

PROJECT DESCRIPTION

PROJECT:	Grain Storage Bins
LOCATION:	Harlem, Montana
DESIGN TEAM:	<i>Structural Engineer:</i> Grain Systems, Inc. <i>Geotechnical Engineer:</i> Maxim Technologies
CONTRACTOR:	The Haskins Company
OWNER:	Columbia Grain, Inc.



DESCRIPTION:

- Four 54' diameter grain bins and one 48' diameter bin
- Mat slab loads = 2,150 psf
- Groundwater at approximately 8' below grade
- Highly compressible lean clay 9' to 11' thick

The geotechnical investigation revealed a near surface layer of highly compressible lean clay on the order of 9' to 11' thick overlying stiff, fat clay. The geotechnical report recommended overexcavating to a depth of 9' below existing grade, using a geotextile fabric to separate the subsoil, and replacement with engineered fill.

The Geopier® System was selected as a Value Engineering alternative. The Rammed Aggregate Pier® (RAP) elements penetrated to a depth of 10-14 feet below the bottom of the floor slab and 6 feet under the perimeter ringwall footing.

A total of 328 RAP elements were installed in only 7 working days on-site.

REFERENCES:	Sterling A Haksins The Haskins Company (509) 535-2978	Richard Dombrowski, P.E. Maxim Technologies, Inc. (406) 543-3045	Tom Gettings, P.E. Grain Systems, Inc. (217) 226-4421
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