

FLYOVER AT TRAN THI LY INTERCHANGE DA NANG, SOUTH CENTRAL COAST, VIETNAM

Vertical Walls with Concrete Facing Panels

Problem

Tran Thi Ly interchange is located in an urban area. There is a road beside the flyover, so a vertical wall solution was selected as best option due to the boundary restraint. Maccaferri MacRes® system has been developed to create vertical concrete faced soil reinforcement structures. It is used extensively in infrastructure, mine works and anywhere that requires a vertical faced structure capable of resisting high loads.

Solution

The system consists of a combination of geostrip soil reinforcement connected to large concrete facing panels. The ParaWeb® polymer geostrip linear reinforcement is placed between compacted layers of structural backfill, and is intimately connected to the pre-cast concrete fascia panels. The fascia panels are erected in progressive layers as the height of the reinforced compacted backfill rises behind.

ParaWeb® strips are planar structures consisting of a core of high tenacity polyester yarn tendons encased in a polyethylene sheath.

They offer 120 year design life and high performance. The incredibly tough polyethylene sheath is resistance to physical, chemical and biological conditions found in reinforced soil structures.

The MacRes® walls were designed using the MSEW computer program, commercialized by ADAMA Engineering, Inc.

The standard used for the design is AASHTO 2007-2010 (LRFD).

T shaped panels with corrugations were mainly used.

ParaWeb® 2E 30, 40 and 50 was used.

Cavity connectors were cast into the panel and utilized to connect the ParaWeb® to the panels through sleeves.

Pure frictional soil with angle of internal friction 34 degrees was used as structural fill.

The wall maximum height is 4.2 m.

Client: Vinh Hung Engineering & Construction

Designer / Consultant: -

Contractor: -

Products used (Qty.)

- MacRes 750 m2

Date of construction: 03/2021 - 07/2021



Project Plan view



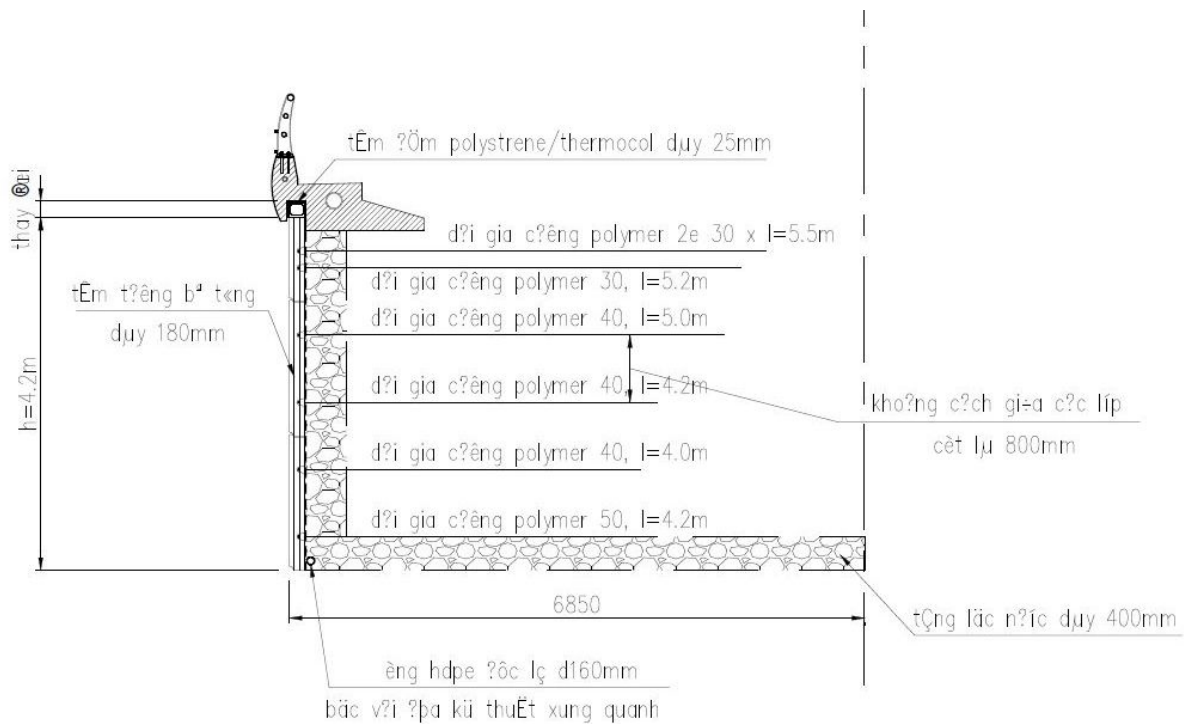
Construction



Construction



Construction



Section 4.2 m