



Seeing for Themselves

South Florida marine contractor taps GNSS technology in project to deepen Palm Beach marina channel.



In the largest project they've ever undertaken — a major upgrade of the iconic Palm Beach Town Marina Project — Murray Logan Construction (MLC) was faced with a challenge. They needed to find a way to accurately, but efficiently, excavate the floor of the marina basin. The goal was to provide three additional feet of water depth to accommodate larger vessels — those in the 275' and larger class. Though simple in theory, the difference between excavating on land and beneath the water's surface could not be starker, said David Logan, MLC's co-owner.

Company

Murray Logan Construction
West Palm Beach, Florida

Project

Palm Beach Town Marina Project
Palm Beach, Florida

Topcon Products

X-53i Excavator System, Sitelink3D

Topcon Dealer

Lengemann Corp., Altoona, Florida

"On land, you put stakes in the ground, and you're good to go," he said.
"Out here, where we are dealing with a 14.5 acre site that changes with the

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tide going one way for six hours and then the other way for six hours, and water elevations that change by about two feet, twice every day, things aren't that easy. So, we needed a way to accurately cut the necessary slopes and various elevations — without seeing them."

Logan said he did some research to see what other contractors in the area were using for land-based excavation work and got good feedback on machine control from a colleague who had attended a trade show. "When he came back, everything seemed to point us toward the Topcon x53i excavator system," he said.

The attraction for Logan was the fact that the machine control system allowed his operators to know at all times — even with their bucket submerged — exactly where it was, the depth it was at, and its horizontal and vertical location.

"It gives our operators a level of confidence they'd never had before," he said. "There is no longer uncertainty about whether they've gone deep enough or whether they've done an area or not — it's right there on the screen in the cab."



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The solution proved so impactful that, when a subcontractor was brought in to supplement the pair of excavators already working, Logan showed them the machine control solution and the results they were gaining from it. "Almost immediately, they felt they needed to add it to their fleet as well. And, because they also do a lot of marine excavation, they see it playing a big role for their future work."

Recognizing that it would not be convenient for Logan to check on issues in each operator's cab while they were working offshore, regional Topcon dealer Lengemann Corp. suggested that MLC look into a site management system, the result being the company's purchase of Topcon Sitelink3D.

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“Sitelink3D gives us a real-time look at what the operators are doing,” said Logan. “It also allows us to manage the surfaces with which they are working and do so from our office or elsewhere using any connected device. That’s valuable because I’m regularly discussing the project with our operators. With Sitelink3D I can see exactly where they are doing and can manipulate settings or manage the work area without the need for me to drive out there, get in a small boat and head out to the barge. The entire package of Topcon solutions has been just what we needed.”



A [full-length version](#) of this story is on the Topcon website.



Visit the [Topcon YouTube channel](#) to watch video on excavation technology featured in this TAW.

