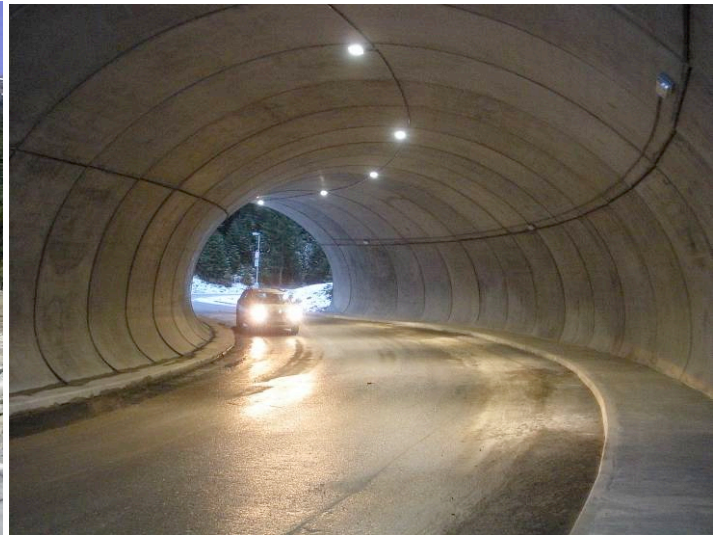




Project Fact Sheet

Bridge under a new ski slope in Nizke Tatry, SK



PROJEKT

Name	Extension of ski slope Hotel Grand – Brhliska
Employer	J & T, a.s.
Date of installation	28/08/2009 – 31/08/2009
Consultant	Dopravoprojekt a.s.
Contractor	Vumat SK s.r.o.
Scope	Design, manufacture and installation of precast arch structure at the latitude of 1140 metres

FACT FILE

Structure	Precast ABM arch 30 x 91
Span	11,3m (clear)
Height	4,2m (clear)
Length	45m as 18 rings per 2,5m

DESCRIPTION

Plans were rushed to improve the recreational facilities for tourists in this picturesque region by extending its ski slopes and bringing it to a new ski lift station lower in the mountain. In doing so an important road had to be crossed to maintain both regional and local access and this demanded quick assessment to determine a solution. To further complicate matters the road is on a 5% grade and follows a curve on horizontal alignment with a radius of 30 m to create a helical configuration in the bridge clearance envelope. Jasna Low Tatras Ltd, with their engineers Dopravoprojekt selected ABM's precast modular arch system to form the bridge after considering other technologies, including an in-situ concrete frame and other metallic systems. The main reason was that the rapid construction of the bridge using off-site resources minimized the risks associated with construction. Furthermore, the enhanced design and service life of the structure in severe high mountain conditions was listed in addition to the requirement for little maintenance. The improved appearance of the concrete tubular form was also cited as a strong reason for selecting ABM. The arch system was designed in three weeks and involved complex geometry and load analysis since each component of the helix required special formwork to deal with skewed edges and bespoke wing walls varying at each end. ABM manufactured the units at their newly set up precast plant in Banska Bystrica in Slovakia and manufacturing was complete in just over a month from instruction. The installation of the structure was at an altitude of 1140 meters above sea level so is easily the highest structure we've built so far. It was also one of the most complex where each component required details setting out in the horizontal and vertical plane so to complete in just 6 days was of great benefit to the locality.



Project Fact Sheet



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