

Principle Arterial

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
≥ 20,000	4 (min)	WB - 21	55.8 m (min)	800 m (see TAC Manual)
FUNCTION				
<ul style="list-style-type: none"> • Cross-city traffic movement and connections between highways. • Primary purpose: Traffic Movement Transportation and Drainage Corridor • Secondary purpose: Restricted neighborhood access Utility corridor Evacuation Route • Spacing optimally at section lines or approximately 1.6 km on center (may be replaced by a higher classification of road) 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> • Direct Driveway Access is restricted. All-turns driveways are prohibited unless access traffic volumes warrant a signalized intersection. Access design to conform to Access Management guidelines in TAC Standard. • A desirable spacing of 800m between signalized intersections should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. • Expressways may intersect with, other Principal Arterial roadways, Minor Arterial roadways, Major Collector roadways, Industrial Collector roadways, and Country Residential roadways. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	60, 70, or 80		<ul style="list-style-type: none"> • New Principle Arterial roadways are to be provided with sufficient ROW at intersections for the construction of auxiliary lanes and turning lanes and may require ROW for grade separated interchange • 2 – 3.7 m wide driving lanes in each direction of travel separated by a 5.5 m wide median. Left or right turning lane width - 3.7m • Speed differential between through traffic and turning vehicles limited to 25 km/h • Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. • Progression band cycle length (%) = 40% min (25% at peak hour) • Auxiliary left & right turn lanes will be required at intersections, with adequate queuing lengths to limit speed differential and store all turning vehicles with a probability of 85 – 95% • Traffic signal cycle lengths = 45 – 90 seconds (90 – 120 seconds at peak hour). • Intersection widening required to accommodate turning traffic volumes and queues. 	
Parking	Not permitted on new roadways			
Pavement Width	7.4m in each direction (min)			
Sidewalk	Requirements for pedestrian accommodation determined on a case by case basis			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, No stops			
Truck Route	Yes			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use		TYPICAL CROSS SECTION See Standard Drawing RD-101	

Minor Arterial Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
10,000 – 30,000	4	WB - 17	47.0 m (min)	400 m (see TAC Manual)
FUNCTION				
<ul style="list-style-type: none"> Inter neighborhood or intercommunity traffic movement, Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Restricted property access Utility corridor Evacuation Route Spacing optimally at section lines or approximately 1.6 km on center (may be replaced by a higher classification of road) 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is restricted. All-turns driveways are prohibited unless access traffic volumes warrant a signalized intersection. Access design to conform to Access Management guidelines in TAC Standard. A desirable spacing of 400m to 800m between signalized intersections should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. Arterial roadways may intersect with, other Arterial roadways, Collector roadways, Local Industrial roadways, and Country Residential roadways. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50, 60, or 70		<ul style="list-style-type: none"> New Minor Arterial Roadways are to be provided with sufficient ROW at intersections for the construction of auxiliary lanes and turning lanes when they are required. 2 – 3.7 m wide driving lanes in each direction of travel separated by a 5.5 m wide median. Left or right turning lane width - 3.7m Speed differential between through traffic and turning vehicles limited to 25 km/h Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Progression band cycle length (%) = 40% min (25% at peak hour) Auxiliary left & right turn lanes may be required at intersections, with adequate queuing lengths to limit speed differential and store all turning vehicles with a probability of 85 – 95% Traffic signal cycle lengths = 45 – 90 seconds (90 – 120 seconds at peak hour). Intersection widening required to accommodate turning traffic volumes and queues. 	
Parking	Not permitted on new roadways			
Pavement Width	7.4m in each direction (min)			
Sidewalk	2.4 metre bicycle pathway on both sides of road			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Stops require turnouts or bus bays			
Truck Route	Yes			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use		TYPICAL CROSS SECTION See Standard Drawing RD-102, 103 & 104	

Minor Arterial Roadway Industrial Section

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
10,000 – 30,000	4	WB - 21	38.0 m (min)	400 m (see TAC Manual)
FUNCTION				
<ul style="list-style-type: none"> Inter neighborhood or intercommunity traffic movement, Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Restricted property access Utility corridor Evacuation Route Spacing optimally at section lines or approximately 1.6 km on center (may be replaced by a higher classification of road) 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is restricted. All-turns driveways are prohibited unless access traffic volumes warrant a signalized intersection. Access design to conform to Access Management guidelines in TAC Standard. A desirable spacing of 400m to 800m between signalized intersections should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. Arterial roadways may intersect with, other Arterial roadways, Collector roadways, Local Industrial roadways, and Country Residential roadways. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50, 60, or 70		<ul style="list-style-type: none"> New Minor Arterial Roadways are to be provided with sufficient ROW at intersections for the construction of left and right turning lanes when they are required. 2 – 3.7 m wide driving lanes in each direction of travel separated by a 5.5 m wide median. Left or right turning lane width - 3.7m Speed differential between through traffic and turning vehicles limited to 25 km/h Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Progression band cycle length (%) = 40% min (25% at peak hour) Auxiliary left & right turn lanes may be required at intersections, with adequate queuing lengths to limit speed differential and store all turning vehicles with a probability of 85 – 95% Traffic signal cycle lengths = 45 – 90 seconds (90 – 120 seconds at peak hour). Intersection widening required to accommodate turning traffic volumes and queues. 	
Parking	Not permitted on new roadways			
Pavement Width	7.4m in each direction (min)			
Sidewalk	2.4 metre bicycle pathway on one side			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Stops require turnouts or bus bays			
Truck Route	Yes			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use			
			TYPICAL CROSS SECTION See Standard Drawing RD-105 & 106	

Undivided Arterial Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
5,000 – 20,000	4	WB - 17	30.0 m (min)	200 m
FUNCTION				
<ul style="list-style-type: none"> Inter neighborhood or intercommunity traffic movement, Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Controlled property access Utility corridor Evacuation Route Spacing optimally at section lines or approximately 1.6 km on center 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is restricted. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 400m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 200m. Arterial roadways may intersect with, other Arterial roadways, Collector roadways, Local Industrial roadways, and Country Residential roadways. 				
TRAFFIC FEATURES				NOTE
Posted Speed (km/h)	50, 60 or 70			<ul style="list-style-type: none"> New Undivided Arterial Roadways are to be provided with sufficient ROW at intersections for the construction of left and right turning lanes when these are required. 2 – 3.7 m wide driving lanes in each direction for a total of 4 driving lanes. Left or right turning lane width - 3.7m Speed differential between through traffic and turning vehicles limited to 25 km/h Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Progression band cycle length (%) = 40% min (25% at peak hour) Auxiliary left & right turn lanes may be required at intersections, with adequate queuing lengths to limit speed differential and store all turning vehicles with a probability of 85 – 95% Traffic signal cycle lengths = 45 – 90 seconds (90 – 120 seconds at peak hour) Intersection widening required to accommodate turning traffic volumes and queues. Undivided Arterials are not to be used in new development
Parking	Restricted			
Pavement Width	14.8m plus turning lanes			
Sidewalk	1.8m separate walk or a separate 2.4 metre bicycle pathway with a 2.0m min. boulevard			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use			
				TYPICAL CROSS SECTION See Standard Drawing RD-107

Undivided Arterial Roadway With Two-Way Left Turn Lane

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
5,000 – 12,000 (3 lane) or 10,000 – 20,000 (5 lane)	3 or 5	WB – 17 WB – 21 (industrial)	30.0 m (min)	200 m
FUNCTION				
<ul style="list-style-type: none"> Inter neighborhood or intercommunity traffic movement, Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Controlled property access Utility corridor Evacuation Route Spacing optimally at section lines or approximately 1.6 km on center 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is restricted. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 400m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 200m. Arterial roadways may intersect with, other Arterial roadways, Collector roadways, Local Industrial roadways, and Country Residential roadways. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50 or 60		<ul style="list-style-type: none"> New Undivided Arterial Roadways are to be provided with sufficient ROW at intersections for the construction of left and right turning lanes when these are required. 2 – 3.7 m wide driving lanes in each direction for a total of 4 driving lanes. Left or right turning lane width - 3.7m, Two-Way-Left turn lane width – 4.2m Speed differential between through traffic and turning vehicles limited to 25 km/h Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Progression band cycle length (%) = 40% min (25% at peak hour) Auxiliary left & right turn lanes may be required at intersections, with adequate queuing lengths to limit speed differential and store all turning vehicles with a probability of 85 – 95% Traffic signal cycle lengths = 45 – 90 seconds (90 – 120 seconds at peak hour) Intersection widening required to accommodate turning traffic volumes and queues. Undivided Arterials are not to be used in new development 	
Parking	Restricted			
Pavement Width	11.6 m or 19.0m (including a 4.2 m 2WLTL)			
Sidewalk	1.8m separate walk or a separate 2.4 metre bicycle pathway with a 2.0m min. boulevard			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use		TYPICAL CROSS SECTION See Standard Drawing RD-107	

Major Collector Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
1,000 – 12,000	4	WB-15	24.0 m (min)	100 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Controlled property access Utility corridor Evacuation Route Used where the Daily Traffic Volumes exceed the volumes for a Minor Collector Roadway but are 12,000 vehicles/day or less. To serve secondary traffic generators, such as neighborhood commercial centers, parks and golf courses, and inter neighborhood travel. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is controlled. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 200m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 100m. Major Collector Roadways may intersect with Local roadways, other Collector roadways, and Arterial roadways but not with lanes. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50 or 60		<ul style="list-style-type: none"> Major Collector roadways are undivided roadways. Outside driving lanes may be used as parking lanes. 2 – 3.5 m wide driving lanes in each direction for a total of 4 driving lanes. Left or right turning lane width - 3.5m, Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Major Collector roadways may be used as a restricted truck route. 	
Parking	Restricted			
Pavement Width	2 x 3.5m wide driving lanes in each direction = 14.0m			
Sidewalk	2.4 m trail on one side and 1.8m monowalk or 1.5m separate walk with a 2.0m min. boulevard on other side			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Restricted			
Sound Attenuation	Abatement measures based upon noise analysis of facility at operational capacity appropriate to the requirements of abutting type of land use		TYPICAL CROSS SECTION See Standard Drawing RD-108	

Industrial / Commercial Major Collector Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
1,000 – 12,000	4	WB-21	24.0 m (min)	100 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Controlled property access Utility corridor Evacuation Route Used where the Daily Traffic Volumes exceed the volumes for a Minor Collector Roadway but are 12,000 vehicles/day or less. To serve secondary traffic generators, such as neighborhood commercial centers, parks and golf courses, and inter neighborhood travel. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is controlled. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 200m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 100m. Major Collector Roadways may intersect with Local roadways, other Collector roadways, and Arterial roadways but not with lanes. 				
TRAFFIC FEATURES				NOTE
Posted Speed (km/h)	50 or 60	<ul style="list-style-type: none"> Major Collector roadways are undivided roadways. Outside driving lanes may be used as parking lanes. 2 – 3.7 m wide driving lanes in each direction for a total of 4 driving lanes. Left or right turning lane width - 3.7m, Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Industrial / Commercial Major Collector roadways may be designated as a truck route. 		
Parking	Restricted			
Pavement Width	2 x 3.7m wide driving lanes in each direction = 14.8m			
Sidewalk	2.4 m trail on one side and 1.8m monowalk or 1.5m separate walk with a 2.0m min. boulevard on other side			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-110		

**Industrial / Commercial
Major Collector Roadway
With Two-Way Left Turn Lane**

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
5,000 – 12,000 (3 lane) or 10,000 – 20,000 (5 lane)	3 or 5	WB-21	28.8 m (min)	100 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Transportation and Drainage Corridor Secondary purpose: Controlled property access Utility corridor Evacuation Route <p>Used where the Daily Traffic Volumes exceed the volumes for a Minor Collector Roadway but are 112,000 vehicles/day or less.</p> <ul style="list-style-type: none"> To serve secondary traffic generators, such as neighborhood commercial centers, parks and golf courses, and inter neighborhood travel. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is controlled. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 200m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 100m. Major Collector Roadways may intersect with Local roadways, other Collector roadways, and Arterial roadways but not with lanes. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50 or 60	<ul style="list-style-type: none"> Major Collector roadways are undivided roadways. Outside driving lanes may be used as parking lanes. 2 – 3.7 m wide driving lanes in each direction. Left or right turning lane width - 3.7m, Two-Way-Left turn lane width – 4.2m Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Industrial / Commercial Major Collector roadways may be designated as a truck route. 		
Parking	Restricted			
Pavement Width	2 x 3.7m wide driving lanes in each direction + 4.2 m TWLTL = 19.0m			
Sidewalk	2.4 m trail on one side and 1.8m monowalk or 1.5m separate walk with a 2.0m min. boulevard on other side			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-111		

Industrial/ Commercial Minor Collector Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
1,000 – 8,000	2	WB - 21	22.0 m (min)	100 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Land access Transportation and Drainage Corridor Secondary purpose: Utility corridor To be used where the Daily Traffic Volumes exceed the volumes for a Local Industrial/ Commercial roadway but are less than 8,000 vehicles/day. To collect and distribute traffic from Industrial/ Commercial Collector roadways, Major Collector roadways and Arterial roadways to roadways of a lower classification. To serve secondary traffic generators, such as neighborhood commercial centers, parks and golf courses, and inter neighborhood travel. May be used as bus routes. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting properties in conformance with driveway requirements. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 100m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. Industrial/ Commercial Collector roadways may intersect with, Local Industrial/ Commercial roadways, other Industrial/ Commercial Collector roadways, Major Collector roadways and Arterial roadways. Intersections of Industrial/ Commercial Collector roadways with Local Residential roadways and Minor Collector roadways are discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50 or 60		<ul style="list-style-type: none"> Industrial/ Commercial Minor Collector roadways are undivided. 2 – 3.7 m wide driving lanes and 3.0 m wide parking lanes. No residential frontage is permitted Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Industrial / Commercial Minor Collector roadways may be designated as a truck route. 	
Parking	Permitted Except in transit zones			
Pavement Width	13.4m			
Sidewalk	1.5 m required			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Not required		TYPICAL CROSS SECTION See Standard Drawing RD-112	

Industrial/ Commercial Minor Collector Roadway With Two-Way Left Turn Lane

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
5,000 – 12,000	3	WB - 21	22.0 m (min)	100 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Land access Transportation and Drainage Corridor Secondary purpose: Utility corridor To be used where the Daily Traffic Volumes exceed the volumes for a Local Industrial/ Commercial roadway but are less than 12,000 vehicles/day. To collect and distribute traffic from Industrial/ Commercial Collector roadways, Major Collector roadways and Arterial roadways to roadways of a lower classification. To serve secondary traffic generators, such as neighborhood commercial centers, parks and golf courses, and inter neighborhood travel. May be used as bus routes. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting properties in conformance with driveway requirements. Access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 100m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. Industrial/ Commercial Collector roadways may intersect with, Local Industrial/ Commercial roadways, other Industrial/ Commercial Collector roadways, Major Collector roadways and Arterial roadways. Intersections of Industrial/ Commercial Collector roadways with Local Residential roadways and Minor Collector roadways are discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50 or 60		<ul style="list-style-type: none"> Industrial/ Commercial Minor Collector roadways are undivided. 2 – 3.7 m wide driving lanes and 3.0 m wide parking lanes plus a 4.2 m wide TWLTL No residential frontage is permitted Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Industrial / Commercial Minor Collector roadways may be used as a truck route. 	
Parking	Permitted Except in transit zones			
Pavement Width	13.4m+ 4.2 TWLTL =17.6m			
Sidewalk	Requirement to be determined case-by-case			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	Not required		TYPICAL CROSS SECTION See Standard Drawing RD-113	

Industrial / Commercial Local Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
1,000 – 5,000	2	WB - 19	20.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Land access to commercial and industrial properties. Transportation and Drainage Corridor Secondary purpose: Traffic Movement Utility corridor May be used as bus routes. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting industrial and commercial properties in conformance with driveway requirements. Driveways to conform to the Land Use Bylaw unless traffic volumes exceed those from 20 residential development equivalent units when access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. Local Industrial/ Commercial roadways may intersect with, other Local Industrial/ Commercial roadways, Industrial/ Commercial Collector roadways, Major Collector roadways and Arterial roadways. Intersections of Local Industrial/ Commercial roadways with Local Residential roadways and Minor Collector roadways are discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	40 or 50		<ul style="list-style-type: none"> Industrial/ Commercial Collector roadways are undivided. 2 – 3.5 m wide driving lanes and 2.5 m wide parking lanes. 	
Parking	Permitted Except in transit zones			
Pavement Width	12.0m			
Sidewalk	Requirement to be determined case-by-case			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	No			
Sound Attenuation	Not required		TYPICAL CROSS SECTION See Standard Drawing RD-114	

Industrial Rural Local Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
< 1,000	2	SU	22.0 m (min)	200 m
FUNCTION				
<ul style="list-style-type: none"> To be used in industrial subdivisions where large parcel size and type of industry precludes commercial uses and future subdivision into smaller parcels. Primarily used in heavy industrial subdivisions. Primary purpose: Land access Traffic Movement Transportation and Drainage Corridor Secondary purpose: Utility corridor May be used as bus routes. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting properties in conformance with driveway requirements. Access design to conform to Access Management guidelines in TAC Standard. Minimum intersection spacing is 200m. Two Lane Rural roadways may intersect with other Two Lane Rural roadways, Major Collector roadways and Arterial roadways. 				
TRAFFIC FEATURES				NOTE
Posted Speed (km/h)	50	<ul style="list-style-type: none"> Two Lane Rural roadways are undivided. 2 – 3.5 m wide driving lanes and 2 - 2.0 m wide shoulders. 		
Parking	None			
Pavement Width	11.0m			
Sidewalk	Not required			
Traffic Control Devices	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade			
Bus Route	Yes, Bus stops are signed			
Truck Route	Yes			
Sound Attenuation	No	TYPICAL CROSS SECTION See Standard Drawing RD-115		

Minor Collector Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
1,000 – 8,000	2	SU	21.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Traffic Movement Land access Transportation and Drainage Corridor Secondary purpose: Utility corridor Used where the Daily Traffic Volumes exceed the volumes for a Local Residential roadway but are less than 8,000 vehicles/day or less. To collect and distribute traffic from Major Collector roadways and Arterial roadways to roadways of a lower classification. To serve secondary traffic generators, such as neighborhood commercial centers, multifamily sites, parks and golf courses, and inter neighborhood travel. May be used as bus routes. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting properties. Driveways to conform to the Land Use Bylaw unless traffic volumes exceed those from 20 residential development equivalent units when access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing of 80m should be maintained unless otherwise approved by the Manager of Engineering Services to accommodate exceptional situations. In no case shall intersection spacing be less than 60m. Minor Collector roadways may intersect with Local Residential roadways, other Collector roadways, Arterial roadways and lanes. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50	<ul style="list-style-type: none"> Minor Collector roadways are undivided. 2 – 3.5 m wide driving lanes and 2 - 2.5 m wide parking lanes. Alternate road section for bicycle accommodation is 13.0 m pavement width with 2 – 3.5 m wide driving lanes and 2 – 3.0 m parking lanes and Signalized intersections spaced to permit efficient 2-way progression between intersections at desirable operational speeds. i.e. stopped vehicle delay for new areas LOS C (overall) with no approach or movement below LOS D. Stopped delay in built up area to be LOS D with no approach or movement below LOS E. Construction, delivery, buses and garbage trucks are permitted. 		
Parking	Permitted Except at transit zones			
Pavement Width	12.0m			
Sidewalk	2.4 m trail on one side and 1.5m monowalk or 1.2m separate walk with a 2.0m min. boulevard on other side			
Traffic Control Devices	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	Yes, Bus stops are signed			
Truck Route	No			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-116 & RD-117		

Local Residential Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
< 3,000	2	SU	16.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Land access Transportation and Drainage Corridor Secondary purpose: Traffic Movement Utility corridor Should not be used as a bus route. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting residential properties. Driveways to conform to the Land Use Bylaw unless traffic volumes exceed those from 20 residential development equivalent units when access design to conform to Access Management guidelines in TAC Standard. Access to commercial properties shall conform to driveway requirements. Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. Local Residential roadways may intersect with other Local Residential roadways, Collector roadways and lanes. Intersections of Local Residential roadways with Arterial roadways and Industrial/ Commercial roadways are discouraged. 				
TRAFFIC FEATURES				NOTE
Posted Speed (km/h)	40 or 50	<ul style="list-style-type: none"> Residential Streets are undivided roadways. 2 – 2.75 m wide driving lanes and 2 - 2.25 m wide parking lanes. Parking is permitted on both sides but may be restricted under special circumstances. Sidewalks are required on both sides of roadway Cul-de-sac bulbs and expanded corners are not allowed. 		
Parking	Permitted Except in transit zones			
Pavement Width	10.0m			
Sidewalk	1.2m monolithic sidewalk			
Traffic Control Devices	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	No			
Truck Route	No			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-118		

Low Volume Local Residential Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
< 400	2	SU	16.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Land access Transportation and Drainage Corridor Secondary purpose: Traffic Movement Utility corridor Should not be used as a bus route. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting residential properties. Driveways to conform to the Land Use Bylaw unless traffic volumes exceed those from 20 residential development equivalent units when access design to conform to Access Management guidelines in TAC Standard. Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. Local Residential roadways may intersect with other Local Residential roadways, Collector roadways and lanes. Intersections of Local Residential roadways and Arterial roadways with Industrial/ Commercial roadways are discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	40 or 50		<ul style="list-style-type: none"> Residential Streets are undivided roadways. 2 – 2.75 m wide driving lanes and 2 - 2.25 m wide parking lanes. Parking is permitted on both sides but may be restricted under special circumstances. Sidewalks are required on both sides of roadway. Cul-de-sac bulbs and expanded bulbs are allowed. 	
Parking	Permitted Except in transit zones			
Pavement Width	10.0m			
Sidewalk	1.2m monolithic sidewalk			
Traffic Control Devices	Where required by intersection signal Warrant Analysis (TAC), Capacity Analysis or micro simulation			
Pedestrian Crossing	At grade, intersections only			
Bus Route	No			
Truck Route	No			
Sound Attenuation	Not required		TYPICAL CROSS SECTION See Standard Drawing RD-118	

Country Residential Two Lane Rural Roadway

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
< 400	2	SU	16.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Land access Transportation and Drainage Corridor Secondary purpose: Traffic Movement Utility corridor Should not be used as a bus route. 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Direct Driveway Access is permitted to abutting residential properties. Driveways to conform to the Land Use Bylaw unless traffic volumes exceed those from 20 residential development equivalent units when access design to conform to Access Management guidelines in TAC Standard. Access to commercial properties shall conform to driveway requirements. Drainage Ditch crossings require culverts complete with end structures and markers. Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. Local Residential roadways may intersect with other Local Residential roadways, Collector roadways and lanes. Intersections of Local Residential roadways with Arterial roadways and Industrial/ Commercial roadways are discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	50		<ul style="list-style-type: none"> Residential Streets are undivided roadways. 2 – 3.5 m wide driving lanes and 2 - 2.0 m wide shoulders. Parking is permitted on both sides but may be restricted under special circumstances. Sidewalks are required on both sides of roadway. Cul-de-sac bulbs and expanded bulbs are allowed. 	
Parking	Permitted Except in transit zones			
Pavement Width	7.0m + 4.0 m shoulders = 11.0 m			
Sidewalk	N/A			
Traffic Signals	Where required by intersection signal Warrant Analysis (TAC)			
Pedestrian Crossing	At grade			
Bus Route	No			
Truck Route	No			
Sound Attenuation	Not required		TYPICAL CROSS SECTION See Standard Drawing RD-119	

9.0 metre Lane

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
< 1,000	na	SU	9.0 m (min)	60 m
FUNCTION	<ul style="list-style-type: none"> Primary purpose: Land access (Traffic movement not a consideration) Transportation and Drainage Corridor Secondary purpose: Utility corridor 			
ACCESS CONDITIONS	<ul style="list-style-type: none"> Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. 9.0 metre Lanes in Industrial subdivisions may intersect with other Lanes and Industrial/ Commercial roadways. Residential Lanes may intersect with other Residential Lanes, Local Residential roadways and Minor Collector roadways. Intersections of Residential lanes with Arterial roadways and Major Collector roadways is discouraged. 			
TRAFFIC FEATURES		NOTE		
Posted Speed (km/h)	30	<ul style="list-style-type: none"> Lanes shall be paved in accordance with the lane paving policy. The policy provides that lanes adjacent to multi-family residential sites involving dwelling units of four or more units shall be paved to the closest intersection with a roadway of a higher functional classification than a lane. This requirement will apply if the lane is used as access to on-site parking. Lanes abutting high density residential, commercial developments and low-density residential developments are to be built to a 9.0 metre lane standard if the high-density residential or commercial development is allowed access to the lane. Lanes abutting high density residential, commercial and low density residential developments are to be paved at the expense of the high density residential or commercial development at the time the high-density residential or commercial development is constructed if the high density residential or commercial development is allowed access to the lane. Area Structure Plan or Conceptual Schemes that propose lots with primary vehicle parking accessing to the lane (back yard garages) will be required built to a 9.0 metre lane standard. 		
Parking	none			
Pavement Width	8.5 m if required			
Sidewalk	na			
Traffic Signals	na			
Pedestrian Crossing	At grade			
On-street Bikeway	na			
Truck Route	na			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-120		

6.0 metre Lane

Functional Requirements

DAILY TRAFFIC VOLUME (VEHICLES/DAY)	NUMBER OF LANES	DESIGN VEHICLE	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING
<1,000	na	SU	6.0 m (min)	60 m
FUNCTION				
<ul style="list-style-type: none"> Primary purpose: Land access (Traffic movement not a consideration) Transportation and Drainage Corridor Secondary purpose: Utility corridor 				
ACCESS CONDITIONS				
<ul style="list-style-type: none"> Desirable intersection spacing is 80m. In no case shall intersection spacing be less than 60m. Residential Lanes may intersect with Other Residential lanes, Residential streets and Minor Collector streets. Intersections of Residential lanes with Arterial Streets and Major Collector Streets is discouraged. 				
TRAFFIC FEATURES			NOTE	
Posted Speed (km/h)	30	<ul style="list-style-type: none"> Lanes shall be paved in accordance with the lane paving policy. The policy provides that lanes adjacent to multi-family residential sites involving dwelling units of four or more units shall be paved to the closest intersection with a roadway of a higher functional classification than a lane. This requirement will apply if the lane is used as access to on-site parking. 6.0 metre Lanes that are paved will have a pavement width of 5.5 m Lanes abutting both commercial and residential developments are to be built to a 9.0 metre lane standard if the commercial development is allowed access to the lane. Developments intended to have the primary vehicle parking accessing the lane (back yard garages) should be built to a 9.0 metre lane standard. High-density multi family sites that are intend to access the lane shall be built to a 9.0 metre standard. 		
Parking	none			
Pavement Width	8.5 m if required			
Sidewalk	na			
Traffic Signals	na			
Pedestrian Crossing	At grade			
Bus Route	No			
Truck Route	No			
Sound Attenuation	Not required	TYPICAL CROSS SECTION See Standard Drawing RD-120		