REINFORCED SOIL STRUCTURES

**Product:** Terramesh® System Mineral Light

**Problem**
The 229-00 retaining wall crosses the western slope above the Veľká Svinka stream above the municipality of Chminianska Nová Ves, where the motorway is in slight cut. The retaining wall is designed to provide the stability of the right cut slope of the D1 motorway.

**Solution**
The retaining wall is situated on the western cut slope of the motorway. The wall consists of two sections. On the top of the wall, there is an embankment of the 118-00 road with an angle of 1:2. The face of the wall is vertical. The proposed angle of the temporary excavation is 1:1.

The structure of the wall is made with a system of reinforced soil structure with gabion facing with integrated reinforcement Terramesh system. The face elements have the dimensions of 2.0 m (length) x 1.0 m (or 0.5 m) (height) x depth of the gabion 0.8 m. Integrated horizontal panels made of hexagonal double-twist plastic-covered steel net, type 8x10, firmly connected to the gabion. The panel forms a 3.0 m long reinforcement (anchoring) in the embankment slope. The diameter of the wire of the net is 2.7 (internal) / 3.7 (external) mm. The surface of Terramesh system blocks is made by Galmac+plastic. The face of the gabion and horizontal reinforcement are connected already during the production process and form a single part of the system. External stability of the reinforced wall is provided for using monoaxial flexible geogrids. Geogrids are connected to the prefabricated face using over lap that must be at least 3.0 m long.

In order to increase the rigidity, a welded panel Ø4.0 mm with Galmac protection is located in the front part of the gabion facing.

**Client:**
Národná diaľničná spoločnosť, a.s.

**Main contractor name:**
Združenie D1 Fričovce - Doprastav, a.s., Strabag, s.r.o.

**Consultant:**
ALFA 04, a.s.

**Used product:**
Terramesh® System - face area: 3 800 m²

**Construction info:**
Construction start date: June 2013
Construction end date: October 2014
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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: October 2014