Mercer Mass Timber Building Solutions

CLT/Light Frame

March 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

| 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 |
| Schedule Acceleration | • 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 |
| 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 CLT expends 70% less carbon than the equivalent volume of concrete |

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

Use Cases

• Developers and builders with interest in mass timber without committing to full mass timber structures  
• Developers and builders with sustainability goals, including embodied carbon targets  
• Buildings with premium retail market rates  
• Projects in late-stage design where CLT can be introduced without significant schedule impact

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