

## UpdateWS

The UpdateWS program has now been updated to use “passive FTP” instead of “active FTP”. This should resolve the problems that some of our external clients may have encountered when attempting to use the program. The updated version is available for download at

<http://www.ncdot.gov/doh/CADD/default.html>

## Pin & Roll Tabs

Dockable dialogs have been modernized in SS1 with the addition of pins to fix their docked location. When pinned, the dialog displays as a tab which will roll into the screen when the tab is clicked.  Once the cursor is moved away from the  dialog, it will automatically roll up to its pinned location. The pin icon will be horizontal when pinned and upright when not pinned. Using pin and roll dialog can save on valuable screen real estate.



## this issue

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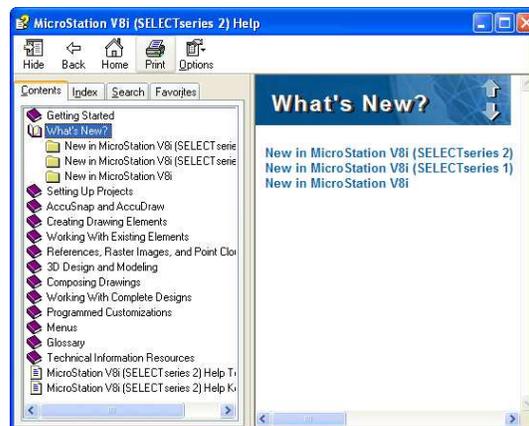
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## Think Differently— don't pave over the box...

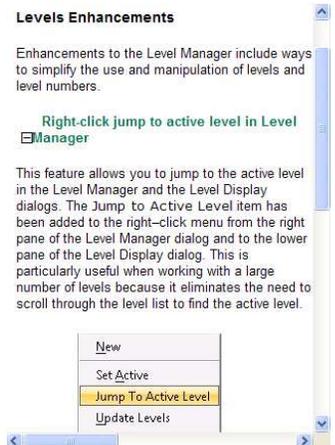
Last Issue I asked the question “So what have you done with CADD today?” I hope the answer was “a lot”. This issue I think I'll get a bit more specific. MicroStation, and GEOPAK have thousands of commands. How many have you used? Can you even remember the last new command you experimented with? If you can't then I would highly recommend that you take some time (I know everybody is busy) or make some time to just play around with MicroStation and Geopak. To begin with check the What's New section of the MicroStation Help file.



Here you will find the major changes to MicroStation since the last version. Or

as you can see from the image the previous three versions. Start with at the bottom of the list and work through it. Granted there will probably be a lot of things (“features”) discussed that you either have no idea what they are talking about or you could care less about. But look them over and take some time to read about them.

One never knows if something is useful until you give a try. For example Under New in MicroStation V8i you will find under the section Levels Enhancements a new feature that allows you to jump to the active level in level manager and level display. It is a simple but very useful feature. So when you get some time Don't continue doing what you've always done make some time and explore what new in MicroStation.



### Levels Enhancements

Enhancements to the Level Manager include ways to simplify the use and manipulation of levels and level numbers.

#### Right-click jump to active level in Level Manager

This feature allows you to jump to the active level in the Level Manager and the Level Display dialogs. The Jump to Active Level item has been added to the right-click menu from the right pane of the Level Manager dialog and to the lower pane of the Level Display dialog. This is particularly useful when working with a large number of levels because it eliminates the need to scroll through the level list to find the active level.

## Western Division Training is back (sort of)

While ITWest has not gotten a new training facility to replace the previous one in Hickory CADD Services (along with PC Training) are again offering training classes for Divisions 9-14. Classes are currently being held at the BSIP training lab in Albemarle and in the Temporary Training room in Asheville at the Division 13 Headquarters building. I would like to thank both Division 10 and 13 for allowing us to use these training rooms. For more information on CADD Training Classes contact Rande Robinson at 828.466.5526 or David Dietrich at 919.386.9116 for PC training or PC software support issues.

## MicroStation You Tube videos

Freeware video demo **View Rotation** - <http://bit.ly/aS0CCw>

Freeware video demo **View Model** - <http://bit.ly/a2L56L>

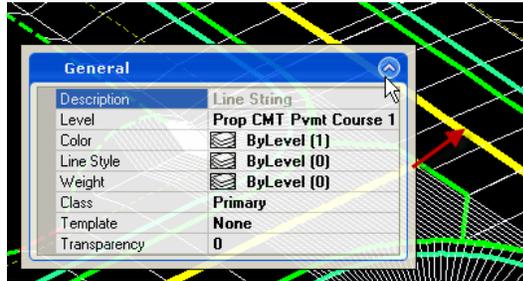
Freeware video demo **View Levels** - <http://bit.ly/cXtHOM>

Trouble remembering where the upf is located?

You can open the MicroStation menu item Workspace -> About Workspace. In the middle of the dialog it will show the path to the file (hover over it to see the full path).

## Alternate Menus

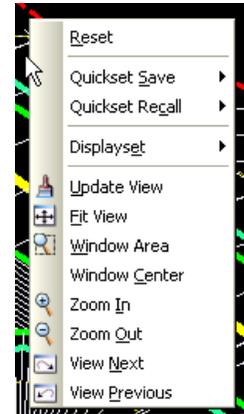
Quick Info - Hover over element and press **Alt + Reset** to open compact Element Information box



The **Shift - Tentative** to open snaps menu

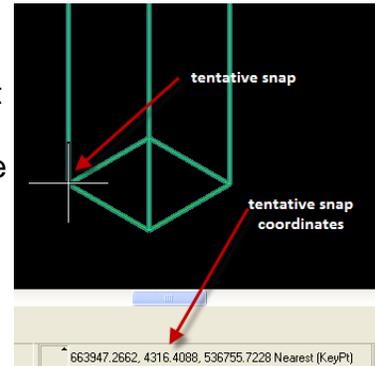


**Shift - Right Click** to open Views, Quickset menu

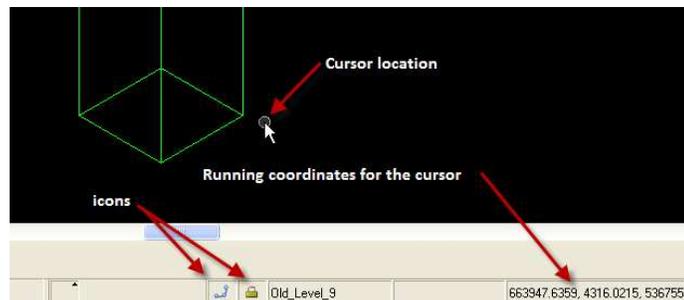


## Running Coordinates

As you probably know if you tentative to a point (or even empty space) in a design file you get the coordinates of the point at the bottom of the MicroStation screen (as the image on the right shows). This is fine but what if you would like to have running coordinates as you move your cursor?



You can. Right click on any of the icons in the lower right corner of the application window. Check "Running Coordinates" on the popup menu as shown on the left. Then just look down to the lower right hand portion of the screen and watch the coordinates update as you move your cursor.





## How to get CADD Training



With each new version of software comes the never ending activity of learning how the program's great new features work and which old ones don't. The introduction of MicroStation V8 and its associated programs are no exception.

The additions of unlimited named levels, models and a slew of user interface enhancements can make one's first attempt to use V8 a bit over whelming. If you need training for a new employee or feel you need a refresher course in any of our CADD products, all you need to do is go to the CADD Support section of the NCDOT Intranet Portal at:

<https://intranet.dot.state.nc.us/portal/Home/Teams/IT/CADD/CADDSupport/tabid/142/Default.aspx>

Then select Training from the Document Library CADD Menu. From the Training page download and fill out the CADD request Training form and mail the form to:

**Steve Brown**  
Engineering Application Services  
1597 Mail Service Center  
Raleigh, NC 27699-1597

CADD Services will get you into the next available class provided there is no waiting list.

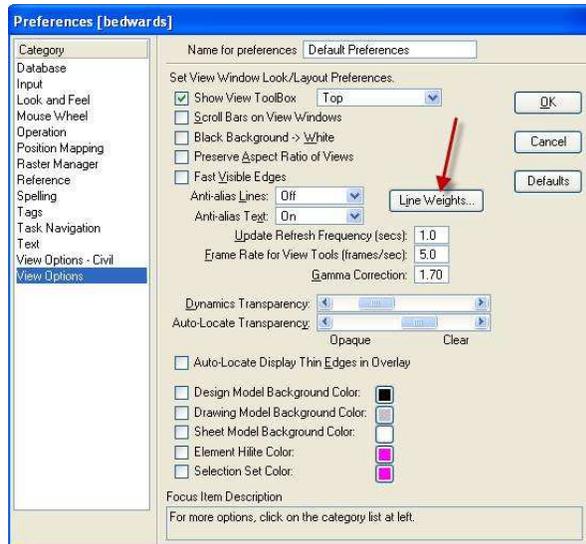
Remember that it is not necessary to continue to fill out requests if a request is on record. In if doubt email Steve at [sbrown@ncdot.gov](mailto:sbrown@ncdot.gov)

Also, when making a request, **check off all the classes that you wish to take.** (i.e. It's not necessary to complete MicroStation before you can request GEOPAK). Once we receive and enter a request our

## View Options—Line Weights

In the view options settings under the Preferences Pull down. Set Line Weights to a 2:1 ratio .

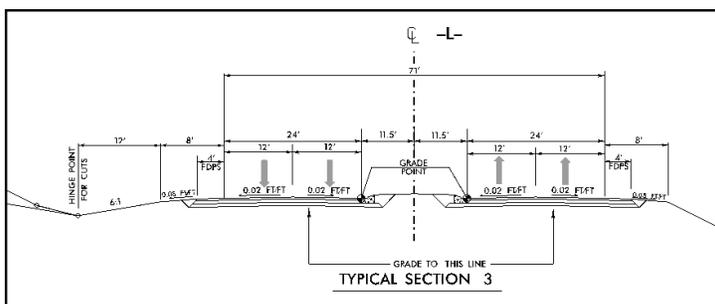
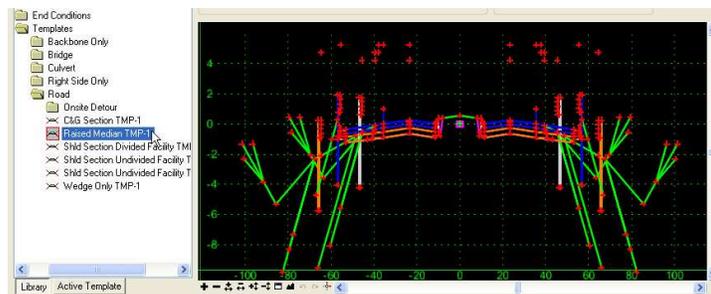
This is generally much “easier on the eyes” and allows some thicker line weight elements (particularly text) to be better viewed from a higher zoom level.



## First Divided Facility Templates Available

Along with the median ditch template, a raised grass median template has just been developed for use.

The first raised median template will satisfy the typical section Shown Below.

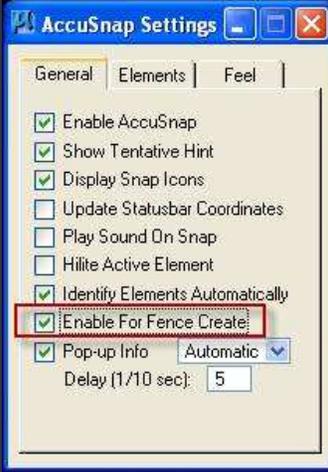


A few more raised concrete and grass median templates with the various configurations will be created in the coming weeks. Please use them for your projects and provide Roadway design some feedback on what is working and what is not.



BACK FROM THE INTENSIVE TRAINING COURSE I WAS RUN THROUGH IN HIS MIND HIS NEW FOUND KNOWLEDGE OF CATS

## Enable AccuSnap for Fence Create.



## AccuDraw & AccuSnap

When using AccuSnap in conjunction with AccuDraw, one can use the following AccuDraw shortcut keys:

**HA**—which suspends AccuDraw for the current tool operation. Selecting a new tool or issuing a Reset re-enables AccuDraw.

**HU**—suspends the AccuSnap for the complete command. Once another command is selected, AccuSnap will be enabled.

**HS**—toggles AccuSnap off/on.

AccuDraw also lets you change the snap mode for the *next snap* the following keys.

**I**—to use the Intersect Snap

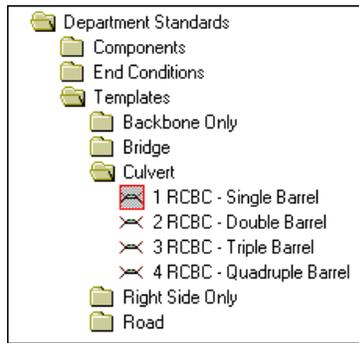
**N**—changes to the Nearest Snap

**C**—Center Snap

## Culverts in Corridor Modeler

**Question:** How do you show the culvert in Corridor Modeler?

**Answer:** Templates ranging from a single barrel to a quadruple barrel RCBC have been added to the NCDOT\_Rdy\_Standard.ITL (master template library).



Treat the culvert as if it is just another corridor (like a -Y-Line). Use parametric constraints (**CV\_Box Height** and **CV\_Box Width**) to vary each box height and width. Create the DTMs for both the proposed roadway and the proposed culvert. When you are ready to cut the proposed cross sections, add both proposed DTMs and the existing DTM/TIN to the surface list.

For further details on the culvert components, see the below web reference help link. This link is also accessible through the component help link in the template library.

[http://www.ncdot.org/doh/preconstruct/highway/roadway/corridor\\_modeling/temp\\_lib/components/culvert/](http://www.ncdot.org/doh/preconstruct/highway/roadway/corridor_modeling/temp_lib/components/culvert/)

For further instructions on how to use the culvert templates, see the below link for an example exercise complete with a downloadable dataset so you can run through it at your convenience.

[http://www.ncdot.org/doh/preconstruct/highway/roadway/corridor\\_modeling/exercises/culvert/](http://www.ncdot.org/doh/preconstruct/highway/roadway/corridor_modeling/exercises/culvert/),

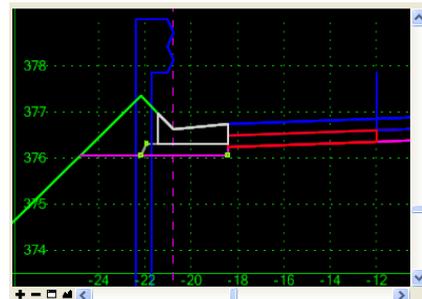
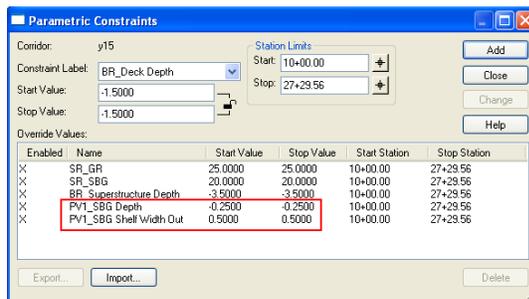
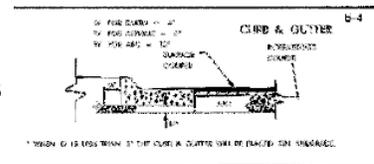
-Oak Thammavong

## CMT 0014 Pavement Layer Underneath SBG

- How should I handle the ABC under shoulder berm gutter in corridor modeling? Please see the attached pdf showing a detail of the ABC under the SBG.
- Project is trench section with SBG. Layers are S9.5B @ 3", I19.0B @ 2.5", and B25.0B @ 4". Design manual calls for SBG to sit on base if intermediate is less than 3" under SBG. How do we handle this with the CM Templates?

According to the Roadway Design Manual, Part I, 1-3E, E-4.

The two undivided facility shoulder templates (2-layers and 3-layers) have been modified to accommodate the pavement layer underneath SBG. Use the two new parametric constraints to control the SBG pavement layer depth and shelf width.

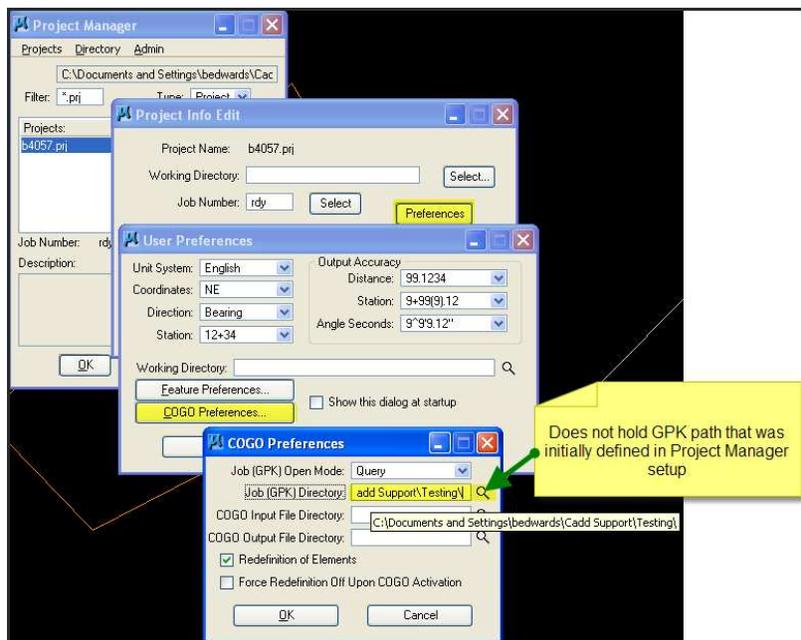


Note the pavement layer depth underneath SBG can be zeroed out if it is less than three inches and to be placed on the subgrade line.



## Geopak V8i SS1 Refresh - GPK path bug in Project Manager

There is a known bug in the most recent Geopak V8i SS1 Refresh version (08.11.07.246) with the Project Manager. The problem is Project Manager will not hold the full GPK file path when changing from project to project. The danger related to this bug is that the user may not realize that he/she is working in a different GPK file than expected. The workaround to this is to reset your GPK path each time to go into a new project, either through the Project Manager itself or simply by going straight to the COGO User preferences dialog (right-click and hold in Microstation view).



Remember this issue is only for the SS1 Refresh release ... not SS1. If your geopak version number is not 08.11.07.246, then this bug does not occur. Please let CADD Services know if you have any ques-

## Basic Corridor Modeling Training Videos on the portal



Can be found at on the NCDOT IntraNet Portal at

<https://intranet.dot.state.nc.us/portal/Home/Teams/IT/CADD/CADDTraining/CorridorModeling/tabid/275/Default.aspx>

Additional CM information can be found on the Roadway Design website at

<https://intranet.dot.state.nc.us/portal/Home/Teams/IT/CADD/CADDTraining/CorridorModeling/tabid/275/Default.aspx>



### CADD News Quote of the Issue

“Some problems are so complex that you have to be highly intelligent and well-informed just to be undecided about them.”

-Laurence J

**CADD News**  
Issue 01 Volume 11  
April 2011



NCDOT  
Information Technology  
Engineering Technology Systems  
Engineering Applications Service  
CADD Services

<http://www.ncdot.org/doh/CADD/>

Century Center Complex Bldg. A  
1597 Mail Service Center  
Raleigh, NC 27699-1597

Phone: 919.707.7030  
Fax: 919.212.3072

IT West / co: Bridge Maintenance  
1296 Prison Camp Road  
Newton, NC 28658

Phone: 828.466.5526  
Fax: 828.466.5579

On the Intranet at

[https://intranet.dot.state.nc.us/  
portal/Home/Teams/IT/CADD/  
tabid/63/Default.aspx](https://intranet.dot.state.nc.us/portal/Home/Teams/IT/CADD/tabid/63/Default.aspx)

### Brain Teaser

The ages of a father and son add up to 66. The father's age is the son's age reversed. How old could they be? (NB there are 3 possible solutions).

### New CADD Services Phone Numbers.

CADD Services (at the Century Center) has recently received a new phone system and numbers which are as follows.

Bryan Edwards—919.707.7030	Tim Merrill— 919.707.7031
Steve Brown—919.707.7032	Ed Williams—919.707.7033
Steve Atkinson—919.707.7034	The Fax number is still the same— 919.212.3072

### Last Word— History Tidbit

Here are some interesting tidbits that just maybe you didn't know.

In George Washington's days, there were no cameras. One's image was either sculpted or painted. Some paintings of George Washington showed him standing behind a desk with one arm behind his back while others showed both legs and both arms. Prices charged by painters were not based on how many people were to be painted, but by how many limbs were to be painted. Arms and legs are 'limbs,' therefore painting them would cost the buyer more.. Hence the expression, 'Okay, but it'll cost you an arm and a leg. (Artists know hands and arms are more difficult to paint).

One more and betting you didn't know this!

In the heyday of sailing ships, all war ships and many freighters carried iron cannons. Those cannons fired round iron cannon balls. It was necessary to keep a good supply near the cannon. However, how to prevent them from rolling about the deck? The best storage method devised was a square-based pyramid with one ball on top, resting on four resting on nine, which rested on sixteen.. Thus, a supply of 30 cannon balls could be stacked in a small area right next to the cannon. There was only one problem...how to prevent the bottom layer from sliding or rolling from under the others. The solution was a metal plate called a 'Monkey' with 16 round indentations. However, if this plate were made of iron, the iron balls would quickly rust to it. The solution to the rusting problem was to make 'Brass Monkeys.' Few landlubbers realize that brass contracts much more and much faster than iron when chilled.

Consequently, when the temperature dropped too far, the brass indentations would shrink so much that the iron cannonballs would come right off the monkey.. Thus, it was quite literally, 'Cold enough to freeze the balls off a brass monkey.' (All this time, you thought that was an improper expression, didn't you.)