MACCAFERRI

CASE HISTORY

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BECAMEX VSIP INDUSTRIAL PARK

--, BINH DINH, VIETNAM

Surface Strengthening and Support

Problem

The connectivity between the Becamex Bình Định Industrial Park–Urban Area and both the Central Highlands provinces and Quy Nhơn Port holds significant strategic importance for Vietnam, particularly in facilitating the efficient transportation of goods. This corridor serves as a vital link between inland production zones and maritime export gateways, supporting regional economic development and national trade objectives.

Recognizing this, in 2024, the Department of Highways initiated the construction of a new road to enhance connectivity between National Highway 19, the Becamex VSIP Industrial Park, and Quy Nhơn Port. This new route is expected to greatly improve the logistics infrastructure in the region, reduce transportation time and costs, and support industrial growth.

However, due to the challenging topography along the planned alignment—specifically its passage through hilly terrain—the project requires extensive cut slopes to accommodate the roadway. These cut slopes present potential geotechnical risks if not properly managed. Therefore, it is essential to implement appropriate slope protection and stabilization measures during construction. These measures are critical not only for ensuring the long-term stability and safety of the roadway but also for minimizing the risk of landslides and erosion, especially during the rainy season.

Client: Roads & Transportation department

Contractor: Vĩnh Hưng

Products used (Qty.)

- Netting — Steelgrid HR30
- Macmat Hs — Macmat HS30

Date of construction: 11/2024 - 03/2025

Google Maps Google Earth



During Installation

Solution

After conducting a thorough evaluation of various slope stabilization solutions and performing due diligence, the project team selected a combination of advanced engineering measures to ensure both surficial and global slope stability. Specifically, high-resistance steel geocomposite (Steel Grid HR) was chosen for its superior tensile strength and durability, making it highly effective in reinforcing the slope surface and mitigating shallow landslides. Complementing this, a three-dimensional reinforced erosion control mat (MacMat HS) was implemented to provide long-term protection against surface erosion, promoting vegetation growth while stabilizing the soil layer.

To further enhance the overall stability of the cut slopes, the design also incorporated the use of soil nails. These passive reinforcement elements were str



Soil nailing



site photo



site photo



site photo



site photo

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