



Shaw's Supermarket Addition

Fall River, Massachusetts

The rapid Geopier installation process provided more time to complete the permanent relocation of a storm drain line outside of the building limits, keeping this task off the critical construction schedule

Description: Construction of a single story, single bay addition to an existing supermarket with a 38 by 196 foot footprint. Typical column loads ranged from 43 to 156 kips with eccentrically loaded footings and grade beams constructed to support existing building columns to be subject to additional loads.

Subsurface Conditions: A 6 to 10 foot thick layer of fill, consisting of loose to dense sand, some silt, trace gravel, with varying amounts of organic material, wood, brick, glass, metal and roots blankets the site. Beneath this deposit, a 6.5 to 11 foot alluvial deposit, consisting of medium dense to dense sand and silt was encountered. This deposit was underlain by a glacial till consisting primarily of medium dense to very dense sand. Groundwater was encountered at depths ranging from 4 to 9.5 feet.

Geopier Solution: The Geopier GP3® system was selected for this project and a total of 141 Rammed Aggregate Pier® (RAP) elements were installed to support the building loads and its floor slab on the



unsuitable fill and organic deposits. Specifically, 70 Geopier® elements provided support for spread footings bearing at an allowable design pressure of 4,500 psf and 71 RAP elements spaced at approximately 10 foot centers provided support for a four inch lightly reinforced concrete slab-on-grade. RAP locations were determined so as to avoid an existing 24 inch RCP storm drain that ran directly beneath the addition.

PROJECT TEAM

Owner:

Shaw's Supermarkets, Inc.

Geotechnical Engineer:

JGI/Eastern, Inc.

Structural Engineer:

Harrimann Associates

General Contractor:

Construction Mgrs & Builders Inc.

Geopier Installer:

Helical Drilling, Inc.

Geopier Designer:

Design/Build Geotechnical, LLC