

**BE-ANTWERP MALINAS  
MECHELEN, ANTWERP, BELGIUM**

Vertical Walls with Concrete Facing Panels

**Problem**

The access road of a new retail center has been planned in Mechelen, Belgium, to let customers easily drive to the new shopping mall. Initially, the retaining wall for the ramp leading to the bridge abutment had been planned as a concrete L-retaining wall, but, thanks to the technical support of Maccaferri, the design has been changed in favour of 530 sqm MacRes System with 12.000 lm of ParaWeb reinforcement. Due to the bad foundation soil characteristics, the contractor asked Maccaferri’s support also for the calculation and delivery of 1.100 sqm of ParaLink 950 as basal reinforcement over piles. Smooth standard panels have been chosen.

**Solution**

The construction company firstly layed the ParaLink 950 rolls as indicated by Maccaferri’s technicians to create a stable foundation for the planned access road. Then the construction of the MacRes vertical wall started with the delivery of the panels according to the plans. Some difficulties were the top cut panels that have been designed one by one to match the inclination of the top road and the curved geometry of the wall. Moreover, a corner in the middle of the wall had to be taken into consideration due to the future presence of a building. The whole construction has taken approx. 3 weeks.

**Client:** Texion Geosynthetics NV

**Designer / Consultant:** Arcadis NV

**Contractor:** Aertssen NV

**Products used (Qty.)**

- MacRes	530 sqm
- ParaLink	1.100
- ParaWeb	11.000

**Date of construction:** 10/2020 - 11/2020



Construction phase: first layer of Macres panels



Construction phase: last layer of top cut panels had been positioned



Construction phase: corner detail



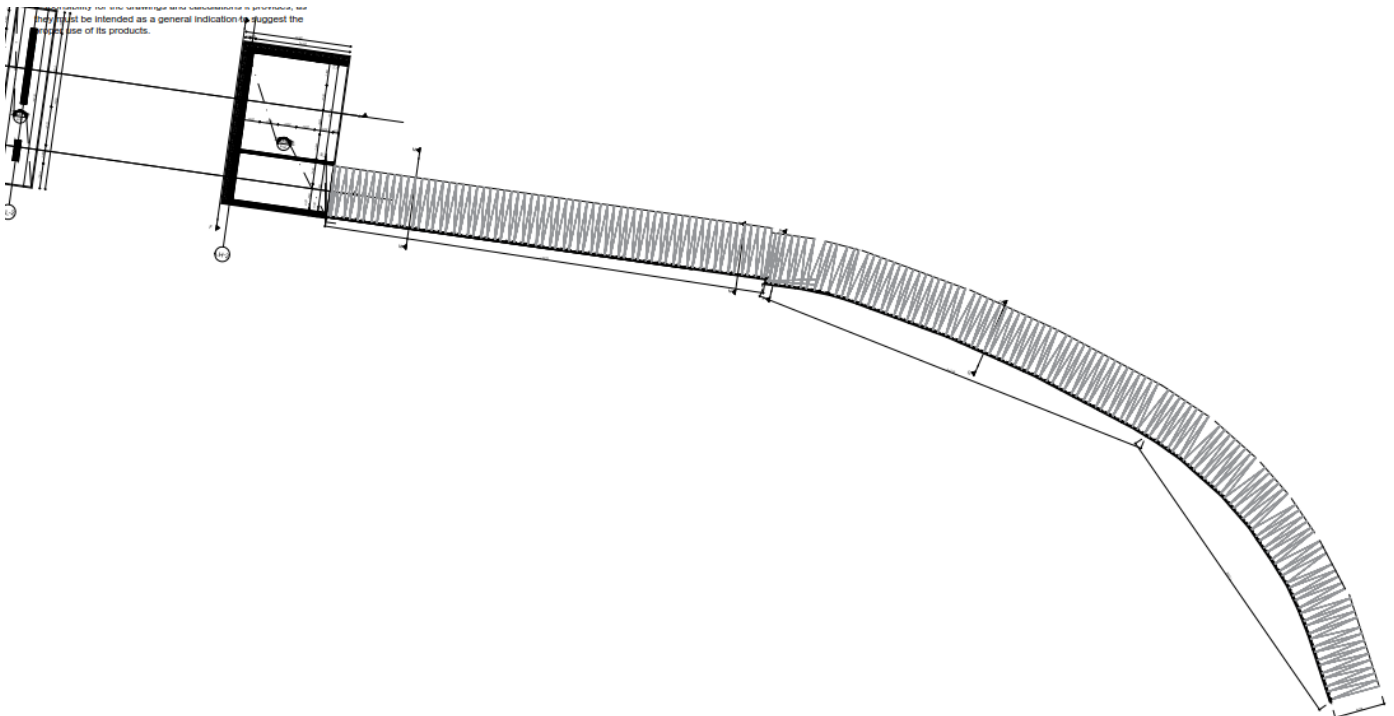
Front view



Construction phase: connection between the panels and the bridge abutment



Construction phase: panels installation



## Schematic top view of Panels+ParaWeb reinforcements

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