

Design Element				Manual Section	Design Criteria		
Design Controls	Design Forecast Year			9.6.2	20 Years		
	Design Year Traffic (ADT)			9.6.3	0 to 400	400 to 2000	Over 2000
	*Design Speed (maximum)	Level		9.5.2	60 mph		
		Rolling			50 mph		
		Mountainous			40 mph		
	Access Control			9.8	Controlled by Regulation		
Level of Service			9.6.4	C			
Cross Section Elements	*Travel Lane Width			13.2.3	11' (1a)	11'	12' (1b)
	*Shoulder Width (2a)			13.2.4	6' (2b)	6' (2b)	8'
	Auxiliary Lanes	Lane Width		13.2.5	11'	11'	12'
		Shoulder Width			6'	6'	8'
	Cross Slope	*Travel Lane		13.2.3.3	2.08%		
		Auxiliary Lane		13.2.5	2.08%		
		*Shoulder		13.2.4.3	8.33%		
TWLTL Width			21.2.7	15'			
Roadway Slopes	Side Slopes	Cut Section	Foreslope	13.3.1	6H:1V to 4H:1V		
			Ditch Type		V-Ditch		
			Back Slope		4H:1V to 2H:1V		
			Rock Cut		0.25H:1V		
		Fill Section	0' – 5'		6H:1V		
			5' – 10'		4H:1V		
			> 10'		2H:1V		
	Clear Zone			14.3	(3)		
	Bridges	New and Reconstructed Bridges	*Structural Capacity			HL-93	
*Clear Roadway Width (4)			13.5.1.1	34'	34'	40'	
Existing Bridges to Remain in Place		*Structural Capacity			H-15		
		*Clear Roadway Width		13.5.1.1	22'	24'	28'
*Vertical Clearance (Collector Under) (5a)		New/Replaced Overpassing Bridges (5b)		12.6	16'-0"		
		Existing Overpassing Bridges			16'-0"		
		Pedestrian Bridges			18'-0"		
		Overhead Signs			17'-6"		
Clearance (Collector Over)	*Railroads		12.6	23'-0"			
	Underpass Width		13.5.2	Traveled Way plus Clear Zone			

*Controlling design criteria (see Section 9.2)

Design Criteria for Rural Two-Lane Collectors (New Construction/Reconstruction)
Figure 20.1E (SCHDM 2003)