

CASE STUDY

Model 288 Push Piers

Project: Residence at Big Floyd Lake

Location: Detroit Lakes, MN

Date: December 2009

Problem:

Shortly after construction began on a home on Big Floyd Lake, the builder began to observe early warning signs of foundation settlement. Before continuing with the home's development, the builder's project manager had a soils investigation performed by a local geotechnical engineering firm. Based on the results of the test, the geotechnical engineer recommended the use of helical piers to support the home's foundation. The geotechnical engineer recommended the piers be installed before construction continued in order to avoid further settlement that could potentially add significant repair cost at a later stage in the project.

Solution:

Innovative Foundation Supportworks installed a combination of both retrofit and new construction helical piers to stabilize the existing foundation and provide support for the interior floor slab. Twenty-three (23) Foundation Supportworks Model 288 Helical Piers were installed to permanently stabilize the existing foundation. The piers were advanced to depths of over 21 feet and to estimated ultimate capacities of over 70,000 pounds. L-shaped foundation brackets were then positioned below and against the footings to effectively stabilize the existing foundation. Fourteen (14) additional piers were installed in a new construction application where concrete would be poured for deck supports and the main floor slab. The piers in these locations were designed to support the concrete additions in order to prevent future settlement. Despite the wet and winter weather conditions, the 37 helical piers were installed in less than five days, allowing the project to remain on schedule. This gave both the homebuilder and future homeowner peace of mind knowing the foundation was permanently stabilized.



Excavation completed for retrofit pier installation



Retrofit pier is advanced



Pier installed and awaiting foundation bracket

Project Summary

Geotechnical Engineer: Midwest Testing, Inc., Fargo, ND

Structural Engineer: Ulteig Engineers, Inc., Fargo, ND

Certified Inspector: Charlie Adams

Installing Contractor: Innovative Foundation Supportworks, Fargo, NE and Hinckley, MN

Products Installed: (14) Foundation Supportworks™ Model 288 New Construction Helical Piers and (23) Foundation Supportworks™ Model 288 Retrofit Helical Piers



New construction piers installed for concrete floor slab

