

**Exercise 19-1**

This is a group exercise to demonstrate how stream cross sections can be plotted from both a digital terrain model (DTM) and the field surveyed survey chains. Once the cross sections are plotted, the HEC-RAS cross-section report is used to create a data file that can be imported in to HEC-RAS.

The minimum electronic information that the district contact needs to provide is the DTM stored as a TIN file and the survey points stored in a GPK file. In most cases the district should be able to provide chains and profiles created from the survey information along with plots the chains and profiles in MicroStation.

1. Open the MicroStation file:

**t:\br-proj\a\_geopak\d2\j2p0300\data\xs\_HEC\_RAS.dgn.**

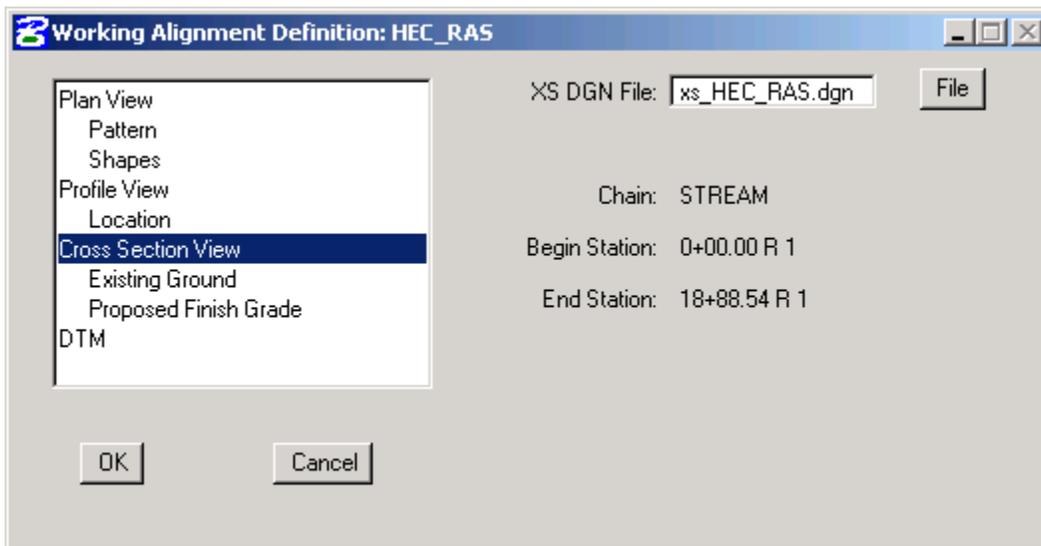
Review the cross sections.

2. Open the project **t:\br-proj\a\_geopak\d2\j2p0300\project\j2p0300.prj** and enter it as **userc**.

3. Copy the J2P0300 working alignment to **HEC\_RAS** and enter that working alignment.

4. Enter the Working Alignment Definition for **HEC\_RAS** and change the following:

<u>Section</u>	<u>Item</u>	<u>Value</u>
<b>Plan View</b>	<b>Chain:</b>	<b>Stream</b>
<b>Cross Section View</b>	<b>XS DGN File:</b>	<b>xs_HEC_RAS.dgn</b>



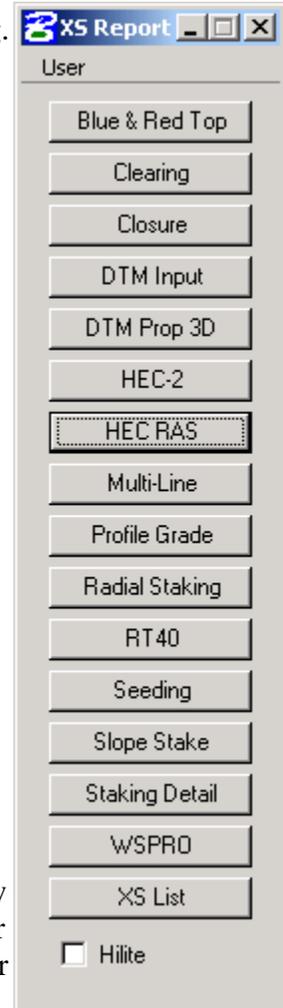
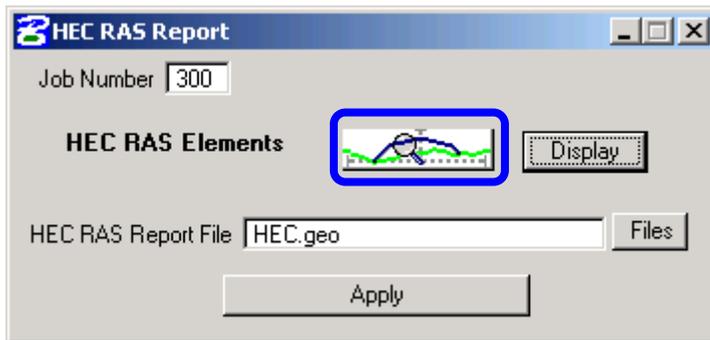
Click **OK** to save the changes to the working alignment definition.

5. Choose **Reports and XS Quantities** from the **Project Manager** dialog.



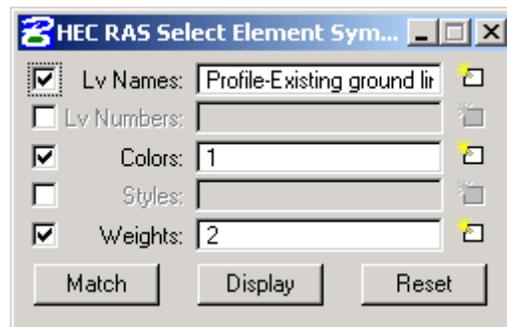
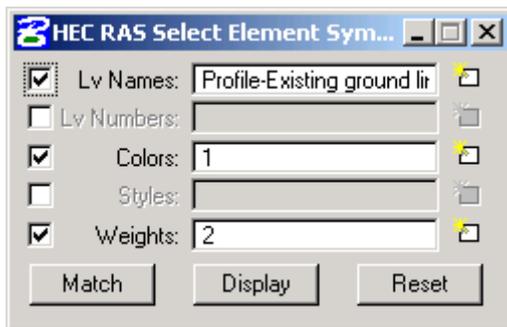
This will bring up the XS Report dialog shown to the right. Select the **HEC RAS** report.

The dialog shown below will appear. Enter the information as shown:



Double Click on the button outlined above to bring up the HEC RAS Select Element Symbology dialog.

To extract the survey profiles, use the setting shown in the dialog below and on the left. The settings in the dialog below and on the right are for the sections created from the TIN file. Click the X in upper right corner of the dialog to close the dialog and accept the settings.



Select **Apply** to generate the report.

The report will be written to the working directory. Open the report in Ultra Edit. It is:  
**t:\br-proj\A\_geopak\d2\j2p0300\data\HEC.geo.**

To import the data into HEC RAS, start the HEC RAS project and go to **Edit > Geometric Data...** in HEC RAS. In the Geometric Data dialog, go to **File > Import Geometry Data > GIS Format...** and load the HEC.geo report.