



# WHAT IS MASS TIMBER?

Mass Timber is an engineered, wood-based structural building material suitable for largescale infrastructure projects such as buildings and bridges BuildingInWood Bulletin #4

How It's Made

CLT is made by gluing alternating grain direction layers of machine stress

rated (MSR), finger jointed, dimensional lumber into large panels suitable for

use as roof, wall, and floor assemblies and industrial mats [1-5]. NLT and DLT

#### **Product Types**

Mass timber is a group of engineered wood products made from dimensional lumber, veneer, or wooden strands that are laminated together into "massive" structural elements such as panels, columns, and beams [1-3]. Lamination is commonly done with glue, although nails and hardwood dowels are sometimes used instead [1, 2].





Cross Laminated Timber

Glued Laminated Timber

Important mass timber products include cross-laminated timber (CLT). glued laminated timber (glulam), nail-laminated timber (NLT), dowellaminated timber (DLT), mass plywood panels (MPP), laminated veneer lumber (LVL), parallel strand lumber (PSL), and laminated strand lumber (LSL) [1.2].



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Mass Plywood Panel

Glulam is made by gluing parallel layers of finger-jointed lumber into columns and beams although glulam panels also exist [1,6]. LVL is made of veneer while PSL and LSL are made from wooden strands [7]. These are typically made by gluing the veneer/strands together into beams [8] or columns (PSL) [7].



Laminated Strand Lumbe



Parallel Strand Lumber

### Why It Matters

Mass timber products enjoy several advantages over traditional construction materials including modular prefabrication and precision milling with large CNC machines [1,3], construction speed [2,3], and environmental performance [9]. Demand for mass timber products are sharply on the rise and mass timber will become an increasingly large part of the North American Construction market in the next 30 years [1].

## **References and Further Reading**

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are also panel materials, although they are manufactured by laying dimensional lumber on end and laminating them together with nails and hardwood dowel, respectively [1,2]. NLT and DLT are typically used in floors and ceilings but not walls [1]. MPPs are another panel product and are manufactured by laminated sheets of veneer together into large panels [1].

Laminated Veneer Lumba