
APPENDIX 8

DESIGN CRITERIA

ITEM	City (For Design Speed 50 km/h)	RVA PROPOSED STANDARD
CLASSIFICATION		
ROAD CLASSIFICATIONS (Neighbourhood Connector)		NC (ULU)
DESIGN SPEED (km/h)	50	50
POSTED SPEED (km/h)	50	50
HORIZONTAL ALIGNMENTS		
NC NORMAL CROWN (-0.02m/m) Rmin. (m)	1100	1100
RC REVERSE CROWN (+0.02m/m) Rmin (m) , e=0.02	750	750
CURVE RADIUS WITH SUPERELEV. RATE e=0.04 Rmin (m)	250	250
CURVE RADIUS WITH SUPERELEV. RATE e=0.06 Rmin (m)	90	90
APPROACH TAPER (m)	60	60
PARALLEL AND STORAGE LANE FOR LEFT TURN (m)	20m +	20m +
CROSS SECTIONS		
THROUGH LANE WIDTH (m)	3.3	3.3
CURB LANE WIDTH (SINGLE LANE PER DIRECTION) (m)	3.5	3.5
BIKE LANE WIDTH (m)	1.5m + 1.0m Buffer	1.5m + 1.0m Buffer
RIGHT TURN LANE WIDTH (m)	3.0	3.0
LEFT TURN LANE WIDTH (m)	3.0	3.0
2-WAY LEFT TURN LANE WIDTH (m)	4.0	4.0
TANGENT SECTION CROSS FALL, ASPHALT PAVEMENT (%)	2%	2%
SUBGRADE CROSS FALL (%)	3%	3%
RAISED MEDIAN WIDTH (m)	2.0 - 5.0	2.0 - 5.0
RAISED MEDIAN WIDTH, ADJACENT TO LEFT TURN LANE, (m)	2.0	2.0
MULTI-USE PATHWAY (TWO WAY SHARED WITH PEDESTRIANS) (m)	3.0 - 6.0	3.0
SIDEWALK WIDTH (m)	1.5-1.8	1.5-1.8
BOULEVARD WIDTH (m)	0.0 - 1.5	0.0 - 1.5
RIGHT OF WAY		
STANDARD ROW WIDTH (m)	23.0	23.0
VERTICAL ALIGNMENTS		
MINIMUM GRADE (%)	0.5%	0.5%
MAXIMUM GRADE (%)	6.0%	6.0%
SAG VERTICAL CURVE Kmin. - COMFORT CONTROL	18	18
CREST VERTICAL CURVE Kmin.	15	15
DRIVEWAYS and INTERSECTIONS		
MINIMUM CURB RADIUS AT INTERSECTION (m)	Table 2.1.4	Table 2.1.4

ITEM	City (For Design Speed 70 km/h)	PROPOSED STANDARD
CLASSIFICATION		
ROAD CLASSIFICATIONS (UT = Urban Thoroughfare)	UT (UAU)	UT (UAU)
DESIGN SPEED (km/h)	70	70
POSTED SPEED (km/h)	60	60
HORIZONTAL ALIGNMENTS		
NC NORMAL CROWN (-0.02m/m) $R_{min.}$ (m)	2200	2200
RC REVERSE CROWN (+0.02m/m) $R_{min.}$ (m), $e=0.02$	1500	1500
CURVE RADIUS WITH SUPERELEV. RATE $e=0.04$ $R_{min.}$ (m)	500	500
CURVE RADIUS WITH SUPERELEV. RATE $e=0.06$ $R_{min.}$ (m)	190	190
APPROACH TAPER (m)	70	70
PARALLEL AND STORAGE LANE FOR LEFT TURN (m)	40m +	40m +
CROSS SECTIONS		
THROUGH LANE WIDTH (m)	3.3	3.3
CURB LANE WIDTH (SINGLE LANE PER DIRECTION) (m)	3.5	3.5
BIKE LANE WIDTH (m)	1.5m + 1.0m Buffer	1.5m + 1.0m Buffer
RIGHT TURN LANE WIDTH (m)	3.0	3.0
LEFT TURN LANE WIDTH (m)	3.0	3.0
2-WAY LEFT TURN LANE WIDTH (m)	4.0	4.0
TANGENT SECTION CROSS FALL, ASPHALT PAVEMENT (%)	2%	2%
SUBGRADE CROSS FALL (%)	3%	3%
RAISED MEDIAN WIDTH (m)	2.0 - 5.0	2.0 - 5.0
RAISED MEDIAN WIDTH, ADJACENT TO LEFT TURN LANE, (m)	2.0	2.0
MULTI-USE PATHWAY (TWO WAY SHARED WITH PEDESTRIANS) (m)	3.0 - 6.0	3.0
SIDEWALK WIDTH (m)	1.5-1.8	1.5-1.8
BOULEVARD WIDTH (m)	0.0 - 1.5	0.0 - 1.5
RIGHT OF WAY		
STANDARD ROW WIDTH (m)	45.0	45.0
VERTICAL ALIGNMENTS		
MINIMUM GRADE (%)	0.5%	0.5%
MAXIMUM GRADE (%)	6.0%	6.0%
SAG VERTICAL CURVE $K_{min.}$ - COMFORT CONTROL	25	25
CREST VERTICAL CURVE $K_{min.}$	25	25
DECISION SIGHT DISTANCE (m)		
DRIVEWAYS and INTERSECTIONS		
MINIMUM CURB RADIUS AT INTERSECTION (m)	Table 2.1.4	Table 2.1.4
ROUNDBABOUTS		
Design Vehicle	WB17.5	WB17.5
London's Design Specifications & Requirements Manual, OTM Book 12 and 12A, the 2017 TAC Geometric Design Guide for Canadian Roads (Chapter 9: Intersections) and the 2017 TAC Roundabout Design Guide.		

ITEM	City (For Design Speed 90 km/h)	RVA PROPOSED STANDARD
CLASSIFICATION		
ROAD CLASSIFICATIONS (RT = Rural Thoroughfare)	RT (RAU)	RT (UAU)
DESIGN SPEED (km/h)	90	90
POSTED SPEED (km/h)	80	80
HORIZONTAL ALIGNMENTS		
NC NORMAL CROWN (-0.02m/m) Rmin. (m)	3500	3500
RC REVERSE CROWN (+0.02m/m) Rmin (m) , e=0.04	2500	2500
CURVE RADIUS WITH SUPERELEV. RATE e=0.04 Rmin (m)	875	875
CURVE RADIUS WITH SUPERELEV. RATE e=0.06 Rmin (m)	340	340
APPROACH TAPER (m)	90	90
PARALLEL AND STORAGE LANE FOR LEFT TURN (m)	60 +	60 +
CROSS SECTIONS		
THROUGH LANE WIDTH (m)	3.3	3.3
CURB LANE WIDTH (SINGLE LANE PER DIRECTION) (m)	3.5	3.5
BIKE LANE WIDTH (m)	1.5	1.5
RIGHT TURN LANE WIDTH (m)	3.0	3.0
LEFT TURN LANE WIDTH (m)	3.0	3.0
SHOULDER WIDTH (m)	3.0m (2.5m Paved, 0.5m Gravel)	3.0m (2.5m Paved, 0.5m Gravel)
TANGENT SECTION CROSS FALL, ASPHALT PAVEMENT (%)	2%	2%
SUBGRADE CROSS FALL (%)	3%	3%
RAISED MEDIAN WIDTH (m)	5.0	N/A
RAISED MEDIAN WIDTH, ADJACENT TO LEFT TURN LANE, (m)	2.0	1.9
MULTI-USE PATHWAY (TWO WAY SHARED WITH PEDESTRIANS) (m)	3.0 - 6.0	3.0
SIDEWALK WIDTH (m)	1.8-2.0	1.5
BOULEVARD WIDTH (m)	1.50 - 3.0	0.5-1.5
RIGHT OF WAY		
STANDARD ROW WIDTH (m)	36.0	36.0
VERTICAL ALIGNMENTS		
MINIMUM GRADE (%)	0.5%	0.5%
MAXIMUM GRADE (%)	6.0%	6.0%
SAG VERTICAL CURVE Kmin. - COMFORT CONTROL	40	40
CREST VERTICAL CURVE Kmin.	50	50
DRIVEWAYS and INTERSECTIONS		
MINIMUM CURB RADIUS AT INTERSECTION WITH ARTERIAL OR COLLECTOR ROAD (m)	Table 2.1.3	Table 2.1.3