

### JABLONEC nad Nisou – Střelnice

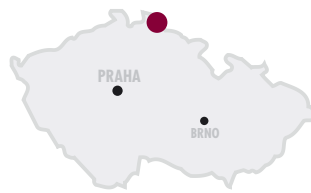
enlarging the athletic stadium

**country:** Czech Republic  
**realization:** 2003 – 2004  
**material:** Armatex® G 50/30, 80/30, 110/30, 200/50  
**total amount:** 100.000 m<sup>2</sup> Armatex® G

### ARMATEX® G

woven geogrid from high-strength PET with PVC adjustment for soil reinforcement

**purpose of usage:**  
soil reinforcing in sheer retaining wall



Within the adaptation of the athletic stadium Střelnice in Jablonec nad Nisou to suit international parameters, the extension of the entire stadium area was designed.

The planning office Vaner addressed SG-Geotechnik to assess the design; namely by calculating stability and reinforcement by **Armatex® G** geogrids in 3 selected profiles No. 4 (stationing 32m), No. 6 (72m), No. 7 (92m), as well as to calculate short-term stability of excavation, calculation of FEM settlement and the technological process of fill laying with prescribed rate of compaction (Proctor standard) in respective stages the embankment.

Slopes 3 m to 14 m had to be reinforced to allow for the extension of the original area of the athletic stadium. Engineering geological study carried out by SG-Geotechnik was used as the groundwork

for mathematical analysis. The base of the current stadium is made up mostly of excavated eluvium and spread slag, often with admixture of bricks and rubble. The subsoil of the embankment is made up of slope sandy loams laid on granite eluvium merging into strongly weathered granite in the depth of approx. 2 m. There was no groundwater found during survey. Earth of the embankment is permeable, filtration factor is presumed to be in the order of 10<sup>-6</sup> m/s.

There was used the program system Geo-Slope of the company Geoslope Int. from Canada to make calculations. There was used two modules for calculating the stress-deformation and consolidation analysis. To design **Armatex® G** geogrids, it was used the module, by which stabilization conditions were analyzed using the method of limit equilibrium of forces.



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