

Updates to CADD Std. And Electronic Deliverables



Weather

- Hot
- Cold
- Wet
- Dry
- All of the above.



Whether

- I'm going to have to do the presentation
- I could find someone to replace me
- I was going to have time to complete the presentation



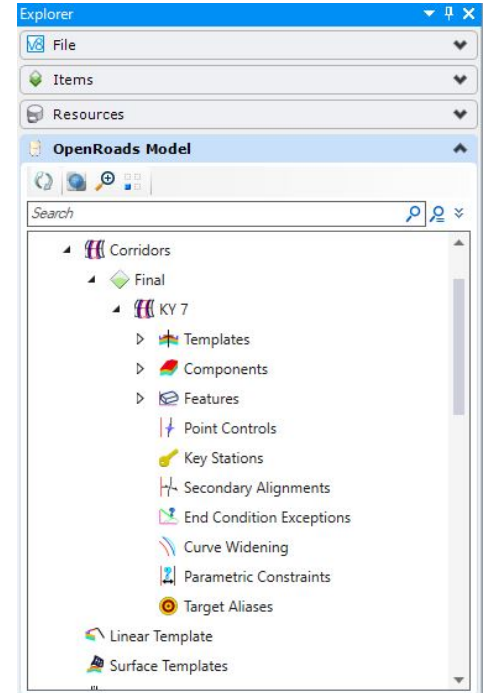
New Terminology in ORD

- MicroStation\InRoads vs OpenRoads Designer (ORD)
- Workspace (MS\InRoads) vs Configuration (ORD)
- KYTC InRoads SS2 CAD Std. vs KYTC ORD CAD Std.



New Terminology in ORD

- Geometry <- Alignments
- Terrain Models <- DTMs
- Corridor <- Roadway Designer (.IRD)



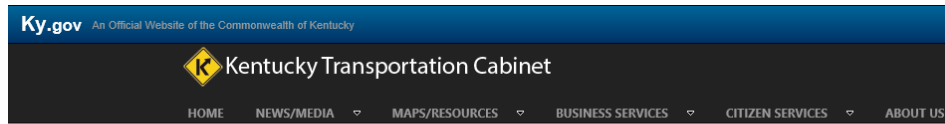
New Terminology in ORD

- Control Features
- Container Files
- SU (SUDA) <- S&S (.SDB)



Updates to CADD Std.

<https://transportation.ky.gov/CADD-Standards/Pages/default.aspx>



CADD Standards

[Download the CADD Standards Configuration \(ORD\) - BETA](#)

I would like to be notified of the CADD Standards Updates and Changes

I would no longer like to be notified of the CADD Standards Updates and Changes

[KYTC CADD Standards Policy](#)

[Download the latest CADD Standards Workspace](#)

You will need to uninstall the previous version of CADD Standards before installing CADD Standards v 03.16

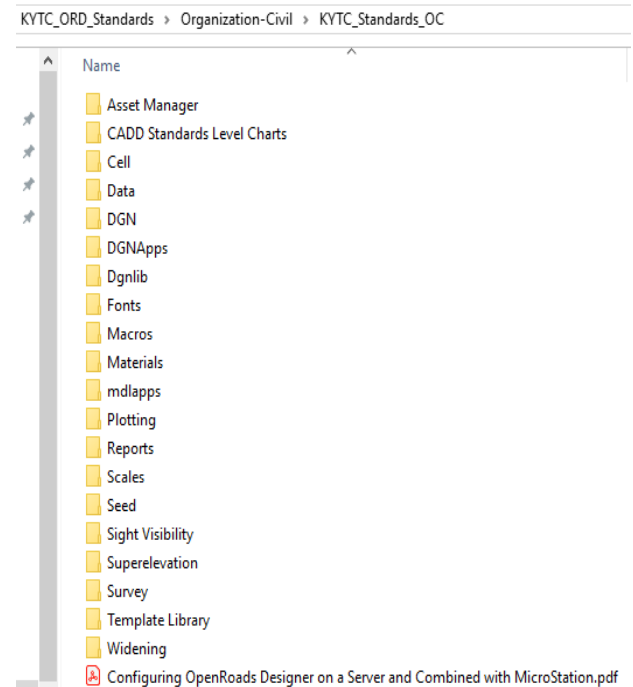
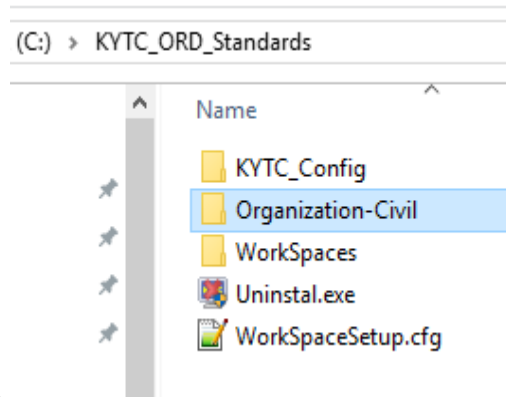
Current Software Releases recognized by KYTC CADD Standards:

MicroStation Version 08.11.07.180



Updates to CADD Std.

C:\KYTC_ORD_Standards\Organization-Civil\KYTC_Standards_OC



Updates to CADD Std.

C:\ProgramData\Bentley\OpenRoads Designer CE\Configuration

- Organization
- Organization-Civil
- WorkSpaces
- ConfigurationSetup.cfg
- ConfigurationSetup.org
- WorkSpaceSetup.cfg



Updates to CADD Std.

_USTN_CUSTOM_CONFIGURATION

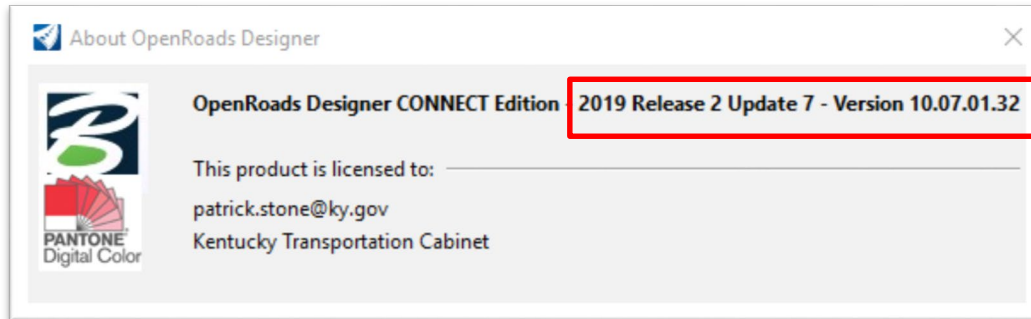
```
1 #####
2 #####
3 ##
4 ## Name : WorkspaceSetup.cfg
5 ## Type : Configuration file
6 ## Purpose : KYTC_ORD_Standards
7 ## Author : Alex Smith
8 ## Creation Date : 7-8-2019
9 ## Modified By :
10 ## Modified Date :
11 ## Config Version : 1.0
12 ## Changed from : _USTN_CUSTOM_CONFIGURATION
13 ## Default :
14 ##
15 ##
16 #####
17 #####
18
19
20 # ConfigurationSetup.cfg - Configures the root Configuration directory
21 # for Your Organization
22 #
23 # The main function of this configuration file is to allow user to specify
24 # the root Configuration directory to activate. The active Configuration
25 # directory is represented by _USTN_CONFIGURATION. By default, it points to
26 # the installed Configuration defined by _USTN_INSTALLED_CONFIGURATION,
27 # which can consist of example WorkSpaces and WorkSets.
28 # If your organization has its own Configuration directory, you can define
29 # _USTN_CUSTOM_CONFIGURATION to that directory path and use it as follows.
30 #
31 # _USTN_CUSTOM_CONFIGURATION = D:/.../MyConfiguration/
32 # _USTN_CONFIGURATION : ${_USTN_CUSTOM_CONFIGURATION}
33 #
34 #-----
35 # START: The section defines user selection at the time of installation.
36 # These lines are generated by installer.
37 [General]
38
39 #####
40 #####
41 # KYTC Changes made here
42 #
43 #
44 #
45 #
46 #
47 #
48 #
49 #
50 #
51 #####
52 #####
53
54 # _USTN_CUSTOM_CONFIGURATION = C:/KYTC_ORD_Standards/
55 #
56 #####
57 #####
```

```
40 #####
41 #####
42 # KYTC Changes made here
43 #
44 #
45 #
46 #
47 #
48 #
49 #
50 #
51 #####
52 #####
```



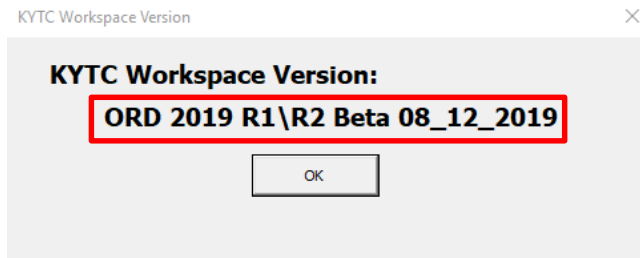
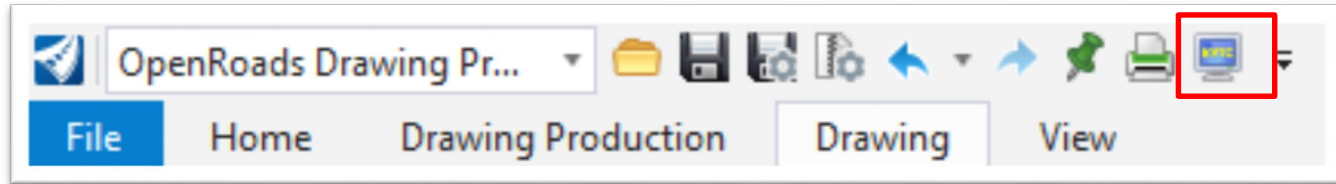
Updates to CADD Std.

- What version of ORD are you using?



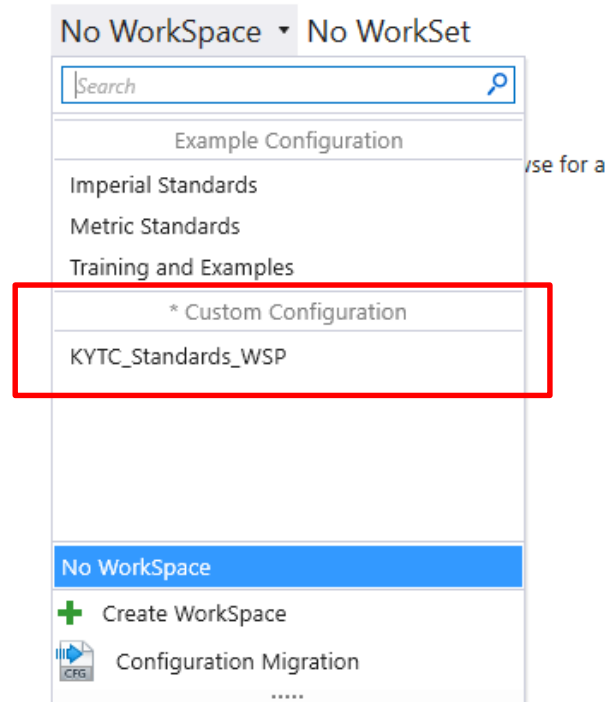
Updates to CADD Std.

What version of CADD standards are you using?




Updates to CADD Std.


- Custom Configuration
 - KYTC_Standards_WSP



Updates to CADD Std.

Recent WorkSets

 KYTC_Standards_WSP
_WorkSet_Template →

 No WorkSpace
No WorkSet

OpenRoads Designer CONNECT Edition

KYTC_Standards_WSP ▾ _WorkSet_Template ▾

Recent Files

You haven't opened any files recently. To browse for a file, start by clicking on Browse.



Browse

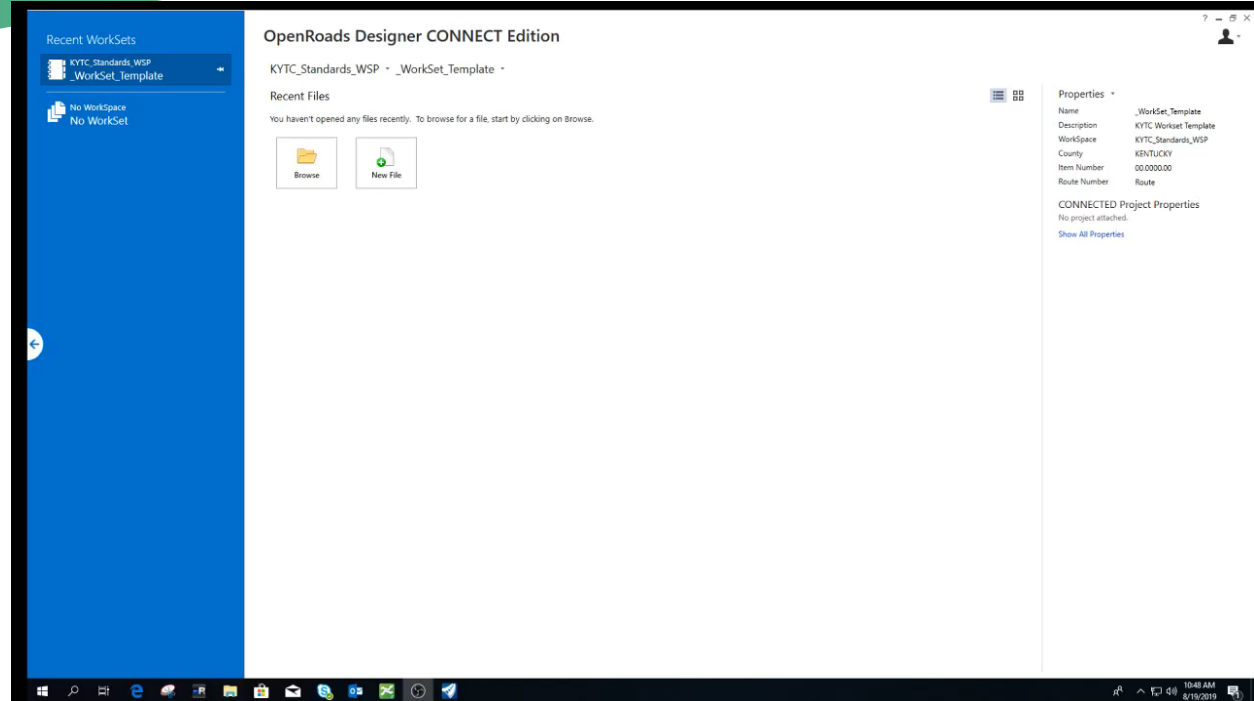


New File



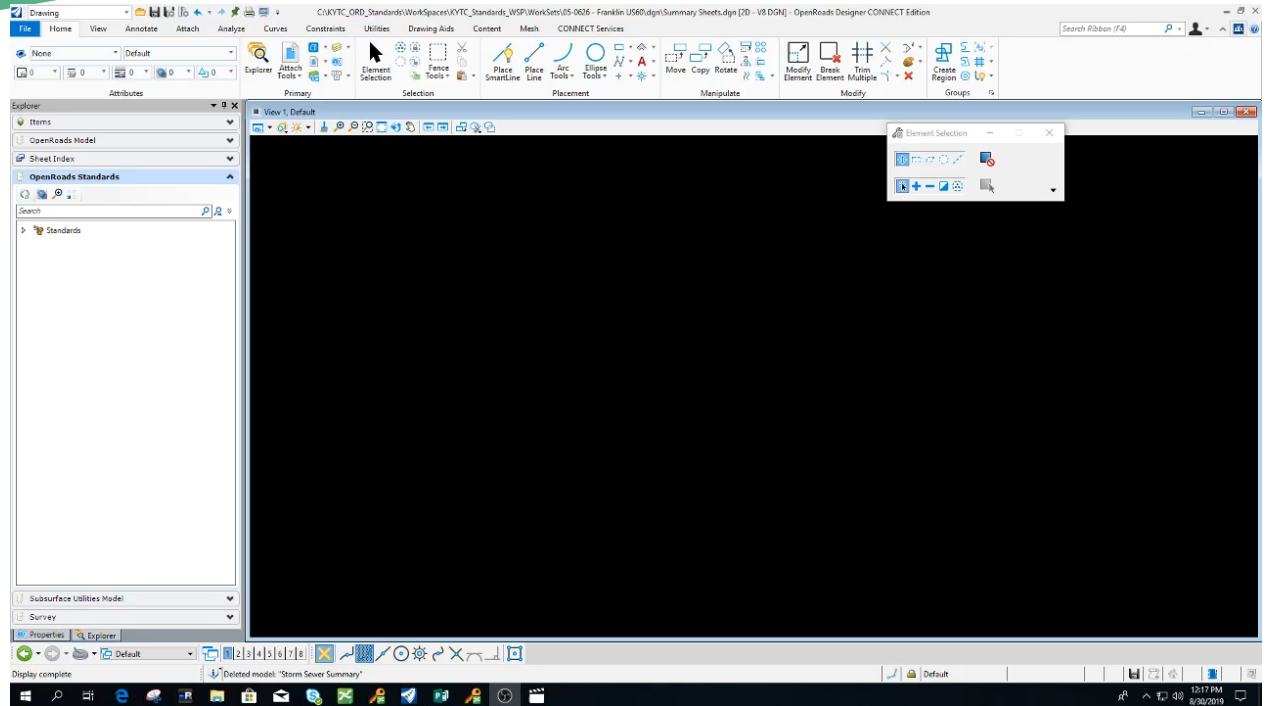
Updates to CADD Std.

WorkSets



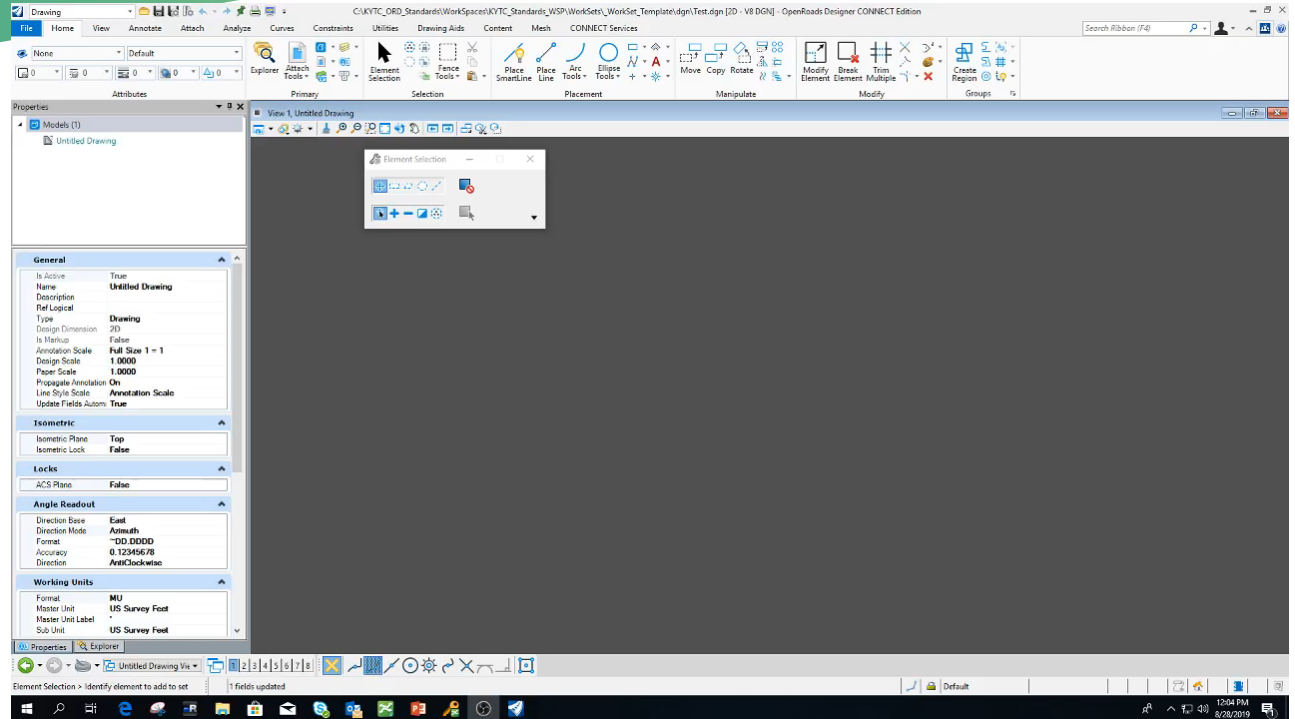
Updates to CADD Std.

MicroStation Table



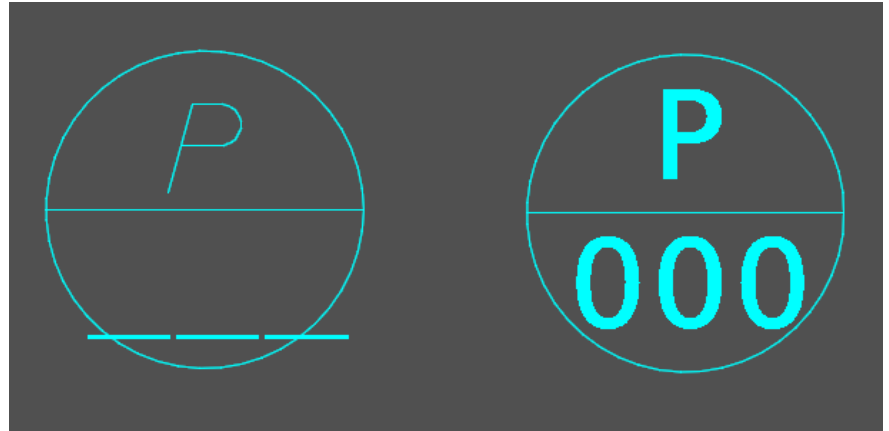
Updates to CADD Std.

Text Favorites



Updates to CADD Std.

- Truetype Fonts
- Font Placeholder



Updates to CADD Std.



Layout Sheet

Cross Section Layout Sheet

<p>INDEX OF SHEETS</p> <p>SHEET NO. DESCRIPTION</p> <p>1. INDEX OF SHEETS</p> <p>2. LAYOUT MAP</p> <p>3. CROSS SECTIONS</p> <p>4. EARTHWORK QUANTITIES</p> <p>5. GENERAL NOTES</p> <p>6. STANDARD DRAWINGS</p> <p>7. DESIGN CRITERIA</p> <p>8. GEOGRAPHIC COORDINATES</p> <p>9. DESIGNED</p> <p>10. CHECKED</p> <p>11. APPROVED</p>	<p>Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS</p> <p>PLANS OF PROPOSED PROJECT</p> <p>KNOTT COUNTY</p> <p>KY 3209 BRIDGE REPLACEMENT OVER BALLS FORK FD52 060 3209 000-001 STP BRZ 1203 398</p> <p>END CONSTRUCTION STA. 106+40.00</p> <p>STATION 104+04.50 CONST. 20.0' X 15.0' SINGLE SPAN CONCRETE I BEAM TYPE V @ 27 DEGREE SKEW RT</p> <p>THESE PLANS ARE FOR GRADE, DRAIN AND STONE BASE</p> <p>THIS PROJECT IS OFF THE 'M' SYSTEM</p> <p>THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT</p> <p>Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS COUNTY OF KNOTT</p> <p>ITEM NO. 12-0906.00</p> <p>PROJECT: 100 AND 3000 000-000</p> <p>DATE: 10/20/18</p> <p>LETTING DATE:</p> <p>DESIGNED BY: CHARLES DALE P.E. KY00000</p> <p>CHECKED BY: KY00000</p> <p>APPROVED BY: KY00000</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>STATION</th> <th>CONV. LEVEL</th> <th>AMB. LEVEL</th> </tr> <tr><td>104+00</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+10</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+20</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+30</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+40</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+50</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+60</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+70</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+80</td><td>8.0</td><td>8.0</td></tr> <tr><td>104+90</td><td>8.0</td><td>8.0</td></tr> <tr><td>105+00</td><td>8.0</td><td>8.0</td></tr> <tr><td>TOTAL</td><td>99</td><td>99</td></tr> </table>	STATION	CONV. LEVEL	AMB. LEVEL	104+00	8.0	8.0	104+10	8.0	8.0	104+20	8.0	8.0	104+30	8.0	8.0	104+40	8.0	8.0	104+50	8.0	8.0	104+60	8.0	8.0	104+70	8.0	8.0	104+80	8.0	8.0	104+90	8.0	8.0	105+00	8.0	8.0	TOTAL	99	99
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Electronic Deliverables

File Federation/Separation and References

- OpenRoads Designer stores all civil data in the .DGN file
 - Everything is a .DGN
 - *Survey, terrains, geometry, superelevation, corridors, etc.*
- OpenRoads Designer is designed to work with reference files
- Important to establish how you are going to work with each .DGN
 - Federate/Separate your project files
 - Establish logical folder structure and file naming



Electronic Deliverables

File Federation/Separation and References

- Topo / Survey
- Terrain
- Geometry
- Corridors
- Superelevation
- Utilities
- Cross Sections
- Plan-Profile Sheets
- Drainage
- Bridges
- Geotech
- Control Features
- Proposed Terrains
- Etc.

SEPARATE YOUR FILES



Electronic Deliverables

Why?

- Smaller files are inherently faster and more efficient.
- Easier to manage and recall where things are.
- Multi-user access to files.
- More control later when you need to compile them for different scenarios (*i.e. alternative designs, create composite models, etc.*)



Electronic Deliverables

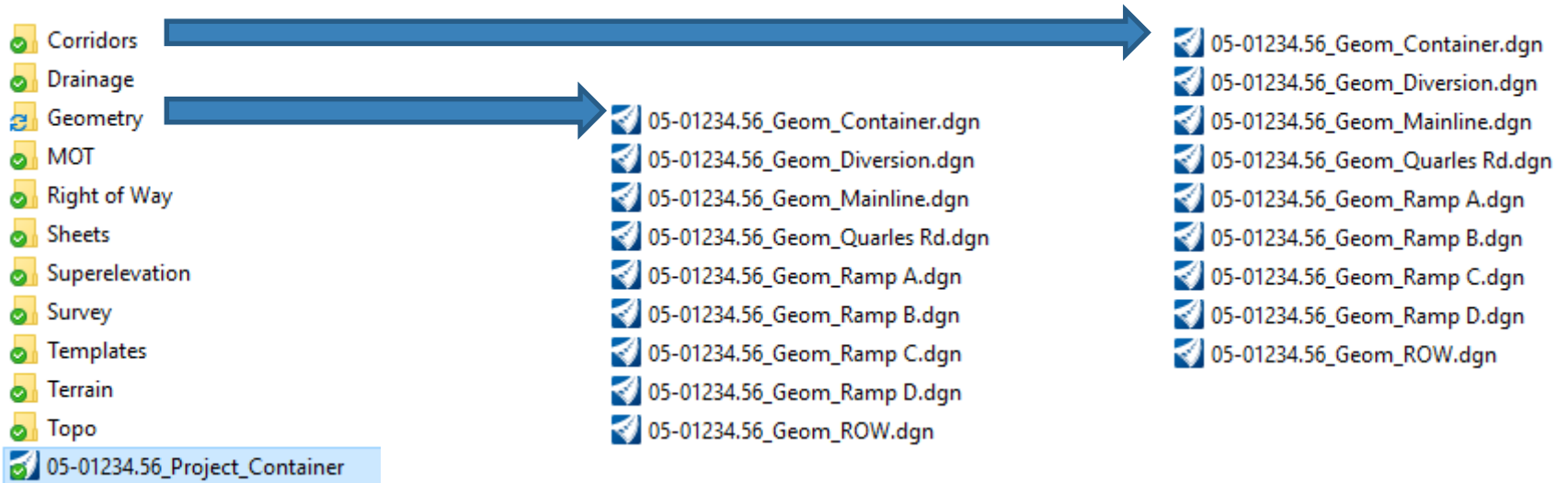


- How should we separate alignments, corridors and superelevations?
 - Each alignment should have its own file.
 - Superelevation Sections should have their own file.
 - Each corridor should have its own file.

Electronic Deliverables



KYTC established logical folder structure and file naming



Electronic Deliverables



Geometry

- 05-01234.56_Geom_Container.dgn
- 05-01234.56_Geom_Diversion.dgn
- 05-01234.56_Geom_Mainline.dgn
- 05-01234.56_Geom_Quarles Rd.dgn
- 05-01234.56_Geom_Ramp A.dgn
- 05-01234.56_Geom_Ramp B.dgn
- 05-01234.56_Geom_Ramp C.dgn
- 05-01234.56_Geom_Ramp D.dgn
- 05-01234.56_Geom_ROW.dgn

Superelevation

- 05-01234.56_Super_Container.dgn
- 05-01234.56_Super_Diversion.dgn
- 05-01234.56_Super_Mainline.dgn
- 05-01234.56_Super_Quarles Rd.dgn
- 05-01234.56_Super_Ramp A.dgn
- 05-01234.56_Super_Ramp B.dgn
- 05-01234.56_Super_Ramp C.dgn
- 05-01234.56_Super_Ramp D.dgn

Corridors

- 05-01234.56_Corr_Container.dgn
- 05-01234.56_Corr_Diversion.dgn
- 05-01234.56_Corr_Mainline.dgn
- 05-01234.56_Corr_Quarles Rd.dgn
- 05-01234.56_Corr_Ramp A.dgn
- 05-01234.56_Corr_Ramp B.dgn
- 05-01234.56_Corr_Ramp C.dgn
- 05-01234.56_Corr_Ramp D.dgn

Container File

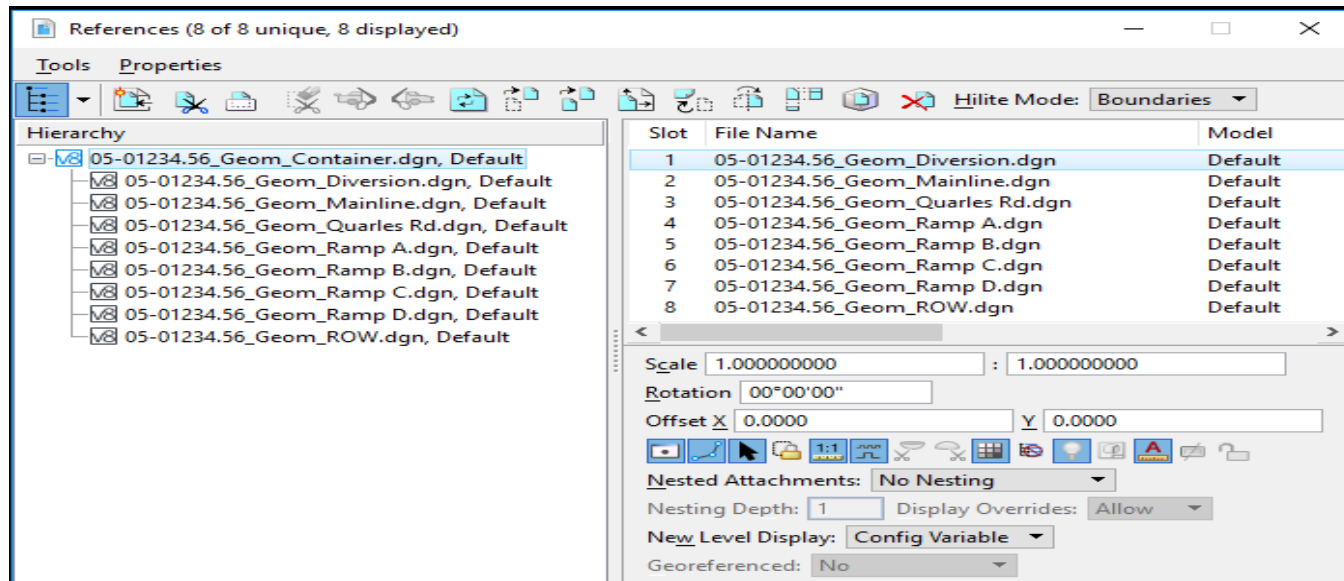


- A Container file functions as the “Master” file for geometry, corridors, proposed terrain, etc.
- A blank file with individual file attached as references.
 - Create a container file for ALL Geometry.
 - Create a container file for ALL Corridors.
 - Create a container file for ALL Superelevation.

Geometry Container

(Use this master file when you want all Geometry)

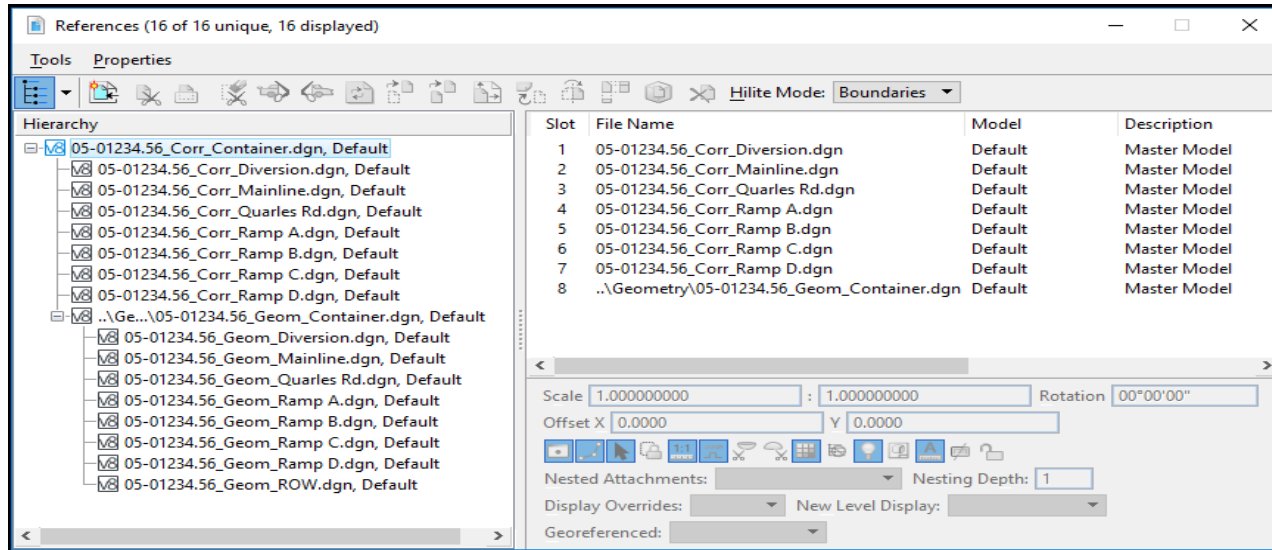
- Create 2D blank master file
- Reference each individual geometry dgn



Corridor Container

(Use this master file when you want all Corridors)

- Create 2D blank master file
- Reference each individual corridor dgn
- Reference master geometry container (Live Nesting = 1)



Project Container File

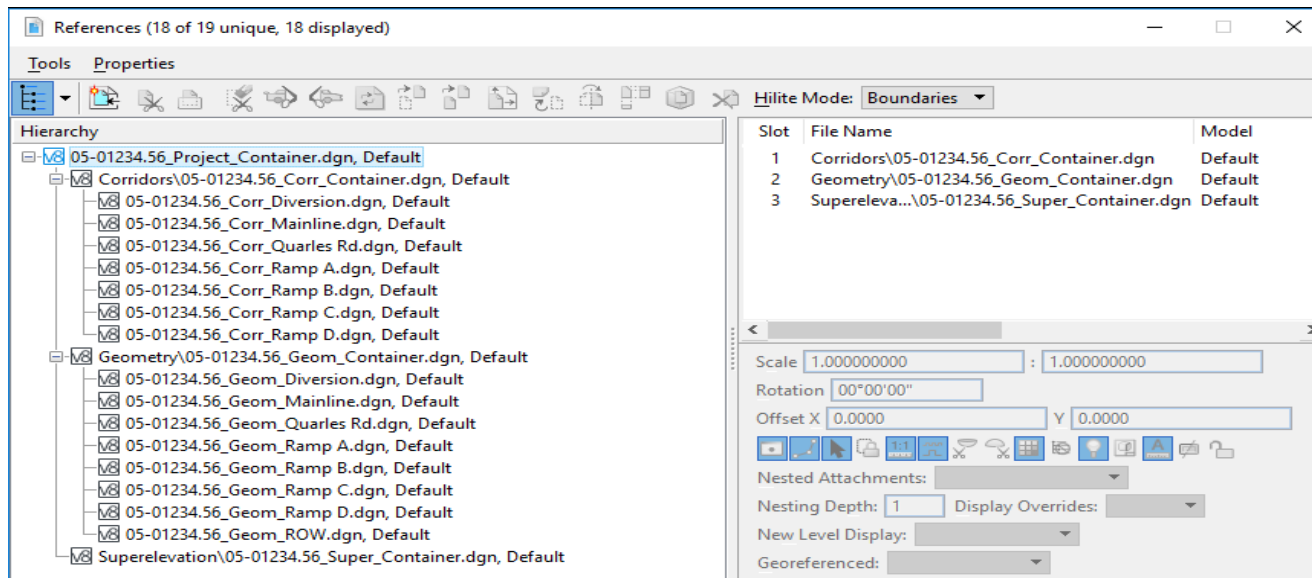


- A blank file with individual file attached as references.
- Contains ALL container files (Geometry, Corridors, Superelevation, etc).
- Use as the master model for plan sheets, cross section, design checks and conflict analysis.

Project Container File



- Contains ALL container files (Geometry, Corridors, Superelevation, etc.)
- Use as the master model for plan sheets, cross section, design checks and conflict analysis.



ORD Training

The screenshot shows the website's navigation bar with links for Home, KSPE, ACEC-KY, KEF, Inside the Profession, Programs, Calendar, and Contact. A search bar is located on the right. The main header features the Kentucky Engineering Center logo and the text "ACEC-KY KEF KEF KSPE". Below the header is a "Community Calendar" section with filters for "All Categories", "Upcoming", "Past", and "Month View", along with an RSS feed icon. A descriptive paragraph explains that users can find upcoming events and view photo galleries of past events. The calendar lists several events:

- Upcoming Events**
 - Tuesday, August 27, 2019**
 - Roadside Design Guide**
8/27/2019 » 8/28/2019
Location: Frankfort Time: From 8:00 am to 4:30 pm
Export to Your Calendar Register
 - Tuesday, September 3, 2019**
 - 2019 ACEC-KY/FHWA/KYTC Partnering Conference**
9/3/2019 » 9/5/2019
Location: Louisville, Kentucky
Export to Your Calendar Register
 - Tuesday, September 10, 2019**
 - Highway Capacity Analysis using HCM 6th Edition with HCS7**
9/10/2019 » 9/12/2019
Location: Frankfort, Kentucky Time: From 9:00 am to 4:00 pm
Export to Your Calendar Register
 - Tuesday, September 17, 2019**
 - Upgrading to OpenRoads Designer**
9/17/2019 » 9/20/2019
Location: Frankfort, Kentucky Time: 8:00 am to 4:30 pm
Export to Your Calendar Register

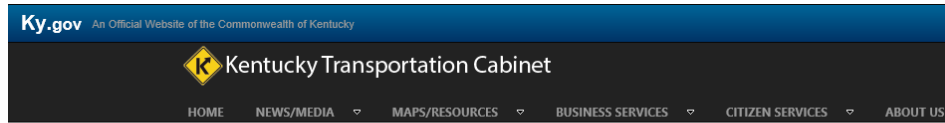
On the right side of the page, there is a "Sign In" form with fields for Username and Password, a "Sign In" button, and links for "Forgot your password?" and "Haven't registered yet?". Below the sign-in form is a "Calendar" section with a "more" link and a list of events:

- 8/27/2019 » 8/28/2019 Roadside Design Guide
- 9/3/2019 » 9/5/2019 2019 ACEC-KY/FHWA/KYTC Partnering Conference
- 9/10/2019 » 9/12/2019 Highway Capacity Analysis using HCM 6th Edition with HCS7
- 9/17/2019 » 9/20/2019 Upgrading to OpenRoads Designer



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MicroStation Version 08.11.07.180



Electronic Deliverables

KYTCCADDSUPPORT@KY.GOV

Questions

KYTCCADDSUPPORT@KY.GOV

KYTCCADDSUPPORT@KY.GOV

KYTCCADDSUPPORT@KY.GOV

KYTCCADDSUPPORT@KY.GOV

