REGION OF PEEL

WASTEWATER CAPACITY IMPROVEMENTS IN CENTRAL MISSISSAUGA

APPENDIX 2-H

Traffic Impact Assessment Report

REGION OF PEEL

WASTEWATER CAPACITY IMPROVEMENTS IN CENTRAL MISSISSAUGA

Traffic Report

Impact Assessment

Central Mississauga Trunk Sewer Schedule 'C' Environmental Assessment

Transportation Impact Assessment

Paradigm Transportation Solutions Limited

December 2021
200552

ptsl.com

Project Summary

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Central Mississauga Trunk Sewer Schedule 'C' Environmental Assessment

Transportation Impact Assessment

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Executive Summary

Content

GM BluePlan retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Assessment in support of a Class 'C' Environmental Assessment undertaken for the Mississauga wastewater system capacity expansion.

The purpose of this study is to:

- Determine the impacts of any work area encroachments onto the adjacent roadways and intersections; and
- Provide recommendations on how to minimize delay for vehicles at the study area intersections and pedestrians throughout the study area.

The findings, conclusions and recommendations of this study are summarized below and outlined in detail in the body of the report.

Conclusions

Based on the investigations carried out, the following is concluded:

- The work areas are expected to affect traffic operations at two intersections and pedestrian mobility at four intersections:
  - Queensway West and Hurontario Street;
  - Queensway West and Cawthra Road.
  - Burnhamthorpe Road East and Central Parkway: northeast corner;
  - Queensway East & Cawthra Road: northeast corner;
  - Queensway East & Hurontario Street: southeast corner; and
  - Queensway East & Tedlo Street: trail northwest corner.
- **Existing Traffic Operations:**
  - The study area intersections are mainly operating at overall acceptable levels of service during the peak hours;
  - Several movements are operating with poor levels of service and high v/c ratios; and
  - Several movements are currently exceeding available turning lane storage during each respective peak hour.

- **2025 Traffic Operations:**
  - Without traffic detour re-assignment:
    - The study area intersections will operate at overall poor levels of service and high v/c ratios (>0.90) during both peak hours;
    - Multiple movements will operate at poor levels of service and with v/c ratios >0.90 during both peak hours; and
    - Several movements will exceed available queue length storage during the peak hours.
  - Significant traffic re-assignment (>50%) will be required to provide better levels of service and less congestion at the study area intersections; however, this level of re-assignment is likely not achievable due to limited detour routing options; and
  - In places where sidewalks or trails are closed, alternative routeing options are typically provided; however, they will increase pedestrian walking routes and times.

Recommendations

Based on the findings of this study, it is recommended that:

- **2025 Traffic Operations:**
  - Refinement of the selected shaft compound locations to minimize road encroachment and lane closures at the study area intersections, where possible;
  - Consideration is given to staging works such that both intersections are not under construction at the same time;
  - If construction conditions are still in place, intersection operations at Queensway East and Hurontario Street should be observed and recorded to provide a baseline for the 2025 operations; and
  - Develop a Traffic Management Plan during the Detailed Design Phase that minimizes impacts to traffic and pedestrians by identifying and assessing:
    - Construction phasing;
    - Detour Options;
    - Signing, pavement marking and traffic control changes required to support detour routing; and
    - Construction heavy vehicle routes, detours and compound access locations.

- **Pedestrian Mobility**
  - Provide advance notice of closures for all affected approaches or intersection legs, especially in long blocks where crossing opportunities are widely spaced;
  - Provide signage at intersections indicating sidewalk or path is closed and that point to alternate/detour routing; and
  - Where possible, move or relocate pedestrian facilities to outside work areas, specifically near Tedlo Street.

Contents

Appendices

Figures

Tables

1 Introduction

1.1 Overview

GM BluePlan retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Assessment in support of a Class 'C' Environmental Assessment (EA) undertaken for the Central Mississauga Trunk Sewer capacity expansion.

1.2 Purpose and Scope

The purpose of this study is to:

- Determine the impacts of any work area encroachments onto the adjacent roadways and intersections; and
- Provide recommendations on how minimize delay for vehicles at the study area intersections and pedestrians throughout the study area.

This report will analyze the 2025 horizons which reflects the anticipated year of construction.

1.3 Study Area

The entire Central Mississauga Trunk Sewer Municipal Class Environmental Assessment Area is comprised of the following areas:

- Burnhamthorpe Road East between Central Parkway East and Cawthra Road (northern study area); and
- Queensway between Hurontario Street and a point approximately one kilometre east of Dixie Road and north on Cawthra Road to a point about 100 metres north of Dundas Street East (southern study area).

Upon review of the proposed shaft and work zone locations, the study area for this assignment was determined to consist of the intersections and pedestrian facilities that will be directly impacted by encroachments or closures. Those locations include:

- Intersection Impacts
  - Queensway West and Hurontario Street; and
  - Queensway West and Cawthra Road.
- Pedestrian Facilities:

- Burnhamthorpe Road East and Central Parkway: northeast corner;
- Queensway East & Cawthra Road: northeast corner;
- Queensway East & Hurontario Street: southeast corner; and
- Queensway East & Tedlo Street: trail northwest corner.

Figure 1.1a and **Figure 1.1b** illustrate the study areas.

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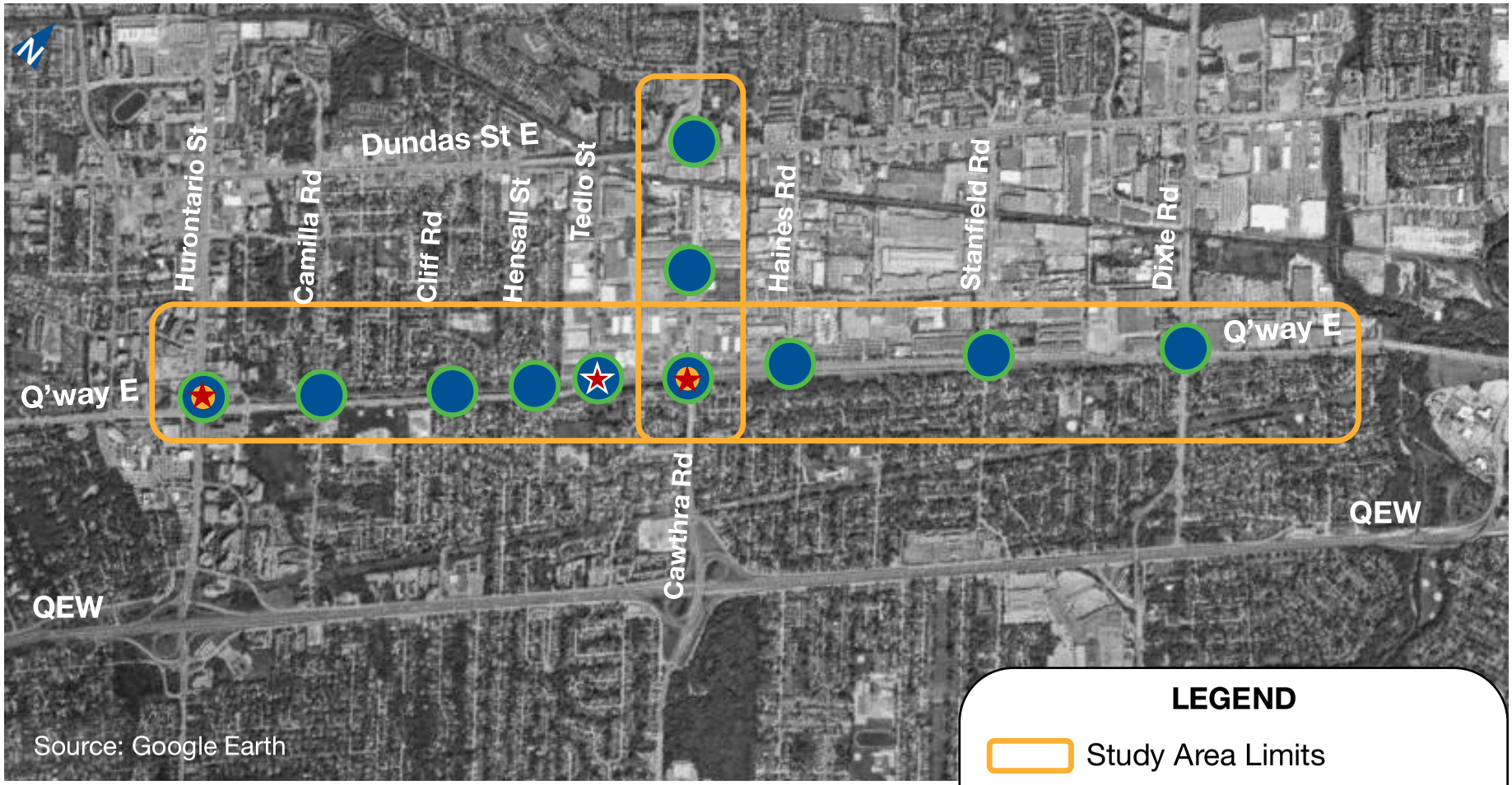
Northern Study Area

Central Mississauga Trunk Sewer EA
200552

Figure 1.1a



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Southern Study Area

Central Mississauga Trunk Sewer EA
200552

Figure 1.1b

2 Existing Conditions

This section documents current traffic conditions, operational deficiencies and constraints experienced by the public travelling at the intersections within the study area.

2.1 Roadway Characteristics

The details of the study area roadways are as follows:

Southern Study Area

- **Queensway**
  - Direction: East-west
  - Cross-Section: Predominantly four-lane urban, divided, with limited direct access.
  - Active Transportation Facilities:
    - Sidewalk on both sides of the road west of Hurontario Street;
    - Sidewalk on both sides of the road between Hurontario Street and the plaza/apartment building entrance to the east;
    - Sidewalk on the north side from Stanfield Road to east of Dixie Road; and
    - A multi-use trail is located on the north side of the road from the plaza/apartment building entrance east of Hurontario Street to Tedlo Street, at which point it shifts to the south side of Queensway East and continues eastward to Stanfield Road.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of the road throughout the study area.
  - Surrounding Land Use: Residential and commercial/ employment land uses.
- **Hurontario Street**
  - Direction: North-south
  - Cross-Section: Predominantly 7-lane urban, with three travel lanes in each direction and a central two-way left-turn lane.
  - Active Transportation Facilities: Sidewalk on both sides of the road north and south of Queensway East.

- Stopping/Parking Restrictions: Parking is not permitted on either side of the road throughout the study area.
- Surrounding Land Use: Residential and commercial/ employment land uses.

- **Cawthra Road**
  - Direction: North-south
  - Cross-Section: Predominantly six-lane urban, with two northbound travel lanes, three southbound travel lanes and a central two-way left-turn lane in the area of Queensway East.
  - Active Transportation Facilities: Sidewalk on both sides of the road north and south of Queensway East.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of the road throughout the study area.
  - Surrounding Land Use:
    - North of Queensway East: Commercial/employment land uses.
    - South of Queensway East: Residential land uses.
- **Camilla Road**
  - Direction: North-south
  - Cross-Section: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Queensway East.
  - Stopping/Parking Restrictions:
    - North of Queensway East: Parking is not permitted on the west side of the road.
    - South of Queensway East: Parking is not permitted on either side of the road.
  - Surrounding Land Use: Mainly residential land uses.
- **Cliff Road**
  - Direction: North-south
  - Cross-Section: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Queensway East.
  - Stopping/Parking Restrictions:

  - North of Queensway East: Parking restrictions are not posted on either side of the road.
  - South of Queensway East: Stopping is prohibited between 8:00 AM and 4:00 PM September through June on the east side of the road.

    Parking restrictions are not posted on the west side of the road.
- Surrounding Land Use: Mainly residential.

Hensall Street

- Direction: North-south
- Cross-Section: Two-lane urban.
- Active Transportation Facilities:
  - North of Queensway East: Sidewalk on the west side of the road.
  - South of Queensway East: Sidewalk on both sides of the road.
- Stopping/Parking Restrictions: Parking restrictions are not posted on either side of the road both north and south of Queensway East.
- Surrounding Land Use: Mainly residential.

Tedlo Street

- Direction: North-south
- Cross-Section: Two-lane urban.
- Active Transportation Facilities: Sidewalk on the west side of the road.
- Stopping/Parking Restrictions: Parking restrictions are not posted on either side of the road.
- Surrounding Land Use: Light industrial land uses.

Haines Road

- Direction: North-south
- Cross-Section: Two-lane urban.
- Active Transportation Facilities: Sidewalk on the east side of the road.
- Stopping/Parking Restrictions: Parking is not permitted on either side of the road.

- Surrounding Land Use: Mainly light industrial/employment land uses.

- **Stanfield Road**
  - Direction: North-south
  - Cross-Section:
    - North of Queensway East: Three-lane urban with one travel lane in each direction and a central two-way left-turn lane.
    - South of Queensway East: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Queensway East.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of the road both north and south of Queensway East.
  - Surrounding Land Use:
    - North of Queensway East: Industrial/employment land uses
    - South of Queensway East: Residential land uses.
- **Dixie Road**
  - Direction: North-south
  - Cross-Section:
    - North of Queensway East: six-lane urban with auxiliary left-turn lanes at most intersections.
    - South of Queensway East: four-lane urban with auxiliary left-turn lanes at most intersections.
  - Active Transportation Facilities:
    - Multi-use trail on the west side of the road from Tonolli Road (about 300 metres north of Queensway East) to Primate Road (about 300 metres south of Queensway East).
    - Sidewalk on the east side of the road both north and south of Queensway East.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of the road both north and south of Queensway East.
  - Surrounding Land Use:

- North of Queensway East: Residential land uses.
- South of Queensway East: Commercial/employment land uses.

- **Dundas Street East**
  - Direction: East-west
  - Cross-Section:
    - East of Cawthra Road: Seven-lane urban, with three travel lanes in each direction plus a central two-way left-turn lane.
    - West of Cawthra Road: Four-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Queensway East.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of Dundas Street East both east and west of Cawthra Road.
  - Surrounding Land Use: Mainly commercial land uses.

- **Orwell Street**
  - Direction: East-west
  - Cross-Section: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on the south side of the road.
  - Stopping/Parking Restrictions: Parking restrictions are not posted on either side of the road.
  - Surrounding Land Use: Mainly commercial/employment land uses.

Northern Study Area

- **Burnhamthorpe Road East**
  - Direction: East-west
  - Cross-Section: Four-lane urban.
  - Active Transportation Facilities:
    - Multi-use trail on the north side of the roadway throughout the study area.
    - Sidewalk on the south side of the road throughout the study area.

- Stopping/Parking Restrictions: Parking is not permitted on either side of the road throughout the study area.
- Surrounding Land Use: Mainly residential with supporting commercial uses at Central Parkway East.

- **Central Parkway East**
  - Direction: North-south
  - Cross-Section: Predominantly four-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Burnhamthorpe Road.
  - Stopping/Parking Restrictions: Parking is not permitted on either side of the road throughout the study area.
  - Surrounding Land Use: Mainly residential with supporting commercial uses at Burnhamthorpe Road East.
- **Molly Avenue**
  - Direction: North-south (at Burnhamthorpe Road)
  - Cross-Section: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on both sides of the road both north and south of Burnhamthorpe Road.
  - Stopping/Parking Restrictions: Parking restrictions are not posted on either side of the road both north and south of Burnhamthorpe Road.
  - Surrounding Land Use: Mainly residential.
- **Wilcox Road**
  - Direction: North-south
  - Cross-Section: Two-lane urban.
  - Active Transportation Facilities: Sidewalk on the east side of the road.
  - Stopping/Parking Restrictions: Parking restrictions are not posted on either side of the road.
  - Surrounding Land Use: Mainly residential.

Where parking restrictions are not posted, parking is governed by The Traffic By-law 0555-2000 which limits parking to a maximum of five hours at any given time and restricts parking between 2:00 AM and 6:00 AM.

2.2 Traffic Volumes

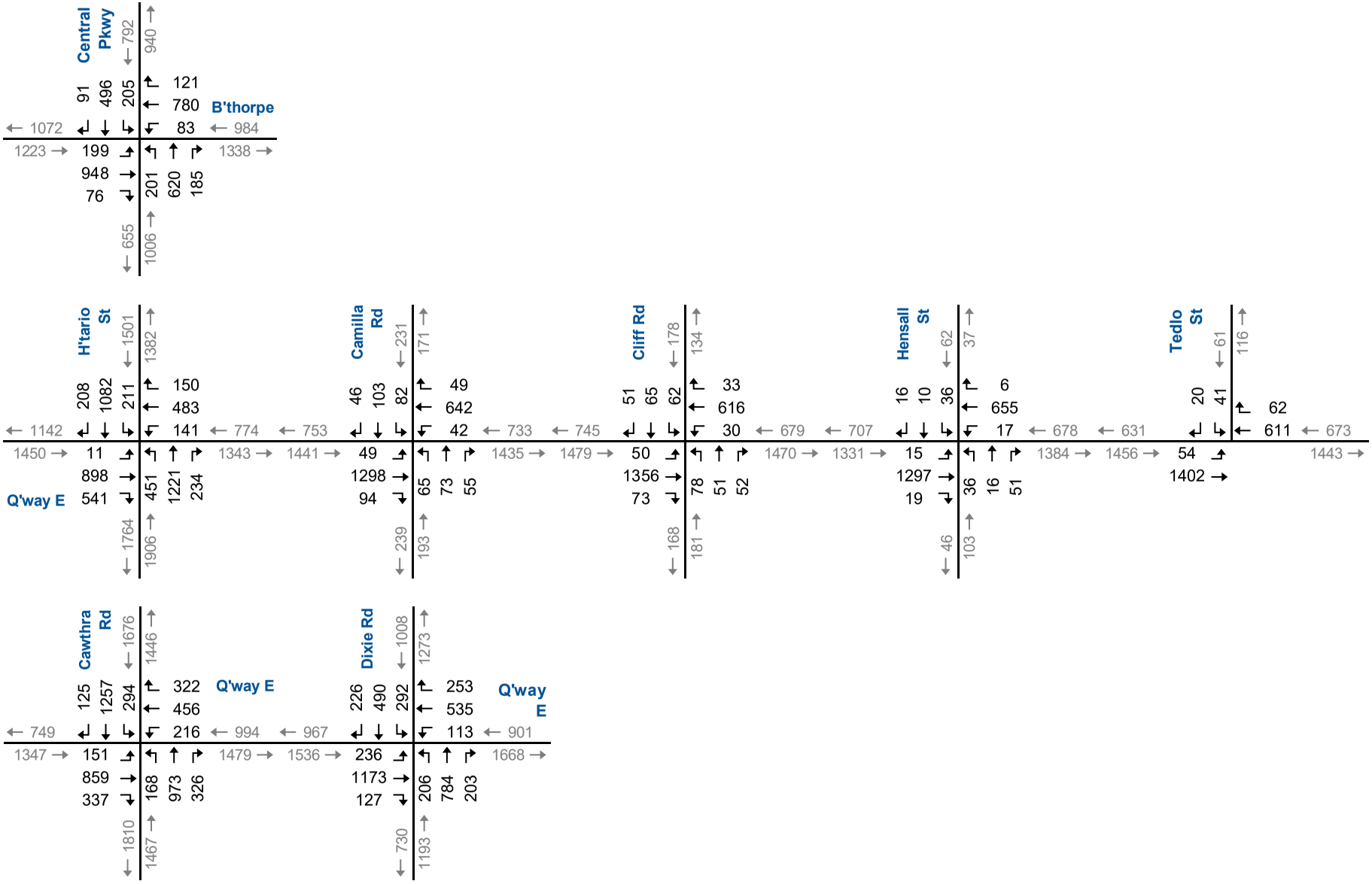
Eight-hour turning movement counts were provided by Peel Region for the study area intersections as follows:

- Queensway East and Hurontario Street: Tuesday, April 18, 2017;
- Queensway East and Cawthra Road: Tuesday, November 7, 2017;
- Queensway East and Camilla Road: Wednesday, March 1, 2017;
- Queensway East & Cliff Road: Wednesday, March 8, 2017;
- Queensway East & Hensall Street: Tuesday, February 28, 2017;
- Queensway East & Tedlo Street: Tuesday, February 28, 2017
- Queensway East and Dixie Road: Wednesday, May 3, 2017; and
- Burnhamthorpe Road East and Central Parkway East: Thursday, December 11, 2019.

A growth rate of 0.8% per year, compounded for four years (total growth of 3.5%) was applied to the 2017 data to reflect 2021 volumes. A total growth of 1.6% was applied to the 2019 volumes at Burnhamthorpe Road East and Central Parkway East to reflect 2021 volumes. This growth rate was calculated using the *2026 Central Mississauga Growth Rate* forecasts provided by Peel Region.

Figure 2.1a and **Figure 2.1b** illustrate the existing peak hour study area traffic.

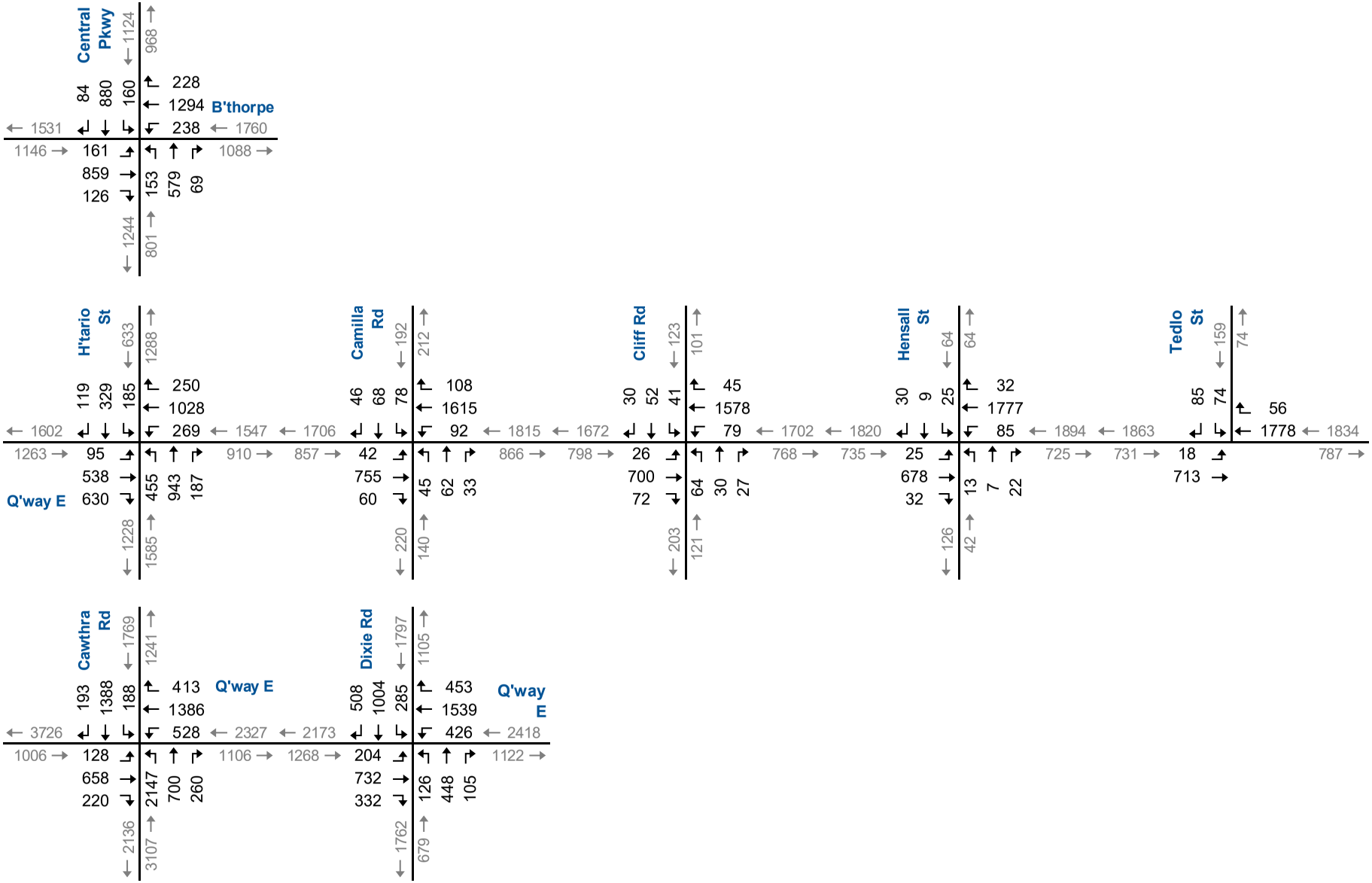
Appendix A contains the detailed traffic count data.



Existing AM Peak Hour Traffic

Central Mississauga Trunk Sewer EA
200552

Figure 2.1a



Existing PM Peak Hour Traffic

Central Mississauga Trunk Sewer EA
200552

Figure 2.1b

2.3 Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by drivers at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles intending to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on a number of criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections, 50 seconds for unsignalized intersections or when the volume to capacity ratio is greater than 1.0, the movement is classed as LOS F and remedial measures are usually implemented if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F may be acceptable for left-turn movements at peak times, depending on delays.

The study area intersection operations were evaluated with the existing turning movement volumes, signal timing plans provided by Peel Region and Synchro 10 with HCM 2000 procedures to satisfy Region requirements[1].

The intersection analysis considered two separate measures of performance:

- The volume to capacity ratio (v/c) for each intersection; and
- The LOS for each turning movement (LOS is based on the average control delay per vehicle).

Based on the Region's TIS guidelines, movements at signalized intersections are considered critical under the following conditions:

- Overall intersection operations, through movements or shared through/right-turn movements with a v/c ratio of 0.90 or greater;
- Exclusive movements with a v/c ratio of 1.00 or greater; and
- The 95th percentile back of queue exceeds available storage for individual movements.

Table 2.1a and **Table 2.1b** summarize the existing intersection operations. The entries in the table indicate the AM and PM peak hour

[1] Traffic Impact Study – Terms of Reference, Peel Region, August 2013

level of service (LOS), volume to capacity ratios (v/c), and 95th percentile queue length estimates.

The analyses indicate the following:

Queensway East and Hurontario Street

- The intersection is operating at overall acceptable levels of service during the peak hours;
- Several movements are operating at poor levels of service but with acceptable v/c ratios; and
- Several movements are currently exceeding available turning lane storage during each respective peak hour.

Queensway East and Camilla Road

- The intersection is operating at overall acceptable levels of service during the peak hours;
- Several movements are operating at poor levels of service but with acceptable v/c ratios; and
- Several movements are currently exceeding available turning lane storage during each respective peak hour.

Queensway East and Cliff Road

- The intersection is operating at overall acceptable levels of service during the peak hours;
- Several movements are operating at lower levels of service but with acceptable v/c ratios; and
- Several movements are currently exceeding available turning lane storage during each respective peak hour.

Queensway East and Hensall Road

- The intersection is operating at overall acceptable levels of service during the peak hours;
- All individual movements are operating with acceptable levels of service and v/c ratios; and
- All queues are accommodated within the existing turning lane storage.

Queensway East and Tedlo Street

- The intersection is operating at overall acceptable levels of service during the peak hours;

- All individual movements are operating with acceptable levels of service and v/c ratios; and
- All queues are accommodated within the existing turning lane storage.

Queensway East and Cawthra Road

- The study area intersection is operating at an overall acceptable level of service during the AM peak hour;
- During the PM peak hour, the intersection is operating at LOS E with a v/c ratio of 1.05, indicating the intersection is over capacity;
- One movement is operating at a poor level of service and v/c ratio greater than one;
- Several movements are operating at poor levels of service but with acceptable v/c ratios; and
- Several movements are currently exceeding available turning lane storage during each respective peak hour.

Queensway East and Dixie Road

- During the peak hours, the intersection is operating at LOS E with a v/c ratio of 0.89 during the AM peak hour and 0.98 during the PM peak hour;
- During the AM peak hour, several movements are operating at LOS F; however, only one movement has a critical v/c ratio >1.0;
- During the PM peak hour, several movements are operating at LOS F and with v/c ratios >1.0, indicating the movement is over capacity;
- Several movements are currently exceeding available turning lane storage during the AM peak hour and one movement is exceeding turning lane storage during the PM peak hour.

Burnhamthorpe Road East and Central Parkway East

- The intersection is operating at overall acceptable levels of service during the peak hours;
- Several movements are operating at poor levels of service but with acceptable v/c ratios; and
- Several movements are currently exceeding available turning lane storage during the AM peak hour and one movement is exceeding turning lane storage during the PM peak hour.

Appendix B contains the detailed Synchro 10 reports.

TABLE 2.1A: EXISTING TRAFFIC OPERATIONS – AM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Queensway East & Hurontario Street	TCS	LOS	D	D	D	**D**	D	C	E	**C**	F	D	D	**D**	E	D	D	**D**	**D**
			Delay	35	49	50	**49**	39	24	59	**34**	97	40	36	**53**	62	49	42	**50**	**49**
			V/C	0.04	0.71	0.62		0.66	0.22	0.11		0.95	0.62	0.36		0.87	0.66	0.27		**0.80**
			Q	7	138	101		35	36	17		99	119	50		68	111	43		
			Ex	105		90		80		45		70		30		50		40		
			Avail.	98		-11		45		28		-29		-20		-18		-3		
	2 - Queensway East & Camilla Road	TCS	LOS	A	A	A	**A**	A	A	A	**A**	F	E	>	**E**	F	F	>	**F**	**B**
			Delay	3	4	3	**4**	4	4	1	**3**	93	73	>	**80**	93	80	>	**85**	**17**
			V/C	0.08	0.43	0.06		0.14	0.22	0.03		0.72	0.60	>		0.75	0.71	>		**0.47**
			Q	4	51	1		14	55	0		34	48	>		39	57	>		
			Ex	95		75		110		80		25		>		30		>		
			Avail.	91		74		97		80		-9		>		-9		>		
	3 - Queensway East & Cliff Road	TCS	LOS	A	A	A	**A**	A	A	A	**A**	E	E	>	**E**	E	E	>	**E**	**B**
			Delay	4	10	5	**9**	2	2	0	**2**	60	58	>	**59**	77	77	>	**77**	**16**
			V/C	0.08	0.48	0.05		0.12	0.23	0.02		0.41	0.25	>		0.56	0.60	>		**0.49**
			Q	9	146	6		1	7	0		33	32	>		31	43	>		
			Ex	90		80		125		65		10		>		20		>		
			Avail.	81		74		124		65		-23		>		-11		>		
	4 - Queensway East & Hensall Road	TCS	LOS	A	C	B	**C**	A	A	B	**A**	<	D	>	**D**	<	D	>	**D**	**B**
			Delay	9	23	14	**23**	7	7	12	**7**	<	41	>	**41**	<	41	>	**41**	**20**
			V/C	0.03	0.57	0.01		0.09	0.29	0.00		<	0.18	>		<	0.13	>		**0.44**
			Q	3	162	2		2	19	0		<	30	>		<	21	>		
			Ex	65		85		90		150		<		>		<		>		
			Avail.	62		83		88		150		<		>		<		>		
	5 - Queensway East & Tedlo Street	TCS	LOS	A	A		**A**		A	A	**A**					D		D	**D**	**A**
			Delay	2	3		**3**		6	4	**6**					50		49	**50**	**5**
			V/C	0.10	0.54				0.24	0.04						0.11		0.01		**0.44**
			Q	2	16				24	1						19		7		
			Ex	60						35						40				
			Avail.	58						34						21				
	6 - Queensway East & Cawthra Road	TCS	LOS	F	E	E	**E**	E	F	F	**F**	C	D	C	**D**	E	D	C	**D**	**E**
			Delay	123	68	74	**76**	77	86	139	**101**	34	38	31	**36**	76	40	25	**45**	**60**
			V/C	0.84	0.78	0.73		0.70	0.44	0.55		0.69	0.65	0.32		0.74	0.77	0.11		**0.80**
			Q	77	72	55		40	53	73		47	155	48		56	204	20		
			Ex	160		20		70		15		65		60		60		55		
			Avail.	83		-35		30		-58		18		12		4		35		
	7 - Queensway East & Dixie Road	TCS	LOS	E	E	F	**E**	E	D	D	**D**	F	E	D	**F**	F	D	D	**D**	**E**
			Delay	61	72	175	**79**	74	39	35	**42**	436	57	43	**120**	80	42	38	**52**	**77**
			V/C	0.79	0.85	0.08		0.50	0.41	0.18		1.73	0.78	0.17		0.79	0.42	0.16		**0.89**
			Q	52	203	30		25	75	21		137	136	23		57	71	17		
			Ex	45		25		140		150		85		75		60				
			Avail.	-7		-5		115		129		-52		52		3				
	8 - Burnhamthorpe Road East & Central Parkway East	TCS	LOS	D	D	C	**D**	D	D	C	**D**	C	D	C	**D**	C	D	C	**D**	**D**
			Delay	51	48	33	**48**	37	44	34	**42**	32	40	35	**38**	35	39	34	**37**	**42**
			V/C	0.73	0.73	0.05		0.39	0.61	0.08		0.47	0.47	0.14		0.55	0.38	0.07		**0.64**
			Q	49	145	10		23	114	13		47	87	18		48	69	14		
			Ex	40		45		125		80		50		50		40		35		
			Avail.	-9		35		103		68		3		32		-8		21		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length
Ex. - Existing Available Storage
Avail. - Available Storage
TCS - Traffic Control Signal

TABLE 2.1B: EXISTING TRAFFIC OPERATIONS – PM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
PM Peak Hour	1 - Queensway East & Hurontario Street	TCS	LOS	C	D	E	**D**	E	E	F	**E**	E	D	C	**D**	D	E	D	**D**	**E**
			Delay	34	43	56	**49**	75	67	98	**73**	75	35	32	**46**	37	57	40	**54**	**56**
			V/C	0.45	0.43	0.73		0.77	0.56	0.26		0.83	0.46	0.21		0.60	0.84	0.11		**0.81**
			Q	27	78	125		84	125	53		84	86	32		41	154	17		
			Ex	105		90		80		45		70		30		50		40		
			Avail.	78		-35		-4		-8		-14		-2		10		23		
	2 - Queensway East & Camilla Road	TCS	LOS	A	A	A	**A**	A	A	A	**A**	E	E	>	**E**	F	E	>	**F**	**B**
			Delay	5	4	4	**4**	1	2	0	**2**	73	72	>	**72**	90	75	>	**81**	**11**
			V/C	0.17	0.24	0.04		0.15	0.52	0.07		0.48	0.52	>		0.71	0.58	>		**0.54**
			Q	6	30	2		3	18	0		25	39	>		38	43	>		
			Ex	95		75		110		80		25		>		30		>		
			Avail.	90		73		107		80		0		>		-8		>		
	3 - Queensway East & Cliff Road	TCS	LOS	A	A	C	**B**	A	A	A	**A**	E	E	>	**E**	E	E	>	**E**	**B**
			Delay	10	10	21	**11**	6	7	9	**7**	62	60	>	**61**	74	75	>	**74**	**13**
			V/C	0.12	0.24	0.04		0.13	0.54	0.03		0.35	0.14	>		0.41	0.49	>		**0.52**
			Q	9	65	13		7	62	2		28	19	>		23	33	>		
			Ex	90		80		125		65		10		>		20		>		
			Avail.	81		67		118		64		-18		>		-3		>		
	4 - Queensway East & Hensall Road	TCS	LOS	B	A	A	**A**	A	A	A	**A**	<	D	>	**D**	<	D	>	**D**	**A**
			Delay	18	5	0	**5**	6	7	3	**6**	<	39	>	**39**	<	40	>	**40**	**7**
			V/C	0.34	0.29	0.02		0.19	0.77	0.02		<	0.05	>		<	0.09	>		**0.55**
			Q	5	15	0		6	49	0		<	13	>		<	19	>		
			Ex	65		85		90		150		<		>		<		>		
			Avail.	61		85		84		150		<		>		<		>		
	5 - Queensway East & Tedlo Street	TCS	LOS	A	A		**A**		B	A	**A**					D		D	**D**	**B**
			Delay	6	3		**3**		10	0	**10**					52		51	**51**	**10**
			V/C	0.17	0.27				0.68	0.05						0.19		0.16		**0.56**
			Q	1	11				92	0						31		25		
			Ex	60						35						40				
			Avail.	59						35						9				
	6 - Queensway East & Cawthra Road	TCS	LOS	F	E	F	**E**	F	E	E	**E**	F	D	C	**D**	E	E	C	**E**	**E**
			Delay	87	68	93	**77**	106	68	65	**76**	140	37	32	**55**	75	57	31	**56**	**66**
			V/C	0.79	0.49	0.34		0.97	0.93	0.76		1.09	0.50	0.19		0.63	0.93	0.18		**1.05**
			Q	65	65	53		83	121	70		109	102	20		38	237	29		
			Ex	160		20		70		15		65		60		60		55		
			Avail.	95		33		-13		-55		-44		40		22		26		
	7 - Queensway East & Dixie Road	TCS	LOS	E	D	D	**D**	F	F	D	**E**	F	D	D	**E**	E	E	E	**E**	**E**
			Delay	67	46	48	**50**	90	84	37	**76**	174	50	43	**72**	78	62	57	**63**	**66**
			V/C	0.70	0.57	0.39		0.90	1.04	0.41		1.06	0.47	0.07		0.75	0.87	0.70		**0.98**
			Q	42	125	79		88	288	61		81	75	2		55	167	123		
			Ex	45		25		140		150		85		75		60				
			Avail.	3		-54		53		89		4		73		5				
	8 - Burnhamthorpe Road East & Central Parkway East	TCS	LOS	F	D	C	**D**	F	E	D	**E**	D	D	C	**D**	C	D	C	**D**	**D**
			Delay	115	45	35	**54**	89	71	36	**69**	38	40	33	**39**	31	45	34	**43**	**54**
			V/C	0.99	0.64	0.13		0.96	0.98	0.23		0.57	0.46	0.05		0.41	0.66	0.07		**0.81**
			Q	74	127	23		81	234	34		38	84	10		38	130	13		
			Ex	40		45		125		80		50		50		40		35		
			Avail.	-34		22		44		46		12		40		2		22		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length
Ex. - Existing Available Storage
Avail. - Available Storage
TCS - Traffic Control Signal

3 Work Zone Impacts

As outlined in **Chapter 1**, the work zones are expected to encroach onto the adjacent roadways at two intersection and impact pedestrian mobility at four locations. This section outlines those locations and the degree of impact.

3.1 Impacted Intersections

3.1.1 Queensway East and Hurontario Street

The work zone is proposed for the southeast corner of the intersection and will encroach onto both Queensway East and Hurontario Street, resulting in the closure of the northbound channelized right-turn lane and the southerly eastbound through lane on Queensway East, east of Hurontario Street.

3.1.2 Queensway East and Cawthra Road

The work zone is proposed for the northeast corner of the intersection and will encroach onto Queensway East, resulting in closure of the northerly westbound through lane on Queensway East, east of Hurontario Street.

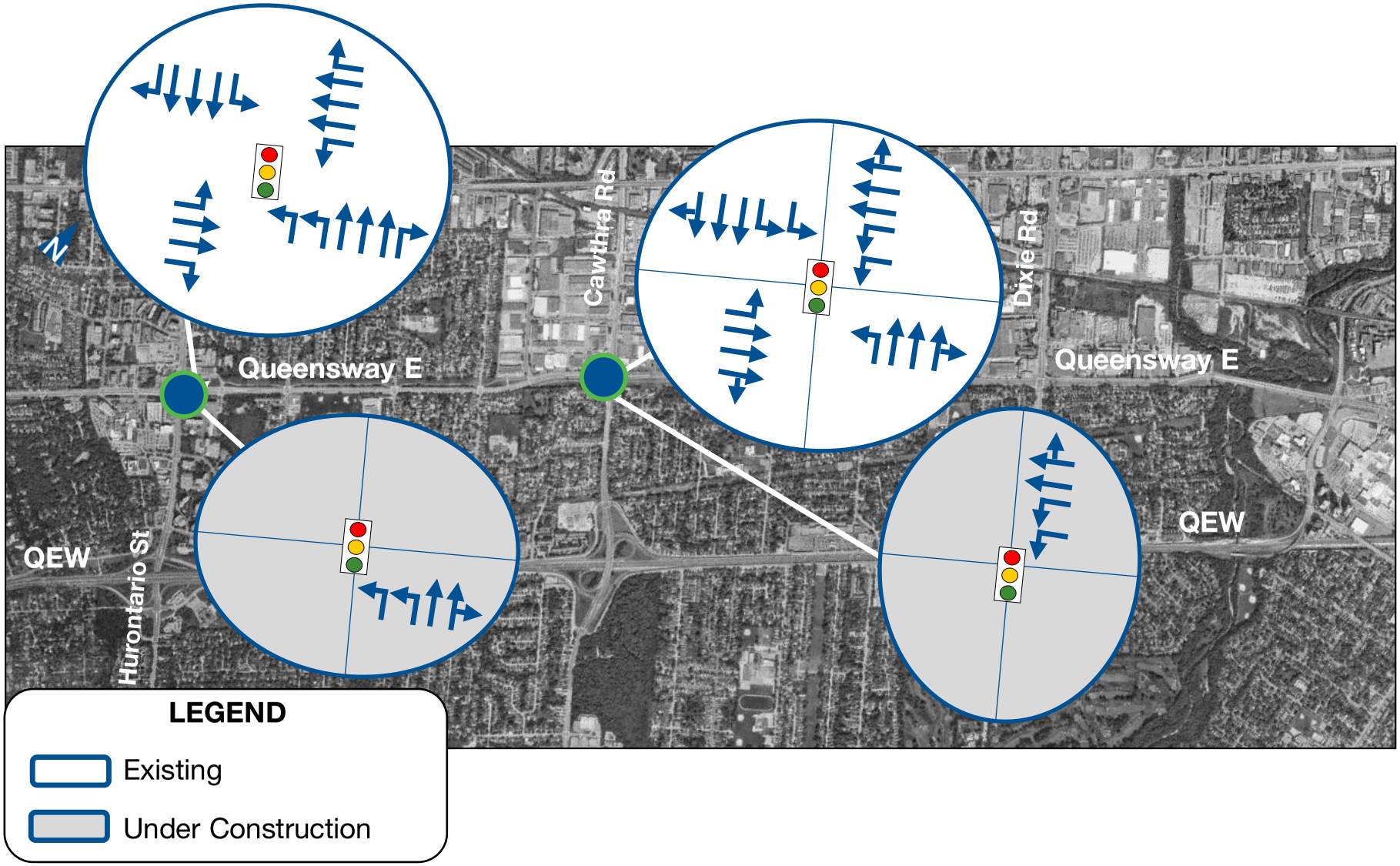
Figure 3.1 illustrates the existing and “under construction” lane configurations for the study area intersections.

3.2 Pedestrian Impact Locations

The work zones will affect pedestrians at the following locations:

- Burnhamthorpe Road East and Central Parkway East: sidewalk closure on east-west and north-south approaches on northeast corner;
- Queensway East & Hurontario Street: sidewalk closure east-west and north-south approaches on southeast corner;
- Queensway East & Cawthra Road: sidewalk closure on east-west and north-south approaches on northeast corner; and
- Queensway East & Tedlo Street: trail closure on northwest corner.

Figure 3.2 illustrates the specific pedestrian impact locations.



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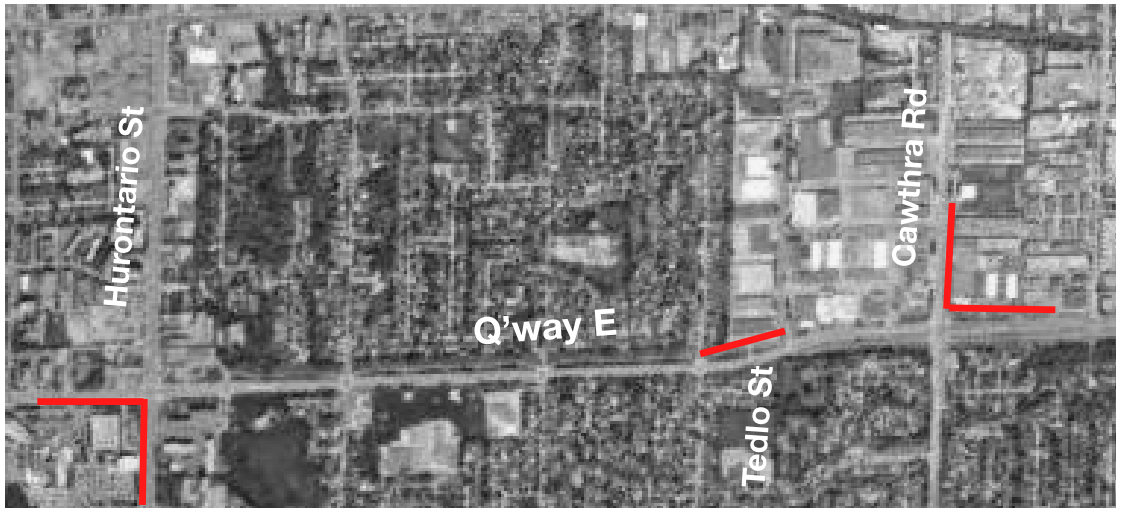
Existing and Construction Condition Lane Configurations

Central Mississauga Trunk Sewer EA
200552

Figure 3.1

Northern Study Area

Southern Study Area



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Pedestrian Impact Locations

4 Future Conditions Evaluation

The assessment of future traffic conditions contained in this section reflects the future traffic volumes at the 2025 horizon which is the assumed year of construction.

4.1 Traffic Volumes

The approved 0.8% per year growth rate was compounded for four years (total growth of 3.5%) and applied to the existing traffic volumes at the study area intersections to derive the 2025 future traffic volumes.

Figure 4.1 illustrates the 2025 peak hour traffic.

4.2 Total Traffic Operations

The operations of the study area intersections impacted by the shaft compound locations under 2025 total traffic were evaluated using the same analytical approach as used for existing traffic operations, and with the lane reductions outlined in **Chapter 3**.

Table 4.1 summarizes the 2025 peak hour total traffic operations. The entries in the table indicate the AM and PM peak hour level of service (LOS), volume to capacity ratios (v/c), and 95th percentile queue length estimates. The analyses indicate:

Queensway East and Hurontario Street

- AM Peak Hour:
  - The intersection will operate at LOS F and with a considerable level of overall congestion as indicated by the v/c ratio > 1.0; and
  - Multiple movements will operate at LOS F, with high levels of congestion as indicated by the v/c ratio > 1.0, and with queues exceeding available storage.
- PM Peak Hour
  - The intersection will operate at LOS E and with a v/c ratio >1.0; and
  - Several movements will operate at poor levels of service (LOS F), with high levels of congestion as indicated by the v/c ratio > 1.0, and with queues exceeding available storage.

Queensway East and Cawthra Road

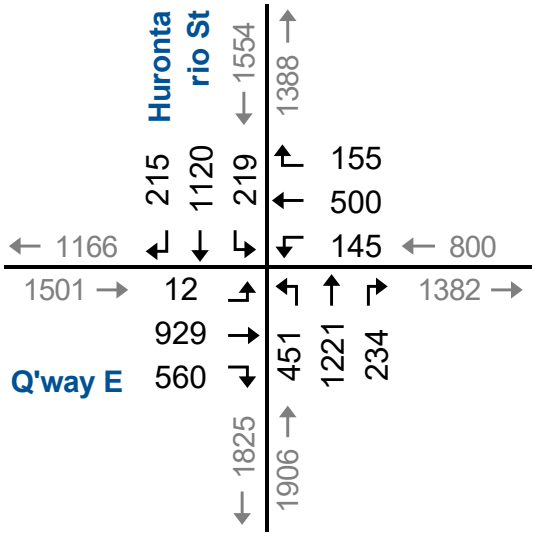
- AM Peak Hour

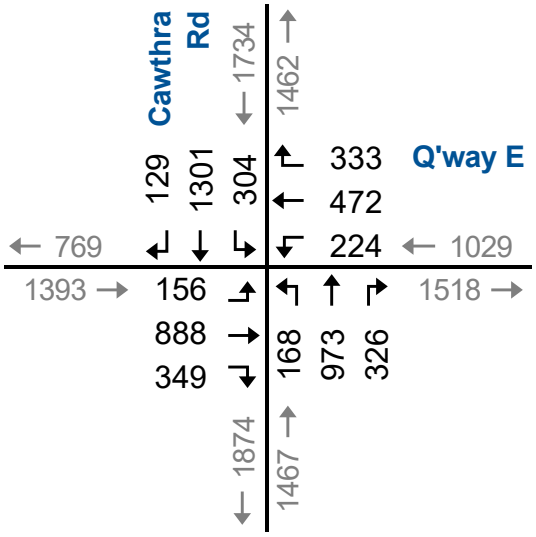
- The intersection will operate at LOS D and with a v/c ratio > 0.90; and
- Multiple movements will experience congestion as indicated by the v/c ratios > 0.90.

- PM Peak Hour
  - The intersection will operate at LOS F and with a considerable level of congestion as indicated by the v/c ratio > 1.0; and
  - Several movements will operate at LOS F, with a v/c ratio > 1.0, and with queues exceeding available storage.

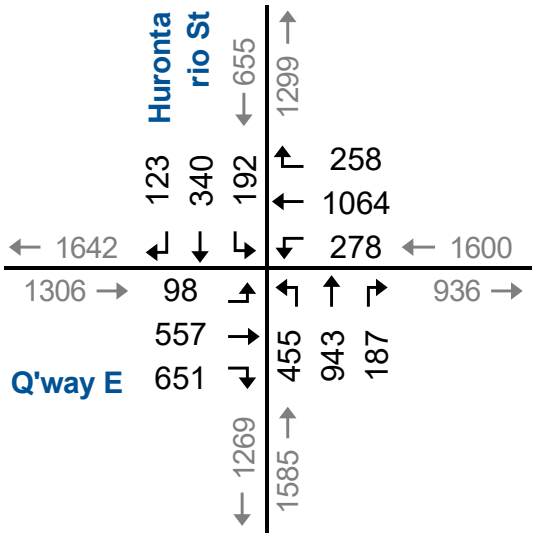
Appendix C contains the detailed Synchro 10 reports.

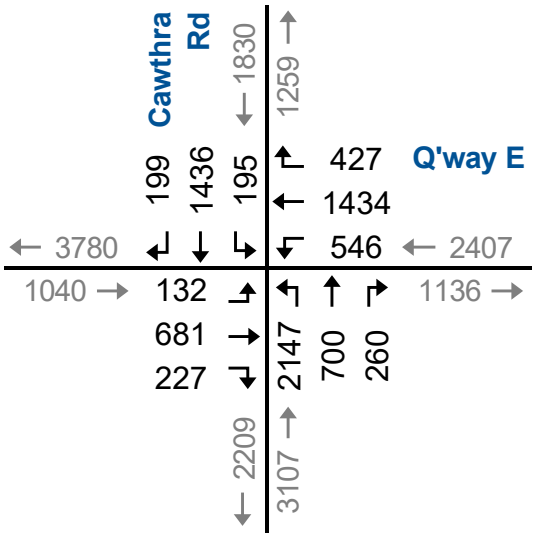
AM Peak Hour





PM Peak Hour





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2025 Peak Hour Traffic

TABLE 4.1: 2025 TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Queensway East & Hurontario Street	TCS	LOS	C	F	D	**F**	F	C	C	**E**	F	F	>	**F**	F	E	D	**F**	**F**
			Delay	23	146	44	**107**	225	22	23	**59**	414	164	>	**223**	273	75	37	**98**	**136**
			V/C	0.04	1.21	0.76		1.26	0.34	0.12		1.74	1.25	>		1.45	1.00	0.30		**1.39**
			Q	5	366	143		71	53	11		119	276	>		106	189	42		
			Ex	105	-	90		80	-	45		70	-	>		50	-	40		
			Avail.	100	-	-53		9	-	34		-49	-	>		-56	-	-2		
	6 - Queensway East & Cawthra Road	TCS	LOS	E	E	E	**E**	E	E	>	**E**	D	D	C	**D**	E	D	C	**D**	**D**
			Delay	80	62	68	**66**	77	79	>	**79**	53	36	29	**37**	67	44	24	**47**	**55**
			V/C	0.90	0.82	0.76		0.90	0.95	>		0.71	0.68	0.33		0.75	0.88	0.13		**0.92**
			Q	40	82	64		49	132	>		57	132	43		53	187	20		
			Ex	160	-	20		70	-	>		65	-	60		60	-	55		
			Avail.	120	-	-44		21	-	>		8	-	17		7	-	35		
PM Peak Hour	1 - Queensway East & Hurontario Street	TCS	LOS	D	E	E	**E**	F	E	E	**E**	F	E	>	**E**	F	D	D	**E**	**E**
			Delay	40	66	64	**63**	132	55	55	**69**	99	60	>	**71**	106	41	37	**59**	**67**
			V/C	0.64	0.91	0.87		1.12	0.78	0.30		0.99	0.95	>		1.02	0.34	0.09		**1.08**
			Q	24	197	161		114	162	64		93	186	>		80	49	11		
			Ex	105	-	90		80	-	45		70	-	>		50	-	40		
			Avail.	81	-	-71		-34	-	-19		-23	-	>		-30	-	29		
	6 - Queensway East & Cawthra Road	TCS	LOS	E	D	C	**D**	D	F	>	**F**	F	D	C	**E**	F	F	C	**F**	**F**
			Delay	71	40	33	**43**	54	228	>	**188**	214	42	35	**72**	81	138	34	**120**	**124**
			V/C	0.85	0.55	0.35		0.84	1.37	>		1.31	0.62	0.17		0.80	1.18	0.23		**1.33**
			Q	50	68	41		71	327	>		101	98	18		43	270	33		
			Ex	160	-	20		70	-	>		65	-	60		60	-	55		
			Avail.	110	-	21		-1	-	>		-36	-	42		17	-	22		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length
Ex. - Existing Available Storage
Avail. - Available Storage
TCS - Traffic Control Signal

4.3 Traffic Re-assignment

The results outlined in **Section 4.2** are based on the worst-case scenario that assumes traffic will not re-assign to other routes and away from the Queensway East corridor to avoid delays.

Overall, it is recognized that some traffic will re-assign itself away from the Queensway East corridor and study area intersections, resulting in overall level of service improvements. However, the actual percent re-assignment is especially difficult to estimate for the following reasons:

- Both intersections provide direct connections to the Queen Elizabeth Way (QEW) less than one kilometre to the south. Due to the close proximity, alternative routes may be perceived to be "out of the way" and not attractive;
- The Hurontario Street and Cawthra Road QEW interchanges are adjacent to each other so traffic will not re-assign away from one to the other (and vice versa) if both are under construction at the same time; and
- There is a general lack of alternative routes for both north-south and east-west travel within the area. For example, the closest alternative QEW interchange is about four kilometres east of Cawthra Road and about nine kilometres west of Hurontario Street. The additional travel time will make these alternative routes less attractive option for motorists.

Recognizing the above, a sensitivity analysis was undertaken at both intersections to determine the percent traffic re-assignment necessary to provide better levels of service at the study area intersections. The analyses were undertaken in 10% increments between 20% re-assignment and 50% re-assignment. It was found that even with signal timing and phasing modifications, a 50% reduction in intersection volumes would not result in acceptable intersection operations due to the reduced capacity. Additional sensitivity analyses were not undertaken since it is unlikely the level of re-assignment needed to provide acceptable levels of service at the study area intersections could not be achieved.

4.4 Potential Mitigation Options

As outlined above, it is unlikely the level of re-assignment needed to provide acceptable levels of service at the constrained study area intersections can be achieved. Based on this, the following are recommended:

- Refinement of the selected shaft compound locations to minimize road encroachment and lane closures at the study area intersections, where possible; and
- Considerations is given to staging works such that both intersections are not under construction at the same time.

  It should be noted that if construction is not undertaken concurrently at study area intersections, traffic may re-assign itself to the intersection that is not under construction. This re-assignment will be limited between Queensway East and Dundas Street East given the lack of east-west road alternatives. However, north of Dundas Street East, there is a higher potential for re-assignment due to the presence of east-west road alternatives, resulting in residential neighbourhood traffic infiltration. To mitigate the impacts, acceptable detour routes should be identified and signed; and temporary traffic calming measures should be explored to reduce the impacts of any infiltration.

4.5 Existing Hurontario Street Intersection Constraints

A desktop scan of Queensway East and Hurontario Street on Google Earth showed that the future construction condition with lane closures and reduced capacity was in place as of May 2021. It is recommended that if the intersection is continuing to operate under these conditions, the operations are observed and recorded to provide a baseline for what can be expected at the 2025 horizon.

4.6 Pedestrian Impacts

As outlined in **Chapter 3**, pedestrian impacts are mainly limited to intersections where alternative routing options are currently provided. While this will increase pedestrian walking distances and times, the impacts should be minimal other than in areas where intersections are spaced further apart.

The following are recommended to reduce or minimize pedestrian impacts:

- Provide advance notice of closures on all affected approaches or intersection legs, especially in long blocks where crossing opportunity are widely spaced;
- Provide signage at intersections indicating sidewalk or path is closed and that point to alternate/detour routing; and
- Where possible, move or relocate pedestrian facilities to outside work areas, specifically near Tedlo Street.

4.7 Next Steps

Based on the findings and recommendations outlined above, a Traffic Management Plan should be developed during the Detailed Design phase to:

- Identify and implement construction phasing and time of day options that minimize overall study area delays;
- Identify and assess viability of detour routes (road classification, turning radii, etc.);
- Identify signing, pavement marking and any traffic control changes required to support detour routing; and
- Identify construction heavy vehicle routes, detour and compound access locations that minimize traffic and pedestrian impacts.

5 Conclusions and Recommendations

5.1 Conclusions

Based on the investigations carried out, the following is concluded:

- The work areas are expected to affect traffic operations at two intersections and pedestrian mobility at four intersections:
  - Queensway West and Hurontario Street;
  - Queensway West and Cawthra Road.
  - Burnhamthorpe Road East and Central Parkway: northeast corner;
  - Queensway East & Cawthra Road: northeast corner;
  - Queensway East & Hurontario Street: southeast corner; and
  - Queensway East & Tedlo Street: trail northwest corner.
- **Existing Traffic Operations:**
  - The study area intersections are mainly operating at overall acceptable levels of service during the peak hours;
  - Several movements are operating with poor levels of service and high v/c ratios; and
  - Several movements are currently exceeding available turning lane storage during each respective peak hour.
- **2025 Traffic Operations:**
  - Without traffic detour re-assignment:
    - The study area intersections will operate at overall poor levels of service and high v/c ratios (>0.90) during both peak hours;
    - Multiple movements will operate at poor levels of service and with v/c ratios >0.90 during both peak hours; and
    - Several movements will exceed available queue length storage during the peak hours.
  - Significant traffic re-assignment (>50%) will be required to provide better levels of service and less congestion at the study area intersections; however, this level of re-assignment is likely not achievable due to limited detour routing options; and

- In places where sidewalks or trails are closed, alternative routeing options are typically provided; however, they will increase pedestrian walking routes and times.

5.2 Recommendations

Based on the findings of this study, it is recommended that:

- **2025 Traffic Operations:**
  - Refinement of the selected shaft compound locations to minimize road encroachment and lane closures at the study area intersections, where possible;
  - Consideration is given to staging works such that both intersections are not under construction at the same time;
  - If construction conditions are still in place, intersection operations at Queensway East and Hurontario Street should be observed and recorded to provide a baseline for the 2025 operations; and
  - Develop a Traffic Management Plan during the Detailed Design Phase that minimizes impacts to traffic and pedestrians by identifying and assessing:
    - Construction phasing;
    - Detour Options;
    - Signing, pavement marking and traffic control changes required to support detour routing; and
    - Construction heavy vehicle routes, detours and compound access locations.
- **Pedestrian Mobility**
  - Provide advance notice of closures for all affected approaches or intersection legs, especially in long blocks where crossing opportunities are widely spaced;
  - Provide signage at intersections indicating sidewalk or path is closed and that point to alternate/detour routing; and
  - Where possible, move or relocate pedestrian facilities to outside work areas, specifically near Tedlo Street.

Appendix A

Detailed Traffic Count Data

Turning Movement Count (16 . QUEENSWAY E & HURONTARIO ST)

Start Time	Southbound HURONTARIO ST						Westbound QUEENSWAY E						Northbound HURONTARIO ST						Eastbound QUEENSWAY E						Int. Total (15 min)	Int. Total (1 hr)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total		
07:00:00	54	187	22	0	4	263	17	65	14	0	8	96	78	167	39	0	5	284	13	149	73	1	9	236	879	
07:15:00	59	204	28	0	7	291	22	56	14	0	12	92	49	234	57	0	5	340	11	197	83	0	4	291	1014	
07:30:00	56	281	19	0	9	356	24	81	21	0	9	126	79	263	63	0	2	405	19	223	93	0	2	335	1222	
07:45:00	56	244	32	0	16	332	29	111	30	0	19	170	96	222	73	0	8	391	11	268	130	2	12	411	1304	4419
08:00:00	57	297	50	0	14	404	37	93	27	1	16	158	93	306	48	0	8	447	1	231	127	1	0	360	1369	4909
08:15:00	50	267	28	0	17	345	20	100	36	0	25	156	131	302	50	0	4	483	3	223	141	0	0	367	1351	5246
08:30:00	38	251	52	0	39	341	38	145	46	0	42	229	104	286	65	1	5	456	7	222	143	0	0	372	1398	5422
08:45:00	58	225	70	0	69	353	40	126	35	0	79	201	123	327	71	0	18	521	0	187	109	0	0	296	1371	5489
BREAK																										
11:00:00	38	174	42	0	18	254	22	97	35	0	12	154	72	199	41	0	0	312	36	99	119	2	6	256	976	
11:15:00	34	239	54	1	7	328	17	79	27	0	8	123	86	245	23	0	5	354	18	122	99	1	12	240	1045	
11:30:00	25	191	35	0	13	251	26	91	22	0	11	139	101	219	38	0	4	358	32	86	119	3	9	240	988	
11:45:00	38	234	41	0	11	313	23	106	23	0	9	152	94	219	32	0	6	345	27	97	114	0	9	238	1048	4057
12:00:00	35	243	42	0	13	320	28	90	36	0	16	154	111	272	34	0	13	417	25	85	113	0	12	223	1114	4195
12:15:00	20	192	33	0	14	245	33	106	32	0	15	171	112	260	33	0	21	405	22	97	110	1	14	230	1051	4201
12:30:00	32	254	42	0	23	328	26	106	30	0	19	162	85	255	26	0	12	366	14	89	122	0	10	225	1081	4294
12:45:00	25	255	51	0	11	331	24	107	22	0	8	153	133	246	45	0	8	424	36	79	126	0	17	241	1149	4395
13:00:00	31	218	36	0	6	285	26	115	34	0	14	175	92	212	24	0	8	328	26	94	113	1	12	234	1022	4303
13:15:00	23	244	41	0	12	308	28	96	38	0	19	162	90	275	30	1	10	396	21	93	124	2	13	240	1106	4358
13:30:00	32	221	49	0	15	302	29	120	25	0	22	174	110	216	31	0	8	357	13	90	94	1	19	198	1031	4308
13:45:00	25	213	44	0	7	282	35	116	33	0	18	184	100	221	20	0	10	341	23	83	134	2	8	242	1049	4208
BREAK																										
15:00:00	45	264	40	0	43	349	45	165	67	0	33	277	78	315	38	0	43	431	16	143	135	0	22	294	1351	
15:15:00	33	263	45	0	27	341	29	130	36	0	34	195	145	287	41	0	24	473	23	92	125	1	30	241	1250	
15:30:00	49	231	44	0	75	324	40	191	45	0	53	276	124	229	43	0	40	396	20	133	137	0	24	290	1286	
15:45:00	49	288	46	0	20	383	60	194	59	0	25	313	136	315	42	0	27	493	25	128	119	1	23	273	1462	5349
16:00:00	32	274	40	0	15	346	54	204	55	0	25	313	120	297	54	0	11	471	26	115	144	2	11	287	1417	5415
16:15:00	38	270	42	0	15	350	67	201	52	0	17	320	80	231	46	0	21	357	25	137	164	0	26	326	1353	5518
16:30:00	31	328	35	0	14	394	59	209	42	0	16	310	113	254	39	0	9	406	27	96	116	0	21	239	1349	5581
16:45:00	52	292	31	1	22	376	59	260	74	0	24	393	125	235	46	0	16	406	25	129	142	2	13	298	1473	5592
17:00:00	37	355	48	0	14	440	58	225	49	0	16	332	95	236	51	0	15	382	23	120	142	3	15	288	1442	5617
17:15:00	39	358	18	0	8	415	64	244	57	0	16	365	131	250	42	0	22	423	22	133	159	1	32	315	1518	5782

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

17:30:00	50	311	17	0	19	378	77	259	60	0	18	396	104	222	48	0	12	374	21	135	162	0	6	318	1466	5899
17:45:00	46	317	22	0	14	385	67	230	48	0	15	345	118	264	35	0	20	417	12	96	162	0	22	270	1417	5843
Grand Total	1287	8185	1239	2	611	10713	1223	4518	1224	1	673	6966	3308	8081	1368	2	420	12759	623	4271	3993	27	413	8914	**39352**	-
Approach%	12%	76.4%	11.6%	0%		-	17.6%	64.9%	17.6%	0%		-	25.9%	63.3%	10.7%	0%		-	7%	47.9%	44.8%	0.3%		-	**-**	-
Totals %	3.3%	20.8%	3.1%	0%		27.2%	3.1%	11.5%	3.1%	0%		17.7%	8.4%	20.5%	3.5%	0%		32.4%	1.6%	10.9%	10.1%	0.1%		22.7%	**-**	-
Heavy	25	265	73	0		-	33	93	35	0		-	120	255	43	0		-	50	105	144	0		-	**-**	-
Heavy %	1.9%	3.2%	5.9%	0%		-	2.7%	2.1%	2.9%	0%		-	3.6%	3.2%	3.1%	0%		-	8%	2.5%	3.6%	0%		-	**-**	-
Bicycles	0	2	0	0		-	0	0	0	0		-	0	0	0	0		-	0	2	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	Southbound HURONTARIO ST						Westbound QUEENSWAY E						Northbound HURONTARIO ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
08:00:00	57	297	50	0	14	404	37	93	27	1	16	158	93	306	48	0	8	447	1	231	127	1	0	360	1369
08:15:00	50	267	28	0	17	345	20	100	36	0	25	156	131	302	50	0	4	483	3	223	141	0	0	367	1351
08:30:00	38	251	52	0	39	341	38	145	46	0	42	229	104	286	65	1	5	456	7	222	143	0	0	372	1398
08:45:00	58	225	70	0	69	353	40	126	35	0	79	201	123	327	71	0	18	521	0	187	109	0	0	296	1371
Grand Total	203	1040	200	0	139	1443	135	464	144	1	162	744	451	1221	234	1	35	1907	11	863	520	1	0	1395	**5489**
Approach%	14.1%	72.1%	13.9%	0%		-	18.1%	62.4%	19.4%	0.1%		-	23.6%	64%	12.3%	0.1%		-	0.8%	61.9%	37.3%	0.1%		-	-
Totals %	3.7%	18.9%	3.6%	0%		26.3%	2.5%	8.5%	2.6%	0%		13.6%	8.2%	22.2%	4.3%	0%		34.7%	0.2%	15.7%	9.5%	0%		25.4%	-
PHF	0.88	0.88	0.71	0		0.89	0.84	0.8	0.78	0.25		0.81	0.86	0.93	0.82	0.25		0.92	0.39	0.93	0.91	0.25		0.94	-
Heavy	6	42	8	0		56	6	22	7	0		35	22	42	6	0		70	1	21	22	0		44	-
Heavy %	3%	4%	4%	0%		3.9%	4.4%	4.7%	4.9%	0%		4.7%	4.9%	3.4%	2.6%	0%		3.7%	9.1%	2.4%	4.2%	0%		3.2%	-
Lights	197	998	192	0		1387	129	442	137	1		709	429	1179	228	1		1837	10	842	498	1		1351	-
Lights %	97%	96%	96%	0%		96.1%	95.6%	95.3%	95.1%	100%		95.3%	95.1%	96.6%	97.4%	100%		96.3%	90.9%	97.6%	95.8%	100%		96.8%	-
Single-Unit Trucks	2	12	0	0		14	4	9	3	0		16	9	9	0	0		18	0	15	4	0		19	-
Single-Unit Trucks %	1%	1.2%	0%	0%		1%	3%	1.9%	2.1%	0%		2.2%	2%	0.7%	0%	0%		0.9%	0%	1.7%	0.8%	0%		1.4%	-
Buses	4	27	8	0		39	2	11	4	0		17	11	33	6	0		50	1	6	18	0		25	-
Buses %	2%	2.6%	4%	0%		2.7%	1.5%	2.4%	2.8%	0%		2.3%	2.4%	2.7%	2.6%	0%		2.6%	9.1%	0.7%	3.5%	0%		1.8%	-
Articulated Trucks	0	3	0	0		3	0	2	0	0		2	2	0	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.3%	0%	0%		0.2%	0%	0.4%	0%	0%		0.3%	0.4%	0%	0%	0%		0.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	139	-	-	-	-	-	159	-	-	-	-	-	34	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	41.4%		-	-	-	-	47.3%		-	-	-	-	10.1%		-	-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0.9%		-	-	-	-	0.3%		-	-	-	-	0%		-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

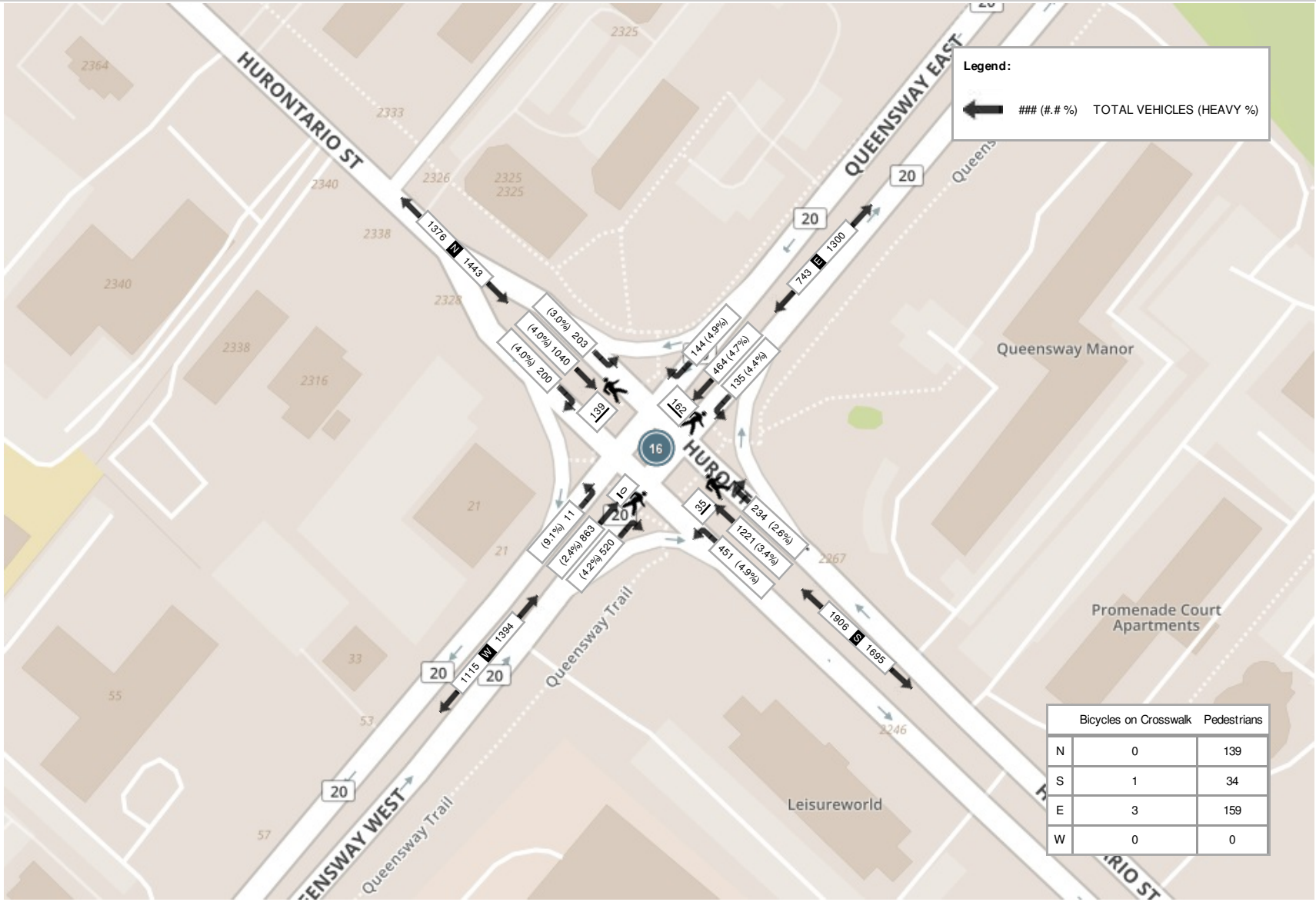
Peak Hour: 12:00 PM - 01:00 PM Weather:

Start Time	Southbound HURONTARIO ST						Westbound QUEENSWAY E						Northbound HURONTARIO ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
12:00:00	35	243	42	0	13	320	28	90	36	0	16	154	111	272	34	0	13	417	25	85	113	0	12	223	1114
12:15:00	20	192	33	0	14	245	33	106	32	0	15	171	112	260	33	0	21	405	22	97	110	1	14	230	1051
12:30:00	32	254	42	0	23	328	26	106	30	0	19	162	85	255	26	0	12	366	14	89	122	0	10	225	1081
12:45:00	25	255	51	0	11	331	24	107	22	0	8	153	133	246	45	0	8	424	36	79	126	0	17	241	1149
Grand Total	112	944	168	0	61	1224	111	409	120	0	58	640	441	1033	138	0	54	1612	97	350	471	1	53	919	**4395**
Approach%	9.2%	77.1%	13.7%	0%		-	17.3%	63.9%	18.8%	0%		-	27.4%	64.1%	8.6%	0%		-	10.6%	38.1%	51.3%	0.1%		-	**-**
Totals %	2.5%	21.5%	3.8%	0%		27.8%	2.5%	9.3%	2.7%	0%		14.6%	10%	23.5%	3.1%	0%		36.7%	2.2%	8%	10.7%	0%		20.9%	**-**
PHF	0.8	0.93	0.82	0		0.92	0.84	0.96	0.83	0		0.94	0.83	0.95	0.77	0		0.95	0.67	0.9	0.93	0.25		0.95	**-**
Heavy	1	37	6	0		44	3	11	3	0		17	23	32	7	0		62	6	14	30	0		50	**-**
Heavy %	0.9%	3.9%	3.6%	0%		3.6%	2.7%	2.7%	2.5%	0%		2.7%	5.2%	3.1%	5.1%	0%		3.8%	6.2%	4%	6.4%	0%		5.4%	**-**
Lights	111	907	162	0		1180	108	398	117	0		623	418	1001	131	0		1550	91	336	441	1		869	**-**
Lights %	99.1%	96.1%	96.4%	0%		96.4%	97.3%	97.3%	97.5%	0%		97.3%	94.8%	96.9%	94.9%	0%		96.2%	93.8%	96%	93.6%	100%		94.6%	**-**
Single-Unit Trucks	1	23	0	0		24	2	8	2	0		12	15	13	6	0		34	1	11	15	0		27	**-**
Single-Unit Trucks %	0.9%	2.4%	0%	0%		2%	1.8%	2%	1.7%	0%		1.9%	3.4%	1.3%	4.3%	0%		2.1%	1%	3.1%	3.2%	0%		2.9%	**-**
Buses	0	11	6	0		17	0	3	1	0		4	8	17	1	0		26	5	3	14	0		22	**-**
Buses %	0%	1.2%	3.6%	0%		1.4%	0%	0.7%	0.8%	0%		0.6%	1.8%	1.6%	0.7%	0%		1.6%	5.2%	0.9%	3%	0%		2.4%	**-**
Articulated Trucks	0	3	0	0		3	1	0	0	0		1	0	2	0	0		2	0	0	1	0		1	**-**
Articulated Trucks %	0%	0.3%	0%	0%		0.2%	0.9%	0%	0%	0%		0.2%	0%	0.2%	0%	0%		0.1%	0%	0%	0.2%	0%		0.1%	**-**
Pedestrians	-	-	-	-	61	-	-	-	-	-	56	-	-	-	-	-	54	-	-	-	-	-	53	-	**-**
Pedestrians%	-	-	-	-	27%		-	-	-	-	24.8%		-	-	-	-	23.9%		-	-	-	-	23.5%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0.9%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 04:45 PM - 05:45 PM Weather:

Start Time	Southbound HURONTARIO ST						Westbound QUEENSWAY E						Northbound HURONTARIO ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
16:45:00	52	292	31	1	22	376	59	260	74	0	24	393	125	235	46	0	16	406	25	129	142	2	13	298	1473
17:00:00	37	355	48	0	14	440	58	225	49	0	16	332	95	236	51	0	15	382	23	120	142	3	15	288	1442
17:15:00	39	358	18	0	8	415	64	244	57	0	16	365	131	250	42	0	22	423	22	133	159	1	32	315	1518
17:30:00	50	311	17	0	19	378	77	259	60	0	18	396	104	222	48	0	12	374	21	135	162	0	6	318	1466
Grand Total	178	1316	114	1	63	1609	258	988	240	0	74	1486	455	943	187	0	65	1585	91	517	605	6	66	1219	**5899**
Approach%	11.1%	81.8%	7.1%	0.1%		-	17.4%	66.5%	16.2%	0%		-	28.7%	59.5%	11.8%	0%		-	7.5%	42.4%	49.6%	0.5%		-	**-**
Totals %	3%	22.3%	1.9%	0%		27.3%	4.4%	16.7%	4.1%	0%		25.2%	7.7%	16%	3.2%	0%		26.9%	1.5%	8.8%	10.3%	0.1%		20.7%	**-**
PHF	0.86	0.92	0.59	0.25		0.91	0.84	0.95	0.81	0		0.94	0.87	0.94	0.92	0		0.94	0.91	0.96	0.93	0.5		0.96	**-**
Heavy	3	18	5	0		26	2	8	2	0		12	7	14	1	0		22	7	6	11	0		24	**-**
Heavy %	1.7%	1.4%	4.4%	0%		1.6%	0.8%	0.8%	0.8%	0%		0.8%	1.5%	1.5%	0.5%	0%		1.4%	7.7%	1.2%	1.8%	0%		2%	**-**
Lights	175	1298	109	1		1583	256	980	238	0		1474	448	929	186	0		1563	84	511	594	6		1195	**-**
Lights %	98.3%	98.6%	95.6%	100%		98.4%	99.2%	99.2%	99.2%	0%		99.2%	98.5%	98.5%	99.5%	0%		98.6%	92.3%	98.8%	98.2%	100%		98%	**-**
Single-Unit Trucks	2	6	0	0		8	1	6	2	0		9	4	2	1	0		7	0	3	5	0		8	**-**
Single-Unit Trucks %	1.1%	0.5%	0%	0%		0.5%	0.4%	0.6%	0.8%	0%		0.6%	0.9%	0.2%	0.5%	0%		0.4%	0%	0.6%	0.8%	0%		0.7%	**-**
Buses	1	11	5	0		17	1	2	0	0		3	3	12	0	0		15	7	2	5	0		14	**-**
Buses %	0.6%	0.8%	4.4%	0%		1.1%	0.4%	0.2%	0%	0%		0.2%	0.7%	1.3%	0%	0%		0.9%	7.7%	0.4%	0.8%	0%		1.1%	**-**
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	1	1	0		2	**-**
Articulated Trucks %	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.2%	0.2%	0%		0.2%	**-**
Pedestrians	-	-	-	-	63	-	-	-	-	-	72	-	-	-	-	-	65	-	-	-	-	-	65	-	**-**
Pedestrians%	-	-	-	-	23.5%		-	-	-	-	26.9%		-	-	-	-	24.3%		-	-	-	-	24.3%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0.7%		-	-	-	-	0%		-	-	-	-	0.4%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

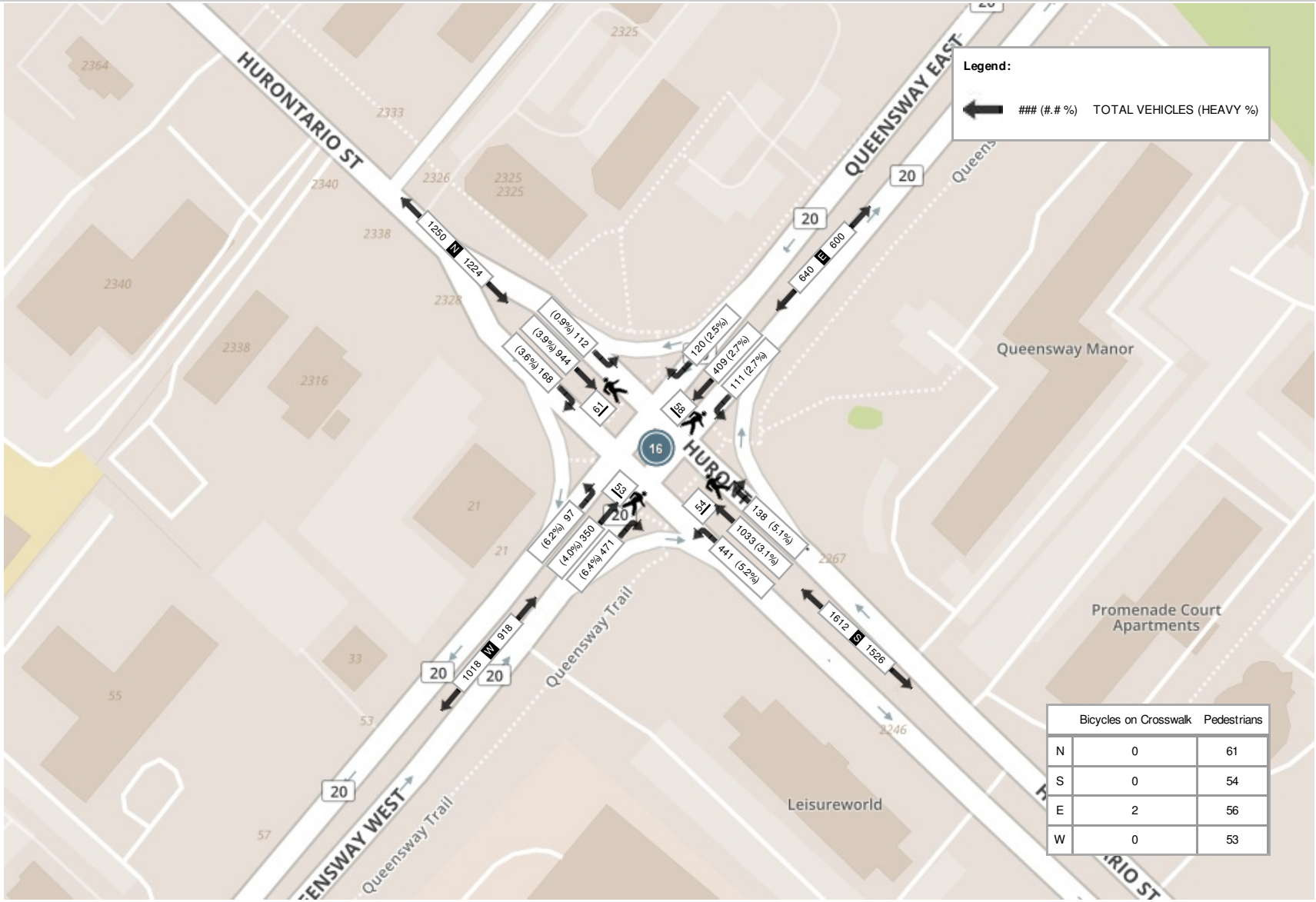
Peak Hour: 08:00 AM - 09:00 AM **Weather:**



	Bicycles on Crosswalk	Pedestrians
N	0	139
S	1	34
E	3	159
W	0	0

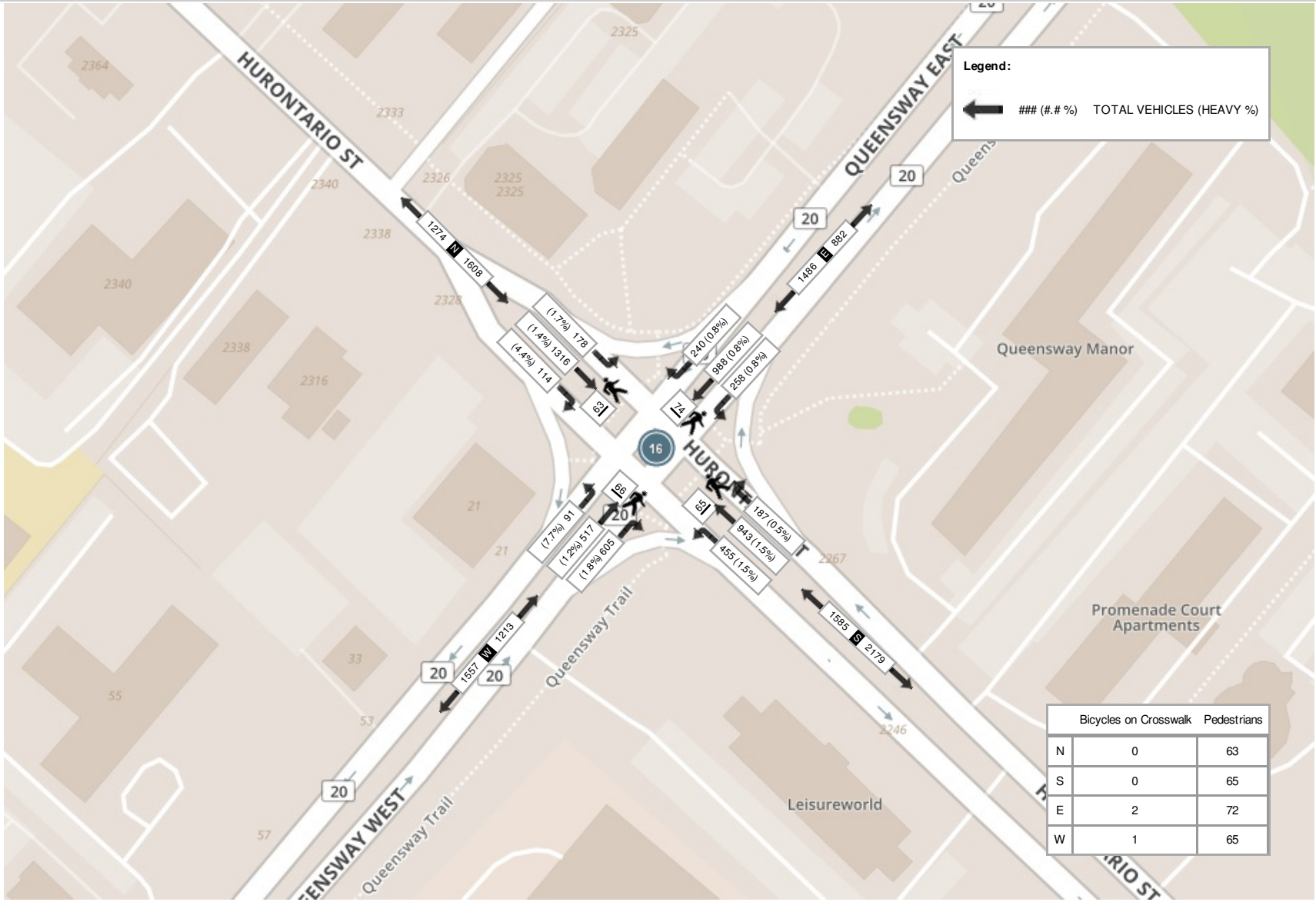
Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 12:00 PM - 01:00 PM **Weather:**



	Bicycles on Crosswalk	Pedestrians
N	0	61
S	0	54
E	2	56
W	0	53

Peak Hour: 04:45 PM - 05:45 PM **Weather:**



	Bicycles on Crosswalk	Pedestrians
N	0	63
S	0	65
E	2	72
W	1	65

Spectrum

Turning Movement Count
Location Name: QUEENSWAY E & CAMILLA RD
Date: Wed, Mar 01, 2017 Deployment Lead: Chris Koukaras

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Turning Movement Count (17 . QUEENSWAY E & CAMILLA RD) CustID: 02004625 MioID: 389232

Start Time	Northbound CAMILLA RD						Eastbound QUEENSWAY E						Southbound CAMILLA RD						Westbound QUEENSWAY E						Int. Total (15 min)	Int. Total (1 hr)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total		
07:00:00	4	1	0	0	3	5	2	217	3	0	1	222	10	3	4	0	0	17	1	70	5	0	1	76	320	
07:15:00	4	4	7	0	0	15	7	234	11	0	0	252	20	10	8	0	0	38	3	84	7	0	0	94	399	
07:30:00	8	14	11	0	0	33	2	285	11	0	0	298	18	11	9	0	2	38	4	93	8	0	0	105	474	
07:45:00	6	12	9	0	0	27	11	329	20	0	0	360	14	28	6	0	4	48	6	133	6	0	3	145	580	1773
08:00:00	24	32	19	0	0	75	2	320	38	0	3	360	24	44	16	0	3	84	8	158	8	0	12	174	693	2146
08:15:00	21	19	20	0	1	60	17	292	21	0	1	330	17	23	10	0	0	50	11	148	15	0	2	174	614	2361
08:30:00	14	10	7	0	7	31	17	306	11	0	3	334	24	4	12	0	2	40	15	178	18	0	2	211	616	2503
08:45:00	16	21	15	0	2	52	19	225	22	0	3	266	20	22	11	0	1	53	9	158	20	0	7	187	558	2481
BREAK																										
11:00:00	9	10	9	0	0	28	5	126	15	0	1	146	6	11	7	0	2	24	10	117	7	0	0	134	332	
11:15:00	8	9	12	0	0	29	8	128	16	0	1	152	6	10	3	0	1	19	10	117	12	0	4	139	339	
11:30:00	12	9	15	0	1	36	10	120	10	0	0	140	12	11	11	0	3	34	10	127	5	0	2	142	352	
11:45:00	12	6	11	0	2	29	12	138	14	0	0	164	14	7	13	0	1	34	6	114	12	0	2	132	359	1382
12:00:00	9	9	7	0	0	25	6	124	14	2	0	146	12	12	13	0	2	37	11	161	15	0	1	187	395	1445
12:15:00	11	7	10	0	0	28	7	137	12	0	0	156	15	11	5	0	0	31	14	116	13	0	2	143	358	1464
12:30:00	8	11	10	0	0	29	11	139	10	1	0	161	9	7	10	0	0	26	10	142	12	0	2	164	380	1492
12:45:00	12	8	9	0	3	29	9	130	19	0	2	158	17	8	12	0	2	37	11	145	17	0	1	173	397	1530
13:00:00	7	7	11	0	1	25	6	101	13	0	1	120	12	11	9	0	0	32	6	132	12	0	2	150	327	1462
13:15:00	13	11	7	0	0	31	10	153	10	0	0	173	14	9	12	0	1	35	11	130	15	0	1	156	395	1499
13:30:00	6	6	6	0	1	18	4	100	6	0	3	110	14	9	12	0	4	35	5	140	8	0	1	153	316	1435
13:45:00	9	11	3	0	4	23	9	140	12	0	3	161	9	13	8	0	9	30	16	131	19	0	1	166	380	1418
BREAK																										
15:00:00	12	10	7	0	1	29	20	167	16	0	5	203	12	8	16	0	2	36	9	198	32	0	4	239	507	
15:15:00	11	8	12	0	2	31	6	132	25	0	0	163	15	49	16	0	7	80	15	192	20	0	1	227	501	
15:30:00	27	31	11	0	1	69	11	169	32	0	1	212	16	24	14	0	6	54	22	247	37	1	4	307	642	
15:45:00	36	40	12	0	1	88	15	186	29	0	3	230	11	27	12	0	0	50	12	266	22	0	1	300	668	2318
16:00:00	22	22	19	0	6	63	8	146	24	0	5	178	10	19	13	0	3	42	13	240	22	0	2	275	558	2369
16:15:00	15	13	12	0	1	40	17	145	18	0	4	180	17	13	6	0	1	36	14	320	27	0	5	361	617	2485
16:30:00	8	19	14	0	1	41	10	174	21	0	0	205	19	24	16	0	0	59	16	293	22	0	4	331	636	2479
16:45:00	9	23	12	0	0	44	14	197	10	0	0	221	11	20	16	0	1	47	16	370	22	0	0	408	720	2531
17:00:00	12	13	5	0	0	30	5	180	8	0	2	193	18	15	13	0	0	46	26	418	28	0	2	472	741	2714
17:15:00	10	17	6	0	0	33	13	169	16	0	0	198	24	14	13	0	0	51	21	360	23	0	2	404	686	2783

17:30:00	9	17	11	0	0	37	10	164	17	0	0	191	16	19	5	0	1	40	26	398	22	0	0	446	714	2861
17:45:00	14	15	11	0	0	40	12	212	17	0	1	241	17	17	13	0	1	47	15	376	31	0	1	422	750	2891
Grand Total	398	445	330	0	38	1173	315	5785	521	3	43	6624	473	513	344	0	59	1330	382	6272	542	1	72	7197	**16324**	-
Approach%	33.9%	37.9%	28.1%	0%		-	4.8%	87.3%	7.9%	0%		-	35.6%	38.6%	25.9%	0%		-	5.3%	87.1%	7.5%	0%		-	**-**	-
Totals %	2.4%	2.7%	2%	0%		7.2%	1.9%	35.4%	3.2%	0%		40.6%	2.9%	3.1%	2.1%	0%		8.1%	2.3%	38.4%	3.3%	0%		44.1%	**-**	-
Heavy	17	41	8	0		-	7	131	31	0		-	5	44	7	0		-	6	151	11	0		-	**-**	-
Heavy %	4.3%	9.2%	2.4%	0%		-	2.2%	2.3%	6%	0%		-	1.1%	8.6%	2%	0%		-	1.6%	2.4%	2%	0%		-	**-**	-
Bicycles	0	1	1	0		-	0	1	0	0		-	0	0	0	0		-	0	1	0	0		-	**-**	-
Bicycle %	0%	0.2%	0.3%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Peak Hour: 07:45 AM - 08:45 AM Weather: Light Rain (10 °C)

Start Time	Northbound CAMILLA RD						Eastbound QUEENSWAY E						Southbound CAMILLA RD						Westbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
07:45:00	6	12	9	0	0	27	11	329	20	0	0	360	14	28	6	0	4	48	6	133	6	0	3	145	580
08:00:00	24	32	19	0	0	75	2	320	38	0	3	360	24	44	16	0	3	84	8	158	8	0	12	174	693
08:15:00	21	19	20	0	1	60	17	292	21	0	1	330	17	23	10	0	0	50	11	148	15	0	2	174	614
08:30:00	14	10	7	0	7	31	17	306	11	0	3	334	24	4	12	0	2	40	15	178	18	0	2	211	616
Grand Total	65	73	55	0	8	193	47	1247	90	0	7	1384	79	99	44	0	9	222	40	617	47	0	19	704	**2503**
Approach%	33.7%	37.8%	28.5%	0%		-	3.4%	90.1%	6.5%	0%		-	35.6%	44.6%	19.8%	0%		-	5.7%	87.6%	6.7%	0%		-	**-**
Totals %	2.6%	2.9%	2.2%	0%		7.7%	1.9%	49.8%	3.6%	0%		55.3%	3.2%	4%	1.8%	0%		8.9%	1.6%	24.7%	1.9%	0%		28.1%	**-**
PHF	0.68	0.57	0.69	0		0.64	0.69	0.95	0.59	0		0.96	0.82	0.56	0.69	0		0.66	0.67	0.87	0.65	0		0.83	**-**
Heavy	4	10	1	0		15	3	22	6	0		31	0	12	1	0		13	4	26	3	0		33	**-**
Heavy %	6.2%	13.7%	1.8%	0%		7.8%	6.4%	1.8%	6.7%	0%		2.2%	0%	12.1%	2.3%	0%		5.9%	10%	4.2%	6.4%	0%		4.7%	**-**
Lights	61	63	54	0		178	44	1225	84	0		1353	79	87	43	0		209	36	591	44	0		671	**-**
Lights %	93.8%	86.3%	98.2%	0%		92.2%	93.6%	98.2%	93.3%	0%		97.8%	100%	87.9%	97.7%	0%		94.1%	90%	95.8%	93.6%	0%		95.3%	**-**
Single-Unit Trucks	1	0	0	0		1	0	8	0	0		8	0	0	0	0		0	2	7	0	0		9	**-**
Single-Unit Trucks %	1.5%	0%	0%	0%		0.5%	0%	0.6%	0%	0%		0.6%	0%	0%	0%	0%		0%	5%	1.1%	0%	0%		1.3%	**-**
Buses	3	10	1	0		14	3	12	6	0		21	0	12	1	0		13	2	17	3	0		22	**-**
Buses %	4.6%	13.7%	1.8%	0%		7.3%	6.4%	1%	6.7%	0%		1.5%	0%	12.1%	2.3%	0%		5.9%	5%	2.8%	6.4%	0%		3.1%	**-**
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	2	0	0		2	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	**-**
Pedestrians	-	-	-	-	8	-	-	-	-	-	6	-	-	-	-	-	9	-	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	-	18.6%		-	-	-	-	14%		-	-	-	-	20.9%		-	-	-	-	44.2%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2.3%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

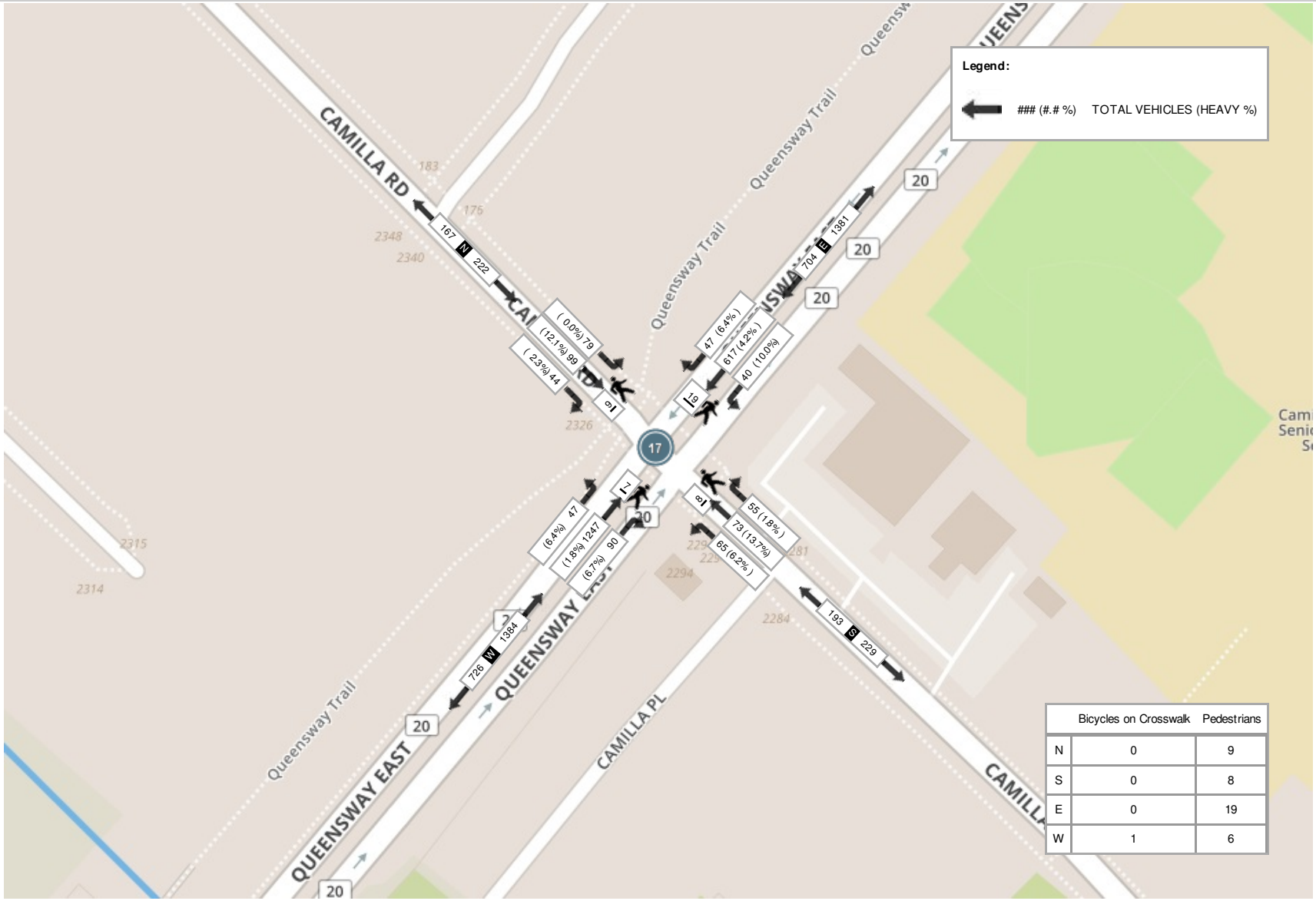
Peak Hour: 12:00 PM - 01:00 PM Weather: Mostly Cloudy (13 °C)

Start Time	Northbound CAMILLA RD						Eastbound QUEENSWAY E						Southbound CAMILLA RD						Westbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
12:00:00	9	9	7	0	0	25	6	124	14	2	0	146	12	12	13	0	2	37	11	161	15	0	1	187	395
12:15:00	11	7	10	0	0	28	7	137	12	0	0	156	15	11	5	0	0	31	14	116	13	0	2	143	358
12:30:00	8	11	10	0	0	29	11	139	10	1	0	161	9	7	10	0	0	26	10	142	12	0	2	164	380
12:45:00	12	8	9	0	3	29	9	130	19	0	2	158	17	8	12	0	2	37	11	145	17	0	1	173	397
Grand Total	40	35	36	0	3	111	33	530	55	3	2	621	53	38	40	0	4	131	46	564	57	0	6	667	**1530**
Approach%	36%	31.5%	32.4%	0%		-	5.3%	85.3%	8.9%	0.5%		-	40.5%	29%	30.5%	0%		-	6.9%	84.6%	8.5%	0%		-	**-**
Totals %	2.6%	2.3%	2.4%	0%		7.3%	2.2%	34.6%	3.6%	0.2%		40.6%	3.5%	2.5%	2.6%	0%		8.6%	3%	36.9%	3.7%	0%		43.6%	**-**
PHF	0.83	0.8	0.9	0		0.96	0.75	0.95	0.72	0.38		0.96	0.78	0.79	0.77	0		0.89	0.82	0.88	0.84	0		0.89	**-**
Heavy	0	4	0	0		4	0	14	2	0		16	1	3	1	0		5	0	22	1	0		23	**-**
Heavy %	0%	11.4%	0%	0%		3.6%	0%	2.6%	3.6%	0%		2.6%	1.9%	7.9%	2.5%	0%		3.8%	0%	3.9%	1.8%	0%		3.4%	**-**
Lights	40	31	36	0		107	33	516	53	3		605	52	35	39	0		126	46	542	56	0		644	**-**
Lights %	100%	88.6%	100%	0%		96.4%	100%	97.4%	96.4%	100%		97.4%	98.1%	92.1%	97.5%	0%		96.2%	100%	96.1%	98.2%	0%		96.6%	**-**
Single-Unit Trucks	0	0	0	0		0	0	11	2	0		13	0	0	1	0		1	0	17	0	0		17	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	2.1%	3.6%	0%		2.1%	0%	0%	2.5%	0%		0.8%	0%	3%	0%	0%		2.5%	**-**
Buses	0	4	0	0		4	0	1	0	0		1	0	3	0	0		3	0	0	1	0		1	**-**
Buses %	0%	11.4%	0%	0%		3.6%	0%	0.2%	0%	0%		0.2%	0%	7.9%	0%	0%		2.3%	0%	0%	1.8%	0%		0.1%	**-**
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	1	0	0	0		1	0	5	0	0		5	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	1.9%	0%	0%	0%		0.8%	0%	0.9%	0%	0%		0.7%	**-**
Pedestrians	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	-	20%		-	-	-	-	13.3%		-	-	-	-	26.7%		-	-	-	-	33.3%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	6.7%		**-**
Bicycles on Road	0	0	1	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (13 °C)

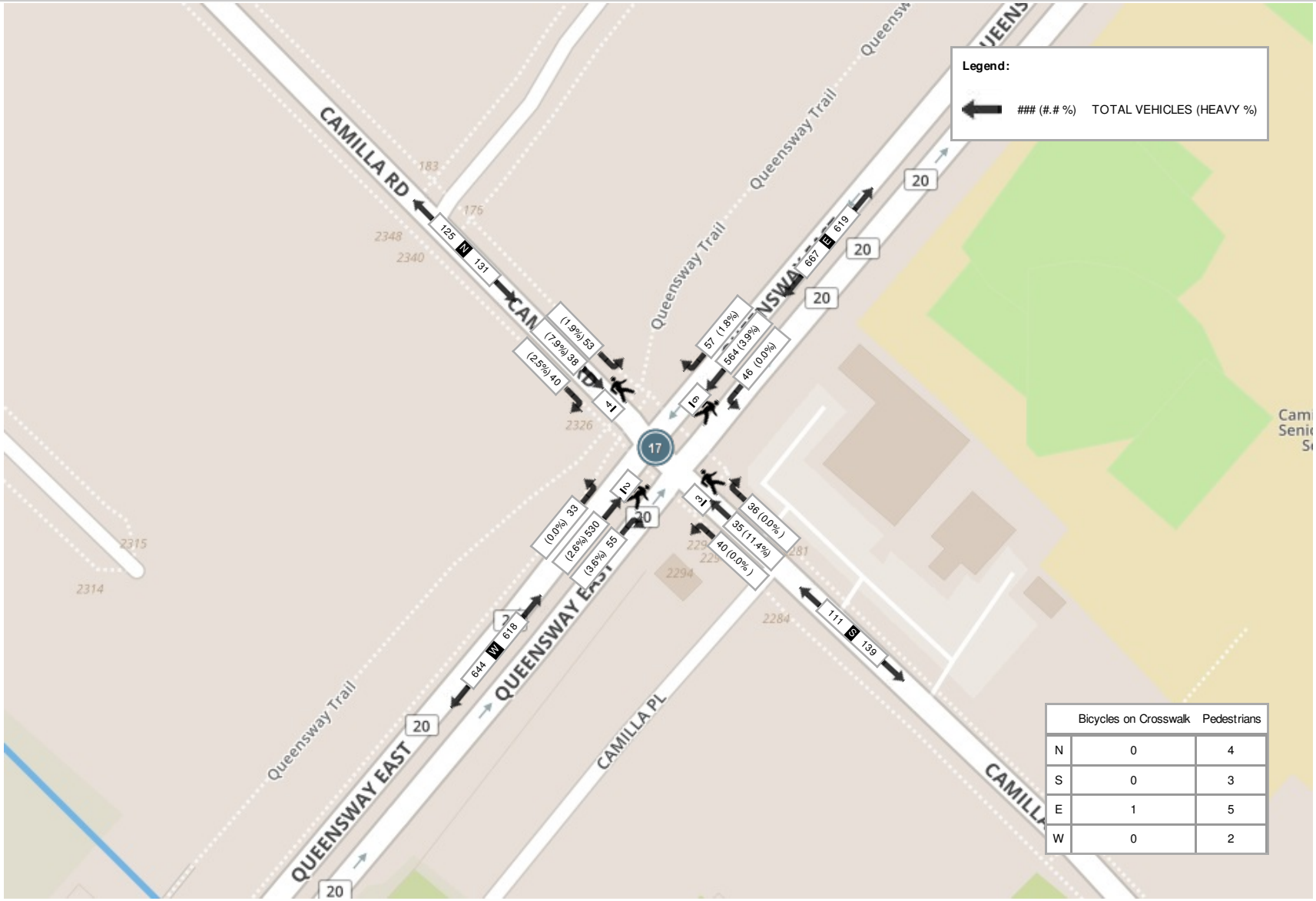
Start Time	Northbound CAMILLA RD						Eastbound QUEENSWAY E						Southbound CAMILLA RD						Westbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
17:00:00	12	13	5	0	0	30	5	180	8	0	2	193	18	15	13	0	0	46	26	418	28	0	2	472	741
17:15:00	10	17	6	0	0	33	13	169	16	0	0	198	24	14	13	0	0	51	21	360	23	0	2	404	686
17:30:00	9	17	11	0	0	37	10	164	17	0	0	191	16	19	5	0	1	40	26	398	22	0	0	446	714
17:45:00	14	15	11	0	0	40	12	212	17	0	1	241	17	17	13	0	1	47	15	376	31	0	1	422	750
Grand Total	45	62	33	0	0	140	40	725	58	0	3	823	75	65	44	0	2	184	88	1552	104	0	5	1744	**2891**
Approach%	32.1%	44.3%	23.6%	0%		-	4.9%	88.1%	7%	0%		-	40.8%	35.3%	23.9%	0%		-	5%	89%	6%	0%		-	**-**
Totals %	1.6%	2.1%	1.1%	0%		4.8%	1.4%	25.1%	2%	0%		28.5%	2.6%	2.2%	1.5%	0%		6.4%	3%	53.7%	3.6%	0%		60.3%	**-**
PHF	0.8	0.91	0.75	0		0.88	0.77	0.85	0.85	0		0.85	0.78	0.86	0.85	0		0.9	0.85	0.93	0.84	0		0.92	**-**
Heavy	1	4	0	0		5	0	10	1	0		11	0	3	0	0		3	0	12	0	0		12	**-**
Heavy %	2.2%	6.5%	0%	0%		3.6%	0%	1.4%	1.7%	0%		1.3%	0%	4.6%	0%	0%		1.6%	0%	0.8%	0%	0%		0.7%	**-**
Lights	44	58	33	0		135	40	715	57	0		812	75	62	44	0		181	88	1540	104	0		1732	**-**
Lights %	97.8%	93.5%	100%	0%		96.4%	100%	98.6%	98.3%	0%		98.7%	100%	95.4%	100%	0%		98.4%	100%	99.2%	100%	0%		99.3%	**-**
Single-Unit Trucks	0	0	0	0		0	0	7	1	0		8	0	0	0	0		0	0	4	0	0		4	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	1%	1.7%	0%		1%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	**-**
Buses	1	4	0	0		5	0	3	0	0		3	0	3	0	0		3	0	6	0	0		6	**-**
Buses %	2.2%	6.5%	0%	0%		3.6%	0%	0.4%	0%	0%		0.4%	0%	4.6%	0%	0%		1.6%	0%	0.4%	0%	0%		0.3%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	20%		-	-	-	-	20%		-	-	-	-	50%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	10%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:45 AM - 08:45 AM Weather: Light Rain (10 °C)

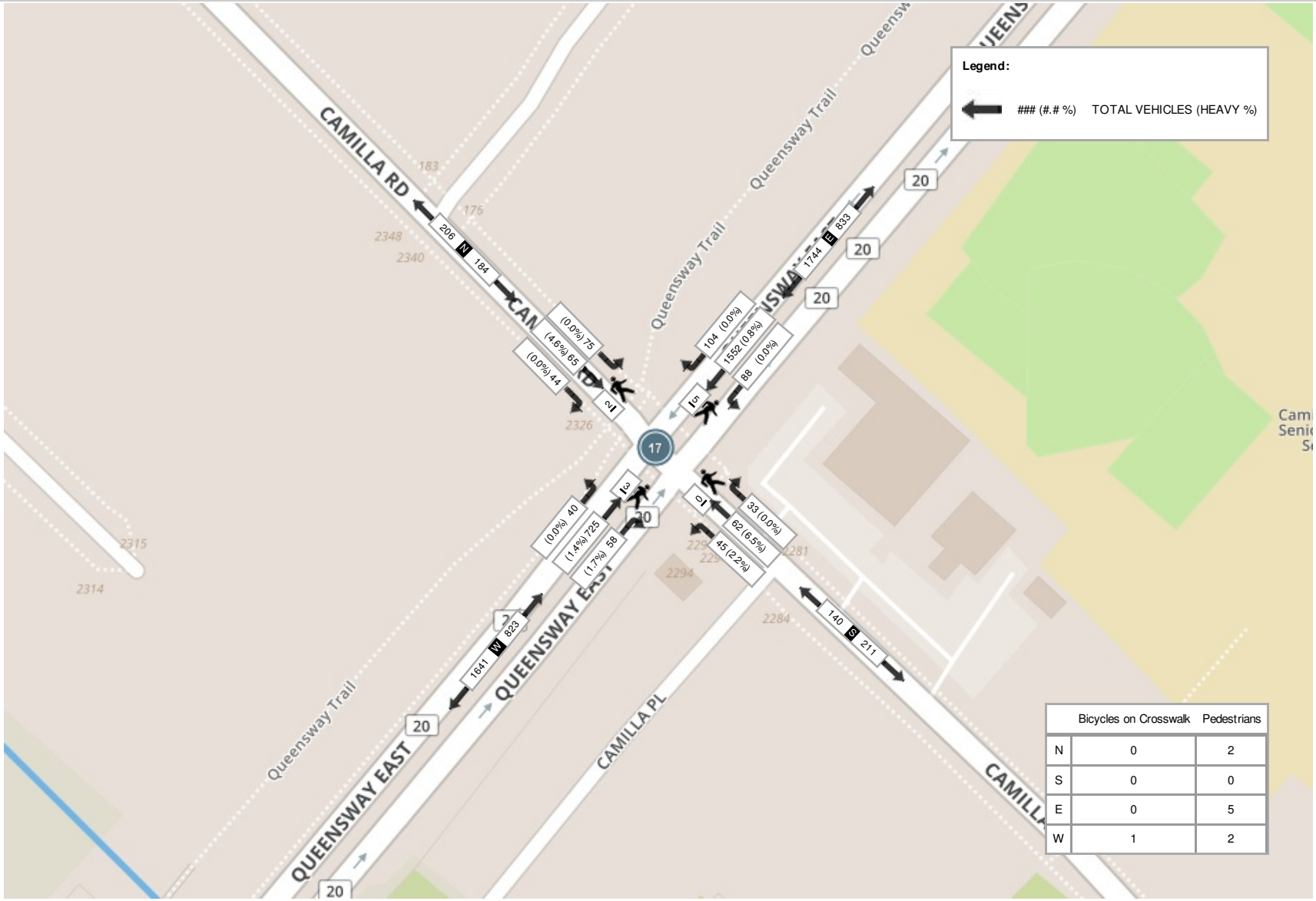


	Bicycles on Crosswalk	Pedestrians
N	0	9
S	0	8
E	0	19
W	1	6

Peak Hour: 12:00 PM - 01:00 PM Weather: Mostly Cloudy (13 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (13 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	2
S	0	0
E	0	5
W	1	2

Turning Movement Count (14 . QUEENSWAY E & CLIFF RD) CustID: 02004102 MioID: 390844

Start Time	Southbound CLIFF RD						Westbound QUEENSWAY E						Northbound CLIFF RD						Eastbound QUEENSWAY E						Int. Total (15 min)	Int. Total (1 hr)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total		
07:00:00	5	3	6	0	0	14	2	82	5	0	0	89	6	5	6	0	0	17	0	354	8	0	1	362	482	
07:15:00	7	4	4	0	1	15	6	79	7	0	0	92	3	3	5	0	0	11	2	338	7	0	1	347	465	
07:30:00	13	13	5	0	0	31	7	97	4	0	0	108	13	11	9	0	0	33	5	373	6	0	2	384	556	
07:45:00	14	16	11	0	4	41	4	138	8	0	0	150	21	10	14	0	0	45	7	346	10	0	0	363	599	2102
08:00:00	12	14	7	0	3	33	6	143	5	0	0	154	14	11	11	0	1	36	13	329	14	0	0	356	579	2199
08:15:00	18	15	16	0	3	49	9	143	8	0	0	160	22	20	15	0	0	57	18	324	18	0	3	360	626	2360
08:30:00	16	17	15	0	0	48	10	168	11	0	0	189	21	10	12	0	0	43	10	304	28	0	9	342	622	2426
08:45:00	10	23	8	0	5	41	19	147	8	0	0	174	26	22	19	0	5	67	4	240	37	0	42	281	563	2390
BREAK																										
11:00:00	9	10	5	0	4	24	4	125	4	0	1	133	10	3	7	0	0	20	5	168	3	0	1	176	353	
11:15:00	9	3	4	0	6	16	7	115	7	0	1	129	6	5	4	0	0	15	8	127	3	0	0	138	298	
11:30:00	6	9	6	0	1	21	5	153	17	0	0	175	12	3	10	0	0	25	2	149	9	0	1	160	381	
11:45:00	6	4	10	0	2	20	10	148	12	0	0	170	16	9	5	0	0	30	7	156	9	0	5	172	392	1424
12:00:00	8	7	3	0	3	18	4	149	12	0	1	165	8	2	6	0	1	16	4	178	5	0	1	187	386	1457
12:15:00	3	4	8	0	3	15	4	148	10	0	1	162	4	6	7	0	0	17	11	130	10	0	3	151	345	1504
12:30:00	14	6	6	0	1	26	8	139	11	0	1	158	15	4	6	0	0	25	6	154	9	0	4	169	378	1501
12:45:00	6	7	6	0	1	19	4	145	8	0	1	157	7	1	10	0	0	18	5	128	7	0	1	140	334	1443
13:00:00	5	9	0	0	1	14	7	154	11	0	0	172	9	3	3	0	0	15	9	122	13	0	1	144	345	1402
13:15:00	10	2	4	0	0	16	5	158	13	0	0	176	5	5	6	0	0	16	4	150	14	0	1	168	376	1433
13:30:00	7	5	6	0	1	18	5	162	6	0	0	173	7	6	8	0	0	21	2	119	7	2	0	130	342	1397
13:45:00	9	6	5	0	1	20	5	162	13	0	0	180	8	6	1	0	1	15	5	115	5	0	2	125	340	1403
BREAK																										
15:00:00	15	17	26	0	2	58	13	236	15	0	2	264	16	4	6	0	0	26	9	122	15	0	1	146	494	
15:15:00	10	18	5	0	0	33	14	278	20	0	0	312	8	9	5	0	2	22	6	156	28	0	16	190	557	
15:30:00	11	6	9	0	9	26	16	262	14	0	2	292	34	39	14	0	6	87	4	142	24	0	47	170	575	
15:45:00	10	13	5	0	0	28	5	291	9	0	1	305	14	18	12	0	0	44	10	176	16	0	0	202	579	2205
16:00:00	6	10	7	0	1	23	11	304	13	0	0	328	13	5	5	0	0	23	12	154	13	0	1	179	553	2264
16:15:00	6	4	5	0	1	15	16	309	7	0	1	332	13	7	4	0	0	24	2	148	11	0	1	161	532	2239
16:30:00	3	9	5	0	2	17	19	340	21	0	0	380	15	2	4	0	1	21	6	173	10	0	1	189	607	2271
16:45:00	11	12	2	0	2	25	18	375	12	0	2	405	12	8	4	0	0	24	10	181	14	0	0	205	659	2351
17:00:00	7	11	11	0	0	29	15	369	12	0	0	396	19	7	3	0	0	29	4	155	22	0	1	181	635	2433
17:15:00	12	18	7	0	1	37	23	411	6	0	0	440	17	5	11	0	0	33	4	177	18	0	0	199	709	2610

17:30:00	9	9	9	0	2	27	20	361	13	0	0	394	16	10	9	0	0	35	7	160	15	0	0	182	638	2641
17:45:00	7	4	9	0	0	20	22	348	11	0	0	381	22	7	7	0	0	36	6	122	10	0	2	138	575	2557
Grand Total	294	308	235	0	60	837	323	6639	333	0	14	7295	432	266	248	0	17	946	207	6170	418	2	148	6797	**15875**	-
Approach%	35.1%	36.8%	28.1%	0%		-	4.4%	91%	4.6%	0%		-	45.7%	28.1%	26.2%	0%		-	3%	90.8%	6.1%	0%		-	**-**	-
Totals %	1.9%	1.9%	1.5%	0%		5.3%	2%	41.8%	2.1%	0%		46%	2.7%	1.7%	1.6%	0%		6%	1.3%	38.9%	2.6%	0%		42.8%	**-**	-
Heavy	8	5	12	0		-	11	126	5	0		-	7	6	4	0		-	7	132	8	0		-	**-**	-
Heavy %	2.7%	1.6%	5.1%	0%		-	3.4%	1.9%	1.5%	0%		-	1.6%	2.3%	1.6%	0%		-	3.4%	2.1%	1.9%	0%		-	**-**	-
Bicycles	0	0	0	0		-	0	2	0	0		-	0	0	0	0		-	0	2	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: QUEENSWAY E & CLIFF RD
Date: Wed, Mar 08, 2017 Deployment Lead: Chris Koukaras

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 07:45 AM - 08:45 AM Weather: Clear (2.2 °C)

Start Time	Southbound CLIFF RD						Westbound QUEENSWAY E						Northbound CLIFF RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
07:45:00	14	16	11	0	4	41	4	138	8	0	0	150	21	10	14	0	0	45	7	346	10	0	0	363	599
08:00:00	12	14	7	0	3	33	6	143	5	0	0	154	14	11	11	0	1	36	13	329	14	0	0	356	579
08:15:00	18	15	16	0	3	49	9	143	8	0	0	160	22	20	15	0	0	57	18	324	18	0	3	360	626
08:30:00	16	17	15	0	0	48	10	168	11	0	0	189	21	10	12	0	0	43	10	304	28	0	9	342	622
Grand Total	60	62	49	0	10	171	29	592	32	0	0	653	78	51	52	0	1	181	48	1303	70	0	12	1421	**2426**
Approach%	35.1%	36.3%	28.7%	0%		-	4.4%	90.7%	4.9%	0%		-	43.1%	28.2%	28.7%	0%		-	3.4%	91.7%	4.9%	0%		-	**-**
Totals %	2.5%	2.6%	2%	0%		7%	1.2%	24.4%	1.3%	0%		26.9%	3.2%	2.1%	2.1%	0%		7.5%	2%	53.7%	2.9%	0%		58.6%	**-**
PHF	0.83	0.91	0.77	0		0.87	0.73	0.88	0.73	0		0.86	0.89	0.64	0.87	0		0.79	0.67	0.94	0.63	0		0.98	**-**
Heavy	2	1	1	0		4	2	27	2	0		31	4	2	0	0		6	3	20	2	0		25	**-**
Heavy %	3.3%	1.6%	2%	0%		2.3%	6.9%	4.6%	6.3%	0%		4.7%	5.1%	3.9%	0%	0%		3.3%	6.3%	1.5%	2.9%	0%		1.8%	**-**
Lights	58	61	48	0		167	27	565	30	0		622	74	49	52	0		175	45	1283	68	0		1396	**-**
Lights %	96.7%	98.4%	98%	0%		97.7%	93.1%	95.4%	93.8%	0%		95.3%	94.9%	96.1%	100%	0%		96.7%	93.8%	98.5%	97.1%	0%		98.2%	**-**
Single-Unit Trucks	1	0	0	0		1	0	13	1	0		14	2	0	0	0		2	1	12	1	0		14	**-**
Single-Unit Trucks %	1.7%	0%	0%	0%		0.6%	0%	2.2%	3.1%	0%		2.1%	2.6%	0%	0%	0%		1.1%	2.1%	0.9%	1.4%	0%		1%	**-**
Buses	1	1	1	0		3	2	11	1	0		14	2	2	0	0		4	2	8	1	0		11	**-**
Buses %	1.7%	1.6%	2%	0%		1.8%	6.9%	1.9%	3.1%	0%		2.1%	2.6%	3.9%	0%	0%		2.2%	4.2%	0.6%	1.4%	0%		0.8%	**-**
Articulated Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	12	-	**-**
Pedestrians%	-	-	-	-	43.5%		-	-	-	-	0%		-	-	-	-	4.3%		-	-	-	-	52.2%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	2	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: QUEENSWAY E & CLIFF RD
Date: Wed, Mar 08, 2017 Deployment Lead: Chris Koukaras

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 11:30 AM - 12:30 PM Weather: Clear (7.3 °C)

Start Time	Southbound CLIFF RD						Westbound QUEENSWAY E						Northbound CLIFF RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
11:30:00	6	9	6	0	1	21	5	153	17	0	0	175	12	3	10	0	0	25	2	149	9	0	1	160	381
11:45:00	6	4	10	0	2	20	10	148	12	0	0	170	16	9	5	0	0	30	7	156	9	0	5	172	392
12:00:00	8	7	3	0	3	18	4	149	12	0	1	165	8	2	6	0	1	16	4	178	5	0	1	187	386
12:15:00	3	4	8	0	3	15	4	148	10	0	1	162	4	6	7	0	0	17	11	130	10	0	3	151	345
Grand Total	23	24	27	0	9	74	23	598	51	0	2	672	40	20	28	0	1	88	24	613	33	0	10	670	**1504**
Approach%	31.1%	32.4%	36.5%	0%		-	3.4%	89%	7.6%	0%		-	45.5%	22.7%	31.8%	0%		-	3.6%	91.5%	4.9%	0%		-	**-**
Totals %	1.5%	1.6%	1.8%	0%		4.9%	1.5%	39.8%	3.4%	0%		44.7%	2.7%	1.3%	1.9%	0%		5.9%	1.6%	40.8%	2.2%	0%		44.5%	**-**
PHF	0.72	0.67	0.68	0		0.88	0.58	0.98	0.75	0		0.96	0.63	0.56	0.7	0		0.73	0.55	0.86	0.83	0		0.9	**-**
Heavy	1	0	1	0		2	0	16	1	0		17	1	1	1	0		3	0	16	0	0		16	**-**
Heavy %	4.3%	0%	3.7%	0%		2.7%	0%	2.7%	2%	0%		2.5%	2.5%	5%	3.6%	0%		3.4%	0%	2.6%	0%	0%		2.4%	**-**
Lights	22	24	26	0		72	23	582	50	0		655	39	19	27	0		85	24	597	33	0		654	**-**
Lights %	95.7%	100%	96.3%	0%		97.3%	100%	97.3%	98%	0%		97.5%	97.5%	95%	96.4%	0%		96.6%	100%	97.4%	100%	0%		97.6%	**-**
Single-Unit Trucks	0	0	1	0		1	0	11	1	0		12	1	1	1	0		3	0	13	0	0		13	**-**
Single-Unit Trucks %	0%	0%	3.7%	0%		1.4%	0%	1.8%	2%	0%		1.8%	2.5%	5%	3.6%	0%		3.4%	0%	2.1%	0%	0%		1.9%	**-**
Buses	1	0	0	0		1	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	**-**
Buses %	4.3%	0%	0%	0%		1.4%	0%	0.5%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	**-**
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	1	0	0		1	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	**-**
Pedestrians	-	-	-	-	9	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	10	-	**-**
Pedestrians%	-	-	-	-	40.9%		-	-	-	-	9.1%		-	-	-	-	4.5%		-	-	-	-	45.5%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast (8.4 °C)

Start Time	Southbound CLIFF RD						Westbound QUEENSWAY E						Northbound CLIFF RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
16:45:00	11	12	2	0	2	25	18	375	12	0	2	405	12	8	4	0	0	24	10	181	14	0	0	205	659
17:00:00	7	11	11	0	0	29	15	369	12	0	0	396	19	7	3	0	0	29	4	155	22	0	1	181	635
17:15:00	12	18	7	0	1	37	23	411	6	0	0	440	17	5	11	0	0	33	4	177	18	0	0	199	709
17:30:00	9	9	9	0	2	27	20	361	13	0	0	394	16	10	9	0	0	35	7	160	15	0	0	182	638
Grand Total	39	50	29	0	5	118	76	1516	43	0	2	1635	64	30	27	0	0	121	25	673	69	0	1	767	**2641**
Approach%	33.1%	42.4%	24.6%	0%		-	4.6%	92.7%	2.6%	0%		-	52.9%	24.8%	22.3%	0%		-	3.3%	87.7%	9%	0%		-	**-**
Totals %	1.5%	1.9%	1.1%	0%		4.5%	2.9%	57.4%	1.6%	0%		61.9%	2.4%	1.1%	1%	0%		4.6%	0.9%	25.5%	2.6%	0%		29%	**-**
PHF	0.81	0.69	0.66	0		0.8	0.83	0.92	0.83	0		0.93	0.84	0.75	0.61	0		0.86	0.63	0.93	0.78	0		0.94	**-**
Heavy	0	0	1	0		1	2	7	0	0		9	0	0	0	0		0	1	5	0	0		6	**-**
Heavy %	0%	0%	3.4%	0%		0.8%	2.6%	0.5%	0%	0%		0.6%	0%	0%	0%	0%		0%	4%	0.7%	0%	0%		0.8%	**-**
Lights	39	50	28	0		117	74	1509	43	0		1626	64	30	27	0		121	24	668	69	0		761	**-**
Lights %	100%	100%	96.6%	0%		99.2%	97.4%	99.5%	100%	0%		99.4%	100%	100%	100%	0%		100%	96%	99.3%	100%	0%		99.2%	**-**
Single-Unit Trucks	0	0	1	0		1	1	5	0	0		6	0	0	0	0		0	0	3	0	0		3	**-**
Single-Unit Trucks %	0%	0%	3.4%	0%		0.8%	1.3%	0.3%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	**-**
Buses	0	0	0	0		0	1	1	0	0		2	0	0	0	0		0	1	2	0	0		3	**-**
Buses %	0%	0%	0%	0%		0%	1.3%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	4%	0.3%	0%	0%		0.4%	**-**
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	5	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	62.5%		-	-	-	-	25%		-	-	-	-	0%		-	-	-	-	12.5%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 07:45 AM - 08:45 AM Weather: Clear (2.2 °C)

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 11:30 AM - 12:30 PM Weather: Clear (7.3 °C)

	Bicycles on Crosswalk	Pedestrians
N	0	9
S	0	1
E	0	2
W	0	10

Peak Hour: 04:45 PM - 05:45 PM **Weather: Overcast (8.4 °C)**

	Bicycles on Crosswalk	Pedestrians
N	0	5
S	0	0
E	0	2
W	0	1

Turning Movement Count (15 . QUEENSWAY E & HENSALL ST) CustID: 02003689 MioID: 389230

Start Time	Southbound HENSALL ST						Westbound QUEENSWAY E						Northbound HENSALL ST						Eastbound QUEENSWAY E						Int. Total (15 min)	Int. Total (1 hr)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total		
07:00:00	6	1	3	0	0	10	2	86	3	0	0	91	1	0	10	0	0	11	0	236	1	0	0	237	349	
07:15:00	6	0	0	0	0	6	3	77	3	0	0	83	1	1	14	0	0	16	0	287	2	0	0	289	394	
07:30:00	6	1	2	0	0	9	3	122	1	1	0	127	6	0	4	0	0	10	3	344	1	1	0	349	495	
07:45:00	10	1	2	0	1	13	3	121	2	0	0	126	3	2	18	0	0	23	2	337	3	0	1	342	504	1742
08:00:00	14	3	5	0	3	22	3	130	0	0	0	133	0	5	11	0	2	16	2	361	2	0	2	365	536	1929
08:15:00	9	1	4	0	1	14	7	154	1	0	0	162	11	4	12	0	0	27	4	297	8	0	0	309	512	2047
08:30:00	5	2	4	0	1	11	4	171	2	0	1	177	17	3	10	0	0	30	4	306	3	0	2	313	531	2083
08:45:00	7	4	2	0	3	13	2	174	3	0	0	179	8	4	18	0	0	30	4	282	5	0	3	291	513	2092
BREAK																										
11:00:00	3	0	3	0	2	6	2	119	1	1	0	123	3	2	6	0	0	11	2	145	6	0	0	153	293	
11:15:00	6	2	2	0	0	10	4	138	5	0	0	147	4	2	5	0	0	11	2	134	1	0	0	137	305	
11:30:00	2	0	6	0	2	8	4	129	6	1	0	140	1	2	3	0	0	6	1	157	3	0	0	161	315	
11:45:00	2	1	2	0	1	5	1	152	4	1	0	158	3	1	3	0	0	7	2	154	4	0	0	160	330	1243
12:00:00	3	0	0	0	0	3	6	138	2	1	0	147	1	0	6	1	0	8	1	144	0	0	0	145	303	1253
12:15:00	4	0	2	0	1	6	6	144	5	0	0	155	1	2	5	0	0	8	6	146	3	0	2	155	324	1272
12:30:00	4	0	1	0	0	5	7	179	12	0	0	198	1	0	3	0	0	4	2	150	2	0	0	154	361	1318
12:45:00	2	2	2	0	0	6	4	166	8	0	0	178	2	1	3	0	0	6	3	148	2	0	0	153	343	1331
13:00:00	4	0	3	0	1	7	8	162	2	1	0	173	2	0	5	0	0	7	2	151	2	0	0	155	342	1370
13:15:00	6	1	2	0	1	9	4	165	9	0	0	178	4	0	5	0	0	9	3	150	4	1	1	158	354	1400
13:30:00	4	1	4	0	0	9	7	202	4	2	0	215	4	0	0	0	0	4	1	125	3	0	1	129	357	1396
13:45:00	7	1	3	0	1	11	6	164	5	1	0	176	1	1	13	0	0	15	3	149	2	0	0	154	356	1409
BREAK																										
15:00:00	8	0	2	0	3	10	8	237	7	0	0	252	5	0	9	0	2	14	0	184	4	0	1	188	464	
15:15:00	5	3	4	0	0	12	11	270	10	1	0	292	1	3	5	0	0	9	2	173	3	0	2	178	491	
15:30:00	3	2	8	0	2	13	2	253	6	1	1	262	2	2	6	0	1	10	6	154	8	0	0	168	453	
15:45:00	3	1	2	0	1	6	11	318	11	0	0	340	4	2	8	0	0	14	6	187	8	0	0	201	561	1969
16:00:00	5	3	4	0	1	12	14	345	7	0	0	366	2	1	3	0	1	6	1	170	6	0	0	177	561	2066
16:15:00	6	3	7	0	1	16	11	329	13	0	0	353	2	1	6	0	0	9	4	173	11	0	0	188	566	2141
16:30:00	10	1	9	0	0	20	15	425	11	0	1	451	3	2	4	0	0	9	7	156	9	0	0	172	652	2340
16:45:00	2	3	4	0	2	9	21	402	7	0	0	430	4	1	4	0	0	9	5	189	8	0	2	202	650	2429
17:00:00	7	3	6	0	1	16	28	416	6	0	0	450	4	1	6	0	0	11	5	146	5	0	1	156	633	2501
17:15:00	5	2	10	0	1	17	18	464	7	0	0	489	2	3	8	0	0	13	7	160	9	0	0	176	695	2630

17:30:00	5	3	3	0	1	11	16	389	6	0	0	411	5	0	5	0	0	10	4	158	9	0	0	171	603	2581
17:45:00	8	2	4	0	3	14	13	378	9	0	0	400	6	2	10	0	0	18	3	185	5	0	0	193	625	2556
Grand Total	177	47	115	0	34	339	254	7119	178	11	3	7562	114	48	228	1	6	391	97	6238	142	2	18	6479	**14771**	-
Approach%	52.2%	13.9%	33.9%	0%		-	3.4%	94.1%	2.4%	0.1%		-	29.2%	12.3%	58.3%	0.3%		-	1.5%	96.3%	2.2%	0%		-	**-**	-
Totals %	1.2%	0.3%	0.8%	0%		2.3%	1.7%	48.2%	1.2%	0.1%		51.2%	0.8%	0.3%	1.5%	0%		2.6%	0.7%	42.2%	1%	0%		43.9%	**-**	-
Heavy	4	4	5	0		-	3	178	1	0		-	2	1	4	1		-	1	144	4	0		-	**-**	-
Heavy %	2.3%	8.5%	4.3%	0%		-	1.2%	2.5%	0.6%	0%		-	1.8%	2.1%	1.8%	100%		-	1%	2.3%	2.8%	0%		-	**-**	-
Bicycles	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	0	3	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Clear (2 °C)

Start Time	Southbound HENSALL ST						Westbound QUEENSWAY E						Northbound HENSALL ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
08:00:00	14	3	5	0	3	22	3	130	0	0	0	133	0	5	11	0	2	16	2	361	2	0	2	365	536
08:15:00	9	1	4	0	1	14	7	154	1	0	0	162	11	4	12	0	0	27	4	297	8	0	0	309	512
08:30:00	5	2	4	0	1	11	4	171	2	0	1	177	17	3	10	0	0	30	4	306	3	0	2	313	531
08:45:00	7	4	2	0	3	13	2	174	3	0	0	179	8	4	18	0	0	30	4	282	5	0	3	291	513
Grand Total	35	10	15	0	8	60	16	629	6	0	1	651	36	16	51	0	2	103	14	1246	18	0	7	1278	**2092**
Approach%	58.3%	16.7%	25%	0%		-	2.5%	96.6%	0.9%	0%		-	35%	15.5%	49.5%	0%		-	1.1%	97.5%	1.4%	0%		-	**-**
Totals %	1.7%	0.5%	0.7%	0%		2.9%	0.8%	30.1%	0.3%	0%		31.1%	1.7%	0.8%	2.4%	0%		4.9%	0.7%	59.6%	0.9%	0%		61.1%	**-**
PHF	0.63	0.63	0.75	0		0.68	0.57	0.9	0.5	0		0.91	0.53	0.8	0.71	0		0.86	0.88	0.86	0.56	0		0.88	**-**
Heavy	0	4	2	0		6	1	27	0	0		28	1	1	2	0		4	1	25	2	0		28	**-**
Heavy %	0%	40%	13.3%	0%		10%	6.3%	4.3%	0%	0%		4.3%	2.8%	6.3%	3.9%	0%		3.9%	7.1%	2%	11.1%	0%		2.2%	**-**
Lights	35	6	13	0		54	15	602	6	0		623	35	15	49	0		99	13	1221	16	0		1250	**-**
Lights %	100%	60%	86.7%	0%		90%	93.8%	95.7%	100%	0%		95.7%	97.2%	93.8%	96.1%	0%		96.1%	92.9%	98%	88.9%	0%		97.8%	**-**
Single-Unit Trucks	0	1	0	0		1	1	13	0	0		14	0	0	1	0		1	0	16	0	0		16	**-**
Single-Unit Trucks %	0%	10%	0%	0%		1.7%	6.3%	2.1%	0%	0%		2.2%	0%	0%	2%	0%		1%	0%	1.3%	0%	0%		1.3%	**-**
Buses	0	3	2	0		5	0	13	0	0		13	1	1	1	0		3	1	7	2	0		10	**-**
Buses %	0%	30%	13.3%	0%		8.3%	0%	2.1%	0%	0%		2%	2.8%	6.3%	2%	0%		2.9%	7.1%	0.6%	11.1%	0%		0.8%	**-**
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	**-**
Pedestrians	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	-	38.9%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	27.8%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	5.6%		-	-	-	-	5.6%		-	-	-	-	11.1%		-	-	-	-	11.1%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

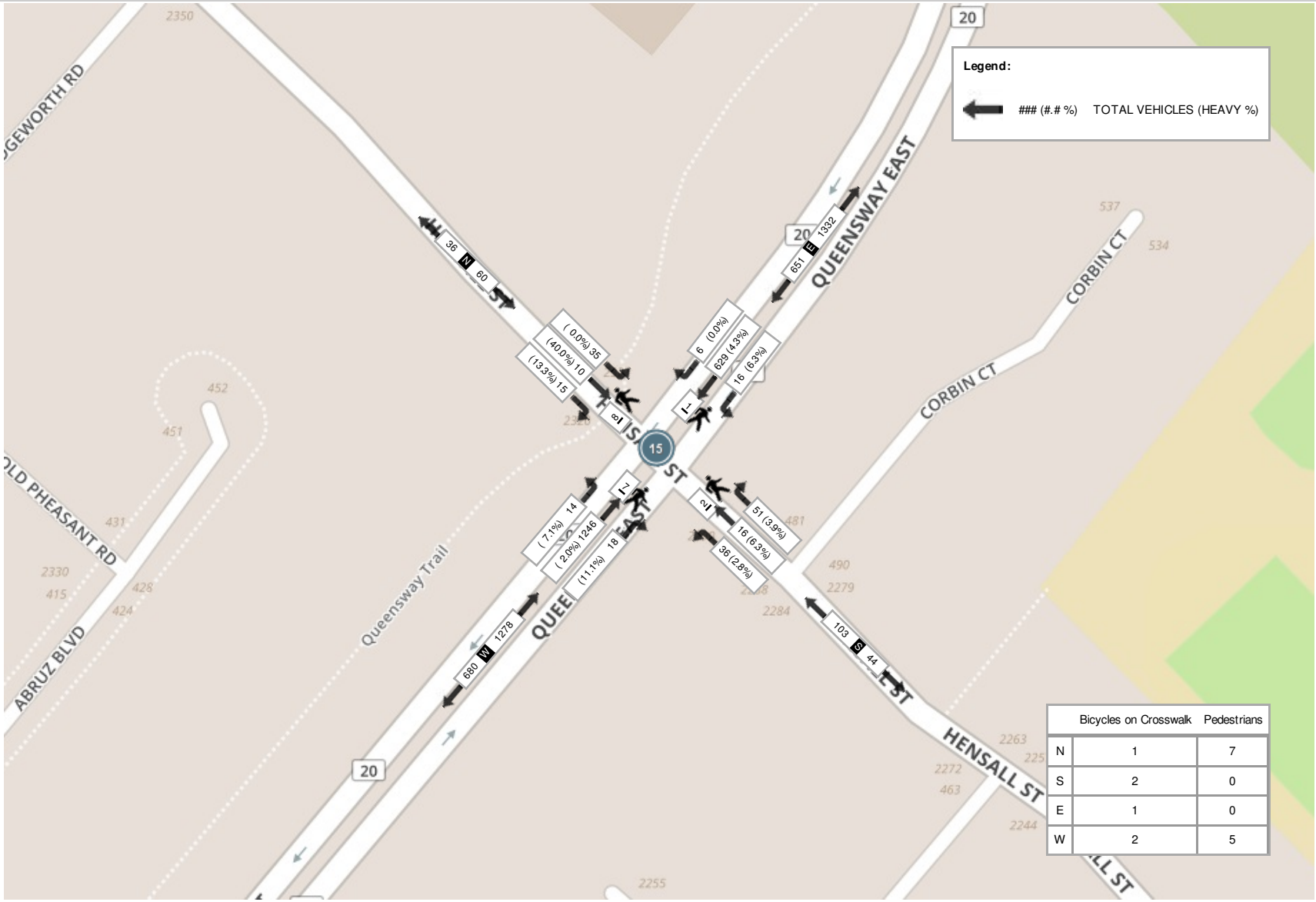
Peak Hour: 01:00 PM - 02:00 PM Weather: Overcast (5 °C)

Start Time	Southbound HENSALL ST						Westbound QUEENSWAY E						Northbound HENSALL ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
13:00:00	4	0	3	0	1	7	8	162	2	1	0	173	2	0	5	0	0	7	2	151	2	0	0	155	342
13:15:00	6	1	2	0	1	9	4	165	9	0	0	178	4	0	5	0	0	9	3	150	4	1	1	158	354
13:30:00	4	1	4	0	0	9	7	202	4	2	0	215	4	0	0	0	0	4	1	125	3	0	1	129	357
13:45:00	7	1	3	0	1	11	6	164	5	1	0	176	1	1	13	0	0	15	3	149	2	0	0	154	356
Grand Total	21	3	12	0	3	36	25	693	20	4	0	742	11	1	23	0	0	35	9	575	11	1	2	596	**1409**
Approach%	58.3%	8.3%	33.3%	0%		-	3.4%	93.4%	2.7%	0.5%		-	31.4%	2.9%	65.7%	0%		-	1.5%	96.5%	1.8%	0.2%		-	-
Totals %	1.5%	0.2%	0.9%	0%		2.6%	1.8%	49.2%	1.4%	0.3%		52.7%	0.8%	0.1%	1.6%	0%		2.5%	0.6%	40.8%	0.8%	0.1%		42.3%	-
PHF	0.75	0.75	0.75	0		0.82	0.78	0.86	0.56	0.5		0.86	0.69	0.25	0.44	0		0.58	0.75	0.95	0.69	0.25		0.94	-
Heavy	0	0	0	0		0	1	24	0	0		25	0	0	0	0		0	0	16	0	0		16	-
Heavy %	0%	0%	0%	0%		0%	4%	3.5%	0%	0%		3.4%	0%	0%	0%	0%		0%	0%	2.8%	0%	0%		2.7%	-
Lights	21	3	12	0		36	24	669	20	4		717	11	1	23	0		35	9	559	11	1		580	-
Lights %	100%	100%	100%	0%		100%	96%	96.5%	100%	100%		96.6%	100%	100%	100%	0%		100%	100%	97.2%	100%	100%		97.3%	-
Single-Unit Trucks	0	0	0	0		0	1	19	0	0		20	0	0	0	0		0	0	12	0	0		12	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	4%	2.7%	0%	0%		2.7%	0%	0%	0%	0%		0%	0%	2.1%	0%	0%		2%	-
Buses	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	2	0	0		2	-
Buses %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	-
Articulated Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Pedestrians%	-	-	-	-	40%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	20%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	20%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	20%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

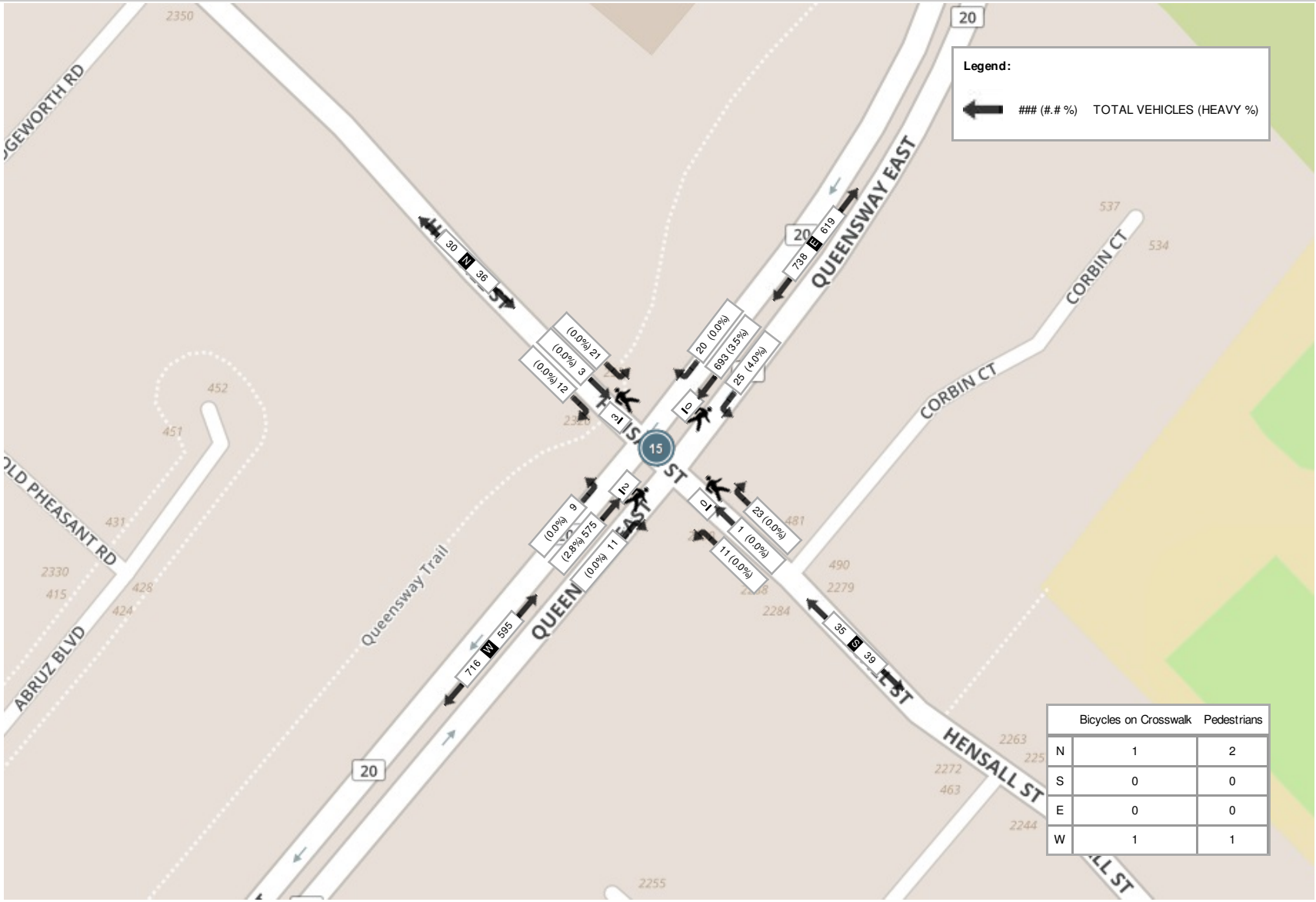
Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast (8 °C)

Start Time	Southbound HENSALL ST						Westbound QUEENSWAY E						Northbound HENSALL ST						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
16:30:00	10	1	9	0	0	20	15	425	11	0	1	451	3	2	4	0	0	9	7	156	9	0	0	172	652
16:45:00	2	3	4	0	2	9	21	402	7	0	0	430	4	1	4	0	0	9	5	189	8	0	2	202	650
17:00:00	7	3	6	0	1	16	28	416	6	0	0	450	4	1	6	0	0	11	5	146	5	0	1	156	633
17:15:00	5	2	10	0	1	17	18	464	7	0	0	489	2	3	8	0	0	13	7	160	9	0	0	176	695
Grand Total	24	9	29	0	4	62	82	1707	31	0	1	1820	13	7	22	0	0	42	24	651	31	0	3	706	**2630**
Approach%	38.7%	14.5%	46.8%	0%		-	4.5%	93.8%	1.7%	0%		-	31%	16.7%	52.4%	0%		-	3.4%	92.2%	4.4%	0%		-	**-**
Totals %	0.9%	0.3%	1.1%	0%		2.4%	3.1%	64.9%	1.2%	0%		69.2%	0.5%	0.3%	0.8%	0%		1.6%	0.9%	24.8%	1.2%	0%		26.8%	**-**
PHF	0.6	0.75	0.73	0		0.78	0.73	0.92	0.7	0		0.93	0.81	0.58	0.69	0		0.81	0.86	0.86	0.86	0		0.87	**-**
Heavy	0	0	0	0		0	1	22	0	0		23	0	0	0	0		0	0	8	0	0		8	**-**
Heavy %	0%	0%	0%	0%		0%	1.2%	1.3%	0%	0%		1.3%	0%	0%	0%	0%		0%	0%	1.2%	0%	0%		1.1%	**-**
Lights	24	9	29	0		62	81	1685	31	0		1797	13	7	22	0		42	24	643	31	0		698	**-**
Lights %	100%	100%	100%	0%		100%	98.8%	98.7%	100%	0%		98.7%	100%	100%	100%	0%		100%	100%	98.8%	100%	0%		98.9%	**-**
Single-Unit Trucks	0	0	0	0		0	1	12	0	0		13	0	0	0	0		0	0	6	0	0		6	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	1.2%	0.7%	0%	0%		0.7%	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.8%	**-**
Buses	0	0	0	0		0	0	7	0	0		7	0	0	0	0		0	0	1	0	0		1	**-**
Buses %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	**-**
Articulated Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	1	0	0		1	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	**-**
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	37.5%		-	-	-	-	12.5%		-	-	-	-	0%		-	-	-	-	37.5%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	12.5%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Clear (2 °C)

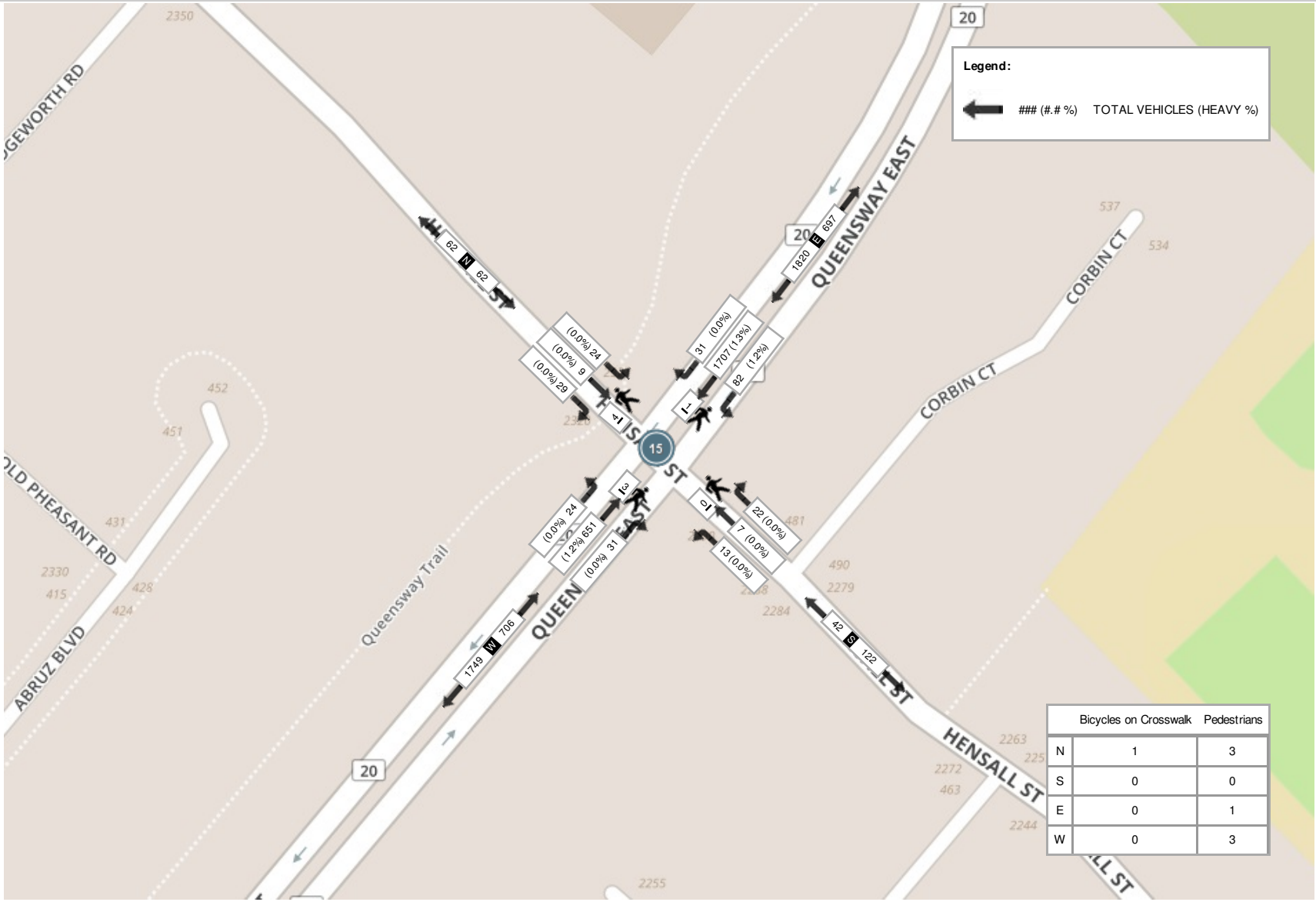


Peak Hour: 01:00 PM - 02:00 PM **Weather: Overcast (5 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	2
S	0	0
E	0	0
W	1	1

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast (8 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	3
S	0	0
E	0	1
W	0	3

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Turning Movement Count (14 . QUEENSWAY E & TEDLO ST) CustID: 02003434 MioID: 389229

Start Time	Southbound TEDLO ST					Westbound QUEENSWAY E					Eastbound QUEENSWAY E					Int. Total (15 min)	Int. Total (1 hr)
	Left	Right	U-Turn	Peds	Approach Total	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	U-Turn	Peds	Approach Total		
07:00:00	8	7	0	0	15	84	13	0	0	97	11	239	0	1	250	362	
07:15:00	9	4	0	0	13	93	8	0	0	101	1	306	0	0	307	421	
07:30:00	6	6	0	0	12	105	7	0	0	112	10	330	0	1	340	464	
07:45:00	11	4	0	0	15	128	12	0	0	140	12	370	0	0	382	537	1784
08:00:00	14	2	0	0	16	130	10	0	0	140	10	374	0	3	384	540	1962
08:15:00	9	8	0	0	17	153	14	1	0	168	15	297	0	0	312	497	2038
08:30:00	5	5	0	0	10	176	24	0	0	200	15	306	0	2	321	531	2105
08:45:00	11	9	0	0	20	166	20	0	0	186	15	291	0	0	306	512	2080
BREAK																	
11:00:00	13	3	0	1	16	123	17	0	0	140	3	148	0	0	151	307	
11:15:00	15	2	0	2	17	154	15	0	0	169	2	141	0	0	143	329	
11:30:00	10	6	0	0	16	119	16	0	0	135	9	154	0	0	163	314	
11:45:00	11	8	0	1	19	153	19	0	0	172	12	148	0	0	160	351	1301
12:00:00	12	11	0	0	23	135	13	0	0	148	3	146	0	0	149	320	1314
12:15:00	21	10	0	0	31	136	15	0	0	151	6	153	0	2	159	341	1326
12:30:00	7	13	0	0	20	182	19	0	0	201	5	153	0	0	158	379	1391
12:45:00	11	11	0	0	22	162	6	0	0	168	6	143	0	0	149	339	1379
13:00:00	11	4	0	0	15	162	17	0	0	179	3	165	0	1	168	362	1421
13:15:00	13	4	0	0	17	199	23	1	0	223	15	160	1	1	176	416	1496
13:30:00	14	5	0	1	19	192	20	0	0	212	5	130	0	0	135	366	1483
13:45:00	17	13	0	0	30	163	18	1	0	182	9	171	0	0	180	392	1536
BREAK																	
15:00:00	24	22	0	1	46	228	15	0	0	243	13	186	0	2	199	488	
15:15:00	16	14	0	1	30	272	23	0	0	295	5	179	0	2	184	509	

15:30:00	7	9	0	0	16	270	15	0	0	285	4	160	0	2	164	465	
15:45:00	12	14	0	0	26	306	14	0	0	320	11	185	0	0	196	542	2004
16:00:00	15	17	0	0	32	360	18	0	0	378	11	167	0	0	178	588	2104
16:15:00	23	11	0	1	34	361	13	1	0	375	6	175	0	0	181	590	2185
16:30:00	20	23	0	0	43	398	14	0	0	412	7	169	0	1	176	631	2351
16:45:00	13	19	0	1	32	436	14	0	0	450	2	191	0	0	193	675	2484
17:00:00	30	21	0	0	51	412	9	1	0	422	3	155	0	0	158	631	2527
17:15:00	8	19	0	0	27	462	17	0	0	479	5	170	1	1	176	682	2619
17:30:00	16	11	0	0	27	420	6	0	0	426	2	168	0	2	170	623	2611
17:45:00	14	13	0	0	27	353	11	0	0	364	9	191	0	2	200	591	2527
Grand Total	426	328	0	9	754	7193	475	5	0	7673	245	6421	2	23	6668	**15095**	-
Approach%	56.5%	43.5%	0%		-	93.7%	6.2%	0.1%		-	3.7%	96.3%	0%		-	**-**	-
Totals %	2.8%	2.2%	0%		5%	47.7%	3.1%	0%		50.8%	1.6%	42.5%	0%		44.2%	**-**	-
Heavy	64	27	0		-	148	63	0		-	22	131	0		-	**-**	-
Heavy %	15%	8.2%	0%		-	2.1%	13.3%	0%		-	9%	2%	0%		-	**-**	-
Bicycles	0	0	0		-	0	0	0		-	0	1	0		-	**-**	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-

Peak Hour: 07:45 AM - 08:45 AM Weather: Clear (2 °C)

Start Time	Southbound TEDLO ST					Westbound QUEENSWAY E					Eastbound QUEENSWAY E					Int. Total (15 min)
	Left	Right	U-Turn	Peds	Approach Total	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	U-Turn	Peds	Approach Total	
07:45:00	11	4	0	0	15	128	12	0	0	140	12	370	0	0	382	537
08:00:00	14	2	0	0	16	130	10	0	0	140	10	374	0	3	384	540
08:15:00	9	8	0	0	17	153	14	1	0	168	15	297	0	0	312	497
08:30:00	5	5	0	0	10	176	24	0	0	200	15	306	0	2	321	531
Grand Total	39	19	0	0	58	587	60	1	0	648	52	1347	0	5	1399	**2105**
Approach%	67.2%	32.8%	0%		-	90.6%	9.3%	0.2%		-	3.7%	96.3%	0%		-	-
Totals %	1.9%	0.9%	0%		2.8%	27.9%	2.9%	0%		30.8%	2.5%	64%	0%		66.5%	-
PHF	0.7	0.59	0		0.85	0.83	0.63	0.25		0.81	0.87	0.9	0		0.91	-
Heavy	6	4	0		10	23	5	0		28	1	21	0		22	-
Heavy %	15.4%	21.1%	0%		17.2%	3.9%	8.3%	0%		4.3%	1.9%	1.6%	0%		1.6%	-
Lights	33	15	0		48	564	55	1		620	51	1326	0		1377	-
Lights %	84.6%	78.9%	0%		82.8%	96.1%	91.7%	100%		95.7%	98.1%	98.4%	0%		98.4%	-
Single-Unit Trucks	5	2	0		7	10	4	0		14	1	12	0		13	-
Single-Unit Trucks %	12.8%	10.5%	0%		12.1%	1.7%	6.7%	0%		2.2%	1.9%	0.9%	0%		0.9%	-
Buses	0	2	0		2	11	0	0		11	0	7	0		7	-
Buses %	0%	10.5%	0%		3.4%	1.9%	0%	0%		1.7%	0%	0.5%	0%		0.5%	-
Articulated Trucks	1	0	0		1	2	1	0		3	0	2	0		2	-
Articulated Trucks %	2.6%	0%	0%		1.7%	0.3%	1.7%	0%		0.5%	0%	0.1%	0%		0.1%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	4	-	-
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	80%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	20%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

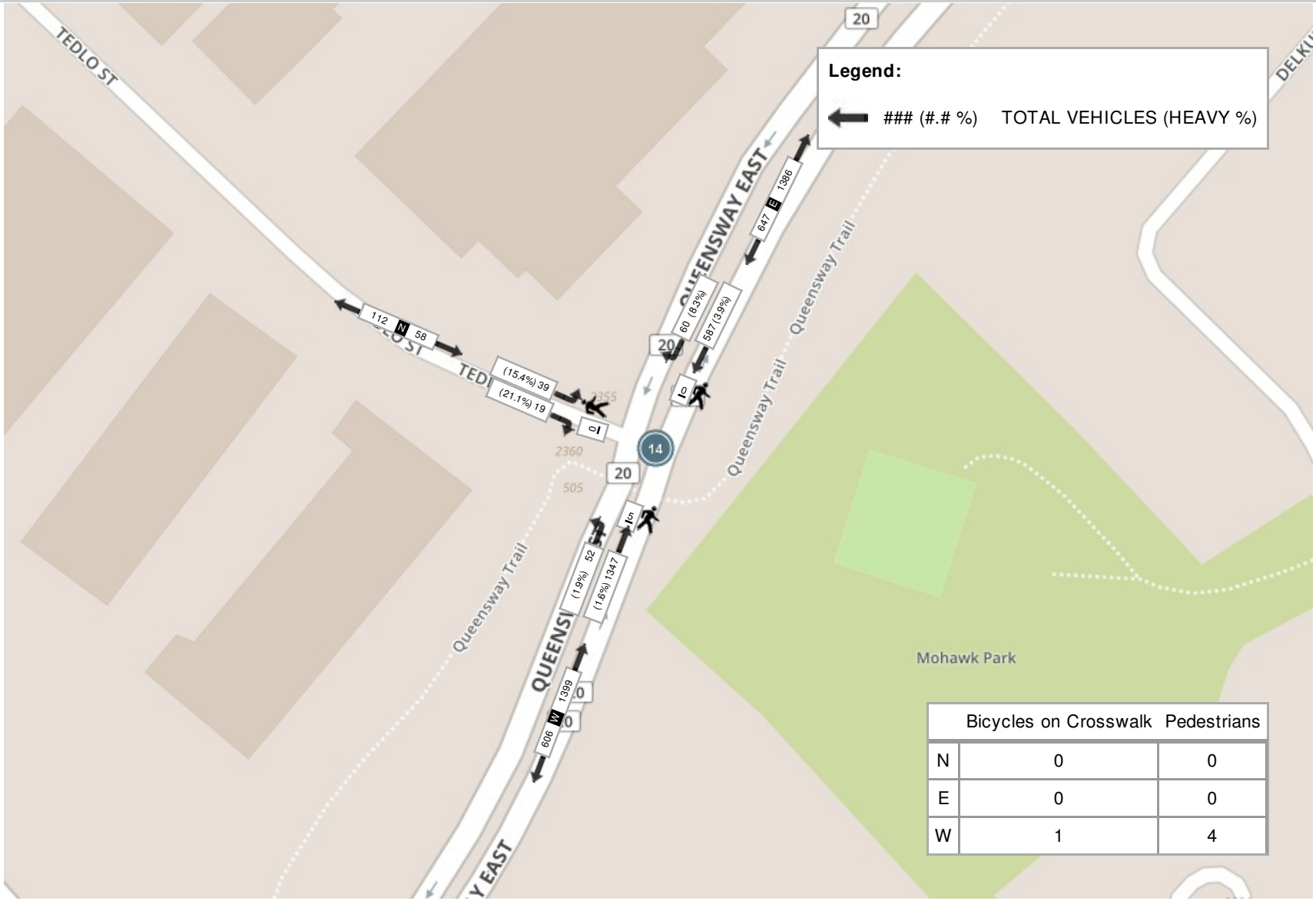
Peak Hour: 01:00 PM - 02:00 PM Weather: Overcast (5 °C)

Start Time	Southbound TEDLO ST					Westbound QUEENSWAY E					Eastbound QUEENSWAY E					Int. Total (15 min)
	Left	Right	U-Turn	Peds	Approach Total	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	U-Turn	Peds	Approach Total	
13:00:00	11	4	0	0	15	162	17	0	0	179	3	165	0	1	168	362
13:15:00	13	4	0	0	17	199	23	1	0	223	15	160	1	1	176	416
13:30:00	14	5	0	1	19	192	20	0	0	212	5	130	0	0	135	366
13:45:00	17	13	0	0	30	163	18	1	0	182	9	171	0	0	180	392
Grand Total	55	26	0	1	81	716	78	2	0	796	32	626	1	2	659	**1536**
Approach%	67.9%	32.1%	0%		-	89.9%	9.8%	0.3%		-	4.9%	95%	0.2%		-	-
Totals %	3.6%	1.7%	0%		5.3%	46.6%	5.1%	0.1%		51.8%	2.1%	40.8%	0.1%		42.9%	-
PHF	0.81	0.5	0		0.68	0.9	0.85	0.5		0.89	0.53	0.92	0.25		0.92	-
Heavy	6	2	0		8	23	11	0		34	5	11	0		16	-
Heavy %	10.9%	7.7%	0%		9.9%	3.2%	14.1%	0%		4.3%	15.6%	1.8%	0%		2.4%	-
Lights	49	24	0		73	693	67	2		762	27	615	1		643	-
Lights %	89.1%	92.3%	0%		90.1%	96.8%	85.9%	100%		95.7%	84.4%	98.2%	100%		97.6%	-
Single-Unit Trucks	3	2	0		5	18	9	0		27	4	8	0		12	-
Single-Unit Trucks %	5.5%	7.7%	0%		6.2%	2.5%	11.5%	0%		3.4%	12.5%	1.3%	0%		1.8%	-
Buses	0	0	0		0	2	0	0		2	0	2	0		2	-
Buses %	0%	0%	0%		0%	0.3%	0%	0%		0.3%	0%	0.3%	0%		0.3%	-
Articulated Trucks	3	0	0		3	3	2	0		5	1	1	0		2	-
Articulated Trucks %	5.5%	0%	0%		3.7%	0.4%	2.6%	0%		0.6%	3.1%	0.2%	0%		0.3%	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	1	-	-
Pedestrians%	-	-	-	33.3%		-	-	-	0%		-	-	-	33.3%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	33.3%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast (8 °C)

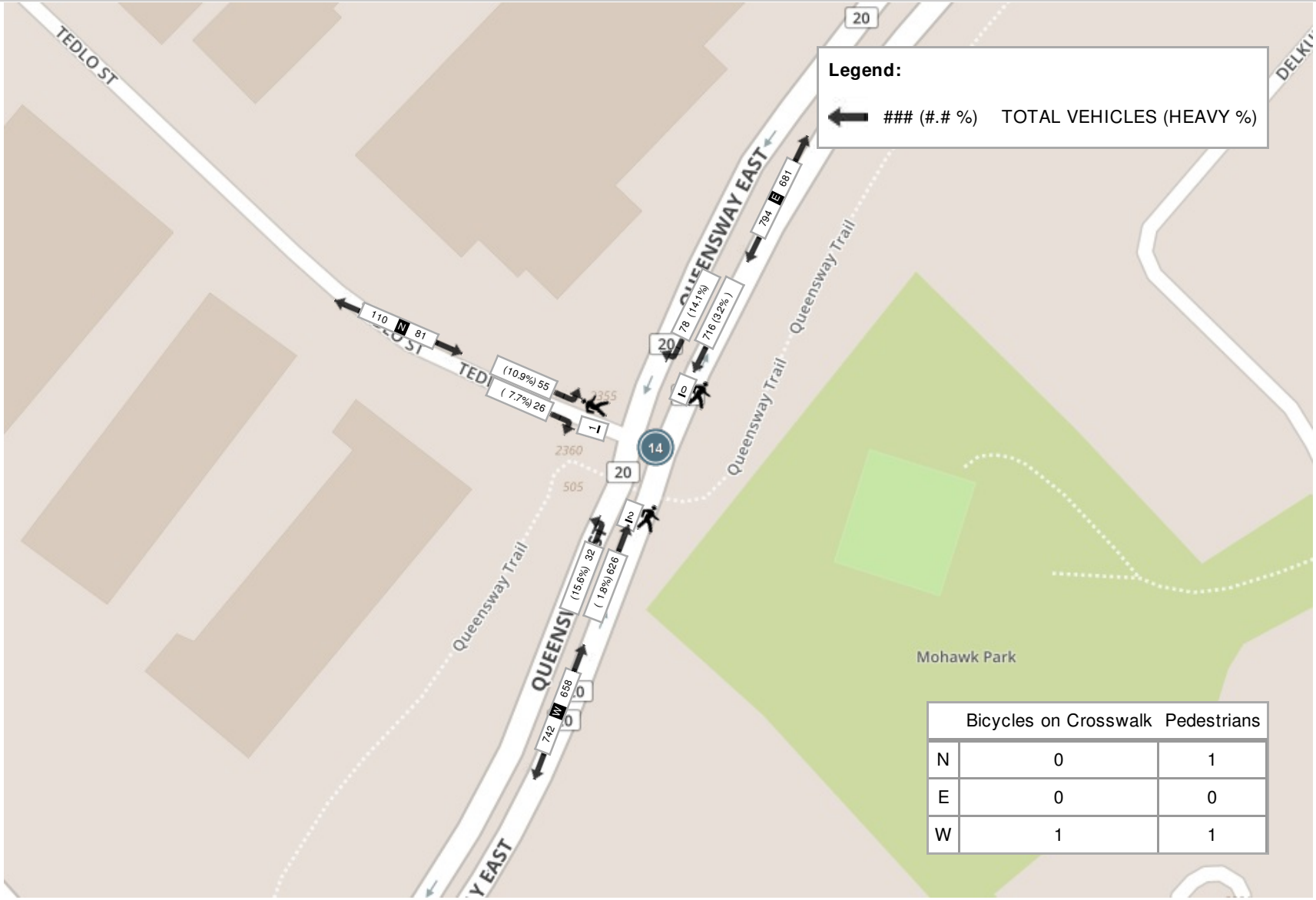
Start Time	Southbound TEDLO ST					Westbound QUEENSWAY E					Eastbound QUEENSWAY E					Int. Total (15 min)
	Left	Right	U-Turn	Peds	Approach Total	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	U-Turn	Peds	Approach Total	
16:30:00	20	23	0	0	43	398	14	0	0	412	7	169	0	1	176	631
16:45:00	13	19	0	1	32	436	14	0	0	450	2	191	0	0	193	675
17:00:00	30	21	0	0	51	412	9	1	0	422	3	155	0	0	158	631
17:15:00	8	19	0	0	27	462	17	0	0	479	5	170	1	1	176	682
Grand Total	71	82	0	1	153	1708	54	1	0	1763	17	685	1	2	703	**2619**
Approach%	46.4%	53.6%	0%		-	96.9%	3.1%	0.1%		-	2.4%	97.4%	0.1%		-	-
Totals %	2.7%	3.1%	0%		5.8%	65.2%	2.1%	0%		67.3%	0.6%	26.2%	0%		26.8%	-
PHF	0.59	0.89	0		0.75	0.92	0.79	0.25		0.92	0.61	0.9	0.25		0.91	-
Heavy	4	6	0		10	16	5	0		21	2	7	0		9	-
Heavy %	5.6%	7.3%	0%		6.5%	0.9%	9.3%	0%		1.2%	11.8%	1%	0%		1.3%	-
Lights	67	76	0		143	1692	49	1		1742	15	678	1		694	-
Lights %	94.4%	92.7%	0%		93.5%	99.1%	90.7%	100%		98.8%	88.2%	99%	100%		98.7%	-
Single-Unit Trucks	3	3	0		6	9	4	0		13	2	5	0		7	-
Single-Unit Trucks %	4.2%	3.7%	0%		3.9%	0.5%	7.4%	0%		0.7%	11.8%	0.7%	0%		1%	-
Buses	0	1	0		1	6	0	0		6	0	1	0		1	-
Buses %	0%	1.2%	0%		0.7%	0.4%	0%	0%		0.3%	0%	0.1%	0%		0.1%	-
Articulated Trucks	1	2	0		3	1	1	0		2	0	1	0		1	-
Articulated Trucks %	1.4%	2.4%	0%		2%	0.1%	1.9%	0%		0.1%	0%	0.1%	0%		0.1%	-
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
Pedestrians%	-	-	-	33.3%		-	-	-	0%		-	-	-	66.7%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:45 AM - 08:45 AM Weather: Clear (2 °C)



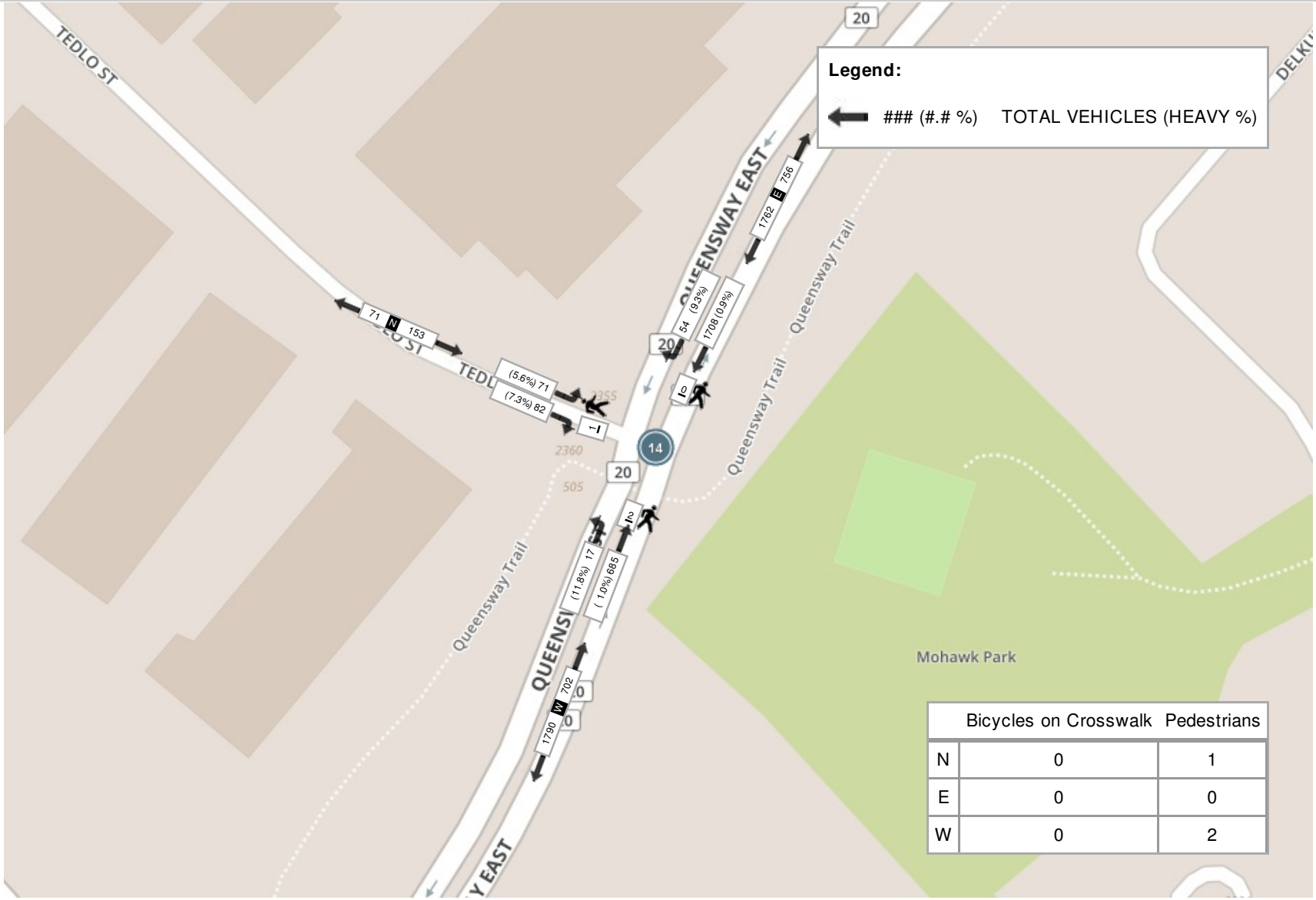
	Bicycles on Crosswalk	Pedestrians
N	0	0
E	0	0
W	1	4

Peak Hour: 01:00 PM - 02:00 PM Weather: Overcast (5 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	1
E	0	0
W	1	1

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast (8 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	1
E	0	0
W	0	2

Turning Movement Count (8 . CAWTHRA ROAD & QUEENSWAY) CustID: 01702927 MioID: 470086

Start Time	Southbound CAWTHRA ROAD						Westbound QUEENSWAY E						Northbound CAWTHRA ROAD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
07:00:00	50	273	22	0	1	345	36	34	31	0	2	101	24	181	62	0	1	267	21	194	76	0	1	291	1004
07:15:00	51	300	30	0	1	381	53	64	27	0	0	144	29	186	71	0	1	286	23	273	79	0	0	375	1186
07:30:00	79	356	29	0	1	464	41	81	48	0	0	170	32	253	57	0	0	342	36	223	90	1	1	350	1326
07:45:00	94	307	28	0	1	429	84	111	50	0	1	245	46	220	72	0	1	338	46	277	102	0	0	425	1437
Hourly	274	1236	109	0	4	1619	214	290	156	0	3	660	131	840	262	0	3	1233	126	967	347	1	2	1441	4953
08:00:00	78	333	24	0	0	435	61	130	92	0	0	283	37	240	82	0	0	359	51	210	112	2	0	375	1452
08:15:00	83	329	35	0	1	447	40	109	76	0	0	225	50	243	70	0	0	363	31	229	76	0	0	336	1371
08:30:00	52	255	30	0	0	337	53	120	79	0	0	252	40	237	74	0	2	351	35	224	83	0	0	342	1282
08:45:00	69	291	31	0	0	391	54	79	62	1	0	196	41	253	100	0	1	394	28	162	53	0	1	243	1224
Hourly	282	1208	120	0	1	1610	208	438	309	1	0	956	168	973	326	0	3	1467	145	825	324	2	1	1296	5329
BREAK																									
11:00:00	42	199	27	1	1	269	63	99	41	0	0	203	42	151	71	0	0	264	19	103	45	0	2	167	903
11:15:00	33	155	21	0	0	209	77	107	35	0	1	219	35	131	70	0	1	236	25	91	38	0	1	154	818
11:30:00	44	221	28	0	0	293	69	88	45	0	0	202	55	179	66	0	1	300	38	104	33	0	0	175	970
11:45:00	54	174	19	0	1	247	78	107	49	0	2	234	48	153	74	1	2	276	31	103	41	0	1	175	932
Hourly	173	749	95	1	2	1018	287	401	170	0	3	858	180	614	281	1	4	1076	113	401	157	0	4	671	3623
12:00:00	34	189	24	0	1	247	100	145	50	0	0	295	51	176	77	0	0	304	36	115	48	0	1	199	1045
12:15:00	50	208	28	0	1	286	72	104	33	0	0	209	55	180	68	0	0	303	24	99	44	0	0	167	965
12:30:00	37	169	25	0	0	231	72	116	38	0	1	226	33	158	93	0	0	284	34	107	53	0	0	194	935
12:45:00	42	196	41	0	3	279	72	108	56	0	0	236	46	172	63	0	1	281	36	103	28	0	2	167	963
Hourly	163	762	118	0	5	1043	316	473	177	0	1	966	185	686	301	0	1	1172	130	424	173	0	3	727	3908
13:00:00	46	184	28	0	0	258	65	108	46	0	1	219	61	175	68	0	1	304	21	111	42	0	2	174	955
13:15:00	35	140	27	0	0	202	82	116	52	0	0	250	40	177	53	0	0	270	31	97	34	0	0	162	884
13:30:00	52	170	40	0	0	262	86	115	44	0	2	245	63	186	80	0	0	329	25	81	46	0	1	152	988
13:45:00	40	173	30	0	0	243	87	112	50	0	3	249	51	157	81	0	1	289	30	110	40	0	0	180	961
Hourly	173	667	125	0	0	965	320	451	192	0	6	963	215	695	282	0	2	1192	107	399	162	0	3	668	3788
BREAK																									
15:00:00	42	255	48	0	0	345	105	189	63	0	1	357	59	197	62	1	1	319	39	126	63	0	3	228	1249
15:15:00	53	279	37	0	1	369	86	214	69	0	0	369	63	218	58	0	2	339	23	100	53	0	0	176	1253
15:30:00	39	247	44	0	3	330	107	251	86	0	1	444	52	201	70	0	0	323	39	125	59	0	2	223	1320
15:45:00	55	284	39	0	1	378	130	222	98	0	1	450	60	230	84	0	2	374	51	113	50	0	1	214	1416
Hourly	189	1065	168	0	5	1422	428	876	316	0	3	1620	234	846	274	1	5	1355	152	464	225	0	6	841	5238

16:00:00	50	288	33	1	0	372	120	244	97	0	0	461	50	200	64	0	3	314	30	143	57	1	1	231	1378
16:15:00	44	275	40	0	0	359	134	307	90	0	0	531	56	216	81	0	0	353	33	102	35	0	1	170	1413
16:30:00	53	372	40	0	0	465	117	258	86	0	0	461	51	196	54	0	3	301	27	109	58	0	1	194	1421
16:45:00	48	281	43	0	0	372	128	333	97	0	0	558	59	168	62	0	1	289	30	160	63	0	0	253	1472
Hourly	195	1216	156	1	0	1568	499	1142	370	0	0	2011	216	780	261	0	7	1257	120	514	213	1	3	848	5684
17:00:00	37	344	48	0	0	429	132	349	103	0	0	584	55	157	60	0	2	272	28	149	63	1	0	241	1526
17:15:00	46	333	46	0	1	425	135	355	96	0	0	586	49	196	58	0	0	303	35	130	49	1	2	215	1529
17:30:00	57	366	52	0	0	475	123	317	96	0	1	536	53	168	80	0	2	301	33	128	50	1	0	212	1524
17:45:00	41	291	39	0	0	371	117	311	102	0	0	530	57	179	62	0	3	298	27	125	49	0	0	201	1400
Hourly	181	1334	185	0	1	1700	507	1332	397	0	1	2236	214	700	260	0	7	1174	123	532	211	3	2	869	5979
Grand Total	1630	8237	1076	2	18	10945	2779	5403	2087	1	17	10270	1543	6134	2247	2	32	9926	1016	4526	1812	7	24	7361	**38502**
Approach%	14.9%	75.3%	9.8%	0%		-	27.1%	52.6%	20.3%	0%		-	15.5%	61.8%	22.6%	0%		-	13.8%	61.5%	24.6%	0.1%		-	**-**
Totals %	4.2%	21.4%	2.8%	0%		28.4%	7.2%	14%	5.4%	0%		26.7%	4%	15.9%	5.8%	0%		25.8%	2.6%	11.8%	4.7%	0%		19.1%	**-**
Heavy	53	344	30	0		-	202	104	100	0		-	99	329	161	0		-	34	112	128	0		-	**-**
Heavy %	3.3%	4.2%	2.8%	0%		-	7.3%	1.9%	4.8%	0%		-	6.4%	5.4%	7.2%	0%		-	3.3%	2.5%	7.1%	0%		-	**-**
Bicycles	0	2	1	0		-	0	2	0	0		-	0	2	0	0		-	0	1	0	0		-	**-**
Bicycle %	0%	0%	0.1%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Partly Cloudy (2.1 °C)

Start Time	Southbound CAWTHRA ROAD						Westbound QUEENSWAY E						Northbound CAWTHRA ROAD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
08:00:00	78	333	24	0	0	435	61	130	92	0	0	283	37	240	82	0	0	359	51	210	112	2	0	375	1452
08:15:00	83	329	35	0	1	447	40	109	76	0	0	225	50	243	70	0	0	363	31	229	76	0	0	336	1371
08:30:00	52	255	30	0	0	337	53	120	79	0	0	252	40	237	74	0	2	351	35	224	83	0	0	342	1282
08:45:00	69	291	31	0	0	391	54	79	62	1	0	196	41	253	100	0	1	394	28	162	53	0	1	243	1224
Grand Total	282	1208	120	0	1	1610	208	438	309	1	0	956	168	973	326	0	3	1467	145	825	324	2	1	1296	**5329**
Approach%	17.5%	75%	7.5%	0%		-	21.8%	45.8%	32.3%	0.1%		-	11.5%	66.3%	22.2%	0%		-	11.2%	63.7%	25%	0.2%		-	-
Totals %	5.3%	22.7%	2.3%	0%		30.2%	3.9%	8.2%	5.8%	0%		17.9%	3.2%	18.3%	6.1%	0%		27.5%	2.7%	15.5%	6.1%	0%		24.3%	-
PHF	0.85	0.91	0.86	0		0.9	0.85	0.84	0.84	0.25		0.84	0.84	0.96	0.82	0		0.93	0.71	0.9	0.72	0.25		0.86	-
Heavy	12	50	8	0		70	24	17	18	0		59	21	43	25	0		89	9	20	18	0		47	-
Heavy %	4.3%	4.1%	6.7%	0%		4.3%	11.5%	3.9%	5.8%	0%		6.2%	12.5%	4.4%	7.7%	0%		6.1%	6.2%	2.4%	5.6%	0%		3.6%	-
Lights	270	1158	112	0		1540	184	421	291	1		897	147	930	301	0		1378	136	805	306	2		1249	-
Lights %	95.7%	95.9%	93.3%	0%		95.7%	88.5%	96.1%	94.2%	100%		93.8%	87.5%	95.6%	92.3%	0%		93.9%	93.8%	97.6%	94.4%	100%		96.4%	-
Single-Unit Trucks	9	23	3	0		35	15	10	11	0		36	9	19	11	0		39	4	11	6	0		21	-
Single-Unit Trucks %	3.2%	1.9%	2.5%	0%		2.2%	7.2%	2.3%	3.6%	0%		3.8%	5.4%	2%	3.4%	0%		2.7%	2.8%	1.3%	1.9%	0%		1.6%	-
Buses	0	18	4	0		22	0	4	0	0		4	9	18	6	0		33	2	4	9	0		15	-
Buses %	0%	1.5%	3.3%	0%		1.4%	0%	0.9%	0%	0%		0.4%	5.4%	1.8%	1.8%	0%		2.2%	1.4%	0.5%	2.8%	0%		1.2%	-
Articulated Trucks	3	9	1	0		13	9	3	7	0		19	3	6	8	0		17	3	5	3	0		11	-
Articulated Trucks %	1.1%	0.7%	0.8%	0%		0.8%	4.3%	0.7%	2.3%	0%		2%	1.8%	0.6%	2.5%	0%		1.2%	2.1%	0.6%	0.9%	0%		0.8%	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-
Pedestrians%	-	-	-	-	20%		-	-	-	-	0%		-	-	-	-	60%		-	-	-	-	20%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	0	1	0	0	-	0	1	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

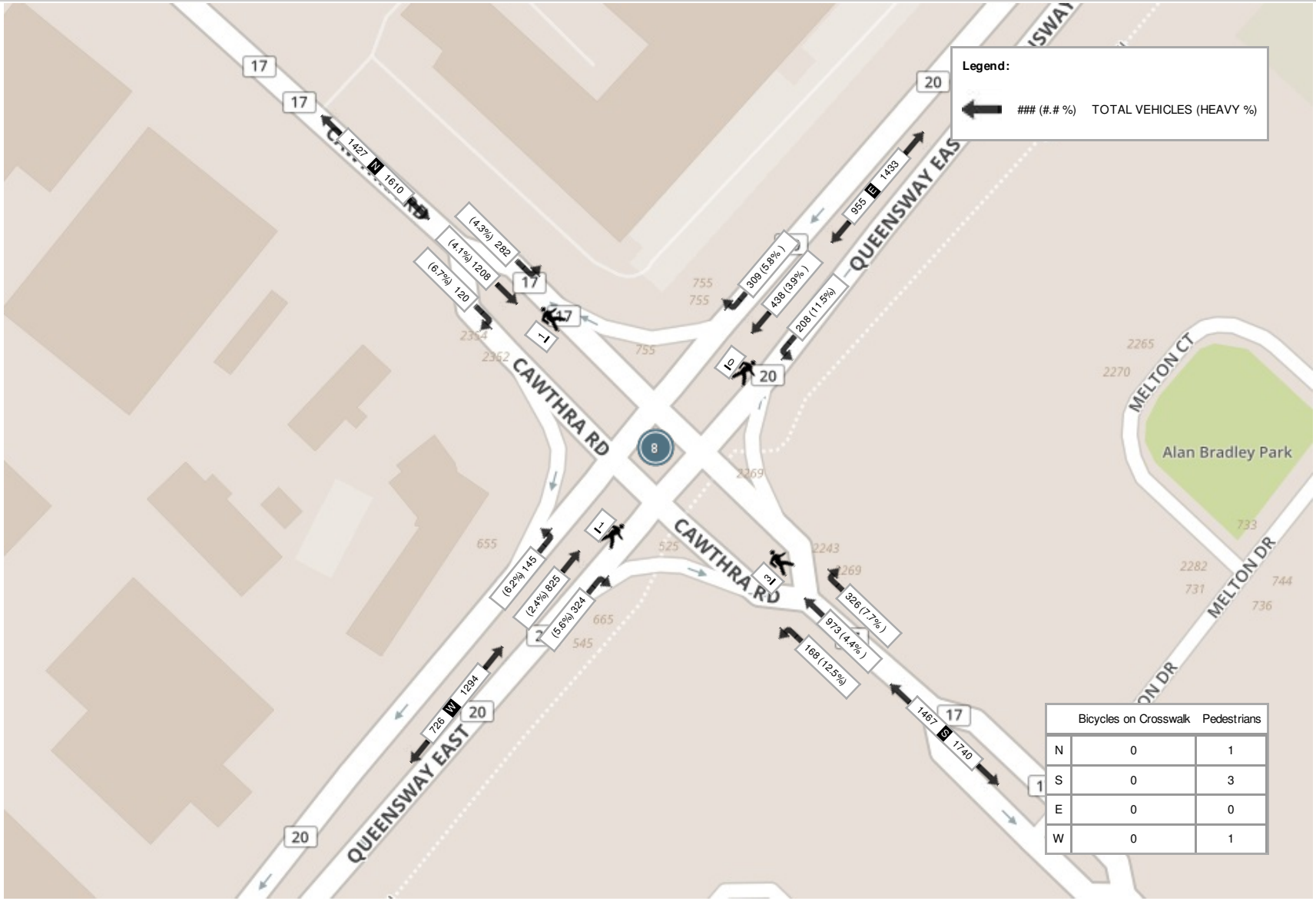
Peak Hour: 12:00 PM - 01:00 PM Weather: Mostly Cloudy (7 °C)

Start Time	Southbound CAWTHRA ROAD						Westbound QUEENSWAY E						Northbound CAWTHRA ROAD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
12:00:00	34	189	24	0	1	247	100	145	50	0	0	295	51	176	77	0	0	304	36	115	48	0	1	199	1045
12:15:00	50	208	28	0	1	286	72	104	33	0	0	209	55	180	68	0	0	303	24	99	44	0	0	167	965
12:30:00	37	169	25	0	0	231	72	116	38	0	1	226	33	158	93	0	0	284	34	107	53	0	0	194	935
12:45:00	42	196	41	0	3	279	72	108	56	0	0	236	46	172	63	0	1	281	36	103	28	0	2	167	963
Grand Total	163	762	118	0	5	1043	316	473	177	0	1	966	185	686	301	0	1	1172	130	424	173	0	3	727	**3908**
Approach%	15.6%	73.1%	11.3%	0%		-	32.7%	49%	18.3%	0%		-	15.8%	58.5%	25.7%	0%		-	17.9%	58.3%	23.8%	0%		-	-
Totals %	4.2%	19.5%	3%	0%		26.7%	8.1%	12.1%	4.5%	0%		24.7%	4.7%	17.6%	7.7%	0%		30%	3.3%	10.8%	4.4%	0%		18.6%	-
PHF	0.82	0.92	0.72	0		0.91	0.79	0.82	0.79	0		0.82	0.84	0.95	0.81	0		0.96	0.9	0.92	0.82	0		0.91	-
Heavy	5	41	3	0		49	29	13	12	0		54	18	49	31	0		98	7	11	21	0		39	-
Heavy %	3.1%	5.4%	2.5%	0%		4.7%	9.2%	2.7%	6.8%	0%		5.6%	9.7%	7.1%	10.3%	0%		8.4%	5.4%	2.6%	12.1%	0%		5.4%	-
Lights	158	721	115	0		994	287	460	165	0		912	167	637	270	0		1074	123	413	152	0		688	-
Lights %	96.9%	94.6%	97.5%	0%		95.3%	90.8%	97.3%	93.2%	0%		94.4%	90.3%	92.9%	89.7%	0%		91.6%	94.6%	97.4%	87.9%	0%		94.6%	-
Single-Unit Trucks	3	34	3	0		40	15	11	11	0		37	14	34	13	0		61	7	5	17	0		29	-
Single-Unit Trucks %	1.8%	4.5%	2.5%	0%		3.8%	4.7%	2.3%	6.2%	0%		3.8%	7.6%	5%	4.3%	0%		5.2%	5.4%	1.2%	9.8%	0%		4%	-
Buses	1	1	0	0		2	2	1	0	0		3	1	3	1	0		5	0	2	1	0		3	-
Buses %	0.6%	0.1%	0%	0%		0.2%	0.6%	0.2%	0%	0%		0.3%	0.5%	0.4%	0.3%	0%		0.4%	0%	0.5%	0.6%	0%		0.4%	-
Articulated Trucks	1	6	0	0		7	12	1	1	0		14	3	12	17	0		32	0	4	3	0		7	-
Articulated Trucks %	0.6%	0.8%	0%	0%		0.7%	3.8%	0.2%	0.6%	0%		1.4%	1.6%	1.7%	5.6%	0%		2.7%	0%	0.9%	1.7%	0%		1%	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
Pedestrians%	-	-	-	-	50%		-	-	-	-	10%		-	-	-	-	0%		-	-	-	-	20%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	10%		-	-	-	-	10%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (6.1 °C)

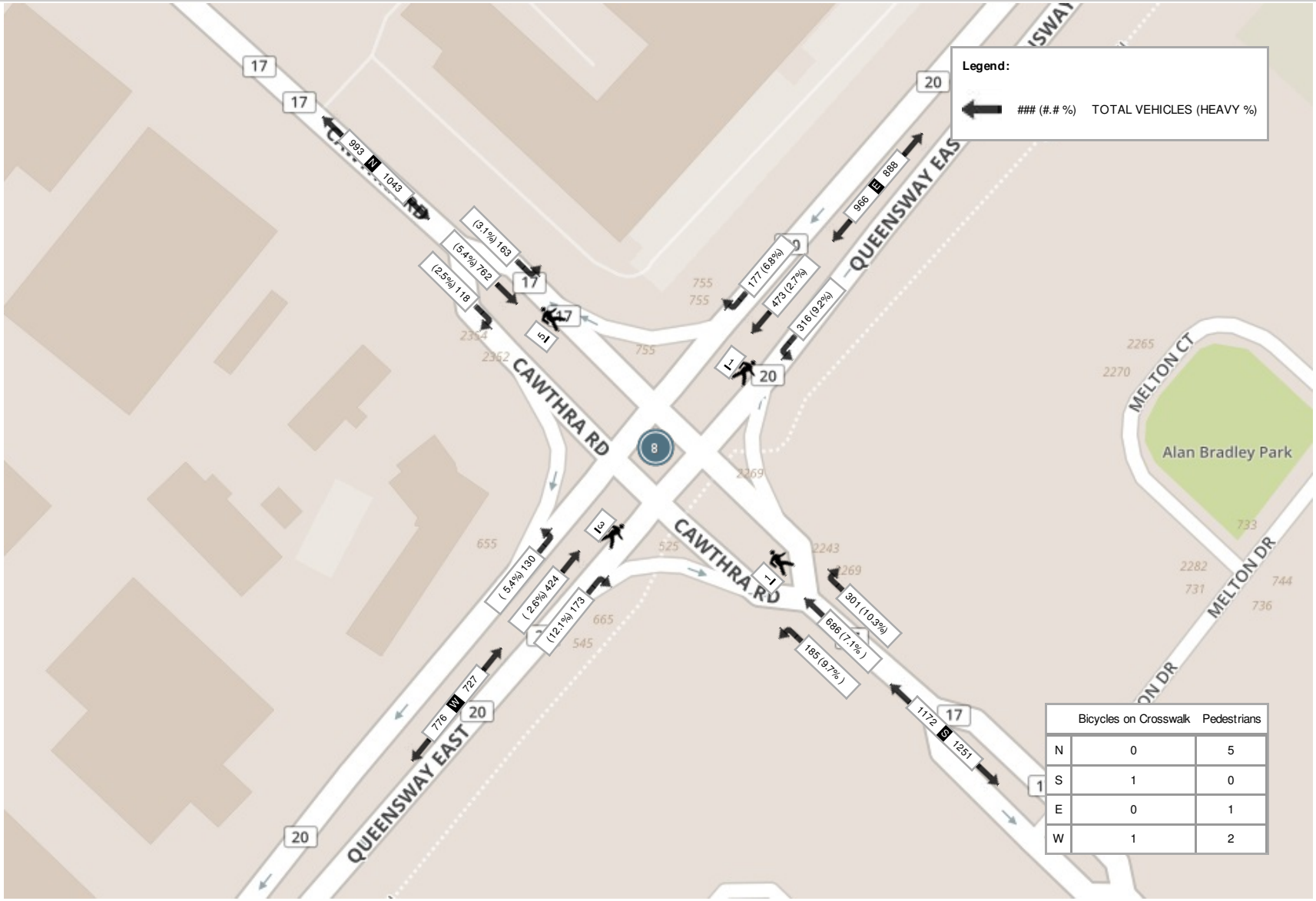
Start Time	Southbound CAWTHRA ROAD						Westbound QUEENSWAY E						Northbound CAWTHRA ROAD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
17:00:00	37	344	48	0	0	429	132	349	103	0	0	584	55	157	60	0	2	272	28	149	63	1	0	241	1526
17:15:00	46	333	46	0	1	425	135	355	96	0	0	586	49	196	58	0	0	303	35	130	49	1	2	215	1529
17:30:00	57	366	52	0	0	475	123	317	96	0	1	536	53	168	80	0	2	301	33	128	50	1	0	212	1524
17:45:00	41	291	39	0	0	371	117	311	102	0	0	530	57	179	62	0	3	298	27	125	49	0	0	201	1400
Grand Total	181	1334	185	0	1	1700	507	1332	397	0	1	2236	214	700	260	0	7	1174	123	532	211	3	2	869	**5979**
Approach%	10.6%	78.5%	10.9%	0%		-	22.7%	59.6%	17.8%	0%		-	18.2%	59.6%	22.1%	0%		-	14.2%	61.2%	24.3%	0.3%		-	**-**
Totals %	3%	22.3%	3.1%	0%		28.4%	8.5%	22.3%	6.6%	0%		37.4%	3.6%	11.7%	4.3%	0%		19.6%	2.1%	8.9%	3.5%	0.1%		14.5%	**-**
PHF	0.79	0.91	0.89	0		0.89	0.94	0.94	0.96	0		0.95	0.94	0.89	0.81	0		0.97	0.88	0.89	0.84	0.75		0.9	**-**
Heavy	1	21	2	0		24	10	11	4	0		25	6	14	10	0		30	3	9	2	0		14	**-**
Heavy %	0.6%	1.6%	1.1%	0%		1.4%	2%	0.8%	1%	0%		1.1%	2.8%	2%	3.8%	0%		2.6%	2.4%	1.7%	0.9%	0%		1.6%	**-**
Lights	180	1313	183	0		1676	497	1321	393	0		2211	208	686	250	0		1144	120	523	209	3		855	**-**
Lights %	99.4%	98.4%	98.9%	0%		98.6%	98%	99.2%	99%	0%		98.9%	97.2%	98%	96.2%	0%		97.4%	97.6%	98.3%	99.1%	100%		98.4%	**-**
Single-Unit Trucks	1	5	1	0		7	6	10	4	0		20	5	7	3	0		15	1	9	1	0		11	**-**
Single-Unit Trucks %	0.6%	0.4%	0.5%	0%		0.4%	1.2%	0.8%	1%	0%		0.9%	2.3%	1%	1.2%	0%		1.3%	0.8%	1.7%	0.5%	0%		1.3%	**-**
Buses	0	7	0	0		7	0	0	0	0		0	1	3	0	0		4	1	0	0	0		1	**-**
Buses %	0%	0.5%	0%	0%		0.4%	0%	0%	0%	0%		0%	0.5%	0.4%	0%	0%		0.3%	0.8%	0%	0%	0%		0.1%	**-**
Articulated Trucks	0	9	1	0		10	4	1	0	0		5	0	4	7	0		11	1	0	1	0		2	**-**
Articulated Trucks %	0%	0.7%	0.5%	0%		0.6%	0.8%	0.1%	0%	0%		0.2%	0%	0.6%	2.7%	0%		0.9%	0.8%	0%	0.5%	0%		0.2%	**-**
Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	-	9.1%		-	-	-	-	9.1%		-	-	-	-	36.4%		-	-	-	-	18.2%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	27.3%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Partly Cloudy (2.1 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	1
S	0	3
E	0	0
W	0	1

Peak Hour: 12:00 PM - 01:00 PM Weather: Mostly Cloudy (7 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	5
S	1	0
E	0	1
W	1	2

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 05:00 PM - 06:00 PM **Weather: Mostly Cloudy (6.1 °C)**

	Bicycles on Crosswalk	Pedestrians
N	0	1
S	3	4
E	0	1
W	0	2

Spectrum

Turning Movement Count
Location Name: DIXIE RD & QUEENSWAY E
Date: Wed, May 03, 2017 Deployment Lead: Peter Ilias

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Turning Movement Count (11 . DIXIE RD & QUEENSWAY E)

Start Time	Southbound DIXIE RD						Westbound QUEENSWAY E						Northbound DIXIE RD						Eastbound QUEENSWAY E						Int. Total (15 min)	Int. Total (1 hr)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total		
07:00:00	42	88	39	0	1	169	12	65	29	0	1	106	19	119	24	0	0	162	38	217	40	0	0	295	732	
07:15:00	56	83	39	1	0	179	9	50	34	0	1	93	30	131	38	0	0	199	46	264	25	0	1	335	806	
07:30:00	63	77	41	0	0	181	22	103	52	0	0	177	23	132	36	0	2	191	51	341	33	0	0	425	974	
07:45:00	73	133	55	0	3	261	27	116	58	0	1	201	37	189	40	0	1	266	63	336	26	0	1	425	1153	3665
08:00:00	57	125	50	0	2	232	26	119	54	0	3	199	50	195	60	0	1	305	56	285	42	0	1	383	1119	4052
08:15:00	82	121	56	0	0	259	30	142	67	0	0	239	65	201	58	0	1	324	52	265	33	0	0	350	1172	4418
08:30:00	69	92	56	0	0	217	26	137	64	0	1	227	54	199	45	0	1	298	56	241	21	0	2	318	1060	4504
08:45:00	64	69	52	0	2	185	23	147	79	1	3	250	46	215	36	0	0	297	64	193	29	0	0	286	1018	4369
BREAK																										
11:00:00	62	107	71	0	0	240	28	114	61	0	0	203	19	104	23	0	0	146	49	112	35	0	1	196	785	
11:15:00	56	118	77	0	1	251	32	108	78	0	0	218	33	124	28	0	1	185	61	139	38	0	1	238	892	
11:30:00	70	136	71	0	3	277	24	87	86	0	0	197	33	175	22	0	0	230	56	109	31	0	3	196	900	
11:45:00	77	120	84	0	0	281	45	107	90	0	3	242	27	141	26	0	0	194	63	152	43	0	0	258	975	3552
12:00:00	54	157	85	0	6	296	48	112	55	0	2	215	24	158	31	0	0	213	59	141	24	0	0	224	948	3715
12:15:00	68	127	81	0	1	276	42	114	92	0	0	248	22	149	29	0	0	200	50	139	39	0	1	228	952	3775
12:30:00	67	134	85	0	1	286	48	130	71	0	0	249	28	139	33	0	0	200	66	144	44	0	1	254	989	3864
12:45:00	83	144	85	0	3	312	36	143	98	2	1	279	29	145	31	1	0	206	80	114	32	0	0	226	1023	3912
13:00:00	59	127	83	0	0	269	25	115	70	2	0	212	37	125	28	1	0	191	52	109	43	0	0	204	876	3840
13:15:00	60	141	83	0	1	284	37	143	92	0	1	272	17	139	31	0	2	187	49	123	36	0	3	208	951	3839
13:30:00	83	167	93	0	0	343	39	134	85	0	3	258	36	138	29	0	0	203	44	92	30	0	0	166	970	3820
13:45:00	75	133	79	0	1	287	38	136	68	0	1	242	29	139	43	0	0	211	63	97	32	0	3	192	932	3729
BREAK																										
15:00:00	55	140	100	0	6	295	50	237	99	0	1	386	37	129	20	0	0	186	60	147	46	0	0	253	1120	
15:15:00	57	168	104	0	0	329	55	231	100	0	4	386	33	170	22	0	0	225	62	130	65	0	1	257	1197	
15:30:00	75	153	101	0	3	329	51	236	106	0	4	393	41	165	27	0	1	233	53	141	57	0	0	251	1206	
15:45:00	53	164	88	0	0	305	54	276	77	1	1	408	32	129	13	0	1	174	71	147	75	0	0	293	1180	4703
16:00:00	62	189	119	0	1	370	71	260	90	0	2	421	37	175	19	0	1	231	53	99	51	0	1	203	1225	4808
16:15:00	76	181	111	0	1	368	73	329	109	0	1	511	30	108	34	0	0	172	61	150	53	0	1	264	1315	4926
16:30:00	61	184	121	0	0	366	71	331	97	0	2	499	27	125	23	0	0	175	50	159	65	0	0	274	1314	5034
16:45:00	69	211	121	0	1	401	60	327	85	0	2	472	41	137	33	0	1	211	50	150	67	0	3	267	1351	5205
17:00:00	69	201	128	0	0	398	109	377	90	0	0	576	32	90	29	0	1	151	49	184	80	0	0	313	1438	5418
17:15:00	73	260	134	0	0	467	105	355	123	0	4	583	34	129	25	0	1	188	60	166	65	0	0	291	1529	5632

17:30:00	64	264	108	0	0	436	89	352	108	0	2	549	23	129	20	0	0	172	36	178	93	0	0	307	1464	5782
17:45:00	68	240	118	0	0	426	106	395	114	0	3	615	37	100	31	0	3	168	51	175	81	0	0	307	1516	5947
Grand Total	2102	4754	2718	1	37	9575	1511	6028	2581	6	47	10126	1062	4643	987	2	18	6694	1774	5439	1474	0	24	8687	**35082**	-
Approach%	22%	49.7%	28.4%	0%		-	14.9%	59.5%	25.5%	0.1%		-	15.9%	69.4%	14.7%	0%		-	20.4%	62.6%	17%	0%		-	**-**	-
Totals %	6%	13.6%	7.7%	0%		27.3%	4.3%	17.2%	7.4%	0%		28.9%	3%	13.2%	2.8%	0%		19.1%	5.1%	15.5%	4.2%	0%		24.8%	**-**	-
Heavy	94	207	139	0		-	57	196	103	0		-	78	246	22	0		-	97	210	38	0		-	**-**	-
Heavy %	4.5%	4.4%	5.1%	0%		-	3.8%	3.3%	4%	0%		-	7.3%	5.3%	2.2%	0%		-	5.5%	3.9%	2.6%	0%		-	**-**	-
Bicycles	0	5	0	0		-	0	2	2	0		-	0	4	4	0		-	0	4	3	0		-	**-**	-
Bicycle %	0%	0.1%	0%	0%		-	0%	0%	0.1%	0%		-	0%	0.1%	0.4%	0%		-	0%	0.1%	0.2%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: DIXIE RD & QUEENSWAY E
Date: Wed, May 03, 2017 Deployment Lead: Peter Ilias

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 07:45 AM - 08:45 AM Weather: Mostly Cloudy (5.8 °C)

Start Time	Southbound DIXIE RD						Westbound QUEENSWAY E						Northbound DIXIE RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
07:45:00	73	133	55	0	3	261	27	116	58	0	1	201	37	189	40	0	1	266	63	336	26	0	1	425	1153
08:00:00	57	125	50	0	2	232	26	119	54	0	3	199	50	195	60	0	1	305	56	285	42	0	1	383	1119
08:15:00	82	121	56	0	0	259	30	142	67	0	0	239	65	201	58	0	1	324	52	265	33	0	0	350	1172
08:30:00	69	92	56	0	0	217	26	137	64	0	1	227	54	199	45	0	1	298	56	241	21	0	2	318	1060
Grand Total	281	471	217	0	5	969	109	514	243	0	5	866	206	784	203	0	4	1193	227	1127	122	0	4	1476	**4504**
Approach%	29%	48.6%	22.4%	0%		-	12.6%	59.4%	28.1%	0%		-	17.3%	65.7%	17%	0%		-	15.4%	76.4%	8.3%	0%		-	**-**
Totals %	6.2%	10.5%	4.8%	0%		21.5%	2.4%	11.4%	5.4%	0%		19.2%	4.6%	17.4%	4.5%	0%		26.5%	5%	25%	2.7%	0%		32.8%	**-**
PHF	0.86	0.89	0.97	0		0.93	0.91	0.9	0.91	0		0.91	0.79	0.98	0.85	0		0.92	0.9	0.84	0.73	0		0.87	**-**
Heavy	19	36	28	0		83	11	33	11	0		55	7	38	6	0		51	8	58	5	0		71	**-**
Heavy %	6.8%	7.6%	12.9%	0%		8.6%	10.1%	6.4%	4.5%	0%		6.4%	3.4%	4.8%	3%	0%		4.3%	3.5%	5.1%	4.1%	0%		4.8%	**-**
Lights	262	435	189	0		886	98	481	232	0		811	199	746	197	0		1142	219	1069	117	0		1405	**-**
Lights %	93.2%	92.4%	87.1%	0%		91.4%	89.9%	93.6%	95.5%	0%		93.6%	96.6%	95.2%	97%	0%		95.7%	96.5%	94.9%	95.9%	0%		95.2%	**-**
Single-Unit Trucks	11	19	18	0		48	5	23	7	0		35	1	10	5	0		16	5	38	2	0		45	**-**
Single-Unit Trucks %	3.9%	4%	8.3%	0%		5%	4.6%	4.5%	2.9%	0%		4%	0.5%	1.3%	2.5%	0%		1.3%	2.2%	3.4%	1.6%	0%		3%	**-**
Buses	1	17	5	0		23	5	0	0	0		5	3	20	0	0		23	2	0	3	0		5	**-**
Buses %	0.4%	3.6%	2.3%	0%		2.4%	4.6%	0%	0%	0%		0.6%	1.5%	2.6%	0%	0%		1.9%	0.9%	0%	2.5%	0%		0.3%	**-**
Articulated Trucks	7	0	5	0		12	1	10	4	0		15	3	8	1	0		12	1	20	0	0		21	**-**
Articulated Trucks %	2.5%	0%	2.3%	0%		1.2%	0.9%	1.9%	1.6%	0%		1.7%	1.5%	1%	0.5%	0%		1%	0.4%	1.8%	0%	0%		1.4%	**-**
Pedestrians	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	5.6%		-	-	-	-	27.8%		-	-	-	-	16.7%		-	-	-	-	16.7%		**-**
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	22.2%		-	-	-	-	0%		-	-	-	-	5.6%		-	-	-	-	5.6%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	1	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

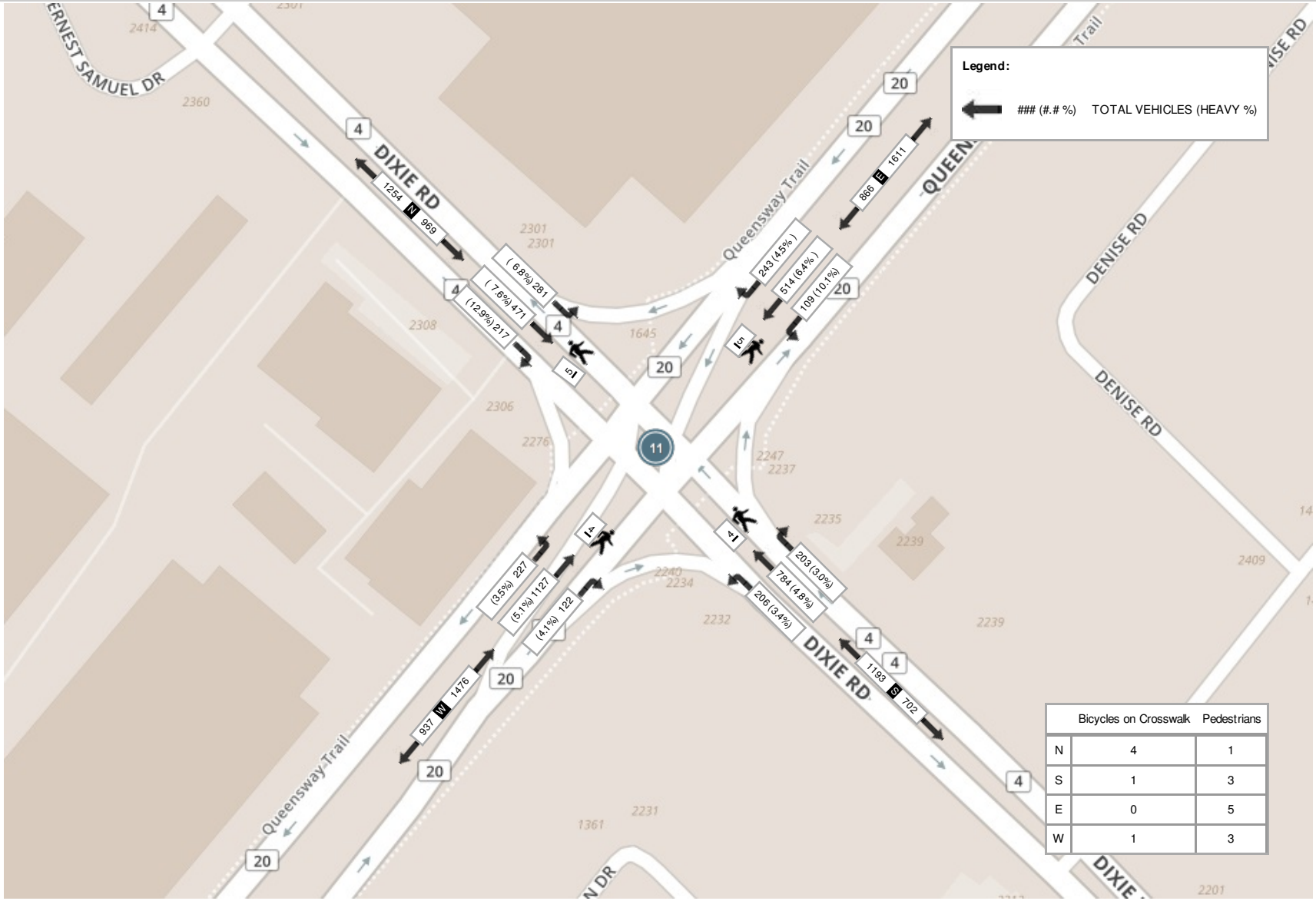
Peak Hour: 12:00 PM - 01:00 PM Weather: Clear (12.6 °C)

Start Time	Southbound DIXIE RD						Westbound QUEENSWAY E						Northbound DIXIE RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
12:00:00	54	157	85	0	6	296	48	112	55	0	2	215	24	158	31	0	0	213	59	141	24	0	0	224	948
12:15:00	68	127	81	0	1	276	42	114	92	0	0	248	22	149	29	0	0	200	50	139	39	0	1	228	952
12:30:00	67	134	85	0	1	286	48	130	71	0	0	249	28	139	33	0	0	200	66	144	44	0	1	254	989
12:45:00	83	144	85	0	3	312	36	143	98	2	1	279	29	145	31	1	0	206	80	114	32	0	0	226	1023
Grand Total	272	562	336	0	11	1170	174	499	316	2	3	991	103	591	124	1	0	819	255	538	139	0	2	932	**3912**
Approach%	23.2%	48%	28.7%	0%		-	17.6%	50.4%	31.9%	0.2%		-	12.6%	72.2%	15.1%	0.1%		-	27.4%	57.7%	14.9%	0%		-	**-**
Totals %	7%	14.4%	8.6%	0%		29.9%	4.4%	12.8%	8.1%	0.1%		25.3%	2.6%	15.1%	3.2%	0%		20.9%	6.5%	13.8%	3.6%	0%		23.8%	**-**
PHF	0.82	0.89	0.99	0		0.94	0.91	0.87	0.81	0.25		0.89	0.89	0.94	0.94	0.25		0.96	0.8	0.93	0.79	0		0.92	**-**
Heavy	12	30	19	0		61	8	21	20	0		49	14	27	3	0		44	18	24	9	0		51	**-**
Heavy %	4.4%	5.3%	5.7%	0%		5.2%	4.6%	4.2%	6.3%	0%		4.9%	13.6%	4.6%	2.4%	0%		5.4%	7.1%	4.5%	6.5%	0%		5.5%	**-**
Lights	260	532	317	0		1109	166	478	296	2		942	89	564	121	1		775	237	514	130	0		881	**-**
Lights %	95.6%	94.7%	94.3%	0%		94.8%	95.4%	95.8%	93.7%	100%		95.1%	86.4%	95.4%	97.6%	100%		94.6%	92.9%	95.5%	93.5%	0%		94.5%	**-**
Single-Unit Trucks	8	20	11	0		39	6	14	13	0		33	8	11	3	0		22	10	13	7	0		30	**-**
Single-Unit Trucks %	2.9%	3.6%	3.3%	0%		3.3%	3.4%	2.8%	4.1%	0%		3.3%	7.8%	1.9%	2.4%	0%		2.7%	3.9%	2.4%	5%	0%		3.2%	**-**
Buses	0	5	0	0		5	2	0	0	0		2	1	9	0	0		10	0	1	0	0		1	**-**
Buses %	0%	0.9%	0%	0%		0.4%	1.1%	0%	0%	0%		0.2%	1%	1.5%	0%	0%		1.2%	0%	0.2%	0%	0%		0.1%	**-**
Articulated Trucks	4	5	8	0		17	0	7	7	0		14	5	7	0	0		12	8	10	2	0		20	**-**
Articulated Trucks %	1.5%	0.9%	2.4%	0%		1.5%	0%	1.4%	2.2%	0%		1.4%	4.9%	1.2%	0%	0%		1.5%	3.1%	1.9%	1.4%	0%		2.1%	**-**
Pedestrians	-	-	-	-	10	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	62.5%		-	-	-	-	18.8%		-	-	-	-	0%		-	-	-	-	6.3%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	6.3%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	6.3%		**-**
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear (18.4 °C)

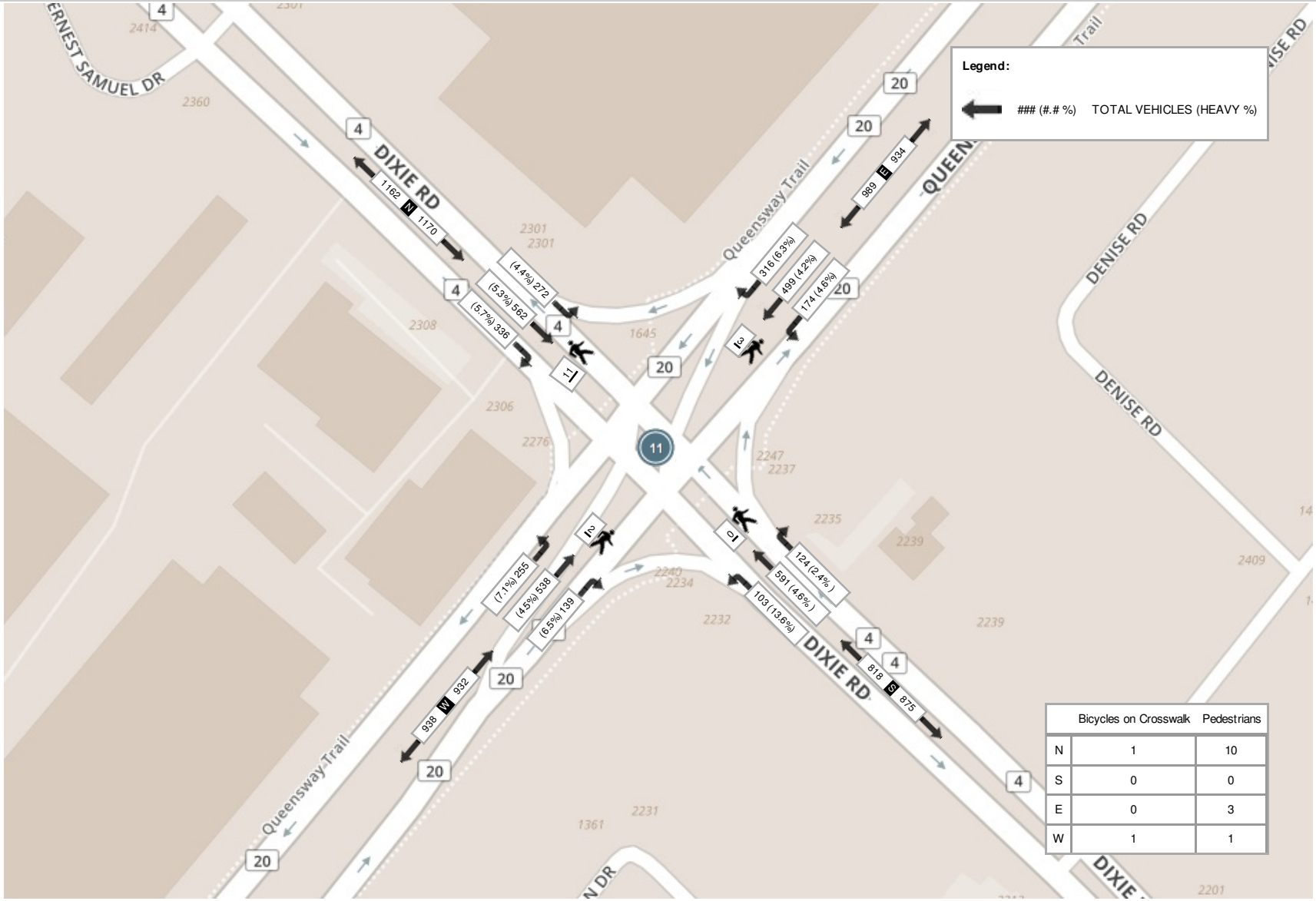
Start Time	Southbound DIXIE RD						Westbound QUEENSWAY E						Northbound DIXIE RD						Eastbound QUEENSWAY E						Int. Total (15 min)
	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	Left	Thru	Right	U-Turn	Peds	Approach Total	
17:00:00	69	201	128	0	0	398	109	377	90	0	0	576	32	90	29	0	1	151	49	184	80	0	0	313	1438
17:15:00	73	260	134	0	0	467	105	355	123	0	4	583	34	129	25	0	1	188	60	166	65	0	0	291	1529
17:30:00	64	264	108	0	0	436	89	352	108	0	2	549	23	129	20	0	0	172	36	178	93	0	0	307	1464
17:45:00	68	240	118	0	0	426	106	395	114	0	3	615	37	100	31	0	3	168	51	175	81	0	0	307	1516
Grand Total	274	965	488	0	0	1727	409	1479	435	0	9	2323	126	448	105	0	5	679	196	703	319	0	0	1218	**5947**
Approach%	15.9%	55.9%	28.3%	0%		-	17.6%	63.7%	18.7%	0%		-	18.6%	66%	15.5%	0%		-	16.1%	57.7%	26.2%	0%		-	**-**
Totals %	4.6%	16.2%	8.2%	0%		29%	6.9%	24.9%	7.3%	0%		39.1%	2.1%	7.5%	1.8%	0%		11.4%	3.3%	11.8%	5.4%	0%		20.5%	**-**
PHF	0.94	0.91	0.91	0		0.92	0.94	0.94	0.88	0		0.94	0.85	0.87	0.85	0		0.9	0.82	0.96	0.86	0		0.97	**-**
Heavy	3	10	4	0		17	5	18	4	0		27	4	19	1	0		24	6	21	3	0		30	**-**
Heavy %	1.1%	1%	0.8%	0%		1%	1.2%	1.2%	0.9%	0%		1.2%	3.2%	4.2%	1%	0%		3.5%	3.1%	3%	0.9%	0%		2.5%	**-**
Lights	271	955	484	0		1710	404	1461	431	0		2296	122	429	104	0		655	190	682	316	0		1188	**-**
Lights %	98.9%	99%	99.2%	0%		99%	98.8%	98.8%	99.1%	0%		98.8%	96.8%	95.8%	99%	0%		96.5%	96.9%	97%	99.1%	0%		97.5%	**-**
Single-Unit Trucks	2	4	2	0		8	1	11	3	0		15	2	11	1	0		14	4	10	2	0		16	**-**
Single-Unit Trucks %	0.7%	0.4%	0.4%	0%		0.5%	0.2%	0.7%	0.7%	0%		0.6%	1.6%	2.5%	1%	0%		2.1%	2%	1.4%	0.6%	0%		1.3%	**-**
Buses	0	6	0	0		6	4	1	1	0		6	0	5	0	0		5	1	1	0	0		2	**-**
Buses %	0%	0.6%	0%	0%		0.3%	1%	0.1%	0.2%	0%		0.3%	0%	1.1%	0%	0%		0.7%	0.5%	0.1%	0%	0%		0.2%	**-**
Articulated Trucks	1	0	2	0		3	0	6	0	0		6	2	3	0	0		5	1	10	1	0		12	**-**
Articulated Trucks %	0.4%	0%	0.4%	0%		0.2%	0%	0.4%	0%	0%		0.3%	1.6%	0.7%	0%	0%		0.7%	0.5%	1.4%	0.3%	0%		1%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	4	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	64.3%		-	-	-	-	28.6%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	7.1%		-	-	-	-	0%		**-**
Bicycles on Road	0	4	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	0	0	2	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:45 AM - 08:45 AM Weather: Mostly Cloudy (5.8 °C)



	Bicycles on Crosswalk	Pedestrians
N	4	1
S	1	3
E	0	5
W	1	3

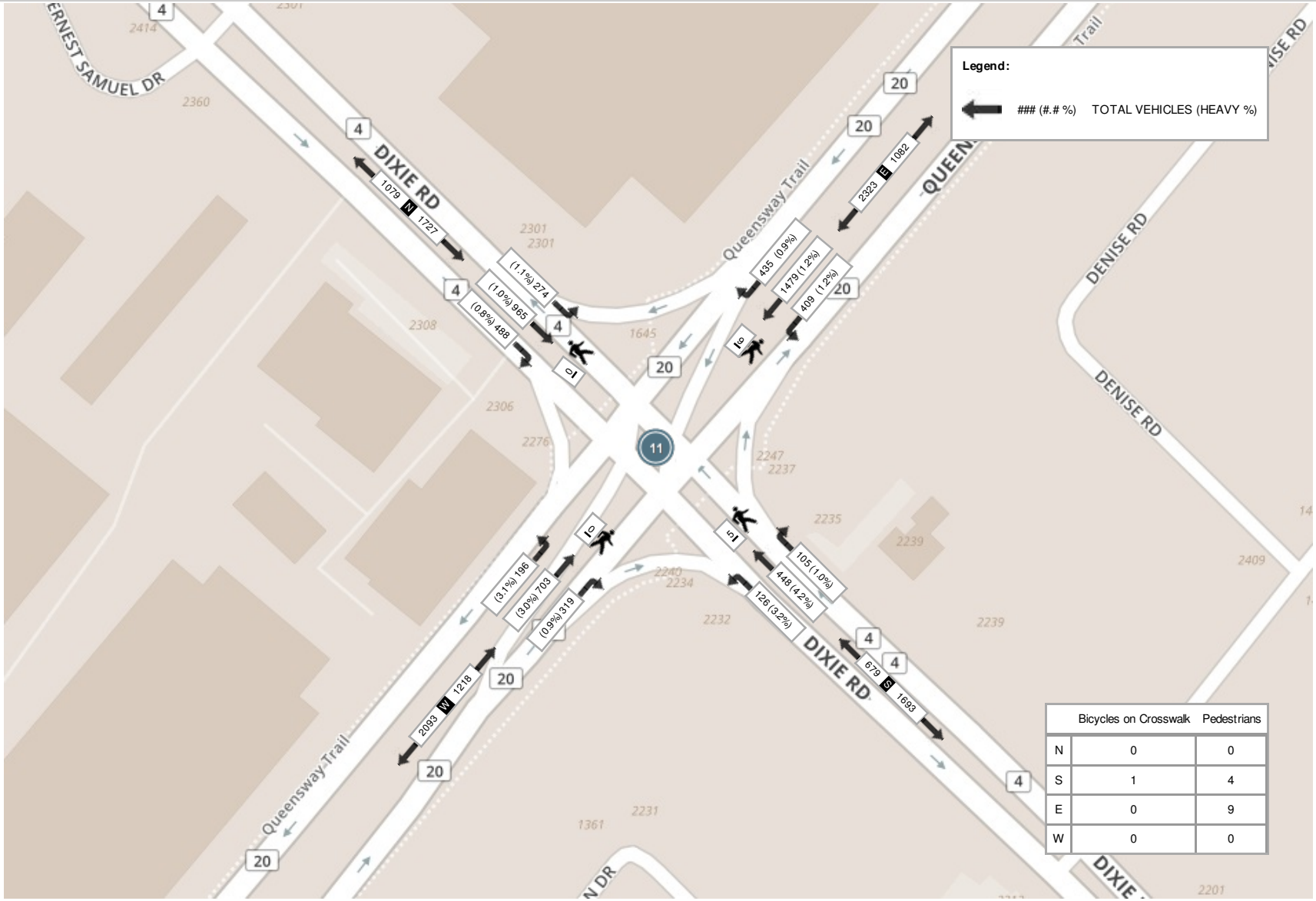
Peak Hour: 12:00 PM - 01:00 PM Weather: Clear (12.6 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	10
S	0	0
E	0	3
W	1	1

Peel Region
10 Peel Centre Drive
Suite B - 4th Floor
Brampton ON, Canada, L6T 4B9

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear (18.4 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	1	4
E	0	9
W	0	0

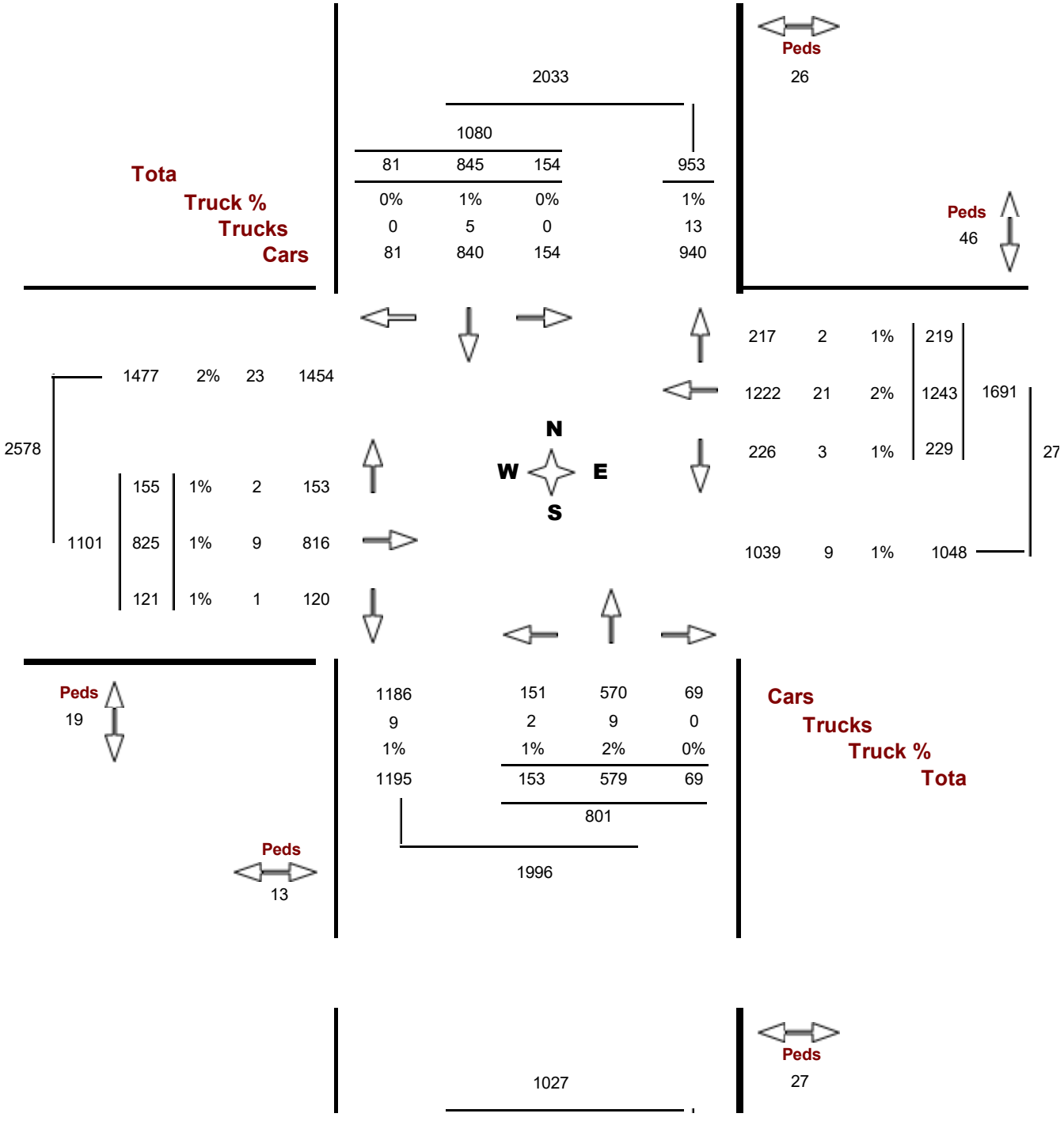
Turning Movements Report - PM Period

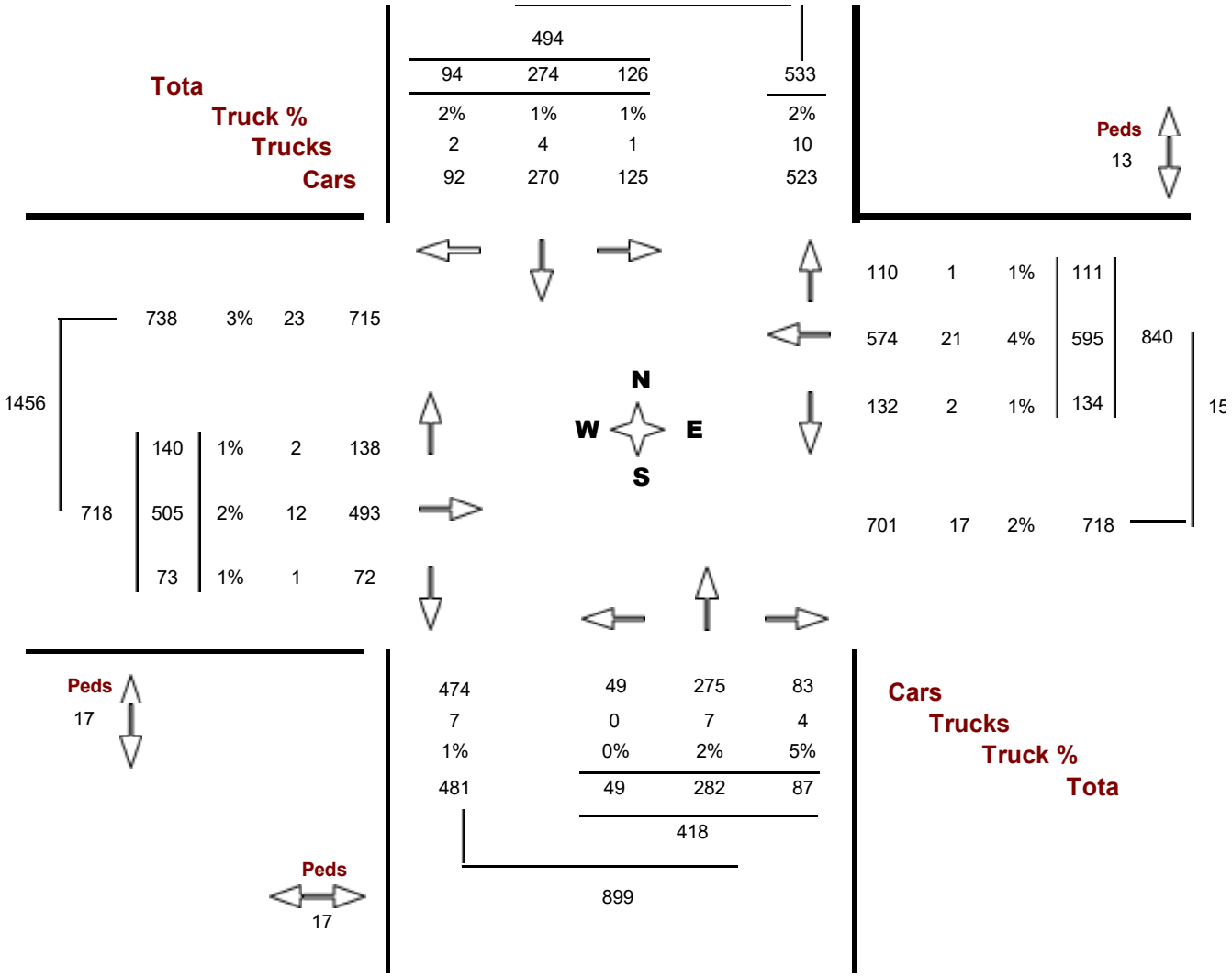
Location..... BURNHAMTHORPE RD E @ CENTRAL PKY E

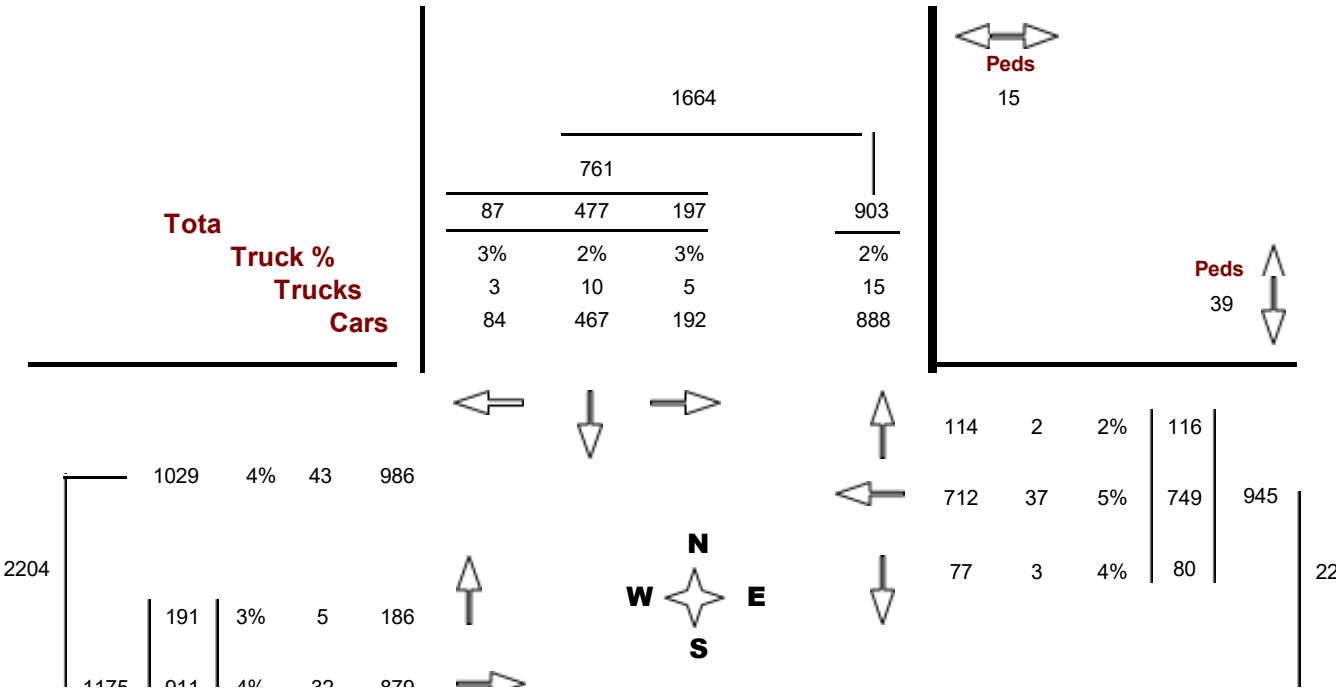
Municipality..... Mississauga **GeoID.....** 349164

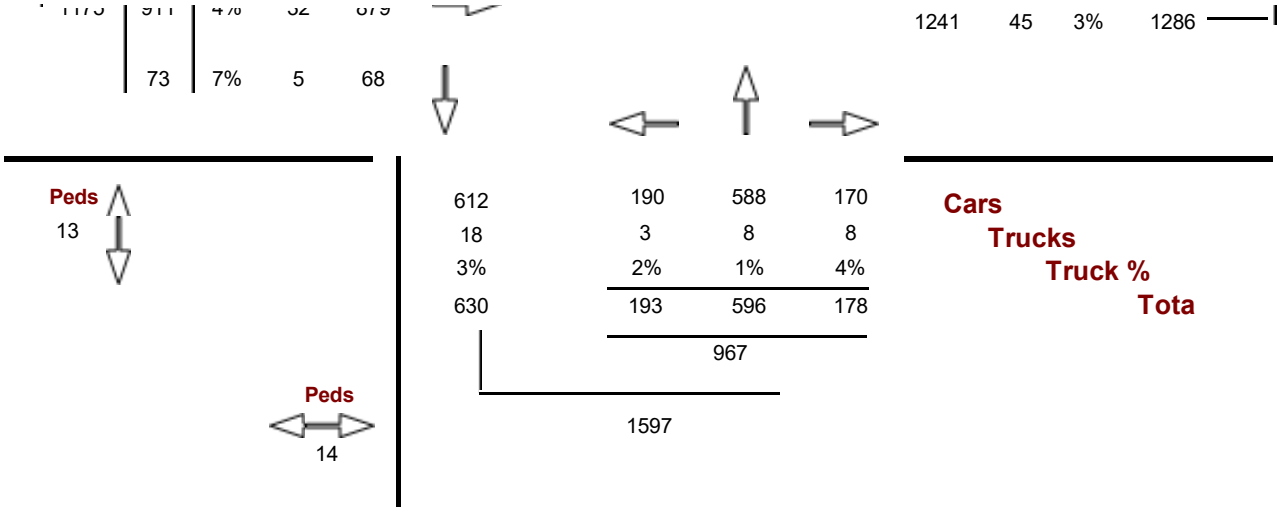
Count Date..... 11-Dec-19 **Peak Hour.....** 4:45 PM — 5:45 PM

Road 1 BURNHAMTHORPE RD E **Road 2** CENTRAL PKY E




Tota
Truck %
Trucks
Cars
494
94 274 126
533
2% 1% 1%
2%
2 4 1
10
92 270 125
523
Peds
13
110 1 1% 111
574 21 4% 595
840
132 2 1% 134
15
701 17 2% 718
738 3% 23 715
1456
140 1% 2 138
718 505 2% 12 493
73 1% 1 72
N
W E
S
Peds
17
474
7
1%
481
49 275 83
0 7 4
0% 2% 5%
49 282 87
418
899
Peds
17
Cars
Trucks
Truck %
Tota


Peds
15
1664
761
Tota
Truck %
Trucks
Cars
87 477 197
903
3% 2% 3%
2%
3 10 5
15
84 467 192
888
Peds
39
114 2 2% 116
712 37 5% 749
945
77 3 4% 80
22
1029 4% 43 986
2204
191 3% 5 186
N
W E
S


1241 45 3% 1286
73 7% 5 68
Peds
13
612
18
3%
630
190 588 170
3 8 8
2% 1% 4%
193 596 178
967
1597
Peds
14
Cars
Trucks
Truck %
Tota

Appendix B

Existing Traffic Operations Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	863	520	135	464	144	451	1221	234	203	1040	200
v/c Ratio	0.04	0.71	0.73	0.65	0.22	0.23	0.95	0.62	0.43	0.85	0.66	0.36
Control Delay	36.1	49.5	24.6	40.7	23.9	9.3	97.9	40.4	21.7	56.8	49.2	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	49.5	24.6	40.7	23.9	9.3	97.9	40.4	21.7	56.8	49.2	22.4
Queue Length 50th (m)	2.2	115.8	57.4	25.2	33.0	4.9	68.6	104.5	27.2	31.8	96.4	21.9
Queue Length 95th (m)	6.7	138.0	100.6	34.9	35.5	16.7	#99.4	119.0	49.9	#68.0	111.3	42.5
Internal Link Dist (m)		123.4			169.3			128.0			135.7	
Turn Bay Length (m)	105.0		90.0	80.0		45.0	70.0		30.0	50.0		40.0
Base Capacity (vph)	264	1224	714	211	2107	636	474	1972	541	239	1581	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.71	0.73	0.64	0.22	0.23	0.95	0.62	0.43	0.85	0.66	0.36

Intersection Summary

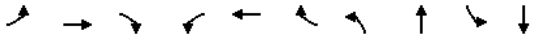
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	863	520	135	464	144	451	1221	234	203	1040	200
Future Volume (vph)	11	863	520	135	464	144	451	1221	234	203	1040	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.5	6.5	6.5	3.0	6.5	6.5	5.0	6.7	6.7	3.0	6.7	6.7
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.84	1.00	1.00	0.78	1.00	1.00	1.00
Flpb, ped/bikes	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1544	3579	1495	1754	4995	1311	3298	4980	1210	1726	4932	1536
Flt Permitted	0.48	1.00	1.00	0.15	1.00	1.00	0.95	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	773	3579	1495	270	4995	1311	3298	4980	1210	294	4932	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	863	520	135	464	144	451	1221	234	203	1040	200
RTOR Reduction (vph)	0	0	203	0	0	83	0	0	62	0	0	67
Lane Group Flow (vph)	11	863	317	135	464	61	451	1221	172	203	1040	133
Confl. Peds. (#/hr)	139		34	34		139			159	159		
Heavy Vehicles (%)	9%	2%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	54.7	54.7	54.7	67.5	67.5	67.5	23.0	63.4	63.4	64.2	51.3	51.3
Effective Green, g (s)	54.7	54.7	54.7	67.5	67.5	67.5	23.0	63.4	63.4	64.2	51.3	51.3
Actuated g/C Ratio	0.34	0.34	0.34	0.42	0.42	0.42	0.14	0.40	0.40	0.40	0.32	0.32
Clearance Time (s)	6.5	6.5	6.5	3.0	6.5	6.5	5.0	6.7	6.7	3.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	264	1223	511	204	2107	553	474	1973	479	233	1581	492
v/s Ratio Prot		c0.24		c0.04	0.09		c0.14	0.25		0.07	0.21	
v/s Ratio Perm	0.01		0.21	0.24		0.05			0.14	c0.28		0.09
v/c Ratio	0.04	0.71	0.62	0.66	0.22	0.11	0.95	0.62	0.36	0.87	0.66	0.27
Uniform Delay, d1	35.2	45.7	44.0	33.1	29.5	28.0	67.9	38.6	34.0	33.6	46.8	40.4
Progression Factor	1.00	1.00	1.00	0.96	0.80	2.10	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	3.4	5.6	7.7	0.2	0.4	29.3	1.5	2.1	27.9	2.2	1.3
Delay (s)	35.4	49.1	49.6	39.3	23.8	59.4	97.2	40.1	36.1	61.5	49.0	41.8
Level of Service	D	D	D	D	C	E	F	D	D	E	D	D
Approach Delay (s)		49.2			33.5			53.1			49.7	
Approach LOS		D			C			D			D	

Intersection Summary

HCM 2000 Control Delay	48.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	21.2
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

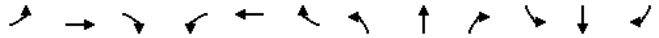
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	1247	90	40	617	47	65	128	79	143
v/c Ratio	0.08	0.43	0.08	0.14	0.22	0.04	0.72	0.64	0.75	0.73
Control Delay	3.9	4.5	0.8	5.1	3.8	0.5	107.1	69.2	105.7	81.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	4.5	0.8	5.1	3.8	0.5	107.1	69.2	105.7	81.4
Queue Length 50th (m)	2.3	38.0	0.3	0.9	13.9	0.1	18.7	29.9	22.8	37.2
Queue Length 95th (m)	m4.0	51.0	m0.8	13.5	54.8	0.4	33.6	48.4	38.8	56.7
Internal Link Dist (m)		274.2			478.1			286.6		209.6
Turn Bay Length (m)	95.0		75.0	110.0		80.0	25.0		30.0	
Base Capacity (vph)	603	2893	1194	287	2837	1192	206	428	243	434
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.43	0.08	0.14	0.22	0.04	0.32	0.30	0.33	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	1247	90	40	617	47	65	73	55	79	99	44
Future Volume (vph)	47	1247	90	40	617	47	65	73	55	79	99	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1700	3579	1456	1653	3510	1464	1671	1584		1740	1634	
Flt Permitted	0.42	1.00	1.00	0.20	1.00	1.00	0.45	1.00		0.51	1.00	
Satd. Flow (perm)	744	3579	1456	355	3510	1464	799	1584		938	1634	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	47	1247	90	40	617	47	65	73	55	79	99	44
RTOR Reduction (vph)	0	0	17	0	0	9	0	20	0	0	12	0
Lane Group Flow (vph)	47	1247	73	40	617	38	65	108	0	79	131	0
Confl. Peds. (#/hr)	9		8	8		9	6		19	19		6
Heavy Vehicles (%)	6%	2%	7%	10%	4%	6%	6%	14%	2%	0%	12%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	129.4	129.4	129.4	129.4	129.4	129.4	18.1	18.1		18.1	18.1	
Effective Green, g (s)	129.4	129.4	129.4	129.4	129.4	129.4	18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.81	0.81	0.11	0.11		0.11	0.11	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	601	2894	1177	287	2838	1184	90	179		106	184	
v/s Ratio Prot		c0.35			0.18			0.07			0.08	
v/s Ratio Perm	0.06		0.05	0.11		0.03	0.08			c0.08		
v/c Ratio	0.08	0.43	0.06	0.14	0.22	0.03	0.72	0.60		0.75	0.71	
Uniform Delay, d1	3.1	4.5	3.1	3.3	3.6	3.0	68.5	67.5		68.7	68.4	
Progression Factor	0.94	0.85	0.84	0.93	0.93	0.44	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.4	0.1	1.0	0.2	0.0	24.7	5.6		24.4	11.8	
Delay (s)	3.1	4.2	2.7	4.1	3.5	1.4	93.2	73.1		93.1	80.3	
Level of Service	A	A	A	A	A	A	F	E		F	F	
Approach Delay (s)		4.0			3.4			79.9			84.8	
Approach LOS		A			A			E			F	

Intersection Summary				
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.5	
Intersection Capacity Utilization	76.7%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	48	1303	70	29	592	32	78	103	60	111
v/c Ratio	0.08	0.48	0.06	0.12	0.23	0.03	0.38	0.32	0.56	0.66
Control Delay	4.4	10.2	1.8	3.4	2.5	0.1	58.9	37.9	88.9	71.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	10.2	1.8	3.4	2.5	0.1	58.9	37.9	88.9	71.8
Queue Length 50th (m)	3.1	124.8	2.2	0.6	7.1	0.0	19.6	16.6	17.2	24.5
Queue Length 95th (m)	8.8	146.0	6.4	1.3	7.2	0.0	32.5	32.1	30.9	42.7
Internal Link Dist (m)		478.1			368.7			241.9		215.5
Turn Bay Length (m)	90.0		80.0	125.0		65.0	10.0		20.0	
Base Capacity (vph)	567	2698	1182	243	2621	1114	209	698	389	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.48	0.06	0.12	0.23	0.03	0.37	0.15	0.15	0.20

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	1303	70	29	592	32	78	51	52	60	62	49
Future Volume (vph)	48	1303	70	29	592	32	78	51	52	60	62	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1699	3579	1549	1705	3476	1463	1690	1703		1733	1697	
Flt Permitted	0.42	1.00	1.00	0.18	1.00	1.00	0.43	1.00		0.69	1.00	
Satd. Flow (perm)	752	3579	1549	322	3476	1463	773	1703		1259	1697	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	1303	70	29	592	32	78	51	52	60	62	49
RTOR Reduction (vph)	0	0	15	0	0	8	0	32	0	0	24	0
Lane Group Flow (vph)	48	1303	55	29	592	24	78	71	0	60	87	0
Confl. Peds. (#/hr)	10		1	1		10	12					12
Heavy Vehicles (%)	6%	2%	3%	7%	5%	6%	5%	4%	0%	3%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	120.6	120.6	120.6	120.6	120.6	120.6	26.9	26.9		13.7	13.7	
Effective Green, g (s)	120.6	120.6	120.6	120.6	120.6	120.6	26.9	26.9		13.7	13.7	
Actuated g/C Ratio	0.75	0.75	0.75	0.75	0.75	0.75	0.17	0.17		0.09	0.09	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	566	2697	1167	242	2620	1102	188	286		107	145	
v/s Ratio Prot		c0.36			0.17		c0.03	0.04			c0.05	
v/s Ratio Perm	0.06		0.04	0.09		0.02	0.04			0.05		
v/c Ratio	0.08	0.48	0.05	0.12	0.23	0.02	0.41	0.25		0.56	0.60	
Uniform Delay, d1	5.2	7.6	5.0	5.3	5.8	4.9	58.2	57.8		70.3	70.5	
Progression Factor	0.66	1.17	0.90	0.36	0.37	0.03	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.6	0.1	0.2	0.0	0.0	1.5	0.5		6.6	6.9	
Delay (s)	3.7	9.5	4.6	2.1	2.2	0.2	59.7	58.2		76.8	77.4	
Level of Service	A	A	A	A	A	A	E	E		E	E	
Approach Delay (s)		9.1			2.1			58.9			77.2	
Approach LOS		A			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	15.5	
Intersection Capacity Utilization	65.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	14	1246	18	16	629	6	103	60
v/c Ratio	0.03	0.57	0.02	0.09	0.29	0.01	0.21	0.14
Control Delay	9.5	23.5	3.0	7.4	7.4	0.0	29.3	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	23.5	3.0	7.4	7.4	0.0	29.3	33.8
Queue Length 50th (m)	2.0	151.6	0.9	0.8	17.8	0.0	15.2	10.4
Queue Length 95th (m)	m3.2	162.3	m2.0	2.0	18.7	0.2	29.8	21.4
Internal Link Dist (m)		368.7			202.6		253.8	213.6
Turn Bay Length (m)	65.0		85.0	90.0		150.0		
Base Capacity (vph)	414	2192	911	174	2149	962	480	415
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.57	0.02	0.09	0.29	0.01	0.21	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1246	18	16	629	6	36	16	51	35	10	15
Future Volume (vph)	14	1246	18	16	629	6	36	16	51	35	10	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.8			6.8	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.95		1.00			1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93			0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.97	
Satd. Flow (prot)	1690	3579	1471	1722	3510	1555		1654			1597	
Flt Permitted	0.38	1.00	1.00	0.16	1.00	1.00		0.88			0.81	
Satd. Flow (perm)	675	3579	1471	284	3510	1555		1488			1325	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	1246	18	16	629	6	36	16	51	35	10	15
RTOR Reduction (vph)	0	0	7	0	0	2	0	22	0	0	8	0
Lane Group Flow (vph)	14	1246	11	16	629	4	0	81	0	0	52	0
Confl. Peds. (#/hr)	7					7	5					5
Heavy Vehicles (%)	7%	2%	11%	6%	4%	0%	3%	6%	4%	0%	40%	13%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	98.0	98.0	98.0	98.0	98.0	98.0		49.2			49.2	
Effective Green, g (s)	98.0	98.0	98.0	98.0	98.0	98.0		49.2			49.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61		0.31			0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.8			6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	413	2192	900	173	2149	952		457			407	
v/s Ratio Prot		c0.35			0.18							
v/s Ratio Perm	0.02		0.01	0.06		0.00		c0.05			0.04	
v/c Ratio	0.03	0.57	0.01	0.09	0.29	0.00		0.18			0.13	
Uniform Delay, d1	12.3	18.4	12.1	12.7	14.6	12.0		40.6			39.9	
Progression Factor	0.75	1.21	1.14	0.48	0.48	1.00		1.00			1.00	
Incremental Delay, d2	0.1	1.0	0.0	1.0	0.3	0.0		0.8			0.7	
Delay (s)	9.3	23.3	13.9	7.1	7.3	12.0		41.4			40.6	
Level of Service	A	C	B	A	A	B		D			D	
Approach Delay (s)		23.0			7.4			41.4			40.6	
Approach LOS		C			A			D			D	

Intersection Summary

HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	52	1347	587	60	39	19
v/c Ratio	0.10	0.54	0.24	0.06	0.11	0.06
Control Delay	2.4	2.8	5.7	1.0	50.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	2.8	5.7	1.0	50.8	18.5
Queue Length 50th (m)	0.9	13.7	13.6	0.0	9.2	0.0
Queue Length 95th (m)	m1.8	16.1	23.7	m1.2	19.2	6.8
Internal Link Dist (m)		202.6	365.4		189.2	
Turn Bay Length (m)	60.0			35.0	40.0	
Base Capacity (vph)	542	2480	2432	1066	345	302
Starvation Cap Reductn	0	56	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.56	0.24	0.06	0.11	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	1347	587	60	39	19
Future Volume (vph)	52	1347	587	60	39	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.5	3.5
Total Lost time (s)	6.1	6.1	6.1	6.1	7.4	7.4
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	3579	3510	1512	1552	1294
Flt Permitted	0.41	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	781	3579	3510	1512	1552	1294
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	52	1347	587	60	39	19
RTOR Reduction (vph)	0	0	0	18	0	15
Lane Group Flow (vph)	52	1347	587	42	39	4
Confl. Peds. (#/hr)						4
Heavy Vehicles (%)	2%	2%	4%	8%	15%	21%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	8	8
Actuated Green, G (s)	110.9	110.9	110.9	110.9	35.6	35.6
Effective Green, g (s)	110.9	110.9	110.9	110.9	35.6	35.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.22	0.22
Clearance Time (s)	6.1	6.1	6.1	6.1	7.4	7.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	541	2480	2432	1048	345	287
v/s Ratio Prot		c0.38	0.17			
v/s Ratio Perm	0.07			0.03	c0.03	0.00
v/c Ratio	0.10	0.54	0.24	0.04	0.11	0.01
Uniform Delay, d1	8.1	12.1	9.0	7.7	49.6	48.5
Progression Factor	0.26	0.17	0.60	0.54	1.00	1.00
Incremental Delay, d2	0.3	0.7	0.2	0.1	0.7	0.1
Delay (s)	2.4	2.8	5.7	4.2	50.3	48.6
Level of Service	A	A	A	A	D	D
Approach Delay (s)		2.8	5.5		49.7	
Approach LOS		A	A		D	

Intersection Summary				
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	145	825	324	208	438	309	168	973	326	282	1208	120
v/c Ratio	0.84	0.78	0.80	0.70	0.44	0.70	0.67	0.65	0.43	0.74	0.77	0.17
Control Delay	128.4	69.6	54.3	80.6	86.1	62.9	35.9	39.9	12.9	80.7	42.3	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.4	69.6	54.3	80.6	86.1	62.9	35.9	39.9	12.9	80.7	42.3	11.6
Queue Length 50th (m)	45.1	62.7	41.1	32.7	48.0	54.1	21.3	120.1	20.0	41.7	159.1	6.5
Queue Length 95th (m)	#76.8	71.6	54.7	m40.0	m52.7	m72.5	47.3	155.3	48.3	55.8	203.6	20.1
Internal Link Dist (m)		365.4			367.5			276.4			257.2	
Turn Bay Length (m)	160.0		20.0	70.0		15.0	65.0		60.0	60.0		55.0
Base Capacity (vph)	182	1224	453	335	1200	498	284	1490	765	437	1566	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.67	0.72	0.62	0.36	0.62	0.59	0.65	0.43	0.65	0.77	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	825	324	208	438	309	168	973	326	282	1208	120
Future Volume (vph)	145	825	324	208	438	309	168	973	326	282	1208	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	5.0	6.9	6.9	5.0	6.9	6.9	3.0	7.5	7.5	5.0	7.5	7.5
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1722	5142	1514	3161	5043	1519	1580	3433	1479	3330	3433	1472
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1722	5142	1514	3161	5043	1519	185	3433	1479	3330	3433	1472
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	825	324	208	438	309	168	973	326	282	1208	120
RTOR Reduction (vph)	0	0	97	0	0	144	0	0	123	0	0	44
Lane Group Flow (vph)	145	825	227	208	438	165	168	973	203	282	1208	76
Confl. Peds. (#/hr)	1		3	3		1	1					1
Heavy Vehicles (%)	6%	2%	6%	12%	4%	6%	13%	4%	8%	4%	4%	7%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4	6		6			2
Actuated Green, G (s)	16.1	32.8	32.8	15.0	31.7	31.7	86.2	69.5	69.5	18.3	73.1	73.1
Effective Green, g (s)	16.1	32.8	32.8	15.0	31.7	31.7	86.2	69.5	69.5	18.3	73.1	73.1
Actuated g/C Ratio	0.10	0.20	0.20	0.09	0.20	0.20	0.54	0.43	0.43	0.11	0.46	0.46
Clearance Time (s)	5.0	6.9	6.9	5.0	6.9	6.9	3.0	7.5	7.5	5.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	173	1054	310	296	999	300	245	1491	642	380	1568	672
v/s Ratio Prot	c0.08	c0.16		0.07	0.09		0.07	0.28		c0.08	c0.35	
v/s Ratio Perm			0.15			0.11	0.30		0.14			0.05
v/c Ratio	0.84	0.78	0.73	0.70	0.44	0.55	0.69	0.65	0.32	0.74	0.77	0.11
Uniform Delay, d1	70.7	60.2	59.5	70.3	56.3	57.8	26.3	35.7	29.7	68.6	36.4	24.9
Progression Factor	1.39	1.08	1.12	1.01	1.53	2.38	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.0	3.3	7.5	5.4	0.2	1.6	7.7	2.2	1.3	7.6	3.7	0.3
Delay (s)	123.4	68.3	74.2	76.5	86.3	138.9	34.1	38.0	31.0	76.2	40.1	25.2
Level of Service	F	E	E	E	F	F	C	D	C	E	D	C
Approach Delay (s)		76.0			101.2			36.0			45.3	
Approach LOS		E			F			D			D	

Intersection Summary

HCM 2000 Control Delay	60.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.4
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	227	1127	122	109	514	243	206	784	203	281	471	217
v/c Ratio	0.79	0.85	0.18	0.50	0.41	0.35	1.73	0.78	0.35	0.79	0.42	0.35
Control Delay	66.7	72.1	25.0	79.7	39.2	6.5	401.1	58.1	9.5	85.4	42.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	72.1	25.0	79.7	39.2	6.5	401.1	58.1	9.5	85.4	42.3	6.0
Queue Length 50th (m)	34.9	180.2	16.4	16.1	59.3	2.8	~88.9	112.5	4.5	41.6	56.1	0.0
Queue Length 95th (m)	#51.8	202.7	m30.2	25.4	74.5	20.6	#137.4	135.6	23.4	56.7	71.3	17.1
Internal Link Dist (m)		1570.3			239.1			156.5			118.3	
Turn Bay Length (m)	45.0		25.0	140.0		150.0	85.0		75.0	60.0		
Base Capacity (vph)	297	1329	668	281	1257	704	119	1008	579	384	1117	613
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.85	0.18	0.39	0.41	0.35	1.73	0.78	0.35	0.73	0.42	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	1127	122	109	514	243	206	784	203	281	471	217
Future Volume (vph)	227	1127	122	109	514	243	206	784	203	281	471	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.9	6.9	5.0	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3404	3476	1541	3219	3444	1533	1733	3400	1522	3236	3305	1391
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3404	3476	1541	3219	3444	1533	1733	3400	1522	3236	3305	1391
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	227	1127	122	109	514	243	206	784	203	281	471	217
RTOR Reduction (vph)	0	0	75	0	0	145	0	0	128	0	0	144
Lane Group Flow (vph)	227	1127	47	109	514	98	206	784	75	281	471	73
Confl. Peds. (#/hr)	1		3	3		1	3		5	5		3
Heavy Vehicles (%)	4%	5%	4%	10%	6%	5%	3%	5%	3%	7%	8%	13%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Actuated Green, G (s)	13.6	61.2	61.2	10.8	58.4	58.4	11.0	47.4	47.4	17.7	54.1	54.1
Effective Green, g (s)	13.6	61.2	61.2	10.8	58.4	58.4	11.0	47.4	47.4	17.7	54.1	54.1
Actuated g/C Ratio	0.08	0.38	0.38	0.07	0.36	0.36	0.07	0.30	0.30	0.11	0.34	0.34
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.9	6.9	5.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	289	1329	589	217	1257	559	119	1007	450	357	1117	470
v/s Ratio Prot	c0.07	c0.32		0.03	0.15		c0.12	c0.23		c0.09	0.14	
v/s Ratio Perm			0.03			0.06			0.05			0.05
v/c Ratio	0.79	0.85	0.08	0.50	0.41	0.18	1.73	0.78	0.17	0.79	0.42	0.16
Uniform Delay, d1	71.8	45.1	31.5	72.0	37.9	34.5	74.5	51.5	41.7	69.3	40.9	37.0
Progression Factor	0.70	1.46	5.55	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.8	5.6	0.2	1.8	1.0	0.7	361.6	5.9	0.8	10.9	1.2	0.7
Delay (s)	61.2	71.6	174.9	73.8	38.9	35.2	436.1	57.4	42.5	80.2	42.0	37.7
Level of Service	E	E	F	E	D	D	F	E	D	F	D	D
Approach Delay (s)		78.5			42.2			120.3			52.1	
Approach LOS		E			D			F			D	

Intersection Summary

HCM 2000 Control Delay	76.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	191	911	73	80	749	116	193	596	178	197	477	87
v/c Ratio	0.70	0.73	0.13	0.38	0.61	0.19	0.44	0.47	0.28	0.53	0.38	0.15
Control Delay	42.5	48.5	6.8	29.0	44.3	6.0	26.7	40.6	7.3	29.0	38.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	48.5	6.8	29.0	44.3	6.0	26.7	40.6	7.3	29.0	38.7	10.0
Queue Length 50th (m)	33.0	121.7	0.0	12.9	94.4	0.0	31.7	70.4	2.8	32.4	54.2	2.6
Queue Length 95th (m)	48.9	144.9	9.9	22.5	114.4	12.5	46.8	86.8	18.3	47.9	68.5	13.9
Internal Link Dist (m)		231.2			216.3			258.7			257.3	
Turn Bay Length (m)	40.0		45.0	125.0		80.0	50.0		50.0	40.0		35.0
Base Capacity (vph)	271	1244	576	212	1232	627	437	1281	636	372	1268	596
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.73	0.13	0.38	0.61	0.19	0.44	0.47	0.28	0.53	0.38	0.15

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	911	73	80	749	116	193	596	178	197	477	87
Future Volume (vph)	191	911	73	80	749	116	193	596	178	197	477	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	7.0	7.0	3.0	7.0	7.0	3.0	8.0	8.0	3.0	8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1732	3433	1458	1716	3400	1528	1747	3535	1469	1727	3500	1516
Flt Permitted	0.23	1.00	1.00	0.15	1.00	1.00	0.41	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	420	3433	1458	273	3400	1528	751	3535	1469	595	3500	1516
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	191	911	73	80	749	116	193	596	178	197	477	87
RTOR Reduction (vph)	0	0	47	0	0	74	0	0	104	0	0	47
Lane Group Flow (vph)	191	911	26	80	749	42	193	596	74	197	477	40
Confl. Peds. (#/hr)	15		14	14		15	13		39	39		13
Heavy Vehicles (%)	3%	4%	7%	4%	5%	2%	2%	1%	4%	3%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	68.0	58.0	58.0	68.0	58.0	58.0	71.0	58.0	58.0	71.0	58.0	58.0
Effective Green, g (s)	68.0	58.0	58.0	68.0	58.0	58.0	71.0	58.0	58.0	71.0	58.0	58.0
Actuated g/C Ratio	0.42	0.36	0.36	0.42	0.36	0.36	0.44	0.36	0.36	0.44	0.36	0.36
Clearance Time (s)	3.0	7.0	7.0	3.0	7.0	7.0	3.0	8.0	8.0	3.0	8.0	8.0
Lane Grp Cap (vph)	260	1244	528	206	1232	553	414	1281	532	356	1268	549
v/s Ratio Prot	c0.05	0.27		0.02	0.22		0.04	0.17		c0.04	0.14	
v/s Ratio Perm	c0.27		0.02	0.14		0.03	0.17		0.05	c0.20		0.03
v/c Ratio	0.73	0.73	0.05	0.39	0.61	0.08	0.47	0.47	0.14	0.55	0.38	0.07
Uniform Delay, d1	34.0	44.3	33.1	31.0	41.7	33.4	28.1	39.1	34.2	28.7	37.6	33.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.8	3.8	0.2	5.4	2.2	0.3	3.7	1.2	0.5	6.1	0.9	0.3
Delay (s)	50.8	48.1	33.3	36.5	43.9	33.7	31.9	40.3	34.8	34.8	38.5	33.7
Level of Service	D	D	C	D	D	C	C	D	C	C	D	C
Approach Delay (s)		47.6			42.1			37.6			37.0	
Approach LOS		D			D			D			D	

Intersection Summary					
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.64				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	21.0		
Intersection Capacity Utilization	137.3%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	91	517	605	258	988	240	455	943	187	178	1316	114
v/c Ratio	0.44	0.43	0.82	0.75	0.56	0.39	0.83	0.46	0.29	0.58	0.84	0.23
Control Delay	33.6	42.7	28.8	68.1	67.3	33.7	78.3	35.7	14.6	30.3	57.7	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	42.7	28.8	68.1	67.3	33.7	78.3	35.7	14.6	30.3	57.7	11.2
Queue Length 50th (m)	15.7	62.0	71.8	62.1	110.5	30.8	67.1	74.1	14.6	27.0	133.2	3.1
Queue Length 95th (m)	26.7	77.7	125.1	#83.9	124.6	52.9	83.8	86.3	32.1	40.5	153.9	17.4
Internal Link Dist (m)		123.4			167.6			128.0			135.7	
Turn Bay Length (m)	105.0		90.0	80.0		45.0	70.0		30.0	50.0		40.0
Base Capacity (vph)	216	1208	736	345	1759	615	615	2045	638	314	1569	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.43	0.82	0.75	0.56	0.39	0.74	0.46	0.29	0.57	0.84	0.23

Intersection Summary

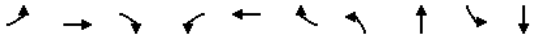
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	517	605	258	988	240	455	943	187	178	1316	114
Future Volume (vph)	91	517	605	258	988	240	455	943	187	178	1316	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7	6.7	3.0	6.7	6.7
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.89	1.00	1.00	0.90
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3614	1473	1791	5193	1491	3395	5029	1414	1739	5079	1387
Flt Permitted	0.18	1.00	1.00	0.35	1.00	1.00	0.95	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	314	3614	1473	658	5193	1491	3395	5029	1414	531	5079	1387
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	91	517	605	258	988	240	455	943	187	178	1316	114
RTOR Reduction (vph)	0	0	244	0	0	110	0	0	64	0	0	68
Lane Group Flow (vph)	91	517	361	258	988	130	455	943	123	178	1316	46
Confl. Peds. (#/hr)	63		65	65		63	65		72	72		65
Heavy Vehicles (%)	8%	1%	2%	1%	1%	1%	2%	2%	1%	2%	1%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	62.8	53.5	53.5	64.2	54.2	54.2	25.9	65.1	65.1	61.6	49.4	49.4
Effective Green, g (s)	62.8	53.5	53.5	64.2	54.2	54.2	25.9	65.1	65.1	61.6	49.4	49.4
Actuated g/C Ratio	0.39	0.33	0.33	0.40	0.34	0.34	0.16	0.41	0.41	0.39	0.31	0.31
Clearance Time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7	6.7	3.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	1208	492	334	1759	505	549	2046	575	296	1568	428
v/s Ratio Prot	0.03	0.14		c0.05	0.19		c0.13	0.19		0.05	c0.26	
v/s Ratio Perm	0.15		0.24	c0.26		0.09			0.09	0.19		0.03
v/c Ratio	0.45	0.43	0.73	0.77	0.56	0.26	0.83	0.46	0.21	0.60	0.84	0.11
Uniform Delay, d1	32.7	41.4	47.0	39.6	43.2	38.3	64.9	34.6	30.8	33.7	51.6	39.5
Progression Factor	1.00	1.00	1.00	1.65	1.52	2.53	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	1.1	9.3	9.4	1.1	1.1	10.0	0.7	0.8	3.4	5.6	0.5
Delay (s)	34.2	42.5	56.3	74.9	66.8	97.9	74.9	35.4	31.7	37.1	57.2	40.0
Level of Service	C	D	E	E	E	F	E	D	C	D	E	D
Approach Delay (s)		48.7			73.2			46.3			53.7	
Approach LOS		D			E			D			D	

Intersection Summary

HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	21.2
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		

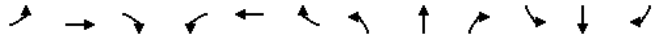
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	40	725	58	88	1552	104	45	95	75	109
v/c Ratio	0.17	0.24	0.04	0.15	0.52	0.08	0.48	0.56	0.71	0.62
Control Delay	5.8	3.8	1.4	1.5	1.7	0.1	84.7	69.4	103.1	70.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	3.8	1.4	1.5	1.7	0.1	84.7	69.4	103.1	70.9
Queue Length 50th (m)	2.1	20.6	0.2	1.4	15.6	0.1	12.8	22.5	21.7	25.2
Queue Length 95th (m)	m5.5	30.1	m2.0	2.9	18.4	0.1	24.6	39.0	37.5	42.8
Internal Link Dist (m)		276.0			478.1			286.6		209.6
Turn Bay Length (m)	95.0		75.0	110.0		80.0	25.0		30.0	
Base Capacity (vph)	229	3000	1339	593	3000	1337	263	450	299	457
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.24	0.04	0.15	0.52	0.08	0.17	0.21	0.25	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

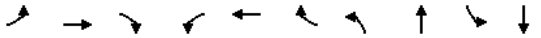


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	725	58	88	1552	104	45	62	33	75	65	44
Future Volume (vph)	40	725	58	88	1552	104	45	62	33	75	65	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.97	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1824	3614	1601	1825	3614	1590	1745	1691		1772	1703	
Flt Permitted	0.14	1.00	1.00	0.37	1.00	1.00	0.55	1.00		0.62	1.00	
Satd. Flow (perm)	276	3614	1601	715	3614	1590	1015	1691		1156	1703	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	725	58	88	1552	104	45	62	33	75	65	44
RTOR Reduction (vph)	0	0	10	0	0	18	0	15	0	0	19	0
Lane Group Flow (vph)	40	725	48	88	1552	86	45	80	0	75	90	0
Confl. Peds. (#/hr)	2					2	2		5	5		2
Heavy Vehicles (%)	0%	1%	2%	0%	1%	0%	2%	7%	0%	0%	5%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	132.8	132.8	132.8	132.8	132.8	132.8	14.7	14.7		14.7	14.7	
Effective Green, g (s)	132.8	132.8	132.8	132.8	132.8	132.8	14.7	14.7		14.7	14.7	
Actuated g/C Ratio	0.83	0.83	0.83	0.83	0.83	0.83	0.09	0.09		0.09	0.09	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	2999	1328	593	2999	1319	93	155		106	156	
v/s Ratio Prot		0.20			c0.43			0.05			0.05	
v/s Ratio Perm	0.14		0.03	0.12		0.05	0.04			c0.06		
v/c Ratio	0.17	0.24	0.04	0.15	0.52	0.07	0.48	0.52		0.71	0.58	
Uniform Delay, d1	2.7	2.9	2.4	2.6	4.1	2.4	69.0	69.3		70.6	69.7	
Progression Factor	1.16	1.16	1.74	0.33	0.25	0.02	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.2	0.0	0.5	0.6	0.1	3.9	2.9		19.3	5.1	
Delay (s)	4.7	3.5	4.2	1.3	1.6	0.1	73.0	72.2		89.9	74.7	
Level of Service	A	A	A	A	A	A	E	E		F	E	
Approach Delay (s)		3.6			1.5			72.4			80.9	
Approach LOS		A			A			E			F	

Intersection Summary

HCM 2000 Control Delay	10.6	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		12.5	
Intersection Capacity Utilization	76.6%	ICU Level of Service		D	
Analysis Period (min)	15				

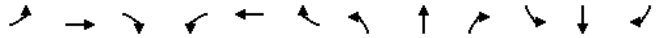
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	673	69	76	1516	43	64	57	39	79
v/c Ratio	0.12	0.24	0.05	0.13	0.54	0.03	0.30	0.22	0.41	0.56
Control Delay	12.7	10.7	6.2	7.2	7.5	3.1	59.5	34.8	82.7	68.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	10.7	6.2	7.2	7.5	3.1	59.5	34.8	82.7	68.7
Queue Length 50th (m)	3.5	53.4	4.8	5.5	58.0	0.8	16.2	7.7	11.2	17.3
Queue Length 95th (m)	8.9	65.2	13.0	m7.1	62.4	m1.5	28.3	19.4	22.5	32.9
Internal Link Dist (m)		478.1			368.7			241.9		215.5
Turn Bay Length (m)	90.0		80.0	125.0		65.0	10.0		20.0	
Base Capacity (vph)	202	2829	1293	565	2829	1243	216	704	417	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.24	0.05	0.13	0.54	0.03	0.30	0.08	0.09	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	673	69	76	1516	43	64	30	27	39	50	29
Future Volume (vph)	25	673	69	76	1516	43	64	30	27	39	50	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.96	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1753	3614	1633	1772	3614	1576	1784	1733		1780	1747	
Flt Permitted	0.14	1.00	1.00	0.39	1.00	1.00	0.54	1.00		0.72	1.00	
Satd. Flow (perm)	259	3614	1633	723	3614	1576	1019	1733		1349	1747	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	673	69	76	1516	43	64	30	27	39	50	29
RTOR Reduction (vph)	0	0	15	0	0	9	0	23	0	0	18	0
Lane Group Flow (vph)	25	673	54	76	1516	34	64	34	0	39	61	0
Confl. Peds. (#/hr)	5					5	1		2	2		1
Heavy Vehicles (%)	4%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	3%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	124.7	124.7	124.7	124.7	124.7	124.7	22.8	22.8		11.4	11.4	
Effective Green, g (s)	124.7	124.7	124.7	124.7	124.7	124.7	22.8	22.8		11.4	11.4	
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.78	0.78	0.14	0.14		0.07	0.07	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	2816	1272	563	2816	1228	185	246		96	124	
v/s Ratio Prot		0.19			c0.42		c0.02	0.02			c0.04	
v/s Ratio Perm	0.10		0.03	0.11		0.02	0.03			0.03		
v/c Ratio	0.12	0.24	0.04	0.13	0.54	0.03	0.35	0.14		0.41	0.49	
Uniform Delay, d1	4.3	4.8	4.0	4.4	6.7	4.0	61.0	60.0		71.1	71.5	
Progression Factor	1.92	2.01	5.24	1.28	0.95	2.20	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.2	0.1	0.1	0.1	0.0	1.1	0.3		2.8	3.1	
Delay (s)	9.5	9.8	21.1	5.7	6.5	8.7	62.2	60.3		73.9	74.6	
Level of Service	A	A	C	A	A	A	E	E		E	E	
Approach Delay (s)		10.8			6.5			61.3			74.4	
Approach LOS		B			A			E			E	

Intersection Summary

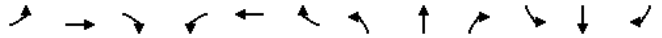
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		15.5	
Intersection Capacity Utilization	75.2%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	24	651	31	82	1707	31	42	62
v/c Ratio	0.34	0.29	0.03	0.19	0.77	0.03	0.08	0.12
Control Delay	19.8	4.9	0.1	5.6	6.6	0.9	22.7	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	19.8	4.9	0.1	5.6	6.7	0.9	22.7	26.3
Queue Length 50th (m)	1.1	14.2	0.2	1.8	19.7	0.0	4.1	7.9
Queue Length 95th (m)	4.5	14.6	0.1	m6.1	49.0	m0.4	13.2	18.8
Internal Link Dist (m)		368.7			202.6		253.8	213.6
Turn Bay Length (m)	65.0		85.0	90.0		150.0		
Base Capacity (vph)	70	2213	1012	429	2213	980	507	496
Starvation Cap Reductn	0	0	0	0	48	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.29	0.03	0.19	0.79	0.03	0.08	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	651	31	82	1707	31	13	7	22	24	9	29
Future Volume (vph)	24	651	31	82	1707	31	13	7	22	24	9	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.8			6.8	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.97		0.99			0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1825	3614	1633	1807	3614	1581		1705			1713	
Flt Permitted	0.06	1.00	1.00	0.37	1.00	1.00		0.92			0.89	
Satd. Flow (perm)	116	3614	1633	702	3614	1581		1601			1561	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	651	31	82	1707	31	13	7	22	24	9	29
RTOR Reduction (vph)	0	0	12	0	0	12	0	15	0	0	17	0
Lane Group Flow (vph)	24	651	19	82	1707	19	0	27	0	0	45	0
Confl. Peds. (#/hr)	3					3	3		1	1		3
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Actuated Green, G (s)	98.0	98.0	98.0	98.0	98.0	98.0		49.2			49.2	
Effective Green, g (s)	98.0	98.0	98.0	98.0	98.0	98.0		49.2			49.2	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61		0.31			0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.8			6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	71	2213	1000	429	2213	968		492			480	
v/s Ratio Prot		0.18			c0.47							
v/s Ratio Perm	0.21		0.01	0.12		0.01		0.02			c0.03	
v/c Ratio	0.34	0.29	0.02	0.19	0.77	0.02		0.05			0.09	
Uniform Delay, d1	15.1	14.7	12.2	13.6	22.8	12.2		39.0			39.5	
Progression Factor	0.38	0.31	0.02	0.35	0.20	0.24		1.00			1.00	
Incremental Delay, d2	12.3	0.3	0.0	0.7	2.0	0.0		0.2			0.4	
Delay (s)	18.0	4.9	0.3	5.5	6.5	3.0		39.2			39.9	
Level of Service	B	A	A	A	A	A		D			D	
Approach Delay (s)		5.1			6.4			39.2			39.9	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.8	
Intersection Capacity Utilization	101.2%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	17	685	1708	54	71	82
v/c Ratio	0.17	0.27	0.68	0.05	0.19	0.23
Control Delay	6.1	2.5	10.2	0.1	52.2	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	2.5	10.2	0.1	52.2	29.7
Queue Length 50th (m)	0.3	6.6	88.3	0.0	17.1	10.2
Queue Length 95th (m)	1.1	10.5	m92.1	m0.0	30.6	24.7
Internal Link Dist (m)		202.6	365.4		189.2	
Turn Bay Length (m)	60.0			35.0	40.0	
Base Capacity (vph)	102	2504	2504	1022	374	357
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.27	0.68	0.05	0.19	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	685	1708	54	71	82
Future Volume (vph)	17	685	1708	54	71	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.5	3.5
Total Lost time (s)	6.1	6.1	6.1	6.1	7.4	7.4
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1630	3614	3614	1463	1684	1469
Flt Permitted	0.09	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	148	3614	3614	1463	1684	1469
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	685	1708	54	71	82
RTOR Reduction (vph)	0	0	0	8	0	30
Lane Group Flow (vph)	17	685	1708	46	71	52
Confl. Peds. (#/hr)	1			1		2
Heavy Vehicles (%)	12%	1%	1%	9%	6%	7%
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		2	6			
Permitted Phases	2			6	8	8
Actuated Green, G (s)	110.9	110.9	110.9	110.9	35.6	35.6
Effective Green, g (s)	110.9	110.9	110.9	110.9	35.6	35.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.22	0.22
Clearance Time (s)	6.1	6.1	6.1	6.1	7.4	7.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	102	2504	2504	1014	374	326
v/s Ratio Prot		0.19	c0.47			
v/s Ratio Perm	0.12			0.03	c0.04	0.04
v/c Ratio	0.17	0.27	0.68	0.05	0.19	0.16
Uniform Delay, d1	8.5	9.3	14.3	7.8	50.5	50.1
Progression Factor	0.28	0.24	0.65	0.00	1.00	1.00
Incremental Delay, d2	3.4	0.3	0.7	0.0	1.1	1.0
Delay (s)	5.8	2.5	10.1	0.0	51.6	51.2
Level of Service	A	A	B	A	D	D
Approach Delay (s)		2.5	9.8		51.4	
Approach LOS		A	A		D	

Intersection Summary

HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	123	532	211	507	1332	397	214	700	260	181	1334	185
v/c Ratio	0.79	0.48	0.49	0.97	0.93	0.79	1.08	0.50	0.35	0.63	0.93	0.26
Control Delay	95.8	69.4	43.8	104.5	67.7	54.0	127.1	38.1	5.9	80.6	57.4	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.8	69.4	43.8	104.5	67.7	54.0	127.1	38.1	5.9	80.6	57.4	12.8
Queue Length 50th (m)	37.2	54.9	31.2	80.6	121.3	65.5	~58.1	81.6	2.7	26.8	195.3	12.6
Queue Length 95th (m)	#65.0	64.9	53.0	m#83.4	m121.3	m69.5	#108.9	101.7	20.4	38.4	#236.5	28.8
Internal Link Dist (m)		365.4			367.5			276.4			257.2	
Turn Bay Length (m)	160.0		20.0	70.0		15.0	65.0		60.0	60.0		55.0
Base Capacity (vph)	167	1128	441	520	1436	502	199	1400	753	342	1432	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.47	0.48	0.97	0.93	0.79	1.08	0.50	0.35	0.53	0.93	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	532	211	507	1332	397	214	700	260	181	1334	185
Future Volume (vph)	123	532	211	507	1332	397	214	700	260	181	1334	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	5.0	6.9	6.9	5.0	6.9	6.9	3.0	7.5	7.5	5.0	7.5	7.5
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1789	5142	1587	3471	5193	1595	1733	3500	1515	3429	3500	1557
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.06	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1789	5142	1587	3471	5193	1595	114	3500	1515	3429	3500	1557
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	532	211	507	1332	397	214	700	260	181	1334	185
RTOR Reduction (vph)	0	0	94	0	0	62	0	0	147	0	0	68
Lane Group Flow (vph)	123	532	117	507	1332	335	214	700	113	181	1334	117
Confl. Peds. (#/hr)	1		4	4		1	2		1	1		2
Heavy Vehicles (%)	2%	2%	1%	2%	1%	1%	3%	2%	4%	1%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4	6		6			2
Actuated Green, G (s)	14.0	34.1	34.1	24.0	44.1	44.1	78.1	64.1	64.1	13.4	65.5	65.5
Effective Green, g (s)	14.0	34.1	34.1	24.0	44.1	44.1	78.1	64.1	64.1	13.4	65.5	65.5
Actuated g/C Ratio	0.09	0.21	0.21	0.15	0.28	0.28	0.49	0.40	0.40	0.08	0.41	0.41
Clearance Time (s)	5.0	6.9	6.9	5.0	6.9	6.9	3.0	7.5	7.5	5.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	1095	338	520	1431	439	197	1402	606	287	1432	637
v/s Ratio Prot	0.07	0.10		c0.15	c0.26		c0.09	0.20		0.05	0.38	
v/s Ratio Perm			0.07			0.21	c0.44		0.07			0.08
v/c Ratio	0.79	0.49	0.34	0.97	0.93	0.76	1.09	0.50	0.19	0.63	0.93	0.18
Uniform Delay, d1	71.5	55.3	53.5	67.7	56.5	53.2	51.0	35.9	31.1	70.9	45.1	30.2
Progression Factor	0.90	1.23	1.73	1.30	1.11	1.16	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.4	0.3	0.6	18.7	5.0	3.1	89.0	1.3	0.7	4.5	12.2	0.6
Delay (s)	86.9	68.3	93.1	106.4	67.5	64.8	140.0	37.2	31.7	75.4	57.4	30.8
Level of Service	F	E	F	F	E	E	F	D	C	E	E	C
Approach Delay (s)		77.0			75.8			54.7			56.4	
Approach LOS		E			E			D			E	

Intersection Summary

HCM 2000 Control Delay	66.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.4
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	703	319	409	1479	435	126	448	105	274	965	488
v/c Ratio	0.70	0.57	0.49	0.90	1.04	0.54	1.06	0.47	0.20	0.75	0.87	0.77
Control Delay	73.1	45.8	25.0	92.1	81.7	14.2	166.6	50.8	1.6	82.3	61.7	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	45.8	25.0	92.1	81.7	14.2	166.6	50.8	1.6	82.3	61.7	37.5
Queue Length 50th (m)	29.4	105.7	43.1	61.7	~248.7	30.6	~40.3	58.4	0.0	40.6	141.1	79.8
Queue Length 95th (m)	41.7	125.2	78.8	#87.5	#287.7	61.1	#81.0	75.3	2.2	54.9	166.7	122.8
Internal Link Dist (m)		1570.2			239.1			156.5			118.3	
Turn Bay Length (m)	45.0		25.0	140.0		150.0	85.0		75.0	60.0		
Base Capacity (vph)	300	1225	654	460	1421	812	119	944	538	407	1106	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.57	0.49	0.89	1.04	0.54	1.06	0.47	0.20	0.67	0.87	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	703	319	409	1479	435	126	448	105	274	965	488
Future Volume (vph)	196	703	319	409	1479	435	126	448	105	274	965	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.9	6.9	5.0	6.9	6.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	3544	1584	3506	3614	1617	1733	3433	1543	3429	3535	1581
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3437	3544	1584	3506	3614	1617	1733	3433	1543	3429	3535	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	196	703	319	409	1479	435	126	448	105	274	965	488
RTOR Reduction (vph)	0	0	107	0	0	177	0	0	76	0	0	139
Lane Group Flow (vph)	196	703	212	409	1479	258	126	448	29	274	965	349
Confl. Peds. (#/hr)			4	4					9	9		
Heavy Vehicles (%)	3%	3%	1%	1%	1%	1%	3%	4%	1%	1%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Actuated Green, G (s)	13.1	55.3	55.3	20.7	62.9	62.9	11.0	44.0	44.0	17.1	50.1	50.1
Effective Green, g (s)	13.1	55.3	55.3	20.7	62.9	62.9	11.0	44.0	44.0	17.1	50.1	50.1
Actuated g/C Ratio	0.08	0.35	0.35	0.13	0.39	0.39	0.07	0.28	0.28	0.11	0.31	0.31
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.9	6.9	5.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	281	1224	547	453	1420	635	119	944	424	366	1106	495
v/s Ratio Prot	0.06	0.20		c0.12	c0.41		c0.07	0.13		0.08	c0.27	
v/s Ratio Perm			0.13			0.16			0.02			0.22
v/c Ratio	0.70	0.57	0.39	0.90	1.04	0.41	1.06	0.47	0.07	0.75	0.87	0.70
Uniform Delay, d1	71.5	42.7	39.6	68.7	48.5	35.1	74.5	48.4	42.9	69.4	51.9	48.4
Progression Factor	0.84	1.02	1.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	1.9	2.0	21.0	35.5	1.9	99.2	1.7	0.3	8.1	9.5	8.2
Delay (s)	67.0	45.5	47.7	89.6	84.0	37.0	173.7	50.1	43.2	77.5	61.5	56.6
Level of Service	E	D	D	F	F	D	F	D	D	E	E	E
Approach Delay (s)		49.5			76.2			71.9			62.6	
Approach LOS		D			E			E			E	

Intersection Summary

HCM 2000 Control Delay	66.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	155	825	121	229	1243	219	153	579	69	154	845	81
v/c Ratio	0.97	0.64	0.20	0.93	0.98	0.34	0.55	0.46	0.12	0.39	0.66	0.13
Control Delay	100.1	45.3	15.0	72.6	70.9	13.7	30.2	40.4	7.7	25.7	45.7	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.1	45.3	15.0	72.6	70.9	13.7	30.2	40.4	7.7	25.7	45.7	10.1
Queue Length 50th (m)	30.7	105.7	8.9	40.4	189.3	14.1	24.4	68.1	0.2	24.6	109.1	2.5
Queue Length 95th (m)	#74.3	126.6	22.6	#80.8	#233.6	33.7	37.6	84.4	10.3	37.7	130.4	13.3
Internal Link Dist (m)		231.2			216.3			258.7			257.3	
Turn Bay Length (m)	40.0		45.0	125.0		80.0	50.0		50.0	40.0		35.0
Base Capacity (vph)	160	1281	608	247	1268	647	280	1268	593	391	1281	606
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.64	0.20	0.93	0.98	0.34	0.55	0.46	0.12	0.39	0.66	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	825	121	229	1243	219	153	579	69	154	845	81
Future Volume (vph)	155	825	121	229	1243	219	153	579	69	154	845	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	7.0	7.0	3.0	7.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1767	3535	1546	1767	3500	1529	1766	3500	1518	1777	3535	1553
Flt Permitted	0.07	1.00	1.00	0.19	1.00	1.00	0.19	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	128	3535	1546	356	3500	1529	348	3500	1518	633	3535	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	155	825	121	229	1243	219	153	579	69	154	845	81
RTOR Reduction (vph)	0	0	48	0	0	94	0	0	43	0	0	43
Lane Group Flow (vph)	155	825	73	229	1243	125	153	579	26	154	845	38
Confl. Peds. (#/hr)	26		13	13		26	19		46	46		19
Heavy Vehicles (%)	1%	1%	1%	1%	2%	1%	1%	2%	0%	0%	1%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	custom	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		8	4		4	8		8
Actuated Green, G (s)	68.0	58.0	58.0	68.0	58.0	58.0	71.0	58.0	58.0	71.0	58.0	58.0
Effective Green, g (s)	68.0	58.0	58.0	68.0	58.0	58.0	71.0	58.0	58.0	71.0	58.0	58.0
Actuated g/C Ratio	0.42	0.36	0.36	0.42	0.36	0.36	0.44	0.36	0.36	0.44	0.36	0.36
Clearance Time (s)	3.0	7.0	7.0	3.0	7.0	8.0	3.0	8.0	8.0	3.0	8.0	8.0
Lane Grp Cap (vph)	156	1281	560	239	1268	554	269	1268	550	373	1281	562
v/s Ratio Prot	c0.06	0.23		0.06	0.36		c0.05	0.17		0.03	c0.24	
v/s Ratio Perm	c0.36		0.05	0.35		0.08	0.21		0.02	0.15		0.02
v/c Ratio	0.99	0.64	0.13	0.96	0.98	0.23	0.57	0.46	0.05	0.41	0.66	0.07
Uniform Delay, d1	44.8	42.4	34.1	40.5	50.4	35.4	29.8	39.0	33.1	27.7	42.7	33.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	70.4	2.5	0.5	48.3	21.0	0.9	8.5	1.2	0.2	3.4	2.7	0.2
Delay (s)	115.2	44.9	34.6	88.9	71.4	36.4	38.2	40.1	33.2	31.1	45.4	33.6
Level of Service	F	D	C	F	E	D	D	D	C	C	D	C
Approach Delay (s)		53.7			69.2			39.2			42.5	
Approach LOS		D			E			D			D	

Intersection Summary

HCM 2000 Control Delay	54.2	HCM 2000 Level of Service		D		
HCM 2000 Volume to Capacity ratio	0.81					
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		21.0		
Intersection Capacity Utilization	137.1%	ICU Level of Service		H		
Analysis Period (min)	15					

c Critical Lane Group

Appendix C

2025 Traffic Operations Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	12	929	560	145	500	155	451	1455	219	1120	215
v/c Ratio	0.03	1.25	0.81	1.26	0.34	0.23	1.74	1.20	1.39	0.97	0.37
Control Delay	19.5	158.2	37.2	199.4	22.6	4.6	385.1	137.9	238.3	65.0	21.0
Queue Delay	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.4	1.1	0.0	0.0
Total Delay	19.5	160.1	37.2	199.4	22.6	4.6	385.1	138.2	239.4	65.0	21.0
Queue Length 50th (m)	1.6	~294.0	95.0	~31.1	41.9	0.0	~87.6	~236.1	~58.7	147.4	22.2
Queue Length 95th (m)	4.9	#366.0	142.8	#71.1	53.4	11.0	#118.7	#276.0	#106.4	#189.1	42.3
Internal Link Dist (m)		123.4			169.3			128.0		135.7	
Turn Bay Length (m)	105.0		90.0	80.0		45.0	70.0		50.0		40.0
Base Capacity (vph)	377	746	690	115	1482	660	259	1209	157	1159	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	178	0	0	0	0	0	98	9	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.64	0.81	1.26	0.34	0.23	1.74	1.31	1.48	0.97	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	929	560	145	500	155	451	1221	234	219	1120	215
Future Volume (vph)	12	929	560	145	500	155	451	1221	234	219	1120	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7		3.0	6.7	6.7
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.86	1.00	0.95		1.00	1.00	1.00
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1633	1883	1502	1755	3476	1339	3298	3207		1733	3433	1536
Flt Permitted	0.43	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.09	1.00	1.00
Satd. Flow (perm)	738	1883	1502	124	3476	1339	3298	3207		160	3433	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	929	560	145	500	155	451	1221	234	219	1120	215
RTOR Reduction (vph)	0	0	93	0	0	89	0	12	0	0	0	64
Lane Group Flow (vph)	12	929	467	145	500	66	451	1443	0	219	1120	151
Confl. Peds. (#/hr)	139		34	34		139			159	159		
Heavy Vehicles (%)	9%	2%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4				2		2
Actuated Green, G (s)	59.9	57.3	57.3	64.7	59.7	59.7	11.0	50.5		53.5	45.5	45.5
Effective Green, g (s)	59.9	57.3	57.3	64.7	59.7	59.7	11.0	50.5		53.5	45.5	45.5
Actuated g/C Ratio	0.43	0.41	0.41	0.46	0.43	0.43	0.08	0.36		0.38	0.32	0.32
Clearance Time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7		3.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	332	770	614	115	1482	570	259	1156		151	1115	499
v/s Ratio Prot	0.00	0.49		c0.04	0.14		c0.14	c0.45		0.08	0.33	
v/s Ratio Perm	0.01		0.31	c0.54		0.05				c0.47		0.10
v/c Ratio	0.04	1.21	0.76	1.26	0.34	0.12	1.74	1.25		1.45	1.00	0.30
Uniform Delay, d1	23.2	41.4	35.5	35.2	26.9	24.2	64.5	44.8		36.8	47.2	35.4
Progression Factor	1.00	1.00	1.00	1.60	0.79	0.91	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	105.0	8.6	168.7	0.6	0.4	349.2	119.3		235.7	28.0	1.6
Delay (s)	23.2	146.4	44.1	225.1	21.9	22.5	413.7	164.0		272.5	75.3	36.9
Level of Service	C	F	D	F	C	C	F	F		F	E	D
Approach Delay (s)		107.2			58.8			223.1			97.8	
Approach LOS		F			E			F			F	

Intersection Summary				
HCM 2000 Control Delay	136.3	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.39			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	129.1%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	156	888	349	224	805	168	973	326	304	1301	129
v/c Ratio	0.86	0.82	0.82	0.90	0.95	0.70	0.68	0.44	0.75	0.88	0.19
Control Delay	67.3	63.1	46.9	81.8	70.7	49.0	37.0	12.2	71.3	44.4	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	63.1	46.9	81.8	70.7	49.0	37.0	12.2	71.3	44.4	11.2
Queue Length 50th (m)	35.1	71.7	52.7	29.0	100.4	27.8	107.7	18.9	38.9	157.7	7.7
Queue Length 95th (m)	m40.3	m81.6	m63.8	m#49.0	#132.1	#56.9	131.7	43.2	53.0	187.0	19.7
Internal Link Dist (m)		365.4			367.5		276.4			257.2	
Turn Bay Length (m)	160.0		20.0	70.0		65.0		60.0	60.0		55.0
Base Capacity (vph)	181	1105	432	248	858	239	1423	737	451	1483	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.80	0.81	0.90	0.94	0.70	0.68	0.44	0.67	0.88	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	888	349	224	472	333	168	973	326	304	1301	129
Future Volume (vph)	156	888	349	224	472	333	168	973	326	304	1301	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	6.9	6.9	5.0	6.9		3.0	7.5	7.5	5.0	7.5	7.5
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1722	5142	1515	3161	3248		1580	3433	1479	3330	3433	1472
Flt Permitted	0.14	1.00	1.00	0.95	1.00		0.07	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	246	5142	1515	3161	3248		117	3433	1479	3330	3433	1472
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	156	888	349	224	472	333	168	973	326	304	1301	129
RTOR Reduction (vph)	0	0	107	0	91	0	0	0	124	0	0	44
Lane Group Flow (vph)	156	888	242	224	714	0	168	973	202	304	1301	85
Confl. Peds. (#/hr)	1		3	3		1	1					1
Heavy Vehicles (%)	6%	2%	6%	12%	4%	6%	13%	4%	8%	4%	4%	7%
Turn Type	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8				6		6			2
Actuated Green, G (s)	39.5	29.5	29.5	11.0	32.5		74.6	58.0	58.0	17.1	60.5	60.5
Effective Green, g (s)	39.5	29.5	29.5	11.0	32.5		74.6	58.0	58.0	17.1	60.5	60.5
Actuated g/C Ratio	0.28	0.21	0.21	0.08	0.23		0.53	0.41	0.41	0.12	0.43	0.43
Clearance Time (s)	3.0	6.9	6.9	5.0	6.9		3.0	7.5	7.5	5.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	174	1083	319	248	754		235	1422	612	406	1483	636
v/s Ratio Prot	0.06	0.17		c0.07	c0.22		0.08	0.28		c0.09	c0.38	
v/s Ratio Perm	0.19		0.16				0.30		0.14			0.06
v/c Ratio	0.90	0.82	0.76	0.90	0.95		0.71	0.68	0.33	0.75	0.88	0.13
Uniform Delay, d1	41.9	52.7	51.9	64.0	52.9		35.7	33.5	27.8	59.4	36.4	24.0
Progression Factor	1.37	1.13	1.23	0.75	1.14		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.6	2.3	4.7	29.4	18.6		17.0	2.7	1.4	7.4	7.6	0.4
Delay (s)	79.8	61.9	68.3	77.2	79.1		52.7	36.2	29.3	66.8	44.0	24.4
Level of Service	E	E	E	E	E		D	D	C	E	D	C
Approach Delay (s)		65.5			78.7			36.6			46.5	
Approach LOS		E			E			D			D	

Intersection Summary

HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.4
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	98	557	651	278	1064	258	455	1130	192	340	123
v/c Ratio	0.62	0.91	0.92	1.10	0.78	0.39	0.99	0.95	0.99	0.34	0.25
Control Delay	39.6	65.8	40.1	117.9	55.8	25.9	99.2	59.4	97.6	40.9	5.8
Queue Delay	0.0	3.5	0.0	0.0	0.9	0.0	0.0	0.0	37.4	0.0	0.0
Total Delay	39.6	69.3	40.1	117.9	56.6	25.9	99.2	59.4	134.9	40.9	5.8
Queue Length 50th (m)	13.6	136.2	87.7	~65.2	140.6	36.8	60.5	145.0	34.2	36.3	0.0
Queue Length 95th (m)	#24.3	#197.2	#160.6	#113.8	161.6	63.5	#92.6	#185.8	#80.4	49.1	11.1
Internal Link Dist (m)		123.4			167.6			128.0		135.7	
Turn Bay Length (m)	105.0		90.0	80.0		45.0	70.0		50.0		40.0
Base Capacity (vph)	158	612	711	252	1368	657	460	1193	194	1002	495
Starvation Cap Reductn	0	0	0	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	23	0	0	0	0	0	0	44	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.95	0.92	1.10	0.84	0.39	0.99	0.95	1.28	0.34	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	557	651	278	1064	258	455	943	187	192	340	123
Future Volume (vph)	98	557	651	278	1064	258	455	943	187	192	340	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7		3.0	6.7	6.7
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00	0.93	1.00	0.97		1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1689	1902	1487	1806	3614	1504	3395	3330		1748	3535	1403
Flt Permitted	0.12	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.10	1.00	1.00
Satd. Flow (perm)	214	1902	1487	163	3614	1504	3395	3330		185	3535	1403
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	557	651	278	1064	258	455	943	187	192	340	123
RTOR Reduction (vph)	0	0	233	0	0	88	0	12	0	0	0	88
Lane Group Flow (vph)	98	557	418	278	1064	170	455	1118	0	192	340	35
Confl. Peds. (#/hr)	63		65	65		63	65		72	72		65
Heavy Vehicles (%)	8%	1%	2%	1%	1%	1%	2%	2%	1%	2%	1%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4				2		2
Actuated Green, G (s)	52.2	45.1	45.1	63.1	53.0	53.0	19.0	49.7		50.7	39.7	39.7
Effective Green, g (s)	52.2	45.1	45.1	63.1	53.0	53.0	19.0	49.7		50.7	39.7	39.7
Actuated g/C Ratio	0.37	0.32	0.32	0.45	0.38	0.38	0.14	0.36		0.36	0.28	0.28
Clearance Time (s)	3.0	6.5	6.5	3.0	6.5	6.5	5.0	6.7		3.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	154	612	479	249	1368	569	460	1182		189	1002	397
v/s Ratio Prot	0.03	0.29		c0.12	0.29		c0.13	0.34		0.08	0.10	
v/s Ratio Perm	0.20		0.28	c0.38		0.11				c0.29		0.02
v/c Ratio	0.64	0.91	0.87	1.12	0.78	0.30	0.99	0.95		1.02	0.34	0.09
Uniform Delay, d1	32.0	45.5	44.8	42.4	38.3	30.5	60.4	43.9		36.5	39.8	36.8
Progression Factor	1.00	1.00	1.00	1.13	1.36	1.78	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.3	19.9	19.4	84.1	3.3	1.0	38.7	16.1		69.7	0.9	0.4
Delay (s)	40.3	65.5	64.1	131.9	55.2	55.3	99.1	59.9		106.1	40.7	37.3
Level of Service	D	E	E	F	E	E	F	E		F	D	D
Approach Delay (s)		62.9			68.6			71.2			59.2	
Approach LOS		E			E			E			E	

Intersection Summary

HCM 2000 Control Delay	66.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues
6: Cawthra Rd & Queensway E

200552 RPeel
2025 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	132	681	227	546	1861	214	700	260	195	1436	199
v/c Ratio	0.81	0.55	0.48	0.84	1.36	1.27	0.62	0.39	0.80	1.18	0.32
Control Delay	63.8	41.9	19.5	55.3	208.5	190.1	42.7	5.8	87.3	132.2	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	41.9	19.5	55.3	208.5	190.1	42.7	5.8	87.3	132.2	15.4
Queue Length 50th (m)	13.2	56.6	22.0	71.7	~334.3	~53.2	79.2	0.4	25.7	~231.0	14.6
Queue Length 95th (m)	#49.7	67.8	41.4	m70.8	m#327.3	#100.5	98.4	18.1	#42.9	#270.3	32.8
Internal Link Dist (m)		365.4			367.5		276.4			257.2	
Turn Bay Length (m)	160.0		20.0	70.0		65.0		60.0	60.0		55.0
Base Capacity (vph)	162	1246	476	718	1364	168	1137	666	244	1212	615
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.55	0.48	0.76	1.36	1.27	0.62	0.39	0.80	1.18	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Cawthra Rd & Queensway E

200552 RPeel
2025 PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	681	227	546	1434	427	214	700	260	195	1436	199
Future Volume (vph)	132	681	227	546	1434	427	214	700	260	195	1436	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.0	6.9	6.9	5.0	6.9		3.0	7.5	7.5	5.0	7.5	7.5
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1789	5142	1588	3471	3479		1733	3500	1515	3429	3500	1557
Flt Permitted	0.12	1.00	1.00	0.95	1.00		0.09	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	222	5142	1588	3471	3479		160	3500	1515	3429	3500	1557
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	681	227	546	1434	427	214	700	260	195	1436	199
RTOR Reduction (vph)	0	0	92	0	20	0	0	0	174	0	0	76
Lane Group Flow (vph)	132	681	135	546	1841	0	214	700	86	195	1436	123
Confl. Peds. (#/hr)	1		4	4		1	2		1	1		2
Heavy Vehicles (%)	2%	2%	1%	2%	1%	1%	3%	2%	4%	1%	2%	1%
Turn Type	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8				6		6			2
Actuated Green, G (s)	41.9	33.9	33.9	26.2	54.1		54.5	45.5	45.5	10.0	48.5	48.5
Effective Green, g (s)	41.9	33.9	33.9	26.2	54.1		54.5	45.5	45.5	10.0	48.5	48.5
Actuated g/C Ratio	0.30	0.24	0.24	0.19	0.39		0.39	0.32	0.32	0.07	0.35	0.35
Clearance Time (s)	3.0	6.9	6.9	5.0	6.9		3.0	7.5	7.5	5.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	1245	384	649	1344		163	1137	492	244	1212	539
v/s Ratio Prot	0.05	0.13		c0.16	c0.53		c0.08	0.20		0.06	c0.41	
v/s Ratio Perm	0.20		0.09				c0.42		0.06			0.08
v/c Ratio	0.85	0.55	0.35	0.84	1.37		1.31	0.62	0.17	0.80	1.18	0.23
Uniform Delay, d1	40.5	46.3	44.0	54.9	42.9		36.1	39.9	33.8	64.0	45.8	32.5
Progression Factor	0.94	0.86	0.75	0.93	1.39		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.3	0.5	0.6	3.3	168.1		177.5	2.5	0.8	16.5	91.8	1.0
Delay (s)	71.2	40.1	33.3	54.3	227.7		213.6	42.4	34.6	80.5	137.5	33.5
Level of Service	E	D	C	D	F		F	D	C	F	F	C
Approach Delay (s)		42.6			188.4			71.9			120.2	
Approach LOS		D			F			E			F	

Intersection Summary

HCM 2000 Control Delay	124.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.4
Intersection Capacity Utilization	130.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group