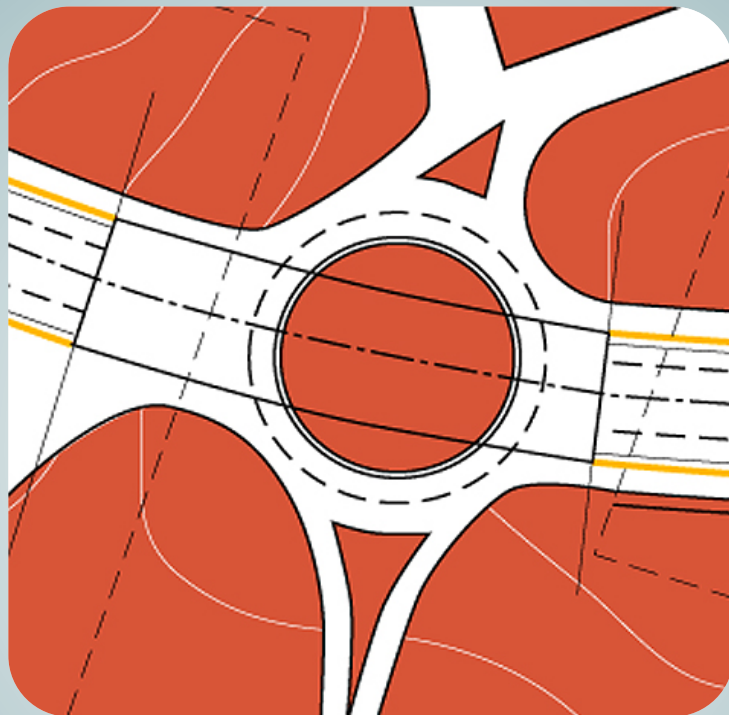


# Workshop on Projects

## Week 4. Activity Week 4 Script



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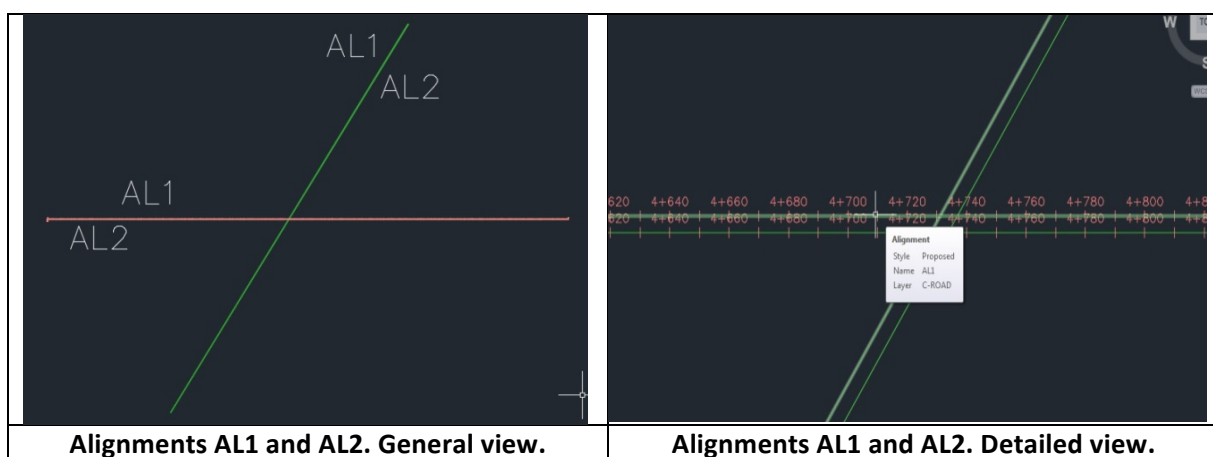
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### ALIGNMENTS LAYOUT

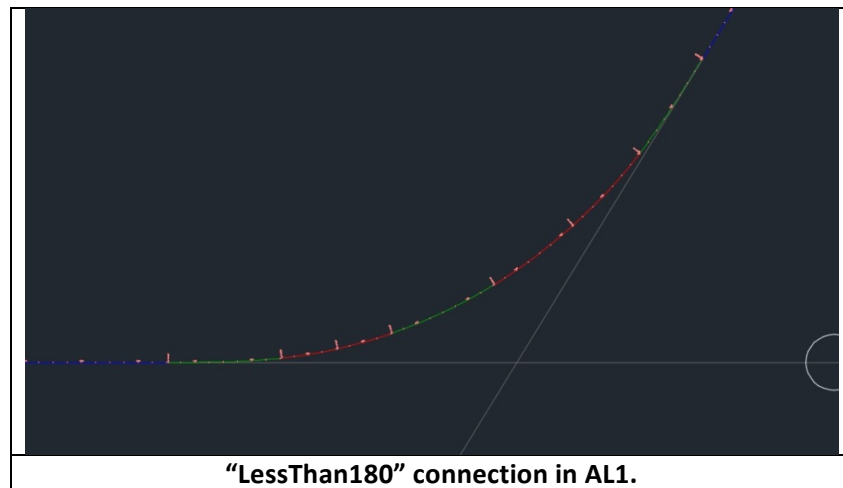
1. Open the file PR1.dwg. This file contains 4 polylines.



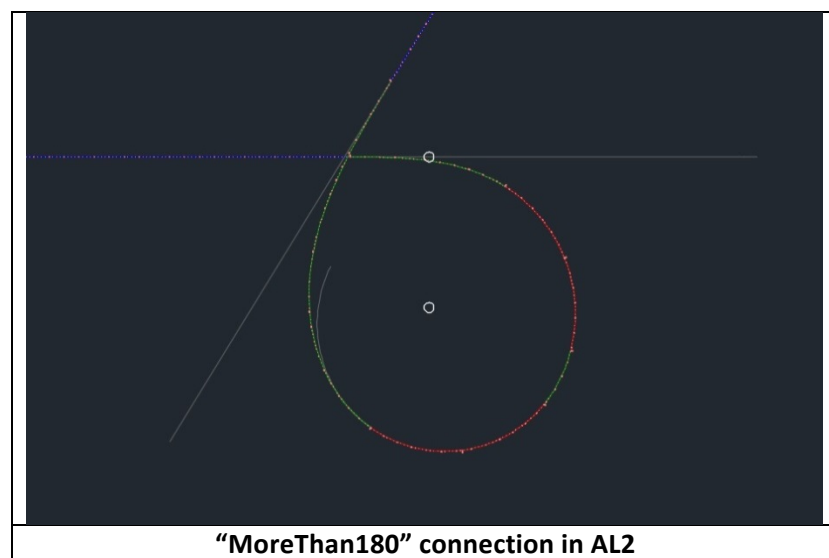
2. These polylines have to be transformed into two alignments AL1 and AL2, as shown in the figure below. AL1 is made with the upper---horizontal and the left---oblique polylines. AL2 with the other pair. (Be sure that the polylines have disappeared once AL1 and AL2 have been created; otherwise, you could have problems when selecting alignments).



3. Lines in AL1 must be connected by means of a transition curve of type Spiral – Curve – Spiral – Curve --- Spiral.



4. Lines in AL2 must be also connected by means of a SCSCS.



### EXERCISES

**PROPOSAL 1. Do your own layout for the curve shown in point 3.**

**PROPOSAL 2. Do your own layout for the curve shown in point 4.**

Suggestion:

- Firstly, try to do your layout using just a SCS group.
- Then, try to do it again using other groups, such as SC + SC + S . You'll find it is not always easy to get a valid set of parameters (radii of curves and lengths of spirals). When a valid one is obtained, maybe it is not very good. This is normal and it is highly advisable to address this in this class. Take your time to feel that your solutions are getting better.
- When you get a first acceptable solution, open the Alignment Grid View and edit the parameters of curves and clothoids to improve the solution, giving them more standard values ( $R = 2000$ ,  $A = 400$ , and so on).
- Using these last values, try to solve the transition by means to a single compound SCSCS curve.

**PROPOSAL 3. Do Superelevation Views for both alignments.**

**PROPOSAL 4. Copy the values of the tabular editor to an Excel sheet and highlight the files where the runout and runoff starts.**

**PROPOSAL 5. In your own words (never mind how good your English is), what are these points really?**