

U.S. Highway 30 Embankment Stabilization Le Grand, Iowa

Geopier® Rammed Aggregate Piers™

Project Team

Owner: Iowa Department of Transportation

General Contractor: Tom Kueter Construction, Inc.

Geopier Installer: Peterson Contractors, Inc.

Geopier Designer: GFC – Midwest

The Geopier Intermediate Foundation System eliminated the problems associated with excavations below groundwater and shoring requirements near the railroad tracks.

Project Overview

Description:

Construction of new 35 foot tall approach embankment to a new bridge spanning an existing double-track, high-usage railroad line.

Subsurface Conditions:

Soft to medium-stiff silty clay underlain by dense sand and stiff glacial clay. SPT N-values ranged from 2 to 7 blows per foot in upper clay soils.

Geopier Solution:

Global stability calculations performed for the embankment placed on unreinforced soils indicated factors of safety of less than 1.3. The Geopier Intermediate Foundation System was developed as a cost effective alternative to overexcavation and replacement. Geopier Rammed Aggregate Piers (RAPs), installed at spacings ranging from 12 to 14 feet on-center beneath the embankment,



increased the factor of safety against global instability to 1.3. The use of RAPs eliminated the problems associated with excavations below groundwater and shoring requirements near the railroad tracks. Peterson Contractors, Inc. completed the installation of over 800 RAPs in about two weeks using two crews.

FOR MORE INFORMATION

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



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The Intermediate Foundation System