



Mercer Mass Timber Building Solutions
CLT/Light Frame

November 2024

Loadbearing System

CLT/Light Frame

Podium buildings utilizing a structural CLT deck solution offers developers, designers and builders an opportunity to use a robust alternative and solid floor deck that is sustainable and value-creating without the need for a significant redesign.

Key Value Drivers

Schedule

- Potential schedule acceleration due to full prefabricated floor slab with minimal site install time
- Elimination of concrete curing from the critical path allows for immediate use of CLT slabs as a work surface for vertical construction

Asset Value

- Increased rental value for tenants
- Decreased concrete cost with elimination of cast-in-place slabs due to 60-70% reduction in podium weight

Design Value

- Increased diaphragm strength and stiffness in comparison to joist floors, resulting in hardware cost reduction
- Exposed wood ceilings for tenants
- Potential for increased floor-to-ceiling height
- Direct CLT-to-Window Wall / Curtain Wall connections

Sustainability

- Sustainably sourced mass timber expends 70% less carbon than the equivalent volume of concrete



For more information about our technical services or any product within the Mercer Mass Timber product portfolio, please contact us at clt@mercerint.com or visit mercermasstimber.com

Technical Services

Technical Offerings: Design-Assist, Estimating/Preconstruction

Project Delivery: 4D BIM Planning, Logistics, Just-in-Time Delivery

Fabrication: Shop Drawings, CNC Machining, CLT Panel Prefab

Installation: Full Erection, Logistics Planning & Sequencing, Lift/Bracing Engineering, Site Supervision/Consultation, and 4D Construction Scheduling

Mass Timber Product Portfolio

Layup: 3, 5, 7 and 9-ply **Sizing:** Up to 12'x60'

Species: Spruce-Pine-Fir (SPF), Douglas-Fir-Larch (DF-L), Southern Yellow Pine (SYP)

Visual Grade: Architectural Appearance (AA), Industrial Appearance (IA)

CLT Grade: 1.4V 875 = V2, 1.4V 750 ≥ V3, 1.8M ≥ E1, E3

GLT Grade (Manufactured): 24F-V8, 20F-V7, 16F-V6 (DF-L)

Glulam Grade:

- Western Species: 24F-V4 DF, 24F-V8 DF, Comb. 2 L2 DF
- Southern Species: 24F-V3 SP, 24F-V8 SP, Comb. 50 N1D14 SP

Use Cases

- Developers and builders interested in mass timber without fully committing to mass timber structures
- Developers and builders with sustainability goals, including embodied carbon reduction
- Buildings targeting premium retail market rates
- Projects in late-stage design where CLT can be introduced without significant schedule impacts

