

SITE PREPARATION

» NEW CONSTRUCTION

REMEDIAL REPAIR

» HELICAL PULLDOWN® MICROPILE

ATLAS RESISTANCE® PIERS

HELICAL UNDERPINNING

EARTH RETENTION

RETAINING WALLS

HELICAL TIEBACK

SOIL SCREW®

PIPELINE STABILIZATION

TELECOM/SUBSTATION

UTILITY/SOLAR

Private Residence in Santa Rosa County, Florida



View of the work area and installation equipment

CHANCE® DISTRIBUTOR
FOUNDATION TECHNOLOGIES, INC.
LAWRENCEVILLE, GA

CHANCE CERTIFIED
INSTALLER
MASON GRADY FOUNDATIONS, LLC
PENSACOLA, FL / CAIRO, GA

GEOTECHNICAL ENGINEER
LARRY M. JACOBS & ASSOCIATES

STRUCTURAL ENGINEER
DEAN A. SPENCER ENGINEERING, INC.

PROJECT:

Installing CHANCE® Helical Pulldown® Micropiles for a Private Residence on Blackwater Bay in Santa Rosa County, FL.

BACKGROUND:

The Geotechnical Investigation performed by Larry M. Jacobs and Associates revealed a thin layer of loose sand with organics over a soft clay layer that extended to approximately 35-feet below existing grade. Below this layer, suitable load bearing material was present in the form of dense to very dense sand.

PROBLEM:

The design team was in need of a high capacity, deep foundation system that could be installed with small equipment, as access to the building site was a limited to one small, narrow, heavily wooded, winding road. The design team did not desire to use standard helical piles because of the substantial depth of supporting soils and the minimal lateral support that the soft clay layer would provide.

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Hubbell Power Systems, Inc. is the world's leading helical pile/anchor manufacturer. The CHANCE® brand offers a technically advanced, cost effective solution for the Civil Construction and Electric Utility and Telecommunications markets.

CASE HISTORY

SOLUTION:

CHANCE Helical Pulldown Micropiles offered the best solution for this project. The Helical Pulldown® Micropile is a system for constructing a grout column around the shaft of a standard Helical Pile. The grout column for this project was a 5-inch diameter column which provided the increased buckling resistance needed in the 25-foot thick soft clay layer. The Helical Pulldown® Micropile also develops additional capacity by combining both end-bearing on the helical plates and skin friction along the rough surface of the grout column. The result is a higher capacity pile system.

The working load per pile was 45-kips, installed with a factor of safety of two. Piles were installed with a 20,000 lb. mini-excavator equipped with a Digga 12K drive-head. SS150 piles were installed with an 8/10/12/14 helix and a 5-inch grout column. In total, there were 119 CHANCE Helical Pulldown Micropiles installed and the installation took approximately seven days to complete.



Narrow access road to the work site.



Completed pile system with new construction cap to allow for connection to the concrete grade beams.

KEY BENEFITS:

- Resistance to buckling in weak surface soils
- Stiffer pile (deflects less at a particular load)
- Additional corrosion protection in aggressive soils



Mason Grady Foundations LLC
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CHANCE® Certification #1912-0009-3630

Mason Grady Foundations specializes in CHANCE Helical Pile Systems primarily for foundations and retaining walls. The company is a certified CHANCE installer, we are family owned and operated, and we are a member of the CHANCE Alliance Network.



hubbelpowersystems.com



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