

DESIGN GUIDE

PARAMETER	FUNCTIONAL CLASSIFICATION	FREEWAY & MAJOR ARTERIAL A,B	MINOR ARTERIAL		COLLECTOR		LOCAL				TRUCK ROUTE	
			C	D	MAJOR E	MINOR F	G	H	I	J	M	N
DESIGN YEAR TRAFFIC. AADT		>10000	>5000	<5000	>3000	<3000	>300	<300	<50			
DESIGN HOURLY VOLUME		>450	>450	<450	>250	<250						
DESIGN SPEED RANGE, km/h		120-90	100-80	90-80	90-80	80-70	80-60	70-50		50	90-80	80-50
GRADIENT - MAXIMUM, %		6	7	7	8	9	10	12		8	7	9
SURFACE TYPE		PAVED	PAVED	PAVED	PAVED	PAVED	OPTIONAL	UNPAVED	UNPAVED	OPTIONAL	PAVED	OPTIONAL
LANE WIDTH, m		3.7	3.7	3.5	3.5	3.3	3.0	4.0	3.3	3.0	3.5	3.3
SHOULDER TYPE		PAVED OUT-2.0 IN-1.5	PAVED 0.5	PAVED 0.3	PAVED 0.0-0.2 (1)	UNPAVED	UNPAVED			OPTIONAL	UNPAVED	UNPAVED
SHOULDER WIDTH (USEABLE), m		OUT-2.5 IN-2.0	2.2	2.0	2.0	1.5	1.2			1.6	2.0	1.2
SHOULDER ROUNDING, m(11)		0.8	0.6	0.6	0.4	0.4	0.4			0.4	0.6	0.4
FINISHED TOP WIDTH, m		11.9-12.4	11.8	11.0	11.0	9.6	8.4	8.0	6.6	9.2	11.0	9.0
SIDE SLOPES (2)		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 (3)		3:1	2:1	2:1	2:1	2:1	2:1	1.5:1	1.5:1	2:1	2:1	2:1
MINIMUM ROW WIDTH(4)		150 & 60	60	60	50	50	40	30	30	40	50	50

DESIGN SPEED PARAMETERS (5)(10)

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(6)(7)	750	600	$\frac{440}{1270 (7)}$	340	250	190	130	90
STOPPING SIGHT DISTANCE - MINIMUM, m(8)	290	250	210	170	140	110	85	65
VERTICAL SAG CURVE - MINIMUM, k(9)	60	55	50	40	30	25	20	11
VERTICAL CREST CURVE - MINIMUM, k(9)	105	85	70	55	35	22	15	7
PASSING SIGHT DISTANCE - MINIMUM, m	800	730	680	610	550	490	410	350

NOTES:

- 0.0 FOR AADT <5000; 0.2 FOR AADT >5000.
- ON EMBANKMENTS OVER 3m, MAY BE REDUCED TO 2:1 WITH THE INSTALLATION OF GUARDRAIL IF ECONOMICALLY FEASIBLE.
- MAXIMUM SLOPES; STEEPER SLOPES MAY BE PERMITTED AS DETERMINED BY LABORATORY TESTS; IN CUTS OVER 3m MUST BE DETERMINED BY LABORATORY TESTS PRIOR TO CONSTRUCTION.
- ROW LIMIT TO BE ADJUSTED TO ALLOW FOR MINIMUM OF 5.0m BEYOND DAYLIGHT LOCATION OR EXCEPTIONALLY 3.0m MAY BE ACCEPTABLE.
- RURAL; FOR URBAN SEE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.
- BASED ON MAXIMUM SUPER ELEVATION OF 0.06 m/m.
- MINIMUM RADIUS REQUIRED TO ACHIEVE HORIZONTAL SIGHT DISTANCE WHEN JERSEY BARRIER USED.
- BASED ON EYE HEIGHT OF 1.05m AND OBJECT HEIGHT OF 380mm.
- K-VALUES ARE BASED ON HEADLIGHT CONTROL.
- THE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS SHOULD BE CONSULTED WHEN COMBINING MINIMUM VALUES.
- ROUNDING CENTERED ON SHOULDER BREAK POINT IF GUARDRAIL NOT INSTALLED.

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No.	REVISION

Scale : N.T.S.
 Drawn by : G.WRIGHT
 Checked by : K.BODDY
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HIGHWAY DESIGN GUIDELINES