RIGHT-OF-WAY ALIGNMENT FILE PROCEDURE

Contents

Overview

The R/W Alignment File was developed to prevent circular referencing of the mainline alignment between RO and other functional design areas. This process procedure covers the creation of the ROALN file, along with the ROBAS files and changes in the Road Design Alignment prior and post Plan Authorization.

Process Provenance

- Date of development: 11/12/2025

- Revision date: *N/A*

- Application/Tool(s): *AutoCAD / Civil 3D*

- Version(s): *Civil 3D 2024*

- Environment(s): *MDT Civil 3D State Kit r2024 v2.21*

- Contact: *Open a Case*

References

Autodesk Civil 3D Naming Standards, File Types & Referencing Relationships

Alignment File Procedure

Premise

To stop circular referencing among Autodesk Docs files in other design work groups, the Right of Way Baseline will be placed in its own .dwg file. This file will contain all R/W Baselines that will be data referenced into the ROMAP file. The only features that will be contained within the ROALN file are the R/W Baseline and subsequent baselines associated with a project. All other features (callouts, text, linework) will be placed in the ROMAP.

Section I.   Create the Alignment Design File

Create Drawing

From the start page of Civil 3D, open a new drawing from the 'design-start.dwt' template.

Save the file with the naming convention XXXXX00XROALN001.dwg under the Autodesk Docs Project RO folder.

Exactly as the ROMAP, associate all data references with the Autodesk Docs project folder using the Prospector tab on the Toolspace palette. Be sure to set the working folder and associate the project to the current drawing before proceeding

Section II.   Reference Road Design Alignment(s)

Using Data Shortcuts to Reference Alignments

Using the Prospector tab in the Toolspace under data shortcuts, navigate to the Alignments -> Centerline Alignments -> RD centerline alignment, right click to 'Create Reference'.

Inside the 'Create Alignment Reference' pop-up window, rename the name of the alignment to the proper naming convention [XXXXX00XROALN_RWBL]. Verify the alignment style is set to 'MDT ALGN-Plan CL' and the alignment label set is set to 'MDT ALGN-Design Label Set (200 Scale)'.

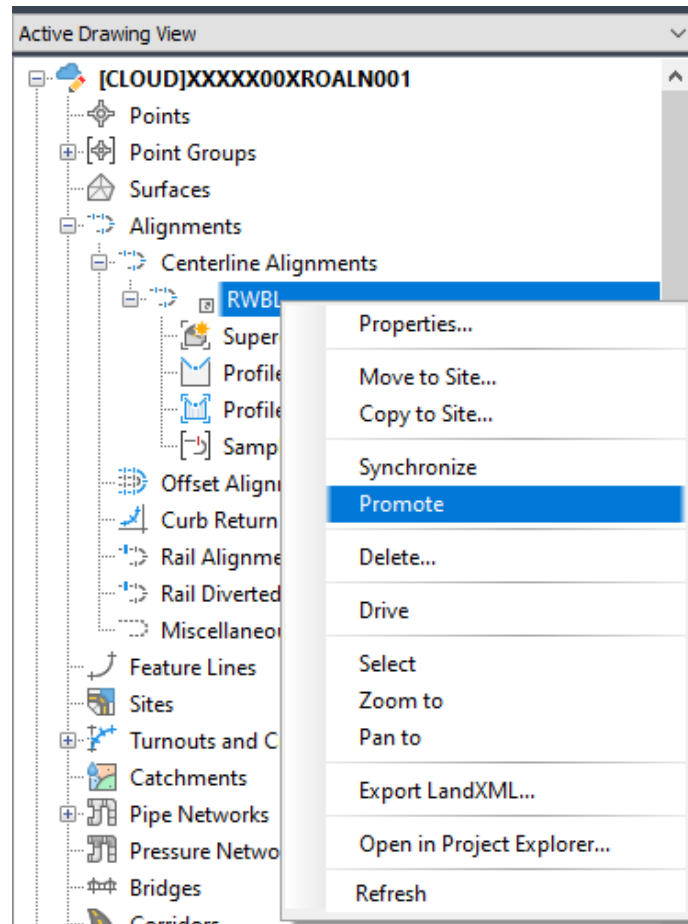### Additional Alignments utilized for R/W Acquisition

Add all other Road Design alignments that will be used as a basis for R/W acquisition into this drawing. All baselines used to define an area of acquisition should start with XXXXX00XROALN_*.

> *e.g. a baseline describing 'Granite Creek Rd' would be called 'XXXXX00XROALN_GraniteCreekRd'.*

Section III. Promote Road Design Alignment(s)

Promote Mainline Alignment

From the Prospector tab of the Toolspace under the drawing settings, navigate to Alignments -> Centerline Alignments -> XXXXX00XROALN_RWBL. Right click the alignment and select 'Promote'.
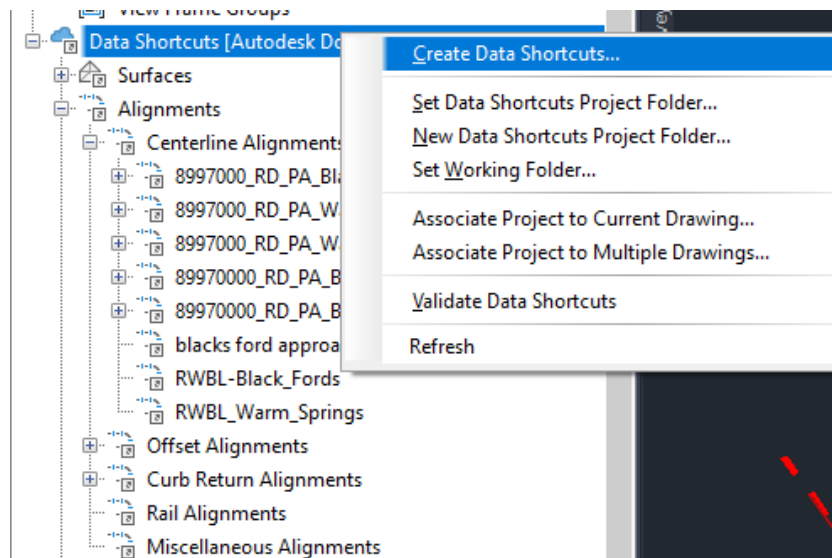

Promote Additional Alignments utilized for R/W Acquisition

Promote all alignments to be utilized for acquisition baselines using the same method for the RWBL alignment. Once all alignments have been promoted, save the file.
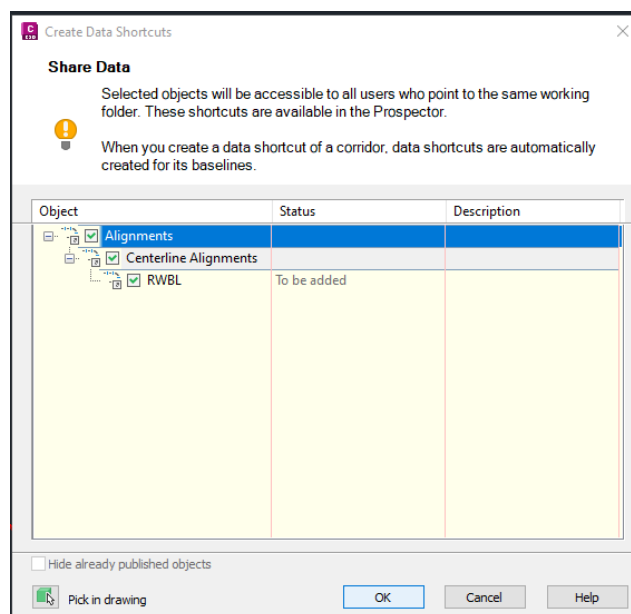
![Montana Department of Transportation logo]

Section IV. Create Data References for R/W Alignments

Create Data Shortcuts

From the Prospector Tab in the Toolspace palette, under data shortcuts, right click 'Data Shortcuts' and select Create Data Shortcuts.

Select all the alignments you promoted earlier to reference into the ROMAP and click OK.

Once the data references have been created save the ROALN file.

Section V. Creating the Horizontal Alignment File (ROBAS)
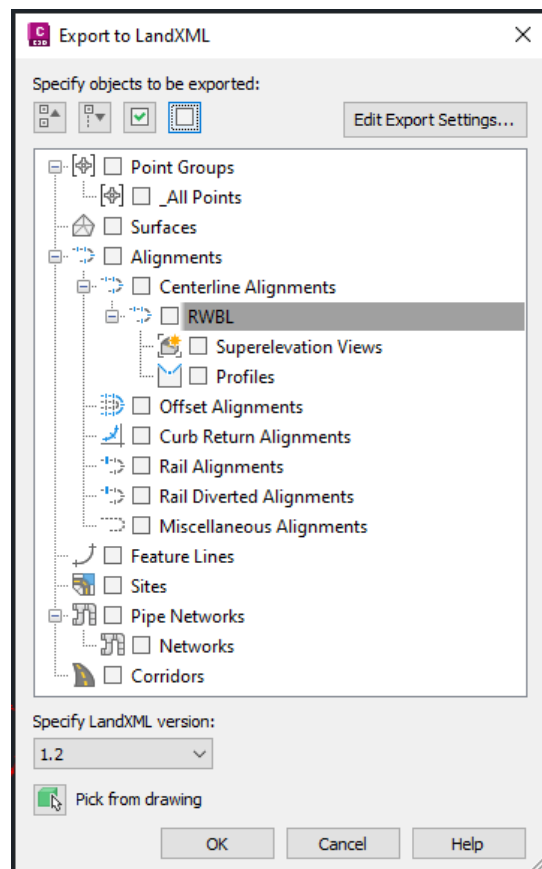
Utilizing the Reports Manager

From the Toolbox tab in the Toolspace palette, expand 'Reports Manager', double click 'Horizontal Alignment Report'. Only the alignments that are stored in the ROALN file should be shown in the list of alignments, select them all, change the 'Save report to:' location to the C://dgn of your computer. This file will be stored on PCMS under the RO folder as 'XXXXX00XROBAS001.txt'. For consultants, save the ROBAS file in the same location as your drawing files for submittal to the Department.

Section VI. Creating the R/W Baseline Coordinate File (ROBAS)
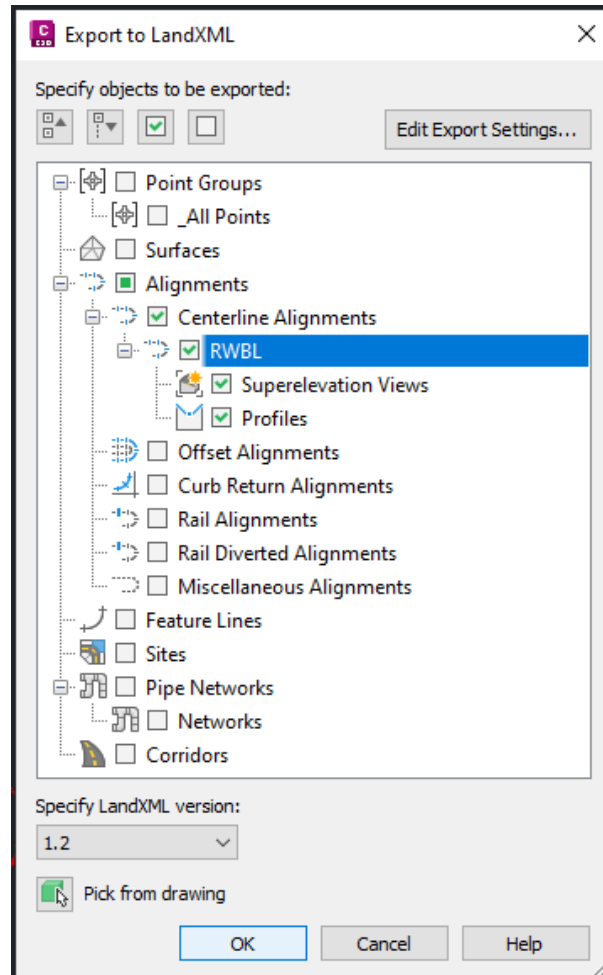
Export to LandXML

In the Output tab on the Ribbon, under the export group select 'Export to LandXML'.

By default, all features will be selected, using the top right button unselect all boxes.

Export to LandXML (Continued)

Find the RWBL under Alignments -> Centerline Alignments -> XXXXX00X_RWBL and all other associated baseline alignments and select them, then select OK.

When prompted, save this .xml file on your computer's dgn folder. Save this file in PCMS as 'XXXXX00XROBAS001.xml' under the RO folder for the project. For Consultants, Save the .xml in the same location as drawing files for submittal to the Department.

Once the baseline files have been saved to PCMS, save and close the ROALN file.

Refer to the process workflow *Right-of-Way Placing Proposed R/W Linework Procedure* for adding the RWBL into the ROMAP file as well as all other design data to map file.

Section VII. Changes to the Road Design Alignment

Alignment Changes PRIOR to Plan Authorization

If any changes have been made to the RD alignment prior to authorization, this process will need to be restarted by deleting the RWBL alignment and promoting the RD alignment from data shortcuts, and subsequent files will need to be updated including the ROMAP and its offsets.

R/W Alignments consumed for cross sections must also be updated. This process would fundamentally start the ROXSF Drawing Procedure over. **Contact the R/W Design Supervisor** for further clarification of impacts to the design.

Alignment Changes AFTER Plan Authorization

If any changes have been made to the RD alignment AFTER project authorization, the **original RWBL MUST be kept**. Additional Alignments may need to be created to supplement the original R/W Centerline. **Contact the R/W Design Supervisor** to coordinate next steps in the design cycle.

R/W Alignments consumed for cross sections must also be updated. This process would fundamentally start the ROXSF Drawing Procedure over. The new R/W Cross Section Alignments would follow the Modified RD Alignment. **Contact the R/W Design Supervisor** for further clarification of impacts to the design.