

ROCKFALL MITIGATION (NETTING) AT PRESERVASI JALAN AEGELA - BATAS K ENDE, NUSA TENGGARA TIMUR, INDONESIA

Soil Nailing

Problem

Cut slopes at Preservasi Jalan Aegela - Batas Kota Ende, Nusa Tenggara Timur Province are composed by Fractured and Weathered Rock with possibility of Rockfall onto the Road Infrastructure. The selection of a proper material was necessary in order to provide integrated and comprehensive solution. Rockfall Netting - Secured Drapery System by Maccaferri Indonesia was selected considering its ability to allow surface seepage and its flexibility compared the common-conventional solution which may have a problem with its poor subdrain system.

Solution

Rockfall Netting - Secured Drapery System was applied by using a combination of Steelgrid HR30 as Netting Material and Rock Nailing with Length of 8m and Spacing of 2.5m x 2.5m. Following to Public Works Ministry Specification "Spesifikasi Khusus Interim SKh-1.3.16 Jaring Kawat (Wire Mesh) dan Net Kabel (Cable Net) Sebagai Pengaman Lereng Batuan", Steelgrid HR30 is categorized as Jaring Kawat Kekuatan Tinggi.

Steelgrid HR30 or Jaring Kawat Kekuatan Tinggi by Maccaferri is a composite of double-twisted steel wire hexagonal mesh with high tensile strength steel cables, woven into the mesh during the manufacturing process as one system material. Steelgrid HR30 combines the patented high strength steel wire mesh geocomposite with Structural Anchor, Anchor Plates, Specific U-bolts, and Mesh Connectors.

Available in rolls of 3m x 50m, Steelgrid HR30 complies the requirement of Mesh Tensile Strength ≥ 145 kN/m (177 kN/m) following the standard of BS EN 10223-3 and has Punching Strength 149 kN following the standard of UNI 11437. Rockfall Netting - Secured Drapery System by Maccaferri Indonesia has great advantages such as:

- Made and Manufactured in Indonesia with International Standardization;
- Easy and Convenient Installation;
- Available for Combination with Soil/Rock Nailing for Slope/Cliff Stabilization;
- Allows drainage on the surface of the slope;
- Economically Competitive.

Client: INDONESIAN MINISTRY OF PUBLIC WORKS (BINA MARGA)

Designer / Consultant: P2JN AND CORETEAM of BPJN X

Contractor: PT NOVITA KARYA TAGA

Products used (Qty.)

- Macarmour & Steelgrid 3.750m²

Date of construction: 10/2019 - 12/2019



Installation process of Steelgrid® HR 30



Installation of SteelGrid® HR 30 as netting



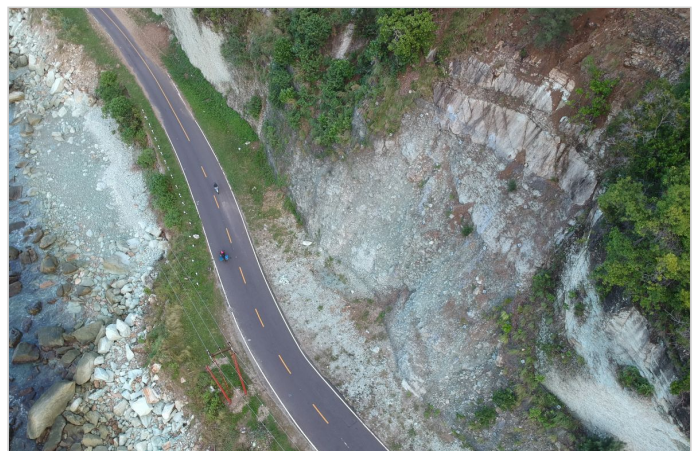
Close up view of installed SteelGrid® HR 30



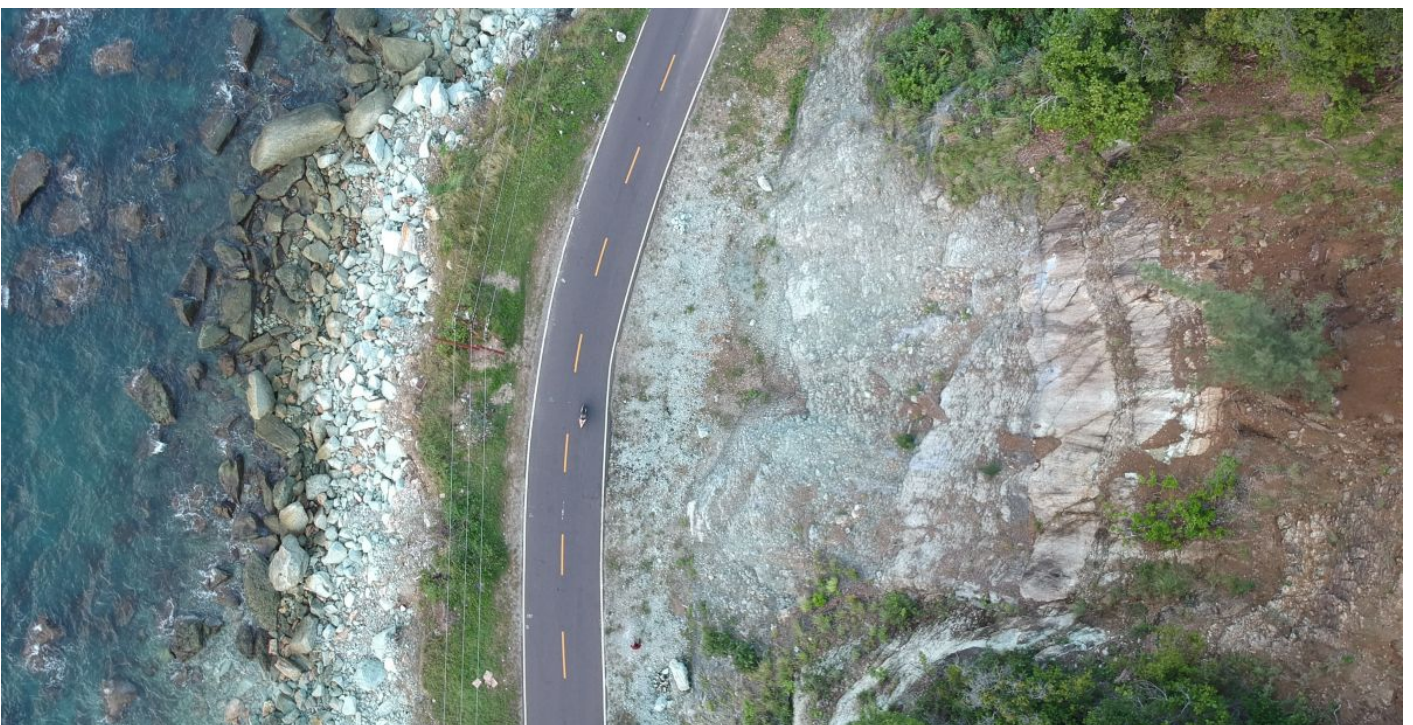
Overview of installed SteelGrid® HR 30 and Soil Nailing



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