Revision Date: **January 2013**

Documentation:

2D Cell Libraries:

The following are standard 2D V8i Cell Libraries which contain many of the existing and proposed symbols, sheets, patterns, etc. used in ODOT's plans:

- **ODOT_Bridge.cel** - contains many of the items and symbols used in Bridge plans.
- **ODOT_Drainage.cel** – contains many drainage symbols like catch basins, head walls, median and pavement inlets, manholes, etc.
- **ODOT_Geotech.cel** – contains many soil patterns and symbols used in Geotechnical plans.
- **ODOT_Geotech_1996.cel** – contains old cells used for the Specifications for Subsurface Investigation.
- **ODOT_RW.cel** - contains many of the items, symbols and notes used in Right of Way plans.
- **ODOT_Sheets.cel** – contains various typical plan sheets used for Plan Development.

  Comments:
  All the sheet cells are created at a 1:1 scale in the cell library so they can be scaled to the appropriate sheet scale as needed.

  Active Points on all Summary Sheets and Sub-Summary tables act as an aid for the placement of text. The active points were created as Construction Elements on Level-SH_Sheet_Data, with the Colors - 0 & 41 and a Weight-2. A Construction Element is used as a guideline to help place or modify Primary Elements in a design file. The benefit of using construction elements is that their display can be toggled off in the View Attributes dialog box regardless of the level they are on.

- **ODOT_Symbols.cel** - contains various existing and proposed symbols used in plans.
- **Various Sign Cell Libraries** – contains various signs from the Sign Design Manual.

  Comments:
  Several Sign cell libraries not listed in this document have been developed to include standard signs from the Office of Roadway Engineering, Sign Designs and Markings Manual (SDMM). These sign cells were specifically created to be placed with the custom application, **ODOT_Signs.mvba**. The Sign cell libraries are contained in the ***ODOTstd\V8istd\cell\Signs*** directory and can be downloaded from the Cell Library web page. Instructions for running the signs application can be found in the *ODOTstd\V8istd\vba\Doc* directory or downloaded from the Applications web page with the ODOT_Signs.mvba application.

Notes:

- Appendix A the CADD Information Table in the CADD Engineering Standards Manual lists which cells need to be placed as Physical or Cosmetic in a design file.

- Each cell has a cell origin defined when the cell is created. When a data point is entered to place the cell, the origin is placed at that point. See the CADD Engineering Standards Manual Appendix C Cells and Cell Origins.

- Most cells created have been created as graphic cells except for a few cells that were created as point cells. The symbology (color, line style, line weight, and level) of a graphic cell is determined when it is created. When the cells are placed, they are level independent, i.e., they keep the settings that were active when they were created. A point cell takes on the active symbology (color, line style, line weight, and level) set in the file at the time when it is placed.

- Several "Pattern and Terminator Type" symbols that were created as graphic type cells in the following cell libraries are now taking advantage of a new feature in MicroStation when placing them in the design file:

  ODOT_Geotech.cel
  ODOT_Geotech_1996.cel
  ODOT_Symbols.cel

  Graphic Cells can be created on the Default Level using specific symbology, such as, color, line style, and line weight. A benefit to graphic cells being created on the Default level is the new symbols act similar to point cells when placed in the design file they inherit the Active Level, but not the symbology (color, line style, line weight). It is important to note, that the graphic cell does not inherit the Active Symbology (i.e. color, weight, line style) like a "Point Cell", unless the graphic cell was drawn on the Default level with the attributes set to "ByLevel".

- Any text placed within symbols were dropped converting them to the individual elements that were used to draw the characters, i.e., lines, line strings, arcs, ellipses, and shapes. Filled shapes were created with the fill attribute on, using a weight of zero (0).

- The ODOT cell libraries have been updated to utilize the new enhancement for Annotation Cells. Every cell can be placed as an Annotation Cell when the feature "**Can be placed as an annotation cell**" is toggled on in the **Model Properties** dialog box. When you change the active model's **Annotation Scale** value, annotation cells in the model are automatically scaled by the new value. There are cells that do not utilize the feature "**Can be placed as an annotation cell**". The following describes the types of cells that use or do not use the "**Can be placed as an annotation cell**" contained in the ODOT Cell libraries:

  - **"Cosmetic" cells -** Cells used to represent the location of an object, such as a mail box, but not the actual dimensions of the object, are referred to as "cosmetic" cells. These cells must be placed at the same scale that will be used as the plotting scale for the completed plan. For these items, the ability to place these cells using the **Annotation Scale Lock** has been enabled in the cell library by toggling on the **Can be placed as annotation cell** option.

- **"Physical" cells -** Cells that represent the actual dimensions of an object, such as a catch basin, are referred to as "physical" cells. These cells are intended to be placed at a scale of 1 regardless of the plotting scale of the completed plan. For these items, the ability to place the cells using the **Annotation Scale Lock** has been disabled in the cell definition.

3D Cell Libraries:

The following 3D V8i Cell Libraries have been developed for use in rendering/modeling:

- **ODOT_3D_Catchbasin.cel** – assorted Catch Basin cells.
- **ODOT_3D_Concrete Barrier.cel** – assorted Concrete Barrier cells.
- **ODOT_3D_Curb Ramp.cel** – assorted Curb Ramp cells.
- **ODOT_3D_Fence.cel** – assorted Fence cells.
- **ODOT_3D_Guardrail.cel** – assorted Guardrail cells.
- **ODOT_3D_Lighting.cel** – assorted Lighting cells.
- **ODOT_3D_Manholes.cel** – assorted Manhole cells.
- **ODOT_3D_Misc.cel** – Miscellaneous cells.
- **ODOT_3D_MOT.cel** – assorted Maintenance of Traffic cells.
- **ODOT_3D_People.cel** – assorted people.
- **ODOT_3D_Sign_Misc.cel** – Miscellaneous Sign cells; Sign posts, Overhead Sign Trusses, etc.
- **ODOT_3D_Sign_Regulatory.cel** – assorted Regulatory Sign cells based on the Sign Design Manual.
- **ODOT_3D_Sign_Warning.cel** – assorted Warning Sign cells based on the Sign Design Manual.
- **ODOT_3D_Sign_Work Zone.cel** – assorted Work Zone Sign cells based on the Sign Design Manual.
- **ODOT_3D_Signals.cel** – assorted Regulatory Sign cells based on the Sign Design Manual.
- **ODOT_3D_Vegetation.cel** – assorted vegetation.
- **ODOT_3D_Vehicles.cel** – assorted vehicles.

Note:

The 3D cells are dimensionally accurate, but please note that these cells are intended to be used to efficiently enhance the realism of 3D models used for rendering. They are not intended to be an official/exact representation of the object they represent, however all of the cells are based on ODOT standards.

Contact Information:

If you have any questions, suggestions, or problems please contact the ODOT Office of CADD and Mapping Services CADD Support team or use the following form on the ODOT web site at:

http://www.dot.state.oh.us/Divisions/Engineering/CADDMapping/CADD/Pages/suggestions.aspx