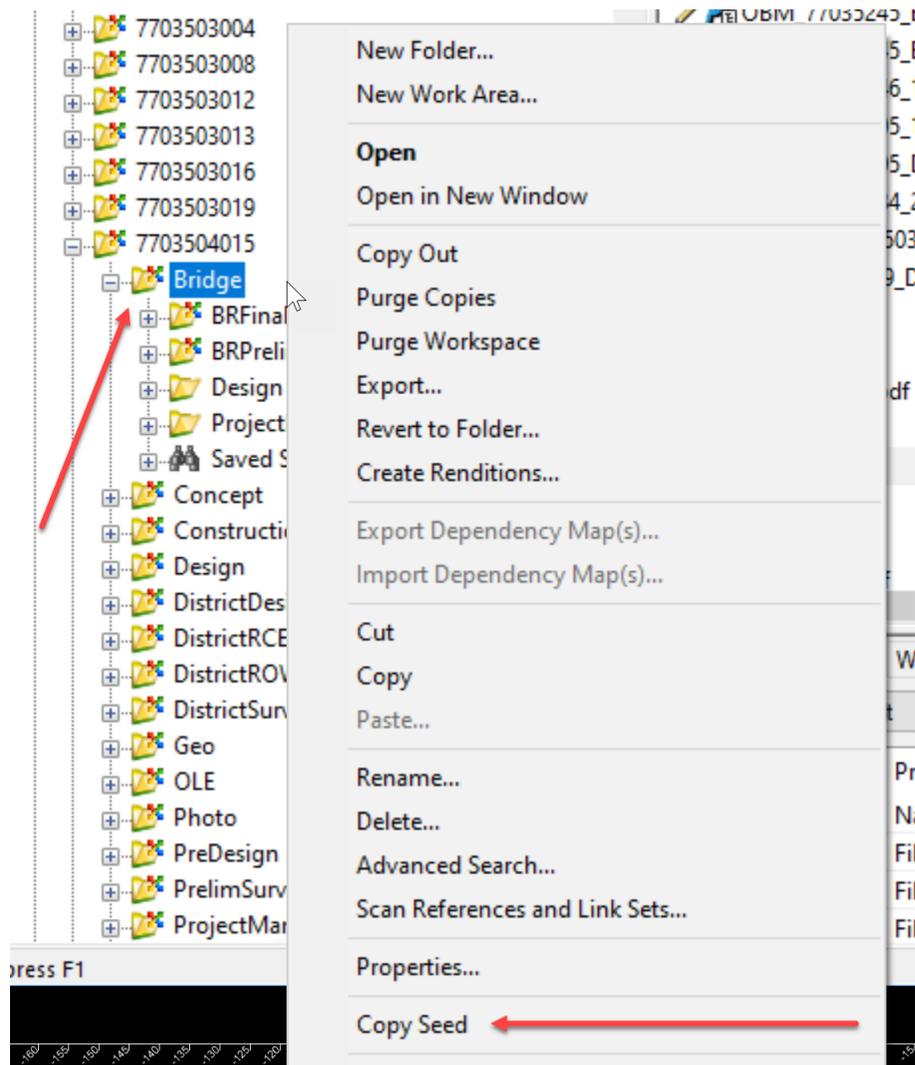


Setting up the MicroStation File to do Drainage Design.

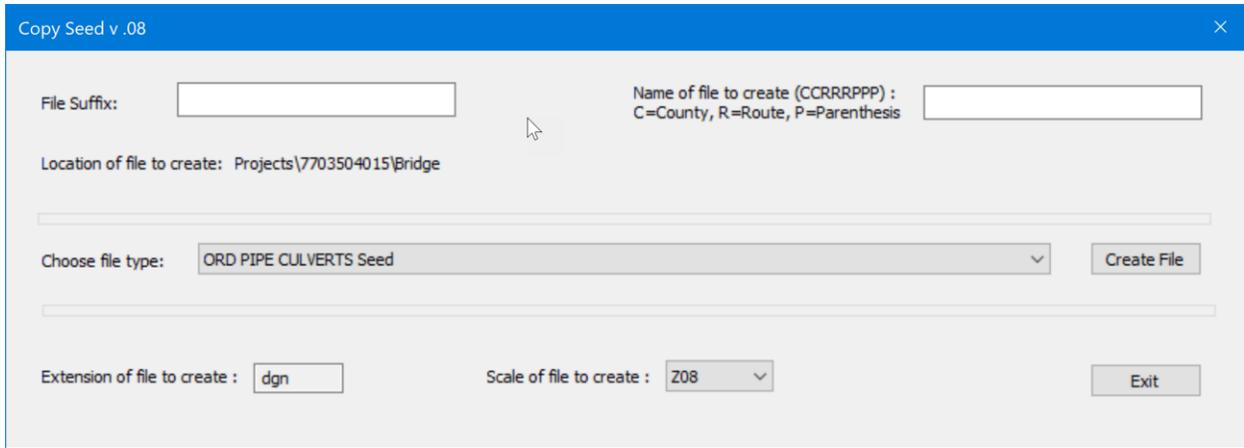
These instructions were created on 4/28/2021. These instructions were created with:



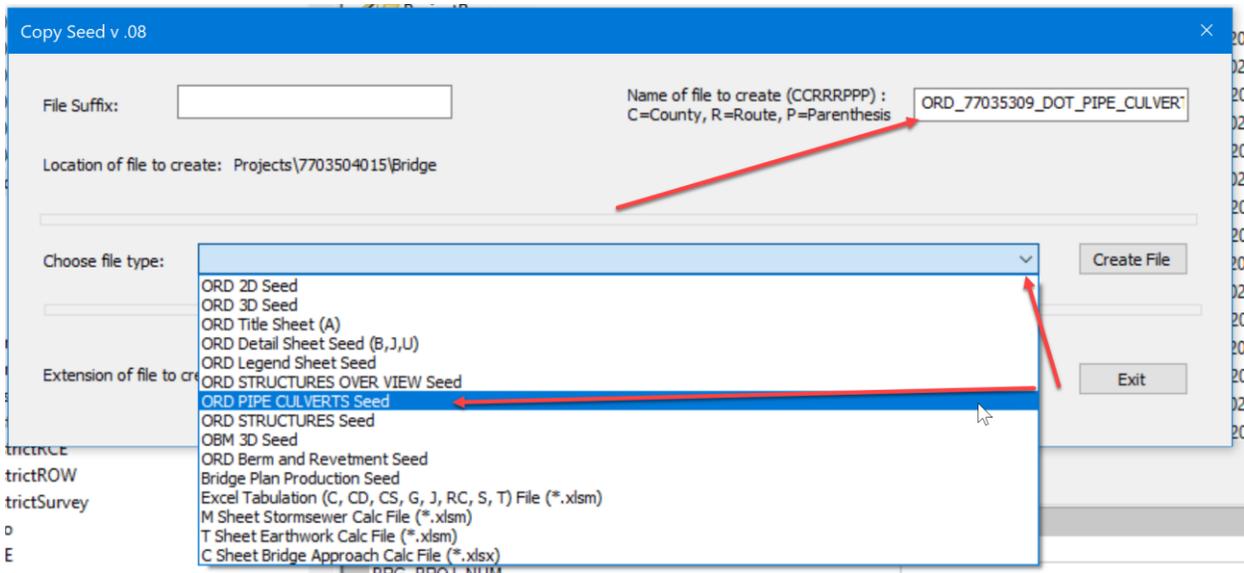
The first step to doing a drainage design in CONNECT is to create the files needed to do our work in. In ProjectWise, use the Copy Seed tool. Navigate to the correct project directory for the project, right click on the project folder and select the Copy Seed command.



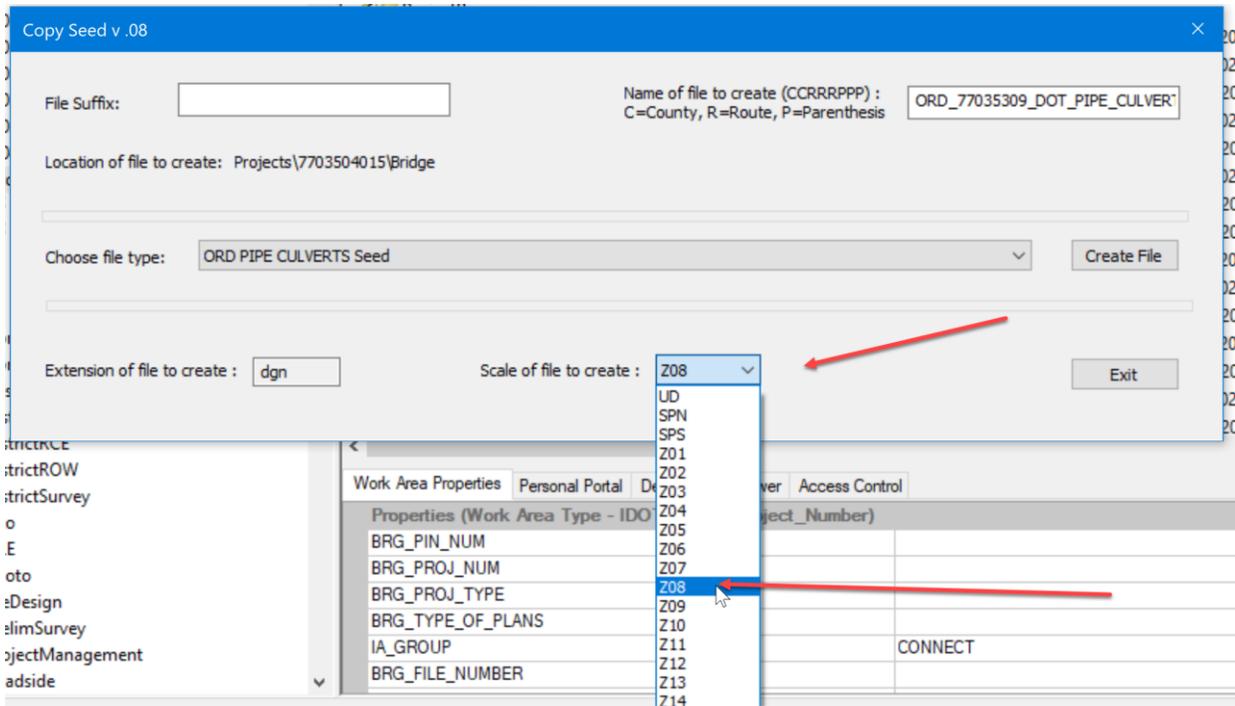
This will open this tool:



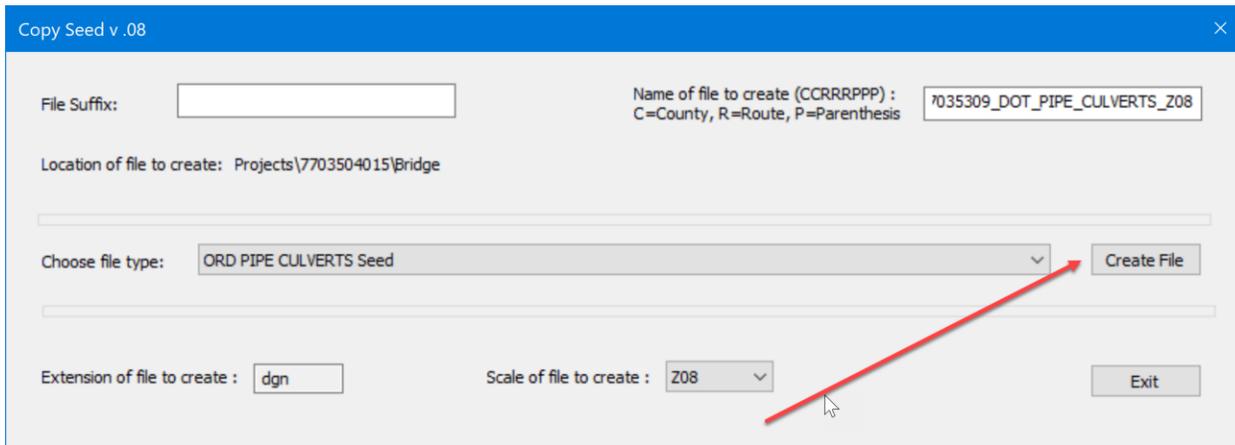
Next, name the file. For pipes, the naming convention for this file is **ORD_CCRRRPPP_DOT_PIPE_CULVERTS_SPN**. **ORD**=the version of MicroStation that the work is done in **CC**=County **RRR**=Route **PPP**=Parenthesis **DOT**=company and or source of the file **PIPE_CULVERTS**=type of work **SPN**=coordinate projection of this project. For this example, the file will be **ORD_77035309_DOT_PIPE_CULVERTS_Z08.dgn**.



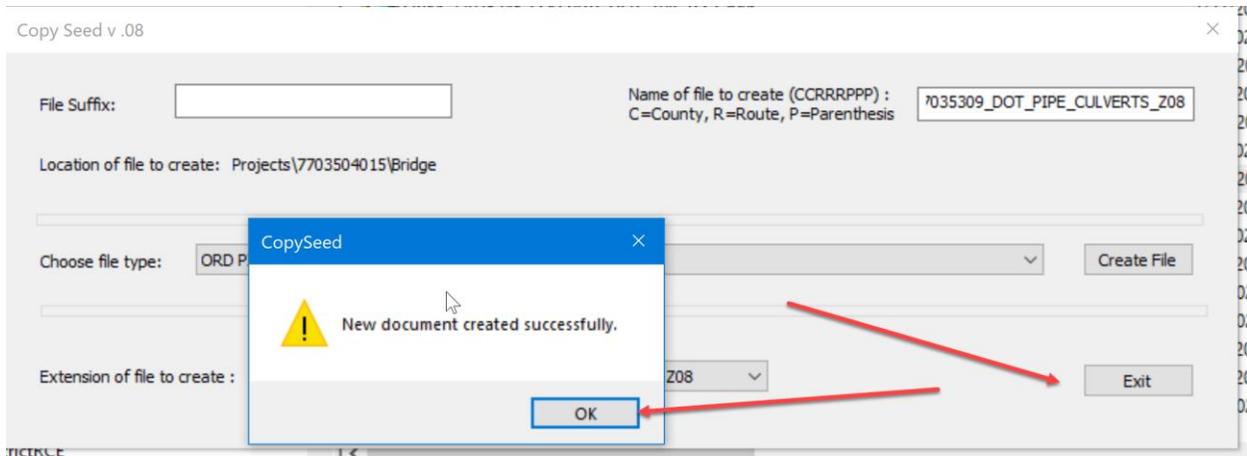
Next, select the correct file type. For this work, choose the **ORD PIPE CULVERTS Seed**.



Next, select the correct coordinate projection for this file. For this example, select Z08 for IaRCS Zone 08. Then click on the Create File button.



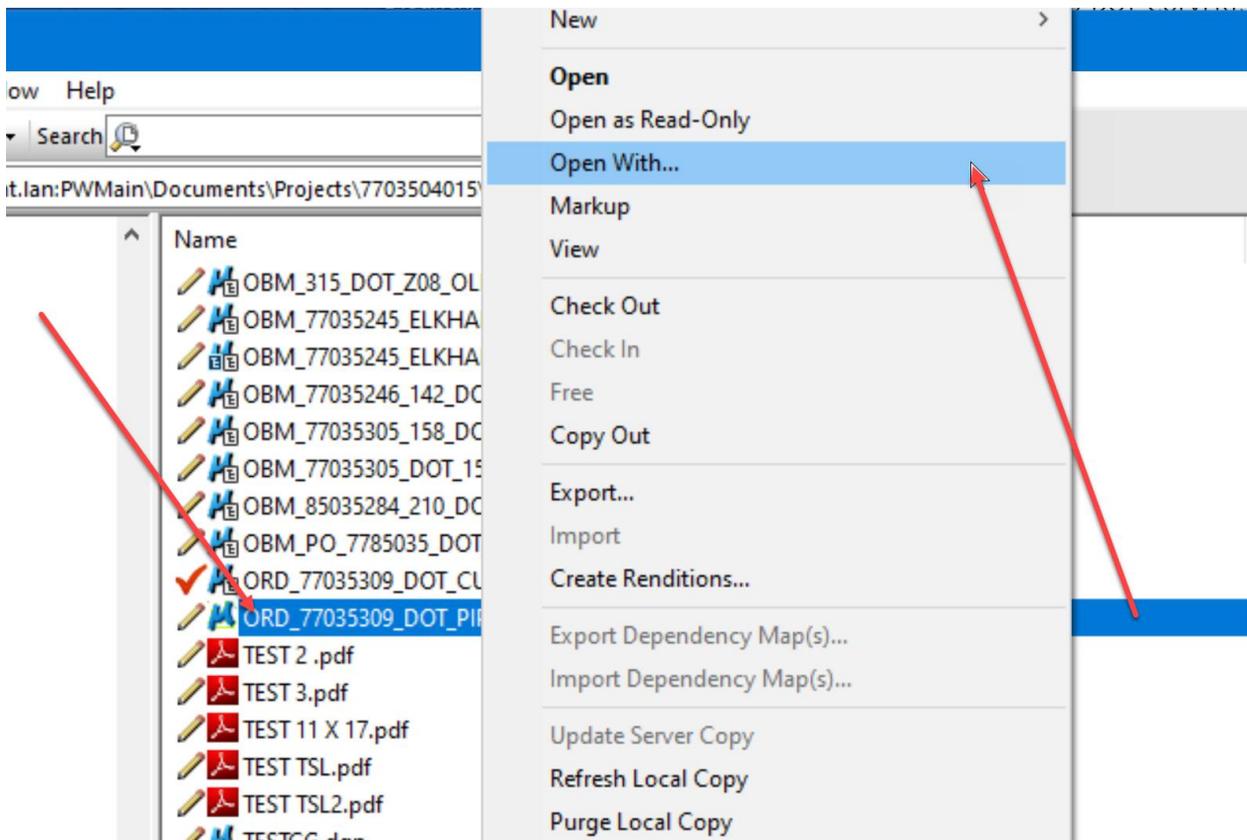
This will create the correct MicroStation file in the project directory. A message displays saying New document created successfully. Click ok on the message.



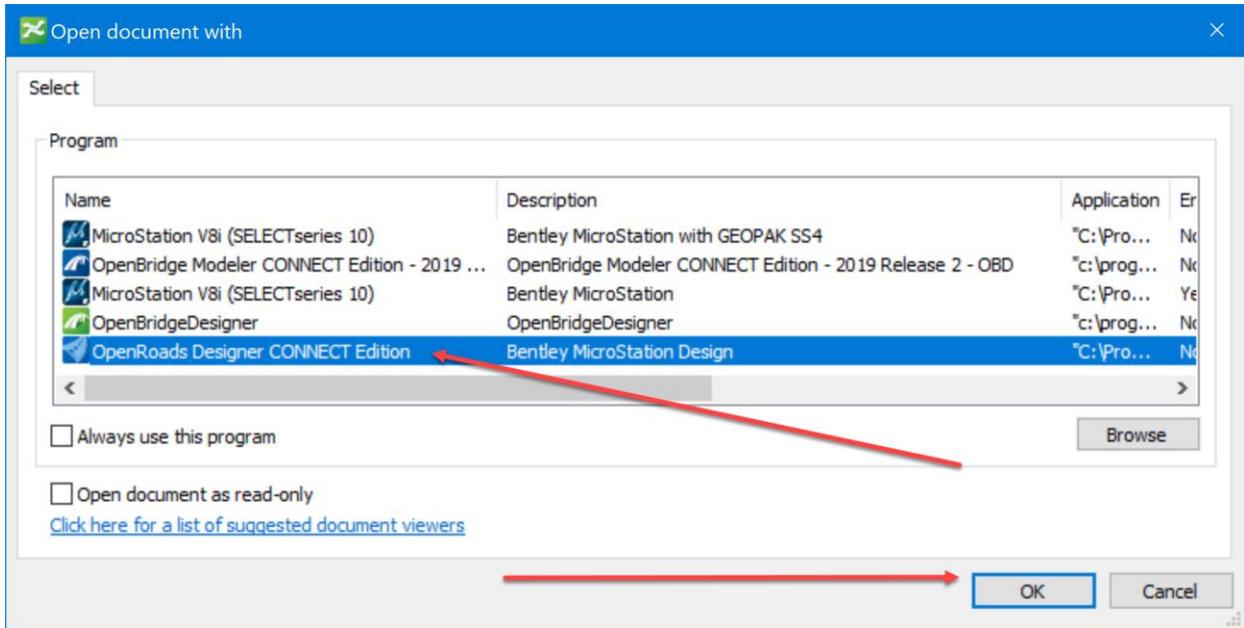
Then click on the Exit button to close the Copy Seed tool.

If your design includes RCB, Flume or drop basins, then repeat this process in order to create an ORD_CCRRRPPP_DOT_STRUCTURES_Z##.dgn file for these types of designs.

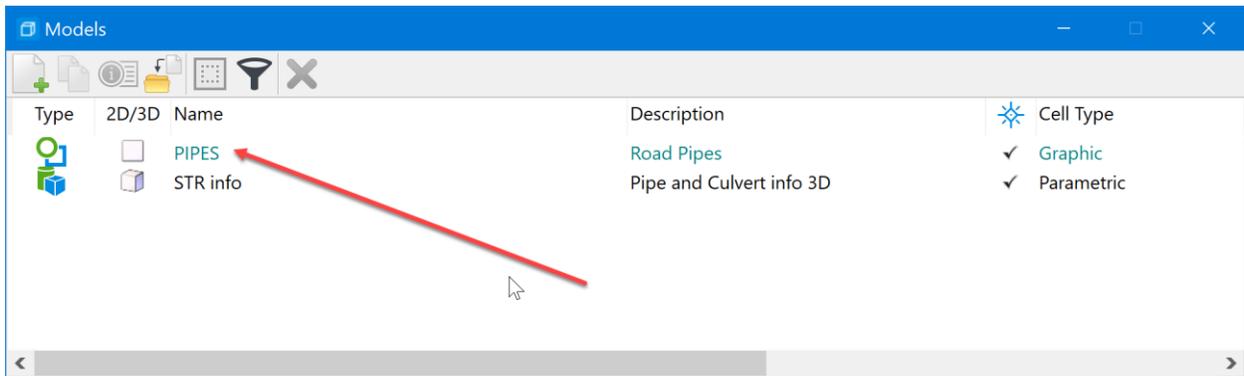
Once the MicroStation file is created, open it in the project directory. Select the file then right click and select the Open With option.



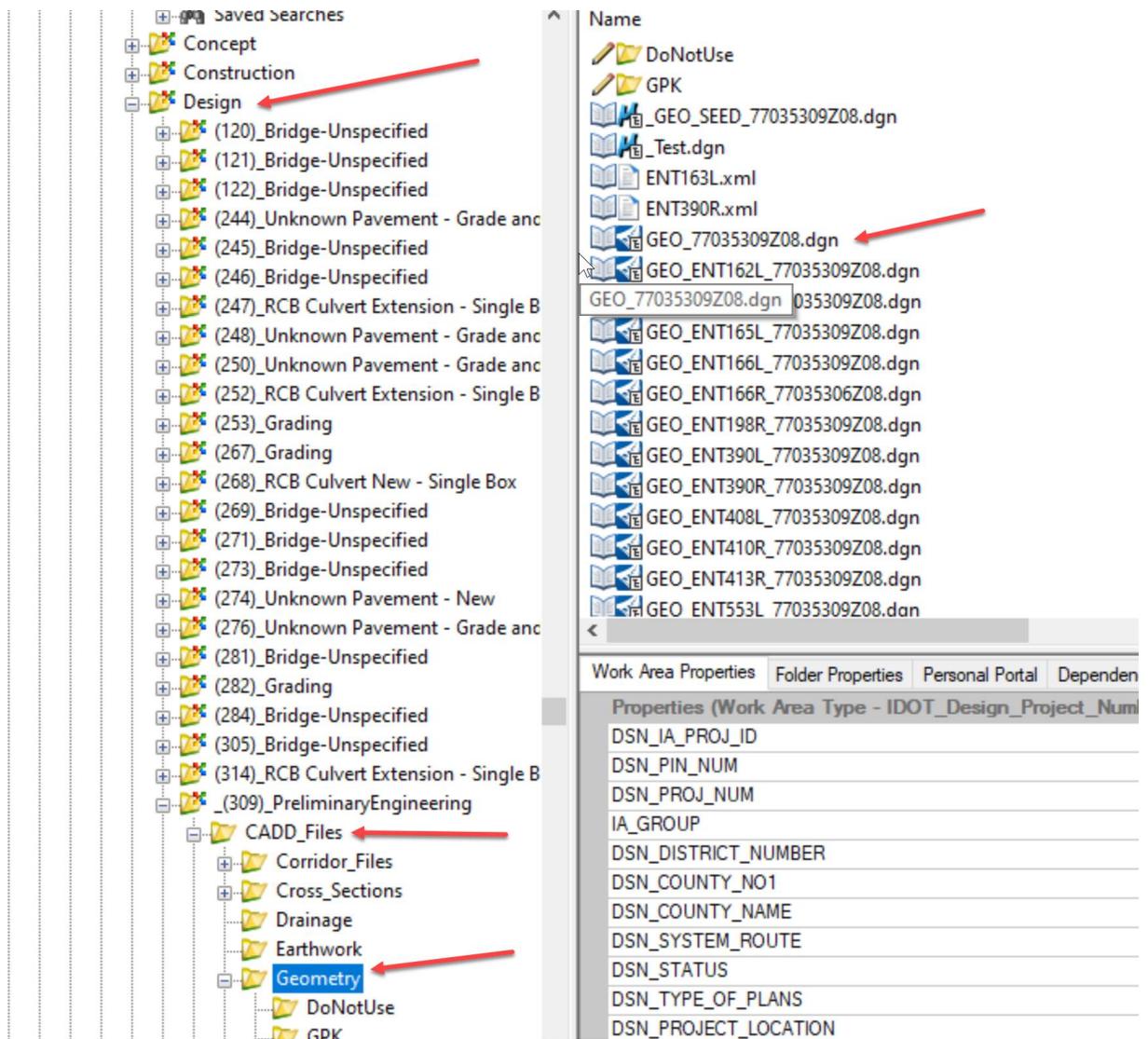
Next, select the OpenRoads Designer CONNECT Edition program. Then click on OK.



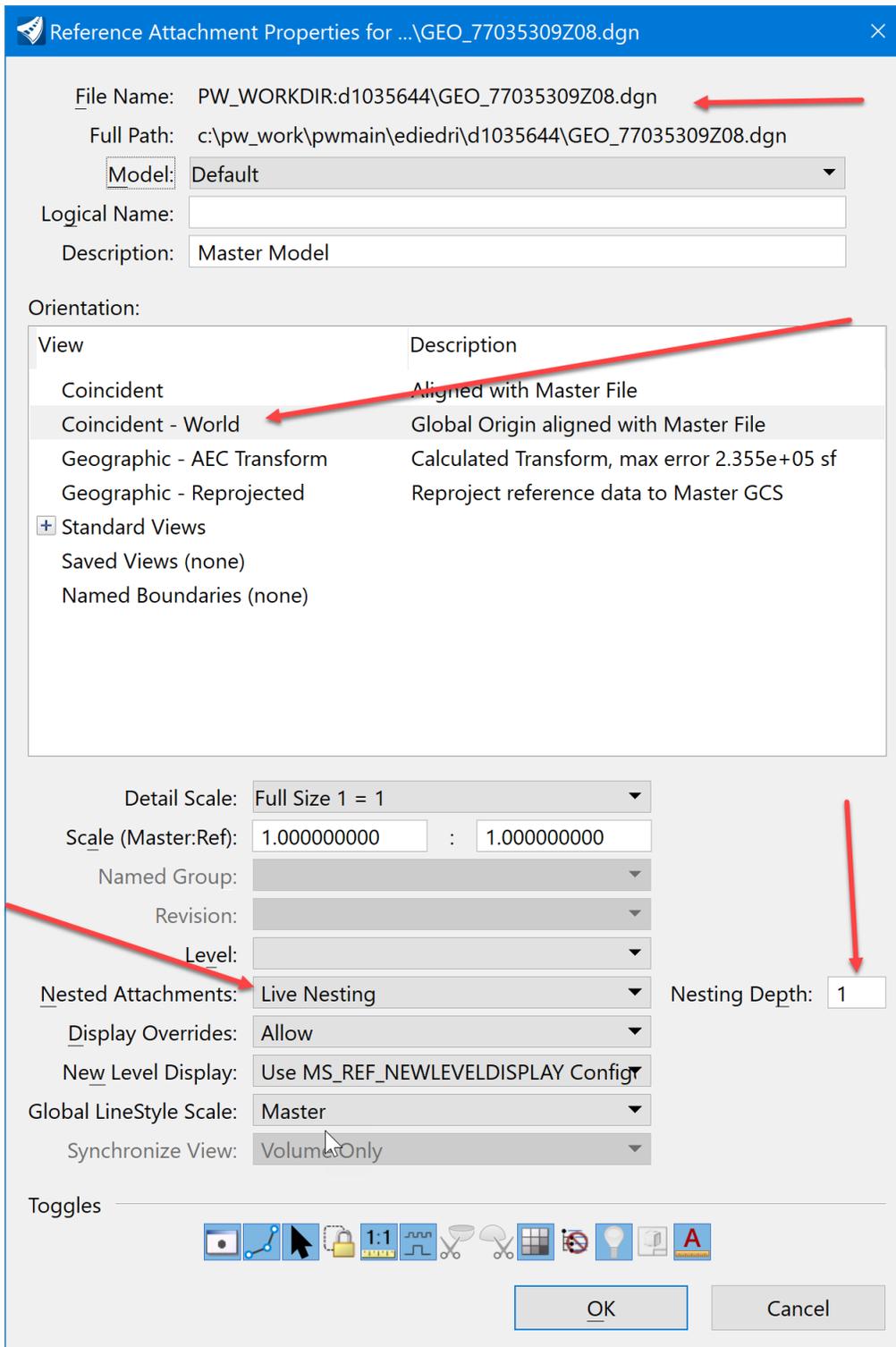
Now that the file is open, first set the file up to make a 3D cut of the proposed corridor and/or a dynamic section of the proposed corridor.



To perform either function: In the PIPES model, reference in the Road Design alignment that has an active profile, this file should be located in the Design folder under the CADD_Files\Geometry\ folder. Select the GEO Alignment file that is named GEO_CRRRPPZZZ.dgn. For this example, it will be GEO_77035309Z08.dgn

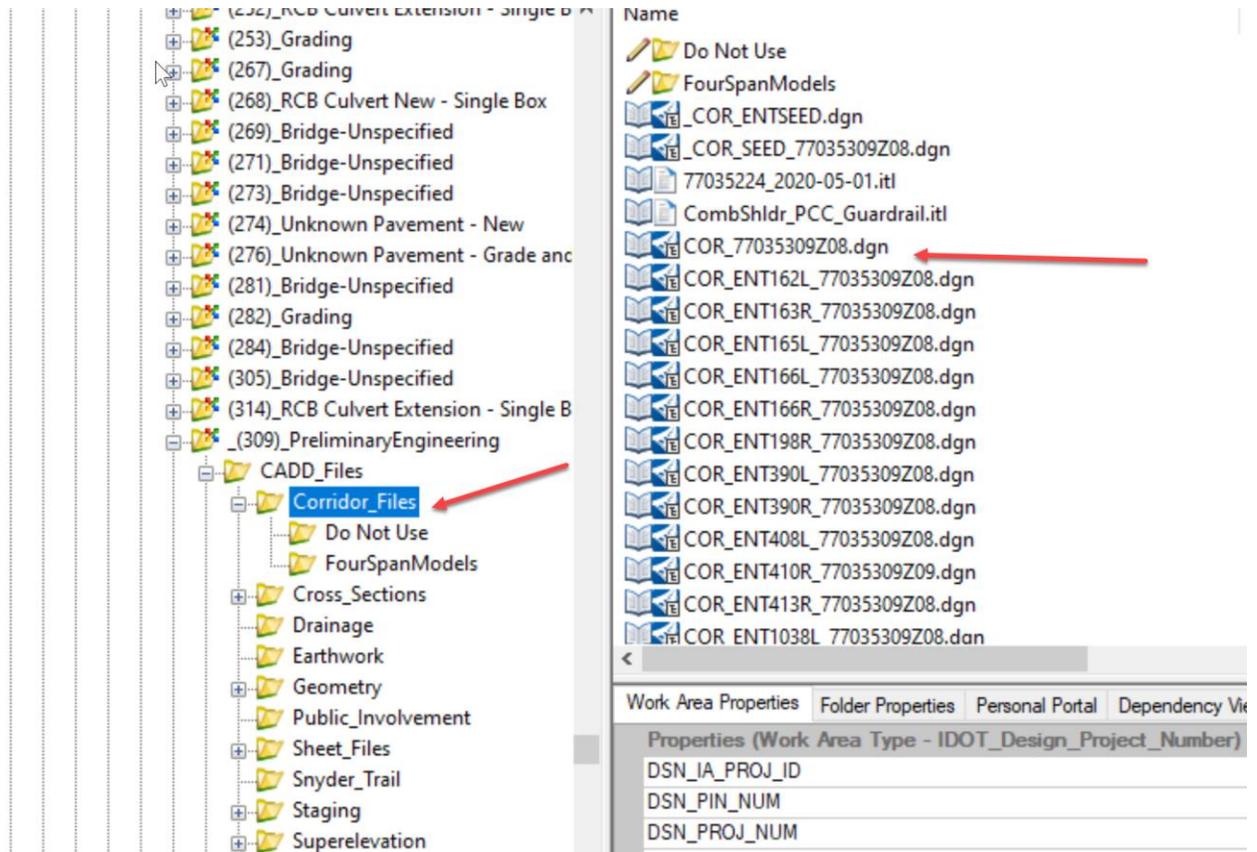


This is the container GEO file that will contain all the Alignments for this project.

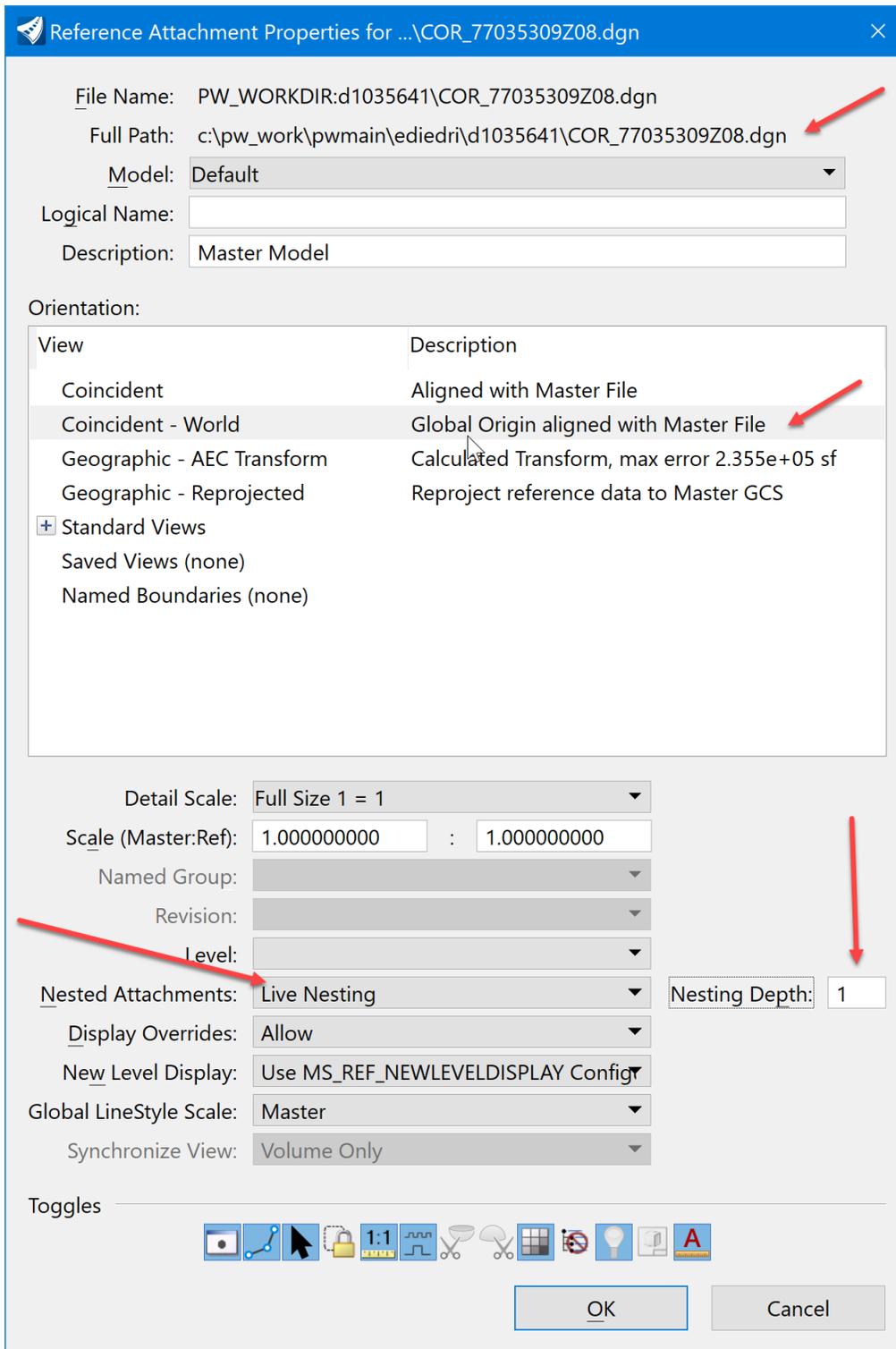


Attach the GEO file using the orientation of Coincident World. Then turn on the live nesting and set its depth to 1.

Next, reference the proposed corridor container file. This file should be located in the Design folder under CADD_Files\Corridor_Files\ folder. Select the COR Corridor file that is named COR_CCRRRPPZZZ.dgn. For this example, it will be COR_77035309Z08.dgn

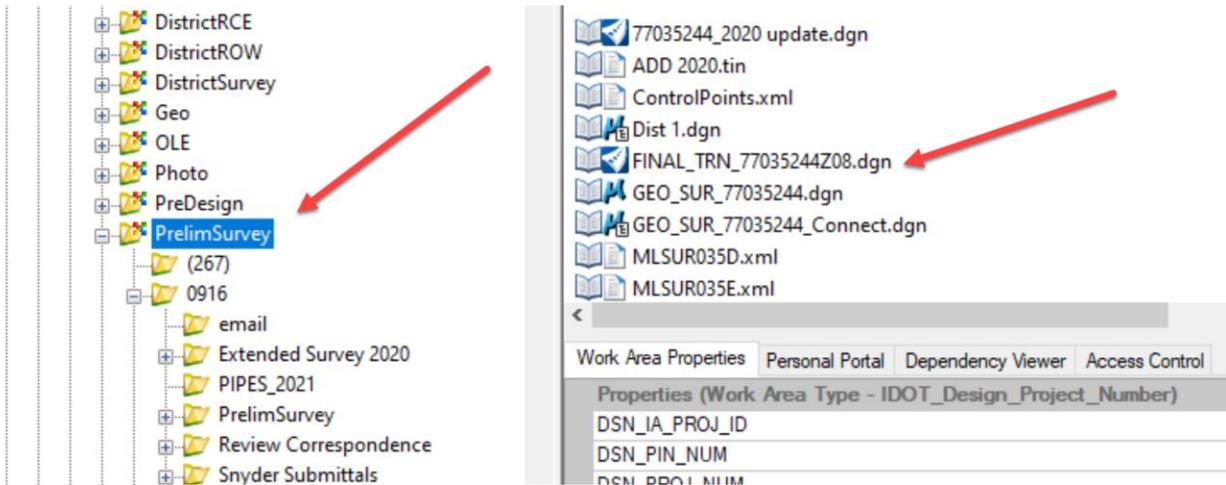


This is the container COR file that will contain all the Corridor for this project.

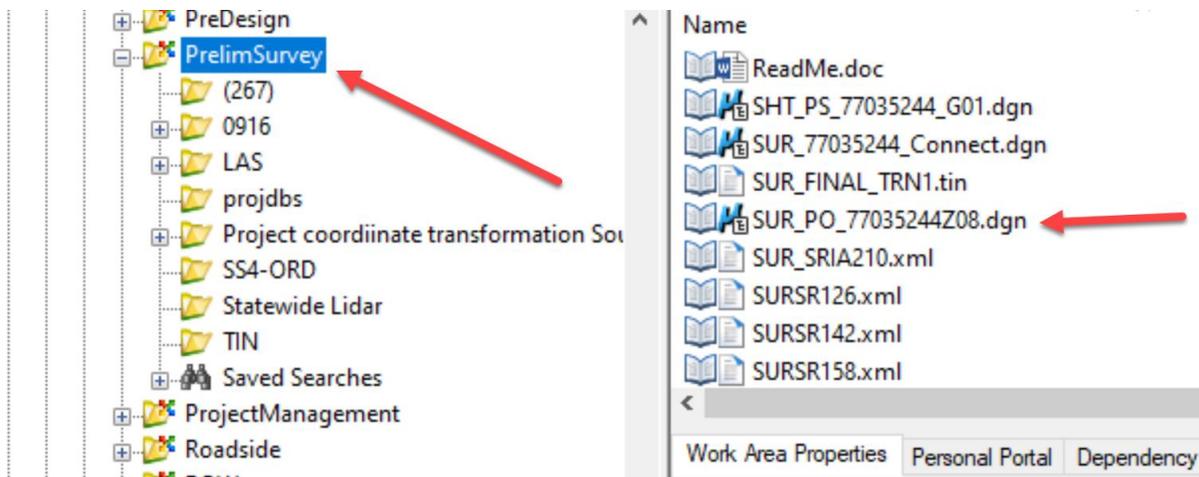


Attach the COR file using the orientation of Coincident World. Then turn on the live nesting and set its depth to 1.

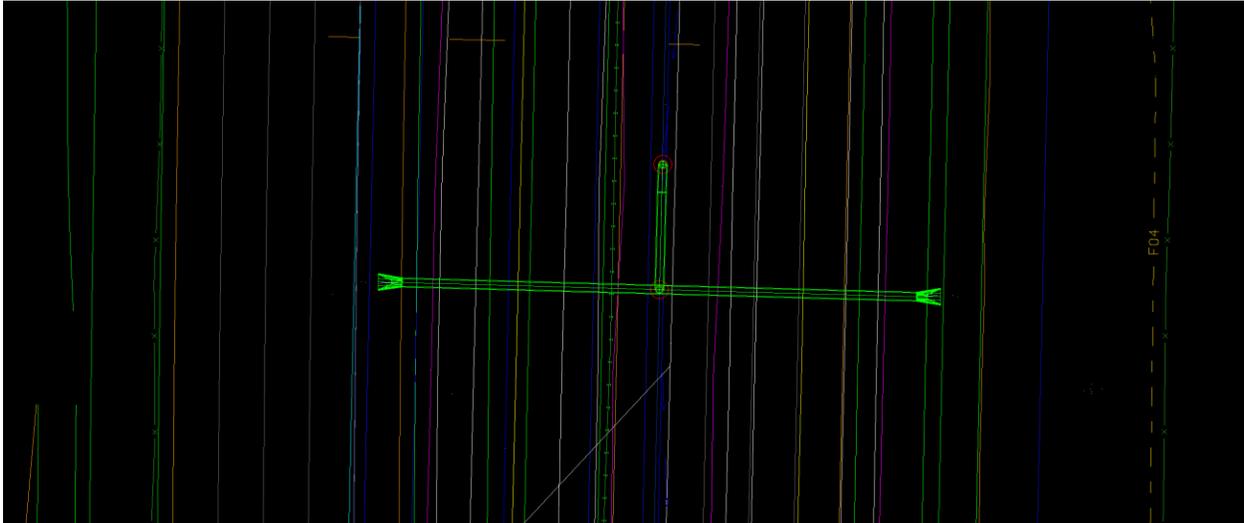
Next, reference in the existing ground. To do this, reference in the TRN file from the survey or Photo location. For this example, it is in the Prelim Survey folder and is called FINAL_TRN_77035244Z08.dgn



Next, attach the survey file that contains the existing 3D pipes and surrounding topo features that will be needed to do an effective design.



This should appear similar to below.

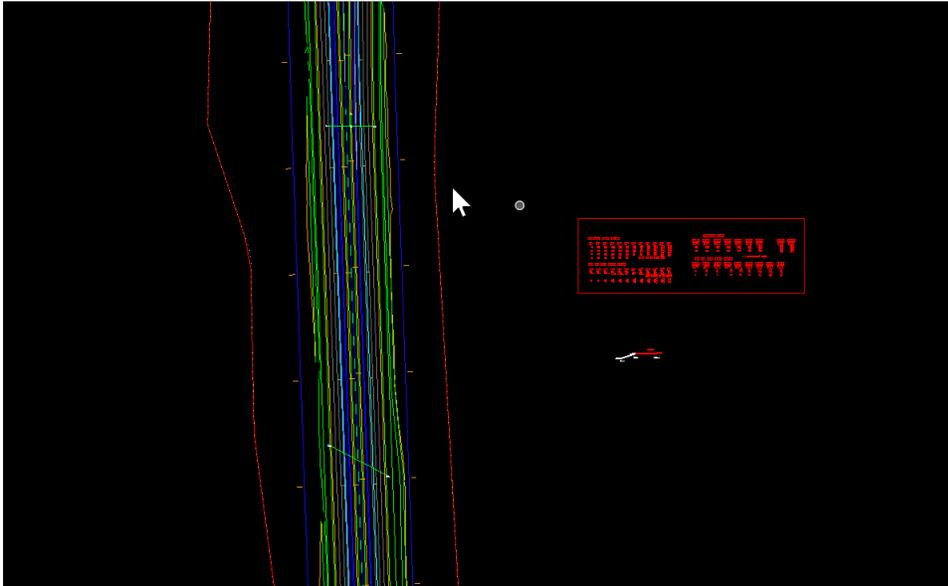


Make sure the files are referenced to the 2D model (that is the PIPES model in this MicroStation file).
 ORD will make a managed model automatically once any 3D information is referenced to this 2D model.
 ORD names the managed model PIPES-3D. This is a crucial step in setting up this workflow.

Next, reference in a file that contains a selection of our pipe aprons. This file is located in
 pw:\ntPwInt1.dot.int.lan:PWMain\Documents\IowaDOTStandardsConnect\Configuration\Organization
 -Civil\IowaDOT_Standards\Cell\BridgeDesignDetails\ApronsConnect.dgn. Then, find this referenced
 content in the file. It should look like this:

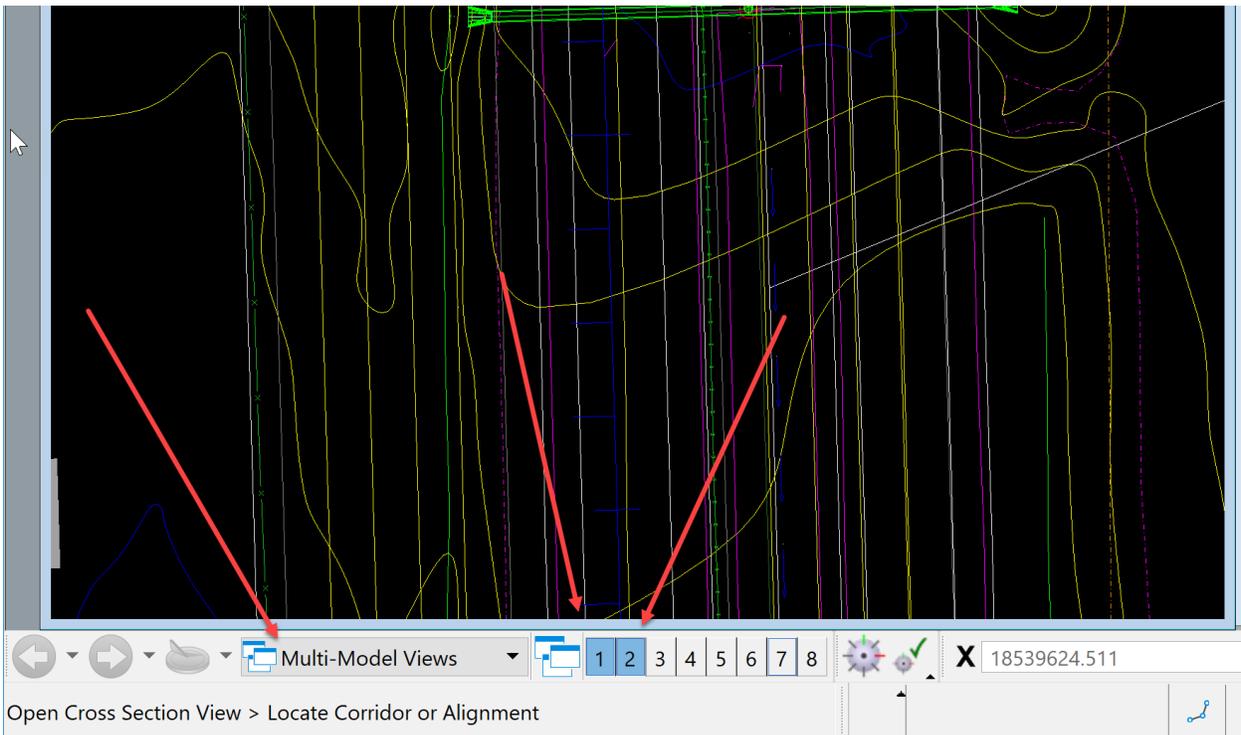


Next, select it with the Element Selection tool and with the copy tool make a copy of it and place it close to our design corridor.

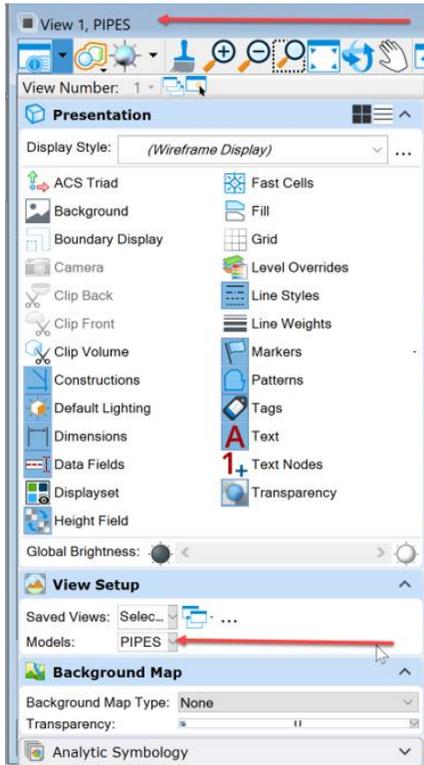


Then, detach the reference file.

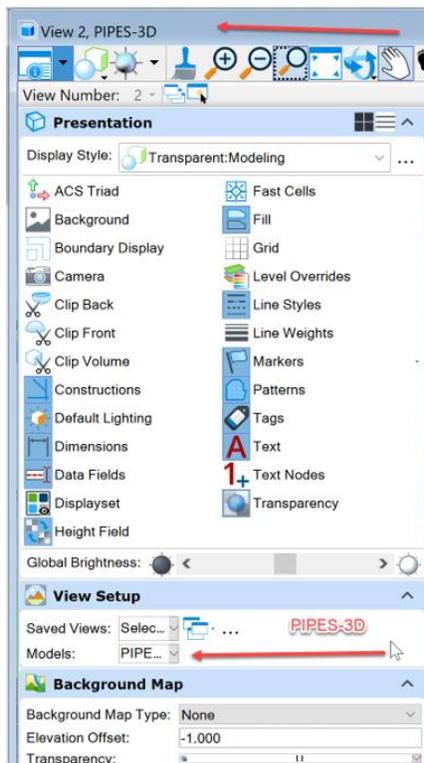
Next, set a few things in the file to make it a little easier to use. The first step is to set up the Multi-Model Views in this file.  This will allow viewing the 2D and 3D model at the same time. To set this up, open two views and then select the Multi-Model Views option.



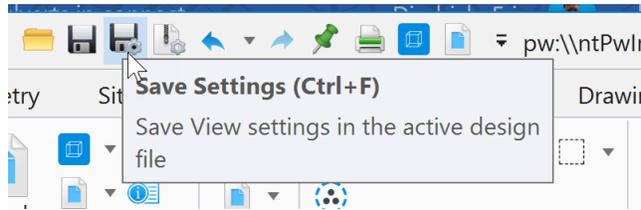
To verify that it is set correctly, open the View Attributes in each window and see what model it is set to. For our needs, set View 1 to the PIPES model which is the pipes 2D model.



For our needs, set View 2 to the PIPES-3D model which is the pipes 3D model.



This allows viewing and manipulating the information in the two models without having to change the model thru the model pallet. Once you have this set, save the settings so that the next time you get into the file there will be no need to set it up again.



Now that the file is set up, start designing and calculating our pipe inverts from the project information.