

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

Rumfish Aquarium



BEFORE - PHOTO COURTESY OF CENTRAL FLORIDA TESTING LABORATORIES



AFTER

“ Besides solving the access problem, using helical piles provided two other advantages. First, it limited the amount of vibration experienced by the surrounding buildings. Second, it was fast. ”

-DOUG SPEELER, SPEELER FOUNDATIONS, INC.

PROJECT

St. Pete Beach, Florida, the Guy Harvey Outpost added a new attraction, the Rumfish Grill, by converting an existing commercial site into the restaurant. But, there was a major obstacle-transitioning a 40'x15' atrium into a large aquarium. The site of the atrium was fully enclosed by four walls with buried water lines below. The massive 40'x12'x12' tank needed a deep foundation system that could bear the weight of 33,500 gallons of water and be completely stable, or the tank would leak.

CHALLENGE

Design a deep foundation that could properly support a load over 234,500 pounds, resist future shifting and be installed in limited access area.

SOLUTION

Access was provided by cutting a hole through an adjacent building's parking garage. Twenty-seven CHANCE® Helical Piles were installed with a mini-excavator.

WHY HELICAL PILES?

- Limited access / low overhead
- Quick installation (27 piles installed in 2 days)
- Limited vibration experienced by surrounding buildings
- No spoils to remove

continued

CERTIFIED INSTALLER

SPEELER FOUNDATIONS, INC.
Clearwater, FL

CHANCE® DISTRIBUTOR

FOUNDATION TECHNOLOGIES, INC.
Lawrenceville, GA

PROFESSIONAL ENGINEER

OLIVER J. TURZAK, P.E.
New Port Richey, FL

GENERAL CONTRACTOR

RKM BUILDING CONSTRUCTION, INC.
South Pasadena, FL

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.



A HOLE WAS CUT THROUGH A GARAGE WALL TO PROVIDE ACCESS



AFTER THE HELICAL PILES ARE INSTALLED AND CAPPED, REBAR IS ADDED FOR REINFORCEMENT PRIOR TO POURING CONCRETE

RKM Building Construction, Inc. (RKM) was the primary contractor, solely responsible for the entire build-out of the restaurant and fish tank. RKM hired Central Florida Testing Laboratories, Inc. (CFTL) to do the soil analysis, but it was not easy. George C. Sinn, Jr., P.E., with CFTL notes, "To get the drilling rig into the location, we had to use a crane and lift it over the kitchen."

Soil tests found a layer of dense sand with a high-bearing capacity about 15 to 20 feet down, which was good news. "To have the tank supported and not move, we were going to have to bypass the upper 5 to 6 feet of soil for support purposes. And, we had a layer down there that would work very well with helical piles. Also, by using helical piles, no additional load would be placed on the existing utilities or the footings of the restaurant or parking garage," continues Sinn.

RKM then brought in Speeler Foundations, Inc., of Clearwater, Florida to install 27 CHANCE® Round Shaft Helical Piles.

"We used a mini-excavator with the drill attachment to drive in the CHANCE Helical Piles until we hit the required torque. Each one can support 15 tons of load," Doug Speeler, Jr., the company's president explains. "Besides solving the access problem, using Helical Piles had two other advantages.

“ I’ve been installing CHANCE® Helical Piles for 15 years and I’ve never seen a project like this one. It was unique because of the access issues and the size of the tank. ”

-DOUG SPEELER, SPEELER FOUNDATIONS, INC.

First, it limited the amount of vibration experienced by the surrounding buildings. Second, it was fast. We started driving in the helical piles on February 3, 2014 and finished two days later," continues Speeler. "We then cut the shafts off at grade to weld a 7"x 7"x 0.5" bearing plate to the top of each one."

The bearing plate would later be incorporated into the one foot thick concrete slab that rests beneath the fish tank. The aquarium was built by Acrylic Tank Manufacturing (ATM), the company featured on the Animal Planet's show TANKED. In May 2014, episode "Reveal: The 10,000 Pound Guy Harvey Tank" featured their work at the RumFish Grill, noting that it is one of the largest dive tanks constructed for the show.



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