



RAILWAY LINE ARNOLDSTEIN - HERMAGOR, OVERPASS BÜRGERFELD ROAD

Client: Austrian Railways Infrastructure AG

Development Period: 2017 to 2022

THE PROJECT

The project included the crossing of the Bürgerfeld Road in Hermagor over the railway line Arnoldstein - Hermagor at km 29.960 and over the federal road B111 (Gail Valley Road).

The three-span structure is led in a curve and holds span widths of 25 m (middle span) and 27 m (outer spans). At the southern abutment, which is located in the valley bottom, follows an embankment with a height of up to 9 m. The northern abutment and the following ramp down to the junction with the B111 are situated in the steep sloped foot of the mountain. These made considerable supporting structures at both sides of the road necessary.

OUR FUNCTION

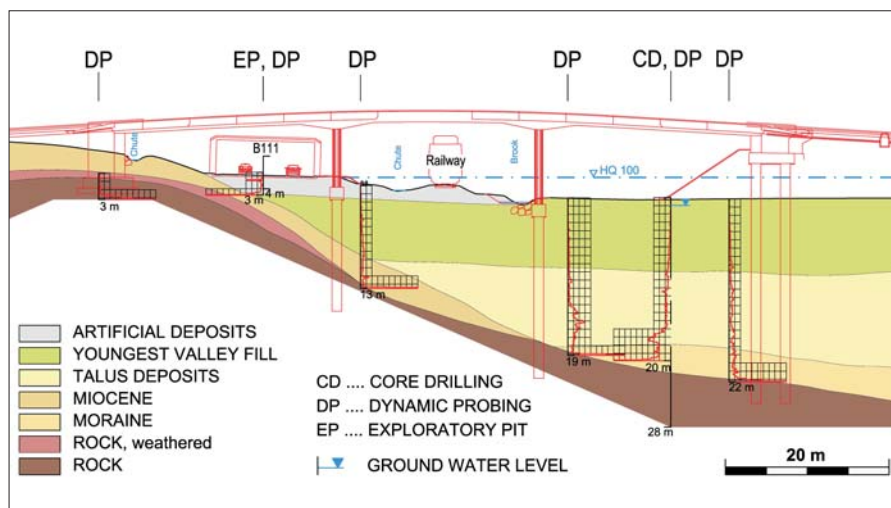
For this project, BGG Consult has been commissioned with geotechnical consulting during all planning and building phases. The contract also included the underground investigation. In the course of these works, subsoil explorations were first planned, supervised and evaluated. Based on these, geotechnical expert's reports were prepared for the bridge structure as well as for the overload fill. In the tendering phase, the planning was accompanied and the geotechnical expert's report for the bridge was adapted accordingly.

During construction, the special heavy construction works and the preparation of the embankment were supervised from a geotechnical perspective. In the course of these, some pile drillings were recorded for the verification of the predicted underground situation.

Preload Fill of the Ramp Embankment:

The valley bottom consists of peat soils and stillwater sediments with a thickness of up to 9 m. Because of their extreme sensitivity to settlements, it was without a question, that the southern abutment and the bridge pylons had to be founded deeply by means of large-diameter bored piles. According to the sloping of the rock surface along the bridge, pile lengths between 15 m und 25 m resulted.

In order to antedate the expected settlements of a scope of several metres at the southern ramp embankment and to minimize the negative skin friction, the embankment fill was carried out far in advance before the bridge construction. The height of the overload amounted up to 2 m. For the stabilisation of the embankment body, geogrid was integrated at several levels. On the basis of the results of settlement measurements, the pace of the fill was controlled.



*Longitudinal underground profile
 along the overpass*