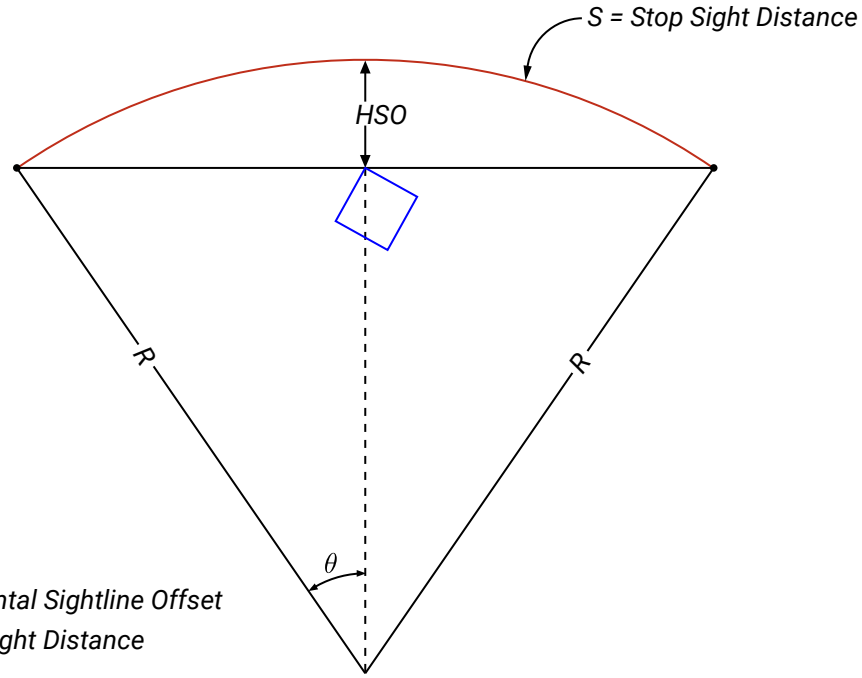

HSO – Horizontal Sightline Offset
S – Stop Sight Distance

How to determine HSO?

$$\frac{S/2}{2\pi R} = \frac{\theta}{360} \quad \Rightarrow \quad \theta = \frac{S}{R} \cdot \frac{90}{\pi}$$

$$\theta = 28.65 \cdot \frac{S}{R}$$

$$HSO = R(1 - \cos\theta) = R[1 - cos(\frac{28.65S}{R})]$$

on Page 3-115 of 7th edition of Green Book

Highway Geometric Design - Determine HSO