



## Fire Safety and Tall Timber Buildings—What's Next?

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### Summary:

Model building codes in the United States limit timber construction to six stories, due to concerns over fire safety and structural performance. With new timber technologies, tall timber buildings are now being planned for construction. The process for building approval for a building constructed above the code height limits with a timber load-bearing structure, is by an alternative engineering means. Engineering solutions are required to be developed to document and prove equivalent performance to a code compliant structure, where approval is based on substantive consultation and documentation. Architects in the US are also pushing the boundaries and requesting load-bearing timber be exposed and not fully encapsulated in fire rated gypsum drywall. This provides an opportunity for the application of recent fire research on exposed timber to be applied, and existing methods of analyzing the impact of fire on engineered timber structures to be developed further. This paper provides an overview of the performance based fire safety engineering required for building approval and also describes the engineering methodologies that can be utilized to address specific exposed load-bearing timber issues; concealed connections for glulam beams; and the methodology to address areas of exposed timber.

Online Access: Payment Required

### Resource Link

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