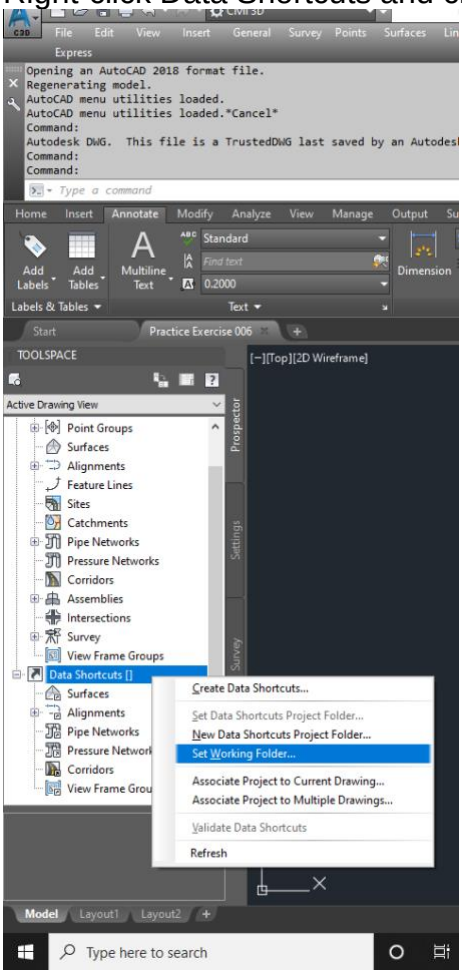
Solution Exercise 6
Create References to Data Shortcuts and Perform a Slope Analysis

1. Open Practice Exercise 006.dwg.

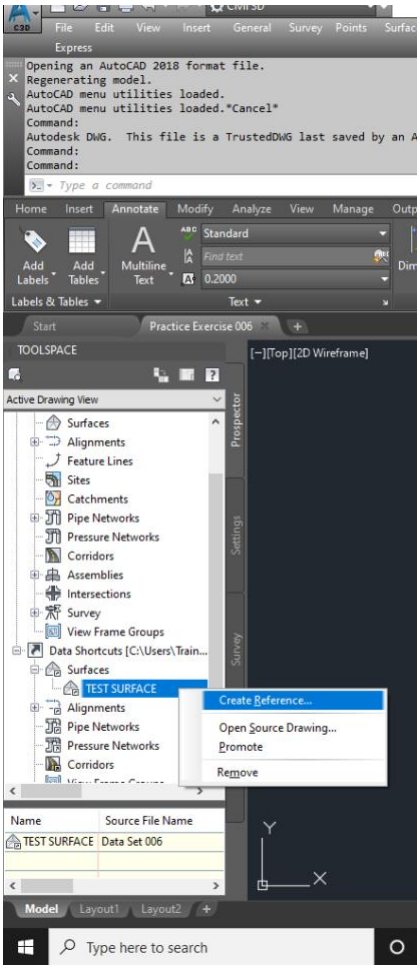
2. Navigate to Data Shortcuts in the Prospector tab.

3. Right-click Data Shortcuts and choose Set Working Folder.

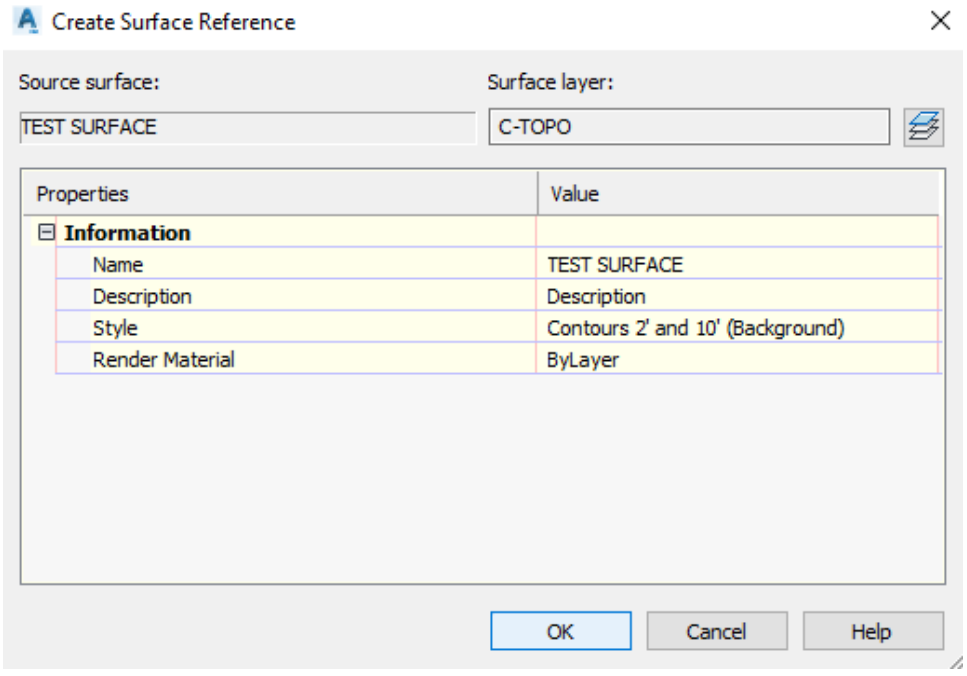


4. Set the Ex6 Folder as the working folder.

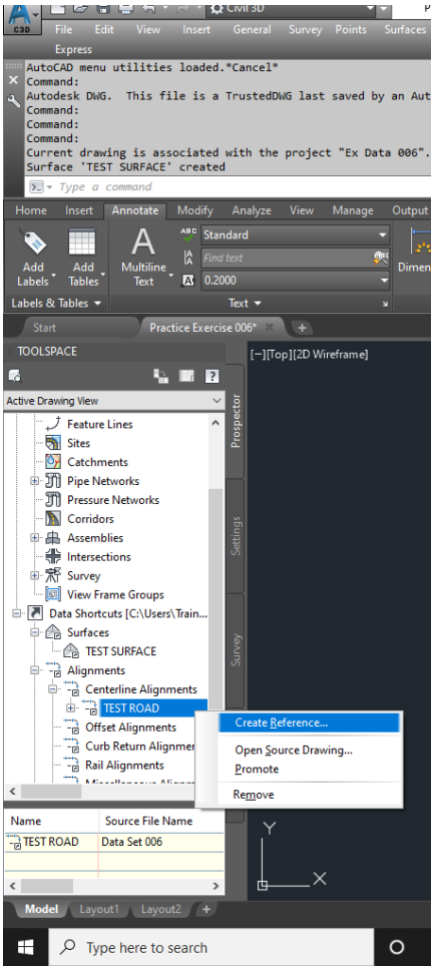
5. Expand Data Shortcuts and Surfaces. Right-click TEST SURFACE and choose Create Reference.



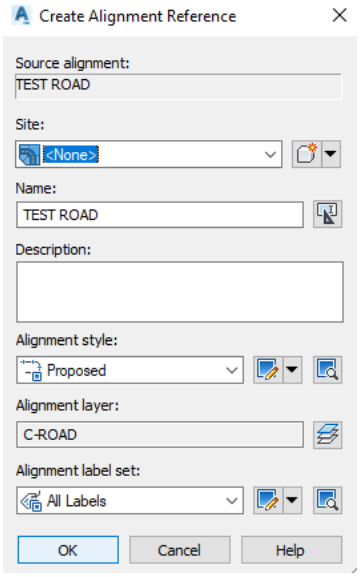
6. Click OK in the Create Surface Reference dialog box.



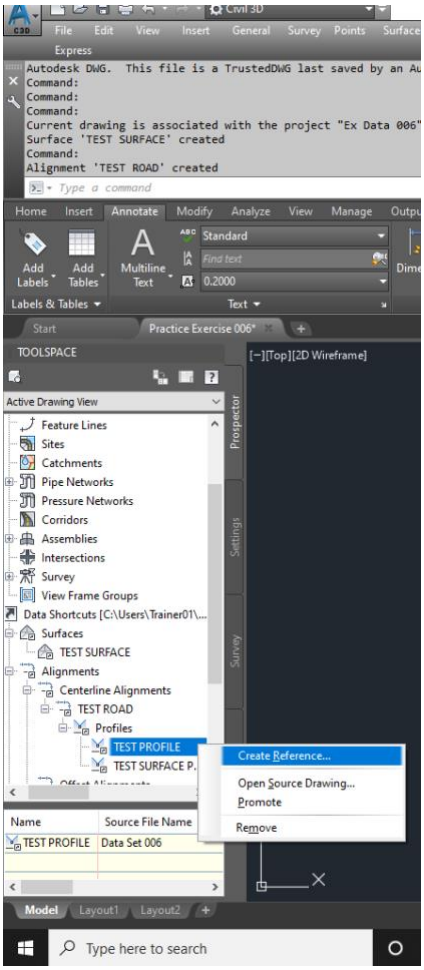
7. Expand Alignments and Centerline Alignments. Right-click TEST ROAD and choose Create Reference.



8. Click OK in the Create Alignment Reference dialog box.

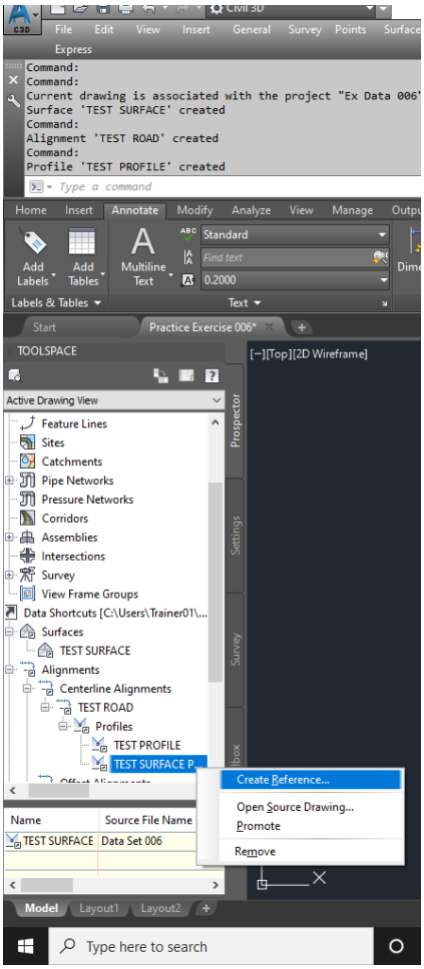


9. Expand TEST ROAD and Profiles. Right-click TEST PROFILE and choose Create Reference.

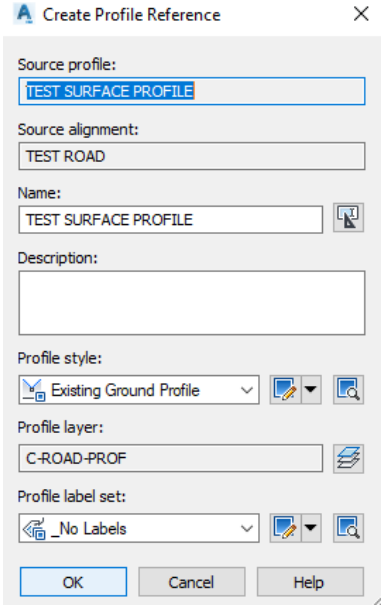


10. Click OK in the Create Profile Reference dialog box.

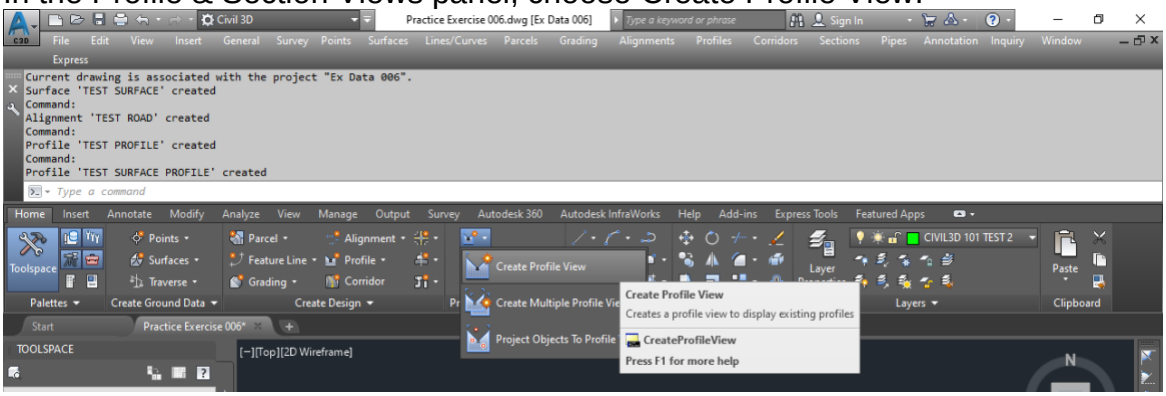
11. Right-click TEST SURFACE PROFILE and choose Create Reference.



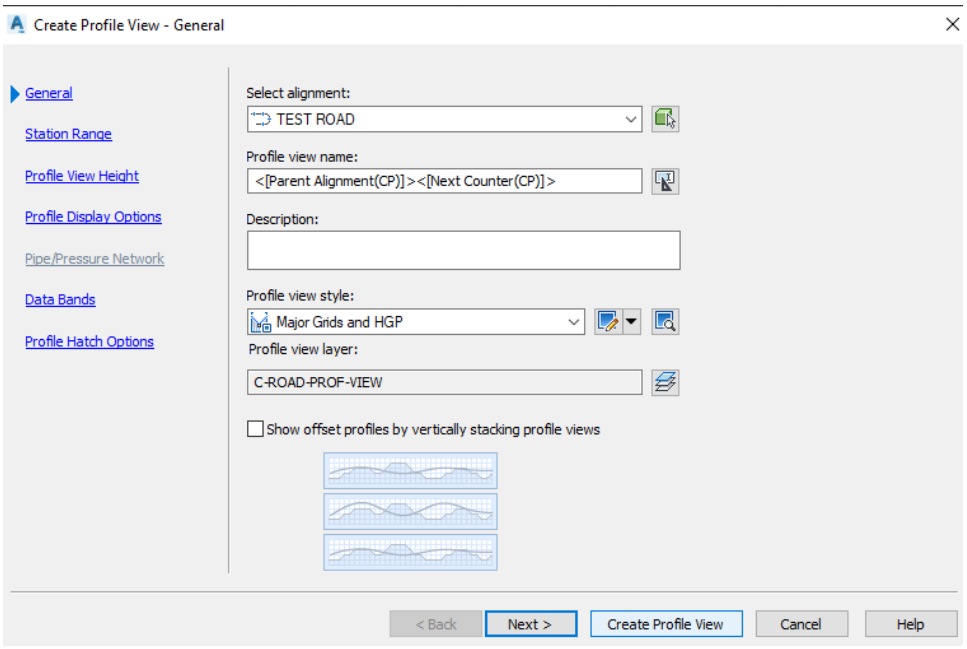
12. Click OK in the Create Profile Reference dialog box.



13. In the Profile & Section Views panel, choose Create Profile View.

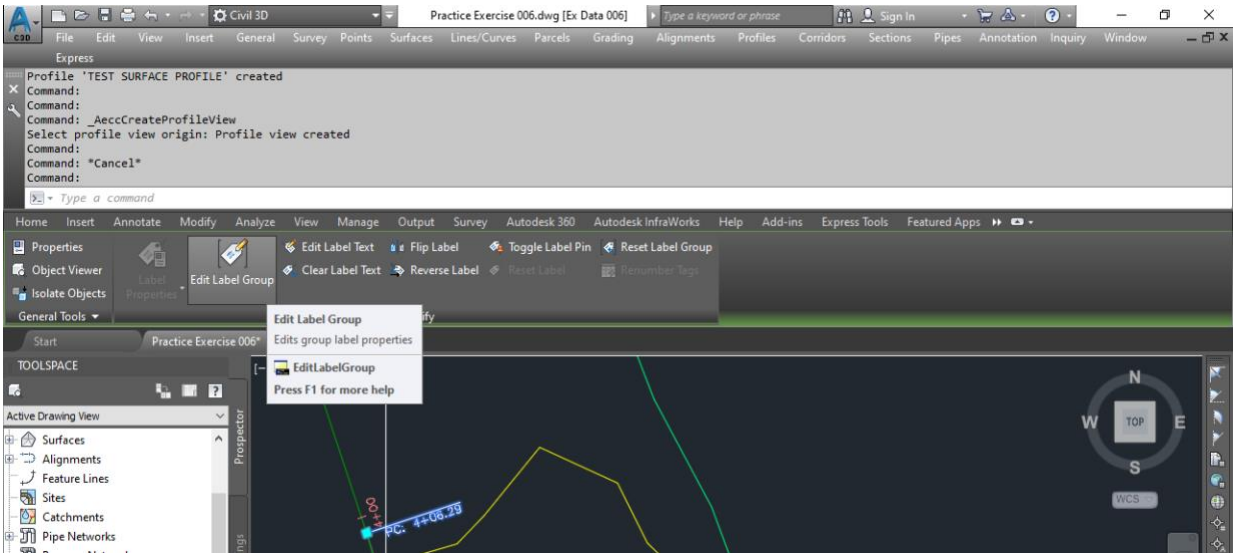


14. Use all of the default settings and click Create Profile View.

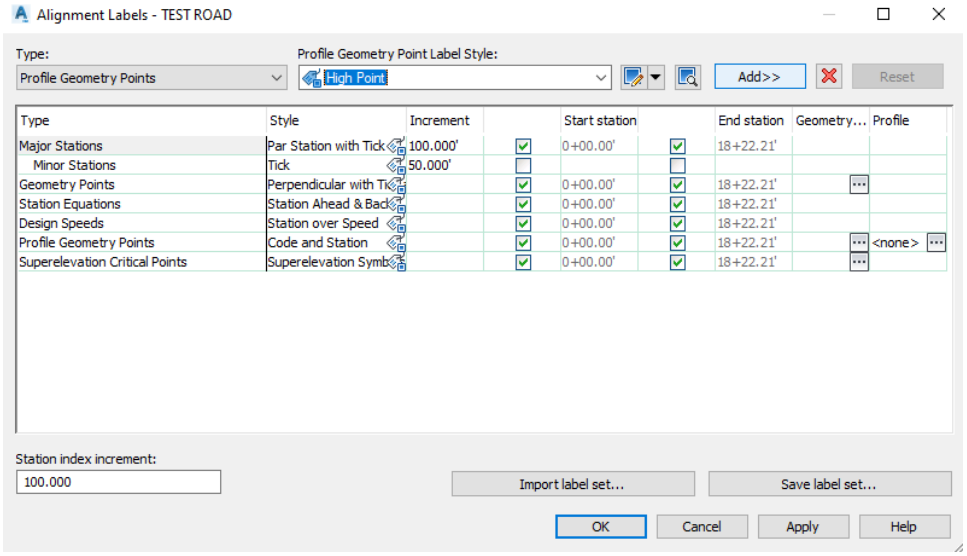


15. Pick the lower-left corner location for your Profile View.

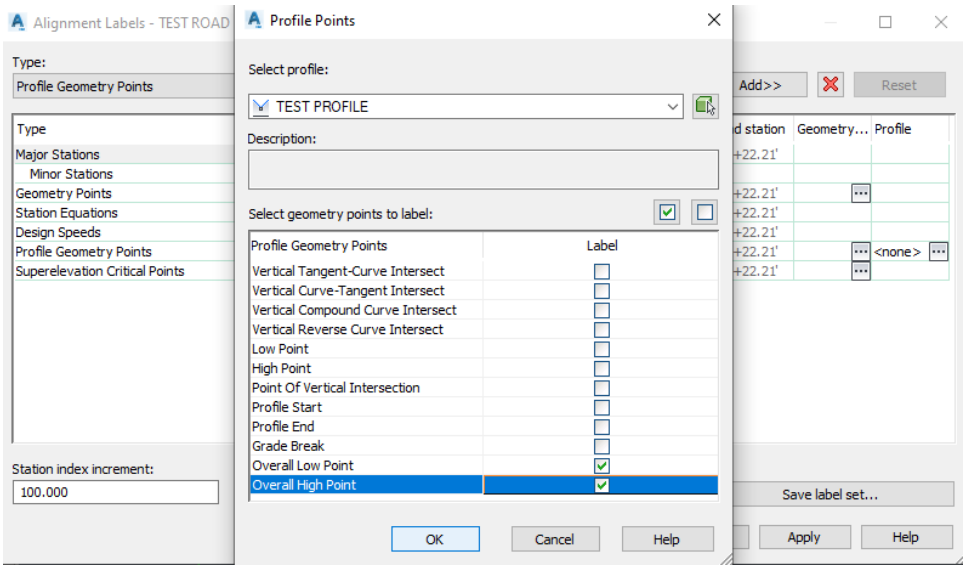
16. Click one of the horizontal geometry labels and click Edit Label Group.



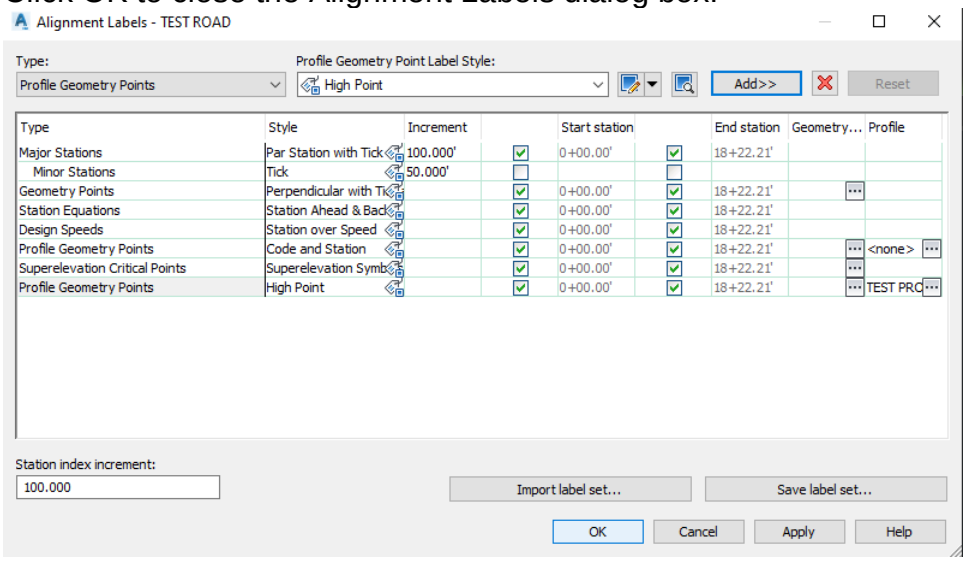
17. Change Type to Profile Geometry Points and Point Geometry Point Label Style to High Point. Click Add.



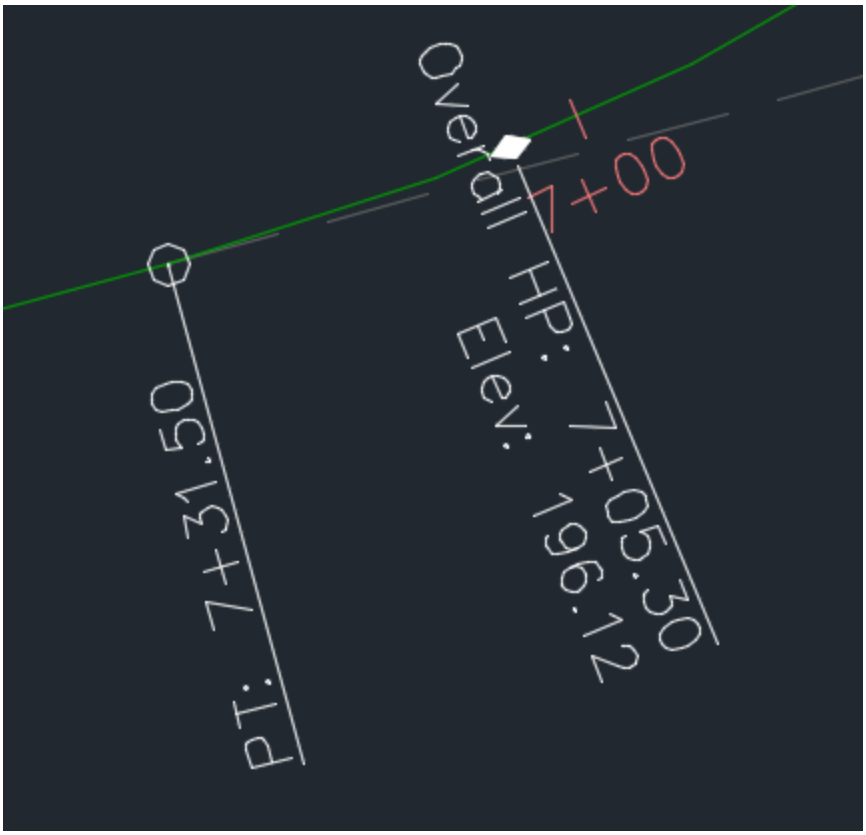
18. Set the profile to TEST PROFILE, deselect all options except Overall High Point and Overall Low Point, and click OK



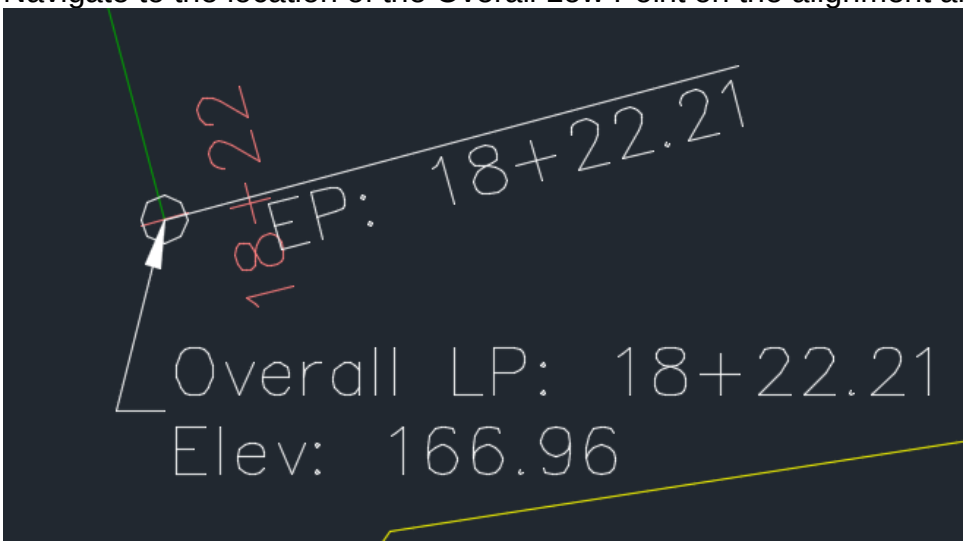
19. Click OK to close the Alignment Labels dialog box.



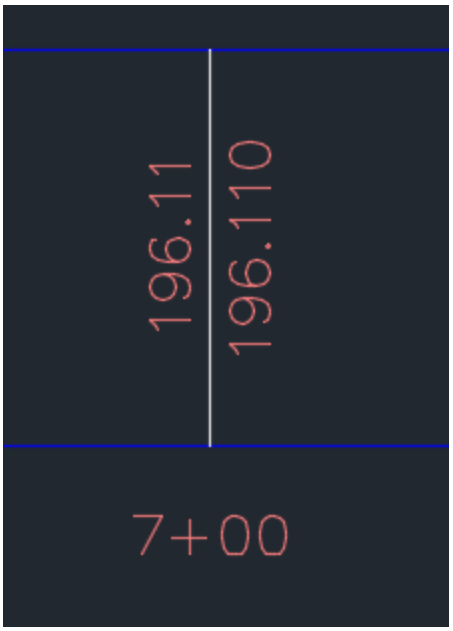
20. Navigate to the location of the Overall High Point on the alignment and take note:



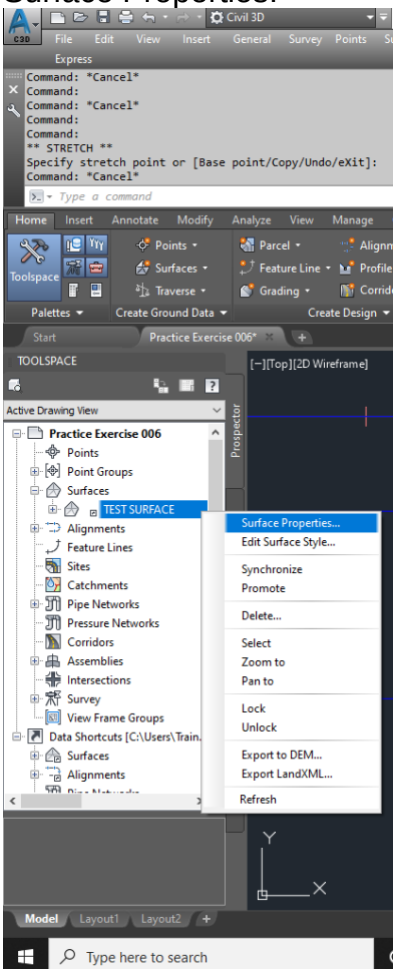
21. Navigate to the location of the Overall Low Point on the alignment and take note:



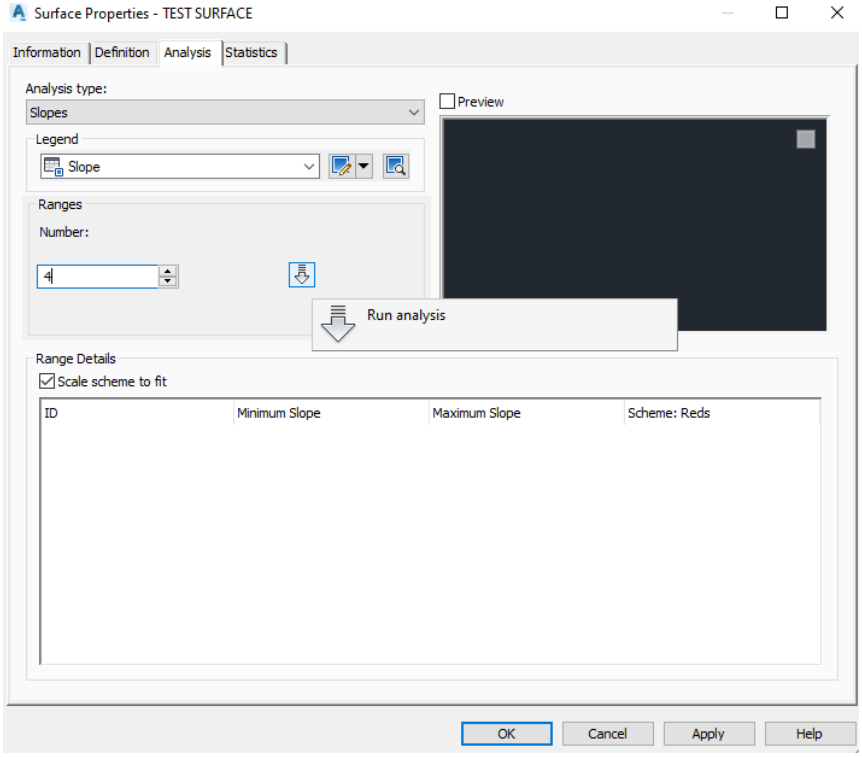
22. Navigate to the 7+00.00 on the profile view data band and take note of the elevation:



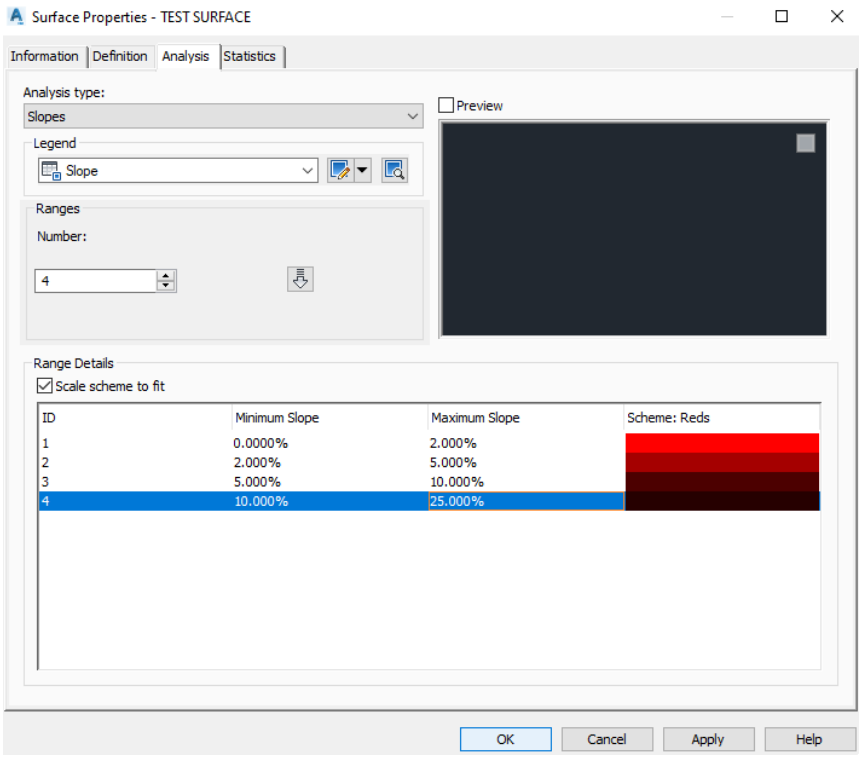
23. Expand Surfaces in the Prospector tab. Right-click Test Surface and choose Surface Properties.



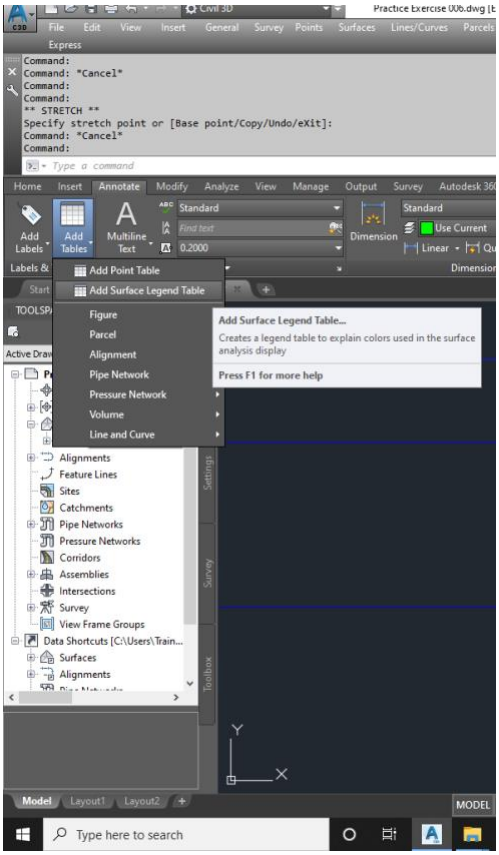
24. Select the Analysis tab and choose Slopes in the Analysis Type menu. Set the Range to 4 and click the down arrow.



25. Change the ranges to match the prompt and click OK.



26. Select the Annotate tab of the ribbon bar and click Add Tables. Choose Add Surface Legend Table.



27. Choose Slopes and choose Dynamic.

28. Pick the lower-left corner location for your surface legend table.

29. Take note of the range 2 area:

Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	2.00%	467450.01	
2	2.00%	5.00%	586368.26	
3	5.00%	10.00%	404376.29	
4	10.00%	25.00%	56599.97	

ANSWERS

What is the Overall High Point elevation of TEST PROFILE? 196.12

What is the Overall Low Point elevation of TEST PROFILE? 166.96

What is the Elevation of TEST PROFILE at Station 7+00.00? 196.11

What is the area of range 2 of the slope analysis? 58636