

## O'Connell Convenience Plus Pittsfield, Massachusetts



**Description:** Construction of a 4,680 square foot, 1-story steel-frame gasoline service station and 6-island canopy. Typical column loads of 70 kips, wall loads of 2,200 lbs/ft, and floor slab pressures of 175 psf.

**Subsurface Conditions:** Beneath 4 to 7 feet of granular fill with minor debris, a variable alluvial deposit ranging from organic silt with root matter to very loose sand was encountered to depths of 9.5 to 13 feet. Glaciofluvial deposits consisting of very loose to medium dense coarse to fine sand underlies the alluvium. Groundwater was encountered at a depth of 6 feet below grade.

**Design Details:** As an alternate to overexcavation and replacement or timber piles and a structural floor slab, a *Geopier*<sup>®</sup> soil reinforcement solution was developed to support the foundations bearing at an allowable design pressure of 4,000 psf. In addition, *Geopier* elements installed in an 8 by 9 foot grid provided support for a 6-inch thick, lightly-reinforced slab-on-grade floor.

**Geopier Licensee:** Helical Drilling Inc., Braintree, MA

**General Contractor:** O'Connell Oil Associates, Inc., Pittsfield, MA

**Owner:** O'Connell Oil Associates, Inc., Pittsfield, MA

**Geotechnical Engineer:** Jaworski Geotech, Inc., Berlin, CT

**Structural Engineer:** Decker & Company, Inc., Lee, MA

**Reference:** Mr. Dan Soldato - O'Connell Oil Associates (413) 499-4800

Mr. Ron Fortune - Decker & Company (413) 243-4088

Jaworski Geotech (860) 829-1725