

Project Spotlight

Capitol Residences



Capitol Residences

Lafarge's Chronolia® 24H speeds up high rise construction.

Project Details

Owner:

Wall Financial Corporation

Location:

Vancouver, British Columbia

General Contractor:

Wall Financial Corporation

Architect/Engineer:

Bingham & Hill Architects

Placers and Finishers:

Loewen Construction Inc.

Developer:

Macdonald Development Corporation

Innovative Product:

Chronolia® 24H

Volume of Innovative Product: 990m³

Year of Construction:

2008-2010

The Opportunity

In 2007, Vancouver city staff approved increased density for the Capitol Residence building site in return for improvements to be made to the Orpheum Theatre that houses the Vancouver Symphony Orchestra. This arrangement provided both the City of Vancouver and the developers of Capitol Residences a unique opportunity to create a cultural amenity in downtown Vancouver while creating much sought after residential space. Without the Orpheum Theatre spending, the Capitol Residences building site would have only supported a 15-17 storey building as opposed to the impressive 42 storey tower designed by Bingham & Hill Architects. In return for this increased density, the Orpheum Theatre will receive much needed underground storage space, a new rehearsal hall for the symphony orchestra, and a Music School of Excellence located in the Capitol Residence Tower itself.

However, complications during excavation and construction delayed the project by 2 months. The threat of a construction freeze for the duration of the 2010 Winter Olympics further complicated matters and meant that Wall Financial Group would need to find a way to make up for the delay in order to finish construction before the start of the Olympics.

The Goal

In order to make up for lost construction time caused by hitting a granite seam during the excavation phase as well as forming delays, Loewen Construction Inc. needed a concrete product that could reach 13MPa in 12 hours. This would allow the construction crew to maintain an accelerated construction cycle that would see a new floor poured every 4 days.





Capitol Residences, located next to the Orpheum Theatre in downtown Vancouver, is 42 storeys tall and contains 327 suites.



By using Chronolia® 24H, Loewen Construction Inc. was able to save 44 construction days.



The Lafarge Solution

Lafarge provided Loewen Construction Inc. with Chronolia® 24H, a concrete mix that would achieve the specified MPA in the time needed by Loewen Construction. In addition to Chronolia® 24H, Lafarge also supplied Loewen Construction with Agilia® Horizontal and several UltraSeries™ Designs to further help them accelerate their construction schedule. The added benefits of using Agilia® Horizontal and the UltraSeries™ products allowed simultaneous pouring of the columns and slabs. With the use of Chronolia® 24H, Agilia® Horizontal, and the UltraSeries™ Designs, Loewen Construction Inc. was able to save 44 construction days and finish Capitol Residences ahead of schedule.

“WE NEEDED OUR CONCRETE TO REACH 13MPA THE MORNING AFTER A POUR. CHRONOLIA® 24H ACHIEVED THAT FOR US AND HELPED US MEET OUR TARGETS .”

**- LEN LOEWEN
OWNER
LOEWEN CONSTRUCTION INC.**



Lafarge Canada Inc.

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