

State Road P48 Landslide Stabilization Dallas County, Iowa

Geopier® Rammed Aggregate Piers™

Project Team

Geotechnical Engineer: Allender Butzke Engineers, Inc.

Owner: Dallas County, Iowa

Geopier Installer: Peterson Contractors, Inc.

Geopier Designer: GFC – Midwest

The Geopier System resulted in a cost of \$170,000 representing a cost savings of over \$700,000 compared to other options being considered.

Project Overview

Description:

Grading operations associated with the construction of State Road P48 coupled with high ground water and a weak soil/shale zone resulted in a problematic landslide condition.

Subsurface Conditions:

Clay fill and glacial till soils underlain by a weak zone of shale at depths on the order of 20 to 25 feet below grade. Friction angles in the shale were on the order of 8 to 10 degrees.

Geopier Solution:

Geopier Rammed Aggregate Piers (RAPs) were installed to depths of up to 30 feet to penetrate the weak shale zone and intersect the critical shearing surface. A total of 579 RAPs were installed to increase the factor of safety and prevent further movement of the slide. A five foot soil



cap was installed in the tops of the RAPs to reduce the amount of ground water infiltration through the RAPs. The Geopier Intermediate Foundation System resulted in a cost of \$170,000 representing a cost savings of over \$700,000 compared to other options being considered.

FOR MORE INFORMATION

Contact Geopier Foundation Company at **800-371-7470**
or at **www.geopier.com**



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The Intermediate Foundation System