


Creating a Profile from Points without a Surface

Civil 3D 2008

Situation: You have points along a linear path with which you want to make a profile. Civil 3D normally requires a surface model to be created before a profile can be created. Because the points are a single path, a surface cannot be created from them.

Solution: Use Transparent commands to create a 3D Polyline from the points. Use the Quick Profile command to create a profile from the 3D Polyline. A Quick Profile of a 3D polyline can be created, but it will disappear from the drawing after the drawing is saved. There is no direct way to create a Civil 3D profile view from a polyline. Use LandXML to convert the Quick Profile into a true Profile View.

1. Import the text file **TRAIL.txt**
2. Start the 3D polyline command by typing **3DPOLY** on the command line.
3. Click the Point Number Transparent command. 
4. At the CAD command line type in the number range for the points.

```
Command: _3dpoly
Specify start point of polyline: '_PN
>>Enter point number: 132-437
```

5. Wait a moment and watch your polyline appear.
6. When the line has completed forming hit the **ESC** key twice to exit the transparent command and the 3DPOLY tool.
7. Select your new 3D polyline and right-click. Select **Quick Profile**.

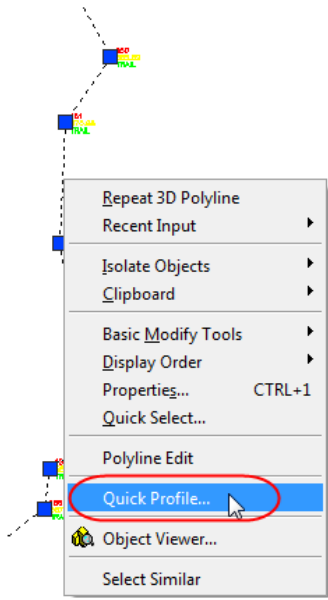


Figure 1

8. Verify that the **Draw 3D entity profile** is selected and click **OK**.

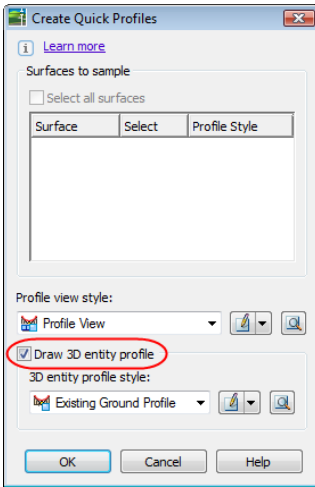


Figure 2

9. Click anywhere in the drawing to locate the Quick Profile.

10. Go to **File > Export > Export to LandXML**

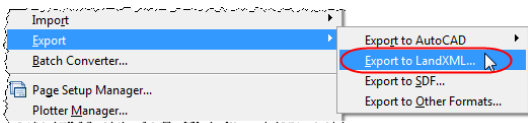


Figure 3

a. In the Export to LandXML dialog box, click the Pick from drawing button .

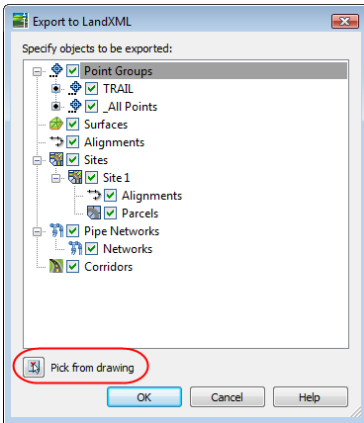


Figure 4

- b. Use a crossing window selection to select the Quick Profile and the 3D Polyline. Hit enter when complete.
- c. Save the file in the project folder where you can retrieve it in the next step.

11. Go to File > Import > Import Land XML

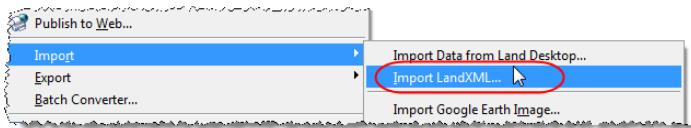


Figure 5

- 12. Locate and open the XML file created in step 10.
- 13. Click **OK**.
 - a. Your 3D polyline is now a horizontal alignment.
 - b. Save the Drawing
- 14. Next we create a profile view for the data we just imported.

15. Go to Profiles > Create Profile View

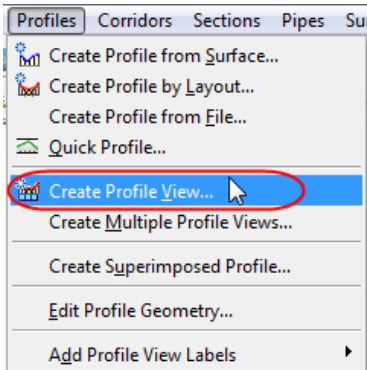


Figure 6

16. Verify that the correct alignment is showing in the Select alignment area. The alignment is automatically given a default name on import. You may wish to change the name in the alignment's properties.
17. Click **Create Profile View**.
18. Select a convenient location in the drawing for the new profile.

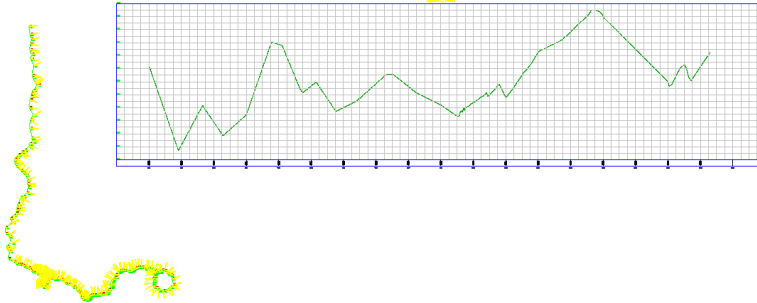


Figure 7

At this point the geometry of the 3D polyline and the profile are no longer related. Additionally, the profile and the alignment will behave slightly differently than a profile extracted from a surface. Changing alignment geometry will not affect the existing profile elevations because it is “locked” by the export-import process.

Now you can add proposed profile data and continue with your project.