VIENNA WEST RAILWAY STATION

Client: ÖBB-Infrastruktur AG (Austrian Railways Infrastructure AG)
Development Period: 2006 to 2011

THE PROJECT

In the course of the restructuring of the Viennese long-distance railway traffic, the Western Railway Station was remodelled into an attractive centre for gastronomy, business and customer services.
This included primarily two sizable building complexes north and south of the existing station hall. Furthermore, another basement was added to the hall, which is declared a listed monument.
Thus, a spacious shopping mall has been developed that connects all three buildings.
The building structures feature base areas of 95 m x 60 m and 80 m x 40 m respectively, and heights of 31 m. Below the southern complex, the underground line U3 is crossing.

OUR FUNCTION

BGG Consult was commissioned for this project with the consulting in the fields of geotechnics and hydrogeology. For this, subsoil explorations were planned, supervised and evaluated. Subsequently, a geotechnical-hydrogeological expert's report was prepared as part of the submission documents for the building permit.
During construction, the project and its execution are supervised in the respective fields.

Underpinning of station hall:
The establishing of the additional basement below the existing station hall, which is declared a listed monument, posed a particular challenge in the field of geotechnics.
Since the existing pillars of the hall were grounded by a shallow foundation, temporary fundament bodies had to be prepared beside the existing pillars, using the methods of jet grouting and bored piles. The load was then transferred into these temporary foundations via steel brackets (see illustration). After excavation, the pillars were extended downward and integrated into the final shallow foundation by means of cast-in-place concrete.

Establishing of basement below station hall; temporary support by jet grouting pillars