CONNECT DDE GUIDE

CONNECTICUT DEPARTMENT OF TRANSPORTATION

DIGITAL DESIGN ENVIRONMENT GUIDE

CONNECT EDITION

Volume 10 – OpenRoads Designer Site Layout

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Course Overview

In this module you will learn how to create base models for Site Design.

Skills Taught

- Learn how to select the proper Workspace and WorkSet.
- Select the proper seed file to create a Base Model.
- Align a file so it's in the proper geospatial location.

Exersize 1 - Base Model Creation

1.1   Startup

Before attempting to open or create DGN files users should make sure the following is in place:

1. CTDOT users should have the CTDOT CONNECT DDE synced through SharePoint with the COMPASS Project Synced along with the CAD Configuration.

2. Consultants should have CTDOT DDE properly installed or be syncing to the CTDOT DDE SharePoint/COMPASS system.

3. Make note of the **Coordinate System** you will be working in. If you have existing survey data, you will need to find out what system is being used **(NAD 83/NAVD 88 or NAD 27/NAVD 29).**

4. Log on to the CONNECTION Client. Bentley Connect licensing requires users to log into their Bentley account to secure a software license. CTDOT users should log in using your CTDOT email address and Bentley password.If you do not see the dialog box, select the ∧ icon on the bottom Windows Screen. Click on the Connection Client Icon and select **Open**.
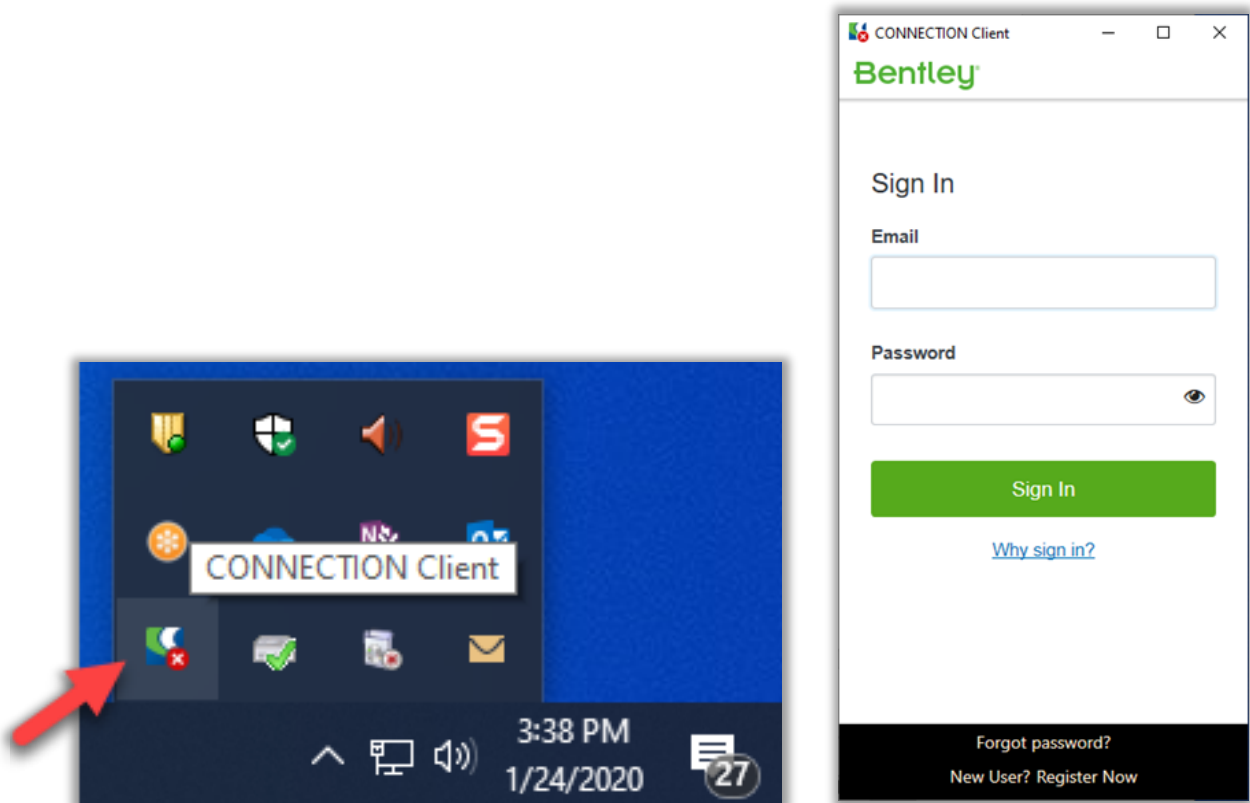

Figure 1 CONNECTION Client System tray

5. Launch the Application.
   - **Consultants**
     Start the software via an appropriate **CTDOT DDE** icon
   - **CTDOT employees**
     On your desktop double click on the **CAD Accounting** icon.
6. On the CT DOT Accounting Menu there will be select ***Compass OpenRoads CE***
   In the ***Run Program*** field select the needed program, the ***Available Account*** (funding source) and ***Resource Type***. Click on the **Start** button to load the program.
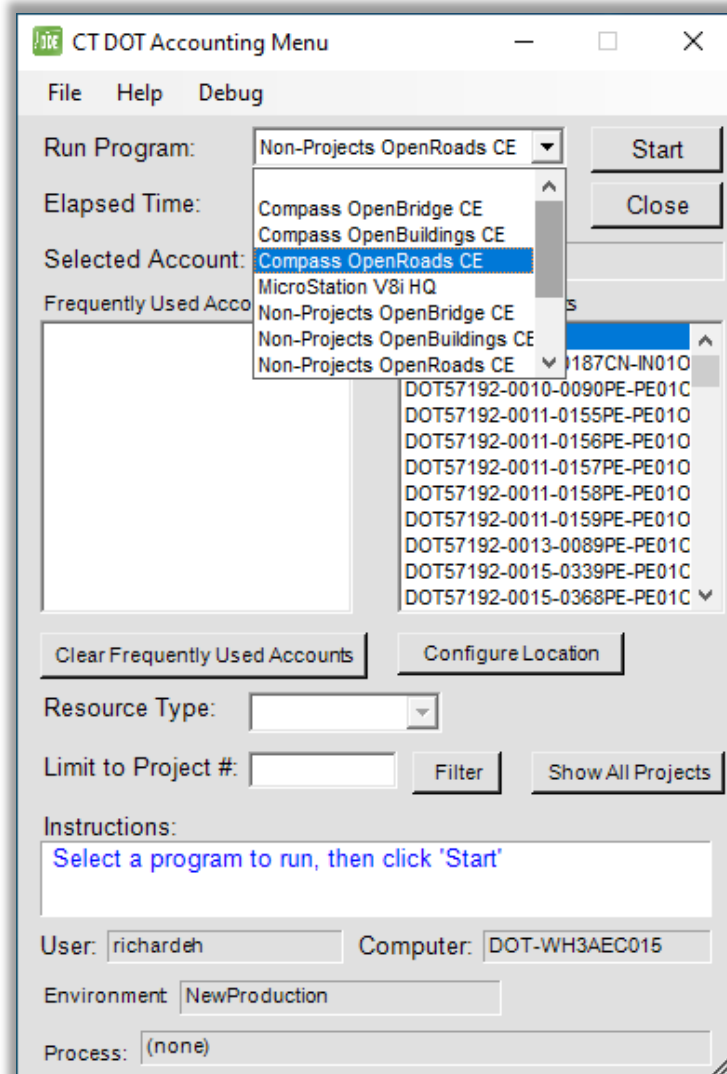

Figure 2 CAD Accounting dialog box

7. After launching the program, a Welcome Screen for *OpenRoads Designer* will appear.

8. Select **Custom Configuration**, using the small drop-down arrows select the Workspace **CT_Workspace**, the needed **WorkSet** and **Role**.

> *Note: If you do not see the Project Number listed, please request a Compass/CAD Setup using this link New CAD Project Request*
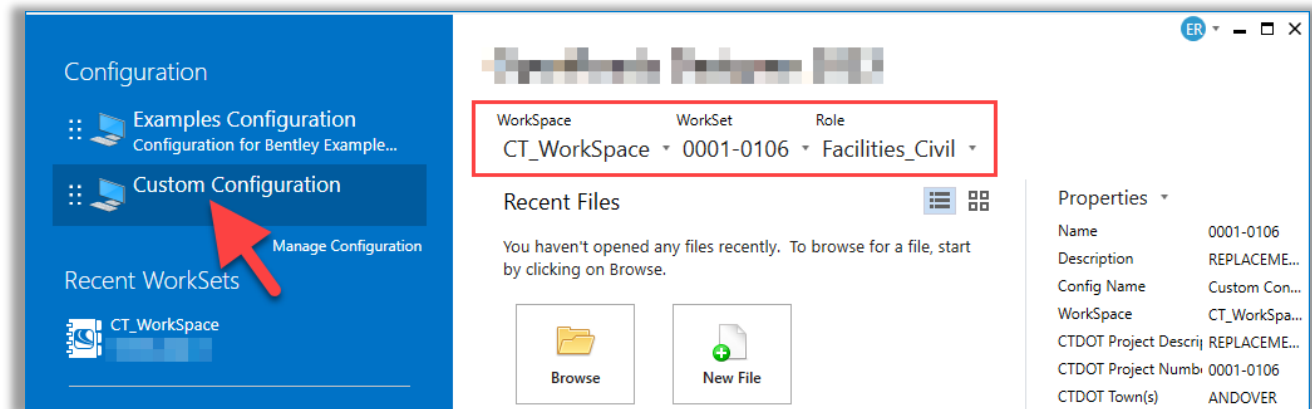

Figure 3 OpenRoads Splash Screen

1.2   Creating a New File

1. Select the **New File** icon.

> **Warning:** Do not copy DGN files created with V8i SELECTseries or InRoads SS2, SS3, SS4, or SS10 to the new CTDOT CONNECT Project/WorkSet folders.

From the New dialog box, browse to the proper discipline folder and enter the proper file name in the **File name:** field using

Example: ***FC_1234_1234_BaseModel.dgn***

2. On the New dialog box click the **Browse** button to select the proper seed file.
    ...CT_Configuration|Organization|Seed|Road

If the survey was done in an old Datum, use the 2D Seed Files in this folder
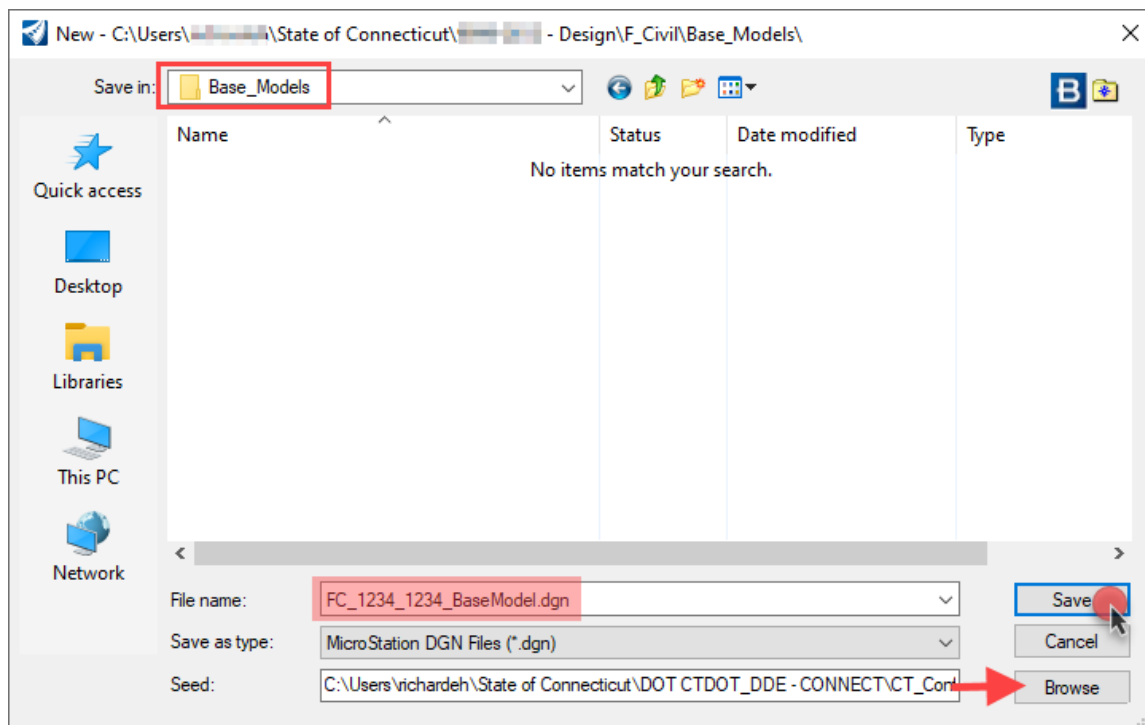***...CT_Configuration|Organization|Seed|GCS|***

Figure 4 New File

3. After the DGN file is created open File Explorer and browse to the file, **right click** and select **View online**.
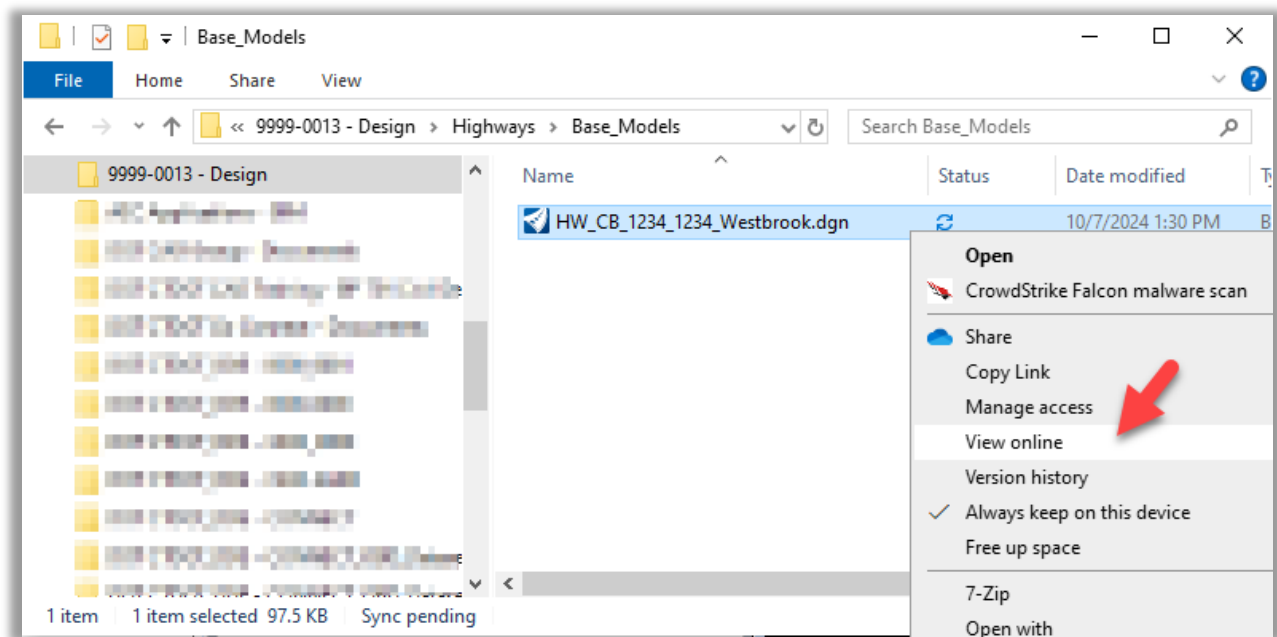

Figure 5 File Explorer View online tool

4. The Projects SharePoint site will open, sort by **Date**, click on the **three dots**, select *More ›*
   Check Out

   > **Note:** *When you are done working on the DGN file, exit the program and go back to the SharePoint Site and* **Check In** *the file.*
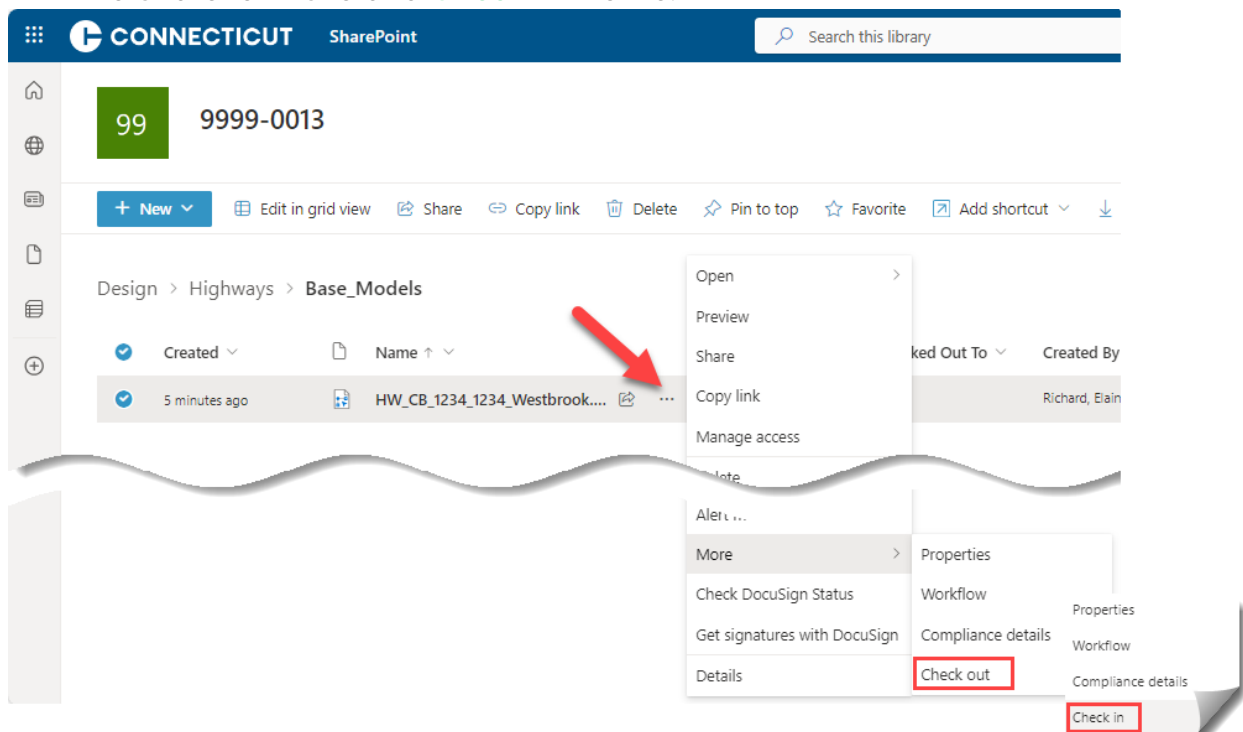

Figure 6 SharePoint Check out

1.3   Referencing

Reference in other Design Unit's DGN files. This could include but not limited to Highway, Illumination, Signal, Signing, Pavement Markings and Existing Survey.

1. Select the **CTDOT** workflow and click on the **Attach** Tab, in the **References** section click on **Attach Reference**.

2. Navigate to the ***Highways|Base_Models*** folder and reference the Highway Design Base Model files. Choose the needed Models (most likely its "Default") and use **No Nesting**.

    Note: *Highway Design may elect to have several DGN files which could include Alignment dgns, Modeling dgns, and Drainage dgns. Highway Design.*

3. Navigate to the ***Active_Survey*** folder and reference the Survey *.dgn file. This may include 2 files a Terrain DGN and a Ground Topo (grn) DGN

    Note: *Older DGN Files will need to be referenced in with certain settings to get them to line up in the correct Geospatial location.*

4. For older reference files turn **True Scale** off and set the Scale to **1:1**.

    Note: *Always do a check by clicking on the Survey's Northing and Easting Grid Marks to compare the files read out. If they do not match you did not properly align the file Geospatially.*
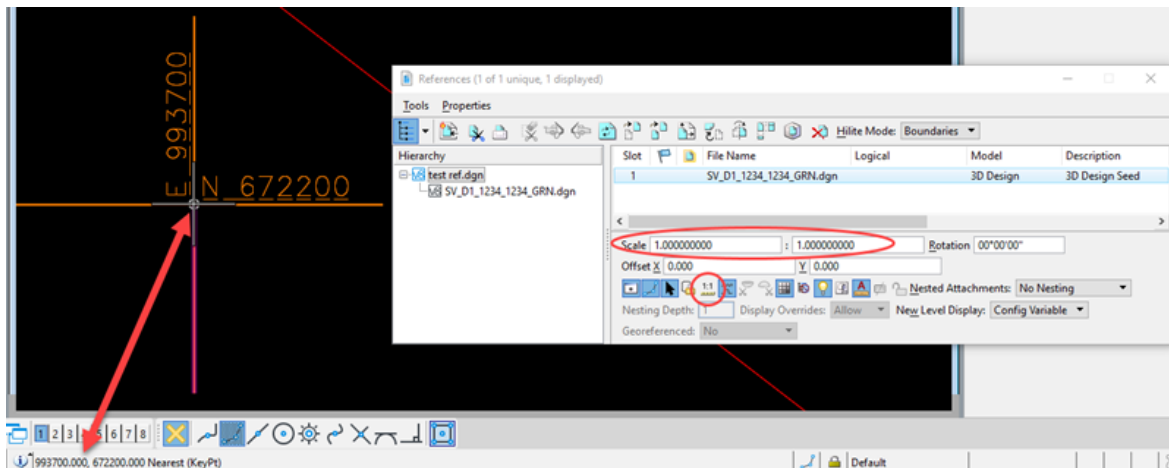

Figure 7 Reference Coordinates

5. Select **Level Display** and turn off the desired levels in the reference files.

6. Activate the terrain by clicking on the terrain boundary, hover over the boundary and from the pop-up menu select the ***Set Terrain Active*** tool.

7. Click again on the terrain boundary and set the override symbology to **Yes**. Then to help with the horizontal alignment creation, you can turn on the contours.

Figure 8 Override Terrain Symbology

8. Select **Save Settings**.

9. Select the **OpenRoads** workflow and select the **Site** tab. Begin designing your site using the tools available in the ribbon.
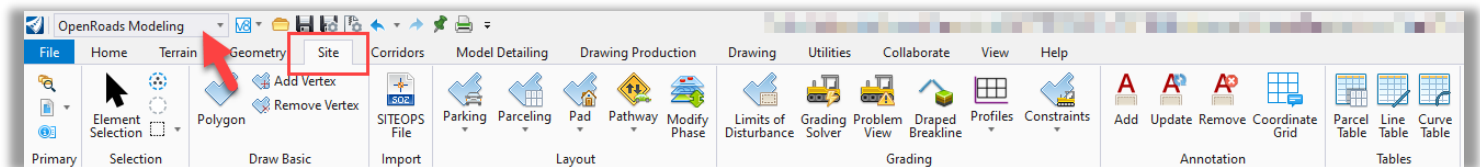

Figure 9 OpenRoads Site Tools

1.4   Online Learning

The following two links will help users get started with Bentley's Learning Program

1. [Getting started with Bentley Learn](#)

2. [All Courses - Bentley Learn](#)