TRANSPORTATION IMPACT STUDY
& PARKING JUSTIFICATION STUDY

1511 OLD PLAINS ROAD
CITY OF BURLINGTON
REGION OF HALTON

PREPARED FOR:

1535 PLAINS ROAD WEST INC. AND 1511 OLD PLAINS ROAD INC.

PREPARED BY:

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DECEMBER 2024

CFCA FILE NO. 2472-6716

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CROZIER
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Revision Number	Date	Comments
Rev.1	December 2024	Issued for Submission

EXECUTIVE SUMMARY

C.F. Crozier & Associates Inc. (Crozier) was retained by 1535 Plains Road West Inc. and 1511 Old Plains Road Inc. to undertake a Transportation Impact Study in support of the Official Plan Amendment and Zoning By-Law Amendment for the residential development located at 1511 Old Plains Road, in the City of Burlington. The purpose of the study is to assess the impacts of the proposed development on the boundary road network and to recommend required mitigation measures, if warranted. This study has been completed in conformance with General Guidelines for the Preparation of Traffic Impact Studies (MTO, 2021) and the Region of Halton's Transportation Impact Study Guidelines.

The analysis undertaken herein was completed using the latest Site Plan prepared by Graziani Corazza Architects, dated December 13, 2024, Any minor changes to the Site Plan will not materially affect the conclusions set out within this report.

The proposed development envisions the construction 75 stacked townhomes built over two phases. The development will be facilitated by 75 resident and 11 visitor parking spaces. The Site Access will take place via Old Plains Road. Old Plains Road will be reconstructed as part of the development.

The intersections included as part of this study are listed below and were confirmed as part of the terms of reference correspondence with MTO and City staff.

- Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized, MTO)
- Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized, MTO)
- Plains Road West at Old York Road (Unsignalized, Burlington)
- Plains Road West and York Boulevard (Signalized, Burlington)
- Proposed site access via Old Plains Road

<u>2024 Existing Conditions</u>

Turning movement count (TMC) surveys were conducted on July 12, 2023, and were grown to the 2024 existing condition based on growth rates provided by the City and MTO. The grown 2024 volumes were applied for the operational assessment of the study intersections. Intersections operations were modelled using Synchro 11 and SimTraffic modelling software, in accordance with relevant municipal and provincial guidelines, and were assessed based on "Highway Capacity Manual (HCM)" criteria.

Under the existing conditions scenario, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is operating below capacity at a LOS "F" during p.m. peak hour.

All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.

2036 Future Background Conditions

For the future background conditions assessment, the 2026, 2031, and 2036 horizon years were considered for the study.

Under 2036 future background conditions, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is projected to operate below capacity at a LOS "E" and "F" during the a.m. and p.m. peak hours, respectively.

Furthermore, the stop-controlled minor intersection of Plains Road West at Old York Road is projected to operate below capacity at a LOS "C" and "F" during the a.m. and p.m. peak hours, respectively.

All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.

The following Signal Timing Plan improvements are expected to improve 2036 Future Background operations:

- Plains Road West at York Road/Old York Road
    - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
    - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing
- Highway 6 Southbound On/Off-Ramp at York Road
    - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
    - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing

It should be noted that the Master Transportation Study prepared by RJ Burnside for the site located at 1535 Plains Road recommends a single lane roundabout at the intersection of Highway 6 Southbound On/Off-Ramp at York Road to manage capacity issues. This report, however, advises signalization for the intersection due to grading and spacing constraints that would hinder the feasibility of a roundabout solution.

It is recommended that the signalization of these intersections be implemented in the 2026 horizon year.

2036 Future Total Conditions

The proposed development is forecasted to generate 34 two-way (7 inbound and 23 outbound) trips during the weekday morning peak hour, and a trip generation of 43 (27 inbound and 14 outbound) trips during the weekday afternoon peak hour.

The study intersections are forecasted to operate at similar Levels of Service in the Future Total conditions when compared to Future Background Conditions. Similarly to Future Background Conditions, the intersections of Plains Road West at York Road/Old York Road at Highway 6 Southbound On/Off-Ramp at York Road are expected to operate below capacity with considerable delays and v/c ratios.

However, utilizing the Future Background recommendations, all intersections are expected to operate efficiently with reserve capacity to accommodate future increases in traffic volumes.

It is further noted that no new critical movements were identified as a result of the proposed development's site traffic and that all recommendations are due to background growth traffic based on the City and MTO's provided growth rates.

Based on the analyses of the future total conditions, the development proposal is expected to have negligible impact on traffic operations within the study road network and can therefore be supported from a transportation operations perspective.

Vehicle Maneuverability Assessment and Sight Lines Assessment

A vehicle maneuvering assessment was conducted and the subject development can accommodate all design vehicles expected to maneuver within the site including Passenger Vehicles, Halton FL Garbage Trucks, and Region of Halton Pumper Fire Trucks.

Additionally, a sight lines assessment was conducted for the intersection of Plains Road West at Old Plains Road. The assessment confirmed that sight lines are expected to be adequate for safe and efficient vehicle movements within and around the intersection.

Parking and Loading Review

The development meets the occupant parking spaces, bicycle parking spaces, accessible parking spaces, and loading space requirements when compared to the City of Burlington Zoning By-Law 2020.

However, the proposed visitor parking supply is deficient by 2 and 6 spaces in Phase 1 and Phase 2, respectively. Based on the peak visitor parking rate observed at the proxy site, the proposed visitor parking supply of 11 spaces would result in a surplus of 3 spaces. Furthermore, any additional visitor parking demand beyond 11 spaces could be accommodated along the shoulders Old Plains Road or within the existing adjacent MTO carpool lot.

Transportation Demand Management

The existence of local transit, combined with the provision of pedestrian infrastructure within the Site Plan, as well as the availability of several Transportation Demand Management options for the development, are expected to support non-auto forms of travel to and from the site.

Conclusion

In conclusion, the proposed residential development at 1511 Old Plains Road in the City of Burlington, Region of Halton, can be supported from a transportation perspective.

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1.0 Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by 1535 Plains Road West Inc. and 1511 Old Plains Road Inc. to undertake a Transportation Impact Study in support of the Official Plan Amendment and Zoning By-Law Amendment for the residential development located at 1511 Old Plains Road, in the City of Burlington. The purpose of the study is to assess the impacts of the proposed development on the boundary road network and to recommend required mitigation measures, if warranted.

This study has been completed in accordance with the General Guidelines for the Preparation of Traffic Impact Studies (MTO, 2021). Further, the scope of work and terms of reference was coordinated with the MTO and City of Burlington staff via email correspondence. Correspondence from the City and MTO is included in **Appendix A**.

1.1 Development Lands

The subject lands cover an area of approximately 1.08 ha and currently consist of open green space and forestry. The property, located in a mixed-use greenfield and residential neighbourhood, is bounded by a Car Pool Parking Lot to the north, Plains Road West to the East, Old Plains Road to the south and Highway 6 to the West. The Site Location is included as **Figure 1.**

1.2 Development Proposal

The proposed residential development envisions the construction of 75 stacked townhome units to be constructed over two phases. The development statistics have been summarized in **Table 1** below.

Table 1: Development Statistics

Phase	Anticipated Build-out	Units	Residential Parking	Visitor Parking
1	2025	51	51	11
2	2026	24	24	0
Total		75	75	11

The main site access is expected to occur from the full-moves access via Old Plains Road. It is expected that a portion of Old Plains Road will need be reconstructed for grading purposes.

The most recent Site Plan prepared by Graziani Corazza Architects (dated December 13, 2024) for phase 1 and phase 2 of the development are included as **Figure 2A and B**, respectively.



Legend	1535 Plains Road West & 1511 Old Plains Road West	CROZIER CONSULTING ENGINEERS	Figure 1
Site Location	Site Location		Project No. 2472-6716 Date. 12/4/2024 Analyst. TDS



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PROPSED RESIDENTIAL DEVELOPMENT

1511 OLD PLAINS ROAD

address

BURLINGTON ON

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ASSISTANT DESIGNER:	C.KOTVA
DRAWN BY:	C.KOTVA/ RALANI
CHECKED BY:	____
PLOT DATE:	DEC.19.2024
JOB #	2079.22

SITE PLAN - PHASE 1

1:250

A102

TITLEBLOCK SIZE: 610 x 900

FIGURE 2A



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DRAWN BY:	C.KOTVA/ RALANI
CHECKED BY:	____
PLOT DATE:	DEC.19.2024
JOB #	2079.22

SITE PLAN - PHASE 2

1:250

A103

TITLEBLOCK SIZE: 610 x 900

FIGURE 2B

2.0 Existing Conditions

The Transportation Impact Study analyzes the following study intersections as confirmed through Terms of Reference correspondence (refer to **Appendix A**).

- Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized, MTO)
- Highway 6 Northbound On/Off-Ramp at Old York Road (Unsignalized, MTO)
- Plains Road West at York Road/ Old York Road (Unsignalized, Burlington)
- Plains Road West and York Boulevard (Signalized, Burlington)
- Proposed site access via Old Plains Road

2.1 Study Road Network

The boundary road network is described in **Table 1** below.

Table 2: Boundary Road Network

Feature	Roadway			
	Plains Road West	**York Road**	**York Boulevard**	**Highway 6**
Alignment	Two-Way (North-South)[2]	Two-Way (East-West)	Two-Way (North-South)	Two-Way (North-South)
Classification[1]	Multi-Purpose Arterial	Arterial	Major Arterial	Provincial Highway
Jurisdiction	City of Burlington	City of Hamilton	City of Hamilton	MTO
Speed Limit	50 km/h	50 km/h	50 km/h	90 km/h
Pedestrian Facilities	Yes (One Side)	No	Yes (Both Sides)	No
Cycling Facilities	Yes (Both Sides)	No	Yes (Both Sides)	No

Note 1: Roadway classification per the City of Burlington Official Plan and City of Hamilton Official Plan.
Note 2: North-South at the site frontage.

Table 2 outlines the existing traffic control, configurations, and pedestrian crossing provisions at the study intersections on the boundary road network.

Table 3: Study Intersections

Intersection	Control	App.[1]	Major Street	Lane Configurations	Pedestrian Crossing
Plains Road West and York Boulevard	Signal	3	York Boulevard	EBL; EBTx2; WBTx2; WBR; SBL; SBR	Marked crosswalks – All approaches
Plains Road West at Old York Road	Stop Minor	3	Old York Road	EBTR; WBLT; NBLR	None
Highway 6 Southbound On/Off-Ramp at York Road	Stop Minor	3	York Road	EBTR; WBLT; SBLTR	None
Highway 6 Northbound On/Off-Ramp and Old York Road	Stop Minor	3	Old York Road	EBLT; WBTR; SBLR	None

Note 1: App. - number of approaches for a given intersection.

Figure 3 illustrates the existing boundary road network, including lane configurations, lane storage lengths, and intersection control.

2.2 Transit Network

The existing transit services near the subject site are outlined in **Table 4** below.

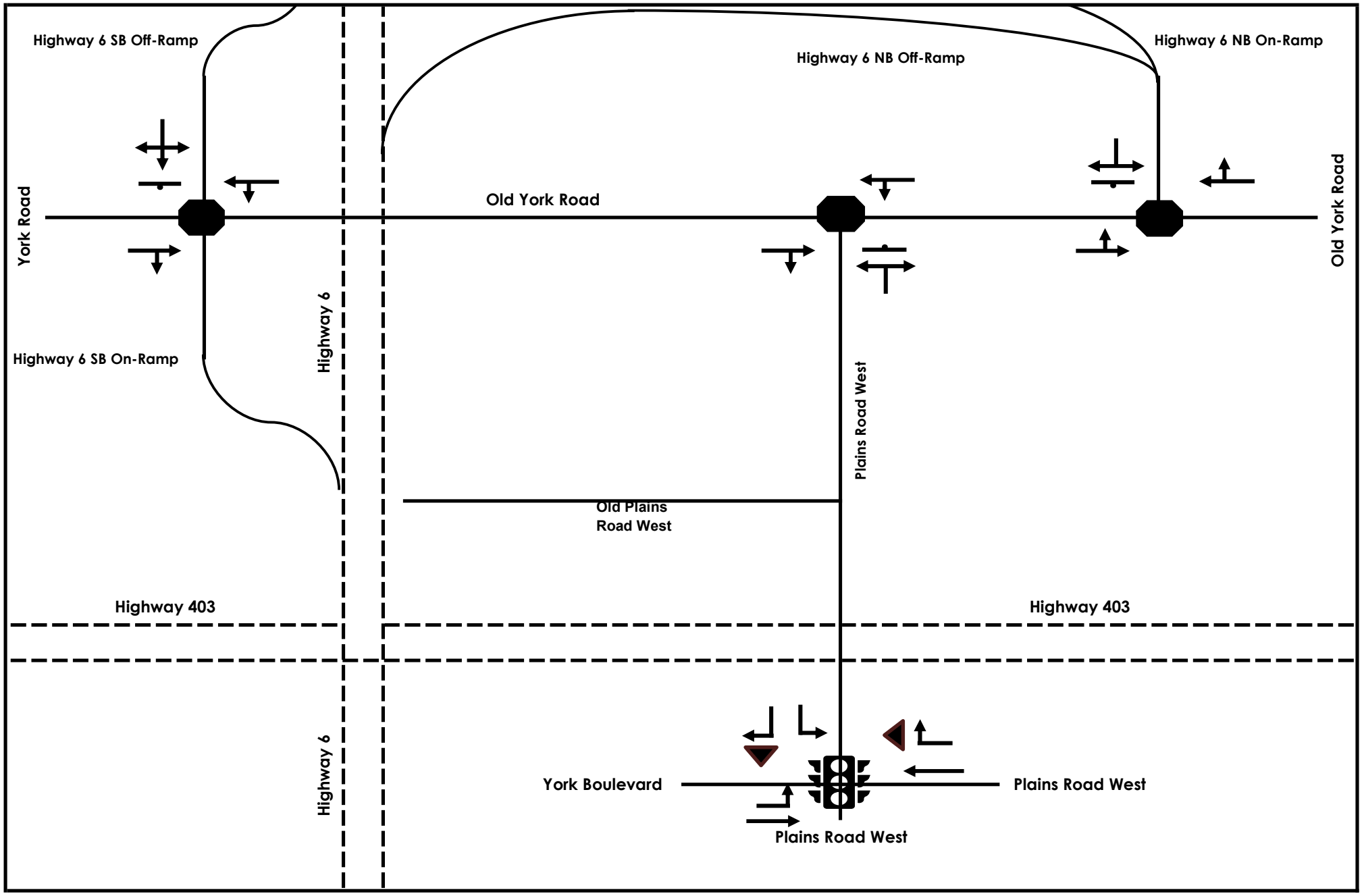
Table 4: Existing Transit Services

Route	Start and End Points	Times of Operation	Peak Hour Headways	Direction 1 Transit Stop	Direction 2 Transit Stop
Hamilton Transit Route 9 Rock Gardens	James and Main to Rock Gardens, Woodland Cemetery and Holy Sepulchre Cemetery	Between 10 am and 4 pm on Sundays and holidays only	60 min	York Boulevard at Plains Road (600 m; 8 min)	Plains Road at York Boulevard (600 m; 8 min)
Burlington Transit Route 1 Plains/Fair view	King St at James St (Hamilton) to Appleby Go Station	Monday to Sunday	10 min	Royal Botanical Gardens (1100 m; 14 min)	Royal Botanical Gardens (1100 m; 14 min)

Furthermore, route 1 terminates at Appleby Go Station which supports transit routes, with several bus route connections. In addition to the bus routes highlighted in Table 3, the Appleby Go Station provides GO Train services along the Lakeshore West Line. Further, The GO Transit allow commuters to access the Greater Toronto Area (GTA) more easily. Transit excerpts are provided in **Appendix B**.

2.3 Active Transportation Network

As outlined in **Table 1**, a network of active transportation facilities within the study area exists. Concrete sidewalks and cycling facilities are located on both sides of Plains Road West and York Boulevard. Further, pedestrian crosswalk pavement markings and provision of pedestrian signal phases as part of the signal timing plans (included in **Appendix C**) allow for safe pedestrian movement at the intersection of York Boulevard at Plains Road West. The existing pedestrian facilities provide good pedestrian connection to transit stops and local destinations within the study area.



Legend

- Stop Sign
- Stop-controlled intersection
- Signalized intersection
- Yield Control Channelized Right-Turn

1535 Plains Road West & 1511 Old Plains Road West

Existing Road Network

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Figure 3

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2.4 Traffic Growth Rates

The City of Burlington and MTO provided growth rates to be used within the study network, the growth rates used are provided in **Table 5** below. The correspondence with the City and Region can be found in **Appendix D.**

Table 5: Background Growth Rates

Roadway	Growth Rates	
	A.M.	P.M.
Highway 6 (MTO)	2.6%	2.6%
York Boulevard	1.0%	1.0%
Plains Road West	1.0%	1.0%
Old Plains Road	1.0%	1.0%
Old York Road	1.0%	1.0%
York Road	1.0%	1.0%

2.5 Traffic Data

In accordance with the City and Region Terms of Reference, new turning movement counts for the 2024 existing condition were collected at the following intersections by Spectrum Traffic Inc. at the associated timeframes as summarized in **Table 6.**

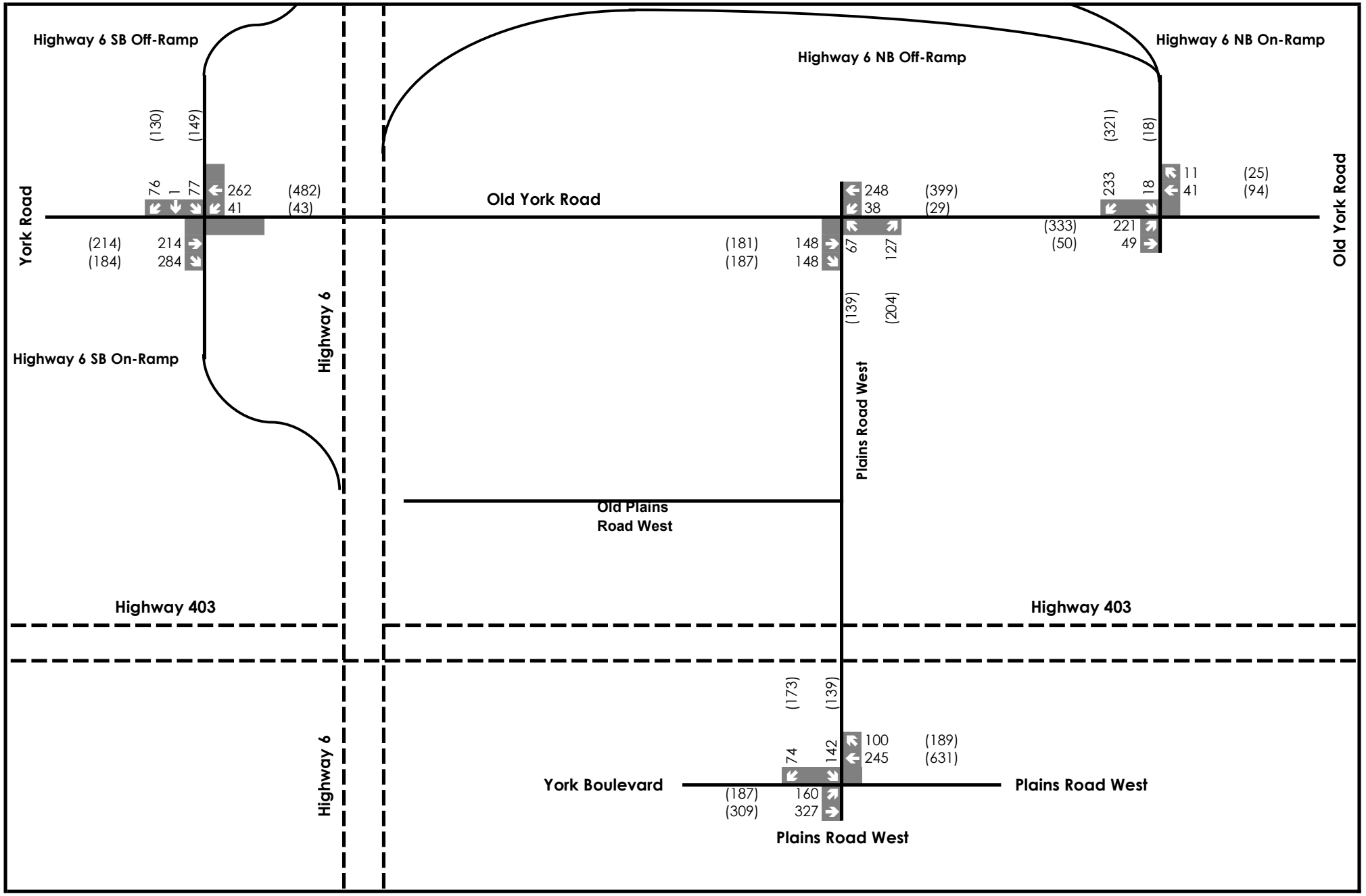
Signal timing plans for the study intersection were provided by City of Burlington staff for modelling purposes.

Table 6: Traffic Data

Intersection	TMC Date	Timing Plan Date Obtained
Plains Road West and York Boulevard	July 12, 2023	December 13, 2024
Plains Road West at York Road/ Old York Road	July 12, 2023	N/A
Highway 6 Southbound On/Off-Ramp at York Road	July 12, 2023	N/A
Highway 6 Northbound On/Off-Ramp at Old York Road	July 12, 2023	N/A

The traffic count data and signal timing plans are provided in **Appendix C.** The 2023 Turning Movement Counts were grown to the 2024 existing condition based on the growth rates shown in **Section 2.4**, the 2024 Existing Traffic Volumes are illustrated in **Figure 4.**

Signal Timing Plans were requested from the City of Burlington at the study intersection of Plains Road West and York Boulevard and were applied to the existing conditions operational analysis. Additionally, these signal timing plans were maintained through the 2026, 2031 and 2036 study horizon years. Provided Signal Timing Plans are included in **Appendix C.**



Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

1535 Plains Road West & 1511 Old Plains Road West

Existing Traffic Volumes

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Figure 4

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Date. 12/4/2024
Analyst. TDS

2.6 Traffic Modeling

The traffic operations assessment herein is based on the method outlined in the "Highway Capacity Manual, 2000" using Synchro 11 modeling software. The following sections details the modelling approach employed for analysis.

2.6.1 Level of Service

Intersections are assessed using a Level of Service metric, with ranges of delay assigned a letter from "A" to "F". A Level of Service "A" or "B" would typically be measured during off-peak hours when lesser traffic volumes are on the roadways with minimal delays to traffic. Levels of Service "C" through "F" would typically be measured in the commuter peak hours when greater vehicle volumes cause delays and longer travel times. The Level of Service (LOS) definitions for signalized and stop-controlled intersections are included in **Appendix D**.

2.6.2 Synchro 11 Modelling Parameters and Peak Hour Factors

The boundary road network was modelled in conformance with General Guidelines for the Preparation of Traffic Impact Studies (MTO, 2021) and Region of Halton's Transportation Impact Study Guidelines. Unless otherwise noted, the existing traffic conditions on the study road network were modelled using the default Synchro parameters. Roadway geometrics were modelled based on the existing study road network description outlined in **Table 2** and **Table 3**.

Peak hour factors used for analysis were determined based on existing traffic volumes and are summarized in Table 5**Table 7.**

Table 7: Peak Hour Factors

Intersection	Peak Hour Factor	
	AM Peak Hour	PM Peak Hour
Plains Road West and York Boulevard	0.95	0.96
Plains Road West at York Road/ Old York Road	0.89	0.94
Highway 6 Southbound On/Off-Ramp at York Road	0.90	0.95
Highway 6 Northbound On/Off-Ramp at Old York Road	0.90	0.97

The remaining modeling parameters with regards to detector locations, lead lagging settings etc. were also calibrated per the Region's Synchro guideline.

2.6.3 Critical Volume-To-Capacity Thresholds

Halton Region considers a movement to be critical when the volume-to-capacity ratio exceeds 0.85 for through or shared through/turning movements, and 0.95 for exclusive turning movements. Therefore, in the traffic operations analysis, the maximum volume-to-capacity (v/c) ratio as well as the v/c ratios which exceed the critical thresholds are identified.

Further, the MTO considers a movement to be critical when the volume-to-capacity exceeds 0.75 for an off-ramp approach at a ramp terminal or exceeds 0.85 for all other movements at an intersection under MTO jurisdiction. The Highway 6 On/Off ramp intersections with York Road and Old York Road were assessed using these critical thresholds.

2.7 Intersection Operations

The traffic operations at the study intersections were analyzed based on the 2024 existing traffic volumes illustrated in **Figure 4**. Detailed capacity analysis worksheets are included in **Appendix E**. **Table 5** outlines the 2024 existing traffic operations.

Table 5: 2024 Existing Traffic Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**10.9**	**10.9**	**0.49**	**0.48**
	EBL	A	A	5.2	6.3	0.22	0.34
	EBT	A	A	5.6	5.6	0.15	0.14
	EBT2	A	A	5.6	5.6	0.15	0.14
	WBT	B	B	10.9	12.7	0.14	0.36
	WBT2	B	B	10.9	12.7	0.14	0.36
	WBR	A	A	3.1	2.6	0.12	0.21
	SBL	D	D	35.4	35.1	0.49	0.48
	SBR	A	A	9.0	8.0	0.24	0.43
Plains Road West at Old York Road (Unsignalized)	**Overall**	**B**	**D**	**14.1**	**27.9**	**0.36**	**0.72**
	EBTR	-	-	0.0	0.0	0.20	0.23
	WBTL	A	A	1.4	0.8	0.04	0.03
	NBLR	B	D	14.1	27.9	0.36	0.72
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**C**	**F**	**20.0**	**69.8**	**0.43**	**0.93**
	EBTR	-	-	0.0	0.0	0.33	0.25
	WBTL	A	A	1.7	1.1	0.05	0.04
	SBLTR	C	F	20.0	69.8	0.43	0.93
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**B**	**10.8**	**12.8**	**0.32**	**0.44**
	EBTL	A	A	6.6	7.4	0.16	0.24
	WBTR	-	-	0.0	0.0	0.04	0.07
	SBLTR	B	B	10.8	12.8	0.32	0.44

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

As shown in **Table 6,** under 2024 existing conditions scenario, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is operating below capacity at a LOS "F" during p.m. peak hour. Maximum control delays are 20.0 and 69.8 seconds in the a.m. and p.m. peak hours, respectively and the maximum volume-to-capacity ratios are 0.43 (SB) and 0.93 (SB) in the weekday a.m. and p.m. peak hours, respectively.

All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.

3.0 Future Background Conditions

This section summarizes the future background conditions of the study road network and provides details relating to growth rates, future transportation network improvements, and background developments within the study area.

3.1 Study Horizons

To evaluate future traffic operations at the study intersections, the following future scenarios were considered for the analysis:

- Full-buildout year for the development proposal – 2026
- Five-year horizon beyond full-buildout – 2031
- Ten-year horizon beyond full-buildout – 2036

The selected study horizons were confirmed through email correspondence with MTO and City staff.

3.2 Future Roadway Improvements

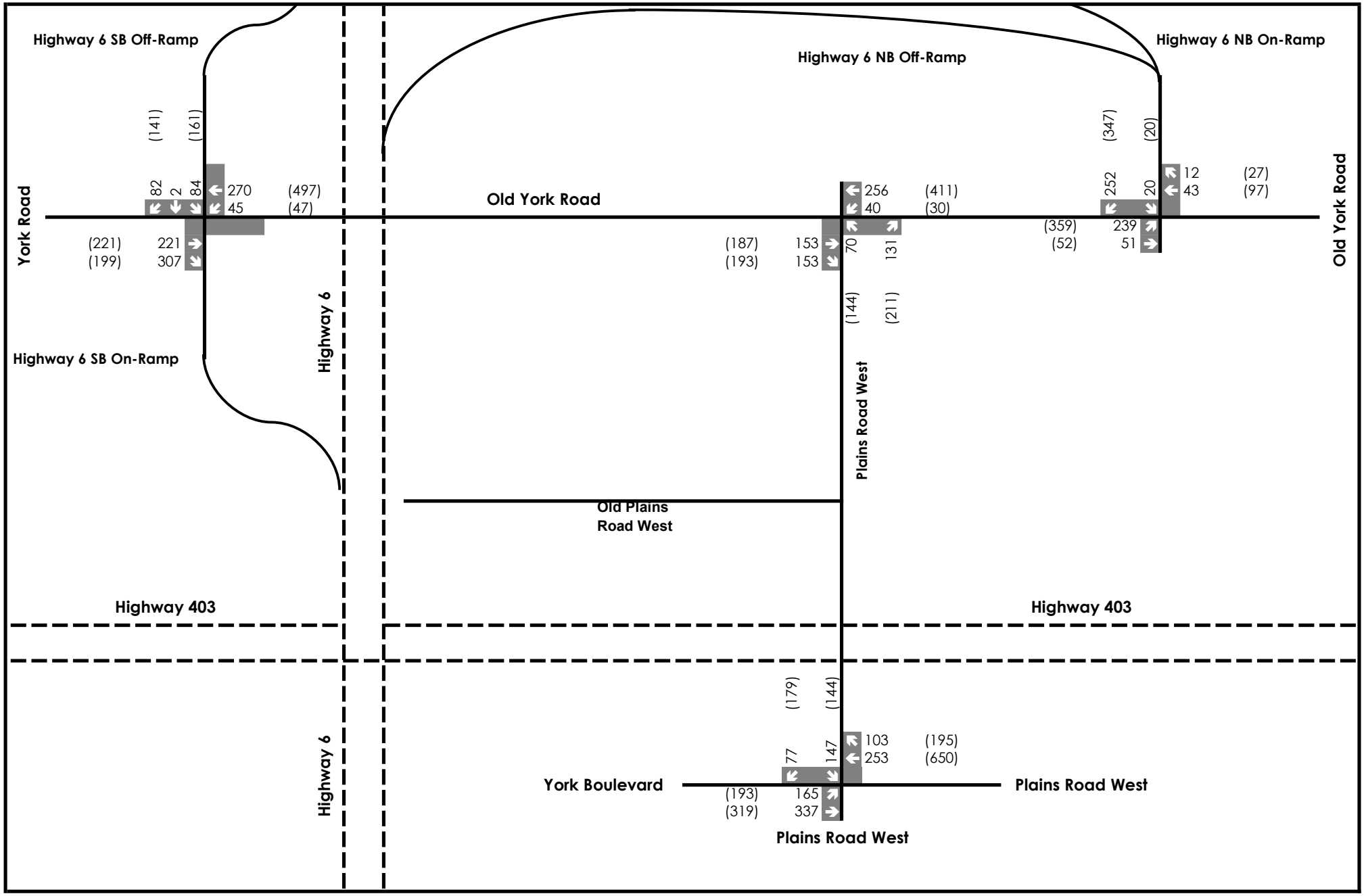
As confirmed by the City and MTO staff, currently, there are no planned improvements to roadway network within the study area. Therefore, the future background and future total analysis herein assumes the existing roadway configurations in the 2026, 2031 and 2036 horizon years.

3.3 Background Developments

As confirmed by the City and MTO staff, no background developments were identified in the vicinity of the site.

3.4 Intersection Operations

The traffic operations at the study intersections were analyzed based on the 2026, 2031 and 2036 future background traffic volumes illustrated in **Figure 5, Figure 6,** and **Figure 7**. Detailed capacity analysis worksheets are included in **Appendix F**. **Table 8, Table 9,** and **Table 10** outline the 2026, 2031 and 2031 future background traffic operations.



Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

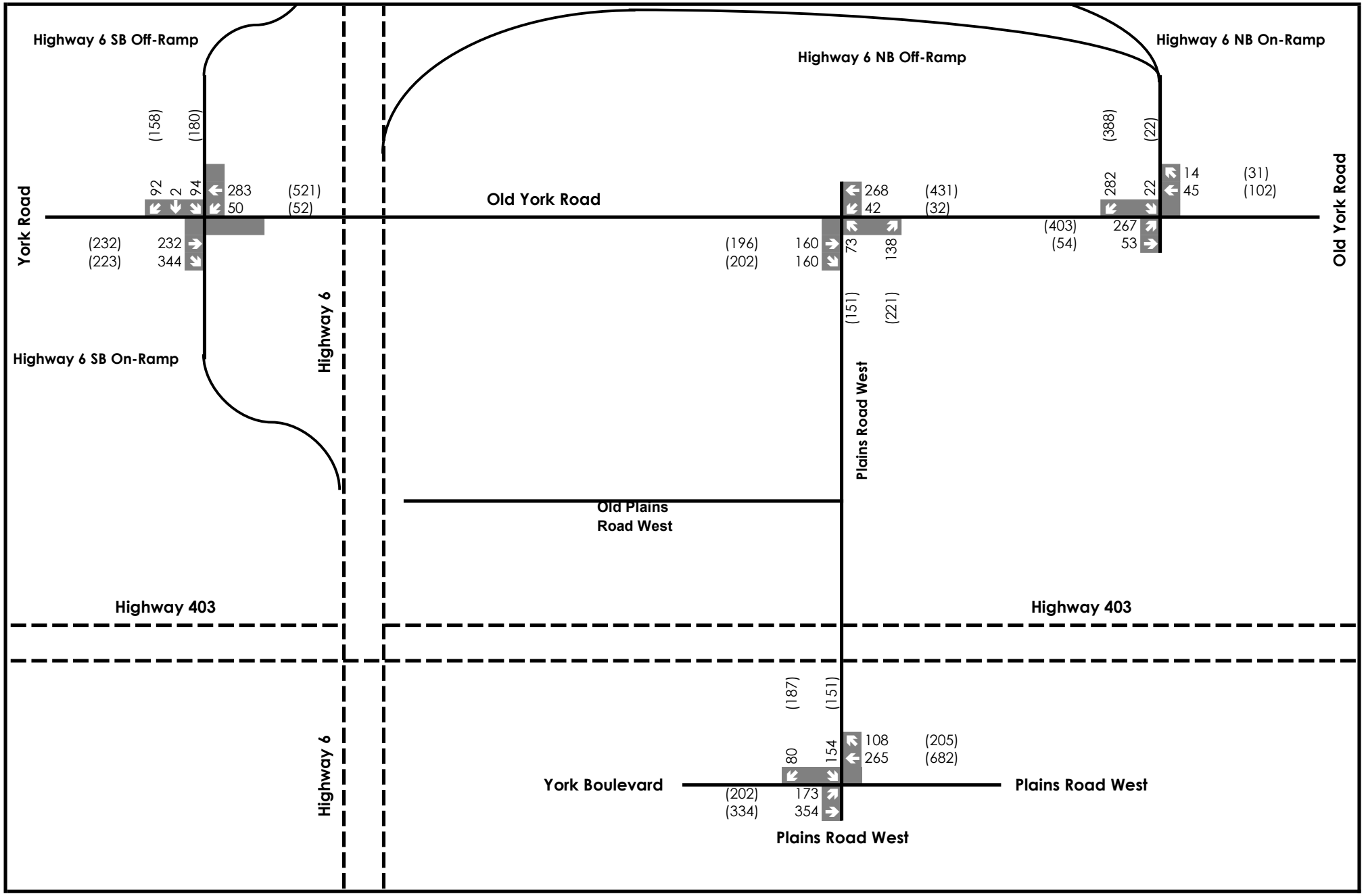
1535 Plains Road West & 1511 Old Plains Road West

2026 Future Background Traffic Volumes

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Figure 5

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Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

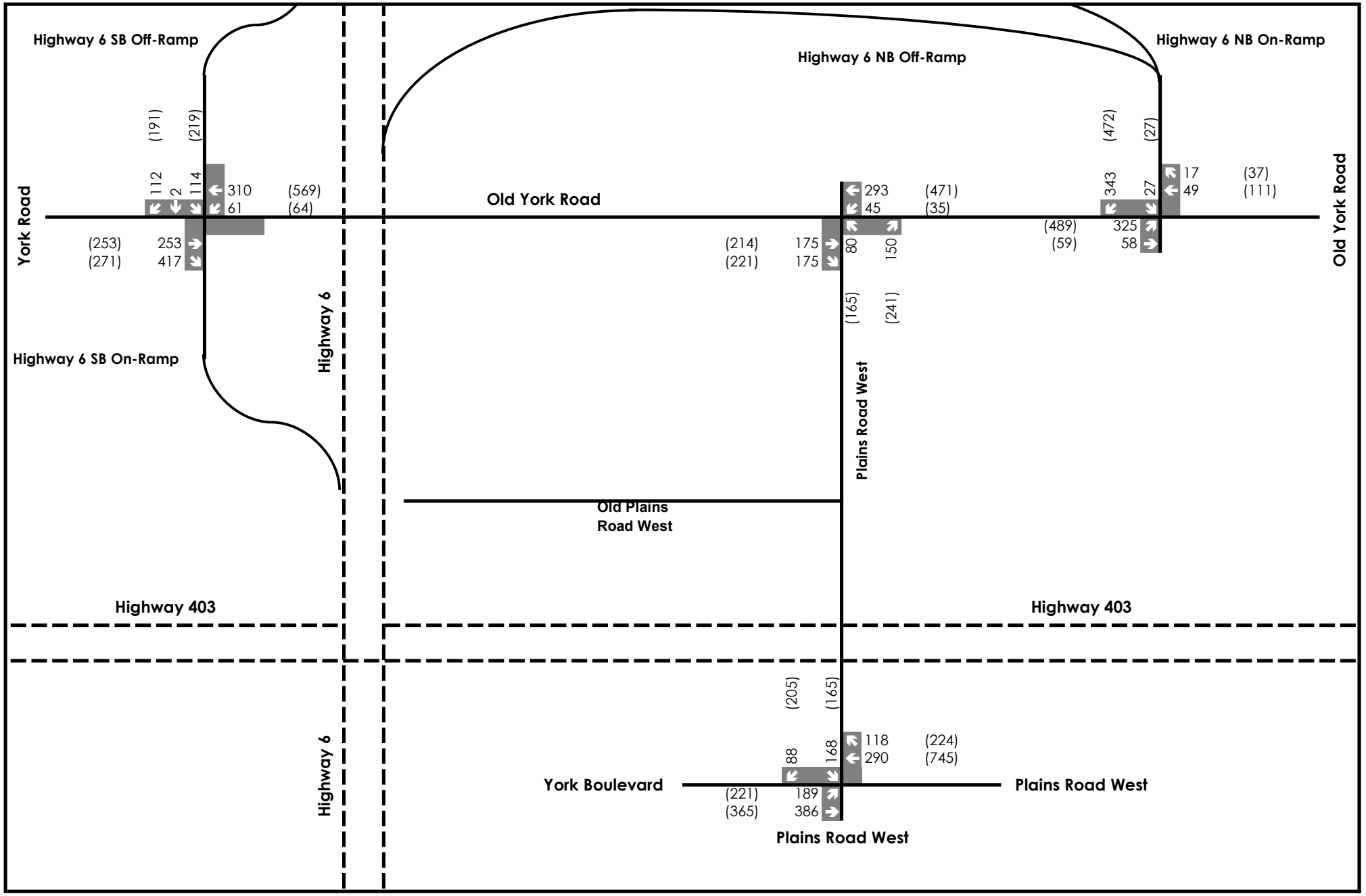
1535 Plains Road West & 1511 Old Plains Road West

2031 Future Background Traffic Volumes

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Figure 6

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Date. 12/4/2024
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Legend	1535 Plains Road West & 1511 Old Plains Road West	CROZIER CONSULTING ENGINEERS	Figure 7
xx A.M. Peak Hour Traffic Volumes (xx) P.M. Peak Hour Traffic Volumes	2036 Future Background Traffic Volumes		Project No. 2472-6716 Date. 12/4/2024 Analyst. TDS

Table 8: 2026 Future Background Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**10.9**	**11.0**	**0.50**	**0.49**
	EBL	A	A	5.3	6.4	0.23	0.35
	EBT	A	A	5.7	5.7	0.15	0.14
	EBT2	A	A	5.7	5.7	0.15	0.14
	WBT	B	B	11.0	12.9	0.15	0.37
	WBT2	B	B	11.0	12.9	0.15	0.37
	WBR	A	A	3.1	2.6	0.12	0.22
	SBL	D	D	35.6	35.2	0.50	0.49
	SBR	A	A	8.9	7.9	0.24	0.43
Plains Road West at Old York Road (Unsignalized)	**Overall**	**B**	**D**	**14.4**	**30.0**	**0.37**	**0.74**
	EBTR	-	-	0.0	0.0	0.20	0.24
	WBTL	A	A	1.4	0.8	0.04	0.03
	NBLR	B	D	14.4	30.0	0.37	0.74
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**C**	**F**	**21.4**	**89.9**	**0.46**	**1.01**
	EBTR	-	-	0.0	0.0	0.35	0.26
	WBTL	A	A	1.7	1.2	0.05	0.04
	SBLTR	C	F	21.4	89.9	0.46	1.01
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**B**	**11.0**	**13.4**	**0.34**	**0.47**
	EBTL	A	A	6.7	7.5	0.17	0.25
	WBTR	-	-	0.0	0.0	0.04	0.08
	SBLTR	B	B	11.0	13.4	0.34	0.47

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.

Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

Table 9: 2031 Future Background Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**11.0**	**11.2**	**0.51**	**0.50**
	EBL	A	A	5.5	6.9	0.24	0.38
	EBT	A	A	5.9	5.8	0.16	0.15
	EBT2	A	A	5.9	5.8	0.16	0.15
	WBT	B	B	11.3	13.4	0.15	0.39
	WBT2	B	B	11.3	13.4	0.15	0.39
	WBR	A	A	3.1	2.6	0.13	0.23
	SBL	D	D	35.7	35.4	0.51	0.50
	SBR	A	A	8.7	7.9	0.24	0.44
Plains Road West at Old York Road (Unsignalized)	**Overall**	**C**	**E**	**15.1**	**37.6**	**0.40**	**0.82**
	EBTR	-	-	0.0	0.0	0.21	0.25
	WBTL	A	A	1.4	0.9	0.04	0.03
	NBLR	C	E	15.1	37.6	0.40	0.82
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**D**	**F**	**26.2**	**89.9**	**0.56**	**1.01**
	EBTR	-	-	0.0	0.0	0.38	0.28
	WBTL	A	A	1.9	1.3	0.06	0.05
	SBLTR	D	F	26.2	164.9	0.56	1.22
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**C**	**11.7**	**15.2**	**0.38**	**0.55**
	EBTL	A	A	6.9	7.7	0.19	0.28
	WBTR	-	-	0.0	0.0	0.04	0.08
	SBLTR	B	C	11.7	15.2	0.38	0.55

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

Table 10: 2036 Future Background Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**11.4**	**11.8**	**0.54**	**0.53**
	EBL	A	A	5.9	8.0	0.27	0.45
	EBT	A	A	6.2	6.2	0.18	0.16
	EBT2	A	A	6.2	6.2	0.18	0.16
	WBT	B	B	11.8	14.3	0.17	0.43
	WBT2	B	B	11.8	14.3	0.17	0.43
	WBR	A	A	3.1	2.7	0.14	0.25
	SBL	D	D	36.1	35.8	0.54	0.53
	SBR	A	A	8.3	7.6	0.26	0.46
Plains Road West at Old York Road (Unsignalized)	**Overall**	**C**	**F**	**17.0**	**64.9**	**0.47**	**0.97**
	EBTR	-	-	0.0	0.0	0.23	0.27
	WBTL	A	A	1.5	0.9	0.04	0.03
	NBLR	C	F	17.0	64.9	0.47	0.97
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**E**	**F**	**49.2**	**398.6**	**0.80**	**1.77**
	EBTR	-	-	0.0	0.0	0.44	0.32
	WBTL	A	A	2.3	1.7	0.08	0.07
	SBLTR	E	F	49.2	398.6	0.80	1.77
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**C**	**13.6**	**23.3**	**0.50**	**0.74**
	EBTL	A	A	7.2	8.2	0.24	0.35
	WBTR	-	-	0.0	0.0	0.04	0.09
	SBLTR	B	C	13.6	23.3	0.50	0.74

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

As shown in **Table 10**, under 2036 future background conditions, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is projected to operate below capacity at a LOS "E" and "F" during the a.m. and p.m. peak hours, respectively. Maximum control delays of 49.2 and 398.6 seconds in the a.m. and p.m. peak hours, respectively, and the maximum volume-to-capacity ratios of 0.80 (SB) and 1.77 (SB) are expected in the weekday a.m. and p.m. peak hours, respectively.

Furthermore, the stop-controlled minor intersection of Plains Road West at Old York Road is projected to operate below capacity at a LOS "C" and "F" during the a.m. and p.m. peak hours, respectively. Maximum control delays of 17.0 and 64.9 seconds in the a.m. and p.m. peak hours, respectively and the maximum volume-to-capacity ratios are 0.47(NB) and 0.97(NB) are expected in the weekday a.m. and p.m. peak hours, respectively.

All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.

3.5 Future Background Recommendations

The overcapacity movements and increase in delay in the 2026 horizon year can generally be attributed to the volumes expected to be produced by the projected growth rate, particularly for turning movements. Some improvements could be explored at the intersections of Plains Road West at York Road/Old York Road and Highway 6 Southbound On/Off-Ramp at York Road should these volumes materialize. These include:

- Plains Road West at York Road/Old York Road
    - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
    - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing
- Highway 6 Southbound On/Off-Ramp at York Road
    - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
    - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing

The Master Transportation Study prepared by RJ Burnside for the site located at 1535 Plains Road indicated similar constraints in the boundary road network due to background growth as indicated in **Section 3.4 above**. The RJ Burnside study suggests that the intersection of Plains Road West at York Road/Old York Road should be signalized in the future to address capacity issues, which aligns with the findings in this report. However, the RJ Burnside study recommends a single lane roundabout at the intersection of Highway 6 Southbound On/Off-Ramp at York Road to manage capacity issues. This report, however, advises signalization for the intersection due to grading and spacing constraints that would hinder the feasibility of a roundabout solution. Excerpts from the RJ Burnside report can be found in **Appendix G.**

Section 3.6 below reviews the operations of both intersection with Signalization.

3.6 Intersection Operations with Improvements

The changes listed in **Section 3.5** were implemented into 2026, 2031 and 2036 Future Background analysis, **Table 11** below contains the results.

Table 11: 2026, 2031 and 2036 Future Background Operations - Optimized

Horizon Year	Intersection (Control)	Performance Metrics						
		Movement	LOS		Delay (s)		v/c ratio	
			AM	PM	AM	PM	AM	PM
2026	Plains Road West at Old York Road (Signalized)	**Overall**	**A**	**B**	**9.1**	**11.3**	**0.49**	**0.65**
		EBTR	A	A	8.0	9.4	0.44	0.52
		WBTL	B	B	13.1	16.2	0.49	0.65
		NBLR	A	A	5.0	7.1	0.30	0.47
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**11.5**	**12.3**	**0.67**	**0.65**
		EBTR	B	A	11.9	8.4	0.67	0.47
		WBTL	B	B	13.2	14.5	0.51	0.65
		SBLTR	A	B	7.4	13.7	0.28	0.50
2031	Plains Road West at Old York Road (Signalized)	**Overall**	**A**	**B**	**9.4**	**11.1**	**0.51**	**0.60**
		EBTR	A	A	8.4	8.4	0.46	0.48
		WBTL	B	B	13.4	13.8	0.51	0.60
		NBLR	A	B	5.0	10.7	0.31	0.55
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**11.1**	**13.9**	**0.67**	**0.68**
		EBTR	B	A	11.1	9.3	0.67	0.50
		WBTL	B	B	12.1	16.1	0.50	0.68
		SBLTR	A	B	9.4	16.3	0.33	0.56
2036	Plains Road West at Old York Road (Signalized)	**Overall**	**B**	**B**	**10.1**	**12.1**	**0.56**	**0.64**
		EBTR	A	A	9.2	7.5	0.50	0.49
		WBTL	B	B	14.4	13.4	0.56	0.60
		NBLR	A	B	5.1	15.4	0.33	0.64
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**13.0**	**16.5**	**0.72**	**0.80**
		EBTR	B	A	12.1	10.0	0.72	0.58
		WBTL	B	C	14.1	10.1	0.60	0.80
		SBLTR	B	B	13.9	19.3	0.44	0.68

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

As indicated in **Table 11**, the recommendations will improve the operations in the 2026, 2031 and 2036 horizon years. All movements would operate under capacity in the a.m. and p.m. peak hours.

4.0 Site Generated Traffic

The proposed development will result in new traffic turning movements on the boundary road network that would otherwise not exist. This section presents the generated trips and trip assignment through the study intersections.

4.1 ITE Trip Generation

To forecast the trips generated by the development, the ITE Trip Generation Manual, 11th Edition was used. The ITE Trip Generation Manual is a compendium of industry collected trip generation data across North America for a variety of land uses and is used industry wide as a source for trip generation forecasts.

Given the site location, the general urban/suburban setting was used; fitted curve estimates were used if available and deemed statistically valid per the ITE Trip Generation Manual (i.e., more than 20 data points and coefficient of determination R2 > 0.75). The trips generated by the proposed development are presented in **Table 12**.

Table 12: Site Generated Traffic

Land Use	Units	Peak Hour	Equation Used	Inbound	Outbound	Total
Multi-family Housing (Low-Rise) (LUC 220)	75	A.M.	Average Rate (0.40)	7 (24%)	23 (76%)	34
		P.M.	Average Rate (0.51)	27 (63%)	14 (37%)	43

As shown in **Table 10**, the proposed development is expected to generate a total of 34 and 43 two-way trips in the a.m. and p.m. peak hours, respectively.

4.2 Trip Distribution and Assignment

The Transportation Tomorrow Survey (TTS) is a comprehensive travel data survey conducted in the Greater Toronto and Hamilton Area. Data from the 2016 TTS was used to determine the peak hour trip distribution at the site for the residential land use proposed at the site.

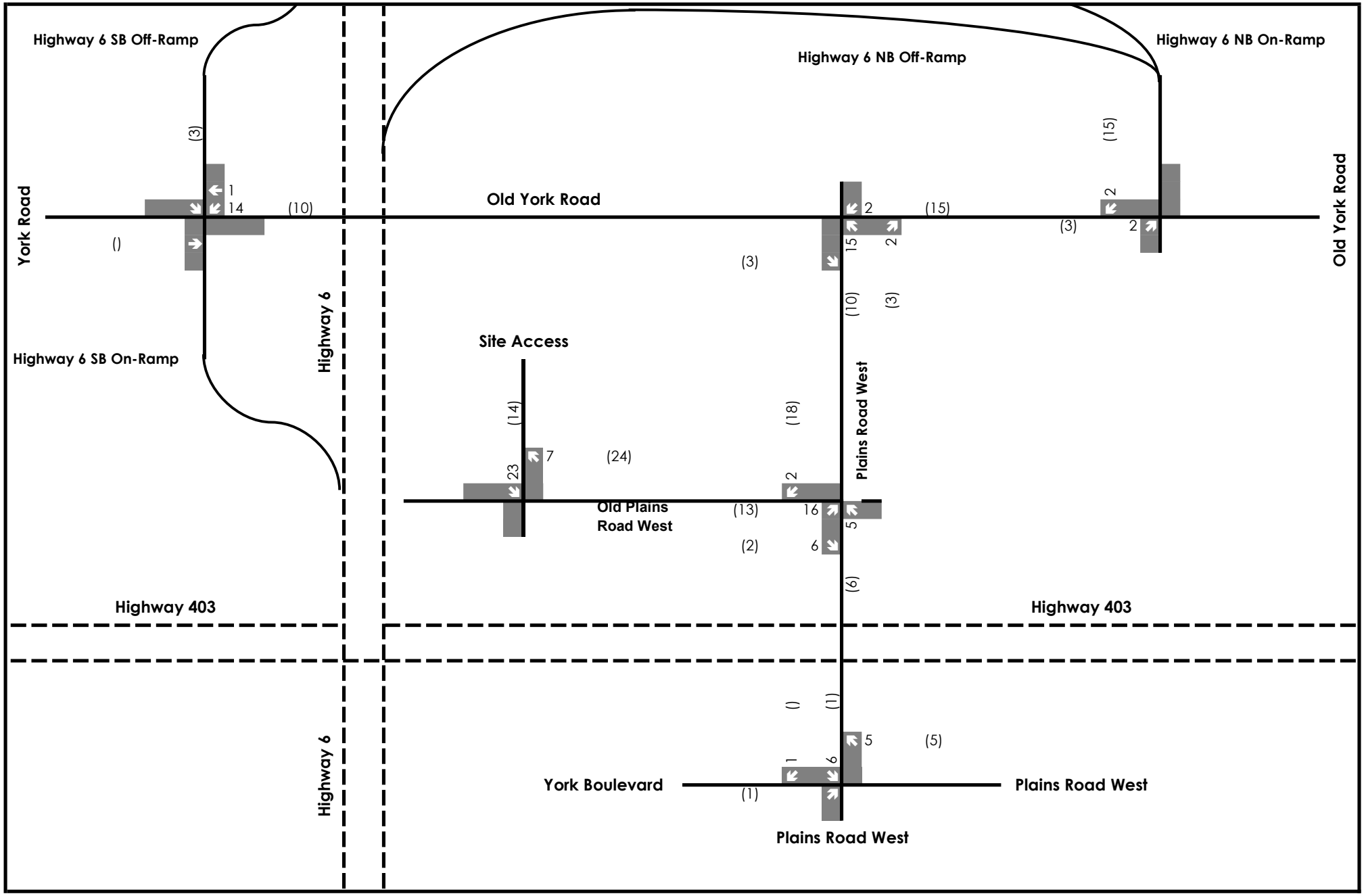
The inbound and outbound residential trip distributions were derived by filtering TTS data with a trip purpose of "Home", destined to and originating from the subject GTA Zone 4092 and neighboring GTA Zones 5215. The A.M. and P.M. distributions were determined by filtering for trips starting during the periods of 6:30 A.M. – 9:30 A.M. and 3:30 P.M. – 6:30 P.M., respectively.
Table 13 summarizes the site trip distribution.

Appendix I provides the TTS query used to determine the site trip distribution.

Table 13: Site Distribution

Direction	A.M. Peak Hour		P.M. Peak Hour	
	In	Out	In	Out
Northwest	0%	4%	6%	0%
North	0%	0%	0%	63%
Northeast	0%	5%	11%	13%
East	0%	34%	34%	7%
Southeast	80%	29%	25%	13%
South	20%	19%	16%	5%
Southwest	0%	5%	4%	0%
West	0%	4%	4%	0%
Total	**100%**	**100%**	**100%**	**100%**

The assignment of site-generated trips per the noted distribution is presented in **Figure 7**



Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

1535 Plains Road West & 1511 Old Plains Road West

Site-Generated Trips

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Figure 8

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5.0 Total Traffic Conditions

This section discusses the traffic operations of the study intersections with the addition of the new site generated trips.

5.1 Intersection Operations

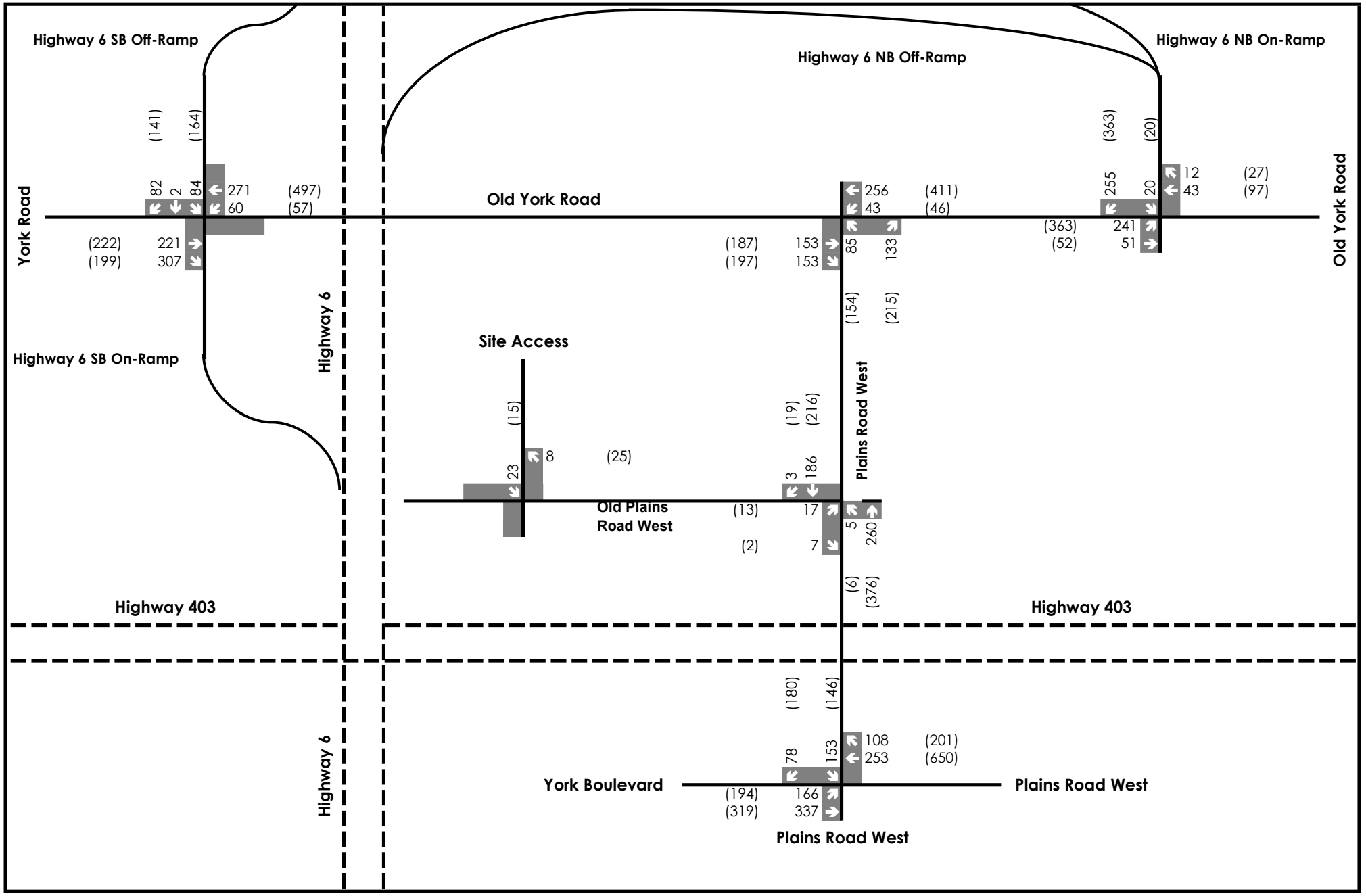
Traffic operations at the study intersections were assessed with the addition of the new site generated trips to the future background traffic volumes. The 2026, 2031 and 2036 future total traffic volumes are illustrated in **Figure 9, Figure 10,** and **Figure 11**, respectively. **Table 14, Table 15,** and **Table 16** outline the future total traffic operations for the 2026, 2031 and 2036 horizon years, respectively. Detailed capacity analysis worksheets are included in **Appendix I.**

The Future Total horizons are analysed separately in **Section 5.2** with the improvements outlined in **Section 3.5**. The below tables maintain the stop-controlled intersections from the existing horizon year.

Table 14: 2026 Future Total Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**11.1**	**11.0**	**0.51**	**0.49**
	EBL	A	A	5.4	6.5	0.23	0.36
	EBT	A	A	5.8	5.7	0.15	0.14
	EBT2	A	A	5.8	5.7	0.15	0.14
	WBT	B	B	11.1	13.0	0.15	0.37
	WBT2	B	B	11.1	13.0	0.15	0.37
	WBR	A	A	3.0	2.6	0.13	0.22
	SBL	D	D	35.7	35.2	0.51	0.49
	SBR	A	A	8.7	7.9	0.24	0.43
Plains Road West at Old York Road (Unsignalized)	**Overall**	**C**	**E**	**15.4**	**37.7**	**0.42**	**0.82**
	EBTR	A	A	0.0	0.0	0.20	0.24
	WBTL	A	A	1.5	1.3	0.04	0.04
	NBLR	C	E	15.4	37.7	0.42	0.82
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**C**	**F**	**23.0**	**106.3**	**0.49**	**1.06**
	EBTR	A	A	0.0	0.0	0.35	0.26
	WBTL	A	A	2.2	1.4	0.07	0.05
	SBLTR	C	F	23.0	106.3	0.49	1.06
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**B**	**11.1**	**13.7**	**0.34**	**0.49**
	EBTL	A	A	6.7	7.5	0.18	0.25
	WBTR	A	A	0.0	0.0	0.04	0.08
	SBLTR	B	B	11.1	13.7	0.34	0.49
Site Access at Old Plains Road	**Overall**	**A**	**A**	**8.6**	**8.6**	**0.02**	**0.02**
	EBTL	A	A	0.0	0.0	0.00	0.00
	WBTR	A	A	0.0	0.0	0.01	0.02
	SBL	A	A	8.6	8.6	0.02	0.02
	SBR	A	A	0.0	0.0	0.00	0.00

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.



Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

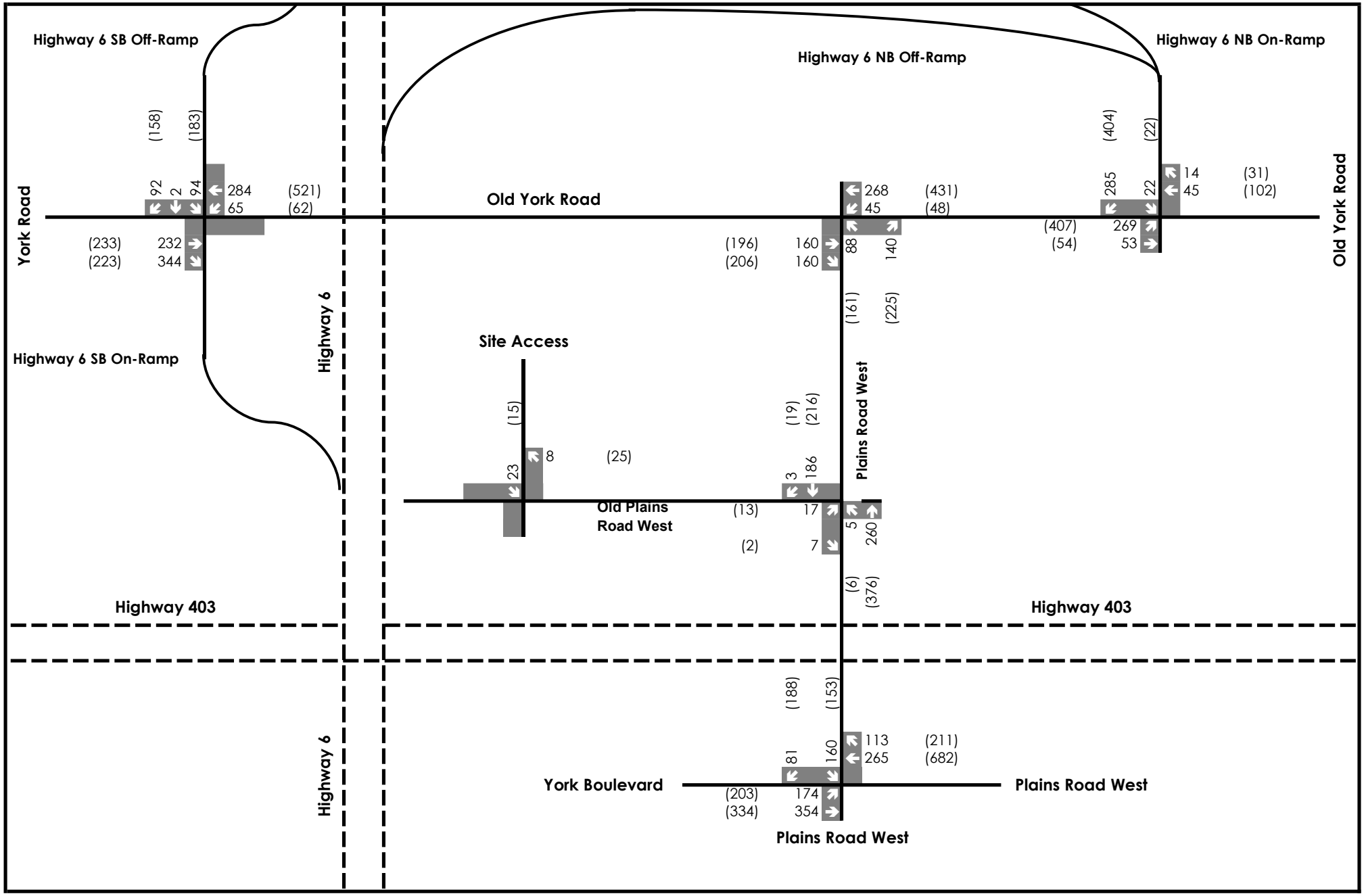
1535 Plains Road West & 1511 Old Plains Road West

2026 Future Total Traffic Volumes

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Figure 9

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Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

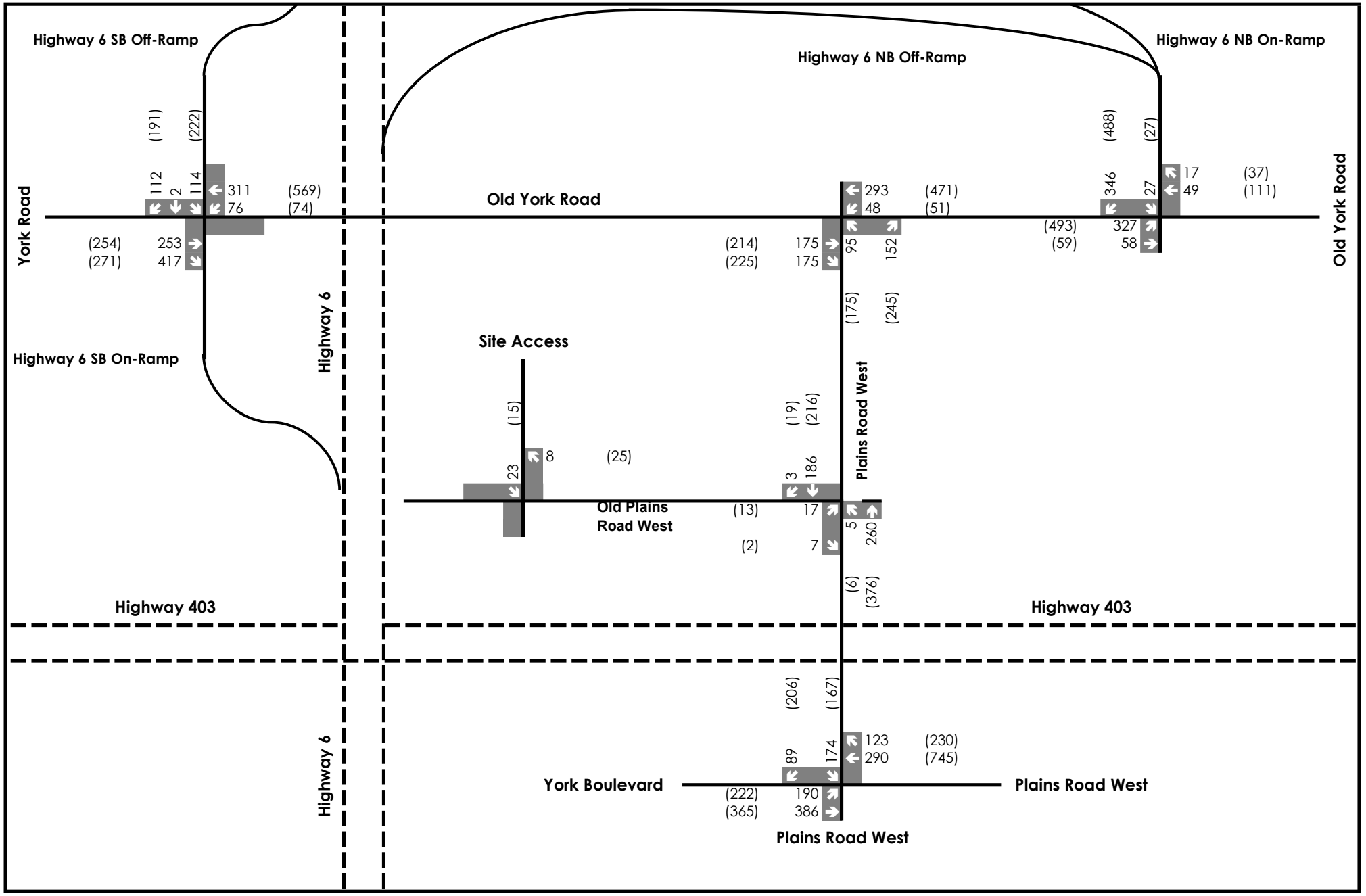
1535 Plains Road West & 1511 Old Plains Road West

2031 Future Total Traffic Volumes

CROZIER CONSULTING ENGINEERS

Figure 10

Project No. 2472-6716
Date. 12/4/2024
Analyst. TDS



Legend

xx A.M. Peak Hour Traffic Volumes
(xx) P.M. Peak Hour Traffic Volumes

1535 Plains Road West & 1511 Old Plains Road West

2036 Future Total Traffic Volumes

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Figure 11

Project No. 2472-6716
Date. 12/4/2024
Analyst. TDS

Table 15: 2031 Future Total Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**11.2**	**11.3**	**0.52**	**0.50**
	EBL	A	A	5.6	6.9	0.24	0.38
	EBT	A	A	6.0	5.9	0.16	0.15
	EBT2	A	A	6.0	5.9	0.16	0.15
	WBT	B	B	11.4	13.5	0.15	0.39
	WBT2	B	B	11.4	13.5	0.15	0.39
	WBR	A	A	3.1	2.7	0.14	0.23
	SBL	D	D	35.9	35.4	0.52	0.50
	SBR	A	A	8.6	7.8	0.24	0.44
Plains Road West at Old York Road (Unsignalized)	**Overall**	**C**	**E**	**16.3**	**48.7**	**0.45**	**0.89**
	EBTR	A	A	0.0	0.0	0.21	0.25
	WBTL	A	A	1.5	1.3	0.04	0.04
	NBLR	C	E	16.3	48.7	0.45	0.89
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**D**	**F**	**28.6**	**188.6**	**0.59**	**1.28**
	EBTR	A	A	0.0	0.0	0.38	0.28
	WBTL	A	A	2.4	1.6	0.08	0.06
	SBLTR	D	F	58.6	188.6	0.59	1.28
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**C**	**11.7**	**15.6**	**0.39**	**0.57**
	EBTL	A	A	6.9	7.8	0.20	0.29
	WBTR	A	A	0.0	0.0	0.04	0.08
	SBLTR	A	C	11.7	15.6	0.39	0.57
Site Access at Old Plains Road	**Overall**	**A**	**A**	**8.6**	**8.6**	**0.02**	**0.02**
	EBTL	A	A	0.0	0.0	0.00	0.00
	WBTR	A	A	0.0	0.0	0.01	0.02
	SBL	A	A	8.6	8.6	0.02	0.02
	SBR	A	A	0.0	0.0	0.00	0.00

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

Table 16: 2036 Future Total Operations

Intersection (Control)	Performance Metrics						
	Movement	LOS		Delay (s)		v/c ratio	
		AM	PM	AM	PM	AM	PM
Plains Road West and York Boulevard (Signalized)	**Overall**	**B**	**B**	**11.5**	**11.8**	**0.55**	**0.53**
	EBL	A	A	6.0	8.1	0.27	0.45
	EBT	A	A	6.3	6.2	0.18	0.16
	EBT2	A	A	6.3	6.2	0.18	0.16
	WBT	B	B	12.0	14.4	0.17	0.43
	WBT2	B	B	12.0	14.4	0.17	0.43
	WBR	A	A	3.1	2.7	0.15	0.26
	SBL	D	D	36.3	35.8	0.55	0.53
	SBR	A	A	8.1	7.6	0.26	0.46
Plains Road West at Old York Road (Unsignalized)	**Overall**	**C**	**F**	**18.6**	**89.1**	**0.52**	**1.05**
	EBTR	A	A	0.0	0.0	0.23	0.27
	WBTL	A	A	1.6	1.3	0.05	0.05
	NBLR	C	F	18.6	89.1	0.52	1.05
Highway 6 Southbound On/Off-Ramp at York Road (Unsignalized)	**Overall**	**F**	**F**	**57.5**	**435.9**	**0.84**	**1.85**
	EBTR	A	A	0.0	0.0	0.44	0.32
	WBTL	A	A	2.8	1.9	0.10	0.08
	SBLTR	F	F	57.5	435.9	0.84	1.85
Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized)	**Overall**	**B**	**C**	**13.7**	**24.5**	**0.50**	**0.76**
	EBTL	A	A	7.2	8.2	0.24	0.35
	WBTR	A	A	0.0	0.0	0.04	0.09
	SBLTR	B	C	13.7	24.5	0.50	0.76
Site Access at Old Plains Road	**Overall**	**A**	**A**	**8.6**	**8.6**	**0.02**	**0.02**
	EBTL	A	A	0.0	0.0	0.00	0.00
	WBTR	A	A	0.0	0.0	0.01	0.02
	SBL	A	A	8.6	8.6	0.02	0.02
	SBR	A	A	0.0	0.0	0.00	0.00

Note 1: The Level of Service of a signalized intersection is based on the average control delay per vehicle. The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach.
Note 2: The Halton Region TIS Guidelines defines critical v/c ratios as greater than 0.85 for through or shared through/turning movements, and greater than 0.95 for exclusive turning movements.

Under 2036 future total conditions, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is projected to operate similar to Future Background conditions; below capacity at a LOS "F" and "F" during the a.m. and p.m. peak hours, respectively. Maximum control delays of 57.5 and 435.9 seconds in the a.m. and p.m. peak hours, respectively, and the maximum volume-to-capacity ratios of 0.84 (SB) and 1.85 (SB) are expected in the weekday a.m. and p.m. peak hours, respectively.

Furthermore, the stop-controlled minor intersection of Plains Road West at Old York Road is projected to operate similar to Future Background conditions; below capacity at a LOS "F" during the p.m. peak hour. Maximum control delays of 18.6 and 89.1 seconds in the a.m. and p.m. peak hours, respectively and the maximum volume-to-capacity ratios are 0.52 (NB) and 1.05 (NB) are expected in the weekday a.m. and p.m. peak hours, respectively.

All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.

5.2 Intersection Operations with Improvements

The changes listed in **Section 3.5** were implemented into 2026, 2031 and 2036 Future Total analysis, **Table 6** below contains the results.

Table 17: 2026, 2031 and 2036 Future Total Traffic - Optimized

Horizon Year	Intersection (Control)	Performance Metrics						
		Movement	LOS		Delay (s)		v/c ratio	
			AM	PM	AM	PM	AM	PM
2026	Plains Road West at Old York Road (Signalized)	**Overall**	**A**	**B**	**9.2**	**11.1**	**0.49**	**0.60**
		EBTR	A	A	11.3	8.0	0.44	0.47
		WBTL	B	B	19.5	14.0	0.49	0.60
		NBLR	A	B	4.8	10.9	0.32	0.55
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**12.4**	**12.7**	**0.67**	**0.67**
		EBTR	B	A	11.9	8.4	0.67	0.47
		WBTL	B	B	15.7	15.2	0.61	0.67
		SBLTR	A	B	7.4	14.0	0.28	0.51
2031	Plains Road West at Old York Road (Signalized)	**Overall**	**A**	**B**	**9.5**	**11.7**	**0.52**	**0.63**
		EBTR	A	A	8.4	8.4	0.46	0.49
		WBTL	B	B	13.6	14.7	0.52	0.63
		NBLR	A	B	5.4	11.5	0.33	0.57
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**11.8**	**13.9**	**0.67**	**0.68**
		EBTR	B	A	11.1	8.6	0.67	0.49
		WBTL	B	B	14.2	15.3	0.58	0.68
		SBLTR	A	B	9.4	17.9	0.33	0.59
2036	Plains Road West at Old York Road (Signalized)	**Overall**	**B**	**B**	**10.2**	**13.1**	**0.57**	**0.67**
		EBTR	A	A	9.2	8.4	0.50	0.50
		WBTL	B	B	14.6	14.3	0.57	0.64
		NBLR	A	B	5.5	16.4	0.36	0.67
	Highway 6 Southbound On/Off-Ramp at York Road (Signalized)	**Overall**	**B**	**B**	**14.2**	**17.8**	**0.72**	**0.80**
		EBTR	B	A	12.1	9.6	0.72	0.56
		WBTL	B	C	18.1	21.1	0.70	0.80
		SBLTR	B	C	13.9	22.9	0.44	0.72

As indicated in **Table 6**, the recommendations will improve the operations in the 2026, 2031 and 2036 horizon years. The conditions remain relatively unchanged when compared to the optimized 2026, 2031 and 2036 Future Background conditions.

It is further noted that no new critical movements were identified as a result of the proposed development's site traffic and that all recommendations are due to background growth traffic based on the City and MTO's provided growth rates.

5.3 Signal Warrants

Signal warrants were conducted for the intersections of Plains Road West at Old York Road and Highway 6 Southbound On/Off-Ramp at York Road.

The analysis followed the procedure in Justification 7, Table 19 of the "Ontario Traffic Manual – Book 12", March 2012. Justifications 1 (Minimum Vehicular Volume) and 2 (Delay to Cross Traffic) were selected to assess the study intersection.

The average hour volume was determined using the following formula from OTM Book 12:

$$AHV = (amPHV + pmPHV) / 4$$

Where;
AHV = average hour volume
PHV = peak hour volume

Under 2036 future total conditions, signals are not warranted at the study intersections of Plains Road West at Old York Road and Highway 6 Southbound On/Off-Ramp at York Road. The signal warrants have been provided in **Appendix J.**

Although the signalization of the intersections of Plains Road West at Old York Road and Highway 6 Southbound On/Off-Ramp at York Road, they are recommended to mitigate capacity issues as a result of Future Background traffic as indicated in **Section 3.6**.

5.4 Future Total Recommended Improvements

The addition of site-generated traffic is not expected to materially change the operations of the intersections within the study area when compared to 2036 Future Background conditions. Therefore, no recommendations differing from Future Background recommendations listed in **Section 3.5** are recommended.

6.0 Site Access Safety Review

This section reviews the internal site circulation as well as the existing site access from a safety and operational feasibility perspective.

6.1 Sight Distance Assessment

The available sightlines at the intersection of Plains Road West at Old Plains Road were measured and compared to the standards set out in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR). Sight distance was measured from the existing site access using the following assumptions:

- A standard driver eye height of 1.08 metres for a passenger car, and
- A 4.4 metre setback from the approximate extension of the outer curb to represent a vehicle waiting to exit the site.

Intersection sight distance is calculated using equation 9.9.1 from the GDGCR as outlined below:

*ISD = 0.278 * V major * tg*

Where;
ISD = Intersection Sight Distance
V major = design speed of roadway (km/h)
tg = assumed time gap for vehicles to turn from stop onto roadway (s)

The design speed of a Local Road in a suburban environment is typically 10-20 km/h greater than posted speed limit. it is expected the posted speed limit for Plains Road West will be 50 Km/h. Therefore, design speed of 70 km/h was assumed for Plains Road West. **Table 18** outlines the sight distance analysis for the proposed site access.

Table 18: Sight Distance Analysis

Feature	Plains Road West at Old Plains Road	
Design Vehicle	**Passenger Car**	**MSU Truck**
Access Type	Full moves	Full moves
Intersection Control	Stop Control on Minor Road	Stop Control on Minor Road
Speed Limit of Roadway	50 km/h	50 km/h
Assumed Design Speed	70 km/h	70 km/h
Base Time Gap	6.5 s (for right-turn) [1] 7.5 s (for left turn) [2]	8.5 s (for right-turn) [1] 9.5 s (for left turn) [2]
Additional Time Gap (Left Turn)	0 s	0 s
Vertical Alignment of Roadway	Fairly flat	Fairly flat
Grade of Roadway	Less than 3%	Less than 3%
Horizontal Alignment of Roadway	Straight	Straight
Sight Distance Required [3]	130 m (right turn) 150 m (left turn)	165 m (right turn) 185 m (left turn)
Measured Sight Distance	180 m (right turn) 200+ m (left turn)	180 m (right turn) 200+ m (left turn)
Minimum Sight Distance Satisfied?	Yes	Yes

Note 1: Time gap for right-turning passenger cars from a stop onto a two-lane highway with no median and with a grade less than 3%. Value from Table 9.9.5 in the GDGCR.
Note 2: Time gap for left-turning passenger cars from a stop onto a two-lane highway with no median and with a grade less than 3%. Value from Table 9.9.3 in the GDGCR.
Note 3: Sight distance value calculated from Intersection Sight Distance equation 9.9.1 in the GDGCR.

As outlined in **Table 16**, minimum sight distance requirements are satisfied at the location of the intersection of Plains Road West at Old Plains Road. **Figure 12** contains Sight Distance Assessment.



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Project

1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing

SIGHT DISTANCE ASSESSMENT

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Drawn By	T.D.S.	Project	2606-6982
Check By	B.B.	Scale 1:750	Drawing FIG 12

6.2 Access Spacing and Corner Clearance Review

The TAC GDGCR was used to review access spacing and corner clearance for the proposed site access intersection to Old Plains Road. The site access spacing requirements and proposed spacings are presented in **Table 19.**

Table 19: Access Spacing Review

Site Access	Available Spacing	Minimum Spacing Requirements	Evaluation	Source
Site Access to Old Plains Road	Approximately 75 m (to Old Plains Road and Plains Road West Intersection)	Minimum 40m spacing between adjacent three-legged intersections along a local road	Satisfied	TAC-GDGCR Section 9.4.2.2

The site corner clearance requirements and proposed clearances are presented in **Table 20**.

Table 20: Corner Clearance Review

Site Access	Available Corner Clearance	Minimum Corner Clearance Requirements	Evaluation	Source
Site Access to Old Plains Road	Approximately 75 m (to Old Plains Road and Plains Road West Intersection)	Minimum 15m corner clearance from stop-controlled intersection	Satisfied	TAC-GDGCR Figure 8.8.2

As presented in **Table 19** and **Table 20**, the proposed access is satisfactory compared to the minimum access spacing and corner clearance requirements of the TAC-GDGCR.

7.0 Maneuvering Assessment

A maneuvering assessment was conducted to ensure the proposed site design provides adequate space for the design vehicles expected at the site for Phase 1 and Phase 2 of the development. The maneuvers of these design vehicles are elaborated upon in the following section.

7.1 Emergency Vehicles

A maneuvering assessment was conducted for emergency vehicles using a Halton Pumper Fire Truck 12.19 metres in length. The fire truck is expected to enter the site via the proposed Site Access via Old Plains Road. The fire truck can safely maneuver the site safely entering and exiting the site as shown in **Figure 13, Figure 14,** and **Figure 15.**

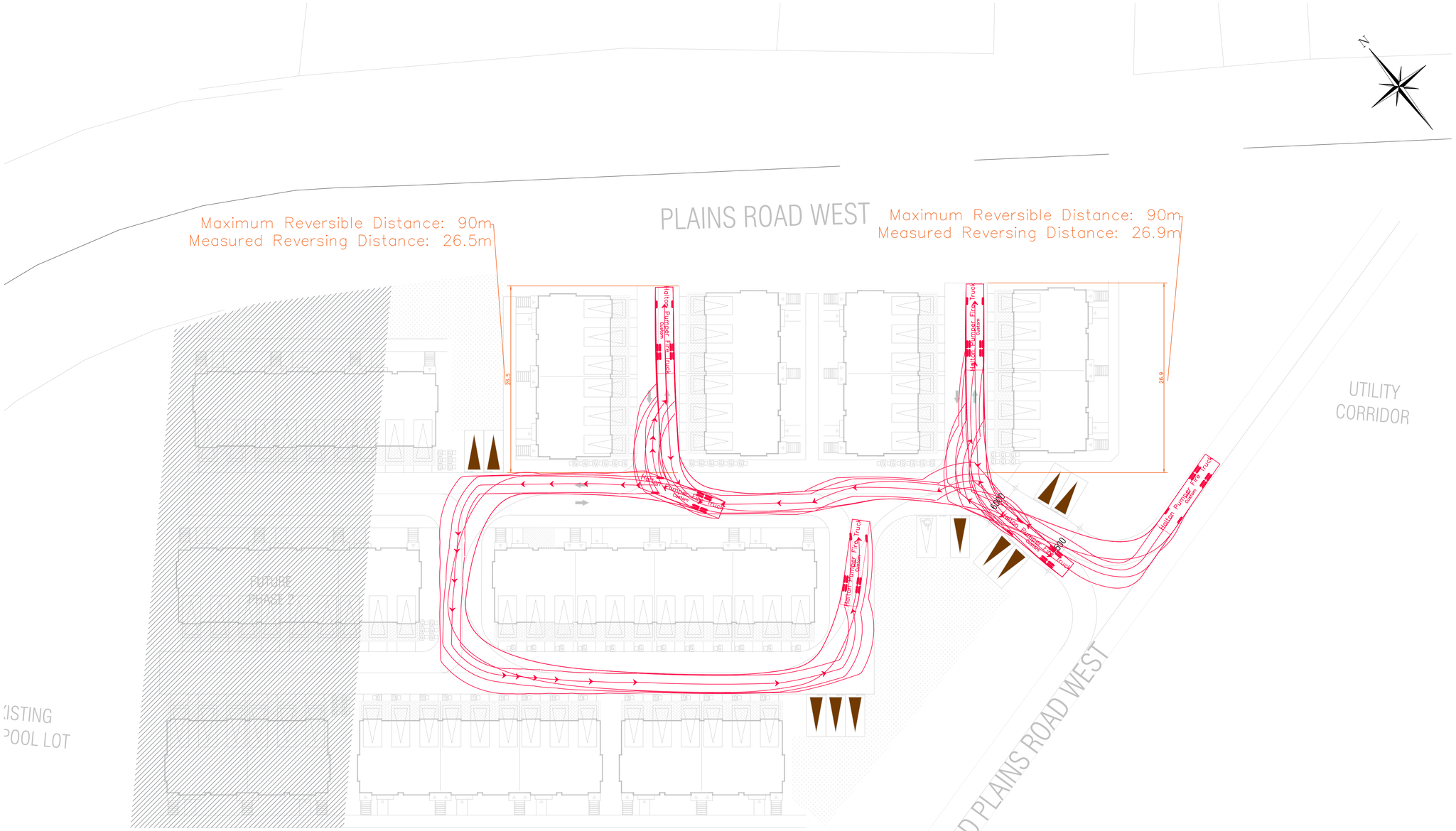
7.2 Passenger Vehicles

A maneuvering assessment was conducted using a Passenger TAC (P-TAC) vehicle as shown in **Figure 16** and **Figure 17**, which demonstrates that passenger vehicles can navigate the site and enter and exit critical parking spots within a three-point turning movement. No issues were identified with any of the proposed parking spaces from a maneuverability perspective.

7.3 Waste Vehicles

Since the proposed development is intended for residential uses within Halton Region, waste collection is intended to be undergone using a Region of Halton FL Garbage Truck. **Figure 18** illustrates the vehicle accessing the waste collection areas throughout the site. Per Region of Halton Development Design Guidelines (see **Appendix L**), the maximum reversible distance for waste vehicles is 18.0m, no waste maneuver on the Site Plan exceeds this threshold. Accordingly, no issues with maneuvering of waste collection vehicles are anticipated.

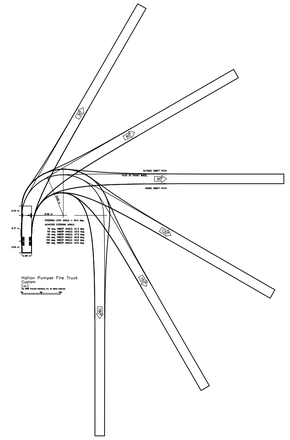
Based on the assessments above, the development can be supported from a maneuverability perspective.



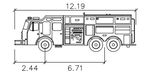
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FOR REVIEW
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SWEEP PATH



VEHICLE PROFILE



Halton Pumper Fire Truck

	meters
Width	: 2.49
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

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Project
1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing
FIRE TRUCK – 1
VEHICLE MANEUVERING ANALYSIS

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Check By	B.B.	Scale 1:300	Drawing FIG 13

PLAINS ROAD WEST

Maximum Reversible Distance: 90m
Measured Reversing Distance: 40.9m

Halton Pumper Fire Truck
Custom

40.9

FUTURE PHASE 2

EXISTING POOL LOT

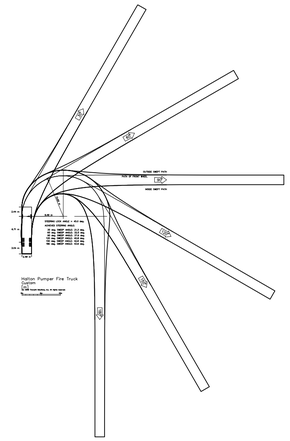
UTILITY CORRIDOR

OLD PLAINS ROAD WEST

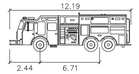
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FOR REVIEW
NOT TO BE USED FOR CONSTRUCTION

SWEEP PATH



VEHICLE PROFILE



Halton Pumper Fire Truck

	meters
Width	: 2.49
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

No.	ISSUE	DATE: MM/DD/YYYY
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Project
1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing
FIRE TRUCK – 2
VEHICLE MANEUVERING ANALYSIS

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Check By	B.B.	Scale 1:300	Drawing FIG 14

PLAINS ROAD WEST

UTILITY CORRIDOR

OLD PLAINS ROAD WEST

FUTURE PHASE 2

:ISTING
POOL LOT

Halton Pumper Fire Truck
Custom

6000

7500

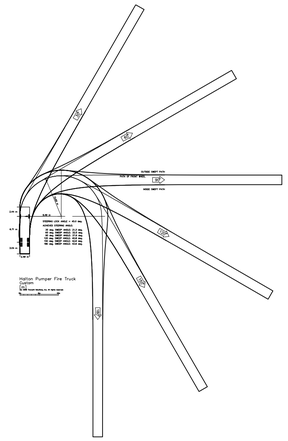
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Maximum Reversible Distance: 90m
Measured Reversing Distance: 49.1m

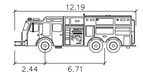
10 0m 10 20
SCALE: 1:300

FOR REVIEW
NOT TO BE USED FOR CONSTRUCTION

SWEEP PATH



VEHICLE PROFILE



Halton Pumper Fire Truck

	meters
Width	: 2.49
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

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Project
1535 PLAINS ROAD WEST &
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Drawing
FIRE TRUCK – 3
VEHICLE MANEUVERING ANALYSIS

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Check By	B.B.	Scale 1:300	Drawing FIG 15

PLAINS ROAD WEST

FUTURE PHASE 2

EXISTING R POOL LOT

UTILITY CORRIDOR

OLD PLAINS ROAD WEST

6000

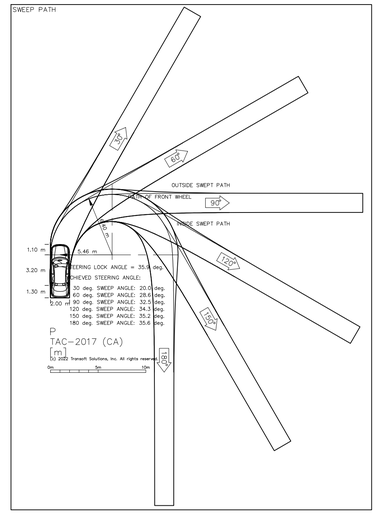
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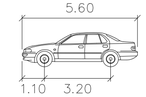
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FOR REVIEW

NOT TO BE USED FOR CONSTRUCTION



VEHICLE PROFILE



P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

No.	ISSUE	DATE: MM/DD/YYYY
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Project

1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing

PASSENGER VEHICLE – 1
VEHICLE MANEUVERING ANALYSIS

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Drawn By	T.D.S.	Project	2606-6982
Check By	B.B.	Scale 1:300	Drawing FIG 16

PLAINS ROAD WEST

UTILITY CORRIDO

OLD PLAINS ROAD WEST

EXISTING CAR POOL LOT

FUTURE PHASE 2

7.50

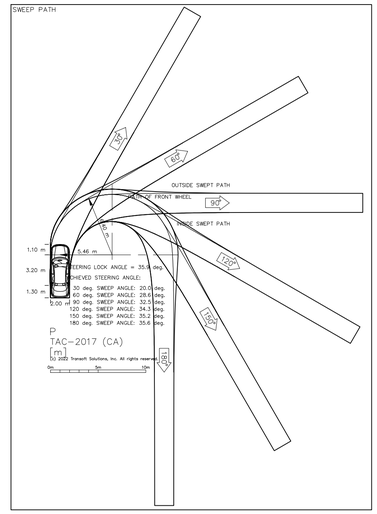
10 0m 10 20

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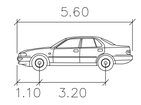
FOR REVIEW

NOT TO BE USED FOR CONSTRUCTION

SWEEP PATH



VEHICLE PROFILE



P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

No.	ISSUE	DATE: MM/DD/YYYY
1	ISSUED FOR REVIEW	12/03/2024

Project

1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing

PASSENGER VEHICLE – 2
VEHICLE MANEUVERING ANALYSIS

CROZIER CONSULTING ENGINEERS
211 YONGE STREET
SUITE 600
TORONTO, ON, M5B 1M4
416-477-3392 T
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	T.D.S.	Project	2606-6982
Check By	B.B.	Scale 1:300	Drawing FIG 17

PLAINS ROAD WEST

Maximum Reversible Distance: 18m
Measured Reversing Distance: 14.1m

Maximum Reversible Distance: 18m
Measured Reversing Distance: 10.5m

UTILITY CORRIDOR

FUTURE PHASE 2

EXISTING R POOL LOT

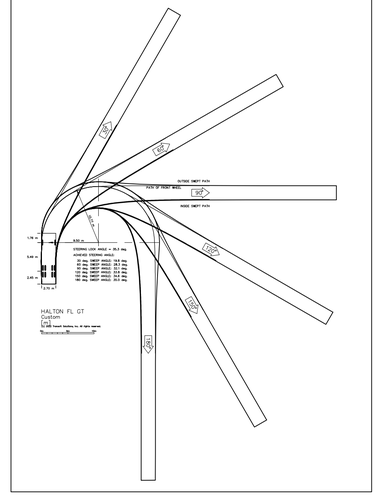
OLD PLAINS ROAD WEST

Maximum Reversible Distance: 18m
Measured Reversing Distance: 16.4m

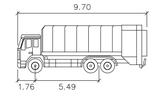
10 0m 10 20
SCALE: 1:300

FOR REVIEW
NOT TO BE USED FOR CONSTRUCTION

SWEEP PATH



VEHICLE PROFILE



HALTON FL GT

	meters
Width	: 2.70
Track	: 2.70
Lock to Lock Time	: 6.0
Steering Angle	: 35.3

No.	ISSUE	DATE: MM/DD/YYYY
1	ISSUED FOR REVIEW	12/03/2024

Project
1535 PLAINS ROAD WEST &
1511 OLD PLAINS ROAD WEST
CITY OF BURLINGTON, REGION OF HALTON

Drawing
WASTE COLLECTION
VEHICLE MANEUVERING ANALYSIS

CROZIER CONSULTING ENGINEERS
211 YONGE STREET
SUITE 600
TORONTO, ON, M5B 1M4
416-477-3392 T
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	T.D.S.	Project	2606-6982
Check By	B.B.	Scale	1:300
		Drawing	FIG 18

8.0 Parking and Loading Review

The City of Burlington minimum parking requirements were assessed to determine if the proposed development has adequate vehicle parking supply.

This section presents the parking requirements for the proposed development based on the City of Burlington Zoning By-Law 2020. Relevant excerpts from the City of Burlington Zoning By-Law 2020 are included in **Appendix K.**

Table 17 outlines the calculated standard vehicle parking requirements and compares them with the proposed parking supply.

Table 17: City of Burlington Zoning By-Law Parking Space Requirements

Phase	By-Law Use	Minimum Parking Space Rate	Units	Required Vehicle Parking	Proposed Vehicle Parking	Surplus/Deficit
1	Stacked Townhouse Dwellings	1 occupant space per unit, 0.25 visitor spaces per unit	51	51 residents + 13 visitors	51 residents + 11 visitors	**+0 resident - -2 visitor**
2			24	24 residents + 6 visitors	24 residents + 0 visitors	**+0 resident - -6 visitor**
Total			75	75 residents + 19 visitors	75 residents + 11 visitors	**+0 resident - -8 visitor**

According to the City of Burlington Zoning By-law, a total of 75 residents and 19 visitors parking spaces are required, given the site plan proposes 75 residents and 11 visitors parking spaces, the development meets the Zoning By-law requirements for resident parking spaces but is deficient by 8 visitor parking spaces upon full-build out of Phase 2. The proposed development will be deficient by 2 visitor parking spaces upon built out of Phase 1.

9.0 Visitor Parking Justification

This section examines and evaluates the feasibility of a reduced visitor parking supply for the proposed development. The proposed parking supply is evaluated against standard parking evaluation criteria and metrics as discussed under this section.

9.1 Surrogate Site Parking Demand Forecast

To assess visitor parking demand, previously undertaken surveys at a similar site to the proposed development was examined. Based on the surrogate sites' data, peak parking demand rates were determined and used to forecast peak parking demands for the proposed residential development.

9.1.1 2-44 Sky Harbour Drive Surrogate Site Parking Survey

In order to assess peak parking demand of the townhouses of the proposed development, parking counts at 2-44 Sky Harbour Drive development in Brampton were reviewed. This site consists of two mid-rise buildings located at the northeast corner of Mississauga Road and Olivia Marie Road: Building 1 includes ground level retail units with three stories of residential units while Building 2 is

solely a 4-storey residential building. The whole development consists of a total of 113 mid-rise condominium units and a total parking supply of 133 residential parking spaces and 14 visitor parking spaces, which makes it comparable to the townhouse element of the proposed development.

A parking utilization survey was undertaken on Tuesday March 27, 2018, from 5:30 a.m. to 8:00 a.m., and 8:00 p.m. to midnight and Saturday March 24, 2018, from 11:00 a.m. to 8:00 p.m.

Using the number of cars parked and the number of dwelling units of the surrogate site, the maximum peak parking demand rates were calculated. The maximum residential spaces occupied during the survey was 110 spaces, thus a peak demand ratio of 0.85 spaces per unit. The maximum visitor spaces occupied was 11 spaces, thus a peak demand ratio of 0.10 spaces per unit. The parking survey results are provided in **Appendix C**.

Table 4 presents the peak parking demand for the townhouses of the proposed development based on the surrogate site peak parking demand rates.

Table 4: Peak Visitor Parking Demand per 2-44 Sky Harbour Drive Parking Survey Data

Land Use	Peak Parking Rates	Number of Units (Townhouse)	Peak Parking Required	Proposed Parking
Proposed Development Visitor Parking	0.10 spaces per unit	75 units	8 spaces	11 Spaces **(+3 spaces)**

As outlined in **Table 4**, based on the surrogate site's parking survey data, the peak parking demand of the proposed development's townhouses would be approximately 8 visitor spaces. Therefore, the proposed total parking supply of 11 spaces is in a surplus of 3 spaces compared to the surrogate site forecasted peak parking demand.

9.2 Opportunities for Additional Visitor Parking Supply

As outlined in **Section 8.0**, the parking supply proposed for the development is deficient by 2 and 6 visitor parking spaces in Phase 1 and Phase 2, respectively compared to the By-Law requirements.

However, as mentioned in **Section 1.1**, it is expected that a portion of Old Plains Road will be reconstructed for grading purposes to provide access to the proposed development. Given this section of Old Plains Road will effectively function as an access for the proposed development, it is expected that any potential periods of visitor parking demand above 8 spaces could be accommodated on the shoulders of Old Plains Road without causing issues to traffic flow.

Additionally, there Is an adjacent MTO Carpool lot located directly north of the site on the same side of Old Plains Road that additional visitors could legally park in for a period of up to 5 days (120 hours) consecutively.

3.2.4 Parking Justification Summary

The peak parking demand forecast based on the parking survey data at surrogate site indicates that the proposed parking supply of 86 parking spaces including 75 occupant spaces and 11 visitor spaces can accommodate future parking demand at the proposed development. Moreover, additional visitor parking spaces are to be added during the re-construction of a portion of Old Plains Road, these spaces will further bolster the vehicle parking supply of the development.

10.0 Other Zoning By-Law Requirements

This section reviews the bicycle parking and loading space requirements associated with the development.

10.1 Accessible Vehicle Parking

The minimum accessible parking requirements associated with the development per City of Burlington Zoning By-Law 2020, are outlined below in **Table 18**.

Per the City of Burlington Zoning By-Law 2020 Section 2.26:

"accessibility is not required for 20% of the required occupant parking in townhouse, back-to-back, stacked townhouse, maisonette, fourplex, and apartment buildings."

Accordingly, the required occupant parking requirement of 75 parking spaces was reduced to 60 spaces to calculate the accessible parking requirement for the development, in addition to the 19 required visitor parking spaces, for a total of 79 spaces to accommodate accessible spaces.

Relevant excerpts from the City of Burlington Zoning By-Law 2020 are included in **Appendix K.**

Table 18: City of Burlington Zoning By-Law Accessible Parking Space Requirements

Total Number of Required Parking Spaces	Minimum Number of Parking Spaces to be designated as Accessible	Minimum Number of Accessible Parking Required
79*	2 designated accessible parking spaces (for 51-90 parking spaces)	2
Accessible Parking Spaces Proposed		2
Surplus (Deficit)		**0**

Note 1: Although 94 spaces are required for the development, only 79 are required to account for accessibility. ***Section 10.1 above****, explains this rationale in greater detail.*

According to the City of Burlington Zoning By-law, a total of 2 accessible parking spaces are required, since the Site Plan proposes 2 accessible spaces, the development meets the Zoning By-law requirements for accessible parking spaces.

10.2 Bicycle Parking Review

The minimum bicycle parking requirements associated with the development per City of Burlington Zoning By-Law 2020 were reviewed. Section 2.26 states that residential developments do not require off-street bicycle spaces. Therefore, the proposed development meets the requirements, Relevant excerpts from the City of Burlington Zoning By-Law 2020 are included in **Appendix K.**

10.3 Loading Review

The minimum loading requirements associated with the development per City of Burlington Zoning By-Law 2020 were reviewed. Section 2.25.3 states that residential buildings with less than 4 storeys do not require off-street loading spaces. Therefore, the proposed development meets the requirements, Relevant excerpts from the City of Burlington Zoning By-Law 2020 are included in **Appendix K.**

11.0 Transportation Demand Management

The purpose of the Transportation Demand Management (TDM) section is to review the existing and future TDM opportunities and recommend site specific measures to enhance the development's efficiency in reducing site generated single occupancy vehicle (SOV) trips.

11.1 Existing TDM opportunities

As noted under **Sections 3.4 and 3.5**, there are plenty of existing non-auto trip options available within the study area and with convenient connections to the site. There are currently pedestrian and cycling facilities on the boundary roads to the site with connections to most of the surrounding areas. The existing transit near the site allows for access to most of the City as well as the Greater Toronto and Hamilton Area (GTHA).

Additionally, directly north of the development exists a Car Pool Parking Lot which is expected to be utilised by residents to reduce single occupancy vehicle (SOV) trips.

11.2 Future TDM opportunities

Currently, no new active transportation facilities have been proposed for the boundary road network. However, per the City of Burlington, in the planning and design of road network, the needs of cyclists and pedestrians are greatly considered. Further, through supportive urban planning and road design and by provision of facilities such as dedicated paths and paved road shoulders, walking and cycling alternatives are being encouraged.

11.3 Site Specific TDM measures

Given the available active transportation and transit on adjacent roads and in proximity to the site, there are site specific TDM measures that can be implemented to capitalize on the TDM opportunities.

11.3.1 Infrastructure

Per the Site Plan prepared by Graziani Corazza Architects (dated December 13, 2024), the following elements are expected to be provided:

- Internal sidewalks facilitating circulation within the development and connecting to pedestrian facilities on Old Plains Road and Plains Road West.

These infrastructure elements are expected to further encourage and promote active transportation at the site.

The Site Plan prepared by Graziani Corazza Architects (dated December 13, 2024) is included as **Figure 2.**

11.3.2 Education/Promotion and Incentives

The provision of up-to-date transit schedules and maps, and pedestrian connectivity maps for residents will educate them on the available opportunities for their trips aside from auto use. This increased awareness of convenient alternate transportation options has been historically shown to reduce SOV trips and is expected to provide similar benefit to the subject development.

12.0 Conclusions

The findings and recommendations of the Transportation Impact Study are summarized below:

- Under the 2024 existing conditions scenario:
    - Under the existing conditions scenario, the stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is operating below capacity at a LOS "F" during p.m. peak hour.
    - All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.
- Under 2036 future background conditions:
    - The stop-controlled minor intersection of Highway 6 Southbound On/Off-Ramp at York Road is projected to operate below capacity at a LOS "E" and "F" during the a.m. and p.m. peak hours, respectively.
    - The stop-controlled minor intersection of Plains Road West at Old York Road is projected to operate below capacity at a LOS "C" and "F" during the a.m. and p.m. peak hours, respectively.
    - All other intersections are operating efficiently with reserve capacity to accommodate future increases in traffic volumes.
- The following Signal Timing Plan improvements are expected to improve 2036 Future Background operations:
    - Plains Road West at York Road/Old York Road
        - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
        - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing
    - Highway 6 Southbound On/Off-Ramp at York Road
        - A.M. Peak Hour: Implementation of traffic signals with optimized signal timing
        - P.M. Peak Hour: Implementation of traffic signals with optimized signal timing
- The proposed development is forecasted to generate 34 two-way (7 inbound and 23 outbound) trips during the weekday morning peak hour, and a trip generation of 43 (27 inbound and 14 outbound) trips during the weekday afternoon peak hour.
- Under 2036 future total conditions:
    - The study intersections are forecasted to operate at similar Levels of Service in the Future Total conditions when compared to Future Background Conditions. Similarly to

Future Background Conditions, the intersections of Plains Road West at York Road/Old York Road at Highway 6 Southbound On/Off-Ramp at York Road are expected to operate below capacity with considerable delays and v/c ratios.

  - However, utilizing the Future Background recommendations, all intersections are expected to operate efficiently with reserve capacity to accommodate future increases in traffic volumes.

  - It is further noted that no new critical movements were identified as a result of the proposed development's site traffic and that all recommendations are due to background growth traffic based on the City and MTO's provided growth rates.

- The existence of local transit, combined with the provision of pedestrian infrastructure within the Site Plan, as well as the availability of several Transportation Demand Management options for the development, are expected to support non-auto forms of travel to and from the site.

- Additionally, a sight lines assessment was conducted for the intersection of Plains Road West at Old Plains Road. The assessment confirmed that sight lines are expected to be adequate for safe and efficient vehicle movements within and around the intersection.

- A vehicle maneuvering assessment was conducted and the subject development can accommodate all design vehicles expected to maneuver within the site including Passenger Vehicles, Halton FL Garbage Trucks, and Region of Halton Pumper Fire Trucks.

- The development meets the occupant parking spaces, bicycle parking spaces, accessible parking spaces, and loading space requirements when compared to the City of Burlington Zoning By-Law 2020. However, the proposed visitor parking supply is deficient by 2 and 6 spaces in Phase 1 and Phase 2, respectively.

  - The proposed visitor parking supply of 11 spaces results in a parking surplus of 3 spaces based on the visitor parking rate observed at the proxy site.

  - Furthermore, additional visitor parking demand could either be accommodated along Old Plains Road or within the existing adjacent MTO carpool lot.

- In conclusion, the proposed residential development at 1511 Old Plains Road in the City of Burlington, Region of Halton can be supported from a transportation perspective.

Minor changes to the Site Plan prepared by Graziani Corazza Architects (dated December 13, 2024) are not expected to affect the conclusions and findings of this report. Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.



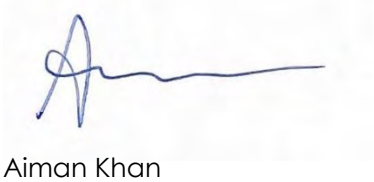
Brandon Bradt, M.Eng. CEM, P.Eng.
Manager, Transportation Planning

C.F. CROZIER & ASSOCIATES INC



Theshantha De Silva, E.I.T.
Engineering Intern, Transportation

C.F. CROZIER & ASSOCIATES INC.



Aiman Khan
Engineering Intern, Transportation

/ TDS/ak
J:\2400\2472 - New Horizon Development Group\6716 - 1511-1535 Plains Rd W\Reports\Transportation\2024.12.19 - 1511 Old Plains - TIS & PJS - FINAL.docx

Appendix A

City and MTO Terms of Reference Correspondence

City TIS Terms of Reference

Theshantha De Silva

From: Mailbox, Transportation Planning <devapptransportationplanning@burlington.ca>
Sent: Friday, November 1, 2024 1:45 PM
To: Brandon Bradt; Theshantha De Silva
Cc: Lucas, Sandra; Robinson, Stephanie
Subject: Terms of Reference 1511-1535 Plains Road West

Good Afternoon, Theshantha,

Thank you for your Terms of Reference (TOR) submission for the 1511-1535 Plains Road West application.

The terms of reference are generally acceptable, please accept the following comments from Transportation Planning with respect to this Transportation Impact Study (TIS) submission.

Please also ensure that both MTO and City comments are considered.

Traffic Data Collection
Transportation Planning understands that the following intersections will be included in the TIS:

- Highway 6 Southbound On/Off-Ramp and York Road (Unsignalized, MTO)
- Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized, MTO)
- Plains Road West and Old York Road (Unsignalized, Burlington)
- Plains Road West and York Boulevard (Signalized, Burlington)
- Proposed site accesses via Old Plains Road West

Transportation Planning also request that Plains Road West and Hillsdale Avenue (Unsignalized, Burlington) be included in the study.

For all general inquiries regarding traffic data availability from the City's roads and intersections, please contact:
Josip.Kafadar@burlington.ca via direct email for TMC's
Steve.Vrakela@burlington.ca via direct email for Signal Timing Plans.

Growth Rate
For the on and off ramps, please contact the Ministry of Transportation (MTO) with regards to appropriate growth rates. Please defer to their growth rate and proceed to use it throughout the study. In the absence of MTO response, please apply a future growth rate of 1% per annum to background traffic for Plains Road West through to the 2036 horizon year (10 years following full build-out).

Background Developments and Transportation Improvements
Transportation Planning confirm that there are no new developments near the proposed area around Plains Road West that this TIS would need to consider.
Any information regarding background development can also be confirmed by the Community Planning Department or found on the City's website:
https://burlington.maps.arcgis.com/home/webmap/viewer.html?webmap=64655c40535f478b8d3adbbbecdb683e

Transportation Planning confirm that there are no new roadway, transit or active transportation improvements planned.

Trip Generation and Trip Distribution
Transportation Planning understands that trip generation rates will be based on the ITE Trip Generation Manual 11th Edition.
Please ensure that the full rationale for Land Use Code (LUC) selection is documented within the TIS report.

Transportation Planning understands that the site-generated trips will be distributed to the surrounding road network using the 2016 Transportation Tomorrow Survey (TTS) data and then assigned using logical routing and travel patterns through the study road network.

Intersection Capacity Analysis
Transportation Planning understands that traffic analysis will be undertaken for the study area intersections under existing and future conditions, for the weekday AM and PM peak periods using Synchro 11.0 analysis software, using Highway Capacity Manual (HCM 2000) procedures.
Please include a queuing assessment, including the levels of service and queuing distances.
Please also include all Synchro Output Reports in the Appendix.

Site Access Review
Transportation Planning understands that access to the site is proposed via:

a) One full move access from Old Plains Rd W

Transportation Planning understands that the TAC Geometric Design Guide for Canadian Roads will be used in your review. Please include a Sight Line Analysis within the road allowance in this review to ensure minimum TAC Geometric Design Guidelines are met for all movements. Please include field measurements and diagrams in this analysis.

Vehicle Maneuverability Diagrams
Transportation Planning understands that the AutoTurn application will be used to undertake a Swept Path Analysis and review of on-site circulation for design vehicles and included in the report.

Parking Supply Review
Transportation Planning understands that parking supply review will be included in the report.

Transportation Demand Management (TDM)
Transportation Planning understands that a TDM Review will be reviewed and included in the report. TDM measures should be thoughtfully designed to ensure their effectiveness in changing travel behaviour and to meet or exceed desired outcomes.

TIS Report Requirements
Please note, that the most up-to-date TIS Guidelines for Halton Region, can be found at the following web link: https://www.halton.ca/Repository/Transportation-Impact-Study-Guidelines

The TIS report shall include, but not limited to:

- Study Area Map showing Site Concept Plan,
- Description of proposed development, including land uses, size, number of units, and development phases,
- Existing Conditions
    - Road Network including Study Area Intersections,
    - Pedestrian Network,
    - Cycling Network,
    - Transit Network
    - Existing Traffic Conditions (Site Operating Characteristics, Data Collection/Traffic Counts with TMC's < 2 years old),)
- Future Background Conditions
    - Growth & Horizon Years
    - Background Traffic Demand Forecast Volumes
- Site Generated Traffic
    - Trip Generation/Distribution/Assignment
- Future Total Traffic Conditions,
    - Intersection Capacity Analysis (by Intersection, with LOS, Avg. Delay, V/C ratios),
    - Traffic Impacts (Tables – Total Traffic Volumes with/without Mitigation)

    - Site Access Review and Considerations – Geometrics (turn lanes, sight lines),
    - Vehicle Maneuverability
    - Recommendations - Identify required/recommended road improvements either as a result of the development impacts, or general non-development improvements.
- Parking Supply Review
- TDM Recommendations / Opportunities (including any Pedestrian & Cycling Facilities, Transit etc.,)
- Conclusions

Best regards,

Taylor Kirchknopf (she/her)
Transportation Planning Technologist
Transportation Services Department

MAIN: 905-335-7600 ext 7986
taylor.kirchknopf@burlington.ca

426 Brant Street P.O. Box 5013, Burlington, Ontario, L7R 3Z6

Our working hours may be different. You are not obligated to reply outside of your typical working hours.

This message, including any attachments, is privileged and intended only for the addressee(s) named above. If you are not the intended recipient, you must not read, use or disseminate the information contained in this email/fax. If you have received this email/fax transmission in error, please notify the sender immediately by telephone, fax or email and permanently delete this email from your computer/shred this fax, including any attachments, without making a copy. Access to this email/fax by anyone else is unauthorized. Thank you.

MTO TIS Terms of Reference

Theshantha De Silva

From: Akhtar, Usman (MTO) <Usman.Akhtar@ontario.ca>
Sent: Friday, October 11, 2024 1:45 PM
To: Theshantha De Silva
Cc: White, Mark J. (MOI); Brandon Bradt; Patel, Jatinbhai (MTO); Rattigan, Vereen (MTO); Vallvé, Nina (MTO)
Subject: FW: 1511-1535 Plains Road W - TIS - Terms of Reference
Attachments: PLAINS RD W @ YORK RD W - OLD YORK RD E.pdf; HWY 6 @ YORK RD - PLAINS RD - RAMP 26.pdf; HWY 6 @ YORK RD - PLAINS RD - RAMP 34.pdf

Hi Theshantha,

York and Plains is is not noted in any of our records. I suspect it would be a municipal traffic signal.

Two MTO projects in this area, Hwy 5/6 Interchange and Preliminary Design EA study for Highway 403 and 6 Infrastructure Renewal. We previously provided the property plan with the future MTO property line.

Traffic Comments

Comments in red below and for the TOR:

- MTO require the submission of a full TIS (following MTO TIS guidelines and by a RAQS qualified consultant) to assess the future impact of the proposed development to identify if there are any warranted highway/road improvements. Digital Synchro version 12 files are required at the time of submission – we will accept version 11 until Dec 2024.
- Any data collected for the TIS must be by a RAQS qualified company/consultant.
- Any functional designs provided in the TIS, are not accepted or approved until P&D/TIMD review once the TIS is approved.
- Use a 2.6% growth rate.
- As part of the TIS, sightlines must be reviewed for Plains Rd, and a field measured distance provided and compared to TAC with mitigating measures if they don't meet the minimum.
- As part of the TIS, a LT warrant analysis and right turn auxiliary lane analysis from Plains Rd into the development must be included.
- The need for geometric improvements shall be reviewed at all locations in the study area and for each proposed development stage. The TIS shall clearly identify transportation impacts by movement, the transportation system improvements that are needed to mitigate these impacts, and the timing of any recommended improvements. A schematic representation of all geometric improvements shall be included as part of the TIS, identifying lane arrangements and intersection improvements for each horizon year.
- The need for traffic signals and/or underground traffic signal utility provisions shall be reviewed at all locations affected by the proposed development and for each proposed development stage. Determination of whether traffic signals or provisions for signals are warranted shall be made according to the process described in OTM Book 12. Eight (8) hours of data as a minimum are required to assess signal warrants for existing and background conditions.

Thanks,

Usman

From: Theshantha De Silva <tdesilva@cfcrozier.ca>
Sent: Wednesday, October 9, 2024 2:10 PM

To: White, Mark J. (MOI) <Mark.J.White@ontario.ca>; Akhtar, Usman (MTO) <Usman.Akhtar@ontario.ca>
Cc: Brandon Bradt <bbradt@cfcrozier.ca>
Subject: 1511-1535 Plains Road W - TIS - Terms of Reference

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Mark and Usman,

C.F. Crozier & Associates Inc. (Crozier) has been retained to prepare a Transportation Impact Study (TIS) for a proposed industrial development located at 1511-1535 Plains Road W in the City of Burlington, Region of Halton.

The elements envisioned for this industrial development include a build out across two phases:

- Phase 1: 51 stacked townhomes, 51 resident parking spaces, and 12 visitor parking spaces
- Phase 2: 24 stacked townhomes, 24 resident parking spaces, and 6 visitor parking spaces
- Total: 75 stacked townhomes, 75 resident parking spaces, and 18 visitor parking spaces
- A full-moves site access from Old Plains Road West is proposed to facilitate the development

The Concept Plan for the proposed development is attached in this email for your review. Kindly note that the Plan may undergo slight adjustments due to minor refinements prior to the final submission.

We are kindly requesting that you review the following Terms of Reference (ToR) and provide feedback regarding our scope of work and request for data. Furthermore, should you not be the appropriate person for correspondence, it would be appreciated to be directed to the appropriate contact.

Study Methodology for the Transportation Impact Study

Due to the subject development's proximity to Highway 6, it is expected that the Ontario Ministry of Transportation will be involved in this development application, as such, the Transportation Impact Study will be completed in conformance with the Region of Halton Transportation Impact Study Guidelines (January 2015), as well as the MTO TIS Guidelines (September 2014).

This Transportation Impact Study supports a Zoning By-Law Application (ZBA). The 1535 Plains Road Master Transportation Study (Burnside 2018) and the 1497-1511 Plains Road W Development Application Pre-Consultation Form was reviewed prior to establishing the below study methodology and scope of work.

The following intersections are proposed to be analyzed as part of the scope of study:

- Highway 6 Southbound On/Off-Ramp and York Road (Unsignalized, MTO)
- Highway 6 Northbound On/Off-Ramp and Old York Road (Unsignalized, MTO)
- Plains Road West and Old York Road (Unsignalized, Burlington)
- Plains Road West and York Boulevard (Signalized, Burlington)
- Proposed site accesses via Old Plains Road West

We kindly request recent Turning Movement Counts for the above intersections should they be available at the City and/or MTO. Alternatively, if counts are not available, we will consult a specialty traffic counting firm to collect new counts.

Noting that the intersection of Plains Road West and York Boulevard is signalized, we also kindly request the signal timing plans for this intersection.

Growth Rate

The Region of Halton Transportation Impact Study Guidelines indicate that growth rates should be obtained from an estimation of roadway growth factors from a calibrated traffic forecast model or based on area transportation studies. As such, we kindly request the applicable studies or that you provide us with the growth rates expected for the above noted study intersections to reflect expected growth in the area. 2.6% growth rate

These growth rates would be used to grow the traffic counts and to the future horizon years using a simple rate (i.e., not compound).ok

Analysis Periods and Scenarios
To capture the traffic characteristics at full build out, we propose analysis of the following horizons:ok

- 2024 (Existing Conditions)
- 2026 (Full-buildout year)
- 2031 (Five-year horizon)
- 2036 (Ten-year horizon)

Considering the residential characteristics of the proposed development, the weekday A.M. and P.M. peak hours will be analyzed for each of the horizon years listed. Since it is all residential, acceptable

Background Developments and Transportation Improvements
Per a review of the Development Projects in the City of Burlington, we did not find any significant developments to include. Please confirm that there are no active developments to be included as background development in the TIS. If there are developments that need to be considered, please provide the associated transportation impact studies that should be included in our analysis.
Further, please advise whether there are any roadway, transit, or active transportation improvements planned within the vicinity of the site.

Trip Generation and Distribution
Trip Generation for the proposed development will be based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. ok

The site-generated trips will be distributed to the surrounding road network using 2016 TTS data and assigned using logical routing through the study road network - ok. If the TTS data is not sufficient due to the area not being built out, trips will be assigned according to first principles and existing travel patterns from TMC data. Discussion/justification needs to be provided before using first principles is required.

Analysis Procedures
Weekday A.M. and P.M. peak hours will be analyzed using Synchro 11.0 analysis software, using Highway Capacity Manual (HCM 2000) procedures.ok

The following Synchro parameters will be used

- Default Synchro values for ideal saturation flow rate (1900 veh/hr/lane) and lane utilization factors
- Counted values for peak hour factors and heavy vehicle percentages
- **Signal timing parameters per the signal timing cards provided and will be optimized in future scenarios to account for the improvements planned at Steeles Avenue and Eighth Line. No,** Wrong TIS – this is Hwy 6 and York, Signal timing optimization can improve operations however, the resulting settings should still be consistent with our Signal Timing Policy. For example: the timing settings cannot be adjusted to favour the sideroad over the highway.
- Per the MTO's TIS guidelines, critical movements will be reported in the summary tables where v/c ratios are greater than 0.85 for all movements and 0.75 for terminal ramp approaches. Additionally, queues will be reported if they are expected to exceed available storage.

Site Access Review
The available sight distance at the proposed site access will be compared to the standards set out by the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR). Additionally, the location of the internal roadways will be reviewed using the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR) regarding corner clearance and throat length

requirements. field measured distance provided and compared to TAC with mitigating measures if they do not meet minimums.

Vehicle Maneuverability Diagrams
Vehicle maneuvering diagrams will be prepared using the AutoTurn application to review on-site circulation for design vehicles including fire trucks, waste collection trucks, and passenger vehicles. ok

Parking Supply Review
The parking spaces proposed for the development will be assessed with respect to the City of Burlington By-law Section 2.25, as well as the 2020 proposed amendment.

Transportation Demand Management (TDM) Opportunities
Analysis of existing and future Transportation Demand Management (TDM) opportunities will be conducted to reduce single-occupant vehicle (SOV) trips and promote alternative modes of transportation including transit and active transportation.

We request the following information for inclusion in the study, along with any comments that arise with regards to the above Terms of Reference.

- Please confirm the traffic data collection method and whether any existing TMC data is available for the proposed study network. attached
- Please provide the signal timing plans for the signalized study intersection of Plains Road West and York Boulevard
- Please provide relevant growth rate(s) applicable to the roadways of study.
- Please confirm the background developments and planned roadway improvements, as well as provide any additional transportation impact studies that are to be included our analysis.
- Please confirm the trip generation and distribution method.

I trust the contents outlined in this email are acceptable. Should you have any questions or require any further information, please feel free to contact us.

Kind regards,
Theshantha

Theshantha De Silva
Engineering Intern, Transportation
Office: 416.868.5212
Collingwood | Milton | Toronto | Bradford | Guelph

Celebrating 20 years and another year as one of Canada's Top Growing Companies.

CROZIER

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Appendix B

Transit Data

9 ROCK GARDENS Information

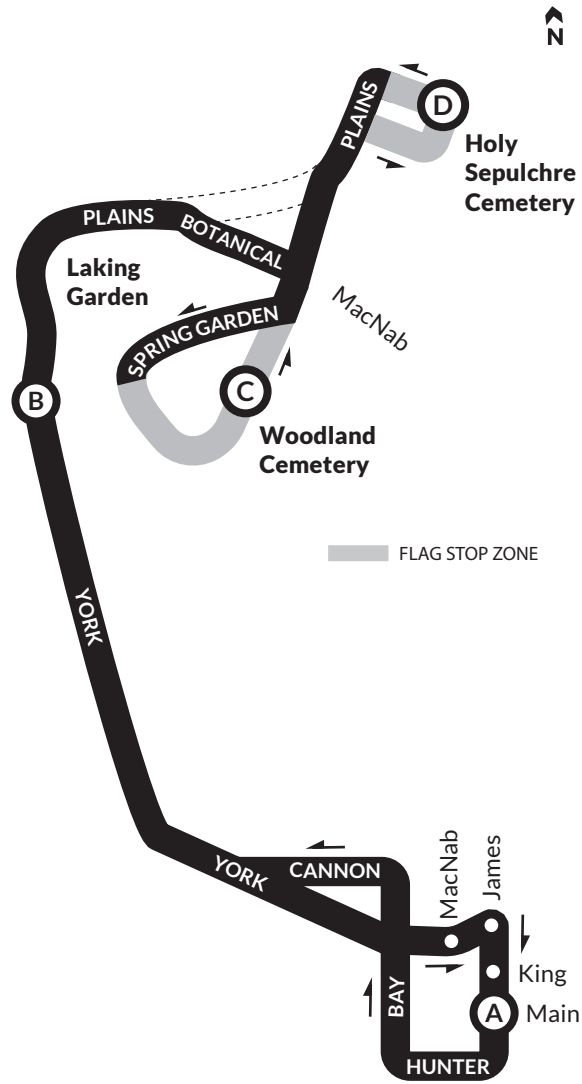
- Service every hour on Sundays and holidays only.
- Service will operate from the 2nd Sunday in May until the 2nd Sunday in November.
- Hours of service are between **10am and 4pm.**
- The route operates from James and Main to Rock Gardens, Woodland Cemetery and Holy Sepulchre Cemetery. Along most of the Rock Gardens route, buses will stop only at designated bus stops.
- In Woodland and Holy Sepulchre Cemeteries, however, the bus will stop anywhere on request. Simply flag the bus driver so he/she knows to stop. The "flag zones" are indicated on the map.
- HSR does not take responsibility for errors in this document, for damages or inconveniences caused by delayed schedules or failures to make connections.

THIS SCHEDULE IS SUBJECT TO CHANGE.

For up-to-date timetables and holiday service hours, visit hamilton.ca/hsr. The HSR does not take responsibility for errors in this document, for damages or inconveniences caused by delayed schedules or failures to make connections.

Rock Gardens 9

Effective September 1, 2024



Website: hamilton.ca/hsr
Email: hsrserve@hamilton.ca
Social: 𝕏@HSR @HamiltonStreetRailway

SCHEDULE - Northbound

TIMEPOINTS	A James & Main	B Rock Gardens	C Woodland Cemetery	D Holy Sepulchre Cemetery
10 am	10:05	10:20	10:30	10:35
11 am	11:05	11:20	11:30	11:35
12 pm	12:05	12:20	12:30	12:35
1 pm	1:05	1:20	1:30	1:35
2 pm	2:05	2:20	2:30	2:35
3 pm	3:05	3:20	3:30	3:35
4 pm	4:05	4:20	4:30	4:35

SCHEDULE - Southbound

TIMEPOINTS	D Holy Sepulchre Cemetery	B Rock Gardens	A James & Main
10 am	10:40	10:46	10:55
11 am	11:40	11:46	11:55
12 pm	12:40	12:46	12:55
1 pm	1:40	1:46	1:55
2 pm	2:40	2:46	2:55
3 pm	3:40	3:46	3:55
4 pm	4:40	4:46	4:55

BUS STOP NUMBERS

Northbound from Downtown

James Street
At Main 8900
At Hunter 2967

Hunter Street
At MacNab 2966
Opposite Park 2968
At Bay 2968

Bay Street
Opposite George 2922
At King 8090
At Vine 2974

Cannon Street
At Hess 2977
York Boulevard
At Queen 2978
At Ray 2978
At Locke 2978
At Inchbury 2979
Opposite Strathcona 2979
At Dundurn Castle 1264
Opposite Hamilton
Cemetery (Main) 1264

York Boulevard
Opposite Old Guelph 1323
At Rock Garden 1325
At Plains 1325

Plains Road
At Spring Gardens 1325
At Botanical 1328

Botanical Drive
At Spring Gardens 1327

Spring Gardens Road
Opp. Woodland 1324
Woodland Cemetery 1326
Holy Sepulchre West 1330
Holy Sepulchre East 1330

Plains Road
At 549 Plains 1329

Southbound to Downtown

Spring Garden Road
At Botanical 1332

Plains Road
Opposite Botanical 1333
At Spring Gardens 1333
At York 1333

York Boulevard
Opposite Rock Garden
At Old Guelph 1334
At Hamilton
Cemetery (North) 1336
At Hamilton Cemetery 1336
York Boulevard
At Hamilton
Cemetery (Main) 1336
At Woodbine 1336
At Locke 2983
At Pearl 2984
At Queen 2984
At Hess 2982
At Bay 2932
Opposite Park 2985
At James 2986

James Street
Opposite Rebecca 1011

Effective Nov 3, 2024

BURLINGTON TRANSIT



Route 1

Real-time bus information: myride.burlingtontransit.ca
burlingtontransit.ca | 905-639-0550
@BurlONTransit | contactbt@burlington.ca

2024-10-v1

1 Plains – Fairview East

Weekdays - East to Appleby GO Station

King St. at James St. (Hamilton)	Royal Botanical Gdns. (Plains Rd.)	Plains Rd. at Waterdown Rd.	Fairview St. at Maple Av.	Fairview St. at Burlington GO Station	Appleby GO Station
4:45	4:55	4:59	5:04	5:08	5:18
5:00	5:10	5:14	5:19	5:23	5:33
5:15	5:25	5:29	5:34	5:38	5:48
5:30	5:40	5:44	5:49	5:53	6:03
5:42	5:52	5:56	6:01	6:05	6:15
5:54	6:04	6:08	6:13	6:17	6:27
6:06	6:18	6:22	6:28	6:32	6:42
6:20	6:32	6:36	6:42	6:46	6:56
6:35	6:47	6:51	6:57	7:01	7:11
6:50	7:02	7:06	7:12	7:16	7:26
7:05	7:17	7:21	7:28	7:33	7:43
7:18	7:30	7:34	7:41	7:46	7:56
7:30	7:42	7:46	7:53	7:58	8:08
7:42	7:54	7:58	8:05	8:10	8:20
7:54	8:06	8:10	8:17	8:22	8:32
8:06	8:18	8:22	8:29	8:34	8:44
8:18	8:30	8:34	8:41	8:46	8:56
8:30	8:42	8:46	8:53	8:58	9:08
8:42	8:54	8:58	9:05	9:10	9:20
8:54	9:06	9:10	9:17	9:22	9:32
9:06	9:18	9:22	9:29	9:34	9:44
And every 12 minutes until					
14:18	14:30	14:34	14:42	14:47	15:00
14:30	14:42	14:46	14:54	14:59	15:12
14:42	14:54	14:58	15:06	15:11	15:24
14:54	15:06	15:10	15:18	15:23	15:36
15:04	15:16	15:20	15:28	15:33	15:46
15:14	15:26	15:30	15:38	15:43	15:56
15:24	15:36	15:40	15:48	15:53	16:06
15:34	15:46	15:50	15:58	16:03	16:16
And every 10 minutes until					
16:54	17:06	17:10	17:18	17:23	17:36
17:04	17:16	17:20	17:28	17:33	17:46
17:14	17:26	17:30	17:38	17:43	17:56

Weekdays - East to Appleby GO Station

King St. at James St. (Hamilton)	Royal Botanical Gdns. (Plains Rd.)	Plains Rd. at Waterdown Rd.	Fairview St. at Maple Av.	Fairview St. at Burlington GO Station	Appleby GO Station
17:24	17:36	17:40	17:48	17:53	18:06
17:33	17:45	17:49	17:57	18:02	18:15
17:42	17:54	17:58	18:06	18:11	18:24
17:51	18:03	18:07	18:15	18:20	18:33
18:01	18:12	18:15	18:21	18:25	18:36
18:11	18:22	18:25	18:31	18:35	18:46
18:22	18:33	18:36	18:42	18:46	18:57
18:32	18:43	18:46	18:52	18:56	19:07
18:42	18:53	18:56	19:02	19:06	19:17
18:54	19:05	19:08	19:14	19:18	19:29
19:07	19:18	19:21	19:27	19:31	19:42
19:20	19:31	19:34	19:40	19:44	19:55
19:30	19:41	19:44	19:50	19:54	20:05
19:42	19:53	19:56	20:02	20:06	20:17
19:55	20:06	20:09	20:15	20:19	20:30
20:11	20:21	20:24	20:29	20:33	20:43
20:28	20:38	20:41	20:46	20:50	21:00
20:44	20:54	20:57	21:02	21:06	21:16
20:59	21:09	21:12	21:17	21:21	21:31
21:14	21:24	21:27	21:32	21:36	21:46
21:29	21:39	21:42	21:47	21:51	22:01
21:44	21:54	21:57	22:02	22:06	22:16
21:59	22:09	22:12	22:17	22:21	22:31
22:14	22:24	22:27	22:32	22:36	22:46
22:29	22:39	22:42	22:47	22:51	23:01
22:44	22:54	22:57	23:02	23:06	23:16
22:59	23:09	23:12	23:17	23:21	23:31
23:14	23:24	23:27	23:32	23:36	23:46
23:29	23:39	23:42	23:47	23:51	0:01
23:44	23:54	23:57	0:02	0:06	0:16
23:59	0:09	0:12	0:17	0:21	0:31
0:14	0:24	0:27	0:32	0:36	0:46
0:29	0:39	0:42	0:47	0:51	1:01
0:44	0:54	0:57	1:02	1:06	1:16

Schedules are affected by traffic and road conditions. Visit myride.burlingtontransit.ca real-time information.

1 Plains – Fairview West

Weekdays - West to Hamilton

Appleby GO Station	Fairview St. at Burlington GO Station	Fairview St. at Maple Av.	Plains Rd. at Waterdown Rd.	Royal Botanical Gdns. (Plains Rd.)	King St. at James St. (Hamilton)
4:52	5:02	5:05	5:12	5:15	5:30
5:07	5:17	5:20	5:27	5:30	5:45
And every 15 minutes until					
6:37	6:47	6:50	6:57	7:00	7:15
6:50	7:00	7:03	7:10	7:13	7:28
7:05	7:16	7:19	7:27	7:31	7:46
7:19	7:30	7:33	7:41	7:45	8:00
And every 12 minutes until					
10:55	11:06	11:09	11:17	11:21	11:36
11:07	11:20	11:24	11:32	11:35	11:50
11:19	11:32	11:36	11:44	11:47	12:02
11:31	11:44	11:48	11:56	11:59	12:14
11:43	11:56	12:00	12:08	12:11	12:26
11:55	12:08	12:12	12:20	12:23	12:38
12:07	12:20	12:24	12:32	12:35	12:50
And every 12 minutes until					
13:31	13:44	13:48	13:56	13:59	14:14
13:40	13:53	13:57	14:05	14:08	14:23
13:52	14:05	14:09	14:17	14:20	14:35
14:04	14:19	14:24	14:32	14:36	14:54
14:15	14:30	14:35	14:43	14:47	15:05
14:27	14:42	14:47	14:55	14:59	15:17
14:39	14:54	14:59	15:07	15:11	15:29
14:51	15:06	15:11	15:19	15:23	15:41
14:58	15:13	15:18	15:26	15:30	15:48
15:07	15:22	15:27	15:35	15:39	15:57
15:17	15:32	15:37	15:45	15:49	16:07
15:27	15:42	15:47	15:55	15:59	16:17
15:35	15:50	15:55	16:03	16:07	16:25
15:43	15:58	16:03	16:11	16:15	16:33
15:51	16:06	16:11	16:19	16:23	16:41
16:01	16:18	16:24	16:32	16:36	16:58
16:11	16:28	16:34	16:42	16:46	17:08
16:21	16:38	16:44	16:52	16:56	17:18

Weekdays - West to Hamilton

Appleby GO Station	Fairview St. at Burlington GO Station	Fairview St. at Maple Av.	Plains Rd. at Waterdown Rd.	Royal Botanical Gdns. (Plains Rd.)	King St. at James St. (Hamilton)
And every 10 minutes until					
17:41	17:58	18:04	18:12	18:16	18:38
17:51	18:08	18:14	18:22	18:26	18:48
18:01	18:13	18:17	18:25	18:29	18:47
18:11	18:23	18:27	18:35	18:39	18:57
18:21	18:33	18:37	18:45	18:49	19:07
18:31	18:43	18:47	18:55	18:59	19:17
18:41	18:53	18:57	19:05	19:09	19:27
18:51	19:03	19:07	19:15	19:19	19:37
19:01	19:12	19:15	19:22	19:25	19:38
19:11	19:22	19:25	19:32	19:35	19:48
19:21	19:32	19:35	19:42	19:45	19:58
19:33	19:44	19:47	19:54	19:57	20:10
19:45	19:56	19:59	20:06	20:09	20:22
19:57	20:08	20:11	20:18	20:21	20:34
20:09	20:20	20:23	20:30	20:33	20:46
20:21	20:32	20:35	20:42	20:45	20:58
20:34	20:45	20:48	20:55	20:58	21:11
20:51	21:02	21:05	21:12	21:15	21:28
21:06	21:17	21:20	21:27	21:30	21:43
21:21	21:32	21:35	21:42	21:45	21:58
21:36	21:47	21:50	21:57	22:00	22:13
21:51	22:02	22:05	22:12	22:15	22:28
22:06	22:17	22:20	22:27	22:30	22:43
22:21	22:32	22:35	22:42	22:45	22:58
22:36	22:47	22:50	22:57	23:00	23:13
22:51	23:02	23:05	23:12	23:15	23:28
23:06	23:17	23:20	23:27	23:30	23:43
23:21	23:32	23:35	23:42	23:45	23:58
23:36	23:47	23:50	23:57	0:00	0:13
23:51	0:02	0:05	0:12	0:15	0:28
0:06	0:17	0:20	0:27	0:30	0:43
0:21	0:32	0:35	0:42	0:45	0:58
0:36	0:47	0:50	0:57	1:00	1:13

Schedules are affected by traffic and road conditions. Visit myride.burlingtontransit.ca real-time information.

1 Plains – Fairview East

Saturday - East to Appleby GO Station

King St. at James St. (Hamilton)	Royal Botanical Gdns. (Plains Rd.)	Plains Rd. at Waterdown Rd.	Fairview St. at Maple Av.	Fairview St. at Burlington GO Station	Appleby GO Station
6:30	6:40	6:44	6:51	6:54	7:04
6:45	6:55	6:59	7:06	7:09	7:19
7:00	7:10	7:14	7:21	7:24	7:34
7:15	7:25	7:29	7:36	7:39	7:49
7:30	7:40	7:44	7:51	7:54	8:04
7:45	7:55	7:59	8:06	8:09	8:19
8:00	8:10	8:14	8:21	8:24	8:34
8:15	8:25	8:29	8:36	8:39	8:49
8:30	8:43	8:47	8:55	8:58	9:09
8:45	8:58	9:02	9:10	9:13	9:24
9:00	9:13	9:17	9:25	9:28	9:39
9:15	9:28	9:32	9:40	9:43	9:54
9:30	9:43	9:47	9:55	9:58	10:09
And every 15 minutes until					
17:00	17:13	17:17	17:25	17:28	17:39
17:15	17:28	17:32	17:40	17:43	17:54
17:30	17:43	17:47	17:55	17:58	18:09
17:45	17:58	18:02	18:10	18:13	18:24
18:00	18:10	18:14	18:21	18:25	18:35
18:15	18:25	18:29	18:36	18:40	18:50
18:30	18:40	18:44	18:51	18:55	19:05
18:45	18:55	18:59	19:06	19:10	19:20
19:00	19:10	19:14	19:21	19:25	19:35
19:15	19:25	19:29	19:36	19:40	19:50
19:30	19:40	19:44	19:51	19:55	20:05
20:00	20:10	20:14	20:21	20:28	20:35
20:30	20:40	20:44	20:51	20:58	21:05
21:00	21:10	21:14	21:21	21:28	21:35
21:30	21:40	21:44	21:51	21:58	22:05
22:00	22:10	22:14	22:21	22:28	22:35
22:30	22:40	22:44	22:51	22:58	23:05
23:00	23:10	23:14	23:21	23:28	23:35
23:30	23:40	23:44	23:51	23:58	24:05
24:00	24:08	24:11	24:16	24:21	24:25

Sunday - East to Appleby GO Station

King St. at James St. (Hamilton)	Royal Botanical Gdns. (Plains Rd.)	Plains Rd. at Waterdown Rd.	Fairview St. at Maple Av.	Fairview St. at Burlington GO Station	Appleby GO Station
6:45	6:55	6:59	7:06	7:09	7:19
7:00	7:10	7:14	7:21	7:24	7:34
7:15	7:25	7:29	7:36	7:39	7:49
7:30	7:40	7:44	7:51	7:54	8:04
7:45	7:55	7:59	8:06	8:09	8:19
8:00	8:10	8:14	8:21	8:24	8:34
8:15	8:25	8:29	8:36	8:39	8:49
8:30	8:43	8:47	8:55	8:58	9:09
8:45	8:58	9:02	9:10	9:13	9:24
9:00	9:13	9:17	9:25	9:28	9:39
9:15	9:28	9:32	9:40	9:43	9:54
9:30	9:43	9:47	9:55	9:58	10:09
9:45	9:58	10:02	10:10	10:13	10:24
10:00	10:13	10:17	10:25	10:28	10:39
10:15	10:28	10:32	10:40	10:43	10:54
And every 15 minutes until					
16:00	16:13	16:17	16:25	16:28	16:39
16:15	16:28	16:32	16:40	16:43	16:54
16:30	16:43	16:47	16:55	16:58	17:09
16:45	16:58	17:02	17:10	17:13	17:24
17:00	17:13	17:17	17:25	17:28	17:39
17:15	17:28	17:32	17:40	17:43	17:54
17:30	17:43	17:47	17:55	17:58	18:09
17:45	17:58	18:02	18:10	18:13	18:24
18:00	18:10	18:14	18:21	18:25	18:35
18:15	18:25	18:29	18:36	18:40	18:50
18:30	18:40	18:44	18:51	18:55	19:05
18:45	18:55	18:59	19:06	19:10	19:20
19:00	19:10	19:14	19:21	19:25	19:35
19:30	19:40	19:44	19:51	19:55	20:05
20:00	20:10	20:14	20:21	20:25	20:35
20:30	20:40	20:44	20:51	20:55	21:05
21:00	21:08	21:14	21:21	21:25	21:35
21:30	21:38	21:44	21:51	21:55	22:05

Schedules are affected by traffic and road conditions. Visit myride.burlingtontransit.ca real-time information.

1 Plains – Fairview West

Saturday - West to Hamilton

Appleby GO Station	Fairview St. at Burlington GO Station	Fairview St. at Maple Av.	Plains Rd. at Waterdown Rd.	Royal Botanical Gdns. (Plains Rd.)	King St. at James St. (Hamilton)
6:35	6:45	6:48	6:55	6:59	7:09
6:50	7:00	7:03	7:10	7:14	7:24
7:05	7:15	7:18	7:25	7:29	7:39
7:20	7:30	7:33	7:40	7:44	7:54
7:35	7:45	7:48	7:55	7:59	8:09
7:50	8:00	8:03	8:10	8:14	8:24
8:05	8:15	8:18	8:25	8:29	8:39
8:20	8:30	8:33	8:40	8:44	8:54
8:30	8:41	8:44	8:52	8:56	9:09
8:45	8:56	8:59	9:07	9:11	9:24
9:00	9:11	9:14	9:22	9:26	9:39
9:15	9:26	9:29	9:37	9:41	9:54
9:30	9:41	9:44	9:52	9:56	10:09
9:45	9:56	9:59	10:07	10:11	10:24
10:00	10:11	10:14	10:22	10:26	10:39
And every 15 minutes until					
17:30	17:41	17:44	17:52	17:56	18:09
17:45	17:56	17:59	18:07	18:11	18:24
18:00	18:11	18:14	18:21	18:25	18:35
18:15	18:26	18:29	18:36	18:40	18:50
18:30	18:41	18:44	18:51	18:55	19:05
18:45	18:56	18:59	19:06	19:10	19:20
19:00	19:11	19:14	19:21	19:25	19:35
19:15	19:26	19:29	19:36	19:40	19:50
19:45	19:56	19:59	20:06	20:10	20:20
20:15	20:26	20:29	20:36	20:40	20:50
20:45	20:56	20:59	21:06	21:10	21:20
21:15	21:26	21:29	21:36	21:40	21:50
21:45	21:56	21:59	22:06	22:10	22:20
22:15	22:26	22:29	22:36	22:40	22:50
22:45	22:56	22:59	23:06	23:10	23:20
23:15	23:26	23:29	23:36	23:40	23:50
23:45	23:56	23:59	24:06	24:10	24:20
24:15	24:26	24:29	24:36	24:40	24:50

Sunday - West to Hamilton

Appleby GO Station	Fairview St. at Burlington GO Station	Fairview St. at Maple Av.	Plains Rd. at Waterdown Rd.	Royal Botanical Gdns. (Plains Rd.)	King St. at James St. (Hamilton)
6:35	6:45	6:48	6:55	6:59	7:09
6:50	7:00	7:03	7:10	7:14	7:24
7:05	7:15	7:18	7:25	7:29	7:39
7:20	7:30	7:33	7:40	7:44	7:54
7:35	7:45	7:48	7:55	7:59	8:09
7:50	8:00	8:03	8:10	8:14	8:24
8:05	8:15	8:18	8:25	8:29	8:39
8:20	8:30	8:33	8:40	8:44	8:54
8:30	8:41	8:44	8:52	8:56	9:09
8:45	8:56	8:59	9:07	9:11	9:24
9:00	9:11	9:14	9:22	9:26	9:39
9:15	9:26	9:29	9:37	9:41	9:54
9:30	9:41	9:44	9:52	9:56	10:09
9:45	9:56	9:59	10:07	10:11	10:24
10:00	10:11	10:14	10:22	10:26	10:39
And every 15 minutes until					
16:00	16:11	16:14	16:22	16:26	16:39
16:15	16:26	16:29	16:37	16:41	16:54
16:30	16:41	16:44	16:52	16:56	17:09
16:45	16:56	16:59	17:07	17:11	17:24
17:00	17:11	17:14	17:22	17:26	17:39
17:15	17:26	17:29	17:37	17:41	17:54
17:30	17:41	17:44	17:52	17:56	18:09
17:45	17:56	17:59	18:07	18:11	18:24
18:00	18:11	18:14	18:21	18:25	18:35
18:15	18:26	18:29	18:36	18:40	18:50
18:30	18:41	18:44	18:51	18:55	19:05
18:45	18:56	18:59	19:06	19:10	19:20
19:00	19:11	19:14	19:21	19:25	19:35
19:15	19:26	19:29	19:36	19:40	19:50
19:45	19:56	19:59	20:06	20:10	20:20
20:15	20:26	20:29	20:36	20:40	20:50
20:55	21:06	21:09	21:16	21:20	21:30
21:15	21:26	21:29	21:36	21:40	21:50

Schedules are affected by traffic and road conditions. Visit myride.burlingtontransit.ca real-time information.

Appendix C

Traffic Data

Spectrum

Turning Movement Count
Location Name: HWY 6 NORTHBOUND ON/OFF-RAMP AND & OLD YORK RD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Turning Movement Count (2 . HWY 6 NORTHBOUND ON/OFF-RAMP AND & OLD YORK RD)

Start Time	N Approach HIGHWAY 6 EAST RAMP					E Approach OLD YORK ROAD					W Approach OLD YORK ROAD					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
06:00:00	9	1	0	0	10	1	1	0	0	2	5	27	0	0	32	44	
06:15:00	19	1	0	0	20	0	2	0	0	2	8	49	0	0	57	79	
06:30:00	26	0	0	0	26	2	22	0	0	24	16	43	0	0	59	109	
06:45:00	20	5	0	0	25	3	8	0	0	11	6	44	0	0	50	86	318
07:00:00	20	1	0	0	21	2	4	0	0	6	11	39	0	0	50	77	351
07:15:00	36	0	0	0	36	1	9	0	0	10	13	39	0	0	52	98	370
07:30:00	35	1	0	0	36	1	4	0	0	5	17	53	0	0	70	111	372
07:45:00	36	0	0	0	36	0	3	0	0	3	16	65	0	0	81	120	406
08:00:00	50	4	0	0	54	5	10	0	0	15	14	53	0	0	67	136	465
08:15:00	49	4	0	0	53	1	11	0	0	12	15	55	0	0	70	135	502
08:30:00	47	4	0	0	51	3	9	0	0	12	13	58	0	0	71	134	525
08:45:00	67	9	0	0	76	2	15	0	0	17	15	52	0	0	67	160	565
09:00:00	58	3	0	0	61	1	9	0	0	10	11	51	0	0	62	133	562
09:15:00	61	2	0	0	63	5	8	0	0	13	10	60	0	0	70	146	573
09:30:00	48	2	0	0	50	5	4	0	0	9	6	39	0	0	45	104	543
09:45:00	38	1	0	0	39	4	11	0	0	15	11	37	0	0	48	102	485
BREAK																	
15:00:00	66	4	0	0	70	5	13	0	0	18	7	41	0	0	48	136	
15:15:00	84	6	1	0	91	4	6	0	0	10	13	59	0	0	72	173	
15:30:00	82	4	0	0	86	3	13	0	0	16	19	53	0	0	72	174	
15:45:00	73	9	0	0	82	5	13	0	0	18	7	67	0	0	74	174	657
16:00:00	85	7	0	0	92	4	21	0	0	25	13	57	0	0	70	187	708
16:15:00	81	2	0	0	83	2	18	0	0	20	14	74	0	0	88	191	726
16:30:00	70	6	0	0	76	7	25	0	0	32	13	95	0	0	108	216	768
16:45:00	92	6	0	0	98	6	15	0	0	21	13	79	0	0	92	211	805
17:00:00	76	4	0	0	80	9	25	0	0	34	14	76	0	0	90	204	822
17:15:00	83	2	0	0	85	3	29	0	0	32	10	83	0	0	93	210	841
17:30:00	72	2	0	0	74	7	22	0	0	29	14	62	0	0	76	179	804
17:45:00	93	3	0	0	96	7	16	0	0	23	12	72	0	0	84	203	796
18:00:00	82	0	0	0	82	3	14	0	0	17	13	39	0	0	52	151	743
18:15:00	79	3	0	0	82	4	22	0	0	26	12	58	0	0	70	178	711
18:30:00	69	6	0	0	75	3	4	0	0	7	9	46	0	0	55	137	669
18:45:00	58	4	0	0	62	6	1	0	0	7	8	39	0	0	47	116	582

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TORONTO ONTARIO, M5B 1M4
CANADA

Grand Total	1864	106	1	0	1971	114	387	0	0	501	378	1764	0	0	2142	**4614**	-
Approach%	94.6%	5.4%	0.1%		-	22.8%	77.2%	0%		-	17.6%	82.4%	0%		-	**-**	-
Totals %	40.4%	2.3%	0%		42.7%	2.5%	8.4%	0%		10.9%	8.2%	38.2%	0%		46.4%	**-**	-
Heavy	15	0	0		-	1	0	0		-	2	34	0		-	**-**	-
Heavy %	0.8%	0%	0%		-	0.9%	0%	0%		-	0.5%	1.9%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

Crozier & Associates
SUITE 301 211 YONGE STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Broken Clouds (15.32 °C)

Start Time	N Approach HIGHWAY 6 EAST RAMP					E Approach OLD YORK ROAD					W Approach OLD YORK ROAD					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
08:30:00	47	4	0	0	51	3	9	0	0	12	13	58	0	0	71	134
08:45:00	67	9	0	0	76	2	15	0	0	17	15	52	0	0	67	160
09:00:00	58	3	0	0	61	1	9	0	0	10	11	51	0	0	62	133
09:15:00	61	2	0	0	63	5	8	0	0	13	10	60	0	0	70	146
Grand Total	233	18	0	0	251	11	41	0	0	52	49	221	0	0	270	**573**
Approach%	92.8%	7.2%	0%		-	21.2%	78.8%	0%		-	18.1%	81.9%	0%		-	**-**
Totals %	40.7%	3.1%	0%		43.8%	1.9%	7.2%	0%		9.1%	8.6%	38.6%	0%		47.1%	**-**
PHF	0.87	0.5	0		0.83	0.55	0.68	0		0.76	0.82	0.92	0		0.95	**-**
Heavy	3	0	0		3	0	0	0		0	1	7	0		8	**-**
Heavy %	1.3%	0%	0%		1.2%	0%	0%	0%		0%	2%	3.2%	0%		3%	**-**
Lights	230	18	0		248	11	39	0		50	44	214	0		258	**-**
Lights %	98.7%	100%	0%		98.8%	100%	95.1%	0%		96.2%	89.8%	96.8%	0%		95.6%	**-**
Single-Unit Trucks	2	0	0		2	0	0	0		0	1	6	0		7	**-**
Single-Unit Trucks %	0.9%	0%	0%		0.8%	0%	0%	0%		0%	2%	2.7%	0%		2.6%	**-**
Buses	1	0	0		1	0	0	0		0	0	0	0		0	**-**
Buses %	0.4%	0%	0%		0.4%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0.5%	0%		0.4%	**-**
Bicycles on Road	0	0	0		0	0	2	0		2	4	0	0		4	**-**
Bicycles on Road %	0%	0%	0%		0%	0%	4.9%	0%		3.8%	8.2%	0%	0%		1.5%	**-**

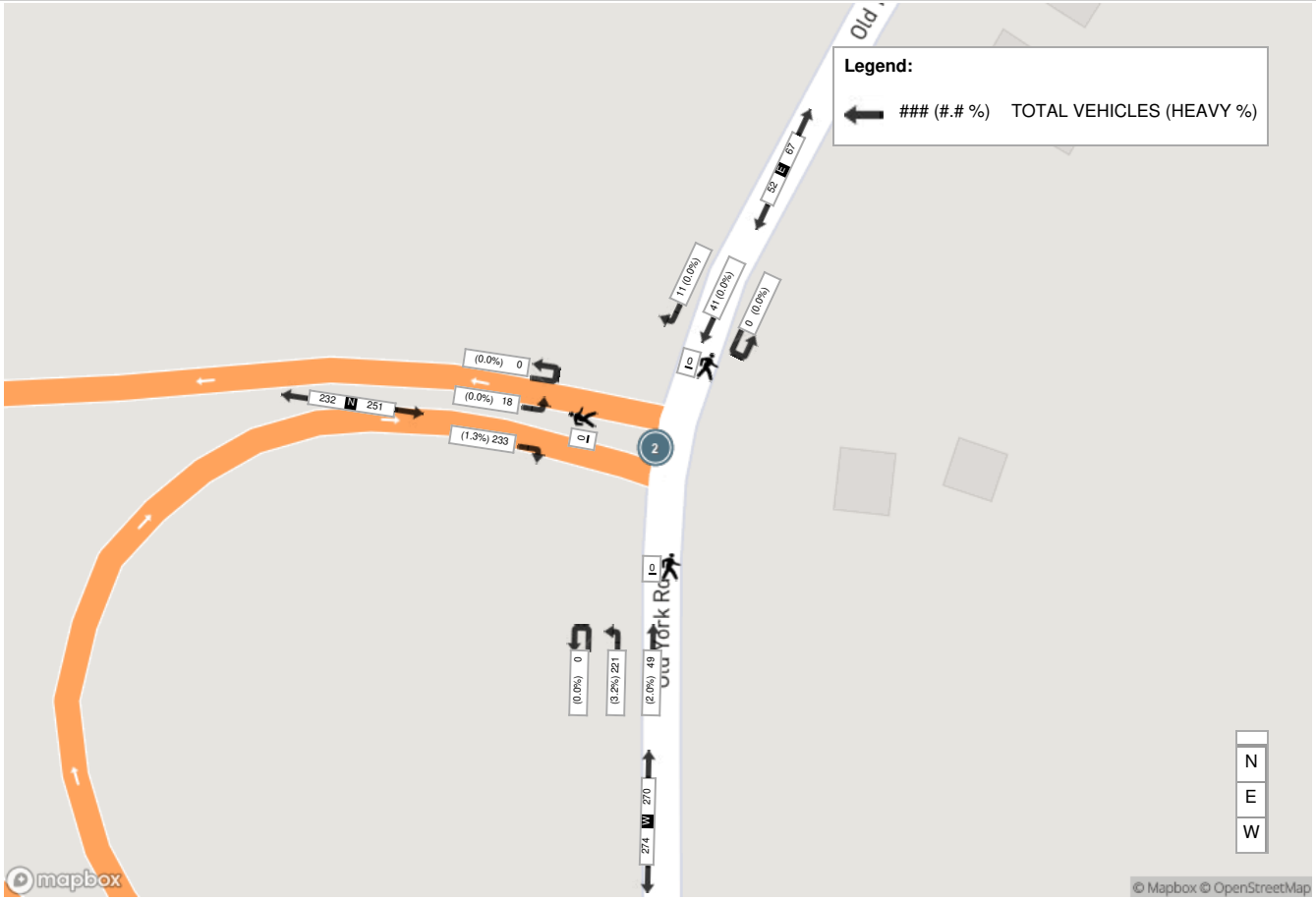
Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)

Start Time	N Approach HIGHWAY 6 EAST RAMP					E Approach OLD YORK ROAD					W Approach OLD YORK ROAD					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
16:30:00	70	6	0	0	76	7	25	0	0	32	13	95	0	0	108	216
16:45:00	92	6	0	0	98	6	15	0	0	21	13	79	0	0	92	211
17:00:00	76	4	0	0	80	9	25	0	0	34	14	76	0	0	90	204
17:15:00	83	2	0	0	85	3	29	0	0	32	10	83	0	0	93	210
Grand Total	321	18	0	0	339	25	94	0	0	119	50	333	0	0	383	**841**
Approach%	94.7%	5.3%	0%		-	21%	79%	0%		-	13.1%	86.9%	0%		-	**-**
Totals %	38.2%	2.1%	0%		40.3%	3%	11.2%	0%		14.1%	5.9%	39.6%	0%		45.5%	**-**
PHF	0.87	0.75	0		0.86	0.69	0.81	0		0.88	0.89	0.88	0		0.89	**-**
Heavy	3	0	0		3	0	0	0		0	0	0	0		0	**-**
Heavy %	0.9%	0%	0%		0.9%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	318	18	0		336	25	93	0		118	49	333	0		382	**-**
Lights %	99.1%	100%	0%		99.1%	100%	98.9%	0%		99.2%	98%	100%	0%		99.7%	**-**
Single-Unit Trucks	1	0	0		1	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Buses %	0.6%	0%	0%		0.6%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0		0	0	1	0		1	1	0	0		1	**-**
Bicycles on Road %	0%	0%	0%		0%	0%	1.1%	0%		0.8%	2%	0%	0%		0.3%	**-**

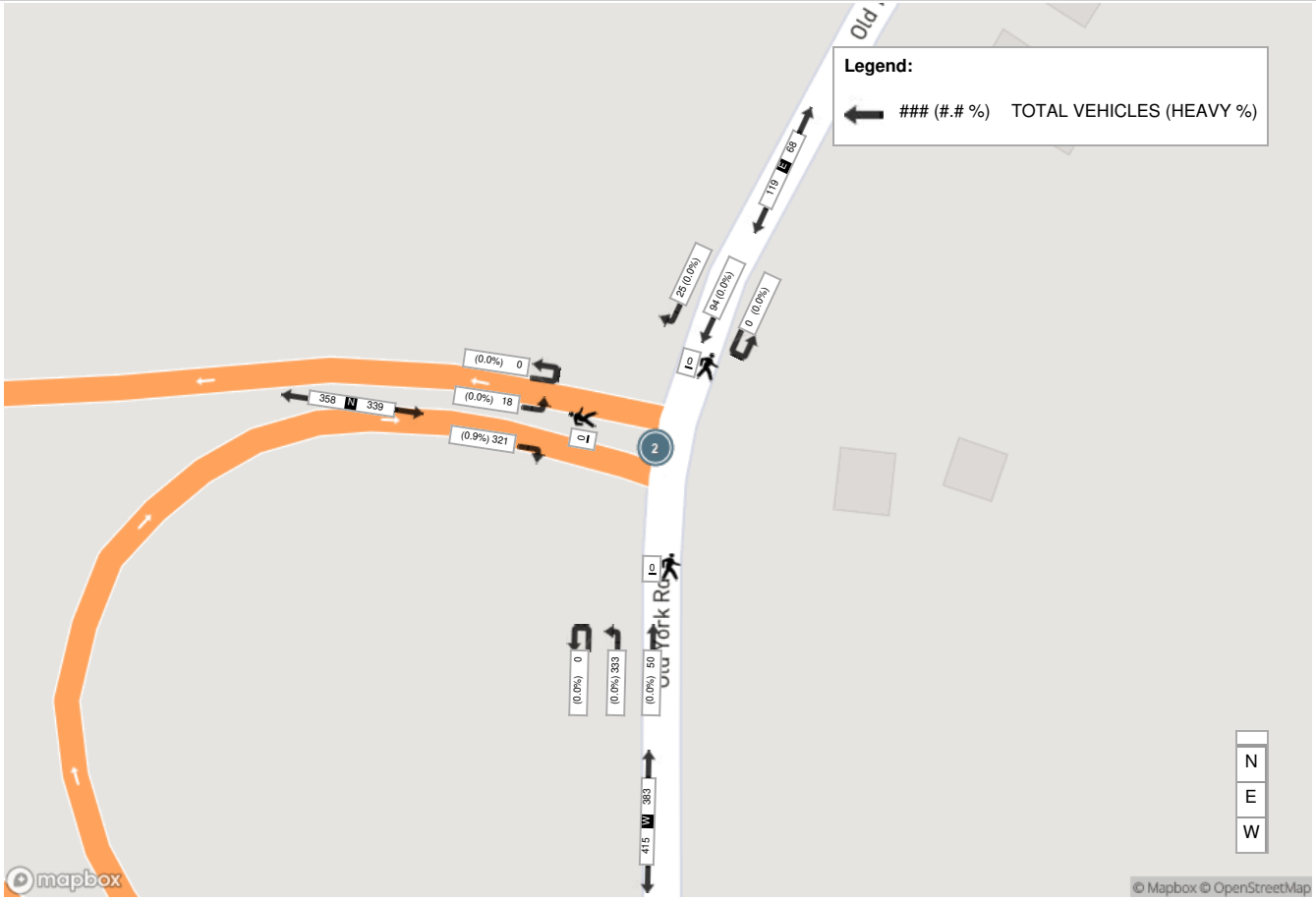
Crozier & Associates
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TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Broken Clouds (15.32 °C)



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STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)



Spectrum

Turning Movement Count
Location Name: HWY 6 SOUTHBOUND ON/OFF-RAMP & YORK RD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Turning Movement Count (1 . HWY 6 SOUTHBOUND ON/OFF-RAMP & YORK RD)

Start Time	N Approach HIGHWAY 6 WEST RAMP						E Approach YORK ROAD						S Approach HIGHWAY 6 WEST RAMP						W Approach YORK ROAD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
06:00:00	4	1	7	0	0	12	0	9	5	0	0	14	0	0	0	0	0	0	60	24	0	0	0	84	110	
06:15:00	5	0	10	0	0	15	0	23	5	0	0	28	0	0	0	0	0	0	50	27	0	0	0	77	120	
06:30:00	5	0	12	0	0	17	0	43	6	0	0	49	0	0	0	0	0	0	51	46	0	0	0	97	163	
06:45:00	8	0	14	0	0	22	0	31	1	0	0	32	0	0	0	0	0	0	52	32	0	0	0	84	138	531
07:00:00	5	0	10	0	0	15	0	23	7	0	0	30	0	0	0	0	0	0	62	38	0	0	0	100	145	566
07:15:00	9	0	20	0	0	29	0	38	5	0	0	43	0	0	0	0	0	0	62	38	0	0	0	100	172	618
07:30:00	15	0	18	0	0	33	0	40	4	0	0	44	0	0	0	0	0	0	82	46	0	0	0	128	205	660
07:45:00	21	1	19	0	0	41	0	40	7	0	0	47	0	0	0	0	0	0	73	40	0	0	0	113	201	723
08:00:00	15	0	22	0	0	37	0	62	8	0	0	70	0	0	0	0	0	0	66	42	0	0	0	108	215	793
08:15:00	18	0	18	0	0	36	0	63	9	0	0	72	0	0	0	0	0	0	61	50	1	0	0	112	220	841
08:30:00	18	1	16	0	0	35	0	61	5	0	0	66	0	0	0	0	0	0	82	62	0	0	0	144	245	881
08:45:00	16	0	25	0	0	41	0	74	14	0	0	88	0	0	0	0	0	0	80	56	0	0	0	136	265	945
09:00:00	24	0	18	0	0	42	0	64	13	0	0	77	0	0	0	0	0	0	61	45	0	0	0	106	225	955
09:15:00	9	0	19	0	0	28	0	75	8	0	0	83	0	0	0	0	0	0	54	53	0	0	0	107	218	953
09:30:00	12	0	15	0	0	27	0	52	10	0	0	62	0	0	0	0	0	0	63	20	0	0	0	83	172	880
09:45:00	13	0	17	0	0	30	0	40	10	0	0	50	0	0	0	0	0	0	61	32	0	0	0	93	173	788
BREAK																										
15:00:00	19	0	26	0	0	45	0	86	11	0	0	97	0	0	0	0	0	0	58	28	0	0	0	86	228	
15:15:00	22	0	19	0	0	41	0	97	14	0	0	111	0	0	0	0	0	0	46	59	0	0	0	105	257	
15:30:00	20	0	24	0	0	44	0	103	10	0	0	113	0	0	0	0	0	0	48	45	0	0	0	93	250	
15:45:00	20	0	14	0	0	34	0	82	12	0	0	94	0	0	0	0	0	0	64	55	0	0	0	119	247	982
16:00:00	12	0	31	0	0	43	0	99	16	0	0	115	0	0	0	0	0	0	58	46	0	0	0	104	262	1016
16:15:00	26	0	21	0	0	47	0	97	22	0	0	119	0	0	0	0	0	0	62	52	0	0	0	114	280	1039
16:30:00	21	1	29	0	0	51	0	114	14	0	0	128	0	0	0	0	0	0	56	69	0	0	0	125	304	1093
16:45:00	30	0	31	0	0	61	0	120	16	0	0	136	0	0	0	0	0	0	46	48	0	0	0	94	291	1137
17:00:00	37	0	32	0	0	69	0	115	8	0	0	123	0	0	0	0	0	0	51	48	0	0	0	99	291	1166
17:15:00	31	0	39	0	0	70	0	131	11	0	0	142	0	0	0	0	0	0	46	58	0	0	0	104	316	1202
17:30:00	32	0	47	0	0	79	0	116	8	0	0	124	0	0	0	0	0	0	41	60	0	0	0	101	304	1202
17:45:00	33	0	28	0	0	61	0	122	10	0	0	132	0	0	0	0	0	0	43	44	0	0	0	87	280	1191
18:00:00	28	1	36	0	0	65	0	112	7	0	0	119	0	0	0	0	0	0	38	29	0	0	0	67	251	1151
18:15:00	26	1	23	0	0	50	0	112	5	0	0	117	0	0	0	0	0	0	41	40	0	0	0	81	248	1083
18:30:00	28	0	16	0	0	44	0	78	6	0	0	84	0	0	0	0	0	0	28	33	0	0	0	61	189	968
18:45:00	21	1	14	0	0	36	0	55	10	0	0	65	0	0	0	0	0	0	45	39	0	0	0	84	185	873
Grand Total	603	7	690	0	0	1300	0	2377	297	0	0	2674	0	0	0	0	0	0	1791	1404	1	0	0	3196	**7170**	-
Approach%	46.4%	0.5%	53.1%	0%		-	0%	88.9%	11.1%	0%		-	0%	0%	0%	0%		-	56%	43.9%	0%	0%		-	**-**	-
Totals %	8.4%	0.1%	9.6%	0%		18.1%	0%	33.2%	4.1%	0%		37.3%	0%	0%	0%	0%		0%	25%	19.6%	0%	0%		44.6%	**-**	-
Heavy	13	1	19	0		-	0	10	5	0		-	0	0	0	0		-	18	11	0	0		-	**-**	-
Heavy %	2.2%	14.3%	2.8%	0%		-	0%	0.4%	1.7%	0%		-	0%	0%	0%	0%		-	1%	0.8%	0%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:15 AM - 09:15 AM Weather: Broken Clouds (15.32 °C)

Start Time	N Approach HIGHWAY 6 WEST RAMP						E Approach YORK ROAD						S Approach HIGHWAY 6 WEST RAMP						W Approach YORK ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:15:00	18	0	18	0	0	36	0	63	9	0	0	72	0	0	0	0	0	0	61	50	1	0	0	112	220
08:30:00	18	1	16	0	0	35	0	61	5	0	0	66	0	0	0	0	0	0	82	62	0	0	0	144	245
08:45:00	16	0	25	0	0	41	0	74	14	0	0	88	0	0	0	0	0	0	80	56	0	0	0	136	265
09:00:00	24	0	18	0	0	42	0	64	13	0	0	77	0	0	0	0	0	0	61	45	0	0	0	106	225
Grand Total	76	1	77	0	0	154	0	262	41	0	0	303	0	0	0	0	0	0	284	213	1	0	0	498	**955**
Approach%	49.4%	0.6%	50%	0%		-	0%	86.5%	13.5%	0%		-	0%	0%	0%	0%		-	57%	42.8%	0.2%	0%		-	-
Totals %	8%	0.1%	8.1%	0%		16.1%	0%	27.4%	4.3%	0%		31.7%	0%	0%	0%	0%		0%	29.7%	22.3%	0.1%	0%		52.1%	-
PHF	0.79	0.25	0.77	0		0.92	0	0.89	0.73	0		0.86	0	0	0	0		0	0.87	0.86	0.25	0		0.86	-
Heavy	3	0	3	0		6	0	1	0	0		1	0	0	0	0		0	2	4	0	0		6	-
Heavy %	3.9%	0%	3.9%	0%		3.9%	0%	0.4%	0%	0%		0.3%	0%	0%	0%	0%		0%	0.7%	1.9%	0%	0%		1.2%	-
Lights	73	1	74	0		148	0	257	41	0		298	0	0	0	0		0	282	207	1	0		490	-
Lights %	96.1%	100%	96.1%	0%		96.1%	0%	98.1%	100%	0%		98.3%	0%	0%	0%	0%		0%	99.3%	97.2%	100%	0%		98.4%	-
Single-Unit Trucks	2	0	2	0		4	0	1	0	0		1	0	0	0	0		0	1	4	0	0		5	-
Single-Unit Trucks %	2.6%	0%	2.6%	0%		2.6%	0%	0.4%	0%	0%		0.3%	0%	0%	0%	0%		0%	0.4%	1.9%	0%	0%		1%	-
Buses	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Buses %	0%	0%	1.3%	0%		0.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Articulated Trucks	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	-
Articulated Trucks %	1.3%	0%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.4%	0%	0%	0%		0.2%	-
Bicycles on Road	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	0	2	0	0		2	-
Bicycles on Road %	0%	0%	0%	0%		0%	0%	1.5%	0%	0%		1.3%	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.4%	-

Spectrum

Turning Movement Count
Location Name: HWY 6 SOUTHBOUND ON/OFF-RAMP & YORK RD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

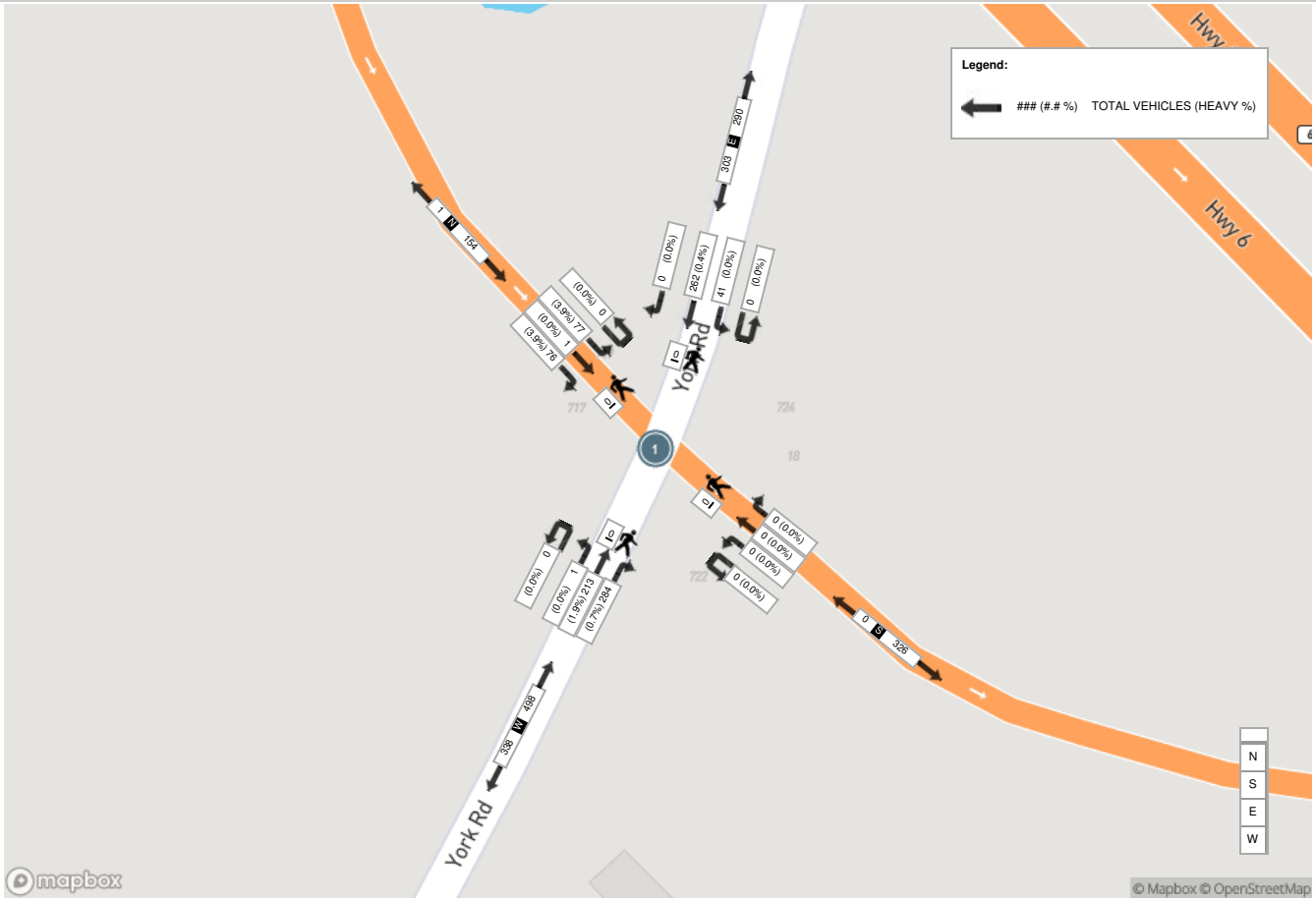
Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (25.99 °C)

Start Time	N Approach HIGHWAY 6 WEST RAMP						E Approach YORK ROAD						S Approach HIGHWAY 6 WEST RAMP						W Approach YORK ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	30	0	31	0	0	61	0	120	16	0	0	136	0	0	0	0	0	0	46	48	0	0	0	94	291
17:00:00	37	0	32	0	0	69	0	115	8	0	0	123	0	0	0	0	0	0	51	48	0	0	0	99	291
17:15:00	31	0	39	0	0	70	0	131	11	0	0	142	0	0	0	0	0	0	46	58	0	0	0	104	316
17:30:00	32	0	47	0	0	79	0	116	8	0	0	124	0	0	0	0	0	0	41	60	0	0	0	101	304
Grand Total	130	0	149	0	0	279	0	482	43	0	0	525	0	0	0	0	0	0	184	214	0	0	0	398	**1202**
Approach%	46.6%	0%	53.4%	0%		-	0%	91.8%	8.2%	0%		-	0%	0%	0%	0%		-	46.2%	53.8%	0%	0%		-	**-**
Totals %	10.8%	0%	12.4%	0%		23.2%	0%	40.1%	3.6%	0%		43.7%	0%	0%	0%	0%		0%	15.3%	17.8%	0%	0%		33.1%	**-**
PHF	0.88	0	0.79	0		0.88	0	0.92	0.67	0		0.92	0	0	0	0		0	0.9	0.89	0	0		0.96	**-**
Heavy	0	0	4	0		4	0	2	0	0		2	0	0	0	0		0	1	0	0	0		1	**-**
Heavy %	0%	0%	2.7%	0%		1.4%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0.5%	0%	0%	0%		0.3%	**-**
Lights	130	0	145	0		275	0	479	43	0		522	0	0	0	0		0	183	212	0	0		395	**-**
Lights %	100%	0%	97.3%	0%		98.6%	0%	99.4%	100%	0%		99.4%	0%	0%	0%	0%		0%	99.5%	99.1%	0%	0%		99.2%	**-**
Single-Unit Trucks	0	0	4	0		4	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	**-**
Single-Unit Trucks %	0%	0%	2.7%	0%		1.4%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.5%	0%	0%	0%		0.3%	**-**
Buses	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	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		0	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.5%	**-**

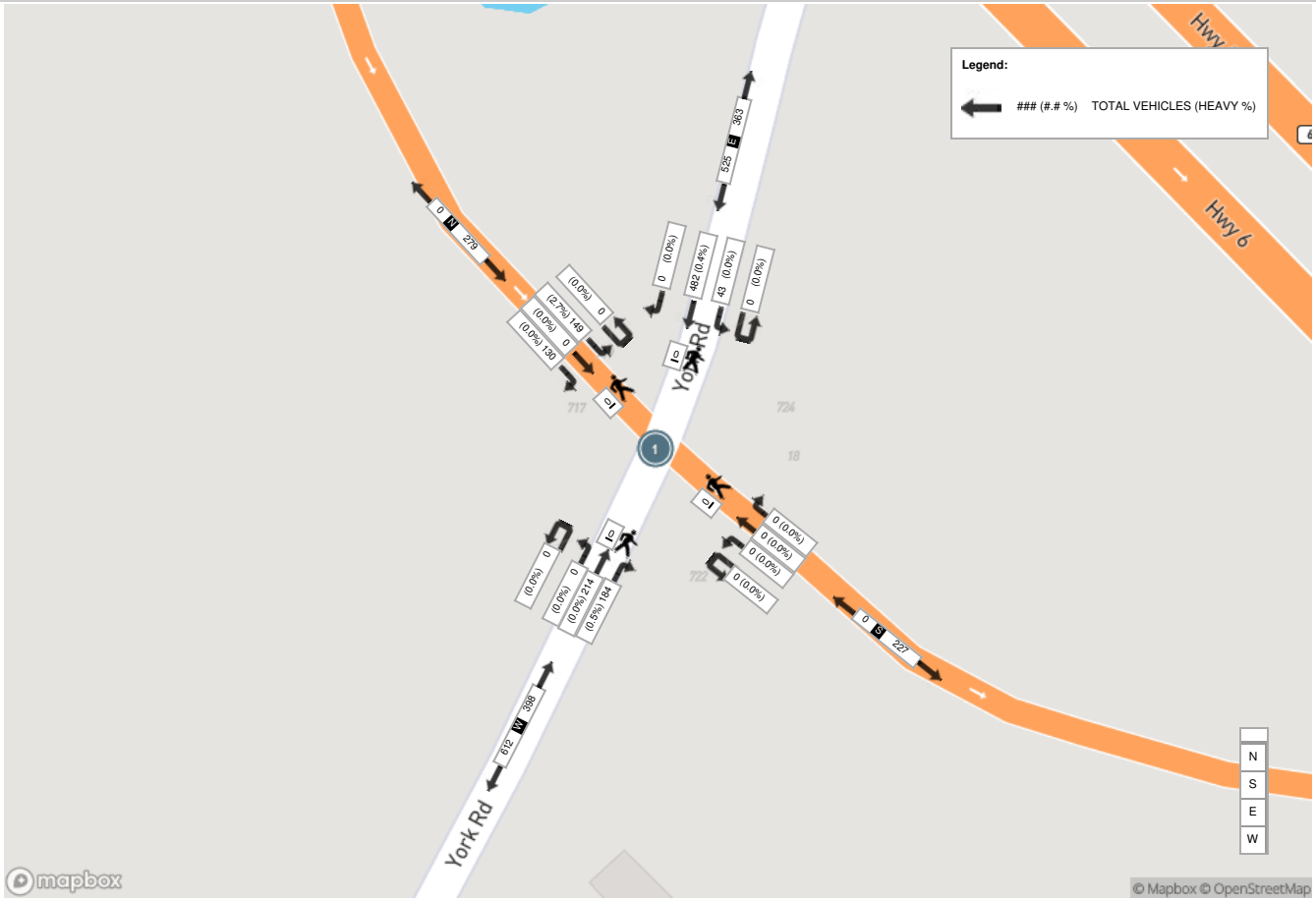
Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:15 AM - 09:15 AM **Weather: Broken Clouds (15.32 °C)**



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CANADA

Peak Hour: 04:45 PM - 05:45 PM **Weather: Broken Clouds (25.99 °C)**



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CANADA

Turning Movement Count (3 . PLAINS RD W & OLD YORK RD)

Start Time	E Approach YORK ROAD					S Approach PLAINS ROAD W					W Approach YORK ROAD					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
06:00:00	9	1	0	0	10	18	5	0	0	23	17	14	0	0	31	64	
06:15:00	21	0	0	0	21	39	7	0	0	46	19	19	0	0	38	105	
06:30:00	43	6	0	0	49	39	7	0	0	46	32	30	0	0	62	157	
06:45:00	24	5	0	0	29	26	9	0	0	35	28	21	0	0	49	113	439
07:00:00	22	2	0	0	24	28	9	0	0	37	23	24	0	0	47	108	483
07:15:00	42	3	0	0	45	23	7	0	0	30	35	25	0	0	60	135	513
07:30:00	35	4	0	0	39	41	8	0	0	49	36	31	0	0	67	155	511
07:45:00	34	5	0	0	39	48	14	0	0	62	32	29	0	0	61	162	560
08:00:00	52	9	0	0	61	36	17	0	0	53	37	29	0	0	66	180	632
08:15:00	53	5	0	0	58	41	18	0	0	59	38	27	0	0	65	182	679
08:30:00	52	8	0	0	60	30	15	0	0	45	39	42	0	0	81	186	710
08:45:00	71	14	0	0	85	34	20	0	0	54	43	37	0	0	80	219	767
09:00:00	63	6	0	0	69	37	12	0	0	49	34	28	0	0	62	180	767
09:15:00	62	10	0	0	72	26	20	0	0	46	32	41	0	0	73	191	776
09:30:00	46	6	0	0	52	29	18	0	0	47	22	16	0	0	38	137	727
09:45:00	45	4	0	0	49	25	11	0	0	36	29	21	0	0	50	135	643
BREAK																	
15:00:00	76	6	0	0	82	27	21	0	0	48	29	23	0	0	52	182	
15:15:00	86	5	0	0	91	26	23	0	0	49	31	47	0	0	78	218	
15:30:00	86	12	0	0	98	36	27	0	0	63	32	35	0	0	67	228	
15:45:00	77	11	0	0	88	38	19	0	0	57	41	35	0	0	76	221	849
16:00:00	96	11	0	0	107	34	28	0	0	62	43	36	0	0	79	248	915
16:15:00	85	16	0	0	101	53	33	0	0	86	33	40	0	0	73	260	957
16:30:00	99	5	0	0	104	50	30	0	0	80	49	53	0	0	102	286	1015
16:45:00	97	11	0	0	108	50	41	0	0	91	38	44	0	0	82	281	1075
17:00:00	92	9	0	0	101	55	31	0	0	86	42	41	0	0	83	270	1097
17:15:00	111	4	0	0	115	49	37	0	0	86	58	43	0	0	101	302	1139
17:30:00	98	5	0	0	103	35	29	0	0	64	59	44	0	0	103	270	1123
17:45:00	109	6	0	0	115	50	26	0	0	76	43	34	0	0	77	268	1110
18:00:00	87	9	0	0	96	25	35	0	0	60	37	26	0	0	63	219	1059
18:15:00	96	3	0	0	99	39	22	0	0	61	34	30	0	0	64	224	981
18:30:00	64	12	0	0	76	27	19	0	0	46	22	28	0	0	50	172	883
18:45:00	50	9	0	0	59	22	16	0	0	38	27	27	0	0	54	151	766

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Grand Total	2084	222	0	0	2306	1136	634	0	0	1770	1114	1020	0	0	2134	**6210**	-
Approach%	90.4%	9.6%	0%		-	64.2%	35.8%	0%		-	52.2%	47.8%	0%		-	**-**	-
Totals %	33.6%	3.6%	0%		37.1%	18.3%	10.2%	0%		28.5%	17.9%	16.4%	0%		34.4%	**-**	-
Heavy	13	4	0		-	15	4	0		-	13	7	0		-	**-**	-
Heavy %	0.6%	1.8%	0%		-	1.3%	0.6%	0%		-	1.2%	0.7%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

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SUITE 301 211 YONGE
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TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Broken Clouds (15.32 °C)

Start Time	E Approach YORK ROAD					S Approach PLAINS ROAD W					W Approach YORK ROAD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:30:00	52	8	0	0	60	30	15	0	0	45	39	42	0	0	81	186
08:45:00	71	14	0	0	85	34	20	0	0	54	43	37	0	0	80	219
09:00:00	63	6	0	0	69	37	12	0	0	49	34	28	0	0	62	180
09:15:00	62	10	0	0	72	26	20	0	0	46	32	41	0	0	73	191
Grand Total	248	38	0	0	286	127	67	0	0	194	148	148	0	0	296	**776**
Approach%	86.7%	13.3%	0%		-	65.5%	34.5%	0%		-	50%	50%	0%		-	**-**
Totals %	32%	4.9%	0%		36.9%	16.4%	8.6%	0%		25%	19.1%	19.1%	0%		38.1%	**-**
PHF	0.87	0.68	0		0.84	0.86	0.84	0		0.9	0.86	0.88	0		0.91	**-**
Heavy	4	0	0		4	1	0	0		1	0	2	0		2	**-**
Heavy %	1.6%	0%	0%		1.4%	0.8%	0%	0%		0.5%	0%	1.4%	0%		0.7%	**-**
Lights	243	38	0		281	126	67	0		193	148	145	0		293	**-**
Lights %	98%	100%	0%		98.3%	99.2%	100%	0%		99.5%	100%	98%	0%		99%	**-**
Single-Unit Trucks	3	0	0		3	1	0	0		1	0	2	0		2	**-**
Single-Unit Trucks %	1.2%	0%	0%		1%	0.8%	0%	0%		0.5%	0%	1.4%	0%		0.7%	**-**
Buses	1	0	0		1	0	0	0		0	0	0	0		0	**-**
Buses %	0.4%	0%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Bicycles on Road	1	0	0		1	0	0	0		0	0	1	0		1	**-**
Bicycles on Road %	0.4%	0%	0%		0.3%	0%	0%	0%		0%	0%	0.7%	0%		0.3%	**-**

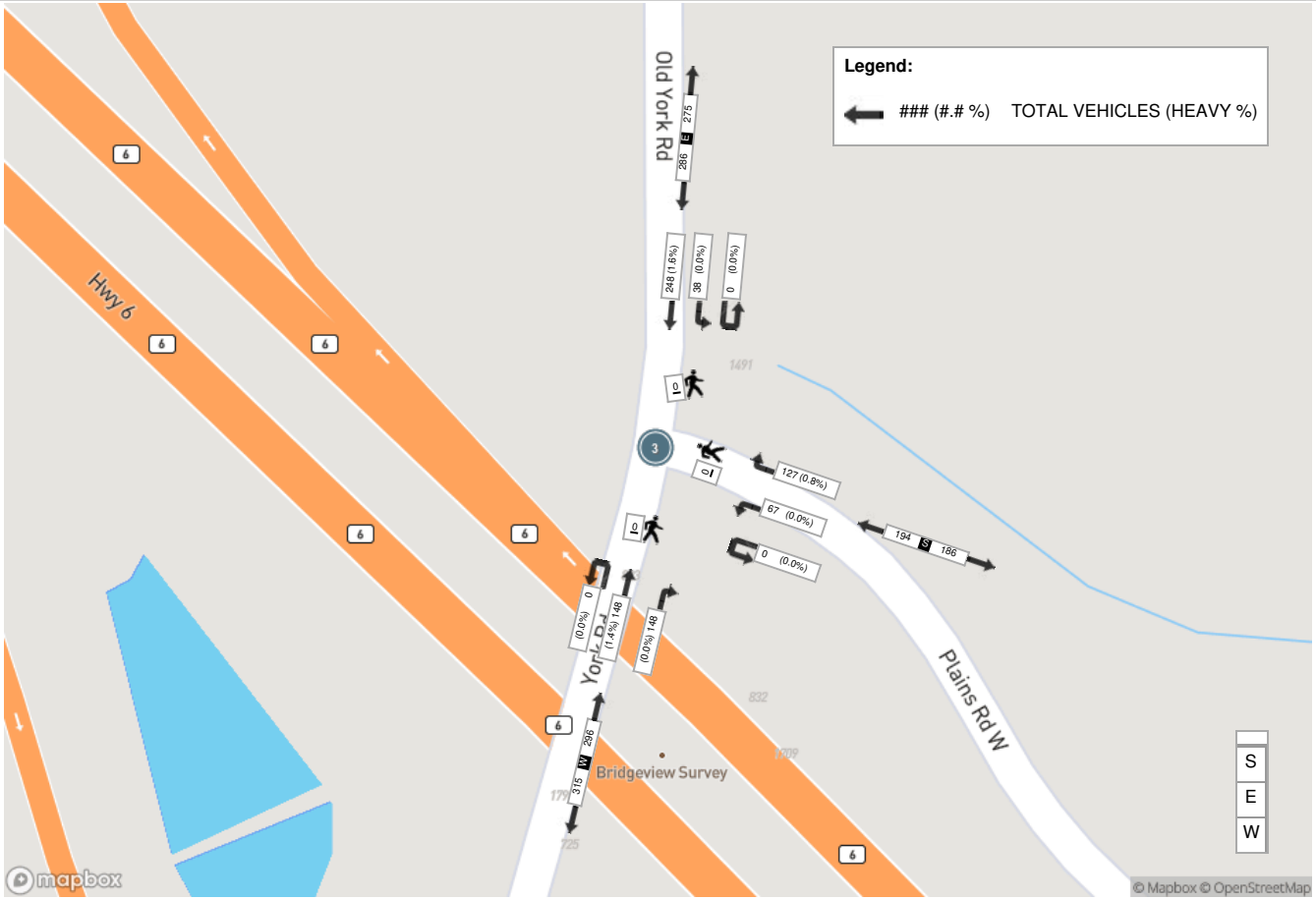
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CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)

Start Time	E Approach YORK ROAD					S Approach PLAINS ROAD W					W Approach YORK ROAD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:30:00	99	5	0	0	104	50	30	0	0	80	49	53	0	0	102	286
16:45:00	97	11	0	0	108	50	41	0	0	91	38	44	0	0	82	281
17:00:00	92	9	0	0	101	55	31	0	0	86	42	41	0	0	83	270
17:15:00	111	4	0	0	115	49	37	0	0	86	58	43	0	0	101	302
Grand Total	399	29	0	0	428	204	139	0	0	343	187	181	0	0	368	**1139**
Approach%	93.2%	6.8%	0%		-	59.5%	40.5%	0%		-	50.8%	49.2%	0%		-	**-**
Totals %	35%	2.5%	0%		37.6%	17.9%	12.2%	0%		30.1%	16.4%	15.9%	0%		32.3%	**-**
PHF	0.9	0.66	0		0.93	0.93	0.85	0		0.94	0.81	0.85	0		0.9	**-**
Heavy	2	0	0		2	0	0	0		0	3	1	0		4	**-**
Heavy %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	1.6%	0.6%	0%		1.1%	**-**
Lights	396	29	0		425	204	139	0		343	183	179	0		362	**-**
Lights %	99.2%	100%	0%		99.3%	100%	100%	0%		100%	97.9%	98.9%	0%		98.4%	**-**
Single-Unit Trucks	0	0	0		0	0	0	0		0	2	1	0		3	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	1.1%	0.6%	0%		0.8%	**-**
Buses	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Buses %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	1	0	0		1	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0.5%	0%	0%		0.3%	**-**
Bicycles on Road	1	0	0		1	0	0	0		0	1	1	0		2	**-**
Bicycles on Road %	0.3%	0%	0%		0.2%	0%	0%	0%		0%	0.5%	0.6%	0%		0.5%	**-**

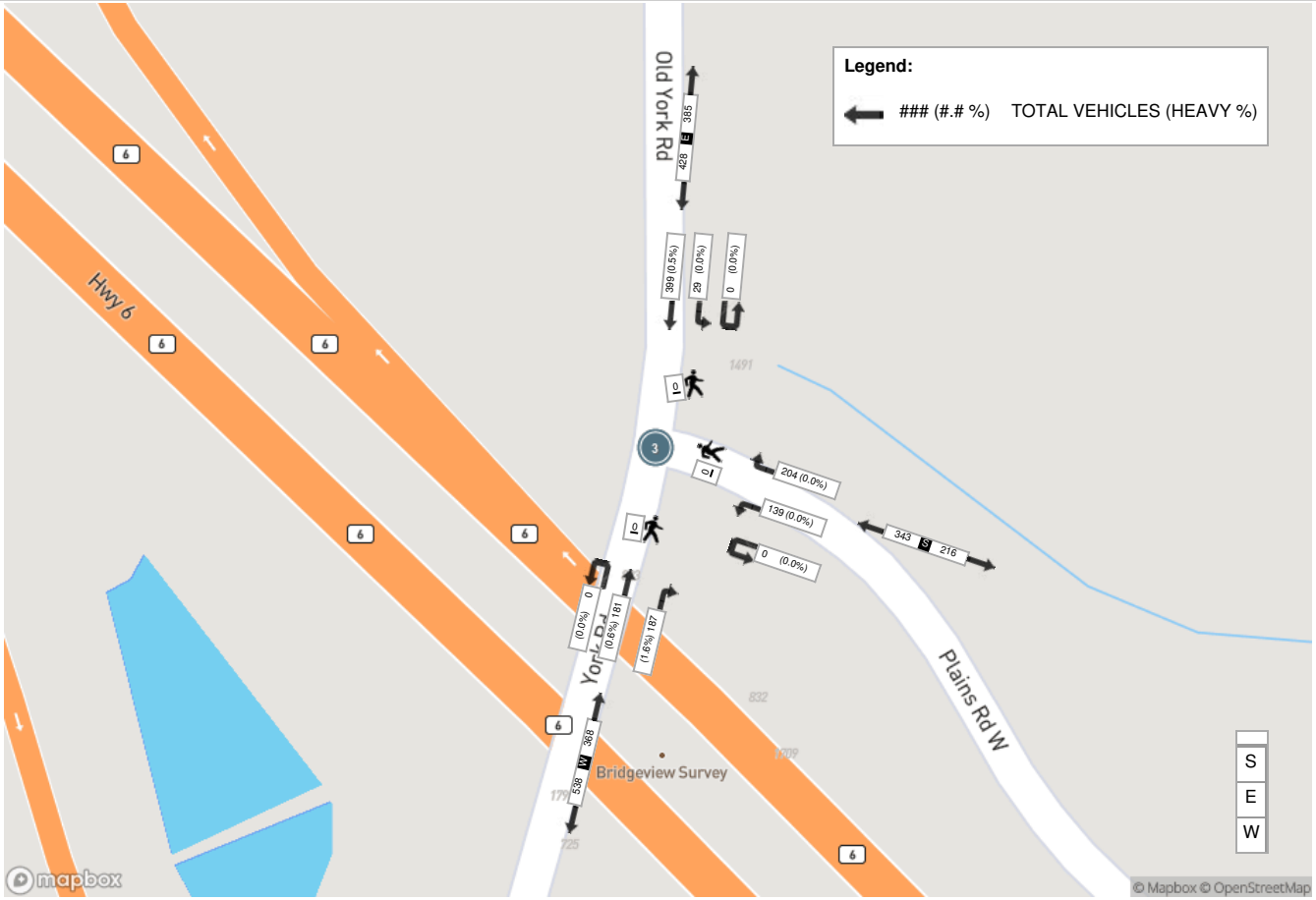
Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Broken Clouds (15.32 °C)



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CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)



Spectrum

Turning Movement Count
Location Name: PLAINS RD W & YORK BLVD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

Crozier & Associates
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CANADA

Turning Movement Count (4 . PLAINS RD W & YORK BLVD)

Start Time	N Approach PLAINS ROAD WEST					E Approach YORK BOULEVARD					W Approach YORK BOULEVARD					NW Approach SBR SLIP LANE				Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total	Bear Right NW:W	UTurn NW:NW	Peds NW:	Approach Total		
06:00:00	0	12	0	0	12	5	12	0	0	17	73	19	0	1	92	5	0	0	5	126	
06:15:00	0	22	0	0	22	11	20	0	0	31	82	50	0	0	132	7	0	0	7	192	
06:30:00	0	31	0	0	31	20	25	0	0	45	77	35	0	0	112	8	0	0	8	196	
06:45:00	0	27	0	0	27	14	27	0	0	41	81	29	0	0	110	13	0	0	13	191	705
07:00:00	0	28	0	2	28	12	36	0	0	48	86	25	0	1	111	6	0	0	6	193	772
07:15:00	0	29	0	0	29	13	44	0	0	57	84	32	0	0	116	16	0	0	16	218	798
07:30:00	0	28	0	0	28	16	47	0	0	63	89	51	0	0	140	18	0	1	18	249	851
07:45:00	0	26	0	0	26	25	57	0	0	82	90	37	0	1	127	22	0	1	22	257	917
08:00:00	0	40	0	2	40	29	58	0	0	87	79	47	0	0	126	22	0	2	22	275	999
08:15:00	0	28	0	0	28	21	61	0	0	82	81	45	0	0	126	16	0	0	16	252	1033
08:30:00	0	48	0	0	48	25	69	0	0	94	77	31	0	0	108	14	0	0	14	264	1048
08:45:00	0	39	0	0	39	39	54	0	0	93	76	24	0	0	100	23	0	0	23	255	1046
09:00:00	0	37	0	0	37	17	47	0	0	64	69	38	0	0	107	17	0	0	17	225	996
09:15:00	0	33	0	0	33	25	50	0	0	75	61	27	0	0	88	7	0	0	7	203	947
09:30:00	0	19	0	0	19	21	44	0	0	65	60	26	0	0	86	13	0	0	13	183	866
09:45:00	0	27	0	0	27	33	42	0	0	75	66	21	0	0	87	10	0	0	10	199	810
BREAK																					
15:00:00	0	30	0	0	30	29	95	0	0	124	67	27	0	0	94	13	0	0	13	261	
15:15:00	0	30	0	0	30	36	102	2	0	140	69	31	0	0	100	7	0	0	7	277	
15:30:00	0	35	0	0	35	31	118	0	0	149	56	29	0	0	85	25	0	0	25	294	
15:45:00	0	49	0	0	49	33	126	0	0	159	79	35	0	0	114	33	0	0	33	355	1187
16:00:00	0	34	0	1	34	37	113	1	0	151	62	25	0	1	87	32	0	0	32	304	1230
16:15:00	0	40	0	0	40	45	116	0	0	161	76	50	0	0	126	26	0	0	26	353	1306
16:30:00	0	42	0	0	42	41	150	0	0	191	89	45	0	0	134	37	0	0	37	404	1416
16:45:00	0	26	0	0	26	58	163	0	0	221	72	43	0	0	115	47	0	0	47	409	1470
17:00:00	0	33	0	0	33	54	148	0	0	202	80	37	0	0	117	39	0	0	39	391	1557
17:15:00	0	38	0	0	38	36	170	0	0	206	68	62	0	0	130	50	0	0	50	424	1628
17:30:00	0	39	0	0	39	40	149	0	0	189	71	28	0	0	99	60	0	0	60	387	1611
17:45:00	1	28	0	1	29	48	149	0	0	197	64	34	0	1	98	45	0	0	45	369	1571
18:00:00	0	31	0	0	31	32	158	1	0	191	47	19	0	0	66	37	0	0	37	325	1505
18:15:00	0	26	0	0	26	40	123	1	0	164	60	25	0	1	85	32	0	0	32	307	1388
18:30:00	0	20	0	0	20	34	78	0	0	112	52	19	0	0	71	18	0	0	18	221	1222
18:45:00	0	23	0	0	23	24	79	0	0	103	50	18	0	0	68	17	0	0	17	211	1064
Grand Total	1	998	0	6	999	944	2730	5	0	3679	2293	1064	0	6	3357	735	0	4	735	**8770**	-
Approach%	0.1%	99.9%	0%		-	25.7%	74.2%	0.1%		-	68.3%	31.7%	0%		-	100%	0%		-	**-**	-
Totals %	0%	11.4%	0%		11.4%	10.8%	31.1%	0.1%		41.9%	26.1%	12.1%	0%		38.3%	8.4%	0%		8.4%	**-**	-
Heavy	0	11	0		-	8	53	0		-	51	15	0		-	6	0		-	**-**	-
Heavy %	0%	1.1%	0%		-	0.8%	1.9%	0%		-	2.2%	1.4%	0%		-	0.8%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-		-	**-**	-

Spectrum

Turning Movement Count
Location Name: PLAINS RD W & YORK BLVD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (15.32 °C)

Start Time	N Approach PLAINS ROAD WEST					E Approach YORK BOULEVARD					W Approach YORK BOULEVARD					NW Approach SBR SLIP LANE				Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Bear Right	UTurn	Peds	Approach Total	
07:45:00	0	26	0	0	26	25	57	0	0	82	90	37	0	1	127	22	0	1	22	257
08:00:00	0	40	0	2	40	29	58	0	0	87	79	47	0	0	126	22	0	2	22	275
08:15:00	0	28	0	0	28	21	61	0	0	82	81	45	0	0	126	16	0	0	16	252
08:30:00	0	48	0	0	48	25	69	0	0	94	77	31	0	0	108	14	0	0	14	264
Grand Total	0	142	0	2	142	100	245	0	0	345	327	160	0	1	487	74	0	3	74	**1048**
Approach%	0%	100%	0%		-	29%	71%	0%		-	67.1%	32.9%	0%		-	100%	0%		-	**-**
Totals %	0%	13.5%	0%		13.5%	9.5%	23.4%	0%		32.9%	31.2%	15.3%	0%		46.5%	7.1%	0%		7.1%	**-**
PHF	0	0.74	0		0.74	0.86	0.89	0		0.92	0.91	0.85	0		0.96	0.84	0		0.84	**-**
Heavy	0	2	0		2	1	7	0		8	8	6	0		14	2	0		2	**-**
Heavy %	0%	1.4%	0%		1.4%	1%	2.9%	0%		2.3%	2.4%	3.8%	0%		2.9%	2.7%	0%		2.7%	**-**
Lights	0	140	0		140	97	235	0		332	314	152	0		466	71	0		71	**-**
Lights %	0%	98.6%	0%		98.6%	97%	95.9%	0%		96.2%	96%	95%	0%		95.7%	95.9%	0%		95.9%	**-**
Single-Unit Trucks	0	2	0		2	1	1	0		2	1	6	0		7	1	0		1	**-**
Single-Unit Trucks %	0%	1.4%	0%		1.4%	1%	0.4%	0%		0.6%	0.3%	3.8%	0%		1.4%	1.4%	0%		1.4%	**-**
Buses	0	0	0		0	0	6	0		6	7	0	0		7	1	0		1	**-**
Buses %	0%	0%	0%		0%	0%	2.4%	0%		1.7%	2.1%	0%	0%		1.4%	1.4%	0%		1.4%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0		0	2	3	0		5	5	2	0		7	1	0		1	**-**
Bicycles on Road %	0%	0%	0%		0%	2%	1.2%	0%		1.4%	1.5%	1.3%	0%		1.4%	1.4%	0%		1.4%	**-**
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-	-	2	-	**-**
Pedestrians%	-	-	-	33.3%		-	-	-	0%		-	-	-	0%		-	-	33.3%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	16.7%		-	-	16.7%		**-**

Spectrum

Turning Movement Count
Location Name: PLAINS RD W & YORK BLVD
Date: Wed, Jul 12, 2023 Deployment Lead: Walter Fugaj

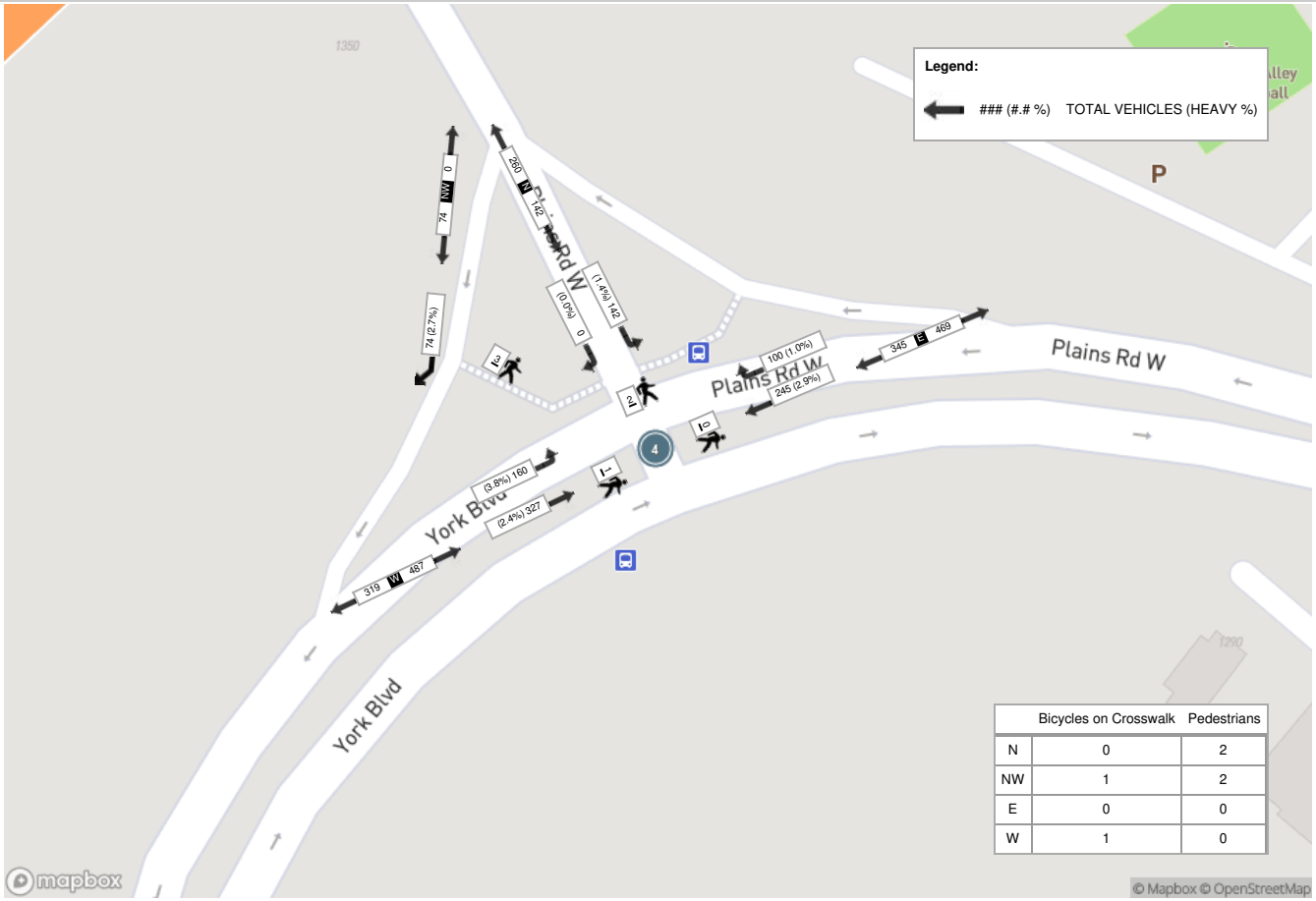
Crozier & Associates
SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)

Start Time	N Approach PLAINS ROAD WEST					E Approach YORK BOULEVARD					W Approach YORK BOULEVARD					NW Approach SBR SLIP LANE				Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Bear Right	UTurn	Peds	Approach Total	
16:30:00	0	42	0	0	42	41	150	0	0	191	89	45	0	0	134	37	0	0	37	404
16:45:00	0	26	0	0	26	58	163	0	0	221	72	43	0	0	115	47	0	0	47	409
17:00:00	0	33	0	0	33	54	148	0	0	202	80	37	0	0	117	39	0	0	39	391
17:15:00	0	38	0	0	38	36	170	0	0	206	68	62	0	0	130	50	0	0	50	424
Grand Total	0	139	0	0	139	189	631	0	0	820	309	187	0	0	496	173	0	0	173	**1628**
Approach%	0%	100%	0%		-	23%	77%	0%		-	62.3%	37.7%	0%		-	100%	0%		-	**-**
Totals %	0%	8.5%	0%		8.5%	11.6%	38.8%	0%		50.4%	19%	11.5%	0%		30.5%	10.6%	0%		10.6%	**-**
PHF	0	0.83	0		0.83	0.81	0.93	0		0.93	0.87	0.75	0		0.93	0.87	0		0.87	**-**
Heavy	0	3	0		3	0	7	0		7	5	0	0		5	2	0		2	**-**
Heavy %	0%	2.2%	0%		2.2%	0%	1.1%	0%		0.9%	1.6%	0%	0%		1%	1.2%	0%		1.2%	**-**
Lights	0	135	0		135	189	617	0		806	294	186	0		480	169	0		169	**-**
Lights %	0%	97.1%	0%		97.1%	100%	97.8%	0%		98.3%	95.1%	99.5%	0%		96.8%	97.7%	0%		97.7%	**-**
Single-Unit Trucks	0	3	0		3	0	0	0		0	0	0	0		0	2	0		2	**-**
Single-Unit Trucks %	0%	2.2%	0%		2.2%	0%	0%	0%		0%	0%	0%	0%		0%	1.2%	0%		1.2%	**-**
Buses	0	0	0		0	0	7	0		7	5	0	0		5	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	1.1%	0%		0.9%	1.6%	0%	0%		1%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%		0%	**-**
Bicycles on Road	0	1	0		1	0	7	0		7	10	1	0		11	2	0		2	**-**
Bicycles on Road %	0%	0.7%	0%		0.7%	0%	1.1%	0%		0.9%	3.2%	0.5%	0%		2.2%	1.2%	0%		1.2%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-	-	0%		**-**

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CANADA

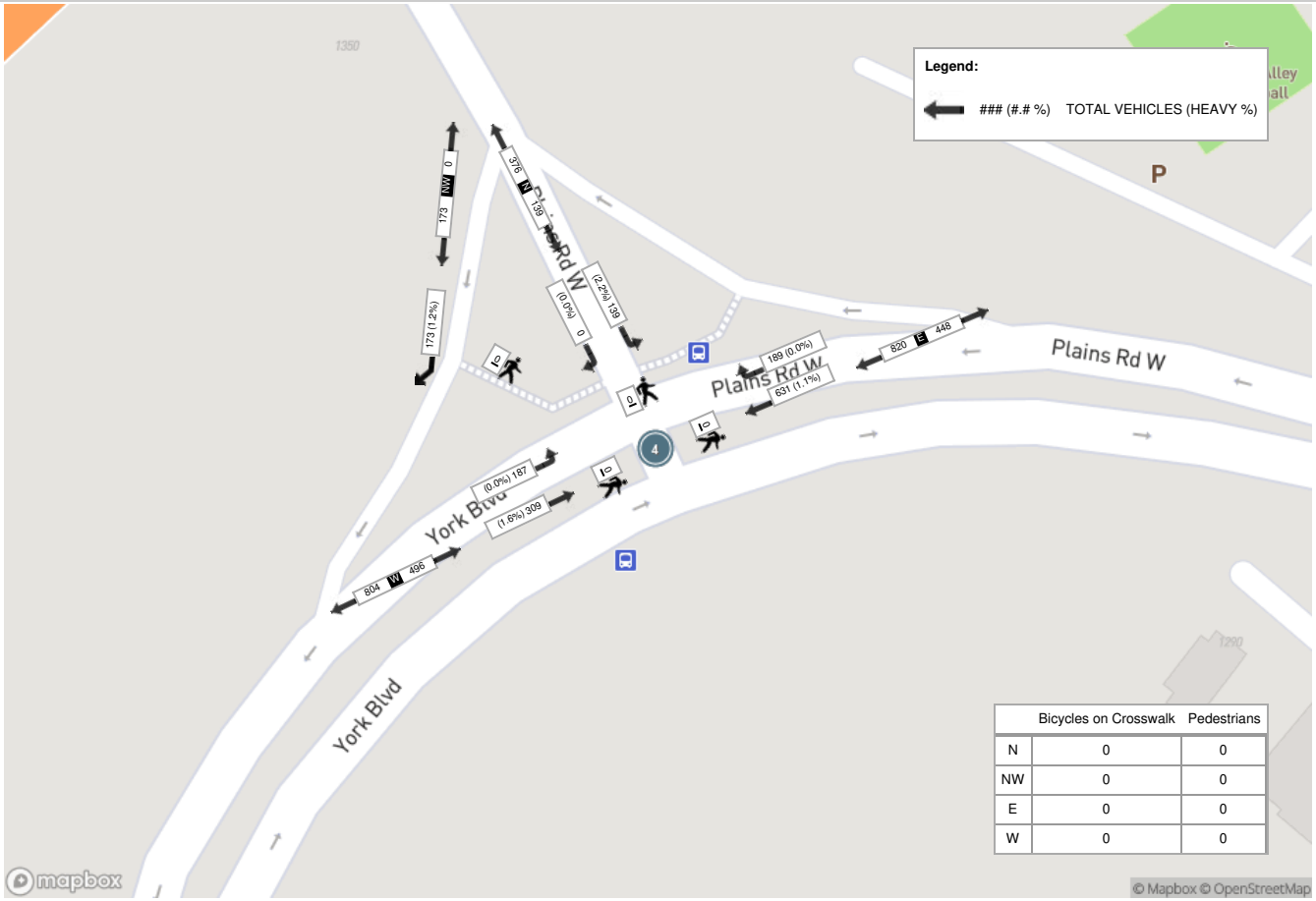
Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (15.32 °C)



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

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SUITE 301 211 YONGE
STREET
TORONTO ONTARIO, M5B 1M4
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (25.99 °C)



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

Intersection Name:	TS ID:	Line No:	Model:	Controller Make:	IP address:
Plains Road & York Boulevard	901				

Type of Operation: 8 Phase Semi-Actuated

No	Date			Description	Prepared By
	Y	M	D		
2	2019	7	28	Main street not running max recall, therefore increased the walk time.	PH
3	2021	1	18	Adjust Phase 8 All-Red	JR

*- Start from Main Manu

PHASE DESCRIPTION			
Ph1		Ph5	ELT - Plains Road
Ph2	EB - Plains Road	Ph6	WB - York Boulevard
Ph3		Ph7	
Ph4		Ph8	SB - Plains Road

CONFIGURATION (PHASE SEQ): PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

	Phase:	1	2	3	4	5	6	7	8
Phase in Use	:		X			X	X		X
Exclusive PED	:								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1	Phase:	1	2	3	4	5	6	7	8
Minimum Green	:		40			6	40		8
Walk	:		34				34		12
Ped. Clearance	:		6				6		14
Vehicle Extension	:		3			3	3		5
MAX 1	:		30			10	30		25
MAX 2	:		30			10	30		25
Yellow Change	:		4			3	4		4
Red Clearance	:		2				2		3

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

	Phase:	1	2	3	4	5	6	7	8
Lock Detector	:								
Vehicle Recall	:								
Pedestrian Recall	:		X				X		
MAX Recall	:		X				X		
Soft Recall	:								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN * - 3 - 2, - 3 - 3

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
10				10								

CP # 1, 2, 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								

Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase							
		1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	10	00:00	10	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Appendix D

Level of Service Definitions

Level of Service Definitions

Signalized Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Extremely favourable progression with most vehicles arriving during the green phase. Most vehicles do not stop and short cycle lengths may contribute to low delay.
B	> 10 and ≤ 20	VERY GOOD. Very good progression and/or short cycle lengths with slightly more vehicles stopping than LOS "A" causing slightly higher levels of average delay.
C	> 20 and ≤ 35	GOOD. Fair progression and longer cycle lengths lead to a greater number of vehicles stopping than LOS "B".
D	> 35 and ≤ 55	FAIR. Congestion becomes noticeable with higher average delays resulting from a combination of long cycle lengths, high volume-to-capacity ratios and unfavourable progression.
E	> 55 and ≤ 80	POOR. Lengthy delays values are indicative of poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures are common with individual movement failures also common.
F	> 80	UNSATISFACTORY. Indicative of oversaturated conditions with vehicular demand greater than the capacity of the intersection.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

Level of Service Definitions

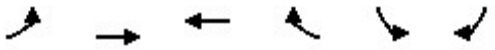
Two-Way Stop Controlled Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Large and frequent gaps in traffic on the main roadway. Queuing on the minor street is rare.
B	> 10 and ≤ 15	VERY GOOD. Many gaps exist in traffic on the main roadway. Queuing on the minor street is minimal.
C	> 15 and ≤ 25	GOOD. Fewer gaps exist in traffic on the main roadway. Delay on minor approach becomes more noticeable.
D	> 25 and ≤ 35	FAIR. Infrequent and shorter gaps in traffic on the main roadway. Queue lengths develop on the minor street.
E	> 35 and ≤ 50	POOR. Very infrequent gaps in traffic on the main roadway. Queue lengths become noticeable.
F	> 50	UNSATISFACTORY. Very few gaps in traffic on the main roadway. Excessive delay with significant queue lengths on the minor street.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

Appendix E

Existing Synchro Reports

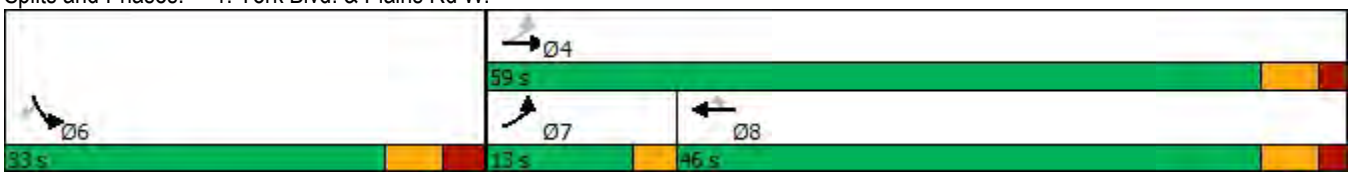


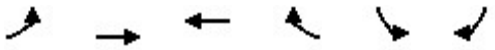
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	162	331	248	101	144	75
Future Volume (vph)	162	331	248	101	144	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.551				0.950	
Satd. Flow (perm)	1003	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				106		79
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	171	348	261	106	152	79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	348	261	106	152	79
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	42.0	42.0	13.9	13.9
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.17	0.17
v/c Ratio	0.22	0.15	0.14	0.12	0.49	0.24
Control Delay	5.2	5.6	10.9	3.1	35.4	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	5.6	10.9	3.1	35.4	9.0
LOS	A	A	B	A	D	A
Approach Delay		5.5	8.6		26.4	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	7.6	9.4	10.5	0.0	22.2	0.0
Queue Length 95th (m)	17.0	17.3	20.0	8.1	39.9	11.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	794	2324	1839	867	575	557
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	0.22	0.15	0.14	0.12	0.26	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	162	331	248	101	144	75
Future Volume (vph)	162	331	248	101	144	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.55	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1005	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	171	348	261	106	152	79
RTOR Reduction (vph)	0	0	0	50	0	65
Lane Group Flow (vph)	171	348	261	56	152	14
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	42.0	42.0	13.9	13.9
Effective Green, g (s)	53.1	53.1	42.0	42.0	13.9	13.9
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.17	0.17
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	740	2326	1840	818	307	268
v/s Ratio Prot	c0.02	0.10	0.07		c0.09	
v/s Ratio Perm	c0.13			0.04		0.01
v/c Ratio	0.23	0.15	0.14	0.07	0.50	0.05
Uniform Delay, d1	5.1	5.0	9.8	9.4	29.9	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.6	0.2
Delay (s)	5.2	5.2	9.9	9.5	32.5	27.7
Level of Service	A	A	A	A	C	C
Approach Delay (s)		5.2	9.8		30.9	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	150	150	39	251	68	129
Future Volume (vph)	150	150	39	251	68	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.911	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1690	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	1753	0	0	1855	1690	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	169	169	44	282	76	145
Shared Lane Traffic (%)						
Lane Group Flow (vph)	338	0	0	326	221	0
Sign Control	Free			Free	Stop	

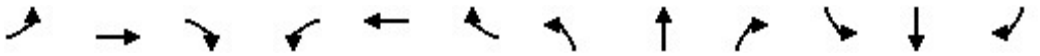
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	150	150	39	251	68	129
Future Volume (Veh/h)	150	150	39	251	68	129
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	169	169	44	282	76	145
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			338		624	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			338		624	254
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		83	82
cM capacity (veh/h)			1232		437	788

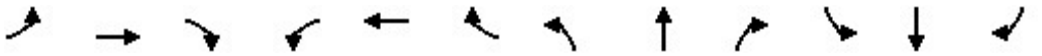
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	338	326	221
Volume Left	0	44	76
Volume Right	169	0	145
cSH	1700	1232	617
Volume to Capacity	0.20	0.04	0.36
Queue Length 95th (m)	0.0	0.9	13.0
Control Delay (s)	0.0	1.4	14.1
Lane LOS		A	B
Approach Delay (s)	0.0	1.4	14.1
Approach LOS			B

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	217	292	43	265	0	0	0	0	80	2	78
Future Volume (vph)	0	217	292	43	265	0	0	0	0	80	2	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.923									0.934	
Flt Protected					0.993						0.976	
Satd. Flow (prot)	0	1729	0	0	1871	0	0	0	0	0	1666	0
Flt Permitted					0.993						0.976	
Satd. Flow (perm)	0	1729	0	0	1871	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	241	324	48	294	0	0	0	0	89	2	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	565	0	0	342	0	0	0	0	0	178	0
Sign Control		Free			Free			Stop			Stop	

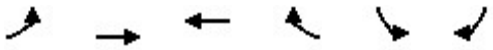
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	217	292	43	265	0	0	0	0	80	2	78
Future Volume (Veh/h)	0	217	292	43	265	0	0	0	0	80	2	78
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	241	324	48	294	0	0	0	0	89	2	87
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	294			565			881	793	403	793	955	294
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	294			565			881	793	403	793	955	294
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	100	70	99	88
cM capacity (veh/h)	1268			1017			226	306	647	293	248	741

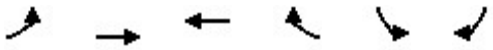
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	565	342	178
Volume Left	0	48	89
Volume Right	324	0	87
cSH	1700	1017	415
Volume to Capacity	0.33	0.05	0.43
Queue Length 95th (m)	0.0	1.2	16.8
Control Delay (s)	0.0	1.7	20.0
Lane LOS		A	C
Approach Delay (s)	0.0	1.7	20.0
Approach LOS			C

Intersection Summary					
Average Delay	3.8				
Intersection Capacity Utilization	65.0%	ICU Level of Service		C	
Analysis Period (min)	15				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	227	50	42	12	19	240
Future Volume (vph)	227	50	42	12	19	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.875	
Flt Protected		0.961			0.996	
Satd. Flow (prot)	0	1759	1845	0	1626	0
Flt Permitted		0.961			0.996	
Satd. Flow (perm)	0	1759	1845	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	252	56	47	13	21	267
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	308	60	0	288	0
Sign Control		Free	Free		Stop	

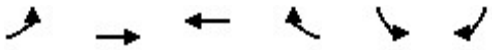
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	227	50	42	12	19	240
Future Volume (Veh/h)	227	50	42	12	19	240
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	252	56	47	13	21	267
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	60				614	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60				614	54
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	84				95	74
cM capacity (veh/h)	1531				383	1014

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	308	60	288
Volume Left	252	0	21
Volume Right	0	13	267
cSH	1531	1700	905
Volume to Capacity	0.16	0.04	0.32
Queue Length 95th (m)	4.7	0.0	11.0
Control Delay (s)	6.6	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	6.6	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	7.9		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

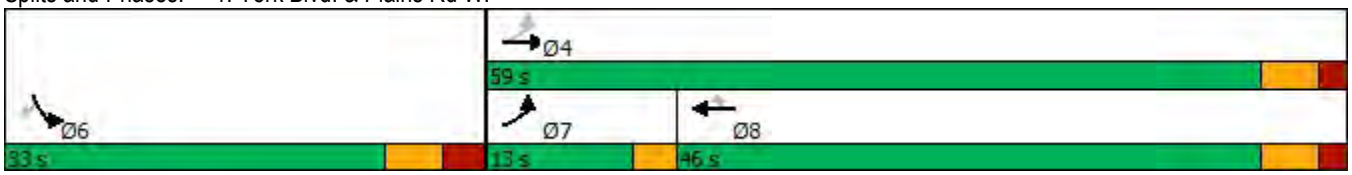


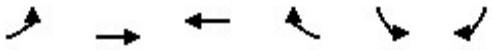
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	313	638	191	141	175
Future Volume (vph)	189	313	638	191	141	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.344				0.950	
Satd. Flow (perm)	654	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				199		182
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	197	326	665	199	147	182
Shared Lane Traffic (%)						
Lane Group Flow (vph)	197	326	665	199	147	182
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	13.9	13.9
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.17	0.17
v/c Ratio	0.34	0.14	0.36	0.21	0.48	0.43
Control Delay	6.3	5.6	12.7	2.6	35.1	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	5.6	12.7	2.6	35.1	8.0
LOS	A	A	B	A	D	A
Approach Delay		5.9	10.4		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	8.8	8.7	30.7	0.0	21.4	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	19.7	16.6	51.3	11.0	38.5	15.9
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	602	2347	1848	938	570	638
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	0.33	0.14	0.36	0.21	0.26	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	313	638	191	141	175
Future Volume (vph)	189	313	638	191	141	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.34	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	653	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	197	326	665	199	147	182
RTOR Reduction (vph)	0	0	0	95	0	150
Lane Group Flow (vph)	197	326	665	104	147	32
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.8	41.8	13.9	13.9
Effective Green, g (s)	53.1	53.1	41.8	41.8	13.9	13.9
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.17	0.17
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	552	2349	1849	843	304	275
v/s Ratio Prot	c0.04	0.09	0.19		c0.08	
v/s Ratio Perm	c0.20			0.06		0.02
v/c Ratio	0.36	0.14	0.36	0.12	0.48	0.11
Uniform Delay, d1	5.4	5.0	11.2	9.7	29.8	27.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.5	0.3	2.5	0.4
Delay (s)	5.8	5.1	11.8	10.0	32.3	28.3
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.4	11.4		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	183	189	30	403	141	207
Future Volume (vph)	183	189	30	403	141	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1743	0	0	1877	1713	0
Flt Permitted				0.997	0.980	
Satd. Flow (perm)	1743	0	0	1877	1713	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	195	201	32	429	150	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	396	0	0	461	370	0
Sign Control	Free			Free	Stop	

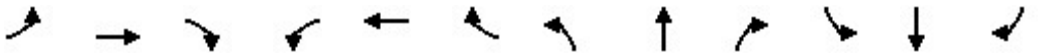
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	183	189	30	403	141	207
Future Volume (Veh/h)	183	189	30	403	141	207
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	195	201	32	429	150	220
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			396		788	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			396		788	296
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		57	71
cM capacity (veh/h)			1174		353	749

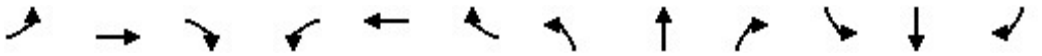
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	396	461	370
Volume Left	0	32	150
Volume Right	201	0	220
cSH	1700	1174	514
Volume to Capacity	0.23	0.03	0.72
Queue Length 95th (m)	0.0	0.7	46.5
Control Delay (s)	0.0	0.8	27.9
Lane LOS		A	D
Approach Delay (s)	0.0	0.8	27.9
Approach LOS			D

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	217	189	45	487	0	0	0	0	153	0	134
Future Volume (vph)	0	217	189	45	487	0	0	0	0	153	0	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.937									0.937	
Flt Protected					0.996						0.974	
Satd. Flow (prot)	0	1772	0	0	1875	0	0	0	0	0	1707	0
Flt Permitted					0.996						0.974	
Satd. Flow (perm)	0	1772	0	0	1875	0	0	0	0	0	1707	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	228	199	47	513	0	0	0	0	161	0	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	427	0	0	560	0	0	0	0	0	302	0
Sign Control		Free			Free			Stop			Stop	

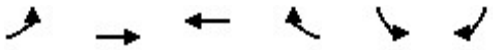
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.8%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	217	189	45	487	0	0	0	0	153	0	134
Future Volume (Veh/h)	0	217	189	45	487	0	0	0	0	153	0	134
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	228	199	47	513	0	0	0	0	161	0	141
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	513			427			1076	934	328	934	1034	513
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	513			427			1076	934	328	934	1034	513
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	100	100	32	100	75
cM capacity (veh/h)	1052			1143			143	255	714	237	224	565

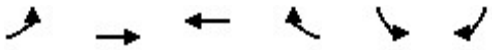
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	427	560	302
Volume Left	0	47	161
Volume Right	199	0	141
cSH	1700	1143	325
Volume to Capacity	0.25	0.04	0.93
Queue Length 95th (m)	0.0	1.0	74.3
Control Delay (s)	0.0	1.1	69.8
Lane LOS		A	F
Approach Delay (s)	0.0	1.1	69.8
Approach LOS			F

Intersection Summary			
Average Delay	16.9		
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	342	51	95	26	19	330
Future Volume (vph)	342	51	95	26	19	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1845	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1845	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	353	53	98	27	20	340
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	406	125	0	360	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			



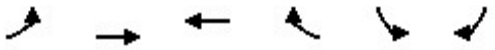
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	342	51	95	26	19	330
Future Volume (Veh/h)	342	51	95	26	19	330
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	353	53	98	27	20	340
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	125				870	112
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125				870	112
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				92	64
cM capacity (veh/h)	1474				247	944

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	406	125	360
Volume Left	353	0	20
Volume Right	0	27	340
cSH	1474	1700	816
Volume to Capacity	0.24	0.07	0.44
Queue Length 95th (m)	7.5	0.0	18.2
Control Delay (s)	7.4	0.0	12.8
Lane LOS	A		B
Approach Delay (s)	7.4	0.0	12.8
Approach LOS			B

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix F

Future Background Synchro Reports

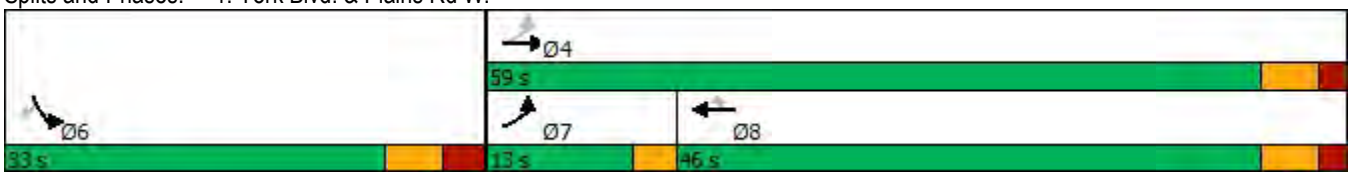


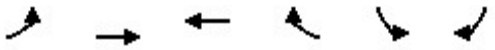
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	337	253	103	147	77
Future Volume (vph)	165	337	253	103	147	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.549				0.950	
Satd. Flow (perm)	999	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				108		81
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	174	355	266	108	155	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	355	266	108	155	81
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	42.0	42.0	14.1	14.1
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.23	0.15	0.15	0.12	0.50	0.24
Control Delay	5.3	5.7	11.0	3.1	35.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	5.7	11.0	3.1	35.6	8.9
LOS	A	A	B	A	D	A
Approach Delay		5.6	8.7		26.4	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	7.8	9.6	10.8	0.0	22.7	0.0
Queue Length 95th (m)	17.4	17.7	20.4	8.2	40.5	11.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	791	2321	1834	867	575	557
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	0.22	0.15	0.15	0.12	0.27	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	337	253	103	147	77
Future Volume (vph)	165	337	253	103	147	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.55	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1000	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	355	266	108	155	81
RTOR Reduction (vph)	0	0	0	51	0	67
Lane Group Flow (vph)	174	355	266	57	155	14
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	42.0	42.0	14.1	14.1
Effective Green, g (s)	53.1	53.1	42.0	42.0	14.1	14.1
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	736	2320	1835	816	311	272
v/s Ratio Prot	c0.02	0.10	0.08		c0.09	
v/s Ratio Perm	c0.13			0.04		0.01
v/c Ratio	0.24	0.15	0.14	0.07	0.50	0.05
Uniform Delay, d1	5.2	5.1	9.8	9.4	29.9	27.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.6	0.2
Delay (s)	5.3	5.2	10.0	9.6	32.5	27.7
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.3	9.9		30.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	40	256	70	131
Future Volume (vph)	153	153	40	256	70	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	1753	0	0	1855	1692	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	172	172	45	288	79	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	333	226	0
Sign Control	Free			Free	Stop	

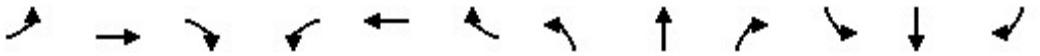
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	153	153	40	256	70	131
Future Volume (Veh/h)	153	153	40	256	70	131
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	172	172	45	288	79	147
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			344		636	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			344		636	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		82	81
cM capacity (veh/h)			1226		429	783

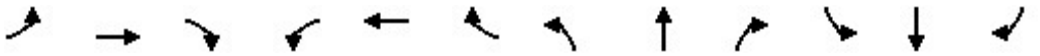
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	344	333	226
Volume Left	0	45	79
Volume Right	172	0	147
cSH	1700	1226	608
Volume to Capacity	0.20	0.04	0.37
Queue Length 95th (m)	0.0	0.9	13.7
Control Delay (s)	0.0	1.4	14.4
Lane LOS		A	B
Approach Delay (s)	0.0	1.4	14.4
Approach LOS			B

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.922									0.934	
Flt Protected					0.993						0.976	
Satd. Flow (prot)	0	1727	0	0	1871	0	0	0	0	0	1666	0
Flt Permitted					0.993						0.976	
Satd. Flow (perm)	0	1727	0	0	1871	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	246	341	50	300	0	0	0	0	93	2	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	587	0	0	350	0	0	0	0	0	186	0
Sign Control		Free			Free			Stop			Stop	

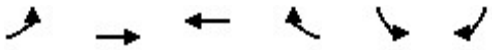
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	221	307	45	270	0	0	0	0	84	2	82
Future Volume (Veh/h)	0	221	307	45	270	0	0	0	0	84	2	82
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	246	341	50	300	0	0	0	0	93	2	91
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	300			587			908	816	416	816	987	300
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	300			587			908	816	416	816	987	300
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	100	67	99	88
cM capacity (veh/h)	1261			998			214	296	636	282	237	735

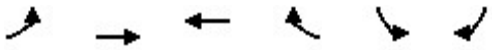
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	587	350	186
Volume Left	0	50	93
Volume Right	341	0	91
cSH	1700	998	402
Volume to Capacity	0.35	0.05	0.46
Queue Length 95th (m)	0.0	1.3	19.0
Control Delay (s)	0.0	1.7	21.4
Lane LOS		A	C
Approach Delay (s)	0.0	1.7	21.4
Approach LOS			C

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	66.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	239	51	43	12	20	252
Future Volume (vph)	239	51	43	12	20	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1845	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1845	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	266	57	48	13	22	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	323	61	0	302	0
Sign Control		Free	Free		Stop	

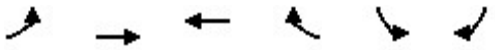
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			



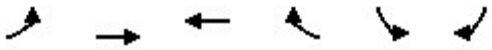
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	239	51	43	12	20	252
Future Volume (Veh/h)	239	51	43	12	20	252
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	266	57	48	13	22	280
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	61				644	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				644	54
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				94	72
cM capacity (veh/h)	1530				364	1012

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	323	61	302
Volume Left	266	0	22
Volume Right	0	13	280
cSH	1530	1700	896
Volume to Capacity	0.17	0.04	0.34
Queue Length 95th (m)	5.0	0.0	12.0
Control Delay (s)	6.7	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	6.7	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		



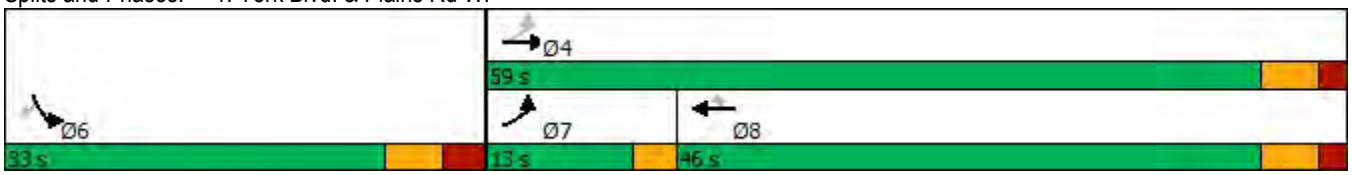
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	319	650	195	144	179
Future Volume (vph)	193	319	650	195	144	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.337				0.950	
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				203		186
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	201	332	677	203	150	186
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	332	677	203	150	186
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.1	14.1
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.35	0.14	0.37	0.22	0.49	0.43
Control Delay	6.4	5.7	12.9	2.6	35.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	5.7	12.9	2.6	35.2	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.0	10.5		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.0	8.9	31.6	0.0	21.9	0.0

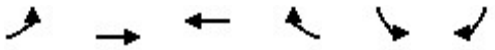


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	20.3	17.0	52.6	11.2	39.5	16.1
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	593	2343	1842	938	569	639
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.14	0.37	0.22	0.26	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	319	650	195	144	179
Future Volume (vph)	193	319	650	195	144	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.34	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	641	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	201	332	677	203	150	186
RTOR Reduction (vph)	0	0	0	97	0	153
Lane Group Flow (vph)	201	332	677	106	150	33
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.8	41.8	14.1	14.1
Effective Green, g (s)	53.1	53.1	41.8	41.8	14.1	14.1
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	544	2343	1844	841	308	278
v/s Ratio Prot	c0.04	0.09	0.19		c0.09	
v/s Ratio Perm	c0.21			0.07		0.02
v/c Ratio	0.37	0.14	0.37	0.13	0.49	0.12
Uniform Delay, d1	5.5	5.1	11.4	9.8	29.8	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.6	0.3	2.5	0.4
Delay (s)	5.9	5.2	11.9	10.1	32.3	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.5	11.5		30.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	193	30	411	144	211
Future Volume (vph)	187	193	30	411	144	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1743	0	0	1877	1713	0
Flt Permitted				0.997	0.980	
Satd. Flow (perm)	1743	0	0	1877	1713	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	199	205	32	437	153	224
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	0	0	469	377	0
Sign Control	Free			Free	Stop	

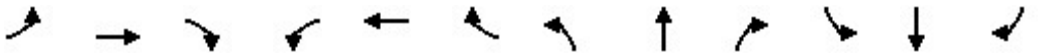
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	187	193	30	411	144	211
Future Volume (Veh/h)	187	193	30	411	144	211
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	199	205	32	437	153	224
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			404		802	302
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			404		802	302
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		56	70
cM capacity (veh/h)			1166		346	743

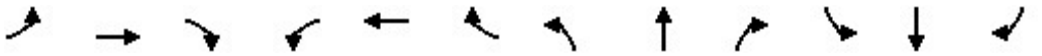
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	404	469	377
Volume Left	0	32	153
Volume Right	205	0	224
cSH	1700	1166	507
Volume to Capacity	0.24	0.03	0.74
Queue Length 95th (m)	0.0	0.7	50.2
Control Delay (s)	0.0	0.8	30.0
Lane LOS		A	D
Approach Delay (s)	0.0	0.8	30.0
Approach LOS			D

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Future Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.936									0.937	
Flt Protected					0.996						0.974	
Satd. Flow (prot)	0	1770	0	0	1875	0	0	0	0	0	1707	0
Flt Permitted					0.996						0.974	
Satd. Flow (perm)	0	1770	0	0	1875	0	0	0	0	0	1707	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	233	209	49	523	0	0	0	0	169	0	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	442	0	0	572	0	0	0	0	0	317	0
Sign Control		Free			Free			Stop			Stop	

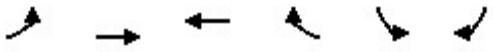
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	221	199	47	497	0	0	0	0	161	0	141
Future Volume (Veh/h)	0	221	199	47	497	0	0	0	0	161	0	141
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	233	209	49	523	0	0	0	0	169	0	148
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	523			442			1106	958	338	958	1063	523
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	523			442			1106	958	338	958	1063	523
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	100	100	26	100	73
cM capacity (veh/h)	1043			1129			133	246	705	228	215	558

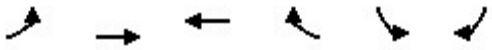
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	442	572	317
Volume Left	0	49	169
Volume Right	209	0	148
cSH	1700	1129	315
Volume to Capacity	0.26	0.04	1.01
Queue Length 95th (m)	0.0	1.1	88.3
Control Delay (s)	0.0	1.2	89.9
Lane LOS		A	F
Approach Delay (s)	0.0	1.2	89.9
Approach LOS			F

Intersection Summary			
Average Delay	21.9		
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	359	52	97	27	20	347
Future Volume (vph)	359	52	97	27	20	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1843	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1843	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	370	54	100	28	21	358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	424	128	0	379	0
Sign Control		Free	Free		Stop	

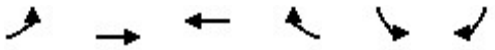
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			



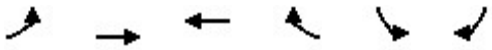
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	359	52	97	27	20	347
Future Volume (Veh/h)	359	52	97	27	20	347
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	370	54	100	28	21	358
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	128				908	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128				908	114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	75				91	62
cM capacity (veh/h)	1470				231	941

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	424	128	379
Volume Left	370	0	21
Volume Right	0	28	358
cSH	1470	1700	804
Volume to Capacity	0.25	0.08	0.47
Queue Length 95th (m)	8.0	0.0	20.4
Control Delay (s)	7.5	0.0	13.4
Lane LOS	A		B
Approach Delay (s)	7.5	0.0	13.4
Approach LOS			B

Intersection Summary			
Average Delay	8.9		
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		



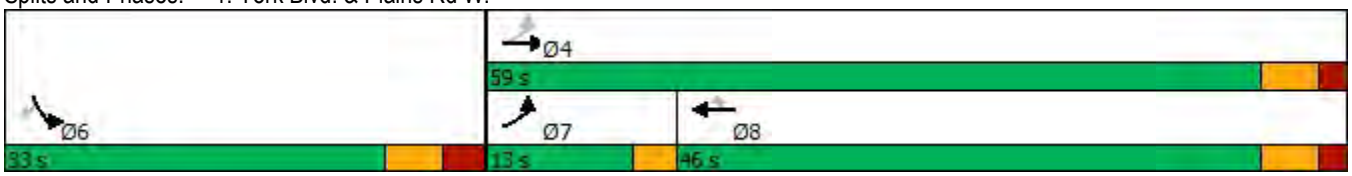
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	337	253	103	147	77
Future Volume (vph)	165	337	253	103	147	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.549				0.950	
Satd. Flow (perm)	999	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				108		81
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	174	355	266	108	155	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	355	266	108	155	81
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	42.0	42.0	14.1	14.1
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.23	0.15	0.15	0.12	0.50	0.24
Control Delay	5.3	5.7	11.0	3.1	35.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	5.7	11.0	3.1	35.6	8.9
LOS	A	A	B	A	D	A
Approach Delay		5.6	8.7		26.4	

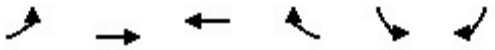


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	7.8	9.6	10.8	0.0	22.7	0.0
Queue Length 95th (m)	17.4	17.7	20.4	8.2	40.5	11.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	791	2321	1834	867	575	557
Starvation Cap Reductn	0	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	0.22	0.15	0.15	0.12	0.27	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	337	253	103	147	77
Future Volume (vph)	165	337	253	103	147	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.55	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1000	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	355	266	108	155	81
RTOR Reduction (vph)	0	0	0	51	0	67
Lane Group Flow (vph)	174	355	266	57	155	14
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	42.0	42.0	14.1	14.1
Effective Green, g (s)	53.1	53.1	42.0	42.0	14.1	14.1
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	736	2320	1835	816	311	272
v/s Ratio Prot	c0.02	0.10	0.08		c0.09	
v/s Ratio Perm	c0.13			0.04		0.01
v/c Ratio	0.24	0.15	0.14	0.07	0.50	0.05
Uniform Delay, d1	5.2	5.1	9.8	9.4	29.9	27.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.6	0.2
Delay (s)	5.3	5.2	10.0	9.6	32.5	27.7
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.3	9.9		30.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

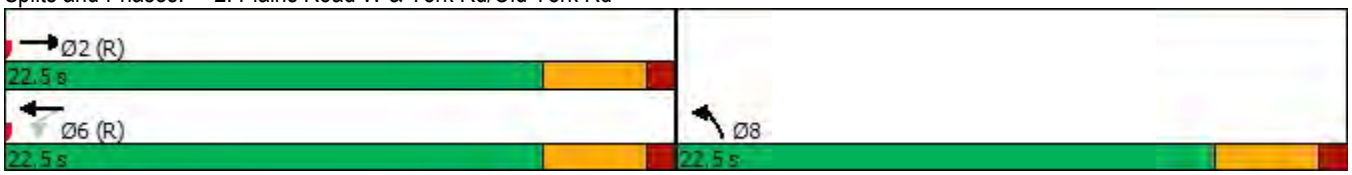


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	40	256	70	131
Future Volume (vph)	153	153	40	256	70	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.919	0.983	
Satd. Flow (perm)	1753	0	0	1716	1692	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				147	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	172	172	45	288	79	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	333	226	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.44			0.49	0.30	
Control Delay	8.0			13.1	5.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.0			13.1	5.0	
LOS	A			B	A	
Approach Delay	8.0			13.1	5.0	
Approach LOS	A			B	A	
Queue Length 50th (m)	11.3			19.4	3.9	
Queue Length 95th (m)	25.8			36.3	13.8	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			686	765	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.44			0.49	0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

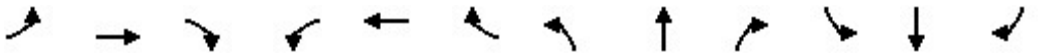




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	40	256	70	131
Future Volume (vph)	153	153	40	256	70	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1692	
Flt Permitted	1.00			0.92	0.98	
Satd. Flow (perm)	1754			1716	1692	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	172	172	45	288	79	147
RTOR Reduction (vph)	80	0	0	0	88	0
Lane Group Flow (vph)	264	0	0	333	138	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			686	676	
v/s Ratio Prot	0.15				c0.08	
v/s Ratio Perm				c0.19		
v/c Ratio	0.38			0.49	0.20	
Uniform Delay, d1	9.5			10.1	8.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			2.4	0.7	
Delay (s)	11.1			12.5	9.5	
Level of Service	B			B	A	
Approach Delay (s)	11.1			12.5	9.5	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

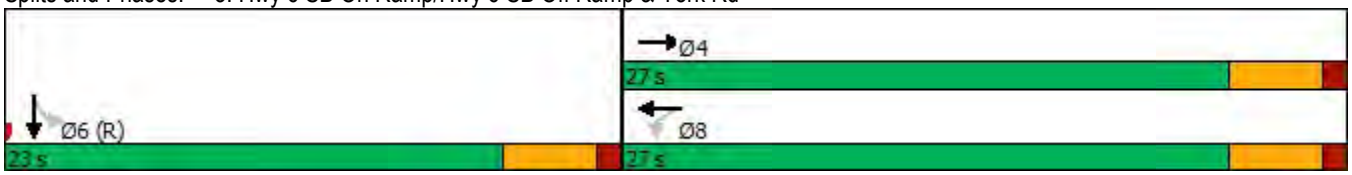


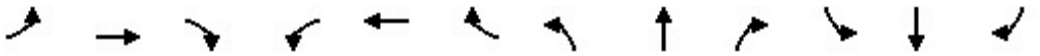
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.922									0.934	
Flt Protected					0.993						0.976	
Satd. Flow (prot)	0	1727	0	0	1871	0	0	0	0	0	1666	0
Flt Permitted					0.806						0.976	
Satd. Flow (perm)	0	1727	0	0	1518	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		181									91	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	246	341	50	300	0	0	0	0	93	2	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	587	0	0	350	0	0	0	0	0	186	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		27.0		27.0	27.0					23.0	23.0	
Total Split (%)		54.0%		54.0%	54.0%					46.0%	46.0%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		22.5			22.5						18.5	
Actuated g/C Ratio		0.45			0.45						0.37	
v/c Ratio		0.67			0.51						0.28	
Control Delay		11.9			13.2						7.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		11.9			13.2						7.4	
LOS		B			B						A	
Approach Delay		11.9			13.2						7.4	
Approach LOS		B			B						A	
Queue Length 50th (m)		25.8			21.7						5.7	
Queue Length 95th (m)		55.5			41.3						16.4	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		876			683						673	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.67			0.51						0.28	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 68.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

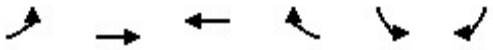




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	45	270	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1726			1870						1665	
Flt Permitted		1.00			0.81						0.98	
Satd. Flow (perm)		1726			1518						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	246	341	50	300	0	0	0	0	93	2	91
RTOR Reduction (vph)	0	100	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	487	0	0	350	0	0	0	0	0	129	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		22.5			22.5						18.5	
Effective Green, g (s)		22.5			22.5						18.5	
Actuated g/C Ratio		0.45			0.45						0.37	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		776			683						616	
v/s Ratio Prot		c0.28										
v/s Ratio Perm					0.23						0.08	
v/c Ratio		0.63			0.51						0.21	
Uniform Delay, d1		10.5			9.8						10.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.8			2.7						0.8	
Delay (s)		14.4			12.6						11.5	
Level of Service		B			B						B	
Approach Delay (s)		14.4			12.6			0.0			11.5	
Approach LOS		B			B			A			B	

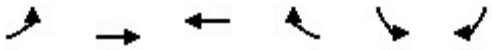
Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	239	51	43	12	20	252
Future Volume (vph)	239	51	43	12	20	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1845	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1845	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	266	57	48	13	22	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	323	61	0	302	0
Sign Control		Free	Free		Stop	

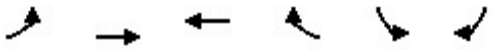
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	239	51	43	12	20	252
Future Volume (Veh/h)	239	51	43	12	20	252
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	266	57	48	13	22	280
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	61				644	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				644	54
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				94	72
cM capacity (veh/h)	1530				364	1012

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	323	61	302
Volume Left	266	0	22
Volume Right	0	13	280
cSH	1530	1700	896
Volume to Capacity	0.17	0.04	0.34
Queue Length 95th (m)	5.0	0.0	12.0
Control Delay (s)	6.7	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	6.7	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

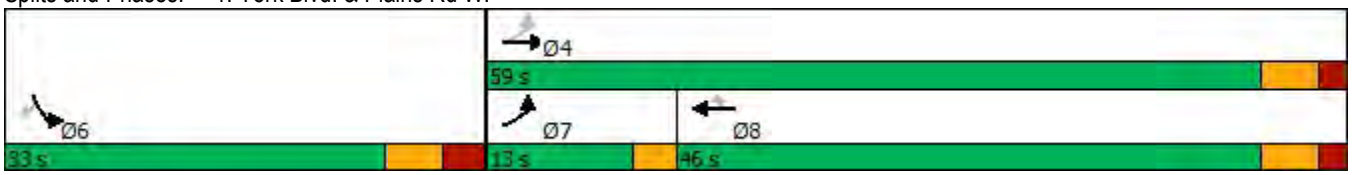


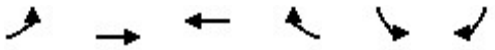
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	319	650	195	144	179
Future Volume (vph)	193	319	650	195	144	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.337				0.950	
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				203		186
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	201	332	677	203	150	186
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	332	677	203	150	186
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.1	14.1
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.35	0.14	0.37	0.22	0.49	0.43
Control Delay	6.4	5.7	12.9	2.6	35.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	5.7	12.9	2.6	35.2	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.0	10.5		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.0	8.9	31.6	0.0	21.9	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	20.3	17.0	52.6	11.2	39.5	16.1
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	593	2343	1842	938	569	639
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	0.34	0.14	0.37	0.22	0.26	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	193	319	650	195	144	179
Future Volume (vph)	193	319	650	195	144	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.34	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	641	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	201	332	677	203	150	186
RTOR Reduction (vph)	0	0	0	97	0	153
Lane Group Flow (vph)	201	332	677	106	150	33
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.8	41.8	14.1	14.1
Effective Green, g (s)	53.1	53.1	41.8	41.8	14.1	14.1
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	544	2343	1844	841	308	278
v/s Ratio Prot	c0.04	0.09	0.19		c0.09	
v/s Ratio Perm	c0.21			0.07		0.02
v/c Ratio	0.37	0.14	0.37	0.13	0.49	0.12
Uniform Delay, d1	5.5	5.1	11.4	9.8	29.8	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.6	0.3	2.5	0.4
Delay (s)	5.9	5.2	11.9	10.1	32.3	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.5	11.5		30.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

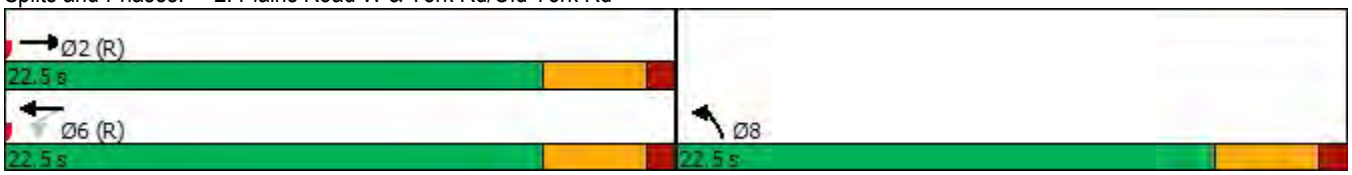


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	193	30	411	144	211
Future Volume (vph)	187	193	30	411	144	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1743	0	0	1877	1713	0
Flt Permitted				0.956	0.980	
Satd. Flow (perm)	1743	0	0	1800	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				195	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	199	205	32	437	153	224
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	0	0	469	377	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.52			0.65	0.47	
Control Delay	9.4			16.2	7.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	9.4			16.2	7.1	
LOS	A			B	A	
Approach Delay	9.4			16.2	7.1	
Approach LOS	A			B	A	
Queue Length 50th (m)	14.8			29.7	9.5	
Queue Length 95th (m)	33.3			54.6	24.9	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	779			720	802	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.52			0.65	0.47	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

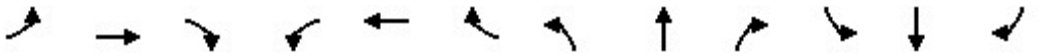




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	193	30	411	144	211
Future Volume (vph)	187	193	30	411	144	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1744			1876	1713	
Flt Permitted	1.00			0.96	0.98	
Satd. Flow (perm)	1744			1800	1713	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	199	205	32	437	153	224
RTOR Reduction (vph)	82	0	0	0	117	0
Lane Group Flow (vph)	322	0	0	469	260	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	697			720	685	
v/s Ratio Prot	0.18				c0.15	
v/s Ratio Perm				c0.26		
v/c Ratio	0.46			0.65	0.38	
Uniform Delay, d1	9.9			11.0	9.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.2			4.5	1.6	
Delay (s)	12.1			15.5	11.1	
Level of Service	B			B	B	
Approach Delay (s)	12.1			15.5	11.1	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

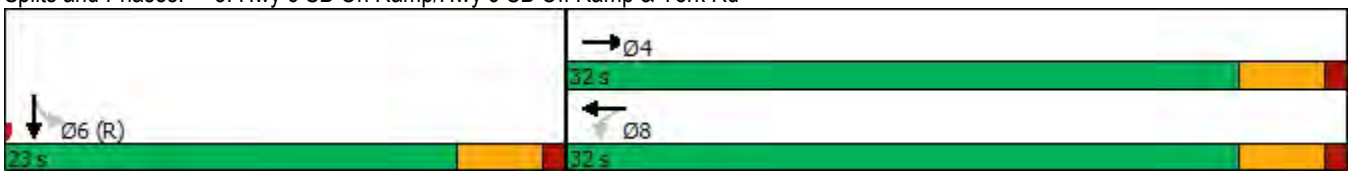


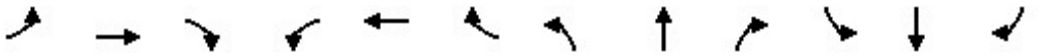
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Future Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.936									0.937	
Flt Protected					0.996						0.974	
Satd. Flow (prot)	0	1770	0	0	1875	0	0	0	0	0	1707	0
Flt Permitted					0.938						0.974	
Satd. Flow (perm)	0	1770	0	0	1766	0	0	0	0	0	1707	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117									86	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	233	209	49	523	0	0	0	0	169	0	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	442	0	0	572	0	0	0	0	0	317	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		32.0		32.0	32.0					23.0	23.0	
Total Split (%)		58.2%		58.2%	58.2%					41.8%	41.8%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
v/c Ratio		0.47			0.65						0.50	
Control Delay		8.4			14.5						13.7	
Queue Delay		0.0			0.0						0.0	
Total Delay		8.4			14.5						13.7	
LOS		A			B						B	
Approach Delay		8.4			14.5						13.7	
Approach LOS		A			B						B	
Queue Length 50th (m)		19.0			40.5						18.1	
Queue Length 95th (m)		37.9			70.2						38.0	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		943			883						631	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.47			0.65						0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 81.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

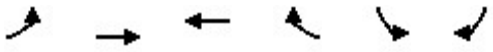




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Future Volume (vph)	0	221	199	47	497	0	0	0	0	161	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.94			1.00						0.94	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1770			1875						1707	
Flt Permitted		1.00			0.94						0.97	
Satd. Flow (perm)		1770			1767						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	233	209	49	523	0	0	0	0	169	0	148
RTOR Reduction (vph)	0	59	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	384	0	0	572	0	0	0	0	0	260	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		27.5			27.5						18.5	
Effective Green, g (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		885			883						574	
v/s Ratio Prot		0.22										
v/s Ratio Perm					c0.32						0.15	
v/c Ratio		0.43			0.65						0.45	
Uniform Delay, d1		8.8			10.2						14.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.5			3.7						2.6	
Delay (s)		10.3			13.8						16.9	
Level of Service		B			B						B	
Approach Delay (s)		10.3			13.8			0.0			16.9	
Approach LOS		B			B			A			B	

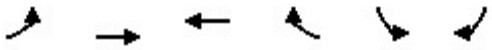
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	359	52	97	27	20	347
Future Volume (vph)	359	52	97	27	20	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1843	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1843	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	370	54	100	28	21	358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	424	128	0	379	0
Sign Control		Free	Free		Stop	

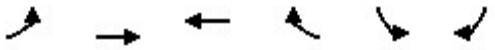
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	359	52	97	27	20	347
Future Volume (Veh/h)	359	52	97	27	20	347
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	370	54	100	28	21	358
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	128				908	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128				908	114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	75				91	62
cM capacity (veh/h)	1470				231	941

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	424	128	379
Volume Left	370	0	21
Volume Right	0	28	358
cSH	1470	1700	804
Volume to Capacity	0.25	0.08	0.47
Queue Length 95th (m)	8.0	0.0	20.4
Control Delay (s)	7.5	0.0	13.4
Lane LOS	A		B
Approach Delay (s)	7.5	0.0	13.4
Approach LOS			B

Intersection Summary			
Average Delay	8.9		
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

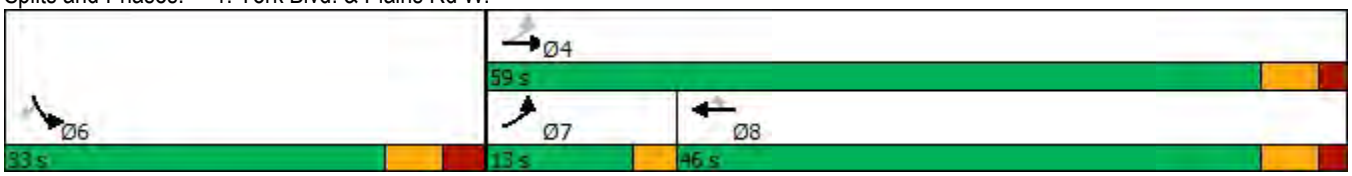


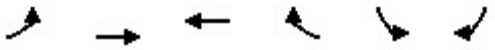
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	354	265	108	154	80
Future Volume (vph)	173	354	265	108	154	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.542				0.950	
Satd. Flow (perm)	986	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				114		84
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	182	373	279	114	162	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	182	373	279	114	162	84
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.4	14.4
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.24	0.16	0.15	0.13	0.51	0.24
Control Delay	5.5	5.9	11.3	3.1	35.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	5.9	11.3	3.1	35.7	8.7
LOS	A	A	B	A	D	A
Approach Delay		5.7	8.9		26.5	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	8.3	10.4	11.6	0.0	23.8	0.0
Queue Length 95th (m)	18.4	19.0	21.5	8.5	42.1	11.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	780	2310	1821	864	572	557
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	0.23	0.16	0.15	0.13	0.28	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	354	265	108	154	80
Future Volume (vph)	173	354	265	108	154	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.54	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	988	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	182	373	279	114	162	84
RTOR Reduction (vph)	0	0	0	55	0	69
Lane Group Flow (vph)	182	373	279	59	162	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.9	41.9	14.4	14.4
Effective Green, g (s)	53.1	53.1	41.9	41.9	14.4	14.4
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	727	2311	1824	811	316	276
v/s Ratio Prot	c0.03	0.11	0.08		c0.09	
v/s Ratio Perm	c0.14			0.04		0.01
v/c Ratio	0.25	0.16	0.15	0.07	0.51	0.05
Uniform Delay, d1	5.3	5.2	10.1	9.6	29.9	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.8	0.2
Delay (s)	5.5	5.4	10.2	9.8	32.7	27.6
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.4	10.1		30.9	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	42	268	73	138
Future Volume (vph)	160	160	42	268	73	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	1753	0	0	1855	1692	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	180	180	47	301	82	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	348	237	0
Sign Control	Free			Free	Stop	

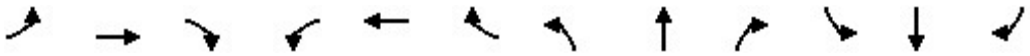
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	160	42	268	73	138
Future Volume (Veh/h)	160	160	42	268	73	138
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	180	180	47	301	82	155
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			360		665	270
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			360		665	270
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		80	80
cM capacity (veh/h)			1210		412	771

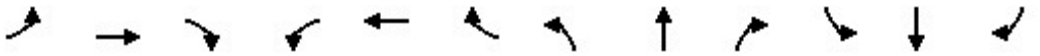
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	360	348	237
Volume Left	0	47	82
Volume Right	180	0	155
cSH	1700	1210	592
Volume to Capacity	0.21	0.04	0.40
Queue Length 95th (m)	0.0	1.0	15.4
Control Delay (s)	0.0	1.4	15.1
Lane LOS		A	C
Approach Delay (s)	0.0	1.4	15.1
Approach LOS			C

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.919									0.934	
Flt Protected					0.992						0.976	
Satd. Flow (prot)	0	1722	0	0	1869	0	0	0	0	0	1666	0
Flt Permitted					0.992						0.976	
Satd. Flow (perm)	0	1722	0	0	1869	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	258	382	56	314	0	0	0	0	104	2	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	640	0	0	370	0	0	0	0	0	208	0
Sign Control		Free			Free			Stop			Stop	

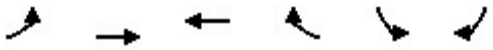
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.9%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	232	344	50	283	0	0	0	0	94	2	92
Future Volume (Veh/h)	0	232	344	50	283	0	0	0	0	94	2	92
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	258	382	56	314	0	0	0	0	104	2	102
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	314			640			978	875	449	875	1066	314
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	314			640			978	875	449	875	1066	314
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	100	100	59	99	86
cM capacity (veh/h)	1246			954			187	271	610	256	211	722

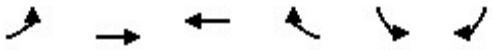
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	640	370	208
Volume Left	0	56	104
Volume Right	382	0	102
cSH	1700	954	373
Volume to Capacity	0.38	0.06	0.56
Queue Length 95th (m)	0.0	1.5	26.1
Control Delay (s)	0.0	1.9	26.2
Lane LOS		A	D
Approach Delay (s)	0.0	1.9	26.2
Approach LOS			D

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	267	53	45	14	22	282
Future Volume (vph)	267	53	45	14	22	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1837	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1837	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	297	59	50	16	24	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	356	66	0	337	0
Sign Control		Free	Free		Stop	

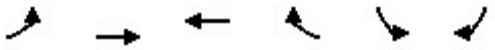
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	267	53	45	14	22	282
Future Volume (Veh/h)	267	53	45	14	22	282
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	297	59	50	16	24	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	66				711	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				711	58
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				93	69
cM capacity (veh/h)	1523				324	1008

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	356	66	337
Volume Left	297	0	24
Volume Right	0	16	313
cSH	1523	1700	876
Volume to Capacity	0.19	0.04	0.38
Queue Length 95th (m)	5.8	0.0	14.6
Control Delay (s)	6.9	0.0	11.7
Lane LOS	A		B
Approach Delay (s)	6.9	0.0	11.7
Approach LOS			B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

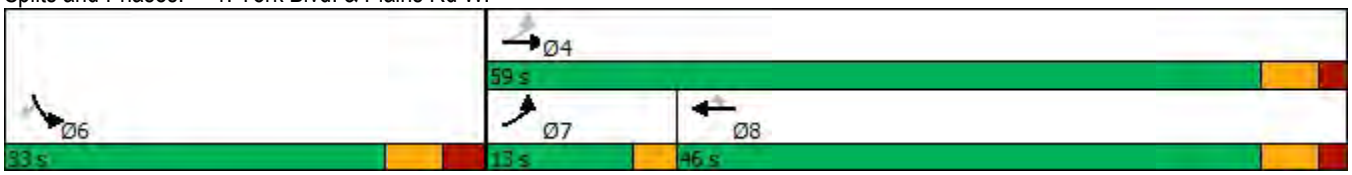


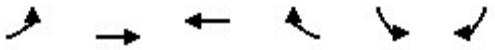
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	202	334	682	205	151	187
Future Volume (vph)	202	334	682	205	151	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.320				0.950	
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				214		195
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	210	348	710	214	157	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	348	710	214	157	195
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	14.4	14.4
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.38	0.15	0.39	0.23	0.50	0.44
Control Delay	6.9	5.8	13.4	2.6	35.4	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.8	13.4	2.6	35.4	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.2	10.9		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.6	9.5	34.1	0.0	23.0	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	21.6	18.1	56.3	11.5	40.9	16.4
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	572	2333	1829	938	566	643
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	0.37	0.15	0.39	0.23	0.28	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	202	334	682	205	151	187
Future Volume (vph)	202	334	682	205	151	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.32	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	210	348	710	214	157	195
RTOR Reduction (vph)	0	0	0	103	0	160
Lane Group Flow (vph)	210	348	710	111	157	35
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	14.4	14.4
Effective Green, g (s)	53.1	53.1	41.6	41.6	14.4	14.4
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	527	2334	1828	834	313	283
v/s Ratio Prot	c0.04	0.10	0.20		c0.09	
v/s Ratio Perm	c0.22			0.07		0.02
v/c Ratio	0.40	0.15	0.39	0.13	0.50	0.12
Uniform Delay, d1	5.7	5.2	11.8	10.1	29.8	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.2	5.3	12.4	10.4	32.4	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	11.9		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	202	32	431	151	221
Future Volume (vph)	196	202	32	431	151	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1745	0	0	1877	1713	0
Flt Permitted				0.997	0.980	
Satd. Flow (perm)	1745	0	0	1877	1713	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	209	215	34	459	161	235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	424	0	0	493	396	0
Sign Control	Free			Free	Stop	

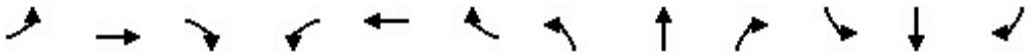
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	196	202	32	431	151	221
Future Volume (Veh/h)	196	202	32	431	151	221
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	209	215	34	459	161	235
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			424		844	316
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			424		844	316
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		51	68
cM capacity (veh/h)			1146		326	729

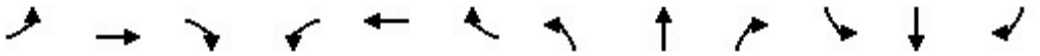
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	424	493	396
Volume Left	0	34	161
Volume Right	215	0	235
cSH	1700	1146	486
Volume to Capacity	0.25	0.03	0.82
Queue Length 95th (m)	0.0	0.7	62.5
Control Delay (s)	0.0	0.9	37.6
Lane LOS		A	E
Approach Delay (s)	0.0	0.9	37.6
Approach LOS			E

Intersection Summary			
Average Delay	11.7		
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Future Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.934									0.937	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1766	0	0	1873	0	0	0	0	0	1707	0
Flt Permitted					0.995						0.974	
Satd. Flow (perm)	0	1766	0	0	1873	0	0	0	0	0	1707	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	244	235	55	548	0	0	0	0	189	0	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	479	0	0	603	0	0	0	0	0	355	0
Sign Control		Free			Free			Stop			Stop	

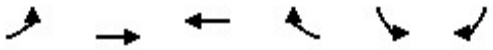
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 85.8%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	232	223	52	521	0	0	0	0	180	0	158
Future Volume (Veh/h)	0	232	223	52	521	0	0	0	0	180	0	158
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	244	235	55	548	0	0	0	0	189	0	166
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	548			479			1186	1020	362	1020	1137	548
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	548			479			1186	1020	362	1020	1137	548
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	100	8	100	69
cM capacity (veh/h)	1021			1094			110	225	683	206	193	540

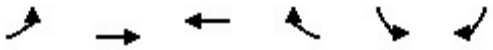
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	479	603	355
Volume Left	0	55	189
Volume Right	235	0	166
cSH	1700	1094	290
Volume to Capacity	0.28	0.05	1.22
Queue Length 95th (m)	0.0	1.3	130.4
Control Delay (s)	0.0	1.3	164.9
Lane LOS		A	F
Approach Delay (s)	0.0	1.3	164.9
Approach LOS			F

Intersection Summary					
Average Delay	41.3				
Intersection Capacity Utilization	85.8%	ICU Level of Service		E	
Analysis Period (min)	15				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	403	54	102	31	22	388
Future Volume (vph)	403	54	102	31	22	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.968		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1839	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1839	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	415	56	105	32	23	400
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	471	137	0	423	0
Sign Control		Free	Free		Stop	

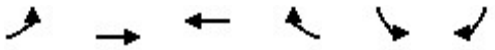
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			



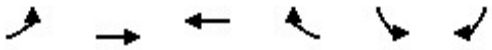
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	403	54	102	31	22	388
Future Volume (Veh/h)	403	54	102	31	22	388
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	415	56	105	32	23	400
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	137				1007	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				1007	121
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	72				88	57
cM capacity (veh/h)	1459				193	933

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	471	137	423
Volume Left	415	0	23
Volume Right	0	32	400
cSH	1459	1700	772
Volume to Capacity	0.28	0.08	0.55
Queue Length 95th (m)	9.5	0.0	27.0
Control Delay (s)	7.7	0.0	15.2
Lane LOS	A		C
Approach Delay (s)	7.7	0.0	15.2
Approach LOS			C

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		



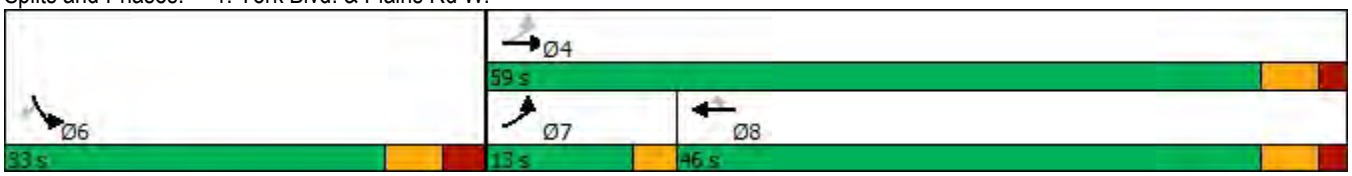
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	354	265	108	154	80
Future Volume (vph)	173	354	265	108	154	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.542				0.950	
Satd. Flow (perm)	986	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				114		84
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	182	373	279	114	162	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	182	373	279	114	162	84
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.4	14.4
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.24	0.16	0.15	0.13	0.51	0.24
Control Delay	5.5	5.9	11.3	3.1	35.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	5.9	11.3	3.1	35.7	8.7
LOS	A	A	B	A	D	A
Approach Delay		5.7	8.9		26.5	

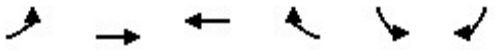


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	8.3	10.4	11.6	0.0	23.8	0.0
Queue Length 95th (m)	18.4	19.0	21.5	8.5	42.1	11.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	780	2310	1821	864	572	557
Starvation Cap Reductn	0	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	0.23	0.16	0.15	0.13	0.28	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	354	265	108	154	80
Future Volume (vph)	173	354	265	108	154	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.54	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	988	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	182	373	279	114	162	84
RTOR Reduction (vph)	0	0	0	55	0	69
Lane Group Flow (vph)	182	373	279	59	162	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.9	41.9	14.4	14.4
Effective Green, g (s)	53.1	53.1	41.9	41.9	14.4	14.4
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	727	2311	1824	811	316	276
v/s Ratio Prot	c0.03	0.11	0.08		c0.09	
v/s Ratio Perm	c0.14			0.04		0.01
v/c Ratio	0.25	0.16	0.15	0.07	0.51	0.05
Uniform Delay, d1	5.3	5.2	10.1	9.6	29.9	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.8	0.2
Delay (s)	5.5	5.4	10.2	9.8	32.7	27.6
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.4	10.1		30.9	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

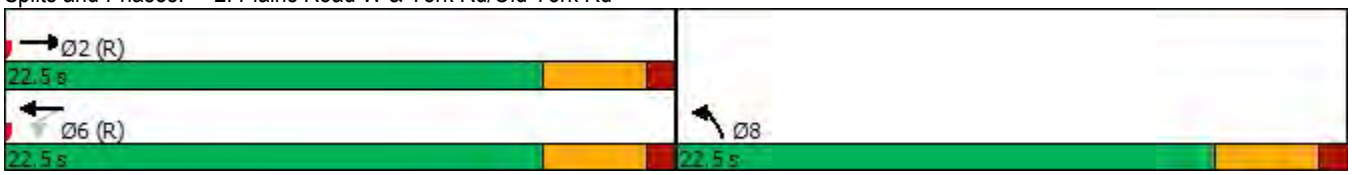


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	42	268	73	138
Future Volume (vph)	160	160	42	268	73	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.916	0.983	
Satd. Flow (perm)	1753	0	0	1711	1692	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				155	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	180	180	47	301	82	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	348	237	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.46			0.51	0.31	
Control Delay	8.4			13.4	5.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.4			13.4	5.0	
LOS	A			B	A	
Approach Delay	8.4			13.4	5.0	
Approach LOS	A			B	A	
Queue Length 50th (m)	12.2			20.4	4.0	
Queue Length 95th (m)	27.6			38.4	14.3	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			684	769	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.46			0.51	0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

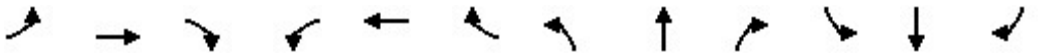




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	42	268	73	138
Future Volume (vph)	160	160	42	268	73	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1692	
Flt Permitted	1.00			0.92	0.98	
Satd. Flow (perm)	1754			1710	1692	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	180	180	47	301	82	155
RTOR Reduction (vph)	80	0	0	0	93	0
Lane Group Flow (vph)	280	0	0	348	144	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			684	676	
v/s Ratio Prot	0.16				c0.09	
v/s Ratio Perm				c0.20		
v/c Ratio	0.40			0.51	0.21	
Uniform Delay, d1	9.6			10.2	8.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			2.7	0.7	
Delay (s)	11.3			12.9	9.6	
Level of Service	B			B	A	
Approach Delay (s)	11.3			12.9	9.6	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

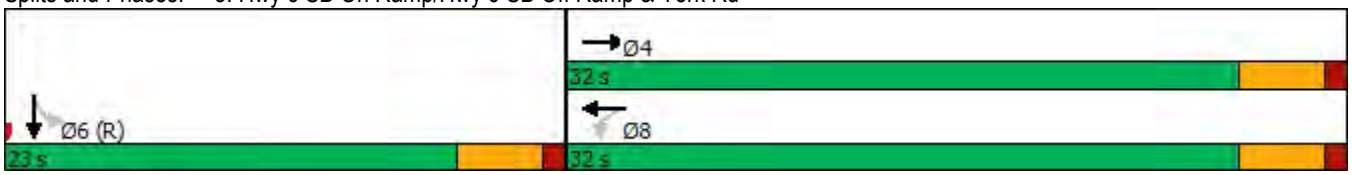


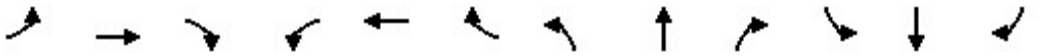
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919									0.934	
Flt Protected					0.992						0.976	
Satd. Flow (prot)	0	1722	0	0	1869	0	0	0	0	0	1666	0
Flt Permitted					0.785						0.976	
Satd. Flow (perm)	0	1722	0	0	1479	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		194									95	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	258	382	56	314	0	0	0	0	104	2	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	640	0	0	370	0	0	0	0	0	208	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		32.0		32.0	32.0					23.0	23.0	
Total Split (%)		58.2%		58.2%	58.2%					41.8%	41.8%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
v/c Ratio		0.67			0.50						0.33	
Control Delay		11.1			12.1						9.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		11.1			12.1						9.4	
LOS		B			B						A	
Approach Delay		11.1			12.1						9.4	
Approach LOS		B			B						A	
Queue Length 50th (m)		29.9			23.6						8.2	
Queue Length 95th (m)		61.9			43.5						21.4	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		958			739						623	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.67			0.50						0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 73.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

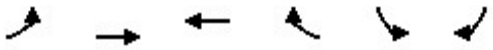




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	50	283	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1723			1870						1665	
Flt Permitted		1.00			0.79						0.98	
Satd. Flow (perm)		1723			1479						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	258	382	56	314	0	0	0	0	104	2	102
RTOR Reduction (vph)	0	97	0	0	0	0	0	0	0	0	63	0
Lane Group Flow (vph)	0	543	0	0	370	0	0	0	0	0	145	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		27.5			27.5						18.5	
Effective Green, g (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		861			739						560	
v/s Ratio Prot		c0.32										
v/s Ratio Perm					0.25						0.09	
v/c Ratio		0.63			0.50						0.26	
Uniform Delay, d1		10.0			9.2						13.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.5			2.4						1.1	
Delay (s)		13.5			11.6						14.4	
Level of Service		B			B						B	
Approach Delay (s)		13.5			11.6			0.0			14.4	
Approach LOS		B			B			A			B	

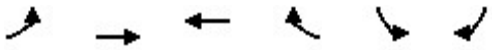
Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	267	53	45	14	22	282
Future Volume (vph)	267	53	45	14	22	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1837	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1837	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	297	59	50	16	24	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	356	66	0	337	0
Sign Control		Free	Free		Stop	

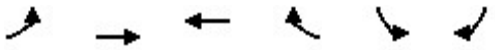
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	267	53	45	14	22	282
Future Volume (Veh/h)	267	53	45	14	22	282
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	297	59	50	16	24	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	66				711	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				711	58
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				93	69
cM capacity (veh/h)	1523				324	1008

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	356	66	337
Volume Left	297	0	24
Volume Right	0	16	313
cSH	1523	1700	876
Volume to Capacity	0.19	0.04	0.38
Queue Length 95th (m)	5.8	0.0	14.6
Control Delay (s)	6.9	0.0	11.7
Lane LOS	A		B
Approach Delay (s)	6.9	0.0	11.7
Approach LOS			B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

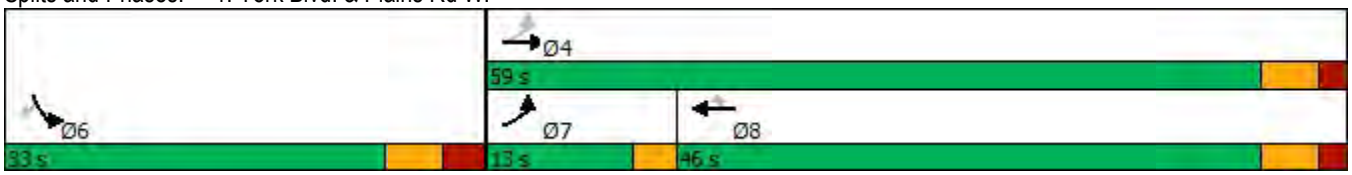


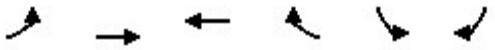
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	202	334	682	205	151	187
Future Volume (vph)	202	334	682	205	151	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.320				0.950	
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				214		195
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	210	348	710	214	157	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	348	710	214	157	195
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	14.4	14.4
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.38	0.15	0.39	0.23	0.50	0.44
Control Delay	6.9	5.8	13.4	2.6	35.4	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.8	13.4	2.6	35.4	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.2	10.9		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.6	9.5	34.1	0.0	23.0	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	21.6	18.1	56.3	11.5	40.9	16.4
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	572	2333	1829	938	566	643
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	0.37	0.15	0.39	0.23	0.28	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	202	334	682	205	151	187
Future Volume (vph)	202	334	682	205	151	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.32	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	210	348	710	214	157	195
RTOR Reduction (vph)	0	0	0	103	0	160
Lane Group Flow (vph)	210	348	710	111	157	35
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	14.4	14.4
Effective Green, g (s)	53.1	53.1	41.6	41.6	14.4	14.4
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	527	2334	1828	834	313	283
v/s Ratio Prot	c0.04	0.10	0.20		c0.09	
v/s Ratio Perm	c0.22			0.07		0.02
v/c Ratio	0.40	0.15	0.39	0.13	0.50	0.12
Uniform Delay, d1	5.7	5.2	11.8	10.1	29.8	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.2	5.3	12.4	10.4	32.4	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	11.9		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	202	32	431	151	221
Future Volume (vph)	196	202	32	431	151	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1745	0	0	1877	1713	0
Flt Permitted				0.956	0.980	
Satd. Flow (perm)	1745	0	0	1800	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				164	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	209	215	34	459	161	235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	424	0	0	493	396	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	27.5		27.5	27.5	22.5	
Total Split (%)	55.0%		55.0%	55.0%	45.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
v/c Ratio	0.48			0.60	0.55	
Control Delay	8.4			13.8	10.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.4			13.8	10.7	
LOS	A			B	B	
Approach Delay	8.4			13.8	10.7	
Approach LOS	A			B	B	
Queue Length 50th (m)	16.1			31.7	15.6	
Queue Length 95th (m)	34.2			56.5	36.3	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	876			828	721	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.48			0.60	0.55	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

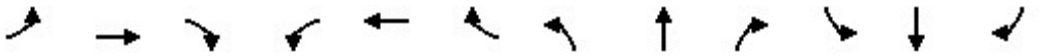




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	202	32	431	151	221
Future Volume (vph)	196	202	32	431	151	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1744			1876	1713	
Flt Permitted	1.00			0.96	0.98	
Satd. Flow (perm)	1744			1799	1713	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	209	215	34	459	161	235
RTOR Reduction (vph)	74	0	0	0	105	0
Lane Group Flow (vph)	350	0	0	493	291	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	23.0			23.0	18.0	
Effective Green, g (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	802			827	616	
v/s Ratio Prot	0.20				c0.17	
v/s Ratio Perm				c0.27		
v/c Ratio	0.44			0.60	0.47	
Uniform Delay, d1	9.1			10.0	12.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			3.2	2.6	
Delay (s)	10.8			13.2	14.9	
Level of Service	B			B	B	
Approach Delay (s)	10.8			13.2	14.9	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

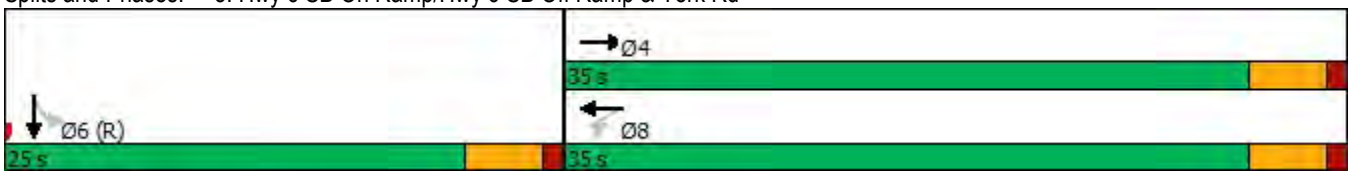


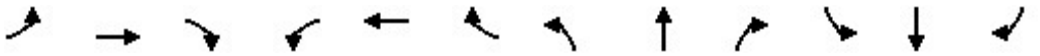
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Future Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934									0.937	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1766	0	0	1873	0	0	0	0	0	1707	0
Flt Permitted					0.928						0.974	
Satd. Flow (perm)	0	1766	0	0	1747	0	0	0	0	0	1707	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		118									80	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	244	235	55	548	0	0	0	0	189	0	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	479	0	0	603	0	0	0	0	0	355	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		35.0		35.0	35.0					25.0	25.0	
Total Split (%)		58.3%		58.3%	58.3%					41.7%	41.7%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		30.5			30.5						20.5	
Actuated g/C Ratio		0.51			0.51						0.34	
v/c Ratio		0.50			0.68						0.56	
Control Delay		9.3			15.9						16.3	
Queue Delay		0.0			0.2						0.0	
Total Delay		9.3			16.1						16.3	
LOS		A			B						B	
Approach Delay		9.3			16.1						16.3	
Approach LOS		A			B						B	
Queue Length 50th (m)		23.7			48.2						24.6	
Queue Length 95th (m)		45.5			81.6						48.0	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		955			888						635	
Starvation Cap Reductn		0			30						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.50			0.70						0.56	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 87.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

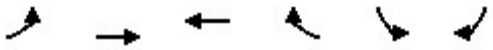




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Future Volume (vph)	0	232	223	52	521	0	0	0	0	180	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.93			1.00						0.94	
Flt Protected		1.00			1.00						0.97	
Satd. Flow (prot)		1765			1874						1707	
Flt Permitted		1.00			0.93						0.97	
Satd. Flow (perm)		1765			1747						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	244	235	55	548	0	0	0	0	189	0	166
RTOR Reduction (vph)	0	58	0	0	0	0	0	0	0	0	53	0
Lane Group Flow (vph)	0	421	0	0	603	0	0	0	0	0	302	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.5			30.5						20.5	
Effective Green, g (s)		30.5			30.5						20.5	
Actuated g/C Ratio		0.51			0.51						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		897			888						583	
v/s Ratio Prot		0.24										
v/s Ratio Perm					c0.35						0.18	
v/c Ratio		0.47			0.68						0.52	
Uniform Delay, d1		9.5			11.1						15.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.8			4.2						3.3	
Delay (s)		11.3			15.2						19.1	
Level of Service		B			B						B	
Approach Delay (s)		11.3			15.2			0.0			19.1	
Approach LOS		B			B			A			B	

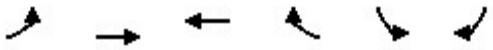
Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	403	54	102	31	22	388
Future Volume (vph)	403	54	102	31	22	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.968		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1839	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1839	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	415	56	105	32	23	400
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	471	137	0	423	0
Sign Control		Free	Free		Stop	

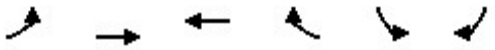
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	403	54	102	31	22	388
Future Volume (Veh/h)	403	54	102	31	22	388
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	415	56	105	32	23	400
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	137				1007	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				1007	121
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	72				88	57
cM capacity (veh/h)	1459				193	933

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	471	137	423
Volume Left	415	0	23
Volume Right	0	32	400
cSH	1459	1700	772
Volume to Capacity	0.28	0.08	0.55
Queue Length 95th (m)	9.5	0.0	27.0
Control Delay (s)	7.7	0.0	15.2
Lane LOS	A		C
Approach Delay (s)	7.7	0.0	15.2
Approach LOS			C

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

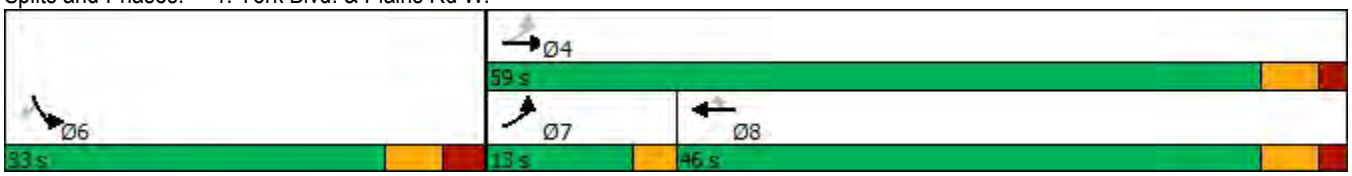


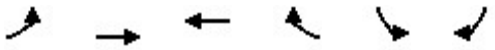
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	386	290	118	168	88
Future Volume (vph)	189	386	290	118	168	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.528				0.950	
Satd. Flow (perm)	961	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				124		93
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	199	406	305	124	177	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	199	406	305	124	177	93
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	15.1	15.1
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.27	0.18	0.17	0.14	0.54	0.26
Control Delay	5.9	6.2	11.8	3.1	36.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.2	11.8	3.1	36.1	8.3
LOS	A	A	B	A	D	A
Approach Delay		6.1	9.3		26.5	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	9.5	11.8	13.2	0.0	26.2	0.0
Queue Length 95th (m)	20.9	21.3	23.8	9.0	45.6	11.7
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	759	2291	1793	858	567	559
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	0.26	0.18	0.17	0.14	0.31	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	386	290	118	168	88
Future Volume (vph)	189	386	290	118	168	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.53	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	963	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	199	406	305	124	177	93
RTOR Reduction (vph)	0	0	0	60	0	76
Lane Group Flow (vph)	199	406	305	64	177	17
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	15.1	15.1
Effective Green, g (s)	53.1	53.1	41.6	41.6	15.1	15.1
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	710	2292	1795	798	329	287
v/s Ratio Prot	c0.03	0.12	0.09		c0.10	
v/s Ratio Perm	c0.15			0.04		0.01
v/c Ratio	0.28	0.18	0.17	0.08	0.54	0.06
Uniform Delay, d1	5.6	5.5	10.6	10.1	29.9	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	3.1	0.2
Delay (s)	5.8	5.7	10.8	10.3	33.0	27.4
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	10.6		31.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	45	293	80	150
Future Volume (vph)	175	175	45	293	80	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	1753	0	0	1855	1692	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	197	197	51	329	90	169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	394	0	0	380	259	0
Sign Control	Free			Free	Stop	

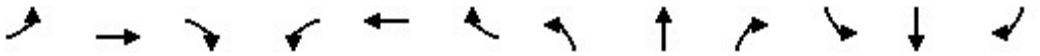
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	175	175	45	293	80	150
Future Volume (Veh/h)	175	175	45	293	80	150
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	197	197	51	329	90	169
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			394		726	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			394		726	296
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		76	77
cM capacity (veh/h)			1176		377	746

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	394	380	259
Volume Left	0	51	90
Volume Right	197	0	169
cSH	1700	1176	557
Volume to Capacity	0.23	0.04	0.47
Queue Length 95th (m)	0.0	1.1	19.6
Control Delay (s)	0.0	1.5	17.0
Lane LOS		A	C
Approach Delay (s)	0.0	1.5	17.0
Approach LOS			C

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		



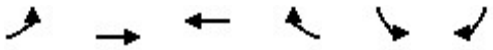
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916									0.934	
Flt Protected					0.992						0.976	
Satd. Flow (prot)	0	1717	0	0	1869	0	0	0	0	0	1666	0
Flt Permitted					0.992						0.976	
Satd. Flow (perm)	0	1717	0	0	1869	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	281	463	68	344	0	0	0	0	127	2	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	412	0	0	0	0	0	253	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 81.9%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	253	417	61	310	0	0	0	0	114	2	112
Future Volume (Veh/h)	0	253	417	61	310	0	0	0	0	114	2	112
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	463	68	344	0	0	0	0	127	2	124
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	344			744			1118	992	512	992	1224	344
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	344			744			1118	992	512	992	1224	344
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			100	100	100	39	99	82
cM capacity (veh/h)	1215			873			141	226	562	209	167	694

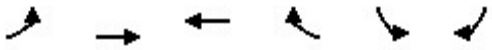
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	744	412	253
Volume Left	0	68	127
Volume Right	463	0	124
cSH	1700	873	317
Volume to Capacity	0.44	0.08	0.80
Queue Length 95th (m)	0.0	2.0	52.1
Control Delay (s)	0.0	2.3	49.2
Lane LOS		A	E
Approach Delay (s)	0.0	2.3	49.2
Approach LOS			E

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	325	58	49	17	27	343
Future Volume (vph)	325	58	49	17	27	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965		0.875	
Flt Protected		0.959			0.996	
Satd. Flow (prot)	0	1755	1834	0	1626	0
Flt Permitted		0.959			0.996	
Satd. Flow (perm)	0	1755	1834	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	361	64	54	19	30	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	425	73	0	411	0
Sign Control		Free	Free		Stop	

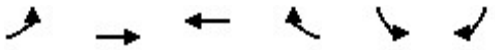
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	325	58	49	17	27	343
Future Volume (Veh/h)	325	58	49	17	27	343
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	361	64	54	19	30	381
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	73				850	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				850	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				88	62
cM capacity (veh/h)	1514				254	1001

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	425	73	411
Volume Left	361	0	30
Volume Right	0	19	381
cSH	1514	1700	824
Volume to Capacity	0.24	0.04	0.50
Queue Length 95th (m)	7.5	0.0	22.6
Control Delay (s)	7.2	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	7.2	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

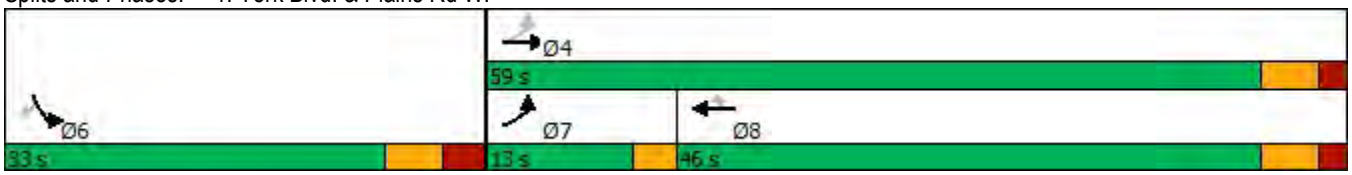


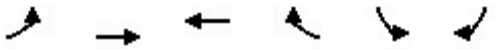
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	221	365	745	224	165	205
Future Volume (vph)	221	365	745	224	165	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.288				0.950	
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				233		214
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	230	380	776	233	172	214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	380	776	233	172	214
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.4	41.4	15.1	15.1
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.45	0.16	0.43	0.25	0.53	0.46
Control Delay	8.0	6.2	14.3	2.7	35.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	6.2	14.3	2.7	35.8	7.6
LOS	A	A	B	A	D	A
Approach Delay		6.8	11.6		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	11.1	10.8	39.5	0.0	25.5	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	24.6	20.5	63.9	12.1	44.5	17.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	532	2313	1802	936	561	652
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	0.43	0.16	0.43	0.25	0.31	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.3			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	221	365	745	224	165	205
Future Volume (vph)	221	365	745	224	165	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.29	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	230	380	776	233	172	214
RTOR Reduction (vph)	0	0	0	114	0	174
Lane Group Flow (vph)	230	380	776	119	172	40
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.4	41.4	15.1	15.1
Effective Green, g (s)	53.1	53.1	41.4	41.4	15.1	15.1
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	492	2314	1804	823	325	294
v/s Ratio Prot	c0.05	0.11	0.22		c0.10	
v/s Ratio Perm	c0.26			0.07		0.03
v/c Ratio	0.47	0.16	0.43	0.14	0.53	0.14
Uniform Delay, d1	6.3	5.4	12.5	10.5	29.8	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.8	0.4	2.9	0.4
Delay (s)	7.0	5.6	13.2	10.9	32.8	28.0
Level of Service	A	A	B	B	C	C
Approach Delay (s)		6.1	12.7		30.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	221	35	471	165	241
Future Volume (vph)	214	221	35	471	165	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1743	0	0	1877	1713	0
Flt Permitted				0.997	0.980	
Satd. Flow (perm)	1743	0	0	1877	1713	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	228	235	37	501	176	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	463	0	0	538	432	0
Sign Control	Free			Free	Stop	

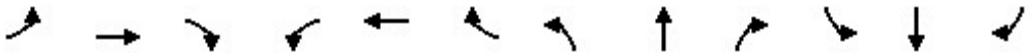
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 84.2%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	214	221	35	471	165	241
Future Volume (Veh/h)	214	221	35	471	165	241
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	228	235	37	501	176	256
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			463		920	346
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			463		920	346
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		40	64
cM capacity (veh/h)			1109		293	702

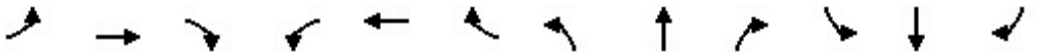
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	463	538	432
Volume Left	0	37	176
Volume Right	235	0	256
cSH	1700	1109	447
Volume to Capacity	0.27	0.03	0.97
Queue Length 95th (m)	0.0	0.8	94.4
Control Delay (s)	0.0	0.9	64.9
Lane LOS		A	F
Approach Delay (s)	0.0	0.9	64.9
Approach LOS			F

Intersection Summary			
Average Delay	19.9		
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Future Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.930									0.937	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1758	0	0	1874	0	0	0	0	0	1707	0
Flt Permitted					0.995						0.974	
Satd. Flow (perm)	0	1758	0	0	1874	0	0	0	0	0	1707	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	266	285	67	599	0	0	0	0	231	0	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	551	0	0	666	0	0	0	0	0	432	0
Sign Control		Free			Free			Stop			Stop	

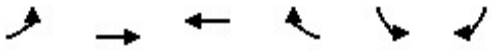
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 97.2%		ICU Level of Service F	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	253	271	64	569	0	0	0	0	219	0	191
Future Volume (Veh/h)	0	253	271	64	569	0	0	0	0	219	0	191
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	266	285	67	599	0	0	0	0	231	0	201
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	599			551			1342	1142	408	1142	1284	599
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	599			551			1342	1142	408	1142	1284	599
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			100	100	100	0	100	60
cM capacity (veh/h)	978			1029			74	187	643	168	156	505

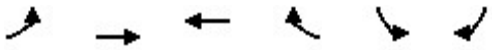
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	551	666	432
Volume Left	0	67	231
Volume Right	285	0	201
cSH	1700	1029	244
Volume to Capacity	0.32	0.07	1.77
Queue Length 95th (m)	0.0	1.7	232.8
Control Delay (s)	0.0	1.7	398.6
Lane LOS		A	F
Approach Delay (s)	0.0	1.7	398.6
Approach LOS			F

Intersection Summary			
Average Delay	105.1		
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	489	59	111	37	27	472
Future Volume (vph)	489	59	111	37	27	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.966		0.872	
Flt Protected		0.957			0.997	
Satd. Flow (prot)	0	1818	1835	0	1636	0
Flt Permitted		0.957			0.997	
Satd. Flow (perm)	0	1818	1835	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	504	61	114	38	28	487
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	565	152	0	515	0
Sign Control		Free	Free		Stop	

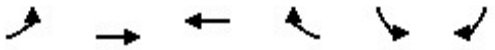
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	489	59	111	37	27	472
Future Volume (Veh/h)	489	59	111	37	27	472
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	504	61	114	38	28	487
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152				1202	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				1202	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	65				79	47
cM capacity (veh/h)	1441				134	919

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	565	152	515
Volume Left	504	0	28
Volume Right	0	38	487
cSH	1441	1700	697
Volume to Capacity	0.35	0.09	0.74
Queue Length 95th (m)	12.7	0.0	52.7
Control Delay (s)	8.2	0.0	23.3
Lane LOS	A		C
Approach Delay (s)	8.2	0.0	23.3
Approach LOS			C

Intersection Summary			
Average Delay	13.5		
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

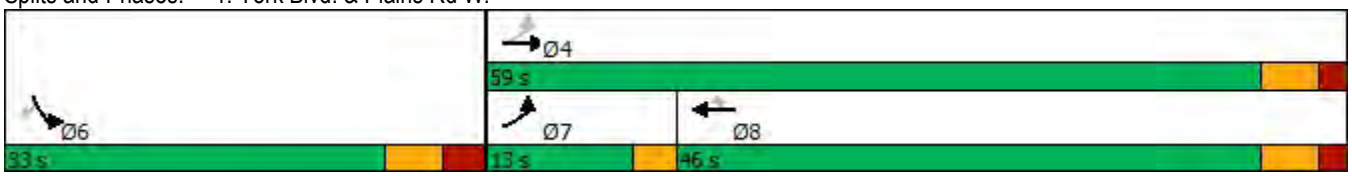


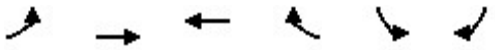
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	386	290	118	168	88
Future Volume (vph)	189	386	290	118	168	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.528				0.950	
Satd. Flow (perm)	961	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				124		93
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	199	406	305	124	177	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	199	406	305	124	177	93
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	15.1	15.1
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.27	0.18	0.17	0.14	0.54	0.26
Control Delay	5.9	6.2	11.8	3.1	36.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.2	11.8	3.1	36.1	8.3
LOS	A	A	B	A	D	A
Approach Delay		6.1	9.3		26.5	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	9.5	11.8	13.2	0.0	26.2	0.0
Queue Length 95th (m)	20.9	21.3	23.8	9.0	45.6	11.7
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	759	2291	1793	858	567	559
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	0.26	0.18	0.17	0.14	0.31	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	386	290	118	168	88
Future Volume (vph)	189	386	290	118	168	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.53	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	963	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	199	406	305	124	177	93
RTOR Reduction (vph)	0	0	0	60	0	76
Lane Group Flow (vph)	199	406	305	64	177	17
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	15.1	15.1
Effective Green, g (s)	53.1	53.1	41.6	41.6	15.1	15.1
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	710	2292	1795	798	329	287
v/s Ratio Prot	c0.03	0.12	0.09		c0.10	
v/s Ratio Perm	c0.15			0.04		0.01
v/c Ratio	0.28	0.18	0.17	0.08	0.54	0.06
Uniform Delay, d1	5.6	5.5	10.6	10.1	29.9	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	3.1	0.2
Delay (s)	5.8	5.7	10.8	10.3	33.0	27.4
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	10.6		31.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

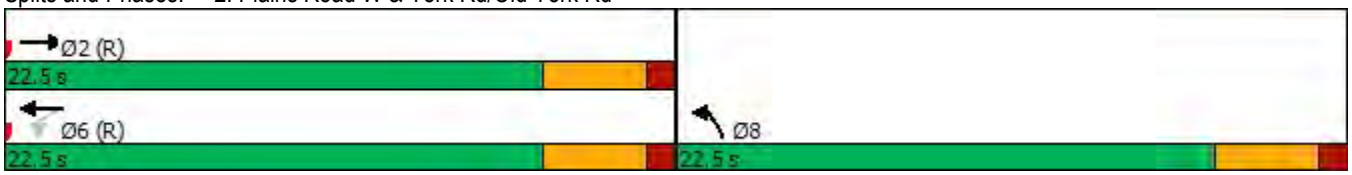


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	45	293	80	150
Future Volume (vph)	175	175	45	293	80	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.912	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	1753	0	0	1855	1692	0
Flt Permitted				0.909	0.983	
Satd. Flow (perm)	1753	0	0	1698	1692	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				169	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	197	197	51	329	90	169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	394	0	0	380	259	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.50			0.56	0.33	
Control Delay	9.2			14.4	5.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	9.2			14.4	5.1	
LOS	A			B	A	
Approach Delay	9.2			14.4	5.1	
Approach LOS	A			B	A	
Queue Length 50th (m)	14.3			22.9	4.4	
Queue Length 95th (m)	31.6			42.7	15.2	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			679	778	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.50			0.56	0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

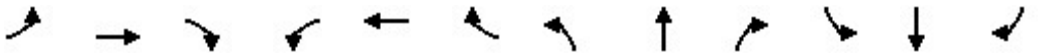




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	45	293	80	150
Future Volume (vph)	175	175	45	293	80	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1692	
Flt Permitted	1.00			0.91	0.98	
Satd. Flow (perm)	1754			1697	1692	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	197	197	51	329	90	169
RTOR Reduction (vph)	80	0	0	0	101	0
Lane Group Flow (vph)	314	0	0	380	158	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			678	676	
v/s Ratio Prot	0.18				c0.09	
v/s Ratio Perm				c0.22		
v/c Ratio	0.45			0.56	0.23	
Uniform Delay, d1	9.9			10.4	8.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.1			3.3	0.8	
Delay (s)	11.9			13.8	9.7	
Level of Service	B			B	A	
Approach Delay (s)	11.9			13.8	9.7	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

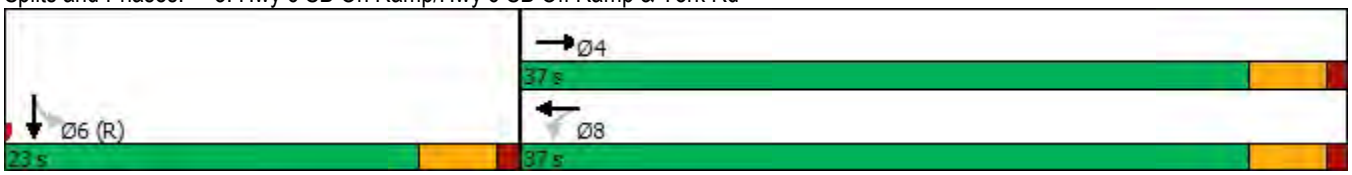


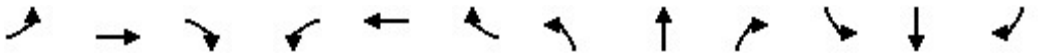
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916									0.934	
Flt Protected					0.992						0.976	
Satd. Flow (prot)	0	1717	0	0	1869	0	0	0	0	0	1666	0
Flt Permitted					0.668						0.976	
Satd. Flow (perm)	0	1717	0	0	1259	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		216									83	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	281	463	68	344	0	0	0	0	127	2	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	412	0	0	0	0	0	253	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		37.0		37.0	37.0					23.0	23.0	
Total Split (%)		61.7%		61.7%	61.7%					38.3%	38.3%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.5			32.5						18.5	
Actuated g/C Ratio		0.54			0.54						0.31	
v/c Ratio		0.72			0.60						0.44	
Control Delay		12.1			14.1						13.9	
Queue Delay		0.0			0.0						0.0	
Total Delay		12.1			14.1						13.9	
LOS		B			B						B	
Approach Delay		12.1			14.1						13.9	
Approach LOS		B			B						B	
Queue Length 50th (m)		39.6			29.3						14.9	
Queue Length 95th (m)		79.3			55.5						32.8	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		1029			681						571	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.72			0.60						0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 83.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

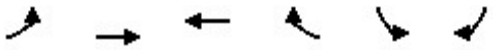




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	61	310	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1717			1869						1665	
Flt Permitted		1.00			0.67						0.98	
Satd. Flow (perm)		1717			1258						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	281	463	68	344	0	0	0	0	127	2	124
RTOR Reduction (vph)	0	99	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	645	0	0	412	0	0	0	0	0	196	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		32.5			32.5						18.5	
Effective Green, g (s)		32.5			32.5						18.5	
Actuated g/C Ratio		0.54			0.54						0.31	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		930			681						513	
v/s Ratio Prot		c0.38										
v/s Ratio Perm					0.33						0.12	
v/c Ratio		0.69			0.60						0.38	
Uniform Delay, d1		10.1			9.4						16.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		4.2			4.0						2.1	
Delay (s)		14.3			13.3						18.4	
Level of Service		B			B						B	
Approach Delay (s)		14.3			13.3			0.0			18.4	
Approach LOS		B			B			A			B	

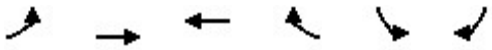
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	325	58	49	17	27	343
Future Volume (vph)	325	58	49	17	27	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965		0.875	
Flt Protected		0.959			0.996	
Satd. Flow (prot)	0	1755	1834	0	1626	0
Flt Permitted		0.959			0.996	
Satd. Flow (perm)	0	1755	1834	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	361	64	54	19	30	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	425	73	0	411	0
Sign Control		Free	Free		Stop	

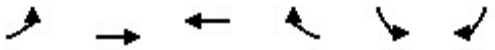
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	325	58	49	17	27	343
Future Volume (Veh/h)	325	58	49	17	27	343
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	361	64	54	19	30	381
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	73				850	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				850	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				88	62
cM capacity (veh/h)	1514				254	1001

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	425	73	411
Volume Left	361	0	30
Volume Right	0	19	381
cSH	1514	1700	824
Volume to Capacity	0.24	0.04	0.50
Queue Length 95th (m)	7.5	0.0	22.6
Control Delay (s)	7.2	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	7.2	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

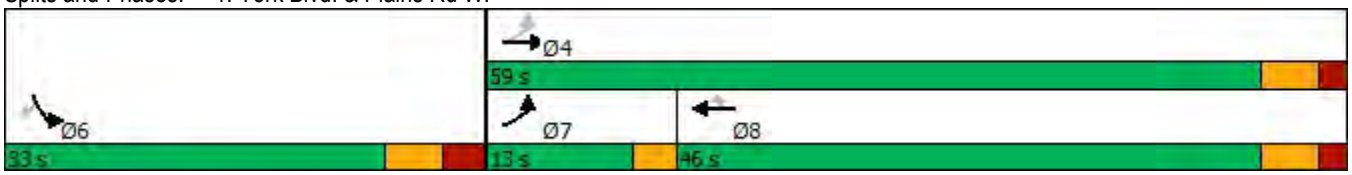


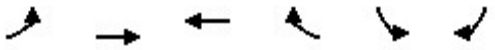
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	221	365	745	224	165	205
Future Volume (vph)	221	365	745	224	165	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.288				0.950	
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				233		214
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	230	380	776	233	172	214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	380	776	233	172	214
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.4	41.4	15.1	15.1
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.45	0.16	0.43	0.25	0.53	0.46
Control Delay	8.0	6.2	14.3	2.7	35.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	6.2	14.3	2.7	35.8	7.6
LOS	A	A	B	A	D	A
Approach Delay		6.8	11.6		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	11.1	10.8	39.5	0.0	25.5	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	24.6	20.5	63.9	12.1	44.5	17.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	532	2313	1802	936	561	652
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	0.43	0.16	0.43	0.25	0.31	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.3			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	221	365	745	224	165	205
Future Volume (vph)	221	365	745	224	165	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.29	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	230	380	776	233	172	214
RTOR Reduction (vph)	0	0	0	114	0	174
Lane Group Flow (vph)	230	380	776	119	172	40
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.4	41.4	15.1	15.1
Effective Green, g (s)	53.1	53.1	41.4	41.4	15.1	15.1
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	492	2314	1804	823	325	294
v/s Ratio Prot	c0.05	0.11	0.22		c0.10	
v/s Ratio Perm	c0.26			0.07		0.03
v/c Ratio	0.47	0.16	0.43	0.14	0.53	0.14
Uniform Delay, d1	6.3	5.4	12.5	10.5	29.8	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.8	0.4	2.9	0.4
Delay (s)	7.0	5.6	13.2	10.9	32.8	28.0
Level of Service	A	A	B	B	C	C
Approach Delay (s)		6.1	12.7		30.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	221	35	471	165	241
Future Volume (vph)	214	221	35	471	165	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.920	
Flt Protected				0.997	0.980	
Satd. Flow (prot)	1743	0	0	1877	1713	0
Flt Permitted				0.953	0.980	
Satd. Flow (perm)	1743	0	0	1794	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	135				143	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	228	235	37	501	176	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	463	0	0	538	432	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	32.0		32.0	32.0	23.0	
Total Split (%)	58.2%		58.2%	58.2%	41.8%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	27.5			27.5	18.5	
Actuated g/C Ratio	0.50			0.50	0.34	
v/c Ratio	0.49			0.60	0.64	
Control Delay	7.5			13.4	15.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	7.5			13.4	15.4	
LOS	A			B	B	
Approach Delay	7.5			13.4	15.4	
Approach LOS	A			B	B	
Queue Length 50th (m)	18.5			36.8	23.7	
Queue Length 95th (m)	35.8			63.4	50.6	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	939			897	671	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.49			0.60	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 85.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

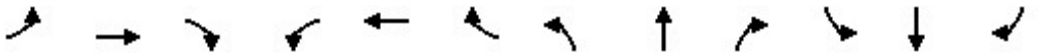




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	221	35	471	165	241
Future Volume (vph)	214	221	35	471	165	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1744			1876	1713	
Flt Permitted	1.00			0.95	0.98	
Satd. Flow (perm)	1744			1793	1713	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	228	235	37	501	176	256
RTOR Reduction (vph)	68	0	0	0	95	0
Lane Group Flow (vph)	396	0	0	538	337	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	27.5			27.5	18.5	
Effective Green, g (s)	27.5			27.5	18.5	
Actuated g/C Ratio	0.50			0.50	0.34	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	872			896	576	
v/s Ratio Prot	0.23				c0.20	
v/s Ratio Perm				c0.30		
v/c Ratio	0.45			0.60	0.59	
Uniform Delay, d1	8.9			9.8	15.1	
Progression Factor	0.93			1.00	1.00	
Incremental Delay, d2	1.3			3.0	4.3	
Delay (s)	9.6			12.8	19.4	
Level of Service	A			B	B	
Approach Delay (s)	9.6			12.8	19.4	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



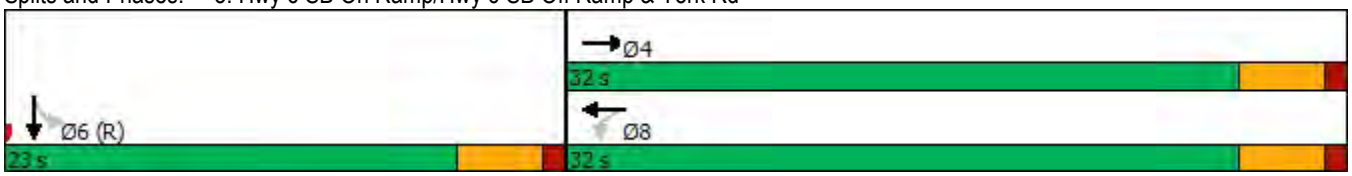
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Future Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930									0.937	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1758	0	0	1874	0	0	0	0	0	1707	0
Flt Permitted					0.886						0.974	
Satd. Flow (perm)	0	1758	0	0	1668	0	0	0	0	0	1707	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140									86	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	266	285	67	599	0	0	0	0	231	0	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	551	0	0	666	0	0	0	0	0	432	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		32.0		32.0	32.0					23.0	23.0	
Total Split (%)		58.2%		58.2%	58.2%					41.8%	41.8%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
v/c Ratio		0.58			0.80						0.68	
Control Delay		10.0			20.1						19.3	
Queue Delay		0.0			0.0						0.0	
Total Delay		10.0			20.1						19.3	
LOS		A			C						B	
Approach Delay		10.0			20.1						19.3	
Approach LOS		A			C						B	
Queue Length 50th (m)		25.9			64.0						29.9	
Queue Length 95th (m)		51.3			#114.7						#59.4	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		949			834						631	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

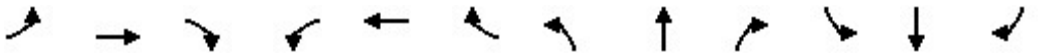
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.58			0.80						0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 98.5%		ICU Level of Service F	
Analysis Period (min) 15			

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

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

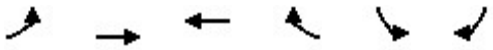




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Future Volume (vph)	0	253	271	64	569	0	0	0	0	219	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.93			1.00						0.94	
Flt Protected		1.00			0.99						0.97	
Satd. Flow (prot)		1758			1874						1707	
Flt Permitted		1.00			0.89						0.97	
Satd. Flow (perm)		1758			1669						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	285	67	599	0	0	0	0	231	0	201
RTOR Reduction (vph)	0	70	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	481	0	0	666	0	0	0	0	0	375	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		27.5			27.5						18.5	
Effective Green, g (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		879			834						574	
v/s Ratio Prot		0.27										
v/s Ratio Perm					c0.40						0.22	
v/c Ratio		0.55			0.80						0.65	
Uniform Delay, d1		9.5			11.4						15.5	
Progression Factor		1.00			1.03						1.00	
Incremental Delay, d2		2.4			6.3						5.7	
Delay (s)		11.9			18.2						21.2	
Level of Service		B			B						C	
Approach Delay (s)		11.9			18.2			0.0			21.2	
Approach LOS		B			B			A			C	

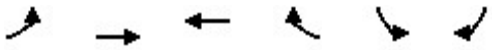
Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	489	59	111	37	27	472
Future Volume (vph)	489	59	111	37	27	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.966		0.872	
Flt Protected		0.957			0.997	
Satd. Flow (prot)	0	1818	1835	0	1636	0
Flt Permitted		0.957			0.997	
Satd. Flow (perm)	0	1818	1835	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	504	61	114	38	28	487
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	565	152	0	515	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	489	59	111	37	27	472
Future Volume (Veh/h)	489	59	111	37	27	472
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	504	61	114	38	28	487
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	152				1202	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				1202	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	65				79	47
cM capacity (veh/h)	1441				134	919

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	565	152	515
Volume Left	504	0	28
Volume Right	0	38	487
cSH	1441	1700	697
Volume to Capacity	0.35	0.09	0.74
Queue Length 95th (m)	12.7	0.0	52.7
Control Delay (s)	8.2	0.0	23.3
Lane LOS	A		C
Approach Delay (s)	8.2	0.0	23.3
Approach LOS			C

Intersection Summary			
Average Delay	13.5		
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

Appendix G

Excerpts from the RJ Burnside report – 1535 Plains Road West

1535 Plains Road Master Transportation Study

New Horizon Development Group

Master Transportation Study for
1535 Plains Road
Burlington ON

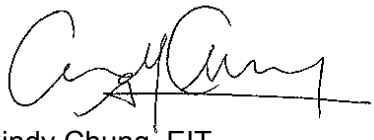
1535 Plains Rd. West Inc.

R.J. Burnside & Associates Limited
1465 Pickering Parkway Suite 200
Pickering ON L1V 7G7 CANADA

October 2018
300042932.0000

R.J. Burnside & Associates Limited

Report Prepared By:

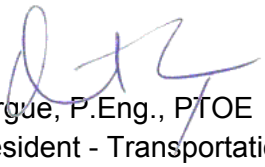


Cindy Chung, EIT
Transportation Planner
CC:cv

Report Reviewed By:



Brad Hale
Senior Transportation Specialist



David Argue, P.Eng., PTOE
Vice President - Transportation



Highway 6 Southbound Ramp / York Road Intersection

Under background 2027 condition during the PM peak hour, the southbound left turn movement is projected to approach capacity and will exceed MTO's volume to capacity ratio threshold of 0.75. The intersection will also experience a high delay resulting to a level of service F. The southbound left turn movement will exceed capacity under background 2032 condition and will continue under the remaining background conditions during both peak hours.

It is recommended that the MTO and Hamilton consider improvements under the background 2027 condition. A single lane roundabout can be implemented to mitigate capacity issues that is projected under background conditions. It is also recommended that the roundabout be designed to allow for installing future right-turn bypass lanes for the southbound and eastbound movements. Under background 2037 condition with a single lane roundabout, all movements will be operated with excess capacity and within MTO's volume to capacity ratio threshold as summarized in Table 4.

As a single lane roundabout, under total 2027 condition, the eastbound approach during weekday AM peak hour and southbound approach during the weekday PM peak hour is projected to exceed MTO's volume to capacity threshold of 0.75. It is recommended that southbound and eastbound right-turn bypass lanes at the roundabout are recommended to be implemented. Table 7 provides a comparison with and without the recommended improvement under total 2037 PM peak hour condition (worse-case scenarios). Detailed ARCADY reports are provided in Appendix J.

Table 7: Highway 6 Southbound Ramp / York Road Operations for Total 2037 Conditions- PM Peak Hour

Movement	Total 2037 PM Peak Hour			
	Single Lane Roundabout		Roundabout with right turn bypass	
	v/c	LOS	v/c	LOS
Southbound	0.86	E	0.51	B
Westbound	0.78	B	0.78	B
Eastbound	0.53	A	0.32	A

Notes: 1. v/c (volume to capacity), LOS (level of service)

With the recommended southbound and eastbound right-turn bypass lanes, the westbound movement is projected to exceed MTO's volume to capacity threshold minimally (volume to capacity ratio of 0.78) and there will be excess capacity. No further improvements are required.

Plains Road / York Road / Old York Road Intersection

Under background 2032 conditions during the PM peak hour, the northbound movement is projected to approach capacity and will experience a high delay resulting in a level of service F. This will continue, and the northbound movement will exceed capacity under background 2037 condition for PM peak hour. It is recommended that the MTO and City consider the following improvement under the background 2032 condition:

- Exclusive northbound left turn lane

With the recommended improvements under background 2032 and 2037 conditions, all movements will operate with excess capacity and will experience a level of service E or better.

Under total 2027 condition, the northbound left turn movement will exceed capacity and experience a high delay resulting to a level of service F during the weekday PM peak hour. This will continue to exceed capacity under the remaining total conditions. The following is recommended at Plains Road and York Road / Old York Road intersection:

- Signalization
- Exclusive westbound left turn lane

The intersection will warrant a traffic signal based on operations. Table 8 provides a comparison with and without the recommended improvement under Total 2037 PM peak hour condition (worse-case scenario). Detailed Synchro reports are provided in Appendix J.

Table 8: Plains Road / York Road / Old York Road Operations for Total 2037 - PM Peak Hour

Movement	Total 2037 PM Peak Hour			
	Stop-Controlled with Exclusive Northbound Turn Lanes [2]		Signalization with Exclusive Turn Lanes	
	v/c	LOS	v/c	LOS
Overall	NA		0.66	C
Eastbound Through-Right			0.68	D
Westbound Left-Through	0.21	A	NA	
Westbound Left	NA		0.62	B
Westbound Through			0.48	B
Northbound Left	2.65	F	0.66	C
Northbound Right	0.49	C	0.21	B

Notes: 1. v/c (volume to capacity), LOS (level of service)
2. Recommended under background conditions

Under total 2037 condition with the recommended improvements, the intersection will operate with excess capacity and will have a level of service D or better. A roundabout

at this location was not considered given the proximity of the structure over Highway 6 and the impact on the structure.

Plains Road / Site Driveway 1 / MTO Carpool Lot Driveway Intersection

It is assumed as part of the development, that the existing site driveway would be relocated opposite the MTO Carpool Lot Driveway. Under total 2027 condition, the westbound movement will exceed capacity during both peak hours and will continue to exceed capacity in the remaining total conditions. The following is recommended at Plains Road / Site Driveway 1 / MTO Carpool Lot Driveway intersection:

- Signalization
- Exclusive southbound left turn lane
- Exclusive northbound left turn lane
- Exclusive northbound right turn lane
- Exclusive westbound left turn lane

Table 9 provides a comparison with and without the recommended improvements under Total 2037 PM peak hour condition (worse-case scenario). Detailed Synchro reports are provided in Appendix J.

Table 9: Plains Road / Site Driveway 1 / MTO Carpool Lot Driveway Operations for Total 2037 - PM Peak Hour

Movement	Total 2037 PM Peak Hour			
	Stop-Controlled		Signalization	
	v/c	LOS	v/c	LOS
Overall	NA		0.52	B
Eastbound Left-Through-Right	0.46	F	0.05	C
Westbound Left	NA		0.68	D
Westbound Through-Right			0.09	C
Westbound Left-Through-Right	3.18	F	NA	
Northbound Left	NA		0.01	A
Northbound Through			0.45	B
Northbound Right			0.19	A
Northbound Left-Through Right	0.00	A	NA	
Southbound Left	NA		0.43	B
Southbound Through-Right			0.29	B
Southbound Left-Through-Right	0.25	A	NA	

Notes: 1. v/c (volume to capacity), LOS (level of service)

With the recommended improvements, the intersection will operate with excess capacity and a level of service D or better. With the recommended changes to Site Driveway 1, adjustments and modifications to MTO Carpool Lot Driveway will be needed to better align the two driveways. This will be addressed when the design is undertaken.

Appendix H

TTS Data

Tue Jun 20 2023 09:19:14 GMT-0400 (Eastern Daylight Time) - Run Time: 2708ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig

Column: 2006 GTA zone of destination - gta06_dest

Filters:

2006 GTA zone of destination - gta06_dest In 4092

and

Start time of trip - start_time In 0630-0930

and

Trip purpose of destination - purp_dest In H

Trip 2016

Table:

	4092
4051	36
5194	9

5215

Tue Jun 20 2023 09:29:38 GMT-0400 (Eastern Daylight Time) - Run Time: 2491ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest

Column: 2006 GTA zone of origin - gta06_orig

Filters:

2006 GTA zone of origin - gta06_orig In 4092 5215

and

Start time of trip - start_time In 0630-0930

and

Trip purpose of origin - purp_orig In H

Trip 2016

Table:

	4092	5215
35	0	26
69	30	0
3633	13	0
3721	8	0
4002	9	0
4009	33	0
4041	33	0
4051	98	27
4060	55	0
4067	12	0
4076	0	23
4079	33	0
4125	25	0
5088	0	55
5142	33	0
5193	21	23
5194	18	0
5205	25	0
7021	25	0

Tue Jun 20 2023 09:37:47 GMT-0400 (Eastern Daylight Time) - Run Time: 2706ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig

Column: 2006 GTA zone of destination - gta06_dest

Filters:

2006 GTA zone of destination - gta06_dest In 4092 5215

and

Start time of trip - start_time In 1530-1830

and

Trip purpose of destination - purp_dest In H

Trip 2016

Table:

	4092	5215
35	0	26
69	30	0
3633	13	0
3701	19	0
3721	8	0
4002	9	0
4009	24	0
4051	73	0
4057	21	0
4060	47	0
4067	12	0
4080	30	0
4087	33	0
4125	25	0
5043	21	0
5088	0	55
5142	21	0
5194	18	0
5205	25	0
5233	0	27
5250	9	0
7021	25	0

Tue Jun 20 2023 09:57:57 GMT-0400 (Eastern Daylight Time) - Run Time: 2762ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest

Column: 2006 GTA zone of origin - gta06_orig

Filters:

2006 GTA zone of origin - gta06_orig In 4092 5215

and

Start time of trip - start_time In 1530-1830

and

Trip purpose of origin - purp_orig In H

Trip 2016

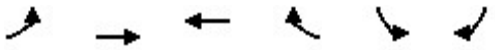
Table:

	4092	5215
4042	13	0
4051	24	0
5194	9	0
5232	33	86
5233	9	0
5234	16	0

Time Perio	Internal								External								Total
	NW	N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	
AM (IN)	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	100.0%
AM (OUT)	0.0%	0.0%	0.0%	10.9%	28.8%	0.0%	0.0%	4.0%	4.0%	0.0%	5.3%	23.0%	0.0%	18.7%	5.3%	0.0%	100.0%
PM (IN)	0.0%	0.0%	0.0%	13.1%	24.7%	0.0%	0.0%	4.4%	6.0%	0.0%	10.5%	21.2%	0.0%	16.5%	3.7%	0.0%	100.0%
PM (OUT)	0.0%	0.0%	0.0%	0.0%	12.6%	0.0%	0.0%	0.0%	0.0%	62.6%	13.2%	6.8%	0.0%	4.7%	0.0%	0.0%	100.0%
SAT (IN)																	0.0%
SAT (OUT)																	0.0%

Appendix I

Future Total Synchro Reports

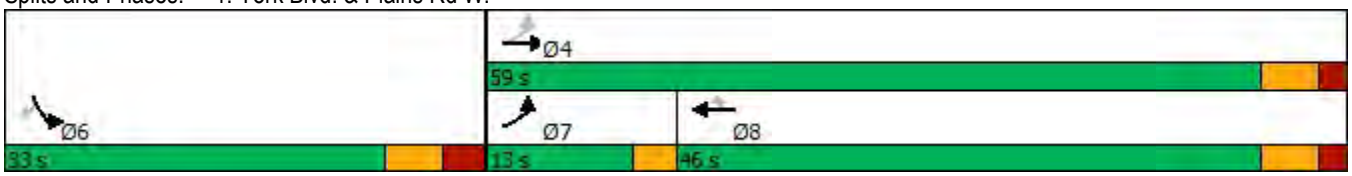


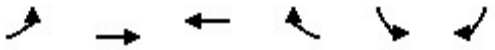
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	166	337	253	108	153	78
Future Volume (vph)	166	337	253	108	153	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.548				0.950	
Satd. Flow (perm)	997	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				114		82
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	175	355	266	114	161	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	355	266	114	161	82
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.9	41.9	14.3	14.3
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.23	0.15	0.15	0.13	0.51	0.24
Control Delay	5.4	5.8	11.1	3.0	35.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	5.8	11.1	3.0	35.7	8.7
LOS	A	A	B	A	D	A
Approach Delay		5.7	8.7		26.6	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	7.9	9.8	10.9	0.0	23.6	0.0
Queue Length 95th (m)	17.7	18.0	20.5	8.5	42.0	11.1
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	787	2313	1826	866	573	556
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	0.22	0.15	0.15	0.13	0.28	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.4			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	166	337	253	108	153	78
Future Volume (vph)	166	337	253	108	153	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.55	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1000	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	175	355	266	114	161	82
RTOR Reduction (vph)	0	0	0	55	0	67
Lane Group Flow (vph)	175	355	266	59	161	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.9	41.9	14.3	14.3
Effective Green, g (s)	53.1	53.1	41.9	41.9	14.3	14.3
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	735	2314	1826	812	314	275
v/s Ratio Prot	c0.02	0.10	0.08		c0.09	
v/s Ratio Perm	c0.13			0.04		0.01
v/c Ratio	0.24	0.15	0.15	0.07	0.51	0.05
Uniform Delay, d1	5.2	5.2	10.0	9.6	29.9	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.8	0.2
Delay (s)	5.4	5.3	10.1	9.8	32.7	27.6
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.3	10.0		31.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	43	256	85	133
Future Volume (vph)	153	153	43	256	85	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.918	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1701	0
Flt Permitted				0.993	0.981	
Satd. Flow (perm)	1753	0	0	1855	1701	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	172	172	48	288	96	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	336	245	0
Sign Control	Free			Free	Stop	

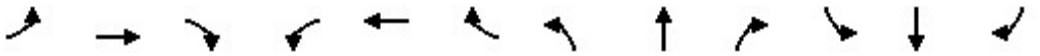
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	153	153	43	256	85	133
Future Volume (Veh/h)	153	153	43	256	85	133
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	172	172	48	288	96	149
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			344		642	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			344		642	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		77	81
cM capacity (veh/h)			1226		424	783

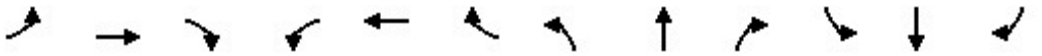
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	344	336	245
Volume Left	0	48	96
Volume Right	172	0	149
cSH	1700	1226	588
Volume to Capacity	0.20	0.04	0.42
Queue Length 95th (m)	0.0	1.0	16.4
Control Delay (s)	0.0	1.5	15.4
Lane LOS		A	C
Approach Delay (s)	0.0	1.5	15.4
Approach LOS			C

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.922									0.934	
Flt Protected					0.991						0.976	
Satd. Flow (prot)	0	1727	0	0	1868	0	0	0	0	0	1666	0
Flt Permitted					0.991						0.976	
Satd. Flow (perm)	0	1727	0	0	1868	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	246	341	67	301	0	0	0	0	93	2	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	587	0	0	368	0	0	0	0	0	186	0
Sign Control		Free			Free			Stop			Stop	

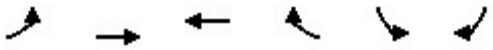
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	221	307	60	271	0	0	0	0	84	2	82
Future Volume (Veh/h)	0	221	307	60	271	0	0	0	0	84	2	82
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	246	341	67	301	0	0	0	0	93	2	91
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	301			587			944	852	416	852	1022	301
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	301			587			944	852	416	852	1022	301
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			100	100	100	65	99	88
cM capacity (veh/h)	1260			998			200	277	636	263	222	734

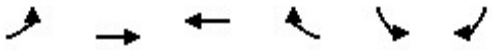
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	587	368	186
Volume Left	0	67	93
Volume Right	341	0	91
cSH	1700	998	383
Volume to Capacity	0.35	0.07	0.49
Queue Length 95th (m)	0.0	1.7	20.6
Control Delay (s)	0.0	2.2	23.0
Lane LOS		A	C
Approach Delay (s)	0.0	2.2	23.0
Approach LOS			C

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	241	51	43	12	20	255
Future Volume (vph)	241	51	43	12	20	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1845	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1845	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	268	57	48	13	22	283
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	325	61	0	305	0
Sign Control		Free	Free		Stop	

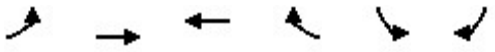
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	241	51	43	12	20	255
Future Volume (Veh/h)	241	51	43	12	20	255
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	268	57	48	13	22	283
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	61				648	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				648	54
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				94	72
cM capacity (veh/h)	1530				362	1012

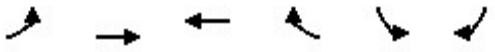
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	325	61	305
Volume Left	268	0	22
Volume Right	0	13	283
cSH	1530	1700	896
Volume to Capacity	0.18	0.04	0.34
Queue Length 95th (m)	5.1	0.0	12.1
Control Delay (s)	6.7	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	6.7	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

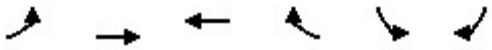
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



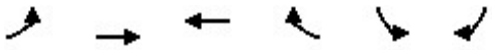
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



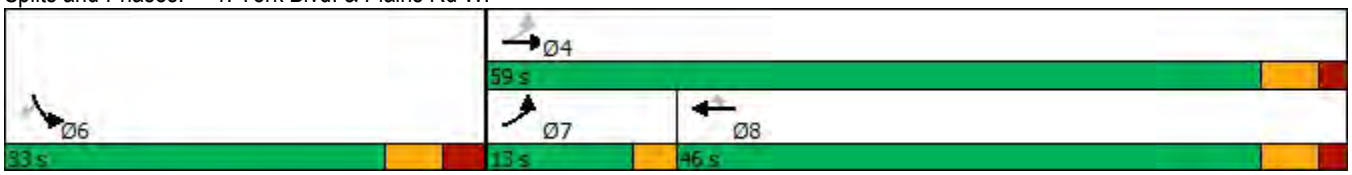
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	319	650	201	146	180
Future Volume (vph)	194	319	650	201	146	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.337				0.950	
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				209		188
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	202	332	677	209	152	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	202	332	677	209	152	188
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.7	41.7	14.2	14.2
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.36	0.14	0.37	0.22	0.49	0.43
Control Delay	6.5	5.7	13.0	2.6	35.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	5.7	13.0	2.6	35.2	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.0	10.5		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.1	9.0	31.8	0.0	22.2	0.0

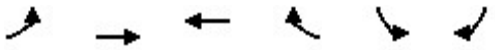


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	20.5	17.2	53.0	11.3	39.8	16.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	592	2340	1838	939	568	640
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.14	0.37	0.22	0.27	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.3			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	319	650	201	146	180
Future Volume (vph)	194	319	650	201	146	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.34	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	202	332	677	209	152	188
RTOR Reduction (vph)	0	0	0	100	0	155
Lane Group Flow (vph)	202	332	677	109	152	33
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.7	41.7	14.2	14.2
Effective Green, g (s)	53.1	53.1	41.7	41.7	14.2	14.2
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	545	2340	1837	838	309	279
v/s Ratio Prot	c0.04	0.09	0.19		c0.09	
v/s Ratio Perm	c0.21			0.07		0.02
v/c Ratio	0.37	0.14	0.37	0.13	0.49	0.12
Uniform Delay, d1	5.6	5.1	11.5	9.9	29.8	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.0	5.2	12.0	10.3	32.4	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.5	11.6		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	197	46	411	154	215
Future Volume (vph)	187	197	46	411	154	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.995	0.980	
Satd. Flow (perm)	1743	0	0	1874	1715	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	199	210	49	437	164	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	409	0	0	486	393	0
Sign Control	Free			Free	Stop	

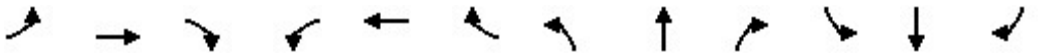
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.8%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	187	197	46	411	154	215
Future Volume (Veh/h)	187	197	46	411	154	215
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	199	210	49	437	164	229
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			409		839	304
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			409		839	304
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		49	69
cM capacity (veh/h)			1161		324	740

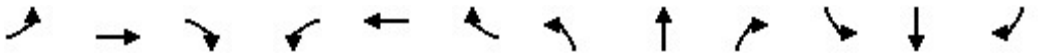
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	409	486	393
Volume Left	0	49	164
Volume Right	210	0	229
cSH	1700	1161	482
Volume to Capacity	0.24	0.04	0.82
Queue Length 95th (m)	0.0	1.1	62.3
Control Delay (s)	0.0	1.3	37.7
Lane LOS		A	E
Approach Delay (s)	0.0	1.3	37.7
Approach LOS			E

Intersection Summary			
Average Delay	12.0		
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Future Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.936									0.938	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1770	0	0	1874	0	0	0	0	0	1708	0
Flt Permitted					0.995						0.974	
Satd. Flow (perm)	0	1770	0	0	1874	0	0	0	0	0	1708	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	234	209	60	523	0	0	0	0	173	0	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	443	0	0	583	0	0	0	0	0	321	0
Sign Control		Free			Free			Stop			Stop	

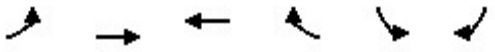
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.9%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	222	199	57	497	0	0	0	0	164	0	141
Future Volume (Veh/h)	0	222	199	57	497	0	0	0	0	164	0	141
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	234	209	60	523	0	0	0	0	173	0	148
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	523			443			1130	982	338	982	1086	523
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	523			443			1130	982	338	982	1086	523
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	100	21	100	73
cM capacity (veh/h)	1043			1128			128	236	704	218	206	558

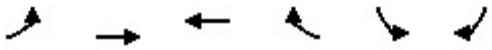
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	443	583	321
Volume Left	0	60	173
Volume Right	209	0	148
cSH	1700	1128	303
Volume to Capacity	0.26	0.05	1.06
Queue Length 95th (m)	0.0	1.3	97.0
Control Delay (s)	0.0	1.4	106.3
Lane LOS		A	F
Approach Delay (s)	0.0	1.4	106.3
Approach LOS			F

Intersection Summary			
Average Delay	25.9		
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	363	52	97	27	20	363
Future Volume (vph)	363	52	97	27	20	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1843	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1843	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	374	54	100	28	21	374
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	428	128	0	395	0
Sign Control		Free	Free		Stop	

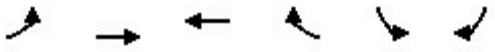
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	363	52	97	27	20	363
Future Volume (Veh/h)	363	52	97	27	20	363
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	374	54	100	28	21	374
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	128				916	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128				916	114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	75				91	60
cM capacity (veh/h)	1470				227	941

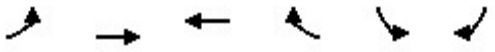
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	428	128	395
Volume Left	374	0	21
Volume Right	0	28	374
cSH	1470	1700	807
Volume to Capacity	0.25	0.08	0.49
Queue Length 95th (m)	8.1	0.0	21.9
Control Delay (s)	7.5	0.0	13.7
Lane LOS	A		B
Approach Delay (s)	7.5	0.0	13.7
Approach LOS			B

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

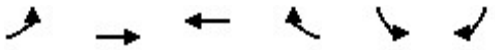
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

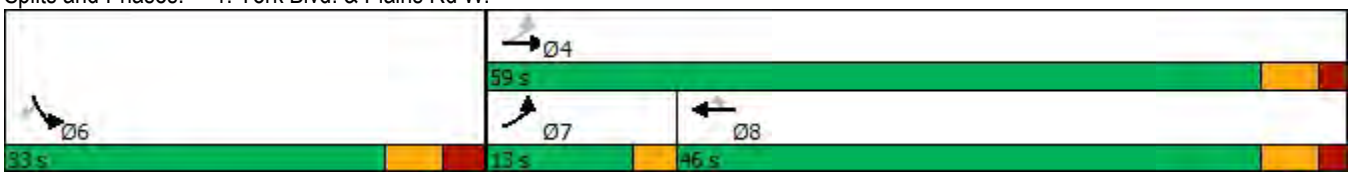


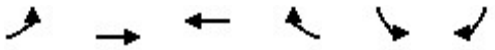
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	166	337	253	108	153	78
Future Volume (vph)	166	337	253	108	153	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.548				0.950	
Satd. Flow (perm)	997	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				114		82
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	175	355	266	114	161	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	355	266	114	161	82
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.9	41.9	14.3	14.3
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.23	0.15	0.15	0.13	0.51	0.24
Control Delay	5.4	5.8	11.1	3.0	35.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	5.8	11.1	3.0	35.7	8.7
LOS	A	A	B	A	D	A
Approach Delay		5.7	8.7		26.6	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	7.9	9.8	10.9	0.0	23.6	0.0
Queue Length 95th (m)	17.7	18.0	20.5	8.5	42.0	11.1
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	787	2313	1826	866	573	556
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	0.22	0.15	0.15	0.13	0.28	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.4			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	166	337	253	108	153	78
Future Volume (vph)	166	337	253	108	153	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.55	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1000	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	175	355	266	114	161	82
RTOR Reduction (vph)	0	0	0	55	0	67
Lane Group Flow (vph)	175	355	266	59	161	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.9	41.9	14.3	14.3
Effective Green, g (s)	53.1	53.1	41.9	41.9	14.3	14.3
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	735	2314	1826	812	314	275
v/s Ratio Prot	c0.02	0.10	0.08		c0.09	
v/s Ratio Perm	c0.13			0.04		0.01
v/c Ratio	0.24	0.15	0.15	0.07	0.51	0.05
Uniform Delay, d1	5.2	5.2	10.0	9.6	29.9	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	2.8	0.2
Delay (s)	5.4	5.3	10.1	9.8	32.7	27.6
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.3	10.0		31.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

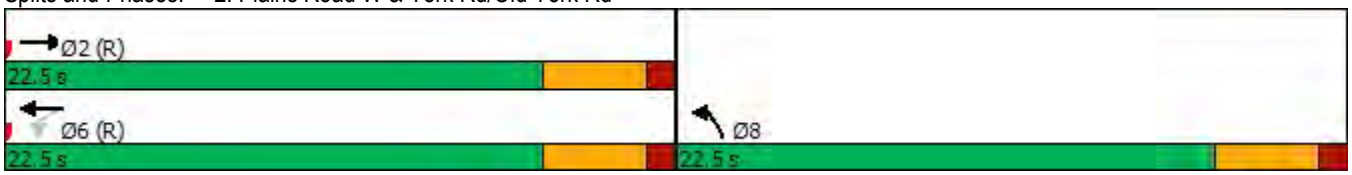


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	43	256	85	133
Future Volume (vph)	153	153	43	256	85	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.918	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1701	0
Flt Permitted				0.913	0.981	
Satd. Flow (perm)	1753	0	0	1705	1701	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				149	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	172	172	48	288	96	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	344	0	0	336	245	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.44			0.49	0.32	
Control Delay	8.0			13.2	5.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.0			13.2	5.4	
LOS	A			B	A	
Approach Delay	8.0			13.2	5.4	
Approach LOS	A			B	A	
Queue Length 50th (m)	11.3			19.5	4.8	
Queue Length 95th (m)	25.8			36.8	15.3	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			682	769	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.44			0.49	0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 9.2		Intersection LOS: A	
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

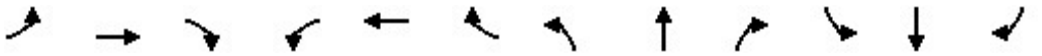




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	153	43	256	85	133
Future Volume (vph)	153	153	43	256	85	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1700	
Flt Permitted	1.00			0.91	0.98	
Satd. Flow (perm)	1754			1706	1700	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	172	172	48	288	96	149
RTOR Reduction (vph)	80	0	0	0	89	0
Lane Group Flow (vph)	264	0	0	336	156	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			682	680	
v/s Ratio Prot	0.15				c0.09	
v/s Ratio Perm				c0.20		
v/c Ratio	0.38			0.49	0.23	
Uniform Delay, d1	9.5			10.1	8.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			2.5	0.8	
Delay (s)	11.1			12.6	9.7	
Level of Service	B			B	A	
Approach Delay (s)	11.1			12.6	9.7	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

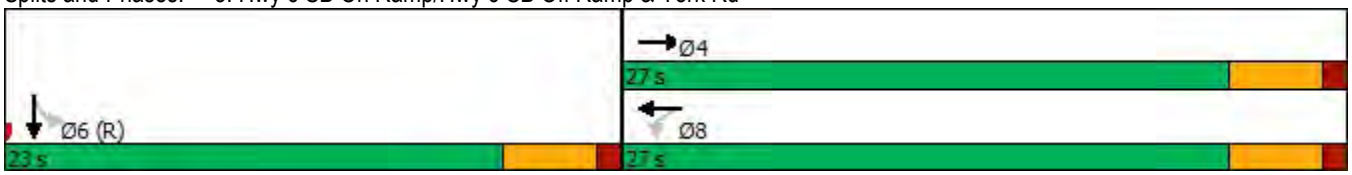


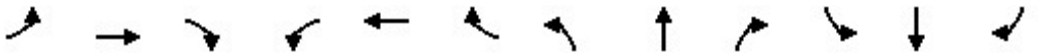
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.922									0.934	
Flt Protected					0.991						0.976	
Satd. Flow (prot)	0	1727	0	0	1868	0	0	0	0	0	1666	0
Flt Permitted					0.717						0.976	
Satd. Flow (perm)	0	1727	0	0	1351	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		181									91	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	246	341	67	301	0	0	0	0	93	2	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	587	0	0	368	0	0	0	0	0	186	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		27.0		27.0	27.0					23.0	23.0	
Total Split (%)		54.0%		54.0%	54.0%					46.0%	46.0%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		22.5			22.5						18.5	
Actuated g/C Ratio		0.45			0.45						0.37	
v/c Ratio		0.67			0.61						0.28	
Control Delay		11.9			15.7						7.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		11.9			15.7						7.4	
LOS		B			B						A	
Approach Delay		11.9			15.7						7.4	
Approach LOS		B			B						A	
Queue Length 50th (m)		25.8			24.2						5.7	
Queue Length 95th (m)		55.5			47.3						16.4	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		876			607						673	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.67			0.61						0.28	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

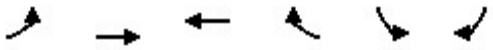




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Future Volume (vph)	0	221	307	60	271	0	0	0	0	84	2	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1726			1868						1665	
Flt Permitted		1.00			0.72						0.98	
Satd. Flow (perm)		1726			1352						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	246	341	67	301	0	0	0	0	93	2	91
RTOR Reduction (vph)	0	100	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	487	0	0	368	0	0	0	0	0	129	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		22.5			22.5						18.5	
Effective Green, g (s)		22.5			22.5						18.5	
Actuated g/C Ratio		0.45			0.45						0.37	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		776			608						616	
v/s Ratio Prot		c0.28										
v/s Ratio Perm					0.27						0.08	
v/c Ratio		0.63			0.61						0.21	
Uniform Delay, d1		10.5			10.4						10.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.8			4.4						0.8	
Delay (s)		14.4			14.8						11.5	
Level of Service		B			B						B	
Approach Delay (s)		14.4			14.8			0.0			11.5	
Approach LOS		B			B			A			B	

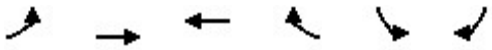
Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	241	51	43	12	20	255
Future Volume (vph)	241	51	43	12	20	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1845	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1845	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	268	57	48	13	22	283
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	325	61	0	305	0
Sign Control		Free	Free		Stop	

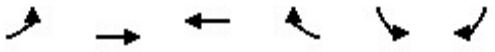
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	241	51	43	12	20	255
Future Volume (Veh/h)	241	51	43	12	20	255
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	268	57	48	13	22	283
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	61				648	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				648	54
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				94	72
cM capacity (veh/h)	1530				362	1012

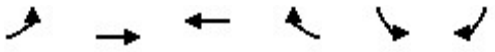
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	325	61	305
Volume Left	268	0	22
Volume Right	0	13	283
cSH	1530	1700	896
Volume to Capacity	0.18	0.04	0.34
Queue Length 95th (m)	5.1	0.0	12.1
Control Delay (s)	6.7	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	6.7	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

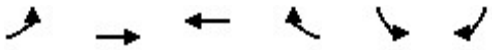
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

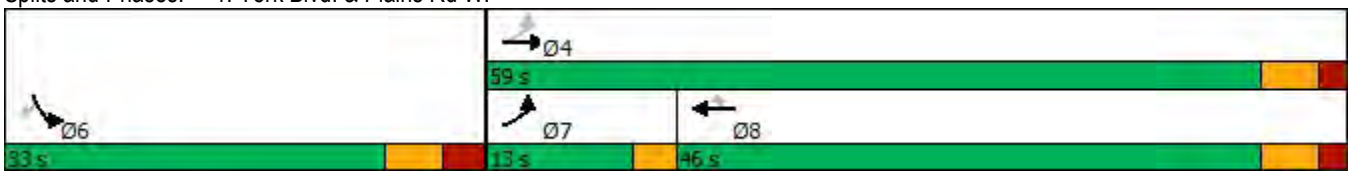


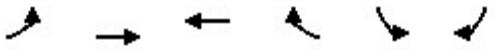
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	319	650	201	146	180
Future Volume (vph)	194	319	650	201	146	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.337				0.950	
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				209		188
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	202	332	677	209	152	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	202	332	677	209	152	188
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.7	41.7	14.2	14.2
Actuated g/C Ratio	0.70	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.36	0.14	0.37	0.22	0.49	0.43
Control Delay	6.5	5.7	13.0	2.6	35.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	5.7	13.0	2.6	35.2	7.9
LOS	A	A	B	A	D	A
Approach Delay		6.0	10.5		20.1	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.1	9.0	31.8	0.0	22.2	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	20.5	17.2	53.0	11.3	39.8	16.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	592	2340	1838	939	568	640
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	0.34	0.14	0.37	0.22	0.27	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.3			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 11.0		Intersection LOS: B	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	319	650	201	146	180
Future Volume (vph)	194	319	650	201	146	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.34	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	640	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	202	332	677	209	152	188
RTOR Reduction (vph)	0	0	0	100	0	155
Lane Group Flow (vph)	202	332	677	109	152	33
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.7	41.7	14.2	14.2
Effective Green, g (s)	53.1	53.1	41.7	41.7	14.2	14.2
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	545	2340	1837	838	309	279
v/s Ratio Prot	c0.04	0.09	0.19		c0.09	
v/s Ratio Perm	c0.21			0.07		0.02
v/c Ratio	0.37	0.14	0.37	0.13	0.49	0.12
Uniform Delay, d1	5.6	5.1	11.5	9.9	29.8	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.0	5.2	12.0	10.3	32.4	28.2
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.5	11.6		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	197	46	411	154	215
Future Volume (vph)	187	197	46	411	154	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.931	0.980	
Satd. Flow (perm)	1743	0	0	1753	1715	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	141				157	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	199	210	49	437	164	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	409	0	0	486	393	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	27.5		27.5	27.5	22.5	
Total Split (%)	55.0%		55.0%	55.0%	45.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
v/c Ratio	0.47			0.60	0.55	
Control Delay	8.0			14.0	10.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.0			14.0	10.9	
LOS	A			B	B	
Approach Delay	8.0			14.0	10.9	
Approach LOS	A			B	B	
Queue Length 50th (m)	14.8			31.4	15.9	
Queue Length 95th (m)	32.0			56.3	36.6	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	877			806	717	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.47			0.60	0.55	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 79.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

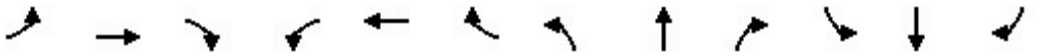




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	187	197	46	411	154	215
Future Volume (vph)	187	197	46	411	154	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1742			1874	1715	
Flt Permitted	1.00			0.93	0.98	
Satd. Flow (perm)	1742			1754	1715	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	199	210	49	437	164	229
RTOR Reduction (vph)	76	0	0	0	100	0
Lane Group Flow (vph)	333	0	0	486	293	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	23.0			23.0	18.0	
Effective Green, g (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	801			806	617	
v/s Ratio Prot	0.19				c0.17	
v/s Ratio Perm				c0.28		
v/c Ratio	0.42			0.60	0.47	
Uniform Delay, d1	9.0			10.1	12.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.6			3.3	2.6	
Delay (s)	10.6			13.4	14.9	
Level of Service	B			B	B	
Approach Delay (s)	10.6			13.4	14.9	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

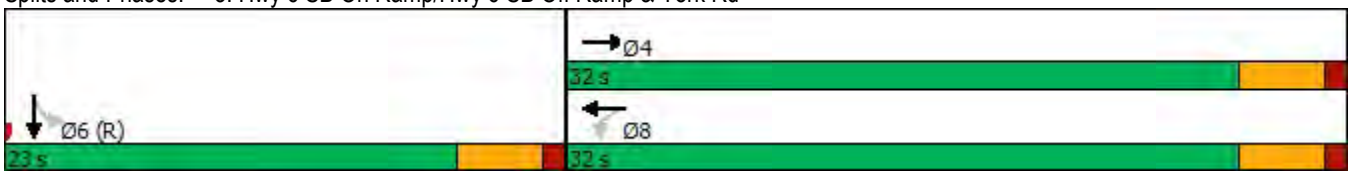


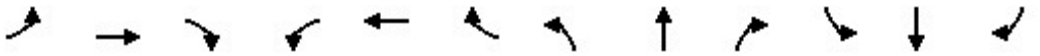
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Future Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.936									0.938	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1770	0	0	1874	0	0	0	0	0	1708	0
Flt Permitted					0.922						0.974	
Satd. Flow (perm)	0	1770	0	0	1736	0	0	0	0	0	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117									84	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	234	209	60	523	0	0	0	0	173	0	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	443	0	0	583	0	0	0	0	0	321	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		32.0		32.0	32.0					23.0	23.0	
Total Split (%)		58.2%		58.2%	58.2%					41.8%	41.8%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
v/c Ratio		0.47			0.67						0.51	
Control Delay		8.4			15.2						14.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		8.4			15.2						14.0	
LOS		A			B						B	
Approach Delay		8.4			15.2						14.0	
Approach LOS		A			B						B	
Queue Length 50th (m)		19.1			42.1						18.7	
Queue Length 95th (m)		38.1			73.4						38.8	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		943			868						630	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.47			0.67						0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 82.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

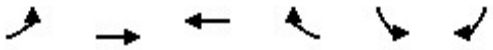




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Future Volume (vph)	0	222	199	57	497	0	0	0	0	164	0	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.94			1.00						0.94	
Flt Protected		1.00			0.99						0.97	
Satd. Flow (prot)		1771			1873						1707	
Flt Permitted		1.00			0.92						0.97	
Satd. Flow (perm)		1771			1737						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	234	209	60	523	0	0	0	0	173	0	148
RTOR Reduction (vph)	0	59	0	0	0	0	0	0	0	0	56	0
Lane Group Flow (vph)	0	385	0	0	583	0	0	0	0	0	265	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		27.5			27.5						18.5	
Effective Green, g (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		885			868						574	
v/s Ratio Prot		0.22										
v/s Ratio Perm					c0.34						0.16	
v/c Ratio		0.43			0.67						0.46	
Uniform Delay, d1		8.8			10.4						14.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.6			4.1						2.7	
Delay (s)		10.3			14.5						17.0	
Level of Service		B			B						B	
Approach Delay (s)		10.3			14.5			0.0			17.0	
Approach LOS		B			B			A			B	

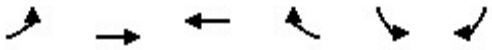
Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	363	52	97	27	20	363
Future Volume (vph)	363	52	97	27	20	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1843	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1843	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	374	54	100	28	21	374
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	428	128	0	395	0
Sign Control		Free	Free		Stop	

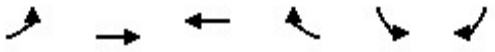
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	363	52	97	27	20	363
Future Volume (Veh/h)	363	52	97	27	20	363
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	374	54	100	28	21	374
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	128				916	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128				916	114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	75				91	60
cM capacity (veh/h)	1470				227	941

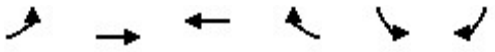
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	428	128	395
Volume Left	374	0	21
Volume Right	0	28	374
cSH	1470	1700	807
Volume to Capacity	0.25	0.08	0.49
Queue Length 95th (m)	8.1	0.0	21.9
Control Delay (s)	7.5	0.0	13.7
Lane LOS	A		B
Approach Delay (s)	7.5	0.0	13.7
Approach LOS			B

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

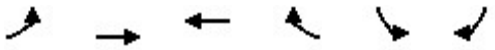
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

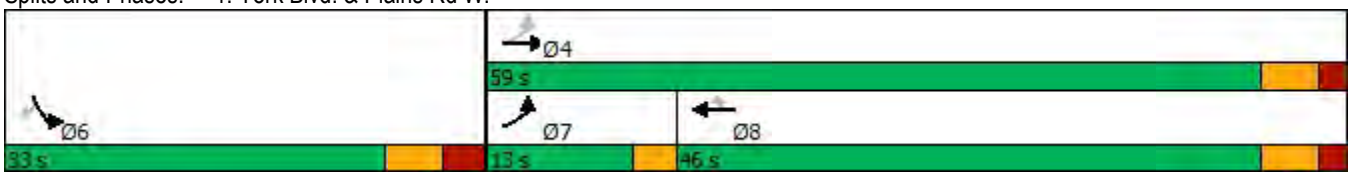


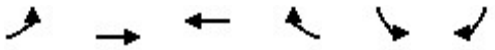
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	174	354	265	113	160	81
Future Volume (vph)	174	354	265	113	160	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.542				0.950	
Satd. Flow (perm)	986	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				119		85
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	183	373	279	119	168	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	373	279	119	168	85
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.7	14.7
Actuated g/C Ratio	0.69	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.24	0.16	0.15	0.14	0.52	0.24
Control Delay	5.6	6.0	11.4	3.1	35.9	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	11.4	3.1	35.9	8.6
LOS	A	A	B	A	D	A
Approach Delay		5.8	8.9		26.7	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	8.5	10.5	11.6	0.0	24.8	0.0
Queue Length 95th (m)	18.8	19.2	21.6	8.8	43.4	11.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	777	2303	1814	863	570	556
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	0.24	0.16	0.15	0.14	0.29	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.8			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	174	354	265	113	160	81
Future Volume (vph)	174	354	265	113	160	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.54	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	988	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	183	373	279	119	168	85
RTOR Reduction (vph)	0	0	0	57	0	70
Lane Group Flow (vph)	183	373	279	62	168	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.8	41.8	14.7	14.7
Effective Green, g (s)	53.1	53.1	41.8	41.8	14.7	14.7
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	725	2303	1813	806	322	281
v/s Ratio Prot	c0.03	0.11	0.08		c0.09	
v/s Ratio Perm	c0.14			0.04		0.01
v/c Ratio	0.25	0.16	0.15	0.08	0.52	0.06
Uniform Delay, d1	5.4	5.3	10.2	9.8	29.9	27.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	2.9	0.2
Delay (s)	5.6	5.5	10.4	10.0	32.8	27.5
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.5	10.3		31.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	45	268	88	140
Future Volume (vph)	160	160	45	268	88	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.917	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1699	0
Flt Permitted				0.993	0.981	
Satd. Flow (perm)	1753	0	0	1855	1699	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	180	180	51	301	99	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	352	256	0
Sign Control	Free			Free	Stop	

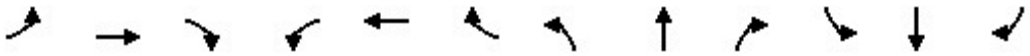
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	160	45	268	88	140
Future Volume (Veh/h)	160	160	45	268	88	140
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	180	180	51	301	99	157
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			360		673	270
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			360		673	270
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		76	80
cM capacity (veh/h)			1210		406	771

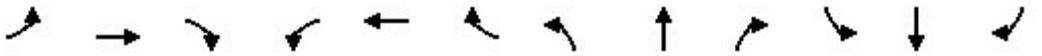
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	360	352	256
Volume Left	0	51	99
Volume Right	180	0	157
cSH	1700	1210	572
Volume to Capacity	0.21	0.04	0.45
Queue Length 95th (m)	0.0	1.1	18.4
Control Delay (s)	0.0	1.5	16.3
Lane LOS		A	C
Approach Delay (s)	0.0	1.5	16.3
Approach LOS			C

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.919									0.934	
Flt Protected					0.991						0.976	
Satd. Flow (prot)	0	1722	0	0	1868	0	0	0	0	0	1666	0
Flt Permitted					0.991						0.976	
Satd. Flow (perm)	0	1722	0	0	1868	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	258	382	72	316	0	0	0	0	104	2	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	640	0	0	388	0	0	0	0	0	208	0
Sign Control		Free			Free			Stop			Stop	

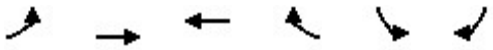
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	232	344	65	284	0	0	0	0	94	2	92
Future Volume (Veh/h)	0	232	344	65	284	0	0	0	0	94	2	92
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	258	382	72	316	0	0	0	0	104	2	102
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	316			640			1012	909	449	909	1100	316
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	316			640			1012	909	449	909	1100	316
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			100	100	100	57	99	86
cM capacity (veh/h)	1244			954			175	254	610	239	198	720

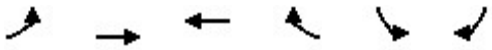
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	640	388	208
Volume Left	0	72	104
Volume Right	382	0	102
cSH	1700	954	354
Volume to Capacity	0.38	0.08	0.59
Queue Length 95th (m)	0.0	2.0	28.5
Control Delay (s)	0.0	2.4	28.6
Lane LOS		A	D
Approach Delay (s)	0.0	2.4	28.6
Approach LOS			D

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	269	53	45	14	22	285
Future Volume (vph)	269	53	45	14	22	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1837	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1837	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	299	59	50	16	24	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	358	66	0	341	0
Sign Control		Free	Free		Stop	

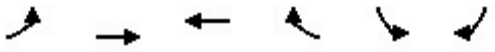
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	269	53	45	14	22	285
Future Volume (Veh/h)	269	53	45	14	22	285
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	299	59	50	16	24	317
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	66				715	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				715	58
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	80				93	69
cM capacity (veh/h)	1523				322	1008

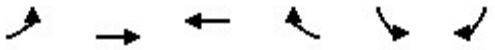
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	358	66	341
Volume Left	299	0	24
Volume Right	0	16	317
cSH	1523	1700	876
Volume to Capacity	0.20	0.04	0.39
Queue Length 95th (m)	5.8	0.0	14.9
Control Delay (s)	6.9	0.0	11.7
Lane LOS	A		B
Approach Delay (s)	6.9	0.0	11.7
Approach LOS			B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

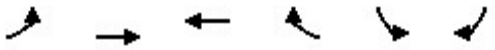
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



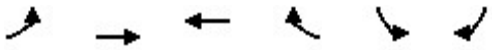
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



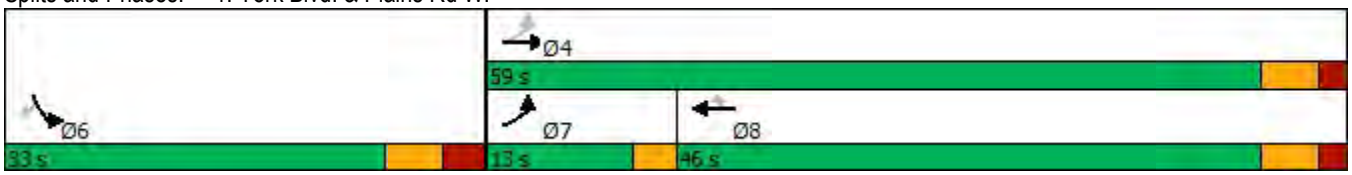
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	334	682	211	153	188
Future Volume (vph)	203	334	682	211	153	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.320				0.950	
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				220		196
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	211	348	710	220	159	196
Shared Lane Traffic (%)						
Lane Group Flow (vph)	211	348	710	220	159	196
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.5	41.5	14.5	14.5
Actuated g/C Ratio	0.70	0.66	0.51	0.51	0.18	0.18
v/c Ratio	0.38	0.15	0.39	0.23	0.50	0.44
Control Delay	6.9	5.9	13.5	2.7	35.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.9	13.5	2.7	35.4	7.8
LOS	A	A	B	A	D	A
Approach Delay		6.3	10.9		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.7	9.6	34.2	0.0	23.3	0.0

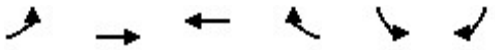


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	21.8	18.3	56.5	11.6	41.4	16.6
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	571	2330	1823	938	566	644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.15	0.39	0.23	0.28	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.6			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	334	682	211	153	188
Future Volume (vph)	203	334	682	211	153	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.32	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	348	710	220	159	196
RTOR Reduction (vph)	0	0	0	106	0	161
Lane Group Flow (vph)	211	348	710	114	159	35
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	14.5	14.5
Effective Green, g (s)	53.1	53.1	41.6	41.6	14.5	14.5
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	526	2331	1826	833	315	284
v/s Ratio Prot	c0.04	0.10	0.20		c0.09	
v/s Ratio Perm	c0.22			0.07		0.02
v/c Ratio	0.40	0.15	0.39	0.14	0.50	0.12
Uniform Delay, d1	5.8	5.2	11.8	10.1	29.8	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.3	5.3	12.4	10.5	32.5	28.1
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	12.0		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	206	48	431	161	225
Future Volume (vph)	196	206	48	431	161	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.995	0.980	
Satd. Flow (perm)	1743	0	0	1874	1715	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	209	219	51	459	171	239
Shared Lane Traffic (%)						
Lane Group Flow (vph)	428	0	0	510	410	0
Sign Control	Free			Free	Stop	

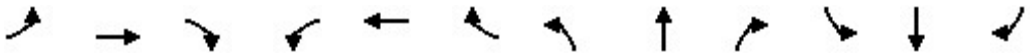
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 81.0%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	196	206	48	431	161	225
Future Volume (Veh/h)	196	206	48	431	161	225
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	209	219	51	459	171	239
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			428		880	318
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			428		880	318
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		44	67
cM capacity (veh/h)			1142		306	727

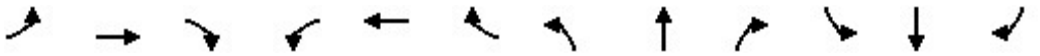
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	428	510	410
Volume Left	0	51	171
Volume Right	219	0	239
cSH	1700	1142	462
Volume to Capacity	0.25	0.04	0.89
Queue Length 95th (m)	0.0	1.1	76.5
Control Delay (s)	0.0	1.3	48.7
Lane LOS		A	E
Approach Delay (s)	0.0	1.3	48.7
Approach LOS			E

Intersection Summary			
Average Delay	15.3		
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Future Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.934									0.938	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1766	0	0	1874	0	0	0	0	0	1708	0
Flt Permitted					0.995						0.974	
Satd. Flow (perm)	0	1766	0	0	1874	0	0	0	0	0	1708	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	245	235	65	548	0	0	0	0	193	0	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	480	0	0	613	0	0	0	0	0	359	0
Sign Control		Free			Free			Stop			Stop	

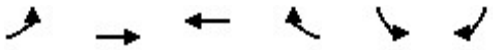
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	233	223	62	521	0	0	0	0	183	0	158
Future Volume (Veh/h)	0	233	223	62	521	0	0	0	0	183	0	158
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	245	235	65	548	0	0	0	0	193	0	166
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	548			480			1206	1040	362	1040	1158	548
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	548			480			1206	1040	362	1040	1158	548
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	100	100	2	100	69
cM capacity (veh/h)	1021			1093			106	216	682	198	186	540

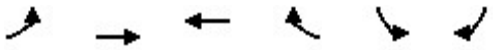
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	480	613	359
Volume Left	0	65	193
Volume Right	235	0	166
cSH	1700	1093	280
Volume to Capacity	0.28	0.06	1.28
Queue Length 95th (m)	0.0	1.5	140.5
Control Delay (s)	0.0	1.6	188.6
Lane LOS		A	F
Approach Delay (s)	0.0	1.6	188.6
Approach LOS			F

Intersection Summary			
Average Delay	47.3		
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	407	54	102	31	22	404
Future Volume (vph)	407	54	102	31	22	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.968		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1839	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1839	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	420	56	105	32	23	416
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	476	137	0	439	0
Sign Control		Free	Free		Stop	

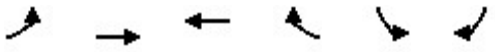
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.8%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	407	54	102	31	22	404
Future Volume (Veh/h)	407	54	102	31	22	404
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	420	56	105	32	23	416
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	137				1017	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				1017	121
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	71				88	55
cM capacity (veh/h)	1459				189	933

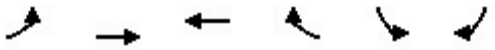
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	476	137	439
Volume Left	420	0	23
Volume Right	0	32	416
cSH	1459	1700	774
Volume to Capacity	0.29	0.08	0.57
Queue Length 95th (m)	9.6	0.0	29.0
Control Delay (s)	7.8	0.0	15.6
Lane LOS	A		C
Approach Delay (s)	7.8	0.0	15.6
Approach LOS			C

Intersection Summary			
Average Delay		10.0	
Intersection Capacity Utilization		68.8%	ICU Level of Service C
Analysis Period (min)		15	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

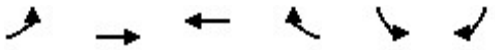
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

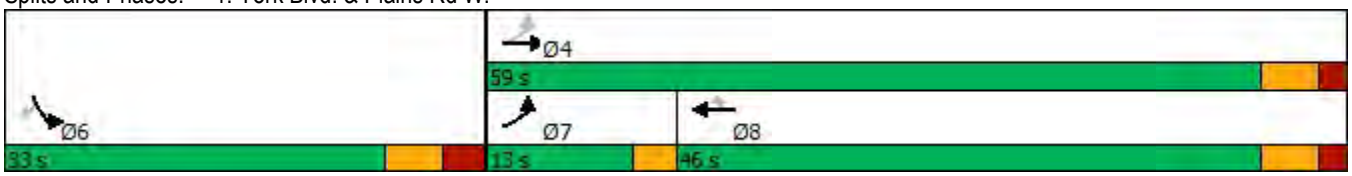


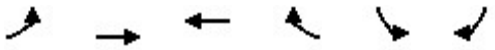
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	174	354	265	113	160	81
Future Volume (vph)	174	354	265	113	160	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.542				0.950	
Satd. Flow (perm)	986	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				119		85
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	183	373	279	119	168	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	373	279	119	168	85
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.8	41.8	14.7	14.7
Actuated g/C Ratio	0.69	0.66	0.52	0.52	0.18	0.18
v/c Ratio	0.24	0.16	0.15	0.14	0.52	0.24
Control Delay	5.6	6.0	11.4	3.1	35.9	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	11.4	3.1	35.9	8.6
LOS	A	A	B	A	D	A
Approach Delay		5.8	8.9		26.7	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	8.5	10.5	11.6	0.0	24.8	0.0
Queue Length 95th (m)	18.8	19.2	21.6	8.8	43.4	11.3
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	777	2303	1814	863	570	556
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	0.24	0.16	0.15	0.14	0.29	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.8			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	174	354	265	113	160	81
Future Volume (vph)	174	354	265	113	160	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.54	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	988	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	183	373	279	119	168	85
RTOR Reduction (vph)	0	0	0	57	0	70
Lane Group Flow (vph)	183	373	279	62	168	15
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.8	41.8	14.7	14.7
Effective Green, g (s)	53.1	53.1	41.8	41.8	14.7	14.7
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	725	2303	1813	806	322	281
v/s Ratio Prot	c0.03	0.11	0.08		c0.09	
v/s Ratio Perm	c0.14			0.04		0.01
v/c Ratio	0.25	0.16	0.15	0.08	0.52	0.06
Uniform Delay, d1	5.4	5.3	10.2	9.8	29.9	27.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	2.9	0.2
Delay (s)	5.6	5.5	10.4	10.0	32.8	27.5
Level of Service	A	A	B	A	C	C
Approach Delay (s)		5.5	10.3		31.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

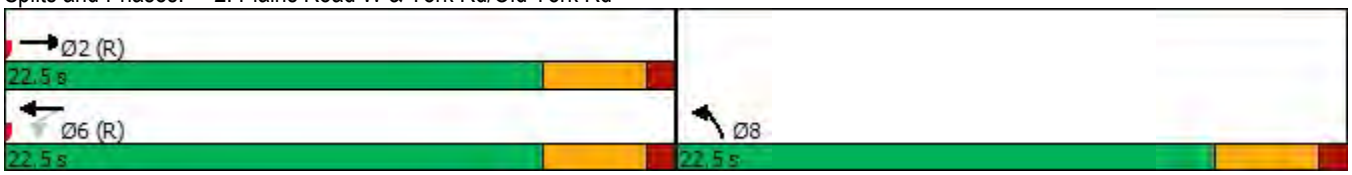


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	45	268	88	140
Future Volume (vph)	160	160	45	268	88	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.917	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1699	0
Flt Permitted				0.908	0.981	
Satd. Flow (perm)	1753	0	0	1696	1699	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				157	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	180	180	51	301	99	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	352	256	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.46			0.52	0.33	
Control Delay	8.4			13.6	5.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.4			13.6	5.4	
LOS	A			B	A	
Approach Delay	8.4			13.6	5.4	
Approach LOS	A			B	A	
Queue Length 50th (m)	12.2			20.8	4.9	
Queue Length 95th (m)	27.6			39.0	15.7	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			678	773	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.46			0.52	0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

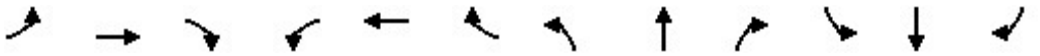




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	160	45	268	88	140
Future Volume (vph)	160	160	45	268	88	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1699	
Flt Permitted	1.00			0.91	0.98	
Satd. Flow (perm)	1754			1696	1699	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	180	180	51	301	99	157
RTOR Reduction (vph)	80	0	0	0	94	0
Lane Group Flow (vph)	280	0	0	352	162	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			678	679	
v/s Ratio Prot	0.16				c0.10	
v/s Ratio Perm				c0.21		
v/c Ratio	0.40			0.52	0.24	
Uniform Delay, d1	9.6			10.2	9.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			2.8	0.8	
Delay (s)	11.3			13.1	9.8	
Level of Service	B			B	A	
Approach Delay (s)	11.3			13.1	9.8	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

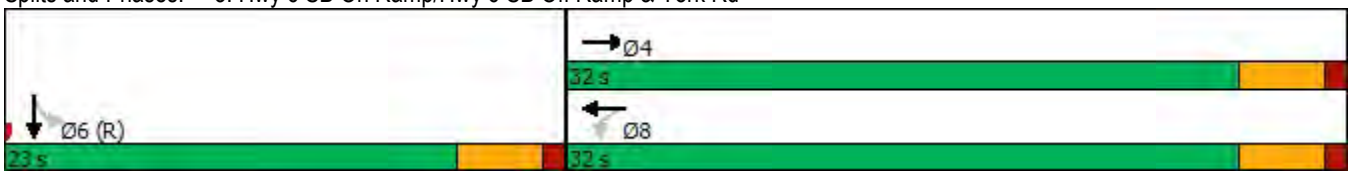


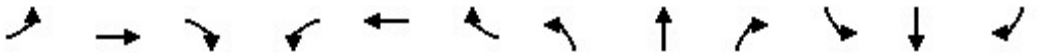
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919									0.934	
Flt Protected					0.991						0.976	
Satd. Flow (prot)	0	1722	0	0	1868	0	0	0	0	0	1666	0
Flt Permitted					0.707						0.976	
Satd. Flow (perm)	0	1722	0	0	1332	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		194									95	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	258	382	72	316	0	0	0	0	104	2	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	640	0	0	388	0	0	0	0	0	208	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		32.0		32.0	32.0					23.0	23.0	
Total Split (%)		58.2%		58.2%	58.2%					41.8%	41.8%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
v/c Ratio		0.67			0.58						0.33	
Control Delay		11.1			14.2						9.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		11.1			14.2						9.4	
LOS		B			B						A	
Approach Delay		11.1			14.2						9.4	
Approach LOS		B			B						A	
Queue Length 50th (m)		29.9			26.3						8.2	
Queue Length 95th (m)		61.9			49.9						21.4	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		958			666						623	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.67			0.58						0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

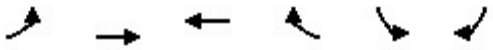




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Future Volume (vph)	0	232	344	65	284	0	0	0	0	94	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1723			1867						1665	
Flt Permitted		1.00			0.71						0.98	
Satd. Flow (perm)		1723			1332						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	258	382	72	316	0	0	0	0	104	2	102
RTOR Reduction (vph)	0	97	0	0	0	0	0	0	0	0	63	0
Lane Group Flow (vph)	0	543	0	0	388	0	0	0	0	0	145	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		27.5			27.5						18.5	
Effective Green, g (s)		27.5			27.5						18.5	
Actuated g/C Ratio		0.50			0.50						0.34	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		861			666						560	
v/s Ratio Prot		c0.32										
v/s Ratio Perm					0.29						0.09	
v/c Ratio		0.63			0.58						0.26	
Uniform Delay, d1		10.0			9.7						13.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.5			3.7						1.1	
Delay (s)		13.5			13.4						14.4	
Level of Service		B			B						B	
Approach Delay (s)		13.5			13.4			0.0			14.4	
Approach LOS		B			B			A			B	

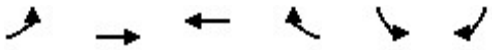
Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	269	53	45	14	22	285
Future Volume (vph)	269	53	45	14	22	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967		0.875	
Flt Protected		0.960			0.996	
Satd. Flow (prot)	0	1757	1837	0	1626	0
Flt Permitted		0.960			0.996	
Satd. Flow (perm)	0	1757	1837	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	299	59	50	16	24	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	358	66	0	341	0
Sign Control		Free	Free		Stop	

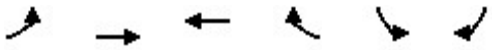
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	269	53	45	14	22	285
Future Volume (Veh/h)	269	53	45	14	22	285
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	299	59	50	16	24	317
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	66				715	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				715	58
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	80				93	69
cM capacity (veh/h)	1523				322	1008

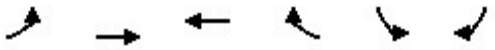
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	358	66	341
Volume Left	299	0	24
Volume Right	0	16	317
cSH	1523	1700	876
Volume to Capacity	0.20	0.04	0.39
Queue Length 95th (m)	5.8	0.0	14.9
Control Delay (s)	6.9	0.0	11.7
Lane LOS	A		B
Approach Delay (s)	6.9	0.0	11.7
Approach LOS			B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

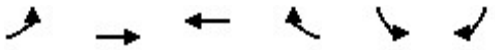
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

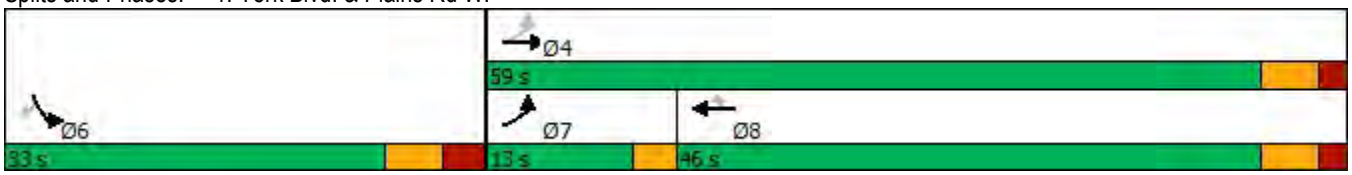


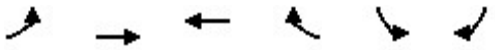
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	334	682	211	153	188
Future Volume (vph)	203	334	682	211	153	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.320				0.950	
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				220		196
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	211	348	710	220	159	196
Shared Lane Traffic (%)						
Lane Group Flow (vph)	211	348	710	220	159	196
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.5	41.5	14.5	14.5
Actuated g/C Ratio	0.70	0.66	0.51	0.51	0.18	0.18
v/c Ratio	0.38	0.15	0.39	0.23	0.50	0.44
Control Delay	6.9	5.9	13.5	2.7	35.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.9	13.5	2.7	35.4	7.8
LOS	A	A	B	A	D	A
Approach Delay		6.3	10.9		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	9.7	9.6	34.2	0.0	23.3	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	21.8	18.3	56.5	11.6	41.4	16.6
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	571	2330	1823	938	566	644
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	0.37	0.15	0.39	0.23	0.28	0.30

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 80.6			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	334	682	211	153	188
Future Volume (vph)	203	334	682	211	153	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.32	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	608	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	348	710	220	159	196
RTOR Reduction (vph)	0	0	0	106	0	161
Lane Group Flow (vph)	211	348	710	114	159	35
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	14.5	14.5
Effective Green, g (s)	53.1	53.1	41.6	41.6	14.5	14.5
Actuated g/C Ratio	0.66	0.66	0.52	0.52	0.18	0.18
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	526	2331	1826	833	315	284
v/s Ratio Prot	c0.04	0.10	0.20		c0.09	
v/s Ratio Perm	c0.22			0.07		0.02
v/c Ratio	0.40	0.15	0.39	0.14	0.50	0.12
Uniform Delay, d1	5.8	5.2	11.8	10.1	29.8	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.6	0.3	2.6	0.4
Delay (s)	6.3	5.3	12.4	10.5	32.5	28.1
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.7	12.0		30.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	206	48	431	161	225
Future Volume (vph)	196	206	48	431	161	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.929	0.980	
Satd. Flow (perm)	1743	0	0	1749	1715	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	140				157	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	209	219	51	459	171	239
Shared Lane Traffic (%)						
Lane Group Flow (vph)	428	0	0	510	410	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	27.5		27.5	27.5	22.5	
Total Split (%)	55.0%		55.0%	55.0%	45.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
v/c Ratio	0.49			0.63	0.57	
Control Delay	8.4			14.7	11.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.4			14.7	11.5	
LOS	A			B	B	
Approach Delay	8.4			14.7	11.5	
Approach LOS	A			B	B	
Queue Length 50th (m)	16.2			33.6	17.2	
Queue Length 95th (m)	34.5			60.4	39.1	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	877			804	717	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.49			0.63	0.57	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

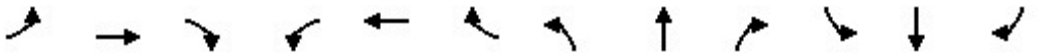




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	196	206	48	431	161	225
Future Volume (vph)	196	206	48	431	161	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1742			1874	1715	
Flt Permitted	1.00			0.93	0.98	
Satd. Flow (perm)	1742			1749	1715	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	209	219	51	459	171	239
RTOR Reduction (vph)	76	0	0	0	100	0
Lane Group Flow (vph)	352	0	0	510	310	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	23.0			23.0	18.0	
Effective Green, g (s)	23.0			23.0	18.0	
Actuated g/C Ratio	0.46			0.46	0.36	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	801			804	617	
v/s Ratio Prot	0.20				c0.18	
v/s Ratio Perm				c0.29		
v/c Ratio	0.44			0.63	0.50	
Uniform Delay, d1	9.1			10.3	12.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.8			3.8	2.9	
Delay (s)	10.9			14.1	15.4	
Level of Service	B			B	B	
Approach Delay (s)	10.9			14.1	15.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

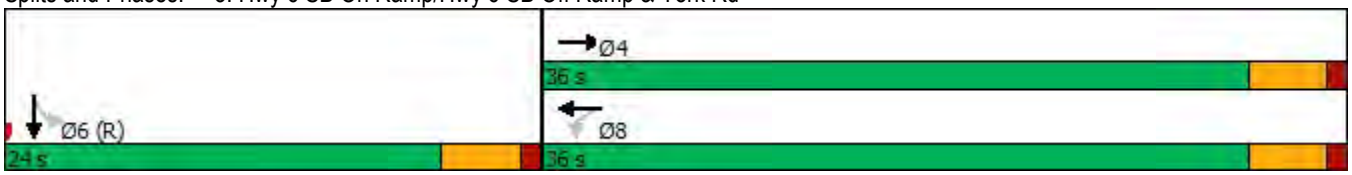


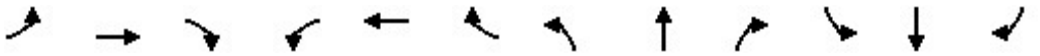
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Future Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934									0.938	
Flt Protected					0.995						0.974	
Satd. Flow (prot)	0	1766	0	0	1874	0	0	0	0	0	1708	0
Flt Permitted					0.913						0.974	
Satd. Flow (perm)	0	1766	0	0	1719	0	0	0	0	0	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		121									76	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	245	235	65	548	0	0	0	0	193	0	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	480	0	0	613	0	0	0	0	0	359	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		36.0		36.0	36.0					24.0	24.0	
Total Split (%)		60.0%		60.0%	60.0%					40.0%	40.0%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.5			31.5						19.5	
Actuated g/C Ratio		0.52			0.52						0.32	
v/c Ratio		0.49			0.68						0.59	
Control Delay		8.6			15.3						17.9	
Queue Delay		0.0			0.3						0.0	
Total Delay		8.6			15.6						17.9	
LOS		A			B						B	
Approach Delay		8.6			15.6						17.9	
Approach LOS		A			B						B	
Queue Length 50th (m)		22.5			47.6						26.2	
Queue Length 95th (m)		43.3			81.4						50.6	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		984			902						606	
Starvation Cap Reductn		0			38						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.49			0.71						0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 87.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

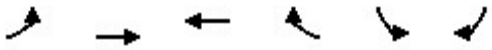




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Future Volume (vph)	0	233	223	62	521	0	0	0	0	183	0	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.93			1.00						0.94	
Flt Protected		1.00			0.99						0.97	
Satd. Flow (prot)		1766			1873						1707	
Flt Permitted		1.00			0.91						0.97	
Satd. Flow (perm)		1766			1720						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	245	235	65	548	0	0	0	0	193	0	166
RTOR Reduction (vph)	0	57	0	0	0	0	0	0	0	0	51	0
Lane Group Flow (vph)	0	423	0	0	613	0	0	0	0	0	308	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		31.5			31.5						19.5	
Effective Green, g (s)		31.5			31.5						19.5	
Actuated g/C Ratio		0.52			0.52						0.32	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		927			903						554	
v/s Ratio Prot		0.24										
v/s Ratio Perm					c0.36						0.18	
v/c Ratio		0.46			0.68						0.56	
Uniform Delay, d1		8.9			10.5						16.7	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.6			4.1						4.0	
Delay (s)		10.5			14.6						20.7	
Level of Service		B			B						C	
Approach Delay (s)		10.5			14.6			0.0			20.7	
Approach LOS		B			B			A			C	

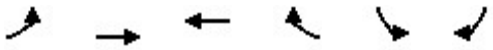
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	407	54	102	31	22	404
Future Volume (vph)	407	54	102	31	22	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.968		0.872	
Flt Protected		0.958			0.997	
Satd. Flow (prot)	0	1820	1839	0	1636	0
Flt Permitted		0.958			0.997	
Satd. Flow (perm)	0	1820	1839	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	420	56	105	32	23	416
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	476	137	0	439	0
Sign Control		Free	Free		Stop	

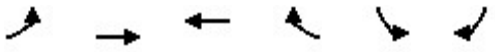
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.8%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	407	54	102	31	22	404
Future Volume (Veh/h)	407	54	102	31	22	404
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	420	56	105	32	23	416
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	137				1017	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				1017	121
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	71				88	55
cM capacity (veh/h)	1459				189	933

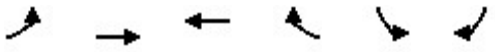
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	476	137	439
Volume Left	420	0	23
Volume Right	0	32	416
cSH	1459	1700	774
Volume to Capacity	0.29	0.08	0.57
Queue Length 95th (m)	9.6	0.0	29.0
Control Delay (s)	7.8	0.0	15.6
Lane LOS	A		C
Approach Delay (s)	7.8	0.0	15.6
Approach LOS			C

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

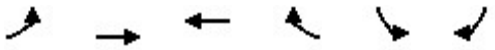
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

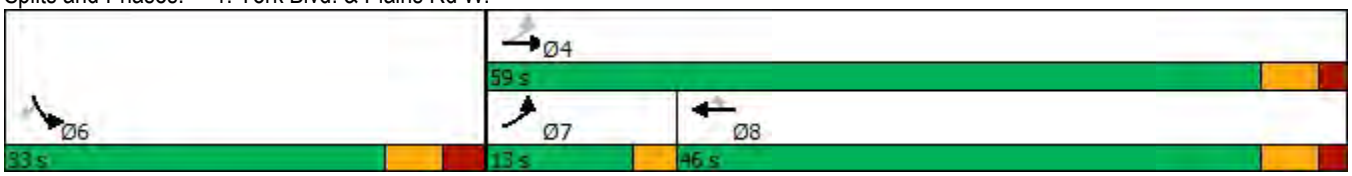


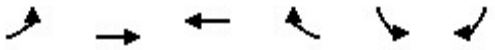
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	386	290	123	174	89
Future Volume (vph)	190	386	290	123	174	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.528				0.950	
Satd. Flow (perm)	961	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				129		94
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	200	406	305	129	183	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	406	305	129	183	94
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	15.4	15.4
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.27	0.18	0.17	0.15	0.55	0.26
Control Delay	6.0	6.3	12.0	3.1	36.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	6.3	12.0	3.1	36.3	8.1
LOS	A	A	B	A	D	A
Approach Delay		6.2	9.3		26.7	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	9.7	12.0	13.3	0.0	27.2	0.0
Queue Length 95th (m)	21.3	21.6	24.1	9.2	46.8	11.7
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	756	2283	1787	857	565	558
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	0.26	0.18	0.17	0.15	0.32	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	386	290	123	174	89
Future Volume (vph)	190	386	290	123	174	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.53	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	963	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	406	305	129	183	94
RTOR Reduction (vph)	0	0	0	63	0	76
Lane Group Flow (vph)	200	406	305	66	183	18
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	15.4	15.4
Effective Green, g (s)	53.1	53.1	41.6	41.6	15.4	15.4
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	707	2283	1789	795	334	292
v/s Ratio Prot	c0.03	0.12	0.09		c0.10	
v/s Ratio Perm	c0.15			0.04		0.01
v/c Ratio	0.28	0.18	0.17	0.08	0.55	0.06
Uniform Delay, d1	5.7	5.6	10.7	10.2	29.9	27.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	3.2	0.2
Delay (s)	5.9	5.8	10.9	10.4	33.1	27.3
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.8	10.8		31.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	48	293	95	152
Future Volume (vph)	175	175	48	293	95	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.917	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1699	0
Flt Permitted				0.993	0.981	
Satd. Flow (perm)	1753	0	0	1855	1699	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	197	197	54	329	107	171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	394	0	0	383	278	0
Sign Control	Free			Free	Stop	

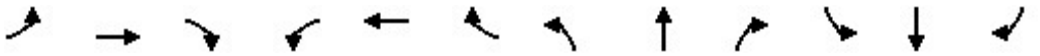
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	175	175	48	293	95	152
Future Volume (Veh/h)	175	175	48	293	95	152
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	197	197	54	329	107	171
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			394		732	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			394		732	296
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		71	77
cM capacity (veh/h)			1176		373	746

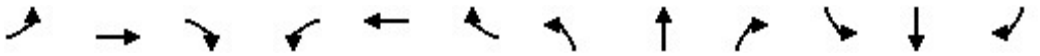
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	394	383	278
Volume Left	0	54	107
Volume Right	197	0	171
cSH	1700	1176	539
Volume to Capacity	0.23	0.05	0.52
Queue Length 95th (m)	0.0	1.2	23.5
Control Delay (s)	0.0	1.6	18.6
Lane LOS		A	C
Approach Delay (s)	0.0	1.6	18.6
Approach LOS			C

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.916									0.934	
Flt Protected					0.990						0.976	
Satd. Flow (prot)	0	1717	0	0	1866	0	0	0	0	0	1666	0
Flt Permitted					0.990						0.976	
Satd. Flow (perm)	0	1717	0	0	1866	0	0	0	0	0	1666	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	281	463	84	346	0	0	0	0	127	2	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	430	0	0	0	0	0	253	0
Sign Control		Free			Free			Stop			Stop	

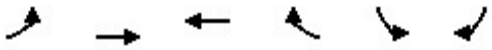
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 82.8%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	253	417	76	311	0	0	0	0	114	2	112
Future Volume (Veh/h)	0	253	417	76	311	0	0	0	0	114	2	112
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	463	84	346	0	0	0	0	127	2	124
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	346			744			1152	1026	512	1026	1258	346
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	346			744			1152	1026	512	1026	1258	346
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			90			100	100	100	35	99	82
cM capacity (veh/h)	1213			873			132	212	562	195	156	692

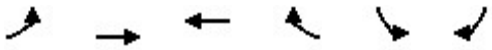
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	744	430	253
Volume Left	0	84	127
Volume Right	463	0	124
cSH	1700	873	301
Volume to Capacity	0.44	0.10	0.84
Queue Length 95th (m)	0.0	2.5	57.7
Control Delay (s)	0.0	2.8	57.5
Lane LOS		A	F
Approach Delay (s)	0.0	2.8	57.5
Approach LOS			F

Intersection Summary			
Average Delay	11.0		
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	327	58	49	17	27	346
Future Volume (vph)	327	58	49	17	27	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965		0.875	
Flt Protected		0.959			0.996	
Satd. Flow (prot)	0	1755	1834	0	1626	0
Flt Permitted		0.959			0.996	
Satd. Flow (perm)	0	1755	1834	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	363	64	54	19	30	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	427	73	0	414	0
Sign Control		Free	Free		Stop	

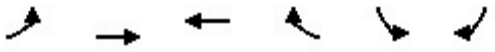
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	327	58	49	17	27	346
Future Volume (Veh/h)	327	58	49	17	27	346
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	363	64	54	19	30	384
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	73				854	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				854	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				88	62
cM capacity (veh/h)	1514				252	1001

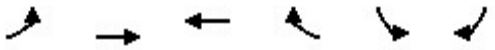
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	427	73	414
Volume Left	363	0	30
Volume Right	0	19	384
cSH	1514	1700	824
Volume to Capacity	0.24	0.04	0.50
Queue Length 95th (m)	7.5	0.0	23.0
Control Delay (s)	7.2	0.0	13.7
Lane LOS	A		B
Approach Delay (s)	7.2	0.0	13.7
Approach LOS			B

Intersection Summary			
Average Delay	9.6		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

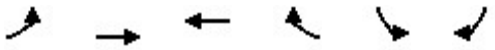
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

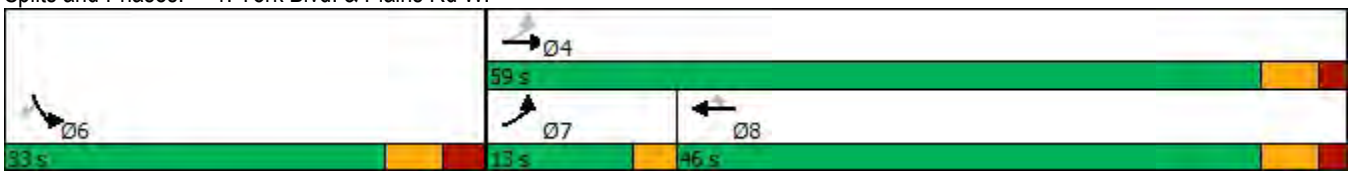


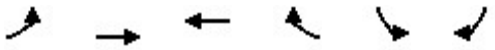
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	365	745	230	167	206
Future Volume (vph)	222	365	745	230	167	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.288				0.950	
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				240		215
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	231	380	776	240	174	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	231	380	776	240	174	215
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.4	41.4	15.2	15.2
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.45	0.16	0.43	0.26	0.53	0.46
Control Delay	8.1	6.2	14.4	2.7	35.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	6.2	14.4	2.7	35.8	7.6
LOS	A	A	B	A	D	A
Approach Delay		6.9	11.6		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	11.2	10.9	39.6	0.0	25.7	0.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	24.9	20.6	64.2	12.3	44.9	17.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	532	2310	1800	939	561	653
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	0.43	0.16	0.43	0.26	0.31	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.4			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	365	745	230	167	206
Future Volume (vph)	222	365	745	230	167	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.29	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	546	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	231	380	776	240	174	215
RTOR Reduction (vph)	0	0	0	118	0	175
Lane Group Flow (vph)	231	380	776	122	174	40
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.4	41.4	15.2	15.2
Effective Green, g (s)	53.1	53.1	41.4	41.4	15.2	15.2
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	491	2311	1802	822	327	295
v/s Ratio Prot	c0.05	0.11	0.22		c0.10	
v/s Ratio Perm	c0.26			0.08		0.03
v/c Ratio	0.47	0.16	0.43	0.15	0.53	0.14
Uniform Delay, d1	6.3	5.5	12.5	10.6	29.8	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.8	0.4	3.0	0.4
Delay (s)	7.0	5.6	13.3	11.0	32.9	28.0
Level of Service	A	A	B	B	C	C
Approach Delay (s)		6.2	12.7		30.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	225	51	471	175	245
Future Volume (vph)	214	225	51	471	175	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.995	0.980	
Satd. Flow (perm)	1743	0	0	1874	1715	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	228	239	54	501	186	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	467	0	0	555	447	0
Sign Control	Free			Free	Stop	

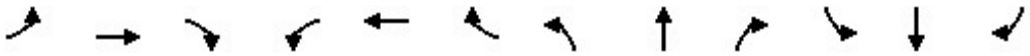
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	214	225	51	471	175	245
Future Volume (Veh/h)	214	225	51	471	175	245
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	228	239	54	501	186	261
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			467		956	348
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			467		956	348
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		32	63
cM capacity (veh/h)			1105		274	700

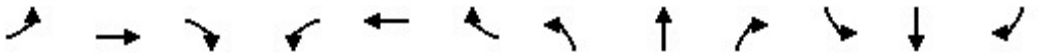
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	467	555	447
Volume Left	0	54	186
Volume Right	239	0	261
cSH	1700	1105	425
Volume to Capacity	0.27	0.05	1.05
Queue Length 95th (m)	0.0	1.2	114.9
Control Delay (s)	0.0	1.3	89.1
Lane LOS		A	F
Approach Delay (s)	0.0	1.3	89.1
Approach LOS			F

Intersection Summary			
Average Delay	27.6		
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Future Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.930									0.938	
Flt Protected					0.994						0.974	
Satd. Flow (prot)	0	1758	0	0	1872	0	0	0	0	0	1708	0
Flt Permitted					0.994						0.974	
Satd. Flow (perm)	0	1758	0	0	1872	0	0	0	0	0	1708	0
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	267	285	78	599	0	0	0	0	234	0	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	552	0	0	677	0	0	0	0	0	435	0
Sign Control		Free			Free			Stop			Stop	

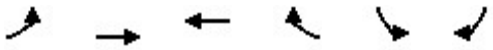
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 98.0%		ICU Level of Service F	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	254	271	74	569	0	0	0	0	222	0	191
Future Volume (Veh/h)	0	254	271	74	569	0	0	0	0	222	0	191
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	267	285	78	599	0	0	0	0	234	0	201
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	599			552			1366	1164	410	1164	1307	599
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	599			552			1366	1164	410	1164	1307	599
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			100	100	100	0	100	60
cM capacity (veh/h)	978			1028			71	180	642	161	149	505

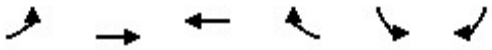
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	552	677	435
Volume Left	0	78	234
Volume Right	285	0	201
cSH	1700	1028	235
Volume to Capacity	0.32	0.08	1.85
Queue Length 95th (m)	0.0	2.0	243.4
Control Delay (s)	0.0	1.9	435.9
Lane LOS		A	F
Approach Delay (s)	0.0	1.9	435.9
Approach LOS			F

Intersection Summary			
Average Delay	114.7		
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	493	59	111	37	27	488
Future Volume (vph)	493	59	111	37	27	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.966		0.872	
Flt Protected		0.957			0.997	
Satd. Flow (prot)	0	1818	1835	0	1636	0
Flt Permitted		0.957			0.997	
Satd. Flow (perm)	0	1818	1835	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	508	61	114	38	28	503
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	569	152	0	531	0
Sign Control		Free	Free		Stop	

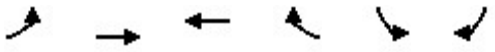
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	493	59	111	37	27	488
Future Volume (Veh/h)	493	59	111	37	27	488
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	508	61	114	38	28	503
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152				1210	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				1210	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	65				79	45
cM capacity (veh/h)	1441				132	919

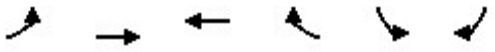
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	569	152	531
Volume Left	508	0	28
Volume Right	0	38	503
cSH	1441	1700	699
Volume to Capacity	0.35	0.09	0.76
Queue Length 95th (m)	12.9	0.0	56.7
Control Delay (s)	8.2	0.0	24.5
Lane LOS	A		C
Approach Delay (s)	8.2	0.0	24.5
Approach LOS			C

Intersection Summary			
Average Delay	14.2		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

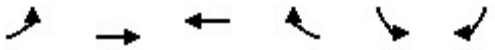
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



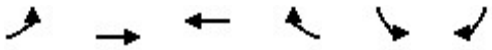
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



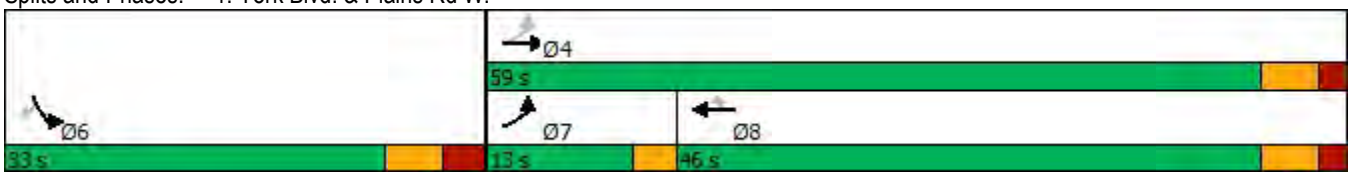
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	386	290	123	174	89
Future Volume (vph)	190	386	290	123	174	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.99
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3505	3505	1599	1770	1568
Flt Permitted	0.528				0.950	
Satd. Flow (perm)	961	3505	3505	1558	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				129		94
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Confl. Peds. (#/hr)	5			5		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Adj. Flow (vph)	200	406	305	129	183	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	406	305	129	183	94
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.6	41.6	15.4	15.4
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.27	0.18	0.17	0.15	0.55	0.26
Control Delay	6.0	6.3	12.0	3.1	36.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	6.3	12.0	3.1	36.3	8.1
LOS	A	A	B	A	D	A
Approach Delay		6.2	9.3		26.7	

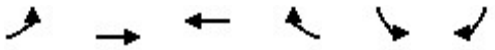


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach LOS		A	A		C	
Queue Length 50th (m)	9.7	12.0	13.3	0.0	27.2	0.0
Queue Length 95th (m)	21.3	21.6	24.1	9.2	46.8	11.7
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	756	2283	1787	857	565	558
Starvation Cap Reductn	0	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	0.26	0.18	0.17	0.15	0.32	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	386	290	123	174	89
Future Volume (vph)	190	386	290	123	174	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
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	0.99
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)	1733	3505	3505	1559	1770	1548
Flt Permitted	0.53	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	963	3505	3505	1559	1770	1548
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	406	305	129	183	94
RTOR Reduction (vph)	0	0	0	63	0	76
Lane Group Flow (vph)	200	406	305	66	183	18
Confl. Peds. (#/hr)	5			5		1
Heavy Vehicles (%)	4%	3%	3%	1%	2%	3%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.6	41.6	15.4	15.4
Effective Green, g (s)	53.1	53.1	41.6	41.6	15.4	15.4
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	707	2283	1789	795	334	292
v/s Ratio Prot	c0.03	0.12	0.09		c0.10	
v/s Ratio Perm	c0.15			0.04		0.01
v/c Ratio	0.28	0.18	0.17	0.08	0.55	0.06
Uniform Delay, d1	5.7	5.6	10.7	10.2	29.9	27.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.2	0.2	3.2	0.2
Delay (s)	5.9	5.8	10.9	10.4	33.1	27.3
Level of Service	A	A	B	B	C	C
Approach Delay (s)		5.8	10.8		31.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

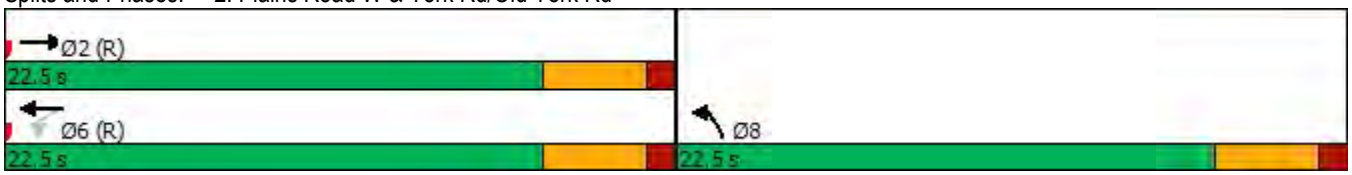


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	48	293	95	152
Future Volume (vph)	175	175	48	293	95	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.917	
Flt Protected				0.993	0.981	
Satd. Flow (prot)	1753	0	0	1855	1699	0
Flt Permitted				0.903	0.981	
Satd. Flow (perm)	1753	0	0	1687	1699	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	133				171	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Adj. Flow (vph)	197	197	54	329	107	171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	394	0	0	383	278	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	22.5		22.5	22.5	22.5	
Total Split (%)	50.0%		50.0%	50.0%	50.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
v/c Ratio	0.50			0.57	0.36	
Control Delay	9.2			14.6	5.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	9.2			14.6	5.5	
LOS	A			B	A	
Approach Delay	9.2			14.6	5.5	
Approach LOS	A			B	A	
Queue Length 50th (m)	14.3			23.2	5.3	
Queue Length 95th (m)	31.6			43.2	16.6	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	781			674	782	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.50			0.57	0.36	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

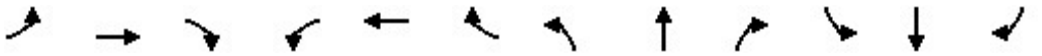




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	175	48	293	95	152
Future Volume (vph)	175	175	48	293	95	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1754			1855	1699	
Flt Permitted	1.00			0.90	0.98	
Satd. Flow (perm)	1754			1687	1699	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	197	197	54	329	107	171
RTOR Reduction (vph)	80	0	0	0	103	0
Lane Group Flow (vph)	314	0	0	383	175	0
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	18.0			18.0	18.0	
Effective Green, g (s)	18.0			18.0	18.0	
Actuated g/C Ratio	0.40			0.40	0.40	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	701			674	679	
v/s Ratio Prot	0.18				c0.10	
v/s Ratio Perm				c0.23		
v/c Ratio	0.45			0.57	0.26	
Uniform Delay, d1	9.9			10.5	9.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.1			3.5	0.9	
Delay (s)	11.9			13.9	10.0	
Level of Service	B			B	A	
Approach Delay (s)	11.9			13.9	10.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



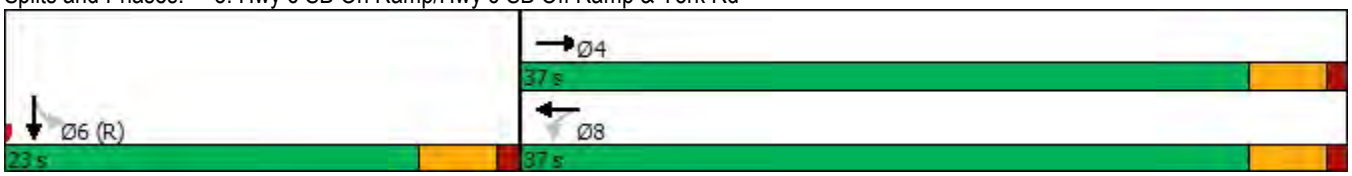
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916									0.934	
Flt Protected					0.990						0.976	
Satd. Flow (prot)	0	1717	0	0	1866	0	0	0	0	0	1666	0
Flt Permitted					0.602						0.976	
Satd. Flow (perm)	0	1717	0	0	1135	0	0	0	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		216									83	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Adj. Flow (vph)	0	281	463	84	346	0	0	0	0	127	2	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	430	0	0	0	0	0	253	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		37.0		37.0	37.0					23.0	23.0	
Total Split (%)		61.7%		61.7%	61.7%					38.3%	38.3%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.5			32.5						18.5	
Actuated g/C Ratio		0.54			0.54						0.31	
v/c Ratio		0.72			0.70						0.44	
Control Delay		12.1			18.1						13.9	
Queue Delay		0.0			0.0						0.0	
Total Delay		12.1			18.1						13.9	
LOS		B			B						B	
Approach Delay		12.1			18.1						13.9	
Approach LOS		B			B						B	
Queue Length 50th (m)		39.6			33.1						14.9	
Queue Length 95th (m)		79.3			#69.1						32.8	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		1029			614						571	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

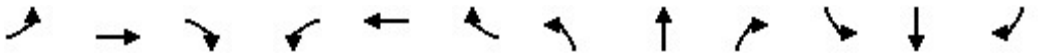
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.72			0.70						0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

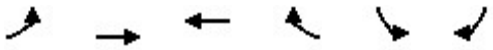




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Future Volume (vph)	0	253	417	76	311	0	0	0	0	114	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.92			1.00						0.93	
Flt Protected		1.00			0.99						0.98	
Satd. Flow (prot)		1717			1867						1665	
Flt Permitted		1.00			0.60						0.98	
Satd. Flow (perm)		1717			1134						1665	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	281	463	84	346	0	0	0	0	127	2	124
RTOR Reduction (vph)	0	99	0	0	0	0	0	0	0	0	57	0
Lane Group Flow (vph)	0	645	0	0	430	0	0	0	0	0	196	0
Heavy Vehicles (%)	2%	2%	1%	0%	1%	2%	2%	2%	2%	4%	0%	4%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		32.5			32.5						18.5	
Effective Green, g (s)		32.5			32.5						18.5	
Actuated g/C Ratio		0.54			0.54						0.31	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		930			614						513	
v/s Ratio Prot		0.38										
v/s Ratio Perm					c0.38						0.12	
v/c Ratio		0.69			0.70						0.38	
Uniform Delay, d1		10.1			10.2						16.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		4.2			6.5						2.1	
Delay (s)		14.3			16.7						18.4	
Level of Service		B			B						B	
Approach Delay (s)		14.3			16.7			0.0			18.4	
Approach LOS		B			B			A			B	

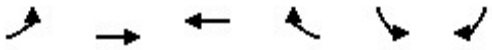
Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	327	58	49	17	27	346
Future Volume (vph)	327	58	49	17	27	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965		0.875	
Flt Protected		0.959			0.996	
Satd. Flow (prot)	0	1755	1834	0	1626	0
Flt Permitted		0.959			0.996	
Satd. Flow (perm)	0	1755	1834	0	1626	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	3%	0%	0%	0%	2%
Adj. Flow (vph)	363	64	54	19	30	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	427	73	0	414	0
Sign Control		Free	Free		Stop	

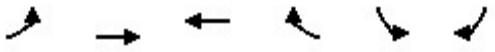
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	327	58	49	17	27	346
Future Volume (Veh/h)	327	58	49	17	27	346
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	363	64	54	19	30	384
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	73				854	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73				854	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				88	62
cM capacity (veh/h)	1514				252	1001

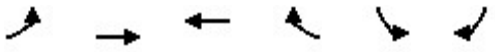
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	427	73	414
Volume Left	363	0	30
Volume Right	0	19	384
cSH	1514	1700	824
Volume to Capacity	0.24	0.04	0.50
Queue Length 95th (m)	7.5	0.0	23.0
Control Delay (s)	7.2	0.0	13.7
Lane LOS	A		B
Approach Delay (s)	7.2	0.0	13.7
Approach LOS			B

Intersection Summary			
Average Delay	9.6		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	8	23	0
Future Volume (vph)	0	0	0	8	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	9	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	9	0	25	0
Sign Control		Free	Free		Stop	

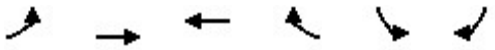
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



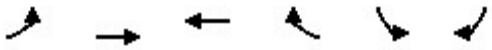
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	8	23	0
Future Volume (Veh/h)	0	0	0	8	23	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	9	25	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	9				4	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				4	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1611				1017	1079

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	9	25	0
Volume Left	0	0	25	0
Volume Right	0	9	0	0
cSH	1700	1700	1017	1700
Volume to Capacity	0.00	0.01	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



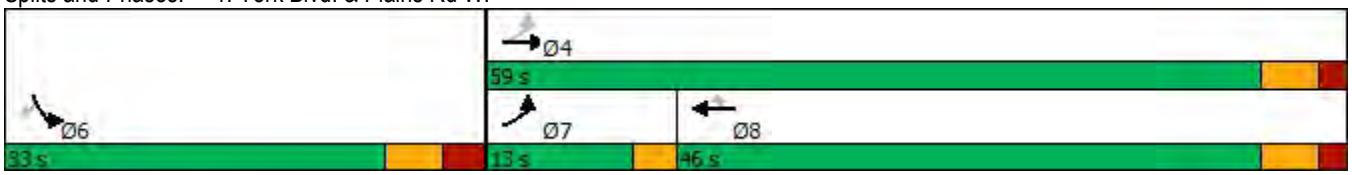
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	365	745	230	167	206
Future Volume (vph)	222	365	745	230	167	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	61.5			0.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	15.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.288				0.950	
Satd. Flow (perm)	547	3539	3539	1615	1752	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				240		215
Link Speed (k/h)		60	60		50	
Link Distance (m)		483.4	417.0		364.8	
Travel Time (s)		29.0	25.0		26.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Adj. Flow (vph)	231	380	776	240	174	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	231	380	776	240	174	215
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	6.0	40.0	40.0	40.0	8.0	8.0
Minimum Split (s)	9.0	46.0	46.0	46.0	15.0	15.0
Total Split (s)	13.0	59.0	46.0	46.0	33.0	33.0
Total Split (%)	14.1%	64.1%	50.0%	50.0%	35.9%	35.9%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	56.1	53.1	41.4	41.4	15.2	15.2
Actuated g/C Ratio	0.69	0.65	0.51	0.51	0.19	0.19
v/c Ratio	0.45	0.16	0.43	0.26	0.53	0.46
Control Delay	8.1	6.2	14.4	2.7	35.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	6.2	14.4	2.7	35.8	7.6
LOS	A	A	B	A	D	A
Approach Delay		6.9	11.6		20.2	
Approach LOS		A	B		C	
Queue Length 50th (m)	11.2	10.9	39.6	0.0	25.7	0.0

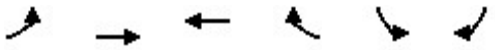


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (m)	24.9	20.6	64.2	12.3	44.9	17.0
Internal Link Dist (m)		459.4	393.0		340.8	
Turn Bay Length (m)	61.5					
Base Capacity (vph)	532	2310	1800	939	561	653
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.16	0.43	0.26	0.31	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 81.4			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: York Blvd. & Plains Rd W.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	365	745	230	167	206
Future Volume (vph)	222	365	745	230	167	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	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)	1805	3539	3539	1615	1752	1583
Flt Permitted	0.29	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	546	3539	3539	1615	1752	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	231	380	776	240	174	215
RTOR Reduction (vph)	0	0	0	118	0	175
Lane Group Flow (vph)	231	380	776	122	174	40
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	53.1	53.1	41.4	41.4	15.2	15.2
Effective Green, g (s)	53.1	53.1	41.4	41.4	15.2	15.2
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.19	0.19
Clearance Time (s)	3.0	6.0	6.0	6.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	5.0	5.0
Lane Grp Cap (vph)	491	2311	1802	822	327	295
v/s Ratio Prot	c0.05	0.11	0.22		c0.10	
v/s Ratio Perm	c0.26			0.08		0.03
v/c Ratio	0.47	0.16	0.43	0.15	0.53	0.14
Uniform Delay, d1	6.3	5.5	12.5	10.6	29.8	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.8	0.4	3.0	0.4
Delay (s)	7.0	5.6	13.3	11.0	32.9	28.0
Level of Service	A	A	B	B	C	C
Approach Delay (s)		6.2	12.7		30.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	225	51	471	175	245
Future Volume (vph)	214	225	51	471	175	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.921	
Flt Protected				0.995	0.980	
Satd. Flow (prot)	1743	0	0	1874	1715	0
Flt Permitted				0.926	0.980	
Satd. Flow (perm)	1743	0	0	1744	1715	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				138	
Link Speed (k/h)	50			50	50	
Link Distance (m)	53.6			51.2	625.5	
Travel Time (s)	3.9			3.7	45.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Adj. Flow (vph)	228	239	54	501	186	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	467	0	0	555	447	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	32.0		32.0	32.0	23.0	
Total Split (%)	58.2%		58.2%	58.2%	41.8%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	27.5			27.5	18.5	
Actuated g/C Ratio	0.50			0.50	0.34	
v/c Ratio	0.50			0.64	0.67	
Control Delay	8.4			14.3	16.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	8.4			14.3	16.4	
LOS	A			B	B	
Approach Delay	8.4			14.3	16.4	
Approach LOS	A			B	B	
Queue Length 50th (m)	19.5			38.9	25.8	
Queue Length 95th (m)	39.6			67.9	53.8	
Internal Link Dist (m)	29.6			27.2	601.5	
Turn Bay Length (m)						
Base Capacity (vph)	940			872	668	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Reduced v/c Ratio	0.50			0.64	0.67	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Plains Road W & York Rd/Old York Rd

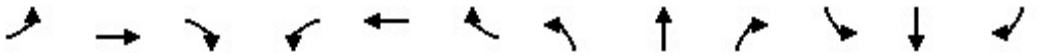




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	225	51	471	175	245
Future Volume (vph)	214	225	51	471	175	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.93			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	1742			1874	1715	
Flt Permitted	1.00			0.93	0.98	
Satd. Flow (perm)	1742			1743	1715	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	228	239	54	501	186	261
RTOR Reduction (vph)	69	0	0	0	92	0
Lane Group Flow (vph)	399	0	0	555	355	0
Heavy Vehicles (%)	1%	2%	0%	1%	0%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	27.5			27.5	18.5	
Effective Green, g (s)	27.5			27.5	18.5	
Actuated g/C Ratio	0.50			0.50	0.34	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	871			871	576	
v/s Ratio Prot	0.23				c0.21	
v/s Ratio Perm				c0.32		
v/c Ratio	0.46			0.64	0.62	
Uniform Delay, d1	8.9			10.1	15.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			3.6	4.9	
Delay (s)	10.6			13.6	20.2	
Level of Service	B			B	C	
Approach Delay (s)	10.6			13.6	20.2	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



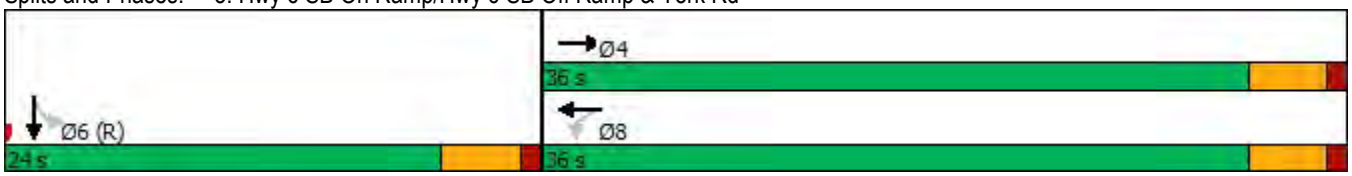
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Future Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930									0.938	
Flt Protected					0.994						0.974	
Satd. Flow (prot)	0	1758	0	0	1872	0	0	0	0	0	1708	0
Flt Permitted					0.858						0.974	
Satd. Flow (perm)	0	1758	0	0	1616	0	0	0	0	0	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		135									76	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		146.0			88.0			238.4			290.5	
Travel Time (s)		10.5			6.3			21.5			26.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Adj. Flow (vph)	0	267	285	78	599	0	0	0	0	234	0	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	552	0	0	677	0	0	0	0	0	435	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		22.5		22.5	22.5					22.5	22.5	
Total Split (s)		36.0		36.0	36.0					24.0	24.0	
Total Split (%)		60.0%		60.0%	60.0%					40.0%	40.0%	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		4.5			4.5						4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.5			31.5						19.5	
Actuated g/C Ratio		0.52			0.52						0.32	
v/c Ratio		0.56			0.80						0.72	
Control Delay		9.6			21.1						22.9	
Queue Delay		0.0			0.1						0.0	
Total Delay		9.6			21.2						22.9	
LOS		A			C						C	
Approach Delay		9.6			21.2						22.9	
Approach LOS		A			C						C	
Queue Length 50th (m)		27.8			58.3						35.7	
Queue Length 95th (m)		52.8			#120.5						#75.0	
Internal Link Dist (m)		122.0			64.0			214.4			266.5	
Turn Bay Length (m)												
Base Capacity (vph)		987			848						606	
Starvation Cap Reductn		0			4						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	

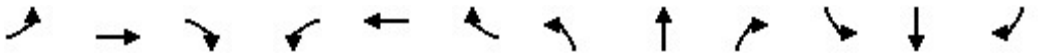
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.56			0.80						0.72	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

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

Splits and Phases: 3: Hwy 6 SB On Ramp/Hwy 6 SB Off Ramp & York Rd

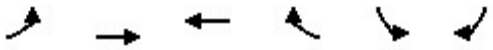




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Future Volume (vph)	0	254	271	74	569	0	0	0	0	222	0	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						1.00	
Frt		0.93			1.00						0.94	
Flt Protected		1.00			0.99						0.97	
Satd. Flow (prot)		1758			1873						1707	
Flt Permitted		1.00			0.86						0.97	
Satd. Flow (perm)		1758			1616						1707	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	267	285	78	599	0	0	0	0	234	0	201
RTOR Reduction (vph)	0	64	0	0	0	0	0	0	0	0	51	0
Lane Group Flow (vph)	0	488	0	0	677	0	0	0	0	0	384	0
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	2%	2%	2%	3%	0%	0%
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		31.5			31.5						19.5	
Effective Green, g (s)		31.5			31.5						19.5	
Actuated g/C Ratio		0.52			0.52						0.32	
Clearance Time (s)		4.5			4.5						4.5	
Lane Grp Cap (vph)		922			848						554	
v/s Ratio Prot		0.28										
v/s Ratio Perm					c0.42						0.22	
v/c Ratio		0.53			0.80						0.69	
Uniform Delay, d1		9.4			11.7						17.6	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.2			7.7						7.0	
Delay (s)		11.5			19.4						24.6	
Level of Service		B			B						C	
Approach Delay (s)		11.5			19.4			0.0			24.6	
Approach LOS		B			B			A			C	

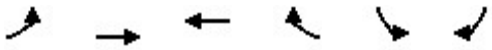
Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	493	59	111	37	27	488
Future Volume (vph)	493	59	111	37	27	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.966		0.872	
Flt Protected		0.957			0.997	
Satd. Flow (prot)	0	1818	1835	0	1636	0
Flt Permitted		0.957			0.997	
Satd. Flow (perm)	0	1818	1835	0	1636	0
Link Speed (k/h)		50	50		40	
Link Distance (m)		92.2	142.8		216.4	
Travel Time (s)		6.6	10.3		19.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	508	61	114	38	28	503
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	569	152	0	531	0
Sign Control		Free	Free		Stop	

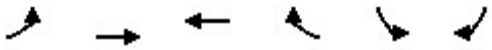
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	493	59	111	37	27	488
Future Volume (Veh/h)	493	59	111	37	27	488
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	508	61	114	38	28	503
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		143				
pX, platoon unblocked						
vC, conflicting volume	152				1210	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				1210	133
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	65				79	45
cM capacity (veh/h)	1441				132	919

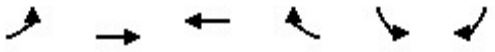
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	569	152	531
Volume Left	508	0	28
Volume Right	0	38	503
cSH	1441	1700	699
Volume to Capacity	0.35	0.09	0.76
Queue Length 95th (m)	12.9	0.0	56.7
Control Delay (s)	8.2	0.0	24.5
Lane LOS	A		C
Approach Delay (s)	8.2	0.0	24.5
Approach LOS			C

Intersection Summary			
Average Delay	14.2		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	25	15	0
Future Volume (vph)	0	0	0	25	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	1863
Link Speed (k/h)		50	50		30	
Link Distance (m)		64.3	94.0		55.9	
Travel Time (s)		4.6	6.8		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	27	0	16	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	25	15	0
Future Volume (Veh/h)	0	0	0	25	15	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	27	16	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27				14	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				14	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1587				1006	1067

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	0	27	16	0
Volume Left	0	0	16	0
Volume Right	0	27	0	0
cSH	1700	1700	1006	1700
Volume to Capacity	0.00	0.02	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.4	0.0
Control Delay (s)	0.0	0.0	8.6	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	8.6	
Approach LOS			A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix J

Signal Warrant Assessments

TRAFFIC SIGNAL WARRANTS - JUSTIFICATION 7 (PROJECTED VOLUMES)
PER OTM BOOK 12

Project and Scenario Summary

Project	2472-6716	**Project Number**	2472-6716
		Date	2024-12-02
Horizon	2026 Future Background	**Analyst**	AK/AB

Study Intersection Summary

Major Street	York Road	**Direction**	East/West
Minor Street	Highway 6	**Direction**	North/South

Intersection Details for Warrant Parameters

Flow Conditions	Restricted Flow (Urban)	**Number of Lanes**	1
T-Intersection?	No	**Intersection Type**	Existing

Notes: Free Flow (Rural) is used when the operating speed is greater than or equal to 70km/h. Restricted Flow (Urban) is used otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered New if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: York Road						Minor: Highway 6						Pedestrians Crossing Major Street
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	221	307	45	270	0	0	0	0	84	2	82	0
PM	0	221	199	47	497	0	0	0	0	161	0	141	0
AHV	0	111	127	23	192	0	0	0	0	61	1	56	0

The AHV is determined by the availability of the peak hour estimates. If both Peak 1 and Peak 2 Peak Hour Volume estimates are available then AHV = (Peak1phv + Peak2phv)/4. In only the case that one estimate is available then AHV = Peak1phv/2 **or** Peak2phv/2.

Justification 7 - OTM Book 12

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENT 1 LANE HIGHWAYS		MINIMUM REQUIREMENT 2 OR MORE LANE HIGHWAYS		COMPLIANCE		
						Sectional		Entire Percentage
		Free Flow	Restricted Flow	Free Flow	Restricted Flow	Numerical	Percentage	
1. Minimum Vehicular Volume	A. Vehicle Volume, All Approaches (Avg. Hour)	480	720	600	900	571	79.3%	69.4%
	B. Vehicle Volume, Along Minor Streets (Avg. Hour)	120	170	120	170	118	69.4%	
2. Delay to Cross Traffic	A. Vehicle Volume, Major Street (Avg. Hour)	480	720	600	900	453	62.9%	62.9%
	B. Combined Vehicle and Pedestrian Volume Crossing Artery From Minor Streets (Avg. Hour)	50	75	50	75	62	82.7%	
Applicable Threshold			X					

Note: For T-intersections the thresholds for 1B have been increased by 50% per OTM Book 12.
Existing Intersections Require 120% Justification
New/Proposed Intersections Require 150% Justification

Percent Compliance: 69.4%
Percentage Required to be Justified: 120%

Signal Justification 7 Met: [ ] **Yes** [X] **No**

TRAFFIC SIGNAL WARRANTS - JUSTIFICATION 7 (PROJECTED VOLUMES)
PER OTM BOOK 12

Project and Scenario Summary

Project	2472-6716	**Project Number**	2472-6716
		Date	2024-12-02
Horizon	2036 Future Total	**Analyst**	AK/AB

Study Intersection Summary

Major Street	York Road	**Direction**	East/West
Minor Street	Highway 6	**Direction**	North/South

Intersection Details for Warrant Parameters

Flow Conditions	Restricted Flow (Urban)	**Number of Lanes**	1
T-Intersection?	No	**Intersection Type**	Existing

Notes: Free Flow (Rural) is used when the operating speed is greater than or equal to 70km/h. Restricted Flow (Urban) is used otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered New if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: York Road						Minor: Highway 6						Pedestrians Crossing Major Street
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	253	417	76	311	0	0	0	0	114	2	112	0
PM	0	254	271	74	569	0	0	0	0	222	0	191	0
AHV	0	127	172	38	220	0	0	0	0	84	1	76	0

The AHV is determined by the availability of the peak hour estimates. If both Peak 1 and Peak 2 Peak Hour Volume estimates are available then AHV = (Peak1phv + Peak2phv)/4. In only the case that one estimate is available then AHV = Peak1phv/2 **or** Peak2phv/2.

Justification 7 - OTM Book 12

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENT 1 LANE HIGHWAYS		MINIMUM REQUIREMENT 2 OR MORE LANE HIGHWAYS		COMPLIANCE		
						Sectional		Entire Percentage
		Free Flow	Restricted Flow	Free Flow	Restricted Flow	Numerical	Percentage	
1. Minimum Vehicular Volume	A. Vehicle Volume, All Approaches (Avg. Hour)	480	720	600	900	718	99.7%	94.7%
	B. Vehicle Volume, Along Minor Streets (Avg. Hour)	120	170	120	170	161	94.7%	
2. Delay to Cross Traffic	A. Vehicle Volume, Major Street (Avg. Hour)	480	720	600	900	557	77.4%	77.4%
	B. Combined Vehicle and Pedestrian Volume Crossing Artery From Minor Streets (Avg. Hour)	50	75	50	75	85	113.3%	
Applicable Threshold			X					

Note: For T-intersections the thresholds for 1B have been increased by 50% per OTM Book 12.
Existing Intersections Require 120% Justification
New/Proposed Intersections Require 150% Justification

Percent Compliance: 94.7%
Percentage Required to be Justified: 120%

Signal Justification 7 Met: [ ] **Yes** [X] **No**

TRAFFIC SIGNAL WARRANTS - JUSTIFICATION 7 (PROJECTED VOLUMES)
PER OTM BOOK 12

Project and Scenario Summary

Project	1511-1535 Plains Rd W	**Project Number**	2472-6716
		Date	2024-12-02
Horizon	2036 Future Background	**Analyst**	AK/AB

Study Intersection Summary

Major Street	York Road	**Direction**	East/West
Minor Street	Plains Rd W	**Direction**	North/South

Intersection Details for Warrant Parameters

Flow Conditions	Restricted Flow (Urban)	**Number of Lanes**	1
T-Intersection?	Yes	**Intersection Type**	Existing

Notes: Free Flow (Rural) is used when the operating speed is greater than or equal to 70km/h. Restricted Flow (Urban) is used otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered New if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: York Road						Minor: Plains Rd W						Pedestrians Crossing Major Street
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	175	175	45	293	0	80	0	150	0	0	0	0
PM	0	214	221	35	471	0	165	0	241	0	0	0	0
AHV	0	97	99	20	191	0	61	0	98	0	0	0	0

The AHV is determined by the availability of the peak hour estimates. If both Peak 1 and Peak 2 Peak Hour Volume estimates are available then AHV = (Peak1phv + Peak2phv)/4. In only the case that one estimate is available then AHV = Peak1phv/2 **or** Peak2phv/2.

Justification 7 - OTM Book 12

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENT 1 LANE HIGHWAYS		MINIMUM REQUIREMENT 2 OR MORE LANE HIGHWAYS		COMPLIANCE		
						Sectional		Entire Percentage
		Free Flow	Restricted Flow	Free Flow	Restricted Flow	Numerical	Percentage	
1. Minimum Vehicular Volume	A. Vehicle Volume, All Approaches (Avg. Hour)	480	720	600	900	566	78.6%	62.4%
	B. Vehicle Volume, Along Minor Streets (Avg. Hour)	180	255	180	255	159	62.4%	
2. Delay to Cross Traffic	A. Vehicle Volume, Major Street (Avg. Hour)	480	720	600	900	407	56.5%	56.5%
	B. Combined Vehicle and Pedestrian Volume Crossing Artery From Minor Streets (Avg. Hour)	50	75	50	75	61	81.3%	
Applicable Threshold			X					

Note: For T-intersections the thresholds for 1B have been increased by 50% per OTM Book 12.
Existing Intersections Require 120% Justification
New/Proposed Intersections Require 150% Justification

Percent Compliance: 62.4%
Percentage Required to be Justified: 120%

Signal Justification 7 Met: [ ] **Yes** [X] **No**

TRAFFIC SIGNAL WARRANTS - JUSTIFICATION 7 (PROJECTED VOLUMES)
PER OTM BOOK 12

Project and Scenario Summary

Project	1511-1535 Plains Rd W	**Project Number**	2472-6716
		Date	2024-12-02
Horizon	2036 Future Total	**Analyst**	AK/AB

Study Intersection Summary

Major Street	York Road	**Direction**	East/West
Minor Street	Highway 6	**Direction**	North/South

Intersection Details for Warrant Parameters

Flow Conditions	Restricted Flow (Urban)	**Number of Lanes**	1
T-Intersection?	Yes	**Intersection Type**	Existing

Notes: Free Flow (Rural) is used when the operating speed is greater than or equal to 70km/h. Restricted Flow (Urban) is used otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered New if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: York Road						Minor: Highway 6						Pedestrians Crossing Major Street
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	175	175	48	293	0	95	0	152	0	0	0	0
PM	0	214	225	51	471	0	175	0	245	0	0	0	0
AHV	0	97	100	25	191	0	68	0	99	0	0	0	0

The AHV is determined by the availability of the peak hour estimates. If both Peak 1 and Peak 2 Peak Hour Volume estimates are available then AHV = (Peak1phv + Peak2phv)/4. In only the case that one estimate is available then AHV = Peak1phv/2 **or** Peak2phv/2.

Justification 7 - OTM Book 12

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENT 1 LANE HIGHWAYS		MINIMUM REQUIREMENT 2 OR MORE LANE HIGHWAYS		COMPLIANCE		
						Sectional		Entire Percentage
		Free Flow	Restricted Flow	Free Flow	Restricted Flow	Numerical	Percentage	
1. Minimum Vehicular Volume	A. Vehicle Volume, All Approaches (Avg. Hour)	480	720	600	900	580	80.6%	65.5%
	B. Vehicle Volume, Along Minor Streets (Avg. Hour)	180	255	180	255	167	65.5%	
2. Delay to Cross Traffic	A. Vehicle Volume, Major Street (Avg. Hour)	480	720	600	900	413	57.4%	57.4%
	B. Combined Vehicle and Pedestrian Volume Crossing Artery From Minor Streets (Avg. Hour)	50	75	50	75	68	90.7%	
Applicable Threshold			X					

Note: For T-intersections the thresholds for 1B have been increased by 50% per OTM Book 12.
Existing Intersections Require 120% Justification
New/Proposed Intersections Require 150% Justification

Percent Compliance: 65.5%
Percentage Required to be Justified: 120%

Signal Justification 7 Met: [ ] **Yes** [X] **No**

Appendix K

City of Burlington Zoning By-Law 2020 Relevant Excerpts

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2.25 OFF-STREET PARKING AND LOADING REQUIREMENTS

2.25.1 Whenever a new development occurs or whenever an existing development is enlarged, extended or increased in capacity, in accordance with this By-law, off-street vehicle parking spaces shall be provided and maintained on the property and within the zone designation for all uses, except for:

(a) those properties shown on “Diagram 1A: Downtown Parking Exemption Area”. For the development of a parcel of land partially or wholly contained within the Downtown Parking Exemption Area, Section 2.25 shall only apply to residential uses; and

(b) those properties shown on “Diagram 1B: Plains Road Corridor Residential Parking Exemption Area”, “Diagram 1C: Fairview Street Corridor Residential Parking Exemption Area”, and “Diagram 1D: Appleby Line Corridor Residential Parking Exemption Area”. For the development of a parcel of land partially or wholly contained within a Residential Parking Exemption Area Overlay Map, Section 2.25 shall only apply to non-residential uses. Despite the above, where the owner/applicant chooses to provide parking facilities on-site, the City’s accessible parking spaces requirements shall apply and accessible parking spaces shall be provided in accordance with Table 1.2.7, and subsections 2.26 (9) (a) and (b), contained in PART 1, Section 2.26 General Parking Provisions.

2.25.2 Off-Street parking shall be in accordance with Subsection 2.26, “General Parking Provisions”

2.25.3 At least one off-street loading space shall be provided in conjunction with every principal building, including mixed-use buildings, but excluding residential buildings less than 4 storeys high.

2.25.4 The number of parking spaces required for permitted uses in all zones shall be in accordance with Table 1.2.6, unless otherwise specified in the respective zones. Where more than one use specified in Table 1.2.6 is provided on the same lot or in the same building, the parking spaces required shall be in respect of each use.

2.25.5 Notwithstanding Part 1, Subsection 2.25.4, when a use changes to another permitted use within a Multi-Unit Business Park that existed as of March 19, 2024, the number of existing parking spaces shall be deemed to conform with the parking requirements of this By-law, provided the change in use does not include an external addition to an existing building or the erection of a new building.

Table 1.2.6: Off-Street Parking Standards

USE	PARKING STANDARD
Detached Dwelling **Semi-Detached Dwelling** **Duplex Dwelling**	2 spaces per unit; one of which may be provided in an attached or detached garage Detached, Semi-detached and Duplex, on a parcel of tied land fronting onto a common element condominium road: 1.5 spaces per unit where 1 space shall be located on the parcel of tied land and 0.5 space per unit for visitor parking shall be located within the common element condominium block which contains the condominium roadway.
Street Townhouse Dwelling **Street Fourplex Dwelling**	2 spaces per unit
Triplex Dwelling	1 occupant space per unit, 0.33 visitor spaces per unit
Street Triplex Dwelling	2 spaces per unit A Triplex Dwelling on a parcel of tied land fronting onto a common element condominium road: 1.5 spaces per unit where 1 space shall be located on the parcel of tied land and 0.5 space per unit for visitor parking shall be located within the common element condominium block which contains the condominium roadway.
Townhouse Dwelling **Fourplex Dwelling** **Cluster Homes**	2 occupant spaces per unit, 0.25 visitor spaces per unit
Stacked Townhouse Dwellings	1 occupant space per unit, 0.25 visitor spaces per unit
Back-to-Back Townhouse Dwellings	2 occupant spaces per unit, 0.25 visitor spaces per unit

USE	PARKING STANDARD
Apartment Building	**Within a Primary Growth Area as identified on Schedule B-1 of the City Official Plan (2020), as approved by Halton Region on November 30, 2020, except for those properties identified in a Residential Parking Exemption Area shown on Diagrams 1B, 1C, or 1D, and as may be further amended**: 1.25 spaces per unit inclusive of visitor parking. *This is an interim rate and is subject to further study to be undertaken by the City. An application to reduce this parking rate will be required to be supported by a parking justification study deemed acceptable by the City.* **Within a Secondary Growth Area as identified on Schedule B-1 of the City Official Plan (2020), as approved by the Halton Region on November 30, 2020, except for those properties identified in a Residential Parking Exemption Area shown on Diagrams 1B, 1C, or 1D, and as may be further amended:** 1.25 spaces per unit inclusive of visitor parking. **For all areas outside of Primary and Secondary Growth Area as identified on Schedule B-1 of the City Official Plan (2020), as approved by Halton Region on November 30, 2020, and as may be further amended:** 1 occupant spaces per one-bedroom unit 1.25 occupant spaces per two-bedroom unit 1.5 occupant spaces per three or more bedroom unit 0.25 visitor spaces per unit 1 additional space per 75 units for the use of maintenance vehicles servicing the site.
Dwelling Units on the 2nd or 3rd floor of a 2 or 3 storey commercial building	1.25 spaces per unit
Additional Residential Unit	1 space per unit
Adult Entertainment Establishment	1 space per 2 persons capacity
Bank, Trust Company, Credit Union	5 spaces per 100 m^2 gross floor area
Bed & Breakfast Home **Boarding House**	1 space per guest room in addition to the parking requirement for a detached dwelling
Cemetery	1 space per employee plus 1 per 4 seats chapel capacity
Community Institution	1 space per 4 persons capacity
Convent, Monastery	1 space per 2 beds
Convention/Conference/Banquet Centre	10 spaces per 100 m^2 gross floor area
Correctional Facility	0.85 spaces per employee 0.25 visitor spaces per resident
Correctional Group Home	4 parking spaces
Day Care Centre	4 spaces per 100 m^2 gross floor area

USE	PARKING STANDARD
Emergency Shelter	0.85 spaces per employee 0.25 visitor spaces per resident
Entertainment Establishment	10 spaces per 100 m^2 of gross floor area
Funeral Home, Mortuary, Crematorium	4 spaces per 100 m^2 gross floor area
Group Home	2 parking spaces
Home-Based Business	None required
Home Day Care	None required
Hospital, Health Care Facility	0.65 spaces per patient bed
Hotel	1 space per guest room or suite
Industrial Uses	1 space per 100 m^2 gross floor area, except those uses classified more specifically in Table 1.2.6
Kennel	1 space per employee plus 1 per 100 m^2 gross floor area
Library, Museum, Post Office	0.75 spaces per employee plus 1.5 spaces per 100 m^2 GFA
Lodge, Fraternity, Private Club	1 space per 4 persons capacity
Long-Term Care Facility	0.35 spaces per bed
Multi-Unit Business Park	2 spaces per 100 m^2 of gross floor area
Night Club, Dance Hall	1.1 spaces per 4 persons
Office: Medical **Other**	6 spaces per 100 m^2 gross floor area 3 spaces per 100 m^2 gross floor area
Outdoor Patio	None Required
Place of Assembly	6 spaces per 100 m^2 gross floor area
Place of Worship	0.2 spaces per seat or prayer space or 6 spaces per 100 m^2 of gross floor area whichever is higher
Recreational Establishment	5.5 spaces per 100 m^2 of gross floor area
Retail Store	3.5 spaces per 100 m^2 gross floor area
Retail Centre	5 spaces per 100 m^2 gross floor area
Residential Social Service	0.85 spaces per employee 0.25 visitor spaces per resident
Restaurant: Fast Food Restaurant	10 spaces per 100 m^2 of gross floor area
Restaurant: Standard Restaurant	18.5 spaces per 100 m^2 of gross floor area
Retirement Home	Occupant/Employee: 0.6 spaces per unit Visitor: 0.25 spaces per unit 1 additional space per 50 units for the use of maintenance vehicles servicing the site
School: Elementary **Secondary** **Post-Secondary** **Business, Commercial, Trade**	1.5 spaces per classroom 3 spaces per classroom 5 spaces per classroom plus 1 space per 6 person capacity of auditoriums 5 spaces per 100 m^2 of gross floor area
Service Commercial Uses	4 spaces per 100 m^2 gross floor area
Storage Locker Facility	0.5 spaces per 100 m^2 of gross floor area
Supermarket	6 spaces per 100 m^2 gross floor area
Warehouse and Logistics	1.5 spaces per 100 m^2 of gross floor area

2.26 GENERAL PARKING PROVISIONS

(1) **Parking Space Size & Accessibility**

(a) Each parking space shall have a minimum width of 2.75 m and a minimum area of 16.5 m^2 and be readily accessible without obstructions at all times for parking and removal of a motor vehicle without the necessity of moving any other vehicle or obstruction. The minimum area of a parking space may include walkways for residential uses only.

The minimum internal dimensions for a private garage are 6.0m depth x 3.0m width x 2.0m height. The minimum internal dimensions for unobstructed area in the private garage are 5.5m depth x 3.0m width x 2.0m height. One step is permitted in the unobstructed area.

(b) Accessibility shall not apply to a parking space in a garage which is for the exclusive use of a dwelling unit, provided the driveway serving the garage has a minimum length of 5.5 metres.
Accessibility is not required for 20% of the required occupant parking in townhouse, back-to-back townhouse, stacked townhouse, maisonette, fourplex, and apartment buildings.

(2) **Illumination**
Where parking facilities are illuminated by lighting fixtures or standards, they shall be arranged so that light from the fixture is shielded and/or directed away from residential dwellings.

(3) **Surface Treatment**
Every parking lot, which includes parking spaces and driveways, shall be graded and drained and the surface treated so as to provide a permanent durable and dustless surface. This provision shall not apply to parking lots of residential developments having three or fewer dwelling units.

(4) **Access**
Every such parking lot shall have adequate means of entrance and exit directly to an existing street or public lane, and every such entrance and/or exit shall be clearly marked by directional signs.

(5) **Parking Structures**
i) Any part of an enclosed parking structure that projects 1.6 m or more above grade shall be subject to the yard requirements of the zone designation.

ii) Entrance and exit ramps to below-grade and above-grade parking structures or buildings shall be set back 7.5 m from a street line.

iii) Below-grade parking structures shall not extend into a required landscape buffer and shall be set back 3 m from all other property lines and street lines.

(6) **Multiple Zones**
Where a property is covered by more than one zone designation, required parking and loading facilities shall be provided within that area of the property zoned for the permitted use and within which the permitted use is located.

However, a driveway providing access from a street to service a property zoned for a permitted use may be located on land zoned for a different permitted use.

(7) **Group Home Parking**
Required Parking for Group Homes may be blocked provided that at least two parking spaces are accessible at all times.

(8) **Correctional Group Home Parking**
Required Parking for Correctional Group Homes may be blocked provided that at least two parking spaces are accessible at all times.

(9) **Designated Accessible Parking Spaces**
Where parking facilities are required, designated accessible parking spaces for the exclusive use of persons with disabilities shall be identified with a provincially regulated vertical sign displaying the international symbol for accessible parking spaces. Designated accessible parking spaces shall be included in the calculation of required parking and shall be provided in accordance with Table 1.2.7, 9(a) and 9(b):

Table 1.2.7

Required Parking	Designated Accessible Parking Spaces
5 to 50 spaces	1 designated accessible parking space
51 to 90 spaces	2 designated accessible parking spaces
Over 90 spaces	3% of required parking

(a) Medical office and institutional uses shall provide a minimum of one designated accessible parking space. Where out-patient services are provided, a minimum of 10% of the required parking shall be designated accessible parking spaces.
(b) Each designated accessible parking space shall meet the minimum width and area requirements of subsection (1) (a) above and shall be located adjacent to a delineated “accessible parking pathway” with a minimum width of 2.0 metres.

(10) **Bicycle Parking**
Bicycle Parking spaces shall be provided in conjunction with office, retail, and service commercial, industrial and institutional developments, in accordance with Table 1.2.8 and (10)(a):

Table 1.2.8

Use	Required Bicycle Parking
Retail, Retail Centre Service Commercial Office, Institutional	2 spaces plus 1 space/1000 m^2 GFA
Industrial	2 spaces plus 0.25 spaces/1000m^2 GFA
Elementary & Secondary School	1 space/10 students & 1 space/35 employees
Post-Secondary School	1 space/20 students

(a) Each bicycle parking space shall be 60 cm x 1.8 m in size

Appendix L

Region of Halton Development Design Relevant Excerpts

Development Design Guidelines for Source Separation of Solid Waste

Regional Official Plan Guidelines



Halton
REGION

Halton Region Official Plan Guidelines

The **Regional Official Plan (ROP)** is Halton's guiding document for land use planning. It contains policies that guide decisions related to, among other things, managing growth and its effects on Halton's social, economic and natural environment.

The **ROP Guidelines** are a set of documents that clarify, inform, and aid in the implementation of the Plan's policies.

"This Plan calls for the preparation of certain guidelines or protocols to provide more detailed directions in the implementation of its *policies*."

Halton Region Official Plan – Section 192
as adopted by Regional Council, December 16, 2009

The Guidelines have been prepared in accordance with Section 192 of the ROP. They provide direction and outline approaches that can be used to satisfy the relevant policies of the Plan. They do not introduce additional policy requirements, and, in the event of a conflict between the Guidelines and the Regional Official Plan, the Plan shall prevail.

The Guidelines may be updated from time to time as required through a report to Regional Council.

For more information, visit **halton.ca/ROP** or **halton.ca/ROPguidelines** or call 311.

1.9.5.6 The applicant is advised to contact the Zoning section of the Local Municipality to ensure that external storage of Waste receptacles is permitted in accordance with Property Standards and By-laws.

1.10 Private Road Requirements

1.10.1 All Private Road layouts shall be designed and constructed in accordance with applicable legislation and by-laws and will be guided by the following:

1.10.1.1 Private Roads layouts shall allow for direct, consistent and safe access from a Municipal Road to the Waste Collection Point and back to the Municipal Road without delays or reversing onto the Municipal Road.

1.10.1.2 Private Road layouts shall allow for the continuous forward collection of Waste without the need for Waste collection vehicles to reverse.

1.10.1.3 All Private Roads shall be constructed with a hard surface, such as asphalt, concrete, or another suitable material acceptable to the Region, and have a minimum width of 6 metres.

1.10.1.4 All turns shall have a minimum turning radius from the centre line of 13 metres to the satisfaction of the Region.

1.10.1.5 Overhead clearance throughout the Private Road must be a minimum of 7.5 metres and be free from obstructions such as overhangs, awnings, utility wires, balconies, and must be kept clear of tree branches, etc.

1.10.1.6 All Private Roads and supported structures along the Waste collection route must be designed and constructed to support a minimum of 35 tonnes (the weight of a fully loaded Waste truck). If Waste collection vehicles are required to drive onto or over a Supported Structure the Region must receive a letter, certified by an Ontario Professional Engineer, in advance of any initial Waste collection, indicating that the supported structure can support a fully loaded Waste truck.

1.10.2 Where continuous forward Waste collection as set out in section 1.10.1.2 cannot be achieved or is demonstrated to be impractical, a cul-de-sac or T-turnaround may be permitted in accordance with the specifications outlined in Appendix 5 and 3, respectively. It should be noted that T-turnarounds are strongly discouraged and will only be approved at the discretion of the Region. Waste collection vehicles are not expected to back up more than 18 meters (from front wheel to front wheel).

Appendix M

Parking Data

Tuesday March 27 - Survey of Phase 1 - Olivia Marie Garden

Parking Demand

Time - Starting	Zone 1: @ Grade Parking (Retail)	Zone 1: @ Grade Parking (Residential)	Zone 1: @ Grade Parking (Res Visitor)	Zone 2: Underground Residential	Zone 1: Commercial +Unmarked	Illegal	Residential Total	Comments	Sum
5:30	4	34	7	56	4	1	98		105
6:00	4	33	7	56	4	1	97		104
6:30	10	30	7	51	5	1	89		103
7:00	4	25	7	46	5	1	79		87
7:30	4	21	7	39	4	1	68		75
8:00	5	20	7	37	4	1	65		73
20:00	8	23	5	50	2	1	79		88
20:30	8	23	5	51	3	1	80		90
21:00	9	28	5	51	3	1	85		96
21:30	8	25	7	51	2	1	84		93
22:00	3	29	4	57	2	1	91		95
22:30	3	31	5	60	2	1	97		101
23:00	3	31	5	61	2	1	98		102
23:30	2	31	5	62	2	1	99		102
0:00	4	32	5	62	2	1	100		105

Percent Utilized

Zone 1	Zone 2	Zone 3
21%	-	29%
21%	-	29%
53%	-	36%
21%	-	36%
21%	-	29%
26%	-	29%
42%	-	14%
42%	-	21%
47%	-	21%
42%	-	14%
16%	-	14%
16%	-	14%
16%	-	14%
11%	-	14%
21%	-	14%

Supply/Capacity Counted

Zone 1: @ Grade Retail	19
Zone 1: @ Grade Parking (Residential)	52
Zone 1: @ Grade Parking (Res Visitor)	14
Zone 2: Underground Residential	81
Zone 1: Commercial + Unmarked	13

Existing

	Visitor	Resident			
Max demand	8	94	102	0.92	spaces/unit
111 units out of 113 sold	0.07	0.85	0.92		

Future

Future Unit	Visitor Demand	Res Demand	Total	Proposed	
112	8	95	103	150	(new build)

AM Average	27%	-	31%
PM Average	34%	-	17%

Saturday March 24 - Survey of Phase 1 - Olivia Marie Garden

Parking Demand

Time - Starting	Zone 1: @ Grade Parking (Retail)	Zone 1: @ Grade Parking (Residential)	Zone 1: @ Grade Parking (Res Visitor)	Zone 2: Underground Residential	Zone 1: Commercial + Unmarked	Illegal	Residential Total	Comments	Sum
11:00	19	30	2	36	4		68		91
11:30	19	30	3	37	4		70		93
12:00	19	28	2	37	3		67		89
12:30	16	30	4	39	2	3	76		91
13:00	19	33	7	39	2	2	81		100
13:30	18	27	7	38	6	2	74		96
14:00	18	26	6	38	7	1	71		95
14:30	19	23	8	37	9	2	70		96
15:00	18	23	9	38	5		70		93
15:30	18	24	9	39	5		72		95
16:00	13	24	9	41	3		74		90
16:30	8	23	10	39	3		72		83
17:00	10	21	10	38	4		69		83
17:30	11	23	10	36	4		69		84
18:00	12	25	9	36	4		70		86
18:30	10	23	10	40	4		73		87
19:00	9	27	9	36	5		72		86
19:30	10	27	10	40	6		77		93
20:00	9	29	11	40	5		80		94

Percent Utilized

Zone 1	Zone 2	Zone 3
100%	-	29%
100%	-	29%
100%	-	21%
84%	-	14%
100%	-	14%
95%	-	43%
95%	-	50%
100%	-	64%
95%	-	36%
95%	-	36%
68%	-	21%
42%	-	21%
53%	-	29%
58%	-	29%
63%	-	29%
53%	-	29%
47%	-	36%
53%	-	43%
47%	-	36%

Supply/Capacity Counted

Zone 1: @ Grade Retail	19
Zone 1: @ Grade Parking (Residential)	52
Zone 1: @ Grade Parking (Res Visitor)	14
Zone 2: Underground Residential	81
Zone 1: Commercial + Unmarked	13 (10 + 3)



AM Average	96%	-	25%
PM Average	82%	-	38%