9.1.1.1   CADD File for the Drainage Design

A separate CADD file for the master drainage design should be created for each project. Hydraulic design files should be created using the seed file USFootSeed.dgn and the naming convention h12345des.dgn.

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Example: h109320des.dgn

Generally, the stormwater management basin design is included in the master hydraulic file and basin detail sheets are separate files.

9.1.2.4   Annotation Instructions
Proposed Work
Annotate all proposed work on projects in lieu of designations that require legends for explanations. When possible, label each continuous proposed work item once per plan sheet. This will decrease the amount of plan clutter. See Using the Place Note Command document for annotating with leader lines and terminators or use the Plan View Labeling tool in GEOPAK. See Appendix D Section 4 for standard levels for text placement and Section 5 for text sizes and weights. Where applicable, use appropriate drainage cells from the drainge2015.cel library in lieu of text notes.
Examples:
Cell HYD_DES_SB for labeling drainage structures and culverts.
Cell HYD_FLOW_ARROW for labeling

Use of Legends
Complex projects that involve dense topography and proposed work will require the use of special legends. These legends must incorporate the standard symbols as specified in the Road Design Manual. Designer must review all legends for consistency with the plans. General Note E-3 is the ESC legend and its location in the plan assembly should be referenced from the plan sheet where applicable.

Standard Symbols
Some construction items incorporate standard symbols in lieu of labeling. These symbols are included in a legend at the bottom of the plan sheet. Erosion control items, construction limits, and crosshatching for demolition of pavement are examples of such symbols.
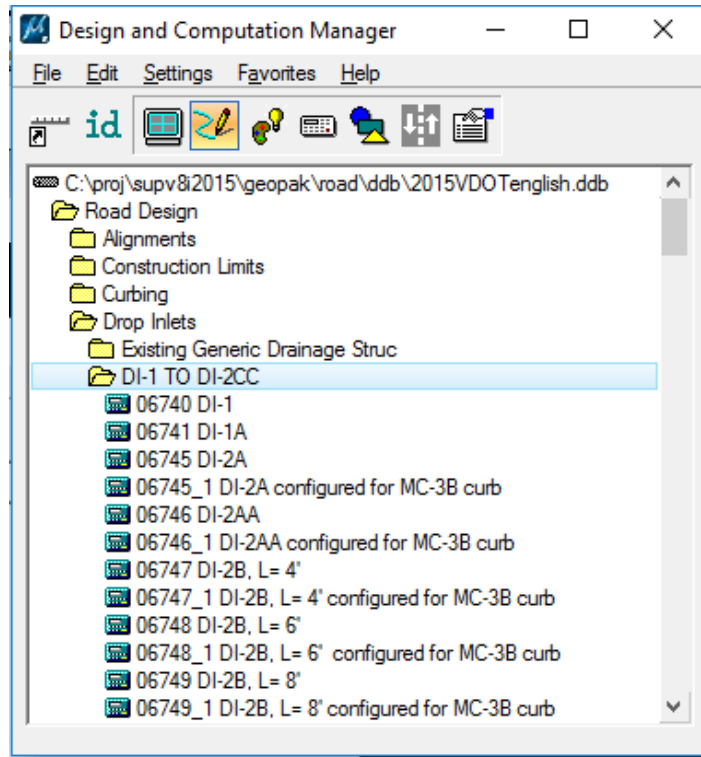
Use of "Proposed" and "Required"
The term "Proposed" applies to ditches, storm water management ponds, and other items that are not construction items in the contract. The term "Required" applies to all paid items that the contractor is constructing.
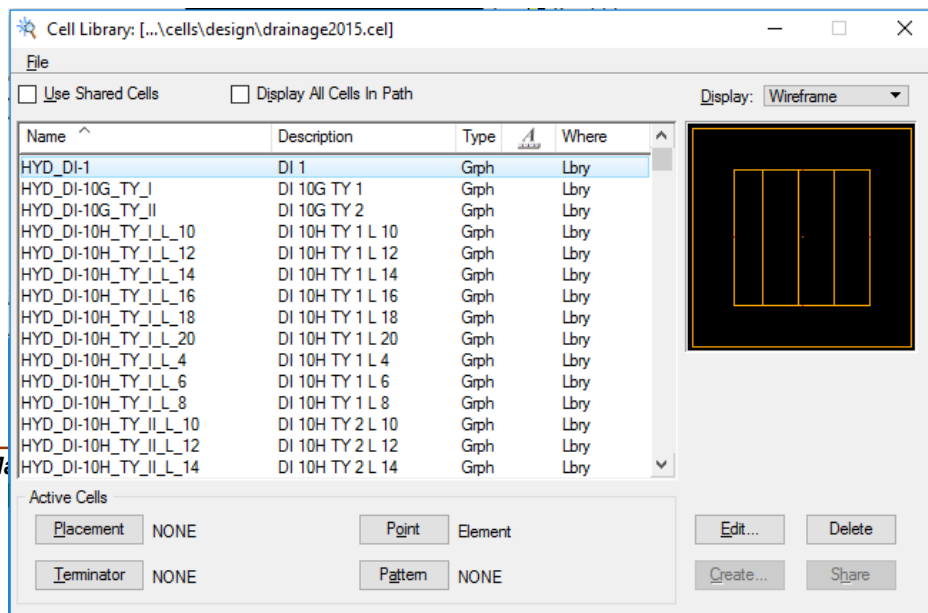
Dimensioning
When dimensioning such items as existing right of way, proposed pavement, medians, etc., which are consistent throughout a plan sheet only need to be dimensioned once on each sheet.

9.1.3.1 Cells

If you use GEOPAK drainage software, placements of the nodes (drop inlets, junctions and end sections) are part of the design process. Otherwise, drafting and quantity tabulation can be accomplished by using the **Design & Computation Manager** in the VDOT MicroStation GEOPAK package. From the **GEOPAK D&C Manager** select: **Road Design/** and choose the folder (drop inlets, end sections, end walls, manholes or paved ditches) with the desired drainage item.

Or, from the MicroStation Menu select: **Element/Cells**
and pick the desired cell from the drainage cell library (drainage2015.cel for English units.)

Job Aids Information

A list of cells and descriptions are contained in the drainage cell library located in Appendix D Section