

2019- California Mass Timber Competition Guidelines

for

Design, Specification, Approval and Construction

of

Mass Timber Building(s) in California

TABLE OF CONTENTS

BACKGROUND.....	3
COMPETITION DESCRIPTION.....	4
Objectives	4
Eligible Applicants, Projects and Mass Timber Materials	4
Eligible Incremental Activities and Related Costs.....	4
Timeline.....	5
COMPETITION EVALUATION CRITERIA AND PROCESS.....	5
Explanation	5
Required Documents	6
Judging Criteria	6
Further Review of Selected Submissions.....	8
Request for Additional Information.....	8
OTHER CONDITIONS.....	8
Intellectual Properties.....	8
Reporting and Audit Requirements	8
Confidentiality and Communications	8
RESOURCES AVAILABLE TO PROPONENTS.....	9
Available Resources	9

BACKGROUND

The California Mass Timber Competition is being hosted by the California Government Operations Agency (GovOps) and administered by WoodWorks – Wood Products Council. GovOps has announced that it will award \$500,000 in grants as part of a statewide competition. Grant(s) will be awarded to selected proponent teams presenting viable and repeatable mass timber solutions for commercial or multi-family projects in California.

By showcasing the architectural and commercial viability of advanced mass timber products in construction, the competition is intended to support employment opportunities in rural communities, contribute to the health and resiliency of California forests, and advance sustainability in the built environment.

California is the largest consumer of engineered wood products west of the Mississippi River, yet almost none is produced in the state. By showcasing opportunities for mass timber, GovOps seeks to stimulate the demand for buildings constructed using mass timber and generate investor interest in potential in-state production capacity while advancing its climate change and green building objectives.

Mass timber also has the potential to help reduce the risk of catastrophic wildfires in California. After a century of suppressing forest fires to protect communities, many U.S. forests are now overly dense and susceptible to large and severe fires. Mass timber products present an opportunity for large, solid structural elements to be potentially manufactured from relatively small-diameter trees as well as other traditionally lower-value resources (such as trees that are dead or dying due to bark beetles or other insects and disease). Demand for these byproducts of sustainable forest management practices helps provide a market incentive for forest thinning and other landscape restoration efforts that reduce the risk of high-severity fire. The intent of this competition is to inspire interest and support for innovative wood products among the architectural, developer and building communities as well as the general public.

Mass timber is more commonly used for construction in Europe, but the last decade has also seen an increase in use as a structural element in North America; Canada, Washington and Oregon have experienced some early success in making these products a viable alternative to traditional building materials. As a construction material, mass timber is attractive to designers for its strength, affordability, aesthetics, construction efficiency, structural performance, reduced carbon footprint, and ability to work alongside other materials as a structural element.

Demonstration projects are needed in California to familiarize local permitting and approval agencies, design practitioners, developers and construction contractors as to the viability of these products.

COMPETITION DESCRIPTION

Objectives

The objectives of the competition are to:

- 1) Provide grant funds totalling \$500,000 to support two or more proponent teams that have viable projects utilizing existing research or proven alternative technical solutions, available technical expertise and incremental funding to safely design and construct high profile mass timber demonstration projects in California.
- 2) Showcase the viability, application, repeatability, and sustainability of mass timber construction in California.
- 3) Clearly illustrate the direct link between the use of mass timber components and the health and resiliency of California forests and economic development opportunities in rural California communities.

Eligible Applicants, Projects and Mass Timber Materials

Eligible applicants may be real estate developers, institutions, and/or other corporations or legal organizations and their design and construction team partners.

Projects must be located in California.

Eligible project types include commercial, institutional, industrial, mixed-use or affordable multi-unit housing developments. Single family homes are not eligible.

Eligible materials include cross-laminated timber (CLT), nail-laminated timber (NLT), glue-laminated timber (GLT), dowel-laminated timber (DLT), mass plywood panels (MPP), and other mass timber products as approved by the competition organization on request. Mixed material (hybrid) solutions that includes mass timber components along with other structural materials are eligible.

Eligible Incremental Activities and Related Costs

Following are examples of activities and costs that are eligible for funding should a project be selected:

- Pre-application meeting expenses—i.e., staff time and costs associated with the development of mass timber-related materials (written and design) for meetings with building departments
- Code consultant and peer review costs that may be required to support a mass timber submission to the Authority Having Jurisdictionⁱ
- Information exchange sessions to better inform building and fire code officials of mass timber solutions accepted in other jurisdictions
- Cost study to compare the proposed mass timber solution to a more traditional solution
- Travel expenses incurred visiting mass timber demonstration projects

- Expedited permitting fees for project review and approval through the Authority Having Jurisdiction
- Small scale tests and prototype assembly development of mass timber assemblies
- Virtual design and virtual construction modeling of mass timber components or assemblies that may help expedite the permitting process
- General contractor fees to model construction sequencing
- Development of unique mass timber design details
- Incremental costs and activities during construction incurred due to the use of mass timber
- Incremental costs to include California-sourced material and/or lesser utilized species and/or materials from forest thinning activities in California
- Project Life Cycle Assessment study
- On-site visuals to communicate the connection(s) between the building’s solution and employment opportunities in rural California communities and the health and resiliency of California forests

Timeline

Disclaimer: Competition dates are subject to change at the discretion of the competition funder and manager.

Competition announcement:	January 8, 2019
Submission period:	January 15 – March 18, 2019
Submission closing date and time:	March 18, 2019 at 5:00 p.m. Pacific Time*
Evaluation and due diligence period:	March 19 – May 12, 2019
Negotiation period:	May 13 – May 17, 2019
Announcements and agreements:	May 22, 2019 (target)

**Submissions received after the closing date and time will not be accepted or reviewed.*

COMPETITION EVALUATION CRITERIA AND PROCESS

Explanation

Following the March 18, 2019 deadline, the competition will involve a series of sequential steps. This will include the evaluation of submitted projects by a broad range of professional experts (including but not limited to researchers and design/construction professionals) as well as due diligence and negotiation phases.

Required Documents

To be eligible for consideration, proponent submissions must include:

- A clearly identified team lead (including company name, individual's name, individual's position, email address and office or cell phone number), who will be responsible for providing contact details and meeting all entry and evaluation requirements
- Building site information, including: legal description; title holder; current zoning; development permit status for the site and project
- Project team information, including architect, engineer, owner and finance source for the project
- Letter of support from each entity on the project team
- Drawings, including site plan, basic project elevations, floorplans and typical and/or unique/innovative mass timber sections
- A project description including details about the proposed mass timber solution
- A narrative explaining how the project design team proposes to navigate the approval process for mass timber, including any feedback already received from the Authority Having Jurisdiction
 - The summary shall address interactions, discussions and information developed to date related to any pre-approval meetings with building officials that is pertinent to mass timber as a structural solution and the competition.
- A summary of the business plan for the project including project financing information
- A statement that non-proprietary information about the design of the project and the solutions supported and generated by the competition funds will be available and can be communicated broadly by the competition funders and managing partners
- A table listing, estimating and noting how grant funds will be applied and utilized

Judging Criteria

Eligible projects submitting the required documents above will be evaluated on the following criteria to determine winning applicants. Approximate point values are listed to provide proponent teams with relative weight values for the judging criteria (100 point total).

- Project size/market impact (15 pts)
 - Minimum project size of 10,000 square feet; preference given to projects greater than 100,000 square feet and/or higher than six stories
 - Project repeatability
- Approval process (15 pts)
 - Letter of support from Authority Having Jurisdiction clarifying the specific requests for additional information, that if received, would help support the project review and permitting approval
 - Narrative describing how grant funds will be used to resolve issues identified by the Authority Having Jurisdiction

- Project costs, viability and value proposition (15 pts)
 - A detailed estimate of project costs (time and materials) including a “mass timber solution delta” resulting from a comparison to the project being built with traditional materials
 - An explanation regarding the viability of the proposed mass timber solution, its uniqueness, and broader implications/applications
 - A narrative explaining how the use of mass timber components adds value to the proposed project (structural, seismic, aesthetic, innovative, biophilic, etc.)
- Use of funds on deliverables to advance the market (15 pts)
 - Description of what information will be shared with the public and how that information will help advance the market
- Location (5 pts)
 - Value of chosen site (e.g., either high-profile, accessible or disadvantaged community)
- Proponent teams (10 pts)
 - One or more California design practitioners
 - Past experience with mass timber
 - A description of prior experience and success (e.g., working with the Authority Having Jurisdiction on similar projects or achieving approval through an Alternate Materials and Methods process)
- California Forest Health Impact (10 pts)
 - A narrative describing the degree to which the project team intends to work with a material manufacturer to utilize California-sourced material and/or lesser utilized species and/or materials from forest thinning activities in the state
 - Resources to better understand natural resources targeted are California’s 1038(j) Forest Fire Prevention Exemption and species defined in the California Forest Practices Act. WoodWorks can provide information on both as requested.
- Resiliency and Sustainability (5 pts)
 - A narrative explaining the sustainability features of the project and how this project will contribute to a resilient community
 - Energy use goals and how they will be achieved by using mass timber solutions for the project
 - An estimate of greenhouse Gas (GHG) mitigation
 - Woodworks Carbon Calculator
 - <http://www.woodworks.org/carbon-calculator-download-form/>
- Innovation (5 pts)
 - A narrative explaining how the mass timber solutions being considered will help advance code adoption for mass timber buildings in the state and have broad market impact potential

- Access (5 pts)
 - A statement indicating that, within certain limitations during construction and once completed, the project will be available for tours or and other educational activities
 - Description of a permanent aspect of the project that could function as a public educational display to showcase the benefits of using mass timber for construction

Further Review of Selected Submissions

A due diligence process that may include competition funders/managers and consulting professionals will follow once shortlisted proponents and projects are determined.

Request for Additional Information

Once selected submissions are shortlisted, the competition manager may request additional information from proponents including land title documents, project proformas, insurance documents and other related and pertinent reports that will further support the project and strengthen a proponents' request for grant funds.

OTHER CONDITIONS

Intellectual Properties

Selected proponents will be expected to release and allow to be made public all information related to project activities and solutions generated partially or wholly by the incremental funds provided by the State. The information will be released within three months of the substantial completion of a project or from the date of the Certificate of Occupancy.

Reporting and Audit Requirements

Selected proponents will be expected to assist competition funders and managers in the development of project reports and must allow information about the project to be made public through technical bulletins and/or case studies. An audit and/or reviews of how grant funds were used may also be required.

Confidentiality and Communications

A proponent will be expected to maintain confidentiality about a selected project until California Government Operations staff and communication teams have issued official press releases related to competition grants. All press releases by either party will be jointly pre-approved with five business days advance notice.

RESOURCES AVAILABLE TO PROPONENTS

Available Resources

For competition related questions:

<http://www.woodworks.org/project-gallery/2019-california-mass-timber-building-competition/>

Contact Information:

GovOps

- matt.henigan@govops.ca.gov

WoodWorks

- CAMassTimberBuildingCompetition@WoodWorks.org

For project support:

WoodWorks – Wood Product Council staff and contractors are not eligible to act as competition evaluators and will be available to support proponents and their design and technical teams during the competition. For project questions please reach out to help@woodworks.org.

WoodWorks provides free project assistance as well as education and resources related to the design of non-residential and multi-family wood buildings. Their technical experts offer support from design through construction on a wide range of building types, including multi-family/mixed-use, education, office, commercial, industrial, civic/recreational and institutional/healthcare.

WoodWorks staff have expertise on a wide range of subjects, including but not limited to:

- Allowable heights and areas and construction types
- Structural design and detailing of wood-frame and hybrid material systems
- Fire resistance and acoustical-rated assemblies
- Efficient and code compliant lateral system design
- Alternate means of code compliance
- Energy-efficient detailing
- Application of advanced building systems and technologies
- General product availability

The WoodWorks website (www.woodworks.org) also includes a wide range of education and links related to mass timber and wood-frame construction.

ⁱ In construction, the authority having jurisdiction (AHJ) is the governmental agency or sub-agency which regulates the permitting, plan review and construction process. In most cases, this is the municipality in which the building is

located. AHJs could include building departments, building officials, plans examiners and site inspectors, all working for or on behalf of the governing agency.