

CENTERM EXPANSION PROJECT

Vancouver, BC | Completed

Role of the firm: Structural Engineer of Record

Area: 40,000 ft²

Budget: Undisclosed

Architect: VIA Architecture

Client: Hatch

As the demand for Canadian goods grows and exports expand into new markets around the world, the need for the increased capacity and improved efficiency of our ports has become vital. In response to the economic shifts, this large project comprising the expansion of the Centennial Pier at the Port of Vancouver anticipates meeting these demands and helping with growing trade needs.

Given that the buildings and pier were built during the 1920s on reclaimed ground, the existing structures are highly susceptible to significant earthquake-induced damage – making a seismic retrofit, as well as adding to the existing Heritage Class A building, significant challenges in this project.

As the engineering consultants, Fast + Epp developed a strategy to retrofit both the superstructure as well as the foundation system below the original pier, while maintaining the integrity of the existing heritage structure. We were able to do this by primarily strengthening the system around the exterior footprint of the building while minimizing the amount of foundation work required directly beneath the building itself. New discrete concrete shear walls were also introduced within the interior of the building to strengthen the existing structure while maintaining the integrity and expressions of the original concrete frames.

With the creation of a new, centralized container operations facility by repurposing the heritage building, the terminal will be able to manage a 60 per cent increase in containers. This expansion project will also generate thousands of jobs for the local community, while supporting environmental and social sustainability.

