

## SALZBURG - WÖRGL RAILWAY LINE, GOLLING SECTION

Client: Austrian Railways Infrastructure AG

Development Period: since 2017

### THE PROJECT

In the context of the development of the railway line Salzburg - Wörgl, the section in the locality of Golling with a length of 580 m is being straightened. In addition to the enlargement of the embankments for the open track, the railway crossings Wasserfall Road and Moartal Road (Ramsl Road) will be replaced by underpasses. Due to the high ground water level, both underpasses, along with the ramps, have to be carried out as water-tight troughs.

### OUR FUNCTION

For this project, BGG Consult was entrusted with the geotechnical and hydrogeological consulting during all design and building phases.

This first included the planning, supervision and evaluation of subsoil exploration works. Based on the results, geotechnical expert's reports were prepared for the permission procedure pertaining to railway law and for the procedure pertaining to water and waterways. For the tender, expertise was provided in the field of geotechnics and hydrogeology, the geotechnical expert's report was adapted to the actual design and construction pit support systems were dimensioned.

During construction, the special heavy construction works were accompanied from a geotechnical and hydrogeological point of view and a hydrogeological preservation of evidence implemented.

#### *Ground Water Lowering Measures:*

The bottoms of both underpasses are situated in the high permeable gravel layer accompanying the *Salzach River* and integrate significantly below the ground water level. Therefore, a water-tight construction pit was indispensable. For this, a closed box of sheet pile walls (object Ramsl Road) and a combination of secant bored pile walls and sheet pile walls (object Wasserfall Road) were carried out. Since the walls of the construction pit support system could not be lowered to the aquitard, bottom sealings by means of jet grouting were established. For the buoyancy control, small-diameter bored piles were used.



*Construction pit Ramsl Road, side southwest with exposed jet grouted bottom*