

CONTROL-POINT ABBREVIATIONS

- PC = Point of Curvature (beginning of curve)
PI = Point of Intersection of tangents
PT = Point of Tangency (end of curve)
PRC = Point of Reverse Curvature
PCC = Point of Compound Curvature

SYMBOLS

- Δ = Deflection angle (deg)
 T = Tangent length (distance from PC to PI, or from PI to PT) (ft)
 L = Length of curve (distance from PC to PT along curve) (ft)
 R = Radius of curve (ft)
 E = External distance (transverse distance from PI to midpoint of curve) (ft)
 LC = Long Chord length (straight-line distance from PC to PT) (ft)
 C = midpoint of long Chord
 M = Middle ordinate distance (transverse distance from midpoint of L to point C) (ft)

FORMULAS

$$L = \frac{\Delta R \pi}{180}$$

$$T = R \tan\left(\frac{\Delta}{2}\right)$$

$$E = T \tan(\Delta/4) = \left[\frac{R}{\cos(\Delta/2)} \right] - R$$

$$LC = 2R \sin(\Delta/2)$$

$$M = R[1 - \cos(\Delta/2)] = E \cos(\Delta/2)$$

LOCATING THE PC OR PT

$$\text{Station of PC} = \text{Station of PI} - T/100$$

$$\text{Station of PT} = \text{Sta. of PC} + L/100$$

1 station = 100 ft. For example,
Sta. 13+54.86 is 1354.86 ft
from Sta. 0+00.00.

HORIZONTAL CURVE ABBREVIATIONS, SYMBOLS, AND FORMULAS

Figure 43-6D