R (m)	V_d = 30 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 40 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 50 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 60 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 70 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 80 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 90 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 100 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 110 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 120 km/h e (%)	L (m) 2 Lns	4 Lns
7000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0
5000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0
3000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	56	84	RC	61	92	2.1	67	101
2500	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	50	75	RC	56	84	2.1	61	92	2.4	67	101
2000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	44	66	RC	50	75	2.2	56	84	2.4	61	92	2.8	67	101
1500	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	39	59	RC	44	66	2.3	50	75	2.6	56	84	2.9	61	92	3.3	67	101
1400	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	39	59	2.1	44	66	2.4	50	75	2.7	56	84	3.0	61	92	3.5	67	101
1300	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	39	59	2.2	44	66	2.5	50	75	2.8	56	84	3.1	61	92	3.6	67	101
1200	NC	0	0	NC	0	0	NC	0	0	RC	33	50	RC	39	59	2.3	44	66	2.6	50	75	2.9	56	84	3.3	61	92	3.7	67	101
1000	NC	0	0	NC	0	0	NC	0	0	RC	33	50	2.2	39	59	2.5	44	66	2.8	50	75	3.2	56	84	3.6	61	92	3.9	67	101
900	NC	0	0	NC	0	0	RC	28	42	RC	33	50	2.4	39	59	2.7	44	66	3.0	50	75	3.4	56	84	3.7	61	92	4.0	67	101
800	NC	0	0	NC	0	0	RC	28	42	2.1	33	50	2.5	39	59	2.8	44	66	3.2	50	75	3.5	56	84	3.9	61	92	R_{min} = 870		
700	NC	0	0	NC	0	0	RC	28	42	2.3	33	50	2.7	39	59	3.0	44	66	3.4	50	75	3.7	56	84	4.0	61	92			
600	NC	0	0	RC	22	33	2.1	28	42	2.5	33	50	2.9	39	59	3.2	44	66	3.6	50	75	3.9	56	84	R_{min} = 635					
500	NC	0	0	RC	22	33	2.3	28	42	2.7	33	50	3.1	39	59	3.5	44	66	3.8	50	75	4.0	56	84						
400	NC	0	0	2.1	22	33	2.5	28	42	2.9	33	50	3.4	39	59	3.7	44	66	4.0	50	75	R_{min} = 490								
300	RC	17	26	2.4	22	33	2.8	28	42	3.3	33	50	3.8	39	59	4.0	44	66	R_{min} = 375											
250	RC	17	26	2.6	22	33	3.0	28	42	3.6	33	50	3.9	39	59	R_{min} = 280														
200	2.3	17	26	2.8	22	33	3.3	28	42	3.8	33	50	R_{min} = 215																	
175	2.4	17	26	2.9	22	33	3.5	28	42	3.9	33	50																		
150	2.5	17	26	3.1	22	33	3.7	28	42	4.0	33	50																		
140	2.6	17	26	3.2	22	33	3.8	28	42	R_{min} = 150																				
130	2.6	17	26	3.3	22	33	3.8	28	42																					
120	2.7	17	26	3.4	22	33	3.9	28	42																					
110	2.8	17	26	3.5	22	33	4.0	28	42																					
100	2.9	17	26	3.6	22	33	4.0	28	42																					
90	3.0	17	26	3.7	22	33	R_{min} = 100																							
80	3.2	17	26	3.8	22	33																								
70	3.3	17	26	3.9	22	33																								
60	3.5	17	26	4.0	22	33																								
50	3.7	18	27	R_{min} = 60																										
40	3.9	19	28																											
30	R_{min} = 35																													

e_{max} = **4.0%**
R = radius of curve
V = assumed design speed
e = rate of superelevation
L = minimum length of runoff (does not include tangent runout)
NC = normal crown section
RC = remove adverse crown, superelevate at normal crown slope

Note: Lengths rounded in multiples of 10 m permit simpler calculations.
Use of e_{max} = 4.0% should be limited to urban conditions

R (m)	V_d = 30 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 40 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 50 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 60 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 70 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 80 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 90 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 100 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 110 km/h e (%)	L (m) 2 Lns	4 Lns	V_d = 120 km/h e (%)	L (m) 2 Lns	4 Lns
7000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0
5000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0
3000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	56	84	RC	61	92	2.3	67	101
2500	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	50	75	RC	56	84	2.3	61	92	2.7	67	101
2000	NC	0	0	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	44	66	2.1	50	75	2.5	56	84	2.8	61	92	3.3	67	101
1500	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	39	59	2.2	44	66	2.7	50	75	3.1	56	84	3.6	61	92	4.2	67	101
1400	NC	0	0	NC	0	0	NC	0	0	NC	0	0	RC	39	59	2.4	44	66	2.8	50	75	3.3	56	84	3.8	61	92	4.4	67	101
1300	NC	0	0	NC	0	0	NC	0	0	RC	33	50	2.1	39	59	2.5	44	66	3.0	50	75	3.5	56	84	4.0	61	92	4.7	67	101
1200	NC	0	0	NC	0	0	NC	0	0	RC	33	50	2.2	39	59	2.7	44	66	3.2	50	75	3.7	56	84	4.2	61	92	5.0	67	101
1000	NC	0	0	NC	0	0	RC	28	42	2.1	33	50	2.6	39	59	3.1	44	66	3.6	50	75	4.2	56	84	4.8	61	92	5.5	67	101
900	NC	0	0	NC	0	0	RC	28	42	2.3	33	50	2.8	39	59	3.4	44	66	3.9	50	75	4.5	56	84	5.1	61	92	5.8	67	101
800	NC	0	0	NC	0	0	RC	28	42	2.5	33	50	3.1	39	59	3.6	44	66	4.2	50	75	4.9	56	84	5.4	61	92	6.0	67	101
700	NC	0	0	RC	22	33	2.1	28	42	2.8	33	50	3.4	39	59	4.0	44	66	4.6	50	75	5.2	56	84	5.7	61	92	R_{min} = 755		
600	NC	0	0	RC	22	33	2.4	28	42	3.1	33	50	3.8	39	59	4.3	44	66	5.0	50	75	5.6	56	84	6.0	61	92			
500	NC	0	0	2.1	22	33	2.8	28	42	3.5	33	50	4.2	39	59	4.8	44	66	5.4	50	75	5.9	56	84	R_{min} = 560					
400	RC	17	26	2.5	22	33	3.3	28	42	4.0	33	50	4.7	39	59	5.3	44	66	5.9	50	75	R_{min} = 435								
300	RC	17	26	3.1	22	33	3.9	28	42	4.6	33	50	5.4	39	59	5.9	44	66	R_{min} = 335											
250	2.3	17	26	3.5	22	33	4.2	28	42	5.0	33	50	5.7	39	59	6.0	44	66												
200	2.8	17	26	3.9	22	33	4.7	28	42	5.5	33	50	6.0	39	59	R_{min} = 250														
175	3.0	17	26	4.1	22	33	5.0	28	42	5.8	35	52	R_{min} = 195																	
150	3.3	17	26	4.4	23	34	5.3	29	43	5.9	35	53																		
140	3.5	17	26	4.5	23	35	5.4	29	44	6.0	36	54																		
130	3.6	17	26	4.6	24	36	5.6	30	45	R_{min} = 135																				
120	3.8	18	27	4.8	25	37	5.7	31	46																					
110	3.9	19	28	5.0	26	39	5.8	31	47																					
100	4.1	20	29	5.2	27	40	5.9	32	48																					
90	4.2	20	30	5.4	28	42	6.0	32	49																					
80	4.5	22	32	5.6	29	43	R_{min} = 90																							
70	4.7	23	34	5.8	30	45																								
60	5.0	24	36	6.0	31	46																								
50	5.4	26	39	R_{min} = 55																										
40	5.8	28	42																											
30	6.0	29	43																											
	R_{min} = 30																													

e_{max} = **6.0%**
R = radius of curve
V = assumed design speed
e = rate of superelevation
L = minimum length of runoff (does not include tangent runout)
NC = normal crown section
RC = remove adverse crown, superelevate at normal crown slope

Note: Lengths rounded in multiples of 10 m permit simpler calculations.

Table 200.04

Values for Design Elements Related to Speed and Horizontal Curvature

From AASHTO, 1994, "A Policy on Geometric Design of Highways and Streets"