



Flat Out Productive

Newer technology helps Iowa-based company excel in grading and screeding projects



Founded in 2008, Elite Builders initially focused on carpentry and framing, growing into a highly successful business in the Des Moines, Iowa area. For owner Matt Eischeid, a combination of no longer wanting to deal with the headaches a large company can bring and a realization that the construction market was lacking someone with mechanical screeding expertise brought about a real sea change in operation.

Today, using some of the grading and paving industry's most innovative solutions – including 3D LPS on a Ligchine laser screed and Level Best-equipped compact track loader – a totally reimagined Elite Builders has more than filled that technical gap.

By way of background, Eischeid initially relied solely upon 2D laser screed technology purchased from the Carol Stream, Illinois branch of the Topcon Solutions Store. While effective for flat pours, it limited the types of jobs

Company

Elite Builders
Des Moines, Iowa

Project

Grading and concrete pad pours for
warehouse development
Des Moines, Iowa

Topcon Products

Topcon LPS via GT Series
robotic total station

Topcon Dealer

Topcon Solutions Stores
Carol Stream, Illinois

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they could do. All that changed, however, with the addition of a 3D LPS (local positioning system) solution, which uses a fast-tracking Topcon GT Series robotic total station to register and maintain screed position from a machine-mounted prism and sonic tracker. Height adjustments — transmitted to and from the screed at a rate of 10 times per second — maintain even the tightest accuracies.

“With LPS, we were now able to tackle bigger, more complex jobs, be more efficient on them, and even increase the level of accuracy we brought to the job site,” said Eischeid. “The Ligchine screed, which was already a powerful tool for us, was instantly made even more valuable.”

He added that using LPS, they were no longer limited to working solely with flat floors or even flat slopes, but could quickly and accurately place concrete on grade, slope, dual slope, and 3D contours.

To augment the screeding operation with a cost-effective grading component, Eischeid again turned to the Topcon Solutions Store. According to Jerry Bickner, TSS director of sales, a Level Best box blade attachment for his John Deere 333G compact track loader was the obvious move.



“Because they already had the Topcon grade control solution they needed on their Ligchine screed, it was a simple matter of switching the components over to the Level Best and, working off a single 3D model, getting the same degree of accuracies for grading,” said Bickner.

Eischeid concurred, adding that, with grading complete, the system can be easily moved back over to the Ligchine to begin the concrete facet of the job. “In essence, we now have the best of both worlds,” he said.

Those benefits became obvious at a distribution center project outside of Des Moines, where Elite was tasked with fine grading and screeding both 100,000+ sq. ft. of parking lot and 210,000 sq. ft. of interior floor.

“With the 3D solution, on average, one person in one machine can generally grade between 7,000-10,000 sq. ft. per hour while maintaining accuracies to within a ¼-inch,” said Eischeid. “Similarly, after grading with the 3D LPS, we can almost always get our concrete yields on our pours down to within 2%. Both were the case here.”



Concrete yield is extremely key in today's highly competitive construction landscape. According to Bickner, lack of subgrade accuracy can dramatically affect the profitability of any pour.

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"Being even ¼" off on a 100,000 sq. ft. pour can result in \$20,000 to \$30,000 off your bottom line," said Bickner. "The Topcon 3D LPS solution allows users to keep that subgrade on the money and eliminate the risk of bad yields. Couple that with the fact that it is easily movable between the grading and paving machinery, and it's easy to see why Matt is so pleased with it."

At the job site mentioned above, Eischeid showed just how productive he can be in the grading portion of that operation "If the general contractor chose to grade that parking lot themselves using traditional means, it would have easily taken them a full day to grade it," he said. "Using the Level Best with 3D, I did it in roughly two hours. That's productive."

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Matt Eischeid



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



[Watch a video here](#) featuring LPS on a Ligchine screed. Visit the [Topcon YouTube channel](#) to watch videos on concrete paving and more.

