A 4 EAST MOTORWAY / A 23 SÜDOSTTANGENTE VIENNA, RENEWAL OF PRATER INTERCHANGE

Client: ASFINAG (Motorway Financing AG)
Development Period: 10/2010 to 2/2012

THE PROJECT

The Prater interchange, the connection of the A 23 Südosttangente Vienna with the A 4 East Motorway, is one of the most important traffic junctions of the high-ranking road network in the eastern region of Austria. The connection lanes are overloaded daily during rush hours. Furthermore, the Erdberger Bridge (190,000 vehicles per day), which is situated in the centre of the junction and exists since 1972, has reached the end of its lifespan.
Therefore, the intersection will be completely renewed. The construction work comprises, besides the new ramp connections and the new Erdberger Bridge, two large-scale route diversions with additional bridges across the *Danube Canal*.

OUR FUNCTION

BGG Consult was commissioned for this project with the expertise in the field of geotechnics, in preparation of the documents for the building permit (including environmental impact study). For this, subsoil investigation works were tendered, overseen and evaluated. Based on the results of the subsoil investigations and with consideration of additionally enquired documents, a Geotechnical-Hydrogeological expert's report was compiled.

Vicinity of Subway:
For the project, foundation measures and embankment fills are necessary in the immediate vicinity and above the existing subway tunnel. In order to minimize the vertical and horizontal displacements of the subway structure, the following measures have been proposed:

- Deep foundation of adjacent structures (cast-in-place bored piles and small diameter bored piles) without consideration of a horizontal elastic support in the area of the tunnel
- Embankment fill with foam glass granulate (low weight embankment)
- Detailed management of the construction sequences (earth works)

For the monitoring of the deformation behaviour, an accompanying measurement programme and safety management plan were prepared.

Excerpt of a longitudinal subsoil profile in the area of the subway crossing