

GEOMETRIC DESIGN STANDARDS FOR RURAL MINOR ARTERIAL SYSTEM GS-2M)

TRAFFIC VOLUME	TERRAIN	DESIGN SPEED (km/h)	MINIMUM RADIUS (METERS)	(8)	(2)	(3)		(4)		(5)	(6)	(7)
				STOPPING SIGHT DISTANCE (METERS)		MIN. WIDTH OF TOTAL SHOULDERS (GRADED & PAVED)	PAVED SHOULDER WIDTH	MIN. WIDTH OF DITCH FRONT SLOPE	FILL W/GR			
				MIN.								
(1) ADT OVER 2000	LEVEL	110	502	220	3.6 m	3.9 m	3.0 m	2.4 m	1.2 m	3.0 m	CS-4, CS-4A OR CS-4C	3.0 m PLUS PAVEMENT WIDTH PLUS 3.0 m
		100	394	185								
	ROLLING	100	394	185								
		80	230	130								
	MOUNTAINOUS	80	230	130								
		60	124	85								
(1) ADT 1500 TO 2000	LEVEL	110	502	220	3.6 m	3.3 m	2.4 m	1.8 m	1.2 m	1.8 m	CS-4, CS-4A OR CS-4C	2.4 m PLUS PAVEMENT WIDTH PLUS 2.4 m
		100	394	185								
	ROLLING	100	394	185								
		80	230	130								
	MOUNTAINOUS	80	230	130								
		60	124	85								
(1) ADT 400 TO 1500	LEVEL	110	502	220	3.6 m	3.3 m	2.4 m	1.8 m	1.2 m	1.8 m	CS-4, CS-4A OR CS-4C	1.8 m PLUS PAVEMENT WIDTH PLUS 1.8 m
		100	394	185								
	ROLLING	100	394	185								
		80	230	130								
	MOUNTAINOUS	80	230	130								
		60	124	85								
CURRENT ADT UNDER 400	LEVEL	110	502	220	3.6 m	2.7 m	1.8 m	1.2 m	1.2 m	1.8 m	CS-4, CS-4A OR CS-4C	1.8 m PLUS PAVEMENT WIDTH PLUS 1.8 m
		100	394	185								
	ROLLING	100	394	185								
		80	230	130								
	MOUNTAINOUS	80	230	130								
		60	124	85								

GENERAL NOTES

Rural Minor Arterials are designed with design speeds of 80 to 110 km/h, dependent on terrain features and traffic volumes, and occasionally may be as low as 60 km/h in mountainous terrain.

In incorporated towns or other built-up areas, Urban Standard GS-6(M) may be used for design. "Built-up" is where there is sufficient development along the roadway that justifies a need to channelize traffic into and out of properties utilizing curb and gutter.

Standard TC-5.01R(M) (2001 AASHTO Green Book) superelevation based on 8% maximum is to be used for Rural Minor Arterials.

If medians are included, see Section 2E of the Road Design Manual.

Clear zone and Recoverable Area information can be found in Appendix A(M), Section A-2(M) of the Road Design Manual.

For Passing Sight Distance Criteria See Current AASHTO Green Book.

For maximum grades relative to terrain and design speed, see AASHTO Green Book, Chapter 7, Exhibit 7-2.

- (2) Lane width to be 3.6 m at all interchange locations. For projects not on the National Highway System, width of traveled way may remain at 6.6 m on reconstructed highways where alignment and safety records are satisfactory.
- (3) If graded median is used, the width of median shoulder is to be 2.4 m. A hydraulic analysis is necessary to determine actual depth requirement.
- (4) The Paved widths shown are the widths to be used if the Materials Division recommends the shoulders be paved or stabilized. When the mainline is 4 lanes (both directions) a minimum 2.4 m wide paved shoulder will be provided on the right of traffic and a minimum 1.2 m wide paved shoulder on the median side. Where the mainline is 6 or more lanes, both right and median paved shoulders will be 2.4 m in width. If paved shoulders are not recommended by the Materials Division the mainline pavement structure will be extended 0.3 m at the same slope into the shoulder to eliminate raveling of the pavement edge. For additional guidance on shoulder widths, see the AASHTO Green Book, Chapter 7.
- (5) Ditch slopes to be 6:1 - 3.0 m width, 4:1 - 1.8 m width.
- (6) Additional or modified slope criteria to be applied where shown on typical sections.
- (7) Vertical clearance at roadway underpasses for new and reconstructed bridges is to be 5.05 m (0.3 m additional clearance required for non-vehicular overpasses).
- (8) For additional information on sight distance requirements on grades of 3 percent or greater, see Exhibit 3-2 of the 2004 AASHTO Green Book.

FOOTNOTES

- (1) Use Design Year ADT for new construction and reconstruction projects (not applicable to R.R.R. projects or roads with ADT < 400) in accordance with Road Design Manual, Chapter 2A, "REQUEST FOR TRAFFIC DATA" and Form LD-104.

FIGURE A - 1 - 2M*