Yi-Lan-I road
Reinforced slope with wrap-around facing

Project location

Yi-Lan-I road, Yi-Lan county, Taiwan
(road leading to National Taipingshan forest recreation area)

Owner

Luodong Forestry District Office

Project period

60 days

Specification

Item	GG100-I	GG150-I	GG200-I
Material	Polyester (PET) Geogrid		
T_{ult} (kN/m)	100	150	200
Elongation(%)	≦ 10	≦ 11	≦ 12
Strength@5% strain(kN/m)	≧ 50	≧ 75	≧ 100

Project Profile

Within two and half months this area experienced the abundance amount of rain caused by HAITANG and other six Typhoons, which caused the road to be damaged by the sliding of slope, and disconnected for more than six months.

The designers designed the reinforced slope to be 70 meter length which is along the original road line. The reinforced slope height was designed from 22m to 30.5m following in-site landform which slope was 1 : 0.5(V : H). Individual stage was more than 5m and constructed 5 to 6 stages along the different road slope. The embedment length was designed from 6m to 18m. The facing system was placed with PE vegetation soil bag.

Two rows of driven piles were constructed under base of first stage reinforced slope. The length of pile was 9m, it had 0.3m of diameter and was driven about 1m to 2m in bed rock. To have an effective prevention of damage from abundance rain in every protecting layer, slope was installed with a very complete system of drainage including the installation of oriented flow system. The most important was that the filling soil had a good permeability because of the granulated shape, which permitted the whole structure to become safe with high drainage and ecological scene of artificial reinforced slope.

ACE Geosynthetics
E-mail:sales@geoace.com http://www.geoace.com