



Pool Sharks

Custom swimming pool firm taps new technology for increase in efficiency



Seeking to improve the layout process for pool design and construction, Signature Pools turned to a Topcon LN-150 robotic layout navigator. Doing so, not only shortened layout times and improved accuracies, it opened doors to additional areas in which the instrument might pay future dividends.

Company

Signature, LLC, Greenville, South Carolina

Project

Adaptation of new technology into pool layout workflow

Topcon Products

LN-150

Topcon Dealer

Earl Dudley & Associates, Birmingham, Alabama; Greenville, South Carolina

Signature is a family-owned business specializing in custom design/build pools and spas. According to Joe Gatas, manager of design and estimating, the company, currently employs about 50 people, but has managed to keep a family feel within the business.

“This, despite the fact that we have an impressive number of projects either being built or in the design phase,” he said.

Until recently, a heavy workload, while manageable, nevertheless raised the stress level of the company’s design/estimating team. However, the purchase

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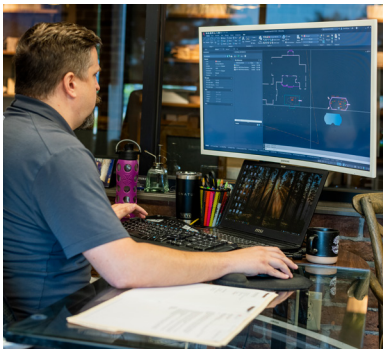
of the LN-150 replaced a layout process that was time-consuming, labor-intensive and prone to error or oversight.

“We’d measure off the corner of the house, and every 10 to 15 feet, use a laser transit to hit an elevation point, manually noting it,” said Gatas. “Then we’d come back, interpret the data, log the points into CAD, calculate the difference between them and our benchmark, and enter that into the system.”

Today, the LN-150, easily and accurately obtains both horizontal dimensions and vertical elevations anywhere within its layout zone. Working with the instrument, a prism pole and a touch-screen controller, Signature’s team can quickly obtain as many layout points as they need.

“With the new robot we can just go out and take measurements at random,” said Chris Davis, lead designer. “We then transfer everything to a thumb drive, put it on the computer and I have all my data. There is no more manual data entry — which greatly lowers the risk of inaccuracy. I can immediately start designing.”

The overall time savings can be substantial, said designer/draftsman Sean Potoniak.



“
For a curvilinear pool, we can save up to three hours over the previous method. We can easily get 200 points in half the time it used to take us to get just 20.”
”

Also impacted was creation of the template, a document that solidifies the as-built design and includes a topographic representation of the property. In the past, that function was subbed out to a third-party company which put Signature’s project at the mercy of someone else’s timeline.

“It was a lengthy process and a costly one, both monetarily — a typical template could cost \$2,000 to \$3,000 — and in lost time,” said Gatas.

He said they now go out with the robot and within 30 minutes, gather the data, bring it back and create the template. “Based on those savings alone, we will probably get our investment in the robot back in a year and a half, maybe sooner.”

When asked about future growth, Gatas said that they are probably near capacity and don’t foresee growing much larger.



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“We really like the family structure here and don’t necessarily want to grow to be a huge company,” he said. “However, it’s always nice to boost the bottom line. By improving efficiencies, the robotic solution is allowing us to do that — without having to take on more projects.”



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



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