

CASE STUDY

Cocoa Beach, FL



CANTSINK
SUPPORTING INNOVATION



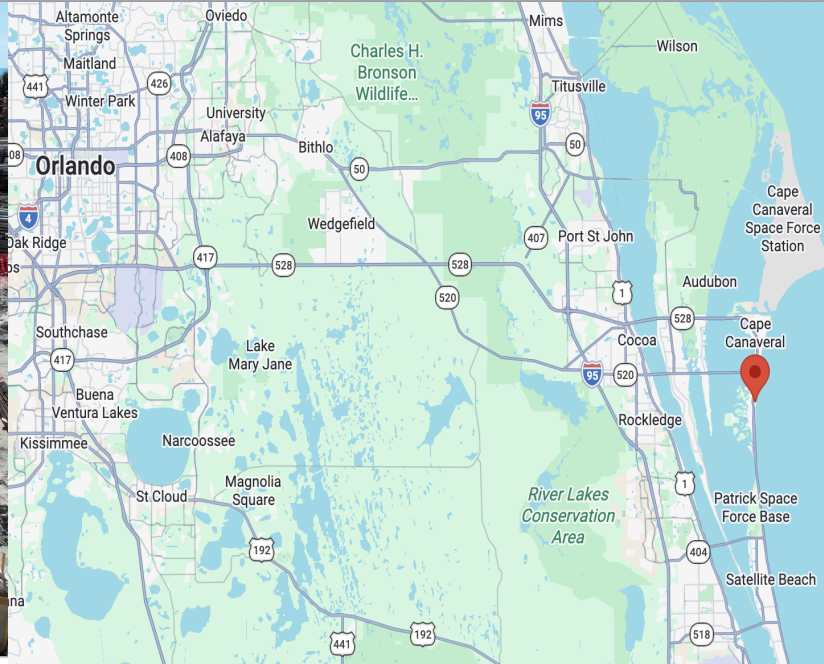
WESTIN COCOA BEACH RESORT AND SPA

Helical Piles Support Large Resort Pool on Sand Foundation

SITUATION

In April 2026, the Westin Resort & Spa project began construction of a pool and patio complex situated directly on the beachfront. American Pools and Spas enlisted Cantsink to install the helical foundation system supporting the large pool, which was to be constructed on a sand substrate. Beachfront sites are unstable due to shifting sand, erosion, and high-water tables, requiring engineered foundations to resist undermining and structural instability. It's one of the most technically challenging environments for stability. In short, you're essentially building a watertight, structurally sound, heavily regulated vessel on one of the most hostile and unstable surfaces available — while making it look beautiful and welcoming.

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SCOPE OF WORK

This was a highly specialized foundation challenge. Working an installation plan produced by Aquatic Engineering Consultants and certified by GB Collins, PA, the Cantsink team installed 149 piles, meeting a challenge that demanded specialized material, precise engineering and an installation team with the experience to adapt when conditions didn't go exactly according to plan.

ANCHOR SYSTEM

To provide the structural support required for this large beachfront pool, Cantsink installed the helical piles in a 10/12/14 triple helix configuration to an average depth of 14 feet below grade. Load capacities were engineered to exceed 30 kips. All 149 piles achieved required torque and depth.

RESULTS

Following installation, all piles were cut and capped to specification. From mobilization through final capping, the project was completed in under two weeks — with the pile installation itself completed in just four days. The project was delivered on schedule, enabling the general contractor to proceed with the remaining pool and deck construction without delay.

This project demonstrates the effectiveness of helical pile foundations in extreme soil conditions. When paired with sound engineering and an experienced crew, there is no site too challenging — and no load too demanding — for a properly designed helical foundation system.