

Grain Storage Bins & Rail Facility Northgate, North Dakota

Geopier® Rammed Aggregate Piers™

Project Team

Geotechnical Engineer: Zeltinger Geotechnical
Budinger & Associates

Structural Engineer: SCAFCP

General Contractor: The Haskins Company

Geopier Installer: Peterson Contractors, Inc.

Geopier Designer: GFC – West

The installation of Geopier Rammed Aggregate Piers provided an increase in allowable bearing pressure from 2,000 psf to at least 3,000 psf and provided positive total and differential settlement control of the mat foundation.

Project Overview

Description:

Construction of six 49 foot diameter, 59 foot tall Behlen metal grain bins with 488,000 bushel storage capacity. Maximum mat loading of 2,925 psf and ring wall loading of 12 kips per foot.

Subsurface Conditions:

Medium stiff, sandy lean clay to a depth of about 18 feet, underlain by stiff to very stiff clay.

Geopier Solution:

The Geopier Intermediate Foundation System was selected to avoid overexcavation and replacement of up to nine feet of soil. The installation of Geopier Rammed Aggregate Piers (RAPs) provided an increase in allowable bearing pressure from 2,000 psf to at least 3,000 psf and provided positive total and differential settlement control of the mat foundation. A total of 242 RAPs were installed eight feet on center to depths of 8 to



13 feet below the ring wall and slab. The RAPs were installed in only seven working days on site. The Geopier System provided significant cost savings and schedule advantages as compared to conventional overexcavation and replacement that would otherwise have been required.

FOR MORE INFORMATION

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



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The Intermediate Foundation System