Workflow 2: Generating Proposed Cross Sections

1. *Select Proposed Cross Sections button from the Project Manager Workflow Dialog Box.*
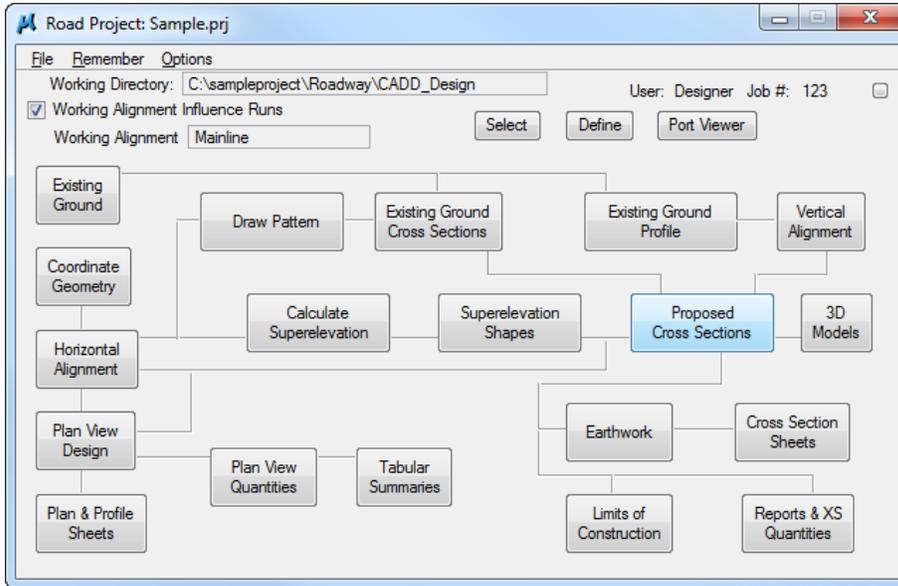

Figure 8.2-1: Accessing Proposed Cross Sections

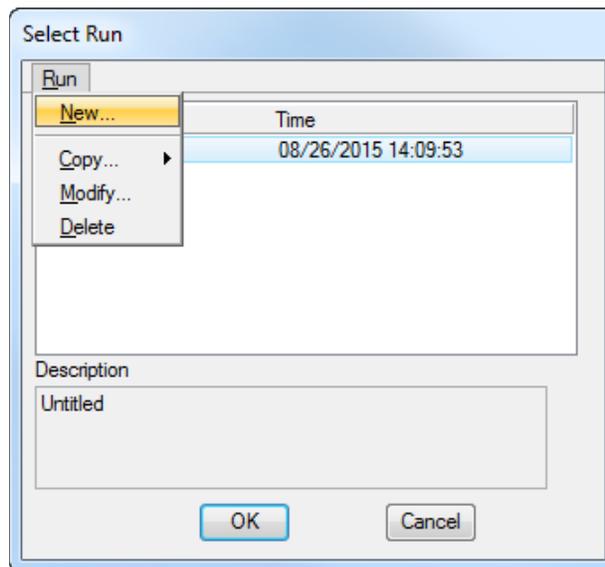2. *The following dialog will be activated, since no run exist for the example Select New to create a Run.*

Figure 8.2-2: Create a New Run

3. *Create a New Run by entering the run name and description and select OK.*

Figure 8.2-3: New Run

4. *From the Select Run dialog, select the newly created run MAIN and select OK.*

Figure 8.2-4: Select New Run

5. *Selecting a Run will access the Proposed Cross Section Dialog.*

Figure 8.2-5: Proposed Cross Sections Dialog

The Proposed Cross Section run shown in this workflow will be for an Undivided New Pavement Typical Section.

6. *Select the XS DGN File from the Proposed Cross Section dialog. Note that the dialog box is already filled in by the Working Alignment definition.*
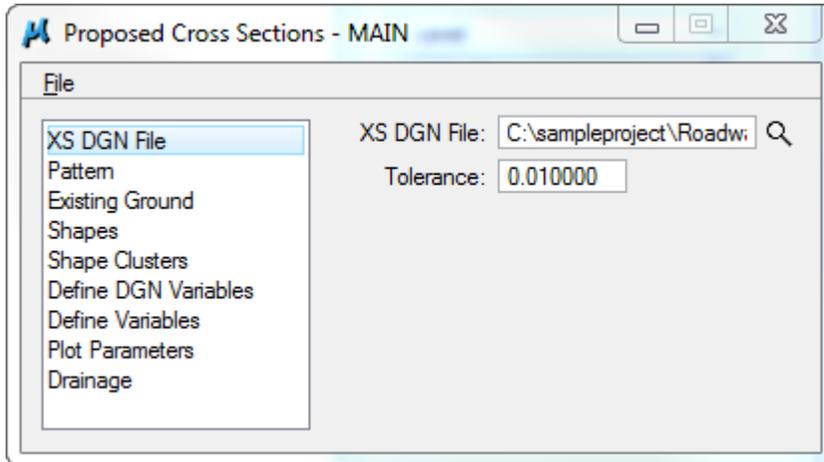

Figure 8.2-6: Selecting XS DGN File

The tolerance should always be set to 0.01 for English projects and 0.003 for Metric projects. The tolerance setting is very important and the proposed cross section will not process without setting this value.

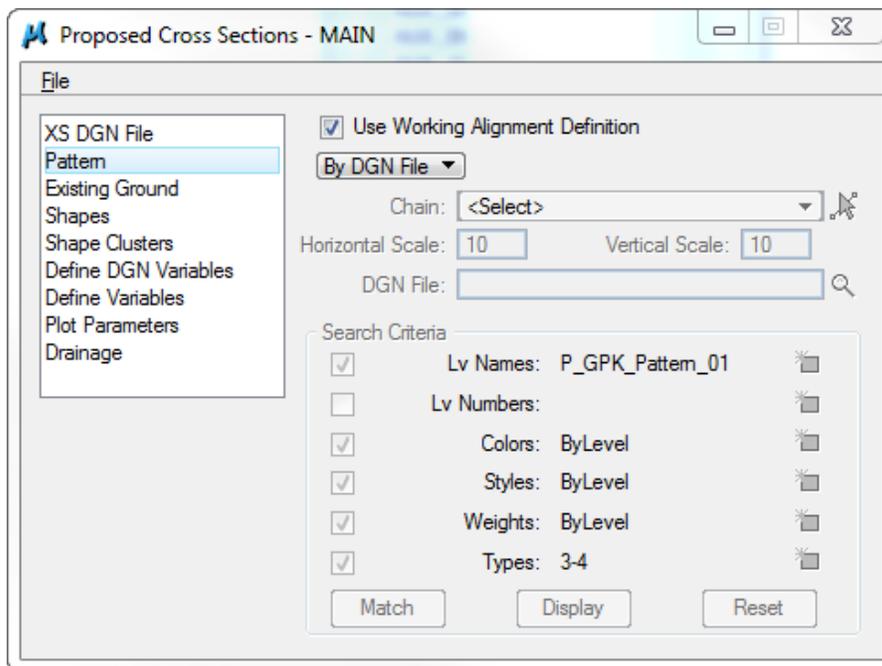7. *Select the Pattern and toggle on Use Working Alignment Definition.*

Figure 8.2-7 Selecting Pattern

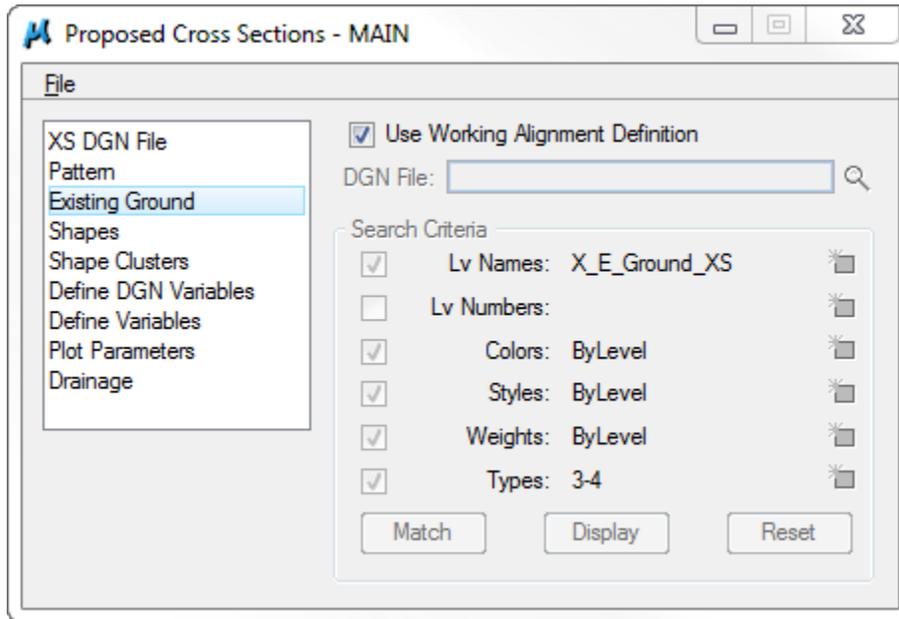8. *Select the Existing Ground and toggle on Use Working Alignment Definition.*

Figure 8.2-8 Selecting Existing Ground

9. *Select the Shapes and toggle on Use Working Alignment Definition.*
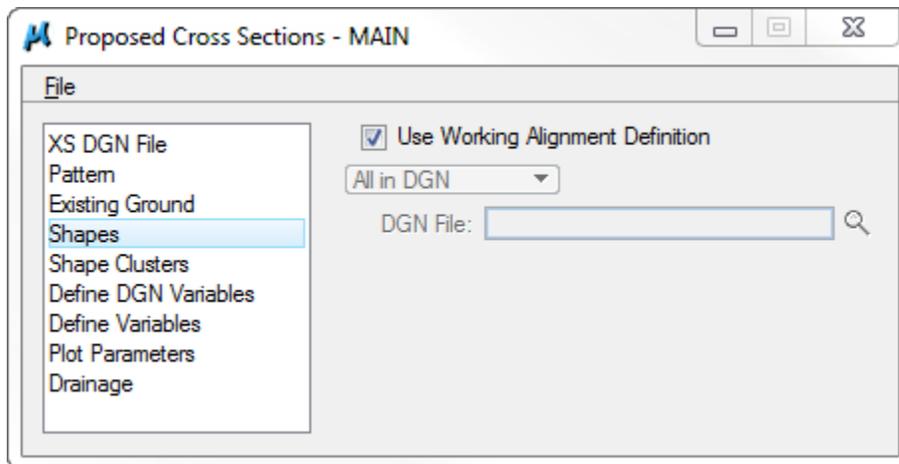
Figure 8.2-9: Selecting Shapes

The Working Alignment Definition toggle can be used for Pattern, Existing Ground and Shapes; these were previously defined for this working alignment.   Shapes can be selected using Working Alignment definition, All in DGN, By Search Criteria, or in Shapeless Mode. Proposed Cross Sections should be run in shapeless mode for Existing Features, Existing and Proposed Right of Way, and Cross Section Labeling Typical Sections.

10. *Select Shape Clusters from the Proposed Cross Section dialog. The following dialog box will appear. Select Scan.*
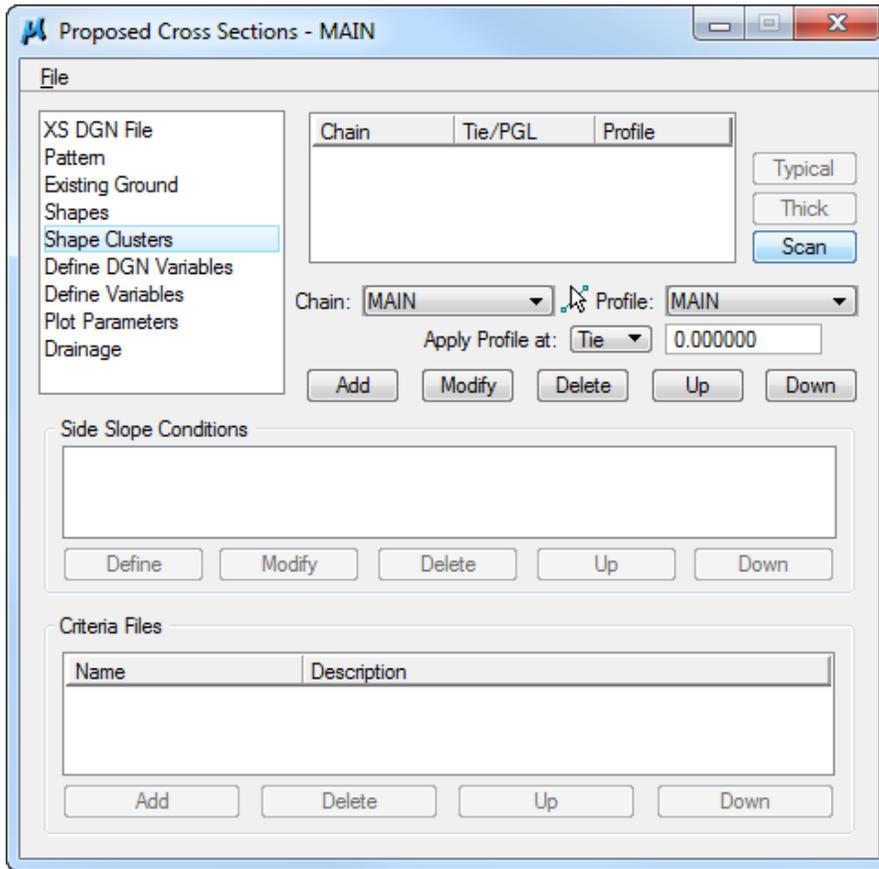

Figure 8.2-10: Selecting Shape Clusters

11. *Selecting Scan button will access the List of Clusters dialog box as shown below.   Select the shape cluster and close the dialog box.*
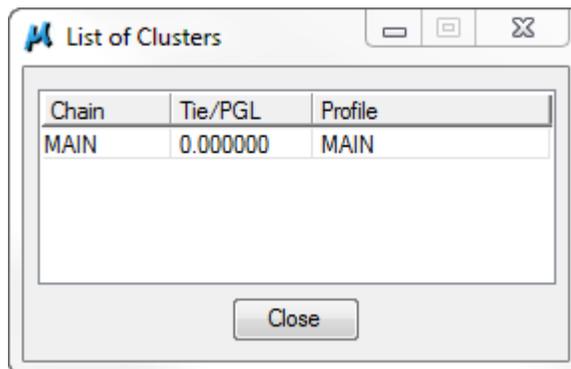

Figure 8.2-11: List of Clusters

12. *Select the add button from the main shape cluster dialog box to add the shape cluster to the list box as shown.*
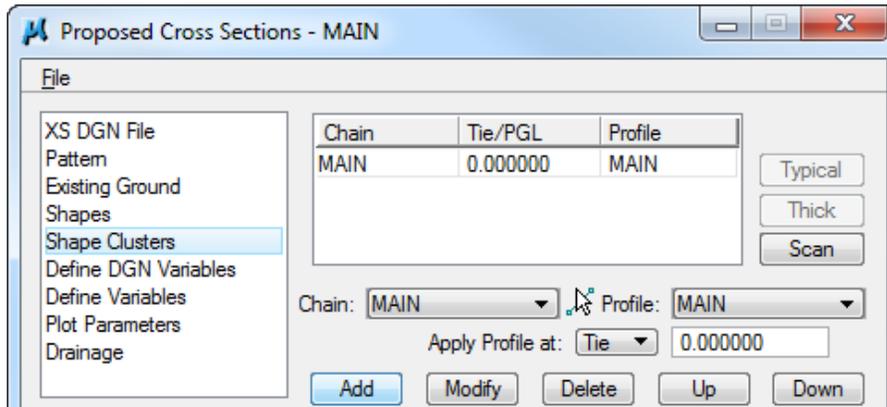

Figure 8.2-12: Add List of Clusters

13. *Once the shape cluster is added to the list box, highlight the information in list box shown and the Typical button will become active. Select the Typical button to access the Typical Section Generator.*
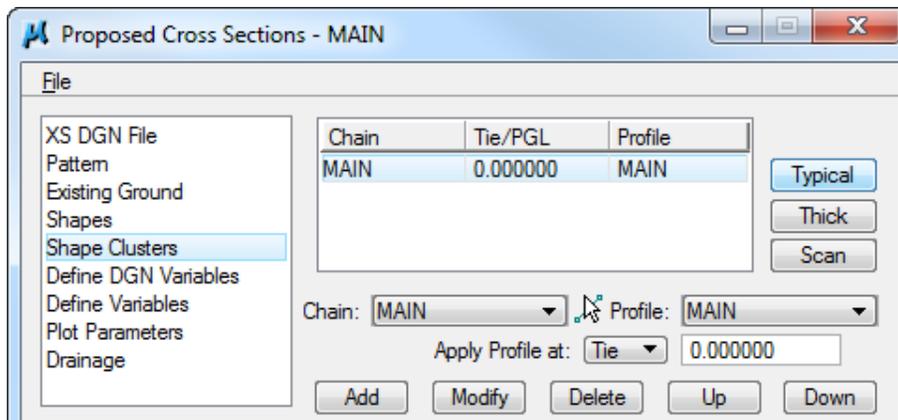

Figure 8.2-13: Select Typical Section

14. *Through the Typical Sections Generator, 6 Typical Sections are available. Select UNPAVT for undivided new pavement. In the Range window, Select Apply to Whole Chain and then Select Apply button at the bottom of the dialog box.*

If the proposed cross section need to be processed for a station range, select By Station Range and then define begin and end stations.
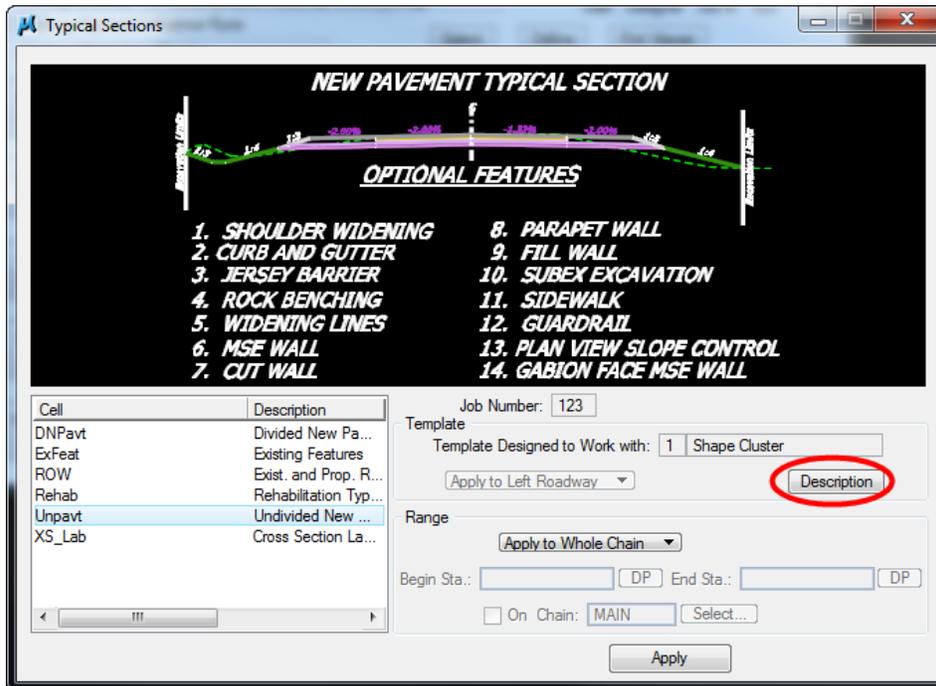

Figure 8.2-14: Choose Typical Section

Select the Description button in the Typical Section dialog box to access the online help for the highlighted Typical Section. Help document provides detailed drawings, descriptions and information on how each of the Typical Sections work.

The help files can also be accessed outside the Typical Sections Dialog Box. For Consultants, **Help** documentations are available through the **V8_Resource.zip** download on website.

The **Help** documentations (*wri files) can be found on the CFLHD network at: *N:\V8i_resource\FLH_Common\GEOPAK\Typicals\English or Metric directory.*

15. *By selecting apply in the dialog box above, the criteria files associated with the selected Typical Section is populated into the main Proposed Cross Section dialog box.*
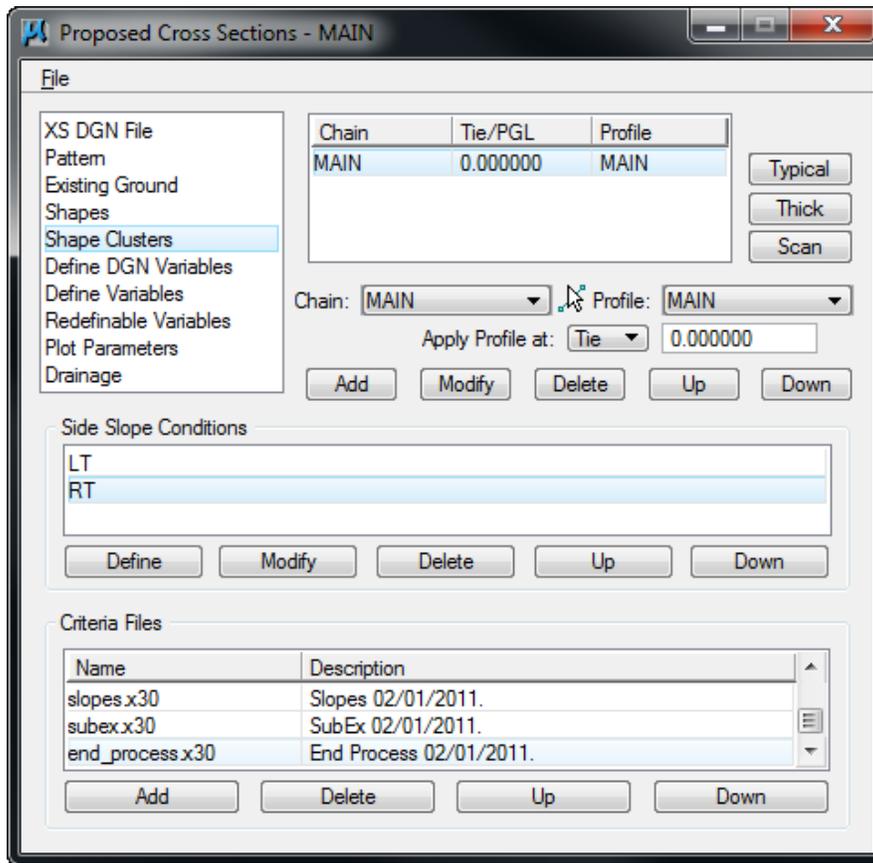

Figure 8.2-15: Populated Shape Cluster

The Define DGN Variables is not applicable for Undivided New Pavement Typical and should be left blank. This variable is used only with Automated Cross Section Labeling Typical.

16. *Select Define Variables and edit Cross Section Dgn, Proposed Plan Dgn and Geopak Lines Dgn values. Edit the default value of the variable and select Modify to accept.*
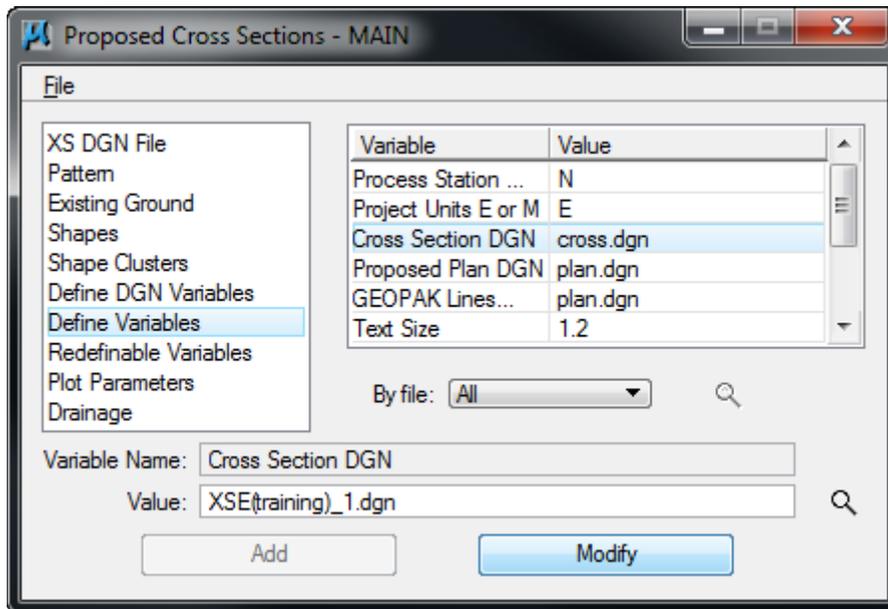

Figure 8.2-16: Populated Shape Cluster

If any of the dgn files are not in the working directory, the full file path must be specified. These dgn files are used by criteria to search for plan view elements.

17. *Select Redefinable Variables. Select the Edit button to modify each of the default variables and to set project specific values.*
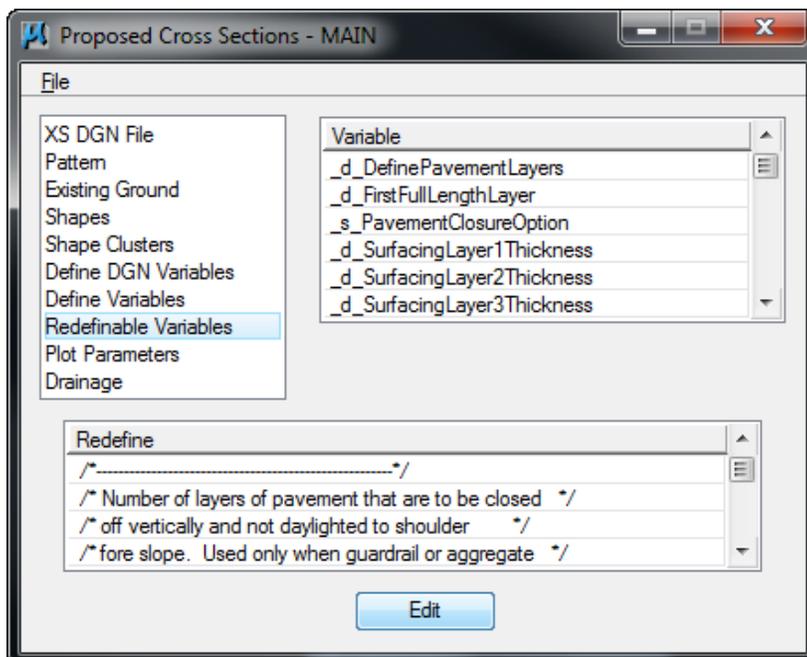

Figure 8.2-17: Redefinable Variables

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Never remove the default syntax of "if (Sta>=0+00 R 1) then" from beginning of each of the redefinable variable statements. When editing the station ranges for the redefinable variables, make sure { and } are placed after every "if, then" statement. Station ranges should be defined in the order of the baseline stationing. "and", "or" and "not" are all valid syntax to use when editing redefinable variables.

The changes made to the define variables and redefinable variables are stored in the proposed cross section run, criteria is not being modified. Every time a Typical Section is reapplied (shape clusters populated), the proposed cross section run will be overwritten, therefore your define variables and redefinable variables will go back to default. Prior to re-applying a Typical Section, makes sure to create an input file by selecting File>Export or make a copy of the pxsprj.inp file and save as a different name. The backed up input file can be used to copy and paste project specific values to your default proposed cross section run.

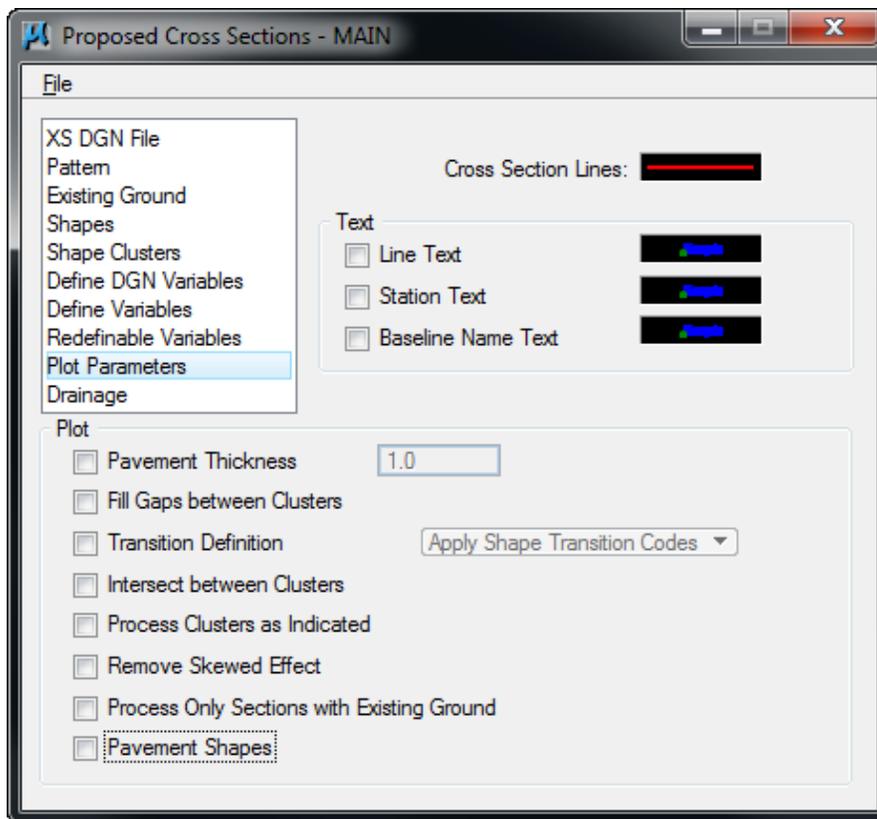18. *Select Plot Parameters and toggle off all the plot options.*

Figure 8.2-18: Plot options

The drainage section will not apply to the 6 Typical Sections and should be left blank.

19. *Once the run has been modified for the working alignment, Select*
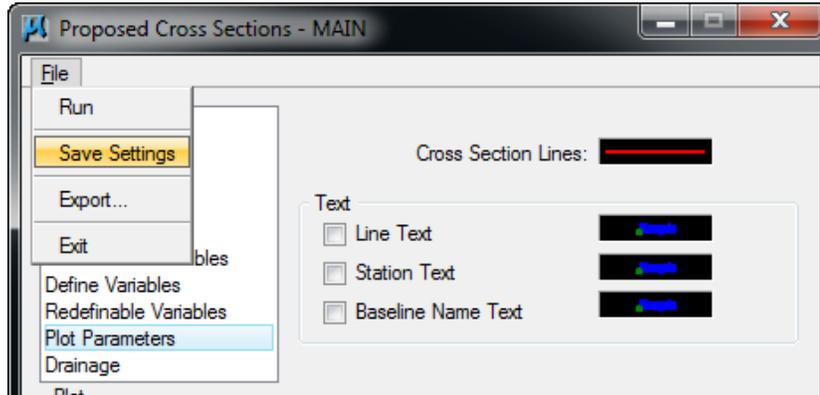   ***Files >Save Settings** to save your run.*

Figure 8.2-19: Save Settings

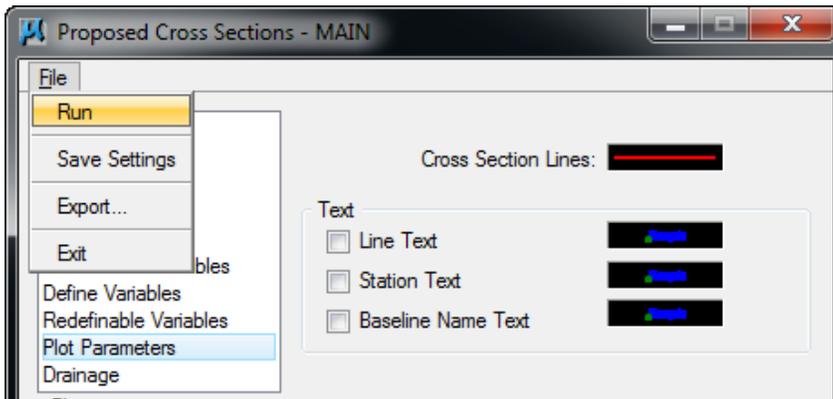20. *Select **Files >Run** to process your proposed cross sections.*

Figure 8.2-20: Run Proposed Cross Section

21. *Select the To Log File, and change To Screen if no log file is desired.*
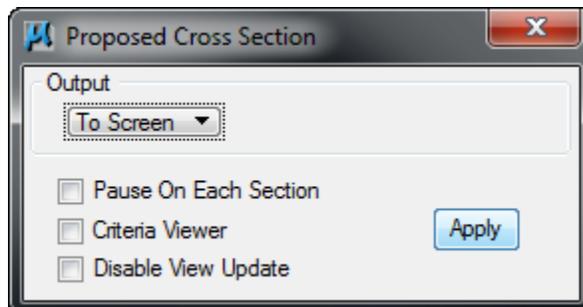   *Select the Apply Button to process the proposed cross sections to the*
    cross section design file.

Figure 8.2-21: Process Proposed Cross Section