

Project Brief

Brittania Mine Museum

Seismic Retrofit of Historic Buildings



British Columbia, Canada
2010



New museum building retrofitted with the Tyfo® Fibrwrap® System



The Britannia Mine Museum was established to preserve and educate the public about British Columbia's material and social history of mining. The project objectives were to transform the site using the existing building stock, provide sustainability with the renewal of the buildings, and respect the heritage nature of the site.

The existing workshop, constructed in the 1950's, is an unreinforced concrete block building.



The unknown subsurface combined with the modern seismic requirements presented a unique design challenge. The seismic loading capacity of the site was far less than what would normally be allowed in this seismic zone.



A custom solution was developed utilizing Tyfo® SEH-51A System over 100% (2,800 square feet) of the interior face of the unreinforced concrete block wall. The fiber wrap was integrated with a new concrete foundation and slab to address out-of-plane seismic forces and a new exterior lightweight steel stud framing to manage the in-plane seismic forces. The result was a building that met the seismic requirements of a site with virtually no seismic loading capacity; a maximum amount of existing building structure retained (+80%); maximized usable area to the interior of the building; and a realized time schedule reduction (7-day application) on a very tight construction timeline – 6 month project schedule from start to finish. The new facility, The Beaty Lundin Visitor Centre, houses the museum's introductory story that includes a minerals exhibit hall and education gallery, theatre and retail space, and anticipates approximately 60,000 visitors per year. In this case, the best solution was to use the Fyfe Co LLC, Tyfo® Fibrwrap® System.

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