



Mass Timber & Hybrid Structures

To realize the potential benefits of mass timber, such as faster construction and the cost and other advantages of a lightweight system, some developers and owners are gaining experience with mid-rise buildings before pursuing the greater heights allowed under the 2021 International Building Code.

Most early mass timber projects developed under capital market forces have been mid-rise speculative offices. Tenants appreciate the beauty of exposed timber, as well as the innovation and sustainability that aligns with their values.

Mass Timber Structural Components

Mass timber can be used in many ways, from an entire structural system to components of the system that can benefit most from the beauty and warmth of an exposed wood structure. One example is Trammel Crow Residential's 975 Bryant Street in San Francisco, which features mass timber mezzanines in its first-floor townhome units. Others include exposed mass timber at amenity areas or penthouses, or for the roof structure.

Image Fiction

INTRO

Harbor Bay Real Estate Advisors

Developer Dan Whalen of Harbor Bay Real Estate Advisors recently broke ground on the nine-story INTRO. "While some developers and contractors are just now dipping their toes into mass timber, we're gaining as much experience as we can, as quickly as possible by studying every detail of fabrication and erection. We're also investing in R&D to make the entire design and construction process even more efficient. Recent projects have shown that using mass timber can shave 30% off the schedule. We are establishing means and methods that could double that."



Maximizing Returns through Multiple Projects

Some developers are betting on greater value in subsequent mass timber projects.

Carbon12 and The Canyons

Kaiser + Path

Ben Kaiser of Kaiser + Path, who has extensive experience with these systems, said, "The Radiator was our first foray into mass timber, which proved successful by every measure. To design and build Carbon12, with the addition of CLT being used at new heights, was quite difficult. We were introducing an entire market sector (governing bodies, insurers, investors, builders, bankers, appraisers) to the innovation of a tall mass timber condominium building. It was extremely difficult and quite expensive. However, if we were to build Carbon12 again today, we'd easily reduce costs and the schedule by over 20-25%."

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To achieve a differentiated mass timber product, developers/owners have to be willing to do things differently. Assembling a detail-oriented team and engaging the builders early are essential to achieving a successful mass timber project. For other tactics, see WoodWorks'

Mass Timber Cost & Design Optimization Checklists.

Mass Timber Vertical Additions

Mass timber structural systems are lightweight. MKA Engineers calculated that Hines' T3 Minneapolis, a 220,000-sf structure with six stories of mass timber over a concrete podium, weighs approximately 60% less than an all-concrete building and 30% less than a comparable steel building. The light weight of mass timber offers developers/owners an opportunity to add a vertical addition with low embodied carbon above an existing building.



80 M Street

Columbia Property Trust

For 80 M Street in Washington DC, Columbia Property Trust is adding 105,000 sf of Class A office space in a two-story mass timber vertical addition plus penthouse above an existing seven-story building.

Considering wood?
Ask us anything.

As a **ULI Greenprint Innovation Partner** WoodWorks offers free project support for developers and design/construction teams using wood for commercial and multi-family buildings. Contact the **expert nearest you** or email help@woodworks.org. For a map of completed mass timber buildings and to connect with the design and builder teams, visit the **WoodWorks Innovation Network**.

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