Investing in Rural Economies and the Next Generation of Oregon Students

In 2016, the Higher Education Coordinating Commission (HECC) approved a list of university capital construction projects for the 2017–19 biennium. These projects were evaluated and prioritized based on a rubric developed by the commission. Included in this list were the science campus at the **University of Oregon,** Academic Building 2 at **Oregon State University–Cascades,** and a field house facility at **Eastern Oregon University.**

Only partial funding was allocated for the project at the University of Oregon, and no funding was provided for the academic building at OSU-Cascades or the field house facility at Eastern Oregon University.

This package of projects represents multiple opportunities for Oregon in the 2018 session. Each institution has committed to using Oregon manufactured wood products—particularly cross-laminated timber (CLT)—in construction. Moreover, these projects serve a high-need, growing communities outside of the Portland-metropolitan area.

Cross-Laminated Timber and Oregon Certified Wood Products

Cross-laminated timber (CLT) is an engineered wood building system designed to complement light- and heavy-timber framing options. It is made from several layers of lumber board stacked crosswise and fused together on their wide faces. Crosslamination provides stability, strength, and rigidity, which is what makes CLT a viable alternative to concrete, masonry, and steel in many applications. It can be used for an entire building, as both the lateral and vertical load resisting system, or for select elements such as the roof, floors, or walls. CLT has been popular in Europe for more than 20 years, with extensive research and a documented track record supporting its widespread use. Internationally, it has propelled wood construction to new heights. It offers the structural simplicity needed for cost-effective projects, as well as benefits such as design versatility, rapid installation, reduced waste, lighter weight (compared to concrete), and energy efficiency.

As recently as 2011, CLT panels had to be shipped from manufacturers in Europe, but there are now a number of manufacturers and distributors working in North America, including D. R. Johnson Lumber Company, located in Riddle, Oregon.

Fire Suppression

Residents across Oregon were plagued by wildfires in 2017, renewing calls to reduce wildfire risk. While there is great debate in Oregon about some forest management practices, there is broad consensus around the importance of forest treatments that can reduce the risk of devastating fires and restore fire-adapted ecosystems. Oregon has led the nation in building collaborative forest restoration as a means to reduce fire hazard. Over the past four years, the state legislature has made federal forest restoration a priority through investments. However, the costs of treatment remain high due to the small size of the trees that are harvested with these kinds of projects.

Because CLT does not rely on "perfect" or large logs, there is the opportunity to use smaller trees from forest restoration and fire hazard reduction projects in the fabrication of the product. Expanding opportunities for and the utilization of CLT creates demand for smaller logs and can be used as a way to manage our forests to both reduce wildfire risk and restore fire-adapted ecosystems.

UNIVERSITY OF OREGON

Oregon State University Cascades

EASTERN OREGON UNIVERSITY

Science Campus

The University of Oregon's $1 billion initiative to establish the Phil and Penny Knight Campus for Accelerating Scientific Impact will fast-track scientific discoveries into life-changing innovations. Investing in a new applied science facility will strengthen the foundation of the university's research while facilitating longterm economic growth in the region.

When fully operational, the Knight Campus will drive nearly $80 million in annual economic activity statewide and directly support more than 750 jobs. In addition to private funds, the UO is partnering with the State of Oregon, requesting $100 million in Article XI-G bonds for construction of the project. Thus far, it has received $50 million of the total request.

By providing all the bonds in a single biennium, the university will reduce its Phase II request from $50 million to $40 million without significantly affecting academic programs or construction efforts. This $90 million investment will leverage $135 million in private funds.

Academic Building 2

The Cascades campus of Oregon State University provides access for central Oregonians to OSU's excellence in both academics and innovative research. It is the only baccalaureate and graduate degree-granting institution based in central Oregon. OSU–Cascades has 1,200 students and will be at capacity in the near future. The next academic building is needed to ensure access for students in one of the most underserved regions of the state.

Academic Building 2 will provide spaces to support growing programs focused on science, technology, engineering, art, and mathematics (STEAM), including expanded engineering and computer science offerings and digital arts, media, and technology. It will also provide spaces for health-related programs, teaching and research lab space for the kinesiology program, and newly designed programs such as an undergraduate degree in outdoor products.

A new 55,000-square-foot academic building will include laboratories, general purpose classrooms, faculty offices, and other learning-support and research spaces. This building is needed to meet demand for higher education in the fast-growing central Oregon region, particularly for place-bound students.

Field House

Eastern Oregon University's programs in physical activity and health, outdoor leadership, student and employee wellness, and athletics are all essential elements of the university's educational mission, and all are fundamental drivers for the EOU experience at its main campus in La Grande and throughout the region.

A new field house will provide a flexible space unavailable anywhere else in eastern Oregon for a physical activity and exercise lab and instructional space for the physical activity and health degree program, winter weather practice spaces for outdoor sports, and support for the reintroduction of a historically successful wrestling program.

Current space constraints mean students must use off-campus facilities. In addition, the off-season use of the EOU's grass fields has led to additional costs associated with field maintenance. The additions of the men's soccer and wrestling programs have further pushed current facilities beyond their capacity.

Utilization of Certified Oregon Wood Products and Cross-Laminated Timber

The University of Oregon will use a minimum of 20,000 board feet in the public-facing areas of the building, including the structure that connects the two towers.

This order will be made in 2018, creating immediate demand for the industry.

Use of regional wood products in Academic Building 2 will vary from incorporating mass timber structural components, such as CLT, to the use of juniper for aesthetic applications while supporting rural economic development initiatives in central and eastern Oregon mills. OSU–Cascades is working in collaboration with Sustainable Northwest Wood to identify a network of mills.

Construction of the Eastern Oregon University Fieldhouse provides significant economic impact for La Grande and the region and, once in place, will offer a venue that is unique to the eastern region as well as western Idaho and southeast Washington. The use of CLT as the primary construction material at a minimum level of 80,000 board feet helps leverage manufacturing and jobs in Oregon.

University of Oregon Science Campus

In October 2016, the University of Oregon launched a $1 billion initiative to establish the Phil and Penny Knight Campus for Accelerating Scientific Impact. With 30 world-class principal investigators, research faculty members, and their teams, the campus is designed to fast-track scientific discoveries into life-changing innovations.

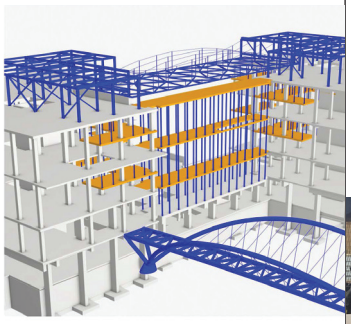
It will train new generations of scientists, forge tighter ties with industry and entrepreneurs, create new opportunities for students, and enhance collaboration among Oregon's universities.

When fully operational, the campus will drive nearly $80 million in annual economic activity statewide and directly support more than 750 jobs. In addition to private funds, the UO is partnering with the State of Oregon. In 2017, the university requested $100 million in Article XI-G bonds for construction of the project. The Oregon Legislative Assembly allocated $50 million.

The university is seeking an additional $40 million in Article XI-G bonds to fulfill its request for the campus. By providing the bonds in the 2017–19 biennium, the university is able to reduce its Phase II request from $50 million to $40 million without significantly affecting academic programs or construction efforts. This $90 million investment will leverage $135 million in private funds.

Utilization of Certified Oregon Wood Products and Cross-Laminated Timber

The University of Oregon will break ground on the project in spring of 2018, with the building scheduled to open early in 2020.



Structural Design: CLT Connector

Representatives of the university's general contractor, architecture, and design teams have met with Oregon manufacturers of cross-laminated timber (CLT) to determine how the technology can be incorporated into the design and construction of the buildings. The UO will use a minimum of 20,000 board feet in the building, including the structure that connects the two towers. The conscious inclusion of CLT into the public-facing spaces allows this emerging technology to be showcased in one of the highest-profile buildings in Oregon.

This order will be made in 2018, creating immediate demand for the industry. The expenditure of these funds will occur a number of years before the state bonds are issued.

Investing in a new applied-science facility will strengthen the foundation of the university's research while facilitating longterm economic growth in the region.

BOND ISSUANCE

XI-G Bonds: **$90 million (includes $50 million authorized in 2017)**

Matching-Gift Funds: **$135 million**

Project Total: **$225 million**

Economic Impact

A preliminary analysis conducted by ECONorthwest estimates that investing $1 billion in new capital and operations over 13 years will generate the following benefits:

$176 million
total economic output (direct, indirect, and induced spending on goods and services) in the regional economy

1,300 jobs
(full-time employees for one year) supported by direct, indirect, and induced spending

$70 million
in labor income, including employee compensation and proprietor income

ANNUAL OPERATING IMPACT AFTER RAMP-UP

$79 million
total economic output (direct and indirect value of goods and services) produced

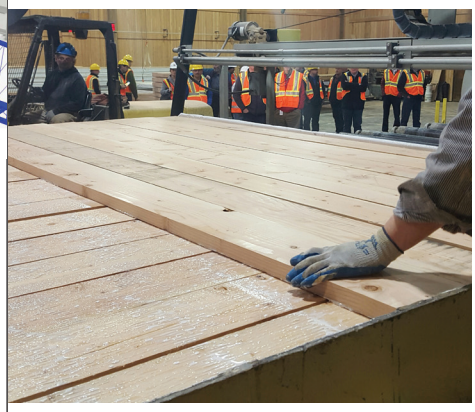
750 jobs
(full-time employees for one year) supported by direct, indirect, and induced spending

$45 million
in labor income, including employee compensation and proprietor income

ANNUAL FISCAL IMPACTS DURING CONSTRUCTION AND AFTER RAMP-UP

$11 million
of state and local tax revenue supported during peak construction

$7 million
in state and local taxes after ramp-up



UNIVERSITY OF OREGON

For additional information please contact **Hans Bernard** at **hbernard@uoregon.edu**

OSU–Cascades

OSU–Cascades provides access for central Oregonians to Oregon State University's excellence in both academics and innovative research. It is the only baccalaureate and graduate degree-granting institution based in central Oregon. OSU–Cascades was born out of a 30-year grassroots effort put forth by central Oregonians to bring a university to the region.

OSU–Cascades is Oregon's fastest-growing public university campus, and has been since 2011. By 2021, the current academic facilities on the 10-acre campus will be at capacity. Without the investment of $39 million in state funding for an additional academic building, OSU–Cascades will be unable to meet the educational needs of the state's fastest-growing and most underserved region.

Academic Building 2 on the OSU–Cascades campuswill provide spaces critical to support growing programs focused on science, technology, engineering, art, and mathematics (STEAM), including expanded engineering and computer science offerings and digital arts, media, and technology. In addition, the building will provide spaces for health-related programs, teaching and research lab space for the kinesiology program, and newly designed programs such as an undergraduate degree in outdoor products.

Rural Challenges

A 2016 study by the American Council on Education describes central Oregon as an "education desert." The region lags behind the rest of Oregon in higher-educational attainment, and the gap in rural Crook and Jefferson counties is significant. The study shows most freshman students who attend a public university do so within 50 miles of home, so OSU–Cascades is critical for serving central Oregon's rural families. However, without additional capacity, OSU–Cascades will be unable to serve these students, and most are unlikely to move to attend another university. The nearest university is OSU in Corvallis, almost three hours away.

UNDER-SERVED STUDENTS

OSU-Cascades' student body reflects the demographics of an underserved and rural community

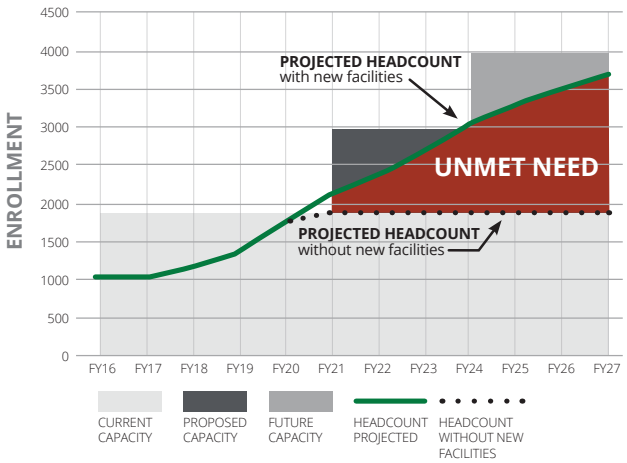
67% Central Oregonians

⅓ First generation college students

50% of students receive a federal Pell Grant, indicating high financial need

16% US minority students

CAMPUS ACADEMIC AND STUDENT SUCCESS SPACE NEEDED BY 2021



BOND ISSUANCE

XI-G Bonds: **$39 million**

Matching-gift Funds: **$10 million**

Project Total: **$49 million**

Economic Impact

Central Oregon's economy is growing fast and diversifying. Employers are looking to OSU–Cascades to provide skilled workers in growing industries such as high-tech, the biosciences, health care, and outdoor products.

The economic impacts of an expanded OSU–Cascades campus extend to the entire state. According to a study by ECONorthwest, by 2025 OSU–Cascades will contribute the following:

$197.8 million
in statewide economic impact

2,083 jobs

$3.43 million
in additional annual state income taxes

Utilization of Oregon Wood Products and Cross-Laminated Timber

OSU–Cascades is committed to creating buildings that include building technologies and materials developed and manufactured in Oregon and the Pacific Northwest. Use of regional wood products would vary from incorporating mass timber structural components, such as CLT, to the use of juniper for aesthetic applications while supporting rural economic development initiatives in central and eastern Oregon and local mills. OSU–Cascades is working in collaboration with Sustainable Northwest Wood to identify a network of mills located in central and eastern Oregon.

Oregon State University Cascades

For additional information please contact **Jock Mills** at **jock.mills@oregonstate.edu**

Eastern Oregon University Fieldhouse

EOU's programs in outdoor leadership, physical activity and health, plus widely recognized community partnerships and vital athletics programs are all essential elements of our educational mission to serve the rural regions of the state. For students, they are fundamental drivers of the "Eastern experience," and for school-age children throughout the region, the EOU campus is key to understanding the opportunities for a college degree.

In a part of the state well-known for robust winter conditions, the EOU Fieldhouse provides an incredibly flexible indoor space unavailable anywhere else in eastern Oregon, southeast Washington, and western Idaho. Such a facility solves the longtime problem of how and where to hold a wide range of activities and events in an enclosed space out of the elements.

For students and faculty members, it means wellness programs, climbing walls, outdoor leadership training, an exercise lab, and instructional space for degree programs such as physical activity and health. For the community, it means access to space year-round in which the elderly can go for a walk in a safe environment and youth can stay active. For businesses, it means tourism and visitors coming to the region to participate and compete in events at the campus. And EOU athletes know they will benefit from winter-weather practice spaces and an ease on the strains placed on current facilities already at capacity.

Economic Impact

Construction of the Fieldhouse provides significant economic impact for the entire rural eastern Oregon region and, once in place, will offer a venue that is unique to this part of the state. The use of a minimum of 80,000 board feet of cross laminated timber (CLT) as a key construction material will help to leverage manufacturing and job numbers in Oregon.

There is simply no other venue of this kind within hundreds of miles of the university. The Fieldhouse supports area K–12 schools, wellness activities, community access, intercollegiate events, local and regional events, sporting camps, games, and even statewide and national athletics playoffs for high schools as well as universities. Conferences, concerts, and trade shows will also be able to access the venue, bringing significant economic benefits to the local and nearby communities.

Use of Cross-Laminated Timber

The use of CLT and engineered wood products, at a minimum level of 80,000 board feet, will constitute a significant construction methodology used in the building.

For rural regions like eastern Oregon that are deeply connected to the natural resources economy, utilization of laminated beams and similar products such as CLT demonstrates a commitment to frontier communities, signaling new opportunities for economic development. The Fieldhouse will serve as a showpiece for manufacturing expansion into innovative markets that lead to growth and prosperity in all areas of the state.

BOND ISSUANCE

XI-G Bonds: **$2 million**

Lottery Bonds: **$7 million**

Project Total: **$9 million**

CONSTRUCTION TIMELINE

Targeted start date: **Fall 2019**

JOBS CREATED

Estimated number of construction jobs created: **120**

EASTERN OREGON UNIVERSITY

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