



# Project Profile



## Twin Super•Cor conveyor crossings adapt to BC copper mine's needs

As part of a major upgrade for Teck Highland Valley Copper Operations, the largest open pit copper mine in Canada, a new haul road was needed to cross two operating conveyor lines. The owner, Teck Resources Limited, needed a safe, reliable and cost-effective solution from a supplier who was capable of adapting to unique situations. A pair of Super•Cor Tunnels with MSE Wall Headwalls, and the experience of the AIL Mining team, met the requirements.



### Project at a glance:

**Project Name:** Highland Valley Copper - Fitzpatrick Skyway

**Location:** Near Logan Lake, South-Central BC

**Owner:** Teck

**Engineer:** CWA Engineers

**Geotechnical Engineer:** BGC Engineering

**Contractor:** Acres Enterprises

**Products:** Super•Cor Arches and MSE Headwalls (Wire Walls)

**Application:** Heavy Haul Road Conveyor Crossings

**Tunnel Dimensions:** Span 6.1 m, Rise 3.1 m, Length 31.7 m

**Installation Time:** Nine weeks total for assembly of both Super•Cor Arches and MSE Headwalls



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## Challenge #1: Using sand for backfill

Teck had a large stockpile of natural sand on-site that they wanted used for the backfill on this project. This was an interesting challenge, as we had never before designed a soil-steel structure for a heavy haul road with sand as a backfill. Our engineering team worked with the owner, their engineer and their geotechnical consultant to determine a safe and cost-effective solution using this backfill.

Having our own Ph.D in Geotechnical and Geo-environmental Engineering on the AIL staff certainly helped us efficiently navigate this situation and, ultimately, enable significant savings on backfill materials.

## Challenge #2: Building on a seismic fault line

The crossing was located close to large open pits within the mine site, with the foundation on a fault line. The potential for settlement and movement of the foundation was a challenge that needed to be faced. Fortunately, the Super•Cor and MSE Wall products are designed for such conditions and can handle a certain level of flexibility.

We also worked with Teck to supply our base channels and anchor bolts during the previous fall, so that they could install the footings before winter hit. We completed our design and manufacturing in the winter months to have the product ready as soon as it was needed in the spring.

As part of our contract, we supplied a full-time field reviewer who was on-site for the duration of the project, ready to address any issues as soon as they arose. A post-project site walk with the owners and the contractors confirmed their satisfaction and we have had continued business with each party since.



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