

Design Element		Manual Section	Area Road		Circulation Road	Primary Access Road	
Design Controls	Design Year Traffic (Current AADT)	40-2.0	1-Lane (1a)	2-Lanes (1b)	2-Lanes (1b)	2-Lanes (1b)	
	Design Forecast Year	40-2.0	< 100	≥ 100	≥ 100	≥ 100	
	Design Speed (km/h)	40-3.0	Current				
	Access Control	40-5.0	20-30	20-30	40-60	50-70	
	Level of Service	40-2.0	None (2)				
Section Elements	Travel Lane	Width	Desirable: B; Minimum: D				
			51-6.02(05), 45-1.0	3.6 to 4.2 m (3)	2.7 to 3.6 m	3.0 or 3.3 m	3.3 or 3.6 m
	Shoulder	Typical Surface Type	HMA / Aggregate		HMA	HMA	
			51-6.02(05), 45-1.0	0.3 m	0.6 m	0.6 to 1.2m	0.6 to 1.2 m
	Cross Slopes	Typical Surface Type	Aggregate/Earth				
			45-1.0	2% if HMA; 6% if Aggregate 6% if Aggregate; 8% if Earth			
	Auxiliary Lanes	Shoulder Width	Desirable: 3.0 m				
			51-6.02(05), 45-1.0	Desirable: 0.6 m; Minimum: 0.3 m			
	Obstruction Free Zone (5)	Side Slopes	Cut	Desirable: 1.0 m		Desirable: 2.0 m	Desirable: 3.0 m
				Desirable: 4.1; Maximum: 1½:1		Minimum: 0 m (V-Ditch)	Desirable: 4.1; Maximum: 1½:1
Desirable: 4.1; Maximum: 1½:1							
Desirable: 4.1; Maximum: 1½:1							
New and Reconstructed Bridges		Structural Capacity	Part VI		HS-20		
Bridges	Existing Bridges to Remain in Place	Clear Roadway Width	45-4.0		Travelway + 1.5 m	Travelway + Shoulders	
		Structural Capacity	Part VI		HS-15		
	Vertical Clearance (Recreational Road Under)	Clear Roadway Width	45-4.0		Minimum: Travelway		
		New and Replaced Overpassing Bridges	44-4.0		4.45 m		
			Existing Overpassing Bridges			4.30 m	
Vertical Clearance (Recreational Road Over Railroad) (6)		Ch. 69	7.00 m				

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Figure 51-6B

Design Element			Manual Section	20 km/h	30 km/h	40 km/h	50 km/h	60 km/h	70 km/h	
Alignment Elements	Stopping Sight Distance	2-Lane (1b)	51-6.02(02), 42-1.0	20 m	35 m	50 m	65 m	85 m	105 m	
		1-Lane (1a)		40 m	70 m	n/a	n/a	n/a	n/a	
	Passing Sight Distance		42-3.0	n/a	n/a	n/a	345 m	410 m	485 m	
	Intersection Sight Distance		46-10.0	45 m	65 m	85 m	105 m	130 m	150 m	
	Minimum Radius (e=4%)		51-6.02(04), 43-2.0	15 m	35 m	60 m	100 m	150 m	215 m	
	Superelevation Rate		51-6.02(04), 43-3.0	n/a	emax = 4%					
	Horizontal Sight Distance		51-6.02(04), 43-4.0	(7)						
	Vertical Curvature (K-values)	Crest	2-Lane (1b)	1	2	4	7	11	17	
			1-Lane (1a)	2	7	n/a	n/a	n/a	n/a	
		Sag	2-Lane (1b)	3	6	9	13	18	23	
1-Lane (1a)			6	13	n/a	n/a	n/a	n/a		
Maximum Grade	Level		44-1.02	8%	8%	7%	7%	7%	7%	
	Rolling			12%	11%	10%	10%	9%	8.5%	
Minimum Grade		44-1.03	Desirable: 0.5%; Minimum: 0.0%							

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Figure 51-6B (Continued)