



UPGRADING OF THE AIRPORT MUNICIPAL RAILWAY LINE (S7)

Client: Austrian Railways

Development Period: 1998 to 2004

THE PROJECT

In the course of the project, the Airport Municipal Railway Line has been developed over a length of 20 km into a double tracked route. Due to grade separations and the creation of space for urban development, 43 km of tracks had to be lowered below surface. Furthermore, 21 new bridges were built, 20.000 m² of noise protection walls erected, and seven stations newly fashioned. Because of lack of space, the securing of the construction pits for the under grade crossings and tunnels (one- to three-cellular, rectangular sections) has been accomplished by means of intermittent, temporary anchored, bored pile walls. These served at the same time as outer walls of the structure. The construction was carried out by the cut-and-cover top-down method. In the final situation, the walls were braced by the bottom and top plate.

All works were done without interruption of the service on the Municipal Railway.

OUR FUNCTION

For this project, BGG was responsible for geotechnical and hydrogeological matters during all the planning and realization phases.

Initially, subsoil investigations were determined, tendered and evaluated. Based on the results of the investigation, expert's reports in the fields of geotechnics and hydrogeology were compiled for the documents of the construction permission.

During construction, consulting on site was performed. Additionally, numerous geodetic and inclinometer measuring points were attended to.

Area of the Aspang Railway Station:

The area of the Aspang Railway Station emerged as an especially challenging spot because of the strongly alternating geology (interlocking of tertiary and quaternary). Due to the intensive expert's attendance, it was possible to respond quickly to the frequent changes of the geological formations. In cooperation with the designers, the ideal construction measures were eventually determined.

*Construction pit
at an intra-urban location
(view towards south-east)*

