National Center of Excellence for Advanced Wood Products Manufacturing and Design

Oregon's competitive advantages over other commercial timber growing regions of the world are the high value of the timber that we grow, and the conservation values incorporated into the management of our forested landscapes. Despite these advantages, the economies of many of our forest dependent rural communities are stagnant or worse, while we export some of our best raw materials overseas and engage in persistent conflict over harvest levels and use of our federal forest lands. The volume of disagreements is often so loud that we forget the power of these two key competitive advantages in global markets that reward technological and product innovations.

We must take every possible action to increase the ability of Oregon's manufactured wood products industries to compete in global markets for the high value wood products that are perfectly suited to the timber we grow and the stewardship ethic of our state. Our goal must be to increase the number of jobs associated with every board foot of lumber we harvest from our forests. Fortunately, emerging trends in domestic and global markets are creating exciting new opportunities for Oregon to accomplish this goal.

Oregon's Opportunity

The true measure of progress toward improving the economies of forest dependent rural communities is increasing the number of jobs created per board foot of timber harvested from our forests.

- With the increasing automation of existing commodity sawmills, progress will require intense focus on creating secondary manufacturing jobs producing engineered wood products.
- Value-added products can position wood as the preferred renewable material for high density, cost effective, multi-story "green" buildings, and they are driving emerging domestic and Asian markets.
- Oregon's timber industry is perfectly positioned to orient itself to this goal by offering new mass timber building components like glulam beams, laminated veneer lumber, composite wood panels, or cross laminated timber (CLT) panels. CLT panels in particular can be used as prefabricated wall, floor and roofing elements in residential, public and commercial structures, and represent an entirely new building technology that is revolutionizing the use of timber in non-residential construction.

Currently, there is no production of structural CLT in the United States. Taking steps now to position Oregon to effectively compete with European and Canadian manufacturers in these emerging markets will not only increase the value of Oregon's natural resources, but also grow the number of Oregonians employed in relation to the board feet of timber harvested from our forests.

Building a Platform for Competing into the Future

Our future prosperity increasingly depends on knowledge—new technologies, innovative products and a creative, prepared workforce. Education, research, testing and collaboration across disciplines are the keys to create a thriving wood products industry for Oregon's future. Northwest companies are calling for universities to partner with industry to invest in applied research initiatives, programs that provide highly trained employees, expertise to test new products and manufacturing technologies, and strategic workforce education programs.

Oregon State's College of Forestry offers the premier forestry and wood products programs in North America. The OSU College of Engineering is known for top tier programs in construction, structural, and industrial engineering applications. The University of Oregon College of Architecture and Allied Arts has been recognized internationally as a leader in sustainable designs and research for over 40 years. In fall 2014, our three colleges will join together to launch a Center of Excellence for Advanced Wood Products Manufacturing and Design.

The Center will feature research and educational programs focused on the unique intersection of design, engineering, and construction of multi-story, multi-use buildings using innovative wood products capable of being produced here in Oregon.

Our collective faculty are positioned to build on trusted relationships with Oregon's timber industry and building design professionals to create new research partnerships. In doing so, the Center will drive the innovation necessary for a resurgence in the Oregon wood products sector while also establishing our state as the North American hub for expertise in innovative wood building design.

Facilities That Will House The Center

Oregon State University's College of Forestry is now in the design phase for construction of a new, state-of-the-art building on the Corvallis campus that will add to existing materials testing laboratory space and house the dedicated research and training programs associated with the Center. The 20,000 square foot building will showcase engineered wood products (including CLT), and will provide a flexible high bay space to house the computer controlled manufacturing systems and specialized equipment necessary for Oregon to become the hub for wood building component design, innovation, testing, and demonstration.

Design and construction of the facility will be accomplished as part of a $60 million capital construction project to renovate and expand the College's current research and classroom facilities. The project represents the best of public/private partnerships, and will be funded equally by donations from the forest products industry and state construction bonds. The resulting facilities will reflect and perpetuate Oregon State's international status as a premier forestry program while also providing best-in-class research capabilities for all three colleges and members of Oregon's wood products industry participating in the Center's research and educational programs.

Research and Education Programs Housed at the Center

The framework for the Center's research and education programs is in place and being refined by the three colleges to ensure it is targeted to strategically support and grow the competitiveness of Oregon's manufacturing sector and building design profession. The focal points for the Center's research include: product and building materials testing, code compliance and validation, building certification and lifecycle documentation, new building products incubation, new applications of current technology, and manufacturing and materials innovation.

Education programs being developed will cross-list courses between the two universities, as well as offer interdisciplinary, project-based courses that address real world design and engineering issues. Input is being solicited from manufacturing, engineering and design professionals to determine how best to offer degree options that provide certificated expertise in wood building component utilization that will be most attractive to employers. Likewise, the Center will emphasize professional certification and training programs tailored to provide professional development programs for architects, engineers, and computerized wood product manufacturing technology. Collaboration on educational programs will begin in the 2014/2015 academic year.

A complete proposal detailing Center staffing, equipment, and budget parameters will be available in fall 2014. For questions regarding the Center contact Geoff Huntington, Director of Strategic Initiatives, OSU College of Forestry at 541-737-9103 or Geoff.Huntington@oregonstate.edu.

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