Project Profile



BC mine saves with flexible and sustainable Ultra•Cor for haul road conveyor overpass

This large open-pit operation in southeastern British Columbia produces over 7 million metric tonnes of clean coal annually from four active pits. As the mine expanded, they needed to construct a new haul road crossing over a critical conveyor line. They calculated that the new crossing on the more direct haul route would save 6,500 truck hours per year and pay for itself in three years.



Project at a glance:

Project Name: BR6 Heavy Vehicle Overpass

Location: Southeastern BC

Sector: Mining

Application: Conveyor Crossing

Product: Ultra•Cor

Dimensions: Span 12.9 m, Rise 6.5 m, Length 94.1 m

Installation Time: Seven weeks

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Steel conveyor crossing solution offered many advantages over concrete

By choosing an Ultra•Cor steel arch solution instead of a concrete arch, they saved 90% of their construction trucking costs. Plus, their concrete spread footings were able to shrink considerably since the steel arch was able to accommodate more settlement than a concrete one. And finally, steel is a more sustainable solution than concrete with a lower life cycle carbon footprint and virtually no maintenance.



Increased backfill density requires settlement remodelling

It was advantageous for the owners to be able to use on-site waste rock as backfill for this project. The organic carbon content on a coal mine site can be higher than common corrosion models allow, so AIL enlisted a corrosion expert to ensure the structure performed as expected for the design service life. The AIL engineering team then remodeled the structure and monitored the settlement to ensure no issues arose.

The new haul road is 50 m wide — wider than normal to allow for two lanes of traffic for their autonomous Komatsu 930E heavy haul trucks. The Ultra•Cor structure can support 3.38 million pounds — basically two of their fully loaded haul trucks or one giant P&H 4800 shovel.

Working very closely with our project partners, we selected the most efficient geometry and provided design work in advance. Our materials were on site on time, and we facilitated several preconstruction meetings with our project partners.

The general contractor commented that this was the smoothest project that he has been a part of on this mine site. And the owner's project manager presented this as a case study in a recent symposium.

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