

## CONNECT Seed Files and Naming Conventions

For CONNECT projects there are several seed files for use with OpenBridge Modeler (OBM), OpenRoad Designer(ORD), and ProStructures.

These seed files contain the models needed to develop the layout and modeling of structures and plan sheets.

The OpenBridge Modeler and OpenRoad Designer seed files for structure projects are located in the CONNECT managed workspace at:

pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\IowaDOTStandardsConnect\Configuration\Organization-Civil\IowaDOT\_Standards\Seed\

The seed file used for both 2D & 3D plan development and sheeting, is located in the CONNECT managed workspace at:

pw:\\NTPwInt1.dot.int.lan:PWMain\Documents\IowaDOTStandardsConnect\Configuration\Organization-Civil\IowaDOT\_Standards\ProStructures\Seed\Imperial3d.dgn

### Copy Seed

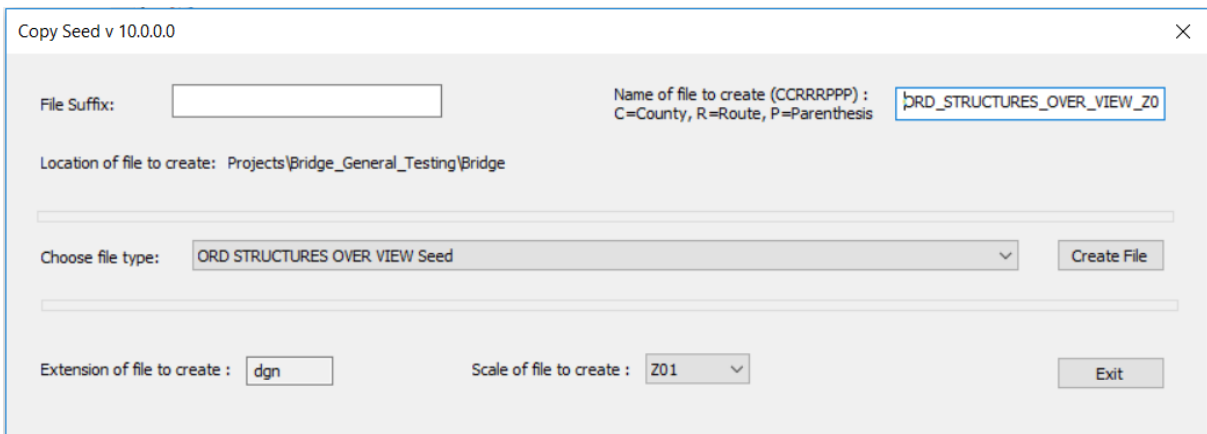
The Copy Seed utility can be used to create the files for modeling and detailing. The CONNECT Copy Seed program is located at:

pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Consultant Data\ProjectWise Custom Tools\CopySeed\

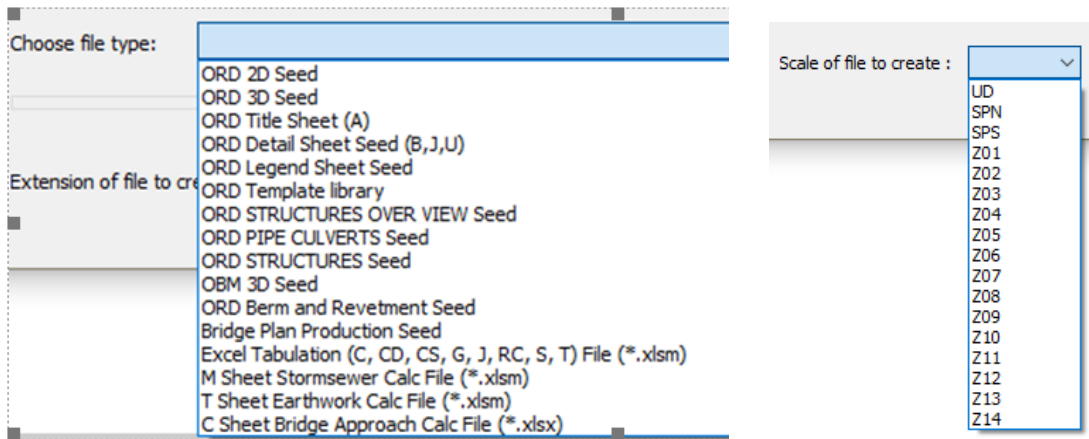
Design consultants will need to install the utility with the provided CopySeedSetup.msi file. Files located in the subfolder CopyFilesToProjectWiseBinFolder also need to be copied to C:\Program Files\Bentley\ProjectWise\bin and C:\Program Files (x86)\Bentley\ProjectWise\bin

To use Copy Seed, right click in the folder and select to launch. Choose file type, the correct zone in Scale of file to create field and complete the Name of the file to create field based on information included in this document. Click Create File.

Images below are showing the **Copy Seed** interface.



Images below are showing drop down options for the file type and scale in **Copy Seed**.



Once a file is created in ProjectWise, in the Description field of the document, (using Rename...) add a logical description to aid in the understand of what the file contains.

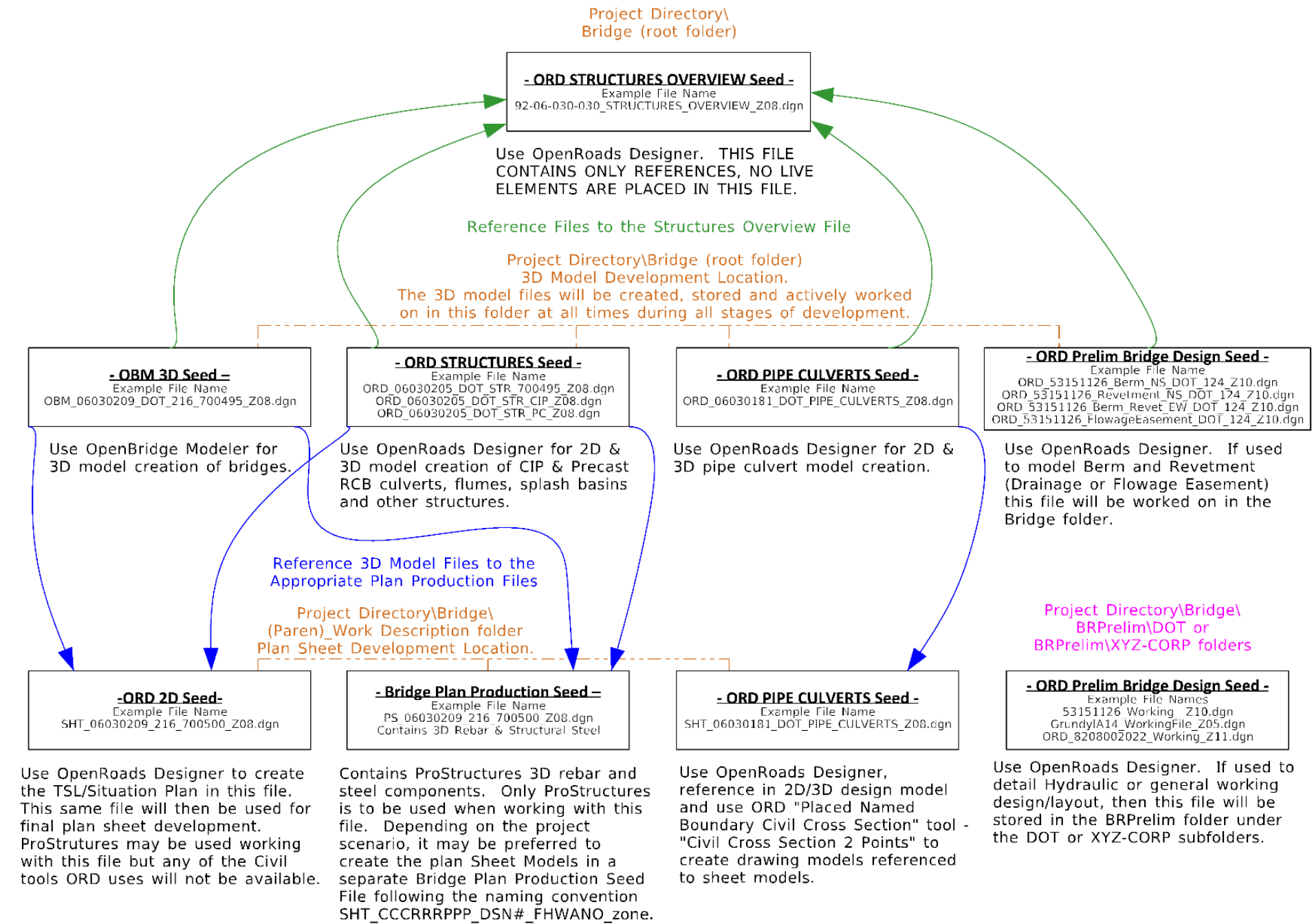
**These files are to be developed and kept in their assigned folders, the same modeling file and TSL Situation Plan file is used at all stages of workflow (not copied). The Preliminary Designer starts the files, and the Final Designer actively uses the same files to complete the work. Include the DOT and/or Consultant Firm designation in the file name, this is to serve as an indicator of designers responsible for the files.**

The sheeting workflow has been modified to use the **ORD 2D Seed** file for the Prelim Design process of TSL/Situation Plan sheet development. This file does not contain the Drawing and Sheet Models used for Final plan sheet development. Those are contained in the **Bridge Plan Production Seed (BPPS)** file. Please see [CONNECT Models and Naming Convention](#) for additional information.

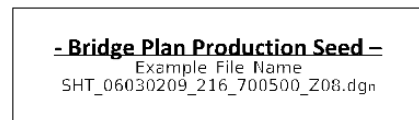
Since the Prelim Design TSL may exist for some time before Final plan sheet development, the current **BPPS** Drawing and Sheet Models will be added by the Final Designer to update the existing file. It is beneficial to have the Final Designer import the up-to-date versions once the file is taken over for Final plan sheet production.

The seed file use and reference relationships are explained in the flowchart on the next page. The location of the file created from the seed file, naming conventions, application to use, content of the file and references required are provided.

### Bridge Bureau Seed File Referencing Flow Chart



**-For General Plan Production-**  
Project Directory\  
Bridge\  
(Paren)\_Work Description folder  
Plan Sheet Development Location.



For plan production not necessarily based off a structure model in the Bridge root folder. Work such as repairs or general working design/layout. It may be ideal/preferred to use OpenRoads Designer when working in this file. ProStructures may be used working with this file but any of the Civil tools ORD uses will not be available.

The seed files listed below are organized by application and type of project.

### **ORD STRUCTURES OVERVIEW Seed**

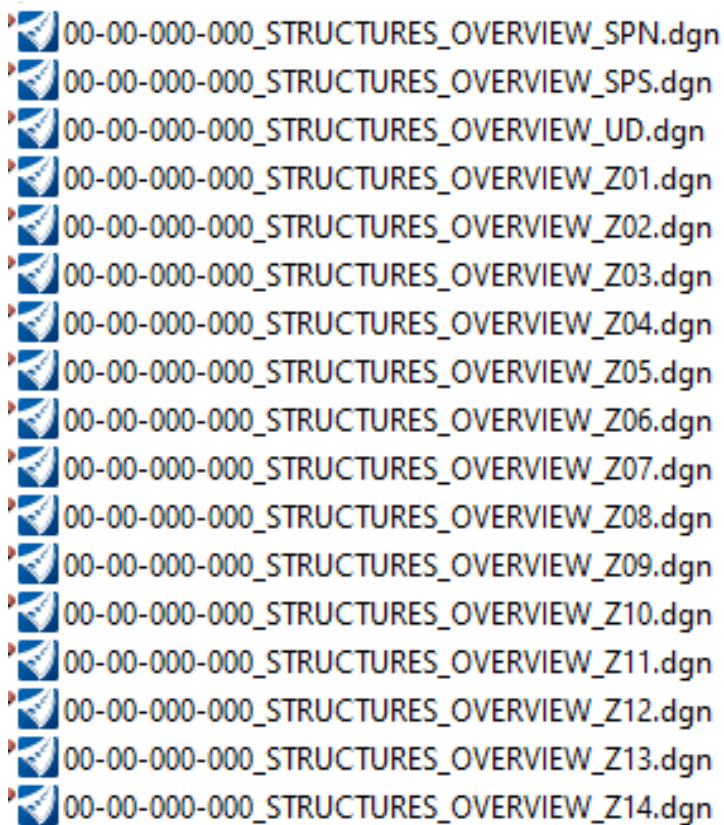
OpenRoads Designer structures overview seed files are used to provide the overview of all structures in the project. All relevant files for the structure models will be referenced to this file.

**No live elements should be contained in these files, use only references.**

This file is to be located in the **Bridge** root folder of the project directory.

The Copy Seed utility can be used to create the files, choose file type **ORD STRUCTURES OVERVIEW Seed**.

The options provided are for each possible laRCS survey zone. The correct seed file must be used to appropriately view all structures in the correct locations.



The naming convention is to follow what is shown in the listed options.

Portions of the name are described below.

- 00-00-000-000 used to identify the Project Code (previously known as the PIN) number for the project

#### File Name

92-06-030-030\_STRUCTURES\_OVERVIEW\_SPN.dgn


















15-77-035-040-01\_STRUCTURES\_OVERVIEW\_Z08.dgn

## **OBM 3D Seed**

OpenBridge Modeler 3D seed files are used to develop the individual bridge models. This file is to be located, and worked on, in the **Bridge** root folder of the project directory.

The Copy Seed utility can be used to create the files, choose file type **OBM 3D Seed**.

The options provided are for each possible IaRCS survey zone. The correct seed file must be used to appropriately place the bridge on the alignment in the model.

 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_SPN.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_SPS.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_UD.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z01.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z02.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z03.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z04.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z05.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z06.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z07.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z08.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z09.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z10.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z11.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z12.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z13.dgn  
 OBM\_CCRRRPPP\_DOT\_DSN#\_FWWANO\_Z14.dgn

The naming convention is to follow what is as shown in the listed options.

Portions of the name are described below.

- OBM signifies an OpenBridge Modeler file
- CCRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
- DOT or consultant firm designation
- DSN# used to list the specific design number of the model
- FHWANO used to list the specific FHWA number of the bridge modeled

### File Name

**OBM\_06030209\_DOT\_216\_700495\_SPN.dgn**

*File Name if DOT starts the prelim work and consultant takes over file for final design work*

**OBM\_06030209\_DOT\_XYZCORP\_216\_700495\_SPN.dgn**

*File Name if consultant starts the prelim work and DOT takes over file for final design work*

**OBM\_06030209\_XYZCORP\_DOT\_216\_700495\_SPN.dgn**

## **ORD PIPE CULVERTS Seed**

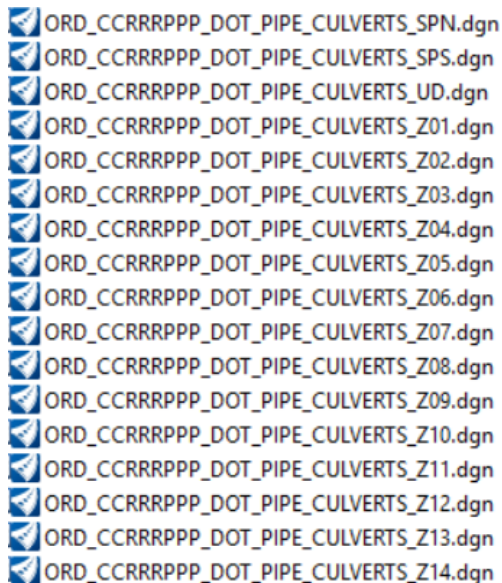
OpenRoads Designer pipe culverts seed files are used to develop the layout and modeling of pipe culvert structures.

**This file will be used in two different ways and will be worked on and stored in two different locations.**

- For 2D/3D modeling, this file is to be located, and worked on, in the **Bridge** root folder of the project directory.
- For plan sheeting, a separate file is created that references the 2D/3D model file. This file is to be located, and worked on, in the **Bridge\ (Paren)\_Work Description** folder of the project directory.

The Copy Seed utility can be used to create the files, choose file type **ORD PIPE CULVERTS Seed**.

The options provided are for each possible laRCS survey zone. The correct seed file must be used to appropriately place the pipe culverts along the alignment.



The naming convention is to follow what is shown in the listed options.

Portions of the name are described below.

- ORD signifies an OpenRoads Designer file
- CCRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
- DOT or consultant firm designation

*File Name used for 2D/3D Model development*

**ORD\_06030181\_DOT\_PIPE\_CULVERTS\_SPN.dgn**

*File Name used for Cross Section Sheets development*

**SHT\_06030181\_DOT\_PIPE\_CULVERTS\_SPN.dgn**

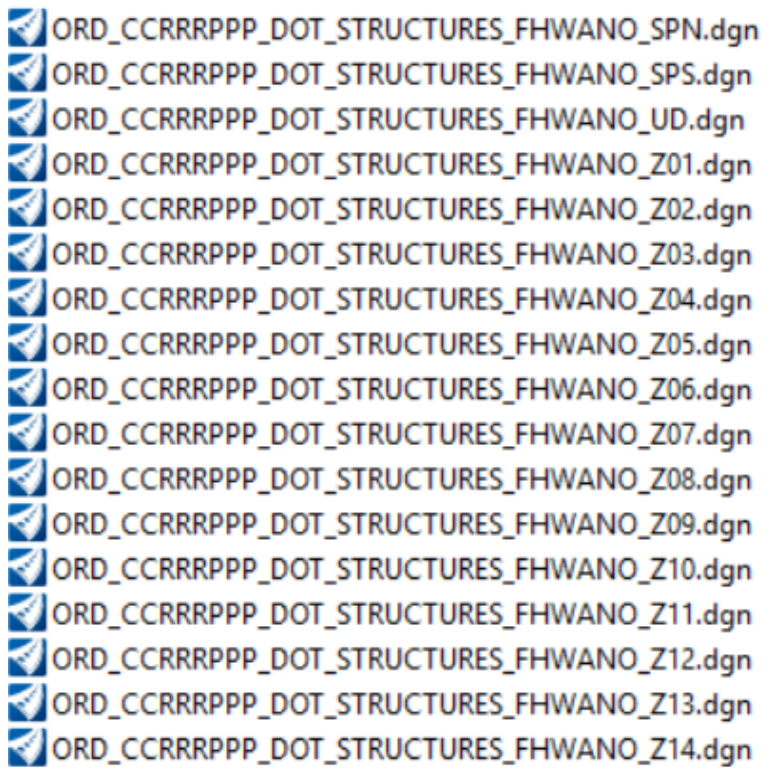
## **ORD STRUCTURES Seed**

OpenRoads Designer structures seed files are used to develop the layout and modeling of box culverts and other structures structures such as flumes and splash basins.

Separate files will need to be created when alternate structures are modeled at the same alignment and station location. This file is to be located, and worked on, in the **Bridge** root folder of the project directory.

The Copy Seed utility can be used to create the files, choose file type **ORD STRUCTURES Seed**.

The options provided are for each possible IaRCS survey zone. The correct seed file must be used to appropriately place the culverts along the alignment.



The naming convention is to follow what is shown in the listed options.

Portions of the name are described below.

- ORD signifies an OpenRoad Designer file
  - CRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
  - DOT or consultant firm designation
  - FHWANO used to list the specific FHWA number of a bridge size box culvert
- All other structures and non-bridge sized box culverts have an assigned Asset ID that should be used instead for this portion of the naming convention. **If there are multiple structure models in the same file, it is advised not to include FHWA or Asset ID Numbers in the file name to alleviate a lengthy file name.**

*File Name for single structure models*

**ORD\_06030205\_DOT\_STR\_700495\_SPN.dgn**

*File Name if DOT starts the prelim work and consultant takes over file for final design work*

**ORD\_06030205\_DOT\_XYZCORP\_STR\_700495\_SPN.dgn**

*File Name if consultant starts the prelim work and DOT takes over file for final design work*

**ORD\_06030205\_XYZCORP\_DOT\_STR\_700495\_SPN.dgn**

**Because RCB Culvert models may contain more than one structure, it is advised not to include Design Numbers or Asset ID Numbers. This will alleviate a lengthy file name. However, if there is a single structure, then it is acceptable to have the Design Number or Asset ID Number in the file name.**

The following naming convention is used for CIP and Precast Alternate RCBs when alternate structures are modeled at the same station on the same alignment. Separate files are necessary. A similar naming convention may be used for all alternate structure scenarios.

*File Name*

**ORD\_06030205\_DOT\_STR\_CIP\_SPN.dgn**

**ORD\_06030205\_DOT\_STR\_PC\_SPN.dgn**



## **ORD Prelim Bridge Design Seed**

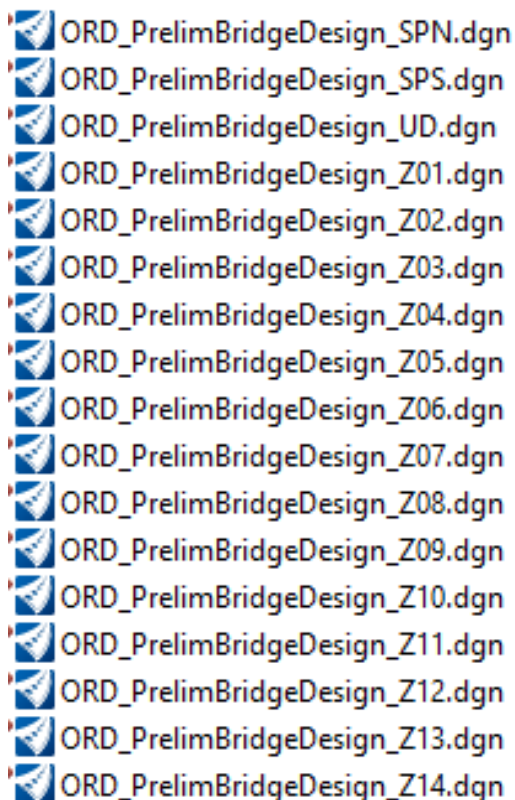
OpenRoads Designer Prelim Bridge Design seed files are used to develop the layout and modeling of berms, revetments, drainage or flowage easement boundary and possible hydraulic layout.

**This file may be considered as a multipurpose seed file and will be worked on and stored in two different locations.**

- **Location 1; Bridge** folder, when this seed file is to be used for berm, revetment, drainage or flowage easement modeling. Rename accordingly.
- **Location 2; BRPrelim** folder (**DOT** or **XYZ-CORP** subfolders), when this seed file is to be used for general preliminary design (not a deliverable) then this file may be kept as a separate file and renamed accordingly.

The Copy Seed utility can be used to create the files, choose file type **ORD Prelim Bridge Design Seed**.

The options provided are for each possible IaRCS survey zone. The correct seed file must be used to appropriately place the berm and revetment at the location of the structure.



The naming convention is to follow what is shown in the listed options.

Portions of the name are described below.

- ORD signifies an OpenRoads Designer file
- CCRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
- NSEW used to indicate directional location of berms (North, South, East, West)
- DOT or consultant firm designation
- DSN# used to list the specific design number(s) of the related bridge design(s)

For **Location 1, Bridge** folder files keep each berm, revetment, flowage easement and Design in its own file.

The following naming convention is used when the file contains a corridor model, grading or revetment models. The file name contains GRADING.

<u>File Name</u>	<u>Description</u>
ORD_53151126_GRADING_DOT_425_Z10.dgn	Grading, Revet EB Bridge Des 425
ORD_53151126_GRADING_DOT_525_Z10.dgn	Berm Revet WB Bridge Des 525

The following naming convention is used when the file contains only a terrain or grading surface. The file name contains TRN.

<u>File Name</u>	<u>Description</u>
ORD_53151126_TRN_E_DOT_425_Z10.dgn	Terrain-East Berm EB Bridge Des 425
ORD_53151126_TRN_W_DOT_425_Z10.dgn	Terrain-West Berm EB Bridge Des 425
ORD_53151126_FlowageEasement_DOT_425_Z10.dgn	Flowage Easement Boundary

For **Location 2, BRPrelim** subfolder files use a logical file name and include the laRCS Zone. Use a logical description of the file.

<u>File Name</u>	<u>Description</u>
53151126_Working_Z10.dgn	Preliminary Layout
ORD_8208002022_Working_Z11.dgn	Site Investigation

## PLAN SHEET FILES AND MULTIPLE STRUCTURES

Sheet file names with multiple Design, FHWA/Asset ID number format is no longer preferred. All plan sheet files will contain only a single Design, FHWA/Asset ID number. Although this will create more files overall, it allows a more flexible workflow and may be more ideal for all users that are working with those files. This process keeps the SHT files fairly "clean" with regards to limiting the named boundaries and saved views, minimizing any confusion to the user.

### ORD 2D Seed

The OpenRoads Designer 2D seed file is the preferred seed file to be used for Prelim Type, Size, Location (TSL)/Situation Plan sheet creation. The same file will then continue to be used for Final plan sheet development.

This file does not contain the Drawing and Sheet Models used for Final plan sheet development that are in the **Bridge Plan Production Seed (BPPS)** file. The concept is that the TSL file created in the Prelim Design process may exist for a length of time, maybe 2+/- years. The **BPPS** Drawing and Sheet Models format of the file may change, requiring the Final Designer to update the existing file (check for changes in the original seed file vs the current one). Therefore, instead of having the Final Designer update the existing, possibly 2-year-old Drawing and Sheet Models, it may be ideal to have the Final Designer import the up-to-date versions once the file is taken over for Final plan sheet production.

This seed file does not have a Geographic Coordinate System applied. If necessary, apply the appropriate Iowa Regional Coordinate System.

This file is to be located, and worked on, in the **Bridge\(\Paren)\_Work Description** folder of the project directory.

The Copy Seed utility can be used to create the files, choose file type **ORD 2D Seed**.

<u>File Name</u>	<u>Description</u>
SHT_06030209_226_700500_SPN.dgn	PPCB Design 226
SHT_06030209_726_001425_CIP_SPN.dgn	Twin 10x10 RCB Culvert Design 726
SHT_06030209_726_001425_PC_SPN.dgn	Twin 10x10 RCB Culvert Design 726

## **Bridge Plan Production Seed**

The ProStructures seed file, Imperial3d.dgn, is used to develop rebar/steel modeling and complete structural details. This file is also used for both 2D & 3D plan development and sheeting. The seed file is located in the CONNECT managed workspace at:  
pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\IowaDOTStandardsConnect\Configuration\Organization-Civil\IowaDOT\_Standards\ProStructures\Seed\Imperial3d.dgn

This file is to be located, and worked on, in the **Bridge\{(Paren)\_Work Description}** folder of the project directory.

The Copy Seed utility can be used to create the files for ProStructures. Choose file type **Bridge Plan Production Seed**.

**This seed file will be used for two workflows and named differently depending on its use.**

- **Workflow 1**, modeling structural concrete, rebar, and steel shapes. File name prefix with **PS\_**.
- **Workflow 2**, Prelim/Final Design plan sheet development. File name prefix with **SHT\_**.

For **Workflow 1**; When ProStructures tools for 3D concrete, rebar or steel modeling is part of the design and plan development, then use the naming convention as described below.

- **PS** prefix signifies a ProStructures file and indicates the file contains modeled concrete, rebar or steel components. **ProStructures use is required to maintain digital integrity of structural elements.**
- CRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
- DSN# used to list the specific design number of the structure details
- FHWANO used to list the specific FHWA number of a bridge or bridge size box culvert  
All other structures and non-bridge sized box culverts have an assigned Asset ID that should be used instead for this portion of the naming convention.
- laRCS survey zone

<u>File Name</u>	<u>Description</u>
<b>PS_06030209_216_700495_SPN.dgn</b>	PPCB Bridge Design 216

For **Workflow 2**; When the design and plan development does not make use of ProStructures modeled rebar or steel components, then use the naming convention as described below.

- **SHT** prefix signifies the file is used for plan sheet creation. **ORD use is required if MicroStation Civil tools/capabilities are to be utilized.**
- CRRRPPP used to identify County (CC), Route (RRR) and Paren (PPP) number of the specific project
- DSN# used to list the specific design number of the structure details
- FHWANO used to list the specific FHWA number of a bridge or bridge size box culvert  
All other structures and non-bridge sized box culverts have an assigned Asset ID that should be used instead for this portion of the naming convention.
- laRCS survey zone

File Name

SHT\_06030209\_226\_700500\_SPN.dgn  
SHT\_06030209\_726\_001425\_CIP\_SPN.dgn  
SHT\_06030209\_726\_001425\_PC\_SPN.dgn

Description

PPCB Design 226  
Twin 10x10 RCB Culvert Design 726  
Twin 10x10 RCB Culvert Design 726

The following naming convention is used if laRCS is unknown. For repair projects the laRCS may not be known or needed, in this case, then use undefined zone UD.

File Name

SHT\_06030209\_1328\_700500\_UD.dgn

Description

Design 1328 Steel Girder Repair