

3.3M Vertical Alignment

3.3.3M Vertical Curves

3.3.3.3M Crest Vertical Curves: Design Domain Quantitative Aid

The TAC Section **3.3.3.3** is applicable to the Department's highways as written with the following substitution and elaboration:

Table 3.3.2M below sets out Crest K Value corresponding with Stopping Sight Distances set out in chapter 2, a driver eye height of 1.08 m, and an object height of 0.38 m. It replaces Table 3.3.2. Refer to Supplement **2.5.2.1M** for an explanation on object heights.

This recommendation is not intended to substitute design standards for good engineering judgement and it is noted that possible exceptions may include areas of extremely rough terrain, high development areas, environmentally sensitive areas and context-sensitive designs. The intent of this supplement is to ensure the safety and effectiveness of Manitoba's roads for the future.

Table 3.3.2M K Values to Provide Stopping Sight Distance on Crest Vertical Curves

Design Speed (km/h)	Stopping Sight Distance (Table 2.5.2)	Rate of Crest Vertical Curvature (K_c)	
		Computed (minimum)	Rounded (recommended)
20	20	0.7	1
30	35	2.2	3
40	50	4.6	5
50	65	7.7	8
60	85	13.2	15
70	105	20.1	25
80	130	30.1	35
90	160	46.7	50
100	185	62.4	65
110	220	88.3	90
120	250	114.0	115
130	285	148.2	150

Note: In some cases, the K value may need to be increased to satisfy decision sight distance.