



## M6 MOTORWAY, BUDAPEST - DUNAÚJVÁROS

Client: PORR AG

Development Period: 2004 to 2006

### THE PROJECT

According to the framework of a PPP (Public-Private-Partnership) road construction project, the PORR Infrastruktur GmbH Company was commissioned, as part of a consortium, with the financing, building and maintenance of this 58.6 km long section of the M6 Motorway. The new motorway had to be completed within only 1½ years. For this section, which runs through the Danube plain, embankments, excavations, eleven exits, and dozens of crossings had to be constructed.



### OUR FUNCTION

BGG Consult was commissioned by the general contractor with the geotechnical consulting regarding the mostly deep-founded bridges and the earth works. Close cooperation with the Technical University of Budapest was necessary since they acted as the accredited authority and had to approve the planned works.

The work was conducted in association with Hungarian geotechnical engineers and according to the Hungarian standards system.

In order to verify the results, an additional subsoil exploration was implemented and evaluated. Based on this, the foundation and the earthwork structures were reviewed and optimized.

*Pile load tests, embankment settlement:*  
A peculiar challenge was the optimization of the project design in consideration of the strictly regulated Hungarian guidelines. After numerous meetings, explanations and calculations, it was decided to reduce the pile tests, which were originally planned for every object (50 pc.), to only 13 tests. Consequently, significant cost and time reductions were achieved.

For the embankments, the ground improvement measures had to be optimized to accommodate the short construction period as well as to minimize future settlements. Based on extensive settlement calculations, proposals were made for ground improvement measures (vertical drains) and overload fills. During construction, the project was continuously optimised based on settlement measurements.

A section of the M6 Motorway during construction