MONTANA
Department of Transportation

RIGHT-OF-WAY BREAK COORDINATES PROCEDURE

Contents

Overview

This procedure guides the user to create the Right of Way Break Coordinates (ROBRK) files associated with R/W Plan Production by creating points, point groups, and creating the ROBRK file.

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*

Right of Way Break Coordinates Procedure

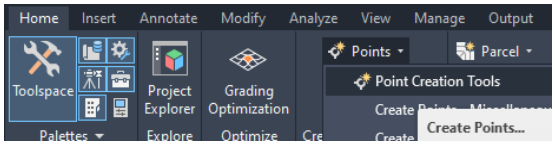
Section I. Creating Points using Civil Object Points

Preface

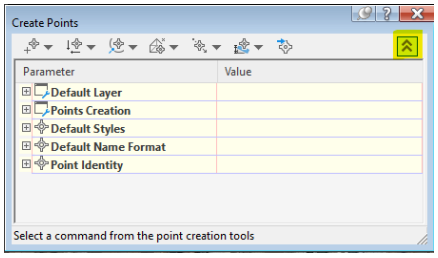
Right of Way Break Point nodes are placed in the ROMAP file.

Plan Production Point Creation Settings

From the Home ribbon tab, in the Create Ground Data group, select Points -> Point Creation Tools.



From the Point Creation Tools Window, Select the Create Points dialog box from the right-hand side of the window.

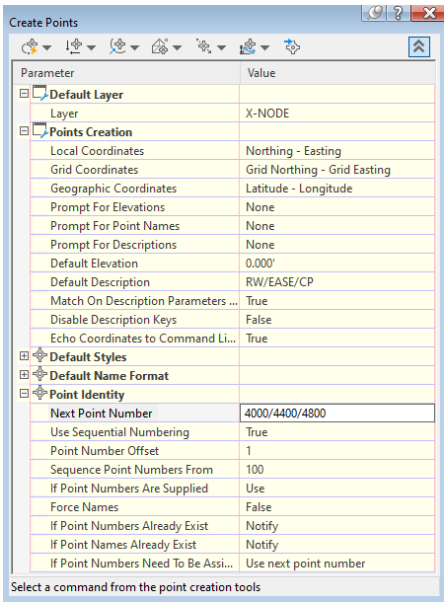


Create Points Dialog Window

Edit and verify that the settings of the Create Points Dialog Window are as follows

Create Points	
Parameter	**Value**
Default Layer	
Layer	X-NODE
Points Creation	
Local Coordinates	Northing - Easting
Prompt for Elevations	None
Prompt for Point Names	None
Prompt for Description	None
Default Description	<blank>*
Point Identity	
Next Point Number	*

*will be populated by desired value from the 'Next Point Number by Point Classification Type Table'



Create Points Dialog Window (Continued)

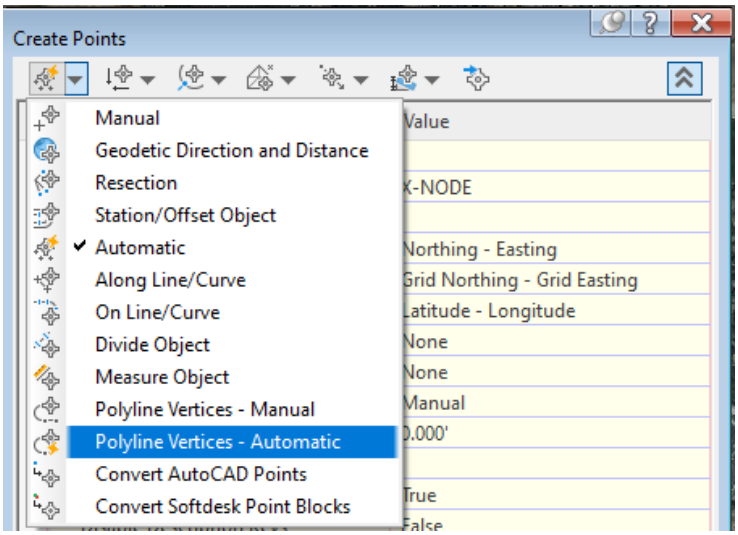
Next Point Number by Point Classification Type Table	
Point Classification	**Default Next Point Number**
RW	4000
EASE	4400
CP	4800

Automatic Point Creation (Preferred)

Points can be created automatically for R/W lines that are a polyline. R/W Lines must be polylines for the ROXSF process.

In the Create Points Window, change the Default Description to the correct Point Classification in the *Points Creation* group. Verify the *Point Identity* -> Next Point Number corresponds to the Point Classification Type.

Select Create Points -> Polyline Vertices – Automatic



Select all the polyline(s) for the Point Classification selected. Enter to Exit the command.

Iterate through all the acquisition point classifications until complete. Points can be viewed in table form in the Prospector tab of the Toolspace, point group.

Note: Additional points may be added if additional polylines are created. In that instance, verify the Point Classification is updated in the Default Description and change the Next Point Number to the next available number in the sequence in the point class. Point Numbers must be unique.

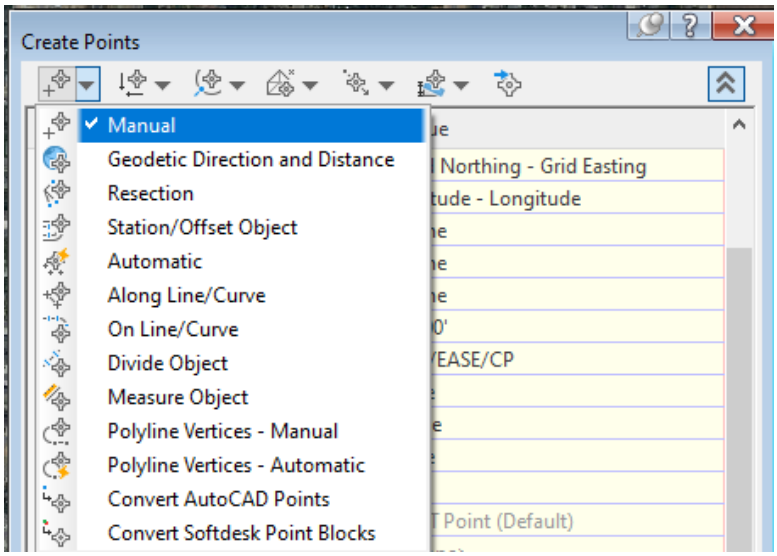
Manual Point Creation

Manual Point Creation may be helpful to add an additional break point added later during a project lifecycle. Automatic point creation should be utilized, when possible to save time and forgo errors in skipped R/W Breaks. R/W Lines must be polylines for the ROXSF process, however, manually created points do not need a polyline to be created.

In the Create Points Window, change the Default Description to the correct Point Classification in the *Points Creation* group. Verify the *Point Identity* -> Next Point Number corresponds to the Point Classification Type.

Note: for additional points added after the initial point creation, utilize the next available number in the sequence. Point Numbers must be unique.

Select Create Points -> Manual



Select all the vertexes for the Point Classification desired using endpoint/intersection object snaps. Enter to exit the command once complete.

Iterate through all the acquisition point classifications until complete. Points can be viewed in table form in the Prospector tab of the Toolspace, point group.

Note: Additional points may be added if additional polylines are created. In that instance, verify the Point Classification is updated in the Default Description and change the Next Point Number to the next available number in the sequence in the point class. Point Numbers must be unique.

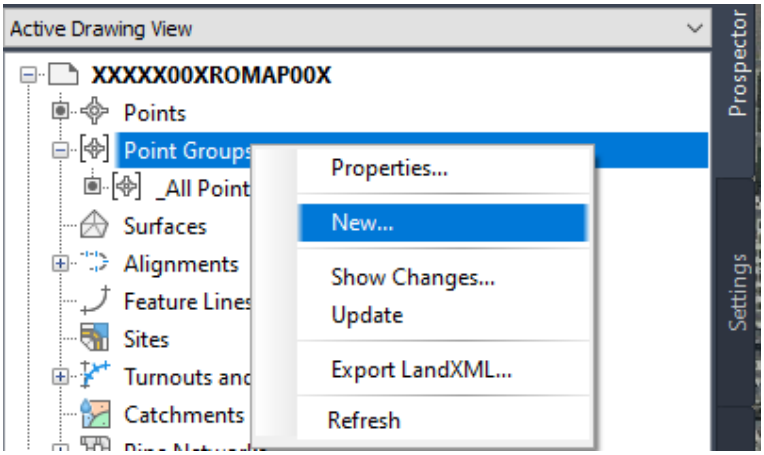
Section II. Creating Points Groups

Preface

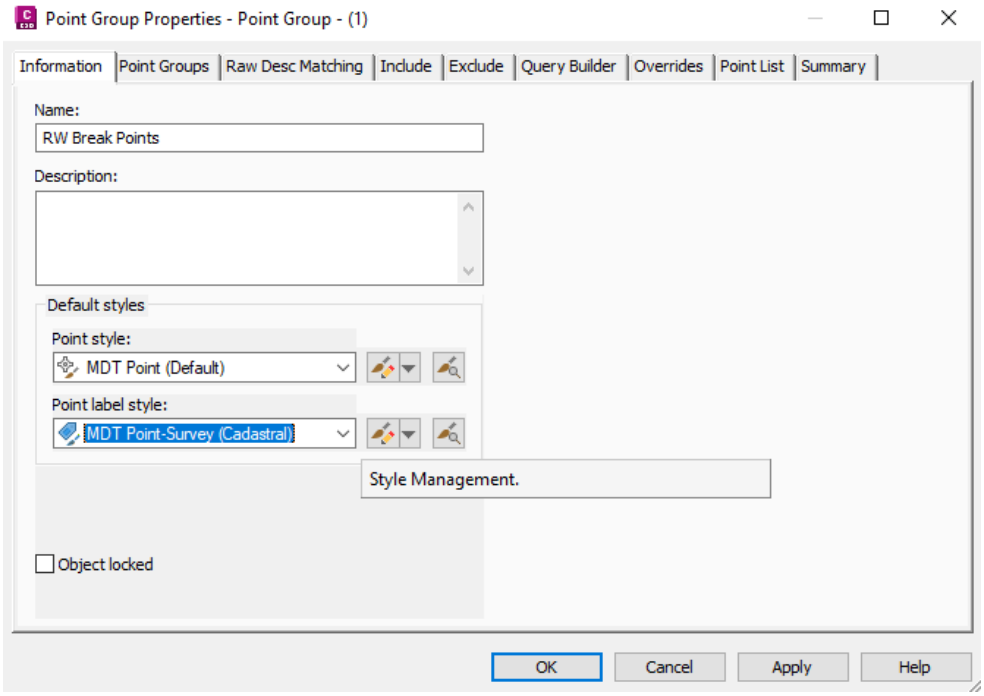
Point groups are utilized to organize the classifications of points within a model. Placing points in point groups allows for bulk/batch editing of point styles.

Create Point Group from Prospector

From the Toolspace Prospector tab, right click on Point Groups and select 'New…'

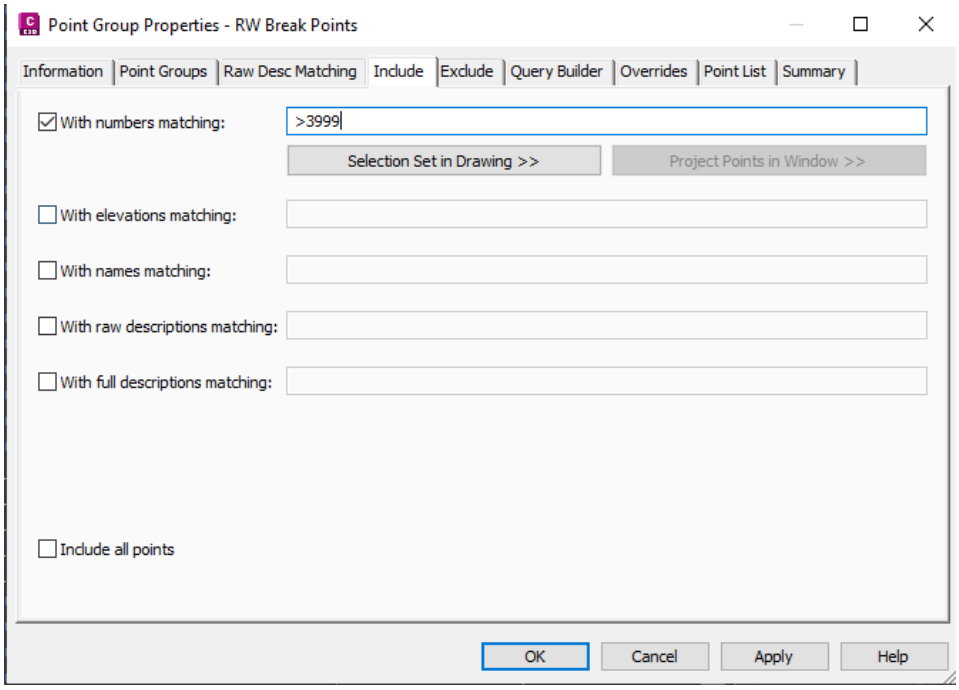


Name the group 'RW Break Points'



Create Point Group from Prospector (Continued)

On the Include tab of the Point Group Properties window, existing points can be added to the point group by selecting 'With numbers matching:' and filling in '>3999'. Once the point group settings are filled in, select OK.



If point numbers are not displayed correctly, verify there are points in the point group. If there are, right click the point group and select 'Update'. Point styles and labels can be edited in the point group properties (right click, properties).

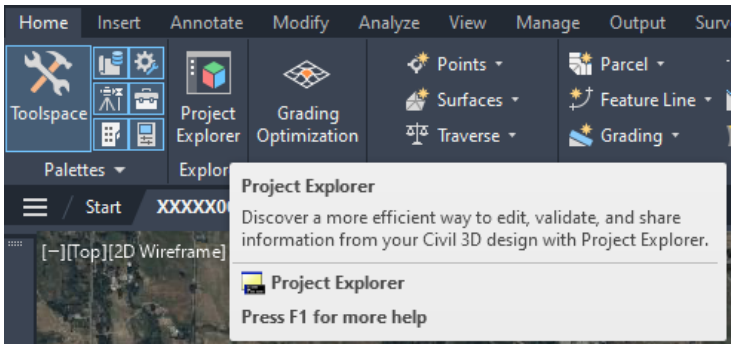
Section III. Creating the R/W Break Coordinate File

Preface

All Points must be added to the drawing and inside the RW Break Points point group before creating the Break file.

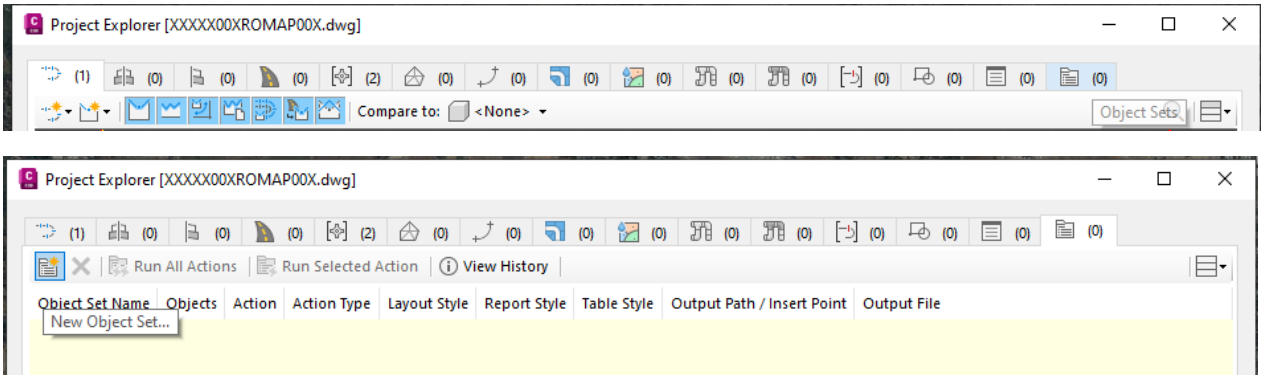
Creating the Break File from the Project Explorer

In the command line, type the command 'PROJECT EXPLORER', the explorer can also be found on the Home tab of the ribbon in the Explore group.

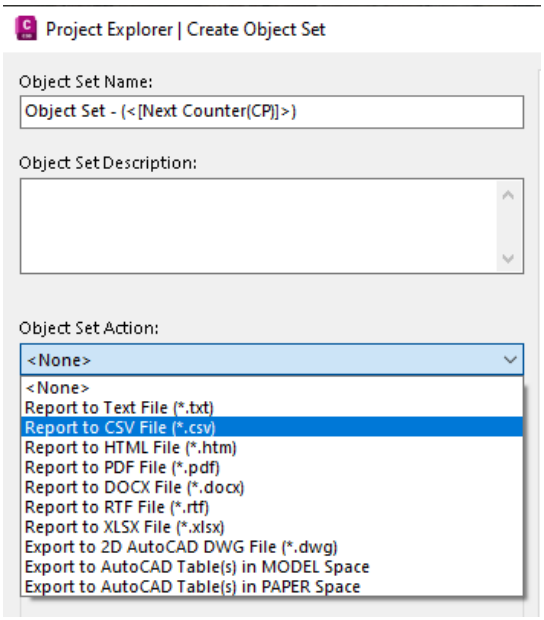


Creating the Break File from the Project Explorer (Continued)

On the Object Sets Tab of the Project Explorer (far right button), select 'New Object Set'.

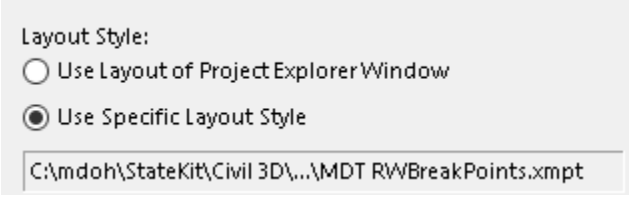


In the Create Object Set dialog window, under Object Set Action, select 'Report to CSV File (*.csv)'



Under Layout Style, select 'Use a specific layout style and navigate to 'C:\\mdoh\StateKit\Civil 3D\2024\Tools\Project Explorer.

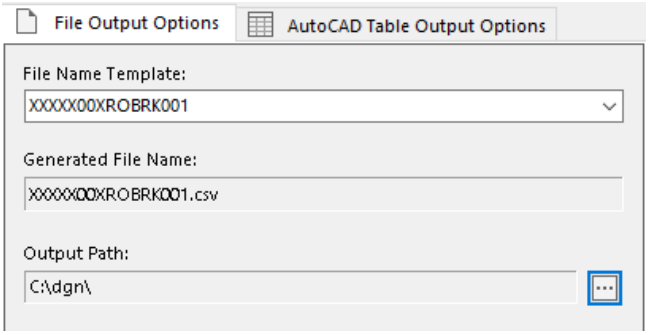
Select the 'MDTRWBreakPoints.xmpt' style.



Creating the Break File from the Project Explorer (Continued)

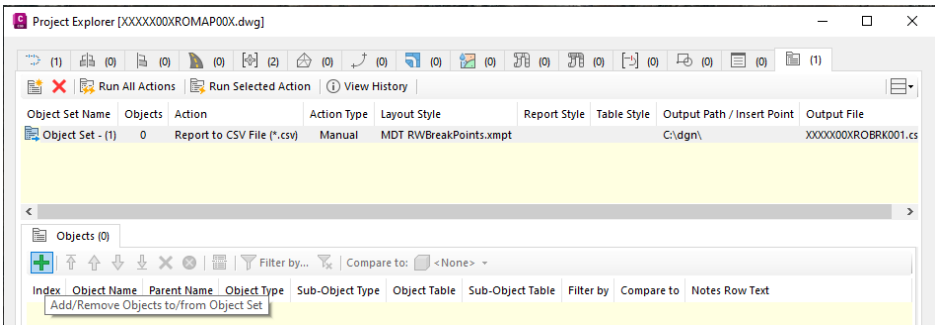
On the right side of the Create Object Set dialog widow, under the File Output Options tab, change the File Name Template to follow the Standard Naming Convention 'XXXXX00XROBRK001" since the .csv file type was added earlier in this process, the generated file output follows the Standard Naming Convention.

Change the Output Path to the C:\dgn\. For consultants, save this file with the drawing files for submittal to the Department.

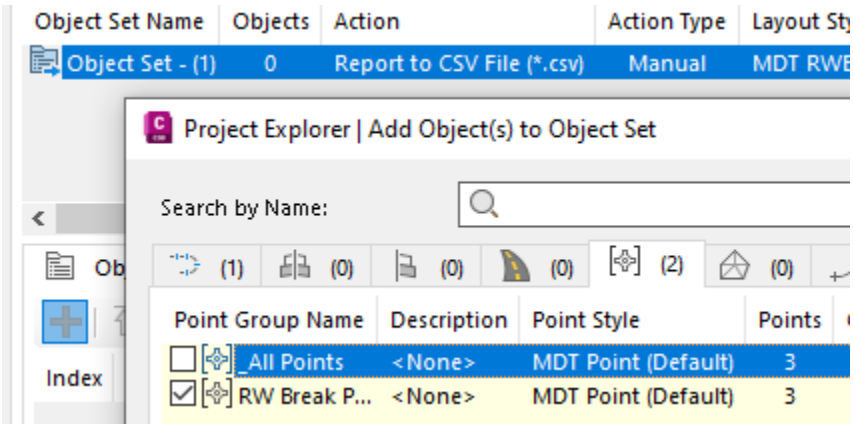


Select OK to create the Object Set.

In the Project Explorer, on the Object Sets Tab (current tab) under the Objects group on the bottom half of the explorer, select the Add/Remove Objects to/from Object Set.

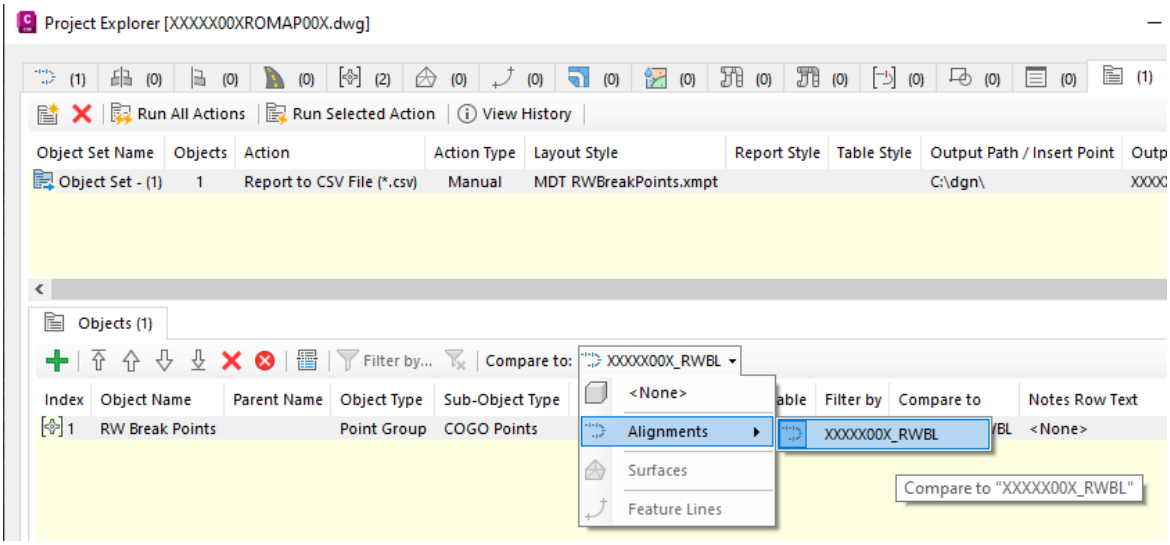


In the Add Object(s) to Object Set dialog window, select the Point Groups Tab. Select the RW Break Points group and select OK

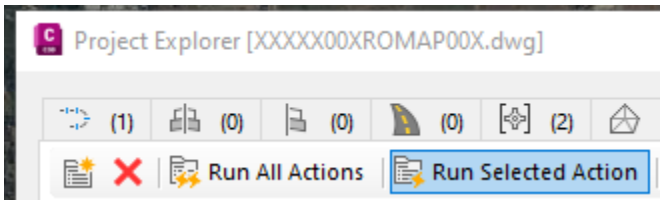


Creating the Break File from the Project Explorer (Continued)

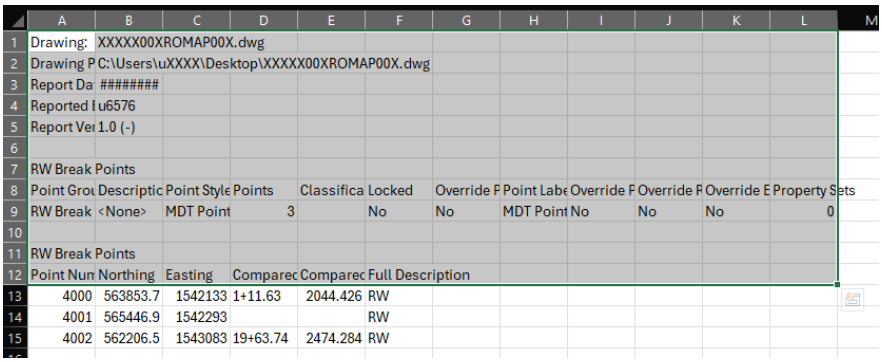
Points will be listed under COGO Points. The Break Coordinate file is best used to compare the Alignment to the break coordinates of the Proposed R/W Acquisition lines. To add the compared alignment information, select the box at the top of the Objects group and select the XXXXX00X_RWBL.



Once the R/W Mainline Alignment has been selected to compare the points, use the Run Selected Action button to create the .csv file. The file will save in the 'C:/dgn' (or alternative selected) folder.



When prompted, open the .csv file. Delete the information (and rows) above the point number (all data and cells above (including) Row 12.)



	A	B	C	D	E	F	G	H	I	J	K	L
1	Drawing:	XXXXX00XROMAP00X.dwg										
2	Drawing P	C:\Users\uXXXX\Desktop\XXXXX00XROMAP00X.dwg										
3	Report Da	########										
4	Reported I	u6576										
5	Report Ver	1.0 (-)										
6												
7	RW Break Points											
8	Point Grou	Descriptio	Point Style	Points	Classifica	Locked	Override P	Point Labe	Override P	Override P	Override E	Property Sets
9	RW Break	<None>	MDT Point	3		No	No	MDT Point	No	No	No	0
10												
11	RW Break Points											
12	Point Num	Northing	Easting	Compared	Compared	Full Description						
13	4000	563853.7	1542133	1+11.63	2044.426	RW						
14	4001	565446.9	1542293			RW						
15	4002	562206.5	1543083	19+63.74	2474.284	RW						

Data shaded above (rows 1-12) shall be deleted. Save the .csv. Upload the file to PCMS. For consultants, submit to MDT with design files.