CONNECT DOCUMENTATION

Connect Edition Introduction

OpenRoads Designer

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Plan Cut Sheets

Introduction – Creating ORD Plan Cut Sheets Video

Working with OpenRoads Designer (ORD) to create the cut sheets is a bit different than only using MicroStation as in the past. In ORD, reference files are attached both as 2D and 3D drawings. Knowing the content of each drawing will help to ensure that the correct information is being shown on the plans produced. For many drawings 2D information will be shown on the plan sheet. Cells representing the symbology of Utility and Drainage features need to be referenced from their 2D models. Corridor and Drive dgns should have their 3D models displayed as the 3D model is the only model information that gets clipped out of the design when placing civil cells along the corridor or at Bridge locations.

The Cut Sheet Seed dgn will be set up and copied to create subsequent cut sheet sets. The *Default* model of a cut sheet dgn is used to turn levels and reference files on and off in each sheet set, very similar to the Master dgn's view definition in SS4.

**** Note that for plan and profile cut sheets, the Sheet model has the Drawing model attached with *Display Overrides* set to ***Never*** and the Drawing model has the *Default* model attached with *Display Overrides* set to ***Never!*** This means that if you want to turn a level or reference file on or off you need to open the *Default* model, modify the view and save setting and save the dgn to save the Reference and Level state. You may have to reopen the dgn to see the changes propagated through to the sheet models!

Create Cut Sheet Seed dgn - Attach Reference Files

Create new drawing *12345-Cut-Sheet-Seed.dgn* either in the CutSheet folder of the prj directory or create a new \CutSheet folder in the OpenRoads folder. Use the ORD seed file - …*\NHDOT\Standards\Seed\NH_SeedORD_Design.dgn*

With the new drawing open and its *Default* model active, attach the project's reference files. Use *Reference File Attach* and attach the Combined.dgn with live nesting set to 1. If using a Proposed Container file, also attach that with live nesting set to 1. All other proposed files such as the Corridor, Drainage, Drive, and Utility files should be attached with live nesting set to 0. MicroStation's files can be attach using the *Drawing* workflow > *Utilities* tab select the ***NHREF*** Macro > **PLAY.** The nhref macro may attach some of the civil drawings like the Geometry drawings so review the attachments carefully.

The *Open Ref Lev* macro can be used to turn levels and reference file display off / on for a particular plan set. It will only work if the Reference file's logical names were defined during the attachment process. The *Default-3D* model attachment's logical name will not be defined and must be assigned by hand. See the Drawing name list for Logical names of Civil drawings.

Use Level Display to turn levels on and off for the plan set. Remember to look at both the *Default* 2D model's levels as well as the *Default-3D* attached model levels. Can turn some levels *Off* that you know will be off in any cut sheet such as the Corridor outlines, Template Drop outlines. The Right click menu can be accessed and Off by element used to shut off displayed levels.

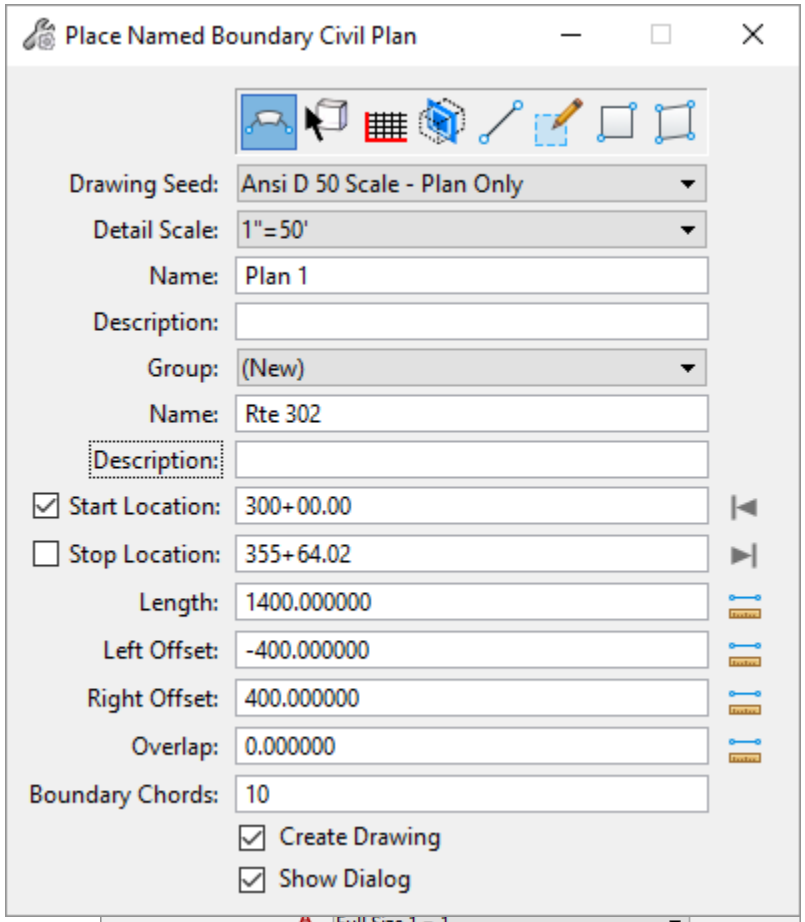
Save Settings and save the dgn.

Create Named Boundaries

Named Boundaries are the clipping elements for the cutsheets. The *Place Named Boundary* tool is used to create the named boundaries of the various types of plans, from plan, profiles to cross sections and details.

Set the workflow to *OpenRoads Modeling* > *Drawing Production* > *Named Boundary* tool

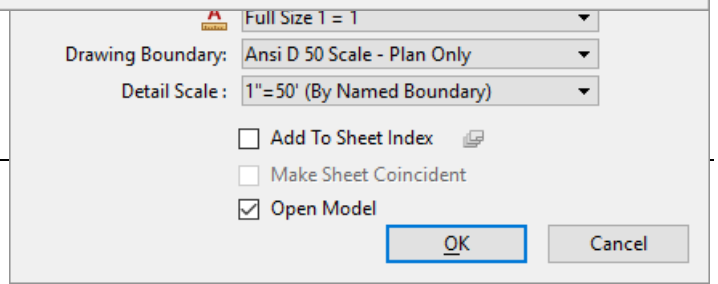
Select the Drawing seed in the top and then select the Alignment in the *Default* model *View 1*. Ensure the correct geometry and name is selected by viewing the popup information on your cursor. Set the start station of the first cut sheet and then move to the location of the end of project and select the stop location.



Create the Drawings (from checking the Box)

Sheets of equal length will be created. Sheets can be placed one at a time of varying lengths. Select any sheet Boundary and you can move vertices to change the shape of the clipped area. With the *Create Drawing* box checked, the cut sheet Drawing models and the Sheet models will be created. It is suggested that you actually uncheck the *Create Drawing* box and verify that the sheets are where you want them. Modify the *Named Boundaries* then use the *Named Boundaries* Tool Box to create the drawings.

Accept through the prompts.



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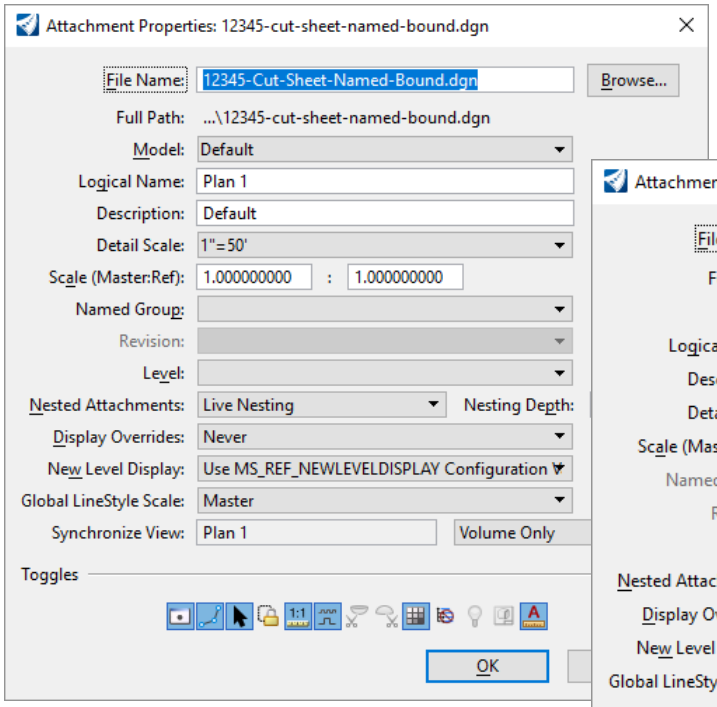
The *Create Drawing* box is as shown. Use the default *Annotation Group* (Plan Annotation). Change the Logical name to the plan type you are creating. i.e. DRN PLAN 1, or GEN PLAN 1. Click OK

This image shows the Drawing *Overrides* are set to *Never*, and Saved view.



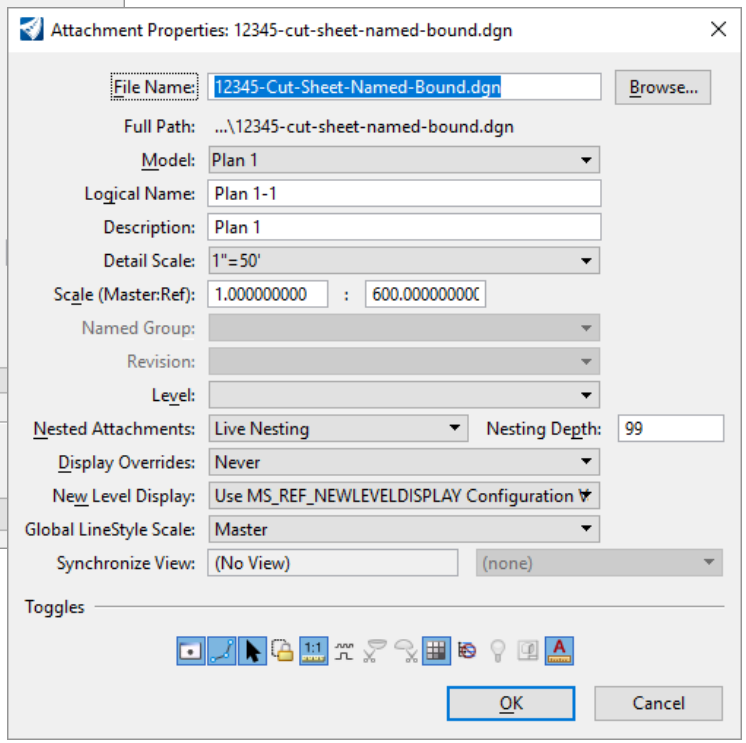
This is the Sheet Model's Reference Attachment settings of the Drawing Model. Note that the Display Overrides are set to Never.

After reviewing the Drawing and Sheet models return to the *Default* model in View 1, Save Settings and Save the DGN.

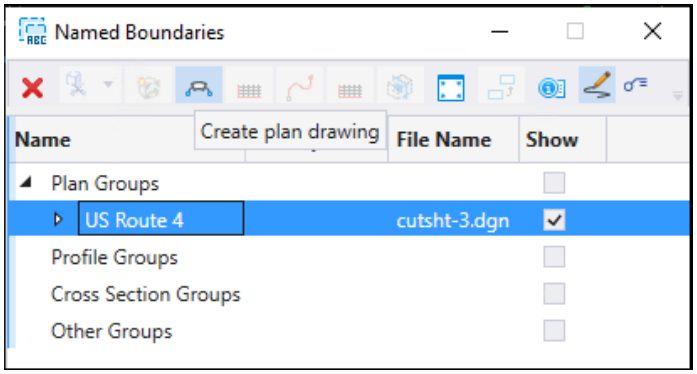
To create the first set of cut sheets use the *File > Save As* command and choose the folder and drawing name. 12345-Gen-Plans.

The Drawing will open. Note that if you view the *Default* model you will see that the view's level state is the same as the sheet model's.

Model's properties. Note the *Display* the model is synchronized to Plan 1



Create Drawings from the Named Boundaries Toolbox



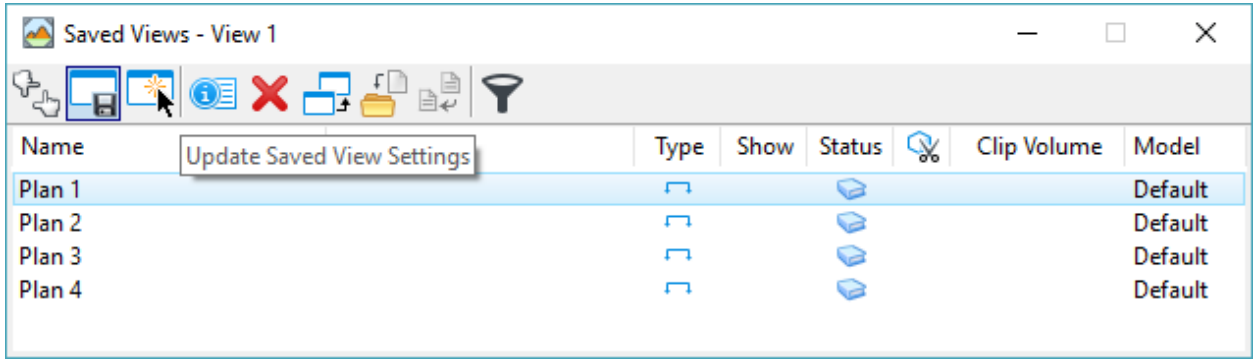
Below and to the right of the Named Boundary tool click on the down arrow. This will open the Named Boundaries box. After creating all the boundaries and modifying them the drawings can be created by selecting the plan group name and clicking on Create Plan Drawing. If the Show Create drawing dialog toggle is set the create drawing box will appear. Click Ok to create the drawing and sheet models.

Open the *Default* model view. Use Level Display to shut off any levels not appropriate to the Plan Type. Corridor dgns should display their 3D levels so that any clipped areas will not display, DU dgns should display their 2D model's levels as that is where the 2D annotation cells are. The Guardrail levels are an exception. The corridor's *Default* model should have the Guardrail turned on and have it turned off in the *Default-3D* model.

When the *Default* view setup is finished *Save Settings*, Save the DGN. Reopen the dgn and all sheet models should be synched with the drawing models which is synched to the *Default* model. When changes to the level state or additional reference files need to be attached do it in the *Default* model, Save settings, save the dgn and reopen the file to see the changes propagated through to the sheet models.

If the sheets become out of synch with the *Default* model (should not need to be done!)

Go to the OpenRoads Modeling workflow, then Saved views. With the *Default* model displayed in view 1 select the first *Saved View*, Plan 1 and use the *Update Saved View Settings* tool and click in the view. Repeat for each defined Saved View. *Save Settings, Save* the DGN then ***CLOSE*** it.



Reopen the DGN and open a Sheet model. The Sheet model's level settings should reflect what was saved in the *Default* model.

Saved views also save the views extents. So, when the views are updated from view 1 the drawings model's "clip extents" are lost. The first time this process is done the Sheet model's clip needs to be re-established. Open each Sheet model, used the Reference Files dialog box to highlight the referenced drawing model and then use the Clip Boundary tool and hit on the named Boundary to re-clip the reference file.

Open each drawing and sheet model and make sure the reference files *Display Overrides* are set to ***Never.***

Additional levels can be turned on or off. When finished Save Settings, Save the DGN and then ***CLOSE*** and Reopen it to see the changes.