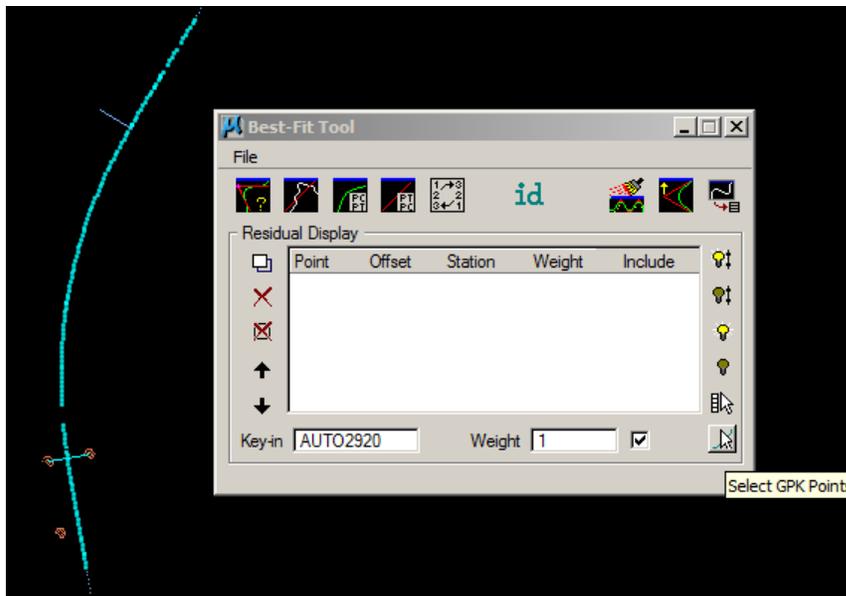


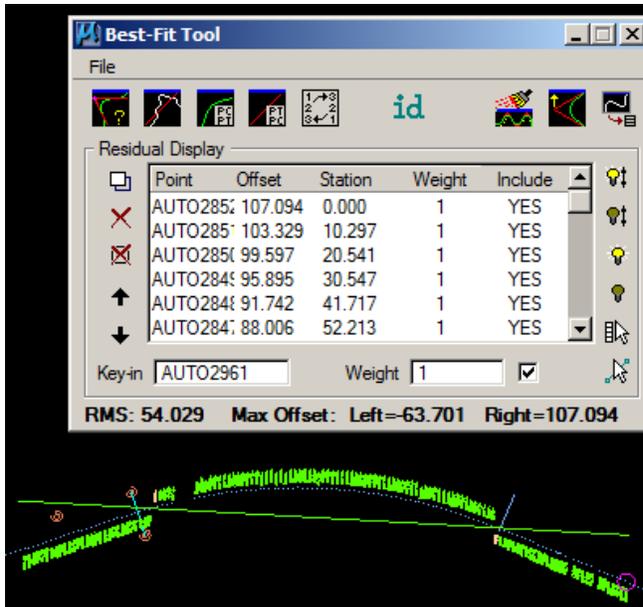
BEST FIT (3-1-2011)

This tool is used to fit an alignment through a series of points. The goal here is to create an alignment that matches the Asbuilt alignment as close as possible but that also stays within a tolerance of 0.5-1.0' of the surveyed shots. Because of overlays through the years, it will be generally be impossible to re-establish the existing CL with the same geometrics as the Asbuilt Alignment. Some requirements:

- 1) Tangents/PI's should not be introduced in locations that should theoretically be a curve.
In cases where one curve does not allow you to meet the tolerance mentioned above, compound curves are allowed, PI's or Kinks are not.
 - 2) PI's can be introduced in tangent sections to stay within the tolerance mentioned above.
1. **VISUALIZE POINTS** - Visualize your CL, Existing ROW, etc. points from COGO -> Tools -> Navigator.
(Existing ROW would be displayed to help you locate PC/PT's.
 2. **SELECT POINTS** - Using Microstation's Element Select command, select the CL Points in area that represents 1 curve and enough points to establish a back & ahead tangent.



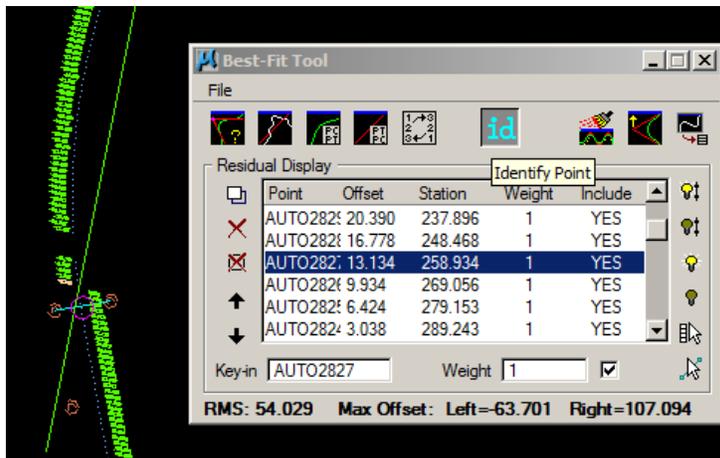
3. **ADD POINTS TO BEST FIT** - Add the selected points to the Best Fit tool. The line you see initially see is a Best Fit line through these points. The text at the bottom of the dialog displays the Maximum Offsets.



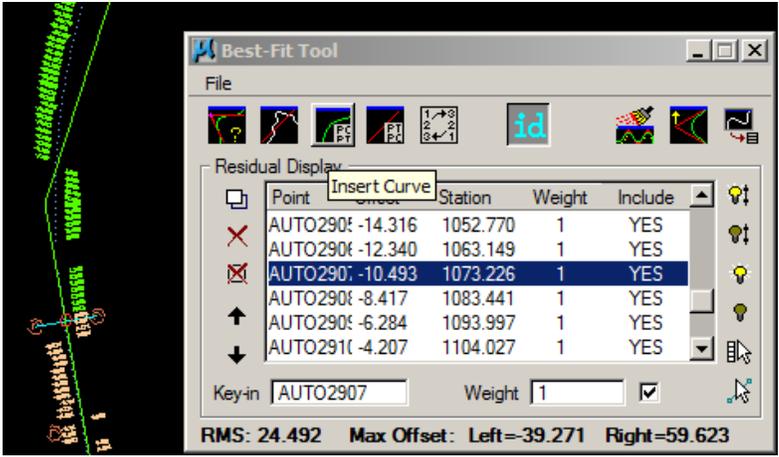
4. INSERT ARC

Note: When you choose Insert an Arc, GeoPak places the PC & PT next to each other (introduces a kink). You then move the PT up or down in the dialog to the PT area. A work-a-round which is described in the steps below, is to place another curve at the PT area and then delete then go back to the PC area and delete the PT.

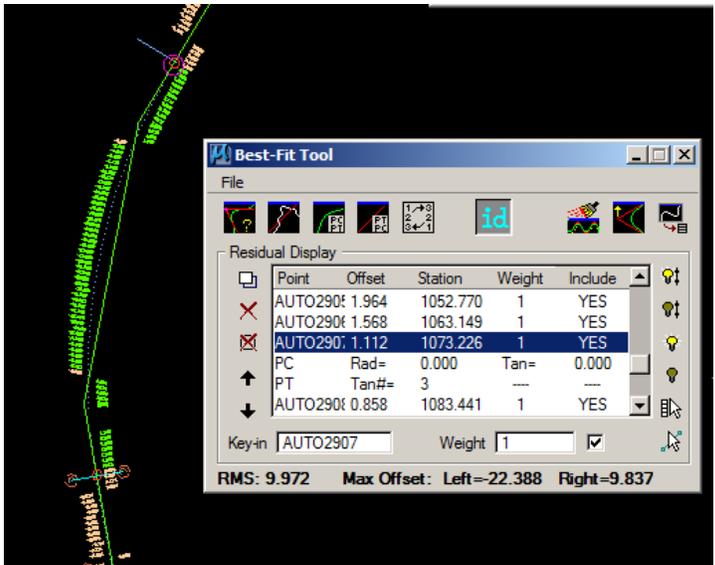
a) Choose ID and then tag a point in the approximate location of the PC. See purple circle below.



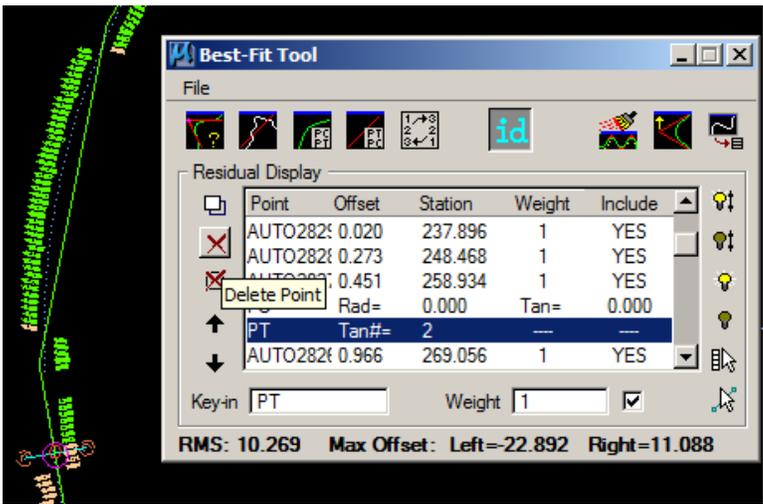
b) Tag the Insert Curve button.



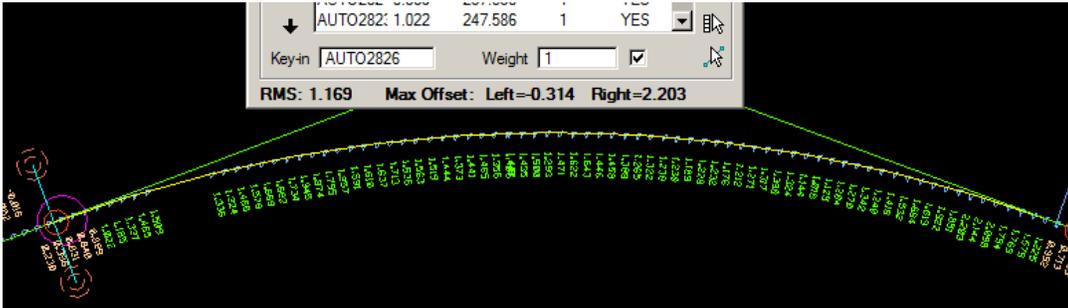
c) ID the approximate location of the PT and insert a curve there.



d) ID the PC area, choose the PT in the dialog and tag delete.

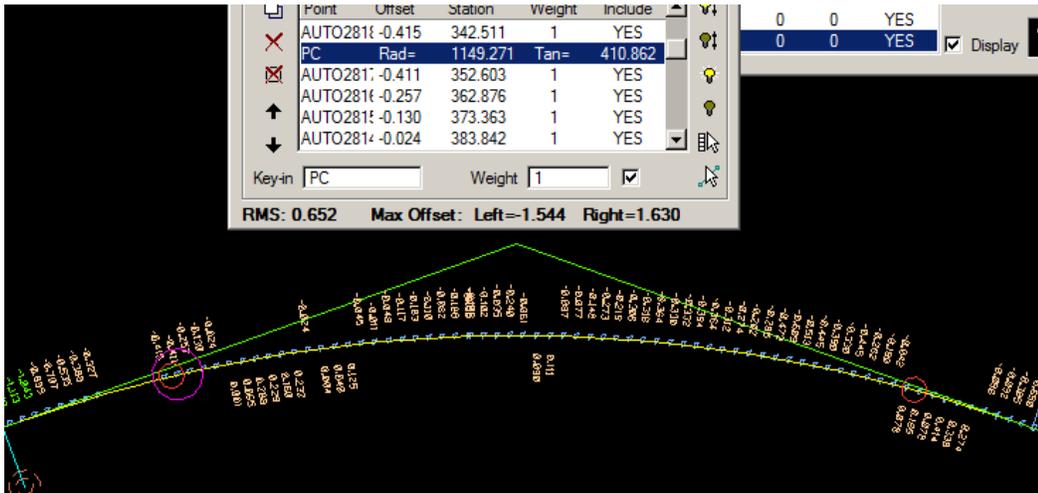


Resultant Curve is shown below. Look at the offsets Left (0.314) & Right (2.203). We need to move the PC & PT to see if we can reduce these offsets where they are both below 0.5'. If that doesn't work, introduce more curves and slide the PC's, PT's until you achieve your intended results.

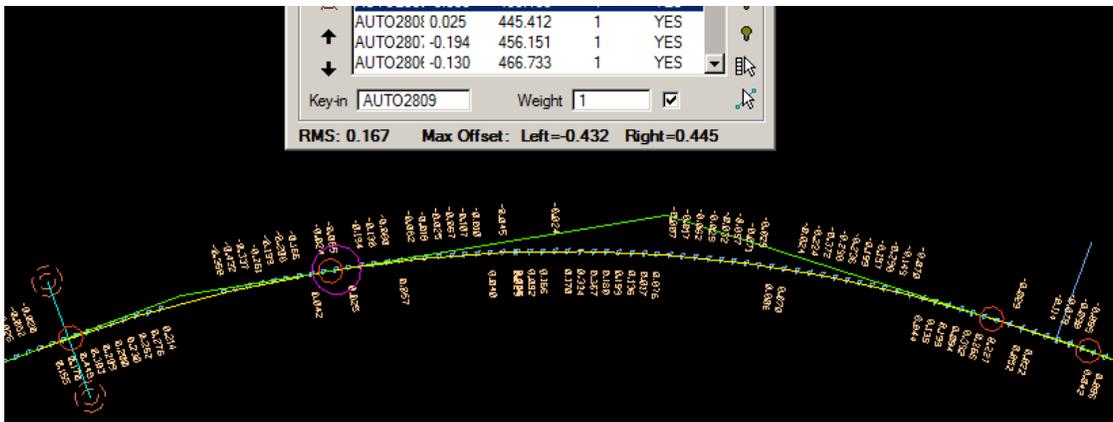


5. Introducing more Arcs.

- a) Move the PC & PT. Note that you can also see the radius of the curve GeoPak is trying to fit on the PC line.



- b) Introduce more Arcs. The left & right offset are below 0.5'. Also see how much more balanced the Left & Right Offset text is.



6. Storing the elements into the GPK.

