



IDEAL Teams with S&B Drilling to Install (102) Helical Piles for a Boardwalk Pipeline Project in Brighton, CO

May, 2017



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| Project Name & Location: | Boardwalk Pipeline - Brighton, CO |
| Project Date: | May 2017 |
| Project Type: | Helical Pile Deep Foundations |
| Helical Pile Installation Contractor: | S&B Drilling - http://www.sandbdrilling.com/ |
| Geotechnical Engineer: | IDEAL Group - http://ideal-foundationsystems.com |
| Civil & Structural Engineer: | Zion Engineering - http://www.zion-eng.com/ |
| General Contractor: | Crossfire, LLC - http://crossfire-llc.com/ |
| Helical Piles Specifications: | (102) 5.50" x 0.361" Wall with 8",10",12" Helix Bearing Plates Non-Galvanized |
| Soils & Loads: | Clay with Bedrock Ranging from 20-25 ft. Across Site; 120 KIPS Ultimate Compression; 4 KIPS Ultimate Tension; 1.5 KIPS Lateral with Moments Ranging from 10K-40K Depending Upon Structure; Avg Depth 25 ft. |
| Project Timeline: | (5) Days |
| Helical Pile Manufacturer: | IDEAL Foundation Systems - Webster, NY |



Project Overview Summary

Client requested a hybrid foundation solution including the use of helical piles with poured concrete caps.

Key Challenge Points

Concrete Sono-Tube foundations were not suitable on their own for the loads requirements needed due to chronic flooding in the area.

Poor soil conditions led the client to look for new solutions. Both helical piles and concrete were selected to be utilized together for this project.

Key Solution Points

The client approved the new solution of Ideal Group helical piles to support multiple large structures on location. The design plan consisted of Ideal Group 5.5" x 15' lead sections followed by a IDEAL Group 5.5" x 10' extension with a bolt-on cap. Furthermore, the scope consisted of 102 of these 5.5" IDEAL Group piles installed to an average depth of 25' and an average installed torque of 30,000 ft/lbs with a 4.7 (Kt factor). The piles then received concrete caps poured over them by the general contractor, ensuring the load was transferred to a deep load bearing soil past the deep aquifer.

Installation Timeframe

(102) piles were installed over (5) days and would have been installed in less time if the other contractors on site had been more prepared.

