



Target Store Landslide Stabilization

Raleigh, North Carolina

The Geopier GP3® System was proposed as a way to eliminate the need for staged construction

Description: The fill slope that was up to 65 feet high with slope angles ranging from 27 to 34 degrees. The landslide encroached on a large commercial superstore at the crest and a roadway at the toe.

Subsurface Conditions: The compacted slopes consisted of residual silty sand and sandy silt.

Geopier Solution: A solution, consisting of Geopier® soil reinforcement installed to intersect the slope failure plane, and supporting a gabion-faced MSE wall as a toe buttress combined with a low H-pile and concrete lagging wall at the crest of the 2.5(H): 1(V) slope was accepted. This solution replaced the conventional solution of excavating and backfilling the buttress. The Geopier construction eliminated the need for staged construction, shoring and significant overexcavation.



PROJECT TEAM

Owner:

Target Stores, Inc.

Geotechnical Engineer:

Langan Engineering Geotechnologies, Inc.

Structural Engineer:

The Woodhull Group

General Contractor:

Ashland Construction

Geopier Installer:

GeoStructures, Inc.

Geopier Designer:

GFC-Midwest