Construction	\$ 820,000
Total Construction Contracts	\$ 8,502,500
Other Costs	
Hazardous Material/Site Remediation	\$ -
Owner Furnished Equipment	\$ 146,250
IT and Telecom Plant and Cable	\$ 75,000
Permits and Fees	\$ 225,000
Total Other Costs	\$ 446,250
Public Art Work	
Total Public Art Work	\$ -
Project Management	
Total Project Management	\$ 206,250

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000	\$ 10,000,000
State-Paid Debt	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ 10,000,000	\$ 10,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

N/A

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	04/01/16
Construction	04/01/16	10/01/17

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

Oregon State University has as core institutional values; accountability, diversity, integrity, respect, and social responsibility. Related to these values is the recognition that individuals with disabilities are underrepresented in higher education in Oregon yet make up almost 29% (800,000) of the general adult population. Compared to college graduates in Oregon without disabilities (30%), Oregonians with disabilities are less likely to be college graduates (21%)¹.

At Oregon State University only about 3% of the student body has sought out services for students with disabilities, nationally about 11% of college students identify as having a disability².

Nationally, almost 57 million individuals³ identify as having a disability (19%), showing that in Oregon we perhaps have a higher percentage of adults with disabilities than the national average.

As the Higher Education Coordinating Commission stated in a letter to institutional presidents on February 14, 2014, a key principle in resource allocation methodology is to put “more funding weight” towards those projects that potentially represent Oregon’s greatest opportunity for achieving 40-40-20. The statistics are clear, to achieve 40-40-20, in addition to our institutional values as a diverse, respectful, and socially responsible university, we must do all that we can to ensure that people with disabilities are full participants in the educational endeavors of the university. All parts of this proposed project will further this cause, by providing physical facilities that allow for greater ease of navigability, so that perhaps more individuals with disabilities will matriculate and graduate to help fulfill our statewide goals. This project addresses known obstacles that we can immediately remedy. Oregon cannot achieve the 40-40-20 goal without identifying and addressing the barriers to educational access that affect people with disabilities.

While these projects are focusing on improving equitable accessible environments for people with disabilities, the impacts will be of the broadest sense, improving our facilities for all. The broadest impacts include retaining students of all identities, because we are focusing on a reinvestment in the revitalization and beautification of portions of the OSU Corvallis campus that are in significant need of repair and renewal.

7. B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

Compared to those in Oregon without disabilities, people with disabilities are less likely to be employed, and are much more likely to have low household incomes¹. Similar to 7. A., how can Oregon advance the goals of economic and workforce development without identifying the obstacles that affect almost one-third of the state’s adult population? This project addresses known obstacles that can be immediately remedied in the physical environment at Oregon State University.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

Comments included above.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

As mentioned in 7.A., adults with disabilities are underrepresented in higher education in Oregon yet make up almost 29% of the general adult population¹. The statistics are also clear that individuals with disabilities are one of the largest underrepresented groups in education nationally. By focusing on improving our educational environments for students with disabilities, and for all community members, Oregonians with physical disabilities may be more drawn to matriculate at Oregon State University because of the institutional and statewide commitment to improving educational opportunities. Students already at Oregon State University will sense a

commitment as well, and will see a reduction in the need to seek out accommodations for physical environment obstacles.

8.B. How the impacts will be measured:

While direct correlations are challenging, positive metrics may include the following: the increased enrollment and retention numbers of students with disabilities at Oregon State University, specifically those with physical disabilities; improvement in the net increase of classrooms and classroom seats providing accessible accommodations; and total net increase in classrooms where there is accommodation for hearing and visually impaired faculty and students.

Additionally, the positive impacts can be measured through formal assessment sought regularly from community members with disabilities, and the general public, on how the improvements are qualitatively affecting individual student progression rates to degree, and other key student performance metrics tracked at Oregon State University.

8.C. When the impacts can be observed:

The initial impacts should be observable immediately after the improvements are made, though some are already observable because of the fiscal and physical resources Oregon State University has already contributed towards our goals. The permanent nature of impacts should also be observable and measurable for the State of Oregon and Oregon State University in terms of student performance for the next 50-100 years.

¹ Oregon Office on Disability and Health. (2013). Disability in Oregon: 2013 Annual Report on the Health of Oregonians with Disabilities. Portland, OR: Institute on Development & Disability, Oregon Health & Science University.

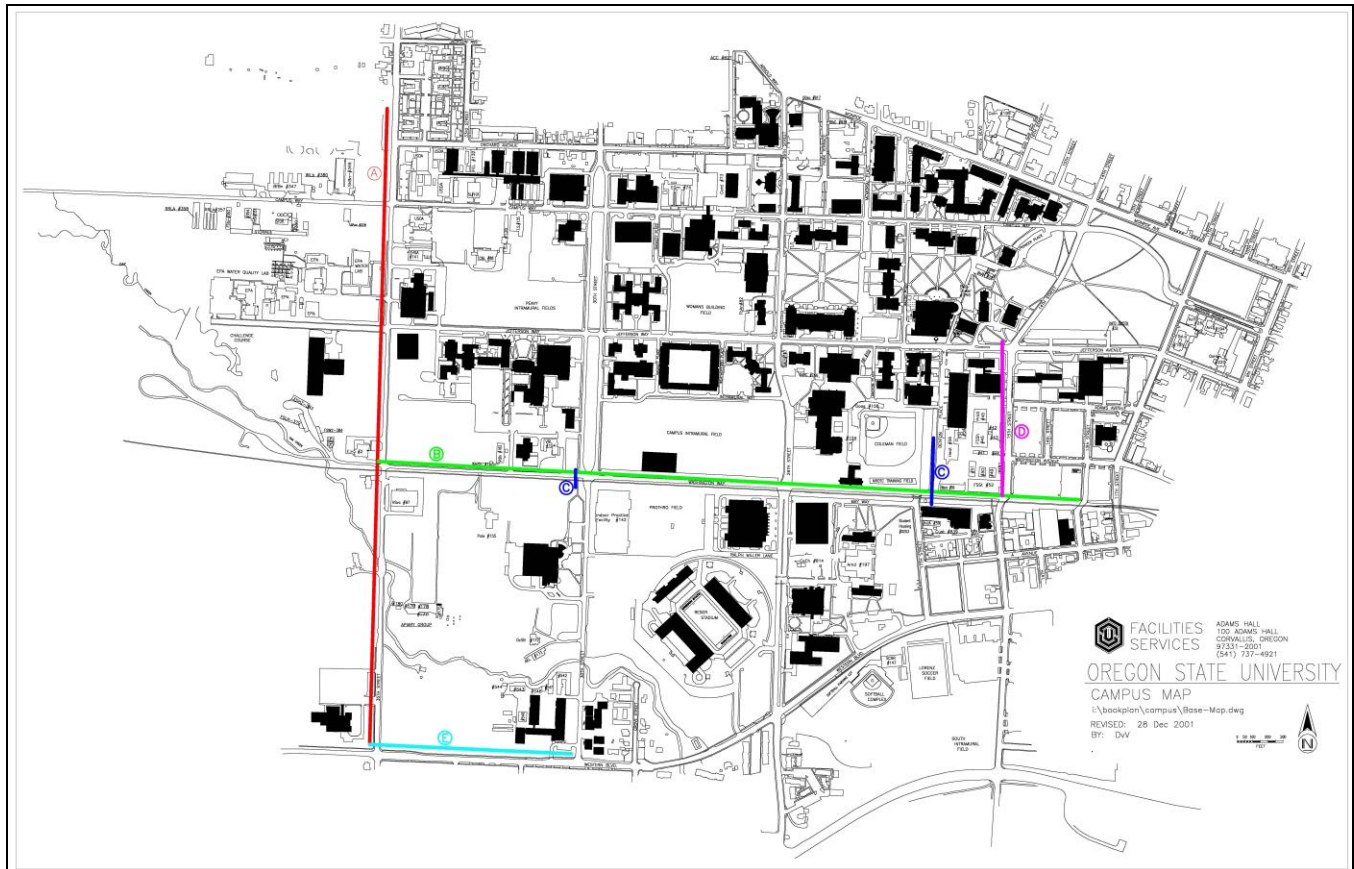
² U.S. Department of Education, Institute of Education Sciences, National Postsecondary Student Aid Study: 2008.

³ Brault, Matthew, Americans With Disabilities: 2010, Current Population Reports, P70-131, U.S. Census Bureau, Washington, DC, 2012.

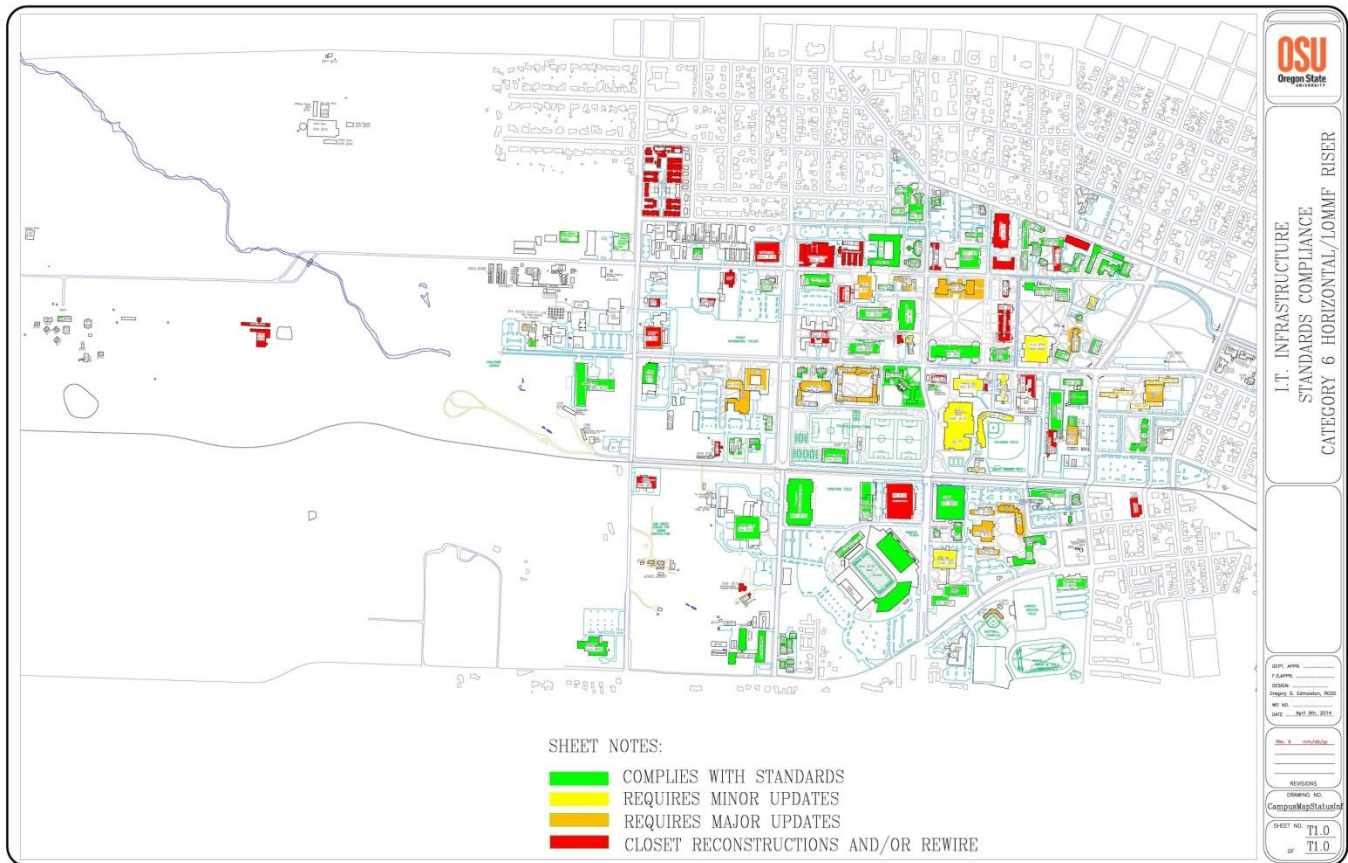
Project Working Title
Information Systems Infrastructure Improvement Program – Phase II
Project Location
Corvallis, Oregon

OSU Corvallis Locational Diagrams

Final Construction Activities and Locations to be Determined during Pre Design Phase



OSU Corvallis Information Systems Infrastructure Development Plan



OSU Corvallis Information Infrastructure Condition

1. Project Narrative Description and Justification

Modern information technology plays a central role supporting the academic and research mission of OSU. The projects proposed include completion of key Campus Network Distribution systems and continued improvements to OSU Building Network Distribution systems. Projects included are part of an ongoing multi-year capital investment program that will regularly upgrade data and communications infrastructure serving OSU students, faculty, and staff. Network improvements enabled by this capital investment represent key foundational elements of OSU's entire IT infrastructure, and as such are key to OSU's ongoing success. As articulated in the IT Strategic Plan "financial restructuring and investment is required to support continued maintenance and growth of the University network, enable the physical growth of the Corvallis, Bend and Newport campuses, and support the growth in the number of people and complexity of work they do".

The purpose of this capital investment is to enable OSU to:

- **Manage Growth:** Network utilization is growing 30-40% a year with the introduction of more devices per person and larger data sets in all academic disciplines. With more students, more faculty, and growing programs in Bend and Newport, OSU needs to invest in higher capacity network infrastructure to make network access transparent.
- **Ensure Stability:** Technology is imbedded in every aspect of University operations, teaching and learning, and research. Continuous access to online resources is critical.
- **Increase Performance:** Instant access to online resources enables leading edge research, effective daily operations, and enhances the learning environment at OSU.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Faculty and student pedagogic quality improvement enhancement with universal wireless and IT system improvements impacting each OSU student and faculty member
- 2) Reduction of OSU's capital deferred maintenance backlog
- 3) Significant % improvement of OSU's IT Infrastructure Conditions Index
- 4) Enhancement of research productivity and associated improvement in faculty retention and recruitment metrics due to the improved computational capacity and resilience

2. Detailed Project Description

Key Space Allocation Metrics

Site Area Acres	N/A
Building Gross SF (GSF)	N/A
Building Assignable SF (ASF)	N/A
Building Space Efficiency	N/A
Project Type	Cable plant and building upgrades
Projected Life of Asset	20 years
No. Building Floor Levels	N/A

Key Space Allocation Metrics

N/A

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

The tunnel fire on the Corvallis campus in November 2010 highlighted an urgent need for more resilient communications infrastructure in support of life, health, and safety. The campus tunnel system is currently used for steam infrastructure, power cable distribution, and communications cable distributions. The arc flash event not only disrupted power for many campus core buildings, it also severely damaged communications cable. With these cables damaged, building alarm and fire control panels could not transmit alarms to campus public safety or community first responders. Temporary installations were required to ensure that classes could continue in a timely manner while still ensuring a safe environment.

The investment in IT infrastructure will include additional and alternative underground distribution facilities to ensure that OSU has the ability to restore communications quickly in the aftermath of future seismic or other events, and to seamlessly provide emergency communications services for normal operations. In this phase II, upgrades will be focused on in-building cable and other infrastructure needed to take advantage of this increased capacity.

Specific improvements to life, health, and safety for the overall investment include:

- 1) Fully connecting the west side communications point of presence that is currently under construction to key facilities including primary research and instruction facilities housing large numbers of faculty/staff/ and students. These connections would ensure two communications paths for each of these facilities and remove the dependency on the Kerr Administration building as a single point of failure.
- 2) Providing for two distinct paths for cable distribution to campus facilities to support a “self-healing ring” IT architecture for OSU Corvallis campus communications.

Access to the utility tunnel and asbestos abatement as part of the upgrade process will be tightly monitored to ensure the health and safety of contractors and OSU personnel.

4. Total Project Cost Model

Project Cost Summary	
Total Cost of Construction Contracts	\$ 4,653,125
Total Project Cost	\$ 5,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	5/1/2014
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ -
Construction Documents and Administration Services	\$ 247,500
Other Services	\$ 27,500
Consultant Services Cost Total	\$ 275,000
Construction Contracts	
Building Systems Upgrades to 270 IS Service Rooms	\$ 1,282,500
Connectivity to 270 IS Service Rooms	\$ 1,080,000
Building IS Rewires	\$ 285,000
IS Systems Equipment	\$ 900,000
Wireless Systems Upgrades	\$ 250,000
Construction General Conditions and Requirements	\$ 302,500
Construction Contingencies	\$ 203,125
Escalation to Mid-Point Construction	\$ 350,000
Total Construction Contracts	\$ 4,653,125
Other Costs	
Hazardous Material/Site Remediation	\$ -
Owner Furnished Equipment	\$ -
IT and Telecom Plant and Cable	\$ -
Permits and Fees	\$ 37,500
Total Other Costs	\$ 37,500
Public Art Work	
Total Public Art Work	\$ -
Project Management	
Total Project Management	\$ 34,375

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000,000	\$ 5,000,000
State-Paid Debt	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ 5,000,000	\$ 5,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

N/A

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	04/01/16
Construction	04/01/16	04/01/17

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

These investments would enhance the learning experience for students once enrolled and taking classes at OSU by improving access to information and online learning systems, enhancing student success and student progression to degree rates.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

The Oregon University System key performance metrics around access, quality, cost-effectiveness and employability (<http://www.ous.edu/factreport/mp/state>) include a number of specific metrics that this investment intends to support. Specifically:

Graduate Satisfaction – The student experience is already highly augmented with online systems to support university instruction research, and experiential learning. Integrating these online system resources with in-person interactions continues to serve as a baseline norm in the higher

education environment. An underperforming network would negatively affect student satisfaction and performance by impeding access to information and timely submission of academic work products. A high performing network enhances the learning experience by enabling real-time virtual interactions and immediate access to information.

Engineering and Computer Science Degrees – A high performing network and internet access attracts the best students and enables a world class curriculum in Engineering and computer science by bringing state of the art access to internet resources and providing access to capabilities that will eventually be available to the wider public as Internet service providers build out comparable capabilities.

Sponsored Research – Advanced Cyber Infrastructure is a competitive advantage in grant application for research involving very large data sets such as Genomics, Geospatial Analysis, and Sensor Networks.

Customer Service (Availability of Information and Timeliness) – These investments enable instant access to information both on campus and off, so that regardless of location students and citizens are able to get the information they need without network congestion or Internet slowdowns.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

Comments included above.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

This investment will enable family and community support networks to remain intact while students attend OSU through the use of online and electronic communication. Access to social media, real time chat, and video conferences will enable under-represented, first generation, rural, and low-income students to stay connected to friends and family and therefore reduce the transition barriers and support student success.

8.B. How the impacts will be measured:

This effect will be reflected in student retention rates and measured as part of OSU’s institutional research reporting metrics.

8.C. When the impacts can be observed:

Incremental improvements in retention rates would be expected and immediate improvements after implementation of the proposed project would be observed/measured in student participation rates.

Appendices

Appendix A: OSU IT Strategic Plan – See <http://oregonstate.edu/is/strategic-plan-projects>

Appendix B: OSU Cyber Infrastructure Plan

Oregon State University Cyberinfrastructure (CI) Plan (2012-2017)

Overview of Oregon State University

Oregon State University (Oregon State or OSU), a comprehensive, research-extensive, public land-grant university, is one of only two American universities to hold the land-, sea-, space-, and sun-grant designations; it is also the only Oregon institution to hold both the Carnegie Foundation's top ranking for research universities and its prestigious Community Engagement classification. OSU considers the state of Oregon as its campus and has teaching, research, and education centers throughout the state, the branch Cascades Campus in Bend, a major marine science center in Newport, as well as 11 agricultural experiment stations at 15 locations, 35 county extension offices, and a range of programs in Portland.

Research Vision

In 2004, OSU initiated a long-term Strategic Plan for the 21st Century (www.oregonstate.edu/leadership/strategicplan) focused on three fundamental goals: to provide outstanding academic and student engagement programs, strengthen innovative scholarly and research activities and enhance OSU's ability to provide solutions to world issues. OSU identified six strategic initiatives for investment in the 2004 Strategic Plan: the Center for Healthy Aging Research: Linking Individuals, Families and Environments (LIFE); Computational and Genome Biology; Ecosystem Informatics: Sustainable Rural Communities; Mathematics, Computer Science and Ecology; Subsurface Biosphere Education and Research; and Water and Watersheds.

Phase II (current priorities) of the Strategic Plan brings an intense focus on three *Signature Areas of Distinction*. Each of these brings science, engineering and social sciences together to solve the world's problems, with strategic hiring underway to increase the University's research capacity. In 2011, OSU added 38 faculty positions, with targeted increases against strategic priorities noted below.

Healthy Planet: Advancing the Science of Sustainable Earth Ecosystems combines knowledge, technologies, and policies related to climate change, food security and safety, renewable energy production, and economic vitality based on sustainable natural resources.

Healthy People: Improving Human Health and Wellness. OSU is home to highly ranked programs that respond to some of the most challenging health and wellness issues facing us today, including community health, cardiovascular and metabolic diseases, cancer, aging, immune function, and neurodegenerative diseases.

Healthy Economy: Promoting Economic Growth and Social Progress. OSU has broad strengths in technology, engineering, agriculture, forest resources, science and business that will allow it to achieve breakthrough advances in renewable and alternative energy, green building technology, and resource and enterprise sustainability.

Scope and Importance of Cyberinfrastructure

Success in achieving OSU's agenda requires that we have a comprehensive and robust cyberinfrastructure. We must deploy new technologies and approaches that will foster research, enable education and improve the economic prospects in Oregon. The cyberinfrastructure plan must be a component of the University's more comprehensive Strategic Plan for Information Technology.

The five core elements of OSU's cyberinfrastructure plan are as follows:

1. Computing and Storage
2. Data Center
3. Network, including the on-campus network and connections to research networks
4. Identity Management
5. Application Delivery

2012 Cyberinfrastructure: Current Cyberinfrastructure

OSU is continuing a long history of enabling data driven research, for example, hosting remote instrumentation at the Tsunami research lab as part of the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) and acting as a direct broadcast center for ocean satellite imagery (<http://omel.coas.oregonstate.edu/MODIS/>). To support these initiatives, and other compute and network intensive research programs, the following cyberinfrastructure has been deployed.

Computing and Storage

The University has three disciplinary clusters that span multiple colleges and academic departments: 1) Earth, Ocean and Atmospheric Sciences; 2) Genomics and Biocomputing; and 3) Engineering and Physical Sciences. Each has its own computational and storage facilities that are managed by discipline experts and computer scientists to tailor the computational resources to their specific needs and approach to computation. Core elements of their storage and computational infrastructures are provided through College funds and then individual researchers add storage/computing capacity. All three clusters use grid engines to queue and distribute jobs across their computational resources and provide specialized application software.

Faculty from the three clusters are active participants in national cyberinfrastructure projects that include local and national facilities, for example the College of Engineering provides computational support for faculty involved with NEES, the College of Earth, Ocean and Atmospheric Sciences is a lead on the Ocean Observatory and the Center for Genome Research and Biocomputing (CGRB) is involved with iPlant and a collaborator with the Texas Advanced Computing Center (TACC).

Data Center

The University has three primary data centers with a fourth under construction. These are hardened data centers with redundant power and cooling systems that provide space for administrative computing, web services and other general purpose computing needs. Selected research computing resources are also located in these data centers. The disciplinary clusters also maintain their own specialized data centers.

Network

Over ninety percent of campus buildings are cabled to a rigorous published standard which calls for a single-mode fiber distribution plant among all buildings, 10 Gbps rated riser within the building, and category six station wire. This campus cable plant standard is maintained by our on-staff Registered Communication Distribution Designer who bases the specifications on EIA/TIA international standards and verifies compliance for all new campus cable infrastructure. Work is currently underway to build out a redundant core for fiber distribution to ensure reliability and resiliency of this cable plant and the communications systems dependent on it.

OSU's data network architecture is based on providing advanced functionality and interoperability at the core on a Cisco systems platform. The core network currently consists of Nexus and Catalyst series platforms designed to support 1/10/40 Gb uplinks. 40 Gbps connections currently support core applications in the centrally managed data centers, 10 Gbps connections are available for research intensive buildings, and 1 Gbps is our standard building connection.

Bandwidth intensive research networks are connected in a security context specially optimized for high performance science environments that bypasses campus network appliances such as firewalls and bandwidth shapers. Work is currently underway to upgrade the campus architecture to a virtualized environment based on MPLS technology to enable flexible network configurations and a resilient design. The new core architecture also includes an IPv6 deployment and work is underway to upgrade our address space management tool to make IPv6 widely available on campus.

As a charter member of Internet2, OSU has worked with regional partners to build/acquire long haul fiber optic paths to connect to the national backbone in Portland Oregon at 2X10Gb. This capacity is shared amongst Portland State University, Oregon Health and Sciences University, and the University of Oregon and is distributed over a regional optical network using DWDM on two separate physical fiber paths across western Oregon. Access to this bandwidth capacity is not currently restrained and each of the member institutions is able to utilize the full bandwidth available at any given time.

Identity Management

The University provides a centralized Active Directory for the campus with an ID system that provides a Central Authentication Service (CAS) for on-campus and off-campus applications.

Application Delivery

Desktop applications remain an essential requirement of most research projects and supply the means of analyzing, visualizing and managing research data as well as communicating among project collaborators. The traditional desktop PC would not be considered a component of cyberinfrastructure, but application and desktop virtualization are expected to become essential in a BYOD (Bring Your Own Device) era. OSU is currently engaged in pilot projects that are testing these new technologies and will provide an understanding of the server infrastructure needed for large-scale implementation.

2017 Cyberinfrastructure Vision

The University has set the goal of becoming a top 10 land grant research institution. It is pursuing an aggressive agenda of investing in its research capacity. This agenda requires an equally aggressive set of goals for the University's cyberinfrastructure. Design of the infrastructure is being guided by a set of edge cases, notably the needs of genomics where the increase in the capability of gene sequencing systems is outpacing Moore's law.

Computing and Storage

The three disciplinary clusters noted above are expected to remain the mechanism for organizing the design and delivery of most computational services. An additional service cluster will be created that supports the area of social science and statistical computing. This cluster is not expected to result in a completely new computational environment with additional engineering staff, rather it will be supported through incremental expansion of an existing cluster.

Faculty are expected to use a mix of computational resources, with both an on-campus and public cloud strategy. The development of on-campus resources will be limited in scope, focusing on those systems that need to be managed locally because of their specialized architecture, problems of network latency, or other similar considerations. Public cloud services, e.g. Amazon's Elastic Compute Cloud, will be equally important to faculty. Federally funded grid resources such as those from XSEDE will be the final source of capacity.

Central information services on campus will offer a large-scale storage cloud that can be used by faculty associated with any disciplinary cluster. Unused compute capacity of centralized computing resources supporting virtual servers and virtual desktops will be available to provide computational capacity for researchers.

Progress:

- CGRB has deployed ETA Drive, providing a web-based storage cloud for its researchers.
- CGRB is using XSEDE resources at TACC to augment its computational capacity.

Data Center

The campus will continue to provide at least two primary Tier 2 data centers which will be head-ends for the network and locations for selected storage and server systems. It will also maintain a modular, containerized data center that can support systems, such as HPC systems, that require large amounts of power per rack. This modularized alternative is expected to have 40+ racks each capable of supporting 20+ kw/rack. The general strategy for provisioning data center infrastructure will be to maximize density and increase the amount of compute power per blade and rack before expanding current space or building new data centers. To the extent needed, space may be set aside in newly constructed buildings to house research servers of the projects within that building. In addition, some disciplinary clusters are expected to maintain their own data center spaces in addition to sharing centrally provided space.

Progress:

- A capacity and management review is underway for OSU's four primary data centers, which will lead to an optimization plan, due in November 2012
- Planning is underway for acquisition of a modular data center for research computing growth across data- and computation-intensive disciplines. A capital funding request has moved forward to the Oregon Legislature.

Network

The University intends to build a 100 Gbps core network with priority given to research-intensive buildings. Our standard will be a minimum of 40 Gbps connections to research buildings and 10 Gbps connection to other buildings with higher speeds available as needed. The campus network will employ MPLS and IPV6 and leverage Software Defined Networking (SDN). A virtual, separate network will be packaged and devoted to research. The path of this network will be through a DMZ, the OSU Science DMZ. perfSONAR will be employed on the research network to monitor end-to-end network performance. The network will support dynamic provisioning and integrate into DYNES or subsequent national systems to help bridge campus cyberinfrastructure with national and international infrastructures. SDN and dynamic provisioning services will be exposed to researchers developing or deploying research applications. Access to Internet2 will be provided through 100 Gbps connections to Portland and Eugene and use of the 100 Gbps Internet2 network link between those two cities.

Progress:

- perfSONAR has been deployed at the University
- The University has applied to participate in the Internet2 Dynes project.
- A second head-in facility will be complete in Summer 2012.
- First stage technology and facilities planning is complete for the 100 Gbps core network.
- Multiple capital funding requests have moved forward to the Oregon Legislature for the physical placement and core components of the network.

Identity Management

There will be a single identity in place for each person for all systems and purposes, with provisioning, audit, and policy controls. University standards and practices related to managing identity and governing policy will have been developed. CAS and Shibboleth will be widely deployed as application authentication middleware. The University is a member of the InCommon Federation. This infrastructure will allow faculty to easily and flexibly access and share network or computational facilities whether at OSU or at other universities.

Progress:

- Discovery phase of a comprehensive identity management infrastructure has started.
- Membership application to InCommon is underway

Application Delivery

Each faculty member will have a persistent, personal, virtual desktop. These desktops will be supported out of two data centers with support for high availability. The virtual desktops will be able to leverage server-side or user-side GPU processors. By building out this infrastructure, it will become possible for faculty to access their work anywhere. It will also enable cyberinfrastructure managers to locate computationally intense desktop applications near research data, reducing network barriers for researchers.

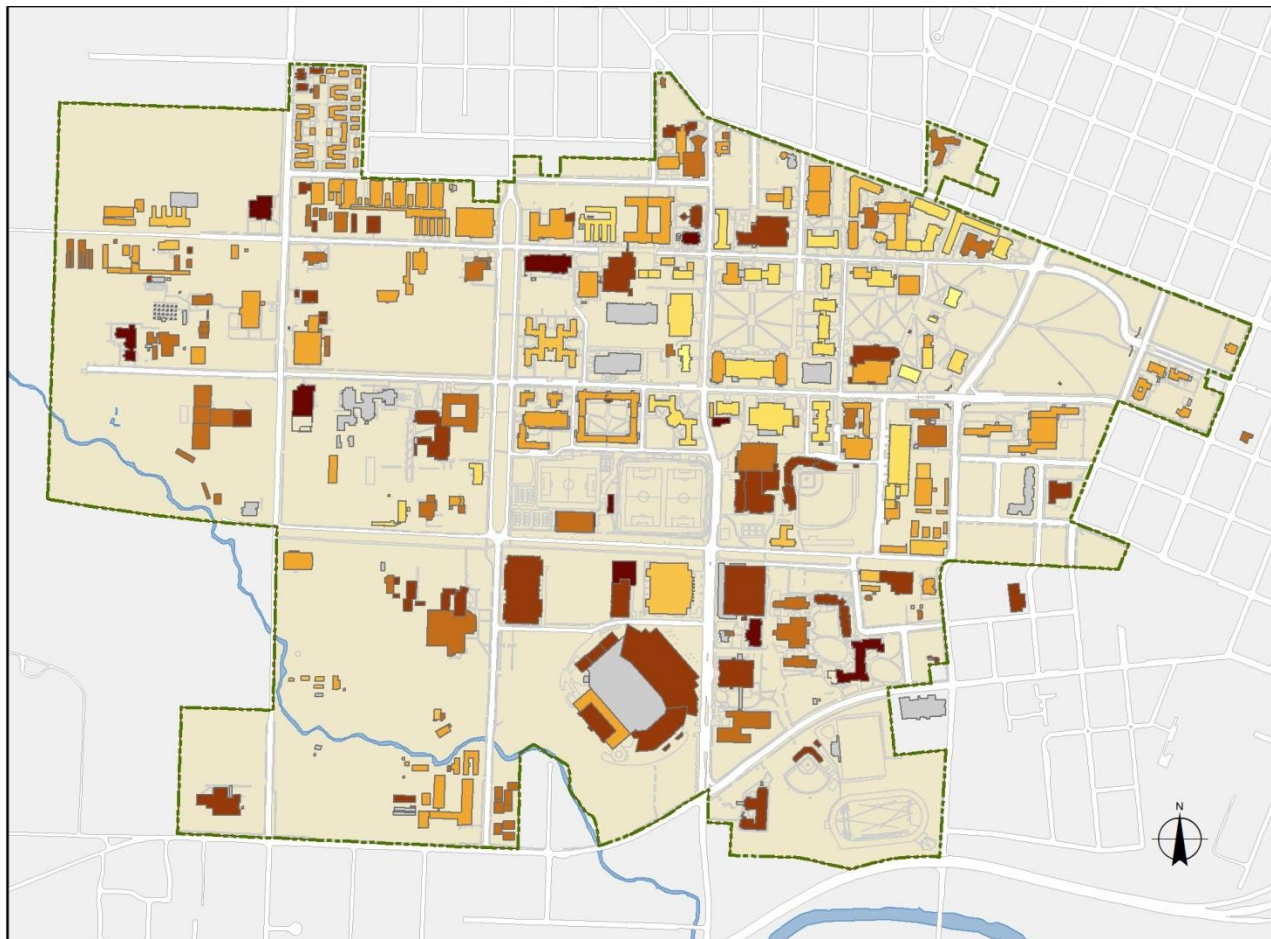
Progress:

- Pilot projects testing application virtualization and virtual desktops are underway at two colleges.
- Project funding has been allocated for expanding these pilots to additional colleges commencing in summer 2012.

Project Working Title
Minor Capital Projects – Building and Program Renewal Projects
Project Location
Corvallis, Oregon

OSU Corvallis Locational Diagram

Final Construction Sites and Activities to be Determined during Pre Design Phase



No Data or New
 1889-1899
 1900-1929
 1930-1949
 1950-1969
 1970-1989
 1990-2009
 2010 & Later

OSU Corvallis Buildings by Age

1. Project Narrative Description and Justification

Building Renewal – Focused on critically needed repairs and renewal of our existing buildings and infrastructure, in particular renewal of building systems that serve OSU’s academic research facilities, these projects represent our careful assessment of the condition of OSU’s capital assets, and reflects prioritized investments. This funding request can begin to reverse the deterioration of a wide range of buildings and infrastructure on the OSU Corvallis campus and sustain our most critical instructional and research programs. Fire and life safety, energy efficiency, and improved utility system reliability and resilience investments are included in a portfolio of minor capital projects.

Specific projects are included in the following general categories: 1) Building Repair and Renewal, 2) Mechanical and Electrical System Renewal, 3) Utilities and Site Work Renewal, and 4) Fire and Life Safety Improvements. See Appendix A for specific projects proposed.

Program Renewal - OSU's proposed program renewal projects include the renovation of teaching laboratories and innovative program improvements to support the culture of innovative learning, teaching, and research through increased space utilization, creating opportunities for collaborative learning spaces, and cost-effectively transforming outdated research facilities into new research opportunities. See Appendix B for specific projects proposed.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Reduction of OSU Deferred Maintenance Backlog
- 2) Reduction of OSU facilities operating and maintenance costs
- 3) Improvement to OSU Facilities Conditions Index
- 4) Significant contribution to OSU faculty retention and recruitment
- 5) Increases in instructional space capacity to support OSU's commitment to Oregon's 40-40-20 commitment

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	Campus
Building Gross SF (GSF)	200,000
Building Assignable SF (ASF)	120,000
Building Space Efficiency	N/A
Project Construction Type	Renovation
Projected Life of Asset (Years)	N/A
No. Building Floor Levels	N/A

Key Space Allocation Metrics

N/A

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

Life, Health, and Safety building needs will be improved via fire and life safety improvements, HVAC and fume hood upgrades, and backup emergency generator power systems.

Gilbert Hall:

Health & safety will be improved via remodeling the organic chemistry lab space and associated fume hoods to allow a greater number of users per lab session.

Graf Hall:

Improvements to the ventilation system for the bottom floor cage areas will improve the health and safety of personnel within the entire building.

4. Total Project Cost Model – Minor Capital Repair Program 2015-17

Building Renewal Portfolio – Please Review Appendix A for Specific Projects and Capital Budget Detail

Program Renewal Portfolio – Please Review Appendix B for Specific Projects and Capital Budget Detail

Project Cost Summary		
Total Cost of Construction Contracts	\$	26,310,000
Total Project Cost	\$	30,000,000
Construction Inflation Rate per annum		3.0%
Base Month and Year		May-14
Acquisition Costs		
Acquisition Cost Total	\$	-
Consultant Services		
Predesign Services	\$	40,000
Construction Documents and Administration Services	\$	2,137,500
Other Services	\$	225,000
Consultant Services Cost Total	\$	2,402,500
Construction Contracts		
Building Repair and Renewal	\$	3,725,000
Mechanical and Electrical Systems Repair and Renewal	\$	7,700,000
Utilities and Site Work Repair and Replacement	\$	4,600,000
Fire and Life Safety Improvements	\$	2,200,000
Bexell Hall Interior Improvements	\$	1,500,000
Gilbert Addition Chemistry Teaching Lab Renovation	\$	2,000,000
Graf Hall Interior Renovation	\$	4,150,000
Instructional Space Improvement	\$	435,000
Total Construction Contracts	\$	26,310,000
Other Costs		
Permits and Fees	\$	675,000
Total Other Costs	\$	675,000
Public Art Work		
Total Public Art Work	\$	-
Project Management		
Total Project Management	\$	612,500

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000	\$ -	\$ 20,000,000	\$ 30,000,000
State-Paid Debt	N/A	\$ -	N/A	\$ -	\$ 10,000,000	\$ -	\$ 20,000,000	\$ 30,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

N/A

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	10/01/16
Construction	10/01/16	10/01/18

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

These projects would substantially improve student experiences at OSU, particularly in baccalaureate core courses and undergraduate instruction. The current state of the buildings - where these improvements will occur - diminishes not only OSU's capacity to serve students in the space but also mitigates against the overall quality of the student experience. To allow building systems including fire and life systems, and building envelopes that protect our building assets from further deterioration to remains unrepaired, unsafe, and failing catastrophically, challenges OSU's ability to provide an efficient and effective educational experience for our students. A better building reflecting investments and care extends our capacity to keep students engaged, enrolled, and graduating.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

Oregon State University remains a critical economic engine throughout the State of Oregon. The deteriorating condition of our existing teaching and learning environments will continue to serve as a deterrent to our ability to compete, recruit, and retain students and faculty. These building and program renewal projects can serve as a catalyst, renewing our community of faculty, staff, students, visitors, and others who support OSU's missions.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

These projects provide major physical improvements to underutilized and deteriorating buildings across the OSU Corvallis campus and sustain the public investment made by generations of Oregon citizens.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

8.B. How the impacts will be measured:

Outcome measures will continue to include number of bachelor degrees awarded and number of advanced degrees awarded. Other performance metrics include monitoring first year progression rates and six-year or less graduation rates for these student groups. Oregon's 40-40-20 goals are ambitious and meeting them will require both increasing the rates of retention and completion for students and increasing the number of students participating from populations under-represented at the public universities. There are many well-documented approaches that can improve these metrics, particularly for disadvantaged students.

8.C. When the impacts can be observed:

OSU expects to see immediate improvements in student and faculty interactions due to these proposed investments in improved thermal performance and comfort, safer environments due to improved egress and general site and building lighting, and improved indoor air quality due to the improved performance of building mechanical systems. “Results” are also anticipated to be observed over a period of 2-4 years via measurable outcomes associated with student progression rates to degree factors, first year progression rates, faculty retention rates, and quality of faculty recruitment.

APPENDICES

Appendix A – Minor Capital Projects – Building Renewal - \$20.75M

Oregon State University requests \$20.750M for minor capital building renewal projects. Projects in this category are estimated to cost between \$25,000 and \$2 million and are prioritized as the most urgent of the University's minor capital preservation needs. Sub-projects have been defined within the following broad categories: 1) Building Repair and Renewal, 2) Mechanical and Electrical Systems, 3) Utilities and Site Work 4) Fire and Life Safety Improvements. All building renewal projects aim to preserve and extend the life of existing campus facilities and their supporting infrastructure systems.

Building Repair and Renewal: \$4.25M

Safe, sound and functional buildings are critical to the academic mission of the OSU. This group of projects addresses deficiencies in existing building systems including: emergency structural repairs, roof repairs and replacement, roofing membrane replacement, window repair and replacement, exterior masonry and siding, and the replacement of worn interior finishes within public spaces. Energy conservations measures (ECMs) are a key component in this area of the proposed work.

Mechanical and Electrical Systems Repair and Renewal: \$8.75M

Projects in the mechanical and electrical systems category include the repair and replacement of campus heating and cooling systems (boilers, heat pumps, water piping, chillers, and cooling tower replacement); the modernization of building HVAC, monitoring and control systems to improve performance and increase efficiency; and elevator repairs and replacement projects. This category also includes the repair and modernization of outdated electrical systems including power generation equipment, campus and building distribution systems and emergency backup power systems. Energy conservations measures (ECMs) are a key component in this area of the proposed work.

Utilities and Site Work Repair and Replacement: \$5.25M

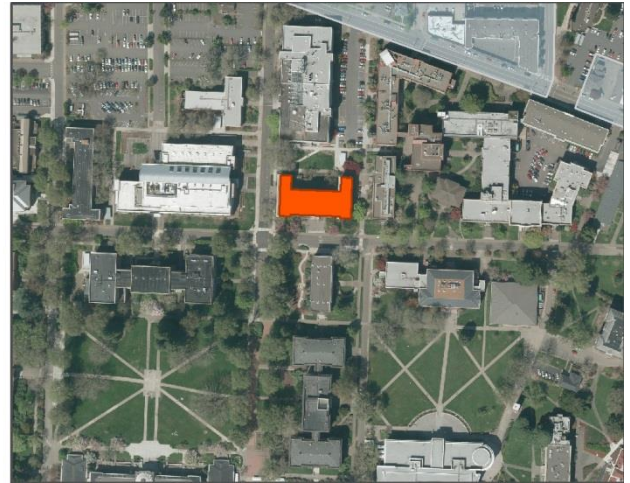
Projects in this category include repair and replacement of aging utility services on campus including sewer, water, gas, and electrical service. Site work includes landscape improvements including irrigation system repair and water conservation measures. This group also includes repair and replacement of existing roads and pedestrian pathways and provides lighting upgrades to ensure safe and sufficient circulation through campus. The utility infrastructure system promotes general health and safety, and provides resources to buildings on campus required for the functionality of OSU programs. Energy conservations measures (ECMs) are a key component in this area of the proposed work.

Fire and Life Safety Improvements: \$2.5M

These projects provide fire protection and alarm system upgrades, and other life and workplace safety projects within existing campus buildings.

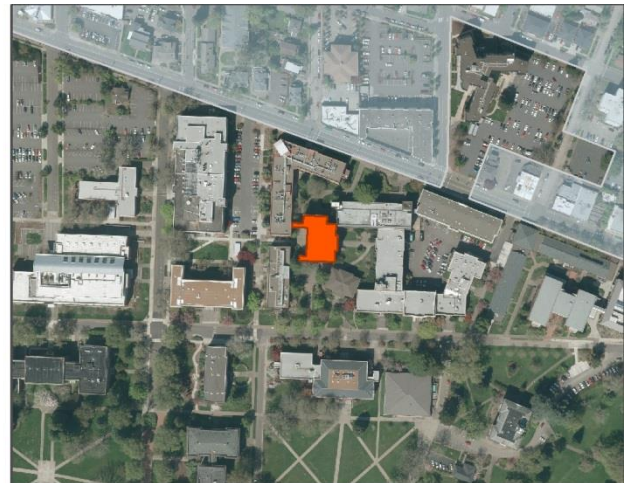
Appendix B – Minor Capital Projects – Program Renewal - \$9.25M

Oregon State University requests \$9.25M for minor capital program renewal projects. Projects in this category are estimated to cost between \$25,000 and \$5 million and renew and extend the life of our existing assets that support our highest-priority needs most vital to the University's instructional and research mission.



Bexell Hall Interior Improvements: \$1.75M

Provides for the renewal and life extension of the interior teaching, student and faculty spaces of Bexell Hall.



Gilbert Addition Chemistry Teaching Lab Renovation: \$2.25M

Renovation of the Gilbert Addition chemistry teaching laboratory will improve, renew and prolong the life of OSU's critical organic chemistry teaching asset. The project will introduce advanced technologies and pedagogy as well as increase the student and scheduling capacity of the lab, extending science education to a far greater number of students.



Graf Hall Interior Renovation: \$4.75M

Graf Hall envisions becoming a shared, open, active center for multiple researchers, graduate students, and undergraduate students to interact. Features will include research laboratories, space for prototyping, testing and student-teams for OSU's robotics programs, classrooms and teaching labs, faculty offices, white board "alcoves" and visitor spaces. This renewal and reuse project will extend the life, usefulness and beauty of a prominent ninety year old building

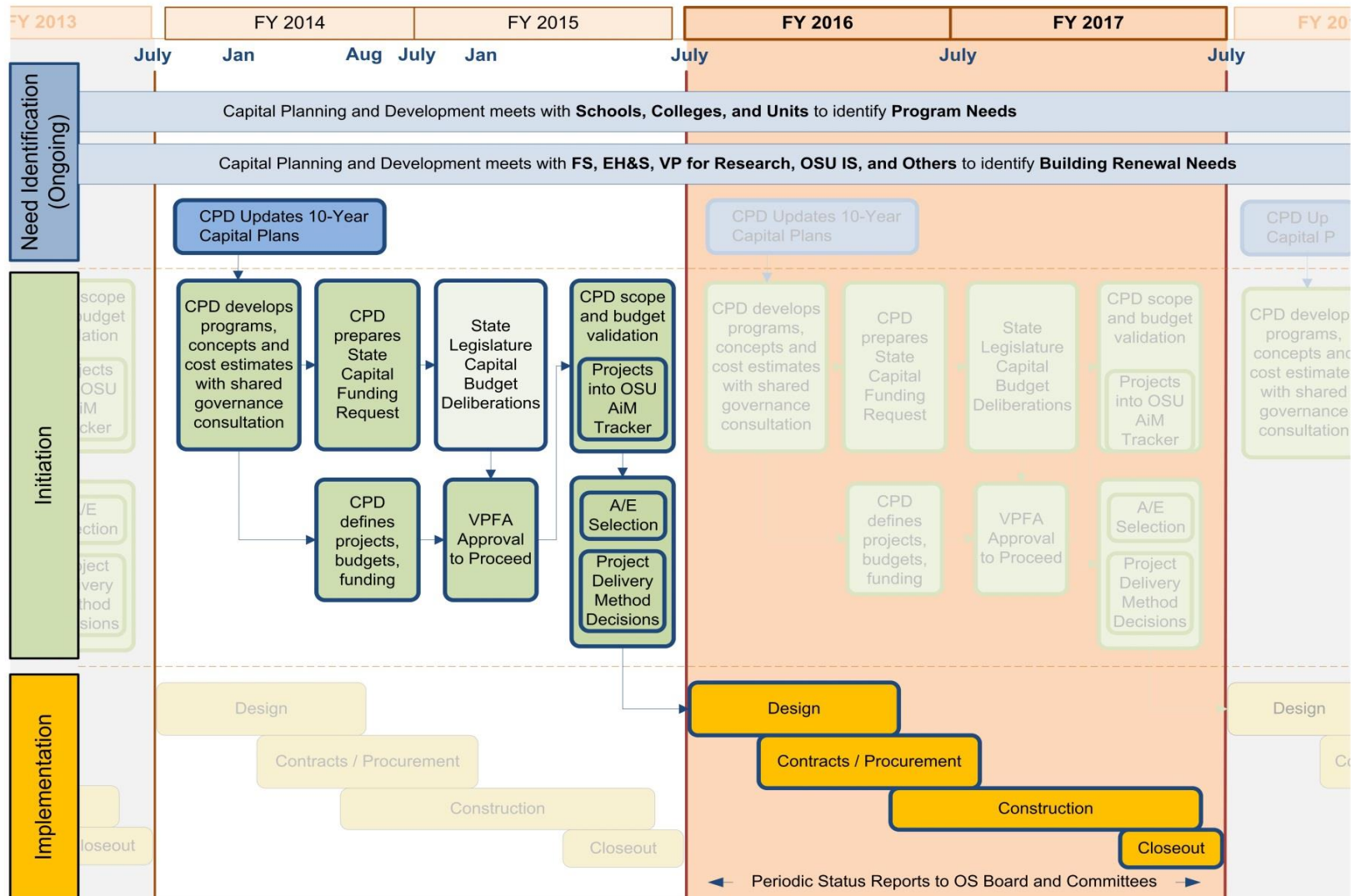
Instructional Space Improvement: \$0.5M

These campus wide projects will continue in this biennia, and in future biennia, OSU's long-range plan for biennial modernization of existing instructional classrooms and classroom laboratories to provide improved safe classroom laboratory environments, increased efficiency of the use of rooms, and more current information technology hardware to provide formal and informal teaching and learning spaces/infrastructure support which will efficiently support the 21st century learner.

Appendix C – Minor Capital Projects – Planning and Implementation Cycle

OSU Minor Capital Planning and Implementation Cycle

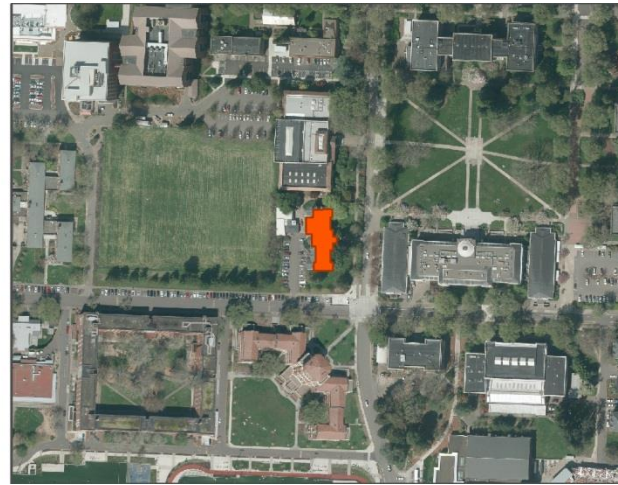
DRAFT – April 2014



Project Working Title
Fairbanks Hall Renovation
Project Location
Corvallis, Oregon

OSU Corvallis Locational Diagrams

Final Site to be Determined during Pre Design Phase



1. Project Narrative Description and Justification

The renovation will provide a more resilient, more efficiently utilized, fully accessible Fairbanks Hall, and renew OSU's second-oldest building for many more years of service to Oregon State University. The comprehensive renovation will create critically needed space in the currently unutilized fourth floor, will reduce building energy costs with planned energy conservation measures, expected to support recruitment and retention of faculty and students, and for the first time will be fully accessible to all students, faculty, and OSU visitors. This renovation supports OSU's deferred maintenance renewal plan.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Reduction of OSU Deferred Maintenance Backlog
- 2) Reduction of OSU facilities operating and maintenance costs
- 3) Improvement to OSU Facilities Conditions Index
- 4) Significant contribution to OSU faculty retention and recruitment
- 5) Increases instructional space capacity to support OSU's commitment to Oregon's 40-40-20 commitment
- 6) Preservation of OSU's cultural heritage while building an improved academic building to enhance academic success for Oregon State University students in support of the OSU Strategic Plan 3.0.

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	2
Building Gross SF (GSF)	37,947
Building Assignable SF (ASF)	22,750
Building Space Efficiency	0.6
Project Construction Type	Renovation
Projected Life of Asset (Years)	75
No. Building Floor Levels	4

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Academic	13,650	60%
Administrative & Office	5,688	25%
Student Space	3,413	15%

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

Fairbanks Hall is one of the most historic, enduring, and iconic buildings on the OSU Corvallis campus. It is, however, many decades past receiving a critically needed renewal. The current state of Fairbanks Hall with regard to life, health, and safety matters is severely compromised. The following are key components that will be addressed.

Fire and Life Safety: This all-wood structure building requires improvement and expansion of fire protections systems, and improved fire and life safety egress.

Hazardous Materials: Significant asbestos abatement is required and lead paint materials will be removed from the building in compliance with all life safety requirements.

Indoor Air Quality: Portions of the building, notably the basement and some studio areas, are poorly ventilated and limit efficient use of the building.

Plumbing Systems: Frequent failures result in regular closures to large portions of the building creating unsafe and unsanitary conditions for the occupants.

Accessibility to all members of the OSU community and Visitors: The first floor is the only floor currently ADA compliant; the basement and floors 2 – 4, representing over 25,000 square feet, are not. Egress from the “accessible” first floor would be unsafe in an emergency given the exterior elevator and required exit pattern.

Fourth Floor: The building’s top floor has been secured from public access for over 30 years and will be opened and renovated for more efficient building and campus academic space utilization.

This area of the building will be provided with fire protection and all hazardous materials as found will be abated.

Basement: The basement is currently used for a woodshop, extensive storage, and a small student lounge space and has difficult access/egress patterns and subject to regular water intrusion to all storage areas.

4. Total Project Cost Model

Project Cost Summary	
Total Cost of Construction Contracts	\$ 8,180,000
Total Project Cost	\$ 10,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	5/1/2014
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ 40,000
Construction Documents and Administration Services	\$ 787,500
Other Services	\$ 112,500
Consultant Services Cost Total	\$ 940,000
Construction Contracts	
Site Work - Preparation and Infrastructure	\$ 250,000
Facility Construction	
Substructure	\$ 112,500
Super Structure & Shell	\$ 1,500,000
Interiors	\$ 1,612,500
Building Systems	\$ 1,625,000
Fixed Equipment	\$ 112,500
Special Construction and Demolition	\$ 100,000
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$ 622,500
Construction General Conditions and Requirements	\$ 825,000
Construction Contingencies	\$ 600,000
Escalation to Mid-Point Construction	\$ 820,000
Total Construction Contracts	\$ 8,180,000
Other Costs	
Hazardous Material/Site Remediation	\$ 50,000
Owner Furnished Equipment	\$ 258,750
IT and Telecom Plant and Cable	\$ 75,000
Permits and Fees	\$ 225,000
Total Other Costs	\$ 608,750
Public Art Work	
Total Public Art Work	\$ 65,000
Project Management	
Total Project Management	\$ 206,250

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000	\$ 10,000,000
State-Paid Debt	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ 10,000,000	\$ 10,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

N/A

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	08/01/16
Construction	08/01/16	08/01/17

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

This project would substantially improve student experiences at OSU, particularly in baccalaureate core courses and undergraduate instruction. The current state of the building diminishes not only our capacity to serve students in the space but also mitigates against the overall quality of the student experience, especially in the arts. An improved public historic building reflecting public investment and care extends our capacity to sustain engaged, enrolled, and graduating students and future citizen leaders in Oregon respectful of our heritage.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

The fine arts are an economic driver in the Willamette Valley and throughout the State. We fail to excel economically and in arts employment, in part at least, because we provide limited

opportunities for our students. A renovated Fairbanks Hall can not only be a catalyst for radical enhancement of those opportunities for our students but also a draw to our community for artists and others who support art and, consequently, spend money and devote resources that create jobs and a stronger economy.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

This project provides major physical improvements to an underutilized and deteriorating building. Failure to address the needs of this building now will lead to an unnecessary continued deterioration of a valued state cultural resource—a capital asset developed with public resources, and, that supports the higher education mission and goals of Oregon State University.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

Oregon State University is a university of choice for Oregonians. Improving Fairbanks Hall provides additional opportunities for all populations in the state. While this project doesn’t directly target underserved populations, a newly renovated, improved space for the School of Arts & Communication (SAC) serves them as well as all Oregonians by:

- Enhancing identity and branding with a signature space for College of Liberal Arts (CLA) and the fine/performing arts
- Providing classroom improvements and spaces for student engagement and interaction
- Developing public meeting spaces, galleries, and performance areas for the SAC, CLA, and the university
- Creating an administrative face, place, identity for the SAC
- Make approximately 20,000 square feet of currently ADA non-compliant space accessible, useable, and safe (floors 2, 3, 4) through the installation of an elevator.

8.B. How the impacts will be measured:

Outcome measures will continue to include number of bachelor degrees awarded and number of advanced degrees awarded. Other performance metrics include monitoring first year progression rates and six-year or less graduation rates for these student groups. Oregon’s 40-40-20 goals are ambitious and meeting them will require both increasing the rates of retention and completion for students and increasing the number of students participating from populations under-represented at the public universities. There are many well-documented approaches that can improve these metrics, particularly for disadvantaged students.

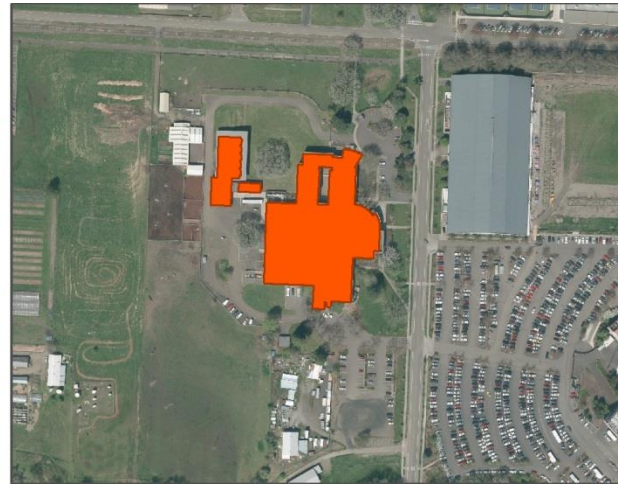
8.C. When the impacts can be observed:

We expect to see immediate results due to more safe, more highly utilized, and more efficient instructional spaces in the proposed comprehensive renovation of Fairbanks Hall.

Project Working Title
Magruder Hall Renovation – Phase II – College of Veterinary Medicine
Project Location (City)
Corvallis

OSU Corvallis Locational Diagrams

Final Site to be Determined during Pre Design Phase



1. Project Narrative Description and Justification

To sustain and grow a signature veterinary medical educational program, OSU plans to increase the number of students and faculty FTEs committed to teaching, research, and service. The proposed Phase II renovation and expansion project provides instructional space, including teaching laboratories, hands-on diagnostic and treatment spaces, and research space that will enable the OSU College of Veterinary Medicine to meet its teaching, research, and service objectives.

The project when completed will allow the College to increase veterinary student enrollment from the current entering class size of 56 to approximately 70 students (14 new students per year). This would lead to an eventual increase of 56 additional students in the four-year degree program at any time, and substantially increased tuition revenues.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) A partnership to sustain and grow the OSU state-wide mission of creating a national veterinary medical educational program.
- 2) Facilities improvements (including the addition of one major new classroom and a classroom teaching laboratory renovation that will more efficiently utilize the existing space available) that will significantly improve the capacity and quality of education for OSU students.
- 3) Reduction in the OSU Deferred Maintenance Backlog.
- 4) Net increase in the number of students who will be able to enter the OSU College of Veterinary Medicine.

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	0.5
Building Gross SF (GSF)	11,112 Renovation - 13,360 New
Building Assignable SF (ASF)	Renovation and New 17,000
Building Space Efficiency	0.7
Project Construction Type	Renovation and New
Projected Life of Asset (Years)	75
No. Building Floor Levels	2

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Teaching Lab	4,250	30%
Academic	4,250	30%
Administrative & Office	3,400	20%
Student Space	1,700	20%

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

Renovation of classroom laboratories and HVAC equipment and fume hoods will improve the health and safety of the students and faculty in the College.

4. Total Project Cost Model

Total Project Cost Model Summary

Project Cost Summary	
Total Cost of Construction Contracts	\$ 12,840,000
Total Project Cost	\$ 15,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	May-14
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ 50,625
Construction Documents and Administration Services	\$ 956,250
Other Services	\$ 112,500
Consultant Services Cost Total	\$ 1,119,375
Construction Contracts	
Site Work - Preparation and Infrastructure	\$ 168,750
Facility Construction	
Substructure	\$ 112,500
Super Structure & Shell	\$ 1,800,000
Interiors	\$ 2,700,000
Building Systems	\$ 3,150,000
Fixed Equipment	\$ 607,500
Special Construction and Demolition	\$ -
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$ 933,750
Construction General Conditions and Requirements	\$ 1,237,500
Construction Contingencies	\$ 900,000
Escalation to Mid-Point Construction	\$ 1,230,000
Total Construction Contracts	\$ 12,840,000
Other Costs	
Hazardous Material/Site Remediation	\$ 25,000
Owner Furnished Equipment	\$ 271,250
IT and Telecom Plant and Cable	\$ -
Permits and Fees	\$ 337,500
Total Other Costs	\$ 633,750
Public Art Work	
Total Public Art Work	\$ 97,500
Project Management	
Total Project Management	\$ 309,375

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ 7,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,500,000
State-Paid Debt	N/A	\$ 7,500,000	N/A	\$ -	\$ -	\$ -	\$ -	\$ 7,500,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

Total amount for XI-G Bond 50% Match from OSU is \$7,500,000. OSU fund sources: Local Funds

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	09/01/15
Design	09/01/15	04/01/16
Construction	05/01/16	09/01/17

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

The veterinary profession is highly respected and career goal for many people who are oriented towards STEM subjects, academic high achievers and those who have a desire for a demanding but rewarding career. Becoming a veterinarian requires 4 years of training beyond the bachelor's degree and a veterinary education fits in the 40% goal for those obtaining a higher degree. The governor and the legislature have embraced investment in STEM education and veterinary medicine and other health professions are included in this category as they provide significant expertise in needed educational disciplines.

There is a significant demand for enrollment in veterinary professional programs as these spots are limited and it is highly competitive to be accepted into a program. Veterinary education is expensive per student, so a modest increase in the number of students accepted is the goal of this proposal in order to increase access while remaining fiscally responsible.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

The economic development goal for Oregon is “to provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare and prosperity of Oregon’s citizens. “

Increasing the ability of Oregon State University’s College of Veterinary Medicine to educate veterinarians addresses this goal in several ways. Veterinarians are highly respected professionals who are needed to provide clinical animal care services throughout Oregon. There is a demand for their services and there is a demand for access to this education.

Veterinarians also contribute specifically to the health and welfare of Oregonians through their expertise in comparative medicine, public health, food safety and regulatory medicine. Their job includes not only maintaining the health and safety of companion animals, but also the health and safety of the state’s food supply. In addition, they have expertise in prevention and treatment of diseases passed from animals to humans. The health and well-being of livestock in this state is dependent on the veterinary work force and is vital to the state’s economy.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

Other statewide goals that are addressed by this proposal are those related to agricultural lands and air, water, and land resources because of the impact of trained veterinarians in maintaining and improving the health and well-being of livestock, wildlife and management of these animals to promote both the animals’ health and the environment in which they live.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

The veterinary profession is highly attractive to rural students who were raised with animals and who are more likely to return to rural areas to practice. These are often areas that are underserved by veterinarians and areas of the highest need for veterinary services. As positions in professional veterinary programs are relatively few in number and highly competitive, increasing the number available will provide additional opportunities for students with farm and ranch backgrounds.

Another current need in veterinary services is for those with multicultural backgrounds whether they be bilingual or culturally sensitive to needs and resources of the increasingly diverse Oregon population. The College has been active in recruiting young people from under-represented populations through its veterinary summer camp for disadvantaged high school students. As these students enter the pipeline for professional programs, they can benefit from the increased opportunities to enter the program at Oregon State University.

8.B. How the impacts will be measured:

Detailed statistics on each entering class in the veterinary program including demographics, hometown, background and experience are kept and analyzed on a yearly basis. The class size has stayed constant at 56 students per class for the last 9 entering classes. It would be very easy to track the changes that occur in these demographics and background with an increase of 14 students each year in the four-year educational program.

8.C. When the impacts can be observed:

A possible impact with respect to access to the professional program could be seen with the first entering class that had the additional student numbers. As the success/graduation rate is nearly 100% for those matriculating, an impact on the diversity of graduating veterinarians would be seen four years later.

Project Working Title
Center for Advanced Wood Products Manufacturing and Design - College of Forestry
Project Location (City)
Corvallis

OSU Corvallis Locational Diagrams

Final Detail Site Locations to be Determined during Predesign Phase



1. Project Narrative Description and Justification

The project will establish an applied research center in partnership with private sector manufacturers to drive the innovation, testing and educational programs necessary for private investment in advanced wood products manufacturing capacity in Oregon's rural communities. In addition, a new, state-of-the-art building demonstrating engineered wood products made-in-Oregon will house the Department of Wood Science and Engineering and enhance undergraduate instructional facilities within and around the existing Peavey Hall on the OSU Corvallis campus.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) A partnership to sustain and grow the OSU state-wide mission of creating industry and community partnerships for economic development through development of enhanced high-value product development of Oregon wood products,
- 2) Facilities improvements that will significantly improve the capacity and quality of education for OSU students,
- 3) Reduction in the OSU Deferred Maintenance Backlog,
- 4) Enhanced recruitment and retention of key faculty, staff, undergraduate and graduate students,
- 5) Projected improvement in OSU total-sponsored-research-grant-dollar productivity.

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	New Construction ~ 1 Acre
Building Gross SF (GSF)	87,000 Renovation - 56,000 New
Building Assignable SF (ASF)	(Renovation and New) 85,800
Building Space Efficiency	0.6
Project Construction Type	Remodel and New Additions
Projected Life of Asset (Years)	75
No. Building Floor Levels	2

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Research	25,740	30%
Research Service	12,870	15%
Academic	25,740	30%
Administrative & Office	8,580	10%
Academic & Public Assembly	12,870	15%

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

The Peavey instructional facility enhancements are needed for certain labs and HVAC/fume hoods. The enhancements can be used to improve the life, health and safety attributes of the building.

4. Total Project Cost Model

Project Cost Summary	
Total Cost of Construction Contracts	\$ 49,675,000
Total Project Cost	\$ 60,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	5/1/2014
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ 202,500
Construction Documents and Administration Services	\$ 3,825,000
Other Services	\$ 450,000
Consultant Services Cost Total	\$ 4,477,500
Construction Contracts	
Site Work - Preparation and Infrastructure	\$ 1,125,000
Facility Construction	
Substructure	\$ 540,000
Super Structure & Shell	\$ 7,875,000
Interiors	\$ 6,750,000
Building Systems	\$ 13,500,000
Fixed Equipment	\$ 2,430,000
Special Construction and Demolition	\$ 250,000
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$ 3,735,000
Construction General Conditions and Requirements	\$ 4,950,000
Construction Contingencies	\$ 3,600,000
Escalation to Mid-Point Construction	\$ 4,920,000
Total Construction Contracts	\$ 49,675,000
Other Costs	
Hazardous Material/Site Remediation	\$ 250,000
Owner Furnished Equipment	\$ 2,225,000
IT and Telecom Plant and Cable	\$ 395,000
Permits and Fees	\$ 1,350,000
Total Other Costs	\$ 4,220,000
Public Art Work	
Total Public Art Work	\$ 390,000
Project Management	
Total Project Management	\$ 1,237,500

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ 30,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000,000
State-Paid Debt	N/A	\$ 30,000,000	N/A	\$ -	\$ -	\$ -	\$ -	\$ 30,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

Total amount for XI-G Bond 50% Match from OSU is \$30,000,000. OSU fund sources: OSU Gift Funds.

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	08/01/16
Construction	08/01/06	08/01/18

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

With this capital investment, the No. 1 College of Forestry in the United States will be expanding both research and education program capacity oriented toward STEM subjects, and career-oriented education programs supporting the 40% goal for those obtaining higher education degrees. The Wood Science and Engineering degree program embraces the educational goals of statewide 40-40-20 policy by promoting and providing greater access to professions requiring significant expertise and training to meet growing workforce demands associated with dynamic new “green” building industry for domestic and export markets. Our Wood Science and Engineering Department will serve as the foundation for a new Oregon Advanced Wood Products Laboratory focused on the unique intersection of design, engineering, and manufacturing of engineered wood building components.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

The economic development goal for Oregon is “to provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare and prosperity of Oregon’s citizens.”

Education, research, testing and innovation are the keys to create the wood products industry of the future. Marketing and cost performance must be improved if Oregon's wood products manufacturing industry is to expand in domestic and international markets. Lack of access to a knowledgeable and technically proficient workforce and the challenges of implementing new manufacturing technology are factors currently inhibiting growth – particularly for small and medium size wood products companies seeking to expand product lines and markets. Oregon companies are calling for higher education to partner with industry to address these challenges by improving workforce education programs, targeting applied research initiatives, providing highly trained employees, and testing new products and manufacturing technologies.

The northwest timber industry is strongly positioned to offer new environmentally friendly products that are well suited to Oregon's natural resources, and can be competitively offered to a growing global market segment. Doing so would not only increase the value of Oregon's natural resources, but also enhance the overall value added to products produced here in Oregon, thereby growing manufacturing jobs in Oregon's rural communities where the existing mill infrastructure is located. In doing so, this capital investment will create capacity for the University to partner with industry and Oregon economic development policy initiatives in ways that produce substantial economic and social benefits for our state – particularly in areas lagging in family-wage employment opportunities.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

The planned College of Forestry facilities are thoroughly integrated into the ongoing statewide policy objectives promoted by Oregon Governor's Executive Order 12-16 promoting wood products in commerce. The facilities are rapidly being viewed as a showcase for innovative design and use of advanced wood products in building design of the precise nature that the Executive Order is seeking to promote across all new public construction. The College has been closely coordinating with the task force being led by the Governor's Office to construct just such a building as a demonstration project.

The facilities and program promote rural economic development and employment initiatives of Oregon's Governor and Legislature. The importance of meaningful investment in research and education initiatives tailored to foster and link the mass timber supply chain of Oregon's existing mills and companies with emerging domestic and foreign markets for manufactured building materials is key to unlocking additional family-wage manufacturing jobs in rural communities. Exporting value-added wood products from our communities is key to advancing the goals of the State and Oregon's business community (see: Oregon Business Council 2014 Agenda for Oregon).

The facilities and programs also support the environmental, carbon reduction goals of the State of Oregon. Opening new markets for wood manufactured products in nonresidential buildings is a great contribution to the renewable, green building goals of state environmental and green building code policies. Both in the "demonstration" effect, and the research and education programs that occur in these facilities, the College will help Oregon document the carbon benefits, environmental performance, and public health relationships accrued from building with renewable wood products.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

The programs associated with the facilities are highly attractive to students raised in rural backgrounds, and who will return to those communities in most need of an educated trained workforce. The College of Forestry is integrally linked to Oregon’s rural economies, and very relevant to the broad-based economic indicators of our State’s economy. In fulfilling the imperative of moving this economic sector forward into the future, the College is actively working to recruit and retain a multi-cultural and gender diverse student body beyond what we have today. Industry is actively partnering in this project based on the clear need for the University to provide these potential students with a clear “pathway to the future” in Oregon. This project is intended to expand the constituencies (both urban and rural) of the forestry profession in Oregon, and the immediate beneficiaries will be the highly trained students who will be hired as professionals in the manufacturing sector providing new products from rural communities.

8.B. How the impacts will be measured:

Detailed statistics on entering classes in Wood Science and Engineering programs are tracked already. Impacts associated with this investment will start with this data (e.g. demographics, hometown, high school size, family background), and will be broadened to show post-graduation workforce employment rates, locations, and salary data. Categories of advanced wood products manufactured in Oregon over time in relation to OSU graduates employed is a potential measure of long-term impacts from the investment.

8.C. When the impacts can be observed:

Short-term: College of Forestry is actively engaged and participating in wood building and rural manufacturing employment initiatives that are pursued by private and public sector entities based on our commitment to partnering and supporting growth of this sector of Oregon’s economy. (Beginning with the Governor’s Wood Building Task Force and in the 2015 session of the Oregon Legislature).

Mid-Term: Grant funds and increase in student enrollment in educational programs targeting growth of advanced wood product manufacturing in Oregon. Active research partnerships and professional educational programs between the College of Forestry and Oregon wood products companies.

Long-Term: Thriving, ongoing manufacturing capacity in advanced wood building materials in Oregon supported by OSU programs that produce research that is relevant to their competitiveness in worldwide markets, and graduating students who are in high demand for employment in those industries.

Project Working Title
Building I – College of Engineering
Project Location
Corvallis, Oregon

OSU Corvallis Locational Diagrams

Final Site to be Determined during Predesign Phase



1. Project Narrative Description and Justification

Envisioned as a highly flexible and adaptable teaching and research building, the new College of Engineering Building I will address the College's deficit of instructional, student laboratory and administrative space required to meet the growing demand for professional engineering disciplines. The building will also provide critically required research space enhancing the College's education mission and integral to advancing their field of knowledge.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Expand opportunities for students in the critical Science-Technology-Engineering-Math (STEM) disciplines with a collaborative and immersive learning experience embedded amidst leading-edge research
- 2) Retain and recruit outstanding faculty, staff, graduate and undergraduate students
- 3) Enable and accelerate engineering industry collaboration, commercialization, and experiential learning opportunities for OSU students and faculty
- 4) Increased capacity in College of Engineering and Interdisciplinary research laboratory space for 40-45 Principal Investigators, substantially growing the College's research critical mass and research-grant productivity

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	2
Building Gross SF (GSF)	120,000
Building Assignable SF (ASF)	72,000
Building Space Efficiency	0.6
Project Construction Type	New
Projected Life of Asset (Years)	75
No. Building Floor Levels	4

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Research	18,000	25%
Research Collaboration	18,000	25%
Research Services	14,400	20%
Academic	7,200	10%
Administrative & Office	7,200	10%
Student Space	7,200	10%

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

As part of the new building design process, all life, safety, and health features and systems will be planned, designed and reviewed to meet or exceed health and safety standards for the building occupants. User groups, design professionals, and maintenance personnel will contribute to the design and comment process for the building.

4. Total Project Cost Model

Project Cost Summary		
Total Cost of Construction Contracts	\$	64,545,000
Total Project Cost	\$	78,000,000
Construction Inflation Rate per annum		3.0%
Base Month and Year		5/1/2014
Acquisition Costs		
Acquisition Cost Total	\$	-
Consultant Services		
Predesign Services	\$	263,250
Construction Documents and Administration Services	\$	4,972,500
Other Services	\$	585,000
Consultant Services Cost Total	\$	5,820,750
Construction Contracts		
Site Work - Preparation and Infrastructure	\$	2,925,000
Facility Construction		
Substructure	\$	760,500
Super Structure & Shell	\$	10,764,000
Interiors	\$	5,850,000
Building Systems	\$	18,720,000
Fixed Equipment	\$	3,159,000
Special Construction and Demolition	\$	-
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$	4,855,500
Construction General Conditions and Requirements	\$	6,435,000
Construction Contingencies	\$	4,680,000
Escalation to Mid-Point Construction	\$	6,396,000
Total Construction Contracts	\$	64,545,000
Other Costs		
Hazardous Material/Site Remediation	\$	500,000
Owner Furnished Equipment	\$	2,795,500
IT and Telecom Plant and Cable	\$	468,000
Permits and Fees	\$	1,755,000
Total Other Costs	\$	5,518,500
Public Art Work		
Total Public Art Work	\$	507,000
Project Management		
Total Project Management	\$	1,608,750

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ 39,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 39,000,000
State-Paid Debt	N/A	\$ 39,000,000	N/A	\$ -	\$ -	\$ -	\$ -	\$ 39,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

Total amount for XI-G Bond 50% Match from OSU is \$39,000,000. OSU fund sources: OSU Gift Funds.

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	07/01/16
Construction	07/01/16	03/01/18

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

The OSU College of Engineering provides opportunities for students to earn baccalaureate, masters and doctoral degrees across fourteen different programs of study ranging from construction engineering management to nuclear engineering. The OSU College of Engineering mission is focused on addressing the goal that 40 percent of Oregonians will have a baccalaureate or higher degree by 2025. The college awarded 925 degrees in the most recently completed academic year (2012-13), an increase of over 40 percent from five years ago.

The OSU College of Engineering enrollment grew by approximately 1,000 students between fall term 2012 and fall term 2013 (nearly 20%). Our ability to accommodate this increased demand and continue to provide a quality educational experience for our students is hampered by a shortage of facilities. The construction of the proposed building will partially address the shortfall

and allow the college to better address student demand and provide innovative education opportunities.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

As described in the “Oregon’s Workforce Development, Strategic Plan 2012 – 2022” prepared by the Oregon Workforce Investment Board; Oregonians must have the skills they need to fill current and emerging high-wage, high-demand jobs. The Strategic Plan (as well as the Oregon Business Plan) also identified several sectors in which Oregon has a competitive advantage including clean technology, advanced manufacturing and high technology.

The proposed project will increase the capacity of the College of Engineering to educate students preparing for high-wage, high-demand jobs across multiple Oregon industries. Although all of the specific building details are not identified pending funding, elements of the building (including laboratories) are expected address a significant number of the industry sectors identified by the Workforce Investment Board.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

Comments included above.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

As presently envisioned, the proposed project includes engineering design studios and spaces for student clubs/groups project work. Education research has shown that these experiential learning spaces appeal to all students and are particularly effective in increasing retention of under-represented and non-traditional students. The proposed project will likely also include career transition coordination space to assist students in gaining the “soft skills” important to their success (i.e., team building, cultural competency, leadership, etc.). These skills are important to the long-term success of all students including non-traditional students.

8.B. How the impacts will be measured:

Retention and time-to-graduation are important metrics of students that have matriculated to the OSU College of Engineering. We will track metrics for the groups identified above and compare to similar metrics for traditional students both before and after the proposed project is completed. Although not specifically associated with the proposed project, the College will continue efforts to increase the populations of under-represented groups and programs such as those included in the proposed project are expected to increase their persistence and success.

8.C. When the impacts can be observed:

Many of the metrics noted above are currently being tracked by Oregon State University and the College of Engineering. The impacts of the proposed project should be identified within three years of the opening of the facility and program initiation.

Project Working Title
Marine Studies Campus Phase I - Hatfield Marine Sciences Center
Project Location (City)
Newport, Oregon

OSU Newport Locational Diagram

Final Site to be Determined during Predesign Phase



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

1. Project Narrative Description and Justification

The Marine Studies Campus represents OSU's strategic effort to achieve OSU's full potential as a leader in marine studies by bringing together key resources for research, education, and engagement. Envisioned as a new pathway for trans-disciplinary ocean science research, education and outreach, the Marine Studies Campus Phase I at the Hatfield Marine Science Center in Newport, Oregon will support teaching, research and engagement activities in marine studies, as well as serving as a key 'hub' for OSU's marine studies activities. OSU students will participate in highly productive marine science research through a deep immersion experience in marine science, technology, engineering, mathematics, and the arts and humanities – an innovative approach which will link natural sciences with theoretical and empirical capabilities in the social sciences and enhance OSU competitive national standing.

OSU investment/benefit justifications include the following reviewed on March 12 and March 13 with the OSU Board of Trustees:

- 1) Students will have outstanding access to state-of-the-art laboratories and nearby natural habitats - the Marine Studies Campus will serve as an innovative facility for attracting and retaining the highest performing OSU students and faculty,
- 2) Enable and accelerate marine science collaboration and experiential learning opportunities for OSU students and faculty,
- 3) Increase instructional space capacity to support OSU's commitment to Oregon's 40-40-20 commitment,
- 4) Increase total OSU sponsored-research-grant-dollar productivity.

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	2
Building Gross SF (GSF)	105,000
Building Assignable SF (ASF)	68,250
Building Space Efficiency	0.65
Project Construction Type	New
Projected Life of Asset (Years)	75
No. Building Floor Levels	4

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Research	20,475	30%
Research Collaboration	13,650	20%
Research Service	13,650	20%
Academic Office	10,235	15%
Administrative & Office	5,120	7.5%
Student Space	5,120	7.5%

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

As part of the new building design process, all life, safety, and health features and systems will be planned, designed and reviewed to meet or exceed health and safety standards for the building occupants. User groups, design professionals, and maintenance personnel will contribute to the design and comment process for the building.

4. Total Project Cost Model

Project Cost Summary		
Total Cost of Construction Contracts	\$	41,487,500
Total Project Cost	\$	50,000,000
Construction Inflation Rate per annum		3.0%
Base Month and Year		5/1/2014
Acquisition Costs		
Acquisition Cost Total	\$	-
Consultant Services		
Predesign Services	\$	168,750
Construction Documents and Administration Services	\$	3,187,500
Other Services	\$	375,000
Consultant Services Cost Total	\$	3,731,250
Construction Contracts		
Site Work - Preparation and Infrastructure	\$	1,987,500
Facility Construction		
Substructure	\$	487,500
Super Structure & Shell	\$	6,900,000
Interiors	\$	3,750,000
Building Systems	\$	12,000,000
Fixed Equipment	\$	2,025,000
Special Construction and Demolition	\$	-
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$	3,112,500
Construction General Conditions and Requirements	\$	4,125,000
Construction Contingencies	\$	3,000,000
Escalation to Mid-Point Construction	\$	4,100,000
Total Construction Contracts	\$	41,487,500
Other Costs		
Hazardous Material/Site Remediation	\$	1,250,000
Owner Furnished Equipment	\$	750,000
IT and Telecom Plant and Cable	\$	300,000
Permits and Fees	\$	1,125,000
Total Other Costs	\$	3,425,000
Public Art Work		
Total Public Art Work	\$	325,000
Project Management		
Total Project Management	\$	1,031,250

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI- F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ 25,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000,000
State-Paid Debt	N/A	\$ 25,000,000	N/A	\$ -	\$ -	\$ -	\$ -	\$ 25,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

Total amount for XI-G Bond 50% Match from OSU is \$25,000,000. OSU fund sources: OSU Gift Funds.

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

N/A

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	12/01/15
Design	12/01/05	01/01/17
Construction	01/01/17	09/01/18

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal - 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

This request directly supports capacity build out of Oregon State University, by providing instructional and lab space for an additional 500 students (combined undergraduate and graduate). This growth in enrollment is consistent with the OSU plan for accommodating the needs of the state for educating more Oregonians to attain college degrees.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

By increasing the educational opportunities for students at OSU the direct consequence will be an enhanced quantity and quality of workforce output. Students successfully engaging with the Marine Studies Campus will develop skills in marine science, technology, policy and the humanities, unmatched anywhere else in the United States, making them more competitive for a wide range of careers, and strongly positioned to define and develop new economic sectors in Oregon.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

Comments included above.

8. Describe: A) “the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students”, B) “how the impacts will be measured”, and C) “when the impacts can be observed.”

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

First, access will be enhanced by the central location along the Oregon coast of the Marine Studies Campus (MSC). Coastal communities along the entire coast will be physically and emotionally more closely connected to OSU by having a physical presence within a relatively close distance of their homes. Further, given the marine focus of the MSC at Newport, there will be greater relevance to coastal communities who themselves are closely tied to the marine environment in their economic and cultural daily lives. Second, the building design includes state-of-the-art instructional facilities that will allow not only more actively engaged classroom teaching, but also high-quality distance learning through video and digital signals to remote locations. These locations can and will include partner institutions along the coast (and throughout the state) including Community Colleges, OSU’s experimental stations, and other public venues. The end result is that the curriculum developed for the MSC will be directly accessible at the Newport facility, *and* to remote, rural locations throughout the state via the Newport facility.

Engagement of students who are under-represented, first generation, rural, or from lower-income families will be enhanced not just by the physical access noted above, but also, in part, by the relevance of the curricular focus to the coastal community. Further, for areas and student from outside the coastal region, the curricular focus, and relevant job training, will have appeal to a number of students throughout the state. Finally, a considerable philanthropic effort will be undertaken as part of the development of the MSC, with a significant component of this effort focused on raising funds for undergraduate (and graduate) fellowships and internship support. Specific efforts will be aimed at targeted funding for under-represented and rural, low-income students.

8.B. How the impacts will be measured:

Success will be evident in quantifying the demographics of students associated with the MSC (starting with current student populations at the University/Newport in marine-related courses). With the facility at Newport and educational funding through fellowships, there should be clear evidence of an increasing diversity within the student population in marine related studies.

8.C. When the impacts can be observed:

Evidence of impacts should occur in parallel with the development of the Marine Studies Campus. As public awareness of the program increases, so too should the positive impacts. With building support from the state, facility construction will program development allowing for immediate initiation of the MSC program. Building out the program to accommodate up to 500 students is targeted to reach the 500-student threshold no later than.

Project Working Title
OSU Cascades Academic Building II
Project Location
Bend, Oregon

OSU Cascades Locational Diagrams

Final Site to be Determined during Pre Design Phase



1. Project Narrative Description and Justification

The second Academic Building on the new Oregon State University Cascades Campus will support the expected growth in student population toward the 5,000 students necessary to meet both Oregon's 40-40-20 goal and OSU's vision of a comprehensive, vibrant four-year academic program and community in Bend. The campus's second Academic Building will complement and expand the capacity and variety of the first Academic Building, providing additional state-of-the-art classrooms and teaching laboratories, academic support and student activity spaces.

In addition to increasing OSU Cascade's instructional and faculty capacity to meet student needs, the new building will help advance expanding opportunities in academic choice and pedagogy diversity, serving as a critical platform that will support educational opportunities in a more personal setting, experience one-on-one mentoring from world-class faculty and go beyond the classroom and into a vast natural laboratory for experiential learning with field studies, research projects and internships.

2. Detailed Project Description

Key Project Metrics

Site Area Acres:	46
Building Gross SF (GSF)	Remodel 90,000 - New 8,000
Building Assignable SF (ASF)	54,000
Building Space Efficiency	0.6
Project Construction Type	Renovation & New
Projected Life of Asset (Years)	75
No. Building Floor Levels	2

Key Space Allocation Metrics

Room Classification Type	Project ASF	% Total ASF
Teaching Laboratories	13,500	25%
Academic	21,600	40%
Student Space	8,100	15%
Administrative & Office	10,800	20%
Campus Energy Center	8,000	Separate Facility

3. Life, Health, and Safety Urgent Needs, Solutions, and Degree to Which Needs are Addressed

As part of the new building design process, all life, safety, and health features and systems will be planned, designed and reviewed to meet or exceed health and safety standards for the building occupants. User groups, design professionals, and maintenance personnel will contribute to the design and comment process for the building.

4. Total Project Cost Model

Project Cost Summary	
Total Cost of Construction Contracts Remodel & Energy Center	\$ 25,952,000
Site Mitigation for 46 acre parcel	\$ 8,000,000
Total Project Cost	\$ 40,000,000
Construction Inflation Rate per annum	3.0%
Base Month and Year	5/1/2014
Acquisition Costs	
Acquisition Cost Total	\$ -
Consultant Services	
Predesign Services	\$ 108,000
Construction Documents and Administration Services	\$ 2,040,000
Other Services	\$ 240,000
Consultant Services Cost Total	\$ 2,388,000
Construction Contracts	
Site Work - Preparation and Infrastructure	\$ 180,000
Site Preparation	
Substructure	\$ 120,000
Super Structure & Shell	\$ 480,000
Interiors	\$ 7,200,000
Building Systems	\$ 8,400,000
Fixed Equipment	\$ 196,000
Special Construction and Demolition	\$ 200,000
Estimating Contingency (10%@SD, 5%@DD, 0%@CD)	\$ 1,992,000
Construction General Conditions and Requirements	\$ 2,640,000
Construction Contingencies	\$ 1,920,000
Escalation to Mid-Point Construction	\$ 2,624,000
Total Construction Contracts	\$ 25,952,000
Other Costs	
Owner Furnished Equipment & Furnishings	\$ 1,500,000
IT and Telecom Plant and Cable	\$ 600,000
Permits and Fees	\$ 720,000
Total Other Costs	\$ 2,820,000
Public Art Work	
Total Public Art Work	\$ 180,000
Project Management	
Total Project Management	\$ 660,000

5. Detailed HECC Funding Request Table

	General Fund/Lottery Funds	Article XI-G Bonds	Article XI-F(1) Bonds	Lottery Bonds	SELP Loans	Seismic Grants	Article XI-Q Bonds	Total
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000,000	\$ 30,000,000
State-Paid Debt	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ 30,000,000	\$ 30,000,000
Campus Paid Debt	N/A	N/A	\$ -	N/A	\$ -	\$ -	\$ -	\$ -

5.A. Amount and Fund Source for XI-G Bond 50% Match from OSU (as applicable):

N/A

5.B. Amount and Fund Source for Required Project Funding beyond requested state funds and Article XI-G Bond 50% Match (as applicable):

Required Project Funding beyond requested state funds are OSU Local Funds: \$10M

5.C. OSU Revenue Sources to fund Campus-Paid Debt (as applicable):

N/A

6. Project Schedule

	Start Date	End Date
Predesign	07/01/15	10/01/15
Design	10/01/15	08/01/16
Construction	08/01/06	08/01/18

7. State of Oregon and Oregon State University Goals Addressed

7.A. Statewide Goal – 40-40-20 – Identify which specific parts of the goal addressed by the proposed funding request:

OSU Cascades' Academic Building II will help OSU meet state educational attainment, or "40-40-20" goals, where 40 percent of Oregonians will have a bachelor's degree by 2025. The increased academic space will continue to allow OSU Cascades students to experience smaller class-sizes, one-on-one mentoring from world-class faculty and higher retention. OSU-Cascades serves a variety of students important to Oregon's goals - more than half are from Central Oregon and represent a mix of students that is older than traditional students, higher in percentage of women and have 15% self-identifying as minority. Further, 50% of OSU Cascades' graduates represent the first in their family to attend college.

7.B. Statewide Goals - Economic Development and Workforce Goals – Identify which specific parts of the goals addressed by the proposed funding request:

OSU Cascades' Academic Building II will increase the capacity of the university to educate students preparing for high-wage, high-demand jobs across multiple Oregon industries and will further opportunities for Oregonians' individual success and economic mobility, and for civic and economic contribution. OSU Cascades' students engage in internships, practicums and study abroad programs with businesses, organizations and agencies in Central Oregon and around the world. Cascade's students have been awarded \$2.03m awarded in scholarships since 2001 through the OSU Foundation. Upon graduation, 50% of students plan to live and work in Central Oregon.

7.C. Other Statewide Goals - Identify which specific parts of the goal(s) are addressed by the proposed funding request:

OSU Cascades was born out of a 30-year grassroots effort put forth by Central Oregonians to bring a university to the region. In 2000, the Oregon University System selected OSU, the state's land grant university, to administer a campus that would serve as a 2+2 partnership with Central Oregon Community College, offering upper-division and graduate coursework toward bachelor's and master's degrees. After record enrollment growth and demonstrated financial support from the surrounding community, in August 2012 the Oregon University System endorsed OSU-Cascades' expansion to a four-year university. In July 2013, the Oregon State Legislature approved capital funding that enables the branch campus to establish its own campus as it expands to offer freshman and sophomore classes. OSU Cascades' Academic Building II is the next vital step to fulfill these local, regional and state-wide goals.

8. Describe: A) "the impact on the project on improving access and success for under-represented, first generation, rural, and low-income students", B) "how the impacts will be measured", and C) "when the impacts can be observed."

8.A. Impact on improving access and success for under-represented first generation, rural, and low-income students:

OSU-Cascades serves a variety of students important to Oregon's goals – 80% are from Central Oregon and represent a mix of students that is older than traditional students, higher in percentage of women and have 15% self-identifying as minority. Further, 50% of OSU Cascades' graduates represent the first in their family to attend college. OSU Cascades Academic Building II will include student collaborative space and spaces for student clubs/groups project work. Education research has shown that these experiential learning spaces appeal to all students and are particularly effective in increasing retention of under-represented and non-traditional students.

8.B. How the impacts will be measured:

Retention and time-to-graduation are important metrics of students at the OSU Cascades. We will track metrics for the groups identified above and compare to similar metrics for traditional students both before and after the proposed project is completed. OSU Cascades will continue efforts to increase the populations of under-represented groups and programs as the Campus Develops and grows toward 5,000 students.

8.C. When the impacts can be observed:

The metrics noted above are currently being tracked by Oregon State University and the OSU Cascades. The impacts of the proposed project should be identified within three years of the opening of the facility and program initiation.