

4.2.3

WRC
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Jan 26/16

HIGHWAY CLASSIFICATION

	FREEWAY		ARTERIAL				COLLECTOR			LOCAL				TRUCK ROUTE	
	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E	TYPE F	TYPE G	TYPE H	TYPE I	TYPE J	TYPE M	TYPE N			
Design Year Traffic, ADOT	>10000	<10000	>5000	<5000	>3000	<3000	>300	<300	<50						
Design Hourly Volume	>450	<450	>450	<450	>250	<250									
Design Speed Range, km/h	120-90	110-90	100-80	90-80	90-80	80-70	80-60	70-50		50	90-80	80-50			
Gradient - Maximum, %	6	6	7	7	8	9	10	12		8	7	9			
Surface Type	Paved	Paved	Paved	Paved	Paved	Paved	Optional	Unpaved	Unpaved	Optional	Paved	Optional			
Lane Width, m	3.7	3.7	3.7	3.5	3.5	3.3	3.0			3.0	3.5	3.3			
Shoulder Type	Paved 2.5	Paved 1.0	Paved 0.5	Paved 0.5	Opt.0.2	Unpaved	Unpaved			Optional	Unpaved	Unpaved			
Shoulder Width (usable), m	2.8	2.5	2.2	2.2	2.0	1.5	1.2			1.6	2.0	1.2			
Shoulder Rounding, m	0.8	0.8	0.6	0.6	0.4	0.4	0.4			0.4	0.6	0.4			
Finished Top Width, m	14.8	14.0	12.6	12.6	11.8	10.4	9.2	8.0	6.6	10.0	12.2	9.8			
Side Slopes (a)	4:1	4:1	3:1	3:1	2:1	2:1	2:1	1.5:1	1.5:1	2:1	2:1	2:1			
Back Slopes (b)	2:1	2:1	2:1	2:1	2:1	2:1	2:1	1.5:1	1.5:1	2:1	2:1	2:1			

DESIGN SPEED PARAMETERS

Design Speed, km/h	120	110	100	90	80	70	60	50
Posted Speed - Maximum, km/h	120	110	100	90	80	70	60	50
Horizontal Curve - Minimum Radius, m (c)	600	475	360	300	230	170	120	90
Stopping Sight Distance - Minimum, m (d)	240	220	200	170	140	110	85	65
Vertical Sag Curve - Minimum, k (e)	60	55	50	40	30	25	20	11
Vertical Crest Curve - Minimum, k	105	85	70	55	35	22	15	7
Passing Sight Distance - Minimum, m	800	740	680	620	560	490	420	340

DESIGN LOADING PARAMETERS

	ALL YEAR	SEASONAL
Loading GW, kg	50000	38500
Design Deflection, micro-m (f)	32	37
Asphalt Concrete Thickness, mm	150	150
Granular Thickness, mm	525	425
		325

- NOTES:**
1. On embankments over 3m, side slopes may be reduced to 2:1 with the installation of guard rail if economically feasible.
 2. Maximum back slopes to be 2:1 but better slopes will be permitted for slope stability as determined by laboratory tests. Back slopes in cuts over 3m must be determined by laboratory tests prior to construction.
 3. Horizontal curves are based on maximum superelevation of 0.08 m/m.
 4. Stopping distance is based on height of eye of 1.05m and height of object of 380mm.
 5. Vertical sag curve k-values are based on headlight control.
 6. Design deflection of 48 micro-m to be used for seasonal loading where ADOT >2000.

NEW SOUTH WALES DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

HIGHWAY DESIGN STANDARDS

Drawn by: Date:	Approved by: Title: Date:
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