

**NEW FRERES WOOD FACILITY DEMONSTRATES WOOD CAN REPLACE STEEL AND CONCRETE IN WAREHOUSE CONSTRUCTION**  
FRERES WOOD'S NEW WAREHOUSE USES WOOD FOR STRUCTURAL COMPONENTS



**CHALLENGE**

Design a new plywood warehouse entirely with Freres Engineered Wood's innovative Mass Ply products, thereby providing a competitive low-carbon alternative to traditional concrete tilt-up construction and pre-engineered metal buildings in the industrial warehouse construction space.

**SOLUTION**

Freres Engineered Wood used a combination of Mass Ply Panels (MPP) and Mass Ply Lams (MPL) to design a 58,000-square-foot warehouse with a unique 40 ft. by 48 ft. grid and ample space for four truck loading stations, two tarping stations, and storage for 6,000 units of plywood.

**RESULT**

The impressive mass timber warehouse represents a significant improvement in the larger construction industry, demonstrating wood's ability to not only replace concrete and steel in industrial warehouse structures but also offer a faster and more reliable means of building them. The design represents a massive carbon benefit of 1,539 metric tons and supports a growing trend toward renewable alternatives in construction.

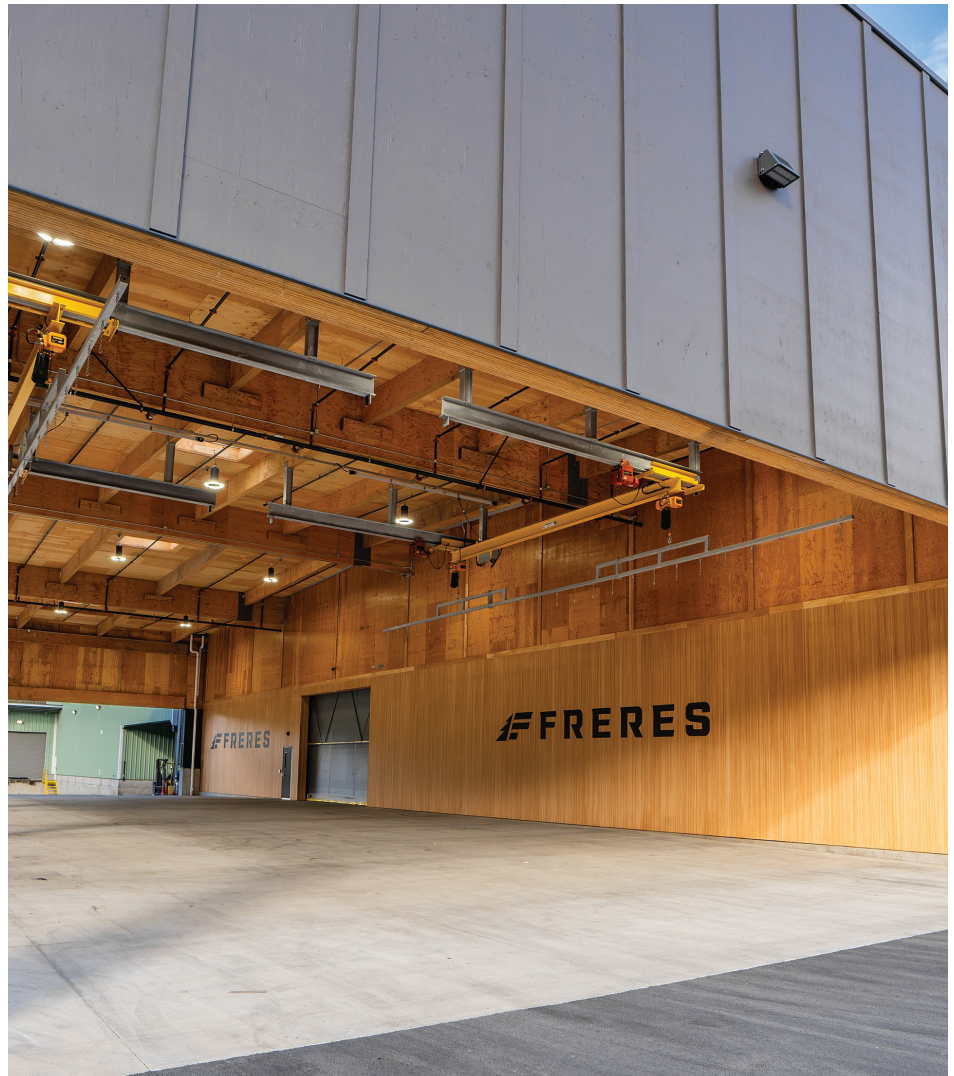


Photo provided by CD Redding Construction

In 2024, Freres Engineered Wood used their patented Mass Ply products to construct a new plywood warehouse, showcasing wood's ability to compete with traditional steel and concrete construction methods for industrial warehouse builds. The innovative, mass timber structure represents yet another sustainable improvement in the larger construction industry.

“As it is now, you only have two opportunities for warehouses: concrete tilt-up construction or pre-engineered metal buildings,” says Kyle Freres, the company’s VP of Operations. “There’s been a lot of exploration to see if wood can provide a viable alternative to these methods, and the new mass timber warehouse demonstrates that wood can offer a quicker and more effective means of constructing large format warehouses.”



*Building Customer Satisfaction*

## NEW FRERES WOOD FACILITY WAREHOUSE CONSTRUCTION CASE STUDY



Photo provided by CD Redding Construction

**“We are thrilled at the potential for wood to compete directly with concrete and steel industrial building construction in the future.”**

— Kyle Freres,  
Freres VP of Operations

Photo Credit: CD Redding Construction

### **PARTNERS**

CD Redding Construction  
Crow Engineering



Photo provided by CD Redding Construction

The 58,000-square-foot mass timber warehouse mimics tilt-up concrete construction, but the structural elements are entirely Freres Wood’s patented Mass Ply Panels (MPP) and Mass Ply Lams (MPL). The Freres team explored many design options for the building’s grid span, comparable to those often requested for warehouse structures, including clear-span trusses at 140’ long. Eventually, they selected a 40 ft. by 48 ft. grid for this structure, with space for four truck loading stations, two tarping stations and storage for 6,000 units of plywood.

“Most mass timber projects are built on a much smaller grid and don’t have this type of open floor space, so getting this span built in with the structure is unique,” says Kyle.

In addition to the building’s impressive grid span, the construction team was able to save time by installing prefabricated Mass Ply products, thereby cutting costs. In fact, the Freres Wood team estimates the warehouse’s mass timber design allowed them to complete the project three months faster than they would have with a traditional concrete tilt-up method.

Finally, by replacing concrete and steel construction methods with wood alternatives, Freres Wood avoided approximately 429 metric tons of greenhouse gas emissions, representing a total potential carbon benefit of 1,539 metric tons. These measurements are the equivalent to 325 cars off the road for one year or energy necessary to operate 163 homes for one year.

“We are thrilled at the potential for wood to compete directly with concrete and steel industrial building construction in the future,” says Kyle. “We believe the biophilic nature of all-wood structures has the potential to improve the well-being of those living and working within them. Additionally, we hope these new mass timber designs will support the growing trend toward sustainable, renewable alternatives in the construction industry.”



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