



ASSOCIATION OF CONSULTING
ENGINEERING COMPANIES
BRITISH COLUMBIA

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2018 AWARDS FOR ENGINEERING EXCELLENCE

Lieutenant Governor's Award of Engineering Excellence Tallwood House at Brock Commons



photo by Brudder, courtesy of naturallywood.com

Consultant

Fast + Epp

Owner/Client

UBC Properties Trust

Prime Consultant

Acton Ostry Architects

Category

Buildings

The Tallwood House at Brock Commons is an 18-storey, 400-bed student residence on the campus of the University of British Columbia (UBC). Reaching 53m, it has been recognized as the tallest mass timber hybrid building in the world. Fast + Epp were the structural engineers, working in conjunction with Acton Ostry Architects and Hermann Kaufmann Architekten.

From the outset, the question was not, "Is it possible to go 18 storeys with timber," but rather, "Can this be built at a price competitive with concrete construction?" A "no" answer would have meant the building would be constructed with concrete – and there was just 10 months to design it.

In order to meet these challenging budget and schedule requirements, Fast + Epp developed a "common sense" design – a hybrid structure respecting the best characteristics of wood, concrete and steel.


The building is comprised of 17 storeys of five-ply cross laminated (CLT) floor panels, point-supported by glued-laminated timber columns, all resting on a concrete transfer slab at level two. Two full-height concrete cores provide the lateral stability.

By utilizing the two-way spanning capabilities of CLT, the beams of a classic post-and-beam system were eliminated, along with labor-intensive connections, which dramatically reduced fabrication time, erection time, and costs. It is the largest application of two-way point supported CLT in the world, demonstrating design innovation with this unique construction material.

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