

LAB 3 - Geometry Projects

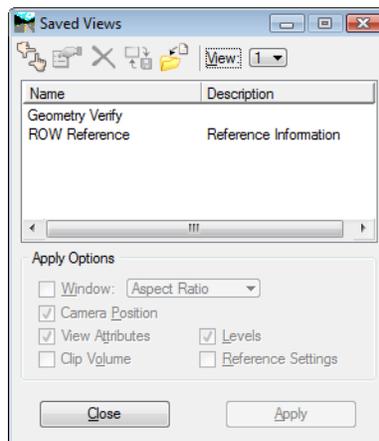
This lab demonstrates opening and viewing Geometry Projects in MicroStation. Geometry data such as a horizontal alignment will be copied from one Geometry Project to another.

Chapter Objectives:

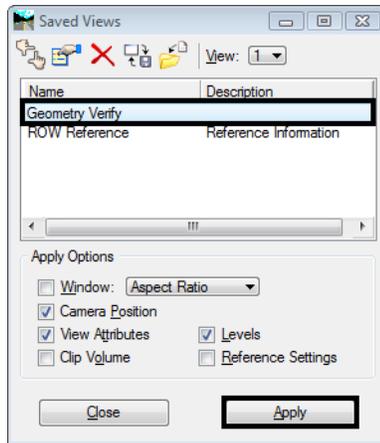
- Open an existing Geometry Project
- View the data stored in the Geometry Project such as the horizontal alignments and Cogo points
- Managing and copying Geometry Project data between files

Lab 3.1 - Opening and Viewing Geometry Projects

1. Open the MicroStation design file
C:\Projects\12345\ROW_Survey\Drawings\Reference_Files\12345ROW_Model.dgn
2. Open the Geometry Project
C:\Projects\12345\ROW_Survey\InRoads\Geometry\12345_ROW.alg that was created in the earlier lab.
3. From the MicroStation pull down menu select **Utilities > Saved Views** the Saved Views dialog will appear.



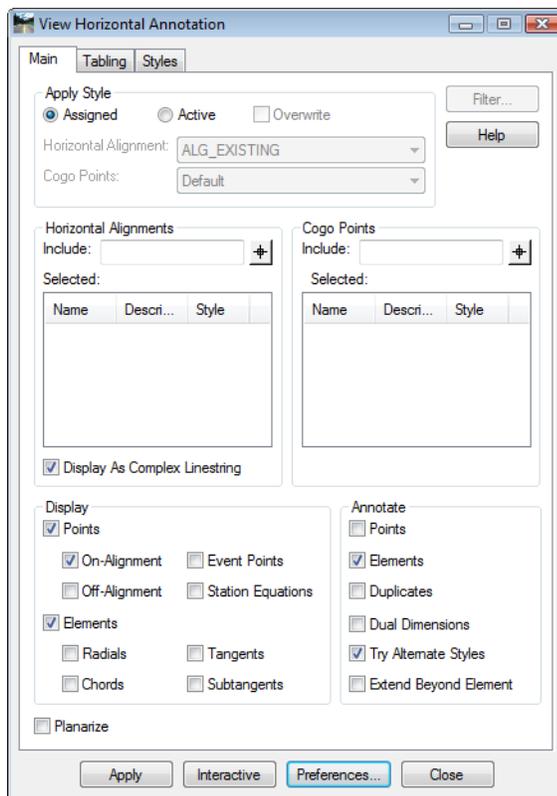
4. From the *Saved Views* dialog select the saved view name *Geometry Verify* then <D> the **Apply** button. This will make it easier to verify the geometry project information by turning off all the ROW_* levels.



5. <D> **Close** to dismiss the *Saved View* dialog box.

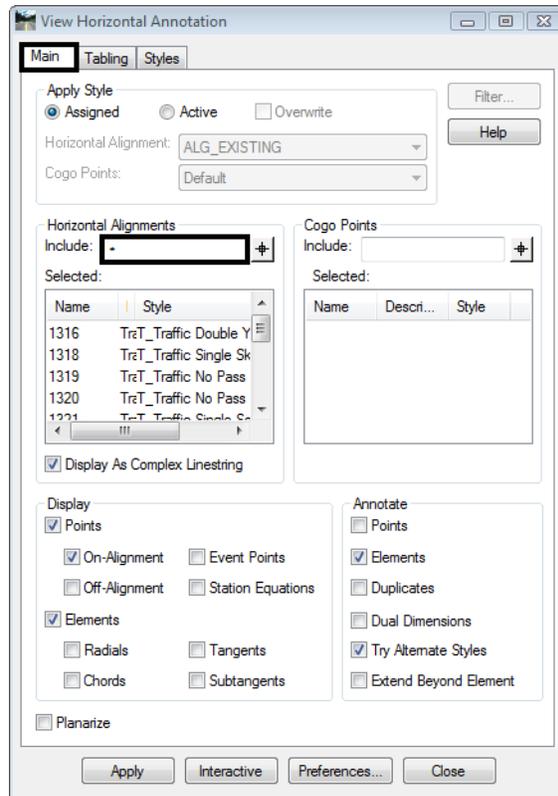
Note: When we need to see the ROW information in later steps, we will recall it using a different Saved View named *ROW Reference*.

6. From the InRoads pull down menu select **Geometry > View Geometry > Horizontal Annotation** the View Horizontal Annotation dialog will appear.

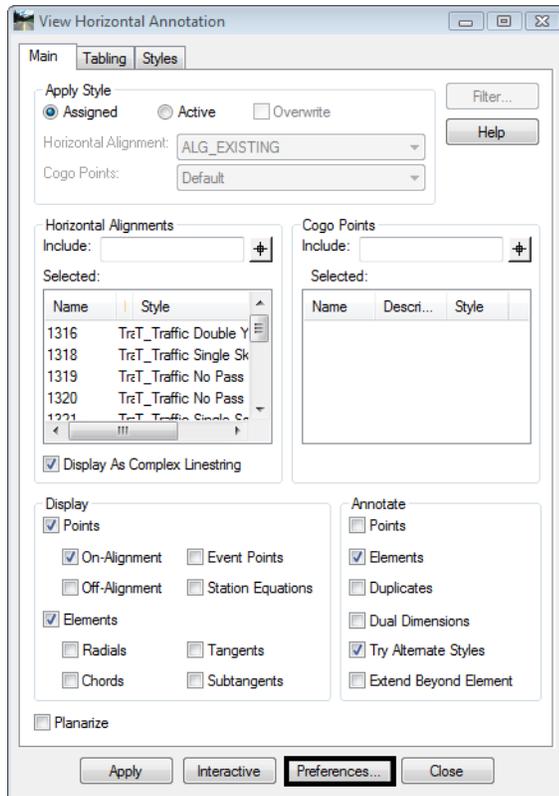


7. Select the *Main* tab in the *View Horizontal Annotation* dialog.

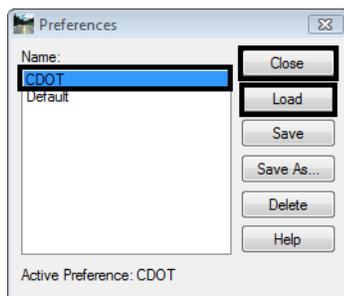
8. In the **Include** field for **Horizontal Alignments** key-in an asterisk * (wild-card) then **Tab** key to identify all horizontal alignments.



9. <D> the **Preferences** button at the bottom of the dialog the Preferences dialog will appear.

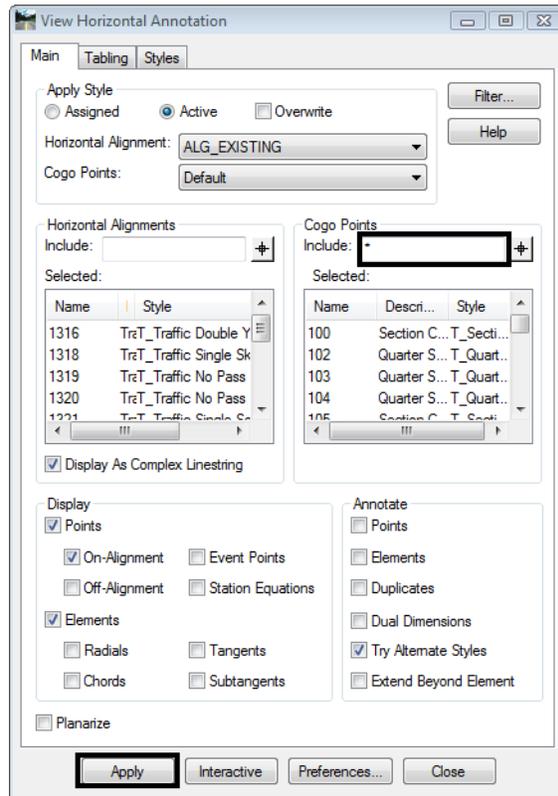


10. Select the preference name **CDOT**.
11. <D> the **Load** then <D> the **Close** buttons. The Preferences dialog will close and the default CDOT preference will be loaded.

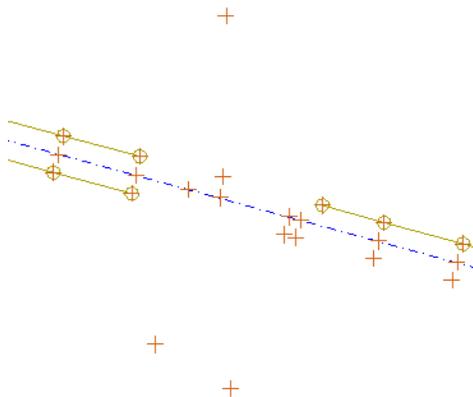


12. In the **Apply Style** section of the **Main** tab select the **Active** radio button.
13. From the **Horizontal Alignment** drop down list select **ALG_Existing**.
14. In the **Annotate** section of the **Main** tab **uncheck Elements**.
15. <D> the **Apply** button the selected horizontal alignments and alignment points will be displayed in the MicroStation view.

16. In the **Include** field for **Cogo Points** key-in an asterisk * (wild-card) then **Tab** key to identify all horizontal alignments.
17. <D> the **Apply** button the selected horizontal alignments, alignment points will be displayed in the MicroStation view.



18. Use MicroStation view commands to zoom into the graphics to review the display of alignments and Cogo points.

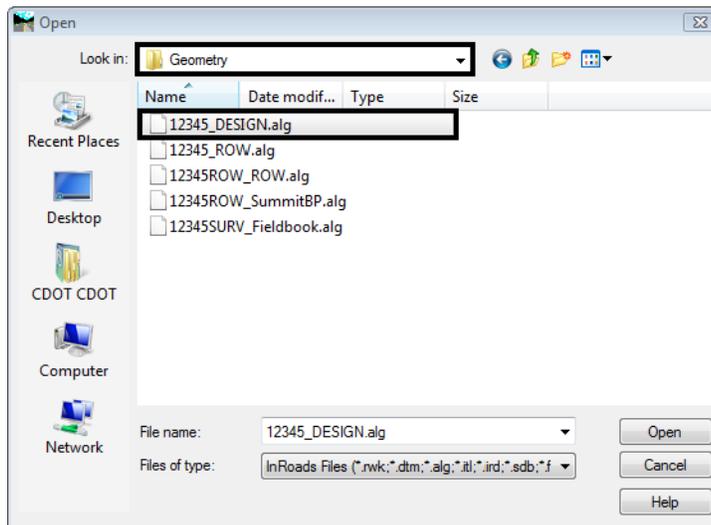


Lab 3.2 - Copying Geometry data

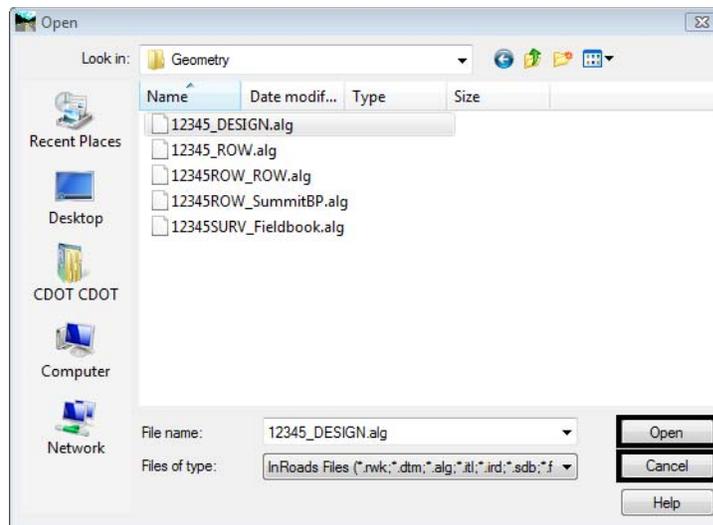
The current geometry project contains only information exported from the fieldbook. Another geometry project, 12345_DESIGN contains the design centerline alignment and is needed for development of right of way for this project.

The design section has developed a horizontal alignment representing the construction reference line for this project. Multiple geometry projects can be loaded into memory simultaneously and be accessed as needed. However, it is much easier (and sometimes necessary) to have the appropriate geometry information contained in a single geometry project. To that end, copy the design reference line from the geometry project 12345_DESIGN to the geometry project 12345_ROW. In order to copy geometry from one project to another, they must both be loaded into memory.

1. From the menu pull down select **File > Open** the Open dialog will appear.
2. Path to the file and folder
C:\Projects\12345\ROW_Survey\InRoads\Geometry\12345_DESIGN.alg

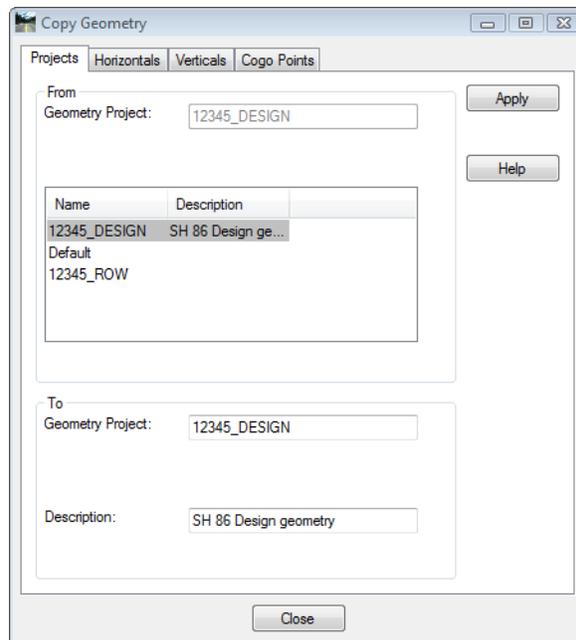


3. <D> the **Open** the <D> the **Cancel** buttons. The file will be loaded into memory and the dialog will be dismissed.



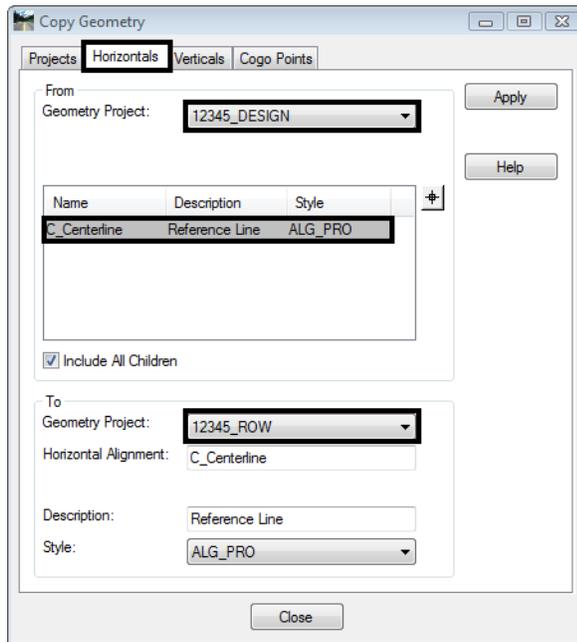
There is a single horizontal alignment needed from the 12345_DESIGN geometry project. It is named C_Centerline

4. From the pull down menu select **Geometry > Copy Geometry** the Copy Geometry dialog will appear.

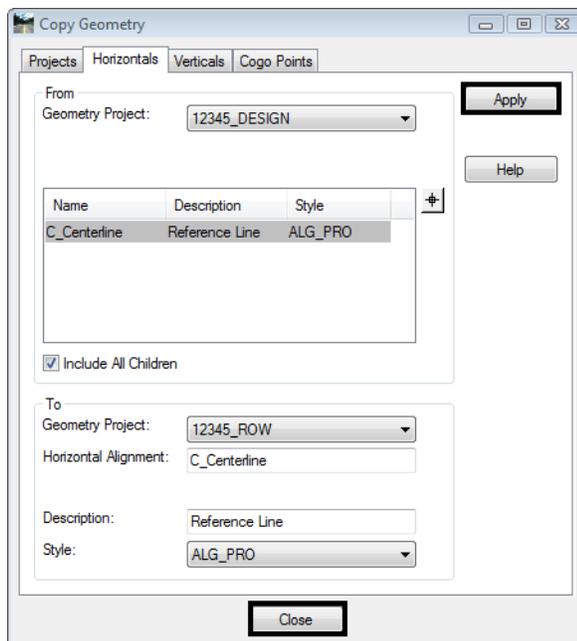


5. In the Copy Geometry dialog select the **Horizontals** tab.
6. In the **From** section select the **Geometry Project: 12345_DESIGN**.
7. In the list of horizontals select the name **C_Centerline**.

8. In the *To* section, set the *Geometry Project: 12345_ROW*.



9. <D> the **Apply** then <D> the **Close** buttons. The horizontal alignment will be copied and the dialog will be dismissed.



Note: The dialog is divided into 2 sections. The top half of the dialog being the geometry project being copied from, with the lower half being the geometry project being copied to. Alignments being copied can be assigned a new name, description, or style during the copy process.

10. From the Geometry Workspace pane <R> the Geometry Project *12345_DESIGN* and select **Close** from the fly out list. InRoads may ask to save the file select no.

Note: The geometry project 12345_ROW should be the active geometry project. By default any geometry viewing or creation commands operate on the active geometry project. The active geometry project is indicated by a red box next to the name. Deleting the active project leaves InRoads in the state of no active project being defined.

11. From the Geometry Workspace pane <R> on the Geometry Project name *12345_ROW* and select **Set Active** from the fly-out menu.
12. Expand the display tree of active Geometry Project by selecting the plus sign.
13. <R> the Horizontal Alignment *C_Centerline* and select **Set Active** from the fly out list.

For orientation purposes, display the graphics and stationing for alignment *C_Centerline*

14. From the pull down menu select **Geometry > View Geometry > Active Horizontal**
15. From the pull down menu select **Geometry > View Geometry > Stationing**

Note: The global scale factor and selected preference influence the display of geometry and stationing.

Summary:

- In LABLINK??? a Geometry Project was opened and displayed graphically in MicroStation
- In LABLINK??? a horizontal alignment was copied from one Geometry Project to a another Geometry Project

