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430 Raglan Street

TRANSPORTATION IMPACT BRIEF

Tin Shack Ltd.

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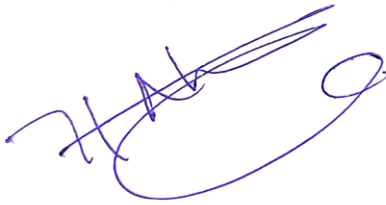
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1 Introduction

Tatham Engineering Limited was retained by Tin Shack Ltd. to prepare a transportation impact brief in support of a proposed industrial warehouse development to be located on 430 Raglan Street, in the Town of Collingwood. The location of the proposed development is illustrated in Figure 1.

1.1 REPORT OBJECTIVE

The objective of this report is to present the findings of the transportation impact brief and address the requirements of the municipality with respect to the potential impacts of the development on the area road network. In consideration of the trip generation associated with the subject development, the scope of this study has been limited to a traffic impact brief which addresses the following:

- existing conditions, including a description of the study area road network, traffic volumes, operations and planned/proposed improvements;
- details of the proposed development and the volume of traffic that it is anticipated to generate; and
- transportation impacts associated with the proposed development.

1.2 REPORT STRUCTURE

The report is structured as follows:

- Chapter 1: introduction and study purpose
- Chapter 2: existing conditions, detailing the road system and corresponding traffic operations;
- Chapter 3: proposed development, access assessment and trip generation;
- Chapter 4: future traffic operations associated with the proposed development; and
- Chapter 5: summary of the report and key findings.



2 Existing Conditions

This chapter will describe the road network, traffic volumes and operations for the existing conditions.

2.1 ROAD NETWORK

The road network considered in this report comprises of Raglan Street and Ron Emo Road, and their respective intersection. Aerial imagery of the road network and study area is provided in Figure 2, while photographs of the study area intersection are provided in Figure 3.

2.1.1 Roads

Raglan Street

As per the *Town of Collingwood's Official Plan*¹, Raglan Street is designated as a collector road. The road is oriented in the north-south direction through the study area and has a 2-lane cross section (1-lane in each direction). Between Poplar Sideroad and Ron Emo Road, Raglan Street is paved to a width of 9.5 metres, providing 4.0 metre travel lanes and a 1.5 metre paved shoulder on the east side of the road (the west side is gravel). The posted speed limit is 50 km/h and hence a design speed of 60 km/h has been assumed (posted speed + 10 km/h). The road maintains a relatively straight and flat alignment through the study area, with some minor horizontal and vertical curves variations in the vicinity of Ron Emo Road.

Ron Emo Road

Ron Emo Road is an east-west collector road under the jurisdiction of the Town. The road has a 2-lane rural cross section with paved width of 8.0 metres and 2.0 metres gravel shoulders. The speed limit is unposted; thus a 50 km/h limit has been assumed.

2.1.2 Intersections

Raglan Street & Ron Emo Road

The intersection of Raglan Street and Ron Emo Road is a three-leg, stop-controlled intersection, with stop control provided on the minor approach (Ron Emo Road). The north approach consists of a shared left-turn/through lane, the south approach consists of a shared through/right-turn lane and the east approach consists of a single shared left/right-turn lane.

¹*Town of Collingwood Official Plan*, Town of Collingwood, May 2026



2.2 TRAFFIC VOLUMES

2.2.1 Traffic Counts

To determine existing traffic volumes, traffic counts were conducted at the intersection of Raglan Street and Ron Emo Road on Wednesday, October 29, 2025. The volumes are illustrated in Figure 4 with detailed counts sheets provided in Appendix A.

2.2.2 2026 Traffic Volumes

The traffic volumes recorded during the 2025 traffic counts were increased at a rate of 2.0% per annum to represent 2026 existing conditions. The rationale for the application of the annual growth rate is discussed further in Section 4.2.1. The resulting traffic volumes are illustrated in Figure 5.

2.3 TRAFFIC OPERATIONS

The assessment of existing conditions provides the baseline from which the future traffic operations can be assessed from. As the capacity, and hence operations, of a road system is effectively dictated by its intersections, the analysis focused on the operations of the study area intersection considering the following:

- the 2026 peak hour traffic volumes;
- the existing intersection configuration and control; and
- procedures outlined in the *2000 Highway Capacity Manual*² (using Synchro v.12 software).

The analysis considers the following metrics for the critical movements at unsignalized intersections (namely stop-controlled and left turn movements):

- the average delay (measured in seconds);
- level of service (LOS); and
- volume to capacity (v/c) ratio.

For level of service, LOS A corresponds to the best operating condition with minimal delays whereas LOS F corresponds to poor operations resulting from high intersection delays. Level of Service (LOS) definitions are provided in Appendix B.

A v/c ratio of less than 1.0 indicates the intersection movement/approach is operating at less than capacity while v/c of 1.0 indicates capacity has been reached.

² *Highway Capacity Manual*. Transportation Research Board. Washington DC, 2000.



A summary of the analysis is provided in Table 1; detailed worksheets provided in Appendix C. As indicated, the intersection currently provides excellent overall operations (LOS B or better). Therefore, no improvements are required to accommodate the existing traffic volumes.

Table 1: Intersection Operations - 2026

INTERSECTION, MOVEMENTS & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Raglan Street & Ron Emo Road	WB LR	stop	11	B	0.12	12	B	0.22
	SB LT	free	5	A	0.07	4	A	0.08

L - left T - through R - right LT - left-through TR - through-right LTR - left-through-right



3 Proposed Development

This chapter will provide additional details regarding the proposed development, including location, projected site-generated traffic volumes, and the assignment of said volumes to the adjacent road network.

3.1 LOCATION

The subject property is located at 430 Raglan Street in the Town of Collingwood. The site is bordered by Raglan Street to the east, providing direct road frontage and access; undeveloped land lies to both the north and south of the property, while towards the west, the property is bounded by the Pretty River.

The location of the proposed development is illustrated in Figure 1.

3.2 LAND USE

The proposed development will consist of a warehouse, to be utilized for storage and delivery of goods. The facility will have a total gross floor area (GFA) of 5,640 m² with a ground (4,060 m²) and a mezzanine floor (1,580 m²).

The site plan for the proposed development is provided in Figure 6.

3.3 ACCESS

3.3.1 Location & Configuration

A single access is proposed to serve the site from Raglan Street, located toward the south limit of the subject lands. The proposed access has been reviewed with consideration to the Ontario Provincial Standard Drawing (OPSD) for Urban Industrial, Commercial and Apartment Entrances (OPSD 350.010) and the recommended access design practices outlined in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads.

For a light industrial driveway accommodating two-way operations, TAC guidelines recommend a throat width ranging from 7.2 to 12.0 metres. The TAC-recommended dimensions are generally consistent with those illustrated in OPSD 350.010. As illustrated on the site plan, the proposed access provides a width of 9.2 metres, which satisfies the applicable design criteria for a light industrial driveway.

Based on the foregoing, the proposed access width is considered appropriate for the intended site operations.



3.3.2 Sight Line Assessment

A sight line assessment was conducted to evaluate the available sight distances along Raglan Street at the proposed site access. The assessment has considered both minimum stopping sight distance and intersection sight distance, as defined below and dictated per the standards published in the Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads*:

- The minimum stopping sight distance provides a sufficient distance for an approaching motorist to observe a stationary hazard in the road and bring their vehicle to a complete stop prior to the hazard.
- The intersection sight distance allows a vehicle to enter a main road from a side street (or site access) and attain the appropriate operating speed without significantly impacting the operating speed of an approaching vehicle.

The noted sight distance requirements and the available sight distances are summarized in Table 2 and illustrated in Figure 7.

Table 2: Sight Line Assessment

LOCATION	DESIGN SPEED	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE		AVAILABLE SIGHTLINES TO/FROM	
			Left Turn	Right Turn	South	North
Site Access	60 km/h	85 m	130 m	110 m	> 250 m	> 250 m

As indicated, the available sight distances both to and from the north and south along Raglan Street at the proposed site access location surpass the minimum requirements for the noted posted speed/design speed and thus are considered appropriate.

3.4 PARKING

Parking for the subject site has been reviewed based on the parking standards contained in the *Town of Collingwood Zoning By-Law 2010-040*³.

3.4.1 Standard Parking

The minimum parking requirements for the subject site are summarized in Table 3. Based on a warehouse gross floor area of 5,640 m² and a minimum parking rate of 1 space per 100 m², a

³Collingwood Zoning By-Law, Town of Collingwood, Consolidated: April 2026



total of 57 parking spaces are required. The site plan provides 57 parking spaces and therefore satisfies the minimum Zoning By-Law requirement.

Table 3: Parking Requirements

LAND USE	PARKING RATE	SIZE	REQUIRED PARKING
warehouse	1 parking space per 100 m ²	5,640 m ²	57

3.4.2 Barrier Free & Bicycle Parking

The barrier-free and bicycle parking requirements and proposed supply are summarized in Table 4. For a parking area containing between 51 and 100 parking spaces, the Zoning By-Law requires a minimum of 3 barrier-free parking spaces. The site plan provides 3 barrier-free parking spaces and therefore satisfies the minimum requirement.

Table 4: Barrier Free & Bicycle Parking Requirements

TYPE	CRITERIA	REQUIREMENT	SUPPLY
barrier free	51-100 parking spaces	3	3
bicycle	10% of required parking spaces (non- residential use)	6	6

For non-residential uses, the Zoning By-Law requires bicycle parking at a rate equivalent to 10% of the required vehicle parking supply. Based on a requirement of 57 vehicle parking spaces, 6 bicycle parking spaces are required. The site plan provides 6 bicycle parking spaces and therefore satisfies the minimum requirement.

3.5 SITE TRAFFIC

3.5.1 Trip Generation

The number of vehicle trips to be generated by the development for the weekday AM and PM peak hours has been determined based on type of use, development size and applicable trip generation rates published in the *ITE Trip Generation Manual, 12th Edition*. Based on the proposed development, the trip rates for *warehouse* (ITE code 150) land-use have been employed.

The associated trip rates and resulting trip estimates are provided in Table 5. As indicated, the proposed development is expected to generate 7 new trips during the weekday AM peak hour and 9 new trips during the weekday PM peak hour.



Table 5: Trip Rates & Estimates

LAND USE	VARIABLE/SIZE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
warehouse (ITE Code 150)	1000 ft ² GFA	0.09	0.03	0.12	0.04	0.11	0.15
	60,708 ft ²	6	2	7	3	7	9

3.5.2 Trip Distribution & Assignment

The distribution of the trips generated from the site to the area road network is based on the location of site within the Town of Collingwood, its proximity to surrounding local developments, travel patterns observed during the traffic counts, expected travel routes and the local arterial road network. For the purpose of this review, the following has been assumed:

- to/from the north via Raglan Street – 40%;
- to/from the south via Raglan Street – 50%; and
- to/from the east via Ron Emo Road – 10%.

The resulting site generated traffic assignment to the study area road network is illustrated in Figure 8. Given the limited volume of site traffic, the resulting distribution onto the surrounding road system will be immaterial (i.e. all site traffic could be destined to/from a single direction without significant implications).



4 Future Conditions

This chapter will address the future conditions with consideration for the subject development, and any resulting impacts of such on the adjacent road system. The following areas will be addressed:

- future traffic volumes;
- future traffic operations, including the site access; and
- potential improvements to the study area road network, if necessary.

In considering the limited trip generation of the site, a single horizon year of 2032 (5-years beyond anticipated build-out) has been considered to assess the impact of the development on the road network.

4.1 ROAD NETWORK

There are no road network improvements currently being considered by the Town within the study area. As such, the road network as described in Section 2.1 has been maintained on the road network.

4.2 TRAFFIC VOLUMES

4.2.1 Background Growth

Population Growth

In considering historical and projected population levels for the Town of Collingwood, the following were noted:

- based on Census data, the population of the Town of Collingwood increased from 21,793 in 2016 to 24,811 in 2021, representing an approximate annual growth rate of 2.6%; and
- as per the Town's *Official Plan*, the population of the Town of Collingwood is expected to increase to 33,340 by 2031, resulting in an annual growth rate of 3.0%; and
- as per the County of Simcoe's *Growth Forecast and Land Needs Assessment*⁴, the Town has been allocated a population of 42,690 by 2051 which yields an annual growth of 1.8% when considering a 2021 population of 24,811.

⁴ *Growth Forecast and Land Needs Assessment*. March 31, 2022, Hemson for the County of Simcoe.



Consideration of Other Studies

Background growth rates have been considered as employed in several other studies as follows:

- the 2017 *Eden Oak Homes – Proposed Residential Development Traffic Impact Study Update*⁵ employed a background growth rate of 1.0% per annum for both Poplar Sideroad/County Road 32 and Hurontario Street/County Road 124 in estimating future traffic volumes;
- the 2018 *Blackmoor Gates Traffic Impact Study*⁶ employed a 2.0% annual growth rate for background traffic;
- the 2019 *Collingwood Transportation Study Update*⁷ employed a 0.5% background growth rate, applied to all Town roads considered in the assessment;
- the 2022 *Pretty River Estates Transportation Impact Study*⁸ employed a 2% annual growth on Poplar Sideroad and 0.5% annual growth on Town roads, as provided by the County and Town respectively; and
- the 2024 *Summit View Phase 3 Traffic Impact Study*⁹ assumed 2.0% annual growth on Poplar Sideroad (as per Town comments).

Overall Background Growth

To maintain consistency with the previously completed transportation studies, and ensure a conservative approach, a 2.0% annual growth rate has been assumed to represent background growth.

4.2.2 Background Development

Further to the historical growth in traffic volumes and anticipated population growth in the area, consideration has been given to area developments that are expected to increase traffic volumes through the study area. While a number of such developments are located along Poplar Sideroad, they will not necessarily translate to significant growth in traffic volumes on Raglan Street. The exception is the DiPoce Lands and the Collingwood Hospital, as detailed below.

⁵ *Eden Oak Homes – Proposed Residential Development Traffic Impact Study Update*. Cole Engineering, September 2017.

⁶ *Blackmoor Gates Traffic Impact Study*. WSP, May 2018.

⁷ *Collingwood Transportation Study Update*. RJ Burnside & Associates Limited, August 2019.

⁸ *Pretty River Estates Transportation Impact Study*. Paradigm, May 2022.

⁹ *Summit View Phase 3 Traffic Impact Study*. Tatham Engineering Limited, August 2024.



DiPoce Lands

The DiPoce Lands consist of approximately 130 acres of undeveloped land located on the north side of Poplar Sideroad between Raglan Street and Sixth Line, with the lands including the Georgian College campus. It is understood that a significant development is proposed for this site, currently referred to as the Poplar Health and Wellness Village. As per available information on the development website¹⁰, this development will consist of an integrated medical, residential, and wellness campus. Current concepts envision the construction of approximately 2,200 residential units, over 90,000 m² of medical and wellness services, and over 50,000 m² of office and research spaces, though no formal concept plans are publicly available. Once concept plans are developed, given the scale of this development, it is likely that the completion of comprehensive master planning studies will be required to determine the impacts of the site on the surrounding transportation network, environment, municipal servicing, etc.

Given the very limited information available, preliminary state of planning and anticipated development timelines for the DiPoce Lands, this development has not been considered in the 2032 horizon employed in this study

Collingwood Hospital

While located within the DiPoce Lands parcel, the Collingwood Hospital development has been considered separately. Through correspondence with the transportation consultant working on the development, the hospital will contain 132 beds and is expected to generate approximately 235 trips during the weekday AM peak hour, 225 trips during the weekday PM peak hour, and 260 trips during the Saturday peak hour. The distribution of trips from the hospital was resolved with the consultant as follows:

- | | |
|---|-----|
| ▪ to/from the north via Hurontario Street | 15% |
| ▪ to/from the north via Raglan Street | 10% |
| ▪ to/from the south via Hurontario Street | 5% |
| ▪ to/from the east via Poplar Sideroad | 40% |
| ▪ to/from the west via Poplar Sideroad | 30% |

Based on information presented on the new hospital's website¹¹, the construction is expected to begin in late 2028 with the hospital operational no sooner than 2033. In this regard, it is not expected to contribute additional volumes on Raglan Street for the 2032 horizon considered.

¹⁰ www.poplarhealthandwellnessvillage.com

¹¹ www.yourfuturehospital.com



4.2.3 Traffic Volumes

Future traffic volumes for the 2032 horizon year are illustrated in Figure 9, reflective of the following:

- the 2026 volumes;
- an annual background growth rate of 2.0%; and
- the additional development volumes associated with the subject site.

4.3 TRAFFIC OPERATIONS

The intersection of Raglan Street and Ron Emo Road was reassessed under future conditions, the results of which are summarized in Table 6, with detailed worksheets provided in Appendix D. Future site access on Raglan Street has also been assessed, assuming stop control and shared lanes on all approaches.

Table 6: Intersection Operations - 2032

INTERSECTION, MOVEMENTS & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Raglan Street & Ron Emo Road	WB LR	stop	12	B	0.15	13	B	0.26
	SB LT	free	5	A	0.09	4	A	0.10
Raglan Street & Site Access	EB LR	stop	10	B	0.00	11	B	0.00

L - left T - through R - right LT - left-through TR - through-right LTR - left-through-right

As indicated, the intersections will provide excellent operations through the 2031 horizon (largely LOS A or B). Based on the resulting operations, no road network improvements are proposed.

4.4 TURN LANE REQUIREMENTS

Given the limited traffic volumes on Raglan Street and trips to be generated from the subject site, exclusive turn lanes on Raglan Street at the site access are not considered necessary, nor would they be warranted.



5 Summary

Proposed Development

The proposed development consists of a 5,640 m² warehouse to be located on 430 Raglan Street, in the Town of Collingwood. Upon buildout, the development is expected to generate 7 trips in the AM and 9 trips in the PM peak hour.

Transportation Impacts

To assess the impacts of the proposed development on the study area road network, the operations at the intersection was analyzed under existing (2026) and future (2032) conditions. The results of the operational analysis indicate that the study area intersection and future site access will provide excellent operations (LOS B or better) through the 2032 horizon.

As such, no road network improvements are required to accommodate the proposed development.

Sight Line Assessment

The available sight lines along Raglan Street at the proposed access location were reviewed and found to exceed the applicable design guidelines for minimum stopping and intersection sight distance.





Source: Simcoe Maps

430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 1: Site Location



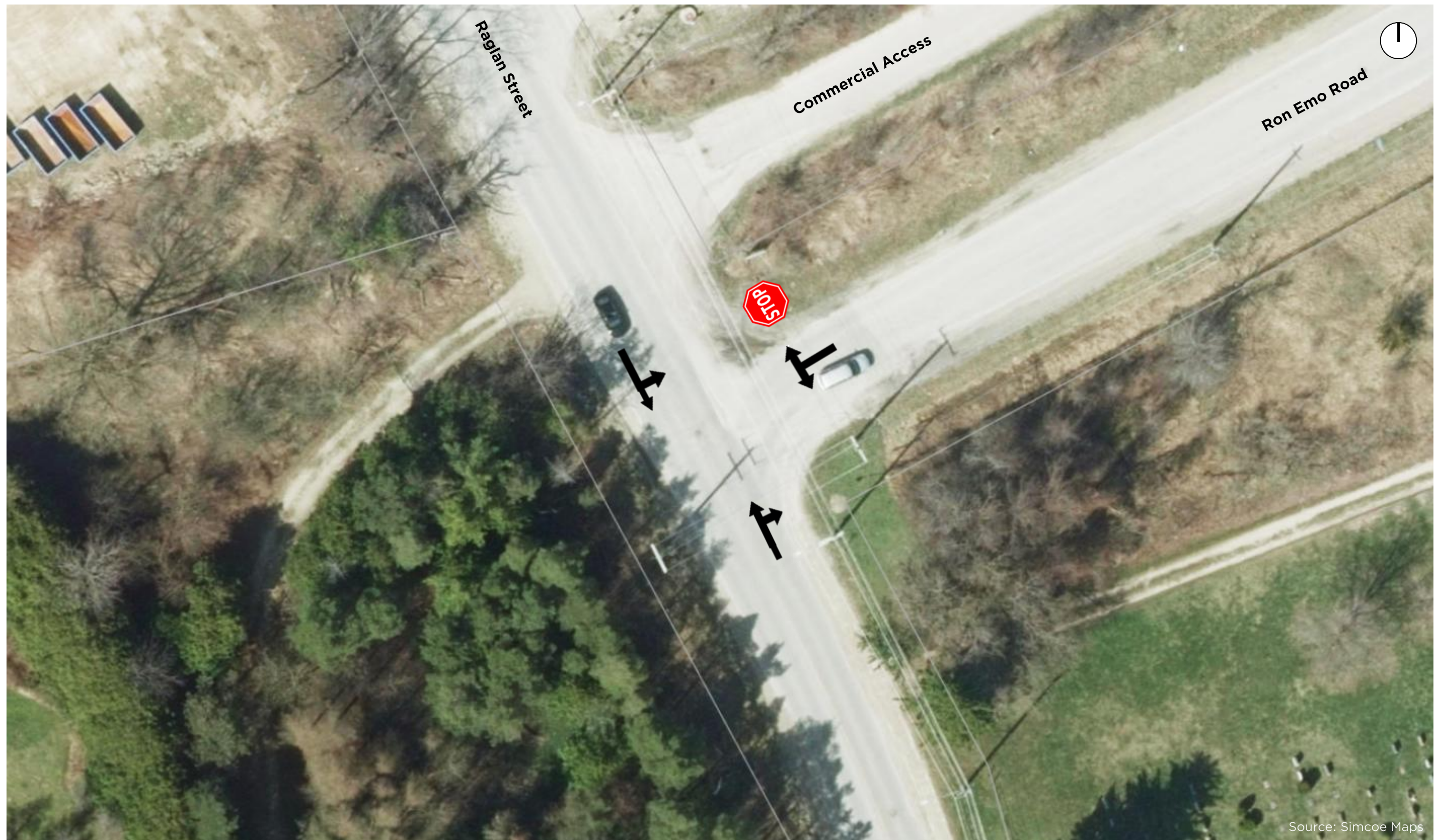


Source: Simcoe Maps

430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 2: Area Road Network

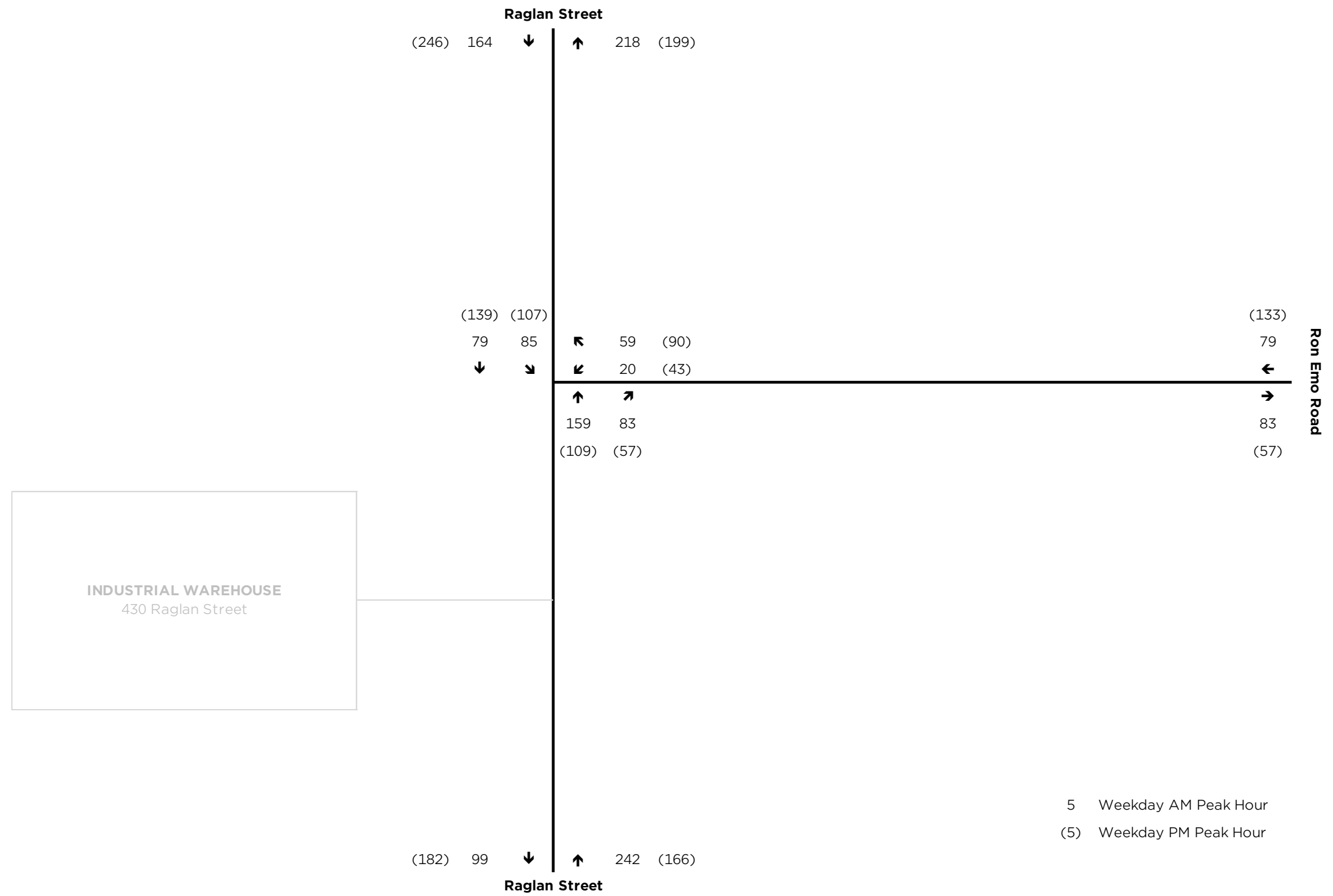




430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 3: Intersection Operation

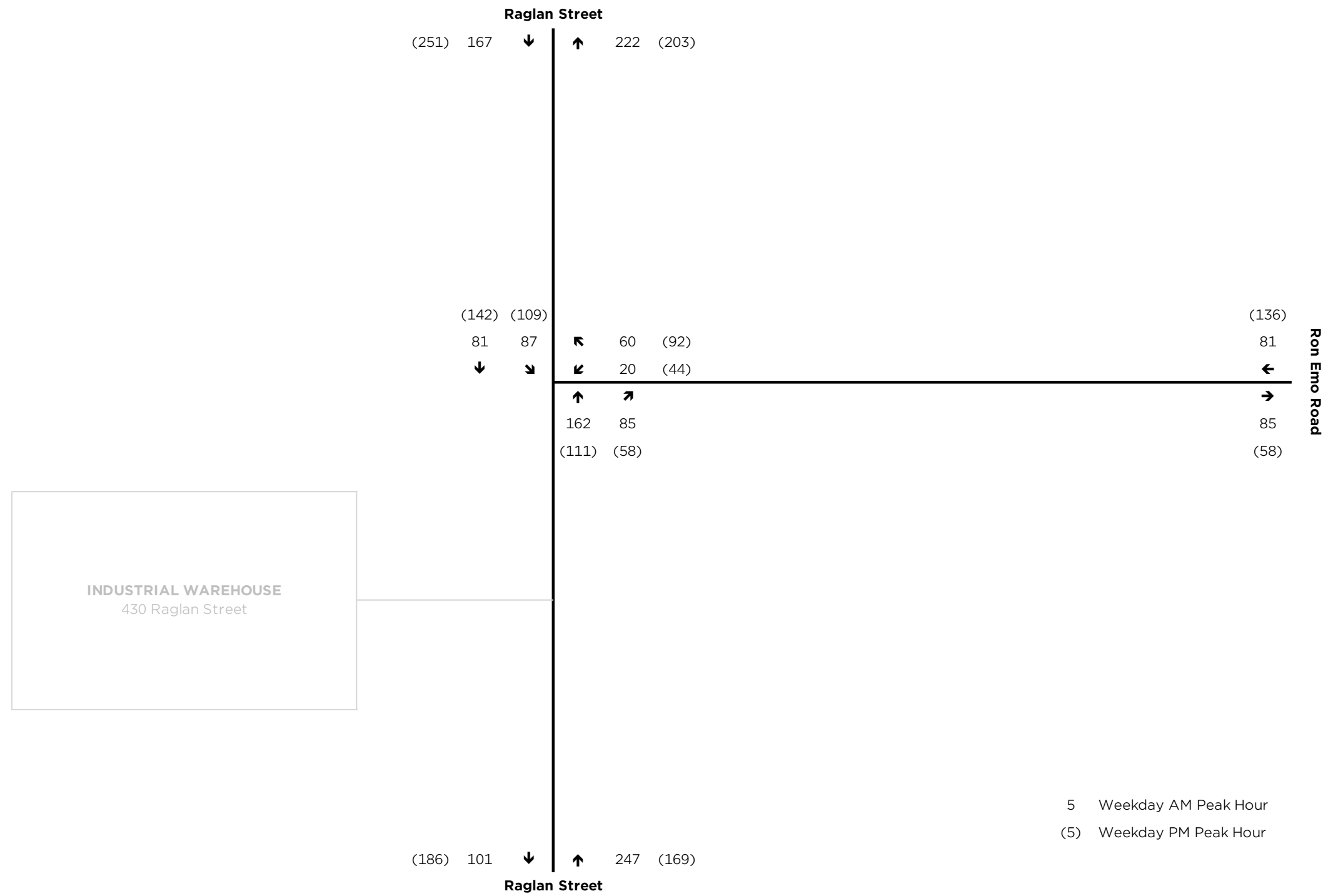




430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 4: Traffic Counts





430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 5: Traffic Volumes - 2026





Looking north on Raglan Street from proposed site access



Looking south on Raglan Street from proposed site access

430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 6A: Sight Line Assessment



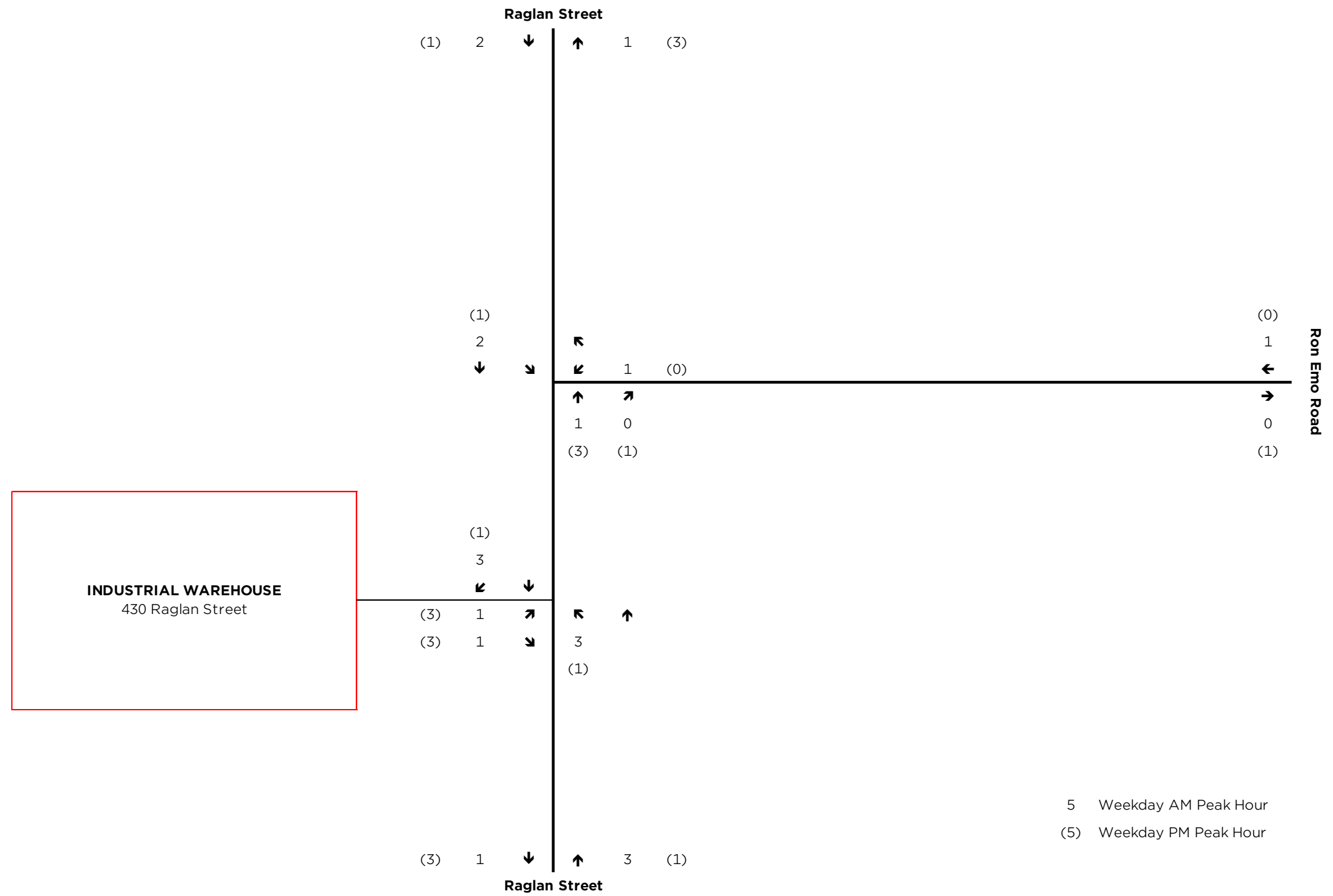


Source: Simcoe Maps

430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 6B: Sight Line Assessment

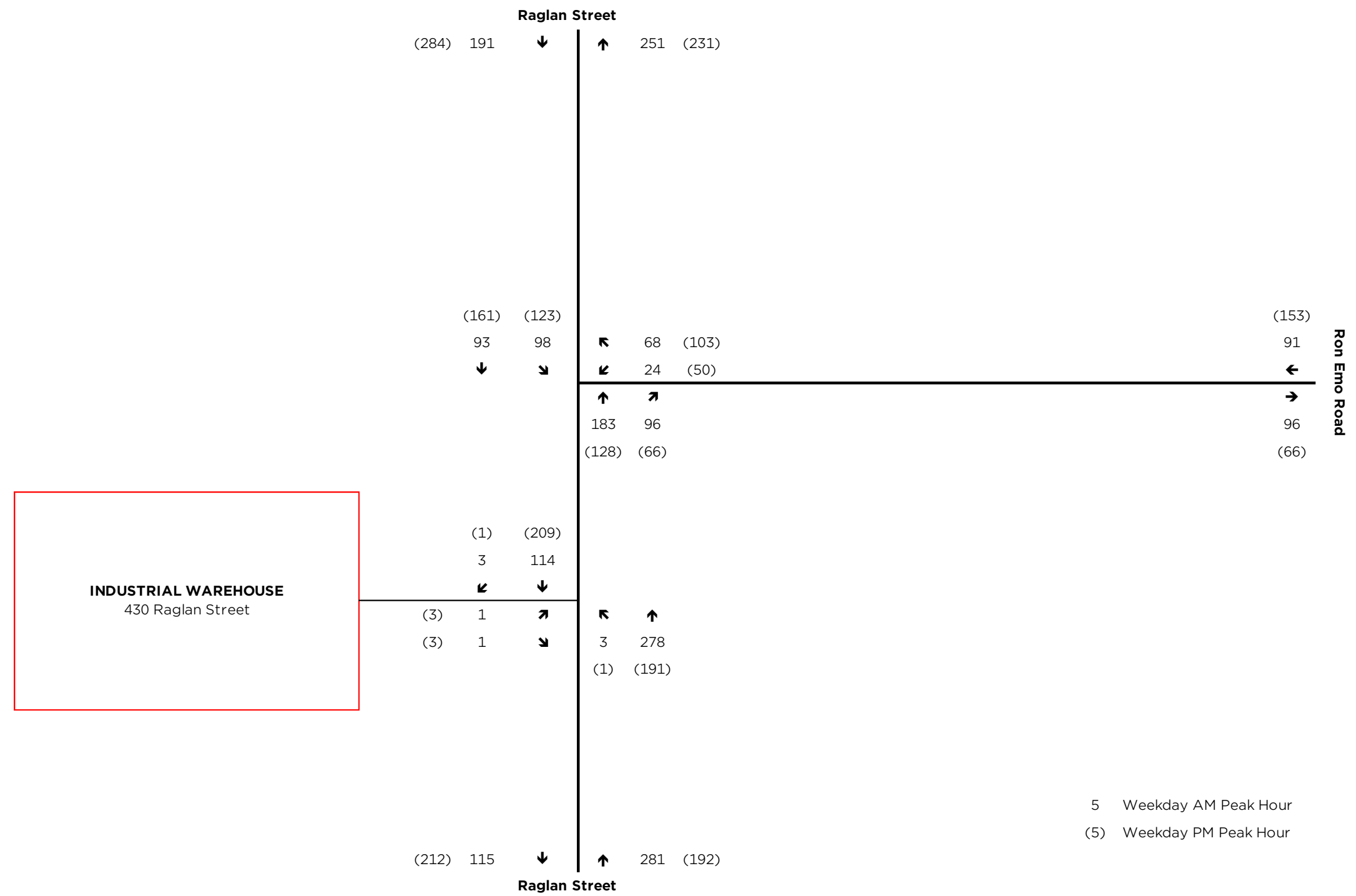




430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 7: Site Traffic





430 RAGLAN STREET - TRAFFIC IMPACT BRIEF

Figure 7: Traffic Volumes - 2032



Appendix A: Traffic Counts

Raglan Street & Ron Emo Road

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 7:45:00

To: 8:45:00

Municipality: Collingwood

Site #: 0000009200

Intersection: Raglan Street & Ron Emo Road

TFR File #: 1

Count date: 29-Oct-2025

Weather conditions:

Clear

Person(s) who counted:

** Non-Signalized Intersection **

Major Road: Raglan Street runs N/S

North Leg Total: 382

North Entering: 164

North Peds: 0

Peds Cross: ∇

Heavys	8	2	10
Trucks	3	4	7
Cars	68	79	147
Totals	79	85	

Heavys	3
Trucks	10
Cars	205
Totals	218

East Leg Total: 247

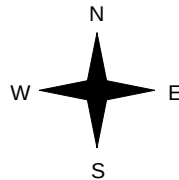
East Entering: 79

East Peds: 0

Peds Cross: ∇



Raglan Street



Cars	Trucks	Heavys	Totals
53	6	0	59



Cars	Trucks	Heavys	Totals
16	0	4	20
69	6	4	

Ron Emo Road



Raglan Street



Cars	84	Cars	152	79	231
Trucks	3	Trucks	4	0	4
Heavys	12	Heavys	3	4	7
Totals	99	Totals	159	83	

Peds Cross: ∇

South Peds: 0

South Entering: 242

South Leg Total: 341

Comments

Raglan Street & Ron Emo Road

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Collingwood

Site #: 0000009200

Intersection: Raglan Street & Ron Emo Road

TFR File #: 1

Count date: 29-Oct-2025

Weather conditions:

Clear

Person(s) who counted:

** Non-Signalized Intersection **

Major Road: Raglan Street runs N/S

North Leg Total: 408

North Entering: 213

North Peds: 1

Peds Cross: $\bowtie$

Heavys	10	1	11
Trucks	6	2	8
Cars	97	97	194
Totals	113	100	

Heavys	7
Trucks	8
Cars	180
Totals	195

East Leg Total: 293

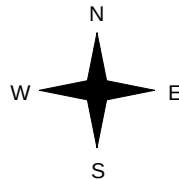
East Entering: 155

East Peds: 0

Peds Cross: $\bowtie$



Raglan Street



Cars	Trucks	Heavys	Totals
102	5	0	107
45	1	2	48
147	6	2	



Ron Emo Road



Raglan Street

Cars	142
Trucks	7
Heavys	12
Totals	161



Cars	78	32	110
Trucks	3	3	6
Heavys	7	3	10
Totals	88	38	

Cars	129	5	4	138
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Peds Cross: $\bowtie$

South Peds: 0

South Entering: 126

South Leg Total: 287

Comments

Raglan Street & Ron Emo Road

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 15:30:00

To: 16:30:00

Municipality: Collingwood

Site #: 0000009200

Intersection: Raglan Street & Ron Emo Road

TFR File #: 1

Count date: 29-Oct-2025

Weather conditions:

Clear

Person(s) who counted:

** Non-Signalized Intersection **

Major Road: Raglan Street runs N/S

North Leg Total: 445

North Entering: 246

North Peds: 0

Peds Cross: $\nlessgtr$

Heavys	4	3	7
Trucks	5	7	12
Cars	130	97	227
Totals	139	107	

Heavys	13
Trucks	7
Cars	179
Totals	199

East Leg Total: 297

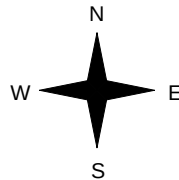
East Entering: 133

East Peds: 0

Peds Cross: $\nlessgtr$



Raglan Street



Cars	Trucks	Heavys	Totals
86	3	1	90
42	1	0	43
128	4	1	



Ron Emo Road



Cars	Trucks	Heavys	Totals
145	10	9	164

Raglan Street

Cars	172
Trucks	6
Heavys	4
Totals	182



Cars	93	48	141
Trucks	4	3	7
Heavys	12	6	18
Totals	109	57	

Peds Cross: $\nlessgtr$

South Peds: 0

South Entering: 166

South Leg Total: 348

Comments

Raglan Street & Ron Emo Road

Total Count Diagram

Municipality: Collingwood

Site #: 0000009200

Intersection: Raglan Street & Ron Emo Road

TFR File #: 1

Count date: 29-Oct-2025

Weather conditions:

Clear

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: Raglan Street runs N/S

North Leg Total: 2864

North Entering: 1432

North Peds: 1

Peds Cross: ∇

Heavys	42	18	60
Trucks	31	21	52
Cars	679	641	1320
Totals	752	680	

Heavys	53
Trucks	48
Cars	1331
Totals	1432

East Leg Total: 2010

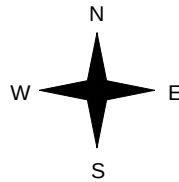
East Entering: 959

East Peds: 2

Peds Cross: ∇



Raglan Street



Cars	Trucks	Heavys	Totals
632	22	6	660
270	11	18	299
902	33	24	

Ron Emo Road



Raglan Street

Cars	949	Cars	699	337	1036
Trucks	42	Trucks	26	11	37
Heavys	60	Heavys	47	23	70
Totals	1051	Totals	772	371	

Peds Cross: ∇

South Peds: 0

South Entering: 1143

South Leg Total: 2194

Comments

Raglan Street & Ron Emo Road

Traffic Count Summary

Intersection: Raglan Street & Ron Emo Road

Count Date: 29-Oct-2025

Municipality: Collingwood

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	60	56	0	116	0	282	8:00:00	0	115	51	166	0
9:00:00	75	80	0	155	0	370	9:00:00	0	148	67	215	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	89	79	0	168	0	281	12:00:00	0	73	40	113	0
13:00:00	100	113	0	213	1	339	13:00:00	0	88	38	126	0
14:00:00	107	74	0	181	0	313	14:00:00	0	89	43	132	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	75	129	0	204	0	346	16:00:00	0	99	43	142	0
17:00:00	106	120	0	226	0	359	17:00:00	0	86	47	133	0
18:00:00	68	101	0	169	0	285	18:00:00	0	74	42	116	0
Totals:	680	752	0	1432	1	2575		0	772	371	1143	0

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	23	0	49	72	0	72	8:00:00	0	0	0	0	0
9:00:00	21	0	47	68	0	68	9:00:00	0	0	0	0	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	32	0	116	148	0	148	12:00:00	0	0	0	0	0
13:00:00	48	0	107	155	0	155	13:00:00	0	0	0	0	0
14:00:00	28	0	71	99	0	99	14:00:00	0	0	0	0	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	32	0	62	94	2	94	16:00:00	0	0	0	0	0
17:00:00	52	0	102	154	0	154	17:00:00	0	0	0	0	0
18:00:00	63	0	106	169	0	169	18:00:00	0	0	0	0	0
Totals:	299	0	660	959	2	959		0	0	0	0	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00
Crossing Values:	23	21	32	49		28	32	52	63

Appendix B: LOS Definitions

Level of Service – Unsignalized Intersections

Level of Service (LOS) for unsignalized intersections is defined in terms of control delay for each critical lane. Control delay includes initial deceleration, queue move-up time, stopped delay and final acceleration delay, and is a function of the service rate or capacity of the approach and degree of saturation.

The following table describes in detail the characteristics of each level of service, with A being the best and F being the worst.

LOS	EXPECTED DELAY TO STREET TRAFFIC	DELAY (sec/veh)
A	Little or no delays	$0 < d \leq 10$
B	Short traffic delays	$10 < d \leq 15$
C	Average traffic delays	$15 < d \leq 25$
D	Long traffic delays	$25 < d \leq 35$
E	Very long traffic delays	$35 < d \leq 50$
F	Extreme delays with queuing which may cause congestion affecting other traffic movements in the intersection	$50 < d$

source: 2010 Highway Capacity Manual

Level of Service – Signalized Intersections

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is made up of a number of factors that relate to control, geometrics, traffic and incidents. Only the portion of total delay attributed to the control facility is quantified. This control delay includes initial deceleration, queue move-up time, stopped delay and final acceleration delay.

The following table describes in detail the characteristics of each level of service, with A being the best and F being the worst.

LOS	EXPECTED DELAY TO STREET TRAFFIC	DELAY (sec/veh)
A	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all at this LOS. Short cycle lengths may also contribute to low delay.	$0 < d \leq 10$
B	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop at this level than at LOS A, causing longer average delays.	$10 < d \leq 20$
C	These higher delays may result from fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	$20 < d \leq 35$
D	At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavourable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures become noticeable.	$35 < d \leq 55$
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.	$55 < d \leq 80$
F	At this level, oversaturation occurs when arrival flow rates exceed the design capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such high delay levels. LOS F is considered to be unacceptable to most drivers.	$80 < d$

source: 2010 Highway Capacity Manual

Appendix C: Existing Conditions

HCM Unsignalized Intersection Capacity Analysis

1: Raglan Street & Ron Emo Road

2026 Existing Conditions
AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	60	162	85	81	87
Future Volume (Veh/h)	20	60	162	85	81	87
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	65	176	92	88	95
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	493	222			268	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	222			268	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	92			93	
cM capacity (veh/h)	499	818			1296	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	87	268	183			
Volume Left	22	0	88			
Volume Right	65	92	0			
cSH	704	1700	1296			
Volume to Capacity	0.12	0.16	0.07			
Queue Length 95th (m)	3.2	0.0	1.7			
Control Delay (s/veh)	10.8	0.0	4.1			
Lane LOS	B		A			
Approach Delay (s/veh)	10.8	0.0	4.1			
Approach LOS	B					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			37.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Raglan Street & Ron Emo Road

2026 Existing Conditions
PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	92	111	58	109	142
Future Volume (Veh/h)	44	92	111	58	109	142
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	100	121	63	118	154
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	543	153			184	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	543	153			184	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	89			92	
cM capacity (veh/h)	459	894			1391	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	148	184	272			
Volume Left	48	0	118			
Volume Right	100	63	0			
cSH	683	1700	1391			
Volume to Capacity	0.22	0.11	0.08			
Queue Length 95th (m)	6.2	0.0	2.1			
Control Delay (s/veh)	11.7	0.0	3.8			
Lane LOS	B		A			
Approach Delay (s/veh)	11.7	0.0	3.8			
Approach LOS	B					
Intersection Summary						
Average Delay		4.6				
Intersection Capacity Utilization		41.0%		ICU Level of Service		A
Analysis Period (min)		15				

Appendix D: Total Condition

HCM Unsignalized Intersection Capacity Analysis

1: Raglan Street & Ron Emo Road

2032 Total Traffic
AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	24	68	183	96	98	93
Future Volume (Veh/h)	24	68	183	96	98	93
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	74	199	104	107	101
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	566	251			303	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	566	251			303	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	91			91	
cM capacity (veh/h)	444	788			1258	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	100	303	208			
Volume Left	26	0	107			
Volume Right	74	104	0			
cSH	656	1700	1258			
Volume to Capacity	0.15	0.18	0.09			
Queue Length 95th (m)	4.1	0.0	2.1			
Control Delay (s/veh)	11.5	0.0	4.5			
Lane LOS	B		A			
Approach Delay (s/veh)	11.5	0.0	4.5			
Approach LOS	B					
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilization			41.3%	ICU Level of Service	A	
Analysis Period (min)			15			

* Value less than 0.01.

HCM Unsignalized Intersection Capacity Analysis 2: Raglan Street & Site Access

2032 Total Traffic
AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	1	3	278	114	3
Future Volume (Veh/h)	1	1	3	278	114	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1	3	302	124	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	434	126	127			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	434	126	127			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	578	925	1459			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	305	127			
Volume Left	1	3	0			
Volume Right	1	0	3			
cSH	712	1459	1700			
Volume to Capacity	0.00*	0.00*	0.07			
Queue Length 95th (m)	0.1	0.0	0.0			
Control Delay (s/veh)	10.1	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s/veh)	10.1	0.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay				0.1		
Intersection Capacity Utilization				27.0%	ICU Level of Service	A
Analysis Period (min)				15		
* Value less than 0.01.						

HCM Unsignalized Intersection Capacity Analysis

1: Raglan Street & Ron Emo Road

2032 Total Traffic
PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	103	128	66	123	161
Future Volume (Veh/h)	50	103	128	66	123	161
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	112	139	72	134	175
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	618	175			211	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	618	175			211	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	87			90	
cM capacity (veh/h)	408	868			1360	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	166	211	309			
Volume Left	54	0	134			
Volume Right	112	72	0			
cSH	635	1700	1360			
Volume to Capacity	0.26	0.12	0.10			
Queue Length 95th (m)	7.9	0.0	2.5			
Control Delay (s/veh)	12.7	0.0	3.9			
Lane LOS	B		A			
Approach Delay (s/veh)	12.7	0.0	3.9			
Approach LOS	B					
Intersection Summary						
Average Delay		4.8				
Intersection Capacity Utilization		45.1%		ICU Level of Service		A
Analysis Period (min)		15				

* Value less than 0.01.

HCM Unsignalized Intersection Capacity Analysis 2: Raglan Street & Site Access

2032 Total Traffic
PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	3	1	191	209	1
Future Volume (Veh/h)	3	3	1	191	209	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	3	1	208	227	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	438	228	228			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	438	228	228			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	576	812	1340			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	209	228			
Volume Left	3	1	0			
Volume Right	3	0	1			
cSH	674	1340	1700			
Volume to Capacity	0.00*	0.00*	0.13			
Queue Length 95th (m)	0.2	0.0	0.0			
Control Delay (s/veh)	10.4	0.0	0.0			
Lane LOS	B	A				
Approach Delay (s/veh)	10.4	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		21.1%		ICU Level of Service		A
Analysis Period (min)		15				

* Value less than 0.01.