Port Viewer

13.1 Introduction

Objectives	Learn how to utilize the Port Viewer.
Project Manager	Port Viewer
Menu Bar Application	None

The **Port Viewer** is a tool that enables the user to view and manipulate all three major aspects of a road design simultaneously, even though they are located in different files. The Port Viewer tool is only available while working within the Project Manager application. These applicable views for design display include:

- Plan view layout
- Profile
- Cross sections
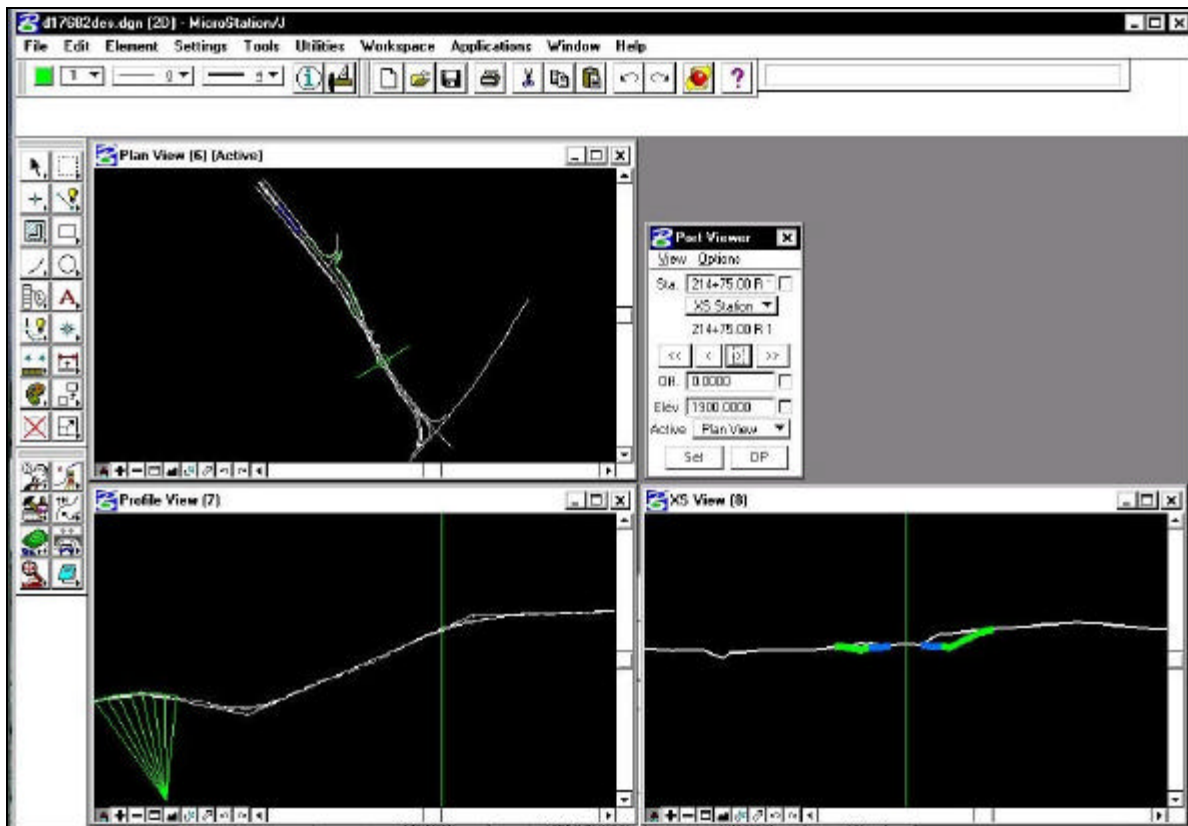
13.2   Accessing the Port Viewer

Prior to starting the **Port Viewer** the working alignment must be set up to include the plan view drawing file, centerline chain, profile name and location (optional), cross-section view file(optional), and digital terrain model information(optional)..

To access the **Port Viewer** tool, click the **Port Viewer** button on the **Project Manager** workflow dialog box. Note this is the only location from which the Port View can be accessed, as there is no GEOPAK Road tool supported for it.

13.3   Port Viewer Dialog Box Settings
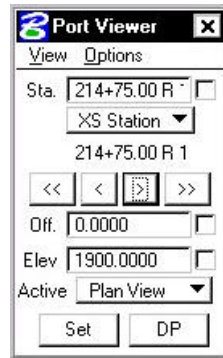
The **Port Viewer** dialog box box allows the user to manipulate the design views in several different ways.

13.3.1   Station Settings

The user is able to manually enter the chain station that they want to view the plan, profile or cross section design file. The cross hairs in the plan and profile views will move to the active station, and the section view will display the cross-section nearest that station.

13.3.2   Traverse Buttons

The "VCR" buttons (forward and backward arrowheads) allow the user to navigate station by station (>,<), or to the beginning or ending station (<<,>>).

13.3.3   Offset Control

The **Offset** option will control the location of the locator circle in the plan view and the vertical cross hair in the cross-section and profile view.

13.3.4   Elevation Control

The **Elevation** option will control the location of the horizontal cross hairs in the profile and cross-section views.
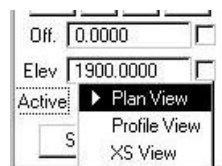
13.3.5 Active Ground Setting

If the TIN file is defined in the **Working Alignment** definition, the DTM view can be substituted for the cross-section view. The DTM view cuts a section on the fly at the location of the cross hairs in the plan view.
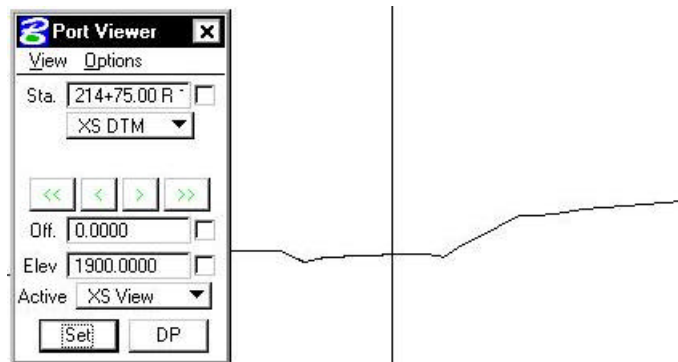
13.3.6 Active View Settings

The **Active** option defines the view that controls the manipulation of the other two views.

13.3.7 Set Button

Once the **Active View** is selected, the user can click the **Set** button. This will allow the user to move the cursor to the **Active View** and move the cross hairs. As the user moves the cursor along the **Active View**, the other two views will be updated according to the placement of the cursor in the **Active View**.

13.3.8 DP Button

The **DP** button enables the user to issue a data point for a MicroStation command. For example, if the user wanted to draw a line at the given station and offset listed in the **Port Viewer** dialog box, they would select the line tool, and click the **DP** button. This would begin drawing a line at the given station and offset.

13.4 Port Viewer Menu Options

13.4.1 View

The **View** pulldown from the Port Viewer menu bar allows the user to fit one or all of the views, or to select the **Active View**.

The **Fit** option will fit the entire horizontal alignment when selecting Plan View, the entire profile when selecting Profile View, or the current cross section when selecting XS View.

The **Active** option set the active design file to be the one that contains either the Plan, Profile or Cross Section data and reference the others. This is useful if you need to alter a section yet you are in the Plan View. Since the Cross Section file is referenced, you can not modify the section. However if you make the XS View 'active', then the port viewer will open the Cross Section file as defined in the Working Alignment dialog box, and reference the Plan and Profile views.
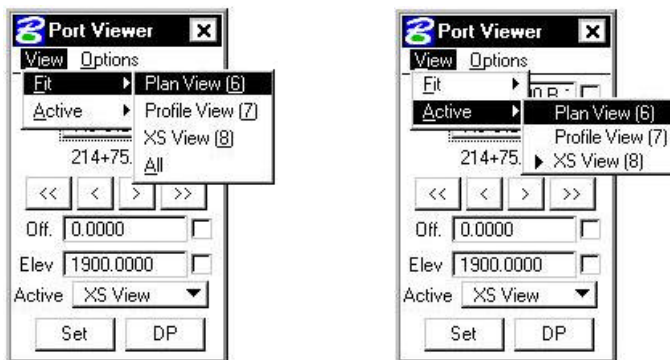
13.4.2 Options

The **Options** menu controls which cross hairs to display, as well as the symbology of the DTM section view.
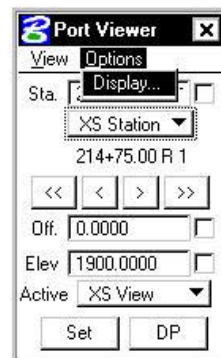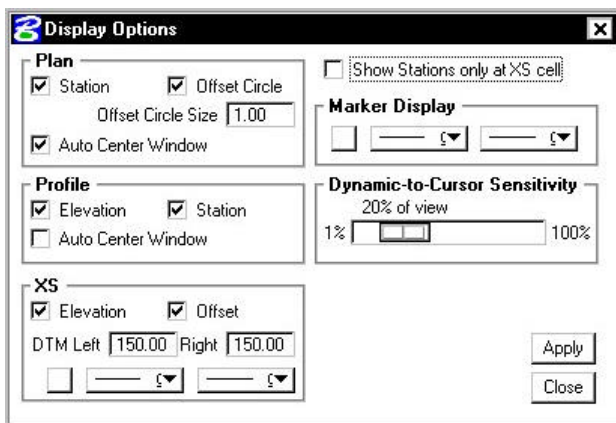
Group boxes are supported for Plan, Profile and XS display options.

Three toggles are located in the **Plan** group box: Station, Offset Circle, and Auto Center Window. When the Station toggle is activated, the pattern line is displayed on the screen. When the Offset Circle toggle is activated, a circle of the size specified in the Offset Circle is placed at the Station and

Offset specified in the Port Viewer dialog box. When the Auto Center Window toggle is activated, the Station and Offset specified in the Port viewer dialog box is centered in the Plan window.

The **Profile** group box has three toggles: Elevation, Station and Auto Center Window. When the Elevation toggle is activated, a horizontal line at the **Marker Display** element symbology is displayed in the Profile View at the Elevation specified in the Port Viewer. When the Station toggle is activated, a vertical line, also at the Marker Display element symbology, is displayed on the Profile view at the Station specified at the top of the Port Viewer dialog box. When the Auto Center Window toggle is activated, the Station and Elevation specified in the Port viewer dialog box is centered in the Profile window.

The **XS** group box has two toggles: Elevation and Offset. When the Elevation toggle is activated, a horizontal line at the **Marker Display** element symbology is displayed in the XS View at the Elevation displayed in the Port Viewer. When the Offset toggle is activated, a vertical line, also at the Marker Display element symbology, is displayed in the XS view at the offset specified in the Port Viewer dialog box. The XS Group box also contains parameters for the XS DTM Left and Right specified in terms of master units. The XS DTM Left and Right parameters are the horizontal distances from the specified alignment which define the limits of the cross section or DTM display line, similar to a cross section pattern line.

The **Dynamic to Cursor Sensitivity** determines how close the MicroStation cursor must get to the data point cross hairs (dynamic cursor) before they begin to follow the MicroStation cursor dynamically in the Set mode. This is to prevent the cross hairs from jumping over to the MicroStation cursor until it is within a certain distance from them. This distance is set as a percentage of the diagonal size of a given view. When the dialog box settings are complete, clicking the Apply button automatically updates the screen and revises the displays.

The **Marker Display** group box contains the element symbology of the marker lines.

After the desired settings have been completed, click the **Apply** button in the lower right corner to automatically close the dialog box and apply all settings.

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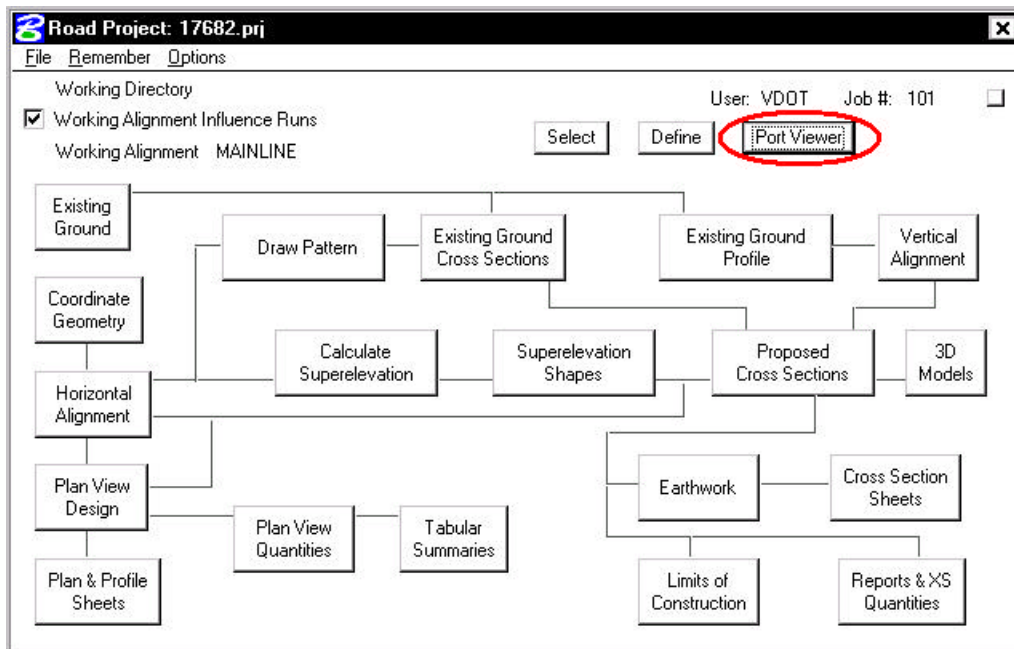# LAB 13: Port Viewer

Step 1.   Execute **c:\data\geo\VDOT\road1\LAB13.EXE.**

Step 2.   Open the MicroStation file **c:\data\geo\VDOT\road1\d17682des.dgn**
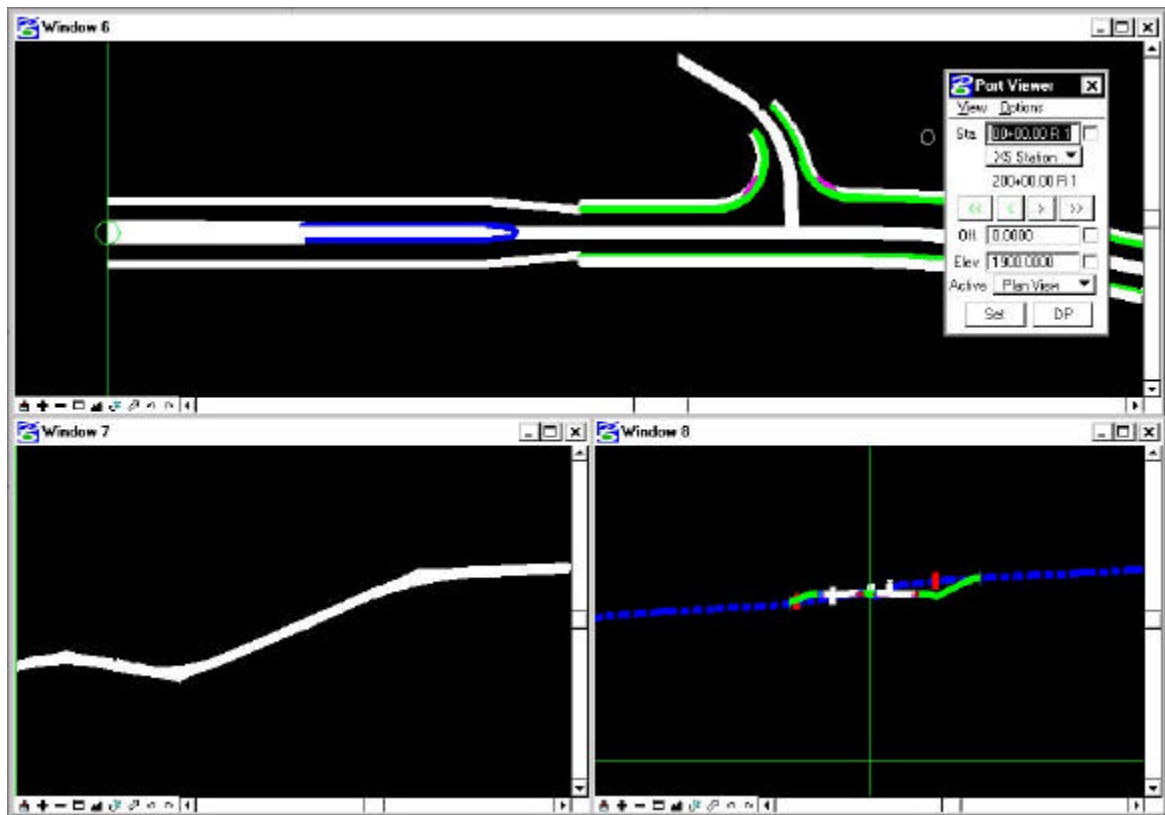
Access **Project Manager**. It should automatically access the Road workflow dialog box since we "remembered" the options in Exercise 2.

Step 3.   Use the **Select** button to make sure that you've got **MAINLINE** selected as your **Working Alignment.**

Step 4.   Select the **Port Viewer** button.

Step 5. **The Port Viewer** dialog box is displayed as shown below.

Step 6. Use the VCR buttons to scroll through the design, profile and cross sections.

Step 7. Dismiss the **Port Viewer** dialog box by pushing the "**x**" in the upper right hand corner.

Step 8. **Exit** MicroStation.