Workflow ORD 1- Using GIS Data For A Title Sheet Vicinity Map

This document guides you through the process of creating a title sheet vicinity map using GIS data. The GIS data has been compiled from a number of shape files into a single DGN file. Data attached to the elements is used to label the drawing for the title sheet vicinity map. This workflow replaces the **PW17 – Creating A Project Location Map Using The ProjectWise ArcGIS**

Connector workflow as the ArcGIS Connector is no longer available in ProjectWise.

Downloading the GIS Vicinity Map.DGN file

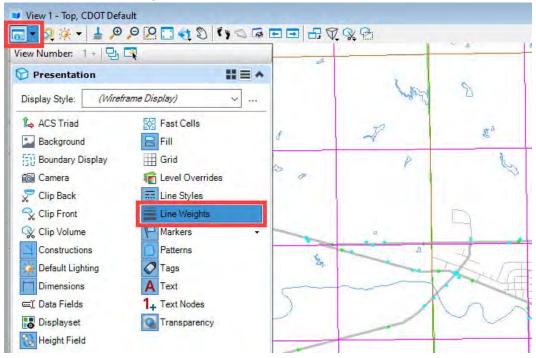
Use the link below to download the GIS Vicinity Map.DGN file:

https://www.codot.gov/business/designsupport/cadd/ord/ord-page

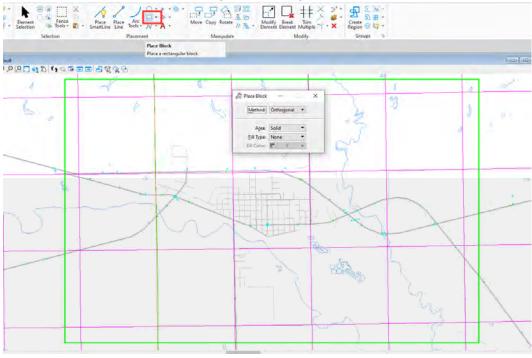
Look under the ORD Training Resources header.Select the file for the version of ORD that you are using.Save the downloaded file to your project perspective work area folder in ProjectWise.

Labeling The Vicinity Map

- 1. Open the **GIS Vicinity Map.DGN** file.
- 2. Select the **View Attributes** icon from the **View** toolbar and turn on the **Line Weights**. This will help in locating structures and milepoints.



- 3. Zoom into the area to be used for the vicinity map for your project limits.
- 4. Select one of the **DRAFT_No Plot-***color* levels as the Active level.
- 5. Place a rectangle around the area to be labeled using the **Place Block** command. Note: This is optional, but it will help to keep annotations within the area of the vicinity map as levels are turned on and off during the labeling process.



A Saved View can also be created for the Project Location.

6. Select the View tab > Saved Views group > Create Saved View command.

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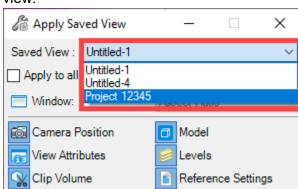
7. In the *Create Saved View* tool settings box, key in the *Name* for the view. A *Description* can also be entered, if desired.

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View Type:	General 🔻
<u>N</u> ame:	Project 12345
Description:	Vacinity Map Location
	Create Drawing
Clip Volume:	(From View) 🔻
	Associative

- 8. Left Click in the view to create the saved view.
- To recall the Saved View, select the View tab > Saved Views group > Apply Saved View command.



10. In the *Apply Saved View* tool settings box, select the *Saved View* then Left Click in the view.



The following items can be annotated:

- Structures Drainage structures, bridges, lighting, etc.
- County lines
- Engineering regions
- Highways
- Major roads
- Minor roads
- Railroads
- Lakes
- Rivers and streams
- Townships
- Sections

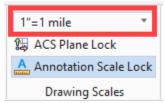
These can be labeled in any order desired. Highways, Major Roads, Minor Roads, and Streams should be labeled using the in-line option. The remaining items should be labeled using the Horizontal option. An example of each option is given below.

Note: Several items listed above share a common location (such as Sections and townships, county lines and engineering regions, etc.) because of this, levels not currently being labeled are turned off to make it easier to select the desired items.

In-Line Labeling

In-line labeling is used for roadway labels and stream names.

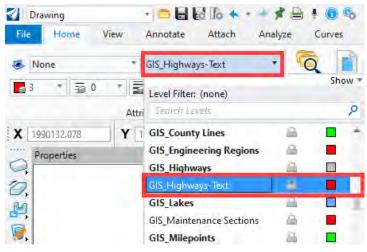
11. Set the Annotation Scale to 1"=1 mile.



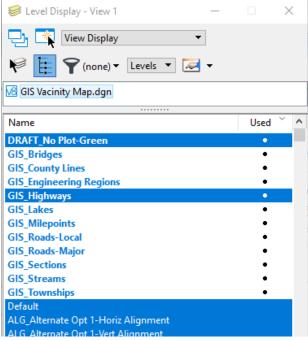
For ORD 10.08, set the annotation scale as shown below:

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12. Set the active level to the desired Text level (in this example, **GIS_Highways-Text** is used). If the data type does not have a GIS Text level, use the **DRAFT_Text-Notes** level.



13. Turn off all the levels not being labeled except for the level to be annotated and no plot level. The illustration below shows the levels used in the example.



Note: The GIS_Highways-Text level is also on (and active). It is not shown above as there is nothing on that level yet.

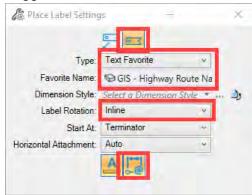
14. Using the **OpenRoads Modeling** workflow > **Drawing Production** tab, select the **Place Label** command.

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- 15. In the *Place Label* tool settings dialog, select the **Place a label without a leader** icon.
- 16. Set the *Type* to **Text Favorite**.
- Select the desired text favorite from the *Favorite Name* dropdown. In this example GIS

 Highway Route Name is used.

- 18. Set the *Label Rotation* to Inline.
- 19. Toggle on the Enable to create relative associations to elements icon.



20. **Left Click** on the element to be annotated near where the label is to be placed. Move the cursor to rotate the label to the desired direction then **Left Click** to place the label.

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- 21. Repeat step 12 for each element to be annotated. Note: When the Place Label command is dismissed then reopened, the tool settings are automatically reset to place a label with leader and Label Rotation to Horizontal.
- 22. Once all the labels have been placed for a data type, set the Active Level to the next data type's Text level. Turn on that data type's level.
- 23. Repeat steps 6 through 13 for the selected data type.

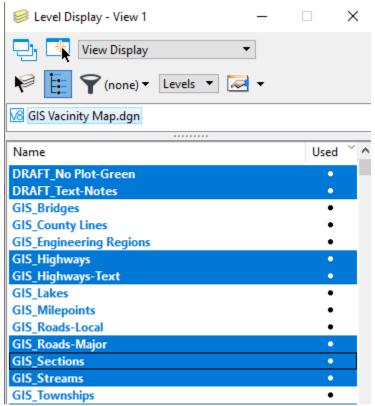
In the illustration below, Highways, Major Roads, and Streams have been annotated.



Horizontal Labeling

Horizontal labeling is used for all other labels. The example below uses the Place a label without a leader option, however, a leader can and should be used where it will improve clarity.

- 24. Set the active level to the desired Text level (in this example, **GIS_Sections-Text** is used). If the data type does not have a GIS Text level, use the **DRAFT_Text-Notes** level.
- 25. Turn on the level for the data type to be annotated. The levels that have been previously annotated are left on so that new labels can be placed in an open area.



Note: The GIS_Highways-Text level is also on (and active). It is not shown above as there is nothing on that level yet.

26. Using the **OpenRoads Modeling** workflow > **Drawing Production** tab, select the **Place Label** command.

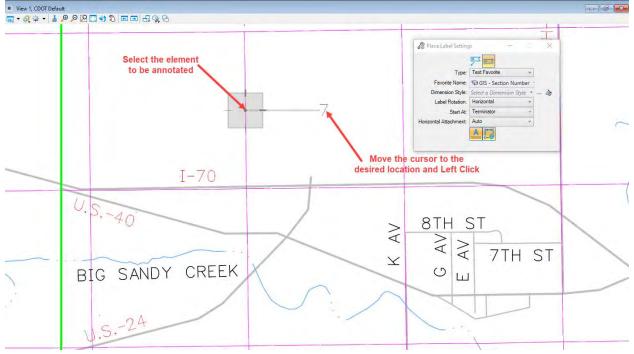


- 27. In the Place Label tool settings dialog, select the Place a label without a leader icon.
- 28. Set the *Type* to **Text Favorite**.
- Select the desired text favorite from the *Favorite Name* dropdown. In this example GIS

 Section Number is used.
- 30. Set the *Label Rotation* to Horizontal.
- 31. Toggle on the Enable to create relative associations to elements icon.

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Туре:	Text Favorite	v
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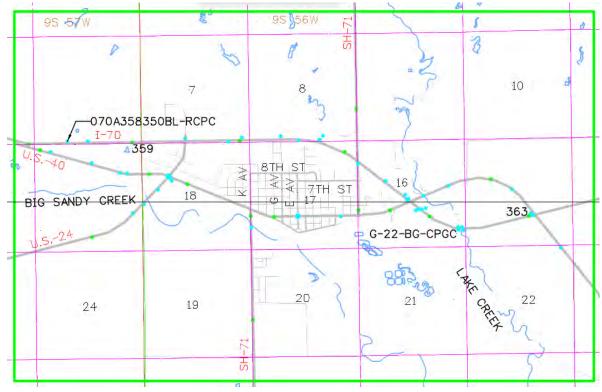
32. Left Click on the element to be annotated. Move the cursor where the label is to be located then Left Click to place the label.



33. Repeat step 24 for each element to be annotated.

- 34. Once all the labels have been placed for a data type, set the **Active Level** to the next data type's Text level. Turn on that data type's level.
- 35. Repeat steps 16 through 25 for the selected data type.

In the illustration below, townships, sections, mile points and Structures have been annotated.



The table below shows the GIS levels and corresponding Text Favorite.

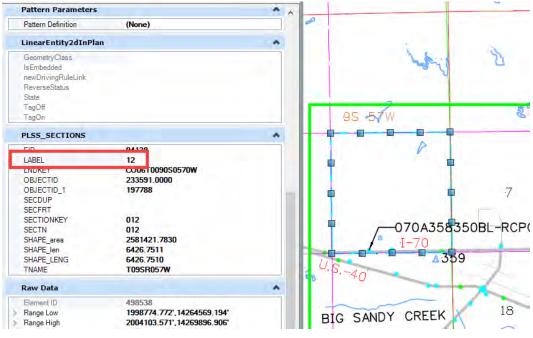
GIS Data Level	Text Favorite
GIS_Bridges	GIS – Structure ID-Type
GIS_County Lines	GIS – County Name
GIS_ Engineering Regions	GIS_Engineering Region Name
GIS_Highways	GIS_Highway Route Name
GIS_Lakes	GIS – Lake Name
GIS_Milepoints	GIS – Milepoint Reference Number
GIS_Roads-Local	GIS_Local Rds Name
GIS_Roads-Major	GIS_Major Rd Name
GIS_Sections	GIS_Section Number
GIS_Streams	GIS_Stream Name
GIS_Townships	GIS – Townships Name

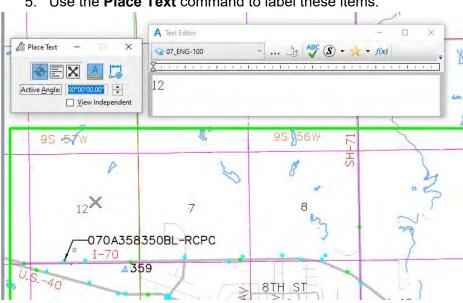
Tips and Notes for Annotating GIS Data

The Place Label command does not allow a reset to pick items under another overlapping item. It will also not work with pre-selected items. This issue is most apparent when labeling items sharing a common border, such as sections, townships, and counties.

To work around this issue, use the following steps:

- 1. Set the desired level.
- 2. Open the **Properties** dialog box.
- 3. Select the **Element Selector** tool and select the desired element. Right Click to select underlying elements.
- 4. Look in the *Properties* dialog box for the data needed. The illustration below shows the *Properties* for a Section.





5. Use the **Place Text** command to label these items.

For clarity, the Place a label with a leader option can be used.

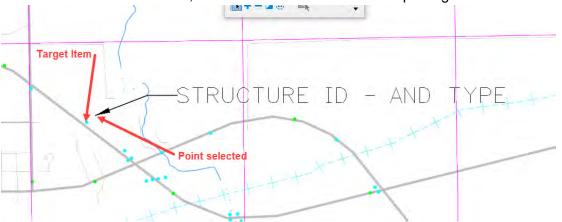


Please note when a GIS item does not have a value associated with it, the Place Label command will return a default value.

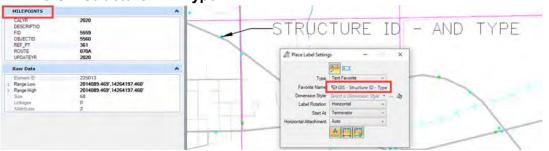
The item selected does not have data for the label. In the illustration below, the lake selected is unnamed, so the default value is used.



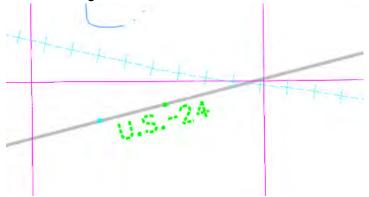
Another situation that displays a default value is if the item was missed when placing the label. In the illustration below, the structure was missed when placing the label.



If the wrong text favorite is used for the selected item the default value to the selected text favorite is displayed. In the illustration below a milepoint was selected but the text favorite is set to **GIS – Structure ID – Type**.



Rotating or moving a label will break the Association to the parent item. The display of the label is changed as shown below.



This does not affect the print output but is does bother some users. If you do not like seeing the broken associations but need to move labels, you can turn off the **Highlight Broken Associations**. Select **File > Settings > User > Preferences**. In the Preferences dialog box, select Operation from the list on the left side. Toggle off **Highlight Broken Associations**. Left Click the **OK** button to accept the change.

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Raster Manager	Display Active Level in All Views	
Reference	Viewing Tools Apply to Active View	
Render Ribbon	Use Snap Mode from Preferences	
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Tags	Abort on Reset	
Text Update Settings	Apply Level Lock	
View Options	Optimized <u>Fence Clipping</u>	
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Creating The Title Sheet

The following steps describe how to create the title sheet model.

1. From the **OpenRoads Modeling** workflow > **Drawing Production** tab > **Named Boundary** group, select the **Place Named Boundary** command.

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- 2. In the Place Named Boundary dialog, select the By 2 points icon.
- 3. Key in a Name and Description, if desired.
- 4. Select the Place a single named boundary icon.
- 5. Toggle on Create Drawing.

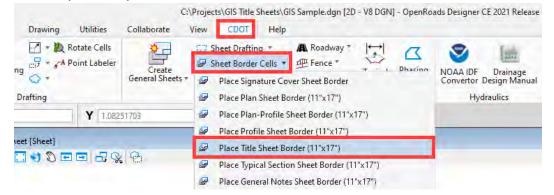
Place Named Bo	undary — 🗆 X
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<u>D</u> escription:	
Group:	(None) Create Drawing

- 6. Left Click on the upper left corner of the vicinity map and then Left Click the lower right corner.
- 7. Left Clack in the view to accept the defined area. This displays the *Create Drawing* dialog.

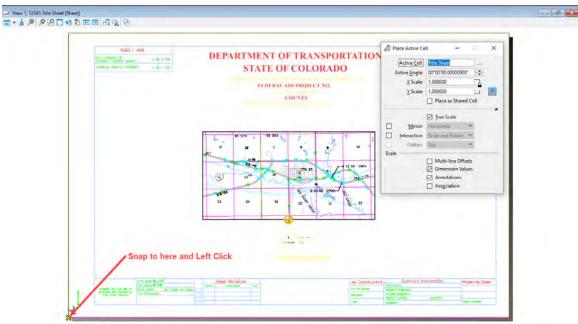
- 8. In the *Create Drawing* dialog, toggle on both **Create Drawing Model** and **Create Sheet Model**.
- 9. If desired, toggle on Add to Sheet Index.
- 10. Left Click the **OK** button. This creates the drawing model and sheet model and opens the sheet model.

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Filename:	(Active File)	💼 🖪
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11. From the CDOT tab > Sheets group, select Sheet Border Cells > Place Title Sheet Border (11"x17").



12. Snap the title sheet cell to the lower left corner of the sheet then Left Click to place the cell.



13. Edit the border as usual.

Tips and Notes for Creating a Title Sheet

Do not attempt to label GIS data in the drawing model as this will be extremely slow or lock up. Other labeling, annotation, etc. should be placed in the drawing model.

When creating the sheet model, if your vicinity map will fit in the defined Named Boundary, then this option can be used. The **From Named Boundary** option places the title sheet border so it will not have to be placed separately.

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Group:	(None)		Group:	(None)	-
	Create Drawing			Create Drawing	
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