

Co-chairs Senator Lew Frederick, Representative Susan McLain and members of the Education Subcommittee of the Joint Committee on Ways & Means,

Thank you for the opportunity to provide information on the TallWood Design Institute (TDI). We are sincerely grateful for the continuing support of this committee and the State Legislature and look forward to continuing the important work that your funding has made possible. TDI is a unique industry-driven partnership between:

- College of Forestry, Oregon State University
- College of Design, University of Oregon
- College of Engineering, Oregon State University

TDI Mission

To drive **economic development in Oregon's wood products** manufacturing sector and **facilitate increased use of Oregon's sustainable timber products** in the design and building industries. We do this through applied research, technical prototyping and testing, and by providing professional education and extension services to industry audiences.

How Funds are Used

TDI was established in 2015. State funds support core operating costs for some of our staff, equipment and operation of testing and research facilities, and development of industry training programs that are part of a larger strategic economic development effort to create manufacturing jobs in timber-dependent rural communities. In addition, these funds are required as matching dollars that leverage approximately \$4M per biennial budget cycle from the federal government and other external sources.

Leveraging State Support

Major External Research Grants: \$10.32 million

USDA

Agricultural Research Service: \$6 million
Wood Innovation Grants: \$2.75 million

Economic Development Administration

I6 Challenge: \$450,000

Business Oregon

Oregon Innovation Council: \$720,000

OR Counties, Cities, UO Design Studios

\$150,000

REACTS Consortium Member Contributions

\$150,000

US Endowment for Forestry & Communities

\$100,000

OSU and UO Research and Testing Facility Investments:

OSU's A.A. "Red" Emmerson Advanced Wood Products Laboratory

- Opened Summer 2019; \$12 million private and public funds investment by OSU
- Capabilities include structural testing, computer-controlled fabrication and manufacturing

UO's Oregon Acoustic Research Laboratory

- Anticipated opening - 2022; \$10 million investment by UO
- Will be the only university facility in North America with capability for testing mass timber floor/ceiling assemblies, needed for further building applications to meet code requirements

These facilities supplement existing ones that have been used to undertake more than 50 industry-focused R&D projects on structural and seismic resilience of wood buildings, energy efficiency, acoustic and fire performance, indoor air quality, durability, carbon benefits and design demonstration projects. Faculty have been hired at both institutions to add new expertise in structural fire, mass

timber architecture and engineering. These investments all support our economic development strategy to grow Oregon's mass timber industry capacity, creating rural jobs in manufacturing and urban jobs in architecture, engineering and construction.

Economic Development and Technical Assistance Highlights

Mass Plywood Panel Manufacturing Facility

- \$40 million investment by Freres Lumber Company in Lyons, OR, based on a unique new mass timber product made possible by prototyping and testing by TDI

Swinerton Builders

- TDI has provided technical support to Swinerton Builders, which has established a 32-person mass timber construction office in Portland and in late 2020 launched Timberlab, a mass timber fabrication facility in north Portland.

Sauter Timber

- Working with Clackamas County, TDI has helped facilitate Sauter Timber's investment in a new CNC fabrication plant in Estacada which broke ground in 2020.

Oregon Mass Timber Supply Chain Analysis

- Conducted by TDI and Business Oregon in summer 2020, this study provides a roadmap for future growth of Oregon's wood products sector

Critical Mass Timber Group

- 650 industry professionals are part of our peer-to-peer learning hub in Portland (currently virtual!), meeting monthly to learn best-practices in design, manufacturing and construction

Industry-Driven Research Agenda

- Representatives from the manufacturing, architecture, engineering, and construction sectors work closely with TDI to identify research needs and provide materials and expertise
- TDI launched the REACTS Consortium in 2021 (Research in Engineering, Architecture and Construction of Timber Structures), consisting of 17 innovative private-sector firms and the US Forest Service, to sponsor key research and testing projects through funded memberships.
- 6,000+ Oregon stakeholders have benefited from TDI outreach and extension activities.

Education

- TDI is addressing current Oregon labor market skills gaps by offering a certificate program in mass timber manufacturing and construction, in partnership with community colleges, unions and others.
- New focus area in advanced mass timber design launched within UO's MS in Architecture program

TallWood Design Institute Leadership

TDI has led the way for Oregon to become the epicenter of mass timber development in the United States, with DR Johnson in Riddle, OR as the first US certified manufacturer of cross-laminated-timber in 2015, Freres Lumber as the only manufacturer of Mass Plywood Panels, certified in 2018, and with Portland hosting the first International Mass Timber Conference the following year, an annual event now attracting 2,000 participants from 80 countries. Oregon is now home to over 60 mass timber buildings and a growing community of architects, engineers and contractors whose unique experience with mass timber is driving down the carbon footprint of the built environment and gaining them business around the country. However, Oregon is facing competition from new manufacturing facilities in Washington, Alabama and Canada, as well as growing expertise around the U.S. Your continued support of TDI is vital if Oregon is to consolidate and build on our first-mover advantage in this rapidly-growing industry sector.



March, 2021

Senator Lew Frederick, Co-Chair
Representative Susan McLain, Co-Chair
Joint Committee on Ways and Means Subcommittee for Higher Education
H-178, State Capitol
Salem, OR 97301

Dear Senator Frederick and Representative McLain:

We are writing to express our support for the proposal to increase the current service level of funding to the TallWood Design Institute (TDI) by 7.42%, in line with that proposed by Oregon’s State Universities. State of Oregon funding over the last six years has been critical to the important work the Institute has been doing to advance Oregon’s wood products and mass timber construction industries.

Launched in 2015, TDI brings together a one-of-a-kind collaboration between leading architecture, wood science, and engineering programs at both Oregon State University and University of Oregon to focus on development of innovative wood products and building components produced in Oregon. The Institute engages extensively with Oregon building design professionals and wood products manufacturers to conduct research and testing and drive innovation in engineered wood products and systems, and this has played a key role in enabling our state to gain first-mover advantage in the rapidly-growing US market for mass timber products and buildings. When TDI was established in 2015 there were only a handful of mass timber buildings completed in the United States. Today that number is 1,060 and doubling annually, and the products and services of Oregon architecture, engineering, manufacturing and construction firms are in demand throughout the nation.

As architects, engineers, contractors, wood products businesses, and civic and nonprofit organizations, we share a collective interest in building on Oregon’s North American leadership in sustainable building design and manufacturing. In the last biennium, TDI again successfully leveraged state funding through a combination of federal, local and private matching funds to more than double its impact. The Institute has embarked on more than 50 research and testing projects that are eliminating barriers to the

manufacture and application of wood products. In addition, TDI's work supports the growth of high value manufacturing jobs in our rural communities and design jobs in our urban centers through workforce training and education. A key component of its R&D program is the generation of objective, science-based data on the sustainability of the supply chain, essential for the future health of our forests and environment. And critically, it is investigating viable commercial applications for low-value, small-diameter timber from forest thinnings – work that will help ensure that the catastrophic forest fires our state experienced in 2020 become a thing of the past.

In 2019 TDI opened the state-of-the-art A.A. Emmerson Advanced Wood Products Lab at Oregon State University, providing Oregon with unmatched capabilities in wood products research and development. The opportunities to utilize these facilities in the next few years to drive economic development and sustainability in Oregon's forests and built environment are tremendous. We therefore urge you to support TallWood Design Institute at the funding levels proposed.

Sincerely,

William P. Silva, Director of Pre-Construction
Swinerton Builders

Mark Gamba, Mayor
City of Milwaukie

Tyler Freres, Vice President of Sales
Freres Lumber

Ethan Martin, Associate
DCI Mass Timber +

Reid Zimmerman, Technical Director
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Eric McDonnell, Principal
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Amy Vohs, AIA, President
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Thomas Robinson, Founder & Principal
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