Workflow 3: Macro - Checking for Kinks in Horizontal Alignment

The Check Bearing Macro checks a GEOPAK COGO "describe chain" output file for kinks in the alignment by comparing AH and BK bearings of consecutive chain elements.

1. *Select Coordinate Geometry from the Project Manager Workflow dialog box as shown below.*

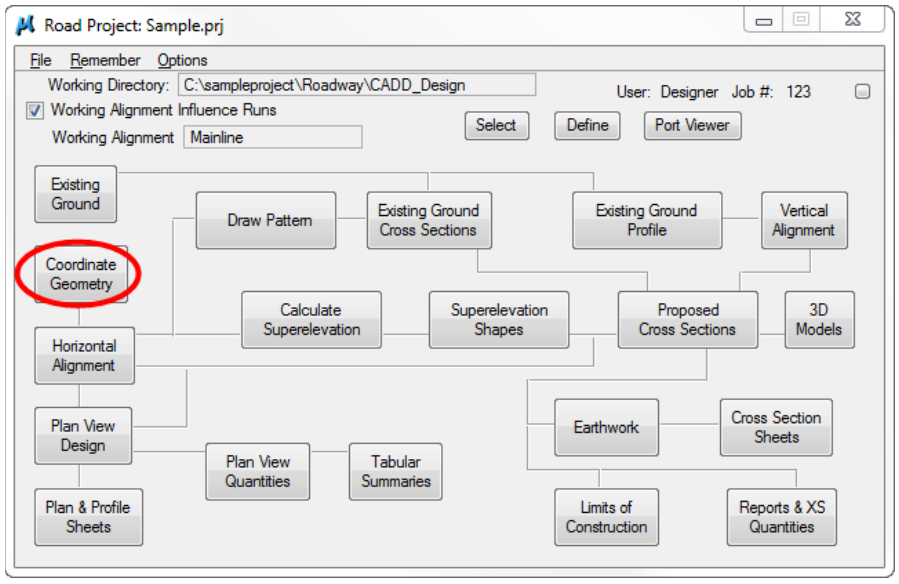

Figure 7.3-1: Accessing COGO through Project Manager

2. *To describe a chain, select Element>Chain>Utility from the COGO dialog box.*

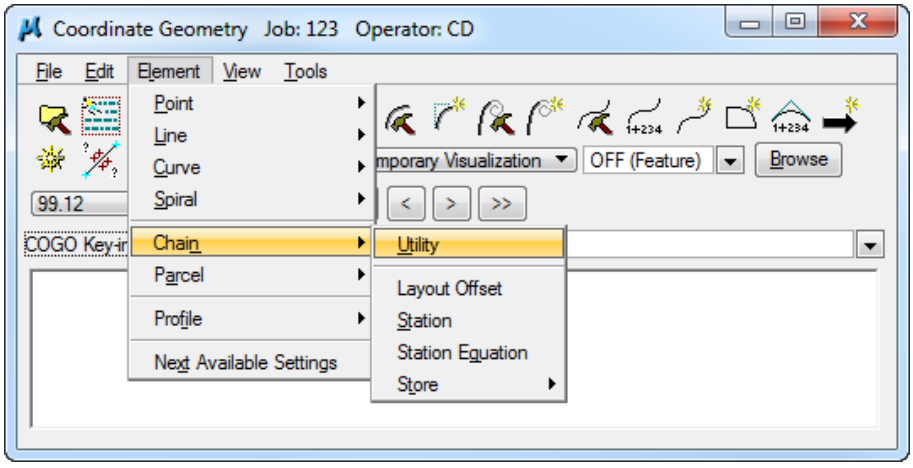

Figure 7.3-2: Accessing Utility Dialog box

3. *In the Chain Utility dialog box, select the chain you want to describe and Click on the Describe Icon shown.*

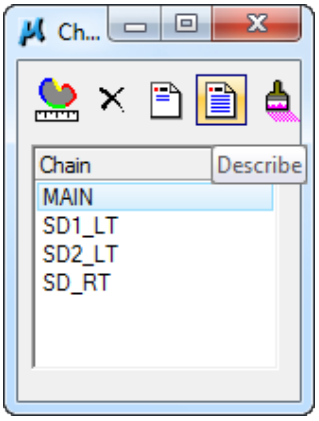

Figure 7.3-3: Chain Utility Dialog box

4. *COGO dialog box will be populated with the chain described as shown below. Create an Output File by selecting File>Input File Utility from the COGO dialog box.*

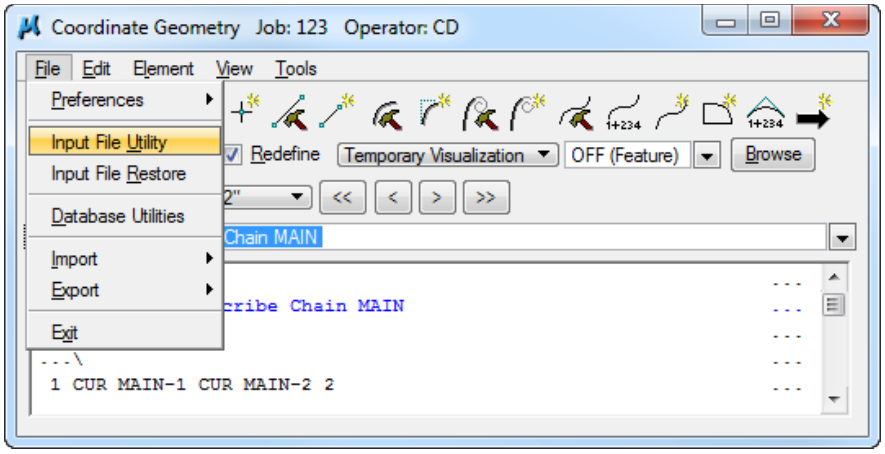

Figure 7.3-4: Accessing Input File Utility

5. *In the File Utility dialog box, select output from lower left pull down and type in a name for the Output File. Select apply to create an Output File. Output File for the example is named main123.ocd. 123 is the job number, O for output, CD is the operator code.*

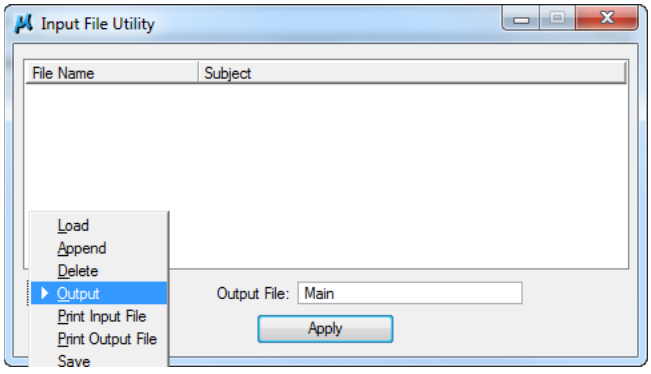

Figure 7.3-5: File Utility

Once an output file is created describing the chain, the Check Bearing Macro can be used to check for kinks in the alignment.

6. *To run Check Bearing Macro, Select Utilities>Macro >MicroStation Basic from the main MicroStation pulldown menu.*

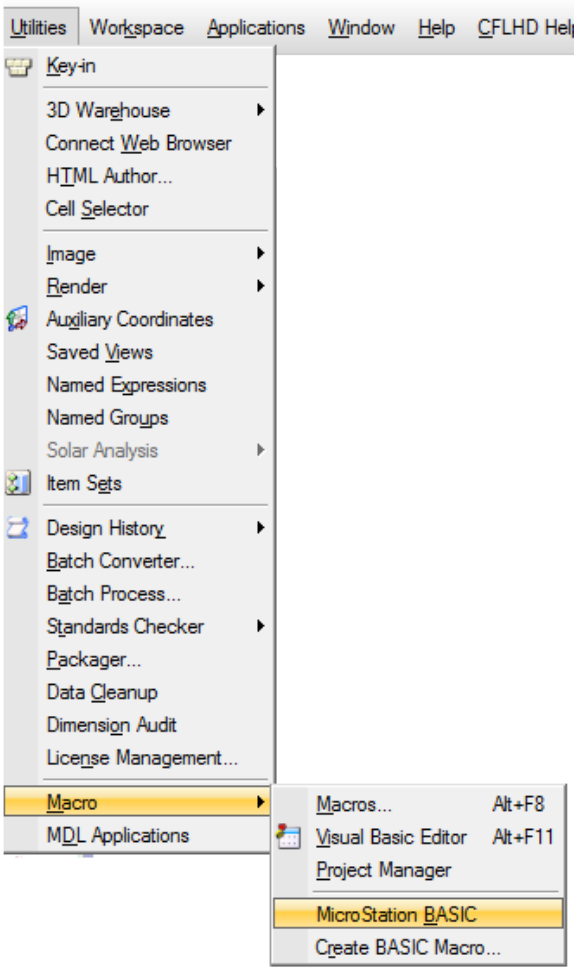

Figure 7.3-6: Accessing MicroStation Basic

The following dialog will appear:

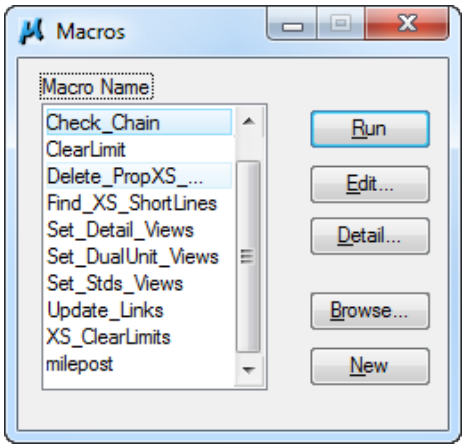

Figure 7.3-7: MicroStation Macro

7. *Browse to select Check_Chain.ba macro from the list of macros. Select the macro and the Start Macro dialog box will appear as shown below. Click on the Run button.*

Macros are located in V*8i_RESOURCE\CFL_Local\MicroStation\Macro*

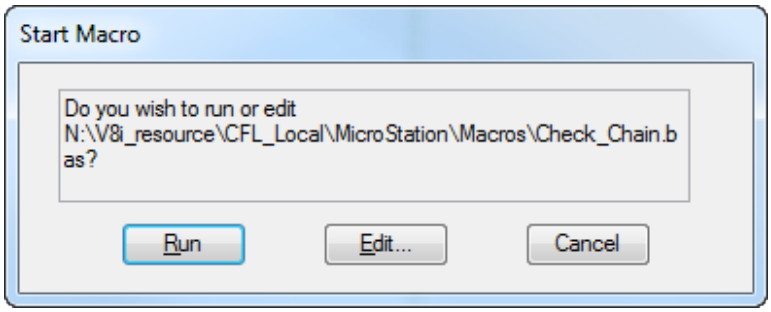

Figure 7.3-8: Start Macro

8. *Running the macro will invoke the following dialog box. Select the COGO Output File created for your alignment and select OK.*

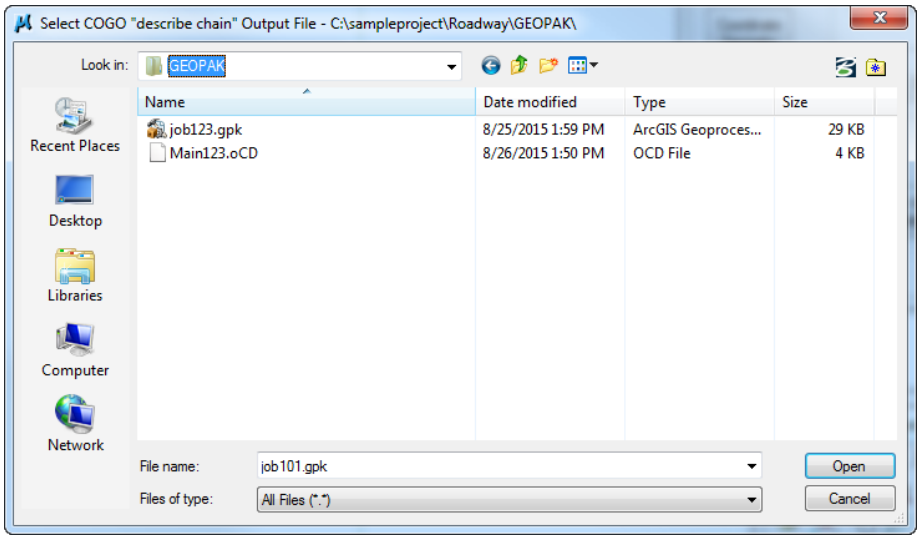

Figure 7.3-9: Select COGO Output File

9. *Selecting the COGO Output File will invoke the Check Bearings dialog box. In the Check Bearing dialog box toggle 1 second and select OK.*

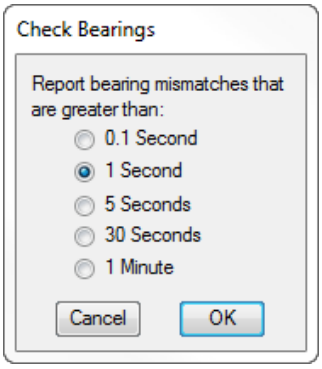

Figure 7.3-10: Check Bearings

User sets tolerance for bearing comparison in the check bearing dialog box (i.e., how much do the bearings need to differ before they are flagged as a kink).

10. *Results to the macro run are reported the on screen, as shown below, and in the log files chkbear.log and chkbear.err.*

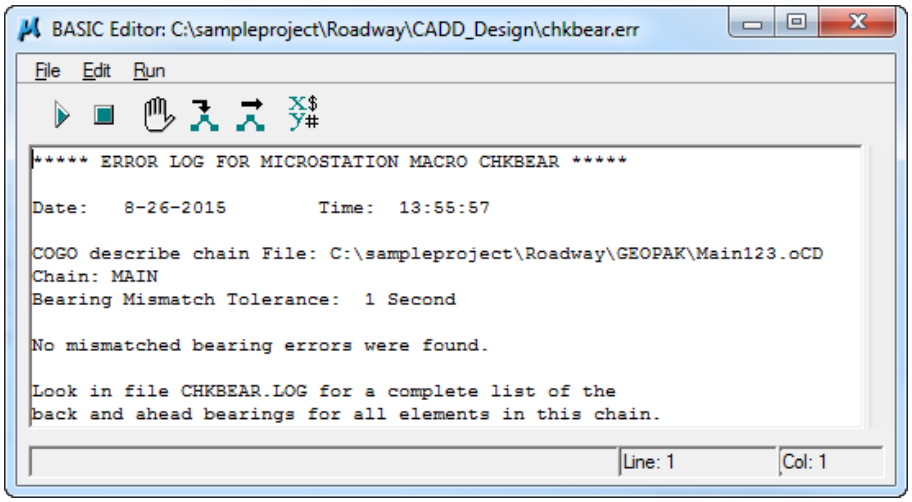

Figure 7.3-11: Check Bearings Error

If the macro run, reports mismatched bearing errors; user must correct the error and restore the horizontal alignment. This workflow should be repeated until no mismatched bearing errors are found.