



**AUTODESK
UNIVERSITY
2005**

November 28 – December 1, 2005 • Orlando, Florida

House of Style in Autodesk® Civil 3D®

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CV32-3L

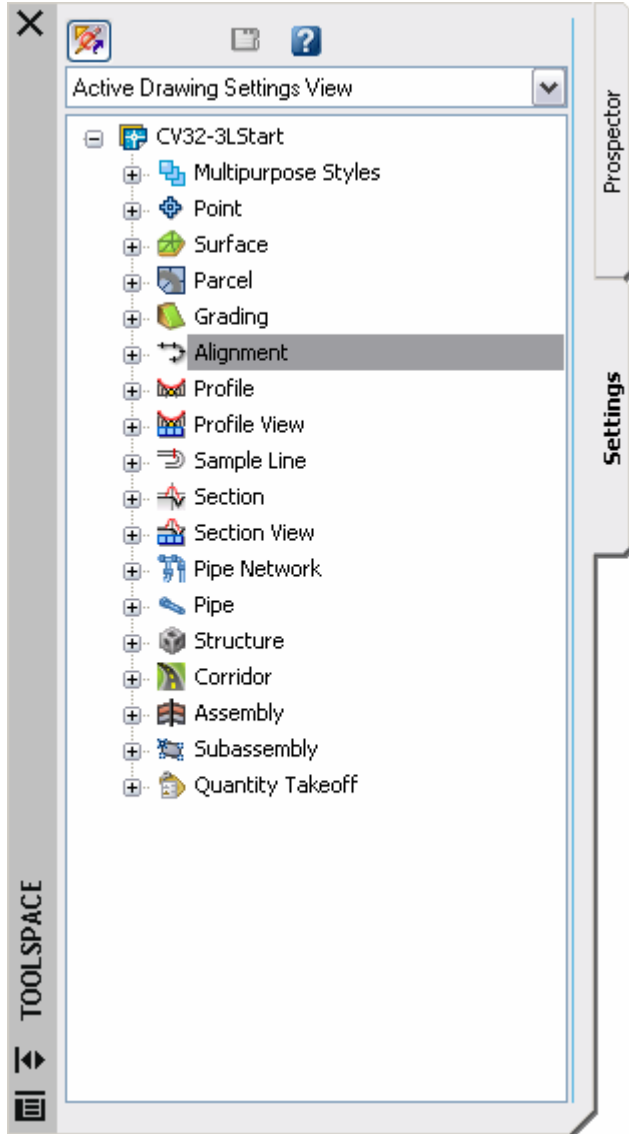
The follow-up to the Elements of Style class, this session will bypass the basics and step into more complex object and label styles. We'll explore some tricks for making styles, and how to use Civil 3D Styles in places you never thought of. If you're ready to be a true style expert, this is the class for you.

About the Speaker:

James has carved out a niche in the information technology side of land development. Since joining Jones & Boyd in 1997, his combination of software expertise and engineering knowledge has enabled him to expand the company's services. A part of the Gunslinger team for Autodesk Land Desktop since 2001, James led Jones & Boyd's pilot project in Autodesk Civil 3D. JBI was also a gold site for testing AutoCAD 2005 software.
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You're Knee Deep in Styles...

...And slogging through. You've handled points, gotten stationing conquered, and tagged more parcels than you can count. What's left? All the good stuff! Styles drive Civil 3D and when you've got styles built across your entire plan set, you're the one in control.



This process can be daunting, but by starting with some examples of where you're going, and using the provided styles as guides, you can make styles that fit your company's needs and standards. And once they're built, you can reuse them in every drawing you make.

The Elements of Style class discussed the basics of creating and copying styles for points, surfaces, parcels, and alignments. This lab will assume a basic level of understanding of Civil 3D styles, as well as the various tabs within the Styles Editor dialog boxes.

In this session, we're going to set up styles, and modify existing styles for these objects:

- Profiles & Label Sets
- Profile Views
- Bands & Band Sets
- Profile Labels & Tricks
- Pipe and Structures
- Pipe Network Labels

The most important part of your move to style based drafting in Civil 3D is getting started. Every style you modify or create will place you one step closer to being a true style maven with a full wardrobe of styles from which to choose.

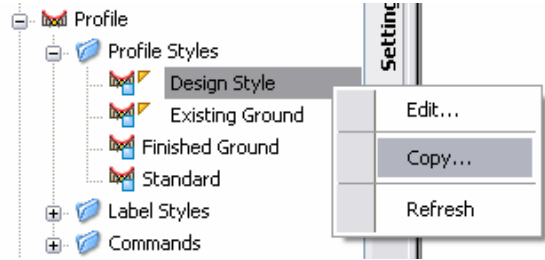
Because this class attempts to cover so much material so quickly, there's a diagram on the last page to help you when you get home. It shows a complete Profile View, along with notes on where to edit each component. Also, we will be looking at styles, not design, so don't get too caught up in the design of the various components.

Now, let's get going!

Profiles—Paving

This exercise will modify the built-in Design Style and will modify it for use in a Paving profile.

1. Open the CV32-3L.dwg (The location will be on screen) and make sure Toolspace is open.
2. Notice that the profile for Melinda Lane is already in the upper right of your screen. Zoom in on this profile view.
3. Expand the Settings tab of Prospector and dig down to the Profile Styles container. Right click on the Design Style and select Copy.
4. In the Profile Style dialog, change the name to Paving and enter a description if you wish.
5. Switch to the Display tab. Click on the Line Component and then shift-click on the 3D Chain Component to highlight them all. *Highlighting multiple entries in the component list lets you change them all at once.*
6. Click on the C-ROAD-PROF-LINE text under layer. Our style will put all of the linework on the same layer for ease of layer display control.
7. Select the C-ROAD-PROF layer from the dialog list that appears and click OK.
8. Now, select the Line through Asymmetrical Parabola. Change the color to Green and Linetype to Continuous. *Profiles & Profile Views are one case where hard-coding colors and linetypes makes sense. Because profiles are rarely modified for display in Xrefs, using entity layers makes good sense and simplifies setup.*
9. Turn off the Arrow, Pass-Through Points and PVI Points visibility by clicking the light bulb next to each component.
10. Change the Line Extensions color to Red and the Linetype to Hidden2. Your dialog should now look like the picture below. We'll ignore color and linetype for components that are off in this style.



Component Type	Visible
Line	☹
Circular Curve	☹
Symmetrical Parabola	☹
Asymmetrical Parabola	☹
Arrow	☹
Line Extensions	☹
Pass-Through Points	☹
PVI Points	☹
3D Chain	☹

Component Type	Visible	Layer	Color	Linetype	LT Scale	Lineweight
Line	☹	C-ROAD-PROF	■ green	Continuous	1.0000	ByLayer
Circular Curve	☹	C-ROAD-PROF	■ green	Continuous	1.0000	ByLayer
Symmetrical Parabola	☹	C-ROAD-PROF	■ green	Continuous	1.0000	ByLayer
Asymmetrical Parabola	☹	C-ROAD-PROF	■ green	Continuous	1.0000	ByLayer
Arrow	☹	C-ROAD-PROF	■ BYLAYER	ByLayer	1.0000	ByLayer
Line Extensions	☹	C-ROAD-PROF	■ red	HIDDEN2	1.0000	ByLayer
Pass-Through Points	☹	C-ROAD-PROF	■ BYLAYER	ByLayer	1.0000	ByLayer
PVI Points	☹	C-ROAD-PROF	■ BYLAYER	ByLayer	1.0000	ByLayer
3D Chain	☹	C-ROAD-PROF	■ BYLAYER	ByLayer	1.0000	ByLayer

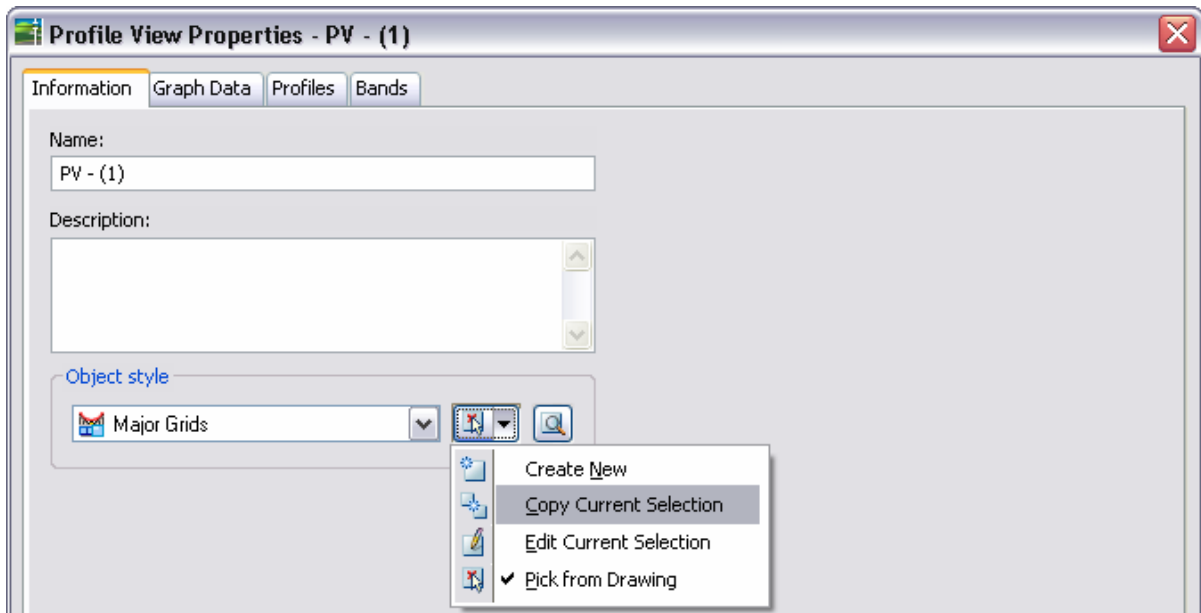
11. Click OK to dismiss the Profile Style dialog box. We'll put this style to use in the next exercise.

Profile Views—Paving

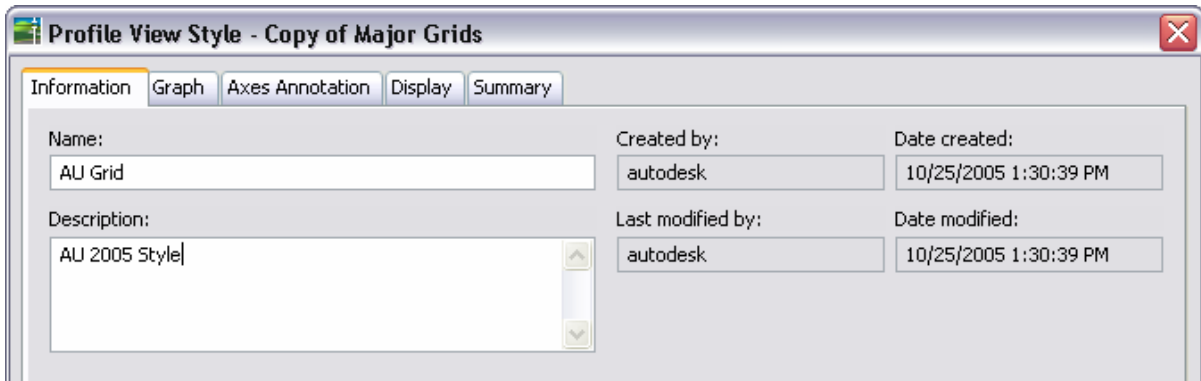
This style will create a grid and band set for profiling your paving design. We'll modify an existing profile to get the look we're after, then use that setup to create a second profile, with our settings already in place.

1. Zoom in on this profile view. Right-click on a grid line, and select Profile View Properties.

2. Switch to the Information tab, and on the Object Style portion, select Copy Current Selection.



3. Change the Name: Field to AU Grid. You can fill in the description if you like.

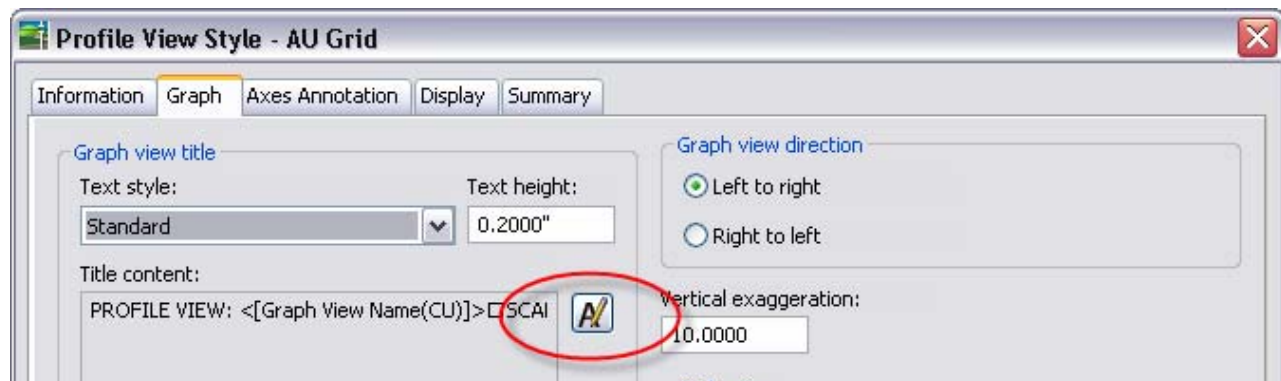


- Switch to the Display Tab. You should set these colors to match your own plotting setup. In this case, set them up to match the image below.

Component Type	Visible	Layer	Color	Linetype	LT Scale
Graph Title	Lightbulb	C-ROAD-PROF-LABL	green	Continuous	1.0000
Left Axis	Lightbulb	C-ROAD-PROF-LABL	cyan	Continuous	1.0000
Left Axis Title	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Left Axis Annotation Major	Lightbulb	C-ROAD-PROF-LABL	white	Continuous	1.0000
Left Axis Annotation Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Left Axis Ticks Major	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Left Axis Ticks Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Right Axis	Lightbulb	C-ROAD-PROF-LABL	cyan	Continuous	1.0000
Right Axis Title	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Right Axis Annotation Major	Lightbulb	C-ROAD-PROF-LABL	white	Continuous	1.0000
Right Axis Annotation Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Right Axis Ticks Major	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Right Axis Ticks Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Top Axis	Lightbulb	C-ROAD-PROF-LABL	cyan	Continuous	1.0000
Top Axis Title	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Top Axis Annotation Major	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Top Axis Annotation Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Top Axis Ticks Major	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Top Axis Ticks Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Bottom Axis	Lightbulb	C-ROAD-PROF-LABL	cyan	Continuous	1.0000
Bottom Axis Title	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Bottom Axis Annotation Major	Lightbulb	C-ROAD-PROF-LABL	white	Continuous	1.0000
Bottom Axis Annotation Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Bottom Axis Ticks Major	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Bottom Axis Ticks Minor	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000
Grid Horizontal Major	Lightbulb	C-ROAD-PROF-LABL	magenta	Continuous	1.0000
Grid Horizontal Minor	Lightbulb	C-ROAD-PROF-LABL	12	Continuous	1.0000
Grid Vertical Major	Lightbulb	C-ROAD-PROF-LABL	magenta	Continuous	1.0000
Grid Vertical Minor	Lightbulb	C-ROAD-PROF-LABL	12	Continuous	1.0000
Grid at HGP	Lightbulb	C-ROAD-PROF-LABL	yellow	Continuous	1.0000

- Switch to the Graph tab, and let's modify the title. The image on the right is what we're after.
- Click on the Mtext Edit Button to enter the Title Component Editor.

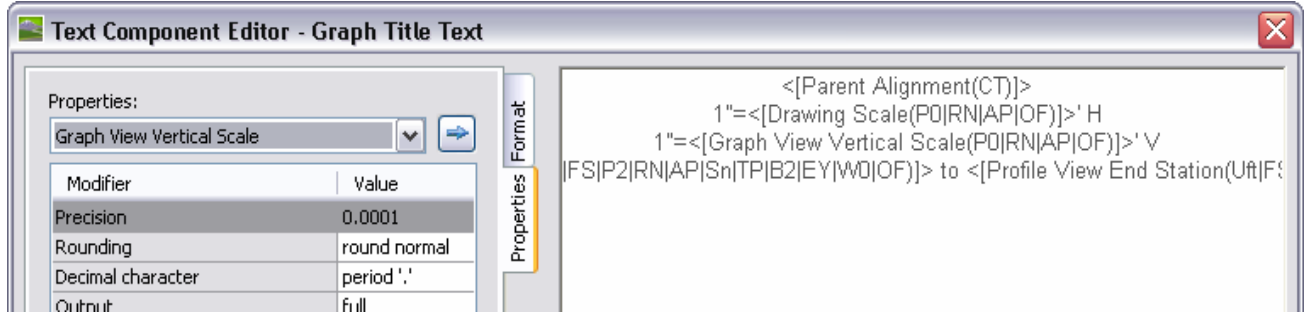
Melinda Lane
 1"=40' H
 1"=4' V
 Station 0+00 to 2+81.28



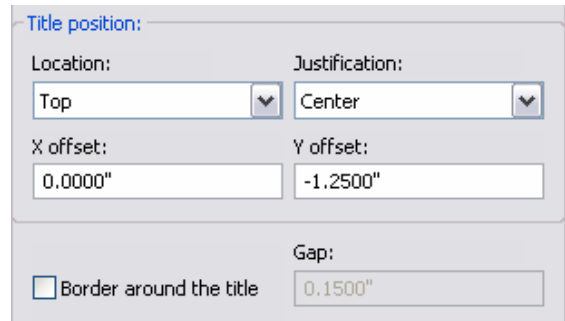
- Highlight all of the text in the right hand preview area, and delete it.
- Start by adding the Parent Alignment Name. Click in the Preview Box to the right of the <[Parent Alignment (CP)]> data tag, and press Enter to move to the next line. *You can copy and paste the tags*

from here to Notepad and play with what each of the fields does by modifying it and copying it back into the dialog. Just one more place to hack the system!

9. Type "1"=" and then insert the Drawing Scale, then repeat the process for the Graph View Vertical Scale. If your standards don't call for this information, just leave it out!
10. Finally, add the Profile Start and End Station. On the Start Station, before you click the insertion arrow, modify the "Drop Decimal for whole numbers" field to yes: When complete, it should look something like below.

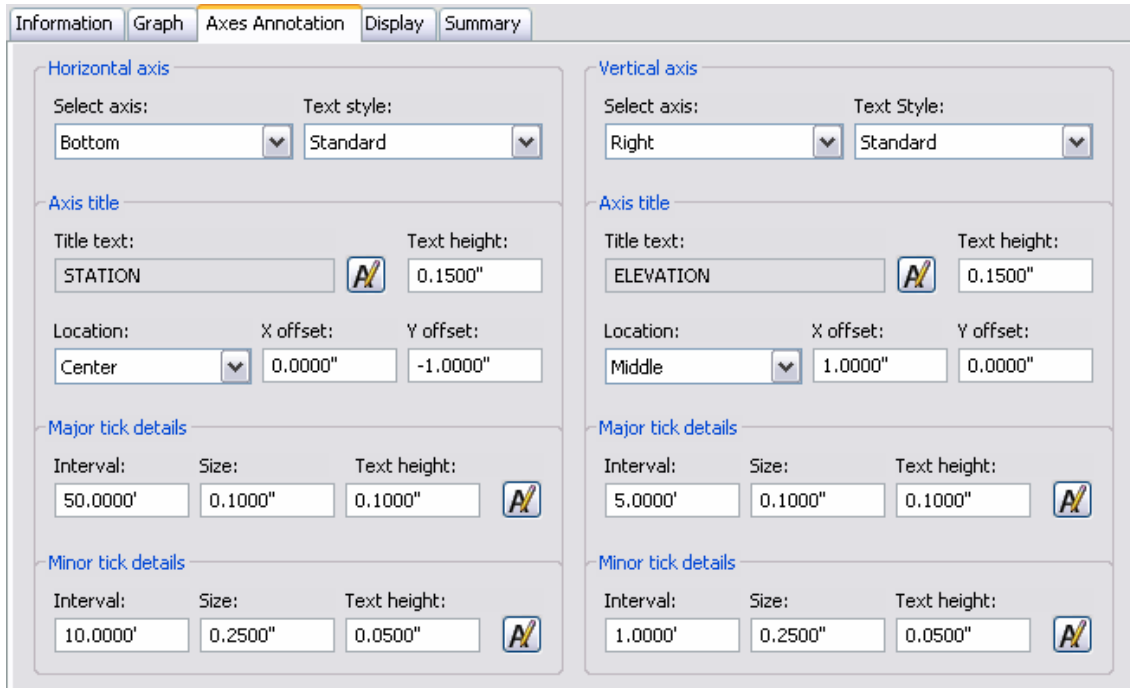


11. Click OK to close and return to the Profile View Style Editor. Because we use this style in a P&P sheet, we'll move the title within the grid, and remove its border. Modify the settings as shown here. *You can move the title any where you'd like by modifying these settings.* We'll leave the profile running left to right, and the vertical exaggeration at 10. We'll also not turn on any clipping or add additional grids on the left or right.



12. Switch to the Axes Annotation tab. On the Horizontal portion of the tab, switch to Bottom Axis using the drop down, then adjust the Major interval to 50' and the Minor to 10'. *The bottom axis drives the grid spacing!*
13. Now let's focus on the Vertical Axis labels and grid. Start by clicking in Major tick Details field and modifying the Interval to 5.0' as shown.
14. Click on the Text Edit button and modify the Profile View Point Elevation to have a Precision of 1.
15. Change the Minor Tick Details to have an Interval of 1. *We don't modify the tick size or height because they're turned off in our display tab!*

- Click the Dropdown near the top and switch to the Right axis, and repeat these steps. When you're done, it should look like the picture below. Click OK to dismiss the Profile View Style dialog box.

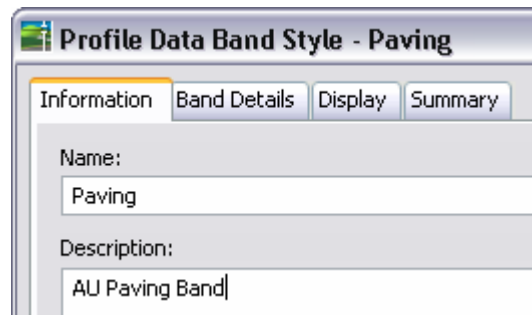


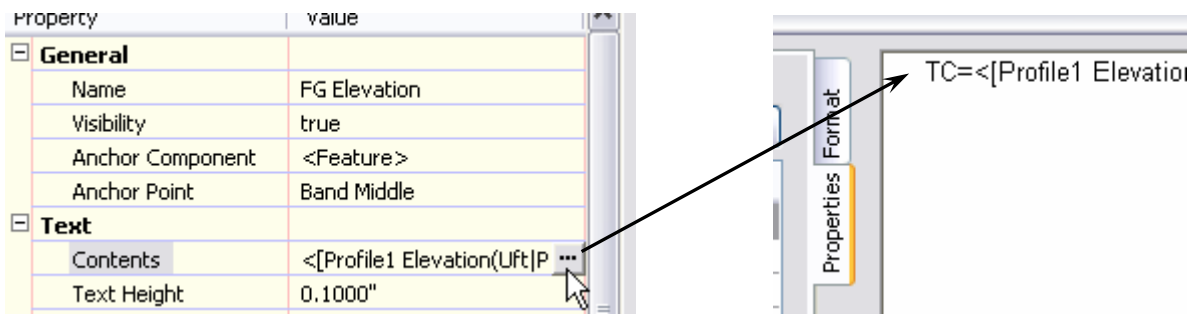
- Your Profile now has a bit of a mess along the bottom. That's the band, and the next exercise.

Bands and Band Sets—Paving

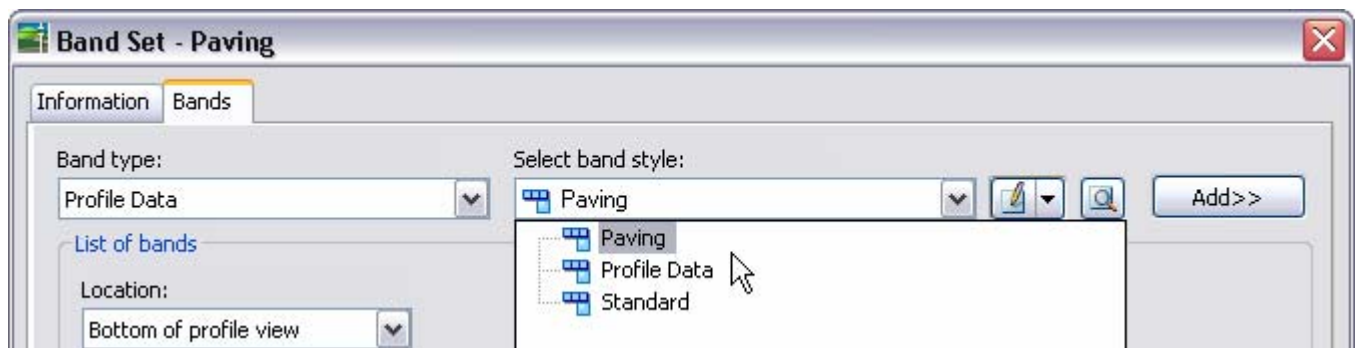
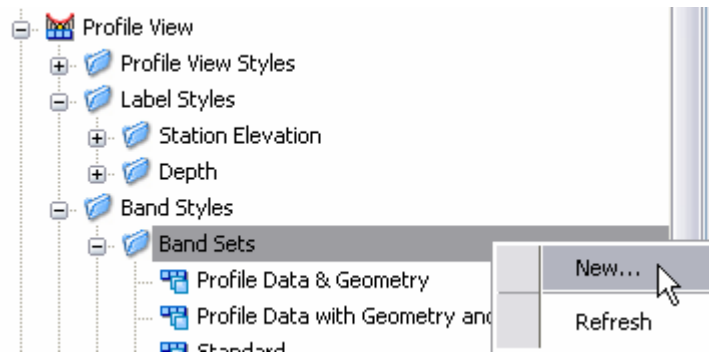
Bands are attached to Profile Views to label information that occurs at regular points, or important points in the design, i.e., Horizontal or Vertical Geometry points. They can be a bit confusing to work with, but are very powerful!

- In Toolspace, switch to the Settings tab, then dig down to Profile Views, Band Styles, Profile Data. Right-click on Standard (it should have the in use glyph on it,) and select Copy. *Notice that we haven't started from scratch yet? It's just much simpler to copy and modify something that's close than it is to start from nothing!*
- Change the name to Paving and add a description if you'd like.
- Change to the Band Details tab, and on the lower left, set the band height to 0.75".
- On the right hand side of this tab, click on At Major Station, and click the Compose label button to pull up the Label Style Composer.
- Click on the FG Elevation Component Contents Editor button as shown below, and modify it as shown, adding "TC=" to the front of the label.



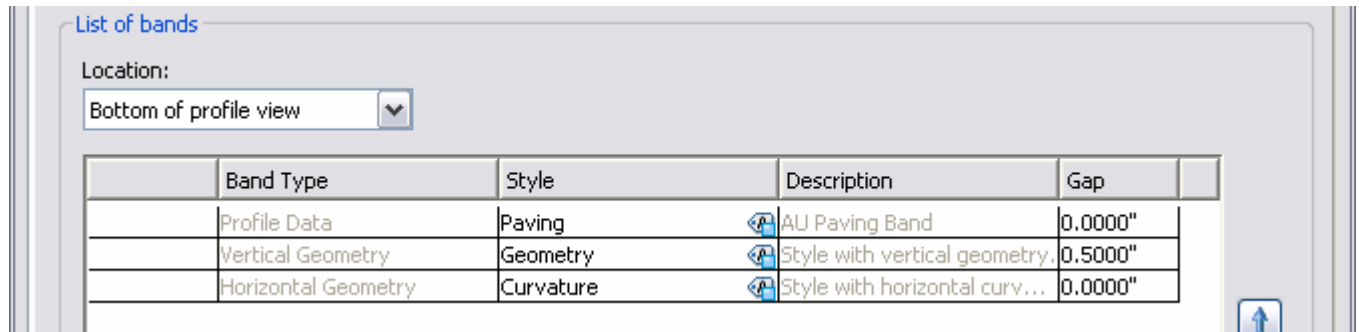


6. Click OK to close the Text Component Editor.
7. Click on the Component dropdown and switch to the Station Component. Change its Y-Offset to -0.15". This will bring the stations closer to the bottom of the band.
8. Click OK to close this dialog.
9. Switch to the Display Tab, and set all components to C-ROAD-PROF like we did with the profile components. Set all colors to White and linetype to Continuous. *Note that some components are not controllable here because they have inherent layer controls in their definitions.*
10. Turn off all components except Band Border, Major Ticks, and Labels at Major Station. Click OK to close the Band Profile Band Data Style dialog.
11. Still in Toolspace, there's an area for Band Sets. Right-click on this branch, and select New.
12. Change the Name to Paving, and switch to the Bands tab.
13. Click the dropdown for Band type, and change it to Profile Data. Then change the Select band style to Paving and click Add>>.



14. Change the Band type to Vertical Geometry and add the Geometry band, then change the type to Horizontal Geometry and add the Curvature band.
15. In the List of Bands area, click in the Gap field, next to the Paving band listing. Change the value to 0.

- Change the gap on Horizontal to 0 as well. *This pushes the labeling tight against, the grid, then gaps one-half inch, the puts the geometry bands together. The gap would allow you to hide those bands with a viewport, if desired.*

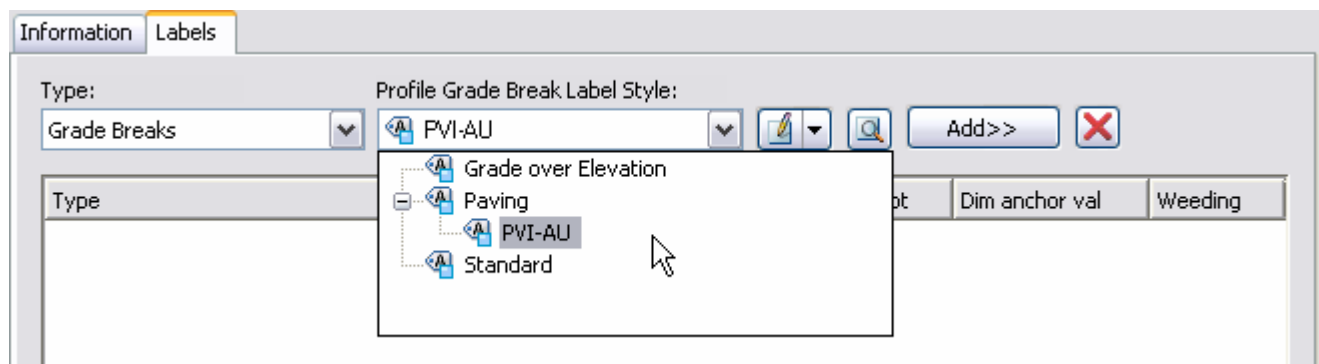


- Click OK to close the Band Set dialog box.

Profile Labels and Label Sets-Paving

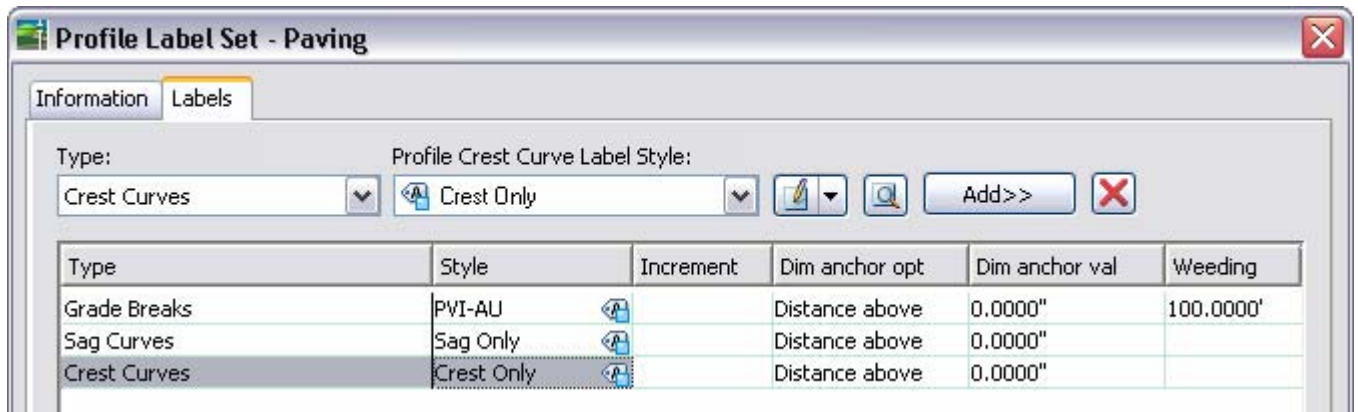
Now, it's time to adjust how our Profiles are labeled within the Profile View. We'll modify the Label for Vertical Geometry to include some standard text, and then create a Label Set for Paving for future use.

- Switch to the Settings tab of Toolspace, and drill down to the Profile-Label Styles-Grade Breaks branch. Right-click on Paving, and select New. *By creating a new style from an existing style, we're making a Child style.*
- Change Name to PVI and add a description if you'd like.
- Switch to the Layout Tab, and add "STA." to the front of the Sta component.
- Close the dialog and note how the style we just made hangs off of the Paving label style.
- Still under the Profile-Label Styles branch, right-click on the Label Sets and select New.
- Change the name to Paving, and switch to the Labels tab.
- Here, you can pick and choose which labels are part of your Label Set. Change the Type: dropdown to Grade Breaks, and select the style we just made as shown below, then click the Add>> button.



- Change the type to Sag Curve, and add the Sag Only label style, then change the type to Crest Curve and add the Crest Only label style. *These are prebuilt and obviously can be tweaked to match your standards.*

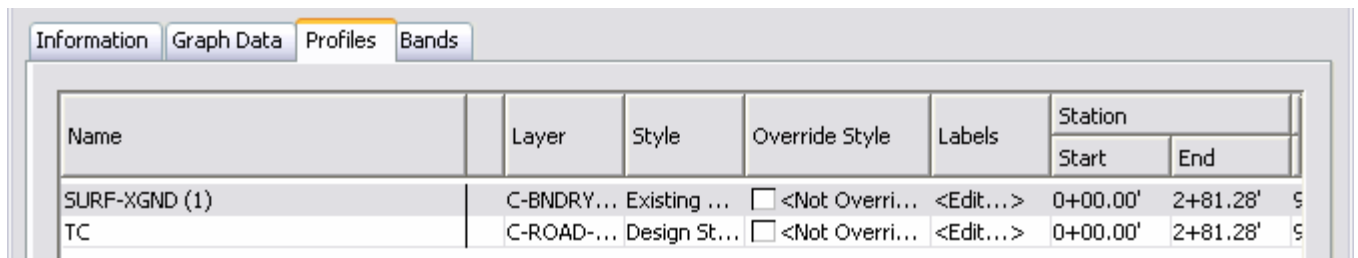
- When your dialog looks like the picture below, click OK, and close the Profile Label Set dialog.



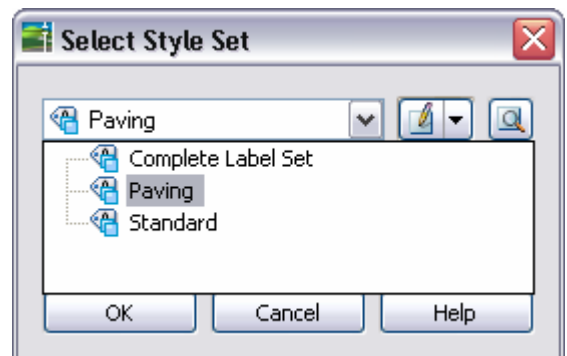
Putting it All Together—Profiles, Views, Sets, etc.

Now, we have a Profile View that looks the way we want it, but we haven't applied all the other styles to that view to make our profile a true complete project. This exercise will make the Melinda Lane Profile View complete, and then we'll make the Carson Lane Profile View, with minimal changes necessary after the creation.

- Find the Profile View for Melinda Lane again.
- Right-click on the grid, and select Profile View Properties.
- On the Information tab, make sure your Object Style is set to AU Grid (or whatever you called your new Profile View style earlier).
- Switch to the Profiles Tab and scroll right until you can see the Style and Labels columns.

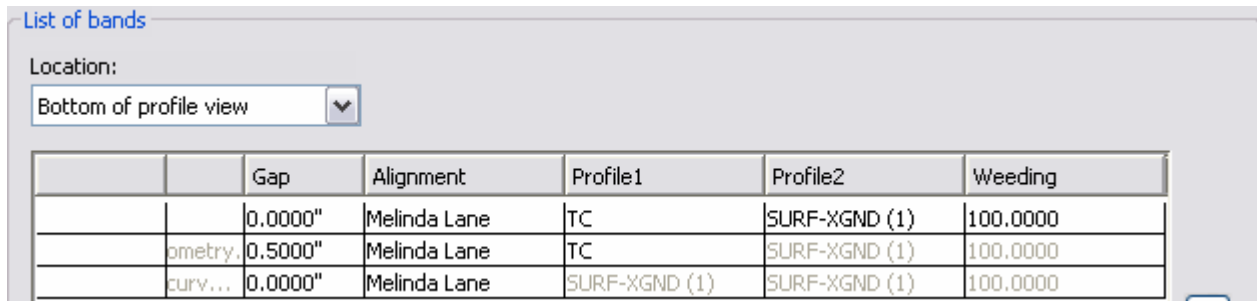


- In the TC row, click on the style listed in the Style column, and it will present you with the option of picking a new style. Change to the Paving style made earlier.
- Click on the <Edit...> area in the Labels column for the TC profile, and you'll see the Profile Labels dialog box. Click the Import label set... button and select the Paving from the dropdown. Click OK, and your Profile Labels dialog will reflect the set being imported. *You can almost always edit, copy, and create new styles when presented with an opportunity to pick one. This makes building styles and sets on the fly a really easy alternative to prebuilding.*

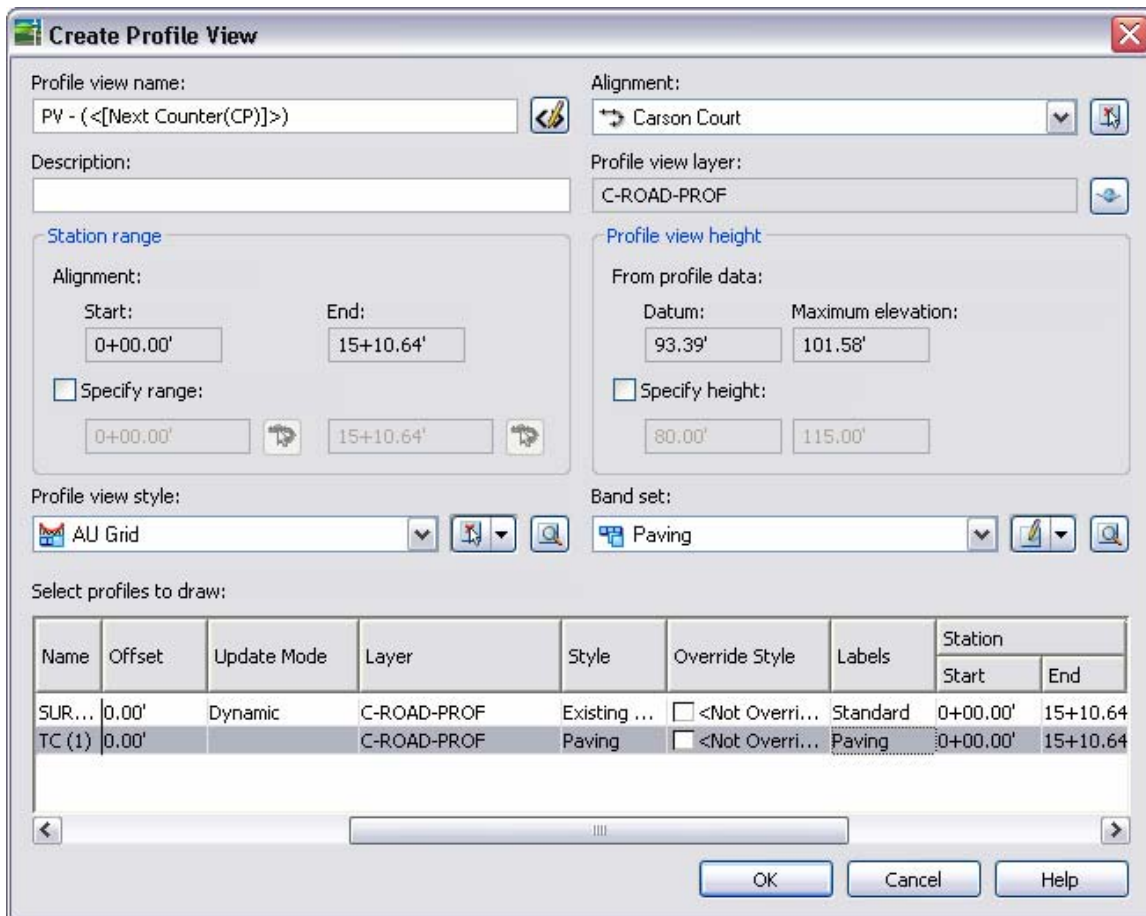


- Click OK again to return to the Profile View Properties dialog, and switch to the Bands tab.
- Import the Paving band set like we just did with Profile labels.

- Scroll right in the List of Bands, and notice that Profile 1 and Profile 2 both reference the sampled ground surface. Click in the Profile 1 column for each band, and change it to TC. When complete, it should look like the picture below. *The Horizontal Geometry band doesn't reference any profiles, therefore it's greyed out.*



- Now we have one profile that looks like the way we want it. Time to do the other from scratch.
- Select the Create View from the Profiles Menu. Make sure Carson Court is selected as the alignment and enter a description if you'd like.
- Change the Profile View style to AU Grid, and the Band set to Paving.
- Click on the profiles listed, and set the layer to C-ROAD-PROF for ease of management.
- Click on the Style column for the TC profile and change it to Paving.
- Click on the Labels column for TC and set that to Paving as well. When you're done, the dialog should look like the picture below.



- Click OK to proceed. Pick a point on the screen, and your profile will be drawn as per your settings. *Note, you need to set the Profile 1 and Profile 2 values the same way we did in the other profile. This can't be avoided in this release.*

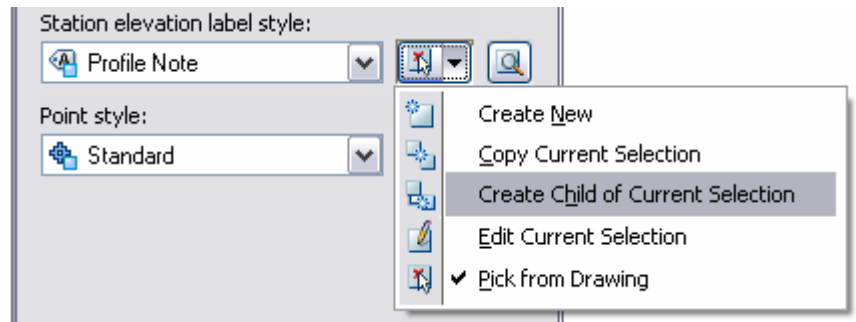
Now that you have a couple of Profile Views, you can also copy the view and modify individual settings. This is handy for slicing Profile Views for Sheets, and for showing only selected portions of a profile.

Profile View Labels

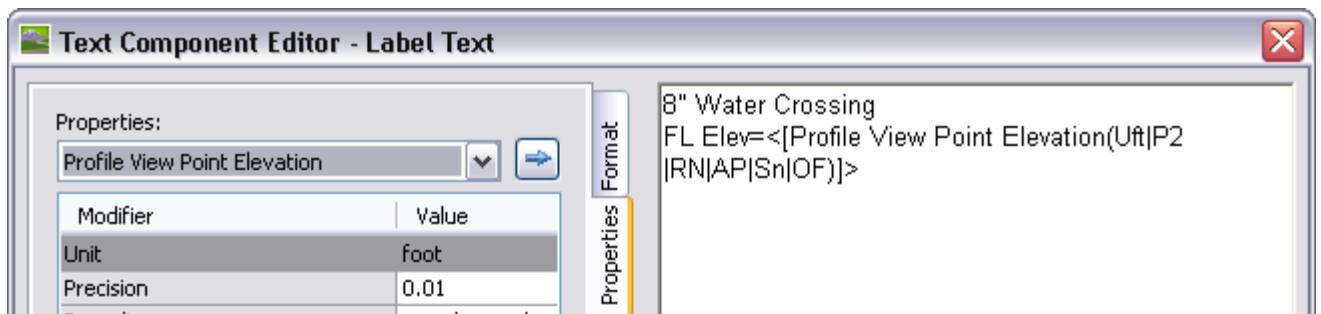
Profiles are incomplete without some more information, but that information can't really be handled as part of a template because it's more about points on the profile, and less about the profile itself. These labels include items such as calling out a profile type, or perhaps labeling a crossing point for a water line. This exercise will create styles for both.

Profile View labels consist of a point, and text. The way these are displayed is determined by the Station Elevation Label Style, and a Point style. We'll modify both to get the result we're after. Also, in this dwg, we have a block drawn for an eight-inch water line crossing. It's a pair of concentric ellipses, drawing with a vertical exaggeration of 10 per our typical profiling convention. This block is called 8inX.

- Pan to the Carson Court profile view.
- Go to the Profiles Menu, and select Add Profile View Labels.
- The Label type is Station Elevation, but we don't have a label style built for this particular label, so we'll make a child style in our Profile Notes family to use. Select Profile Note, then select the Create Child option on the dropdown button to the right. *We use a child for text control. By having a stack of children under a style, we can modify the appearance simply by changing the parent! This makes standardization very easy!*



- Change the name to 8in Crossing, and switch to the Layout tab. Switch to the Note Component, and modify the Contents to read as shown below. To get the data, insert the Profile View Point Elevation.



- Click OK twice to return to the Add Labels dialog box. Now, on the Point Style portion of the dialog, click on the Create New dropdown to the right.
- Change the Name to 8in Crossing and switch to the Marker tab.
- Click the Use AutoCAD BLOCK symbol for marker radio button, and select the 8inX block from the list.

8. On the top right, change the Option dropdown for Size to Use Fixed Scale, and leave the values at 1 in each component. *You could also simply draw the block without exaggeration and perform the scaling here, but I already had a block to use from our library.*
9. Click OK to return to the Add Labels dialog, and you should now have 8in Crossing for both your Label and Point style. Click Add.
10. Select the Profile View by selecting the grid, then pick twice more to enter the station and elevation information. *You can also enter this information by typing directly at the command line.*
11. After playing with that note, change the Label style to PROP TC-LT&RT.
12. Create a new Point Style called None and change the Marker to Use Custom Marker.
13. Select the second option from the left. This is a null point and will not display anything.
14. Click Add, and add a note somewhere along your proposed grade profile. Drag the note off, and you'll have a nicely labeled point that will scale and move with your profile view. *To move the point being labeled, right click on the label, change the point style to something else, move the point, then change it back to None.*

Now that we've got some profiles, it's time to get a pipe network handled.

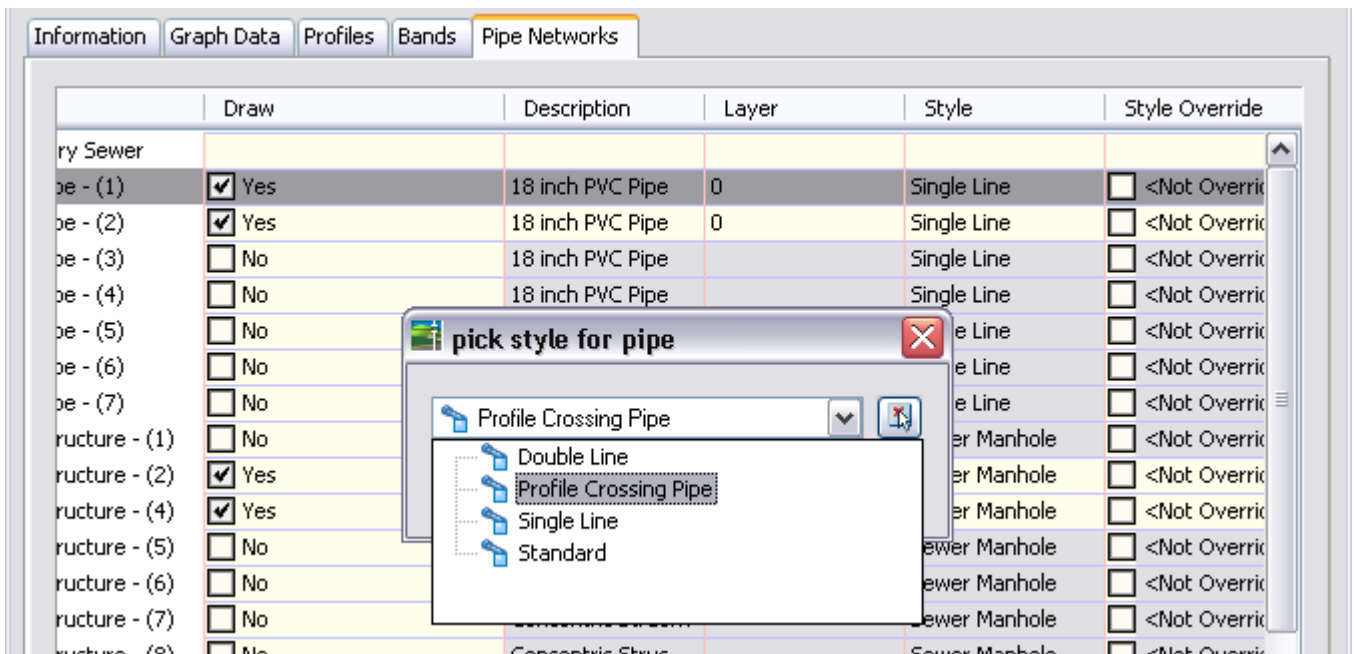
Pipe Styles—Profile

Civil 3D ships out of the box with most of the common ways to display a pipe, but structures are more commonly represented by symbols. We'll add the a new structure style showing the symbol, profile the pipe along Carson Court, and show the crossing from Melinda Lane with a Profile View Style Override.

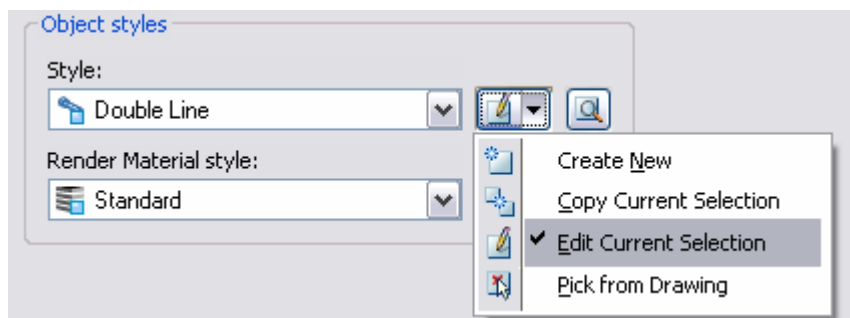
We simply don't have time to modify the design of this network. Recognize that we'll be labeling a network that really doesn't work, but the styles are the important portion of this exercise.

1. Select Create View from the Profiles Menu, and select Line B as the Alignment.
2. Change the grid to AU Grid, and select Paving as the Band Set.
3. Now, click the Copy Current Selection from the dropdown next to the Band set list.
4. Change the name to Piping and switch to the Bands tab.
5. Highlight the Vertical Geometry Band in the list, and press the red X to delete it. Repeat for the Horizontal Geometry.
6. Click on the Paving Band in the list and a Style selection dialog should appear. Click the dropdown on the right, and Copy Current Selection
7. Change the Band name to Flowline and modify the description if you wish.
8. Change to the Band Details, and click the At Major Station Label.
9. Click the Compose Label button, and modify the FG Elevation component to be named Flowline Elevation.
10. Then modify the Contents, replacing TC= with FL=.
11. Click OK on these dialogs until you've returned to the Create Profile View dialog. *These changes could all be made in Toolspace, but I like changing them here as it shows the flexibility of the program. After this, you'd never need to do it again for pipes!*
12. A profile view is established, but no pipes are shown. On the Pipes menu, select Draw Parts in Profile View and select the manholes and pipe along Line B. *Note that only Network parts can be selected!*
13. Pick the profile view we just established. Zoom in to see the manholes and pipe.

14. Select the first manhole, and right-click. Select Resize to Model to see how the manhole sizes to the reference surface. *In this case, the rim will move to the existing ground surface since we didn't establish a proposed surface. Remember, we're after techniques, not a working design!*
15. Pull up the Profile View properties, and switch to the new Pipe Networks tab. Note that Pipe (2) is the only pipe shown. *If you were to name your pipes and structures, those names would appear here, making this much easier to understand!*
16. Close the dialog box, and pan to the plan view. Select the Line A pipe, and right-click.
17. Select Draw Parts in Profile View and select the Line B profile view. Now, pull up the profile view properties once more. Note that Pipe (1) is now shown in the list of displayed parts.
18. Scroll to the right, and click on the Style Override column in the Pipe(1) row to display the style override dialog box. Select Profile Crossing Pipe as shown below.



19. Click OK to dismiss the properties dialog box.
20. On the left hand end of the profile, a pipe crossing ellipse should appear. *If you drag this ellipse, you are modifying the model, not just the symbol.*
21. Right-click on the pipe in profile view, and select Pipe Properties.
22. Change the Object style to Double Line, then click the Edit Current Selection.
23. Switch to the Display tab, and turn on the Profile display objects as shown here.
24. Click OK to close the Pipe Style editor, and OK again to dismiss the Pipe Properties dialog.
25. Create a new Profile by Layout, and call it Flowline. Use the Flowline style and use a Label Set of



Component Type	Visible	Layer
Profile Pipe Centerline		C-UTIL-PIPE
Profile Pipe Inside Wall		C-UTIL-PRC
Profile Pipe Outside Wall		C-UTIL-PRC
Profile Pipe End Line		C-UTIL-PRC
Profile Pipe Hatch		C-UTIL-PRC
Profile Crossing Pipe Inside Wall		C-UTIL-PRC

<none>. The Flowline style is set to a no-plot layer to allow us to view it, but not have it affect our plots.

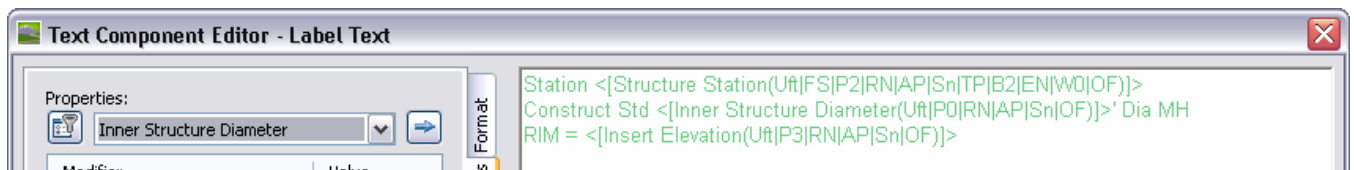
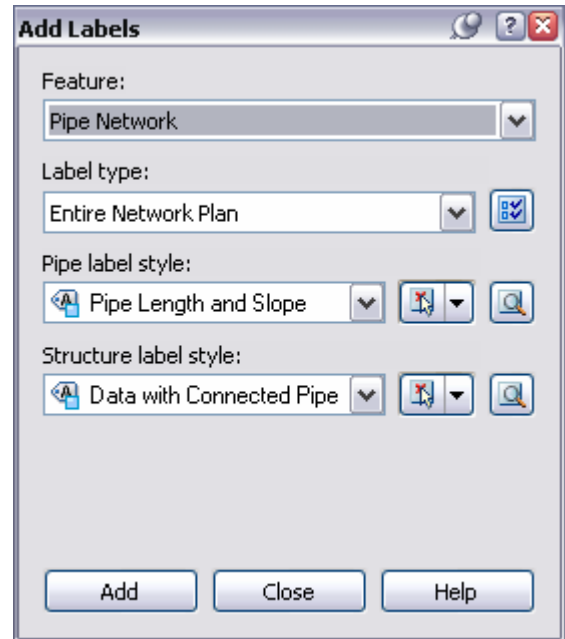
26. Click OK and trace the bottom of your pipe network to create a profile matching the Flowline of your structures.
27. Now, pull up the Profile View properties, switch to the Bands tab, and set the Profile 1 column in the Profile data band to be Flowline. Click OK to dismiss the dialog.

Your pipe profile is complete, and now we'll finish by simply changing the symbology used in plan view. Structures in plan are easily modified to reflect whatever symbol you like simply by modifying the structure style's plan view tab.

Pipe Network Labels—Plan

The network now needs labels, so we'll label the entire plan view, and then modify the style to show how easy it is to display the information that matches your drafting convention.

1. Go to Pipes-Add Labels to display the Add Labels dialog box.
2. Change the Pipe Label style to Pipe Length and Slope.
3. Change the Structure Label style to Data with connected pipes. *The label type should be Entire Network Plan. This labels ALL of the parts with one click and is extremely efficient.*
4. Click Add, then click on any pipe or manhole in the network. Click Close to dismiss the Add Labels dialog box. *You could also select Entire Network Profile to label all of your profile views appropriately.*
5. Pick any structure label and right-click to pull up the label properties.
6. Click on the Label Style cell and the ... button to show the Label Style dialog box. Select Edit Current Selection.
7. Switch to the Layout tab, and we'll modify the Contents as shown below. *Just for illustration, the list of available properties that can be added from the model is shown in the list below.*



Name	Structure Sump Elevation	Frame Diameter
Description	Connected Pipes	Frame Length
Network Name	Structure Shape	Frame Width
Structure Rotation Angle	Vertical Pipe Clearance	Barrel Height
Reference Alignment Name	Rim to Sump Height	Barrel Pipe Clearance
Structure Station	Wall Thickness	Cone Height
Structure Offset	Floor Thickness	Slab Thickness
Reference Surface Name	Material	Inner Structure Diameter
Structure Northing	Frame	Inner Structure Length
Structure Easting	Grate	Inner Structure Width
Insert Elevation	Cover	Headwall Base Width
	Frame Height	Headwall Base Thickness

8. Click OK to dismiss the dialogs, and notice how all of your structure labels have updated.

Your plan is now complete, and you're officially a style expert. As you can see, styles can be used to represent almost everything under the sun. Every object in Civil 3D has styles associated with it, and good understanding of how to build them is invaluable in making your transition to Civil 3D as painless as possible. Now, let's discuss some limitations of the current product, and some creative uses for styles and labels.

Styles—Faking It!

As you saw in a couple of exercises, you can sometimes use styles for unintended purposes. Since their biggest strength is the attachment to both object and drawing data, it's beneficial to use Civil 3D labels whenever possible. Here are a few favorites:

- *Create a point style showing almost anything!* Any block or symbol you need to label can be a point style, and the label text can be smart, or it can simply be dumb text. A prime example was our water crossing in the profile view. The genius is that the text rotates and scales as needed.
- *Create a no plot style showing more information than you would normally plot.* These are great for items such as design information on sewer pipes, curve information for your design, or surface information during the grading process.
- *Make a structure symbol calling out multiple parts.* You'll notice there's a series of Structure labels styles that call out water appurtenances. By inserting a null structure after drawing your water plan with symbology, you can label the structures at that intersection with dummy text, and if the appurtenances change, simply change the label to reflect what's being built.

There are many creative ways to make styles and labels your own, and to bend them to your will. Experiment, ask questions, and most of all, don't give up! Almost anything can be accomplished with the right combination of labels and styles.

