Working with Land Desktop or Civil 3D Contours in IntelliCAD-based Carlson Programs

If you are working in an IntelliCAD version of Carlson Survey or Civil and need to bring in surface entities (contours) from a Civil 3D (C3D) or Land Desktop (LDT) drawing, it's actually very easy to do. However, it's not necessarily easy to find on your own. And, unfortunately, it's in a slightly different place depending on whether you're using the Carlson Survey or Civil menu.

FYI – If you simply try to "Open" a drawing that has AECC Contour Objects with an IntelliCAD-based program, it may look correct, but the entities will only be the dreaded "ACAD PROXY OBJECTS" that have bogus elevations. These are only good to look at… not work with.

Whether you're using Survey or Civil, the only thing you'll need is a drawing file (DWG) containing the C3D or LDT contours for the surface. It doesn't even need to be opened, you just need to have it and be able to find it. (hey, I'm getting old!).

First, start a new drawing in Carlson.

Then, if you're using Carlson Civil:

1. Go to the "Surface" menu,
2. Select "Import/Export Surface"
3. Then, select "Convert LDT/Civil 3D Surface Drawing".

If you’re using Carlson Survey:

1. Go to the “Surface” menu,
2. Select “Import/Export Surface Data”
3. Then, select “Convert Civil 3D Surface Drawing”.

Next, you’re prompted to “Select the LDT/Civil 3D Drawing to Read”. After browsing to and selecting the LDT or C3D file, pick “Open”.

Next, you’re prompted to to “Select Converted Drawing to Write”. This will be a new DWG file containing the converted data. After browsing to a new location and specifying a new file name, pick the “Save” button.

You’ll see the conversion process in the text window. Once finished, you can open the converted drawing.

What you will find in the new drawing are all of the entities from the original LDT/C3D drawing except that any AECC Contour Objects have been converted to elevated PLINEs and LINEs.

The first step you’ll probably want to take after opening the new drawing is to join together all of the contour PLINEs and LINEs. You may want to “Isolate” the layers for the contours first.

Then use the “Join Nearest” command under the “Edit” menu. Like most cases, make sure to have the “Join Only Common Elevations” and “Join Only Common Layers” options selected.

Originally posted on **Carlson Connection** by Jennifer Dibona

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Carlson + ESRI = Wow!

So, how cool is this?

At the Carlson User Conference this week in Lexington, KY, Brent Jones of ESRI announced a new grant program in coordination with Carlson Software. The program will bring ESRI products to every IntelliCAD-based Carlson program.

Speaking with Brent on Tuesday, he said that a few of the details have yet to be worked out, but Carlson IntelliCAD users should be hearing details in about a month.

Originally posted on **Carlson Connection** by Jennifer Dibona

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Brent Jones of ESRI discusses ‘Why GIS Needs Surveyors’

Combining all the GIS and land development technologies that exist today is what Brent Jones suggested surveyors do in his keynote address to the attendees at the 2nd annual Carlson User Conference. Jones, PE, PLS, is the Survey, Cadastre, and Engineering Industry Manager for ESRI, which designs and develops the world’s leading geographic information system (GIS) technology.

To help surveyors accomplish this, Jones announced an upcoming grant program to be offered by ESRI for every Carlson IntelliCAD user. “ESRI is very supportive of Carlson’s development on

IntelliCAD and we want to support your users," said Jones of this specialized grant program being developed exclusively for Carlson IntelliCAD users. "We want to help surveyors leverage their existing resources to help in the GIS market." With this offer Carlson IntelliCAD users will be able to access GIS technology and jump-start a GIS practice. Read More

Originally posted on **Carlson Connection** by Karen Cummings

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Carlson Software Expands Carlson College™

Carlson Software recently expanded their expert level training program, Carlson College™, and started the Carlson College Training Program. This new program will allow individuals and companies to get training direct from Carlson Software or through the members of the Carlson College Training Program. New members of the Training Program include Harken-Reidar Inc. of Front Royal, Va.; Carlson Desktop Solutions (CDS), based in Austin, Texas; That CAD Girl, located near Raleigh, N.C.; and, for C&G products only, Larry Phipps of the Land Surveyor's Workshop in Jefferson, N.C. Membership in the Carlson College Training Program is available to any person or organization that makes a commitment to providing quality training on Carlson Software products.

For more information on the Carlson College Training Program or training, please contact Carlson Software at 800-989-5028, email training@carlsonsw.com or visit www.carlsonsw.com/training. Members of the Carlson College Training Program are independent entities from Carlson Software.

Read the entire Press release here.

Originally posted on **Carlson Connection** by Karen Cummings

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Coming in Carlson 2010

I’m not privy to the “official” list of coming updates, but I can share a few things that I know will be in the next release. Most of these come from “wishlist” items I have submitted on behalf of my clients.

The folks at Carlson are welcome to add their 2-cents in the Comments of this post or on Direct From Carlson.

Option for placing building footprint a distance off the building setback line.

Currently, the LotNet command places the building footprint exactly on the midpoint of the building setback line. We heard the request several times to have the option of placing the footprint some distance behind the setback line. It will be in the 2010 release.

C & G Survey

Instead of having two separate survey programs, Carlson will be incorporating C & G as a separate set of menus in Carlson Survey in 2010.

Basic IntelliCAD Menu

If you’re running Carlson on top of an AutoCAD-based program, you have an icon or menu option to switch over to an AutoCAD menu that has basic Draw commands such as line, pline and text

and basic Modify commands such as copy, explode and pedit. Although it’s not easy to get to right now, IntelliCAD has a similar set of menus and toolbars. Carlson 2010 stand-alone with IntelliCAD will have a menu item and toolbar icon allowing you to easily switch over to the IntelliCAD menus and then back again to the Carlson menus.

Lookup table of curb slopes for super-elevation transitioning

This new feature will handle curb transitions like those shown in this NC DOT detail drawing.

Originally posted on **Carlson Connection** by Jennifer Dibona

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Poll Question 3/30/2009

[polldaddy poll=1493826]

Originally posted on **Carlson Connection** by Jennifer Dibona

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IntelliCAD Update for Carlson Products – 2/2/2009

The most recent IntelliCAD Update for Carlson can be found here:

http://update.carlsonsw.com/entov/c2009_icad_post65_install.exe

From Carlson:

It contains the fixes based on user input and crash submissions since we released 6.5.

In particular, the following features and crashes has been addressed or at least a fix has been attempted:

1) Crash on mouse move
2) Crash on save (during exit?)
3) Another update to image engine to correct problems in the last update
4) Crash during printing or redraw after real time zoom
5) Numerous "small" crashes
6) Crashes during drawing opening or saving
7) Right click menu is added for entity modifications (this requires menu reload and will reset the menus and toolbars). To reload the menu, type MENU and select icadbase.mnu file.
8) Slow autosave/save has been addressed or at least improved.
9) Font mapping problems have been addressed

In case if this patch makes matters worse for you, the older patch is available here: http://update.carlsonsw.com/entov/c2009_icad_6_6_17_41_install.exe . Simply run it to restore to the last version.

Originally posted on **Carlson Connection** by Jennifer Dibona

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Top Myths About Carlson

Software

I’m asked many of these questions on a fairly regular basis and thought it was time to look into some of them and provide the fullest answer I could. Where possible, I’ve researched and found the answer myself. In a few cases I had to rely on Carlson representatives to supply the answers.

Myth #1 Autodesk stopped working with Carlson in February 2008.

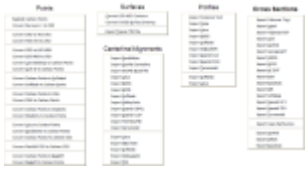
False. In February 2008 Carlson simply stopped being a reseller of Autodesk products.

In other words, if you want to run Carlson on top of AutoCAD, Map, Land Desktop or Civil 3D, you’ll have to buy it from an Autodesk reseller instead of from Carlson. Carlson remains part of Autodesk’s Developer Network (ADN) and is listed on Autodesk’s partner page. The ADN designation provides tools to developers to help build their products on top of Autodesk products. As a point of comparison, Eagle Point Software is also a development partner of Autodesk.

Myth #2 Carlson is owned by Autodesk or, (“bonus”-myth) Carlson will be sold to another, larger software company.

False. Carlson Software was started in 1983 by Bruce Carlson and remains a private, family-owned business. No one can absolutely guarantee the future, but I have heard Bruce Carlson speak many times about the value he places on competition in the marketplace and his belief that the consolidation of many other software companies has come at the expense of the end-user of the software.

Selling out? I don't see it. But partnering? Yes. Carlson places a great deal of value on working with any company who wants to work with them. Click on the image below to see the many different programs Carlson imports data from and exports data to.



Myth #3 Because Carlson Software uses basic AutoCAD entities instead of "intelligent objects", it does not have 3D or dynamic abilities.

False. Carlson Software uses basic AutoCAD entities so that all drawings produced by their programs can be easily shared with any other DWG- or DXF-compatible program, regardless of version. Carlson has figured out a way to have the dynamic reactions work on basic entities such as lines, polylines and text. One example would be having profiles and storm drain structures automatically adjust their elevation as a centerline alignment is edited and changed along a surface. And, all of this happens without having to fight the dreaded "proxy objects"!

Myth #4 Because Carlson now works on top of Intellicad, it no longer works on top of AutoCAD-based products.

False. Carlson Software has always worked on top of AutoCAD-based products and, if you listen to Bruce Carlson discuss the issue, hopes to always continue doing so.

In April 2008, Carlson began giving their customers an IntelliCAD-based "stand-alone" copy of their software with every purchase of Carlson Civil, Survey, Hydrology, GIS, TakeOff and other programs. (IntelliCAD is widely described as an "AutoCAD-

clone”. You can read more HERE.). This, again, gives more power and options to Carlson users because it allows the user to choose whether to run Carlson on top of practically any version of AutoCAD, AutoCAD Map, Land Desktop, Civil 3D or on top of IntelliCAD.

Also, with their Sight Survey program (launched in 2008), Carlson created their first program to run on top of MicroStation.

At last year’s 25th Anniversary users’ conference, Bruce Carlson stated that Carlson hopes to have their software working on 4 different platforms within the next few years: IntelliCAD, AutoCAD, Microstation and ESRI.

Myth #5 Carlson doesn’t have CIVIL “BIM”-ability.

First, the premise of the statement is incorrect. BIM (Building Information Modeling), by definition, has no relationship to the civil engineering industry. It is architectural in scope and refers to actual buildings and facilities.

However, for several reasons there has been a push to re-define the term BIM to apply to Civil Engineering (in general) and Civil 3D (in particular). When discussing BIM in the context of Civil Engineering, it simply means that a software program has the ability to:

- design to specific criteria
- show a great visual representation of all the components of your project in 3D view and
- dynamically reflect changes to your project.

Can Carlson Software do all that? Absolutely.

Carlson can, and has been able to, produce true 3D models of civil/survey/utility project sites for years. These models can be viewed in 3D and quantities are dynamically updated whenever the model changes.

Because Carlson has strongly served the U.S. mining industry for over 20 years, they long ago developed features for grading, material quantity calculations and surface viewing and visualization to meet the demands of this industry. In fact, the civil industry pales in comparison to the mining industry in regard to these demands.

Myth #6 Carlson has only been developing civil software since 2007.

False. To make sure I got this right, I asked the folks at Carlson for help and received the following in response:

> *Bruce Carlson began developing his software for the mining industry in 1983. By 1984, the program was able to extract profiles and cross-sections, calculate volumes and design road profiles. 3D Surface viewing abilities have been available in Carlson Software since the early 1990's.*
>
> *Carlson developed the stand-alone Carlson Survey program in 1996 and in 1999 Autodesk contracted to market and sell a version of it called "Autodesk Field Survey". Autodesk did away with Field Survey after a few years and Carlson migrated most users over to Carlson Survey where it has grown to become a favorite of surveyors.*
>
> *Various civil features were organized as modules in a package called SurvCADD that was released in 1989. The civil engineering routines were renamed as Carlson Civil in 2006.*
>
> *The first Hydrology module for Carlson was released in 1993.*

It was re-packaged as Carlson Hydrology in 2006.

Carlson Hydrology was the first and, I believe, is still the only H & H software to function entirely within the DWG-environment. If I learn differently after this document is made public, I will post a correction in this space.

Myth #7 Carlson may have found a spot in some surveying firms, but larger firms aren't using it.

False. Again, I requested generic customer data from Carlson and was told that,

> *Among our 30,000+ users, there are many DOT agencies and also ENR Top 50 firms using Carlson Software. Carlson Software is very experienced in working with large firms, due to their mining background. All 20 of the top 20 U.S. coal companies use Carlson Software at some level, most being standardized on the software for mine planning and design.*

As far as my personal experience, I've only been working with Carlson Software for a couple of years and companies I work with tend to have fewer than 25 users. I can personally say that I have seen or know of a few large firms who have moved to or are in the process of moving to Carlson.

These do not include the many customers of mine who have recently let their software contracts lapse, purchased one or more seats of Carlson and have told me they plan to purchase and implement Carlson when the economy rebounds.

Myth #8 Carlson Software does not support the full project

lifecycle – Concept to Completion.

False. I think Carlson probably has the project lifecycle covered better than any other software firm in existence.

Carlson Software has data collection, survey processing, civil design, hydrology, GIS, construction material takeoff and machine control software in their stable.

Myth #9 Carlson Software doesn't have the support system in place to adequately support its users.

False. Carlson provides free technical support directly out of their Maysville, KY and Boston, MA offices. Again, I have heard Bruce Carlson say that keeping tech support free and in-house ensures that their software will remain easy-to-use and that the company will always be responsive to the wishes of their customers.

If a bug or other problem with the software is encountered and logged into Carlson's tech support department, the corrected files will be emailed to you as soon as the programmers develop the fix. Periodically a collection of the updated files will be released to all users as a maintenance patch. These updates are available to all users whether or not they are under a maintenance contract with Carlson.

I received this testimonial from a customer on March 13, 2009.

> *"Recently I found that the Time of Concentration input boxes were inadequate under the hydrology portion of Carlson Civil Suite so I emailed a description of the problem to them. I was very impressed to get a phone call the same day. They discussed the problem with me and had a revised program update*

> *to me in under a week. I've been emailing Autodesk for over a year on problems with Civil 3D and never heard a peep. Needless to say I'm very happy with the customer service I have received from Carlson thus far."*
>
> *David Farina, CCAD Engineering*
> *– Greenville, SC*

Other examples of Carlson's responsiveness:

Example 1: The ability of the Carlson Civil & Hydrology "Design Bench Pond" command to have multiple interior benches was added to the software after an attendee at a workshop I held in Raleigh, NC in December 2007 requested it.

Example 2: In the LotNet command, the prompts asking users to specify minimum and maximum building offset distances for lot layout generated too many tech support calls. In the next release, the prompts were re-worded to make the intent more clear.

Example 3: The LotNet command now allows you to designate "sub-areas" (such as wetlands, stream buffers, poor soils, etc.) to be excluded from your area to be subdivided during the lot layout routine. This request came from a prospect during a demonstration in Raleigh.

Example 4: I understand that Carlson's tech support team was bombarded by requests to change the default cul-de-sac location from the "Start" of the road to the "End" of the road in the RoadNet command. This was changed in the 2009 release.

Example 5: The ability to draw multiple building pads inside lots during the lot layout routine in LotNet was requested by a firm out of Savannah, GA.

Myth #10 Carlson Software can’t share data with Land Desktop or Civil 3D.

False. Carlson has many tools in their software to import civil/survey data from and export data to Land Desktop and Civil 3D. It can be said that Carlson Software works with Civil 3D data as well as Land Desktop or any other civil/survey software and also works with Land Desktop data as well as Civil 3D or any other software.

Carlson has LandXML import and export functionality, can directly convert Land Desktop points and contours into Carlson points and contours and also imports a Civil 3D surface as elevated contours.

Regardless of the civil/survey software being used, LandXML is the best mechanism to import/export a surface model because it maintains the TIN lines of the surface.

Myth #11 To be continued.

If anyone thinks of other question(s) they’d like to supply, please email me HERE. I’m open to suggestions and don’t mind expanding beyond 10 Myths.

Originally posted on **Carlson Connection** by Jennifer Dibona

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Welcome!

Thanks for taking the time to visit us at Carlson Connection.

The site is a little bare right now, but keep checking back. We hope to make it an active community with lots of good information and discussion.

If you'd like to be a Contributor to the site, please **email me here**.

Originally posted on **Carlson Connection** by Jennifer Dibona