



Mercer Mass Timber Building Solutions

# CLT/CFS Hybrid

November 2024

## Loadbearing System

# CLT/CFS Hybrid

A hybrid mass timber and steel solution for multifamily, student housing, or hospitality building results in schedule acceleration, cost savings, and significant sustainability impact.

### Key Value Drivers

#### Cost

- Up to 10% project cost savings over concrete or structural steel building
- Up to 50% reduction in structure weight results in lighter foundation, lateral systems reductions, build in challenging soil conditions
- Potential for higher rental value and faster lease due to aesthetic and sustainability attributes
- Reduced carrying costs and interest reserves requirements for developers because of time savings

#### Schedule

- Up to 20% faster than concrete building
- Reduced on-site staging, noise, traffic, and site install team size
- Reduced construction phase risks through an off-site prefabrication approach, minimizing productivity variability and on-site delays.

#### Asset Value

- **Biophilia:** Human response to wood leads to increased productivity and reduced stress when users are in environments that utilize natural materials
- **Sustainability:** Sustainably sourced CLT expends 70% less carbon than the equivalent volume of concrete
- **Design Features:** Exposed natural materials in the units, with CLT ceiling left exposed
- **Structural:** High strength/stiffness CLT diaphragms that work well with approved lateral load resisting systems (BRBs, RC shear walls, etc.)

### 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)

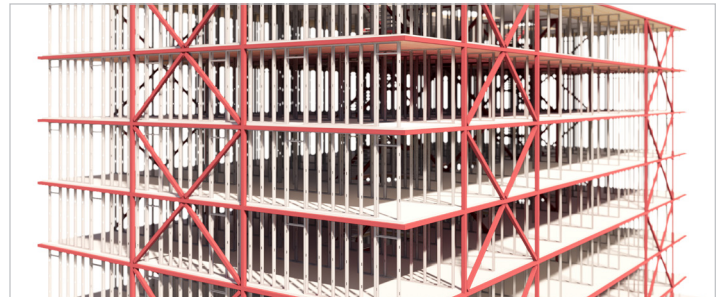
**Visual Grade:** Architectural Appearance (AA), Industrial Appearance (IA)

**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



For more information about our technical services or any product within the Mercer Mass Timber product portfolio, please contact us at [clt@mercerint.com](mailto:clt@mercerint.com) or visit [mercermasstimber.com](http://mercermasstimber.com).