

UNITED STATES

Bridge Point ePort Distribution Center Perth Amboy, NJ



Owner
Bridge Development Partners, LLC

Engineer
SESI Consulting Engineers

General contractor
Premier Design + Build Group, LLC

Dates of work
November 2015 – June 2016

Description

The ePort Distribution Center is a facility located in Perth Amboy, NJ, comprised of three warehouses: Buildings A, B, and C. Ground improvement was required to support approximately 300,000 sq-ft of the 720,000 sq-ft Building C warehouse.

Built on a brownfield site, the property was the former site of a paint manufacturing and processing facility. To support the building slab and foundations above layers of thick organic soils, while producing minimal spoils, Menard installed Controlled Modulus Column (CMC)[®] rigid inclusions.

Main figures

Controlled Modulus Columns
4,320 EA.

Ground conditions

The site soils are characterized by up to 30 ft of loose to very dense silty sands or processed dredge fill. The historic fill is underlain by soft organics which vary in thickness up to a maximum of 30 ft, underlain by medium dense alluvial sands at 20 to 54 ft below working grade, underlain by glacial till/marine clay below depths of approximately 54 to 60 ft. The portion of the Building C warehouse that required CMC rigid inclusions contained soils that were much softer/looser than the remaining areas.

Solution

The CMC rigid inclusion installation under approximately half the footprint of Building C served to take the load through the soft soils allowing for spread footings and slab-on-grade construction. This ground improvement technique was critical to minimize generation of potentially contaminated soils.

CMC rigid inclusions are a preferred alternative for ground improvement at brownfield sites because they are installed using a specially designed auger that displaces the soil laterally, with very minimal spoils created and does not create a pathway for transfer of contamination between aquifers.

A total of 4,320 CMC rigid inclusions were installed to an average depth of 64 ft.