

CDOT ORD 10.12 Configuration ReadMe



Date: May 1, 2024

Workspace Configuration Version: CDOT.2024.R1-01

Software Versions:

- **OpenRoads Designer CE – 2022 Release 3 (10.12.02.4)**
- **ProjectWise Explorer (10.00.03.453)**

The CDOT Standards have been developed and tested using OpenRoads Designer Connect Edition 2022 Release 3 (ORD 10.12). These standards are under continuous development and are subject to change in future updates.

A summary of the major enhancements for this WorkSpace release is included below.

Installation

Local Installation Path:

- ***C:\ProgramData\Bentley\OpenRoads Designer CE 10.12\Configuration***

General Configuration

- All files have been updated to use the 10.12 schema.
- *\\Organization-Civil\CDOT_Standards.cfg*
 - Stripped out variables that are specific to OpenBridge and/or OpenRoads and moved them to a new configuration file.
 - Added MS_IDLETIMEOUT = 150. To timeout and close OpenX after some time has passed.
 - Added MS_LOCAL_MATERIALS = 1. This is to ensure materials are carried over to the imodel.
 - Added a line to remove the capability to activate reference files. This is due to issues with Civil files breaking using the Reference Activate command.
 - Added variables needed for the new tools added.
- *\\Organization-Civil\CDOT_Standards - ORD.cfg*
 - New configuration file for OpenRoads configuration variables
- *\\Organization-Civil\CDOT_Standards - OBM.cfg*
 - New configuration file for OpenBridge configuration variables
- *\\WorkSpaces\CDOT_Standards.cfg*
 - Updated configuration file to find the correct output folders while in ProjectWise

Sheet Index Template

- *\\Workspaces\CDOT_Standards\CDOT Workset Template\CDOT_Workset_Template.dgnws*
 - Added new folders and rearranged folders to match the Sheet submittal format.

Seed Files

- \\Organization-Civil\CDOT_Standards\Seed\CDOT_3D Seed-Design.dgn
 - Changed Default model name to CDOT Default-3D

Levels

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_DU-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added the following levels:
 - HYDR_Text
 - HYDR_Profile-EGL
 - Changed the HYDR_HGL to HYDR_Profile-HGL
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added the following levels:
 - DES_Barrier
 - DES_Grading-Berm
 - DES_Grading-Pond
 - DES_Grading-Swale
 - DES_Roadway-Diamond Grinding
 - DRAFT_Text-Tables
 - MOD_TempComp-Diamond Grinding
 - MOD_TempComp-Topsoil
 - MOD_TempPoints-Channel
 - MOD_TempPoints-Diamond Grinding
 - SHEET_Legend
 - TER_Temporary-Boundary
 - TER_Temporary-Breaklines
 - TER_Temporary-Contours – Imported
 - TER_Temporary-Contours – Labels
 - TER_Temporary-Contours – Major
 - TER_Temporary-Contours – Minor
 - TER_Temporary-Flow Arrows
 - TER_Temporary-Hole
 - TER_Temporary-Island
 - TER_Temporary-Points – High
 - TER_Temporary-Points – Low
 - TER_Temporary-Random
 - TER_Temporary-Triangle Vertices
 - TER_Temporary-Triangles
 - TER_Temporary-Void
 - Changed the following levels:
 - DES_Roadway-Handrail to DES_Roadway-Railing
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Site-Levels_ElemTemp_Feat_Annot.dgnlib
 - Added the following levels:
 - SITE_Misc

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Survey-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Move the Topo_* levels from the roadway dgnlib into the above file.
 - Updated the linestyle used for the following levels. TOPO_CURBGUTR_Concrete-Pan-Flowline_CW and TOPO_CURBGUTR_Concrete-Pan-Flowline_CCW. The linestyle was updated to the curb linestyle instead of the flowline linestyle.
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Traffic-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added the following levels:
 - TRAF_Strip Map-City Limits
 - TRAF_Strip Map-Climb Lane
- Moved the TER_Existing-* levels from the Roadway level library to the Survey level library.

Cells

- Renamed Subsurface cell libraries to Drainage-Utils
- Removed the Labeling.cel file.
- Split the *Traffic – Signs.cel* file into multiple cell libraries:
 - \\Organization-Civil\CDOT_Standards\Cell\
 - Traffic Signs - CDOT Supplemental.cel
 - Traffic Signs - Destination.cel
 - Traffic Signs - Guide.cel
 - Traffic Signs - Misc.cel
 - Traffic Signs - Regulatory.cel
 - Traffic Signs - Warning.cel
- Split the *Traffic – General.cel* file into multiple cell libraries:
 - \\Organization-Civil\CDOT_Standards\Cell\
 - Traffic - General.cel
 - Traffic - Sign Structures.cel
 - Traffic - Signals.cel
 - Traffic - Striping.cel
- \\Organization-Civil\CDOT_Standards\Cell\Traffic - Striping.cel
 - Added Pavement Marking Cells that were missing:
 - STRIPE_Word-Left
 - STRIPE_Word-Merge
 - STRIPE_Word-Right
 - STRIPE_Word-Slow
 - STRIPE_Word-To
 - STRIPE_Word-Turn
- Split the *XS Crossing Point Labels* into multiple cell libraries:
 - \\Organization-Civil\CDOT_Standards\Cell\
 - XS Flags.cel
 - XS Guardrail Details.cel
- Added the following cell libraries:
 - \\Organization-Civil\CDOT_Standards\Cell\
 - Modeling_3D - Misc.cel
 - XS Drainage-Util Details.cel

- *\\Organization-Civil\CDOT_Standards\Sheet Borders\

 - Sheets - Traffic.cel*
- *\\Organization-Civil\CDOT_Standards\Cell\XS Guardrail Details.cel*
 - Renamed cells to have more descriptive names.
 - Updated the cell description to include the M Standard #.
- *\\Organization-Civil\CDOT_Standards\Cell\Modeling_3D - Roadway Design.cel*
 - Renamed cells to have more descriptive names.
 - Added Concrete Barrier Type 7 cells (MOD_3D-Concrete Barrier-Type 7).
 - Added Guardrail Type FShape Barrier – Type 7 (CA) cell
 - Added Guardrail Type 3 W-Beam Steel/Wood cells (MOD_3D-Guardrail (MGS) – Type 3 XXXX).
- *\\Organization-Civil\CDOT_Standards\Cell\Modeling_3D - Roadway\Survey.cel*
 - Copied the following cells from the traffic striping cell library. STRIPE_Arrow-Turn Left, STRIPE_Arrow-Turn Right, STRIPE_Arrow-Straight Left, STRIPE_Arrow-Straight Right, STRIPE_Word-Only, STRIPE_Symbol-Biker, STRIPE_Arrow-Straight and from the Traffic signal cell library the SIGNAL_Controller Cabinet cell was copied to the survey cell library. These cells had to be copied from the traffic cell libraries because in the traffic cell libraries these cells were not on level DEFAULT. This caused the cells to be placed on a traffic level instead of a survey level. The prefix SURV_ was added to the copied cells so we don't have cells with duplicate names.
 - Changed the font on the FND_Monument – BLM cell to match other FND_Monument cells.
- *\\Organization-Civil\CDOT_Standards\Cell\Cell Selector*
 - Added the following cell selector files:
 - Blank Cell Selector.csf
 - 3D Modeling.csf
 - Arrows.csf
 - Construction.csf
 - Cranes.csf
 - Drainage.csf
 - Environmental.csf
 - Fence.csf
 - General.csf
 - Guardrail.csf
 - Patterns.csf
 - Pulpits.csf
 - Roadway Design.csf
 - Sheets.csf
 - Symbols.csf
 - Traffic General.csf

Line Styles

- *\\Organization-Civil\CDOT_Standards\Dgnlib\Line Styles\CDOT_Design-LineStyles.dgnlib*
 - Added the following Line Styles:
 - MOD_Concrete Barrier Type 7
 - MOD_Concrete Barrier Type 7 with Screen
 - MOD_Guardrail F Shape Barrier Type 7 (CA)

- MOD_Guardrail Sngl Slope Barrier Type 9 (CA-CC)
- MOD_Guardrail Type 3 W-Beam Steel - Left
- MOD_Guardrail Type 3 W-Beam Steel - Median
- MOD_Guardrail Type 3 W-Beam Steel – Right

Text Styles

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_ORD-TextStyles_DimStyles.dgnlib
 - Added the following Text Styles:
 - DU Labels - Center Center - Conduit Span
 - CDOT_Tabulation Standard-Center Center
 - CDOT_Tabulation Standard-Left Center
 - CDOT_Tabulation Subtitle-Center Center
 - CDOT_Tabulation Subtitle-Left Center
 - CDOT_Tabulation Title-Center Center
 - CDOT_Title_Filled-Center Bottom
 - CDOT_Title_Filled-Center Center

Text Favorites

- Separated the Text Favorite Libraries out by discipline.
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Updated *Plan\PLAN – Major Stations* to a larger Text Style for alignment annotations.
 - Updated *Profile\Parabola – Curve Label* to include Stopping Sight Distance.
 - Added the following Text Favorites:
 - Plan\PLAN – Coordinates NE-Elevation
 - Plan\PLAN – Point Name-Coordinates NE-Elevation
 - Plan\PLAN – Station-Offset-Coordinates
 - XS\XS - Slope
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Survey-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added Text favorite for northing and easting.
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Traffic-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added various Text Favorites for Traffic annotations.

Annotation Groups

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Updated *Plan\PLAN – Major Stations* to a larger Text Style for alignment annotations.
 - Added the following XS Annotations:
 - Cross Section\Drawing\Flags\Grading\XS Flag - Grading ALL
 - Cross Section\Drawing\Flags\Roadway\XS Flag - Roadway ALL
 - Cross Section\Drawing\Flags\Roadway\XS Flag - Ramps

- Cross Section\Drawing\Flags\Roadway\XS Flag - Baseline
 - Cross Section\Drawing\Flags\Roadway\XS Flag – Exist Alignment
- Moved Linear and Profile Annotations to be under discipline specific folders.
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Survey-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Added annotation group Point\Northing-Easting

Civil Labeler

- Imported the civil labels from the \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Civil Labeler.xml file into the corresponding .dgnlib files.
- Updated Civil Labels with new settings available in the software.
- Changed the folder Roadway Design\Cross Section to XS
- Added the following Civil Labels:
 - Roadway Design\Plan\Linear\Grading Slope
 - Roadway Design\Plan\Points\Point Name
 - Roadway Design\Plan\Points\Point Name-Coordinates NE-Elevation
 - Roadway Design\Plan\Points\Station-Offset-Coordinates NE
 - Roadway Design\Profile\Slope
 - Roadway Design\XS\Slope
 - Traffic\Begin Striping
 - Traffic\End Striping
 - Traffic\Remove and Replace
 - Traffic\Striping Label-Offset-Station Range

Element Templates

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Landscape_Env-Levels_ElemTemp_Feat_Annot.dgnlib
 - See CDOT_10.12 Workspace Updates.xlsx for a list of added Element Templates
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Definitions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - See CDOT_10.12 Workspace Updates.xlsx for a list of added Element Templates
 - Moved:
 - Linear\Roadway\Existing folder out of the Roadway folder (**Linear\Existing**).
 - Linear\Roadway\Guardrail\Handrail to **Linear\Roadway\Barriers\Handrail**
 - Linear\Roadway\Guardrail\Handrail – Profile to **Linear\Roadway\Barriers\Handrail - Profile**
 - Civil Cells folder to **Modeling\Civil Cells**
 - Aquaplaning, Sight Visibility, Trace Slope, and Volumes folders under a folder named Analysis.
 - Terrains\Terrain Models\Existing folder to the Survey Feature Definition library.
 - Renamed:
 - Linear\Roadway\Pavement\Edge of Road – Oil to ...**Edge of Oil**
 - Modeling\Template Elements\Template Components\Guardrail\TC_Guardrail Post to **TC_Guardrail Post - Steel**

- Modeling\Template Elements\Template Points\Guardrail\TP_Guardrail Post to **TC_Guardrail Post – Steel**
 - Renamed and recategorized ALL Guardrail Elements
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Traffic-Levels_ElemTemp_Feat_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Element Templates

Feature Symbologies

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Landscape_Env-Levels_ElemTemp_Feat_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Feature Symbologies
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Feature Symbologies
 - Moved:
 - Linear\Roadway\Existing folder out of the Roadway folder (**Linear\Existing**).
 - Linear\Roadway\Guardrail\Handrail to **Linear\Roadway\Barriers\Handrail**
 - Linear\Roadway\Guardrail\Handrail – Profile to **Linear\Roadway\Barriers\Handrail - Profile**
 - Civil Cells folder to *Modeling\Civil Cells*
 - Aquaplaning, Sight Visibility, Trace Slope, and Volumes folders under a folder named Analysis.
 - Terrains\Terrain Models\Existing folder to the Survey Feature Definition library.
 - Renamed:
 - Linear\Roadway\Pavement\Edge of Road – Oil to ...**Edge of Oil**
 - Surface\Template Elements\Template Components\Guardrail\TC_Guardrail Post to **TC_Guardrail Post - Steel**
 - Linear\Modeling\Template Elements\Template Points\Guardrail\TP_Guardrail Post to **TC_Guardrail Post – Steel**
 - Renamed and recategorized ALL Guardrail Features
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Traffic-Levels_ElemTemp_Feat_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Feature Symbologies

Feature Definitions

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Landscape_Env-Levels_ElemTemp_Feat_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Feature Definitions
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Roadway-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - See *CDOT_10.12 Workspace Updates.xlsx* for a list of added Feature Symbologies
 - Moved:
 - Linear\Roadway\Existing folder out of the Roadway folder (**Linear\Existing**).

- Linear\Roadway Design\Guardrail\Handrail to **Linear\Roadway\Barriers\Handrail**
 - Civil Cells folder to *Modeling\Civil Cells*
 - Aquaplaning, Sight Visibility, Trace Slope, and Volumes folders under a folder named Analysis.
 - Terrains\Terrain Models\Existing folder to the Survey Feature Definition library.
- Renamed:
 - Linear\Roadway Design\Pavement\Edge of Road – Oil to ...**Edge of Oil**
 - Mesh\Template Components\Guardrail\TC_Guardrail Post to **TC_Guardrail Post - Steel**
 - Linear\Template Points\Guardrail\TP_Guardrail Post to **TC_Guardrail Post – Steel**
 - Renamed and recategorized ALL Guardrail Features
- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Traffic-Levels_ElemTemp_Feat_Annot.dgnlib
 - See *CDOT_10.12 WorkSpace Updates.xlsx* for a list of added Feature Definitions

Graphical Filters

- \\Organization-Civil\CDOT_Standards\Dgnlib\Graphical Filters\CDOT_Graphical Filters.dgnlib
 - Added Median Bottom Feature to appropriate Graphical Filters.

Survey Preferences

- \\Organization-Civil\CDOT_Standards\Dgnlib\Feature Defintions\CDOT_Survey-Levels_ElemTemp_Feat_TextFav_Annot.dgnlib
 - Updated survey setting Best Match Field Code to Match Start.

Tabulation Sheets and Notes

- \\Organization-Civil\CDOT_Standards\Tabulation Sheets\
 - Separated the Tabulation Sheets into discipline specific folders:
 - Bridge
 - Roadway Design
 - ROW_Survey
 - Traffic
 - Added the following Tabulation Spreadsheets
 - \Bridge\Project#\BRDG_Tabulation of Bridge.xlsm
 - \Roadway Design\Project#\DES_Tabulation of Curb_Gutter.xlsx
 - \Roadway Design\Project#\DES_Tabulation of Median Cover.xlsx
 - \Traffic\Project#\TRAF_Tabulation of Pavement Markings.xlsm
 - \Traffic\Project#\TRAF_Tabulation of Traffic Signs.xlsm

Item Types and Reports

- \\Organization-Civil\CDOT_Standards\Dgnlib\Item Types\CDOT_Roadway-ItemTypes_Reports.dgnlib
 - Added the following Item Type Libraries:

- Pay Item – Curb and Gutter
- Pay Item – Fence
- Pay Item – Guardrail
- Pay Item – Pavement Markings
- Added the following Reports:
 - Tabulation of Curb and Gutter
 - Tabulation of Fence
 - Tabulation of Guardrail
 - Tabulation of Pavement Markings

Table Seeds

- \\Organization-Civil\CDOT_Standards\Dgnlib\Table Seeds\CDOT_Roadway-TableSeedsdgnlib
 - Added the following Table Seeds:
 - Index of Sheets
 - Monument Coordinate Table - FA
 - Monument Coordinate Table - FROW
 - Monument Coordinate Table - FB
 - Monument Coordinate Table - FE
 - Tabulation of ROW Monuments
 - Tabulation of Aliquot Monuments
 - Project Coordinate Table
 - Geodetic Coordinate Table
 - Design Data
 - Tabulation of Length
 - Tabulation of Fence
 - Tabulation of Guardrail
 - Tabulation of Delineators

Sheet Borders

- \\Organization-Civil\CDOT_Standards\Sheet Borders\Sheets - Design.cel
 - Added the following Sheet Borders:
 - Plan – Plan w- Key Map
 - Plan – Profile w- Key Map
 - Plan w- Key Map
 - Tabulation – Delineators
 - Change the name of *Tabulation - Concrete* to *Tabulation - Concrete Items*
 - Separated Tabulation – Fence/Guardrail sheets
- \\Organization-Civil\CDOT_Standards\Sheet Borders\Sheets - Miscellaneous.cel
 - Updated the *Standards Plans List* Sheet Border to the latest update.
- \\Organization-Civil\CDOT_Standards\Sheet Borders\Sheets - ROW-Survey.cel
 - Added Sheet Border ROW-SURV_Survey Tabulation
- \\Organization-Civil\CDOT_Standards\Sheet Borders\Sheets - Traffic.cel
 - Added the following Sheet Borders:
 - Tabulation - Pavt Markings
 - Tabulation - Traffic Signs

Sheet Seeds

- *\\Organization-Civil\CDOT_Standards\Dgnlib\Sheet Seeds*
 - Updated all Sheet Seeds to work to be set with 1 scale.
 - Added the following Sheet Seeds:
 - Plan – Plan w- Key Map
 - Plan – Profile w- Key Map
 - Plan w- Key Map

Plotting

- *\\Organization-Civil\CDOT_Standards\Printing\Pen Tables*.tbl*
 - Updated Pentables to print new levels properly.
 - Revised Pentables to print discipline specific. Pentables will bring forward elements for chosen discipline.
 - Added the following Pentables
 - CDOT_Bridge - PenTable.tbl
 - CDOT_Hydraulics - PenTable.tbl
- *\\Organization-Civil\CDOT_Standards\Printing\Plot Configs*.pltcfg*
 - Updated all plot configs to plot weights thicker
 - Added the following Plot Configurations:
 - CDOT_Bridge - PDF_High Quality.pltcfg
 - CDOT_Hydraulics - PDF_High Quality.pltcfg
- *\\Organization-Civil\CDOT_Standards\Dgnlib\Printing\CDOT_PrintStyles.dgnlib*
 - Updated Print Styles to point to updated Pentables and Plot configs
 - Added the Print Style CDOT PDF - Hydraulics

Template Library

- *\\Organization-Civil\CDOT_Standards\Template Library\CDOT_TemplateLibrary.itl*
 - Added Templates for Type 9 (Guardrail) Concrete Barrier
 - Added Hinge and Breakpoint to the Point list
 - Changed the Guardrail templates to include the new feature definition
 - Set the EAV Label component to not be included in the surface creation.
 - Updated all End Conditions to have the same priorities.
 - Other various edits

GUI

- *\\Organization-Civil\CDOT_Standards\Dgnlib\GUI\CDOT_CustomRibbon.dgnlib*
 - Added the NOAA Website
 - *CDOT > Hydraulics Drafting > NOAA IDF Tools > NOAA Website*
 - Added a link to the M Standards Website
 - *Help > CDOT Info & Help > Helpful Links > M Standard Plan Drawings*
 - Added link to open General Notes Word Document
 - *CDOT > Plans Production > Create Sheets > General Notes Sheets > Open General Notes Document*
 - Added links to open Tabulations Excel Spreadsheets

- Added link to SWMP Templates website and other SWMP tools.
 - *CDOT > Plans Production > Create Sheets > SWMP Sheets*
- Moved the CDOT Help to the Help tab.
- Added Traffic Drafting Section to the CDOT ribbon for Signs, Pavement Markings, and the new Create StripMap tool.
- Added Bridge Sheets to the ribbon.
- Added link to Bridge Design Manual.
- Added Caisson Break tool to Bridge Workflow
- Added Pipe End/Break tool to Bridge Workflow
- Updated all links to point to most up to date website
- Added miscellaneous tools to the Misc Drafting Group

Apps

- *\\Organization-Civil\CDOT_Standards\Apps*
 - Added Caisson Break tool.
 - Added Pipe End/Break tool
 - Added Traffic StripMap tool.

Macros

- *\\Organization-Civil\CDOT_Standards\Macros*
 - Added CDOT – Updating Report Codes. Instructions document for the macro is also included.

Drainage and Utility Standards

- See Drainage and Utility ReadMe file for updated Drainage/Utility Standards

Bridge Standards

- *\\Organization-Civil\CDOT_Bridge Standards*
 - See OpenBridge ReadMe file for updated Bridge Standards