

Civil 3D Implementation: Success Exceeds All Expectations

Studies in Success

Company: Phillippi Engineering Inc. (PEI)

Software on Board: Autodesk® Land Desktop, MapCAD and Trimble GPS

Summary

Phillippi Engineering, Inc. (PEI) was at a crossroads. To remain competitive and profitable in a tightening economy, the firm needed to reduce production hours while still maintaining the high quality plan sets that their customers had come to expect. Autodesk® Civil 3D appeared to offer an answer, and Ideate helped PEI implement Civil 3D. The result was that with Civil 3D, PEI is now free to evaluate different design scenarios without incurring lost time and the quality of their work is enhanced.

About PEI

Phillippi Engineering, Inc. (PEI) is a mid-sized Civil Engineering and Land Surveying firm based in Vacaville, California. PEI's primary expertise is in the fields of civil engineering design and land surveying. The company's experience includes master planning studies, feasibility studies, utility studies, plan checking services, benefit/assessment districts, planning, mapping, preliminary and final design and construction staking of infrastructure, water, sewer, storm drain, regional detention facilities, parks and community facilities.

PEI has a dedicated staff of professional civil engineers, professional land surveyors, skilled technicians and support staff to successfully complete civil engineering and land surveying projects of all complexities. PEI also has a history of taking the helm of technological innovation. The company has remained at the forefront of its industry by utilizing the latest

technology in equipment and software, including Land Desktop, MapCAD and Trimble GPS along with total station survey equipment.

The Challenge

PEI is known for the thoroughness and quality of its plan sets. Historically, the company has used Land Desktop to prepare plan sets. The technical staff is very familiar and proficient with Land Desktop. However, numerous engineering and drafting hours are spent creating and updating the production drawings and performing quality control.

To compound production costs, design changes further diminish the project budget when staff members need to ensure that there are no errors, omissions or typos in the whole plan set. The prospect of having to redraft much of the design made PEI designers hesitant to try different design scenarios. According to Allan Haddox, P.E., PEI Engineering and CAD Manager, "Our biggest challenge is to keep the plan profile sheets updated as the design changes."

In these tough times, many engineering companies are in survival mode. Profit margins diminish. Companies vie for survival bids. The challenge is to remain profitable while being competitive with bids. PEI determined that streamlining the design process from conceptual design to plan production would be invaluable. Also, reducing design time would help decrease the design budget which in turn would help maintain a reasonable profit margin yet keep PEI competitive.

The Solution

The challenge that Haddox had identified became the kernel of an idea for change. The ability to free up engineering time from drafting to focus more on design was very appealing. The result was sure to be a better design. The quality of PEI plans could potentially increase multifold while the company utilized the same manpower and resources. Productivity could soar. After all, Civil 3D can cascade changes in the model throughout the production drawings automatically as the design changes.

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—Allan Haddox, P.E., Engineering Manager and CAD Manager, PEI

"The farther behind you fall, the harder it is to catch up."

"A better design... quality increase... same manpower and resources."

“...implementing Civil 3D was the most prudent, contemporary and pragmatic choice.”

Most civil firms stay away from cutting edge technology. However, Haddox is a believer that the farther behind you fall, the harder it is to catch up. Since PEI has always been at the cutting edge of technology, consistently maintaining and upgrading its licenses to the latest and the greatest, PEI decided that implementing Civil 3D was the most prudent, contemporary and pragmatic choice to keep the company at the leading edge of technology.

Knowing what great things new software can do and implementing them are two different and challenging tasks. Most firms have been hesitant about moving to Civil 3D out of concern that they will need more time to create a drawing template and develop the styles. Haddox shares his solution when he says, “You need to team up with a professional company to help with creating the styles.” He adds that most firms don’t have the capability to setup standards on their own. “You need a team of professionals. If we had not hired Ideate, we wouldn’t be at the Civil 3D transition point where we are right now.”

Ideate Inc. helped PEI with the entire process of adopting and implementing Civil 3D. Gaurav Bagga, Ideate Civil Applications Specialist explains, “Our Ideate team began by conducting a thorough needs assessment. We explored PEI’s standard processes and discovered how to make those processes work with Civil 3D.” By working with Ideate, PEI has been able to develop a template with PEI standard styles.

“It would have taken too much time to create on our own,” says Haddox. “With styles created, you don’t have to be expert in Civil 3D. Once the styles were set, Gaurav was able to conduct training specific to our projects using our template. Because the template was already created he didn’t need to train everyone on every detail of the styles. Having achieved this transition, PEI is now in a better position to use Civil 3D on future projects. Also as an added benefit, Haddox says, “Moving to Civil 3D will be less convoluted when working with third party software such as MapCAD, because there is no need to have separate versions for Land Desktop and for Civil 3D.”

Conclusion

PEI now has its own Civil 3D drawing template with the necessary styles and settings based on PEI standards. Says Haddox, “After the Ideate training we can now create a sheet that looks exactly like our standards. When we get stuck we just call Ideate and because they worked with us from day one, they have an intimate knowledge of our business and are able to help us in a timely fashion.” Now the designers can actually spend their time on developing the best designs for our clients. Making additional design changes does not result in the use of significant staff time to revise the plans. Our clients are starting to realize the benefits.”

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About Ideate, Inc.

Ideate, Inc., the Autodesk® Reseller of the Quarter for the Americas for third quarter fiscal year 2009, is a leading Autodesk Value Added Reseller on the West Coast and software developer for Revit®. Ideate provides companies in the areas of building, civil, GIS, and multimedia with Autodesk software, implementation services, training, support, and consulting services. Established in 1992 and headquartered in San Francisco, CA, Ideate, Inc. is recognized as an Autodesk® Premier Solutions Provider (PSP) – Building Architecture, Autodesk’s highest level of authorization. Employing top architects and structural, mechanical, and civil engineers, Ideate, Inc. offers its partners premium services to ensure their maximum productivity and return on investment.

Ideate, Inc. operates five Autodesk® Authorized Training Centers on the West Coast: San Francisco, CA; Sacramento, CA; San Jose, CA; Portland, OR and Seattle, WA. For more information about Ideate, Inc. visit www.ideateinc.com.

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