

Helical Piles of New York Installs Helical Pile Deep Foundations for an Elevated House Project in Massapequa

June, 2014

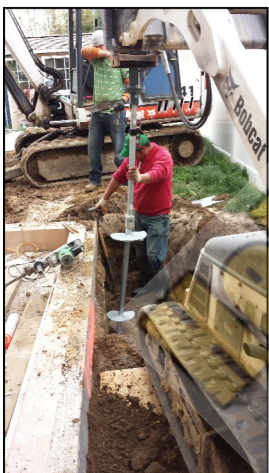


Helical Piles of New York
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Project Name & Location:	New Elevated House Foundation, Massapequa, NY
Project Date:	June 2014
Project Type:	Helical Piles Installed to Support New Elevated House Foundation
Helical Pile Installation Contractor:	Helical Piles of New York - Div. of High-Rise Industries
Architect:	SRF Architect, P.C. - Melville, NY
Helical Piles Specifications:	(23) Helical Piles; 1.5" SS5 with 8", 10", 12" Helix Bearing Plates; (21) Underpinning Brackets; 15 Ton Ultimate Capacity; Galvanized
Soils & Embedment Depth:	Sand and Clay. Average Pile Embedment 15 ft.
Project Timeline:	Helical Pile Installation - 3 days
Helical Pile Manufacturer:	A.B. Chance - Centralia, MO

Helical Piles of NY, a division of High Rise Industries with headquarters located in Shirley, NY, recently completed helical pile installations and new foundation work for a badly damaged house. The house is located between the canals in Massapequa on Long Island, and it suffered significant flood damage not only from Super Storm Sandy (5 feet of water) but also from Hurricane Irene (2 feet of water) a year earlier. The combined forces from both storms and the significant high water table eventually caused the slab-on-grade foundation to settle and to also shift laterally.



The project objective was to lift the house approximately (8) feet and place it on a new poured wall foundation supported by helical piles. But once the house was lifted, it became apparent just how bad the existing foundation was out of level. Although the original plan of work specified to use the existing foundation to support the new walls, it was obvious that plan would not work with the compromised slab that had settled (6) inches and had significant bowing in or out at the corners.

The revised plan called for underpinning the existing foundation with helical piles and to install underpinning brackets on (21) of the piles to support the new poured foundation above. After the helical pile locations were marked, excavation to expose the footings began. Right away the crew experienced very strong hydrostatic pressure from the high ground water table that caused caving and dewatering challenges. The crew had to use two excavators working in tandem – one to keep the hole open and the other one to install the helical piles. This made the installation process slow and tedious to put it mildly. In addition, once the crew exposed the old footings, installed the helical piles and began mounting the underpinning brackets, it became apparent that the original footings were not poured level and were also out of plumb.



In addition to the (21) helical piles with underpinning brackets, (2) additional helical piles were installed with concrete pile caps to support the front concrete stair case walls. The new foundation has a height of (8) feet, and the walls are (8) inches thick with (2) #5 rebar horizontally on the top and bottom and vertically (3) feet on center. (11) Smart Flood Foundation Vents were installed to alleviate future hydrostatic water pressures.



Click the links below to see videos of the project

<https://www.youtube.com/watch?v=U-7AnTC1-rl>

<https://www.youtube.com/watch?v=hopPGxyZrbk>

