

CDOT Configuration ReadMe



Introduction

This Read Me has been divided into the following sections.

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New Features

Version 03.00 December 6th, 2006

This release implements the following enhancements and fixed problems that have been reported during production. Updates made to Documentation for additional workflows, Custom Programs for Menu update/fix, MicroStation Configuration, and plotting.

Default Project Directory

- JPC#GeneralNotesSheet01.dgn was added to \Workspace-CDOT\Project Template\Design\Drawings.
- JPC#GeneralNotesSheet02.dgn was added to \Workspace-CDOT\Project Template\Design\Drawings.
- Added the County Maps folder to the Workspace directory.
- Removed Index of Sheets.
- Delete the duplicate file JPC#SURVTabSheet##.dgn.
- Change active level to DRAFT_Text-3 in sheets, JPC#StandardPlanList.dgn and JPC#SURVTabSheet.dgn.
- SWMP sheets were added to Landscape and Environmental drawing folder.
- JPC#ROWTabulationPropertiesSheet##.dgn has been updated to use a spreadsheet through a workflow.

Documentation

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Custom Programs

- CDOTMenus.exe
 - Construction was migrated from the mdf menus.
 - Look and fell has been updated for all disciplines.
 - Menus remember last command for each selection.
- TypicalSection.exe
 - Updated required fields.

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- Updated leader lines.
- Updated to use level name changes.
- Macros
 - Added txt2node.ma
- All custom programs have the current version in the program header.

InRoads Preferences

- CDOT-Styles.ini
 - Using the right click view command the Spiral TS, CS, SC, and ST were being displayed as a triangle point (by text). Switched it to a circle symbol (by text) per M standards.
 - A space following the Geometry Point prefixes exists for TS, CS, SC, ST, etc. Per M Standards “TS Sta=1+30.83” (CDOT preference still needs to force-loaded as this is know but in InRoads)
 - Geometry styles for Section lines modified to direct graphics to levels renamed from ‘proposed’ to ‘protracted’
 - Named Symbologies for ROW geometry styles renamed to match geometry style names.
 - Removed all geometry styles that referred to:
 - Alg_Alternate
 - Alg_Appr (approach)
 - Alg_Obsolete
 - Alg_Ramp
 - Re-associated vertical geometry styles for segregation of tangent lines:
 - ALG_OTHER_Hor-Tangent-Lines
 - ALG_PROPOSED_Hor-Tangent-Lines
 - ALG_SECONDARY_Hor-Tangent-Lines
 - ALG_EXISTING_Hor-Tangent-Lines
 - Alignment annotation reformatted to conform to the 2006 M standards. A workflow document has been developed to assist the users with annotating curves with and without spiral transitions.
 - Geometry Styles ALG....Horizontal-Keypoints-text have been removed. A single geometry style ALG_COGO_Points
- CDOT-Preferences.ini
 - Set the default cross section vertical distortion to 2x
 - Feature ‘Breakline’ set display line segments (points toggled off). Breakline is a feature InRoads requires. It may be used inadvertently but should be reassigned to an appropriate feature style.
 - Removed all Feature Styles and Named Symbologies for ‘Guardrail Type 3A’ features.
 - All ROW_Section_Line feature styles utilizing the name Proposed have been changed to Protracted.
 - Eliminated Feature D_GAME-Ramp as pay item 607-60002 has not shown use in the bid history for 5+ years
 - Added Feature Styles and Named Symbologies for:
 - D_Wall_Top
 - D_Wall_Bottom-Right
 - D_Wall_Bottom-Left

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- Set the 4 ALG_Geometry Named Symbologies ALG_Alternate – ALG-Secondary to have text placed relative to object for use with the Curve Set Annotation dialog.
- Set the dialog ‘View Horizontal Annotation’ to display Points As:Cell as the default setting.
- Created Preferences for Curve set annotation per the M standards. Two preferences will be required to annotate a single curve if a spiral is included. Example: Proposed Circular & Proposed Spiral
- Tools > Options [Affixes-Spiral] added the symbol font for Theta
- Updated the preferences for the View Vertical Annotation dialog to reflect: VPI= (nospace) and EL.= (nospace)
- Updated the order of the Preferences for the View Vertical Annotation dialog to better match the M Standards. InRoads can not accomplish breaking the witness lines or filling the arrowheads on the dimension lines.
- Created Named Symbologies for the segregation of vertical tangent lines for graphic display.
 - ALG_OTHER_Hor-Tangent-Lines
 - ALG_PROPOSED_Hor-Tangent-Lines
 - ALG_SECONDARY_Hor-Tangent-Lines
 - ALG_EXISTING_Hor-Tangent-Lines
- Named Symbology “DTM_Prop_Contour_Depressed_Minor” (32 characters) changed to “DTM_Prop_Contour_Depressed_Mnr”
- Removed all preferences and named symbologies that referred to:
 - Alg_Alternate
 - Alg_Appr (approach)
 - Alg_Obsolete
 - Alg_Ramp
- Features and Named Symbologies D_Curb_FL_Lt & D_Curb_FL_Rt redirected to level DES_ROADWAY_Curb-Flowline
- Named Symbology NOTES redirected to level DRAFT_Text-3
- Added Features and Named Symbologies for:
 - D_DRIVEWAY-Asphalt
 - D_DRIVEWAY-Concrete
 - D_DRIVEWAY-Dirt
 - D_DRIVEWAY-Gravel
 - D_ROADWAY-Asphalt
 - D_ROADWAY-Concrete
 - D_ROADWAY-Dirt
 - D_ROADWAY-Gravel
 - TOPO_ROADWAY_Edge-Of-Driveway-Asphalt
 - TOPO_ROADWAY_Edge-Of-Driveway-Concrete
 - TOPO_ROADWAY_Edge-Of-Driveway-Dirt
 - TOPO_ROADWAY_Edge-Of-Driveway-Gravel
 - TOPO_ROADWAY_Edge-Of-Parking-Lot
 - TOPO_ROADWAY_Edge-Of-Parking-Lot-Oil
 - TOPO_ROADWAY_Edge-Of-Road-Concrete
 - TOPO_ROADWAY_Edge-Of-Road-Dirt
 - TOPO_ROADWAY_Edge-Of-Road-Gravel
 - TOPO_ROADWAY_Edge-Of-Road-Oil
- Updated Named Symbologies for redefined level names

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- Added cross section cells and initialized profile and cross section crossing points for numerous design, topography and ROW features.
- For cross section and profile features with undefined 'crossing' symbology, replaced the 'symbol +' with the InRoads 'plus sign' for improved justification.
- Redefined Survey codes and feature styles for new level definition:
 - Handicap Symbol
- InRoads Service Pack 5 allowed configuration changes to the Plan and Profile Generator to direct the border sheet cell, matchline linework and text, and north arrow cell to the correct levels.
- Added 13 preferences in the Plan and Profile generator for double profiles on a single border sheet. Added were:
 - 40 Scale Double Profile 1x, 2x, 5x
 - 50 Scale Double Profile 1x, 2x, 5x
 - 100 Scale Double Profile 1x, 2x, 5x
 - 200 Scale Double Profile 1x, 2x, 5x, 10x
- Cells have been developed representing the various ROW geometry styles for display in Cross Section or Profile views.. Both Feature styles and named Symbologies also have to be created for each geometry style. Existing and proposed will be developed for V03.00. A workflow document will also be provided for the users.
- Cells have been developed representing breakline features for both the design and survey disciplines (hydrology features developed previously). A workflow document will be developed to assist the users with the appropriate workflow to display features and adjust the vertical scale of cells displayed at a vertical distortion other than the CDOT standard of 2x
- 10 Named Symbologies have been created for:
 - DES_XSEC_Suface1 – Surface10 and directed to levels of the same name.
- CDOT-Typical Sections.tml
 - Added TC name LT_Curb-Base
 - Added TC name Rt_Curb-Base
 - The template layer names were changed to match the named symbologies.
 - Changed decision tables to work with design and Z slope heights.

Survey Preferences

- CDOT-Survey_Features.fwf
 - Updated Survey Feature table for new levels assignments for:
 - TOPO_ROADWAY_Edge-Of-Driveway-Asphalt
 - TOPO_ROADWAY_Edge-Of-Driveway-Concrete
 - TOPO_ROADWAY_Edge-Of-Driveway-Dirt
 - TOPO_ROADWAY_Edge-Of-Driveway-Gravel
 - TOPO_ROADWAY_Edge-Of-Parking-Lot
 - TOPO_ROADWAY_Edge-Of-Parking-Lot-Oil
 - TOPO_ROADWAY_Edge-Of-Road-Concrete
 - TOPO_ROADWAY_Edge-Of-Road-Dirt
 - TOPO_ROADWAY_Edge-Of-Road-Gravel
 - TOPO_ROADWAY_Edge-Of-Road-Oil
 - Code 3019 was not displaying correctly as a DTM feature. The Named Symbology 'T_Edge of Wetlands CW' required modification.
- CDOT-Survey_Preferences.fxp

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- Issue log #1124 set the shot location symbol to a capital “X” to correct the center justification problem. This change necessitated a change to the text location for Points, Codes, Elevations, and Notes to eliminate text conflicts.
- In the Survey Options dialog, set the radio button for ‘Segregate Text by Feature Level’ to on by default.
- The file names and process has been developed for V3.0 along with a workflow document. The default Survey options (fxp file) is delivered with the switch "segregate text by element level" on which will stratify the survey shot information.

MicroStation Configuration

- Change the name of the standard font resource library to CDOT_Font.rsc.
- Combined two linestyle resource file and named the linestyle resource library CDOT_Linestyles.rsc.
- Added AutoCAD resources for opening AutoCAD files and printing.
- Modified linestyles to scale to the M&S standards.
- Added the auto-synchronization variable back into the configuration.
- Resized characters %, *, <, >, +/- \206, /+ \205
- Added a flowline character.
- Added characters for font 4 AsConst ^()<>{ }[]\|"~.
- Sheet boarder text has been updated. Justification and multi-line text.
- Updated the topo seed files to have correct cell library active, active angle set, active scale set and cell library properties.
- Added a button under the Misc Tools menu palette to reset all elements to bylevel symbology.
- Added Traffic general notes.
- Added Roadway Design general notes.
- Set .07” ENG-100 as the default text style to all dgn’s unless specified.
- Compressed out old AutoCAD fonts and dim styles.
- Remove the word “DRAWING” from the sheet boarders file name information.
- Changed dimension style CDOT 3, In the Terminators tab, change the Terminator Orientation to Automatic, in the Terminator Symbols tab, toggle the Uniform Cell Scale to ON.
- Delete old upf files.
- The CDOT icon in the MicroStation main palette was change to start the CDOTMenus.exe.
- Select Group utility has been restricted to a Bridge user or an xxMulti-Discipline user.
- Added variable MS_Refnewleveldisplay to the configuration.
- Added new Text style children for Filled background text.
- Renamed CDOT-Text & Dim Styles.dgnlib to Text_&_Dim_Styles.dgnlib.
- Updated the CDOT icon on the main tool palette to V03.00.
- Updated the Bridge.mdf to call new menus when needed.
- Updated the Menus.mdf to call new menus when needed.
- Updated the default CDOT Preference Seed.upf.
- Recreated the CDOT User.upf. File was becoming corrupt. Was able to fix the file history.
- Updated Roadway_Design.dgn seed files to call updated cell library name.
- Updated TOPO.dgn seed files to call updated cell library name.

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- Added file V0204_To_V0300.csv for project translations to CDOT-Workspace V03.00.
This file is located in:
\\Workspace-CDOT\Standards-Global\MicroStation\Tables\Level_Translation\

Cell Libraries

- CDOT Design cells.cel has been renamed to Roadway_Design.cel
- CDOT Pattern cells.cel has been renamed to Pattern.cel
- CDOT TOPO cells.cel has been renamed to TOPO.cel
- Most of the cell models were changed to graphic cells.
- Bridge.cel
 - Updated cells from Bridge Discipline.
- General.cel
 - Added cross sections labeling cells.
 - Delete old bar scales and replaced with approved bar scales.
 - RE cell updates.
 - Delete cells for John Schneider and Dan Fazzan.
 - Updated sheets boarder to use bylevel symbology with the new SHEET levels.
 - Standard Symbols were cleaned up.
 - Added a resident engineer cell for Paul Westhoff.
- Landscape_&_Enivronmental.cel
 - Resized cells to match M&S Standards.
- Pattern.cel
 - Added pattern PATTERN_Bronze
 - Added pattern PATTERN_Steel
 - Added pattern PATTERN_Masonry
 - Added pattern PATTERN_Timber1
 - Added pattern PATTERN_Timber2
 - Added pattern PATTERN_Timber3
 - Added pattern PATTERN_Timber4
 - Added pattern PATTERN_Sand
 - Added pattern PATTERN_BearingPad
 - Added pattern PATTERN_Rock
 - Added pattern PATTERN_Herringbone
- Roadway_Design.cel
 - Change the origin point of the guardrail cells to the edge of post.
- ROW.cel
 - RE cell updates.
 - Change the Parcel ID cell to contain 3 characters.
 - Add Gary Bazanele to the ROW SHEET_Region Cell list.
 - Remove Mark Lane from the cell list.
- TRAF_Signs.cel
 - Scaled all signs for insertion at 100.
 - Filled all sign text.
 - Standard Interstate and US Highway signs added.
- TRAF_TCD.cel
 - Rotated the Impact-Attuator cell 180 degrees to function right as a line terminator.
- Utilities.cel

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- Added utility plan cells and incorporated them into the menu.

Level Libraries

- General.dgnlib has been deleted
- Drafting.dgnlib has been renamed to Standard_Levels.dgnlib
- Alignments.dgnlib
 - Added level ALG_COGO_Points.
 - Delete levels: ALG_..._Cogo, ALG_..._Hor-Keypoints-Text, ALG_..._Ver-Alignment-Dim (use ALG_..._Ver-Alignment-Text for vertical witness/text/vertical data and cardinal points) , ALG...Ver-Keypoints-text
 - Changed levels ALG_..._Hor-Tangent-Lines and ALG_...Ver-Tangent-Lines needs to be weight of 0 not weight of 3.
 - Deleted ALG_RAMPS_* levels.
 - Deleted ALG_APPROACH_ROAD_* levels.
 - Deleted ALG_ALTERNATE_* levels.
 - Deleted ALG_OBSOLETE_* levels.
- GIS.dgnlib
 - Added level GIS_Highway-Text
 - Added level GIS_Milepost-Text
 - Added level GIS_Bridges-Text
- Hydraulics.dgnlib
 - Change storm sewer levels to color green to make the UNCC codes.
- Landscape_&_Environmental.dgnlib
 - Added level LAND_ENVI_Wetland-Left
 - Added level LAND_ENVI_Wetland-Right
 - Added level LAND_ENVI_Wetland-Symb
 - Added level LAND_ENVI_Erosion-Silt-Fence
 - Added level LAND_ENVI_Concern
 - Added level LAND_ENVI_Soil-Retention-Blanket-Ditch
 - Deleted level LAND_ENVI_Erosion-Curb-Sock.
 - Deleted level LAND_ENVI_Prairie-Dog
 - Deleted level LAND_ENVI_Prebles-Mouse
 - Deleted level LAND_ENVI_Wetland
 - Deleted level LAND_ENVI_Soil-Retention-Blanket-Perm-Ditch
 - Deleted level LAND_ENVI_Soil-Retention-Blanket-Temp-Ditch
- Materials_&_Geotechnical.dgnlib
 - Deleted level GEOT_Pattern
 - Deleted level GEOT_Text
 - Deleted level GEOT_Dimensions
 - Deleted level RXFL_Dimensions
 - Deleted level RXFL_Misc1
 - Deleted level RXFL_Misc2
 - Deleted level RXFL_Text
 - Deleted level RXFL_Frozen
 - Deleted level GEOT_Frozen
- Roadway_Design.dgnlib
 - Added level DES_LIGHTING_Power-Dist
 - Added levels DES_XSEC_Surface1
 - Added levels DES_XSEC_Surface2
 - Added levels DES_XSEC_Surface3

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- Added levels DES_XSEC_Surface4
- Added levels DES_XSEC_Surface5
- Added levels DES_XSEC_Surface6
- Added levels DES_XSEC_Surface7
- Added levels DES_XSEC_Surface8
- Added levels DES_XSEC_Surface9
- Added levels DES_XSEC_Surface10
- Added level DES_ROADWAY_Edge-Of-Road-Oil
- Added level DES_ROADWAY_Edge-Of-Road-Concrete
- Added level DES_ROADWAY_Edge-Of-Driveway-Gravel
- Added level DES_ROADWAY_Edge-Of-Road-Dirt
- Added level DES_ROADWAY_Edge-Of-Road-Gravel
- Added level DES_ROADWAY_Edge-Of-Driveway-Asphalt
- Added level DES_XSEC_Subbase-Top
- Added level DES_XSEC_Base-Course-Top
- Added level DES_XSEC_Subgrade-Top
- Added level DES_ROADWAY_Edge-Of-Driveway-Concrete
- Added level DES_ROADWAY_Edge-Of-Driveway-Dirt
- Deleted level DES_LIGHTING
- Deleted level DES_FENCE_Silt
- Deleted level DES_ROADWAY_Edge-of-pavement
- Deleted level DES_XSEC_Asphalt-Bottom
- Deleted level DES_XSEC_Base-Bottom
- Deleted level DES_XSEC_Subgrade
- Deleted level DES_XSEC_Base-Top
- Deleted level DES_PROFILE_Grid
- Deleted level DES_PROFILE_Grid-Text
- Deleted level DES_PROFILE_Grid_Minor
- Deleted level DES_XSEC_Grid
- Deleted level DES_XSEC_Grid-Text
- Deleted level DES_XSEC_Grid_Minor
- ROW.dgnlib
 - Added level ROW_OWNERSHIP_Lot-Line-Text_existing
 - Added level ROW_OWNERSHIP_Lot-Line_existing
 - Added level ROW_MONUMENT_PLSS-Misc-Line_existing
 - Added level ROW_MONUMENT_PLSS-Misc-Line-Text_existing
 - Change all Section lines from proposed to protracted.
 - Deleted level ROW_Pattern_Parcels_Proposed
 - Deleted level ROW_Pattern_Owner_Proposed
 - Merged in Survey levels.
- Standard_Levels.dgnlib
 - Added level DRAFT_Screened-40
 - Added level DRAFT_Screened-70
 - Added level SHEET_Grid
 - Added level SHEET_Grid-Minor
 - Added level SHEET_Grid-Text
 - Incorporated GEN_* levels to DRAFT_* or SHEET_* levels.
- Utilities.dgnlib
 - Added levels with *_Symb for use with new plan view cells.

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Plotting

- Added an 8.5x11 batch print setup.
- Added multiple grey scale pen tables.
- Added line cap rounding to reduce blocky text.
- Added all new levels to the pen tables.
- Added Plot driver CDOT-Shaded_Printerdriver.plt for printing shades. Requires file rip_std_options.inc in the same directory.
- Added Pen table CDOT-ACAD.tbl for opening AutoCAD files for printing only. This is based on the colors used from the old design manual.
- Pen table added CDOT-Shading_GrayscalePenTable.tbl.

Known Issues

- Annotation can be set to 'Start and End' provide grade labels outside the VPC's & VPT's.
- The arrowheads on the dimension lines for vertical annotation are hard-coded by InRoads as an open arrowhead
- The dimension line for vertical annotation can not be a broken line as this is also hard-coded by InRoads
- In the MicroStation DGMLIB file for ALG_Approach there is no Weight changes per level there is just weight 1
- In the MicroStation DGMLIB file for ALG_Existing there is no Weight changes per level there is just weight 2
- Issue log #1133 should there be a follow up workflow doc that shows the Design team to reference the topo file with contours, and fieldbook files. Can we teach nested references?
- We recommend that the display of fieldbook files should be at 20 scale not 100. 100 scale will cause severe text conflicts due to density of survey data. The purpose is readability not the plot scale of the sheets.
- Plan & Profile Generator. Generating a plan and profile or full plan view, the clip boundary is on the correct level but it does not honor level symbology. When creating a double plan view the clip boundary works as expected. If the user force-loads the sheet limit named symbology, the correct settings are applied.
- As above, InRoads does not always 'refresh' parent dialogs as expected. Changes made to Named Symbologies – Text rotation or offsets, does not propagate to Geometry Styles unless the Named Symbology is re-selected in the Geometry Style Manager.
- After setting the text justification and starting the sentence with a "." or a "*" will cause the text to ignore the justification and place the text at a left top justification. This is being logged with Bentley.
- Existing projects will call levels that have been deleted or renamed. All project dgn's will have to translated using the provided csv file in the following location:
`\\Workspace-CDOT\Standards-Global\MicroStation\Tables\Level_Translation\`