REINFORCED SOIL STRUCTURES

Product: Terramesh® System

Problem
The abutment wall was designed for a limited scope of the embankment along the R1 expressway. The embankment from the expressway interferes with the land of a private company, which is why a portion was designed as an abutment wall to partially mitigate the amount of land that was permanently used for the road.

Solution
The wall is formed by the modular system TERRAMESH, which is formed with gabion facing elements with integrated reinforcement. The facing elements are 2.0 m long and 1.0 m tall (or 0.5 m) with a basket width of 0.8 m and reinforcement in the form of a horizontal panel made of doubletwist hexagonal steel wire mesh type 8x10 securely connected to the front unit. The panel forms a 3.0 m long reinforcement (anchoring) in the embankment slope. The diameter of the wire mesh is 2.7 (internal) / 3.7 (external) mm. The surface finish of Terramesh system mesh block is Galmac + plastic coating. The facing of the gabion and horizontal reinforcement are connected during the production process and form a single part of the system.

External stability of the reinforced wall is secured using uniaxial geogrids. Wall reinforcement is provided by Paragrid geogrids based on the project documentation with lengths of 7 to 15 m. The geogrids are connected to facing using an overlap with a minimum length of 3.0 m.

The total height of the wall is 5.0 - 7.0 m and the wall length of 100 m. The wall has a grade of 5.1 into the slope.

Client:
GRANVIA, a. s.

Main contractor:
Granvia Construction, s.r.o.

Consultant:
DOPRAVOPROJEKT a.s.

Used product:
Terramesh® System - face area: 613 m²

Construction info:
Construction start date: April 2010
Construction end date: June 2010
MACCAFERRI CENTRAL EUROPE s.r.o. has implemented and applies a quality management system pursuant to the standard EN ISO 9001:2008 certified by TSÚS CERTICOM.

Typical cross-section

After construction Date: June 2010