

The District of North Vancouver

Customer Success Story

Autodesk Infrastructure Solutions
Autodesk® Civil 3D®
Autodesk Map® 3D



“Autodesk Civil 3D has already saved us three full days on a small project, and we anticipate even more time savings on upcoming projects.”

Shawn McLeod,
GIS Manager,
The District of North Vancouver

Municipality Saves Time Designing Infrastructure

The District of North Vancouver designs faster and creates more sophisticated presentations with Autodesk Civil 3D

Project Summary

Located across the picturesque Burrard Inlet from Vancouver, British Columbia, the District of North Vancouver (DNV) is home to more than 80,000 people. The DNV is about 60 percent parkland and green space, making it a popular destination for hikers and bikers in summer and skiers in winter. The area's steep terrain, though scenic, can make designing infrastructure projects challenging and potentially time-consuming. And with hundreds of kilometers of trails, roads, and utilities infrastructure to maintain, the DNV's small staff of two designers must work efficiently. Since turning to Autodesk Civil 3D, the DNV have been able to:

- Accelerate the process of designing new alignments by as much as one business day
- Generate profiles and contours automatically
- Create sophisticated public presentations in half the time
- Extend in-house resources by getting more done in less time

The Challenge

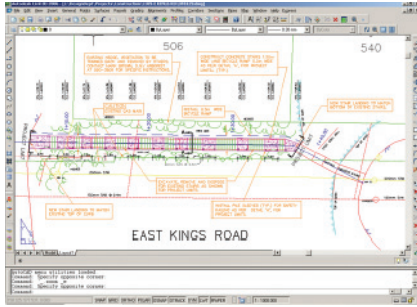
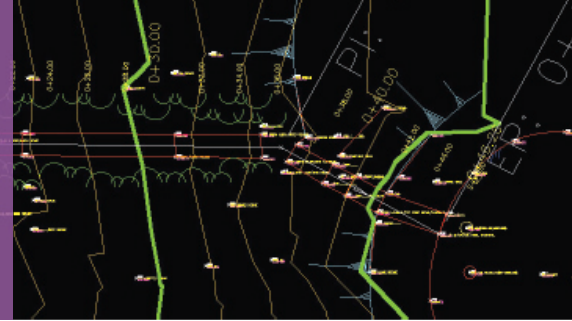
Time-consuming Manual Redrawing

Until 2003, the DNV's designers used software that was incompatible with the District's GIS. The DNV decided to turn to Autodesk Map 3D because of its easy integration with common spatial data formats, including ESRI Shapefiles. Though Autodesk Map 3D saved the design team time by integrating GIS data, the team still had to make design changes manually. According to Shawn McLeod, GIS manager for the DNV, “Redesigning after every change makes it difficult to present multiple design options to the public.”

With a number of complex infrastructure projects on the horizon, the DNV decided it was time to move to a more sophisticated civil design application. The DNV turned to Global CADD Systems (GCS), a professional services company, for a needs assessment and recommendation. “The DNV needed a standards-based solution that could also accelerate its workflow,” says Sasha Nikodijevic, president of GCS. “Autodesk Civil 3D delivered exactly what they needed. With Civil 3D, setting up projects takes significantly less time and incorporating design changes is virtually instantaneous.”

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“Autodesk Civil 3D enables us to create multiple alignments quickly and easily. Using Civil 3D’s dynamic modeling capabilities, we will be able to present more options to citizens in the preliminary stages of projects and incorporate their feedback faster.”

Lee Nguyen,
Design Technician,
The District of North Vancouver

The Solution

Multiple Alignments in Less Time

The switch to Autodesk Civil 3D came at an ideal point, according to McLeod. He recalls, “We switched at a time that allowed our designers to familiarize themselves with Autodesk Civil 3D while working on smaller projects. In the next couple of years we will begin our sanitary infrastructure replacement program, which will keep our two designers very busy. Civil 3D will be the central tool on this design project.”

Although small in comparison to the sanitary infrastructure replacement project, the projects the DNV designed using Autodesk Civil 3D took advantage of the application’s sophisticated modeling capabilities. The first project involved designing a staircase that will connect two popular—and very challenging—hiking trails. Using Autodesk Civil 3D, the designers began the project by generating profiles and contours for the terrain. Then, they created an alignment for the stairs. When the project designer made changes to one portion of the alignment, the entire design changed automatically to reflect the modifications.

“After doing an initial design, I received requests for two additional alignments based on new survey information,” reports Doug Robertson, the designer working on the project. “Using Autodesk Civil 3D, I loaded the new information and created the new alignments. Because Civil 3D dynamically links all elements of the design, I saved an entire day of design time on each new alignment.”

More Sophisticated Presentations

Whenever the DNV plans infrastructure projects, those projects generate significant public interest. As a result, the DNV devotes a great deal of time and care to presenting proposed project details to the public. And when the public offers feedback and new ideas, the District makes an effort to incorporate public input into designs when possible. The entire process often takes as long as six months and consumes significant resources. However with Autodesk Civil 3D, the DNV plans to accelerate the process.

“Autodesk Civil 3D enables us to create multiple alignments quickly and easily,” explains Lee Nguyen, a designer with the DNV. “Using Civil 3D’s dynamic modeling capabilities, we will be able to present more options to citizens in the preliminary stages of projects and incorporate their feedback faster. We couldn’t do that without Civil 3D.”

The Result

Stretching Resources Further

The DNV sees Autodesk Civil 3D making a significant contribution to three key organizational goals: saving time, completing work cost-effectively, and delivering exceptional service to citizens. “With only two in-house designers and major projects in the works, we need to work efficiently,” says McLeod. “Autodesk Civil 3D has already saved us three full days on a small project, and we anticipate even more time savings on our upcoming projects. And with Civil 3D, we can present better, more detailed options in half the time. Plus, we continue to connect our civil engineering and GIS data seamlessly by using Civil 3D with Map 3D.”

For More Information

To learn more about how Autodesk Civil 3D helps public works agencies carry out their missions more cost-effectively, visit us on the web at www.autodesk.com/civil3D.

About Global CADD Systems

Founded in 1997 and based in Vancouver, British Columbia, Global CADD Systems provides technology sales, implementation, training, and support to organizations that depend on CAD and GIS technology. Visit Global CADD Systems on the web at www.globalcaddsystems.com.