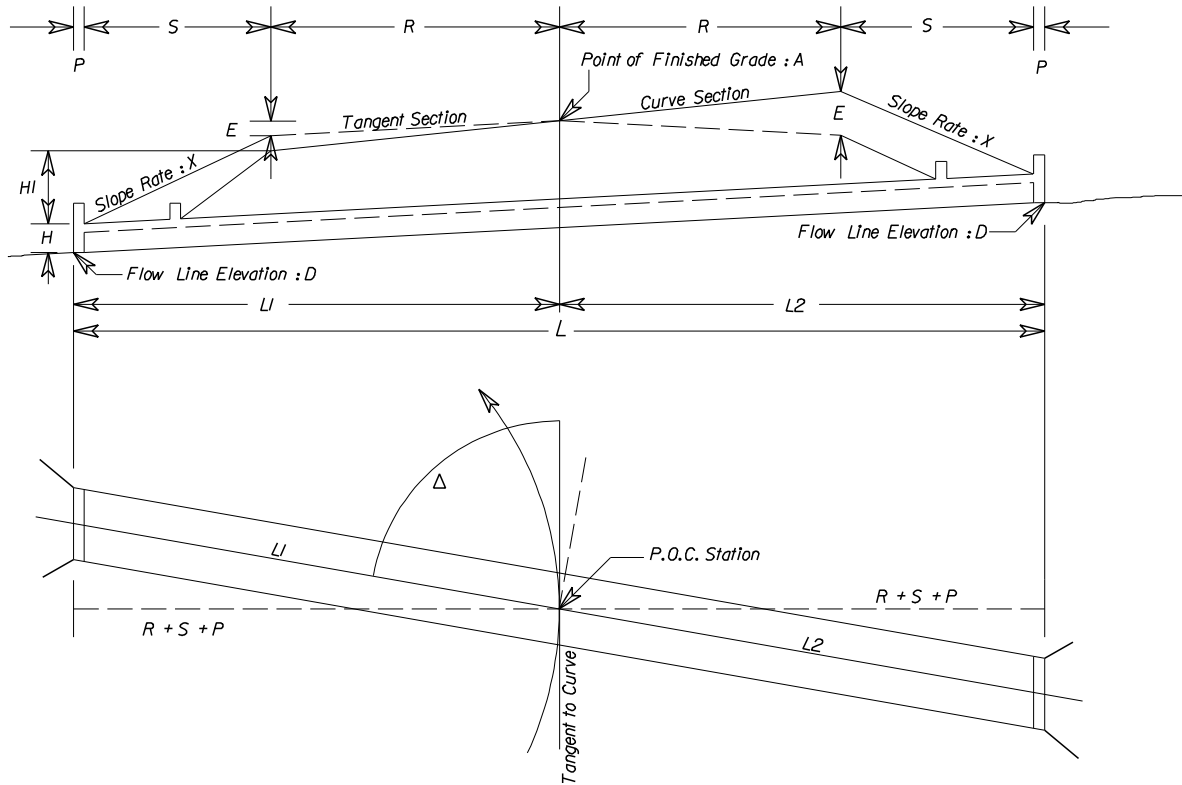


Figure 8-L
Sketch Showing Procedure for Checking Box Culvert



Given:

- | | |
|-----------------------------|-----|
| Box Length | (L) |
| Box Height | (H) |
| Station and Finished Grade | (A) |
| Super Elevation | (E) |
| Flow Line Elevation | (D) |
| Pavement and Shoulder Width | (R) |
| Slope Rate | (X) |
| Delta | (D) |

Required: L1 and L2

Solution:

$$\text{Elevation "A"} \pm \text{"E"} = \text{Elevation "B"}$$

$$\text{Elevation Flow Line "D"} + \text{"H"} = \text{Elevation "C"}$$

$$\text{"B"} - \text{"C"} = \text{"HI"}$$

$$\text{"HI"} \times \text{"X"} = \text{"S"}$$

$$\text{"R"} + \text{"S"} + \text{"P"} = \text{L1 or L2}$$

For Skew Angles:

$$\text{L1 or L2} = \frac{\text{"R"} + \text{"S"} + \text{"P"}}{\text{Sin } D}$$