





## Fire Demonstration: Cross-Laminated Timber Stair/Elevator Shaft

<https://research.thinkwood.com/en/permalink/catalogue1277>

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Organization: National Research Council of Canada

Year of Publication: 2015

Country of Publication: Canada

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Floors  
Walls  
Shafts and Chases

Topic: Fire

Keywords: Origine  
Fire Resistance  
Exterior Walls

Language: English

Research Status: Complete

### Summary:

The consortium of Nordic Wood Structures, EBC and Yvan Blouin Architect are designing a 13-storey residential building using a mass timber structure. The project, named "Origine" is proposed to be located in the eco-neighbourhood of Pointe-aux-Lièvres in Quebec City and to start construction in spring 2015. The mass timber structure would be composed primarily of glue-laminated timber and crosslaminated timber (CLT). The cross-laminated timber consists of at least three orthogonally bonded layers of solid-sawn lumber that are laminated by gluing of longitudinal and transverse layers with structural adhesives to form a solid rectangular-shaped, straight and plane timber intended for floor, roof or wall applications. The National Research Council Canada (NRC) was requested to assist in the demonstration of an alternative solution to noncombustible construction as prescribed in the Québec Construction Code [1] and the National Building Code of Canada (NBCC) [2]. Three series of fire tests were conducted at NRC to investigate: the fire endurance (fire resistance) of CLT floor and wall assemblies [3], the fire performance of a CLT exterior wall assembly [4], and the fire demonstration of a CLT stair/elevator shaft for the proposed building. This report provides the description and results of the fire demonstration for the CLT stair/elevator shaft. This fire demonstration was funded by the Government of Quebec's Ministère des Forêts, de la Faune et des Parcs through FPInnovations.

Online Access: Free

### Resource Link

<http://doi.org/10.4224/21277597>