



UNITED STATES

Squantum Gardens Quincy, MA



Owner

E.A. Fish, Inc.

Engineer

Terracon Consultants, Inc.

General contractor

Suffolk Construction Company

Dates of work

2006/01 2006/04

Description

This project was completed in 2006 as a design-build ground improvement solution. Squantum Gardens is a residential building complex consisting of 216 two- and four-story units of senior housing located in Quincy, Massachusetts.

Due to poor ground conditions, including highly compressible soil, the site required ground improvement before construction.

Main figures

Controlled Modulus Columns (CMC)TM
1211 EA.

Ground conditions

The subsurface conditions included 5 to 8 ft of fill to underlain by peat, marine clay, silt and sand, and bedrock. The fill layer consisted of sand with brick and concrete fragments. The top of the peat deposit was 7 to 10 ft below the ground surface. The peat was very soft to medium stiff, and ranged in thickness from 3 to 9 ft. Bedrock was present at depth ranging 64 ft to 86 ft.

Solution

Menard provided a design-build solution to stiffen the ground that included the installation of 1,211 Controlled Modulus Column (CMC)TM rigid inclusions to depths up to 31 ft. Menard's ground improvement design reduced settlements to within the limits specified for the project.

In summary, in order to provide a stable foundation for construction of two multi-story residential buildings containing senior housing and a senior residential center, Menard installed CMC rigid inclusions to improve the ground for site preparation.