

FUNCTIONAL TRAFFIC DESIGN STUDY

BRIDLE PARK, STAYNER

**TOWN OF CLEARVIEW
SIMCOE COUNTY**

PREPARED FOR:

1000983019 ONTARIO LIMITED

PREPARED BY:

**C.F. CROZIER & ASSOCIATES INC.
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JULY 2026

CFCA FILE NO. 1508-7498

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Revision Number	Date	Comments
Rev. 0	July 2026	First Submission

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1 Introduction

1000983019 Ontario Limited (the applicant) retained C.F. Crozier & Associates Inc. (Crozier) to complete a Transportation Impact Study to support the Official Plan Amendment for the proposed greenfield development (the Site) located in the community of Stayner, within the Township of Clearview (Township), Simcoe County (County).

1.1 Development Lands

The subject lands cover an area of approximately 68 ha and is currently agricultural. The site is bounded by additional lands owned by the proponent to the north, the Clearview Collingwood Train Trail to the northeast, residential homes and the Stayner Arena to the south, and environmentally protected lands to the west.

1.2 Reference Reports

The Functional Traffic Design Study refers to the Traffic Impact Study (TIS) prepared by Crozier (July 2026), submitted under separate cover. The following manuals are also referenced for standards and practices:

- Township of Clearview Engineering Design Criteria Standards (October 2025)
- Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR)
- Ministry of Transportation Ontario (MTO) Design Supplement for TAC GDGCR
- Ontario Traffic Manual Book 12

2 Development Proposal

The following sections review the proposed uses, design standards and expected facilities within the subject development.

2.1 Proposed Land Uses

Appendix A includes the Draft Plan of Subdivision, prepared by MHBC Planning., dated June 18, 2026. The servicing phasing of the development was outlined in the TIS (Crozier, July 2026). The entirety of the development was assumed to be completed by the year 2031. Per the Draft Plan of Subdivision, the following is proposed:

- 523 single-detached homes;
- 4 semi-detached homes;
- 164 townhouses;
- 2.12 ha school block; and
- 2.31 ha park block

Internal to the development, the proposed road network consists of a network of only local residential streets. The proposed internal road network is intended to function as local residential roads, providing direct access to adjacent residential lots and distributing traffic to the external road network.

Details relating to the proposed right-of-way (ROW) widths are included in **Section 3**.

2.2 Cross-Sections

All proposed streets are intended to function as local residential roads. As illustrated in the Draft Plan, the roadways are shown with a 20.0 m right-of-way (ROW) and provide direct access to the proposed residential lots while distributing traffic to the external road network.

The Township of Clearview's 20.0 m ROW standard has been included in **Appendix B**. The cross-section includes 8.5 m of asphalt for a single lane in each direction. Sidewalks of 1.5 m are proposed on the south and east sides of the roadway; however, it is recommended that consideration for flipping that standard be given for Street "D" to allow for the sidewalk along the frontage of the school and park.

2.3 Non-Auto Facilities

The proposed development is expected to accommodate pedestrian and cycling facilities throughout the internal road network.

Sidewalks

As noted, the 20.0 m ROW provides sidewalks allowing for pedestrian connectivity between the residential neighborhoods, school block, park, future development lands, and the Train Trail. The final sidewalk layout and configuration will be confirmed during the detailed design stage in consultation with the Township.

Bike Routes

Shared on-street cycling is expected to be accommodated along the local roadway network. As local roads, vehicles operate at lower speeds and shared facilities are acceptable. Access to the Train Trail will provide cycling access to downtown Stayner away from Highway 26.

2.4 On-Street Parking

Based on the 8.5 m asphalt surface (plus gutter) of the 20.0 m ROW, on-street parking can be accommodated on one side of the local roadways while maintaining two-way traffic operations. The location and extent of on-street parking will be confirmed during the detailed design stage in consultation with the Township.

2.5 Intersection Controls

Regina Street and Red Oak Trail

At the intersection with Regina Street, Red Oak Trail is proposed to be stop-controlled on the north and south approach. Regina Street (east-west) will maintain free-flow. As per the TIS (Crozier, July 2026), each approach will consist of one outbound and one receiving lane.

Regina Street/ North Street and East Street Extension

At the intersection with Regina Street/ North Street, the East Street Extension is proposed to be stop-controlled on the north and south approach. Regina Street/ North Street (east-west) will maintain free-flow. As per the TIS (Crozier, July 2026), each approach will consist of one outbound and one receiving lane.

Highway 26 and Bridle Park Site Access

The intersection of Highway 26 and Bridle Park Site Access is proposed to be signalized. Further information regarding signalization can be referenced in the July 2026 TIS.

The north leg of the intersection will consist of a dedicated southbound right turn lane, one through lane, and one receiving lane. The west leg will consist of a single outbound lane (share left-right) and one inbound lane. The south leg will consist of a dedicated northbound left-turn lane, one through lane, and one receiving lane.

North Street Site Access

At the intersection with North Street, the North Street Site Access is proposed to be stop-controlled on the north approach. Regina Street (east-west) will maintain free-flow. As per the TIS (Crozier, July 2026), each approach will consist of one outbound and one receiving lane.

3 Geometric Assessment

The following sections review the geometric conditions of the proposed Draft Plan. It is noted that detailed design of the roadway will provide additional details regarding the roadways and further assessment and information can be prepared as required, based on the detailed design.

Excerpts from the Town of Clearview Engineering Design Standards (October 2025) can be found in **Appendix B**. Relevant TAC excerpts have been included in **Appendix C**.

3.1 Horizontal Curves

The Township's Engineering Standards outline the requirements for road design within section B2.06. The minimum centerlines radius for a local urban road is 90 m. The inner and outer radii of proposed horizontal curves are noted on the Draft Plan. All outer radii are 100 m and all inner at 80 m resulting in a centerline of 90 m, consistent with the standard.

The minimum tangent for urban local roads within the Townships Standard is 30 m. Only one instance of a horizontal curve is noted, at the intersection of Street "H" and Street "J". A tangent length of 51 m is provided between the curves.

Horizontal curves provide natural traffic calming to neighbourhoods and in this development are result of the limits of environmental features, existing trails and connecting roadways.

3.2 Vertical Curves

The vertical profile of the proposed public roadways (Street "A" to "O") will be determined and defined through the detailed design process. TAC design standards for 'K' values will be adhered to and any deviations, if necessary, would be justified.

3.3 Sight Distances

A sight distance analysis was conducted to confirm that there is sufficient sight distance based on the standards set out in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR)

TAC GDGCR Table 9.9.4 (Case B1) and Table 9.9.6 (Base B2/B3) outline intersection sight distance requirements. The sight distance assessment presented in **Appendix D** is based on the current Draft

Plan of Subdivision. The assessment is preliminary and based on the proposed ROW. Available sight distance along internal roadways should continue to be reviewed as part of the detailed intersection and roadway design. The sight distance analysis of all the proposed roadways is summarized in

Table 1.

Table 1: Sight Distance Analysis

Sight Distance Analysis (General Parameters)						
Base Time Gap (Passenger Cars)		Grade of Roadway	Posted Speed Limit	Design Speed	Left Turn Requirement	Right Turn Requirement
Left: 7.5 s	Right: 6.5 s	Less than 3%	50 km/h	60 km/h	130 m	110 m
Intersection	Sight Distance Measured			Requirements Satisfied		
Street K entering Street J	69 m looking left (west) An excess of 130 m looking right (east)			No		
Street H entering Street K	82 m looking left (east) An excess of 130 m looking right (west)			Yes		
Street H entering Street J	52 m looking left (west) 85 m looking right (east)			No		
Street I entering Street H	85 m looking left (south) 80 m looking right (north)			No		
Street B entering Street H	An excess of 110 m looking left (east) 95 m looking right (west))			Yes (sight distance ends at 90 degree bend)		
Street B entering Street A	55 m looking left (west) 53 m looking right (east)*			Yes (sight distance ends at T-intersection)		
Street D entering Street H	An excess of 110 m looking left (west) An excess of 130 m looking right (east)			Yes		
Street D entering Street I	An excess of 110 m looking left (west) An excess of 130 m looking right (east)			Yes		
Street L entering Street D	An excess of 110 m looking left (south) An excess of 130 m looking right (north)			Yes		
Street E entering Street J	An excess of 110 m looking left (west) An excess of 130 m looking right (east)			Yes		
Street F entering Street J	An excess of 110 m looking left (east) An excess of 130 m looking right (west)			Yes		
Street J entering Street G	An excess of 110 m looking left (north) An excess of 130 m looking right (south)			Yes		
Street G entering Street H	An excess of 110 m looking left (east) 91 m looking right (west)			No		
Street O entering Street P	70 m looking left (south)* An excess of 130 m looking right (north)			Yes (sight distance ends at T-intersection)		
Street O entering Street H	An excess of 110 m looking left (west) 89 m looking right (east)*			Yes (sight distance ends at T-intersection)		
Street H entering Street L	53 m looking left (east)* An excess of 130 m looking right (west)			Yes (sight distance ends at T-intersection)		

It is noted at some instances sight distance is limited due to a 90-degree horizontal curves; however, vehicles will be travelling at a lower speed through these curves and therefore additional provide additional time for the vehicle to make a left turn at the intersection.

At the intersection of Street "J" and Street "H" an all-way stop control is proposed to support

crossing to the school block. This intersection control would mitigate the sight distance deficiency identified. In the instances of Street "G" and Street "K" the offset of the vehicle to the stop bar may provide more sight distance. Both intersect just beyond curves in the roadway, which have traffic calming benefits. It is recommended that these locations be reviewed further in detailed design. All-way stops, reduced speed limits or large setbacks may mitigate restrictions identified.

3.4 Intersection Spacing

TAC GDGCR Section 9.4.2. outlines the minimum recommended intersection spacing based on road classification. Along local roads, spacing between four-leg intersections are recommended to be a minimum of 60 m, while three-leg ('T') intersections are recommended to be 40 m centerline-to-centreline. The approximate spacing provided between roadway on the plan are as presented in **Table 2**.

Table 2: Intersection Spacing

Roadway	Segment	Proposed Intersection Spacing	Minimum Recommended Spacing
Street "A"	Street "B" to Street "H"	219 m	40 m
Street "B"	Street "A" to Street "H"	163 m	40 m
Street "C"	Street "A" to Street "H"	163 m	40 m
Street "D"	Regina Street to Street "M"	166 m	60 m
	Street "M" to Street "L"	62 m	40 m
	Street "L" to Street "J"	150 m	60 m
	Street "J" to Street "I"	80 m	60 m
	Street "I" to Street "H"	80 m	60 m
Street "E"	Street "L" to Street "J"	150 m	40 m
Street "F"	Street "L" to Street "J"	150 m	40 m
Street "G"	Street "M" to Street "L"	62 m	60 m
	Street "L" to Street "J"	150 m	60 m
	Street "J" to Street "I"	80 m	40 m
	Street "I" to Street "H"	80 m	40 m
Street "H"	Street "L" to Street "O"	120 m	40 m
	Street "O" to Street "N"	100 m	40 m
	Street "N" to Street "P"	93 m	40 m
	Street "P" to Street "G"	147 m	40 m
	Street "G" to Street "D"	245 m	40 m
	Street "D" to Street "C"	80 m	40 m
	Street "C" to Street "B"	62 m	40 m
	Street "B" to Street "A"	62 m	40 m
	Street "A" to Street "I"	126 m	40 m
	Street "I" to Street "J"	104 m	60 m
	Street "J" to Street "K"	119 m	60 m
Street "I"	Street "H" to Street "D"	253 m	60 m
	Street "D" to Street "G"	245 m	60 m
Street "J"	Street "K" (west) to Street "H"	225 m	60 m
	Street "H" to Street "K"	101 m	60 m

Roadway	Segment	Proposed Intersection Spacing	Minimum Recommended Spacing
	(east)		
	Street "K" to Street "D"	141 m	60 m
	Street "D" to Street "E"	80 m	60 m
	Street "E" to Street "F"	85 m	40 m
	Street "F" to Street "G"	80 m	40 m
Street "K"	Street "J" to Street "H"	228 m	40 m
	Street "H" to Street "J"	80 m	60 m
Street "L"	Street "D" to Street "E"	80 m	40 m
	Street "E" to Street "F"	85 m	40 m
	Street "F" to Street "G"	80 m	60 m
	Street "G" to Street "P"	80 m	60 m
	Street "P" to Street "H"	211 m	40 m
	Street "H" to Highway 26		40 m
Street "M"	Street "D" to Street "G"	245 m	40 m
Street "N"	Street "P" to Street "H"	112 m	40 m
Street "O"	Street "P" to Street "H"	171 m	40 m
Street "P"	Street "L" to Street "O"	80 m	40 m
	Street "O" to Street "N"	80 m	40 m
	Street "N" to Street "H"	119 m	40 m

3.5 Intersection angle

Per TAC GDGCR Section 3.2.6.1 (18), it is desirable that intersecting roads meet at, or nearly at, right angles. TAC GDGCR notes that some deviation is acceptable between 70 degrees and 110 degrees. All intersections are proposed to meet at a 90-degree angle, except for Street J and K (west) which meet at 83 degrees, and Street J and H which meet at 82 degrees. In both instances the intersection angle is about the recommended minimum of 70 degrees.

3.6 Daylight Triangles

Daylight triangles detailed in the Draft Plan of Subdivision prepared by MHBC Planning (July 2026) are consistent with the Town of Clearview standard for local roads. For all local roads, a minimum daylight triangle distance of 3 x 3 m is required, the proposed daylight triangles meet these minimum requirements.

3.7 Curb Radii

The curb radii at intersections of all local roads have minimum requirements of 9.0 m outlined in the Town's Design Criteria Standards. All radii will be reviewed and confirmed through detailed design.

3.8 Elbow Bend

There are four locations in the site where a right-angle elbow bend occurs within the internal road network. For these specific areas, the Town of Clearview Standard Drawing B108 "Typical 90 Degree Bend" was followed to accommodate appropriate turning. The design of the internal road network will be refined through the detailed design process.

4 Transit Connectivity

The following sections review existing transit within the Community of Stayner and potential ways to expand the route through the proposed development, servicing both residents and the school block.

4.1 Existing Transit Routes / Stop Locations

The Township of Clearview operates a transit route under Clearview Public Transit labelled "Clearview Bus Route" throughout the Village of Stayner. Clearview Public Transit operates hourly seven days a week, except for statutory holidays, between 6:30 a.m. and 8:30 p.m. from Monday to Saturday, and 8:30 a.m. to 5:30 p.m. on Sunday. Bus stops located near the proposed development include stops at Legion Park (Stop 16), Highway 26 and North Street (Stop 6 and 17), as well as Stayner Collegiate Institute (Stop 5).

Simcoe County's transit service Linx, provides hourly service between Wasaga Beach and Barrie, through Stayner, during weekdays between 5:30 a.m. and 6:30 p.m. The stop in Stayner is located at the Clearview Admin Centre, which is approximately a 17-minute walk from the development lands along the Train Trail.

The Township of Clearview, in partnership with the Town of Collingwood and the Town of Wasaga Beach, also provides a door-to-door specialized transit service, TransitPLUS, for residents with accessibility needs.

Appendix E contains relevant transit information.

4.2 Future Transit Service / Potential Routes

It is recommended that at a minimum transit stop should be provided at the road intersections within the Bridle Park Block. Transit stops near the future school block is recommended to increase accessibility and encourage sustainable transportation modes.

The potential route changes through the development are illustrated in **Appendix F**.

5 Traffic Calming

Traffic calming and appropriate vehicle speeds are intended to be achieved through the design of the roadway and site. Urbanized roadways are proposed throughout with sidewalks. A review of the Town of Collingwood Traffic Calming Policies and Procedures (2023) was undertaken and the following traffic calming measures are recommended for consideration within the proposed development:

- Dynamic Speed Displays (with reduced community safety zone around school and park)
- Raised Intersections
- Textured Crosswalks
- Speed Humps
- On-Street Parking
- Pavement Marking Legends (painted speed limits on pavement surface)

Identifying the best traffic calming measures for a community is often determined after the development has been occupied and driver behaviour in the study road network can be analyzed. **Appendix G** includes excerpts from Collingwood Traffic Calming Policy.

6 Design Vehicles

The largest vehicles anticipated to circulate internal to the development are Garbage Trucks and Fire Trucks. Curb location have been estimated based on the ROW and movements can be refined and confirmed through detailed design, as required. Vehicle maneuvering diagrams for the design vehicles have been prepared and are included in **Appendix H**.

7 Pavement Marking and Signage Plan

A formal Pavement Marking and Signage Plan will be prepared for the internal roadway as part of detailed design of the subdivision. **Appendix F** includes a markup of recommendation for the internal network, including intersection controls and transit locations for consideration and coordination with the Township of Clearview prior to detailed design.

8 Conclusions

Based on our review of the proposed Draft Plan of Subdivision for the Bridle Park development, the internal roadway network generally conforms to the Township of Clearview Engineering Design Criteria Standards and applicable TAC GDGCR guidelines for local urban roads.

The assessment identified that adequate intersection spacing and horizontal curve are provided and that the majority of proposed intersections provide adequate sight distance. The locations identified with constrained sight distance are primarily associated with horizontal curvature and appropriate mitigation measures, including all-way stop control, speed management strategies, and further refinement of the ROW and intersection design during detailed design, are available to mitigate the deficiencies.

Subject to the recommendations outlined in this report and further review through detailed design, the proposed roadway network can support the development, providing safe, connected, and functional roadways for future residents and roadway users.

Respectfully submitted by,

C.F. CROZIER & ASSOCIATES INC.



Damian Flis
Engineering Intern, Transportation

KH/DF/BR

C.F. CROZIER & ASSOCIATES INC.

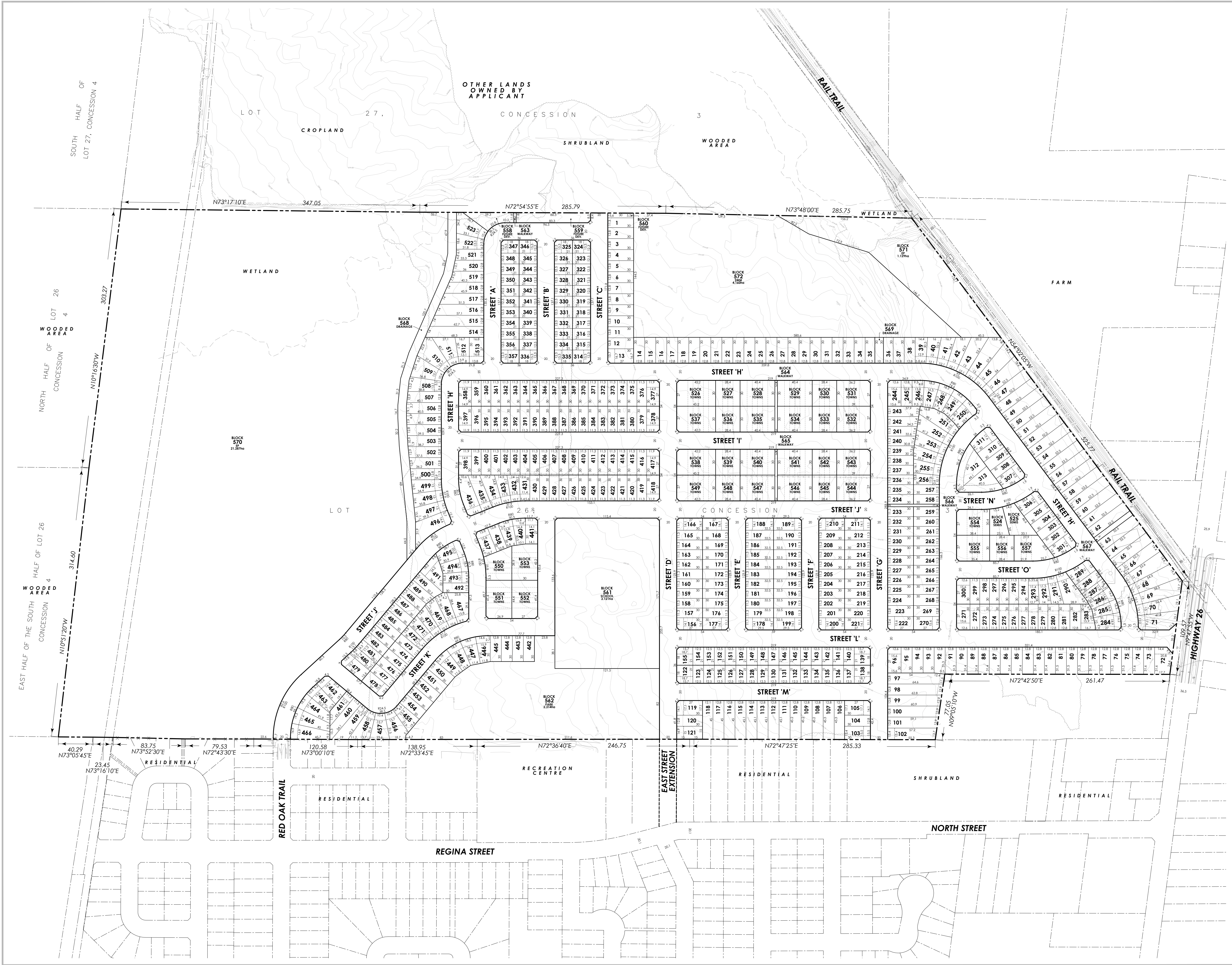


Kerianne, P.Eng.
Project Engineer, Transportation

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APPENDIX A

Draft Plan of Subdivision (MHBC, June 2026)



Legal Description
Part of Lot 26, Concession 3
Geographic Township of Nottawasaga
Town of Clearview
County of Simcoe

Owner's Certificate
I hereby authorize MacNaughton Hermens Britton Clarkson Planning Limited to submit this plan for approval.

Date: _____
Matthew Castelli
1000983019 Ontario Limited

Surveyor's Certificate
I hereby certify that the boundaries of the land to be subdivided on this plan and their relationship to the adjacent lands are accurately and correctly shown.

Date: _____
Paul Edwards, OLS
R-PE Surveying Limited

Key Plan

Legend

- Project Boundary Line
- Right of Way Line
- Block Line
- Lot Line
- Parcel Fabric

Land Use Summary

Land Use	Lot / Block	Units	Area
Single Detached - 11.3m	1, 35, 36, 106, 118, 156-221, 225-243, 256-267, 272-279, 285-287, 291-299, 302-304, 308, 355-431, 440, 441, 458-461, 468-477, 480-490, 492, 493	231	8.325
Single Detached - 12.8m	222-224, 244-255, 308-311, 280-284, 288-290, 300, 301, 305-307, 309-313, 434-439, 442-457, 462-467, 478, 479, 481, 484-523	214	11.044
Single Detached - 12.5m Shallow	122-155, 314-357	78	2.141
Semi Detached - 7.5m	524, 525	4	0.146
Townhouse - 6m	526-557	164	3.583
Future Development	558-560		0.190
School	561		2.121
Park	562		2.314
Walkway	563-567		0.089
Drainage	568-569		0.439
Environmental Protection	570, 571		22.346
Stormwater Management Area	572		4.160
Right of Way	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O		11.727
Totals		691	68.625

Rev. No. Date Issued / Revision By

Additional Information
Required Under Section 51 (17) of the Planning Act R.S.O. 1990 C.P.13 as Amended

A. As shown
B. As shown
C. As shown
D. As shown
E. As shown

F. As shown
G. As shown
H. Municipal water & sanitary supply
I. Silty sand/sand & glacial till

J. As shown
K. All services as required (water, sanitary, storm, hydro, cable)
L. As shown

Stamp

Project
Bridle Park
1000983019 Ontario Limited
111 Mildenhall Road
Toronto, Ontario
M4N 3H4

File Name
Draft
Plan of Subdivision

Scale Bar
0 5 10 15 20 25 50 75 100m
Measurements shown on this plan are in metres and can be converted to feet by dividing by 0.3048

DWG No.
1 of 1



APPENDIX B

Township of Clearview Engineering Standards Excepts



Township of Clearview

Engineering Design Criteria Standards

October 2025

Section B – Roadways

shall be incorporated into all new urban and collector roads. Sidewalks are required on at least one side of the street in all new developments.

B2.07 Road Drainage / Conveyance

See Section C – Stormwater Management and Drainage Systems.

B3.00 Intersections**B3.01 Location and Spacing of Intersections**

Location and spacing of intersections shall be as per TAC Section 9.4.2. Minimum intersection spacing for four-legged intersections shall be 60 m for local and collector roads.

B3.02 Stop or Traffic Signal Control

Curb radii or curb return radii for urban intersections under traffic signal or stop control shall be designed based on the highest classification of each intersecting road at a given intersection. Radii are measured from edge of pavement. Minimum curb radii are shown below; however, larger radii may be required if directed by the Township on specific bus or truck routes.

Property daylighting triangles at all intersection quadrants shall be included in the road allowances to be shown on the drawings, as follows:

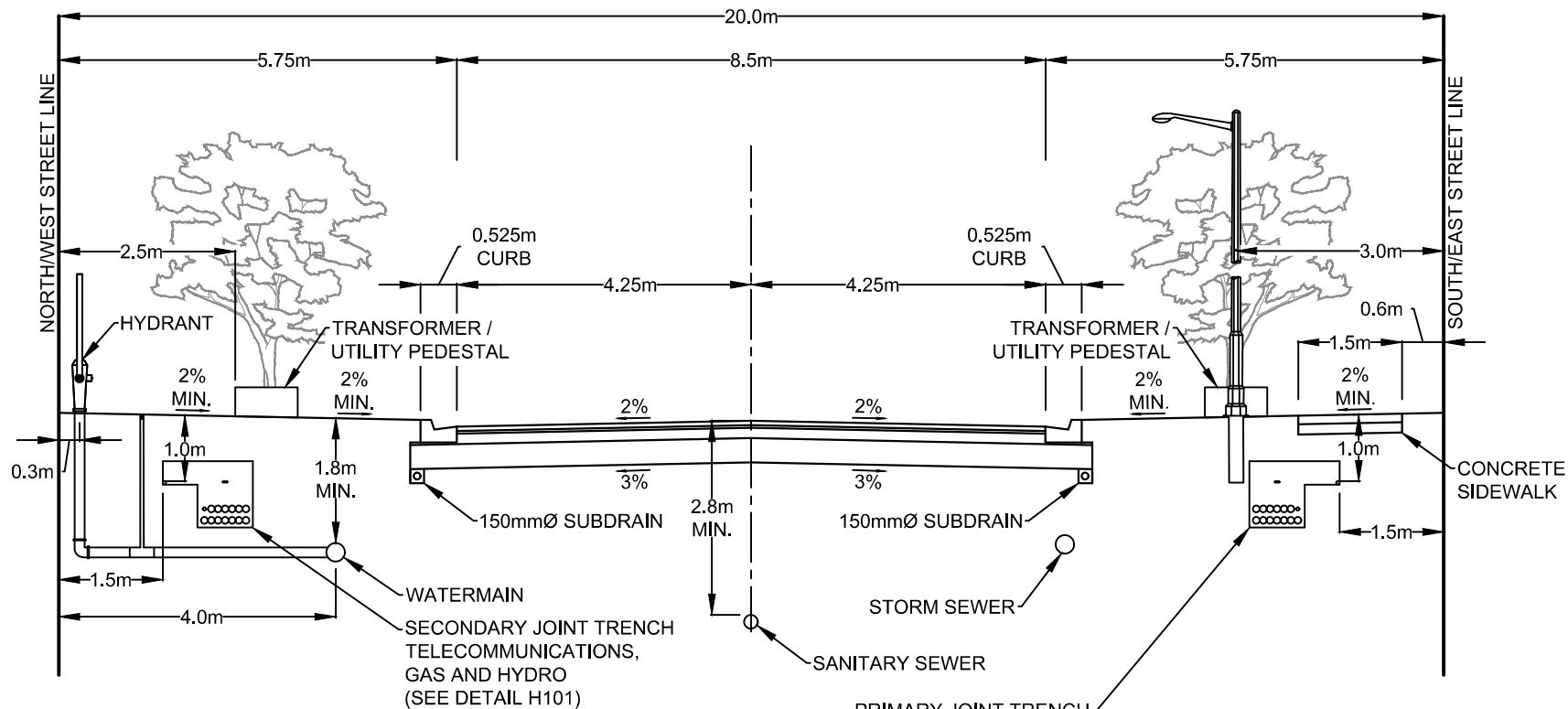
- Local Roads – 3 m daylighting, 9 m minimum curb radii.
- Collector Roads – 7.5 m daylighting, 9 m minimum curb radii.

Such daylighting shall be shown on the proposed Draft Plan for registration and on all applicable engineering drawings.

Daylight requirements for County and Provincial roads shall be confirmed by the applicable Road Authority and shall be measured from the limit of any required ROW widening.

Road widening or tapering at intersections may be required depending on the findings and recommendations of the TIS. If a widening / tapering is required at the intersection, the boulevard width shall be maintained.

Transition treatments (i.e., lane widening or narrowing to introduce turning lanes) shall be as specified in the TAC Geometric Design Guide for Canadian Roads, Sections 9.13, 9.14, and 9.17.



NOTES:

ROAD

- 40mm HL3 SURFACE COURSE ASPHALT
- 60mm HL8 BASE COURSE ASPHALT
- 150mm GRANULAR 'A'
- 350mm GRANULAR 'B'

SUBDRAIN

- 150mm DIAMETER SUBDRAIN, CONSTRUCTED PER OPSD-216.021

CURB

- CURB OPSD-600.070
- NOTE: IF ALTERNATE CURBS ARE PROPOSED, PROVIDE MODIFIED CROSS SECTION

BOULEVARD

- 150mm TOPSOIL + NURSERY SOD

SIDEWALK

- 125mm CONCRETE 32MPa (150mm AT DRIVEWAYS)
- 150mm GRANULAR 'A'

STREETLIGHTS

- COBRA HEAD FIXTURE AND ARM WITH DECORATIVE STYLE POLES, ALL BLACK IN COLOUR

- PRIMARY JOINT TRENCH TELECOMMUNICATIONS, GAS AND HYDRO (SEE DETAIL H101)

 TOWNSHIP OF CLEARVIEW				LOCAL 8.5m URBAN ROAD - 20m R.O.W.		
No.	Issue / Revision	Date	Auth.	Scale	Date	Dwg. No.
				N.T.S.	OCT 2025	B102

APPENDIX C

TAC GDGCR Excerpts

15. To avoid the appearance of distortion and to enhance driver guidance, the horizontal alignment should be carefully coordinated with the vertical alignment. This is described more fully in **Section 3.4**.
16. Intersections are points of conflict and potential hazard. It is important that the alignment of the intersecting roads permit drivers to discern and readily make the maneuvers necessary to pass through the intersection with safety while minimizing interference between vehicles. To this end, the practice of placing intersections on horizontal curves should be avoided whenever practicable.
17. At many places, site conditions establish definite alignment and grade limitations on the intersecting roads. However, it is often possible to modify the alignment and grades to better suit traffic conditions and reduce hazards, particularly on rural highways.
18. For safety and economy reasons it is desirable that intersecting roads meet at, or nearly at, right angles. Experience has clearly shown that the practice of realigning roads to increase the angle of intersection has proved beneficial. Some deviation from this approach is acceptable, angles between 70° and 110° for instance, produce only a small reduction in visibility which often does not warrant realignment.
19. The intersection of roads on sharp curves is not recommended because of undesirable operational features. This aspect of design is discussed more fully in **Chapter 9**.
20. Approval from Transport Canada may be required, in accordance with the Notice of Railway Works Regulations for the installation or alteration of federally regulated railway crossings for public use. Additionally, all federally regulated crossings should comply with Transport Canada's *Grade Crossings Regulations* (GCR) and *Grade Crossings Standards* (GCS).
21. The presence of a railway crossing influences the horizontal alignment of a road. Crossings are made as nearly as possible at right angles to provide maximum sight distance along the track in both directions from both approaches. If the crossing angle is less than 70° or greater than 110°, it is appropriate to realign the roadway or to enhance the safety of the grade crossing by adding warning systems. In addition, it is preferable to have the road alignment on tangent for at least 30 m either side of the track for low speed roadways, and for a distance at least equal to stopping sight distance on higher speed roads. Refer to **Section 9.5** in **Chapter 9** for additional guidance.
22. Where these dimensions cannot be achieved, the elements of the design which affect safe operation are normally closely examined. These include the possible incorporation of a warning systems at the grade crossing, and in the case of curved roadway alignments, the impact of the reduced cross-slope or no superelevation where the road surface matches the track grade. The best solution is to avoid crossing a railway with a curved road since the cross section of the roadway at the crossing has to match the profile of the railway track and, therefore, the appropriate superelevation for the curve cannot normally be applied.
23. In all cases, it is desirable to design the horizontal and vertical geometry of the roadway approaches in a smooth and continuous manner, thereby allowing motorists to shift their attention from the roadway to the railway approaches.
24. When undertaking the preliminary design of a grade crossing for a major road across a busy railway, it is desirable to consider the requirements of a possible future grade separation. These requirements include access to adjacent properties, right of way and drainage.
25. Urban traffic calming elements should not be placed on horizontal curves.

Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn From Stop

Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)
20	20	41.7	45
30	35	62.6	65
40	50	83.4	85
50	65	104.3	105
60	85	125.1	130
70	105	146.0	150
80	130	166.8	170
90	160	187.7	190
100	185	208.5	210
110	220	229.4	230
120	250	250.2	255
130	285	271.1	275

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of case B3.

Table 9.9.6: Design Intersection Sight Distance – Case B2, Right Turn from Stop, and Case B3, Crossing Maneuver

Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)
20	20	36.1	40
30	35	54.2	55
40	50	72.3	75
50	65	90.4	95
60	85	108.4	110
70	105	126.5	130
80	130	144.6	145
90	160	162.6	165
100	185	180.7	185
110	220	198.8	200
120	250	216.8	220
130	285	234.9	235

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane highway with no median and with grades of 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

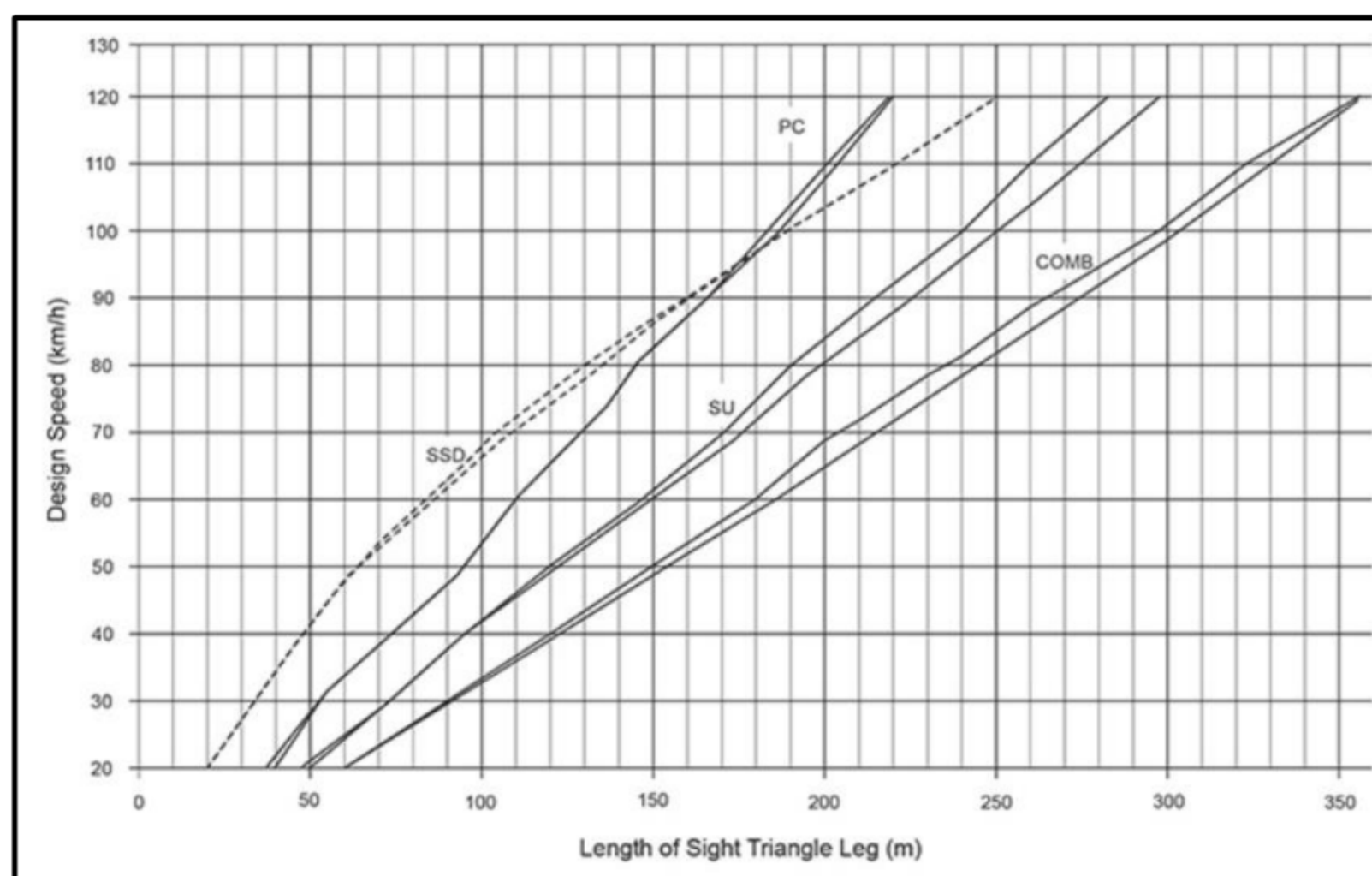


Figure 9.9.5: Intersection Sight Distance – Case B2, Right Turn from Stop, and Case B3, Crossing Maneuver (Calculated and Design Values Plotted)

APPENDIX D

Sight Distance Assessment



DESIGN INTERSECTION SIGHT DISTANCE	
TYPE	INTERSECTION SIGHT DISTANCE (ISD)
CASE	B1, LEFT TURN FROM THE MINOR ROAD
GRADE	-3% TO +3%
APPROACH GRADE FACTOR (T 9.9.2)	1.0
FORMULA (Eq. 9.9.1)	ISD = 0.278Vmajor x TG
VEHICLE TYPE	PASSENGER CAR
V MAJOR ROAD	60 KM/H
TIME GAP (T 9.9.3)	7.5 SECONDS
ISD	130 m

TYPE	INTERSECTION SIGHT DISTANCE (ISD)
CASE	B2, RIGHT TURN FROM THE MINOR ROAD
GRADE	-3% TO +3%
APPROACH GRADE FACTOR (T 9.9.2)	1.0
FORMULA (Eq. 9.9.1)	ISD = 0.278Vmajor x TG
VEHICLE TYPE	PASSENGER CAR
V MAJOR ROAD	60 KM/H
TIME GAP (T 9.9.3)	6.5 SECONDS
ISD	110 m

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Project	BRIDLE PARK (STAYNER, ONTARIO) TOWNSHIP OF CLEARVIEW	
Drawing	SIGHT DISTANCE PLAN	

Drawn By
K.H./D.F.

Design By
B.R.

Check By
K.H./D.F.

Project
1508-7498

Drawing
T200

APPENDIX E

Transit information Excepts



CLEARVIEW

PUBLIC TRANSIT MAP

-  Bus Stops
-  Bus Transfer Locations
-  Clearview Bus Route
-  Reset Route (No Stops)



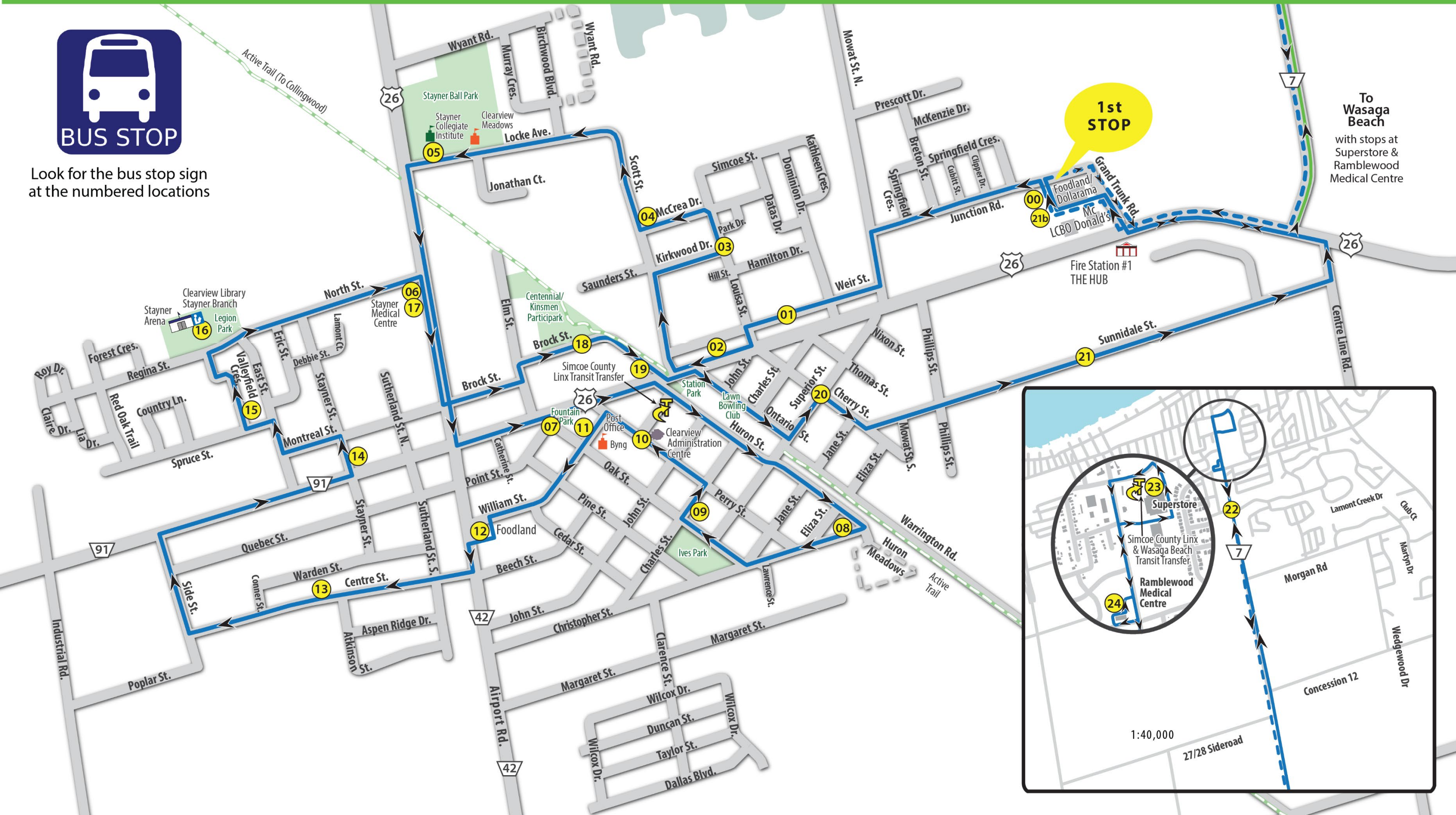
Scale: 1:10,000

Clearview Transit Map v. 2025-07-03-01:58

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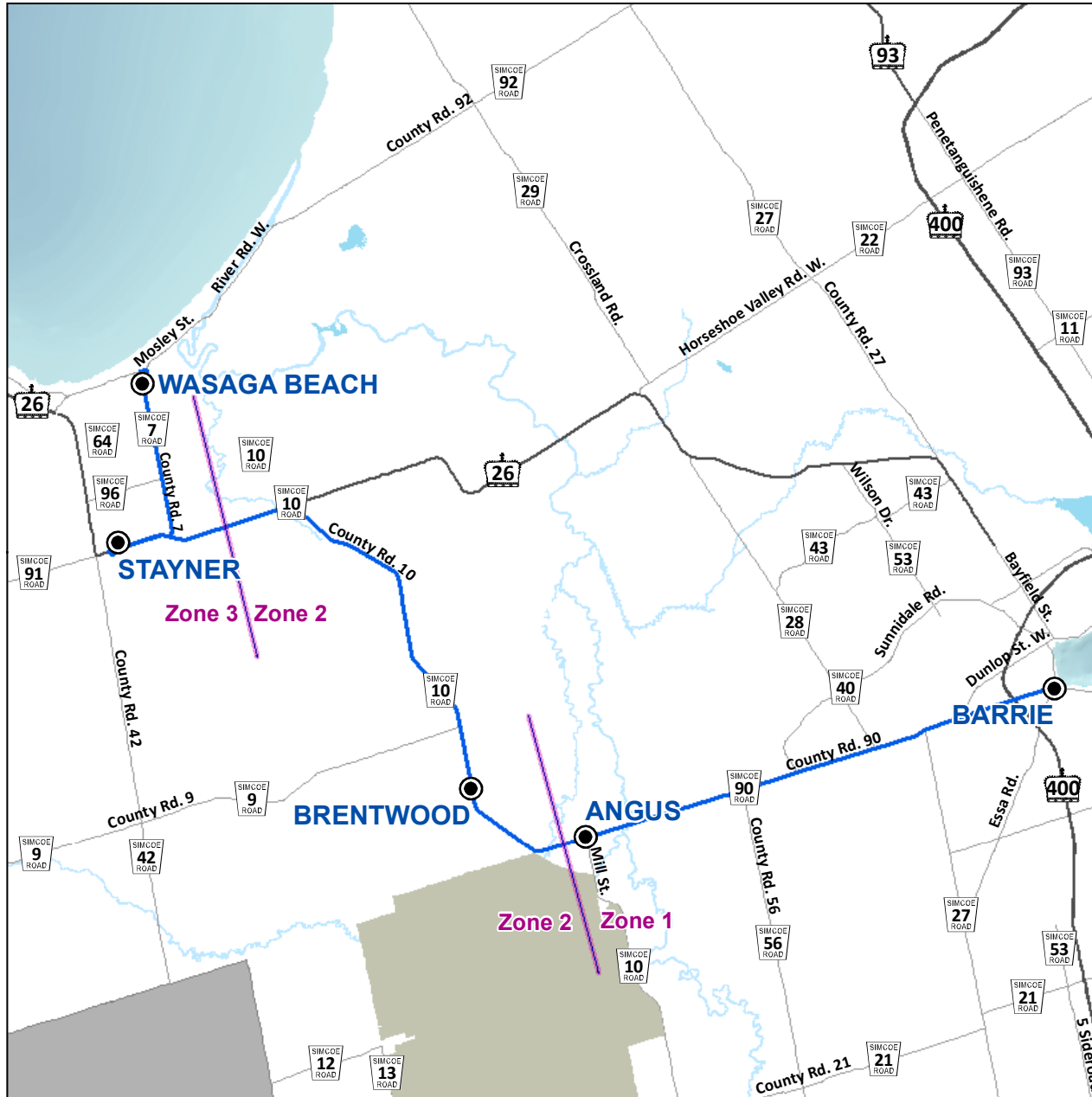


Look for the bus stop sign
at the numbered locations



To
Wasaga
Beach
with stops at
Superstore &
Ramblewood
Medical Centre

Route Map



Fare Structure

Route 2 is divided into three **Fare Zones** and rates are based on distance travelled. Children 5 years and younger ride for free.

ZONE	LOCATION
Zone 1	Barrie, Allandale Waterfront Station
Zone 1	Angus, Commerce Road
Zone 2	Brentwood, Community Centre
Zone 3	Stayner, Clearview Administration Center
Zone 3	Wasaga Beach, 45 th St. S. and Knox Road W.
Zone 3	Wasaga Beach, 25 45 th St. S.

From/To	Zone 1	Zone 2	Zone 3
Zone 1	\$2.00	\$4.00	\$6.00
Zone 2	\$4.00	\$2.00	\$4.00
Zone 3	\$6.00	\$4.00	\$2.00

 Use Our Fare Calculator at linx.simcoe.ca

Smoking is strictly prohibited on LINX buses and at bus stops

Holiday Service

There is no service on statutory holidays.

Lost and Found

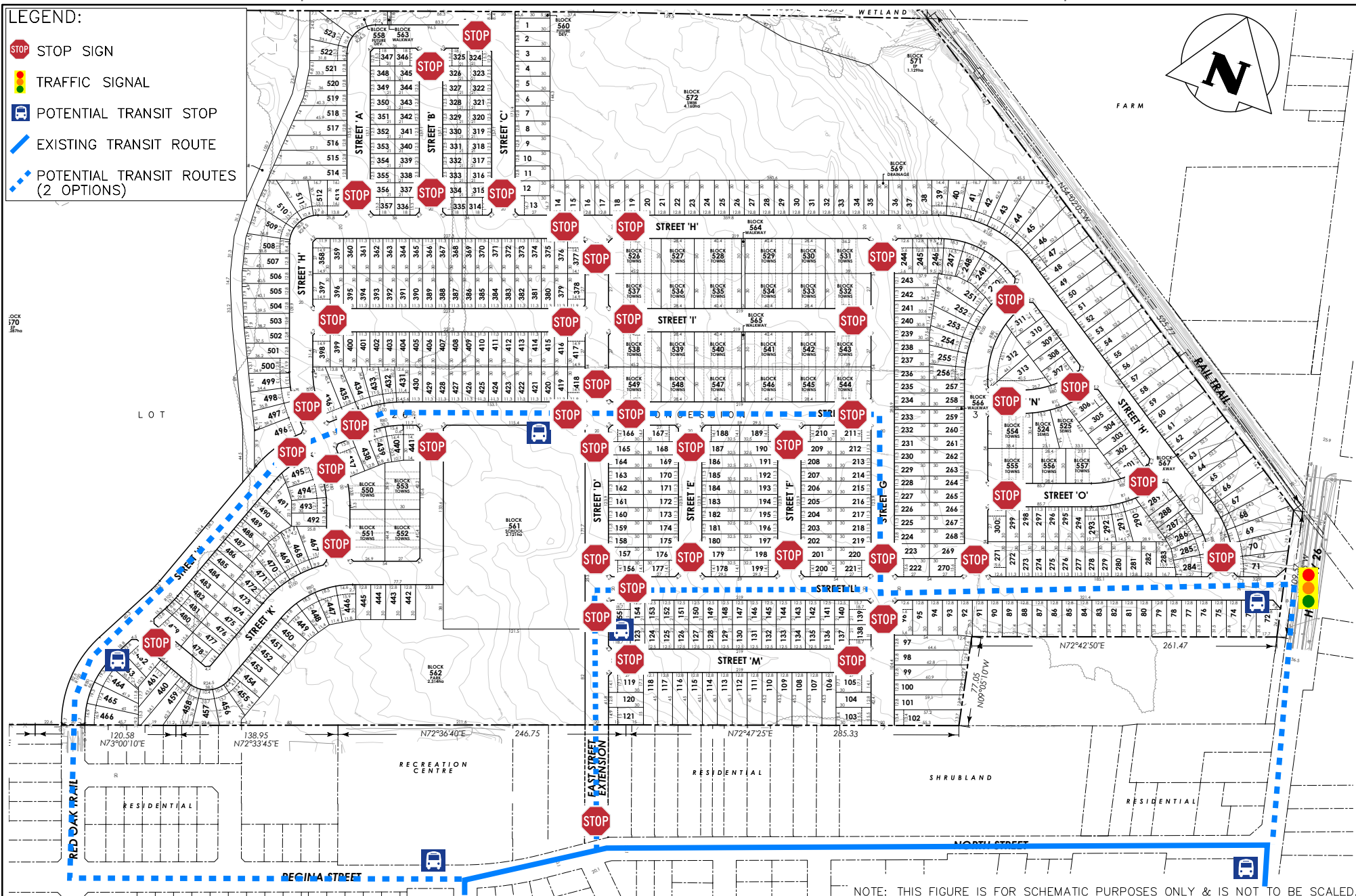
Please call Customer Service at 1-800-263-3199 Monday to Friday between 8 a.m. and 5 p.m. for assistance.

APPENDIX F

Internal Network Recommendations

LEGEND:

-  STOP SIGN
-  TRAFFIC SIGNAL
-  POTENTIAL TRANSIT STOP
-  EXISTING TRANSIT ROUTE
-  POTENTIAL TRANSIT ROUTES (2 OPTIONS)



NOTE: THIS FIGURE IS FOR SCHEMATIC PURPOSES ONLY & IS NOT TO BE SCALED.



Project

BRIDLE PARK
(STAYNER, ONTARIO)
TOWNSHIP OF CLEARVIEW

Drawing

INTERNAL NETWORK RECOMMENDATIONS



CROZIER
CONSULTING ENGINEERS

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COLLINGWOOD, ON L9Y 4L4
705 446-3510 T
705 446-3520 F
WWW.CFCROZIER.CA

Drawn By	K.H.	Design By	K.H.	Project	1508-7498
Scale	N.T.S.	Date	2026.07.17	Check By	K.H.
				Drawing	FIG. F

APPENDIX G

Collingwood Traffic Calming Policy Excepts



Enhancing our communities



Traffic Calming

POLICIES & PROCEDURES

Town of Collingwood

3 Traffic Calming Measures

Traffic calming measures are typically classified into the follow categories:

- physical measures which relate to physical alterations to the road surface or geometry; or
- non-physical measure which relate to “soft” methods such as enforcement, pavement markings and signage.

3.1 PHYSICAL MEASURES

Physical measures include:

- speed humps (rounded raised areas placed across the roadway);
- speed cushions (variation of speed humps with gaps in the humps to accommodate emergency vehicles and busses);
- speed tables (flat-topped speed humps);
- rumble strips (raised bars/grooves closely spaced);
- textured crosswalks (patterned surface contrasting the adjacent roadway);
- raised intersections (flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section);
- traffic circles (raised island, placed in intersections, around which traffic circulates);
- roundabouts (larger than traffic circles and typically have raised splitter islands to channel approaching traffic to the right and are used on higher volume streets);
- chicanes (curb extensions that alternate from one side of the street to the other, forming S-shaped curves);
- chokers (curb extensions at midblock locations that narrow a street);
- curb radius reductions (reconstruction of an intersection corner to a smaller radius);
- realigned intersections (changes in alignment that convert T-intersections with straight approaches into curving streets that meet at right angles);
- neckdowns (curb extensions at intersections that reduce roadway width curb to curb);
- centre island narrowings (placement of a raised island located along the centerline of a street that narrows the travel lanes at that location);
- on-street parking (allowing vehicles to park adjacent and parallel to the curb); and



- gateways (a combination of traffic calming measures that identify a transition between rural and urban zones - ideal for arterial roads).

3.2 NON-PHYSICAL MEASURES

As previously noted, non-physical traffic calming measures are usually implemented through enforcement, signage and pavement markings. Such measures include:

- speed enforcement (police enforcement, particularly in school and community safety zones; can also include automated speed enforcement);
- pavement marking legends (painted speed limits on the pavement surface to remind drivers of the speed limits);
- transverse lane markings (transverse bars or chevron pavement markings on a travel lane);
- lane narrowing and shoulder widening through pavement marking; and
- dynamic speed displays (radar signs which indicate travel speeds).

It is noted that while stop signs are often employed as a means of traffic calming, such is not recommended. As per the *Ontario Traffic Manual Book 5 Regulatory Signs*, stop signs should not be used for speed control. Unwarranted stop signs increase vehicular speeds between stop signs (stop signs only affect speeds within approximately 40 metres of the stop sign), encourage rolling stops and ultimately, non-compliance. An excessive number of stop signs, particularly those that are not warranted, also breeds disrespect for stop signs and other traffic control devices.

3.3 TOWN OF COLLINGWOOD MEASURES

In consideration of the Town objectives in implementing traffic calming guidelines, and recognizing the combination of urban, semi-urban and rural roads within the Town's road network, the following traffic calming measures have been considered:

- | | | |
|-------------------------------------|---------------------------|------------------------|
| ▪ police enforcement; | ▪ chicanes; | ▪ speed cushions; |
| ▪ automated speed enforcement; | ▪ curb radius reductions; | ▪ speed tables; |
| | ▪ curb extensions; | ▪ centre median; |
| ▪ dynamic speed signs; | ▪ traffic calming curbs; | ▪ traffic circles; and |
| ▪ lane narrowing via road markings; | ▪ textured cross walks; | ▪ on-street parking. |
| | ▪ speed humps; | |



APPENDIX H

Vehicle Manoeuvring Diagrams



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Project: BRIDLE PARK (STAYNER, ONTARIO) TOWNSHIP OF CLEARVIEW
Drawing: VEHICLE MANOEUVERING DIAGRAM FIRE TRUCK



Drawn By	Design By	Project
B.R.	B.R.	1508-7498
Check By	Check By	Drawing
K.H./D.F.	K.H./D.F.	T301



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Engineer

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Engineer

Project

BRIDLE PARK
(STAYNER, ONTARIO)
TOWNSHIP OF CLEARVIEW

Drawing

VEHICLE MANOEUVERING DIAGRAM
GARBAGE TRUCK



Drawn By	B.R.	Design By	B.R.	Project	1508-7498
Check By	K.H./D.F.	Check By	K.H./D.F.	Drawing	T301