
COMPARISON OF ENVIRONMENTAL PERFORMANCE OF A FIVE-STOREY BUILDING BUILT WITH CROSS-LAMINATED TIMBER AND CONCRETE

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Comparison of Environmental Performance of a Five-Storey Building Built with Cross-Laminated Timber and Concrete

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Summary:

Cross Laminated Timber (CLT), which is made by laminating dimension lumber at right angles, is an innovative high-performance building material that offers many positive attributes including renewability, high structural stability, storage of carbon during the building life, good fire resistance, possibility of material recycling and reuse. It is conceptually a sustainable and cost effective structural timber solution that can compete with concrete in non-residential and multi-family mid-rise building market. Therefore, there is a need to understand and quantify the environmental attribute of this building system in the context of North American resources, manufacturing technology, energy constraints, building types, and construction practice. This study is to compare energy consumption of two building designs using different materials, i.e. CLT and concrete.

Online Access: Free

Resource Link

http://sbsp.sites.olt.ubc.ca/files/2012/07/SBSP-report-Jessie-Chen.pdf