# 2025 MASS TIMBER COMPETITION: BUILDING SUSTAINABLE SCHOOLS

Request for Proposals and Entry Requirements









## Table of Contents

Competition Dates	1
Competition Objectives	1
Submission Eligibility	2
Award Amount and Funding Priorities	2
Preference for Domestic Supply	3
Evaluation Methodology and Scoring Rubric	3
Eligible Expenses	9
Reporting and Access Requirements for Recipients	.10
Deliverable and Funding Schedule for Recipients	. 11
Competition Entry Instructions	. 11
Inquiries	. 11
Prior Year Winners	. 11
About	.12

## **Competition Dates**

10/28/24	Submission Entry Period Begins
11/20/24	Competition Q&A Webinar
1/13/25	Submission Entry Period Ends
4/19/25	Recipients Notified
6/6/25Public Announceme	ent at the 2025 AIA Conference on Architecture and Design

## **Competition Objectives**

This competition is being held to showcase mass timber's application, practicality, commercial viability, and role in building sustainable and resilient K-12 learning environments in the United States. It is intended to help expand the use of mass timber building solutions by public and private institutions and support increased employment in the advanced wood products design, engineering, construction, supply chain, and manufacturing sectors.

Funding for the competition is provided by the Softwood Lumber Board (SLB) and USDA Forest Service (USDA FS) to assist in:

- Efforts to overcome barriers to the use of a new building system, most notably the work of analyzing design and engineering alternatives and verifying that these solutions comply with applicable code(s).
- Quantification of benefits arising from the use of a wood product, such as carbon emissions reduction and biophilic outcomes.
- Understanding the costs associated with the use of mass timber or mass timber hybrid building systems and construction.

Information reported by grant recipients—such as cost analysis, design insights, life cycle assessments (LCAs), post-occupancy biophilic studies, and other research results—will be shared with the broader education community, as well as their design and construction partners, to help support future projects. By making these findings public, the funders seek to advance the business case for mass timber in project types where the use of wood is currently less common, such as education buildings.

## **Submission Eligibility**

To be eligible to enter, the lead applicant on the project team must be one of the following:

- A for-profit building sector organization registered in the U.S. (e.g., architect, engineer, developer, building owner, general contractor, manufacturer).
- A not-for-profit organization incorporated as a not-for-profit corporation or society formed in the U.S. (e.g., independent school, trust, religious body, association).
- A U.S. local government entity (e.g., public school district, city, county, state).
- A Native American Tribal government entity or organization.

An eligible project must be located within the United States and be a K-12 educational project including, but not limited to, classrooms, libraries, athletic facilities, offices, resource centers, portable classrooms, and vocational centers. Pre-K and daycare facilities will also be considered.

An eligible project must include one of the following mass timber systems: cross-laminated timber (CLT) of either solid-sawn and structural composite lumber, nail-laminated timber (NLT), glued-laminated timber (glulam), dowel-laminated timber (DLT), and other mass timber products approved by the competition organizers upon request. Mixed material (hybrid) solutions that have predominantly mass timber components along with other structural materials are also eligible.

## **Award Amount and Funding Priorities**

The competition will award up to \$1.8 million in total funds across multiple projects. Within their entry, the team should request an award amount that is appropriate for the proposed project—up to a maximum amount of \$500,000.

Final award amounts will be based on project size or complexity, replicability, and the likelihood of construction with a clear path to completion.

- **Project size or complexity.** Significant projects with high anticipated design and construction costs will be better able to justify larger requested award amounts. (Please see the section below called Eligible Expenses.)
- **Replicability.** Proposals that are viable for multiple sites or are part of a Master Plan Prototype applicable in numerous future projects may be considered for higher funding.
- Likelihood to be constructed. Proposals that have a clear path to completion will be more likely to receive higher funding. The judging panel will be asked to consider questions such as: Is the entry for a specific district or investor with a determined site? Is the proposed project already funded? Has the construction type been determined? Has a design team been contracted? Is there school district buy-in?

## **Preference for Domestic Supply**

Preference will be given to projects that are scalable in terms of project size and replicable by other schools and school districts within the U.S.

Wood sourced for the proposed project should demonstrate sustainable forest management that contributes to forest and watershed health. Several approaches are used to ensure sustainable supply of wood products, including federal, state, and local regulations; third-party certifications; best management practices; and an emerging ASTM standard. Preference will also be provided for projects that commit to using domestically harvested and manufactured mass timber.

## **Evaluation Methodology and Scoring Rubric**

#### Methodology

Each project submission will be judged by an independent panel of industry professionals representing education, architecture, engineering, construction, and sustainability. The judging panel will consider aspects of the project using the weighted scoring rubric outlined below. Panel members will meet as a group to discuss and evaluate projects and to choose the finalists. In general, the judging panel will elevate submissions that have the following attributes, which are reflected in the scoring rubric.

- The submitted project has the potential to catalyze broader adoption of mass timber by communities for the benefit of educators, staff, students, and residents that use our schools. The project team has identified and leveraged the design and constructability benefits of mass timber in a way that could expedite other future school projects.
  - » In particular, the project will demonstrate biophilic design principles for the potential enhancement of wellness and learning outcomes.
  - » The project demonstrates a compelling way for districts and communities to implement decarbonization practices and/or meet existing sustainability and resiliency goals by using a carbon-storing building material.
- The project team has developed and documented a new solution in the design, engineering, and construction of a mass timber system within existing codes and regulations.
  - Or the project team has validated a creative application of mass timber outside the current regulations.

#### **Proposal Submission and Document Structure**

Project teams will need to complete all required elements within the <u>online form</u> and upload optional supporting documents. The entry deadline applies to when the submission has been completed via the online form. Submissions started by the user but not finished before the deadline will not be accepted. Alternate methods of submission (e.g., email) will also not be accepted.

## Scoring Rubric

Points will be awarded based on the range provided for each section, and each section is allotted points based on its importance to the project scope. The total points achievable for each project is 1,000.

#### Section 1: Project Description – 250 points

1.1	0 – 25 points	Project Overview
1.1		<ul> <li>Provide an overview of the proposed project. Describe the schematic site plan and education specifications, if known.</li> <li>Explain how this project serves the education and civil needs of the community. Provide a statement of support for the proposed project from the district or other governing body, if available. State how local community will be involved in the design process, if applicable.</li> <li>Show a benefit to underserved/historically marginalized people, their communities, and/or the forest areas they value. If applicable, explain how this project supports Executive Order 13985: "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government."</li> </ul>
1.2	0 – 75 points	<ul> <li>Building(s) Plan</li> <li>Include the schematic program: project size, floor area, and number of stories.</li> <li>Explain the planning, entitlements, and permitting status for the land and building.</li> <li>Identify the proposed IBC Construction Type(s) and Building Occupancies.</li> <li>All construction types are eligible, including the new tall-wood construction types noted in the 2021 IBC (IV-A, IV-B, and IV-C).</li> </ul>
1.3	0 – 75 points	<ul> <li>Project Schedule and Funding</li> <li>State if project is fully, partially, or not yet funded.</li> <li>Provide project schedule and status.</li> <li>Provide project cost estimates and a schedule of expenses.</li> <li>Describe the funding required for completion of the project specifying funds already in place and outstanding needs.</li> <li>Estimate how much of the total project cost for your organization would be offset by the requested award amount.</li> </ul>

1.4	0 – 50 points	<ul> <li>Use of Competition Award Funding</li> <li>Explain how the funds will be used. (Be sure to reference the section called Eligible Expenses, below.)</li> <li>Provide a list of tasks, with an approximate schedule and budget for each, that will be financially supported by the award.</li> </ul>
1.5	0 – 25 points	<ul> <li>Team Profiles</li> <li>List the known team members, including key individuals, committed to the project. This may include district staff and liaisons, developer, architect, structural engineer, construction manager, mass timber supplier, and/or general contractor. Include any important specialty consultants particularly relevant to the success of the project (e.g., fire, acoustics, LCA, Building Information Modeling (BIM)).</li> <li>Include bios of team members that describe their experience with previous mass timber projects.</li> <li>Describe the diversity and equity reflected within the makeup of the project team.</li> <li>Letters of support or commitment from key stakeholders, team members' mass timber resumes, and supporting information may also be provided.</li> </ul>

## Section 2: Business Case for Mass Timber – 400 points

2.1	0 – 100 points	Mass Timber Solution
		<ul> <li>Describe the mass timber solution(s) to be used in the project. Include detailed information on where in the proposal mass timber will be used and estimate the component sizes, total volume, and percentage of mass timber structural components in the overall project.</li> </ul>
		<ul> <li>Provide the master plan, prototype documents, conceptual construction plans and drawings, if available, as attachments.</li> </ul>
		For this competition, mass timber includes cross-laminated timber (CLT), nail- laminated timber (NLT), glued-laminated timber (glulam), dowel-laminated timber (DLT), products that meet PRG 320-19, and other mass timber products approved by the competition organizers upon request. Mixed material (hybrid) solutions that have predominantly mass timber components along with other structural materials are also eligible.

2.2	0 – 100 points	Mass Timber Performance and Justification
		<ul> <li>Explain how the mass timber system will meet project objectives and key code requirements—e.g., structural, fire, life safety, acoustics, vibration, durability, sustainability, and/or resilience.</li> </ul>
		<ul> <li>Indicate if approval of an alternate means and methods request (AMMR) is needed for the proposed project. If so, demonstrate the track record for acceptance of similar projects with the Authority Having Jurisdiction (AHJ). Provide supporting information on the AHJ's likely position(s) and a letter from the AHJ regarding the proposed project. Describe contingency plans if the AMMR is not approved.</li> </ul>
		<ul> <li>Describe the solutions developed for this project that will be documented and shared with the education and building communities.</li> </ul>
		• Describe how the atypical costs, sourcing, scheduling, etc. associated with mass timber have been justified to district and ownership stakeholders. Show benefits of using mass timber on upfront (e.g., schedule) and/or long-term costs (e.g., maintenance).
		<ul> <li>Provide a statement of support from the district regarding the choice to build with mass timber.</li> </ul>
		<ul> <li>Describe any known implications of using mass timber on project funding, insurance, or related topics and how they will be addressed.</li> </ul>
		Ideal candidates are high-profile, replicable, economically viable U.S. projects that utilize existing research and/or proven alternative technical solutions and available technical expertise for their successful execution.
2.3	0 – 50 points	Mass Timber Sourcing
		<ul> <li>Identify selected manufacturers of mass timber products or manufacturers being considered to supply products.</li> </ul>
		<ul> <li>If appropriate, provide a letter of commitment to use lumber sourced and mass timber produced from the U.S. or North America.</li> </ul>
		<ul> <li>Provide a statement of sustainability from the manufacturer being considered for specified mass timber products.</li> </ul>
		Preference will be given to projects that commit to using U.S. harvested and manufactured mass timber. An objective of the competition is to grow the U.S. mass timber and solid-sawn lumber markets and strengthen the domestic mass timber supply chain.
		Wood products sourced for the project should demonstrate sustainable forest management that contributes to forest and watershed health as documented in the statement of sustainability from the manufacturer. Several approaches are used to ensure sustainable supply of wood products, including feder- al, state, and local regulations, third-party certifications, best management practices, and ASTM standard D7612. The use of mass timber with lumber that meets third-party forest or fiber sourcing certification is not a requirement.

2.4	0 – 75 points	Mass Timber Value and Benefits
		• Explain the project team's reason for building with mass timber.
		<ul> <li>Explain any tangible and intangible benefits that using mass timber will provide to the project team, project owner, and community.</li> </ul>
		<ul> <li>Describe any plans to develop construction cost estimates comparing a mass timber design for this project with another design using traditional materials. Comparisons should include the installed cost, required finishes, construction equipment costs, and impact of construction schedule on costs.</li> </ul>
2.5	0 – 75 points	Mass Timber as a Biophilic Design Element
		• Explain how visible wood surfaces impart potential biophilic design benefits to occupants, especially to the learning outcomes and wellness of students and staff.
		• State if stakeholders are willing to conduct post-occupancy research into the impact of biophilic materials used in their project.

## Section 3: Sustainability & Resiliency – 125 points

3.1	0 – 100 points	Carbon Impact of the Structure
		<ul> <li>Provide an estimate of the carbon reduction and storage benefits of the proposed project relative to other material options. This can be determined using the <u>WoodWorks Carbon Calculator</u> or a similar tool.</li> </ul>
		<ul> <li>Describe results from or plans to perform a WBLCA, structural LCA, or otherwise demonstrate influence on reducing the building's carbon footprint, and/or related carbon accounting analysis. Explain how these efforts compare the proposed mass timber solution to other material alternatives.</li> </ul>
		<ul> <li>How will the project team share this information to advance the mass timber market?</li> </ul>
3.2	0 – 25 points	Sustainability and Resiliency Goals
		<ul> <li>Explain any other sustainability goals for the project including any sustainable building certification program goals (e.g., Living Building Challenge, LEED, Passive House, etc.).</li> </ul>
		<ul> <li>Describe how use of wood is consistent with local sustainability initiatives or community actions towards green construction (i.e. net zero goals, sustainability initiatives, incubators, etc.).</li> </ul>
		State if mass timber provides opportunities for the building to better handle fire, seismic activity, or extreme weather events.

## Section 4: Impact – 225 points

4.1	0 – 100 points	<ul> <li>Market Impact</li> <li>Explain how this project will increase the acceptance and use of mass timber by other schools in your district or other districts. How could the project replicable and scalable, giving rise to similar implementations in other geographic areas or climates?</li> <li>Explain how the mass timber solutions could help advance code and market adoption of mass timber school buildings.</li> </ul>
4.2	0 – 25 points	<ul> <li>Economic Development</li> <li>Describe how the project will spur the economic development of the community where it is located. State any impact on opportunities for rural communities.</li> </ul>
4.3	0 – 100 points	<ul> <li>Outcomes</li> <li>Summarize the information that will be collected—and will be shared if selected—during the project that helps demonstrate to others the viability, application, cost-effectiveness, and carbon reduction and sequestration benefits of mass timber construction.</li> <li>State a plan for sharing learnings with the broader education and construction communities (e.g., guides, webinars, published results) upon project completion.</li> <li>Describe the resources that the team is willing to commit towards communications outreach upon project completion.</li> </ul>

## **Eligible Expenses**

Awarded funds must be used toward costs incurred after competition funds have been granted and only for the following eligible expenses:

#### Bond Planning, Pre-Bond Design, and Master Planning

- Schematic site plan development.
- Cost estimating.
- Site visits and other stakeholder research into mass timber.
- Costs associated with distributing information, conducting a community meeting (i.e. parent-teacher meeting, school board meeting, etc.), and sending communications about reasons to consider mass timber.
- Preliminary code analysis through the local jurisdiction's building department or other administrative unit.

#### Schematic Design, Design Development, and Construction Drawings

- Architecture.
- Concept and design development.
- Engineering.
- Incremental preliminary evaluation of possible structural solutions and building serviceability-related issues.
- Incremental design expenses related to the design of the wood structure.
- Integration of novel solutions when detailing structural documents for tendering and construction.
- Fire safety and protection.
- Fire and building safety strategies, related issues, and possible solutions.
- Building enclosure design.
- Examination of issues and detailing solutions related to the building's exterior façade.
- Mechanical and electrical interfaces.
- Strategies and issue resolutions related to system integration.
- Secondary impact and preliminary cost analysis related to use of wood products, components and systems, and related construction methodologies.

#### Research, Testing, and Other Required Support by Third Parties

- Research and testing related to acoustic, fire, seismic, vibration, connections, building envelope assembly materials, and construction techniques.
- Whole building life cycle assessment (WBLCA) or structural LCA.
- Post-occupancy studies related to biophilic elements.
- Costs associated with product, component, and/or system modeling and testing.

#### Building System Code Acceptance, Final Cost Analysis, and Approvals

- Architecture and engineering.
- Comprehensive resolution of design issues.
- Final code review, final cost analysis, and preparation of documents and peer review process costs.
- Additional design modeling or testing requirements.
- Final documents and presentations to the local authority for building permit approvals.
- Other project approval costs.

#### Construction

- Quality control, site inspection, and site safety costs.
- Risk management related costs.

## Related Activities and Other Costs Not Noted but Directly Attributable to the Development and Construction of a Wood Solution

- Incremental supervision and trade training associated with the proposed wood solution(s).
- Instrumentation during construction and ongoing monitoring costs associated with building performance of critical wood components or assemblies.
- Construction site access requested by the competition partners that may cause the proponent to incur additional costs (e.g., construction disruption and additional site safety requirements that may result from visitor tours or promotional events).

### **Reporting and Access Requirements for Recipients**

Reporting requirements for recipients will be defined in the funding agreement but will likely include the following information. Regular communication between the project teams and competition organizers will be implemented.

Information sharing requirements include the following. Results may be shared publicly.

- The recipient will provide details of any WBLCAs or structural LCAs that informed the project design.
- The recipient must make available material quantities, costs, and/or BIM model for further analysis.

Access to technical information and business cost data will support case studies developed by the competition organizers. Recipients will grant the following.

- Access and permission to use project photos by the SLB, the American Wood Council, Think Wood, WoodWorks, and the USDA FS for use in promotional materials (e.g., websites, case studies, and social media).
- Access to the jobsite for project tours in collaboration with the recipient.
- Access to jobsite for collecting data that inform future projects and solutions.
- Data resulting from tests performed to validate design approaches.
- Access to whole building cost data including mass timber cost data for WoodWorks internal use in tracking cost trends and mass timber efficiencies.

- Notes and results from discussions and project reviews by the AHJ.
- Development and access to a construction report (including a project timeline with mass timber construction timeline identified separately).
- Insurance data to assist in the analysis of current rates and trends.
- Development financials to create a business case report.
- Lessons learned on the project for potential use in a case study and to generally help inform others interested in pursuing mass timber projects.
- Availability for quarterly virtual meetings to discuss and finalize deliverables in accordance with the payment schedule.

## **Deliverable and Funding Schedule for Recipients**

Awarded funds will be disbursed partially at intervals as the project progresses and upon approval by the funders of milestone deliverables. A funding agreement will specify the required deliverables—such as project updates, financial reports, receipts and proofs of payment—and set corresponding payouts along a predetermined schedule. That schedule will depend on the amount of funding awarded and the nature of the project. For example, delivery of a predesign status update and completion of schematic designs may trigger 15% of funding to be released to the recipient; and the delivery of financial reports outlining mass timber material costs may trigger an additional 25%—and so forth, until the agreement is fulfilled and the full amount is disbursed.

## **Competition Entry Instructions**

To submit a project entry: 1. <u>Complete all fields within the online form</u>. 2. At the same time, upload a proposal document as instructed at the bottom of the webpage. Submitters will see a message confirming receipt of the submission. For technical assistance with the entry form, contact the program administrator at the email address below.

## Inquiries

All inquiries should be submitted by email to sustainableschools@woodworks.org.

## **Prior Year Winners**

Profiles of winning projects from the 2022 and 2023 competitions can be viewed on <u>softwoodlumberboard.org</u> and <u>thinkwood.com</u>.

You may also find it instructive to browse mass timber projects in your region on the <u>WoodWorks Innovation Network</u>.

## About









#### About the Softwood Lumber Board

The <u>Softwood Lumber Board</u> is an industry funded initiative established to promote the uses as well as the environmental and economic benefits of softwood lumber products. Programs and initiatives supported by the SLB, including American Wood Council, Think Wood, and WoodWorks, focus on increasing the demand for lumber products in the United States.

#### About the USDA Forest Service

The <u>USDA Forest Service</u> has brought people and communities together to answer the call of conservation for more than 100 years. Grounded in world class science and rooted in communities, the Forest Service connects people with nature and to each other. The Forest Service cares for shared natural resources in ways that promote lasting economic, ecological, and social vitality. 193 million acres of national forests and grasslands contribute more than \$13 billion to the economy each year through visitor spending alone. The Forest Service also maintains the largest forestry research organization in the world and assists state and private landowners, helping to steward about 900 million forested acres in the U.S., including 130 million acres in urban areas, which most Americans now call home.

#### About WoodWorks

<u>WoodWorks – Wood Products Council</u> provides education and free technical support related to the design, engineering, and construction of commercial and multifamily wood buildings in the United States. A non-profit staffed with structural engineers, architects, and construction experts, WoodWorks has the expertise to assist with all aspects of wood building design.

#### About the Center for Green Schools

The <u>Center for Green Schools</u> at the U.S. Green Building Council is a global leader in advancing green schools and providing the resources needed to create sustainable, healthy, resilient, and equitable learning environments. We are driving the green school movement by working directly with those implementing sustainability within school systems and offering a wide array of initiatives that accelerate action.