MONTANA
Department of Transportation

Project Development & Delivery - Digital Design and Modeling Services

CENTERLINE COORDINATE TABLES IN AUTODESK

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Overview

This document contains the workflow necessary for creating a centerline coordinate table in Civil 3D.

Process Guide

Application/Tool(s):	AutoCAD / Civil 3D
Version(s):	13.6.2123.0 Civil 3D 2024.4.6 Update
Environment:	MDT Civil 3D State Kit r2024 v2.3.1
Released/Revised:	4/6/2026



SUPPORT
Open a Case

Statement of Need

A workflow specific to the creation of centerline coordinate tables was not covered in the Civil 3D production training classes. For that reason, the Road Design Workflow Subcommittee identified the need for documentation covering the topic.

Disclaimer: Because the State Kit is continuously being updated and improved, the styles and layers in this documentation may vary from what is in the current version of the State Kit.

References

Title and Notes Sheets in Autodesk

Revisions

4/6/2026	Updates for ADA Accessibility

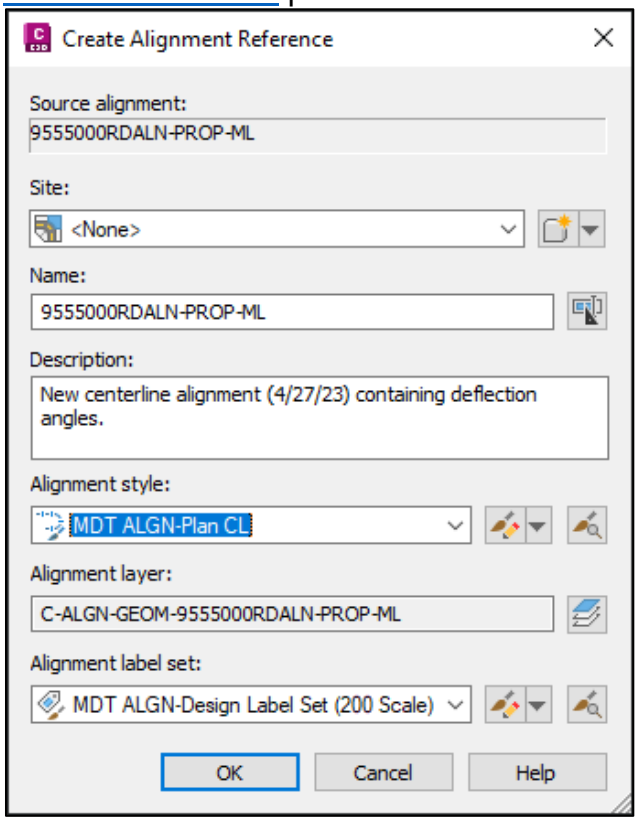
Process Description and Examples

Section I. Alignment Coordinate Table

Procedure – Create Object Set

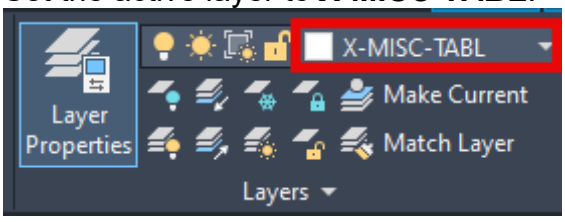
1. In the title sheet file, create a ***data reference*** to the design alignment while in model space. Do not create a reference to the profile.

   NOTE: If the title sheet file has not been created, follow the Title and Notes Sheets in Autodesk process.

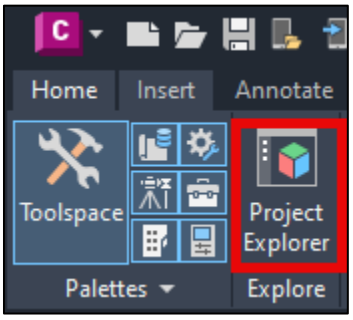


2. **Ribbon > MDT Tools tab > MDT Sheets panel > MDT Sheet Layouts dropdown > Road Layouts**. Select ***RD-Notes-Misc*** layout, then ***OK*** to insert. Then activate the layout so that paper space is active.

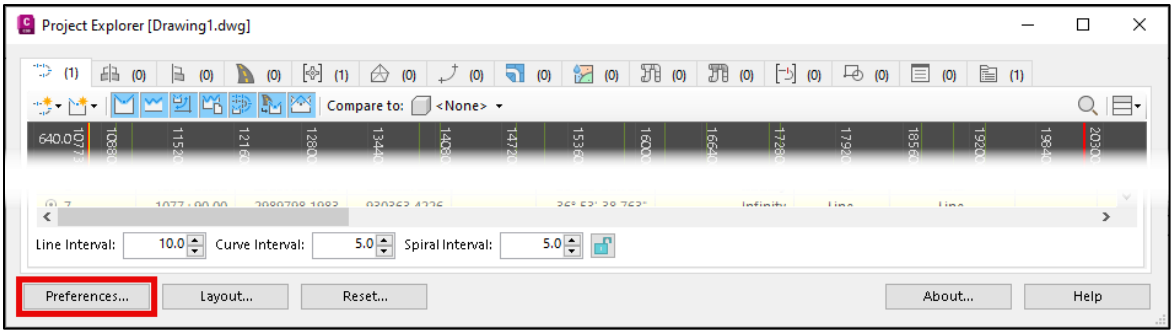
3. Set the active layer to ***X-MISC-TABL***.



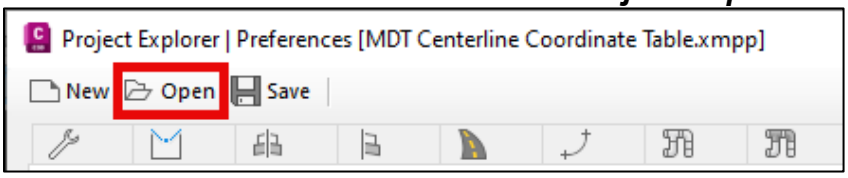
4. **Ribbon > Home Tab > Explore panel > Project Explorer.**



a. In the bottom left corner of the ***Project Explorer*** window, select ***Preferences***.



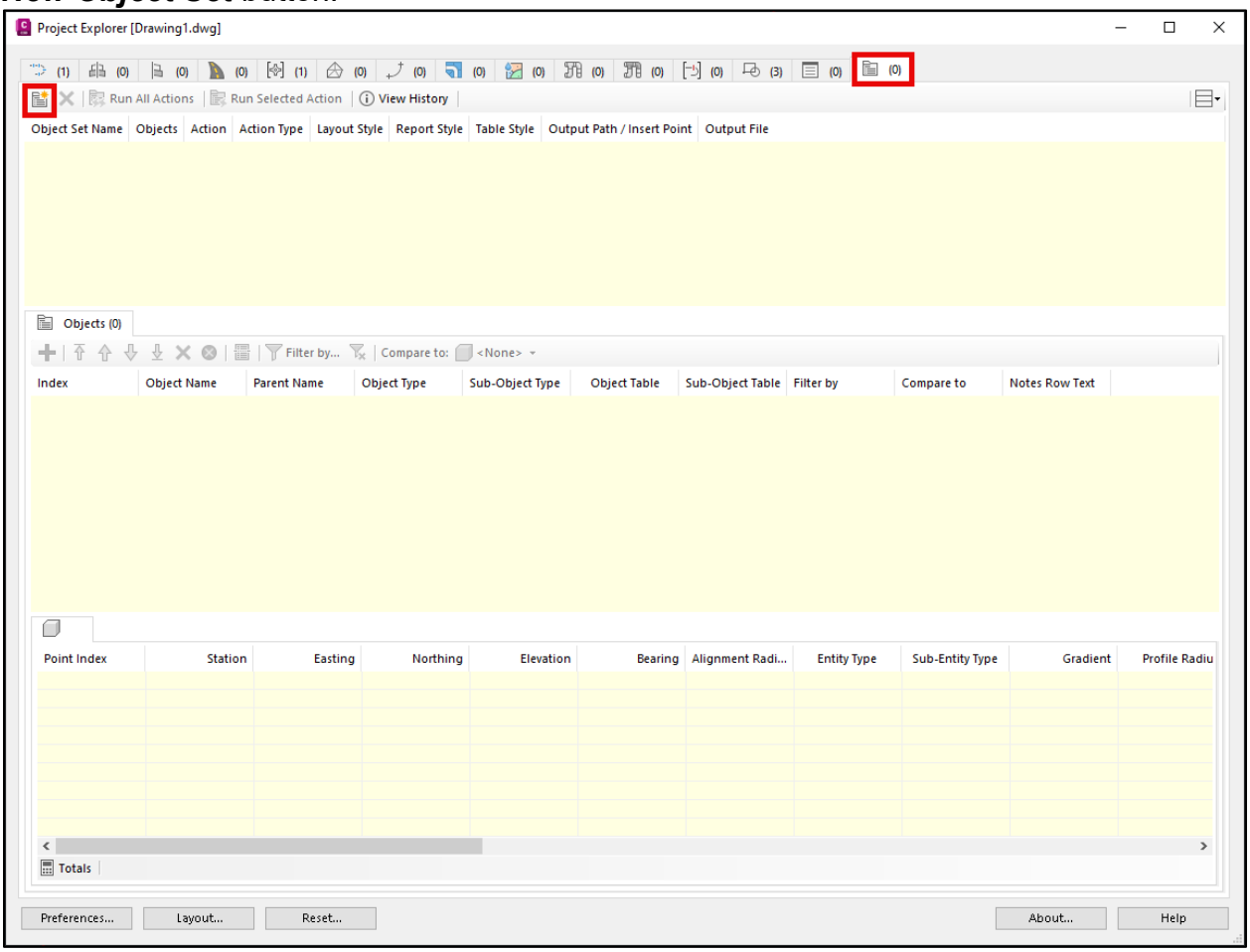
b. In the *Preferences* popup, select ***Open*** and navigate to the following folder:
C:\mdoh\StateKit\Civil 3D\2024\Tools\Project Explorer



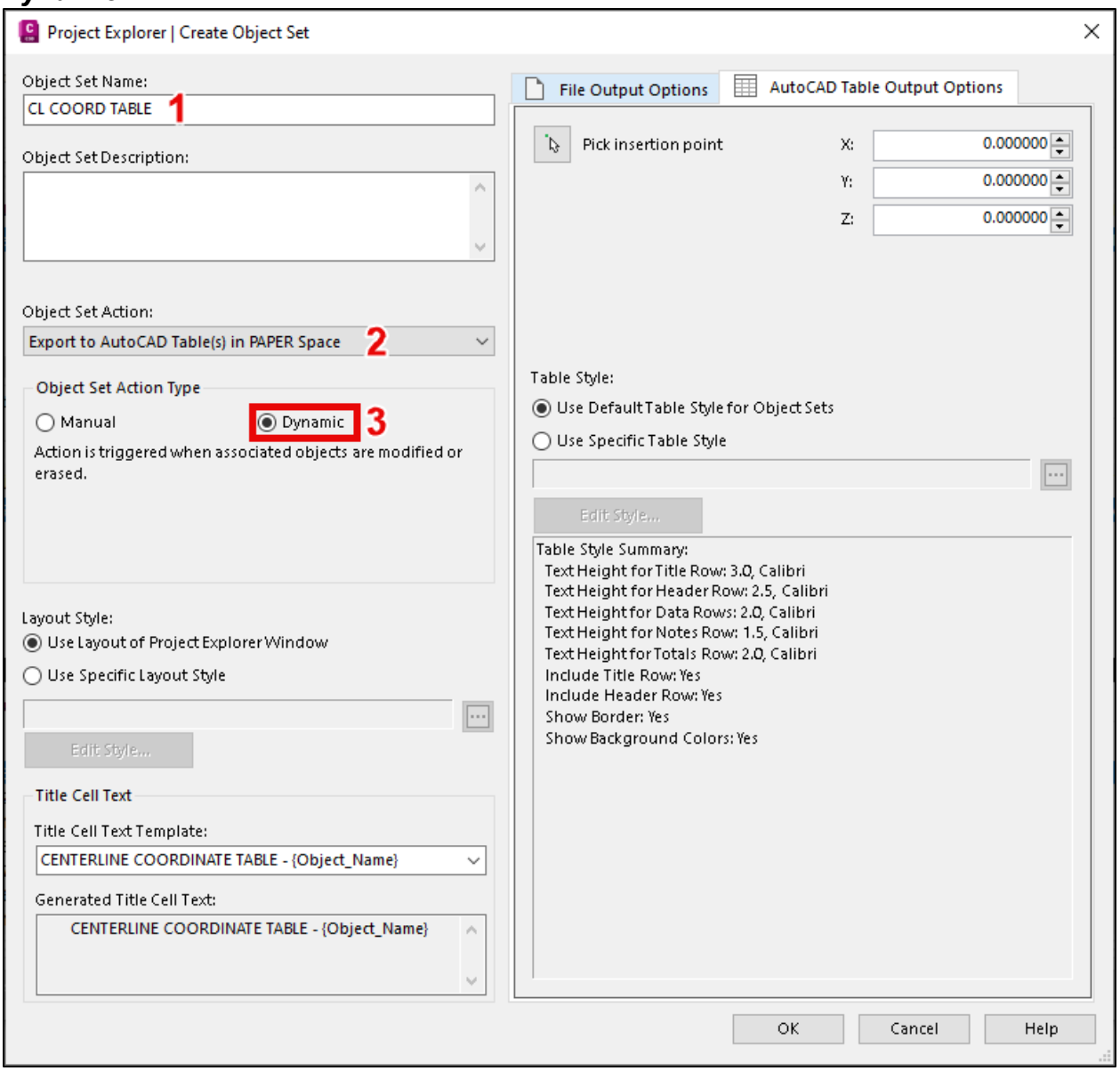
Select the ***MDT Centerline Coordinate Table.xmpp*** file. Opening this preference fill will prepopulate the name of the table.

NOTE: If other object set tables are created in Civil 3D, it is recommended to ***Restore Defaults*** in the lower left corner of the *Project Explorer Preferences* dialog.

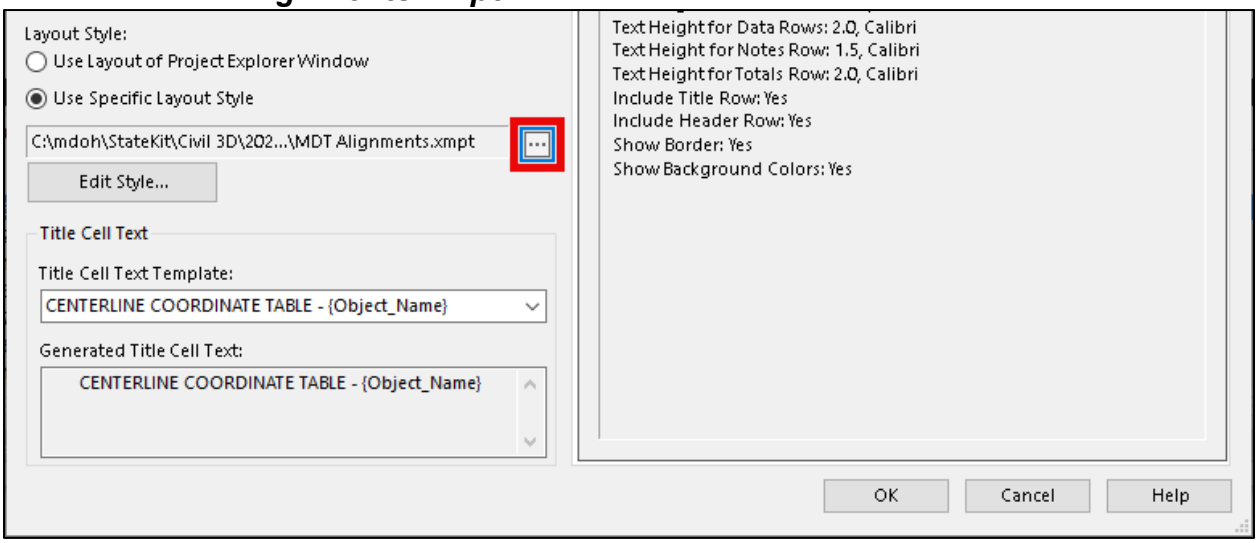
5. In the ***Project Explorer*** window, select the ***Object Set(s)*** tab, then select the ***New Object Set*** button.



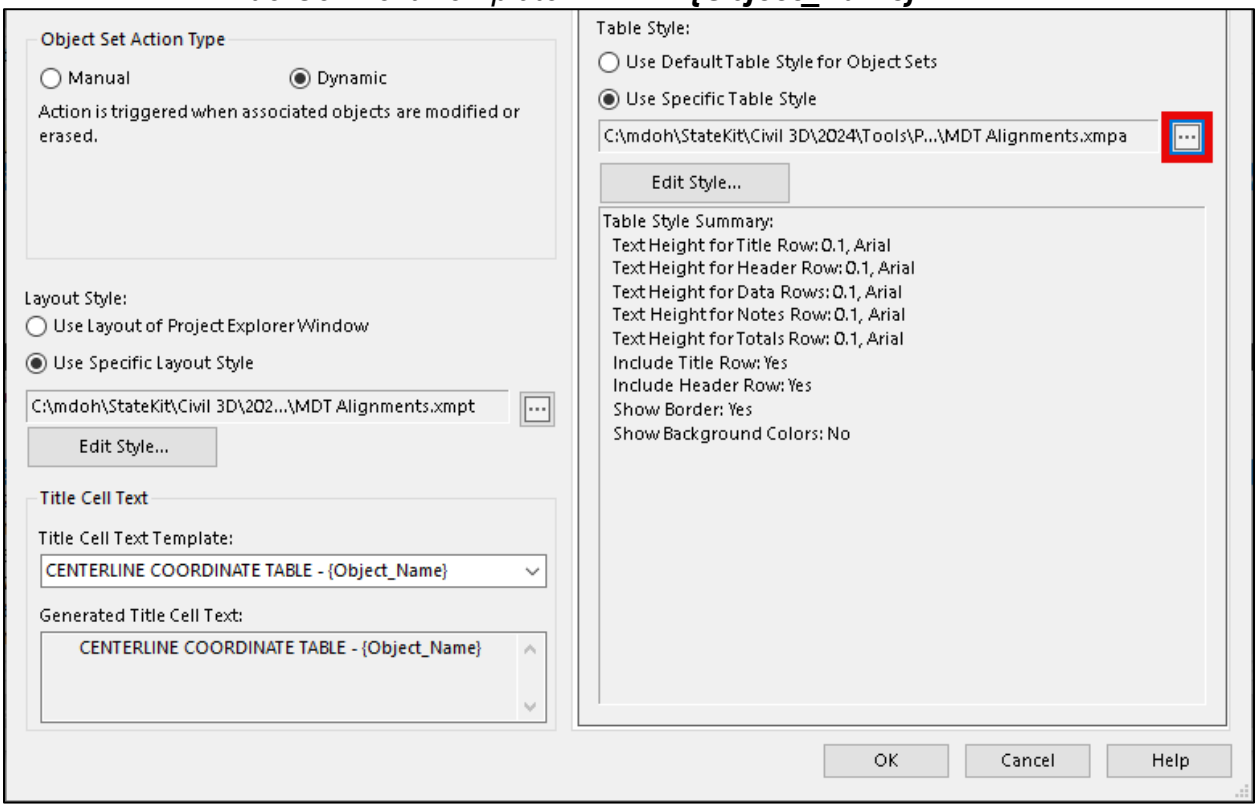
6. In the ***Create Object Set*** popup window, name the *Object Set Name* "***CL COORD TABLE***." In the *Object Set Action*, select the dropdown and select ***Export to AutoCAD Table(s) in PAPER Space***. Set the *Object Action Type* to ***Dynamic***.



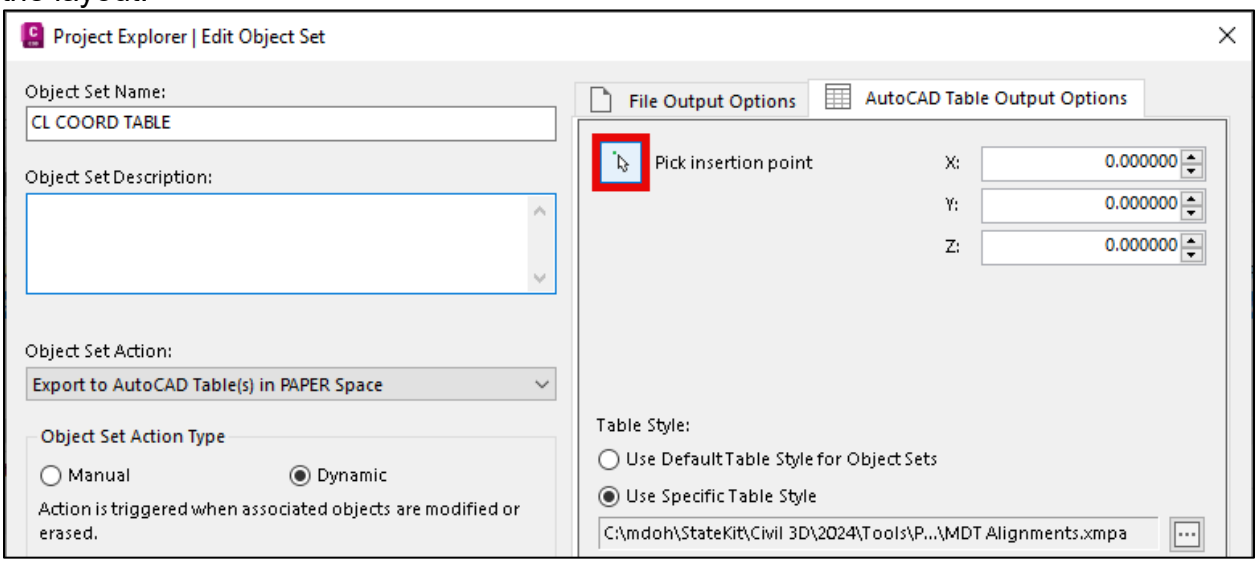
7. In the *Layout Style* section, select ***Use Specific Layout Style*** and click the ellipsis to navigate to the following folder:
C:\mdoh\StateKit\Civil 3D\2024\Tools\Project Explorer
Select the ***MDT Alignments.xmpt*** file.

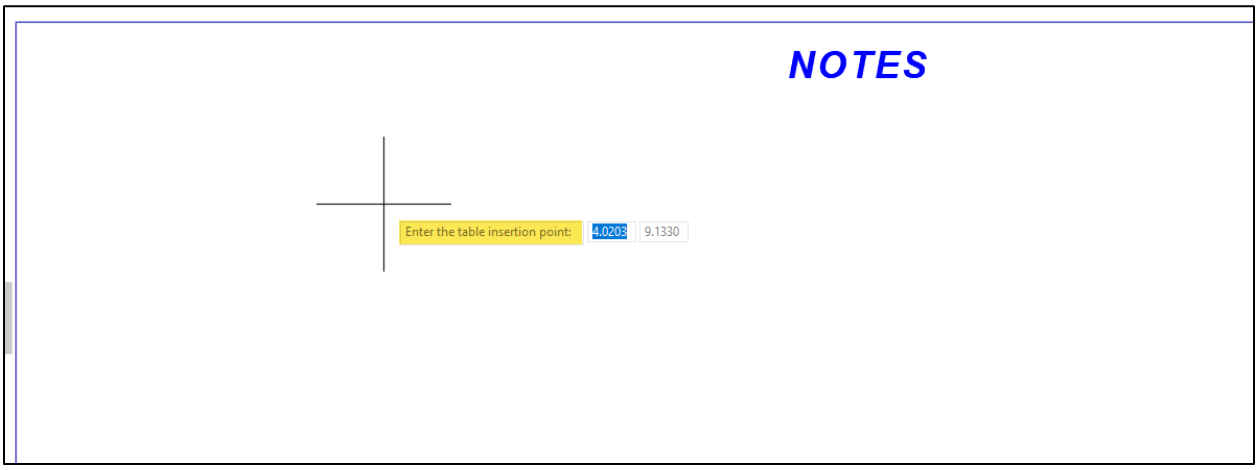


8. In the *Table Style* section, select ***Use Specific Table Style*** and click the ellipsis to navigate to the same folder as in Step 7. Select the ***MDT Alignments.xmpa*** file. Ensure the *Title Cell Text Template* is set to ***{Object_Name}***.

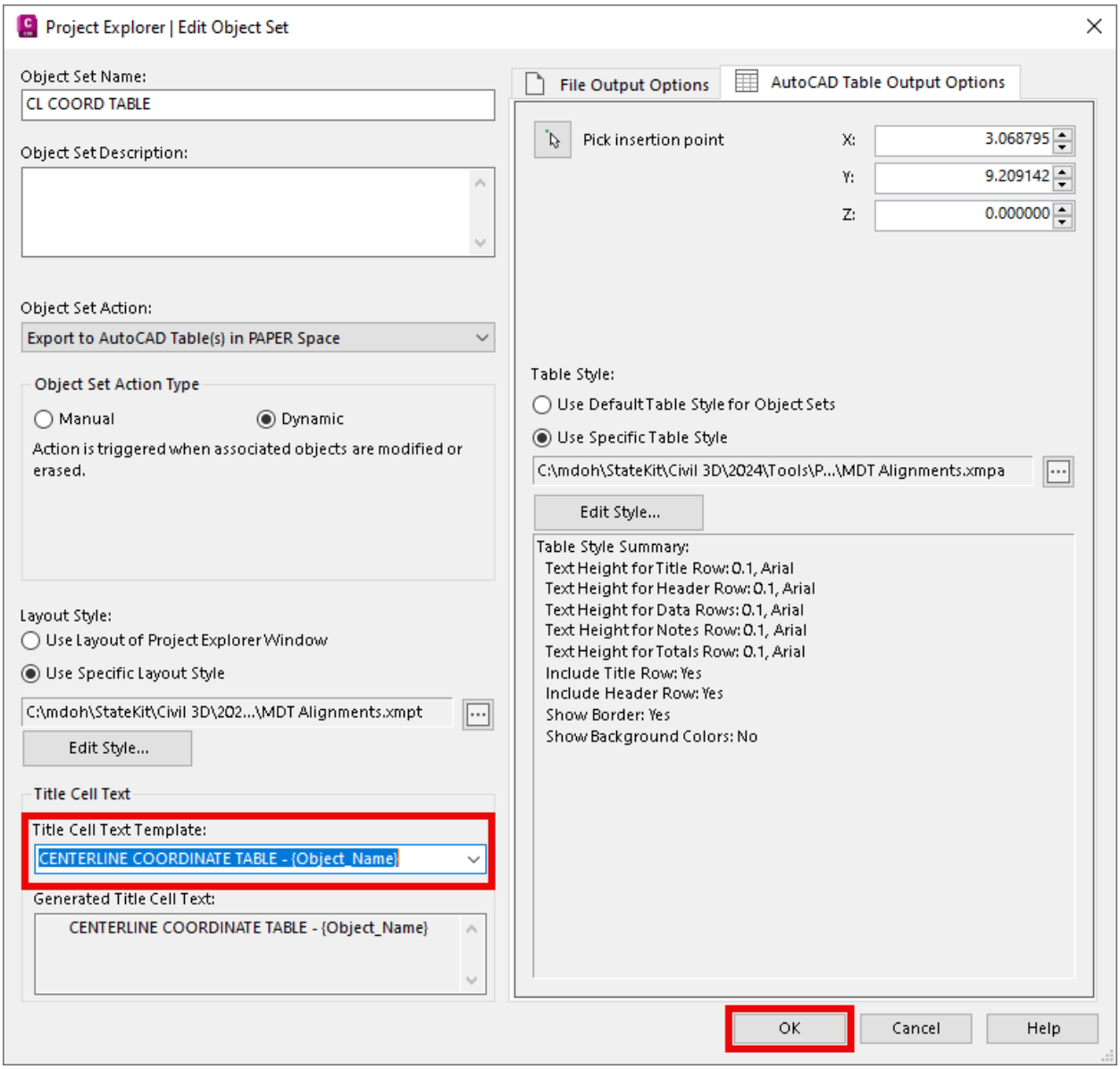


9. ***Pick the insertion point*** by left clicking the mouse pointer icon at a point within the layout.

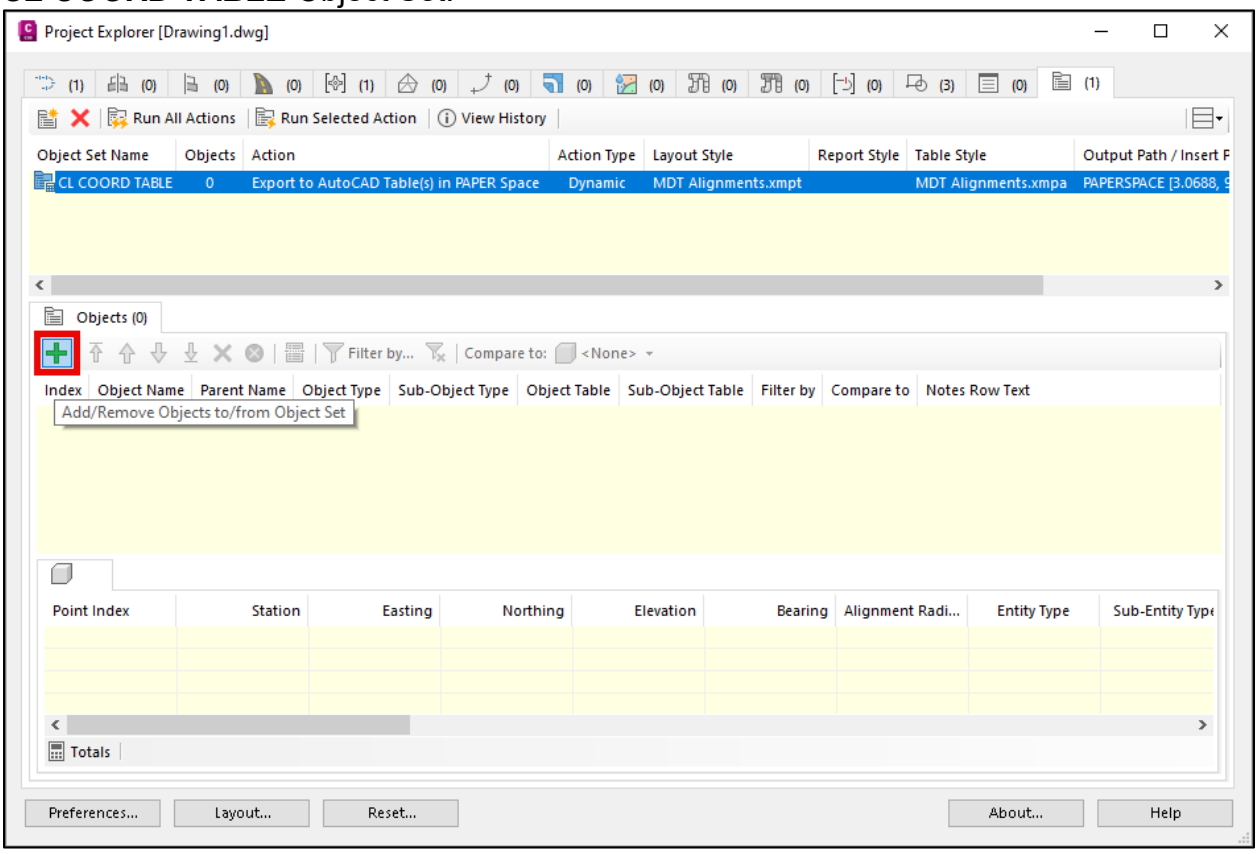




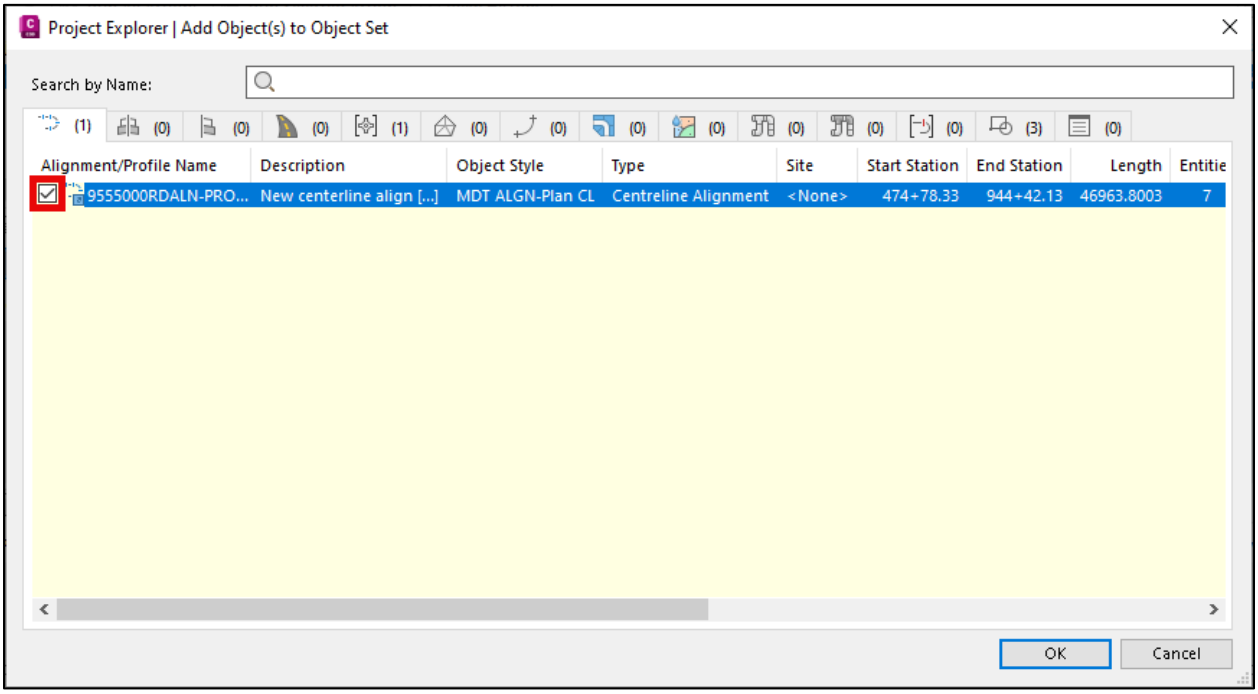
10. Select ***OK*** to close the window*.
    *If the alignment is not a centerline alignment, but rather an approach or detour alignment, perform the following:
    Return to the ***Create Object Set*** popup window. In the *Title Cell Text* section, replace the "***CENTERLINE"*** prefix with the appropriate description, such as "***APPROACH***" or "***DETOUR***" in the *Title Cell Text Template*. Then select ***OK*** to close the window.
    It is also recommended to set the *Object Set Name* to match the alignment type.



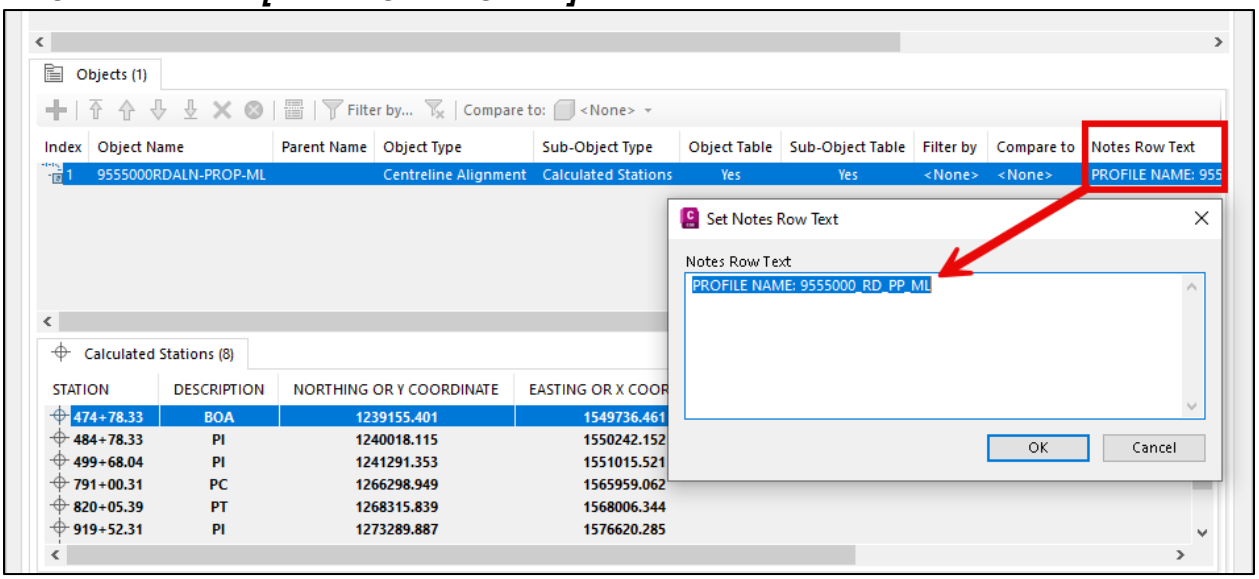
11. In the ***Project Explorer*** window, select the green **+** to add the alignment to the ***CL COORD TABLE*** Object Set.



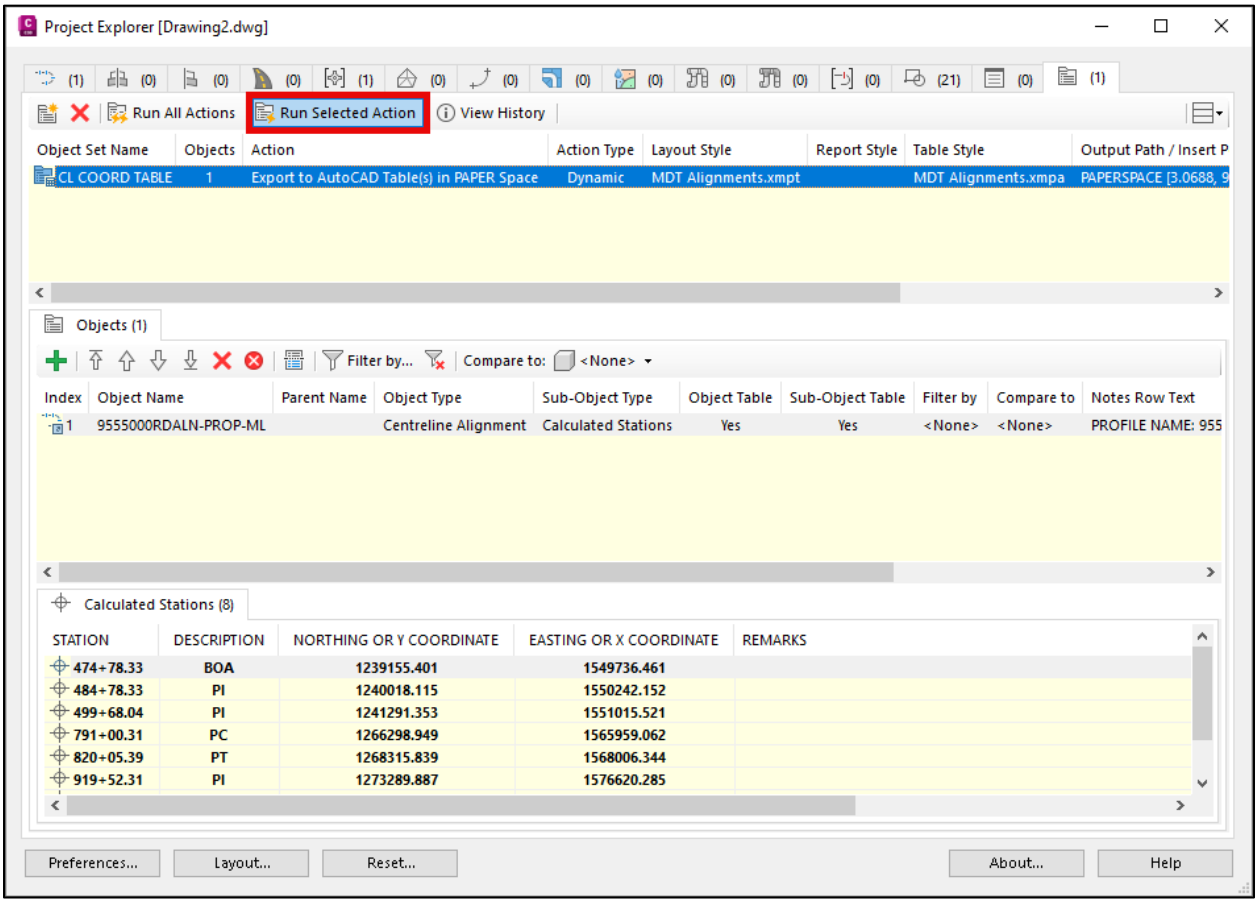
12. Select the alignment, check the box, then select ***OK***. The ***Project Explorer*** may take a few moments to load the information.



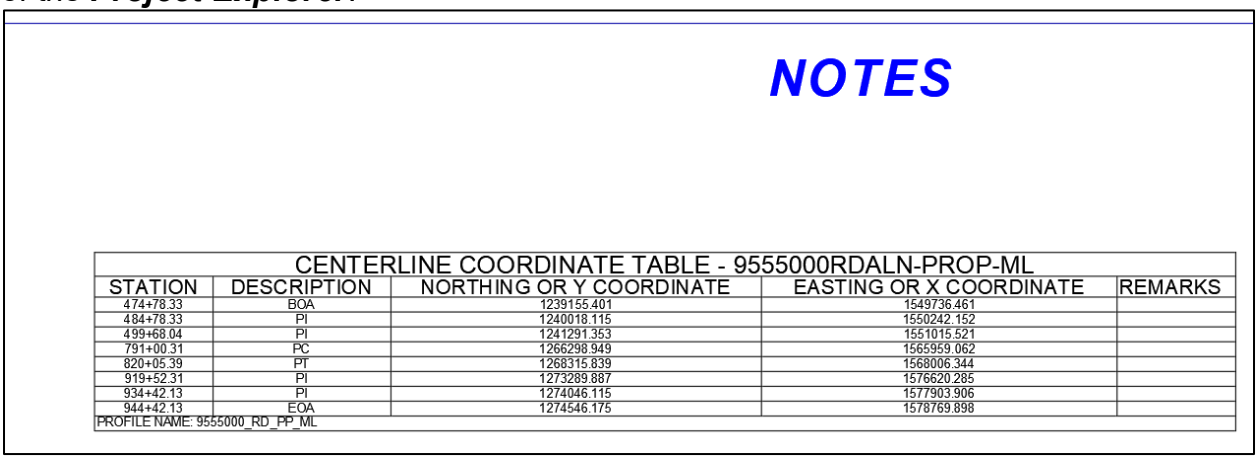
13. In the *Objects* section, select the *<None>* cell in the *Notes Row Text* column, then type the name of the design profile associated with the alignment in the *Set Notes Row Text* popup. Use the following format:
PROFILE NAME: [NAME OF PROFILE]



14. Select ***Run Selected Action.***



15. The table will be inserted into the layout at the specified insertion point. Close out of the ***Project Explorer***.



NOTES

CENTERLINE COORDINATE TABLE - 9555000RDALN-PROP-ML

STATION	DESCRIPTION	NORTHING OR Y COORDINATE	EASTING OR X COORDINATE	REMARKS
474+78.33	BOA	1239155.401	1549736.461	
484+78.33	PI	1240018.115	1550242.152	
499+68.04	PI	1241291.353	1551015.521	
791+00.31	PC	1266298.949	1565959.062	
820+05.39	PT	1268315.839	1568006.344	
919+52.31	PI	1273289.887	1576620.285	
934+42.13	PI	1274046.115	1577903.906	
944+42.13	EOA	1274546.175	1578769.898	

PROFILE NAME: 9555000_RD_PP_ML

16. Use the ***MOVE*** command to adjust the positioning of the table as needed or follow step 9 to change the object set's insertion point and run the action again. Adjust the column widths and row heights and type in remarks as necessary.

    NOTE: If the object set action is run again or if the alignment geometry changes, the remarks will be erased and will need to be re-entered. If the table was moved, the table will also revert to its insertion point.

Procedure – Add Comma Separators to the Table

1. Select only the cells containing coordinates, then right click, select ***Data Format***, specify the data type as ***Decimal Number*** with the format as ***Decimal***. Select the precision to the ***nearest thousandth (0.000)***.
2. In the *Table Cell Format* popup, select *Additional Format*, then select the dropdown for the *Thousands* number separator and select ***',' (Comma)***. Select ***OK***, then ***OK*** again to close out of both the *Additional Format* and *Table Cell Format* popups.

