Topic: Ancillary Data Tool
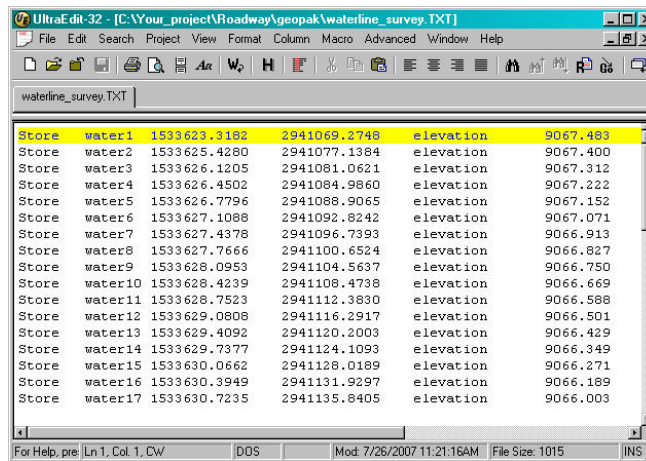
The Ancillary Data Tool allows the user to place a symbol, cell or text onto cross sections to represent the location of a surveyed physical feature (waterline, gas line etc), at the proper offset and elevation. For example, a waterline has been located and the designer has been given an ASCII file containing the survey data. The exact format of the ASCII file is not important. The designer can use the Ancillary Data tool to draw the waterline location on each cross section and the profile of the waterline can be projected onto the mainline profile.
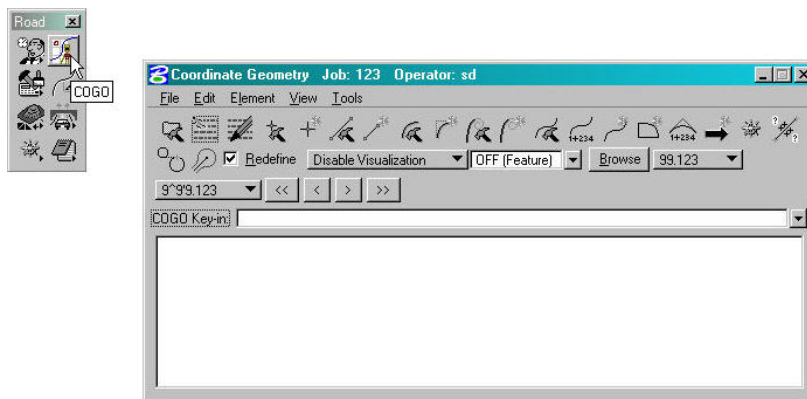
Example ASCII File of Survey Data

- An example ASCII file is shown below. In this example, the second column depicts the points that will be stored by COGO. If necessary, use UltraEdit to adjust the original point names (points chosen by the surveyors) to point names which have not been used previously in your project.

To Import an ASCII File to COGO

1. Open the **Coordinate Geometry (COGO)** dialog box as shown below:

2. From the COGO dialog box, open the **Import ASCII File to COGO** dialog box as shown below:
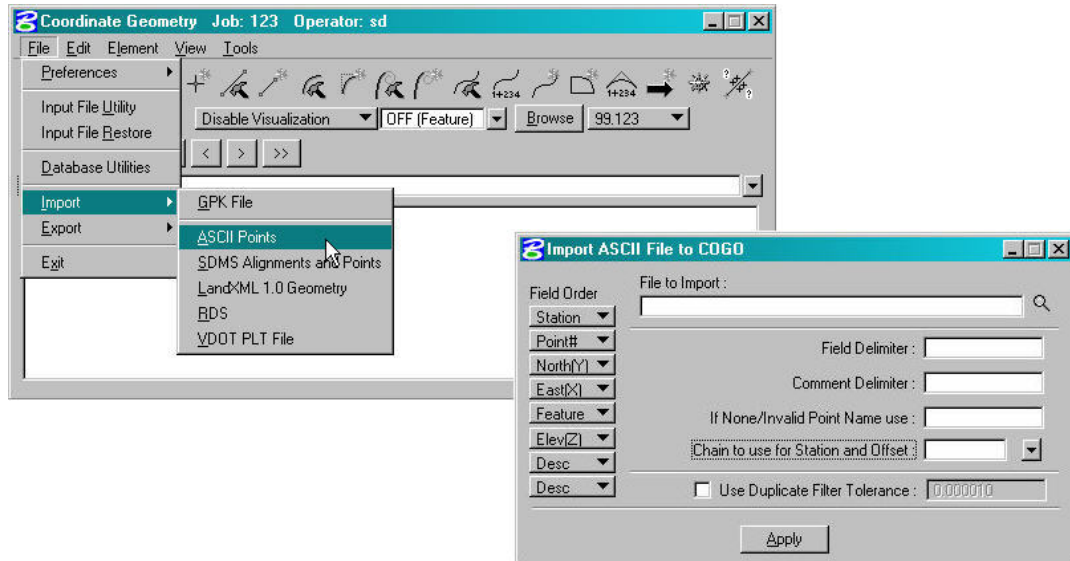
3. Adjust the buttons below **Field Order** to match the type of information of each of the columns in your ASCII file. Click on each button and select the type that corresponds to your ASCII file, as shown below. Under **File to Import**, click on the magnifying glass to select your ASCII file. Adjust the **Field Delimiter** to match your ASCII file. In this case, it is a space (verses a comma or something else). Press **Apply** to store the points from the ASCII file into COGO. In this example, 16 points were stored. Click **OK**.
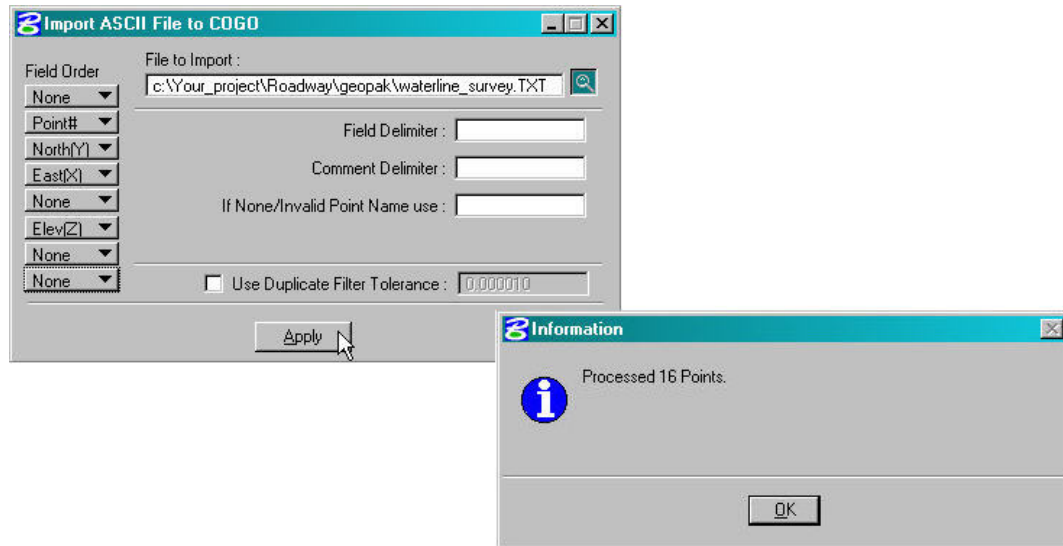
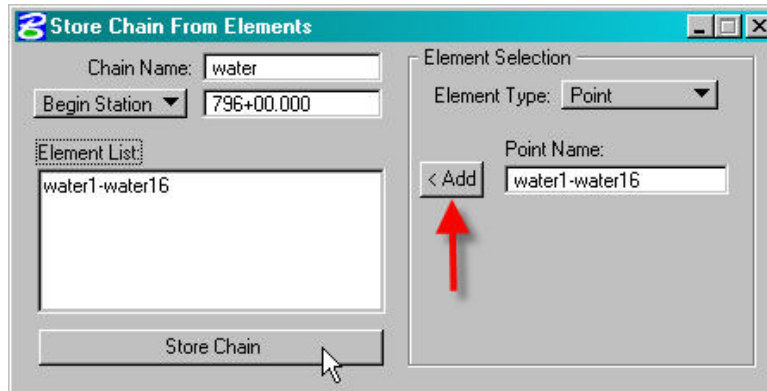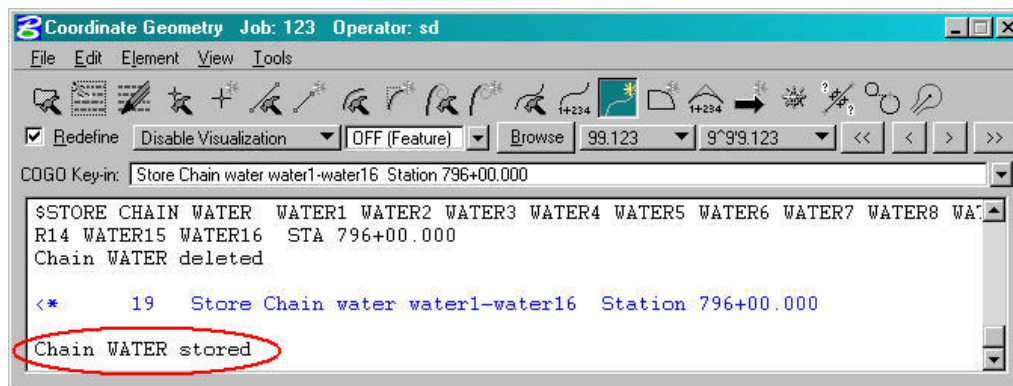## To Create the Waterline Chain

1. From the COGO dialog box, go to **Element>Chain>Store>From Elements** from the pull down menu as shown below.
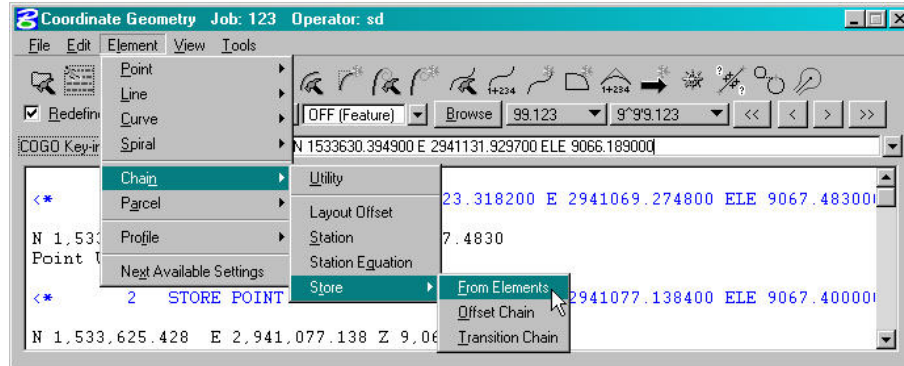
2. In the **Store Chain From Elements** dialog box, type in the desired **Chain Name** and **Begin Station** of the waterline as shown below. Under the **Element Selection** portion of the dialog box, adjust the **Element Type** to **Point.** Enter your point range using a hyphen under **Point Name** (Individual points may be typed in and separated with commas). Press the **Add** button to populate the **Element List** field. Click on **Store Chain**.

3. As shown below, the **COGO** dialog box will give you a message that the chain named **WATER** is successfully stored.
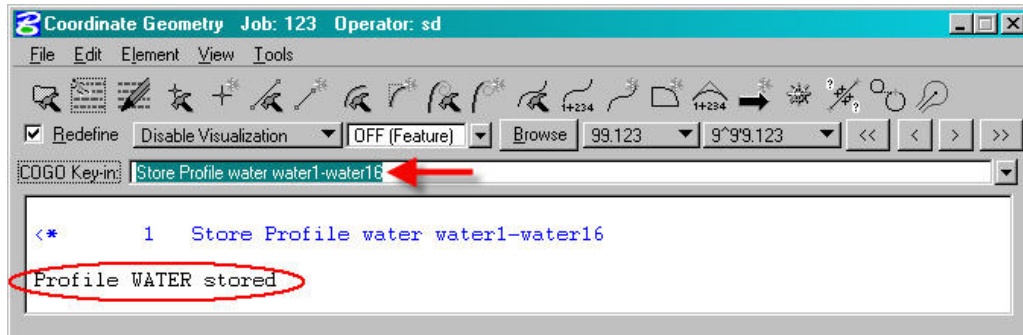
To Create the Waterline Profile

1. To store the profile of the waterline, adjust the **COGO Key-in** text display in the COGO dialog box as shown below, and press Enter on your keyboard. COGO will give you a message that the profile named WATER was successfully stored.

**To Draw a Waterline Symbol on the Cross Sections**

1. Open the Draw Ancillary Features dialog box in your cross section file as depicted below:
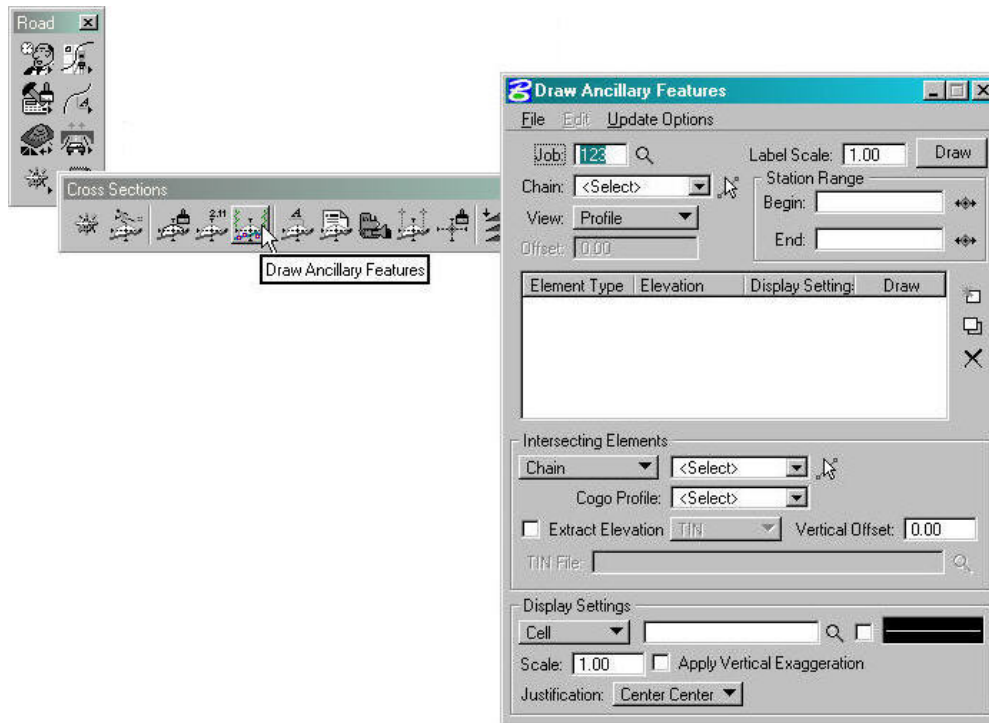
2. Adjust the fields for **Job** number, mainline **Chain** and waterline **Station Range**. Set the **View** to **Cross Section.** Under the **Intersecting Elements** section**,** toggle the button to **Chain**, as shown below. Select the waterline chain and profile using the down arrow buttons. Browse to select your **TIN File**.
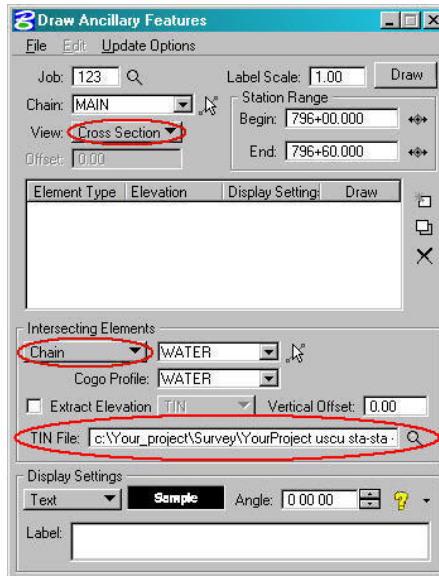
> **Note:** For information on the other options available under **Intersecting Elements** go to the main Microstation pulldown menu and select **Applications>Geopak Road>Help**. Then navigate to: **Bentley GEOPAK Road 2004 Edition>Command Reference> Cross Sections>Cross Section Tool Box>Draw Ancillary Features>Intersecting Elements**.

3. Adjust the **Display Settings** fields as desired. In this example, we will place a Symbol on each cross section at the exact elevation and horizontal offset from the main centerline. Select **Symbol** and toggle to the desired symbol as shown below. Change the symbology of the symbol by double clicking in the symbology adjustment area.
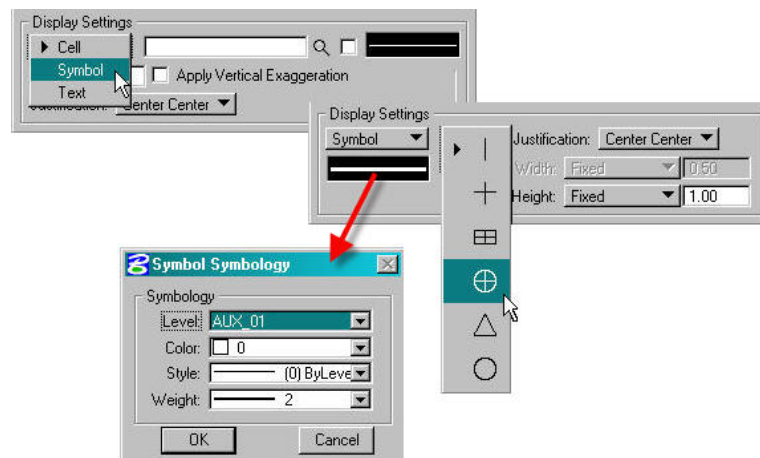

> **Note:** For information on the **Text** and **Cell** options, go to the main Microstation pulldown menu and select **Applications>Geopak Road>Help**. Then navigate to: **Bentley GEOPAK Road 2004 Edition>Command Reference>Cross Sections>Cross Section Tool Box>Draw Ancillary Features>Display Settings**.
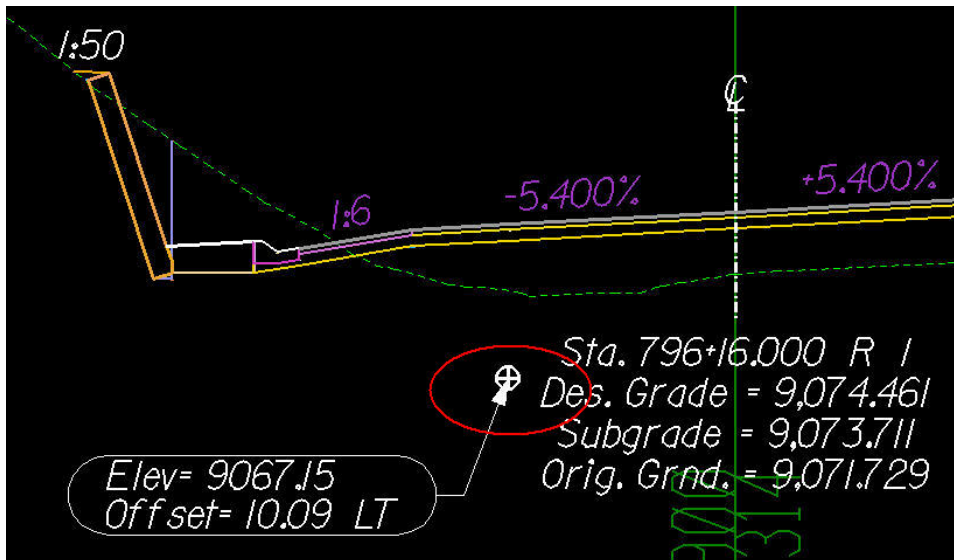
4. When the dialog box is completed as shown below, click on **Add Element Set** to populate the text field. Click on **Draw**.
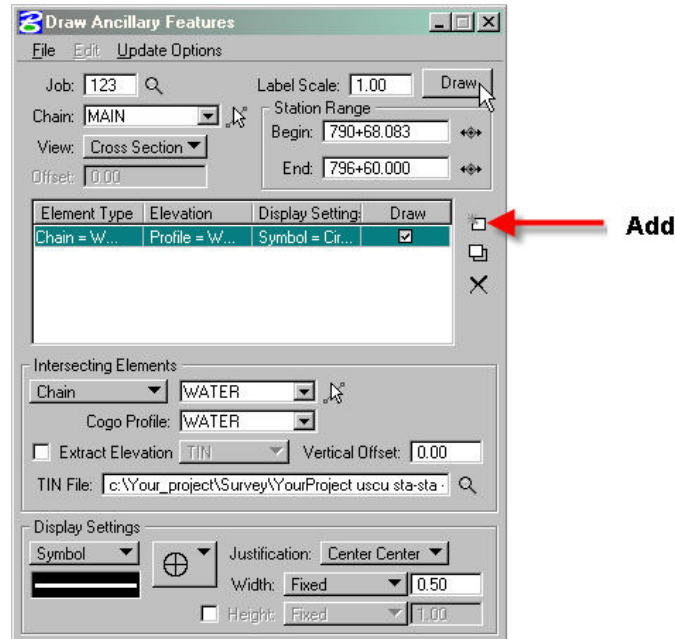
5. An example of the resulting ancillary feature drawn on a cross section is depicted below (the label was placed using the **Cross Section Labeling** tool).
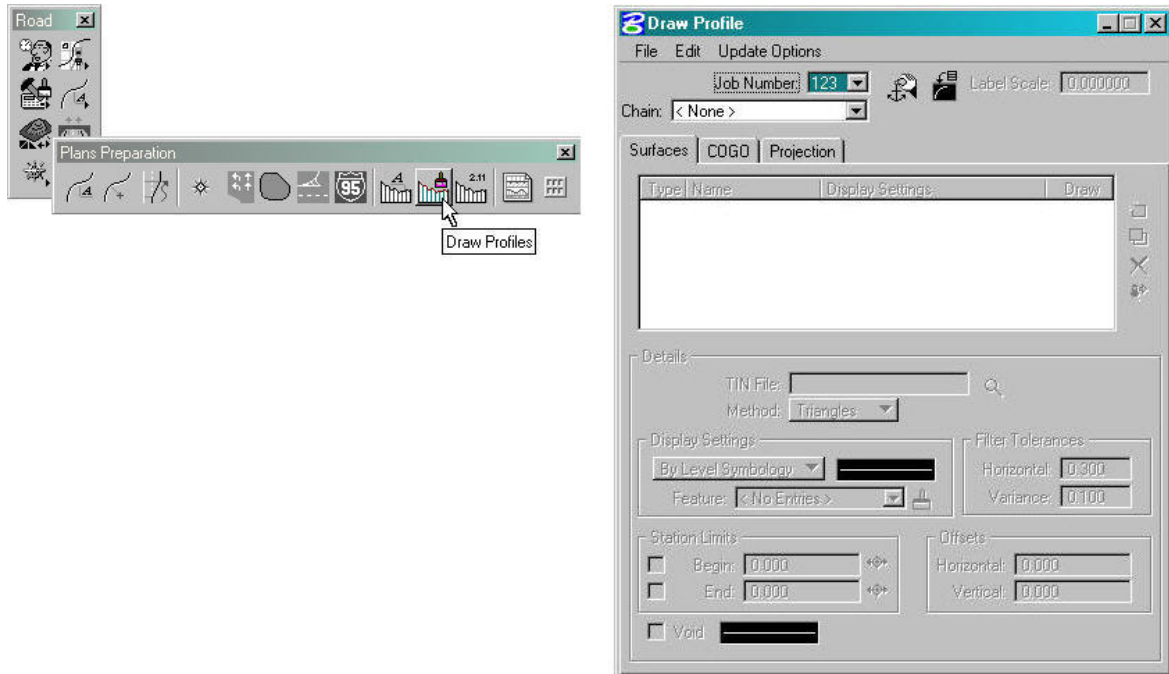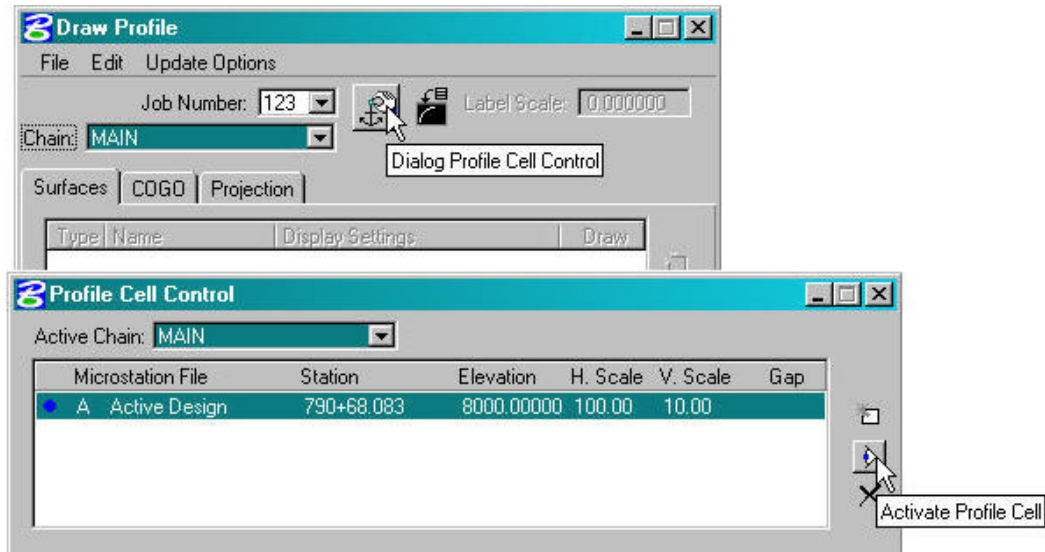
To Draw the Projection of the Waterline Profile onto the Mainline Profile

1. Open the Microstation file that contains your mainline profile. Open the **Draw Profile** dialog box as shown below.


2. Select your **Job Number** and mainline **Chain**. Click on the **Dialog Profile Cell Control** button and make sure that the mainline profile cell is the active cell as shown below. Close the **Profile Cell Control** dialog box.

3. Click on the **Projection** tab of the **Draw Profile** dialog box. In the **Details** portion of the dialog box, toggle the **Type** to **Cogo Chain,** select the waterline chain and profile. Under the **Stationing** section of the dialog box, enter the Begin and End stations of the waterline. Adjust the **Display Settings** to By Level Symbology and choose your settings by double clicking on the field next to it. When the dialog box is completed as shown below, click on the Add button.
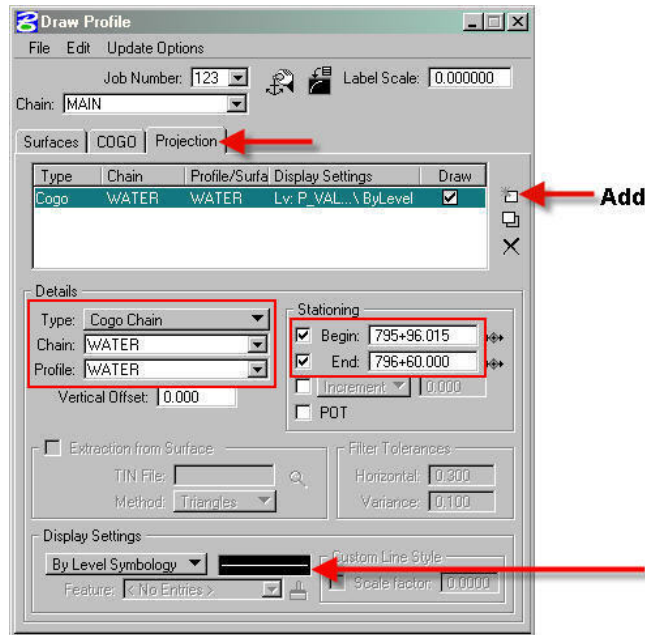
4. The waterline profile, projected onto the mainline profile, will be drawn in the Microstation file, as shown below.
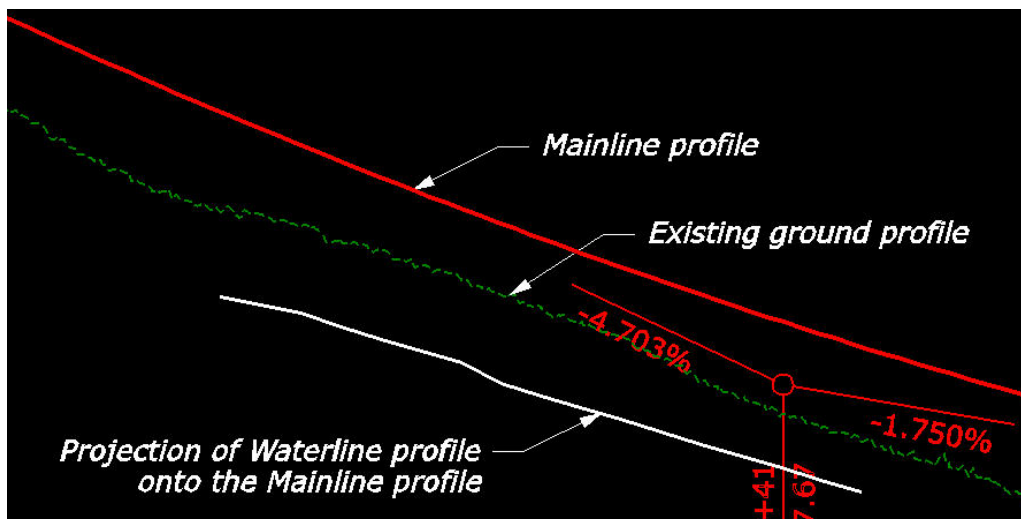
Some of the information contained in this Brown Bag Lunch was borrowed from The Complete Knuckleheads Guided Tour of Geopak 2004. For further information Click Here or go to http://www.wfl.fhwa.dot.gov/design/cadd/idiot2004/ancillary.htm

Information contained in this handout is taken from Geopak Help Files.