



City Sanitation Line



Deep Foundations – Installing Helical Pulldown Micropiles

PROJECT OVERVIEW

The city of Valparaiso was installing a new 12" sanitary line.

REQUIREMENTS AND CHALLENGES

An 800' section was to run between a housing edition and a protected wetland. This section had organic soils that were approximately 25' deep and would not support the weight of the pipe. Due to the vicinity of the new line to the housing edition and the wetlands, excavation of the organic soils was not an option.

SOLUTION AND RESULTS

A helical pulldown micropile was chosen to support the 12" line. The grout was to serve as added corrosion protection in the upper 25' due to the high moisture content in the organic soils.

Helical Pulldown micropiles were installed at 10' on center to support the 12" line at each joint, and 4 Helical Pulldown micropiles were installed at each of 2 manholes to support their weight. A special support bracket was used for the 12" line. It was fashioned out of 8" x 8" post timbers 3' long.

A section of the timber was hollowed to cradle the pipe and have 100 percent contact of the pipe to the timber. The timber was AC2 treated and epoxy coated for corrosion protection and fastened to a traditional 8" x 8" x 3/4" new construction bracket with lag bolts. The installation took approximately 2 weeks and was challenging because of tight working conditions and the sequencing of the micropiles.

Project Details

SECTOR

City Sanitation Line

LOCATION

Valparaiso, IN

APPLICATION(S)

Helical Pulldown
Micropiles

