

# STEVESTON FIRE HALL NO. 2

**LOCATION**  
Richmond, British Columbia

**SIZE**  
840 m<sup>2</sup>

**COMPLETION**  
2011

**ARCHITECT**  
HCMA Architecture + Design

**STRUCTURAL ENGINEER**  
Fast + Epp Structural Engineers

**GENERAL CONTRACTOR**  
Stuart Olson Dominion  
Construction Ltd.

**PROJECT OWNER**  
City of Richmond

## PROJECT OVERVIEW

Sustainable building is playing an increasingly important role in Canada's post-disaster design standards. Not only must buildings that house critically-important emergency responders be structurally sound and able to remain operational in the event of a disaster, but they are often designed to echo the sustainability goals of the communities they serve.

When the City of Richmond decided to replace the 40-year-old fire hall serving the Steveston community, they did so with an iconic structure built with structural wood panels formed using mountain pine beetle wood. The Steveston Fire Hall is an example of the City's commitment to promoting wood in construction due to its low carbon footprint and dedication

to using salvaged or recycled materials when possible. The resulting LEED Gold-certified Fire Hall provides firefighters with a base to serve the community.

HCMA met the strict structural requirements for fire hall construction and created a comfortable work environment for staff by blending a wood and metal composite building skin with extensive glazing. The Hall's transparent design engages the community by providing views of the equipment, and gives staff plenty of daylight for bright, warm spaces. Wood panels were left exposed to the interior, creating an uncluttered, natural material palette.



Photo courtesy of HCMA

*“Sustainability is one of Richmond Council’s term goals, so the City took extra steps to ensure Steveston Fire Hall was truly sustainable in design, construction and operation.”*

**Mayor Malcolm Brodie, City of Richmond, BC**

## WOOD USE

The solid wood decking used for the roof and wall panels of the main fire hall consists of nail laminated timber (NLT), which was nailed in place at the jobsite. NLT panels were also used for the 12-metre-high hose-drying tower and two fire apparatus bays.

NLT panels are fabricated using stacks of 2x4 dimensional lumber laid on edge and fastened by long nails, forming a structural panel. NLT offers numerous benefits for the long-span decking, including structural integrity, lower cost and faster procurement times. It can also be left exposed to the building’s interior to provide a natural, warm aesthetic.

Wood is safe and resilient. A wide range of research, professional expertise and built projects gives regulators

and safety professionals the science-based information needed to develop building codes to minimize danger to life from the effects of fire and natural disaster events during construction and occupancy.

Wood’s durability and recyclability contributed to the project’s LEED Gold designation. Nearly 25 percent of the materials in the project (including lumber for the NLT panels) were sourced locally and the recycled content of the materials in the project exceeded 10 percent (by value).

Wood’s natural insulating properties also helped contribute to the building’s sustainable design. The high-performance building envelope reduces heat loss in winter and heat gain in summer.



Photos courtesy of HCMA

## FOR MORE INFORMATION

This profile is published by Forestry Innovation Investment, the Government of British Columbia’s market development agency for forest products.

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