

# MAKING THE GRADE

Construction estimating software benefits business operations.

By Mike Gillum

**R**ecognizing that in many small and mid-size sitework contracting firms, the owners, as well as other employees, wear multiple hats and do not have full-time estimators on staff, Daniel G. Frondorf CPE founded DG Frondorf and Associates LLC in 1999. He knew that often the two most important functions in a contracting business—estimating and bidding—were put on the back burner and handled by the owner after a full day of serving as the firm's accountant, foreman, human resources officer, and laborer.

Understanding the challenges these contractors face, DG Frondorf and Associates LLC provides sitework contractors of varying sizes with quantity takeoffs, cost estimates, scheduling, scope of work analyses, and post-bid work, as well as claims and change order preparation and invoicing. Over the years, the Cincinnati, Ohio-based firm has grown and expanded its wide range of services to not only sitework contractors, but also architects, engineers, construction management firms, developers, property owners, and other consultants.

## THE TECHNOLOGY REVOLUTION

"I have seen bidding and estimating change significantly over the past 10 years," says Frondorf. "Computers have revolutionized construction estimating. There are more software packages, more options on the Internet to find bid opportunities, and more real-time information to leverage. We have found that contractors of all sizes are struggling with information overload and searching for new ways to effectively manage their businesses."

Unlike its clients, DG Frondorf and Associates LLC's core business is estimating and bidding. It is critical that the firm has the right tools and processes in place to efficiently provide reliable estimation and bid data to its clients.

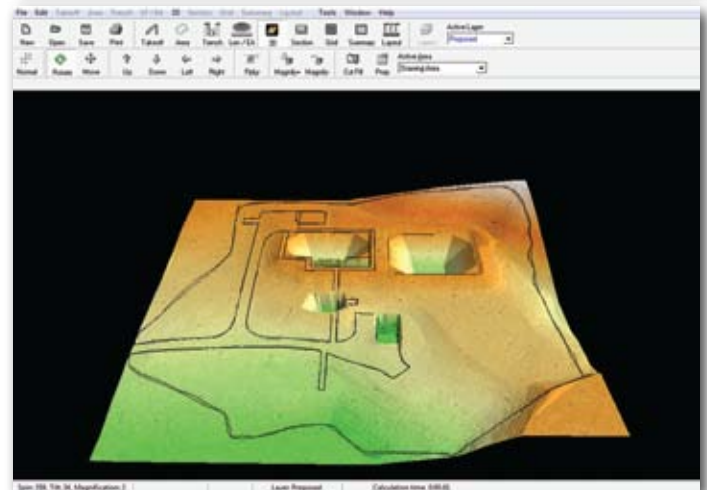
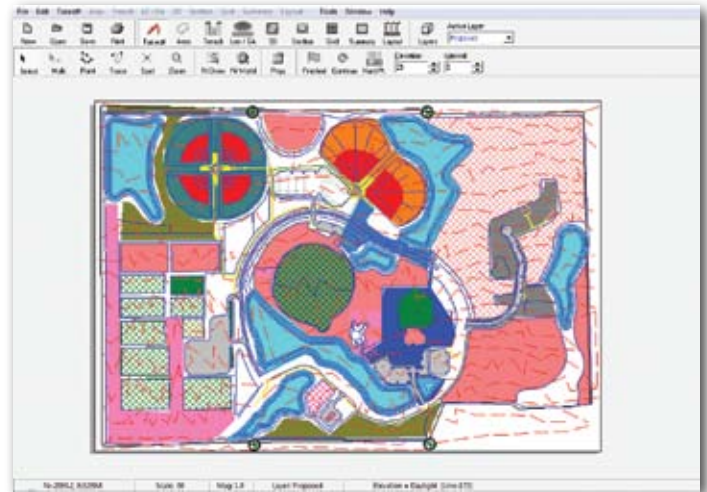
## THE QUEST FOR ACCURACY

Not long after the company was founded, Frondorf invested in an estimating and earthwork solution to help with all their job estimates.

For the Frondorf team who works with many sitework contractors, construction managers, civil designers, landscape architects, and owners, the earth-measuring program has become an invaluable tool.

"Knowing not only how much material our clients will have to move for a project, but also what types of materials are involved, are major factors in creating an accurate budget or bid," explains Frondorf.

For example, the firm received a request at 10 a.m. on a Tuesday to verify data for a bid due on Friday for the sitework for a new jail. This is not uncommon for the firm to receive projects under tight



Quest Earthwork's Takeoff screen (top) can handle multiple sheets, works with any known scale, and allows the contractor to choose Imperial or metric units. Know precisely what materials are being dealt with to create an accurate bid. Use 3D View (bottom) to verify the site using a realistic aerial view of the existing and proposed elevations, or survey by taking a virtual helicopter ride.

deadlines. The contractor asked DG Frondorf and Associates LLC to double check the material quantities provided by the owner. They wanted to know exactly how much rock they would be digging up versus clay, as rock is much more expensive to excavate and these specific details about the types of materials were not provided by the owner.

Using an earthwork solution, DG Frondorf and Associates LLC was able to do an accurate takeoff of the site, by taking a geotechnical report and breaking down the cut and fill based on the type of material in specific locations on the job. Although the owner provided some information for the site, this geotechnical

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information helped the contractor verify the information and more accurately calculate the specific types and amounts of materials that would need to be excavated.

“If we had done this project by hand, it would have taken 3 or 4 days,” explains Frondorf. “With an earthwork solution, we were able to complete the takeoff in less than 4 hours. It not only saved us valuable time, but also provided more precise data that potentially prevented costly mistakes on the project.”

### VISUALIZING THE JOB

For so long, contractors have relied on blueprints for project planning purposes, but these one-dimensional tools have their fair share of limitations. For most estimators, visualizing the job is a must. “Using a solution that has stunning graphics that help clients see where cuts and fills are and the depth of color helps them easily visualize and plan how the job will get done. The use of 3D, grid, and cross section formats to visualize the project is a huge time savings and definitely increases our accuracy,” says Frondorf.

“We have been using a solution that could do cross section for a couple years and have been thrilled with it,” says Frondorf. “Doing dirt takeoffs can be drafting intensive and inherently time consuming. Typically, many drawings are required to be produced by the estimator, rendering the takeoff process more susceptible to error. Using a cross section, we can break out separate sections of the project, take off the elevations for each area, and easily view the amounts of cut, fill, and stripped soil that remain. If a mistake has been made, a visual spike will be evident and a change can be made immediately. With manual takeoffs, we may not see the error, compromising the accuracy of the takeoff.”

### MORE BIDS, MORE CONTRACTS

“Since we have been using an earthwork solution, our sales have definitely increased each year. As more clients see the value, our customer base grows. We are able to crank out a lot of information in significantly less time, and the more bids a contractor can submit, statistics show, the more contracts they should win,” explains Frondorf.

Speed is important, but even more critical is ensuring the accuracy of the information the firm is providing its clients. Frondorf explains, “If we do an earthwork takeoff manually, there is a greater opportunity for error. With an earthwork solution, the program does exactly what we would do manually, but it’s quicker and more reliable. We can nail down the details to the last cubic yard, eliminating guesswork and waste on the projects. We are able to plug in numbers with certainty and be more accurate in cost estimating and bids.”

### ABOUT THE SOLUTION

DG Frondorf and Associates LLC uses Maxwell Systems™ Quest Estimator™ and Quest Takeoff™ as an all-in-one automated takeoff and estimating system to ensure accuracy when calculating areas, lengths, and quantities and creating precise bids. The firm also leverages the advanced functionality in Maxwell Systems Quest Earthwork™ earth-measuring program and Quest Cross Sections™ to accurately determine cut and fill quantities. These integrated solutions provide contractors like Frondorf with end-to-end construction management in a single robust system. ♦



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