Buildings

Goya Service Railroad

UNITED STATES

Secaucus, NJ

Owner
Goya Foods

Engineer
Langan Engineering & Environmental Services

General contractor
RC Andersen, LLC

Dates of work
2019/07 2019/08

Main figures

Controlled Modulus Columns
66 EA.

Description

Goya Foods, the largest Hispanic-owned food company in the United States, opened a 240,000 sq-ft sustainable production facility in Secaucus, NJ, as part of a $250 million investment. The facility, which opened in 2016, manufactures and distributes more than four million cases of Goya products annually. As part of the company's commitment to environmentally sustainable and eco-friendly facilities, the Secaucus warehouse includes 6,552 solar panels on 3.7 acres of rooftop to generate more than 70 percent of the building's energy supply with a net-zero carbon footprint.

In 2019, Goya proposed the addition of rail line access to the facility's loading dock. This expansion would require the installation of Controlled Modulus Column (CMC)® rigid inclusions to support a new, elevated platform. Menard USA was contracted to design and install reinforced CMCs.

This would be the first project in which Menard installed CMCs to support an elevated loading dock.

Ground conditions

The soil is characterized by a 4-in layer of asphalt, underlain by 4 to 10 ft of fine to coarse sand fill with elevated blow counts caused by obstructions. Underlying the fill is organics, underlain by clay and glacial till. The site requires improvement of the fill soils and organics and clay for improved bearing capacity and settlement control.

Solution

Micropiles were initially considered for support of the loading dock. However, Menard provided an economic and timesaving solution with CMCs. The CMCs were installed to shallower depths than micropiles would require. Menard installed CMCs that were reinforced with a centralized bar (which tied into the footing) for uplift support. The 66 CMCs were designed to carry up to 15 kips of uplift and 80 kips of compression. The CMCs were installed to an average depth of 40 ft and a maximum depth of 51 ft.

The design targeted 1 in of post-construction settlement, with less than a ½ in of differential settlement.

As part of expansion to a food production facility in Secaucus, Menard installed reinforced CMCs as an alternate to micropiles to support an elevated loading dock.