

Town Center, Phase II Windsor Heights, Iowa

Geopier® Rammed Aggregate Piers™

Project Team

Geotechnical Engineer: Allender Butzke Engineers, Inc.

Structural Engineer: Tometich Engineering, Inc.

General Contractor: Nelson Construction Services

Geopier Installer: Peterson Contractors, Inc.

Geopier Designer: GFC – Midwest

With the new building located adjacent to a public right-of-way, deep overexcavation would require sheeting. The Geopier Intermediate Foundation System eliminated the need for excavation and sheeting by reinforcing the in-place rubble fill.

Project Overview

Description:

Construction of a multi-story office building including a partial basement level. Foundation column loads of 40 to 350 kips with continuous wall loads ranging from 1.3 to 5 kips per lineal foot. Floor slab pressures were 100 psf.

Subsurface Conditions:

Existing debris and rubble laden fill with topsoil underlain by lean clay Wisconsin glacial till, over silty clay loess soils. The underlying loess soils varied in consistency with shear strengths between 630 and 2,550 psf but generally ranged from 1 and 1.2 ksf.

Geopier Solution:

The Geopier Intermediate Foundation System was developed to reinforce the existing fill soils to support the foundations with a bearing pressure of 4,500 psf. The project featured a two level approach consisting of high capacity footings on the south half extending into native soils at the lower level and



moderate footing capacities with floor slab support on the north half over existing rubble fill materials. The traditional pier solution required a high torque drill to penetrate the fill. Installation of 188, 30-inch diameter Geopier Rammed Aggregate Piers (RAPs) provided total settlement of less than about one inch for foundations and floor slabs and afforded both time and money savings.

FOR MORE INFORMATION

Contact Geopier Foundation Company at **800-371-7470**

or at **www.geopier.com**



GEOPIER
FOUNDATION COMPANY

The Intermediate Foundation System