Construction Zone Design Speed, V (km/h)	f_{max} for Open-Roadway Conditions	Normal Crown Section Minimum Radius, R_{min} (m), e = -0.02	Superelevated Section Minimum Radius, R_{min} (m), e= +0.08
30	0.17	50	30
40	0.17	85	55
50	0.16	145	85
60	0.15	220	125
70	0.14	325	180
80	0.14	420	230
90	0.13	580	305

Notes:

1. *Curve Radus. The radius is calculated from the equation as follows:*

$$R_{\min} = \frac{V^2}{127\,(e + f_{\max})};$$

values shown in the table for design have been rounded up to the next higher 5-m increment.

2. *Normal Crown Section. If the normal crown section is maintained through the horizontal curve, the superelevation rate is -0.02 assuming a typical cross slope of 2%. Therefore, the R_{min} column with e = -0.02 lists the minimum radii which can be used if retaining the normal section through the horizontal curve.*

3. *Other Radii. For a proposed radius or superelevation rate intermediate between the table values, the equation in Note 1 may be used to determine the proper curvature layout. For example, if the construction zone design speed is 100 km/h and the proposed curve radius is 500 m, then the superelevation rate is determined as follows:*

$$e = \frac{V^2}{127\,R} - f$$

$$e = \frac{(100)^2}{(127)(500)} - 0.12$$

$$e = +0.37$$

MINIMUM RADIUS FOR HORIZONTAL CURVE
(Construction Zone)

Figure 82-3A