FUSS & O'NEILL

April 23, 2019

Mr. Paul Harren
Electric Boat Corporation
75 Eastern Point Road
Groton, CT 06340

Re: Traffic Impact Study Addendum – 2029 Design Year
Assembly Building
Electric Boat Groton
Connecticut Campus
75 Eastern Point Road

Dear Mr. Harren:

Fuss & O'Neill has been retained by Electric Boat Corporation to study the year 2029 traffic impact of the proposed 198,000 square foot assembly building with a 16,500 square foot utility building at your Groton campus located at 75 Eastern Point Road in Groton, Connecticut. This addendum has been prepared to document the findings of the study and is being submitted to the City of Groton in support of the development's land use applications. This addendum, which analyzes the proposed impact of the development from the year 2019 to 2029, shall supplement the Traffic Impact Study, dated April 2019 and prepared by Fuss & O'Neill which analyses the proposed impact of the development from the year 2019 to 2024.

Background Traffic Conditions

Growth Rate

Upon review of historical ADT traffic volume data from the Connecticut Department of Transportation (CTDOT) within the study area, a gradual decline in traffic volumes was observed over the past 10 years. For the purposes of this addendum however, the 2024 background volumes from the Traffic Impact Study, dated April 2019, prepared by Fuss & O'Neill were projected to the 2029 peak design year using a 0.5 percent per year peak hour growth factor to account for potential future traffic growth in the study area. This growth rate should be considered conservative based on the observed gradual decline in traffic volumes over the past several years and based on the fact that there are no significant planned major traffic generators in the study area that would substantially increase traffic volumes in the foreseeable future. The 2029 background traffic volumes are shown in Figure No. 7, attached.

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Proposed Conditions

Development

Electric Boat Corporation proposes to construct a 198,000 square foot assembly building with a 16,500 square foot utility building at their Groton campus located at 75 Eastern Point Road in Groton, Connecticut. This facility is expected to be completed in the year 2024 and fully operational in the year 2029.

In the year 2024, Electric Boat anticipates 8,855 total employees (7,036 first shift, 1,455 second shift, and 364 third shift). Between 2024 and 2029, Electric Boat anticipates an increase of approximately 1,139 first shift employees, 711 second shift employees, and 178 third shift employees bringing the total number of employees in its peak year of 2029 to 10,883 employees (8,175 first shift, 2,166 second shift, and 542 third shift). For the purposes of this addendum this increase in the number of employees from the year 2024 to 2029 will presumably be accommodated via an additional parking facility located at the existing G-Lot parking facility.

Although an increase in the number of employees is expected from the year 2024 to 2029 it is anticipated that Electric Boat will not exceed City of Groton zoning regulations of 1 parking space for every 3 employees during its largest shift over the next 11 years.

Site Access and Circulation

For the purposes of this addendum, a multi-level parking structure located at the existing G-Lot parking facility was analyzed to show the worst case scenario in the traffic model for the employee projections to 2029. There are other options such as off-site parking that could be provided, however to show the most conservative scenario, a parking structure adjacent to the Shipyard was analyzed. As required by the City's zoning regulations employee counts will be provided on a semi-annual basis to certify the number of employees on each work shift and as employees are added, parking will continue to be analyzed and adjusted as necessary. In addition, parking will be addressed as required submissions are made to OSTA.

Trip Generation

The expected site generated traffic volumes were calculated using existing empirical data from the Institute of Transportation Engineers (ITE) publication Trip Generation, 10th edition, 2017. This publication is an industry-accepted resource for determining trip generation. Trip generation for the weekday morning and afternoon peak hour was calculated using the ITE land use code 140 "Manufacturing". The ITE manual indicates that the increase of 1,139 first shift employees from the year 2024 to 2029 is expected to generate a total of 490 additional vehicle trips (397 entering, 93

exiting) during the morning peak hour and a total of 513 additional vehicle trips (226 entering, 287 exiting) during the afternoon peak hour. Due to the availability of vans offered by Electric Boat to their employees for vanpooling, a 10% credit was applied to the trip generation. After applying the 10% credit the facility is expected to generate a total of 441 vehicle trips (357 entering, 84 exiting)) during the morning peak hour, and a total of 462 vehicle trips (204 entering, 258 exiting) during the afternoon peak hour.

Trip Distribution

The distribution of traffic entering and exiting the proposed site was applied to the road network based on the existing regional traffic distributions and the layout of the adjacent roadway network. During the peak hours, the following arrival distributions of traffic are anticipated:

- 45% from the west on Interstate 95
- 35% from the east on Interstate 95
- 10% from the north on Route 12
- 10% from the north on Route 184

A regional arrival/departure distribution for the new site generated traffic traveling to and from the project site is shown in Figure No. 8, attached.

Combined Volumes

The site generated traffic was distributed to the roadway system based on the arrival/departure distributions with the results shown in Figure No. 9, attached.. These volumes were then added to the background volumes to yield the year 2029 peak hour Combined traffic volumes shown in Figure No. 10, attached.

Intersection Capacity Analysis

Capacity analyses for both signalized and unsignalized intersections were conducted using Synchro Professional Software, version 10.0.

In discussing intersection capacity analyses results, two terms are used to describe the operating condition of the road or intersection. These two terms are volume to capacity ratio (v/c) and level of service (LOS).

The v/c ratio is a ratio of the volume of traffic using an intersection to the total capacity of the intersection (the maximum number of vehicles that can utilize the intersection during an hour). The v/c ratio can be used to describe the percentage of capacity utilized by a single intersection movement, a combination of movements, an entire intersection approach, or the intersection as a whole.

LOS is a measure of the delay experienced by stopped vehicles at an intersection. LOS is rated on a scale from A to F, with A describing a condition of very low delay (less than 10 seconds per vehicle), and F describing a condition where delays will exceed 50 seconds per vehicle for unsignalized intersections and 80 seconds per vehicle for signalized intersections. Delay is described as a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Therefore, intersections with longer delay times are less acceptable to most drivers.

LOS is generally used to describe the operation (based on delay time) of both signalized and unsignalized intersections, while v/c ratio is applied to signalized intersections only. These definitions for v/c ratio and LOS, as well as the methodology for conducting signalized and unsignalized intersection capacity analyses, are taken from the "Highway Capacity Manual, 6th Edition" published by the Transportation Research Board.

Using the above referenced methodologies, the weekday morning and weekday afternoon peak hour 2029 background and combined conditions analyses were conducted at the following intersections:

- CT Route 349 at Eastern Point Road
- CT Route 349 at Mumford Avenue
- CT Route 349 at Benham Road
- CT Route 349 at Route 649 and Brandegee Avenue
- Eastern Point Road at Thames Street, Smith Street and Poquonnock Road
- Poquonnock Road at Chicago Avenue, Benham Road, and Mitchell Street
- Poquonnock Road at EB Parking Lot (M-Lot)
- North Street at Meridian Street and Mitchell Street
- North Street at Broad Street
- Bridge Street at North Street and I-95 Ramps
- CT Route 349 and Meridian Street and Meridian Street Extension
- CT Route 649 at Rainville Avenue and Old Farm Road

Tables No. 1 & 2 attached present a summary of the levels of service at the signalized and unsignalized intersections for 2029 background conditions traffic volume. Copies of the analysis worksheets can be found attached for the weekday morning and weekday afternoon peak hours respectively.

The signalized intersection of CT Route 349 at Eastern Point Road operates at LOS B under background and LOS C under combined conditions during the weekday morning peak hour and operates at LOS B under background combined conditions during the weekday afternoon peak hour. All approaches on Route 349 and Eastern Point Rd. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

At the unsignalized intersection of CT Route 349 at Mumford Avenue, the eastbound and westbound approaches operate at LOS A under background and combined conditions during the weekday morning and afternoon peak hours. The northbound and southbound approaches operate at LOS F under background and combined conditions during the weekday morning peak hour. The northbound approach operates at LOS E under background conditions and operates at LOS F under combined conditions during the weekday afternoon peak hour while the southbound approach operate at LOS F under background and combined conditions during the weekday afternoon peak hour. The eastbound and westbound approaches on Route 349 operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour. The northbound and southbound Mumford Avenue approaches do not operate efficiently when modeled in Synchro due to the high number of pedestrian crossings and opposing free flow movements on Route 349, however field observations indicate that the approaches operate much more efficiently than the baseline analysis indicates during each peak hour.

The signalized intersection of CT Route 349 at Benham Road operates at LOS B under background and LOS C under combined conditions during the weekday morning peak hour while operating at a LOS C under background and combined conditions during the afternoon peak hour. All approaches on Route 349 and Benham Road operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hours.

The signalized intersection of CT Route 349 at Route 649 and Brandegee Avenue operates at LOS C under background and combined conditions during the weekday morning peak hour and operates at LOS E under background conditions and LOS F during the weekday afternoon peak hour. Although the intersection operates at acceptable levels of service under both conditions during the weekday morning peak hour it is recommended to optimize the traffic signal timings to increase LOS on the westbound approach. Due to the degradation in intersection LOS during the weekday afternoon peak hour it is also recommended to optimize the traffic signal timings during the afternoon peak hour to increase intersection LOS. Upon implementation of the proposed signal timing improvements, the overall background conditions intersection LOS (C and E respectively) is maintained in the combined conditions during both the morning and afternoon peak hours. Recommended improvements are outlined in the conclusion of this report with LOS results for the 2029 combined improved condition shown in Table 1, attached.

The signalized intersection of Eastern Point Rd. at Thames St., Smith St. and Poquonnock Rd. operates at LOS B under background and combined conditions during the weekday morning and afternoon peak hours. All approaches on Eastern Point Rd., Thames St., Smith St., and Poquonnock Rd. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

The signalized intersection of Poquonnock Rd. at Chicago Ave., Benham Rd., and Mitchell St. operates at LOS F under background and combined conditions during both the weekday morning and afternoon peak hours. Due to the poor intersection LOS during the weekday morning and afternoon peak hours it is recommended to optimize the traffic signal timings. Signal optimization will improve the combined conditions LOS to E during the morning peak hour and maintain LOS F operations during the afternoon peak hour. Recommended improvements are outlined in the conclusion of this report with LOS results for the 2029 combined improved condition shown in Table 1, attached.

At the unsignalized intersection of Poquonnock Rd. at the EB Parking Lot (M-Lot), the Poquonnock Road eastbound and westbound approaches operate at LOS A under background and combined conditions during the weekday morning and weekday afternoon peak hours. The northbound parking lot approach operates at LOS B under background and combined conditions during the weekday morning peak hour and operates at LOS C under background and combined conditions during the weekday afternoon peak hour. All approaches on Poquonnock Rd. and the EB Parking Lot (M-Lot) driveway operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

The signalized intersection of North St. at Meridian St. and Mitchell St. operates at LOS B under background and combined conditions during the weekday morning and afternoon peak hours. All approaches on North St., Meridian St. and Mitchell St. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

The signalized intersection of North St. at Broad St. operates at LOS B under background and combined conditions during the weekday morning peak hour and operates at LOS A under background and combined conditions during the weekday afternoon peak hour. All approaches on North St and Broad St. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

The signalized intersection of Bridge Street at North Street and I-95 ramps operates at LOS F under background and combined conditions during the weekday morning peak hour and operates at a LOS D under background conditions and LOS E under combined conditions during the weekday afternoon peak hour. Due to the degradation in intersection LOS during the weekday morning and afternoon peak hours it is recommended to optimize the traffic signal timings to facilitate an increase in intersection and approach LOS. Upon implementation of the proposed signal timing improvements, the overall background conditions intersection LOS is maintained in the combined conditions during both peak hours. Recommended improvements are outlined in the conclusion of this report with LOS results for the 2029 combined improved condition shown in Table 1, attached.

The signalized intersection of CT Route 349 and Meridian St. and Meridian St. Ext. operates at LOS D under background conditions and LOS F under combined conditions during the weekday morning peak hour while the intersection operates at LOS C under background and combined conditions during the weekday afternoon peak hour. All approaches on CT Route 349, Meridian St. and Meridian St. Ext. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour with the exception of the southbound approach during the weekday morning peak hour. Due to the degradation in intersection LOS during the weekday morning peak hour it is recommended to optimize the traffic signal timings to facilitate an increase in intersection and approach LOS. Upon implementation of the proposed signal timing improvements, the overall intersection LOS is improved to LOS C in the combined conditions during the morning peak hour. Recommended improvements are outlined in the conclusion of this report with LOS results for the 2029 combined improved condition shown in Table 1, attached.

The signalized intersection of CT Route 649 at Rainville Ave. and Old Farm Rd. operates at LOS B under background and combined conditions during the weekday morning and afternoon peak hours. All approaches on CT Route 649, Rainville Ave. and Old Farm Rd. operate at acceptable levels of service under 2029 background and combined conditions during the weekday morning and afternoon peak hour.

Queue Analysis

Existing Condition 95th percentile (design) queue lengths were reviewed at each intersection in the study area. The 95th percentile (design) vehicle queue lengths represent the maximum queue lengths that can be expected at each of the critical approach lanes of the study area intersections and is a function of the traffic signal timing, vehicular arrival patterns during the analysis period, and the saturation flow rate. The queue lengths are provided in the Synchro capacity analysis worksheets, attached, and Tables 3 and 4 attached provides a summary of the queue lengths for the critical lanes at each intersection.

Overall, a moderate increase in queuing is experienced at all study intersection approaches under 2029 background and combined conditions during the weekday morning and afternoon peak hours. A review of existing storage capacity reveals that adequate storage exists to accommodate existing queue lengths at most study intersection approaches with implemented recommendations as outlined in the conclusion.

Conclusion

The purpose of this addendum is to identify the impact of additional employee growth from the year 2024 to 2029 stemming from the 198,000 square foot assembly building with a 16,500 square foot

utility building expected to be completed in the year 2024. The increase of 1,139 first shift employees, 711 second shift employees, and 178 third shift employees from the year 2024 to 2029 is expected to generate a total of 490 additional vehicle trips (397 entering, 93 exiting) during the morning peak hour and a total of 513 additional vehicle trips (226 entering, 287 exiting) during the afternoon peak hour. Due to the availability of vans offered by Electric Boat to their employees for vanpooling, a 10% reduction of vehicular trips generated by the site has been factored into the above trip generation After applying the 10% credit the facility is expected to generate a total of 441 vehicle trips (357 entering, 84 exiting)) during the morning peak hour, and a total of 462 vehicle trips (204 entering, 258 exiting) during the afternoon peak hour.

For the purposes of this addendum, an additional parking facility access will presumably be provided via a multi-level parking structure located at the existing G-Lot parking facility. This parking lot will provide additional parking for the anticipated increase of employees from the year 2024 to 2029 and will provide access to Route 349 (Eastern Point Road) via a proposed driveway.

Capacity analysis revealed that most study intersections operate efficiently under 2029 background and combined conditions during the weekday morning and afternoon peak hours with the addition of the trips generated by the anticipated increase of employees from the year 2024 to 2029 and the expected growth rate for the area for weekday morning and weekday afternoon peak hours. However, the intersections of CT Route 349 at Route 649 and Brandegee Avenue, Poquonnock Rd. at Chicago Ave., Benham Rd., and Mitchell St., Bridge Street at North Street and I-95 Ramps, and CT Route 349 and Meridian Street and Meridian Street Extension will experience a more significant LOS degradation with peak hour delays under combined conditions during the weekday morning and afternoon peak hours. The signal timing revisions outlined below will reduce delay, manage queuing, and allow the intersections to operate at a more acceptable level of service, similar to how they operate under background conditions.

Based on the results of the capacity and queue analysis, traffic signal timing optimizations are recommended at the following study area intersections to increase intersection and approach level of service and improve delay during the weekday morning and afternoon peak hours:

- CT Route 349 at Route 649 and Brandegee Avenue
- Poquonnock Road at Chicago Avenue, Benham Road, and Mitchell Street
- Bridge Street at North Street and I-95 Ramps
- CT Route 349 and Meridian Street and Meridian Street Extension

Based on the results of the foregoing analysis, it is the professional opinion of Fuss & O'Neill, Inc. that the proposed Electric Boat peak employee growth through 2029, upon implementation of the signal timing revisions identified above, will not have a significant impact to traffic operations in the study area. The proposed additional employees can be safely and efficiently accommodated throughout the study area roadway network.

Attachments:

- Traffic Volume Figures
- Table 1 - Signalized Intersection LOS Summary
- Table 2 - Unsignalized Intersection LOS Summary
- Table 3- Weekday Morning Queue Length Summary
- Table 4- Weekday Morning Queue Length Summary
- Weekday Morning and Afternoon Synchro Reports

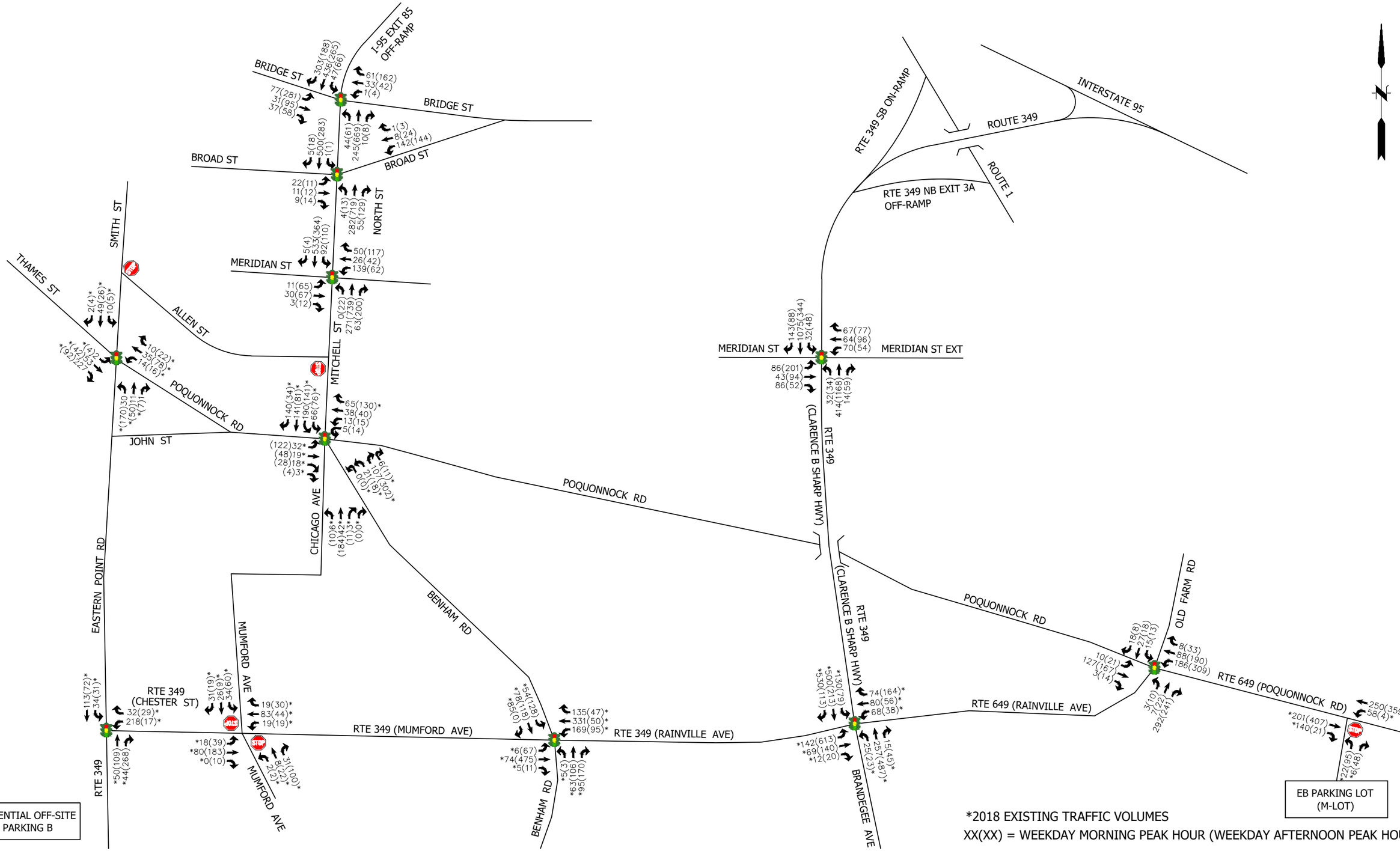

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FIGURE 2: 2019 EXISTING TRAFFIC CONDITIONS

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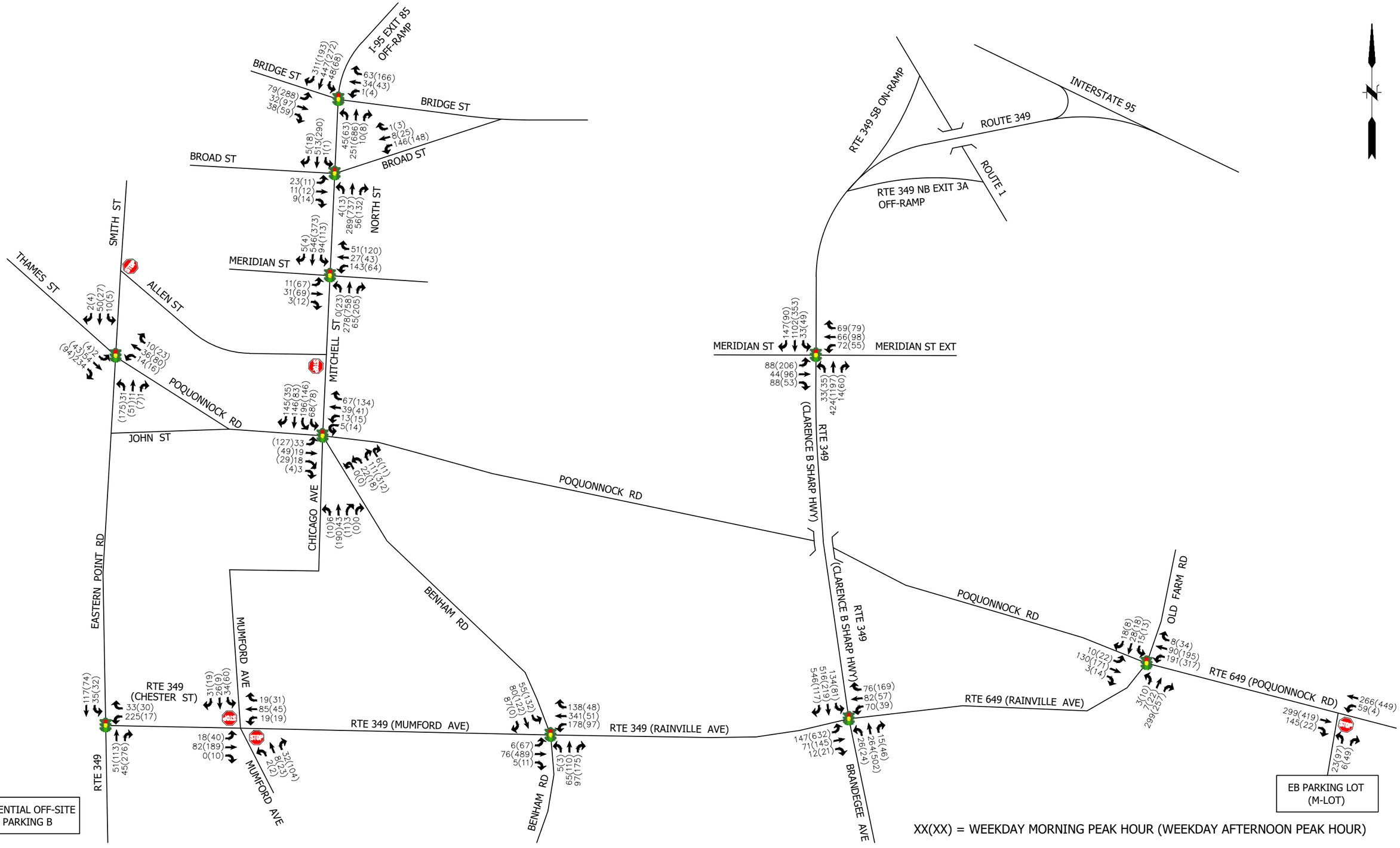

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FIGURE 3: 2024 BACKGROUND TRAFFIC CONDITIONS

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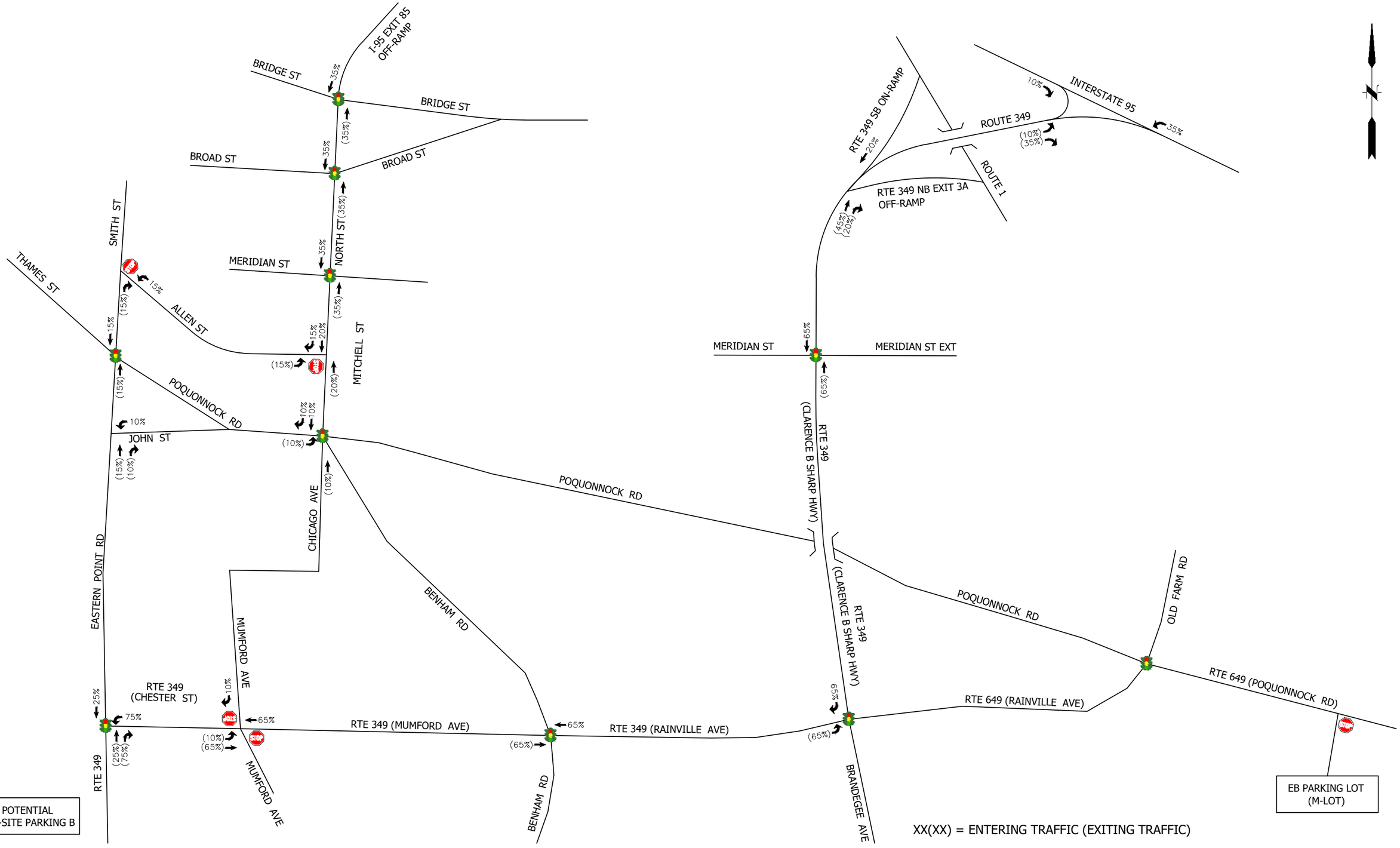

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FIGURE 4: SITE GENERATED TRAFFIC ARRIVAL / DEPARTURE DISTRIBUTION (%)

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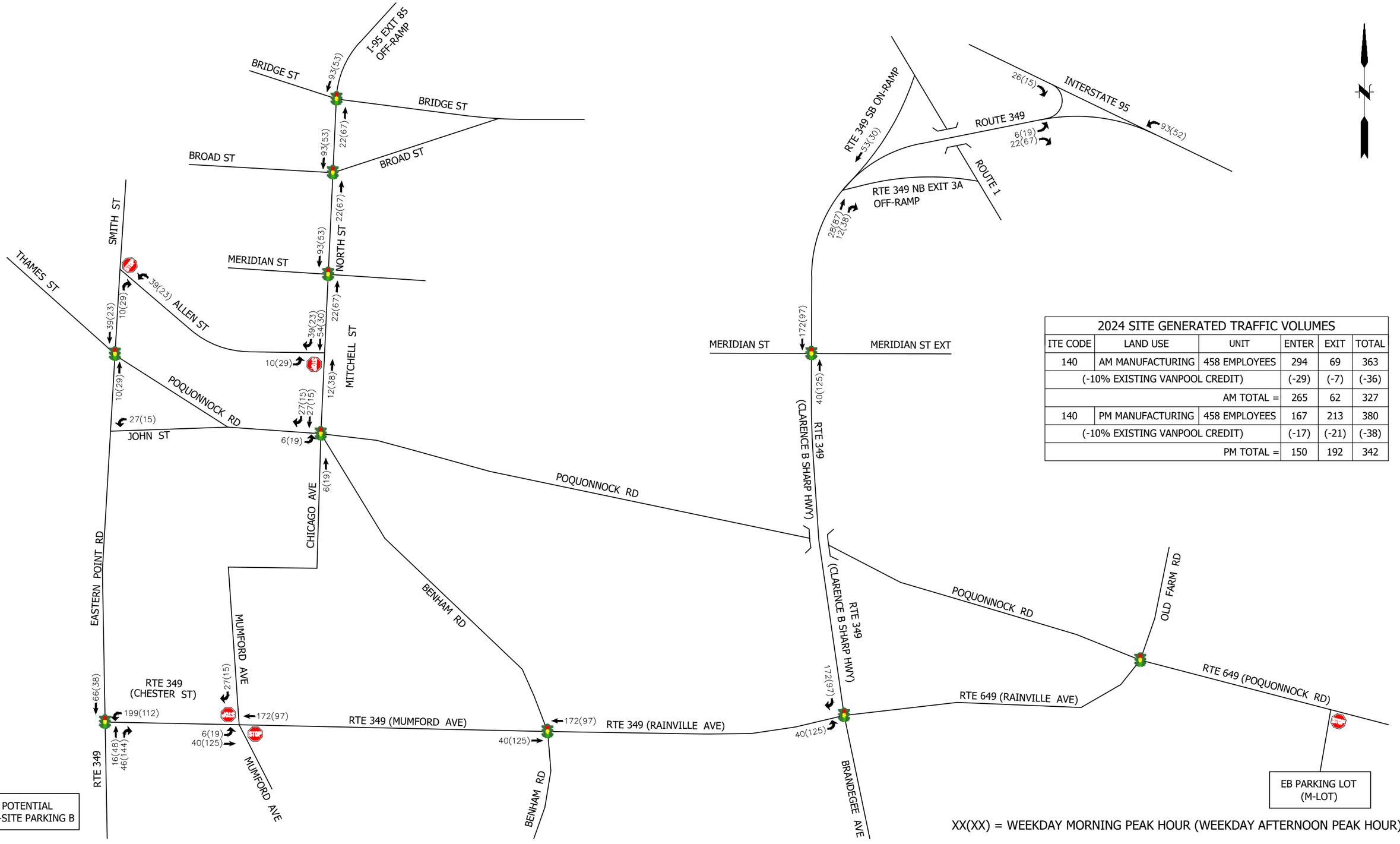

2024 SITE GENERATED TRAFFIC VOLUMES					
ITE CODE	LAND USE	UNIT	ENTER	EXIT	TOTAL
140	AM MANUFACTURING	458 EMPLOYEES	294	69	363
(-10% EXISTING VANPOOL CREDIT)			(-29)	(-7)	(-36)
		AM TOTAL =	265	62	327
140	PM MANUFACTURING	458 EMPLOYEES	167	213	380
(-10% EXISTING VANPOOL CREDIT)			(-17)	(-21)	(-38)
		PM TOTAL =	150	192	342

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FIGURE 5: SITE GENERATED TRAFFIC VOLUMES

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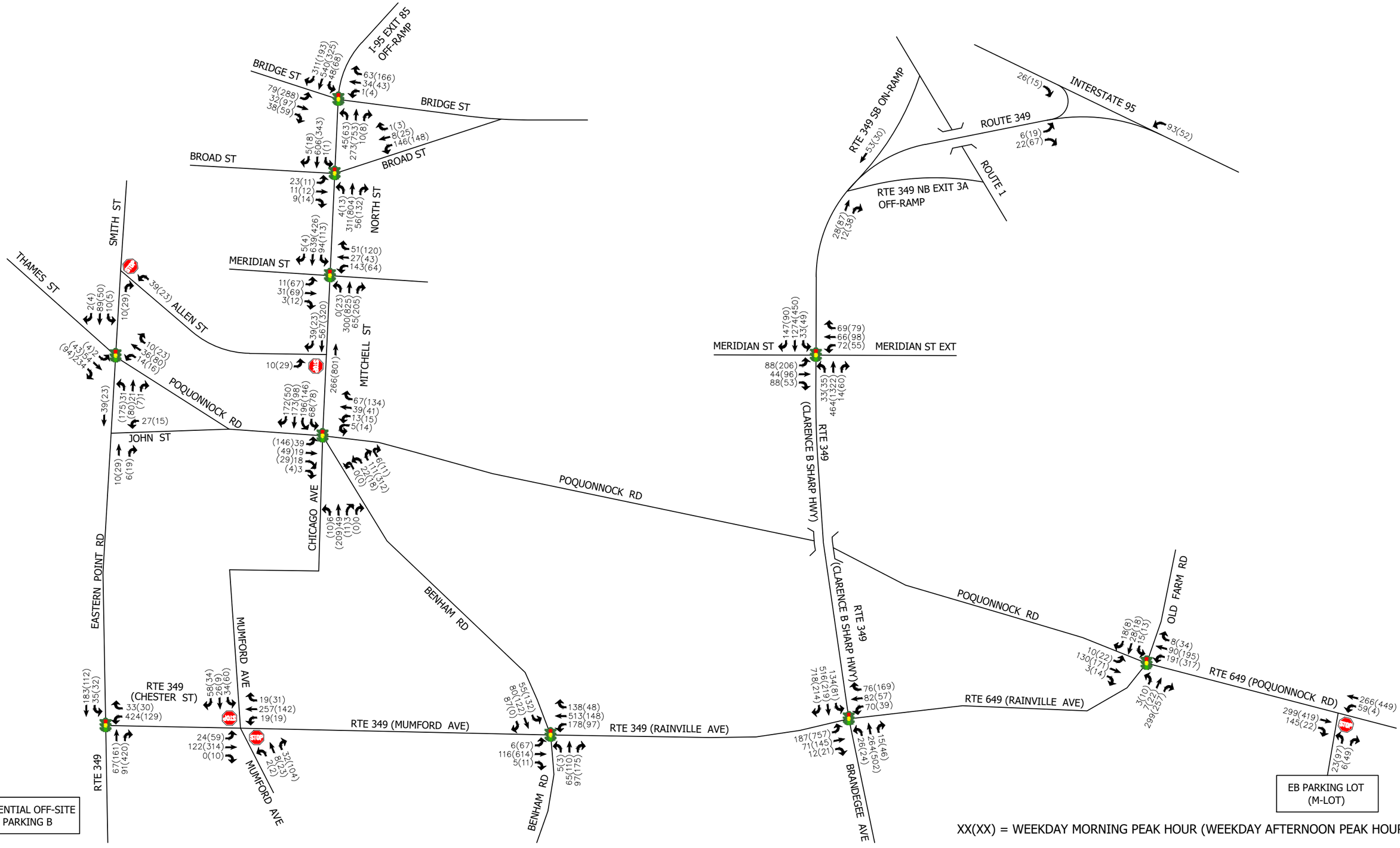

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FIGURE 6: 2024 COMBINED TRAFFIC VOLUMES

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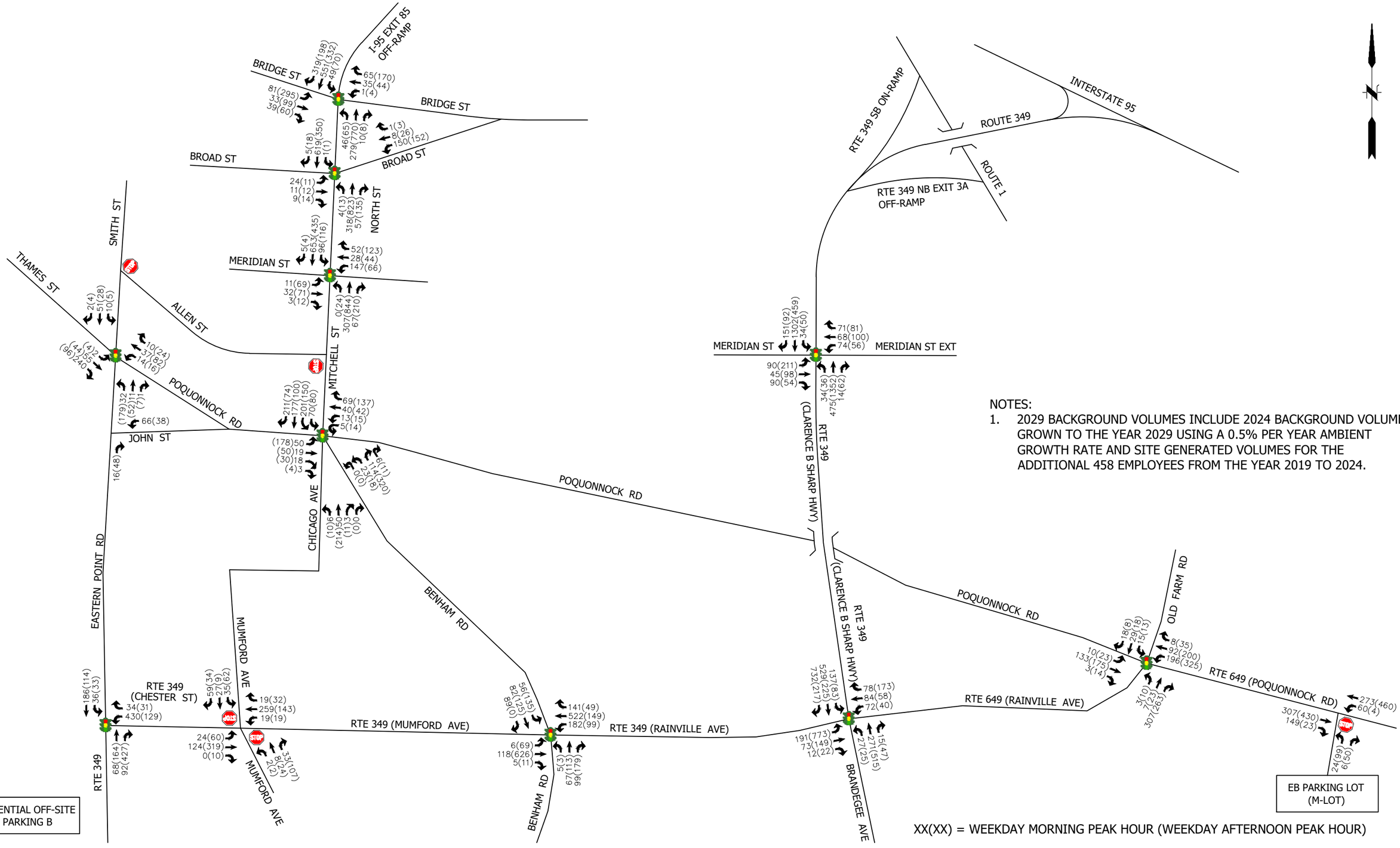

NOTES:

1. 2029 BACKGROUND VOLUMES INCLUDE 2024 BACKGROUND VOLUMES GROWN TO THE YEAR 2029 USING A 0.5% PER YEAR AMBIENT GROWTH RATE AND SITE GENERATED VOLUMES FOR THE ADDITIONAL 458 EMPLOYEES FROM THE YEAR 2019 TO 2024.

XX(XX) = WEEKDAY MORNING PEAK HOUR (WEEKDAY AFTERNOON PEAK HOUR)

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FIGURE 7: 2029 BACKGROUND TRAFFIC CONDITIONS

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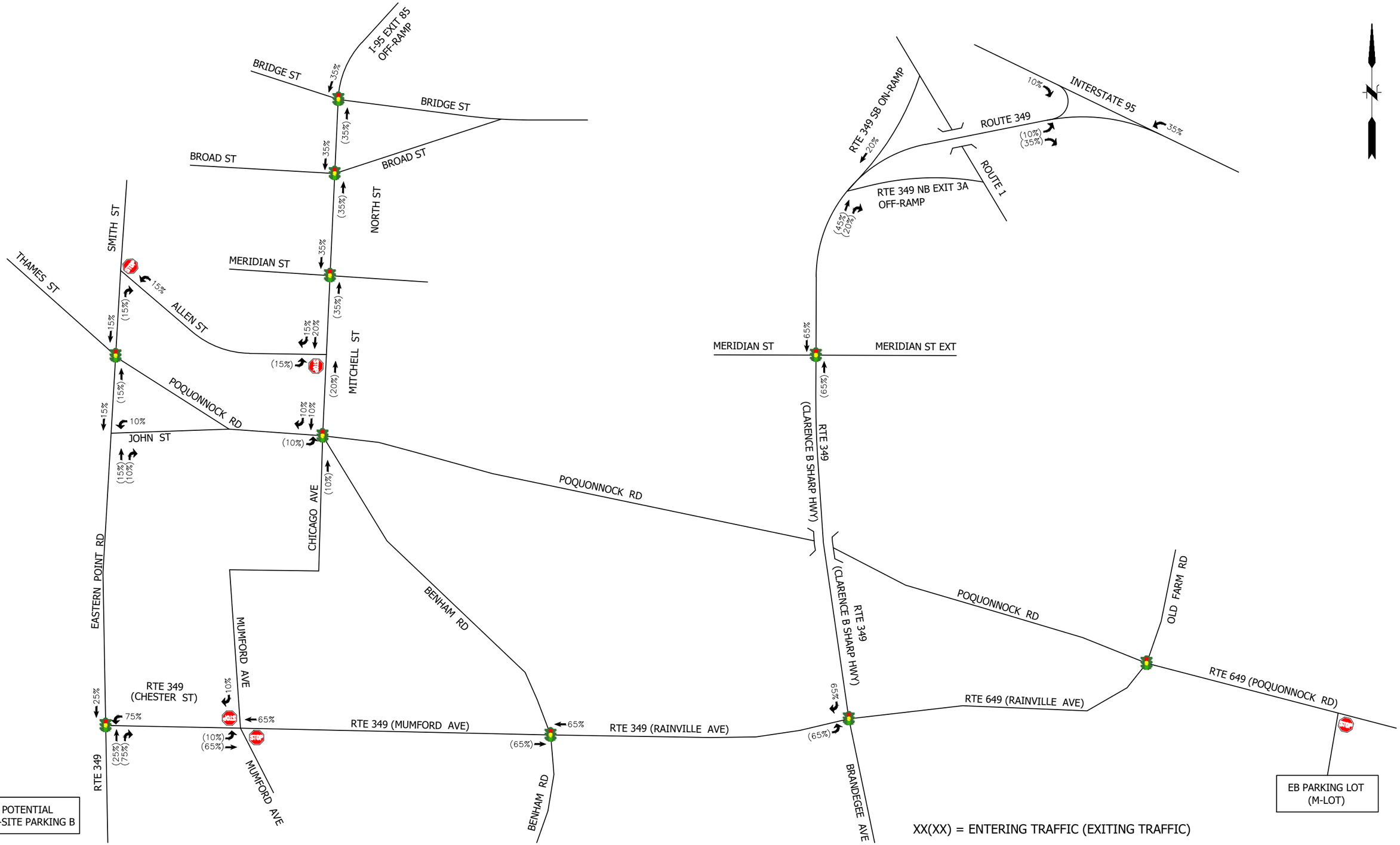

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FIGURE 8: SITE GENERATED TRAFFIC ARRIVAL / DEPARTURE DISTRIBUTION (%)

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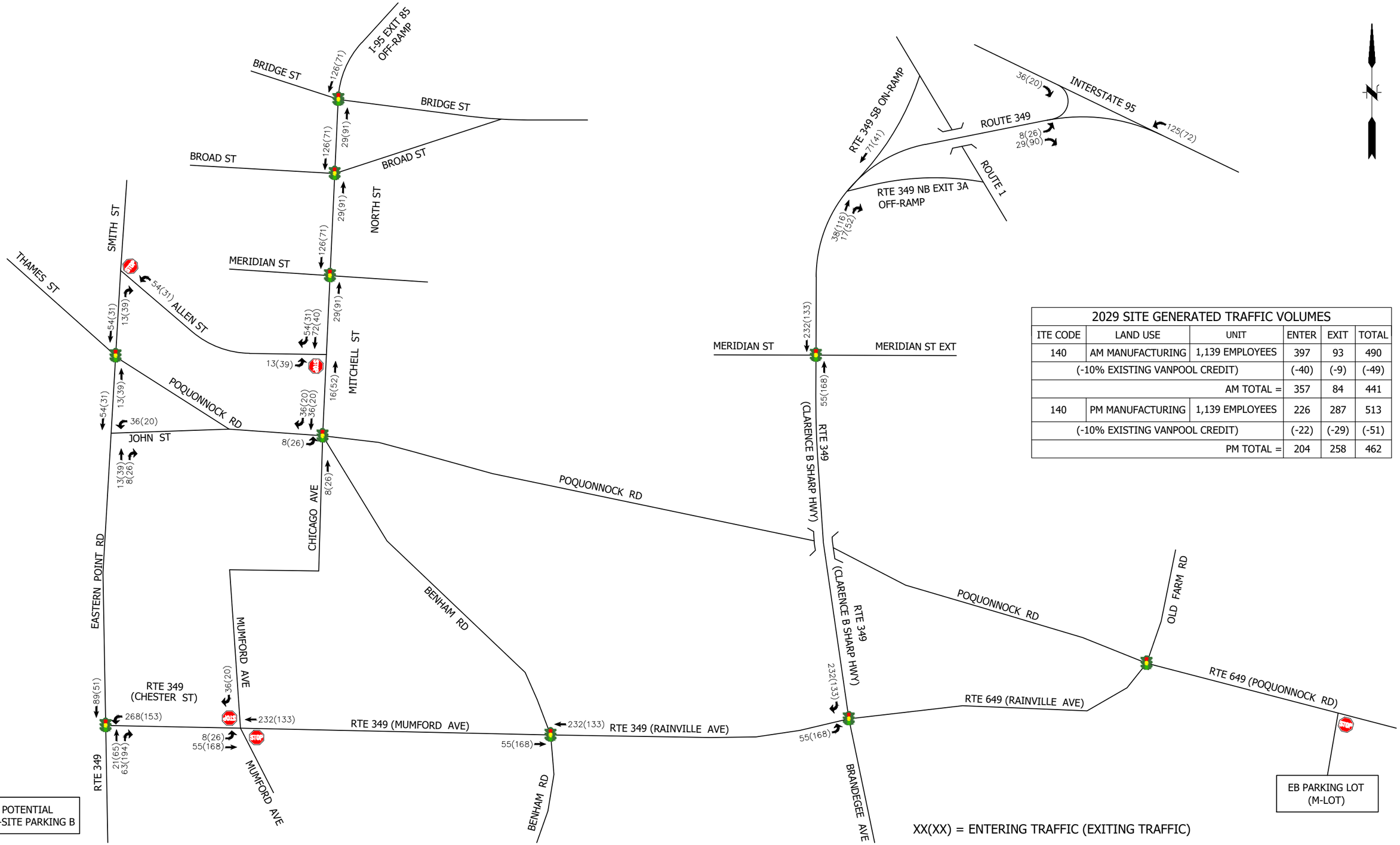

2029 SITE GENERATED TRAFFIC VOLUMES					
ITE CODE	LAND USE	UNIT	ENTER	EXIT	TOTAL
140	AM MANUFACTURING	1,139 EMPLOYEES	397	93	490
(-10% EXISTING VANPOOL CREDIT)			(-40)	(-9)	(-49)
		AM TOTAL =	357	84	441
140	PM MANUFACTURING	1,139 EMPLOYEES	226	287	513
(-10% EXISTING VANPOOL CREDIT)			(-22)	(-29)	(-51)
		PM TOTAL =	204	258	462

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FIGURE 9: SITE GENERATED TRAFFIC VOLUMES

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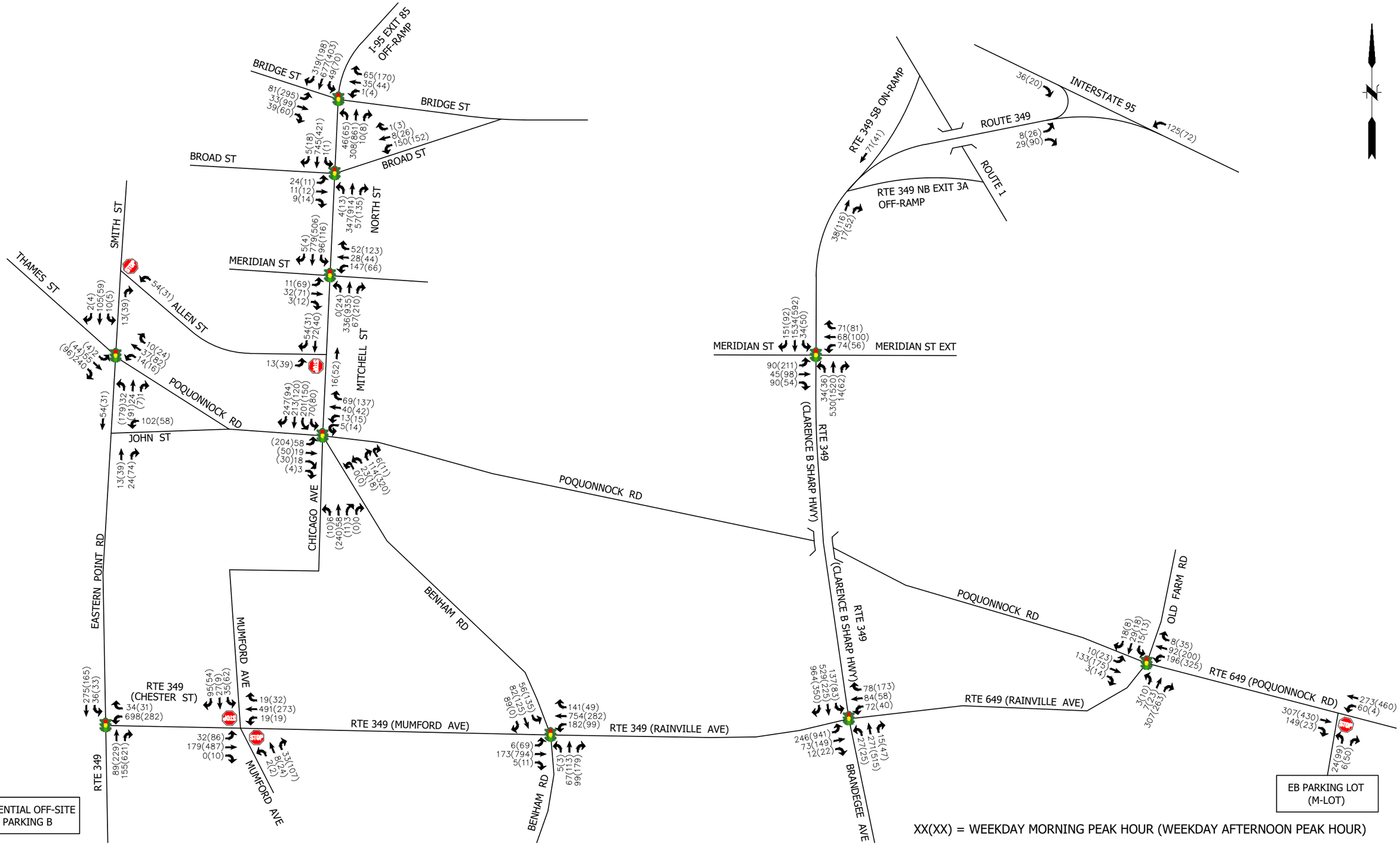

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FIGURE 10: 2029 COMBINED TRAFFIC VOLUMES

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Table 1

Signalized Intersection Level of Service Summary
Electric Boat – Assembly Building Development
Groton, Connecticut

Signalized Intersections	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	2029 Background	2029 Combined	2029 Combined Improved	2029 Background	2029 Combined	2029 Combined Improved
CT Route 349 at Eastern Point Road	0.46 / LOS B*	0.65 / LOS C	N / A	0.35 / LOS B	0.52 / LOS B	N / A
WB Approach	LOS C	LOS C	N / A	LOS B	LOS C	N / A
NB Approach	LOS B	LOS C	N / A	LOS B	LOS B	N / A
SB Approach	LOS B	LOS B	N / A	LOS A	LOS A	N / A
CT Route 349 at Benham Road	0.76 / LOS B	0.89 / LOS C	N / A	0.71 / LOS C	0.84 / LOS C	N / A
EB Approach	LOS B	LOS B	N / A	LOS C	LOS D	N / A
WB Approach	LOS B	LOS C	N / A	LOS B	LOS B	N / A
NB Approach	LOS C	LOS C	N / A	LOS C	LOS C	N / A
SB Approach	LOS C	LOS C	N / A	LOS D	LOS D	N / A
CT Route 349 at Route 649 and Brandegee Avenue	0.69 / LOS C	0.79 / LOS C	0.75 / LOS C	0.84 / LOS E	0.92 / LOS F	0.93 / LOS E
EB Approach	LOS E	LOS E	LOS E	LOS F	LOS F	LOS E
WB Approach	LOS F	LOS F	LOS E	LOS E	LOS E	LOS F
NB Approach	LOS C	LOS C	LOS D	LOS D	LOS D	LOS E

Signalized Intersections	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	2029 Background	2029 Combined	2029 Combined Improved	2029 Background	2029 Combined	2029 Combined Improved
SB Approach	LOS A	LOS A	LOS B	LOS C	LOS B	LOS C
Eastern Point Rd. at Thames St., Smith St. and Poquonnock Rd.	0.18 / LOS B	0.26 / LOS B	N / A	0.32 / LOS B	0.36 / LOS B	N / A
EB Approach	LOS B	LOS B	N / A	LOS C	LOS C	N / A
WB Approach	LOS B	LOS B	N / A	LOS C	LOS C	N / A
NB Approach	LOS B	LOS B	N / A	LOS A	LOS A	N / A
SB Approach	LOS A	LOS A	N / A	LOS A	LOS A	N / A
Poquonnock Rd. at Chicago Ave., Benham Rd., and Mitchell St.	0.91 / LOS F	0.94 / LOS F	0.96 / LOS E	1.06 / LOS F	1.71 / LOS F	1.08 / LOS F
EB Approach	LOS D	LOS E	LOS F	LOS F	LOS F	LOS F
WB Approach	LOS D	LOS D	LOS D	LOS D	LOS D	LOS C
NB Approach	LOS D	LOS D	LOS E	LOS D	LOS D	LOS F
SB Approach	LOS F	LOS F	LOS E	LOS D	LOS D	LOS D
NE Approach	LOS E	LOS E	LOS F	LOS F	LOS F	LOS F
North Street at Meridian Street and Mitchell Street	0.63 / LOS B	0.72 / LOS B	N / A	0.56 / LOS B	0.62 / LOS B	N / A
EB Approach	LOS C	LOS C	N / A	LOS C	LOS C	N / A
WB Approach	LOS C	LOS C	N / A	LOS C	LOS C	N / A
NB Approach	LOS B	LOS C	N / A	LOS B	LOS B	N / A
SB Approach	LOS A	LOS A	N / A	LOS A	LOS A	N / A

Signalized Intersections	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	2029 Background	2029 Combined	2029 Combined Improved	2029 Background	2029 Combined	2029 Combined Improved
North Street at Broad Street	0.67 / LOS B*	0.77 / LOS B	N / A	0.59 / LOS A	0.63 / LOS A	N / A
EB Approach	LOS B	LOS B	N / A	LOS B	LOS B	N / A
WB Approach	LOS C	LOS C	N / A	LOS C	LOS C	N / A
NB Approach	LOS A	LOS A	N / A	LOS A	LOS A	N / A
SB Approach	LOS A	LOS B	N / A	LOS A	LOS A	N / A
Bridge Street at North Street and I-95 Ramps	0.77 / LOS F	0.91 / LOS F	0.87 / LOS F	0.77 / LOS D	0.87 / LOS E	0.85 / LOS D
EB Approach	LOS D	LOS D	LOS D	LOS D	LOS D	LOS E
WB Approach	LOS C	LOS C	LOS C	LOS C	LOS C	LOS C
NB Approach	LOS C	LOS C	LOS D	LOS C	LOS C	LOS D
SB Approach	LOS F	LOS F	LOS F	LOS E	LOS F	LOS C
Route 349 at Meridian Street and Meridian Street Extension	0.89 / LOS D	1.01 / LOS F	0.91 / LOS C	0.71 / LOS C	0.76 / LOS C	N / A
EB Approach	LOS C	LOS C	LOS D	LOS C	LOS C	N / A
WB Approach	LOS C	LOS C	LOS E	LOS C	LOS C	N / A
NB Approach	LOS C	LOS C	LOS B	LOS C	LOS D	N / A
SB Approach	LOS E	LOS F	LOS C	LOS B	LOS B	N / A
CT Route 649 at Rainville Avenue and Old Farms Road	0.34 / LOS B	0.34 / LOS B	N / A	0.53 / LOS B	0.53 / LOS B	N / A
EB Approach	LOS A	LOS A	N / A	LOS A	LOS A	N / A

Signalized Intersections	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	2029 Background	2029 Combined	2029 Combined Improved	2029 Background	2029 Combined	2029 Combined Improved
WB Approach	LOS A	LOS A	N/A	LOS B	LOS B	N/A
NB Approach	LOS C	LOS C	N/A	LOS C	LOS C	N/A
SB Approach	LOS C	LOS C	N/A	LOS C	LOS C	N/A

* Values indicated are intersection v/c Ratio/Level of Service/Delay (sec.)

+ Values indicated are intersection Level of Service/Delay (sec.)

Table 2

Unsignalized Intersection Level of Service Summary
Electric Boat – Assembly Building Development
Groton, Connecticut

Unsignalized Intersections	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	2029 Background	2029 Combined	2029 Combined Improved	2029 Background	2029 Combined	2029 Combined Improved
CT Route 349 at Mumford Avenue #1						
EB Approach	LOS A*	LOS A	N/A	LOS A	LOS A	N/A
WB Approach	LOS A	LOS A	N/A	LOS A	LOS A	N/A
NB Approach	LOS F	LOS F	N/A	LOS E	LOS F	N/A
SB Approach	LOS F	LOS F	N/A	LOS F	LOS F	N/A
Poquonnock Rd. at EB Parking Lot (M-Lot)						
EB Approach	LOS A	LOS A	N/A	LOS A	LOS A	N/A
WB Approach	LOS A	LOS A	N/A	LOS A	LOS A	N/A
NB Approach	LOS B	LOS B	N/A	LOS C	LOS C	N/A

*All values indicated are approach LOS

Table 3

Queue Length Summary Weekday Morning Peak Hour
Electric Boat – Assembly Building Development
Groton, Connecticut

Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
CT Route 349 at Eastern Point Road	WB Left Turn	170 Feet	345 Feet	N/A	320 Feet
	NB Through	70 Feet	100 Feet	N/A	320 Feet
	NB Right Turn	20 Feet	15 Feet	N/A	175 Feet
	SB Left Turn	30 Feet	35 Feet	N/A	125 Feet
	SB Through	130 Feet	240 Feet	N/A	345 Feet
CT Route 349 at Mumford Avenue #1	EB Approach	0 Feet	0 Feet	N/A	325 Feet
	WB Approach	0 Feet	0 Feet	N/A	1,000 Feet
	NB Approach	175 Feet	N/A	N/A	300 Feet
	SB Approach	297 Feet	N/A	N/A	245 Feet
CT Route 349 at Benham Road	EB Approach	50 Feet	70 Feet	N/A	1,000 Feet
	WB Approach	335 Feet	545 Feet	N/A	900 Feet
	NB Left/Through	85 Feet	85 Feet	N/A	215 Feet
	NB Right Turn	35 Feet	35 Feet	N/A	215 Feet
	SB Left Turn	65 Feet	65 Feet	N/A	210 Feet
	SB Through	125 Feet	125 Feet	N/A	210 Feet
CT Route 349 at Route 649 and Brandegee Avenue	EB Left Turn	240 Feet	320 Feet	310 Feet	1,000 Feet
	EB Through	210 Feet	245 Feet	245 Feet	1,000 Feet
	WB Through	380 Feet	380 Feet	285 Feet	>700 Feet
	WB Right Turn	40 Feet	40 Feet	40 Feet	>700 Feet
	NB Approach	165 Feet	165 Feet	235 Feet	>300 Feet
	SB Left Turn	115 Feet	115 Feet	130 Feet	100 Feet
	SB Through	530 Feet	530 Feet	605 Feet	>1,000 Feet
	SB Right Turn	20 Feet	20 Feet	20 Feet	>1,000 Feet

Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
Eastern Point Rd. at Thames St., Smith St. and Poquonnock Rd.	EB Through	35 Feet	35 Feet	N/A	100 Feet
	EB Right Turn	0 Feet	0 Feet	N/A	100 Feet
	WB Approach	40 Feet	40 Feet	N/A	700 Feet
	NB Approach	25 Feet	35 Feet	N/A	>1,000 Feet
	SB Approach	20 Feet	35 Feet	N/A	575 Feet
Poquonnock Rd. at Chicago Ave., Benham Rd., and Mitchell St.	EB Approach	135 Feet	160 Feet	190 Feet	450 Feet
	WB Approach	130 Feet	130 Feet	135 Feet	>1,000 Feet
	NB Approach	170 Feet	170 Feet	200 Feet	720 Feet
	SB Through/Left	545 Feet	545 Feet	440 Feet	300 Feet
	SB Through/Right	375 Feet	505 Feet	340 Feet	300 Feet
	NE Left	85 Feet	95 Feet	125 Feet	640 Feet
Poquonnock Rd. at EB Parking Lot (M-Lot)	EB Approach	0 Feet	0 Feet	N/A	435 Feet
	WB Approach	5 Feet	5 Feet	N/A	485 Feet
	NB Approach	10 Feet	10 Feet	N/A	>100 Feet
North Street at Meridian Street and Mitchell Street	EB Approach	40 Feet	40 Feet	N/A	920 Feet
	WB Through/Right	45 Feet	45 Feet	N/A	2,095 Feet
	WB Left	120 Feet	120 Feet	N/A	275 Feet
	NB Left	0 Feet	0 Feet	N/A	70 Feet
	NB Through	95 Feet	105 Feet	N/A	>2,000 Feet
	NB Right	20 Feet	20 Feet	N/A	330 Feet
	SB Through/Right	295 Feet	405 Feet	N/A	1,000 Feet
	SB Left	30 Feet	30 Feet	N/A	70 Feet
North Street at Broad Street	EB Approach	25 Feet	25 Feet	N/A	700 Feet
	WB Through/Right	10 Feet	10 Feet	N/A	220 Feet
	WB Left	75 Feet	75 Feet	N/A	220 Feet
	NB Approach	45 Feet	50 Feet	N/A	>1,000 Feet
	SB Approach	230 Feet	380 Feet	N/A	310 Feet

Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
Bridge Street at North Street and I-95 Ramps	EB Left	55 Feet	55 Feet	60 Feet	660 Feet
	EB Through/Right	70 Feet	70 Feet	75 Feet	655 Feet
	WB Right	5 Feet	5 Feet	5 Feet	340 Feet
	WB Through/Left	55 Feet	55 Feet	60 Feet	350 Feet
	NB Left	70 Feet	65 Feet	70 Feet	45 Feet
	NB Through/Right	165 Feet	175 Feet	185 Feet	280 Feet
	SB Left	65 Feet	60 Feet	55 Feet	140 Feet
	SB Through	860 Feet	1045 Feet	980 Feet	1,270 Feet
	SB Right	0 Feet	0 Feet	0 Feet	>1,000 Feet
Route 349 at Meridian Street and Meridian Street Extension	EB Through/Right	55 Feet	55 Feet	90 Feet	>1,000 feet
	EB Left	50 Feet	50 Feet	65 Feet	835 Feet
	WB Right	25 Feet	25 Feet	30 Feet	155 Feet
	WB Through	75 Feet	75 Feet	90 Feet	>2,000 feet
	WB Left	85 Feet	85 Feet	120 Feet	140 Feet
	NB Left	55 Feet	55 Feet	60 Feet	180 Feet
	NB Through/Right	130 Feet	145 Feet	95 Feet	200 Feet
	SB Right	45 Feet	45 Feet	30 Feet	250 Feet
	SB Through	755 Feet	940 Feet	555 Feet	>4,000 Feet
	SB Left	50 Feet	50 Feet	50 Feet	260 Feet
CT Route 649 at Rainville Avenue and Old Farms Road	EB Left	10 Feet	10 Feet	N/A	200 Feet
	EB Through/Right	65 Feet	65 Feet	N/A	>2,000 Feet
	WB Left	60 Feet	60 Feet	N/A	210 Feet
	WB Through/Right	30 Feet	30 Feet	N/A	>2,000 Feet
	NB Through/Left	15 Feet	15 Feet	N/A	990 Feet
	NB Right	35 Feet	35 Feet	N/A	110 Feet
	SB Approach	50 Feet	50 Feet	N/A	545 Feet

Table 4

Queue Length Summary Weekday Afternoon Peak Hour
Electric Boat – Assembly Building Development
Groton, Connecticut

Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
CT Route 349 at Eastern Point Road	WB Left Turn	70 Feet	155 Feet	N/A	320 Feet
	NB Through	120 Feet	165 Feet	N/A	320 Feet
	NB Right Turn	10 Feet	0 Feet	N/A	175 Feet
	SB Left Turn	25 Feet	20 Feet	N/A	125 Feet
	SB Through	60 Feet	85 Feet	N/A	345 Feet
CT Route 349 at Mumford Avenue #1	EB Approach	0 Feet	5 Feet	N/A	325 Feet
	WB Approach	5 Feet	5 Feet	N/A	1,000 Feet
	NB Approach	105 Feet	345 Feet	N/A	300 Feet
	SB Approach	205 Feet	N/A	N/A	245 Feet
CT Route 349 at Benham Road	EB Approach	360 Feet	510 Feet	N/A	1,000 Feet
	WB Approach	85 Feet	140 Feet	N/A	900 Feet
	NB Left/Through	120 Feet	120 Feet	N/A	215 Feet
	NB Right Turn	45 Feet	45 Feet	N/A	215 Feet
	SB Left Turn	160 Feet	160 Feet	N/A	210 Feet
	SB Through	135 Feet	135 Feet	N/A	210 Feet
CT Route 349 at Route 649 and Brandegee Avenue	EB Left Turn	810 Feet	1025 Feet	905 Feet	1,000 Feet
	EB Through	805 Feet	1020 Feet	890 Feet	1,000 Feet
	WB Through	165 Feet	165 Feet	215 Feet	>700 Feet
	WB Right Turn	20 Feet	20 Feet	20 Feet	>700 Feet
	NB Approach	410 Feet	410 Feet	500 Feet	>300 Feet
	SB Left Turn	100 Feet	100 Feet	115 Feet	100 Feet
	SB Through	270 Feet	270 Feet	295 Feet	>1,000 Feet
	SB Right Turn	10 Feet	10 Feet	10 Feet	>1,000 Feet

Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
Eastern Point Rd. at Thames St., Smith St. and Poquonnock Rd.	EB Through	45 Feet	45 Feet	N/A	100 Feet
	EB Right Turn	35 Feet	35 Feet	N/A	100 Feet
	WB Approach	85 Feet	85 Feet	N/A	700 Feet
	NB Approach	115 Feet	140 Feet	N/A	>1,000 Feet
	SB Approach	15 Feet	20 Feet	N/A	575 Feet
Poquonnock Rd. at Chicago Ave., Benham Rd., and Mitchell St.	EB Approach	410 Feet	450 Feet	395 Feet	450 Feet
	WB Approach	165 Feet	165 Feet	150 Feet	>1,000 Feet
	NB Approach	360 Feet	360 Feet	440 Feet	720 Feet
	SB Through/Left	225 Feet	225 Feet	225 Feet	300 Feet
	SB Through/Right	85 Feet	120 Feet	120 Feet	300 Feet
	NE Left	340 Feet	385 Feet	385 Feet	640 Feet
Poquonnock Rd. at EB Parking Lot (M-Lot)	EB Approach	0 Feet	0 Feet	N/A	435 Feet
	WB Approach	0 Feet	0 Feet	N/A	485 Feet
	NB Approach	75 Feet	75 Feet	N/A	>100 Feet
North Street at Meridian Street and Mitchell Street	EB Approach	115 Feet	115 Feet	N/A	920 Feet
	WB Through/Right	55 Feet	55 Feet	N/A	2,095 Feet
	WB Left	60 Feet	60 Feet	N/A	275 Feet
	NB Left	20 Feet	20 Feet	N/A	70 Feet
	NB Through	290 Feet	370 Feet	N/A	>2,000 Feet
	NB Right	55 Feet	65 Feet	N/A	330 Feet
	SB Through/Right	170 Feet	210 Feet	N/A	1,000 Feet
	SB Left	45 Feet	45 Feet	N/A	70 Feet
North Street at Broad Street	EB Approach	20 Feet	20 Feet	N/A	700 Feet
	WB Through/Right	20 Feet	20 Feet	N/A	220 Feet
	WB Left	80 Feet	80 Feet	N/A	220 Feet
	NB Approach	155 Feet	180 Feet	N/A	>1000 Feet
	SB Approach	115 Feet	140 Feet	N/A	310 Feet

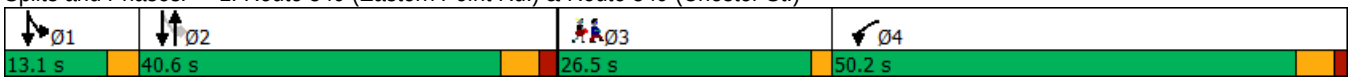
Intersection	Approach Lane	2029 Background	2029 Combined	2029 Combined Improved	Available Storage
Bridge Street at North Street and I-95 Ramps	EB Left	155 Feet	155 Feet	165 Feet	660 Feet
	EB Through/Right	165 Feet	165 Feet	180 Feet	655 Feet
	WB Right	10 Feet	10 Feet	10 Feet	340 Feet
	WB Through/Left	80 Feet	80 Feet	85 Feet	350 Feet
	NB Left	65 Feet	65 Feet	70 Feet	45 Feet
	NB Through/Right	340 Feet	395 Feet	415 Feet	280 Feet
	SB Left	95 Feet	95 Feet	80 Feet	140 Feet
	SB Through	500 Feet	630 Feet	470 Feet	1270 Feet
	SB Right	0 Feet	0 Feet	0 Feet	>1,000 Feet
Route 349 at Meridian Street and Meridian Street Extension	EB Through/Right	105 Feet	105 Feet	N/A	>1,000 feet
	EB Left	100 Feet	100 Feet	N/A	835 Feet
	WB Right	30 Feet	30 Feet	N/A	155 Feet
	WB Through	110 Feet	110 Feet	N/A	>2,000 feet
	WB Left	75 Feet	75 Feet	N/A	140 Feet
	NB Left	50 Feet	50 Feet	N/A	180 Feet
	NB Through/Right	465 Feet	555 Feet	N/A	200 Feet
	SB Right	10 Feet	15 Feet	N/A	250 Feet
	SB Through	180 Feet	235 Feet	N/A	>4,000 Feet
	SB Left	65 Feet	65 Feet	N/A	260 Feet
CT Route 649 at Rainville Avenue and Old Farms Road	EB Left	15 Feet	15 Feet	N/A	200 Feet
	EB Through/Right	90 Feet	90 Feet	N/A	>2,000 Feet
	WB Left	90 Feet	90 Feet	N/A	210 Feet
	WB Through/Right	65 Feet	65 Feet	N/A	>2,000 Feet
	NB Through/Left	45 Feet	45 Feet	N/A	990 Feet
	NB Right	20 Feet	20 Feet	N/A	110 Feet
	SB Approach	35 Feet	35 Feet	N/A	545 Feet

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Lane Configurations							
Traffic Volume (vph)	430	34	68	92	36	186	
Future Volume (vph)	430	34	68	92	36	186	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	11	12	15	
Storage Length (ft)	0	0		175	125		
Storage Lanes	2	0		1	1		
Taper Length (ft)	25				60		
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.98				1.00		
Frt	0.987			0.850			
Flt Protected	0.956				0.950		
Satd. Flow (prot)	3410	0	1801	1531	1770	2049	
Flt Permitted	0.956				0.681		
Satd. Flow (perm)	3333	0	1801	1531	1263	2049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	9			133			
Link Speed (mph)	30		25			25	
Link Distance (ft)	406		522			429	
Travel Time (s)	9.2		14.2			11.7	
Confl. Peds. (#/hr)	17				6		
Peak Hour Factor	0.69	0.57	0.57	0.69	0.34	0.66	
Adj. Flow (vph)	623	60	119	133	106	282	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	683	0	119	133	106	282	
Turn Type	Prot		NA	Perm	D.P+P	NA	
Protected Phases	4		2		1	1 2	3
Permitted Phases				2	2		
Detector Phase	4		2	2	1	1 2	
Switch Phase							
Minimum Initial (s)	9.0		15.0	15.0	4.0		5.0
Minimum Split (s)	14.2		20.6	20.6	7.1		24.0
Total Split (s)	50.2		40.6	40.6	13.1		26.5
Total Split (%)	38.5%		31.1%	31.1%	10.0%		20%
Maximum Green (s)	45.0		35.0	35.0	10.0		24.5
Yellow Time (s)	3.8		3.8	3.8	3.0		2.0
All-Red Time (s)	1.4		1.8	1.8	0.1		0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	5.2		5.6	5.6	3.1		
Lead/Lag	Lag		Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes
Vehicle Extension (s)	2.0		2.5	2.5	1.0		3.0
Recall Mode	None		Min	Min	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)	16.5		16.3	16.3	27.8	31.1	
Actuated g/C Ratio	0.28		0.27	0.27	0.47	0.52	
v/c Ratio	0.72		0.24	0.26	0.16	0.26	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Control Delay	24.9		23.2	7.2	12.1	12.1	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	24.9		23.2	7.2	12.1	12.1	
LOS	C		C	A	B	B	
Approach Delay	24.9		14.7			12.1	
Approach LOS	C		B			B	
Queue Length 50th (ft)	95		28	0	13	39	
Queue Length 95th (ft)	171		68	20	28	132	
Internal Link Dist (ft)	326		442			349	
Turn Bay Length (ft)				175	125		
Base Capacity (vph)	2747		1127	1008	714	1768	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.25		0.11	0.13	0.15	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130.4			
Actuated Cycle Length: 59.5			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 34.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Route 349 (Eastern Point Rd.) & Route 349 (Chester St.)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	430	34	68	92	36	186
Future Volume (vph)	430	34	68	92	36	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	12	15
Total Lost time (s)	5.2		5.6	5.6	3.1	3.1
Lane Util. Factor	0.97		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3411		1801	1531	1765	2049
Flt Permitted	0.96		1.00	1.00	0.68	1.00
Satd. Flow (perm)	3411		1801	1531	1265	2049
Peak-hour factor, PHF	0.69	0.57	0.57	0.69	0.34	0.66
Adj. Flow (vph)	623	60	119	133	106	282
RTOR Reduction (vph)	7	0	0	97	0	0
Lane Group Flow (vph)	676	0	119	36	106	282
Confl. Peds. (#/hr)	17				6	
Turn Type	Prot		NA	Perm	D.P+P	NA
Protected Phases	4		2		1	1 2
Permitted Phases				2	2	
Actuated Green, G (s)	16.5		16.4	16.4	25.2	28.3
Effective Green, g (s)	16.5		16.4	16.4	25.2	28.3
Actuated g/C Ratio	0.27		0.27	0.27	0.42	0.47
Clearance Time (s)	5.2		5.6	5.6	3.1	
Vehicle Extension (s)	2.0		2.5	2.5	1.0	
Lane Grp Cap (vph)	931		489	415	600	960
v/s Ratio Prot	c0.20		0.07		0.03	c0.14
v/s Ratio Perm				0.02	0.05	
v/c Ratio	0.73		0.24	0.09	0.18	0.29
Uniform Delay, d1	19.9		17.2	16.4	10.9	9.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4		0.2	0.1	0.1	0.1
Delay (s)	22.3		17.3	16.5	11.0	10.0
Level of Service	C		B	B	B	A
Approach Delay (s)	22.3		16.9			10.2
Approach LOS	C		B			B

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	15.9
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
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)	24	124	0	19	259	19	2	8	33	35	27	59
Future Volume (vph)	24	124	0	19	259	19	2	8	33	35	27	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.988			0.908			0.945	
Flt Protected		0.990			0.998			0.995			0.987	
Satd. Flow (prot)	0	3270	0	0	3490	0	0	1851	0	0	1911	0
Flt Permitted		0.990			0.998			0.995			0.987	
Satd. Flow (perm)	0	3270	0	0	3490	0	0	1851	0	0	1911	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		406			1171			266			576	
Travel Time (s)		9.2			26.6			7.3			15.7	
Confl. Peds. (#/hr)	14			439			13					380
Peak Hour Factor	0.75	0.95	0.92	0.92	0.67	0.53	0.25	0.40	0.55	0.71	0.43	0.78
Adj. Flow (vph)	32	131	0	21	387	36	8	20	60	49	63	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	444	0	0	88	0	0	188	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	124	0	19	259	19	2	8	33	35	27	59
Future Volume (Veh/h)	24	124	0	19	259	19	2	8	33	35	27	59
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.95	0.92	0.92	0.67	0.53	0.25	0.40	0.55	0.71	0.43	0.78
Hourly flow rate (vph)	32	131	0	21	387	36	8	20	60	49	63	76
Pedestrians		380						439			14	
Lane Width (ft)		10.0						15.0			15.0	
Walking Speed (ft/s)		3.5						3.5			3.5	
Percent Blockage		30						52			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		406			1171							
pX, platoon unblocked												
vC, conflicting volume	437			570			1357	1113	504	660	1095	606
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	437			570			1357	1113	504	660	1095	606
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
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 %	97			96			0	78	75	60	32	75
cM capacity (veh/h)	1101			477			7	90	245	121	92	302

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	98	66	214	230	88	188
Volume Left	32	0	21	0	8	49
Volume Right	0	0	0	36	60	76
cSH	1101	1700	477	1700	56	141
Volume to Capacity	0.03	0.04	0.04	0.14	1.57	1.34
Queue Length 95th (ft)	2	0	3	0	202	297
Control Delay (s)	2.9	0.0	1.8	0.0	446.2	252.0
Lane LOS	A		A		F	F
Approach Delay (s)	1.7		0.9		446.2	252.0
Approach LOS					F	F

Intersection Summary				
Average Delay	98.9			
Intersection Capacity Utilization	40.6%	ICU Level of Service		A
Analysis Period (min)	15			

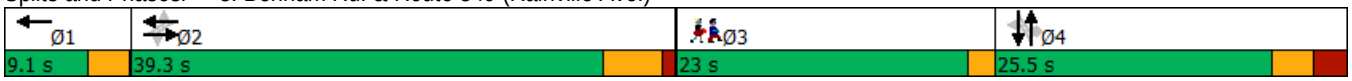
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	118	5	182	522	141	5	67	99	56	82	89
Future Volume (vph)	6	118	5	182	522	141	5	67	99	56	82	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	14	10	10	10
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.990			0.976				0.850		0.924	
Flt Protected		0.997			0.989			0.994		0.950		
Satd. Flow (prot)	0	3260	0	0	3189	0	0	1728	1689	1652	1606	0
Flt Permitted		0.902			0.723			0.941		0.692		
Satd. Flow (perm)	0	2950	0	0	2331	0	0	1636	1689	1203	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			30				124		49	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			1087			448			267	
Travel Time (s)		26.6			24.7			10.2			6.1	
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.62	0.69	0.38	0.80	0.80	0.86	0.42	0.75	0.80	0.69	0.61	0.64
Adj. Flow (vph)	10	171	13	228	653	164	12	89	124	81	134	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	194	0	0	1045	0	0	101	124	81	273	0
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Detector Phase	2	2		2	1 2		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0			9.0	9.0	9.0	9.0	9.0	
Minimum Split (s)	17.2	17.2		17.2			14.5	14.5	14.5	14.5	14.5	
Total Split (s)	39.3	39.3		39.3			25.5	25.5	25.5	25.5	25.5	
Total Split (%)	40.6%	40.6%		40.6%			26.3%	26.3%	26.3%	26.3%	26.3%	
Maximum Green (s)	34.1	34.1		34.1			20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.2	4.2		4.2			3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0			2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.2						5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag			Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0			2.5	2.5	2.5	2.5	2.5	
Recall Mode	Min	Min		Min			None	None	None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		31.0			42.8			15.4	15.4	15.4	15.4	
Actuated g/C Ratio		0.44			0.61			0.22	0.22	0.22	0.22	
v/c Ratio		0.15			0.73			0.28	0.27	0.31	0.70	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	6.0	5.0
Minimum Split (s)	9.1	23.0
Total Split (s)	9.1	23.0
Total Split (%)	9%	24%
Maximum Green (s)	6.0	21.0
Yellow Time (s)	3.0	2.0
All-Red Time (s)	0.1	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	0.2	3.0
Recall Mode	Max	None
Walk Time (s)		7.0
Flash Dont Walk (s)		14.0
Pedestrian Calls (#/hr)		1
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.0			16.6			28.4	7.7	29.9	33.8	
Queue Delay		0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay		14.0			16.6			28.4	7.7	29.9	33.8	
LOS		B			B			C	A	C	C	
Approach Delay		14.0			16.6			17.0			32.9	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)		21			124			36	0	29	87	
Queue Length 95th (ft)		50			333			83	33	64	127	
Internal Link Dist (ft)		1091			1007			368			187	
Turn Bay Length (ft)									250			
Base Capacity (vph)		1504			1584			487	590	358	513	
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		0.13			0.66			0.21	0.21	0.23	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 96.9			
Actuated Cycle Length: 70.5			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Benham Rd. & Route 349 (Rainville Ave.)



Lane Group	Ø1	Ø3
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	118	5	182	522	141	5	67	99	56	82	89
Future Volume (vph)	6	118	5	182	522	141	5	67	99	56	82	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	14	10	10	10
Total Lost time (s)		5.2			3.1			5.5	5.5	5.5	5.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.99			0.98			1.00	0.85	1.00	0.92	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3262			3191			1728	1689	1652	1606	
Flt Permitted		0.90			0.72			0.94	1.00	0.69	1.00	
Satd. Flow (perm)		2948			2332			1636	1689	1203	1606	
Peak-hour factor, PHF	0.62	0.69	0.38	0.80	0.80	0.86	0.42	0.75	0.80	0.69	0.61	0.64
Adj. Flow (vph)	10	171	13	228	652	164	12	89	124	81	134	139
RTOR Reduction (vph)	0	5	0	0	13	0	0	0	97	0	39	0
Lane Group Flow (vph)	0	189	0	0	1032	0	0	101	27	81	234	0
Confl. Peds. (#/hr)							1					
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)		31.0			40.4			15.3	15.3	15.3	15.3	
Effective Green, g (s)		31.0			40.4			15.3	15.3	15.3	15.3	
Actuated g/C Ratio		0.43			0.57			0.21	0.21	0.21	0.21	
Clearance Time (s)		5.2						5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0						2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)		1278			1317			350	361	257	343	
v/s Ratio Prot											c0.15	
v/s Ratio Perm		0.06			c0.44			0.06	0.02	0.07		
v/c Ratio		0.15			0.78			0.29	0.07	0.32	0.68	
Uniform Delay, d1		12.3			12.1			23.5	22.4	23.7	25.9	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1			3.1			0.3	0.1	0.5	5.1	
Delay (s)		12.3			15.3			23.9	22.5	24.2	31.0	
Level of Service		B			B			C	C	C	C	
Approach Delay (s)		12.3			15.3			23.1			29.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	15.8
Intersection Capacity Utilization	56.2%	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)	191	73	12	72	84	78	27	271	15	137	529	732
Future Volume (vph)	191	73	12	72	84	78	27	271	15	137	529	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.986				0.850		0.992				0.850
Flt Protected	0.950	0.983			0.975			0.994		0.950		
Satd. Flow (prot)	1569	1658	0	0	1695	1478	0	3257	0	1652	1739	1478
Flt Permitted	0.950	0.983			0.975			0.809		0.489		
Satd. Flow (perm)	1569	1658	0	0	1695	1478	0	2650	0	850	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				98		4				796
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							10					
Peak Hour Factor	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	220	94	16	111	102	98	50	315	20	161	615	796
Shared Lane Traffic (%)	26%											
Lane Group Flow (vph)	163	167	0	0	213	98	0	385	0	161	615	796
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	26.3	26.3		18.8	18.8	18.8	66.3	66.3		15.1		
Total Split (%)	17.5%	17.5%		12.5%	12.5%	12.5%	44.2%	44.2%		10.1%		
Maximum Green (s)	21.8	21.8		14.3	14.3	14.3	61.8	61.8		10.6		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.9	19.9			14.4	14.4		62.1		72.8	77.3	124.3
Actuated g/C Ratio	0.15	0.15			0.11	0.11		0.48		0.57	0.60	0.97
v/c Ratio	0.67	0.65			1.13	0.39		0.30		0.29	0.59	0.55

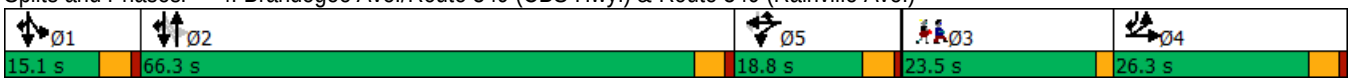
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	23.5
Total Split (s)	23.5
Total Split (%)	16%
Maximum Green (s)	21.5
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	3
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	66.9	63.7			155.5	15.7		22.1		14.7	20.5	1.6
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	66.9	63.7			155.5	15.7		22.1		14.7	20.5	1.6
LOS	E	E			F	B		C		B	C	A
Approach Delay		65.3			111.5			22.1			10.4	
Approach LOS		E			F			C			B	
Queue Length 50th (ft)	131	131			~200	0		95		54	289	0
Queue Length 95th (ft)	#238	209			#379	40		164		116	530	19
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	266	284			189	252		1279		546	1043	1452
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	0.61	0.59			1.13	0.39		0.30		0.29	0.59	0.55

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 128.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 31.2		Intersection LOS: C	
Intersection Capacity Utilization 77.5%		ICU Level of Service D	
Analysis Period (min) 15			

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

Splits and Phases: 4: Brandegee Ave./Route 349 (CBS Hwy.) & Route 349 (Rainville Ave.)



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	73	12	72	84	78	27	271	15	137	529	732
Future Volume (vph)	191	73	12	72	84	78	27	271	15	137	529	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.97	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1569	1658			1694	1478		3255		1652	1739	1478
Flt Permitted	0.95	0.98			0.97	1.00		0.81		0.49	1.00	1.00
Satd. Flow (perm)	1569	1658			1694	1478		2649		850	1739	1478
Peak-hour factor, PHF	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	220	94	16	111	102	98	50	315	20	161	615	796
RTOR Reduction (vph)	0	3	0	0	0	87	0	2	0	0	0	87
Lane Group Flow (vph)	163	164	0	0	213	11	0	383	0	161	615	709
Confl. Peds. (#/hr)							10					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	19.9	19.9			14.4	14.4		62.1		72.8	77.3	116.1
Effective Green, g (s)	19.9	19.9			14.4	14.4		62.1		72.8	77.3	116.1
Actuated g/C Ratio	0.15	0.15			0.11	0.11		0.48		0.56	0.59	0.89
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	239	253			187	163		1261		540	1030	1366
v/s Ratio Prot	c0.10	0.10			c0.13	0.01				0.02	c0.35	c0.40
v/s Ratio Perm								0.14		0.14		0.08
v/c Ratio	0.68	0.65			1.14	0.07		0.30		0.30	0.60	0.52
Uniform Delay, d1	52.3	52.0			58.0	52.0		20.9		14.2	16.7	1.5
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	7.8	5.9			108.2	0.2		0.6		0.3	0.9	0.3
Delay (s)	60.0	57.8			166.2	52.1		21.5		14.5	17.7	1.8
Level of Service	E	E			F	D		C		B	B	A
Approach Delay (s)		58.9			130.2			21.5			9.3	
Approach LOS		E			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

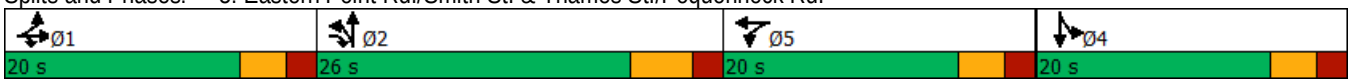
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	240	14	37	10	32	11	1	10	51	2
Future Volume (vph)	2	55	240	14	37	10	32	11	1	10	51	2
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
Ped Bike Factor		0.98			0.97			0.98			1.00	
Frt			0.850		0.967			0.993			0.996	
Flt Protected		0.996			0.988			0.967			0.994	
Satd. Flow (prot)	0	1855	1583	0	1780	0	0	1789	0	0	1844	0
Flt Permitted		0.996			0.988			0.967			0.994	
Satd. Flow (perm)	0	1813	1583	0	1730	0	0	1760	0	0	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			421		16			3			2	
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		678			836			704			713	
Travel Time (s)		15.4			22.8			19.2			19.4	
Confl. Peds. (#/hr)	121			46			13			4		
Peak Hour Factor	0.25	0.55	0.57	0.70	0.88	0.50	0.62	0.55	0.25	0.62	0.49	0.50
Adj. Flow (vph)	8	100	421	20	42	20	52	20	4	16	104	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	421	0	82	0	0	76	0	0	124	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Detector Phase	1	1	1 2	5	5		2	2		4	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		6.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		26.0	26.0		11.0	11.0	
Total Split (s)	20.0	20.0		20.0	20.0		26.0	26.0		20.0	20.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		30.2%	30.2%		23.3%	23.3%	
Maximum Green (s)	15.0	15.0		15.0	15.0		20.0	20.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			5.0	
Lead/Lag	Lead	Lead					Lag	Lag				
Lead-Lag Optimize?	Yes	Yes					Yes	Yes				
Vehicle Extension (s)	2.0	2.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)		10.0	39.4		9.4			21.3			10.0	
Actuated g/C Ratio		0.15	0.61		0.14			0.33			0.15	
v/c Ratio		0.38	0.37		0.30			0.13			0.44	
Control Delay		32.8	2.4		27.9			21.0			32.9	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		32.8	2.4		27.9			21.0			32.9	
LOS		C	A		C			C			C	
Approach Delay		8.6			27.9			21.0			32.9	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)		42	0		25			22			47	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		56	0		68			37			53	
Internal Link Dist (ft)		598			756			624			633	
Turn Bay Length (ft)												
Base Capacity (vph)		455	1111		449			588			454	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.24	0.38		0.18			0.13			0.27	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 65.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 39.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Eastern Point Rd./Smith St. & Thames St./Poquonnock Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	240	14	37	10	32	11	1	10	51	2
Future Volume (vph)	2	55	240	14	37	10	32	11	1	10	51	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			6.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			1.00	
Flt Protected		1.00	1.00		0.99			0.97			0.99	
Satd. Flow (prot)		1856	1583		1780			1788			1843	
Flt Permitted		1.00	1.00		0.99			0.97			0.99	
Satd. Flow (perm)		1856	1583		1780			1788			1843	
Peak-hour factor, PHF	0.25	0.55	0.57	0.70	0.88	0.50	0.62	0.55	0.25	0.62	0.49	0.50
Adj. Flow (vph)	8	100	421	20	42	20	52	20	4	16	104	4
RTOR Reduction (vph)	0	0	193	0	14	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	108	228	0	68	0	0	74	0	0	122	0
Confl. Peds. (#/hr)	121			46			13			4		
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Actuated Green, G (s)		10.0	36.3		6.7			21.3			8.0	
Effective Green, g (s)		10.0	36.3		6.7			21.3			8.0	
Actuated g/C Ratio		0.15	0.54		0.10			0.32			0.12	
Clearance Time (s)		5.0			5.0			6.0			5.0	
Vehicle Extension (s)		2.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		277	857		178			568			220	
v/s Ratio Prot		c0.06	c0.14		c0.04			0.04			c0.07	
v/s Ratio Perm												
v/c Ratio		0.39	0.27		0.38			0.13			0.56	
Uniform Delay, d1		25.7	8.2		28.2			16.3			27.8	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.3	0.1		1.4			0.5			3.0	
Delay (s)		26.1	8.3		29.6			16.7			30.8	
Level of Service		C	A		C			B			C	
Approach Delay (s)		11.9			29.6			16.7			30.8	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	50	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	50	19	19	3	5	13	40	69	23	114	6	70
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
Ped Bike Factor										1.00		
Frt		0.973					0.927			0.992		
Flt Protected		0.971					0.993			0.993		
Satd. Flow (prot)	0	1760	0	0	0	0	1715	0	0	1835	0	0
Flt Permitted		0.584					0.947			0.908		
Satd. Flow (perm)	0	1058	0	0	0	0	1635	0	0	1676	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)		1					42			2		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Confl. Peds. (#/hr)									6			
Peak Hour Factor	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	88	28	25	4	6	19	54	93	31	165	12	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	0	0	172	0	0	208	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	25.0	25.0			25.0	25.0	25.0		30.0	30.0		25.0
Total Split (%)	20.5%	20.5%			20.5%	20.5%	20.5%		24.6%	24.6%		20.5%
Maximum Green (s)	20.0	20.0			20.0	20.0	20.0		25.0	25.0		20.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6					19.6			25.2		
Actuated g/C Ratio		0.19					0.19			0.25		
v/c Ratio		0.71					0.49			0.50		
Control Delay		59.5					34.2			39.1		
Queue Delay		0.0					0.0			0.0		
Total Delay		59.5					34.2			39.1		
LOS		E					C			D		

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	201	177	211	6	50	3	
Future Volume (vph)	201	177	211	6	50	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.991		
Flt Protected	0.987				0.956		
Satd. Flow (prot)	1839	1583	0	0	1765	0	
Flt Permitted	0.469				0.912		
Satd. Flow (perm)	874	1583	0	0	1684	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Confl. Peds. (#/hr)							
Peak Hour Factor	0.82	0.73	0.95	0.50	0.53	0.38	
Adj. Flow (vph)	245	242	222	12	94	8	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	330	464	0	0	114	0	
Turn Type	NA	Prot		Perm	Prot		
Protected Phases	1	1			5		3
Permitted Phases				5			
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	25.0	25.0		17.0	17.0		25.0
Total Split (%)	20.5%	20.5%		13.9%	13.9%		20%
Maximum Green (s)	20.0	20.0		12.0	12.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	20.2	20.2			12.1		
Actuated g/C Ratio	0.20	0.20			0.12		
v/c Ratio	1.90	1.08			0.57		
Control Delay	452.3	95.6			56.3		
Queue Delay	0.0	0.0			0.0		
Total Delay	452.3	95.6			56.3		
LOS	F	F			E		

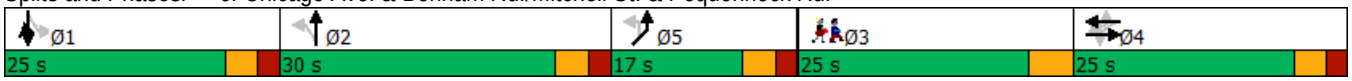
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Approach Delay		59.5					34.2			39.1		
Approach LOS		E					C			D		
Queue Length 50th (ft)		82					70			108		
Queue Length 95th (ft)		136					130			170		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		210					358			418		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.69					0.48			0.50		

Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 101.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.90			
Intersection Signal Delay: 155.4		Intersection LOS: F	
Intersection Capacity Utilization 56.6%		ICU Level of Service B	
Analysis Period (min) 15			

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

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

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.



Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Approach Delay	243.8				56.3		
Approach LOS	F				E		
Queue Length 50th (ft)	~310	~240			67		
Queue Length 95th (ft)	#543	#376			86		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	174	429			201		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	1.90	1.08			0.57		

Intersection Summary

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	50	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	50	19	19	3	5	13	40	69	23	114	6	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frpb, ped/bikes		1.00					1.00			1.00		
Flpb, ped/bikes		1.00					1.00			1.00		
Frt		0.97					0.93			0.99		
Flt Protected		0.97					0.99			0.99		
Satd. Flow (prot)		1759					1714			1832		
Flt Permitted		0.58					0.95			0.91		
Satd. Flow (perm)		1059					1635			1676		
Peak-hour factor, PHF	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	88	28	25	4	6	19	54	93	31	165	12	85
RTOR Reduction (vph)	0	1	0	0	0	0	34	0	0	2	0	0
Lane Group Flow (vph)	0	144	0	0	0	0	138	0	0	206	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Actuated Green, G (s)		19.6					19.6			25.2		
Effective Green, g (s)		19.6					19.6			25.2		
Actuated g/C Ratio		0.19					0.19			0.24		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		198					306			403		
v/s Ratio Prot												
v/s Ratio Perm		c0.14					0.08			c0.12		
v/c Ratio		0.73					0.45			0.51		
Uniform Delay, d1		40.0					37.7			34.4		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		13.4					1.4			4.6		
Delay (s)		53.3					39.2			39.0		
Level of Service		D					D			D		
Approach Delay (s)		53.3					39.2			39.0		
Approach LOS		D					D			D		

Intersection Summary			
HCM 2000 Control Delay	179.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	104.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	201	177	211	6	50	3
Future Volume (vph)	201	177	211	6	50	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00	
Flpb, ped/bikes	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.99	1.00			0.96	
Satd. Flow (prot)	1839	1583			1763	
Flt Permitted	0.47	1.00			0.91	
Satd. Flow (perm)	874	1583			1683	
Peak-hour factor, PHF	0.82	0.73	0.95	0.50	0.53	0.38
Adj. Flow (vph)	245	242	222	12	94	8
RTOR Reduction (vph)	0	115	0	0	0	0
Lane Group Flow (vph)	330	349	0	0	114	0
Confl. Peds. (#/hr)						
Turn Type	NA	Prot		Perm	Prot	
Protected Phases	1	1			5	
Permitted Phases				5		
Actuated Green, G (s)	20.2	20.2			12.1	
Effective Green, g (s)	20.2	20.2			12.1	
Actuated g/C Ratio	0.19	0.19			0.12	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	168	305			194	
v/s Ratio Prot		0.22				
v/s Ratio Perm	c0.38				c0.07	
v/c Ratio	1.96	1.14			0.59	
Uniform Delay, d1	42.2	42.2			43.9	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	454.8	96.0			12.4	
Delay (s)	497.0	138.2			56.3	
Level of Service	F	F			E	
Approach Delay (s)	287.3				56.3	
Approach LOS	F				E	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	307	149	60	273	24	6
Future Volume (vph)	307	149	60	273	24	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.946				0.949	
Flt Protected				0.991	0.970	
Satd. Flow (prot)	3683	0	0	3858	1886	0
Flt Permitted				0.991	0.970	
Satd. Flow (perm)	3683	0	0	3858	1886	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	504			552	258	
Travel Time (s)	13.7			15.1	7.0	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.90	0.78	0.85	0.91	0.92	0.38
Adj. Flow (vph)	341	191	71	300	26	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	532	0	0	371	42	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	307	149	60	273	24	6
Future Volume (Veh/h)	307	149	60	273	24	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.78	0.85	0.91	0.92	0.38
Hourly flow rate (vph)	341	191	71	300	26	16
Pedestrians					1	
Lane Width (ft)					15.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	504					
pX, platoon unblocked						
vC, conflicting volume			533		730	267
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			533		730	267
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		92	98
cM capacity (veh/h)			1030		333	730

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	227	305	171	200	42
Volume Left	0	0	71	0	26
Volume Right	0	191	0	0	16
cSH	1700	1700	1030	1700	420
Volume to Capacity	0.13	0.18	0.07	0.12	0.10
Queue Length 95th (ft)	0	0	6	0	8
Control Delay (s)	0.0	0.0	4.0	0.0	14.5
Lane LOS			A		B
Approach Delay (s)	0.0		1.8		14.5
Approach LOS					B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

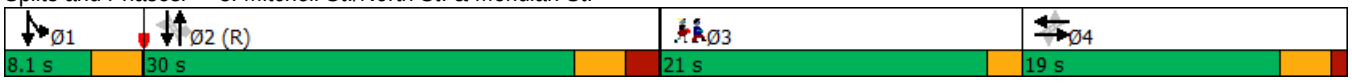
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	3	147	28	52	0	307	67	96	653	5
Future Volume (vph)	11	32	3	147	28	52	0	307	67	96	653	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	95		0	60		115	60		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			180			30			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99								
Frt		0.986			0.901				0.850		0.998	
Flt Protected		0.987		0.950						0.950		
Satd. Flow (prot)	0	1994	0	1770	1678	0	1863	3539	1583	1770	1859	0
Flt Permitted		0.920		0.758						0.532		
Satd. Flow (perm)	0	1858	0	1403	1678	0	1863	3539	1583	991	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			58				89		1	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		834			697			953			634	
Travel Time (s)		19.0			19.0			21.7			14.4	
Confl. Peds. (#/hr)	1			3								
Peak Hour Factor	0.55	0.68	0.38	0.87	0.93	0.89	0.92	0.87	0.75	0.60	0.91	0.42
Adj. Flow (vph)	20	47	8	169	30	58	0	353	89	160	718	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	169	88	0	0	353	89	160	730	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Detector Phase	4	4		4	4		2	2	2	1	1 2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0	25.0	5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0	30.0	8.1		
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0	30.0	8.1		
Total Split (%)	24.3%	24.3%		24.3%	24.3%		38.4%	38.4%	38.4%	10.4%		
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0	25.0	5.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0	2.0	0.1		
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.0		15.0	15.0			30.5	30.5	52.9	56.0	
Actuated g/C Ratio		0.19		0.19	0.19			0.39	0.39	0.68	0.72	
v/c Ratio		0.21		0.63	0.24			0.26	0.13	0.18	0.55	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	27%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		23.8		38.4	12.3			18.5	5.3	4.9	8.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		23.8		38.4	12.3			18.5	5.3	4.9	8.1	
LOS		C		D	B			B	A	A	A	
Approach Delay		23.8			29.5			15.8			7.5	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		28		77	12			66	0	19	132	
Queue Length 95th (ft)		41		119	44			97	19	32	294	
Internal Link Dist (ft)		754			617			873			554	
Turn Bay Length (ft)				95					115	60		
Base Capacity (vph)		408		303	409			1381	672	875	1332	
Starvation Cap Reductn		0		0	0			0	0	0	0	
Spillback Cap Reductn		0		0	0			0	0	0	0	
Storage Cap Reductn		0		0	0			0	0	0	0	
Reduced v/c Ratio		0.18		0.56	0.22			0.26	0.13	0.18	0.55	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78.1			
Actuated Cycle Length: 78.1			
Offset: 8.1 (10%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 81.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: Mitchell St./North St. & Meridian St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	3	147	28	52	0	307	67	96	653	5
Future Volume (vph)	11	32	3	147	28	52	0	307	67	96	653	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0			5.0	5.0	3.1	3.1	
Lane Util. Factor		1.00		1.00	1.00			0.95	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	0.90			1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1992		1758	1679			3539	1583	1770	1858	
Flt Permitted		0.92		0.76	1.00			1.00	1.00	0.53	1.00	
Satd. Flow (perm)		1858		1402	1679			3539	1583	991	1858	
Peak-hour factor, PHF	0.55	0.68	0.38	0.87	0.93	0.89	0.92	0.87	0.75	0.60	0.91	0.42
Adj. Flow (vph)	20	47	8	169	30	58	0	353	89	160	718	12
RTOR Reduction (vph)	0	6	0	0	47	0	0	0	54	0	0	0
Lane Group Flow (vph)	0	69	0	169	41	0	0	353	35	160	730	0
Confl. Peds. (#/hr)	1			3								
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		15.0		15.0	15.0			30.5	30.5	51.0	54.1	
Effective Green, g (s)		15.0		15.0	15.0			30.5	30.5	51.0	54.1	
Actuated g/C Ratio		0.19		0.19	0.19			0.39	0.39	0.65	0.69	
Clearance Time (s)		4.0		4.0	4.0			5.0	5.0	3.1		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		356		269	322			1382	618	851	1287	
v/s Ratio Prot					0.02			0.10		0.05	c0.39	
v/s Ratio Perm		0.04		c0.12					0.02	0.07		
v/c Ratio		0.19		0.63	0.13			0.26	0.06	0.19	0.57	
Uniform Delay, d1		26.5		29.0	26.1			16.1	14.8	5.2	6.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3		4.5	0.2			0.4	0.2	0.1	0.6	
Delay (s)		26.8		33.5	26.3			16.6	15.0	5.3	6.6	
Level of Service		C		C	C			B	B	A	A	
Approach Delay (s)		26.8			31.1			16.2			6.4	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	14.1
Intersection Capacity Utilization	81.1%	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)	24	11	9	150	8	1	4	318	57	1	619	5
Future Volume (vph)	24	11	9	150	8	1	4	318	57	1	619	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	11	11	11	11	11	11	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00			1.00	
Frt		0.972			0.962			0.973			0.999	
Flt Protected		0.974		0.950				0.999				
Satd. Flow (prot)	0	1999	0	1711	1732	0	0	3326	0	0	1985	0
Flt Permitted		0.867		0.726				0.944			0.998	
Satd. Flow (perm)	0	1774	0	1307	1732	0	0	3142	0	0	1981	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			4			79			2	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		699			143			486			286	
Travel Time (s)		19.1			3.9			11.0			6.5	
Confl. Peds. (#/hr)	6						1			1		
Peak Hour Factor	0.92	0.92	0.92	0.74	0.67	0.25	0.50	0.87	0.69	0.25	0.82	0.62
Adj. Flow (vph)	26	12	10	203	12	4	8	366	83	4	755	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	203	16	0	0	457	0	0	767	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0		25.0	25.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0		30.0	30.0	
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0		30.0	30.0	
Total Split (%)	38.8%	38.8%		38.8%	38.8%		61.2%	61.2%		61.2%	61.2%	
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		11.9		11.9	11.9			29.2			29.2	
Actuated g/C Ratio		0.26		0.26	0.26			0.63			0.63	
v/c Ratio		0.10		0.61	0.04			0.23			0.62	
Control Delay		11.1		23.4	11.0			5.1			11.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		11.1		23.4	11.0			5.1			11.4	
LOS		B		C	B			A			B	
Approach Delay		11.1			22.5			5.1			11.4	
Approach LOS		B			C			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		8		47	2			23			132	
Queue Length 95th (ft)		25		76	9			46			228	
Internal Link Dist (ft)		619			63			406			206	
Turn Bay Length (ft)												
Base Capacity (vph)		579		421	561			1999			1242	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.08		0.48	0.03			0.23			0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 46.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: North St. & Broad St.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	11	9	150	8	1	4	318	57	1	619	5
Future Volume (vph)	24	11	9	150	8	1	4	318	57	1	619	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	11	11	11	11	11	11	12	14	12
Total Lost time (s)		4.0		4.0	4.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.97		1.00	0.96			0.97			1.00	
Flt Protected		0.97		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1989		1711	1733			3325			1984	
Flt Permitted		0.87		0.73	1.00			0.94			1.00	
Satd. Flow (perm)		1772		1307	1733			3140			1980	
Peak-hour factor, PHF	0.92	0.92	0.92	0.74	0.67	0.25	0.50	0.87	0.69	0.25	0.82	0.62
Adj. Flow (vph)	26	12	10	203	12	4	8	366	83	4	755	8
RTOR Reduction (vph)	0	8	0	0	3	0	0	32	0	0	1	0
Lane Group Flow (vph)	0	40	0	203	13	0	0	425	0	0	766	0
Confl. Peds. (#/hr)	6						1			1		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		10.2		10.2	10.2			28.2			28.2	
Effective Green, g (s)		10.2		10.2	10.2			28.2			28.2	
Actuated g/C Ratio		0.22		0.22	0.22			0.59			0.59	
Clearance Time (s)		4.0		4.0	4.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		381		281	372			1868			1177	
v/s Ratio Prot					0.01							
v/s Ratio Perm		0.02		c0.16				0.14			c0.39	
v/c Ratio		0.11		0.72	0.03			0.23			0.65	
Uniform Delay, d1		14.9		17.3	14.7			4.5			6.3	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.1		8.8	0.0			0.3			2.8	
Delay (s)		15.1		26.1	14.7			4.8			9.1	
Level of Service		B		C	B			A			A	
Approach Delay (s)		15.1			25.3			4.8			9.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

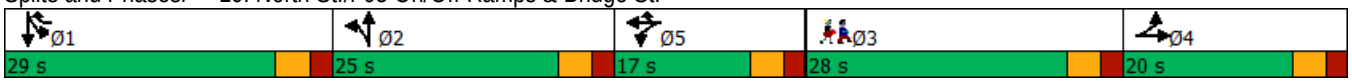
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	279	10	49	551	319
Future Volume (vph)	81	33	39	1	35	65	46	279	10	49	551	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt		0.922				0.850		0.991				0.850
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	3319	1717	0	0	1857	1583	1770	3507	0	1770	1863	1583
Flt Permitted	0.950				0.997		0.950			0.950		
Satd. Flow (perm)	3319	1717	0	0	1857	1583	1766	3507	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38				110		5				202
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Confl. Peds. (#/hr)							2					
Peak Hour Factor	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	307	20	75	697	347
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	88	0	0	71	81	54	327	0	75	697	347
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	20.0	20.0		17.0	17.0		25.0	25.0		29.0	29.0	
Total Split (%)	16.8%	16.8%		14.3%	14.3%		21.0%	21.0%		24.4%	24.4%	
Maximum Green (s)	15.0	15.0		12.0	12.0		20.0	20.0		24.0	24.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	9.1	9.1			9.3	35.3	20.7	20.7		24.8	24.8	85.3
Actuated g/C Ratio	0.11	0.11			0.11	0.41	0.24	0.24		0.29	0.29	1.00
v/c Ratio	0.27	0.41			0.35	0.11	0.13	0.38		0.15	1.29	0.22

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	24%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	41.0	31.6			44.9	1.7	32.0	31.4		28.9	172.3	0.3
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.0	31.6			44.9	1.7	32.0	31.4		28.9	172.3	0.3
LOS	D	C			D	A	C	C		C	F	A
Approach Delay		36.5			21.9			31.5			109.4	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	23	24			34	0	21	70		27	~445	0
Queue Length 95th (ft)	57	71			55	6	69	166		64	#862	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	603	343			269	752	428	853		514	541	1583
Starvation Cap Reductn	0	0			0	0	0	0		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.16	0.26			0.26	0.11	0.13	0.38		0.15	1.29	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 119			
Actuated Cycle Length: 85.3			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay: 78.6		Intersection LOS: E	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	279	10	49	551	319
Future Volume (vph)	81	33	39	1	35	65	46	279	10	49	551	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1717			1858	1583	1770	3507		1770	1863	1583
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1717			1858	1583	1770	3507		1770	1863	1583
Peak-hour factor, PHF	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	307	20	75	697	347
RTOR Reduction (vph)	0	34	0	0	0	52	0	4	0	0	0	0
Lane Group Flow (vph)	96	54	0	0	71	29	54	323	0	75	697	347
Confl. Peds. (#/hr)							2					
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	9.1	9.1			7.2	32.0	20.7	20.7		24.8	24.8	90.2
Effective Green, g (s)	9.1	9.1			7.2	32.0	20.7	20.7		24.8	24.8	90.2
Actuated g/C Ratio	0.10	0.10			0.08	0.35	0.23	0.23		0.27	0.27	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	334	173			148	561	406	804		486	512	1583
v/s Ratio Prot	0.03	0.03			c0.04	0.02	0.03	c0.09		0.04	c0.37	
v/s Ratio Perm												c0.22
v/c Ratio	0.29	0.31			0.48	0.05	0.13	0.40		0.15	1.36	0.22
Uniform Delay, d1	37.5	37.6			39.7	19.1	27.6	29.5		24.8	32.7	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.8			2.4	0.0	0.7	1.5		0.1	174.9	0.3
Delay (s)	37.9	38.4			42.1	19.2	28.3	31.0		24.9	207.6	0.3
Level of Service	D	D			D	B	C	C		C	F	A
Approach Delay (s)		38.1			29.9			30.6			131.1	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	92.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.2	Sum of lost time (s)	25.0
Intersection Capacity Utilization	58.0%	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)	90	45	90	74	68	71	34	475	14	34	1302	151
Future Volume (vph)	90	45	90	74	68	71	34	475	14	34	1302	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	90		90	120		150	130		120
Storage Lanes	2		0	1		1	1		1	1		1
Taper Length (ft)	300			120			150			300		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.906				0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1688	0	1770	1863	1583	1770	5060	0	1770	3539	1583
Flt Permitted	0.950			0.632			0.950			0.950		
Satd. Flow (perm)	3433	1688	0	1177	1863	1583	1770	5060	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61				91		3				103
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		588			486			576			595	
Travel Time (s)		16.0			13.3			8.7			9.0	
Confl. Peds. (#/hr)						1						
Peak Hour Factor	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	572	19	56	1550	216
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	200	0	106	93	85	39	591	0	56	1550	216
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Detector Phase	4	4 8		8	8	5 8	1	6		5	2	2 4
Switch Phase												
Minimum Initial (s)	5.0			9.0	9.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.9			14.7	14.7		11.8	20.0		11.8	20.0	
Total Split (s)	24.9			26.7	26.7		17.8	35.0		17.8	35.0	
Total Split (%)	17.4%			18.6%	18.6%		12.4%	24.4%		12.4%	24.4%	
Maximum Green (s)	19.0			21.0	21.0		11.0	30.0		11.0	30.0	
Yellow Time (s)	3.3			3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6			2.4	2.4		3.8	2.0		3.8	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Lead/Lag	Lag						Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes						Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Recall Mode	None			None	None		None	Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	10.0	28.9		13.0	13.0	26.2	6.6	30.8		7.3	34.2	50.3
Actuated g/C Ratio	0.12	0.35		0.16	0.16	0.32	0.08	0.38		0.09	0.42	0.61
v/c Ratio	0.26	0.32		0.57	0.32	0.15	0.28	0.31		0.36	1.05	0.21
Control Delay	36.3	14.9		46.8	35.8	5.2	44.8	21.1		45.4	66.3	5.9

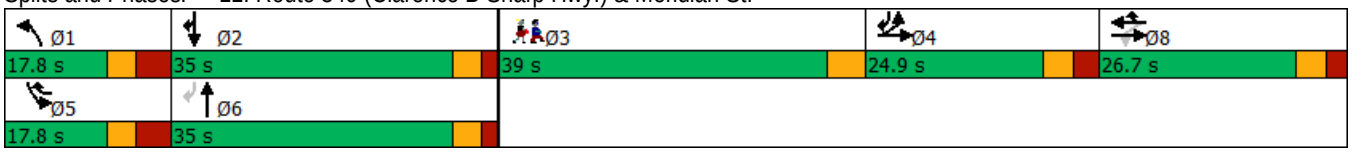
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	39.0
Total Split (s)	39.0
Total Split (%)	27%
Maximum Green (s)	35.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	28.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.3	14.9		46.8	35.8	5.2	44.8	21.1		45.4	66.3	5.9
LOS	D	B		D	D	A	D	C		D	E	A
Approach Delay		22.4			30.7			22.5			58.5	
Approach LOS		C			C			C			E	
Queue Length 50th (ft)	26	51		52	44	0	19	77		28	~504	25
Queue Length 95th (ft)	51	56		85	76	24	56	130		48	#756	47
Internal Link Dist (ft)		508			406			496			515	
Turn Bay Length (ft)	230			90		90	120			130		120
Base Capacity (vph)	816	794		309	489	616	243	1902		243	1473	1180
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.13	0.25		0.34	0.19	0.14	0.16	0.31		0.23	1.05	0.18

Intersection Summary

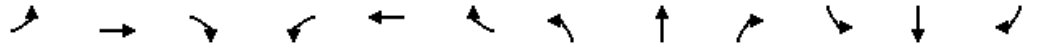
Area Type: Other
Cycle Length: 143.4
Actuated Cycle Length: 82.1
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 44.8 Intersection LOS: D
Intersection Capacity Utilization 65.2% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 349 (Clarence B Sharp Hwy.) & Meridian St.



Lane Group	Ø3
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	45	90	74	68	71	34	475	14	34	1302	151
Future Volume (vph)	90	45	90	74	68	71	34	475	14	34	1302	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.7	5.7	6.8	6.8	5.0		6.8	5.0	5.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1688		1770	1863	1583	1770	5061		1770	3539	1583
Flt Permitted	0.95	1.00		0.63	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1688		1178	1863	1583	1770	5061		1770	3539	1583
Peak-hour factor, PHF	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	572	19	56	1550	216
RTOR Reduction (vph)	0	40	0	0	0	66	0	2	0	0	0	43
Lane Group Flow (vph)	108	160	0	106	93	19	39	589	0	56	1550	173
Confl. Peds. (#/hr)						1						
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Actuated Green, G (s)	10.0	28.9		13.0	13.0	24.7	4.1	32.3		6.0	34.2	49.2
Effective Green, g (s)	10.0	28.9		13.0	13.0	19.0	4.1	32.3		6.0	34.2	49.2
Actuated g/C Ratio	0.12	0.34		0.15	0.15	0.22	0.05	0.38		0.07	0.40	0.58
Clearance Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	405	575		180	285	355	85	1929		125	1428	919
v/s Ratio Prot	0.03	c0.09			0.05	0.01	0.02	0.12		c0.03	c0.44	0.11
v/s Ratio Perm				c0.09								
v/c Ratio	0.27	0.28		0.59	0.33	0.05	0.46	0.31		0.45	1.09	0.19
Uniform Delay, d1	34.0	20.3		33.4	31.9	25.8	39.2	18.3		37.8	25.2	8.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		3.2	0.2	0.0	1.4	0.4		0.9	50.6	0.0
Delay (s)	34.1	20.4		36.5	32.2	25.8	40.6	18.8		38.7	75.9	8.4
Level of Service	C	C		D	C	C	D	B		D	E	A
Approach Delay (s)		25.2			31.9			20.1			66.7	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	27.4
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Future Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	11	11	11	11	11	15	15	15
Storage Length (ft)	155		0	0		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	135			25			25			25		
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
Ped Bike Factor											1.00	
Frt		0.993			0.986				0.850		0.960	
Flt Protected	0.950			0.950				0.986			0.988	
Satd. Flow (prot)	1711	1788	0	1652	1775	0	0	1775	1531	0	1943	0
Flt Permitted	0.676			0.643				0.900			0.905	
Satd. Flow (perm)	1217	1788	0	1118	1775	0	0	1621	1531	0	1778	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9				374		23	
Link Speed (mph)		30			30			75			30	
Link Distance (ft)		529			504			284			348	
Travel Time (s)		12.0			11.5			2.6			7.9	
Confl. Peds. (#/hr)										4		
Peak Hour Factor	0.83	0.77	0.38	0.86	0.81	0.67	0.38	0.35	0.82	0.62	0.68	0.64
Adj. Flow (vph)	12	173	8	228	114	12	8	20	374	24	43	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	181	0	228	126	0	0	28	374	0	95	0
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Detector Phase	1	1 2		3	2 3		5	5	5	5	5	
Switch Phase												
Minimum Initial (s)	3.0			3.0			5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	7.0			7.2			11.2	11.2	11.2	11.2	11.2	
Total Split (s)	9.0			14.2			22.2	22.2	22.2	22.2	22.2	
Total Split (%)	11.1%			17.5%			27.3%	27.3%	27.3%	27.3%	27.3%	
Maximum Green (s)	5.0			10.0			16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.0			3.0			4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	1.0			1.2			2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0				0.0	0.0		0.0	
Total Lost Time (s)	4.0			4.2				6.2	6.2		6.2	
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	1.0			2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None			None			None	None	None	None	None	
Act Effct Green (s)	36.9	40.9		39.2	36.0			8.3	20.0		8.3	
Actuated g/C Ratio	0.52	0.58		0.55	0.51			0.12	0.28		0.12	
v/c Ratio	0.02	0.18		0.34	0.14			0.15	0.54		0.42	
Control Delay	8.6	8.6		6.4	5.3			29.8	5.4		28.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	8.6	8.6		6.4	5.3			29.8	5.4		28.9	

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	20.8
Total Split (s)	35.8
Total Split (%)	44%
Maximum Green (s)	30.0
Yellow Time (s)	3.8
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			C	A		C	
Approach Delay		8.6			6.0			7.1			28.9	
Approach LOS		A			A			A			C	
Queue Length 50th (ft)	2	31		21	12			11	0		29	
Queue Length 95th (ft)	10	67		58	32			13	36		50	
Internal Link Dist (ft)		449			424			204			268	
Turn Bay Length (ft)	155								85			
Base Capacity (vph)	668	1011		733	968			366	689		420	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.18		0.31	0.13			0.08	0.54		0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.2			
Actuated Cycle Length: 71.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Route 649 (Rainville Ave.)/Old Farms Rd. & Route 649 (Poquonnock Rd.)

Lane Group	Ø2
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Future Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	15	15	15
Total Lost time (s)	4.0	4.0		4.2	5.8			6.2	6.2		6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1711	1789		1652	1775			1775	1531		1938	
Flt Permitted	0.68	1.00		0.64	1.00			0.90	1.00		0.90	
Satd. Flow (perm)	1218	1789		1118	1775			1621	1531		1776	
Peak-hour factor, PHF	0.83	0.77	0.38	0.86	0.81	0.67	0.38	0.35	0.82	0.62	0.68	0.64
Adj. Flow (vph)	12	173	8	228	114	12	8	20	374	24	43	28
RTOR Reduction (vph)	0	2	0	0	4	0	0	0	291	0	20	0
Lane Group Flow (vph)	12	179	0	228	122	0	0	28	83	0	75	0
Confl. Peds. (#/hr)										4		
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Actuated Green, G (s)	35.1	39.1		37.6	37.6			8.3	15.7		8.3	
Effective Green, g (s)	35.1	39.1		37.6	37.6			8.3	15.7		8.3	
Actuated g/C Ratio	0.49	0.55		0.53	0.53			0.12	0.22		0.12	
Clearance Time (s)	4.0			4.2				6.2	6.2		6.2	
Vehicle Extension (s)	1.0			2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)	636	985		647	940			189	472		207	
v/s Ratio Prot	0.00	c0.10		c0.04	0.07				0.02			
v/s Ratio Perm	0.01			c0.15				0.02	0.03		c0.04	
v/c Ratio	0.02	0.18		0.35	0.13			0.15	0.18		0.36	
Uniform Delay, d1	9.1	8.0		9.1	8.4			28.2	22.4		28.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.0			0.1	0.1		0.4	
Delay (s)	9.1	8.0		9.2	8.5			28.3	22.5		29.3	
Level of Service	A	A		A	A			C	C		C	
Approach Delay (s)		8.1			9.0			22.9			29.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

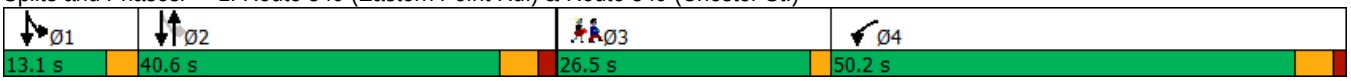
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Lane Configurations							
Traffic Volume (vph)	698	34	89	155	36	275	
Future Volume (vph)	698	34	89	155	36	275	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	11	12	15	
Storage Length (ft)	0	0		175	125		
Storage Lanes	2	0		1	1		
Taper Length (ft)	25				60		
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.98				1.00		
Frt	0.992			0.850			
Flt Protected	0.955				0.950		
Satd. Flow (prot)	3423	0	1801	1531	1770	2049	
Flt Permitted	0.955				0.657		
Satd. Flow (perm)	3344	0	1801	1531	1219	2049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	5			225			
Link Speed (mph)	30		25			25	
Link Distance (ft)	406		522			429	
Travel Time (s)	9.2		14.2			11.7	
Confl. Peds. (#/hr)	17				6		
Peak Hour Factor	0.69	0.57	0.57	0.69	0.34	0.66	
Adj. Flow (vph)	1012	60	156	225	106	417	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1072	0	156	225	106	417	
Turn Type	Prot		NA	Perm	D.P+P	NA	
Protected Phases	4		2		1	1 2	3
Permitted Phases				2	2		
Detector Phase	4		2	2	1	1 2	
Switch Phase							
Minimum Initial (s)	9.0		15.0	15.0	4.0		5.0
Minimum Split (s)	14.2		20.6	20.6	7.1		24.0
Total Split (s)	50.2		40.6	40.6	13.1		26.5
Total Split (%)	38.5%		31.1%	31.1%	10.0%		20%
Maximum Green (s)	45.0		35.0	35.0	10.0		24.5
Yellow Time (s)	3.8		3.8	3.8	3.0		2.0
All-Red Time (s)	1.4		1.8	1.8	0.1		0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	5.2		5.6	5.6	3.1		
Lead/Lag	Lag		Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes
Vehicle Extension (s)	2.0		2.5	2.5	1.0		3.0
Recall Mode	None		Min	Min	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)	29.9		18.9	18.9	32.3	35.7	
Actuated g/C Ratio	0.39		0.24	0.24	0.42	0.46	
v/c Ratio	0.81		0.36	0.42	0.18	0.44	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Control Delay	28.2		30.2	7.1	17.3	19.2	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	28.2		30.2	7.1	17.3	19.2	
LOS	C		C	A	B	B	
Approach Delay	28.2		16.6			18.8	
Approach LOS	C		B			B	
Queue Length 50th (ft)	182		55	0	24	111	
Queue Length 95th (ft)	343		100	13	35	242	
Internal Link Dist (ft)	326		442			349	
Turn Bay Length (ft)				175	125		
Base Capacity (vph)	2144		876	860	584	1442	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.50		0.18	0.26	0.18	0.29	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130.4			
Actuated Cycle Length: 77.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Route 349 (Eastern Point Rd.) & Route 349 (Chester St.)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	698	34	89	155	36	275
Future Volume (vph)	698	34	89	155	36	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	12	15
Total Lost time (s)	5.2		5.6	5.6	3.1	3.1
Lane Util. Factor	0.97		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3422		1801	1531	1765	2049
Flt Permitted	0.95		1.00	1.00	0.66	1.00
Satd. Flow (perm)	3422		1801	1531	1221	2049
Peak-hour factor, PHF	0.69	0.57	0.57	0.69	0.34	0.66
Adj. Flow (vph)	1012	60	156	225	106	417
RTOR Reduction (vph)	3	0	0	171	0	0
Lane Group Flow (vph)	1069	0	156	54	106	417
Confl. Peds. (#/hr)	17				6	
Turn Type	Prot		NA	Perm	D.P+P	NA
Protected Phases	4		2		1	1 2
Permitted Phases				2	2	
Actuated Green, G (s)	29.9		18.9	18.9	29.7	32.8
Effective Green, g (s)	29.9		18.9	18.9	29.7	32.8
Actuated g/C Ratio	0.38		0.24	0.24	0.38	0.42
Clearance Time (s)	5.2		5.6	5.6	3.1	
Vehicle Extension (s)	2.0		2.5	2.5	1.0	
Lane Grp Cap (vph)	1308		435	370	538	859
v/s Ratio Prot	c0.31		0.09		0.03	c0.20
v/s Ratio Perm				0.04	0.05	
v/c Ratio	0.82		0.36	0.15	0.20	0.49
Uniform Delay, d1	21.7		24.6	23.3	16.0	16.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9		0.4	0.1	0.1	0.2
Delay (s)	25.6		25.0	23.4	16.1	16.7
Level of Service	C		C	C	B	B
Approach Delay (s)	25.6		24.1			16.6
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	15.9
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
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)	32	179	0	19	491	19	2	8	33	35	27	95
Future Volume (vph)	32	179	0	19	491	19	2	8	33	35	27	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.993			0.908			0.930	
Flt Protected		0.991			0.999			0.995			0.990	
Satd. Flow (prot)	0	3274	0	0	3511	0	0	1851	0	0	1887	0
Flt Permitted		0.991			0.999			0.995			0.990	
Satd. Flow (perm)	0	3274	0	0	3511	0	0	1851	0	0	1887	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		406			1171			266			576	
Travel Time (s)		9.2			26.6			7.3			15.7	
Confl. Peds. (#/hr)	14		14	439					13			380
Peak Hour Factor	0.75	0.95	0.92	0.92	0.67	0.53	0.25	0.40	0.55	0.71	0.43	0.78
Adj. Flow (vph)	43	188	0	21	733	36	8	20	60	49	63	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	790	0	0	88	0	0	234	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	179	0	19	491	19	2	8	33	35	27	95
Future Volume (Veh/h)	32	179	0	19	491	19	2	8	33	35	27	95
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.95	0.92	0.92	0.67	0.53	0.25	0.40	0.55	0.71	0.43	0.78
Hourly flow rate (vph)	43	188	0	21	733	36	8	20	60	49	63	122
Pedestrians		380			13			439			14	
Lane Width (ft)		10.0			12.0			15.0			15.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		30			1			52			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		406			1171							
pX, platoon unblocked												
vC, conflicting volume	783			627			1655	1538	546	1070	1520	778
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	783			627			1655	1538	546	1070	1520	778
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
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 %	95			95			0	59	74	0	0	48
cM capacity (veh/h)	817			454			0	49	227	48	50	233

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	137	94	388	402	88	234
Volume Left	43	0	21	0	8	49
Volume Right	0	0	0	36	60	122
cSH	817	1700	454	1700	0	84
Volume to Capacity	0.05	0.06	0.05	0.24	Err	2.80
Queue Length 95th (ft)	4	0	4	0	Err	567
Control Delay (s)	3.4	0.0	1.5	0.0	Err	921.1
Lane LOS	A		A		F	F
Approach Delay (s)	2.0		0.7		Err	921.1
Approach LOS					F	F

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	54.8%	ICU Level of Service	A	
Analysis Period (min)	15			

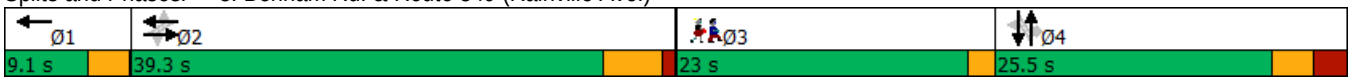
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	173	5	182	754	141	5	67	99	56	82	89
Future Volume (vph)	6	173	5	182	754	141	5	67	99	56	82	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	14	10	10	10
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.993			0.982				0.850		0.924	
Flt Protected		0.998			0.992			0.994		0.950		
Satd. Flow (prot)	0	3274	0	0	3218	0	0	1728	1689	1652	1606	0
Flt Permitted		0.901			0.732			0.937		0.692		
Satd. Flow (perm)	0	2955	0	0	2374	0	0	1629	1689	1203	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			21				124		49	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			1087			448			267	
Travel Time (s)		26.6			24.7			10.2			6.1	
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.62	0.69	0.38	0.80	0.80	0.86	0.42	0.75	0.80	0.69	0.61	0.64
Adj. Flow (vph)	10	251	13	228	943	164	12	89	124	81	134	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	0	0	1335	0	0	101	124	81	273	0
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Detector Phase	2	2		2	1 2		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0			9.0	9.0	9.0	9.0	9.0	
Minimum Split (s)	17.2	17.2		17.2			14.5	14.5	14.5	14.5	14.5	
Total Split (s)	39.3	39.3		39.3			25.5	25.5	25.5	25.5	25.5	
Total Split (%)	40.6%	40.6%		40.6%			26.3%	26.3%	26.3%	26.3%	26.3%	
Maximum Green (s)	34.1	34.1		34.1			20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.2	4.2		4.2			3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0			2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.2						5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag			Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0			2.5	2.5	2.5	2.5	2.5	
Recall Mode	Min	Min		Min			None	None	None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		34.9			46.3			15.3	15.3	15.3	15.3	
Actuated g/C Ratio		0.47			0.63			0.21	0.21	0.21	0.21	
v/c Ratio		0.20			0.89			0.30	0.28	0.33	0.74	

Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	6.0	5.0
Minimum Split (s)	9.1	23.0
Total Split (s)	9.1	23.0
Total Split (%)	9%	24%
Maximum Green (s)	6.0	21.0
Yellow Time (s)	3.0	2.0
All-Red Time (s)	0.1	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	0.2	3.0
Recall Mode	Max	None
Walk Time (s)		7.0
Flash Dont Walk (s)		14.0
Pedestrian Calls (#/hr)		1
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.1			24.3			28.8	7.6	30.5	36.2	
Queue Delay		0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay		14.1			24.3			28.8	7.6	30.5	36.2	
LOS		B			C			C	A	C	D	
Approach Delay		14.1			24.3			17.1			34.9	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		32			203			36	0	29	87	
Queue Length 95th (ft)		68			#543			83	33	64	127	
Internal Link Dist (ft)		1091			1007			368			187	
Turn Bay Length (ft)									250			
Base Capacity (vph)		1396			1494			450	556	332	479	
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		0.20			0.89			0.22	0.22	0.24	0.57	

Intersection Summary			
Area Type:	Other		
Cycle Length: 96.9			
Actuated Cycle Length: 74			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 24.0		Intersection LOS: C	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Benham Rd. & Route 349 (Rainville Ave.)



Lane Group	Ø1	Ø3
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	173	5	182	754	141	5	67	99	56	82	89
Future Volume (vph)	6	173	5	182	754	141	5	67	99	56	82	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	14	10	10	10
Total Lost time (s)		5.2			3.1			5.5	5.5	5.5	5.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.99			0.98			1.00	0.85	1.00	0.92	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3274			3215			1728	1689	1652	1606	
Flt Permitted		0.90			0.73			0.94	1.00	0.69	1.00	
Satd. Flow (perm)		2956			2374			1629	1689	1203	1606	
Peak-hour factor, PHF	0.62	0.69	0.38	0.80	0.80	0.86	0.42	0.75	0.80	0.69	0.61	0.64
Adj. Flow (vph)	10	251	13	228	942	164	12	89	124	81	134	139
RTOR Reduction (vph)	0	3	0	0	9	0	0	0	99	0	39	0
Lane Group Flow (vph)	0	271	0	0	1326	0	0	101	25	81	234	0
Confl. Peds. (#/hr)							1					
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)		34.9			44.1			15.3	15.3	15.3	15.3	
Effective Green, g (s)		34.9			44.1			15.3	15.3	15.3	15.3	
Actuated g/C Ratio		0.46			0.59			0.20	0.20	0.20	0.20	
Clearance Time (s)		5.2						5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0						2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)		1370			1390			330	343	244	326	
v/s Ratio Prot											c0.15	
v/s Ratio Perm		0.09			c0.56			0.06	0.01	0.07		
v/c Ratio		0.20			0.95			0.31	0.07	0.33	0.72	
Uniform Delay, d1		11.9			14.7			25.5	24.3	25.6	28.0	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1			14.5			0.4	0.1	0.6	6.9	
Delay (s)		12.0			29.2			25.9	24.3	26.2	34.9	
Level of Service		B			C			C	C	C	C	
Approach Delay (s)		12.0			29.2			25.0			32.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	15.8
Intersection Capacity Utilization	62.6%	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)	246	73	12	72	84	78	27	271	15	137	529	964
Future Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.988				0.850		0.992				0.850
Flt Protected	0.950	0.978			0.975			0.994		0.950		
Satd. Flow (prot)	1569	1653	0	0	1695	1478	0	3257	0	1652	1739	1478
Flt Permitted	0.950	0.978			0.975			0.808		0.487		
Satd. Flow (perm)	1569	1653	0	0	1695	1478	0	2647	0	847	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				98		4				1048
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							10					
Peak Hour Factor	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	283	94	16	111	102	98	50	315	20	161	615	1048
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	195	198	0	0	213	98	0	385	0	161	615	1048
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	26.3	26.3		18.8	18.8	18.8	66.3	66.3		15.1		
Total Split (%)	17.5%	17.5%		12.5%	12.5%	12.5%	44.2%	44.2%		10.1%		
Maximum Green (s)	21.8	21.8		14.3	14.3	14.3	61.8	61.8		10.6		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.6	21.6			14.4	14.4		62.0		72.7	77.2	125.9
Actuated g/C Ratio	0.17	0.17			0.11	0.11		0.48		0.56	0.59	0.97
v/c Ratio	0.75	0.72			1.15	0.39		0.31		0.30	0.60	0.72

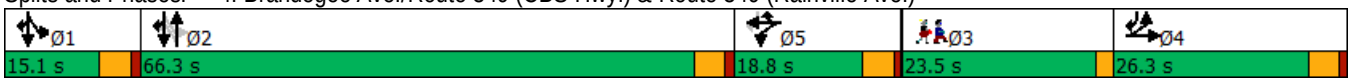
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	23.5
Total Split (s)	23.5
Total Split (%)	16%
Maximum Green (s)	21.5
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	3
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	71.3	67.4			161.1	15.7		22.6		15.1	21.1	3.2
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	71.3	67.4			161.1	15.7		22.6		15.1	21.1	3.2
LOS	E	E			F	B		C		B	C	A
Approach Delay		69.3			115.3			22.6			10.3	
Approach LOS		E			F			C			B	
Queue Length 50th (ft)	161	161			~200	0		95		54	289	0
Queue Length 95th (ft)	#318	247			#379	40		164		116	530	20
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	263	279			186	250		1261		537	1029	1461
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	0.74	0.71			1.15	0.39		0.31		0.30	0.60	0.72

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 130.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 91.8%		ICU Level of Service F	
Analysis Period (min) 15			

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

Splits and Phases: 4: Brandegee Ave./Route 349 (CBS Hwy.) & Route 349 (Rainville Ave.)



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Future Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.97	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1569	1653			1694	1478		3255		1652	1739	1478
Flt Permitted	0.95	0.98			0.97	1.00		0.81		0.49	1.00	1.00
Satd. Flow (perm)	1569	1653			1694	1478		2647		847	1739	1478
Peak-hour factor, PHF	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	283	94	16	111	102	98	50	315	20	161	615	1048
RTOR Reduction (vph)	0	2	0	0	0	87	0	2	0	0	0	114
Lane Group Flow (vph)	195	196	0	0	213	11	0	383	0	161	615	934
Confl. Peds. (#/hr)							10					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	21.6	21.6			14.4	14.4		62.0		72.6	77.1	117.6
Effective Green, g (s)	21.6	21.6			14.4	14.4		62.0		72.6	77.1	117.6
Actuated g/C Ratio	0.16	0.16			0.11	0.11		0.47		0.55	0.58	0.89
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	256	270			184	161		1243		530	1015	1367
v/s Ratio Prot	c0.12	0.12			c0.13	0.01				0.02	0.35	c0.53
v/s Ratio Perm								0.14		0.14		0.10
v/c Ratio	0.76	0.73			1.16	0.07		0.31		0.30	0.61	0.68
Uniform Delay, d1	52.7	52.4			58.8	52.8		21.7		14.9	17.7	2.0
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	12.6	9.4			115.2	0.2		0.6		0.3	1.0	1.4
Delay (s)	65.3	61.8			174.0	52.9		22.3		15.2	18.7	3.4
Level of Service	E	E			F	D		C		B	B	A
Approach Delay (s)		63.5			135.8			22.3			9.6	
Approach LOS		E			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	132.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

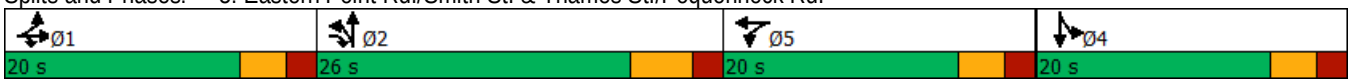
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	240	14	37	10	32	24	1	10	105	2
Future Volume (vph)	2	55	240	14	37	10	32	24	1	10	105	2
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
Ped Bike Factor		0.98			0.97			0.99			1.00	
Frt			0.850		0.967			0.995			0.998	
Flt Protected		0.996			0.988			0.975			0.997	
Satd. Flow (prot)	0	1855	1583	0	1780	0	0	1807	0	0	1853	0
Flt Permitted		0.996			0.988			0.975			0.997	
Satd. Flow (perm)	0	1813	1583	0	1730	0	0	1788	0	0	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			421		16			2			1	
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		678			836			704			713	
Travel Time (s)		15.4			22.8			19.2			19.4	
Confl. Peds. (#/hr)	121			46			13			4		
Peak Hour Factor	0.25	0.55	0.57	0.70	0.88	0.50	0.62	0.55	0.25	0.62	0.49	0.50
Adj. Flow (vph)	8	100	421	20	42	20	52	44	4	16	214	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	421	0	82	0	0	100	0	0	234	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Detector Phase	1	1	1 2	5	5		2	2		4	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0		3.0	3.0		20.0	20.0		6.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		26.0	26.0		11.0	11.0	
Total Split (s)	20.0	20.0		20.0	20.0		26.0	26.0		20.0	20.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		30.2%	30.2%		23.3%	23.3%	
Maximum Green (s)	15.0	15.0		15.0	15.0		20.0	20.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			5.0	
Lead/Lag	Lead	Lead					Lag	Lag				
Lead-Lag Optimize?	Yes	Yes					Yes	Yes				
Vehicle Extension (s)	2.0	2.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)		9.8	36.4		8.2			20.4			13.0	
Actuated g/C Ratio		0.14	0.52		0.12			0.29			0.19	
v/c Ratio		0.42	0.41		0.37			0.19			0.68	
Control Delay		35.1	2.7		30.9			23.1			39.4	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		35.1	2.7		30.9			23.1			39.4	
LOS		D	A		C			C			D	
Approach Delay		9.3			30.9			23.1			39.4	
Approach LOS		A			C			C			D	
Queue Length 50th (ft)		46	0		28			34			96	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		56	0		69			46			92	
Internal Link Dist (ft)		598			756			624			633	
Turn Bay Length (ft)												
Base Capacity (vph)		405	1010		401			527			405	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.27	0.42		0.20			0.19			0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 70.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Eastern Point Rd./Smith St. & Thames St./Poquonnock Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	240	14	37	10	32	24	1	10	105	2
Future Volume (vph)	2	55	240	14	37	10	32	24	1	10	105	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			6.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			1.00	
Flt Protected		1.00	1.00		0.99			0.97			1.00	
Satd. Flow (prot)		1856	1583		1780			1806			1852	
Flt Permitted		1.00	1.00		0.99			0.97			1.00	
Satd. Flow (perm)		1856	1583		1780			1806			1852	
Peak-hour factor, PHF	0.25	0.55	0.57	0.70	0.88	0.50	0.62	0.55	0.25	0.62	0.49	0.50
Adj. Flow (vph)	8	100	421	20	42	20	52	44	4	16	214	4
RTOR Reduction (vph)	0	0	211	0	14	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	108	210	0	68	0	0	99	0	0	233	0
Confl. Peds. (#/hr)	121			46			13			4		
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Actuated Green, G (s)		9.9	35.4		6.7			20.5			13.0	
Effective Green, g (s)		9.9	35.4		6.7			20.5			13.0	
Actuated g/C Ratio		0.14	0.50		0.09			0.29			0.18	
Clearance Time (s)		5.0			5.0			6.0			5.0	
Vehicle Extension (s)		2.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		258	788		167			520			338	
v/s Ratio Prot		c0.06	c0.13		c0.04			0.05			c0.13	
v/s Ratio Perm												
v/c Ratio		0.42	0.27		0.40			0.19			0.69	
Uniform Delay, d1		28.0	10.3		30.3			19.0			27.2	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.4	0.1		1.6			0.8			5.8	
Delay (s)		28.4	10.4		31.9			19.9			32.9	
Level of Service		C	B		C			B			C	
Approach Delay (s)		14.1			31.9			19.9			32.9	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	21.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
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
Ped Bike Factor										1.00		
Frt		0.975					0.927			0.992		
Flt Protected		0.969					0.993			0.993		
Satd. Flow (prot)	0	1760	0	0	0	0	1715	0	0	1835	0	0
Flt Permitted		0.577					0.945			0.908		
Satd. Flow (perm)	0	1048	0	0	0	0	1632	0	0	1676	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)		1					42			2		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Confl. Peds. (#/hr)									6			
Peak Hour Factor	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	102	28	25	4	6	19	54	93	31	165	12	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	0	0	172	0	0	208	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	25.0	25.0			25.0	25.0	25.0		30.0	30.0		25.0
Total Split (%)	20.5%	20.5%			20.5%	20.5%	20.5%		24.6%	24.6%		20.5%
Maximum Green (s)	20.0	20.0			20.0	20.0	20.0		25.0	25.0		20.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		20.2					20.2			25.2		
Actuated g/C Ratio		0.20					0.20			0.25		
v/c Ratio		0.77					0.48			0.50		
Control Delay		64.6					33.9			39.3		
Queue Delay		0.0					0.0			0.0		
Total Delay		64.6					33.9			39.3		
LOS		E					C			D		

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	201	213	247	6	58	3	
Future Volume (vph)	201	213	247	6	58	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.992		
Flt Protected	0.987				0.955		
Satd. Flow (prot)	1839	1583	0	0	1765	0	
Flt Permitted	0.469				0.910		
Satd. Flow (perm)	874	1583	0	0	1682	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Confl. Peds. (#/hr)							
Peak Hour Factor	0.82	0.73	0.95	0.50	0.53	0.38	
Adj. Flow (vph)	245	292	260	12	109	8	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	330	552	0	0	129	0	
Turn Type	NA	Prot		Perm	Prot		
Protected Phases	1	1			5		3
Permitted Phases				5			
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	25.0	25.0		17.0	17.0		25.0
Total Split (%)	20.5%	20.5%		13.9%	13.9%		20%
Maximum Green (s)	20.0	20.0		12.0	12.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	20.2	20.2			12.1		
Actuated g/C Ratio	0.20	0.20			0.12		
v/c Ratio	1.91	1.29			0.65		
Control Delay	457.2	175.1			60.5		
Queue Delay	0.0	0.0			0.0		
Total Delay	457.2	175.1			60.5		
LOS	F	F			E		

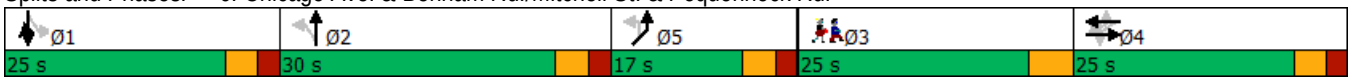
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Approach Delay		64.6					33.9			39.3		
Approach LOS		E					C			D		
Queue Length 50th (ft)		92					70			108		
Queue Length 95th (ft)		#161					130			170		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		207					356			415		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.77					0.48			0.50		

Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 102			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.91			
Intersection Signal Delay: 180.4		Intersection LOS: F	
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			

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

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

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.



Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Approach Delay	280.6				60.5		
Approach LOS	F				E		
Queue Length 50th (ft)	~310	~356			77		
Queue Length 95th (ft)	#543	#504			95		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	173	427			199		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	1.91	1.29			0.65		

Intersection Summary

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frpb, ped/bikes		1.00					1.00			1.00		
Flpb, ped/bikes		1.00					1.00			1.00		
Frt		0.98					0.93			0.99		
Flt Protected		0.97					0.99			0.99		
Satd. Flow (prot)		1760					1714			1832		
Flt Permitted		0.58					0.94			0.91		
Satd. Flow (perm)		1048					1632			1675		
Peak-hour factor, PHF	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	102	28	25	4	6	19	54	93	31	165	12	85
RTOR Reduction (vph)	0	1	0	0	0	0	34	0	0	2	0	0
Lane Group Flow (vph)	0	158	0	0	0	0	138	0	0	206	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Actuated Green, G (s)		20.2					20.2			25.2		
Effective Green, g (s)		20.2					20.2			25.2		
Actuated g/C Ratio		0.19					0.19			0.24		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		201					313			401		
v/s Ratio Prot												
v/s Ratio Perm		c0.15					0.08			c0.12		
v/c Ratio		0.79					0.44			0.51		
Uniform Delay, d1		40.5					37.5			34.7		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		19.1					1.4			4.7		
Delay (s)		59.5					38.9			39.4		
Level of Service		E					D			D		
Approach Delay (s)		59.5					38.9			39.4		
Approach LOS		E					D			D		

Intersection Summary			
HCM 2000 Control Delay	219.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	105.2	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	201	213	247	6	58	3
Future Volume (vph)	201	213	247	6	58	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00	
Flpb, ped/bikes	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.99	1.00			0.96	
Satd. Flow (prot)	1839	1583			1764	
Flt Permitted	0.47	1.00			0.91	
Satd. Flow (perm)	874	1583			1681	
Peak-hour factor, PHF	0.82	0.73	0.95	0.50	0.53	0.38
Adj. Flow (vph)	245	292	260	12	109	8
RTOR Reduction (vph)	0	116	0	0	0	0
Lane Group Flow (vph)	330	436	0	0	129	0
Confl. Peds. (#/hr)						
Turn Type	NA	Prot		Perm	Prot	
Protected Phases	1	1			5	
Permitted Phases				5		
Actuated Green, G (s)	20.2	20.2			12.1	
Effective Green, g (s)	20.2	20.2			12.1	
Actuated g/C Ratio	0.19	0.19			0.12	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	167	303			193	
v/s Ratio Prot		0.28				
v/s Ratio Perm	c0.38				c0.08	
v/c Ratio	1.98	1.44			0.67	
Uniform Delay, d1	42.5	42.5			44.6	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	460.1	216.0			16.9	
Delay (s)	502.6	258.5			61.5	
Level of Service	F	F			E	
Approach Delay (s)	349.8				61.5	
Approach LOS	F				E	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	307	149	60	273	24	6
Future Volume (vph)	307	149	60	273	24	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.946				0.949	
Flt Protected				0.991	0.970	
Satd. Flow (prot)	3683	0	0	3858	1886	0
Flt Permitted				0.991	0.970	
Satd. Flow (perm)	3683	0	0	3858	1886	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	504			552	258	
Travel Time (s)	13.7			15.1	7.0	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.90	0.78	0.85	0.91	0.92	0.38
Adj. Flow (vph)	341	191	71	300	26	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	532	0	0	371	42	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	307	149	60	273	24	6
Future Volume (Veh/h)	307	149	60	273	24	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.78	0.85	0.91	0.92	0.38
Hourly flow rate (vph)	341	191	71	300	26	16
Pedestrians					1	
Lane Width (ft)					15.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	504					
pX, platoon unblocked						
vC, conflicting volume			533		730	267
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			533		730	267
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		92	98
cM capacity (veh/h)			1030		333	730

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	227	305	171	200	42
Volume Left	0	0	71	0	26
Volume Right	0	191	0	0	16
cSH	1700	1700	1030	1700	420
Volume to Capacity	0.13	0.18	0.07	0.12	0.10
Queue Length 95th (ft)	0	0	6	0	8
Control Delay (s)	0.0	0.0	4.0	0.0	14.5
Lane LOS			A		B
Approach Delay (s)	0.0		1.8		14.5
Approach LOS					B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

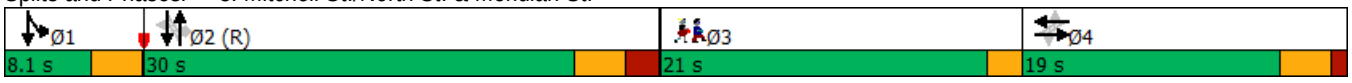
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	3	147	28	52	0	336	67	96	779	5
Future Volume (vph)	11	32	3	147	28	52	0	336	67	96	779	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	95		0	60		115	60		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			180			30			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99								
Frt		0.986			0.901				0.850		0.998	
Flt Protected		0.987		0.950						0.950		
Satd. Flow (prot)	0	1994	0	1770	1678	0	1863	3539	1583	1770	1859	0
Flt Permitted		0.920		0.758						0.487		
Satd. Flow (perm)	0	1858	0	1403	1678	0	1863	3539	1583	907	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			58				89		1	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		834			697			953			634	
Travel Time (s)		19.0			19.0			21.7			14.4	
Confl. Peds. (#/hr)	1			3								
Peak Hour Factor	0.55	0.68	0.38	0.87	0.93	0.89	0.92	0.87	0.75	0.60	0.91	0.42
Adj. Flow (vph)	20	47	8	169	30	58	0	386	89	160	856	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	169	88	0	0	386	89	160	868	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Detector Phase	4	4		4	4		2	2	2	1	1 2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0	25.0	5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0	30.0	8.1		
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0	30.0	8.1		
Total Split (%)	24.3%	24.3%		24.3%	24.3%		38.4%	38.4%	38.4%	10.4%		
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0	25.0	5.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0	2.0	0.1		
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.0		15.0	15.0			25.0	25.0	52.9	56.0	
Actuated g/C Ratio		0.19		0.19	0.19			0.32	0.32	0.68	0.72	
v/c Ratio		0.21		0.63	0.24			0.34	0.16	0.18	0.65	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	27%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		23.8		38.4	12.3			21.3	5.5	4.9	10.0	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		23.8		38.4	12.3			21.3	5.5	4.9	10.0	
LOS		C		D	B			C	A	A	B	
Approach Delay		23.8			29.5			18.4			9.2	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		28		77	12			74	0	19	179	
Queue Length 95th (ft)		41		119	44			106	19	32	406	
Internal Link Dist (ft)		754			617			873			554	
Turn Bay Length (ft)				95					115	60		
Base Capacity (vph)		408		303	409			1132	567	901	1332	
Starvation Cap Reductn		0		0	0			0	0	0	0	
Spillback Cap Reductn		0		0	0			0	0	0	0	
Storage Cap Reductn		0		0	0			0	0	0	0	
Reduced v/c Ratio		0.18		0.56	0.22			0.34	0.16	0.18	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78.1			
Actuated Cycle Length: 78.1			
Offset: 8.1 (10%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 87.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 8: Mitchell St./North St. & Meridian St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	3	147	28	52	0	336	67	96	779	5
Future Volume (vph)	11	32	3	147	28	52	0	336	67	96	779	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0			5.0	5.0	3.1	3.1	
Lane Util. Factor		1.00		1.00	1.00			0.95	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	0.90			1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1992		1758	1679			3539	1583	1770	1859	
Flt Permitted		0.92		0.76	1.00			1.00	1.00	0.49	1.00	
Satd. Flow (perm)		1858		1402	1679			3539	1583	907	1859	
Peak-hour factor, PHF	0.55	0.68	0.38	0.87	0.93	0.89	0.92	0.87	0.75	0.60	0.91	0.42
Adj. Flow (vph)	20	47	8	169	30	58	0	386	89	160	856	12
RTOR Reduction (vph)	0	6	0	0	47	0	0	0	61	0	0	0
Lane Group Flow (vph)	0	69	0	169	41	0	0	386	28	160	868	0
Confl. Peds. (#/hr)	1			3								
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		15.0		15.0	15.0			25.0	25.0	51.0	54.1	
Effective Green, g (s)		15.0		15.0	15.0			25.0	25.0	51.0	54.1	
Actuated g/C Ratio		0.19		0.19	0.19			0.32	0.32	0.65	0.69	
Clearance Time (s)		4.0		4.0	4.0			5.0	5.0	3.1		
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		356		269	322			1132	506	879	1287	
v/s Ratio Prot					0.02			0.11		0.06	c0.47	
v/s Ratio Perm		0.04		c0.12					0.02	0.06		
v/c Ratio		0.19		0.63	0.13			0.34	0.06	0.18	0.67	
Uniform Delay, d1		26.5		29.0	26.1			20.3	18.4	5.2	6.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3		4.5	0.2			0.8	0.2	0.1	1.4	
Delay (s)		26.8		33.5	26.3			21.1	18.6	5.3	8.3	
Level of Service		C		C	C			C	B	A	A	
Approach Delay (s)		26.8			31.1			20.6			7.9	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	14.1
Intersection Capacity Utilization	87.8%	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)	24	11	9	150	8	1	4	347	57	1	745	5
Future Volume (vph)	24	11	9	150	8	1	4	347	57	1	745	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	11	11	11	11	11	11	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00			1.00	
Frt		0.972			0.962			0.975			0.999	
Flt Protected		0.974		0.950				0.999				
Satd. Flow (prot)	0	1999	0	1711	1732	0	0	3332	0	0	1985	0
Flt Permitted		0.867		0.726				0.942			0.998	
Satd. Flow (perm)	0	1774	0	1307	1732	0	0	3142	0	0	1981	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			4			71			1	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		699			143			486			286	
Travel Time (s)		19.1			3.9			11.0			6.5	
Confl. Peds. (#/hr)	6						1			1		
Peak Hour Factor	0.92	0.92	0.92	0.74	0.67	0.25	0.50	0.87	0.69	0.25	0.82	0.62
Adj. Flow (vph)	26	12	10	203	12	4	8	399	83	4	909	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	203	16	0	0	490	0	0	921	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0		25.0	25.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0		30.0	30.0	
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0		30.0	30.0	
Total Split (%)	38.8%	38.8%		38.8%	38.8%		61.2%	61.2%		61.2%	61.2%	
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		11.9		11.9	11.9			29.2			29.2	
Actuated g/C Ratio		0.26		0.26	0.26			0.63			0.63	
v/c Ratio		0.10		0.61	0.04			0.25			0.74	
Control Delay		11.1		23.4	11.0			5.4			16.0	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		11.1		23.4	11.0			5.4			16.0	
LOS		B		C	B			A			B	
Approach Delay		11.1			22.5			5.4			16.0	
Approach LOS		B			C			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		8		47	2			26			182	
Queue Length 95th (ft)		25		76	9			51			#378	
Internal Link Dist (ft)		619			63			406			206	
Turn Bay Length (ft)												
Base Capacity (vph)		579		421	561			1996			1242	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.08		0.48	0.03			0.25			0.74	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 46.6			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 9: North St. & Broad St.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	11	9	150	8	1	4	347	57	1	745	5
Future Volume (vph)	24	11	9	150	8	1	4	347	57	1	745	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	11	11	11	11	11	11	12	14	12
Total Lost time (s)		4.0		4.0	4.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.97		1.00	0.96			0.97			1.00	
Flt Protected		0.97		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1989		1711	1733			3332			1984	
Flt Permitted		0.87		0.73	1.00			0.94			1.00	
Satd. Flow (perm)		1772		1307	1733			3140			1981	
Peak-hour factor, PHF	0.92	0.92	0.92	0.74	0.67	0.25	0.50	0.87	0.69	0.25	0.82	0.62
Adj. Flow (vph)	26	12	10	203	12	4	8	399	83	4	909	8
RTOR Reduction (vph)	0	8	0	0	3	0	0	29	0	0	0	0
Lane Group Flow (vph)	0	40	0	203	13	0	0	461	0	0	921	0
Confl. Peds. (#/hr)	6						1			1		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		10.2		10.2	10.2			28.2			28.2	
Effective Green, g (s)		10.2		10.2	10.2			28.2			28.2	
Actuated g/C Ratio		0.22		0.22	0.22			0.59			0.59	
Clearance Time (s)		4.0		4.0	4.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		381		281	372			1868			1178	
v/s Ratio Prot					0.01							
v/s Ratio Perm		0.02		c0.16				0.15			c0.46	
v/c Ratio		0.11		0.72	0.03			0.25			0.78	
Uniform Delay, d1		14.9		17.3	14.7			4.6			7.3	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.1		8.8	0.0			0.3			5.2	
Delay (s)		15.1		26.1	14.7			4.9			12.5	
Level of Service		B		C	B			A			B	
Approach Delay (s)		15.1			25.3			4.9			12.5	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

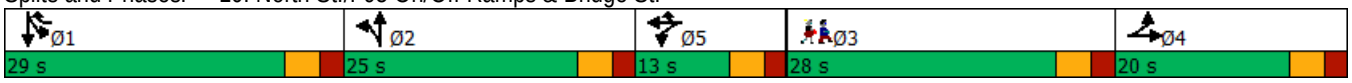
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Future Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt		0.922				0.850		0.992				0.850
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	3319	1717	0	0	1857	1583	1770	3511	0	1770	1863	1583
Flt Permitted	0.950				0.997		0.950			0.950		
Satd. Flow (perm)	3319	1717	0	0	1857	1583	1767	3511	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				114		5				209
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Confl. Peds. (#/hr)							2					
Peak Hour Factor	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	338	20	75	857	347
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	88	0	0	71	81	54	358	0	75	857	347
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	20.0	20.0		13.0	13.0		25.0	25.0		29.0	29.0	
Total Split (%)	17.4%	17.4%		11.3%	11.3%		21.7%	21.7%		25.2%	25.2%	
Maximum Green (s)	15.0	15.0		8.0	8.0		20.0	20.0		24.0	24.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	9.0	9.0			8.2	34.2	20.6	20.6		24.7	24.7	84.0
Actuated g/C Ratio	0.11	0.11			0.10	0.41	0.25	0.25		0.29	0.29	1.00
v/c Ratio	0.27	0.40			0.39	0.11	0.12	0.41		0.14	1.57	0.22

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	24%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	40.0	30.5			47.2	1.6	30.8	30.9		27.8	289.6	0.3
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	40.0	30.5			47.2	1.6	30.8	30.9		27.8	289.6	0.3
LOS	D	C			D	A	C	C		C	F	A
Approach Delay		35.4			22.9			30.8			195.8	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	23	23			34	0	21	77		27	~610	0
Queue Length 95th (ft)	55	68			55	6	66	174		61	#1046	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	609	347			181	711	433	863		520	547	1583
Starvation Cap Reductn	0	0			0	0	0	0		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.16	0.25			0.39	0.11	0.12	0.41		0.14	1.57	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 84			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.57			
Intersection Signal Delay: 134.7		Intersection LOS: F	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Future Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1717			1858	1583	1770	3510		1770	1863	1583
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1717			1858	1583	1770	3510		1770	1863	1583
Peak-hour factor, PHF	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	338	20	75	857	347
RTOR Reduction (vph)	0	35	0	0	0	53	0	4	0	0	0	0
Lane Group Flow (vph)	96	53	0	0	71	28	54	354	0	75	857	347
Confl. Peds. (#/hr)							2					
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	9.0	9.0			6.2	30.9	20.6	20.6		24.7	24.7	88.9
Effective Green, g (s)	9.0	9.0			6.2	30.9	20.6	20.6		24.7	24.7	88.9
Actuated g/C Ratio	0.10	0.10			0.07	0.35	0.23	0.23		0.28	0.28	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	336	173			129	550	410	813		491	517	1583
v/s Ratio Prot	0.03	0.03			c0.04	0.02	0.03	c0.10		0.04	c0.46	
v/s Ratio Perm												c0.22
v/c Ratio	0.29	0.31			0.55	0.05	0.13	0.44		0.15	1.66	0.22
Uniform Delay, d1	37.0	37.1			40.0	19.3	27.1	29.2		24.2	32.1	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.7			5.0	0.0	0.7	1.7		0.1	304.5	0.3
Delay (s)	37.3	37.8			45.0	19.3	27.7	30.9		24.3	336.6	0.3
Level of Service	D	D			D	B	C	C		C	F	A
Approach Delay (s)		37.5			31.3			30.5			227.0	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	155.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	25.0
Intersection Capacity Utilization	58.0%	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)	90	45	90	74	68	71	34	530	14	34	1534	151
Future Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	90		90	120		150	130		120
Storage Lanes	2		0	1		1	1		1	1		1
Taper Length (ft)	300			120			150			300		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.906				0.850		0.996				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1688	0	1770	1863	1583	1770	5065	0	1770	3539	1583
Flt Permitted	0.950			0.632			0.950			0.950		
Satd. Flow (perm)	3433	1688	0	1177	1863	1583	1770	5065	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61				91		3				103
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		588			486			576			595	
Travel Time (s)		16.0			13.3			8.7			9.0	
Confl. Peds. (#/hr)						1						
Peak Hour Factor	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	639	19	56	1826	216
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	200	0	106	93	85	39	658	0	56	1826	216
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Detector Phase	4	4 8		8	8	5 8	1	6		5	2	2 4
Switch Phase												
Minimum Initial (s)	5.0			9.0	9.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.9			14.7	14.7		11.8	20.0		11.8	20.0	
Total Split (s)	24.9			26.7	26.7		17.8	35.0		17.8	35.0	
Total Split (%)	17.4%			18.6%	18.6%		12.4%	24.4%		12.4%	24.4%	
Maximum Green (s)	19.0			21.0	21.0		11.0	30.0		11.0	30.0	
Yellow Time (s)	3.3			3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6			2.4	2.4		3.8	2.0		3.8	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Lead/Lag	Lag						Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes						Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Recall Mode	None			None	None		None	Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	10.0	28.9		13.0	13.0	26.2	6.6	30.8		7.3	34.2	50.3
Actuated g/C Ratio	0.12	0.35		0.16	0.16	0.32	0.08	0.38		0.09	0.42	0.61
v/c Ratio	0.26	0.32		0.57	0.32	0.15	0.28	0.35		0.36	1.24	0.21
Control Delay	36.3	14.9		46.8	35.8	5.2	44.8	21.4		45.4	139.4	5.9

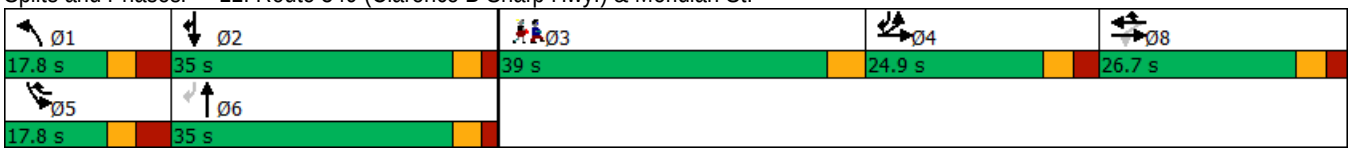
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	39.0
Total Split (s)	39.0
Total Split (%)	27%
Maximum Green (s)	35.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	28.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.3	14.9		46.8	35.8	5.2	44.8	21.4		45.4	139.4	5.9
LOS	D	B		D	D	A	D	C		D	F	A
Approach Delay		22.4			30.7			22.7			123.1	
Approach LOS		C			C			C			F	
Queue Length 50th (ft)	26	51		52	44	0	19	87		28	~661	25
Queue Length 95th (ft)	51	56		85	76	24	56	145		48	#938	47
Internal Link Dist (ft)		508			406			496			515	
Turn Bay Length (ft)	230			90		90	120			130		120
Base Capacity (vph)	816	794		309	489	616	243	1904		243	1473	1180
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.13	0.25		0.34	0.19	0.14	0.16	0.35		0.23	1.24	0.18

Intersection Summary

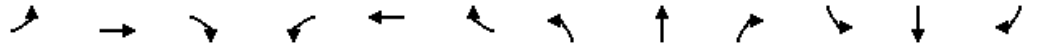
Area Type: Other
Cycle Length: 143.4
Actuated Cycle Length: 82.1
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.24
Intersection Signal Delay: 85.6 Intersection LOS: F
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 349 (Clarence B Sharp Hwy.) & Meridian St.



Lane Group	Ø3
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Future Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.7	5.7	6.8	6.8	5.0		6.8	5.0	5.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1688		1770	1863	1583	1770	5063		1770	3539	1583
Flt Permitted	0.95	1.00		0.63	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1688		1178	1863	1583	1770	5063		1770	3539	1583
Peak-hour factor, PHF	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	639	19	56	1826	216
RTOR Reduction (vph)	0	40	0	0	0	66	0	2	0	0	0	43
Lane Group Flow (vph)	108	160	0	106	93	19	39	656	0	56	1826	173
Confl. Peds. (#/hr)						1						
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Actuated Green, G (s)	10.0	28.9		13.0	13.0	24.7	4.1	32.3		6.0	34.2	49.2
Effective Green, g (s)	10.0	28.9		13.0	13.0	19.0	4.1	32.3		6.0	34.2	49.2
Actuated g/C Ratio	0.12	0.34		0.15	0.15	0.22	0.05	0.38		0.07	0.40	0.58
Clearance Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	405	575		180	285	355	85	1930		125	1428	919
v/s Ratio Prot	0.03	c0.09			0.05	0.01	0.02	0.13		c0.03	c0.52	0.11
v/s Ratio Perm				c0.09								
v/c Ratio	0.27	0.28		0.59	0.33	0.05	0.46	0.34		0.45	1.28	0.19
Uniform Delay, d1	34.0	20.3		33.4	31.9	25.8	39.2	18.6		37.8	25.2	8.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		3.2	0.2	0.0	1.4	0.5		0.9	131.0	0.0
Delay (s)	34.1	20.4		36.5	32.2	25.8	40.6	19.1		38.7	156.2	8.4
Level of Service	C	C		D	C	C	D	B		D	F	A
Approach Delay (s)		25.2			31.9			20.3			137.9	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	94.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	27.4
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Future Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	11	11	11	11	11	15	15	15
Storage Length (ft)	155		0	0		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	135			25			25			25		
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
Ped Bike Factor											1.00	
Frt		0.993			0.986				0.850		0.960	
Flt Protected	0.950			0.950				0.986			0.988	
Satd. Flow (prot)	1711	1788	0	1652	1775	0	0	1775	1531	0	1943	0
Flt Permitted	0.676			0.643				0.900			0.905	
Satd. Flow (perm)	1217	1788	0	1118	1775	0	0	1621	1531	0	1778	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9				374		23	
Link Speed (mph)		30			30			75			30	
Link Distance (ft)		529			504			284			348	
Travel Time (s)		12.0			11.5			2.6			7.9	
Confl. Peds. (#/hr)										4		
Peak Hour Factor	0.83	0.77	0.38	0.86	0.81	0.67	0.38	0.35	0.82	0.62	0.68	0.64
Adj. Flow (vph)	12	173	8	228	114	12	8	20	374	24	43	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	181	0	228	126	0	0	28	374	0	95	0
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Detector Phase	1	1 2		3	2 3		5	5	5	5	5	
Switch Phase												
Minimum Initial (s)	3.0			3.0			5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	7.0			7.2			11.2	11.2	11.2	11.2	11.2	
Total Split (s)	9.0			14.2			22.2	22.2	22.2	22.2	22.2	
Total Split (%)	11.1%			17.5%			27.3%	27.3%	27.3%	27.3%	27.3%	
Maximum Green (s)	5.0			10.0			16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.0			3.0			4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	1.0			1.2			2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0				0.0	0.0		0.0	
Total Lost Time (s)	4.0			4.2				6.2	6.2		6.2	
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	1.0			2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None			None			None	None	None	None	None	
Act Effct Green (s)	36.9	40.9		39.2	36.0			8.3	20.0		8.3	
Actuated g/C Ratio	0.52	0.58		0.55	0.51			0.12	0.28		0.12	
v/c Ratio	0.02	0.18		0.34	0.14			0.15	0.54		0.42	
Control Delay	8.6	8.6		6.4	5.3			29.8	5.4		28.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	8.6	8.6		6.4	5.3			29.8	5.4		28.9	

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	20.8
Total Split (s)	35.8
Total Split (%)	44%
Maximum Green (s)	30.0
Yellow Time (s)	3.8
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			C	A		C	
Approach Delay		8.6			6.0			7.1			28.9	
Approach LOS		A			A			A			C	
Queue Length 50th (ft)	2	31		21	12			11	0		29	
Queue Length 95th (ft)	10	67		58	32			13	36		50	
Internal Link Dist (ft)		449			424			204			268	
Turn Bay Length (ft)	155								85			
Base Capacity (vph)	668	1011		733	968			366	689		420	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.02	0.18		0.31	0.13			0.08	0.54		0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.2			
Actuated Cycle Length: 71.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Route 649 (Rainville Ave.)/Old Farms Rd. & Route 649 (Poquonnock Rd.)

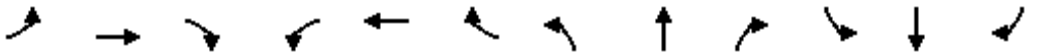
Lane Group	Ø2
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Future Volume (vph)	10	133	3	196	92	8	3	7	307	15	29	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	15	15	15
Total Lost time (s)	4.0	4.0		4.2	5.8			6.2	6.2		6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1711	1789		1652	1775			1775	1531		1938	
Flt Permitted	0.68	1.00		0.64	1.00			0.90	1.00		0.90	
Satd. Flow (perm)	1218	1789		1118	1775			1621	1531		1776	
Peak-hour factor, PHF	0.83	0.77	0.38	0.86	0.81	0.67	0.38	0.35	0.82	0.62	0.68	0.64
Adj. Flow (vph)	12	173	8	228	114	12	8	20	374	24	43	28
RTOR Reduction (vph)	0	2	0	0	4	0	0	0	291	0	20	0
Lane Group Flow (vph)	12	179	0	228	122	0	0	28	83	0	75	0
Confl. Peds. (#/hr)										4		
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Actuated Green, G (s)	35.1	39.1		37.6	37.6			8.3	15.7		8.3	
Effective Green, g (s)	35.1	39.1		37.6	37.6			8.3	15.7		8.3	
Actuated g/C Ratio	0.49	0.55		0.53	0.53			0.12	0.22		0.12	
Clearance Time (s)	4.0			4.2				6.2	6.2		6.2	
Vehicle Extension (s)	1.0			2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)	636	985		647	940			189	472		207	
v/s Ratio Prot	0.00	c0.10		c0.04	0.07				0.02			
v/s Ratio Perm	0.01			c0.15				0.02	0.03		c0.04	
v/c Ratio	0.02	0.18		0.35	0.13			0.15	0.18		0.36	
Uniform Delay, d1	9.1	8.0		9.1	8.4			28.2	22.4		28.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.0			0.1	0.1		0.4	
Delay (s)	9.1	8.0		9.2	8.5			28.3	22.5		29.3	
Level of Service	A	A		A	A			C	C		C	
Approach Delay (s)		8.1			9.0			22.9			29.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
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)	246	73	12	72	84	78	27	271	15	137	529	964
Future Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.988				0.850		0.992				0.850
Flt Protected	0.950	0.978			0.975			0.994		0.950		
Satd. Flow (prot)	1569	1653	0	0	1695	1478	0	3257	0	1652	1739	1478
Flt Permitted	0.950	0.978			0.975			0.797		0.373		
Satd. Flow (perm)	1569	1653	0	0	1695	1478	0	2609	0	648	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				98		3				1048
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							10					
Peak Hour Factor	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	283	94	16	111	102	98	50	315	20	161	615	1048
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	195	198	0	0	213	98	0	385	0	161	615	1048
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	27.0	27.0		27.1	27.1	27.1	33.0	33.0		39.4		
Total Split (%)	18.0%	18.0%		18.1%	18.1%	18.1%	22.0%	22.0%		26.3%		
Maximum Green (s)	22.5	22.5		22.6	22.6	22.6	28.5	28.5		34.9		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.9	21.9			20.3	20.3		28.7		63.6	68.2	123.2
Actuated g/C Ratio	0.17	0.17			0.16	0.16		0.22		0.50	0.53	0.97
v/c Ratio	0.72	0.69			0.79	0.31		0.65		0.27	0.66	0.72

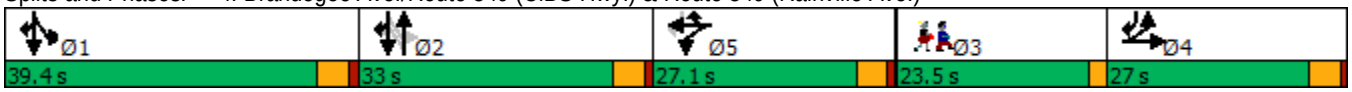
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	23.5
Total Split (s)	23.5
Total Split (%)	16%
Maximum Green (s)	21.5
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	3
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	67.5	64.2			73.6	12.3		52.3		18.7	27.8	3.2
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	67.5	64.2			73.6	12.3		52.3		18.7	27.8	3.2
LOS	E	E			E	B		D		B	C	A
Approach Delay		65.8			54.3			52.3			12.9	
Approach LOS		E			D			D			B	
Queue Length 50th (ft)	158	158			166	0		150		65	346	0
Queue Length 95th (ft)	#311	245			#283	37		234		132	604	20
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	278	294			302	344		588		600	917	1459
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	0.70	0.67			0.71	0.28		0.65		0.27	0.67	0.72

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 127.6			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 29.6		Intersection LOS: C	
Intersection Capacity Utilization 91.8%		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: 4: Brandegee Ave./Route 349 (ClBS Hwy.) & Route 349 (Rainville Ave.)



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Future Volume (vph)	246	73	12	72	84	78	27	271	15	137	529	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.97	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1569	1653			1694	1478		3254		1652	1739	1478
Flt Permitted	0.95	0.98			0.97	1.00		0.80		0.37	1.00	1.00
Satd. Flow (perm)	1569	1653			1694	1478		2610		649	1739	1478
Peak-hour factor, PHF	0.87	0.78	0.75	0.65	0.82	0.80	0.54	0.86	0.75	0.85	0.86	0.92
Adj. Flow (vph)	283	94	16	111	102	98	50	315	20	161	615	1048
RTOR Reduction (vph)	0	2	0	0	0	83	0	2	0	0	0	116
Lane Group Flow (vph)	195	196	0	0	213	15	0	383	0	161	615	932
Confl. Peds. (#/hr)							10					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	21.9	21.9			20.3	20.3		28.7		63.7	68.2	114.9
Effective Green, g (s)	21.9	21.9			20.3	20.3		28.7		63.7	68.2	114.9
Actuated g/C Ratio	0.17	0.17			0.16	0.16		0.22		0.49	0.53	0.89
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	265	280			266	232		579		591	917	1365
v/s Ratio Prot	0.12	0.12			c0.13	0.01				0.07	0.35	c0.50
v/s Ratio Perm								0.15		0.06		0.13
v/c Ratio	0.74	0.70			0.80	0.07		0.66		0.27	0.67	0.68
Uniform Delay, d1	50.9	50.6			52.5	46.4		45.8		18.7	22.3	2.0
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	10.1	7.7			15.7	0.1		5.8		0.3	1.9	1.4
Delay (s)	61.1	58.3			68.2	46.5		51.6		19.0	24.2	3.4
Level of Service	E	E			E	D		D		B	C	A
Approach Delay (s)		59.7			61.4			51.6			11.8	
Approach LOS		E			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	129.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
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
Ped Bike Factor										1.00		
Frt		0.975					0.927			0.992		
Flt Protected		0.969					0.993			0.993		
Satd. Flow (prot)	0	1760	0	0	0	0	1715	0	0	1835	0	0
Flt Permitted		0.537					0.940			0.894		
Satd. Flow (perm)	0	975	0	0	0	0	1623	0	0	1648	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)		1					40			2		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Confl. Peds. (#/hr)									6			
Peak Hour Factor	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	102	28	25	4	6	19	54	93	31	165	12	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	0	0	172	0	0	208	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	22.0	22.0			22.0	22.0	22.0		21.0	21.0		42.0
Total Split (%)	18.0%	18.0%			18.0%	18.0%	18.0%		17.2%	17.2%		34.4%
Maximum Green (s)	17.0	17.0			17.0	17.0	17.0		16.0	16.0		37.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		17.1					17.1			16.1		
Actuated g/C Ratio		0.17					0.17			0.16		
v/c Ratio		0.97					0.56			0.79		
Control Delay		107.2					39.2			64.6		
Queue Delay		0.0					0.0			0.0		
Total Delay		107.2					39.2			64.6		
LOS		F					D			E		

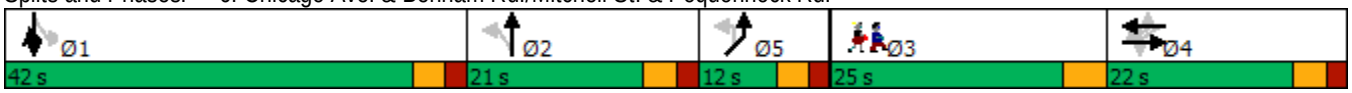
Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	201	213	247	6	58	3	
Future Volume (vph)	201	213	247	6	58	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.992		
Flt Protected	0.987				0.955		
Satd. Flow (prot)	1839	1583	0	0	1765	0	
Flt Permitted	0.472				0.883		
Satd. Flow (perm)	879	1583	0	0	1632	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Confl. Peds. (#/hr)							
Peak Hour Factor	0.82	0.73	0.95	0.50	0.53	0.38	
Adj. Flow (vph)	245	292	260	12	109	8	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	330	552	0	0	129	0	
Turn Type	NA	Prot		Perm	Prot		
Protected Phases	1	1			5		3
Permitted Phases				5			
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	42.0	42.0		12.0	12.0		25.0
Total Split (%)	34.4%	34.4%		9.8%	9.8%		20%
Maximum Green (s)	37.0	37.0		7.0	7.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	37.3	37.3			7.1		
Actuated g/C Ratio	0.37	0.37			0.07		
v/c Ratio	1.03	0.83			1.15		
Control Delay	91.7	34.4			174.9		
Queue Delay	0.0	0.0			0.0		
Total Delay	91.7	34.4			174.9		
LOS	F	C			F		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Approach Delay		107.2					39.2			64.6		
Approach LOS		F					D			E		
Queue Length 50th (ft)		97					74			123		
Queue Length 95th (ft)		#192					136			#202		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		164					306			262		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.97					0.56			0.79		

Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 102			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 70.3		Intersection LOS: E	
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			

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

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.



Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Approach Delay	55.8				174.9		
Approach LOS	E				F		
Queue Length 50th (ft)	198	227			~91		
Queue Length 95th (ft)	#442	340			#123		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	321	669			112		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	1.03	0.83			1.15		

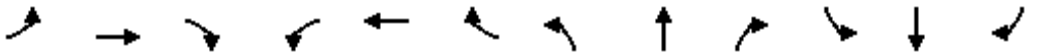
Intersection Summary

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Future Volume (vph)	58	19	19	3	5	13	40	69	23	114	6	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frpb, ped/bikes		1.00					1.00			1.00		
Flpb, ped/bikes		1.00					1.00			1.00		
Frt		0.98					0.93			0.99		
Flt Protected		0.97					0.99			0.99		
Satd. Flow (prot)		1760					1714			1831		
Flt Permitted		0.54					0.94			0.89		
Satd. Flow (perm)		976					1624			1649		
Peak-hour factor, PHF	0.57	0.68	0.75	0.75	0.81	0.68	0.74	0.74	0.75	0.69	0.50	0.82
Adj. Flow (vph)	102	28	25	4	6	19	54	93	31	165	12	85
RTOR Reduction (vph)	0	1	0	0	0	0	33	0	0	2	0	0
Lane Group Flow (vph)	0	158	0	0	0	0	139	0	0	206	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		Perm
Protected Phases		4					4			2		
Permitted Phases	4				4	4			2			1
Actuated Green, G (s)		17.1					17.1			16.1		
Effective Green, g (s)		17.1					17.1			16.1		
Actuated g/C Ratio		0.16					0.16			0.15		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		158					264			252		
v/s Ratio Prot												
v/s Ratio Perm		c0.16					0.09			c0.13		
v/c Ratio		1.00					0.52			0.82		
Uniform Delay, d1		44.0					40.3			43.1		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		71.9					2.4			24.7		
Delay (s)		115.9					42.7			67.8		
Level of Service		F					D			E		
Approach Delay (s)		115.9					42.7			67.8		
Approach LOS		F					D			E		

Intersection Summary			
HCM 2000 Control Delay	78.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	105.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	201	213	247	6	58	3
Future Volume (vph)	201	213	247	6	58	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00	
Flpb, ped/bikes	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.99	1.00			0.96	
Satd. Flow (prot)	1839	1583			1764	
Flt Permitted	0.47	1.00			0.88	
Satd. Flow (perm)	879	1583			1632	
Peak-hour factor, PHF	0.82	0.73	0.95	0.50	0.53	0.38
Adj. Flow (vph)	245	292	260	12	109	8
RTOR Reduction (vph)	0	92	0	0	0	0
Lane Group Flow (vph)	330	460	0	0	129	0
Confl. Peds. (#/hr)						
Turn Type	NA	Prot		Perm	Prot	
Protected Phases	1	1			5	
Permitted Phases				5		
Actuated Green, G (s)	37.3	37.3			7.1	
Effective Green, g (s)	37.3	37.3			7.1	
Actuated g/C Ratio	0.35	0.35			0.07	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	311	561			110	
v/s Ratio Prot		0.29				
v/s Ratio Perm	c0.38				c0.08	
v/c Ratio	1.06	0.82			1.17	
Uniform Delay, d1	33.9	30.8			49.0	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	68.1	12.6			139.6	
Delay (s)	102.0	43.4			188.6	
Level of Service	F	D			F	
Approach Delay (s)	65.3				188.6	
Approach LOS	E				F	

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Future Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt		0.922				0.850		0.992				0.850
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	3319	1717	0	0	1857	1583	1770	3511	0	1770	1863	1583
Flt Permitted	0.950				0.997		0.950			0.950		
Satd. Flow (perm)	3319	1717	0	0	1857	1583	1766	3511	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36				110		4				202
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Confl. Peds. (#/hr)							2					
Peak Hour Factor	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	338	20	75	857	347
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	88	0	0	71	81	54	358	0	75	857	347
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		40.0	40.0	
Total Split (%)	10.9%	10.9%		10.9%	10.9%		21.0%	21.0%		33.6%	33.6%	
Maximum Green (s)	8.0	8.0		8.0	8.0		20.0	20.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	8.1	8.1			8.1	43.5	20.2	20.2		35.4	35.4	96.6
Actuated g/C Ratio	0.08	0.08			0.08	0.45	0.21	0.21		0.37	0.37	1.00
v/c Ratio	0.35	0.50			0.46	0.10	0.15	0.49		0.12	1.26	0.22

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	24%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	47.8	39.3			55.0	1.4	35.5	37.3		23.6	156.1	0.3
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	47.8	39.3			55.0	1.4	35.5	37.3		23.6	156.1	0.3
LOS	D	D			D	A	D	D		C	F	A
Approach Delay		43.8			26.4			37.0			106.1	
Approach LOS		D			C			D			F	
Queue Length 50th (ft)	27	29			40	0	25	93		27	~603	0
Queue Length 95th (ft)	61	77			58	6	70	185		57	#978	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	277	176			155	773	371	738		648	682	1583
Starvation Cap Reductn	0	0			0	0	0	0		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.35	0.50			0.46	0.10	0.15	0.49		0.12	1.26	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 119			
Actuated Cycle Length: 96.6			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay: 80.4		Intersection LOS: F	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

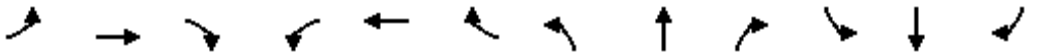
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.

Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

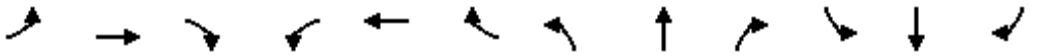
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Future Volume (vph)	81	33	39	1	35	65	46	308	10	49	677	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1717			1858	1583	1770	3510		1770	1863	1583
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1717			1858	1583	1770	3510		1770	1863	1583
Peak-hour factor, PHF	0.84	0.78	0.84	0.25	0.52	0.80	0.85	0.91	0.50	0.65	0.79	0.92
Adj. Flow (vph)	96	42	46	4	67	81	54	338	20	75	857	347
RTOR Reduction (vph)	0	33	0	0	0	46	0	3	0	0	0	0
Lane Group Flow (vph)	96	55	0	0	71	35	54	355	0	75	857	347
Confl. Peds. (#/hr)							2					
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	8.1	8.1			8.1	43.5	20.2	20.2		35.4	35.4	100.5
Effective Green, g (s)	8.1	8.1			8.1	43.5	20.2	20.2		35.4	35.4	100.5
Actuated g/C Ratio	0.08	0.08			0.08	0.43	0.20	0.20		0.35	0.35	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	267	138			149	685	355	705		623	656	1583
v/s Ratio Prot	0.03	c0.03			c0.04	0.02	0.03	c0.10		0.04	c0.46	
v/s Ratio Perm												c0.22
v/c Ratio	0.36	0.40			0.48	0.05	0.15	0.50		0.12	1.31	0.22
Uniform Delay, d1	43.7	43.9			44.2	16.5	33.1	35.7		22.0	32.5	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	1.4			2.4	0.0	0.9	2.6		0.1	148.7	0.3
Delay (s)	44.3	45.3			46.6	16.6	34.0	38.2		22.1	181.3	0.3
Level of Service	D	D			D	B	C	D		C	F	A
Approach Delay (s)		44.8			30.6			37.7			122.8	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	91.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	25.0
Intersection Capacity Utilization	58.0%	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)	90	45	90	74	68	71	34	530	14	34	1534	151
Future Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	90		90	120		150	130		120
Storage Lanes	2		0	1		1	1		1	1		1
Taper Length (ft)	300			120			150			300		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.906				0.850		0.996				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1688	0	1770	1863	1583	1770	5065	0	1770	3539	1583
Flt Permitted	0.950			0.632			0.950			0.950		
Satd. Flow (perm)	3433	1688	0	1177	1863	1583	1770	5065	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				91		4				103
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		588			486			576			595	
Travel Time (s)		16.0			13.3			8.7			9.0	
Confl. Peds. (#/hr)						1						
Peak Hour Factor	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	639	19	56	1826	216
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	200	0	106	93	85	39	658	0	56	1826	216
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Detector Phase	4	4 8		8	8	5 8	1	6		5	2	2 4
Switch Phase												
Minimum Initial (s)	5.0			9.0	9.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.9			14.7	14.7		11.8	20.0		11.8	20.0	
Total Split (s)	10.9			16.0	16.0		11.8	60.6		16.9	65.7	
Total Split (%)	7.6%			11.2%	11.2%		8.2%	42.3%		11.8%	45.8%	
Maximum Green (s)	5.0			10.3	10.3		5.0	55.6		10.1	60.7	
Yellow Time (s)	3.3			3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6			2.4	2.4		3.8	2.0		3.8	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Lead/Lag	Lag						Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes						Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Recall Mode	None			None	None		None	Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	5.0	21.0		10.3	10.3	23.6	5.0	57.1		7.6	62.1	73.0
Actuated g/C Ratio	0.05	0.20		0.10	0.10	0.23	0.05	0.55		0.07	0.60	0.71
v/c Ratio	0.65	0.52		0.91	0.50	0.20	0.46	0.24		0.43	0.86	0.19
Control Delay	67.7	33.4		109.0	54.7	7.2	65.9	12.3		56.0	23.2	3.4

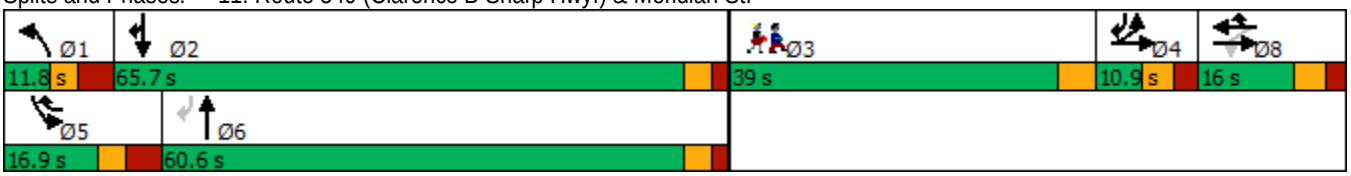
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	39.0
Total Split (s)	39.0
Total Split (%)	27%
Maximum Green (s)	35.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	28.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	67.7	33.4		109.0	54.7	7.2	65.9	12.3		56.0	23.2	3.4
LOS	E	C		F	D	A	E	B		E	C	A
Approach Delay		45.4			60.7			15.3			22.0	
Approach LOS		D			E			B			C	
Queue Length 50th (ft)	37	90		71	60	0	26	77		36	520	23
Queue Length 95th (ft)	#65	91		#120	90	29	#62	95		50	553	30
Internal Link Dist (ft)		508			406			496			515	
Turn Bay Length (ft)	230			90		90	120			130		120
Base Capacity (vph)	166	381		117	185	468	85	2797		173	2126	1148
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.65	0.52		0.91	0.50	0.18	0.46	0.24		0.32	0.86	0.19

Intersection Summary

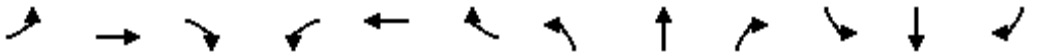
Area Type: Other
Cycle Length: 143.4
Actuated Cycle Length: 103.4
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 26.0 Intersection LOS: C
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 349 (Clarence B Sharp Hwy.) & Meridian St.



Lane Group	Ø3
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Future Volume (vph)	90	45	90	74	68	71	34	530	14	34	1534	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.7	5.7	6.8	6.8	5.0		6.8	5.0	5.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1688		1770	1863	1583	1770	5063		1770	3539	1583
Flt Permitted	0.95	1.00		0.63	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1688		1178	1863	1583	1770	5063		1770	3539	1583
Peak-hour factor, PHF	0.83	0.60	0.72	0.70	0.73	0.84	0.88	0.83	0.73	0.61	0.84	0.70
Adj. Flow (vph)	108	75	125	106	93	85	39	639	19	56	1826	216
RTOR Reduction (vph)	0	39	0	0	0	70	0	2	0	0	0	32
Lane Group Flow (vph)	108	161	0	106	93	15	39	656	0	56	1826	184
Confl. Peds. (#/hr)						1						
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Actuated Green, G (s)	5.0	21.2		10.3	10.3	23.6	4.0	58.5		7.6	62.1	72.1
Effective Green, g (s)	5.0	21.2		10.3	10.3	17.9	4.0	58.5		7.6	62.1	72.1
Actuated g/C Ratio	0.05	0.20		0.10	0.10	0.17	0.04	0.56		0.07	0.59	0.69
Clearance Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	163	341		115	183	270	67	2826		128	2097	1089
v/s Ratio Prot	0.03	c0.10			0.05	0.01	0.02	0.13		c0.03	c0.52	0.12
v/s Ratio Perm				c0.09								
v/c Ratio	0.66	0.47		0.92	0.51	0.05	0.58	0.23		0.44	0.87	0.17
Uniform Delay, d1	49.1	36.9		46.9	44.8	36.4	49.6	11.8		46.6	18.0	5.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.6	0.4		59.0	0.8	0.0	8.0	0.2		0.9	5.3	0.0
Delay (s)	56.7	37.2		105.8	45.7	36.4	57.6	11.9		47.4	23.3	5.8
Level of Service	E	D		F	D	D	E	B		D	C	A
Approach Delay (s)		44.1			65.3			14.5			22.1	
Approach LOS		D			E			B			C	

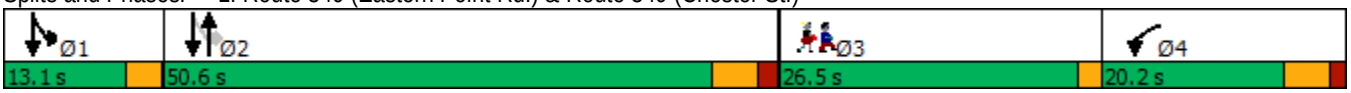
Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	104.8	Sum of lost time (s)	27.4
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

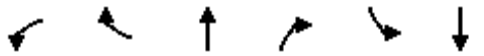
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Lane Configurations							
Traffic Volume (vph)	129	31	164	427	33	114	
Future Volume (vph)	129	31	164	427	33	114	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	11	12	15	
Storage Length (ft)	0	0		175	125		
Storage Lanes	2	0		1	1		
Taper Length (ft)	25				60		
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.85			0.99	0.99		
Frt	0.973			0.850			
Flt Protected	0.961				0.950		
Satd. Flow (prot)	3379	0	1801	1531	1770	2049	
Flt Permitted	0.961				0.552		
Satd. Flow (perm)	2881	0	1801	1510	1021	2049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	21			577			
Link Speed (mph)	30		25			25	
Link Distance (ft)	421		522			429	
Travel Time (s)	9.6		14.2			11.7	
Confl. Peds. (#/hr)	49			2	18		
Peak Hour Factor	0.61	0.66	0.57	0.74	0.60	0.60	
Adj. Flow (vph)	211	47	288	577	55	190	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	258	0	288	577	55	190	
Turn Type	Prot		NA	Perm	D.P+P	NA	
Protected Phases	4		2		1	1 2	3
Permitted Phases				2	2		
Detector Phase	4		2	2	1	1 2	
Switch Phase							
Minimum Initial (s)	9.0		15.0	15.0	4.0		5.0
Minimum Split (s)	14.2		20.6	20.6	7.1		24.0
Total Split (s)	20.2		50.6	50.6	13.1		26.5
Total Split (%)	18.3%		45.8%	45.8%	11.9%		24%
Maximum Green (s)	15.0		45.0	45.0	10.0		24.5
Yellow Time (s)	3.8		3.8	3.8	3.0		2.0
All-Red Time (s)	1.4		1.8	1.8	0.1		0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	5.2		5.6	5.6	3.1		
Lead/Lag	Lag		Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes
Vehicle Extension (s)	2.0		2.5	2.5	1.0		3.0
Recall Mode	None		Min	Min	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							8
Act Effct Green (s)	10.7		20.8	20.8	29.8	33.2	
Actuated g/C Ratio	0.19		0.37	0.37	0.53	0.59	
v/c Ratio	0.39		0.43	0.62	0.09	0.16	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Control Delay	23.5		17.3	5.2	7.3	7.1	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	23.5		17.3	5.2	7.3	7.1	
LOS	C		B	A	A	A	
Approach Delay	23.5		9.2			7.1	
Approach LOS	C		A			A	
Queue Length 50th (ft)	27		54	0	4	16	
Queue Length 95th (ft)	69		119	11	23	62	
Internal Link Dist (ft)	341		442			349	
Turn Bay Length (ft)				175	125		
Base Capacity (vph)	1019		1562	1386	749	1893	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.25		0.18	0.42	0.07	0.10	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110.4			
Actuated Cycle Length: 55.8			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Route 349 (Eastern Point Rd.) & Route 349 (Chester St.)

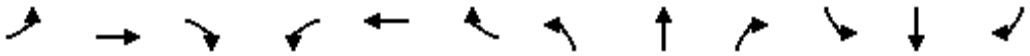




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	129	31	164	427	33	114
Future Volume (vph)	129	31	164	427	33	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	12	15
Total Lost time (s)	5.2		5.6	5.6	3.1	3.1
Lane Util. Factor	0.97		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3377		1801	1510	1763	2049
Flt Permitted	0.96		1.00	1.00	0.55	1.00
Satd. Flow (perm)	3377		1801	1510	1024	2049
Peak-hour factor, PHF	0.61	0.66	0.57	0.74	0.60	0.60
Adj. Flow (vph)	211	47	288	577	55	190
RTOR Reduction (vph)	17	0	0	364	0	0
Lane Group Flow (vph)	241	0	288	213	55	190
Confl. Peds. (#/hr)	49			2	18	
Turn Type	Prot		NA	Perm	D.P+P	NA
Protected Phases	4		2		1	1 2
Permitted Phases				2	2	
Actuated Green, G (s)	10.7		20.7	20.7	26.9	30.0
Effective Green, g (s)	10.7		20.7	20.7	26.9	30.0
Actuated g/C Ratio	0.19		0.37	0.37	0.48	0.54
Clearance Time (s)	5.2		5.6	5.6	3.1	
Vehicle Extension (s)	2.0		2.5	2.5	1.0	
Lane Grp Cap (vph)	645		665	558	573	1097
v/s Ratio Prot	c0.07		c0.16		0.01	c0.09
v/s Ratio Perm				0.14	0.04	
v/c Ratio	0.37		0.43	0.38	0.10	0.17
Uniform Delay, d1	19.7		13.2	13.0	7.8	6.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		0.3	0.3	0.0	0.0
Delay (s)	19.9		13.6	13.3	7.8	6.7
Level of Service	B		B	B	A	A
Approach Delay (s)	19.9		13.4			6.9
Approach LOS	B		B			A

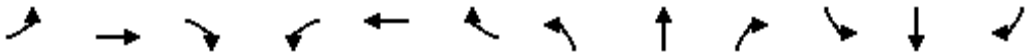
Intersection Summary				
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	38.0%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	319	10	19	143	32	2	24	107	62	9	34
Future Volume (vph)	60	319	10	19	143	32	2	24	107	62	9	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.966			0.886			0.960	
Flt Protected		0.993			0.995			0.999			0.970	
Satd. Flow (prot)	0	3260	0	0	3402	0	0	1814	0	0	1908	0
Flt Permitted		0.993			0.995			0.999			0.970	
Satd. Flow (perm)	0	3260	0	0	3402	0	0	1814	0	0	1908	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		421			1171			266			576	
Travel Time (s)		9.6			26.6			7.3			15.7	
Confl. Peds. (#/hr)	38			176			54			36		
Peak Hour Factor	0.81	0.71	0.50	0.47	0.58	0.38	0.50	0.92	0.66	0.83	0.75	0.95
Adj. Flow (vph)	74	449	20	40	247	84	4	26	162	75	12	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	543	0	0	371	0	0	192	0	0	123	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	319	10	19	143	32	2	24	107	62	9	34
Future Volume (Veh/h)	60	319	10	19	143	32	2	24	107	62	9	34
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.71	0.50	0.47	0.58	0.38	0.50	0.92	0.66	0.83	0.75	0.95
Hourly flow rate (vph)	74	449	20	40	247	84	4	26	162	75	12	36
Pedestrians		54			36			176			38	
Lane Width (ft)		10.0			12.0			15.0			15.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			3			21			5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		421			1171							
pX, platoon unblocked												
vC, conflicting volume	369			645			1082	1232	446	990	1200	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			645			1082	1232	446	990	1200	258
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
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 %	93			95			95	78	62	0	90	95
cM capacity (veh/h)	1132			740			85	117	427	71	123	678

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	298	244	164	208	192	123
Volume Left	74	0	40	0	4	75
Volume Right	0	20	0	84	162	36
cSH	1132	1700	740	1700	296	102
Volume to Capacity	0.07	0.14	0.05	0.12	0.65	1.20
Queue Length 95th (ft)	5	0	4	0	105	205
Control Delay (s)	2.6	0.0	2.9	0.0	37.0	230.4
Lane LOS	A		A		E	F
Approach Delay (s)	1.4		1.3		37.0	230.4
Approach LOS					E	F

Intersection Summary			
Average Delay	29.9		
Intersection Capacity Utilization	43.7%	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)	69	626	11	99	149	49	3	113	179	135	125	0
Future Volume (vph)	69	626	11	99	149	49	3	113	179	135	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	14	10	10	10
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00				
Frt		0.996			0.976				0.850			
Flt Protected		0.994			0.985			0.999		0.950		
Satd. Flow (prot)	0	3270	0	0	3176	0	0	1737	1689	1652	1739	0
Flt Permitted		0.834			0.555			0.994		0.608		
Satd. Flow (perm)	0	2744	0	0	1789	0	0	1728	1689	1057	1739	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			30				218			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			1087			448			267	
Travel Time (s)		26.6			24.7			10.2			6.1	
Confl. Peds. (#/hr)				2			3					
Peak Hour Factor	0.67	0.84	0.46	0.81	0.73	0.79	0.75	0.66	0.82	0.61	0.84	0.92
Adj. Flow (vph)	103	745	24	122	204	62	4	171	218	221	149	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	872	0	0	388	0	0	175	218	221	149	0
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Detector Phase	2	2		2	1 2		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0			9.0	9.0	9.0	9.0	9.0	
Minimum Split (s)	17.2	17.2		17.2			14.5	14.5	14.5	14.5	14.5	
Total Split (s)	39.3	39.3		39.3			25.5	25.5	25.5	25.5	25.5	
Total Split (%)	38.9%	38.9%		38.9%			25.3%	25.3%	25.3%	25.3%	25.3%	
Maximum Green (s)	34.1	34.1		34.1			20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.2	4.2		4.2			3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0			2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.2						5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag			Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0			2.5	2.5	2.5	2.5	2.5	
Recall Mode	Min	Min		Min			None	None	None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		33.0			48.4			20.3	20.3	20.3	20.3	
Actuated g/C Ratio		0.41			0.60			0.25	0.25	0.25	0.25	
v/c Ratio		0.78			0.36			0.41	0.37	0.84	0.34	

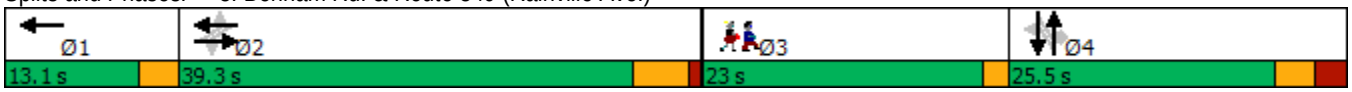
Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	6.0	5.0
Minimum Split (s)	9.1	23.0
Total Split (s)	13.1	23.0
Total Split (%)	13%	23%
Maximum Green (s)	10.0	21.0
Yellow Time (s)	3.0	2.0
All-Red Time (s)	0.1	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	0.2	3.0
Recall Mode	Max	None
Walk Time (s)		7.0
Flash Dont Walk (s)		14.0
Pedestrian Calls (#/hr)		2
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		28.3			10.2			31.2	6.6	59.1	30.2	
Queue Delay		0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay		28.3			10.2			31.2	6.6	59.1	30.2	
LOS		C			B			C	A	E	C	
Approach Delay		28.3			10.2			17.6			47.5	
Approach LOS		C			B			B			D	
Queue Length 50th (ft)		175			36			70	0	101	59	
Queue Length 95th (ft)		#362			85			118	44	#161	135	
Internal Link Dist (ft)		1091			1007			368			187	
Turn Bay Length (ft)									250			
Base Capacity (vph)		1171			1114			432	585	264	434	
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		0.74			0.35			0.41	0.37	0.84	0.34	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100.9			
Actuated Cycle Length: 81.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 3: Benham Rd. & Route 349 (Rainville Ave.)



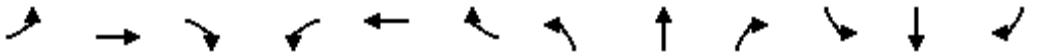
Lane Group	Ø1	Ø3
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	626	11	99	149	49	3	113	179	135	125	0
Future Volume (vph)	69	626	11	99	149	49	3	113	179	135	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	14	10	10	10
Total Lost time (s)		5.2			3.1			5.5	5.5	5.5	5.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.98			1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.98			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3270			3174			1736	1689	1652	1739	
Flt Permitted		0.83			0.56			0.99	1.00	0.61	1.00	
Satd. Flow (perm)		2742			1789			1728	1689	1057	1739	
Peak-hour factor, PHF	0.67	0.84	0.46	0.81	0.73	0.79	0.75	0.66	0.82	0.61	0.84	0.92
Adj. Flow (vph)	103	745	24	122	204	62	4	171	218	221	149	0
RTOR Reduction (vph)	0	2	0	0	13	0	0	0	164	0	0	0
Lane Group Flow (vph)	0	870	0	0	375	0	0	175	54	221	149	0
Confl. Peds. (#/hr)				2			3					
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)		33.0			46.2			20.3	20.3	20.3	20.3	
Effective Green, g (s)		33.0			46.2			20.3	20.3	20.3	20.3	
Actuated g/C Ratio		0.40			0.56			0.25	0.25	0.25	0.25	
Clearance Time (s)		5.2						5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0						2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)		1095			1000			424	415	259	427	
v/s Ratio Prot											0.09	
v/s Ratio Perm		c0.32			c0.21			0.10	0.03	c0.21		
v/c Ratio		0.79			0.37			0.41	0.13	0.85	0.35	
Uniform Delay, d1		21.8			10.1			26.1	24.3	29.7	25.7	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.1			0.2			0.5	0.1	22.6	0.4	
Delay (s)		25.9			10.4			26.6	24.4	52.3	26.1	
Level of Service		C			B			C	C	D	C	
Approach Delay (s)		25.9			10.4			25.4			41.7	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	15.8
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
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)	773	149	22	40	58	173	25	515	47	83	225	217
Future Volume (vph)	773	149	22	40	58	173	25	515	47	83	225	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.991				0.850		0.983				0.850
Flt Protected	0.950	0.969			0.980			0.998		0.950		
Satd. Flow (prot)	1569	1643	0	0	1704	1478	0	3241	0	1652	1739	1478
Flt Permitted	0.950	0.969			0.980			0.923		0.210		
Satd. Flow (perm)	1569	1643	0	0	1704	1478	0	2997	0	365	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				240		9				252
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	966	186	35	55	78	240	35	585	80	122	253	252
Shared Lane Traffic (%)	39%											
Lane Group Flow (vph)	589	598	0	0	133	240	0	700	0	122	253	252
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	52.3	52.3		20.8	20.8	20.8	46.3	46.3		10.5		
Total Split (%)	34.1%	34.1%		13.6%	13.6%	13.6%	30.2%	30.2%		6.8%		
Maximum Green (s)	47.8	47.8		16.3	16.3	16.3	41.8	41.8		6.0		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.6	127.8
Actuated g/C Ratio	0.36	0.36			0.11	0.11		0.32		0.36	0.40	0.97
v/c Ratio	1.04	1.00			0.72	0.64		0.73		0.64	0.37	0.18

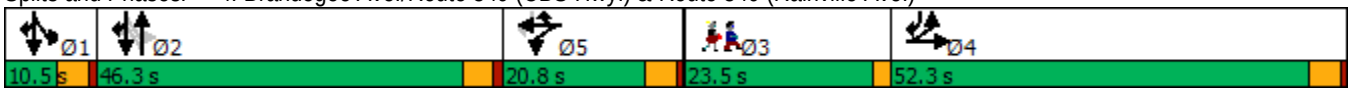
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	23.5
Total Split (%)	15%
Maximum Green (s)	21.5
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	88.4	79.4			79.1	15.3		46.0		47.0	31.6	0.5
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	88.4	79.4			79.1	15.3		46.0		47.0	31.6	0.5
LOS	F	E			E	B		D		D	C	A
Approach Delay		83.8			38.0			46.0			22.1	
Approach LOS		F			D			D			C	
Queue Length 50th (ft)	~549	517			108	0		268		65	146	0
Queue Length 95th (ft)	#812	#805			165	20		408		101	271	11
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	569	597			211	393		957		191	691	1436
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	1.04	1.00			0.63	0.61		0.73		0.64	0.37	0.18

Intersection Summary			
Area Type:	Other		
Cycle Length: 153.4			
Actuated Cycle Length: 132.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 55.3		Intersection LOS: E	
Intersection Capacity Utilization 74.6%		ICU Level of Service D	
Analysis Period (min) 15			

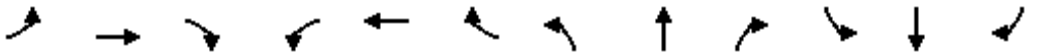
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Brandegee Ave./Route 349 (CBS Hwy.) & Route 349 (Rainville Ave.)



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	773	149	22	40	58	173	25	515	47	83	225	217
Future Volume (vph)	773	149	22	40	58	173	25	515	47	83	225	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97			0.98	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1569	1644			1703	1478		3238		1652	1739	1478
Flt Permitted	0.95	0.97			0.98	1.00		0.92		0.21	1.00	1.00
Satd. Flow (perm)	1569	1644			1703	1478		2997		365	1739	1478
Peak-hour factor, PHF	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	966	186	35	55	78	240	35	585	80	122	253	252
RTOR Reduction (vph)	0	1	0	0	0	214	0	6	0	0	0	27
Lane Group Flow (vph)	589	597	0	0	133	26	0	694	0	122	253	225
Confl. Peds. (#/hr)							1					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.5	119.5
Effective Green, g (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.5	119.5
Actuated g/C Ratio	0.36	0.36			0.11	0.11		0.31		0.36	0.39	0.89
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	562	589			184	160		940		188	682	1369
v/s Ratio Prot	c0.38	0.36			c0.08	0.02				c0.03	0.15	0.13
v/s Ratio Perm								c0.23		0.20		0.02
v/c Ratio	1.05	1.01			0.72	0.16		0.74		0.65	0.37	0.16
Uniform Delay, d1	42.9	42.9			57.7	54.1		41.0		33.3	28.9	0.9
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	51.2	40.4			13.1	0.5		5.2		7.5	0.3	0.1
Delay (s)	94.1	83.3			70.8	54.6		46.2		40.8	29.2	1.0
Level of Service	F	F			E	D		D		D	C	A
Approach Delay (s)		88.6			60.4			46.2			20.1	
Approach LOS		F			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	59.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	133.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

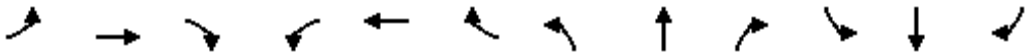
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	96	16	82	24	179	52	7	5	28	4
Future Volume (vph)	4	44	96	16	82	24	179	52	7	5	28	4
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			0.850		0.973			0.996			0.986	
Flt Protected		0.996			0.994			0.964			0.994	
Satd. Flow (prot)	0	1855	1583	0	1802	0	0	1789	0	0	1826	0
Flt Permitted		0.996			0.994			0.964			0.994	
Satd. Flow (perm)	0	1855	1583	0	1802	0	0	1789	0	0	1826	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		12			2			4	
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		678			836			704			713	
Travel Time (s)		15.4			22.8			19.2			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	48	104	17	89	26	195	57	8	5	30	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	104	0	132	0	0	260	0	0	39	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Detector Phase	1	1	1 2	5	5		2	2		4	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		6.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		26.0	26.0		11.0	11.0	
Total Split (s)	20.0	20.0		20.0	20.0		26.0	26.0		20.0	20.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		30.2%	30.2%		23.3%	23.3%	
Maximum Green (s)	15.0	15.0		15.0	15.0		20.0	20.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			5.0	
Lead/Lag	Lead	Lead					Lag	Lag				
Lead-Lag Optimize?	Yes	Yes					Yes	Yes				
Vehicle Extension (s)	2.0	2.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)		8.5	37.5		10.2			26.7			7.1	
Actuated g/C Ratio		0.15	0.65		0.18			0.47			0.12	
v/c Ratio		0.19	0.10		0.40			0.31			0.17	
Control Delay		27.9	2.8		26.0			18.4			26.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		27.9	2.8		26.0			18.4			26.5	
LOS		C	A		C			B			C	
Approach Delay		11.2			26.0			18.4			26.5	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		15	0		34			58			10	
Queue Length 95th (ft)		52	23		95			167			41	
Internal Link Dist (ft)		598			756			624			633	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		505	1071		499			834			500	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.10	0.10		0.26			0.31			0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 57.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 42.2%		ICU Level of Service A	
Analysis Period (min) 15			

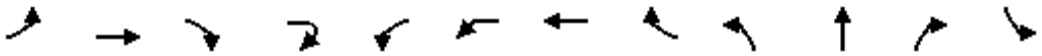
Splits and Phases: 5: Eastern Point Rd./Smith St. & Thames St./Poquonnock Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	96	16	82	24	179	52	7	5	28	4
Future Volume (vph)	4	44	96	16	82	24	179	52	7	5	28	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			6.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			1.00			0.99	
Flt Protected		1.00	1.00		0.99			0.96			0.99	
Satd. Flow (prot)		1856	1583		1802			1788			1825	
Flt Permitted		1.00	1.00		0.99			0.96			0.99	
Satd. Flow (perm)		1856	1583		1802			1788			1825	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	48	104	17	89	26	195	57	8	5	30	4
RTOR Reduction (vph)	0	0	44	0	10	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	52	60	0	122	0	0	259	0	0	35	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Actuated Green, G (s)		6.2	36.2		7.9			25.0			2.7	
Effective Green, g (s)		6.2	36.2		7.9			25.0			2.7	
Actuated g/C Ratio		0.10	0.58		0.13			0.40			0.04	
Clearance Time (s)		5.0			5.0			6.0			5.0	
Vehicle Extension (s)		2.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		183	912		226			711			78	
v/s Ratio Prot		c0.03	0.04		c0.07			c0.14			c0.02	
v/s Ratio Perm												
v/c Ratio		0.28	0.07		0.54			0.36			0.45	
Uniform Delay, d1		26.2	5.9		25.7			13.3			29.3	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.3	0.0		2.5			1.4			4.1	
Delay (s)		26.6	5.9		28.2			14.7			33.4	
Level of Service		C	A		C			B			C	
Approach Delay (s)		12.8			28.2			14.7			33.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	21.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	178	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	178	50	30	4	14	15	42	137	18	320	11	80
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		0.982					0.911			0.996		
Flt Protected		0.967					0.993			0.997		
Satd. Flow (prot)	0	1769	0	0	0	0	1685	0	0	1850	0	0
Flt Permitted		0.496					0.938			0.997		
Satd. Flow (perm)	0	907	0	0	0	0	1592	0	0	1850	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)		1					68			1		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	54	33	4	15	16	46	149	20	348	12	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	284	0	0	0	0	226	0	0	380	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	25.0	25.0			25.0	25.0	25.0		30.0	30.0		25.0
Total Split (%)	20.5%	20.5%			20.5%	20.5%	20.5%		24.6%	24.6%		20.5%
Maximum Green (s)	20.0	20.0			20.0	20.0	20.0		25.0	25.0		20.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		20.0					20.0			25.0		
Actuated g/C Ratio		0.21					0.21			0.26		
v/c Ratio		1.52					0.59			0.80		
Control Delay		289.1					31.2			47.5		
Queue Delay		0.0					0.0			0.0		
Total Delay		289.1					31.2			47.5		
LOS		F					C			D		
Approach Delay		289.1					31.2			47.5		
Approach LOS		F					C			D		

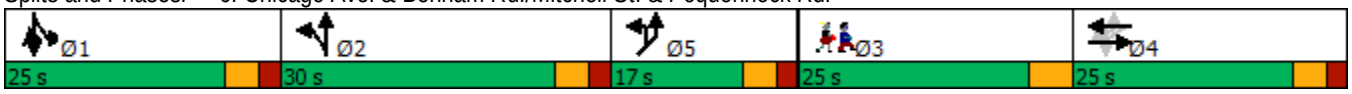
Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	150	100	74	10	214	11	
Future Volume (vph)	150	100	74	10	214	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850			0.994		
Flt Protected	0.983				0.955		
Satd. Flow (prot)	1831	1583	0	0	1768	0	
Flt Permitted	0.983				0.955		
Satd. Flow (perm)	1831	1583	0	0	1768	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	163	109	80	11	233	12	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	250	189	0	0	256	0	
Turn Type	NA	Prot		Prot	Prot		
Protected Phases	1	1		5	5		3
Permitted Phases							
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	25.0	25.0		17.0	17.0		25.0
Total Split (%)	20.5%	20.5%		13.9%	13.9%		20%
Maximum Green (s)	20.0	20.0		12.0	12.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	20.0	20.0			12.0		
Actuated g/C Ratio	0.21	0.21			0.12		
v/c Ratio	0.66	0.43			1.17		
Control Delay	45.0	13.3			155.3		
Queue Delay	0.0	0.0			0.0		
Total Delay	45.0	13.3			155.3		
LOS	D	B			F		
Approach Delay	31.3				155.3		
Approach LOS	C				F		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Queue Length 50th (ft)		~248					88			219		
Queue Length 95th (ft)		#411					166			#362		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		187					382			477		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		1.52					0.59			0.80		

Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 97			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.52			
Intersection Signal Delay: 101.4		Intersection LOS: F	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

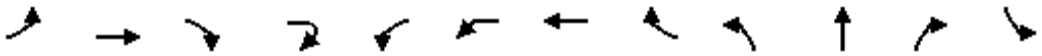
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.



Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Queue Length 50th (ft)	143	23			~190		
Queue Length 95th (ft)	226	84			#342		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	377	439			218		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	0.66	0.43			1.17		

Intersection Summary



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	178	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	178	50	30	4	14	15	42	137	18	320	11	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frt		0.98					0.91			1.00		
Flt Protected		0.97					0.99			1.00		
Satd. Flow (prot)		1770					1685			1850		
Flt Permitted		0.50					0.94			1.00		
Satd. Flow (perm)		907					1592			1850		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	54	33	4	15	16	46	149	20	348	12	87
RTOR Reduction (vph)	0	1	0	0	0	0	54	0	0	1	0	0
Lane Group Flow (vph)	0	283	0	0	0	0	172	0	0	379	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Actuated Green, G (s)		20.0					20.0			25.0		
Effective Green, g (s)		20.0					20.0			25.0		
Actuated g/C Ratio		0.21					0.21			0.26		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		187					328			476		
v/s Ratio Prot										c0.21		
v/s Ratio Perm		c0.31					0.11					
v/c Ratio		1.51					0.52			0.80		
Uniform Delay, d1		38.5					34.3			33.6		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		257.0					2.0			13.0		
Delay (s)		295.5					36.2			46.6		
Level of Service		F					D			D		
Approach Delay (s)		295.5					36.2			46.6		
Approach LOS		F					D			D		

Intersection Summary			
HCM 2000 Control Delay	105.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	150	100	74	10	214	11
Future Volume (vph)	150	100	74	10	214	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.98	1.00			0.95	
Satd. Flow (prot)	1831	1583			1767	
Flt Permitted	0.98	1.00			0.95	
Satd. Flow (perm)	1831	1583			1767	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	109	80	11	233	12
RTOR Reduction (vph)	0	114	0	0	0	0
Lane Group Flow (vph)	250	75	0	0	256	0
Turn Type	NA	Prot		Prot	Prot	
Protected Phases	1	1		5	5	
Permitted Phases						
Actuated Green, G (s)	20.0	20.0			12.0	
Effective Green, g (s)	20.0	20.0			12.0	
Actuated g/C Ratio	0.21	0.21			0.12	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	377	326			218	
v/s Ratio Prot	c0.14	0.05			c0.14	
v/s Ratio Perm						
v/c Ratio	0.66	0.23			1.17	
Uniform Delay, d1	35.4	32.1			42.5	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	8.9	1.7			116.0	
Delay (s)	44.3	33.7			158.5	
Level of Service	D	C			F	
Approach Delay (s)	39.7				158.5	
Approach LOS	D				F	

Intersection Summary

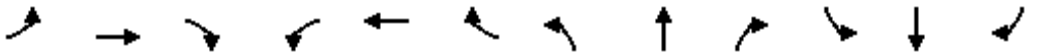
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	23	4	460	99	50
Future Volume (vph)	430	23	4	460	99	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected				0.999	0.970	
Satd. Flow (prot)	3858	0	0	3889	1882	0
Flt Permitted				0.999	0.970	
Satd. Flow (perm)	3858	0	0	3889	1882	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	504			552	258	
Travel Time (s)	13.7			15.1	7.0	
Confl. Peds. (#/hr)			2		4	
Peak Hour Factor	0.93	0.75	0.50	0.83	0.72	0.57
Adj. Flow (vph)	462	31	8	554	138	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	493	0	0	562	226	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	430	23	4	460	99	50
Future Volume (Veh/h)	430	23	4	460	99	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.75	0.50	0.83	0.72	0.57
Hourly flow rate (vph)	462	31	8	554	138	88
Pedestrians	4				2	
Lane Width (ft)	15.0				15.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	504					
pX, platoon unblocked						
vC, conflicting volume			495		776	248
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			495		776	248
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		58	88
cM capacity (veh/h)			1062		329	750

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	308	185	193	369	226
Volume Left	0	0	8	0	138
Volume Right	0	31	0	0	88
cSH	1700	1700	1062	1700	421
Volume to Capacity	0.18	0.11	0.01	0.22	0.54
Queue Length 95th (ft)	0	0	1	0	77
Control Delay (s)	0.0	0.0	0.4	0.0	23.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		23.0
Approach LOS					C

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		



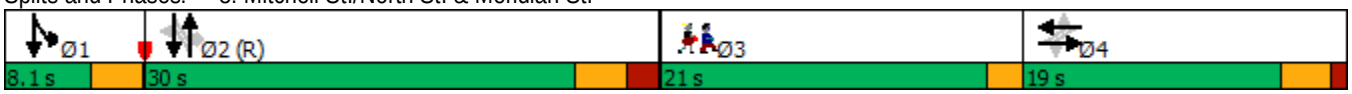
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	71	12	66	44	123	24	844	210	116	435	4
Future Volume (vph)	69	71	12	66	44	123	24	844	210	116	435	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	95		0	60		115	60		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			180			30			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					1.00					
Frt		0.989			0.893				0.850		0.999	
Flt Protected		0.978		0.950			0.950			0.950		
Satd. Flow (prot)	0	1982	0	1770	1663	0	1770	3539	1583	1770	1861	0
Flt Permitted		0.655		0.604			0.483			0.217		
Satd. Flow (perm)	0	1327	0	1125	1663	0	898	3539	1583	404	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			135				202		1	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		834			697			953			634	
Travel Time (s)		19.0			19.0			21.7			14.4	
Confl. Peds. (#/hr)	1						2					
Peak Hour Factor	0.92	0.92	0.92	0.82	0.81	0.91	0.46	0.91	0.81	0.95	0.89	1.00
Adj. Flow (vph)	75	77	13	80	54	135	52	927	259	122	489	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	0	80	189	0	52	927	259	122	493	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Detector Phase	4	4		4	4		2	2	2	1	1 2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0	25.0	5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0	30.0	8.1		
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0	30.0	8.1		
Total Split (%)	24.3%	24.3%		24.3%	24.3%		38.4%	38.4%	38.4%	10.4%		
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0	25.0	5.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0	2.0	0.1		
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.6		15.6	15.6		36.0	36.0	36.0	52.3	55.4	
Actuated g/C Ratio		0.20		0.20	0.20		0.46	0.46	0.46	0.67	0.71	
v/c Ratio		0.61		0.36	0.43		0.13	0.57	0.31	0.23	0.37	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	27%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		36.3		29.3	11.4		17.5	19.6	6.2	5.9	6.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		36.3		29.3	11.4		17.5	19.6	6.2	5.9	6.4	
LOS		D		C	B		B	B	A	A	A	
Approach Delay		36.3			16.7			16.7			6.3	
Approach LOS		D			B			B			A	
Queue Length 50th (ft)		72		34	22		14	164	15	15	76	
Queue Length 95th (ft)		117		58	53		21	#292	56	43	172	
Internal Link Dist (ft)		754			617			873			554	
Turn Bay Length (ft)				95			60		115	60		
Base Capacity (vph)		299		250	474		413	1631	838	521	1319	
Starvation Cap Reductn		0		0	0		0	0	0	0	0	
Spillback Cap Reductn		0		0	0		0	0	0	0	0	
Storage Cap Reductn		0		0	0		0	0	0	0	0	
Reduced v/c Ratio		0.55		0.32	0.40		0.13	0.57	0.31	0.23	0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78.1			
Actuated Cycle Length: 78.1			
Offset: 8.1 (10%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 8: Mitchell St./North St. & Meridian St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	71	12	66	44	123	24	844	210	116	435	4
Future Volume (vph)	69	71	12	66	44	123	24	844	210	116	435	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1	3.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.99		1.00	0.89		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1981		1770	1663		1768	3539	1583	1770	1860	
Flt Permitted		0.66		0.60	1.00		0.48	1.00	1.00	0.22	1.00	
Satd. Flow (perm)		1328		1126	1663		899	3539	1583	404	1860	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.81	0.91	0.46	0.91	0.81	0.95	0.89	1.00
Adj. Flow (vph)	75	77	13	80	54	135	52	927	259	122	489	4
RTOR Reduction (vph)	0	4	0	0	108	0	0	0	109	0	0	0
Lane Group Flow (vph)	0	161	0	80	81	0	52	927	150	122	493	0
Confl. Peds. (#/hr)	1						2					
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		15.6		15.6	15.6		36.0	36.0	36.0	50.4	53.5	
Effective Green, g (s)		15.6		15.6	15.6		36.0	36.0	36.0	50.4	53.5	
Actuated g/C Ratio		0.20		0.20	0.20		0.46	0.46	0.46	0.65	0.69	
Clearance Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		265		224	332		414	1631	729	512	1274	
v/s Ratio Prot					0.05			c0.26		0.04	c0.26	
v/s Ratio Perm		c0.12		0.07			0.06		0.09	0.11		
v/c Ratio		0.61		0.36	0.24		0.13	0.57	0.21	0.24	0.39	
Uniform Delay, d1		28.5		26.9	26.3		12.0	15.4	12.5	6.2	5.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.9		1.0	0.4		0.6	1.4	0.6	0.2	0.2	
Delay (s)		32.4		27.9	26.7		12.7	16.8	13.2	6.4	5.5	
Level of Service		C		C	C		B	B	B	A	A	
Approach Delay (s)		32.4			27.0			15.9			5.7	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	14.1
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

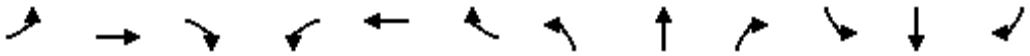
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	12	14	152	26	3	13	823	135	1	350	18
Future Volume (vph)	11	12	14	152	26	3	13	823	135	1	350	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	11	11	11	11	11	11	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				1.00				
Frt		0.955			0.968			0.979			0.992	
Flt Protected		0.981		0.950				0.999				
Satd. Flow (prot)	0	1978	0	1711	1743	0	0	3346	0	0	1971	0
Flt Permitted		0.887		0.710				0.943			0.990	
Satd. Flow (perm)	0	1787	0	1277	1743	0	0	3158	0	0	1951	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			8			55			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		699			143			486			286	
Travel Time (s)		19.1			3.9			11.0			6.5	
Confl. Peds. (#/hr)	2			1			1					
Peak Hour Factor	0.39	0.60	0.58	0.90	0.86	0.38	0.54	0.89	0.87	0.25	0.92	0.75
Adj. Flow (vph)	28	20	24	169	30	8	24	925	155	4	380	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	169	38	0	0	1104	0	0	408	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0		25.0	25.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0		30.0	30.0	
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0		30.0	30.0	
Total Split (%)	38.8%	38.8%		38.8%	38.8%		61.2%	61.2%		61.2%	61.2%	
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		11.1		11.1	11.1			29.1			29.1	
Actuated g/C Ratio		0.24		0.24	0.24			0.64			0.64	
v/c Ratio		0.16		0.55	0.09			0.54			0.33	
Control Delay		10.4		21.8	11.2			7.8			6.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		10.4		21.8	11.2			7.8			6.8	
LOS		B		C	B			A			A	
Approach Delay		10.4			19.9			7.8			6.8	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		10		38	6			81			49	
Queue Length 95th (ft)		19		82	21			156			113	
Internal Link Dist (ft)		619			63			406			206	
Turn Bay Length (ft)												
Base Capacity (vph)		602		418	577			2026			1242	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.12		0.40	0.07			0.54			0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 45.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

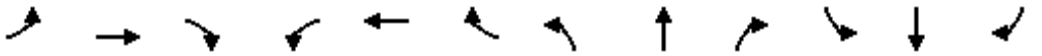
Splits and Phases: 9: North St. & Broad St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	12	14	152	26	3	13	823	135	1	350	18
Future Volume (vph)	11	12	14	152	26	3	13	823	135	1	350	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	11	11	11	11	11	11	12	14	12
Total Lost time (s)		4.0		4.0	4.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.95		1.00	0.97			0.98			0.99	
Flt Protected		0.98		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1976		1707	1744			3346			1970	
Flt Permitted		0.89		0.71	1.00			0.94			0.99	
Satd. Flow (perm)		1786		1276	1744			3158			1952	
Peak-hour factor, PHF	0.39	0.60	0.58	0.90	0.86	0.38	0.54	0.89	0.87	0.25	0.92	0.75
Adj. Flow (vph)	28	20	24	169	30	8	24	925	155	4	380	24
RTOR Reduction (vph)	0	19	0	0	6	0	0	22	0	0	4	0
Lane Group Flow (vph)	0	53	0	169	32	0	0	1082	0	0	404	0
Confl. Peds. (#/hr)	2			1			1					
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		9.5		9.5	9.5			28.1			28.1	
Effective Green, g (s)		9.5		9.5	9.5			28.1			28.1	
Actuated g/C Ratio		0.20		0.20	0.20			0.60			0.60	
Clearance Time (s)		4.0		4.0	4.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		364		260	355			1904			1177	
v/s Ratio Prot					0.02							
v/s Ratio Perm		0.03		c0.13				c0.34			0.21	
v/c Ratio		0.15		0.65	0.09			0.57			0.34	
Uniform Delay, d1		15.2		17.0	15.0			5.6			4.6	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.2		5.7	0.1			1.2			0.8	
Delay (s)		15.4		22.7	15.2			6.8			5.4	
Level of Service		B		C	B			A			A	
Approach Delay (s)		15.4			21.3			6.8			5.4	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



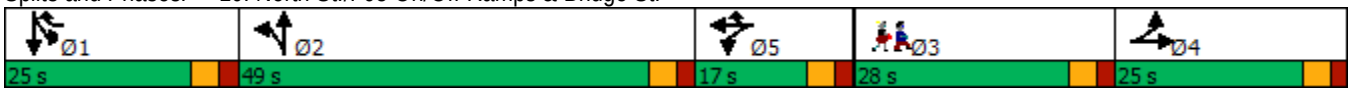
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	770	8	70	332	198
Future Volume (vph)	295	99	60	4	44	170	65	770	8	70	332	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.950				0.850		0.998				0.850
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				239		1				174
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Peak Hour Factor	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	928	12	89	361	228
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	200	0	0	58	239	68	940	0	89	361	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	25.0	25.0		17.0	17.0		49.0	49.0		25.0	25.0	
Total Split (%)	17.4%	17.4%		11.8%	11.8%		34.0%	34.0%		17.4%	17.4%	
Maximum Green (s)	20.0	20.0		12.0	12.0		44.0	44.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Actuated g/C Ratio	0.15	0.15			0.09	0.27	0.40	0.40		0.18	0.18	1.00
v/c Ratio	0.61	0.72			0.37	0.40	0.10	0.66		0.28	1.07	0.14
Control Delay	49.4	56.5			55.6	4.3	22.5	30.4		42.9	111.9	0.2
Queue Delay	0.0	0.0			0.0	0.0	0.0	1.8		0.0	0.0	0.0

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	19%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	49.4	56.5			55.6	4.3	22.5	32.2		42.9	111.9	0.2
LOS	D	E			E	A	C	C		D	F	A
Approach Delay		52.2			14.3			31.5			65.2	
Approach LOS		D			B			C			E	
Queue Length 50th (ft)	105	126			40	0	30	285		55	~287	0
Queue Length 95th (ft)	155	166			82	11	64	342		94	#500	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	603	333			202	630	708	1414		322	338	1583
Starvation Cap Reductn	0	0			0	0	0	299		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.51	0.60			0.29	0.38	0.10	0.84		0.28	1.07	0.14

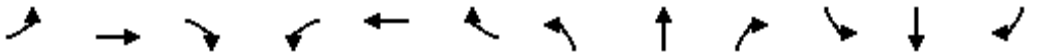
Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 110.1			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 42.9		Intersection LOS: D	
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.



Lane Group	Ø3
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	770	8	70	332	198
Future Volume (vph)	295	99	60	4	44	170	65	770	8	70	332	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.95			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1771			1850	1583	1770	3532		1770	1863	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1771			1850	1583	1770	3532		1770	1863	1583
Peak-hour factor, PHF	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	928	12	89	361	228
RTOR Reduction (vph)	0	12	0	0	0	175	0	1	0	0	0	0
Lane Group Flow (vph)	307	188	0	0	58	64	68	939	0	89	361	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Effective Green, g (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Actuated g/C Ratio	0.15	0.15			0.09	0.27	0.40	0.40		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	500	267			157	422	708	1414		321	338	1583
v/s Ratio Prot	0.09	c0.11			c0.03	0.04	0.04	c0.27		0.05	c0.19	
v/s Ratio Perm												0.14
v/c Ratio	0.61	0.70			0.37	0.15	0.10	0.66		0.28	1.07	0.14
Uniform Delay, d1	43.8	44.4			47.6	30.8	20.6	27.0		38.8	45.0	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	7.6			1.5	0.1	0.3	2.5		0.3	68.2	0.2
Delay (s)	45.7	52.0			49.0	30.9	20.8	29.4		39.2	113.2	0.2
Level of Service	D	D			D	C	C	C		D	F	A
Approach Delay (s)		48.2			34.5			28.9			65.5	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	61.7%	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)	211	98	54	56	100	81	36	1352	62	50	459	92
Future Volume (vph)	211	98	54	56	100	81	36	1352	62	50	459	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	90		90	120		150	130		120
Storage Lanes	2		0	1		1	1		1	1		1
Taper Length (ft)	300			120			150			300		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor										1.00		
Frt		0.944				0.850		0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1758	0	1770	1863	1583	1770	5045	0	1770	3539	1583
Flt Permitted	0.950			0.640			0.950			0.950		
Satd. Flow (perm)	3433	1758	0	1192	1863	1583	1770	5045	0	1766	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				92		5				132
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		588			486			576			595	
Travel Time (s)		16.0			13.3			8.7			9.0	
Confl. Peds. (#/hr)										3		
Peak Hour Factor	0.85	0.84	0.77	0.90	0.86	0.88	0.71	0.91	0.78	0.71	0.90	0.58
Adj. Flow (vph)	248	117	70	62	116	92	51	1486	79	70	510	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	187	0	62	116	92	51	1565	0	70	510	159
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Detector Phase	4	4 8		8	8	5 8	1	6		5	2	2 4
Switch Phase												
Minimum Initial (s)	5.0			9.0	9.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.9			14.7	14.7		11.8	20.0		11.8	20.0	
Total Split (s)	24.9			26.7	26.7		17.8	35.0		17.8	35.0	
Total Split (%)	17.4%			18.6%	18.6%		12.4%	24.4%		12.4%	24.4%	
Maximum Green (s)	19.0			21.0	21.0		11.0	30.0		11.0	30.0	
Yellow Time (s)	3.3			3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6			2.4	2.4		3.8	2.0		3.8	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Lead/Lag	Lag						Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes						Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Recall Mode	None			None	None		None	Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	11.6	28.4		11.1	11.1	24.8	7.2	30.2		7.9	33.6	51.1
Actuated g/C Ratio	0.14	0.34		0.13	0.13	0.29	0.09	0.36		0.09	0.40	0.61
v/c Ratio	0.53	0.31		0.40	0.47	0.17	0.34	0.86		0.42	0.36	0.16
Control Delay	38.7	19.6		43.0	41.9	6.0	44.6	32.8		45.7	21.1	3.1

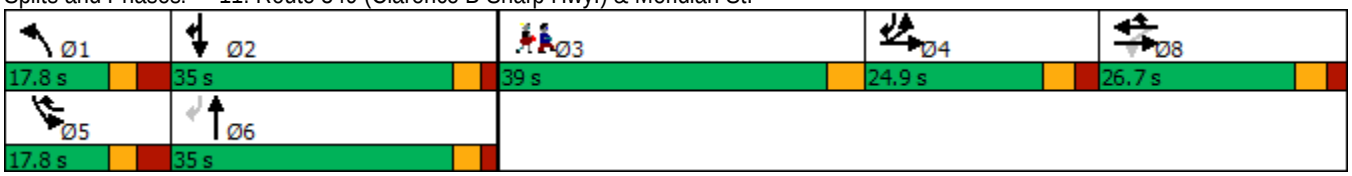
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	39.0
Total Split (s)	39.0
Total Split (%)	27%
Maximum Green (s)	35.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	28.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	38.7	19.6		43.0	41.9	6.0	44.6	32.8		45.7	21.1	3.1
LOS	D	B		D	D	A	D	C		D	C	A
Approach Delay		30.5			29.9			33.1			19.6	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	62	63		31	58	0	26	270		35	100	5
Queue Length 95th (ft)	102	107		74	112	31	51	#465		64	178	9
Internal Link Dist (ft)		508			406			496			515	
Turn Bay Length (ft)	230			90		90	120			130		120
Base Capacity (vph)	778	799		298	467	580	232	1810		232	1410	1141
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.32	0.23		0.21	0.25	0.16	0.22	0.86		0.30	0.36	0.14

Intersection Summary

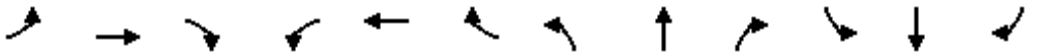
Area Type: Other
Cycle Length: 143.4
Actuated Cycle Length: 84.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 349 (Clarence B Sharp Hwy.) & Meridian St.



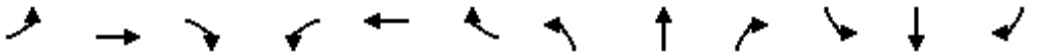
Lane Group	Ø3
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	98	54	56	100	81	36	1352	62	50	459	92
Future Volume (vph)	211	98	54	56	100	81	36	1352	62	50	459	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.7	5.7	6.8	6.8	5.0		6.8	5.0	5.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1758		1770	1863	1583	1770	5047		1770	3539	1583
Flt Permitted	0.95	1.00		0.64	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1758		1192	1863	1583	1770	5047		1770	3539	1583
Peak-hour factor, PHF	0.85	0.84	0.77	0.90	0.86	0.88	0.71	0.91	0.78	0.71	0.90	0.58
Adj. Flow (vph)	248	117	70	62	116	92	51	1486	79	70	510	159
RTOR Reduction (vph)	0	15	0	0	0	72	0	3	0	0	0	55
Lane Group Flow (vph)	248	172	0	62	116	20	51	1562	0	70	510	104
Confl. Peds. (#/hr)										3		
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Actuated Green, G (s)	11.6	28.6		11.1	11.1	24.7	6.1	31.9		7.9	33.7	50.3
Effective Green, g (s)	11.6	28.6		11.1	11.1	19.0	6.1	31.9		7.9	33.7	50.3
Actuated g/C Ratio	0.14	0.33		0.13	0.13	0.22	0.07	0.37		0.09	0.39	0.59
Clearance Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	463	585		154	240	350	125	1874		162	1388	926
v/s Ratio Prot	c0.07	0.10			c0.06	0.01	0.03	c0.31		c0.04	0.14	0.07
v/s Ratio Perm				0.05								
v/c Ratio	0.54	0.29		0.40	0.48	0.06	0.41	0.83		0.43	0.37	0.11
Uniform Delay, d1	34.6	21.2		34.4	34.7	26.4	38.2	24.6		36.9	18.5	7.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1		0.6	0.6	0.0	0.8	4.5		0.7	0.8	0.0
Delay (s)	35.2	21.3		35.0	35.3	26.4	39.0	29.1		37.6	19.3	7.9
Level of Service	D	C		C	D	C	D	C		D	B	A
Approach Delay (s)		29.2			32.2			29.4			18.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	27.4
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Future Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	11	11	11	11	11	15	15	15
Storage Length (ft)	155		0	0		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	135			25			25			25		
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
Ped Bike Factor											1.00	
Frt		0.987			0.976				0.850		0.960	
Flt Protected	0.950			0.950				0.979			0.986	
Satd. Flow (prot)	1711	1777	0	1652	1757	0	0	1763	1531	0	1940	0
Flt Permitted	0.570			0.615				0.832			0.880	
Satd. Flow (perm)	1026	1777	0	1069	1757	0	0	1498	1531	0	1727	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			16				360		20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		529			504			284			348	
Travel Time (s)		12.0			11.5			6.5			7.9	
Confl. Peds. (#/hr)										5		
Peak Hour Factor	0.88	0.83	0.70	0.84	0.82	0.75	0.42	0.69	0.73	0.65	0.64	0.40
Adj. Flow (vph)	26	211	20	387	244	47	24	33	360	20	28	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	231	0	387	291	0	0	57	360	0	68	0
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Detector Phase	1	1 2		3	2 3		5	5	5	5	5	
Switch Phase												
Minimum Initial (s)	3.0			3.0			5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	7.0			7.2			11.2	11.2	11.2	11.2	11.2	
Total Split (s)	9.0			14.2			22.2	22.2	22.2	22.2	22.2	
Total Split (%)	11.1%			17.5%			27.3%	27.3%	27.3%	27.3%	27.3%	
Maximum Green (s)	5.0			10.0			16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.0			3.0			4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	1.0			1.2			2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0				0.0	0.0		0.0	
Total Lost Time (s)	4.0			4.2				6.2	6.2		6.2	
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	1.0			2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None			None			None	None	None	None	None	
Act Effct Green (s)	36.9	40.9		40.7	37.5			8.0	21.2		8.0	
Actuated g/C Ratio	0.51	0.57		0.56	0.52			0.11	0.29		0.11	
v/c Ratio	0.05	0.23		0.58	0.32			0.35	0.51		0.33	
Control Delay	8.7	9.1		9.6	6.2			35.5	5.1		26.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	8.7	9.1		9.6	6.2			35.5	5.1		26.7	

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	20.8
Total Split (s)	35.8
Total Split (%)	44%
Maximum Green (s)	30.0
Yellow Time (s)	3.8
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			D	A		C	
Approach Delay		9.1			8.2			9.3			26.7	
Approach LOS		A			A			A			C	
Queue Length 50th (ft)	5	45		40	30			24	0		20	
Queue Length 95th (ft)	17	88		92	66			43	19		35	
Internal Link Dist (ft)		449			424			204			268	
Turn Bay Length (ft)	155								85			
Base Capacity (vph)	571	987		697	943			332	691		398	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.05	0.23		0.56	0.31			0.17	0.52		0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.2			
Actuated Cycle Length: 72.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Route 649 (Rainville Ave.)/Old Farms Rd. & Route 649 (Poquonnock Rd.)

Lane Group	Ø2
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Future Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	15	15	15
Total Lost time (s)	4.0	4.0		4.2	5.8			6.2	6.2		6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1711	1777		1652	1757			1764	1531		1932	
Flt Permitted	0.57	1.00		0.61	1.00			0.83	1.00		0.88	
Satd. Flow (perm)	1027	1777		1068	1757			1499	1531		1726	
Peak-hour factor, PHF	0.88	0.83	0.70	0.84	0.82	0.75	0.42	0.69	0.73	0.65	0.64	0.40
Adj. Flow (vph)	26	211	20	387	244	47	24	33	360	20	28	20
RTOR Reduction (vph)	0	4	0	0	7	0	0	0	275	0	18	0
Lane Group Flow (vph)	26	227	0	387	284	0	0	57	85	0	50	0
Confl. Peds. (#/hr)										5		
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Actuated Green, G (s)	35.1	39.1		39.1	39.1			8.0	17.0		8.0	
Effective Green, g (s)	35.1	39.1		39.1	39.1			8.0	17.0		8.0	
Actuated g/C Ratio	0.49	0.54		0.54	0.54			0.11	0.24		0.11	
Clearance Time (s)	4.0			4.2				6.2	6.2		6.2	
Vehicle Extension (s)	1.0			2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)	545	961		650	950			165	491		190	
v/s Ratio Prot	0.00	c0.13		c0.07	0.16				0.02			
v/s Ratio Perm	0.02			c0.25				c0.04	0.04		0.03	
v/c Ratio	0.05	0.24		0.60	0.30			0.35	0.17		0.26	
Uniform Delay, d1	9.7	8.7		10.0	9.1			29.7	22.0		29.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.0		1.0	0.1			0.5	0.1		0.3	
Delay (s)	9.7	8.8		11.0	9.2			30.2	22.1		29.7	
Level of Service	A	A		B	A			C	C		C	
Approach Delay (s)		8.9			10.2			23.2			29.7	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	20.2
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

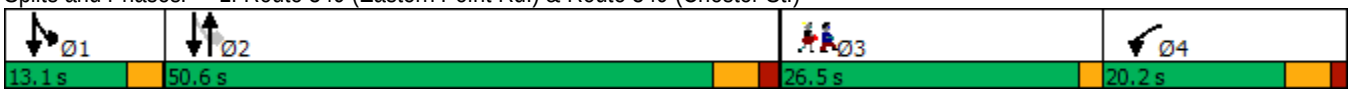
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Lane Configurations							
Traffic Volume (vph)	282	31	229	621	33	165	
Future Volume (vph)	282	31	229	621	33	165	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	11	12	15	
Storage Length (ft)	0	0		175	125		
Storage Lanes	2	0		1	1		
Taper Length (ft)	25				60		
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.84			0.99	0.99		
Frt	0.986			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	3410	0	1801	1531	1770	2049	
Flt Permitted	0.957				0.408		
Satd. Flow (perm)	2852	0	1801	1510	756	2049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	8			839			
Link Speed (mph)	30		25			25	
Link Distance (ft)	421		522			429	
Travel Time (s)	9.6		14.2			11.7	
Confl. Peds. (#/hr)	49			2	18		
Peak Hour Factor	0.61	0.66	0.57	0.74	0.60	0.60	
Adj. Flow (vph)	462	47	402	839	55	275	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	509	0	402	839	55	275	
Turn Type	Prot		NA	Perm	D.P+P	NA	
Protected Phases	4		2		1	1 2	3
Permitted Phases				2	2		
Detector Phase	4		2	2	1	1 2	
Switch Phase							
Minimum Initial (s)	9.0		15.0	15.0	4.0		5.0
Minimum Split (s)	14.2		20.6	20.6	7.1		24.0
Total Split (s)	20.2		50.6	50.6	13.1		26.5
Total Split (%)	18.3%		45.8%	45.8%	11.9%		24%
Maximum Green (s)	15.0		45.0	45.0	10.0		24.5
Yellow Time (s)	3.8		3.8	3.8	3.0		2.0
All-Red Time (s)	1.4		1.8	1.8	0.1		0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	5.2		5.6	5.6	3.1		
Lead/Lag	Lag		Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes		Yes
Vehicle Extension (s)	2.0		2.5	2.5	1.0		3.0
Recall Mode	None		Min	Min	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							15.0
Pedestrian Calls (#/hr)							8
Act Effct Green (s)	16.0		29.2	29.2	39.3	42.6	
Actuated g/C Ratio	0.23		0.41	0.41	0.56	0.60	
v/c Ratio	0.65		0.54	0.75	0.10	0.22	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3
Control Delay	33.4		19.5	6.4	7.4	7.7	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	33.4		19.5	6.4	7.4	7.7	
LOS	C		B	A	A	A	
Approach Delay	33.4		10.6			7.7	
Approach LOS	C		B			A	
Queue Length 50th (ft)	92		108	0	7	38	
Queue Length 95th (ft)	154		164	0	22	85	
Internal Link Dist (ft)	341		442			349	
Turn Bay Length (ft)				175	125		
Base Capacity (vph)	780		1266	1310	602	1734	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.65		0.32	0.64	0.09	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110.4			
Actuated Cycle Length: 70.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			

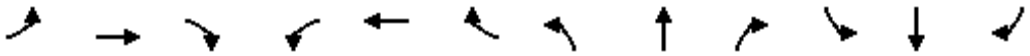
Splits and Phases: 1: Route 349 (Eastern Point Rd.) & Route 349 (Chester St.)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	282	31	229	621	33	165
Future Volume (vph)	282	31	229	621	33	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	11	12	15
Total Lost time (s)	5.2		5.6	5.6	3.1	3.1
Lane Util. Factor	0.97		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3409		1801	1510	1766	2049
Flt Permitted	0.96		1.00	1.00	0.41	1.00
Satd. Flow (perm)	3409		1801	1510	758	2049
Peak-hour factor, PHF	0.61	0.66	0.57	0.74	0.60	0.60
Adj. Flow (vph)	462	47	402	839	55	275
RTOR Reduction (vph)	6	0	0	496	0	0
Lane Group Flow (vph)	503	0	402	343	55	275
Confl. Peds. (#/hr)	49			2	18	
Turn Type	Prot		NA	Perm	D.P+P	NA
Protected Phases	4		2		1	1 2
Permitted Phases				2	2	
Actuated Green, G (s)	16.0		29.2	29.2	36.6	39.7
Effective Green, g (s)	16.0		29.2	29.2	36.6	39.7
Actuated g/C Ratio	0.22		0.41	0.41	0.51	0.56
Clearance Time (s)	5.2		5.6	5.6	3.1	
Vehicle Extension (s)	2.0		2.5	2.5	1.0	
Lane Grp Cap (vph)	763		736	617	493	1139
v/s Ratio Prot	c0.15		0.22		0.01	c0.13
v/s Ratio Perm				c0.23	0.05	
v/c Ratio	0.66		0.55	0.56	0.11	0.24
Uniform Delay, d1	25.2		16.1	16.1	9.1	8.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6		0.7	0.9	0.0	0.0
Delay (s)	26.8		16.7	17.0	9.1	8.2
Level of Service	C		B	B	A	A
Approach Delay (s)	26.8		16.9			8.3
Approach LOS	C		B			A

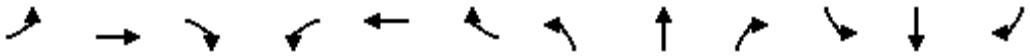
Intersection Summary				
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	487	10	19	491	32	2	24	107	62	9	54
Future Volume (vph)	86	487	10	19	491	32	2	24	107	62	9	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	12	12	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.987			0.886			0.947	
Flt Protected		0.994			0.998			0.999			0.975	
Satd. Flow (prot)	0	3270	0	0	3486	0	0	1814	0	0	1892	0
Flt Permitted		0.994			0.998			0.999			0.975	
Satd. Flow (perm)	0	3270	0	0	3486	0	0	1814	0	0	1892	0
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		421			1171			266			576	
Travel Time (s)		9.6			26.6			7.3			15.7	
Confl. Peds. (#/hr)	38			176			54			36		
Peak Hour Factor	0.81	0.71	0.50	0.47	0.58	0.38	0.50	0.92	0.66	0.83	0.75	0.95
Adj. Flow (vph)	106	686	20	40	847	84	4	26	162	75	12	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	812	0	0	971	0	0	192	0	0	144	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.9%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	487	10	19	491	32	2	24	107	62	9	54
Future Volume (Veh/h)	86	487	10	19	491	32	2	24	107	62	9	54
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.71	0.50	0.47	0.58	0.38	0.50	0.92	0.66	0.83	0.75	0.95
Hourly flow rate (vph)	106	686	20	40	847	84	4	26	162	75	12	57
Pedestrians		54			36			176			38	
Lane Width (ft)		10.0			12.0			15.0			15.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			3			21			5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		421			1171							
pX, platoon unblocked												
vC, conflicting volume	969			882			1704	2133	565	1773	2101	558
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	969			882			1704	2133	565	1773	2101	558
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
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 %	84			93			79	10	55	0	60	87
cM capacity (veh/h)	675			603			19	29	357	4	30	433

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	449	363	464	508	192	144
Volume Left	106	0	40	0	4	75
Volume Right	0	20	0	84	162	57
cSH	675	1700	603	1700	123	8
Volume to Capacity	0.16	0.21	0.07	0.30	1.56	17.41
Queue Length 95th (ft)	14	0	5	0	346	Err
Control Delay (s)	4.4	0.0	1.9	0.0	352.2	Err
Lane LOS	A		A		F	F
Approach Delay (s)	2.4		0.9		352.2	Err
Approach LOS					F	F

Intersection Summary				
Average Delay	712.8			
Intersection Capacity Utilization	59.9%	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)	69	794	11	99	282	49	3	113	179	135	125	0
Future Volume (vph)	69	794	11	99	282	49	3	113	179	135	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	14	10	10	10
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00				
Frt		0.997			0.984				0.850			
Flt Protected		0.995			0.989			0.999		0.950		
Satd. Flow (prot)	0	3277	0	0	3215	0	0	1737	1689	1652	1739	0
Flt Permitted		0.813			0.541			0.994		0.603		
Satd. Flow (perm)	0	2678	0	0	1758	0	0	1728	1689	1048	1739	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			18				218			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			1087			448			267	
Travel Time (s)		26.6			24.7			10.2			6.1	
Confl. Peds. (#/hr)				2			3					
Peak Hour Factor	0.67	0.84	0.46	0.81	0.73	0.79	0.75	0.66	0.82	0.61	0.84	0.92
Adj. Flow (vph)	103	945	24	122	386	62	4	171	218	221	149	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1072	0	0	570	0	0	175	218	221	149	0
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Detector Phase	2	2		2	1 2		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0			9.0	9.0	9.0	9.0	9.0	
Minimum Split (s)	17.2	17.2		17.2			14.5	14.5	14.5	14.5	14.5	
Total Split (s)	39.3	39.3		39.3			25.5	25.5	25.5	25.5	25.5	
Total Split (%)	38.9%	38.9%		38.9%			25.3%	25.3%	25.3%	25.3%	25.3%	
Maximum Green (s)	34.1	34.1		34.1			20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	4.2	4.2		4.2			3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0			2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)		0.0						0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.2						5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag			Lag	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0			2.5	2.5	2.5	2.5	2.5	
Recall Mode	Min	Min		Min			None	None	None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		34.5			49.8			20.2	20.2	20.2	20.2	
Actuated g/C Ratio		0.42			0.60			0.24	0.24	0.24	0.24	
v/c Ratio		0.96			1.13dl			0.41	0.38	0.86	0.35	

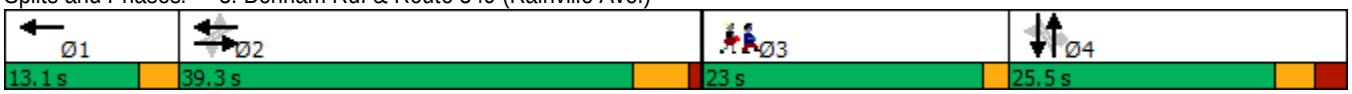
Lane Group	Ø1	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	6.0	5.0
Minimum Split (s)	9.1	23.0
Total Split (s)	13.1	23.0
Total Split (%)	13%	23%
Maximum Green (s)	10.0	21.0
Yellow Time (s)	3.0	2.0
All-Red Time (s)	0.1	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	0.2	3.0
Recall Mode	Max	None
Walk Time (s)		7.0
Flash Dont Walk (s)		14.0
Pedestrian Calls (#/hr)		2
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		43.9			13.2			31.6	6.7	63.2	30.5	
Queue Delay		0.0			0.0			0.0	0.0	0.0	0.0	
Total Delay		43.9			13.2			31.6	6.7	63.2	30.5	
LOS		D			B			C	A	E	C	
Approach Delay		43.9			13.2			17.8			50.0	
Approach LOS		D			B			B			D	
Queue Length 50th (ft)		246			66			70	0	101	59	
Queue Length 95th (ft)		#512			142			118	44	#162	135	
Internal Link Dist (ft)		1091			1007			368			187	
Turn Bay Length (ft)									250			
Base Capacity (vph)		1120			1069			423	578	257	426	
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		0.96			0.53			0.41	0.38	0.86	0.35	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100.9			
Actuated Cycle Length: 82.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 33.3		Intersection LOS: C	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

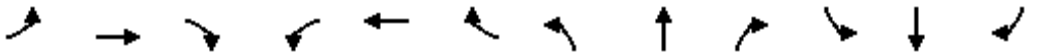
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: Benham Rd. & Route 349 (Rainville Ave.)



Lane Group	Ø1	Ø3
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

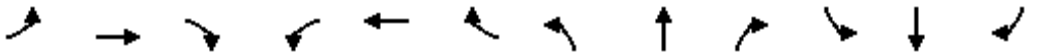
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	794	11	99	282	49	3	113	179	135	125	0
Future Volume (vph)	69	794	11	99	282	49	3	113	179	135	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	10	10	14	10	10	10
Total Lost time (s)		5.2			3.1			5.5	5.5	5.5	5.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.98			1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.99			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3276			3215			1736	1689	1652	1739	
Flt Permitted		0.81			0.54			0.99	1.00	0.60	1.00	
Satd. Flow (perm)		2677			1759			1728	1689	1048	1739	
Peak-hour factor, PHF	0.67	0.84	0.46	0.81	0.73	0.79	0.75	0.66	0.82	0.61	0.84	0.92
Adj. Flow (vph)	103	945	24	122	386	62	4	171	218	221	149	0
RTOR Reduction (vph)	0	1	0	0	8	0	0	0	166	0	0	0
Lane Group Flow (vph)	0	1071	0	0	562	0	0	175	52	221	149	0
Confl. Peds. (#/hr)				2			3					
Turn Type	Perm	NA		D.Pm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			1 2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)		34.5			47.7			20.2	20.2	20.2	20.2	
Effective Green, g (s)		34.5			47.7			20.2	20.2	20.2	20.2	
Actuated g/C Ratio		0.41			0.57			0.24	0.24	0.24	0.24	
Clearance Time (s)		5.2						5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0						2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)		1099			998			415	406	252	418	
v/s Ratio Prot											0.09	
v/s Ratio Perm		c0.40			c0.32			0.10	0.03	c0.21		
v/c Ratio		0.97			1.13dl			0.42	0.13	0.88	0.36	
Uniform Delay, d1		24.3			11.5			27.0	25.0	30.7	26.5	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		21.0			0.7			0.5	0.1	26.9	0.4	
Delay (s)		45.3			12.3			27.5	25.1	57.6	26.9	
Level of Service		D			B			C	C	E	C	
Approach Delay (s)		45.3			12.3			26.2			45.2	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Future Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.993				0.850		0.983				0.850
Flt Protected	0.950	0.967			0.980			0.998		0.950		
Satd. Flow (prot)	1569	1643	0	0	1704	1478	0	3241	0	1652	1739	1478
Flt Permitted	0.950	0.967			0.980			0.923		0.210		
Satd. Flow (perm)	1569	1643	0	0	1704	1478	0	2997	0	365	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				240		9				407
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	1176	186	35	55	78	240	35	585	80	122	253	407
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	694	703	0	0	133	240	0	700	0	122	253	407
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	52.3	52.3		20.8	20.8	20.8	46.3	46.3		10.5		
Total Split (%)	34.1%	34.1%		13.6%	13.6%	13.6%	30.2%	30.2%		6.8%		
Maximum Green (s)	47.8	47.8		16.3	16.3	16.3	41.8	41.8		6.0		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.6	127.8
Actuated g/C Ratio	0.36	0.36			0.11	0.11		0.32		0.36	0.40	0.97
v/c Ratio	1.22	1.18			0.72	0.64		0.73		0.64	0.37	0.28

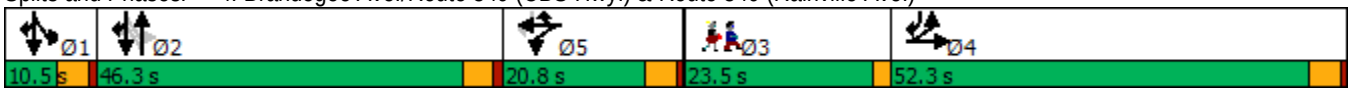
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	23.5
Total Split (%)	15%
Maximum Green (s)	21.5
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	150.8	134.2			79.1	15.3		46.0		47.0	31.6	0.6
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	150.8	134.2			79.1	15.3		46.0		47.0	31.6	0.6
LOS	F	F			E	B		D		D	C	A
Approach Delay		142.4			38.0			46.0			17.9	
Approach LOS		F			D			D			B	
Queue Length 50th (ft)	~742	~734			108	0		268		65	146	0
Queue Length 95th (ft)	#1024	#1018			165	20		408		101	271	12
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	569	597			211	393		957		191	691	1442
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	1.22	1.18			0.63	0.61		0.73		0.64	0.37	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 153.4			
Actuated Cycle Length: 132.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay: 79.8		Intersection LOS: E	
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

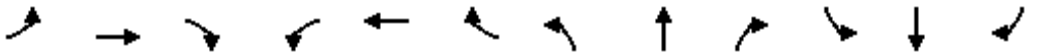
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Brandegee Ave./Route 349 (CBS Hwy.) & Route 349 (Rainville Ave.)



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

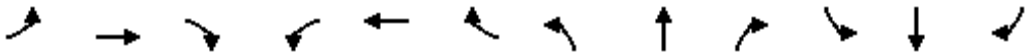
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Future Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97			0.98	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1569	1642			1703	1478		3238		1652	1739	1478
Flt Permitted	0.95	0.97			0.98	1.00		0.92		0.21	1.00	1.00
Satd. Flow (perm)	1569	1642			1703	1478		2997		365	1739	1478
Peak-hour factor, PHF	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	1176	186	35	55	78	240	35	585	80	122	253	407
RTOR Reduction (vph)	0	1	0	0	0	214	0	6	0	0	0	43
Lane Group Flow (vph)	694	702	0	0	133	26	0	694	0	122	253	364
Confl. Peds. (#/hr)							1					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.5	119.5
Effective Green, g (s)	48.0	48.0			14.5	14.5		42.0		48.0	52.5	119.5
Actuated g/C Ratio	0.36	0.36			0.11	0.11		0.31		0.36	0.39	0.89
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	562	589			184	160		940		188	682	1369
v/s Ratio Prot	c0.44	0.43			c0.08	0.02				c0.03	0.15	0.21
v/s Ratio Perm								c0.23		0.20		0.04
v/c Ratio	1.23	1.19			0.72	0.16		0.74		0.65	0.37	0.27
Uniform Delay, d1	42.9	42.9			57.7	54.1		41.0		33.3	28.9	1.0
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	120.5	102.2			13.1	0.5		5.2		7.5	0.3	0.1
Delay (s)	163.4	145.1			70.8	54.6		46.2		40.8	29.2	1.1
Level of Service	F	F			E	D		D		D	C	A
Approach Delay (s)		154.2			60.4			46.2			16.4	
Approach LOS		F			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	87.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	133.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

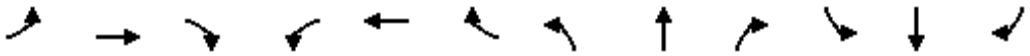


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	96	16	82	24	179	91	7	5	59	4
Future Volume (vph)	4	44	96	16	82	24	179	91	7	5	59	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.973			0.996			0.993	
Flt Protected		0.996			0.994			0.969			0.997	
Satd. Flow (prot)	0	1855	1583	0	1802	0	0	1798	0	0	1844	0
Flt Permitted		0.996			0.994			0.969			0.997	
Satd. Flow (perm)	0	1855	1583	0	1802	0	0	1798	0	0	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		12			1			3	
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		678			836			704			713	
Travel Time (s)		15.4			22.8			19.2			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	48	104	17	89	26	195	99	8	5	64	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	104	0	132	0	0	302	0	0	73	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Detector Phase	1	1	1 2	5	5		2	2		4	4	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		6.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		26.0	26.0		11.0	11.0	
Total Split (s)	20.0	20.0		20.0	20.0		26.0	26.0		20.0	20.0	
Total Split (%)	23.3%	23.3%		23.3%	23.3%		30.2%	30.2%		23.3%	23.3%	
Maximum Green (s)	15.0	15.0		15.0	15.0		20.0	20.0		15.0	15.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			5.0	
Lead/Lag	Lead	Lead					Lag	Lag				
Lead-Lag Optimize?	Yes	Yes					Yes	Yes				
Vehicle Extension (s)	2.0	2.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)		8.5	37.9		10.4			27.4			8.2	
Actuated g/C Ratio		0.13	0.60		0.16			0.43			0.13	
v/c Ratio		0.21	0.11		0.43			0.39			0.30	
Control Delay		30.8	3.0		29.3			22.4			30.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		30.8	3.0		29.3			22.4			30.5	
LOS		C	A		C			C			C	
Approach Delay		12.3			29.3			22.4			30.5	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)		20	0		45			102			27	
Queue Length 95th (ft)		54	24		98			205			66	
Internal Link Dist (ft)		598			756			624			633	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		460	989		456			779			459	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.11	0.11		0.29			0.39			0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 63.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

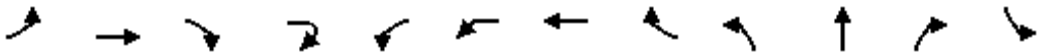
Splits and Phases: 5: Eastern Point Rd./Smith St. & Thames St./Poquonnock Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	44	96	16	82	24	179	91	7	5	59	4
Future Volume (vph)	4	44	96	16	82	24	179	91	7	5	59	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			6.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			1.00			0.99	
Flt Protected		1.00	1.00		0.99			0.97			1.00	
Satd. Flow (prot)		1856	1583		1802			1798			1843	
Flt Permitted		1.00	1.00		0.99			0.97			1.00	
Satd. Flow (perm)		1856	1583		1802			1798			1843	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	48	104	17	89	26	195	99	8	5	64	4
RTOR Reduction (vph)	0	0	47	0	11	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	52	57	0	121	0	0	301	0	0	70	0
Turn Type	Split	NA	pt+ov	Split	NA		Split	NA		Split	NA	
Protected Phases	1	1	1 2	5	5		2	2		4	4	
Permitted Phases												
Actuated Green, G (s)		6.1	36.7		7.9			25.6			6.4	
Effective Green, g (s)		6.1	36.7		7.9			25.6			6.4	
Actuated g/C Ratio		0.09	0.55		0.12			0.38			0.10	
Clearance Time (s)		5.0			5.0			6.0			5.0	
Vehicle Extension (s)		2.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		168	867		212			686			176	
v/s Ratio Prot		c0.03	0.04		c0.07			c0.17			c0.04	
v/s Ratio Perm												
v/c Ratio		0.31	0.07		0.57			0.44			0.40	
Uniform Delay, d1		28.5	7.1		28.0			15.4			28.5	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.4	0.0		3.7			2.0			1.5	
Delay (s)		28.9	7.1		31.7			17.4			30.0	
Level of Service		C	A		C			B			C	
Approach Delay (s)		14.4			31.7			17.4			30.0	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
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		0.984					0.911			0.996		
Flt Protected		0.966					0.993			0.997		
Satd. Flow (prot)	0	1771	0	0	0	0	1685	0	0	1850	0	0
Flt Permitted		0.486					0.943			0.997		
Satd. Flow (perm)	0	891	0	0	0	0	1600	0	0	1850	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)							68			1		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	54	33	4	15	16	46	149	20	348	12	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	313	0	0	0	0	226	0	0	380	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	25.0	25.0			25.0	25.0	25.0		30.0	30.0		25.0
Total Split (%)	20.5%	20.5%			20.5%	20.5%	20.5%		24.6%	24.6%		20.5%
Maximum Green (s)	20.0	20.0			20.0	20.0	20.0		25.0	25.0		20.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		20.0					20.0			25.0		
Actuated g/C Ratio		0.21					0.21			0.26		
v/c Ratio		1.71					0.59			0.80		
Control Delay		369.6					31.1			47.5		
Queue Delay		0.0					0.0			0.0		
Total Delay		369.6					31.1			47.5		
LOS		F					C			D		
Approach Delay		369.6					31.1			47.5		
Approach LOS		F					C			D		

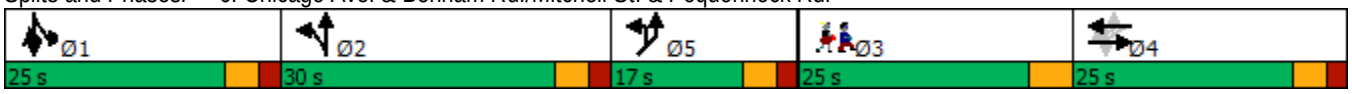
Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	150	120	94	10	240	11	
Future Volume (vph)	150	120	94	10	240	11	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850			0.994		
Flt Protected	0.983				0.954		
Satd. Flow (prot)	1831	1583	0	0	1766	0	
Flt Permitted	0.983				0.954		
Satd. Flow (perm)	1831	1583	0	0	1766	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	163	130	102	11	261	12	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	250	232	0	0	284	0	
Turn Type	NA	Prot		Prot	Prot		
Protected Phases	1	1		5	5		3
Permitted Phases							
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	25.0	25.0		17.0	17.0		25.0
Total Split (%)	20.5%	20.5%		13.9%	13.9%		20%
Maximum Green (s)	20.0	20.0		12.0	12.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	20.0	20.0			12.0		
Actuated g/C Ratio	0.21	0.21			0.12		
v/c Ratio	0.66	0.53			1.30		
Control Delay	45.0	18.5			201.7		
Queue Delay	0.0	0.0			0.0		
Total Delay	45.0	18.5			201.7		
LOS	D	B			F		
Approach Delay	32.2				201.7		
Approach LOS	C				F		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Queue Length 50th (ft)		~286					87			219		
Queue Length 95th (ft)		#451					166			#362		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		183					383			477		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		1.71					0.59			0.80		

Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 97			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.71			
Intersection Signal Delay: 126.8		Intersection LOS: F	
Intersection Capacity Utilization 98.8%		ICU Level of Service F	
Analysis Period (min) 15			

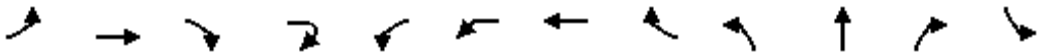
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.



Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Queue Length 50th (ft)	143	47			~226		
Queue Length 95th (ft)	226	121			#386		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	377	439			218		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	0.66	0.53			1.30		

Intersection Summary



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frt		0.98					0.91			1.00		
Flt Protected		0.97					0.99			1.00		
Satd. Flow (prot)		1770					1685			1850		
Flt Permitted		0.49					0.94			1.00		
Satd. Flow (perm)		891					1600			1850		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	54	33	4	15	16	46	149	20	348	12	87
RTOR Reduction (vph)	0	0	0	0	0	0	54	0	0	1	0	0
Lane Group Flow (vph)	0	313	0	0	0	0	172	0	0	379	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Actuated Green, G (s)		20.0					20.0			25.0		
Effective Green, g (s)		20.0					20.0			25.0		
Actuated g/C Ratio		0.21					0.21			0.26		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		183					329			476		
v/s Ratio Prot										c0.21		
v/s Ratio Perm		c0.35					0.11					
v/c Ratio		1.71					0.52			0.80		
Uniform Delay, d1		38.5					34.3			33.6		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		341.8					1.9			13.0		
Delay (s)		380.3					36.2			46.6		
Level of Service		F					D			D		
Approach Delay (s)		380.3					36.2			46.6		
Approach LOS		F					D			D		

Intersection Summary			
HCM 2000 Control Delay	132.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	150	120	94	10	240	11
Future Volume (vph)	150	120	94	10	240	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.98	1.00			0.95	
Satd. Flow (prot)	1831	1583			1767	
Flt Permitted	0.98	1.00			0.95	
Satd. Flow (perm)	1831	1583			1767	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	130	102	11	261	12
RTOR Reduction (vph)	0	114	0	0	0	0
Lane Group Flow (vph)	250	118	0	0	284	0
Turn Type	NA	Prot		Prot	Prot	
Protected Phases	1	1		5	5	
Permitted Phases						
Actuated Green, G (s)	20.0	20.0			12.0	
Effective Green, g (s)	20.0	20.0			12.0	
Actuated g/C Ratio	0.21	0.21			0.12	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	377	326			218	
v/s Ratio Prot	c0.14	0.07			c0.16	
v/s Ratio Perm						
v/c Ratio	0.66	0.36			1.30	
Uniform Delay, d1	35.4	33.0			42.5	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	8.9	3.1			165.5	
Delay (s)	44.3	36.2			208.0	
Level of Service	D	D			F	
Approach Delay (s)	40.4				208.0	
Approach LOS	D				F	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	23	4	460	99	50
Future Volume (vph)	430	23	4	460	99	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected				0.999	0.970	
Satd. Flow (prot)	3858	0	0	3889	1882	0
Flt Permitted				0.999	0.970	
Satd. Flow (perm)	3858	0	0	3889	1882	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	504			552	258	
Travel Time (s)	13.7			15.1	7.0	
Confl. Peds. (#/hr)			2		4	
Peak Hour Factor	0.93	0.75	0.50	0.83	0.72	0.57
Adj. Flow (vph)	462	31	8	554	138	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	493	0	0	562	226	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	430	23	4	460	99	50
Future Volume (Veh/h)	430	23	4	460	99	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.75	0.50	0.83	0.72	0.57
Hourly flow rate (vph)	462	31	8	554	138	88
Pedestrians	4				2	
Lane Width (ft)	15.0				15.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	504					
pX, platoon unblocked						
vC, conflicting volume			495		776	248
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			495		776	248
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		58	88
cM capacity (veh/h)			1062		329	750

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	308	185	193	369	226
Volume Left	0	0	8	0	138
Volume Right	0	31	0	0	88
cSH	1700	1700	1062	1700	421
Volume to Capacity	0.18	0.11	0.01	0.22	0.54
Queue Length 95th (ft)	0	0	1	0	77
Control Delay (s)	0.0	0.0	0.4	0.0	23.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		23.0
Approach LOS					C

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

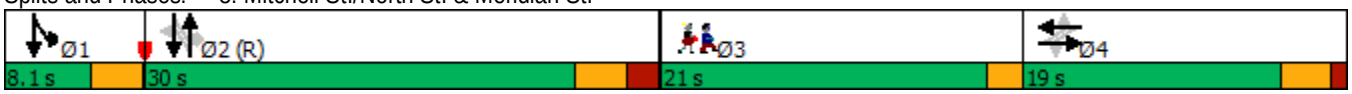
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	71	12	66	44	123	24	935	210	116	506	4
Future Volume (vph)	69	71	12	66	44	123	24	935	210	116	506	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	95		0	60		115	60		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			180			30			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					1.00					
Frt		0.989			0.893				0.850		0.999	
Flt Protected		0.978		0.950			0.950			0.950		
Satd. Flow (prot)	0	1982	0	1770	1663	0	1770	3539	1583	1770	1861	0
Flt Permitted		0.655		0.604			0.449			0.167		
Satd. Flow (perm)	0	1327	0	1125	1663	0	835	3539	1583	311	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			135				182		1	
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		834			697			953			634	
Travel Time (s)		19.0			19.0			21.7			14.4	
Confl. Peds. (#/hr)	1						2					
Peak Hour Factor	0.92	0.92	0.92	0.82	0.81	0.91	0.46	0.91	0.81	0.95	0.89	1.00
Adj. Flow (vph)	75	77	13	80	54	135	52	1027	259	122	569	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	0	80	189	0	52	1027	259	122	573	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Detector Phase	4	4		4	4		2	2	2	1	1 2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0	25.0	5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0	30.0	8.1		
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0	30.0	8.1		
Total Split (%)	24.3%	24.3%		24.3%	24.3%		38.4%	38.4%	38.4%	10.4%		
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0	25.0	5.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0	2.0	0.1		
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.6		15.6	15.6		34.3	34.3	34.3	52.3	55.4	
Actuated g/C Ratio		0.20		0.20	0.20		0.44	0.44	0.44	0.67	0.71	
v/c Ratio		0.61		0.36	0.43		0.14	0.66	0.32	0.24	0.43	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	27%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		36.3		29.3	11.4		18.9	23.0	7.7	6.0	7.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		36.3		29.3	11.4		18.9	23.0	7.7	6.0	7.0	
LOS		D		C	B		B	C	A	A	A	
Approach Delay		36.3			16.7			19.8			6.8	
Approach LOS		D			B			B			A	
Queue Length 50th (ft)		72		34	22		15	204	22	15	94	
Queue Length 95th (ft)		117		58	53		22	#368	64	43	210	
Internal Link Dist (ft)		754			617			873			554	
Turn Bay Length (ft)				95			60		115	60		
Base Capacity (vph)		299		250	474		366	1553	797	508	1319	
Starvation Cap Reductn		0		0	0		0	0	0	0	0	
Spillback Cap Reductn		0		0	0		0	0	0	0	0	
Storage Cap Reductn		0		0	0		0	0	0	0	0	
Reduced v/c Ratio		0.55		0.32	0.40		0.14	0.66	0.32	0.24	0.43	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78.1			
Actuated Cycle Length: 78.1			
Offset: 8.1 (10%), Referenced to phase 2:NBSB and 6:, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 8: Mitchell St./North St. & Meridian St.



Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	71	12	66	44	123	24	935	210	116	506	4
Future Volume (vph)	69	71	12	66	44	123	24	935	210	116	506	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1	3.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.99		1.00	0.89		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1981		1770	1663		1768	3539	1583	1770	1861	
Flt Permitted		0.66		0.60	1.00		0.45	1.00	1.00	0.17	1.00	
Satd. Flow (perm)		1328		1126	1663		835	3539	1583	311	1861	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.81	0.91	0.46	0.91	0.81	0.95	0.89	1.00
Adj. Flow (vph)	75	77	13	80	54	135	52	1027	259	122	569	4
RTOR Reduction (vph)	0	4	0	0	108	0	0	0	102	0	0	0
Lane Group Flow (vph)	0	161	0	80	81	0	52	1027	157	122	573	0
Confl. Peds. (#/hr)	1						2					
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2		2	2		
Actuated Green, G (s)		15.6		15.6	15.6		34.3	34.3	34.3	50.4	53.5	
Effective Green, g (s)		15.6		15.6	15.6		34.3	34.3	34.3	50.4	53.5	
Actuated g/C Ratio		0.20		0.20	0.20		0.44	0.44	0.44	0.65	0.69	
Clearance Time (s)		4.0		4.0	4.0		5.0	5.0	5.0	3.1		
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		265		224	332		366	1554	695	501	1274	
v/s Ratio Prot					0.05			c0.29		0.05	c0.31	
v/s Ratio Perm		c0.12		0.07			0.06		0.10	0.11		
v/c Ratio		0.61		0.36	0.24		0.14	0.66	0.23	0.24	0.45	
Uniform Delay, d1		28.5		26.9	26.3		13.1	17.3	13.6	6.9	5.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.9		1.0	0.4		0.8	2.2	0.8	0.3	0.3	
Delay (s)		32.4		27.9	26.7		13.9	19.5	14.4	7.1	5.9	
Level of Service		C		C	C		B	B	B	A	A	
Approach Delay (s)		32.4			27.0			18.3			6.1	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	14.1
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

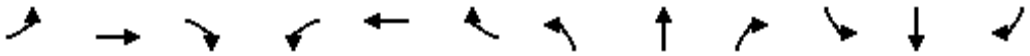
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	12	14	152	26	3	13	914	135	1	421	18
Future Volume (vph)	11	12	14	152	26	3	13	914	135	1	421	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	11	11	11	11	11	11	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				1.00				
Frt		0.955			0.968			0.981			0.993	
Flt Protected		0.981		0.950				0.999				
Satd. Flow (prot)	0	1978	0	1711	1743	0	0	3353	0	0	1973	0
Flt Permitted		0.887		0.710				0.942			0.991	
Satd. Flow (perm)	0	1787	0	1277	1743	0	0	3162	0	0	1955	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			8			48			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		699			143			486			286	
Travel Time (s)		19.1			3.9			11.0			6.5	
Confl. Peds. (#/hr)	2			1			1					
Peak Hour Factor	0.39	0.60	0.58	0.90	0.86	0.38	0.54	0.89	0.87	0.25	0.92	0.75
Adj. Flow (vph)	28	20	24	169	30	8	24	1027	155	4	458	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	169	38	0	0	1206	0	0	486	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		25.0	25.0		25.0	25.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		30.0	30.0		30.0	30.0	
Total Split (s)	19.0	19.0		19.0	19.0		30.0	30.0		30.0	30.0	
Total Split (%)	38.8%	38.8%		38.8%	38.8%		61.2%	61.2%		61.2%	61.2%	
Maximum Green (s)	15.0	15.0		15.0	15.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.0		4.0	4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		11.1		11.1	11.1			29.1			29.1	
Actuated g/C Ratio		0.24		0.24	0.24			0.64			0.64	
v/c Ratio		0.16		0.55	0.09			0.60			0.39	
Control Delay		10.4		21.8	11.2			8.5			7.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		10.4		21.8	11.2			8.5			7.4	
LOS		B		C	B			A			A	
Approach Delay		10.4			19.9			8.5			7.4	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		10		38	6			94			62	
Queue Length 95th (ft)		19		82	21			182			140	
Internal Link Dist (ft)		619			63			406			206	
Turn Bay Length (ft)												
Base Capacity (vph)		602		418	577			2026			1245	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.12		0.40	0.07			0.60			0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 49			
Actuated Cycle Length: 45.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

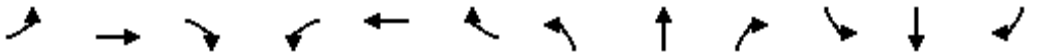
Splits and Phases: 9: North St. & Broad St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	12	14	152	26	3	13	914	135	1	421	18
Future Volume (vph)	11	12	14	152	26	3	13	914	135	1	421	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	11	11	11	11	11	11	12	14	12
Total Lost time (s)		4.0		4.0	4.0			5.0			5.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.95		1.00	0.97			0.98			0.99	
Flt Protected		0.98		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1976		1707	1744			3352			1973	
Flt Permitted		0.89		0.71	1.00			0.94			0.99	
Satd. Flow (perm)		1786		1276	1744			3162			1955	
Peak-hour factor, PHF	0.39	0.60	0.58	0.90	0.86	0.38	0.54	0.89	0.87	0.25	0.92	0.75
Adj. Flow (vph)	28	20	24	169	30	8	24	1027	155	4	458	24
RTOR Reduction (vph)	0	19	0	0	6	0	0	19	0	0	3	0
Lane Group Flow (vph)	0	53	0	169	32	0	0	1187	0	0	483	0
Confl. Peds. (#/hr)	2			1			1					
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		9.5		9.5	9.5			28.1			28.1	
Effective Green, g (s)		9.5		9.5	9.5			28.1			28.1	
Actuated g/C Ratio		0.20		0.20	0.20			0.60			0.60	
Clearance Time (s)		4.0		4.0	4.0			5.0			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		364		260	355			1906			1178	
v/s Ratio Prot					0.02							
v/s Ratio Perm		0.03		c0.13				c0.38			0.25	
v/c Ratio		0.15		0.65	0.09			0.62			0.41	
Uniform Delay, d1		15.2		17.0	15.0			5.9			4.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.2		5.7	0.1			1.5			1.1	
Delay (s)		15.4		22.7	15.2			7.4			5.9	
Level of Service		B		C	B			A			A	
Approach Delay (s)		15.4			21.3			7.4			5.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



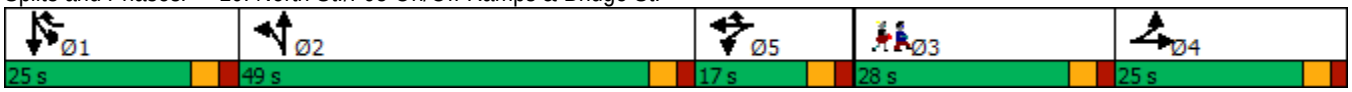
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Future Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.950				0.850		0.998				0.850
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				239		1				167
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Peak Hour Factor	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	1037	12	89	438	228
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	200	0	0	58	239	68	1049	0	89	438	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	25.0	25.0		17.0	17.0		49.0	49.0		25.0	25.0	
Total Split (%)	17.4%	17.4%		11.8%	11.8%		34.0%	34.0%		17.4%	17.4%	
Maximum Green (s)	20.0	20.0		12.0	12.0		44.0	44.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Actuated g/C Ratio	0.15	0.15			0.09	0.27	0.40	0.40		0.18	0.18	1.00
v/c Ratio	0.61	0.72			0.37	0.40	0.10	0.74		0.28	1.30	0.14
Control Delay	49.4	56.5			55.6	4.3	22.5	32.8		42.9	190.4	0.2
Queue Delay	0.0	0.0			0.0	0.0	0.0	4.3		0.0	0.0	0.0

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	19%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	49.4	56.5			55.6	4.3	22.5	37.1		42.9	190.4	0.2
LOS	D	E			E	A	C	D		D	F	A
Approach Delay		52.2			14.3			36.2			115.6	
Approach LOS		D			B			D			F	
Queue Length 50th (ft)	105	126			40	0	30	332		55	~402	0
Queue Length 95th (ft)	155	166			82	11	64	393		94	#632	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	603	333			202	630	708	1414		322	338	1583
Starvation Cap Reductn	0	0			0	0	0	286		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.51	0.60			0.29	0.38	0.10	0.93		0.28	1.30	0.14

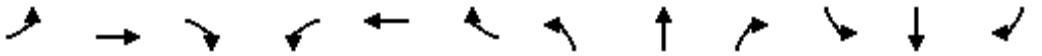
Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 110.1			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 59.2		Intersection LOS: E	
Intersection Capacity Utilization 65.5%		ICU Level of Service C	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.



Lane Group	Ø3
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Future Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.95			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1771			1850	1583	1770	3533		1770	1863	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1771			1850	1583	1770	3533		1770	1863	1583
Peak-hour factor, PHF	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	1037	12	89	438	228
RTOR Reduction (vph)	0	12	0	0	0	175	0	1	0	0	0	0
Lane Group Flow (vph)	307	188	0	0	58	64	68	1048	0	89	438	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Effective Green, g (s)	16.6	16.6			9.4	29.4	44.1	44.1		20.0	20.0	110.1
Actuated g/C Ratio	0.15	0.15			0.09	0.27	0.40	0.40		0.18	0.18	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	500	267			157	422	708	1415		321	338	1583
v/s Ratio Prot	0.09	c0.11			c0.03	0.04	0.04	c0.30		0.05	c0.24	
v/s Ratio Perm												0.14
v/c Ratio	0.61	0.70			0.37	0.15	0.10	0.74		0.28	1.30	0.14
Uniform Delay, d1	43.8	44.4			47.6	30.8	20.6	28.1		38.8	45.0	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	7.6			1.5	0.1	0.3	3.5		0.3	153.4	0.2
Delay (s)	45.7	52.0			49.0	30.9	20.8	31.7		39.2	198.4	0.2
Level of Service	D	D			D	C	C	C		D	F	A
Approach Delay (s)		48.2			34.5			31.0			119.8	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	59.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.1	Sum of lost time (s)	25.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	98	54	56	100	81	36	1520	62	50	592	92
Future Volume (vph)	211	98	54	56	100	81	36	1520	62	50	592	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	230		0	90		90	120		150	130		120
Storage Lanes	2		0	1		1	1		1	1		1
Taper Length (ft)	300			120			150			300		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor										1.00		
Frt		0.944				0.850		0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1758	0	1770	1863	1583	1770	5050	0	1770	3539	1583
Flt Permitted	0.950			0.640			0.950			0.950		
Satd. Flow (perm)	3433	1758	0	1192	1863	1583	1770	5050	0	1767	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				92		4				103
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		588			486			576			595	
Travel Time (s)		16.0			13.3			8.7			9.0	
Confl. Peds. (#/hr)										3		
Peak Hour Factor	0.85	0.84	0.77	0.90	0.86	0.88	0.71	0.91	0.78	0.71	0.90	0.58
Adj. Flow (vph)	248	117	70	62	116	92	51	1670	79	70	658	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	187	0	62	116	92	51	1749	0	70	658	159
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Detector Phase	4	4 8		8	8	5 8	1	6		5	2	2 4
Switch Phase												
Minimum Initial (s)	5.0			9.0	9.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.9			14.7	14.7		11.8	20.0		11.8	20.0	
Total Split (s)	24.9			26.7	26.7		17.8	35.0		17.8	35.0	
Total Split (%)	17.4%			18.6%	18.6%		12.4%	24.4%		12.4%	24.4%	
Maximum Green (s)	19.0			21.0	21.0		11.0	30.0		11.0	30.0	
Yellow Time (s)	3.3			3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6			2.4	2.4		3.8	2.0		3.8	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Lead/Lag	Lag						Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes						Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Recall Mode	None			None	None		None	Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	11.6	28.4		11.1	11.1	24.8	7.2	30.2		7.9	33.6	51.1
Actuated g/C Ratio	0.14	0.34		0.13	0.13	0.29	0.09	0.36		0.09	0.40	0.61
v/c Ratio	0.53	0.31		0.40	0.47	0.17	0.34	0.97		0.42	0.47	0.16
Control Delay	38.7	19.6		43.0	41.9	6.0	44.6	43.2		45.7	22.5	4.2

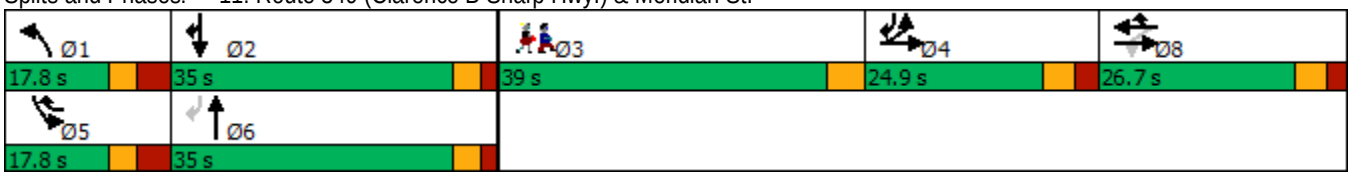
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	39.0
Total Split (s)	39.0
Total Split (%)	27%
Maximum Green (s)	35.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	28.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	38.7	19.6		43.0	41.9	6.0	44.6	43.2		45.7	22.5	4.2
LOS	D	B		D	D	A	D	D		D	C	A
Approach Delay		30.5			29.9			43.2			21.0	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	62	63		31	58	0	26	319		35	136	11
Queue Length 95th (ft)	102	107		74	112	31	51	#554		64	234	17
Internal Link Dist (ft)		508			406			496			515	
Turn Bay Length (ft)	230			90		90	120			130		120
Base Capacity (vph)	778	799		298	467	580	232	1811		232	1410	1132
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.32	0.23		0.21	0.25	0.16	0.22	0.97		0.30	0.47	0.14

Intersection Summary

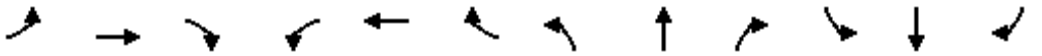
Area Type: Other
Cycle Length: 143.4
Actuated Cycle Length: 84.4
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 70.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 349 (Clarence B Sharp Hwy.) & Meridian St.



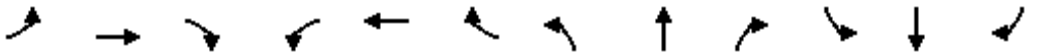
Lane Group	Ø3
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	98	54	56	100	81	36	1520	62	50	592	92
Future Volume (vph)	211	98	54	56	100	81	36	1520	62	50	592	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.7	5.7	6.8	6.8	5.0		6.8	5.0	5.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1758		1770	1863	1583	1770	5051		1770	3539	1583
Flt Permitted	0.95	1.00		0.64	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1758		1192	1863	1583	1770	5051		1770	3539	1583
Peak-hour factor, PHF	0.85	0.84	0.77	0.90	0.86	0.88	0.71	0.91	0.78	0.71	0.90	0.58
Adj. Flow (vph)	248	117	70	62	116	92	51	1670	79	70	658	159
RTOR Reduction (vph)	0	15	0	0	0	72	0	3	0	0	0	43
Lane Group Flow (vph)	248	172	0	62	116	20	51	1746	0	70	658	116
Confl. Peds. (#/hr)										3		
Turn Type	Prot	NA		Perm	NA	pt+ov	Prot	NA		Prot	NA	custom
Protected Phases	4	4 8			8	5 8	1	6		5	2	2 4
Permitted Phases				8								6
Actuated Green, G (s)	11.6	28.6		11.1	11.1	24.7	6.1	31.9		7.9	33.7	50.3
Effective Green, g (s)	11.6	28.6		11.1	11.1	19.0	6.1	31.9		7.9	33.7	50.3
Actuated g/C Ratio	0.14	0.33		0.13	0.13	0.22	0.07	0.37		0.09	0.39	0.59
Clearance Time (s)	5.9			5.7	5.7		6.8	5.0		6.8	5.0	
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	463	585		154	240	350	125	1875		162	1388	926
v/s Ratio Prot	c0.07	0.10			c0.06	0.01	0.03	c0.35		c0.04	0.19	0.07
v/s Ratio Perm				0.05								
v/c Ratio	0.54	0.29		0.40	0.48	0.06	0.41	0.93		0.43	0.47	0.13
Uniform Delay, d1	34.6	21.2		34.4	34.7	26.4	38.2	25.9		36.9	19.5	8.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1		0.6	0.6	0.0	0.8	9.9		0.7	1.2	0.0
Delay (s)	35.2	21.3		35.0	35.3	26.4	39.0	35.8		37.6	20.6	8.0
Level of Service	D	C		C	D	C	D	D		D	C	A
Approach Delay (s)		29.2			32.2			35.9			19.7	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	27.4
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Future Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	11	11	11	11	11	15	15	15
Storage Length (ft)	155		0	0		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	135			25			25			25		
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
Ped Bike Factor											1.00	
Frt		0.987			0.976				0.850		0.960	
Flt Protected	0.950			0.950				0.979			0.986	
Satd. Flow (prot)	1711	1777	0	1652	1757	0	0	1763	1531	0	1940	0
Flt Permitted	0.570			0.615				0.832			0.880	
Satd. Flow (perm)	1026	1777	0	1069	1757	0	0	1498	1531	0	1727	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			16				360		20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		529			504			284			348	
Travel Time (s)		12.0			11.5			6.5			7.9	
Confl. Peds. (#/hr)										5		
Peak Hour Factor	0.88	0.83	0.70	0.84	0.82	0.75	0.42	0.69	0.73	0.65	0.64	0.40
Adj. Flow (vph)	26	211	20	387	244	47	24	33	360	20	28	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	231	0	387	291	0	0	57	360	0	68	0
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Detector Phase	1	1 2		3	2 3		5	5	5	5	5	
Switch Phase												
Minimum Initial (s)	3.0			3.0			5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	7.0			7.2			11.2	11.2	11.2	11.2	11.2	
Total Split (s)	9.0			14.2			22.2	22.2	22.2	22.2	22.2	
Total Split (%)	11.1%			17.5%			27.3%	27.3%	27.3%	27.3%	27.3%	
Maximum Green (s)	5.0			10.0			16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.0			3.0			4.2	4.2	4.2	4.2	4.2	
All-Red Time (s)	1.0			1.2			2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0				0.0	0.0		0.0	
Total Lost Time (s)	4.0			4.2				6.2	6.2		6.2	
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	1.0			2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None			None			None	None	None	None	None	
Act Effct Green (s)	36.9	40.9		40.7	37.5			8.0	21.2		8.0	
Actuated g/C Ratio	0.51	0.57		0.56	0.52			0.11	0.29		0.11	
v/c Ratio	0.05	0.23		0.58	0.32			0.35	0.51		0.33	
Control Delay	8.7	9.1		9.6	6.2			35.5	5.1		26.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	8.7	9.1		9.6	6.2			35.5	5.1		26.7	

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	15.0
Minimum Split (s)	20.8
Total Split (s)	35.8
Total Split (%)	44%
Maximum Green (s)	30.0
Yellow Time (s)	3.8
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

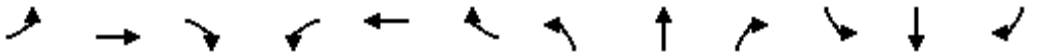
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			D	A		C	
Approach Delay		9.1			8.2			9.3			26.7	
Approach LOS		A			A			A			C	
Queue Length 50th (ft)	5	45		40	30			24	0		20	
Queue Length 95th (ft)	17	88		92	66			43	19		35	
Internal Link Dist (ft)		449			424			204			268	
Turn Bay Length (ft)	155								85			
Base Capacity (vph)	571	987		697	943			332	691		398	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.05	0.23		0.56	0.31			0.17	0.52		0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 81.2			
Actuated Cycle Length: 72.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Route 649 (Rainville Ave.)/Old Farms Rd. & Route 649 (Poquonnock Rd.)

Lane Group	Ø2
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

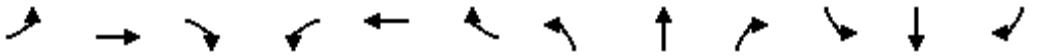
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Future Volume (vph)	23	175	14	325	200	35	10	23	263	13	18	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	15	15	15
Total Lost time (s)	4.0	4.0		4.2	5.8			6.2	6.2		6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1711	1777		1652	1757			1764	1531		1932	
Flt Permitted	0.57	1.00		0.61	1.00			0.83	1.00		0.88	
Satd. Flow (perm)	1027	1777		1068	1757			1499	1531		1726	
Peak-hour factor, PHF	0.88	0.83	0.70	0.84	0.82	0.75	0.42	0.69	0.73	0.65	0.64	0.40
Adj. Flow (vph)	26	211	20	387	244	47	24	33	360	20	28	20
RTOR Reduction (vph)	0	4	0	0	7	0	0	0	275	0	18	0
Lane Group Flow (vph)	26	227	0	387	284	0	0	57	85	0	50	0
Confl. Peds. (#/hr)										5		
Turn Type	custom	NA		custom	NA		Perm	NA	custom	Perm	NA	
Protected Phases	1	1 2		3	2 3			5	5		5	
Permitted Phases	2			2			5		3	5		
Actuated Green, G (s)	35.1	39.1		39.1	39.1			8.0	17.0		8.0	
Effective Green, g (s)	35.1	39.1		39.1	39.1			8.0	17.0		8.0	
Actuated g/C Ratio	0.49	0.54		0.54	0.54			0.11	0.24		0.11	
Clearance Time (s)	4.0			4.2				6.2	6.2		6.2	
Vehicle Extension (s)	1.0			2.0				2.0	2.0		2.0	
Lane Grp Cap (vph)	545	961		650	950			165	491		190	
v/s Ratio Prot	0.00	c0.13		c0.07	0.16				0.02			
v/s Ratio Perm	0.02			c0.25				c0.04	0.04		0.03	
v/c Ratio	0.05	0.24		0.60	0.30			0.35	0.17		0.26	
Uniform Delay, d1	9.7	8.7		10.0	9.1			29.7	22.0		29.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.0		1.0	0.1			0.5	0.1		0.3	
Delay (s)	9.7	8.8		11.0	9.2			30.2	22.1		29.7	
Level of Service	A	A		B	A			C	C		C	
Approach Delay (s)		8.9			10.2			23.2			29.7	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	20.2
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
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)	941	149	22	40	58	173	25	515	47	83	225	350
Future Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	10	10	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			80		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.993				0.850		0.983				0.850
Flt Protected	0.950	0.967			0.980			0.998		0.950		
Satd. Flow (prot)	1569	1643	0	0	1704	1478	0	3241	0	1652	1739	1478
Flt Permitted	0.950	0.967			0.980			0.922		0.143		
Satd. Flow (perm)	1569	1643	0	0	1704	1478	0	2994	0	249	1739	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				240		8				407
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1087			427			507			1053	
Travel Time (s)		24.7			9.7			11.5			23.9	
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	1176	186	35	55	78	240	35	585	80	122	253	407
Shared Lane Traffic (%)	41%											
Lane Group Flow (vph)	694	703	0	0	133	240	0	700	0	122	253	407
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Detector Phase	4	4		5	5	5	2	2		1	1 2	1 2 4
Switch Phase												
Minimum Initial (s)	8.0	8.0		6.0	6.0	6.0	15.0	15.0		6.0		
Minimum Split (s)	12.5	12.5		10.5	10.5	10.5	19.5	19.5		10.5		
Total Split (s)	65.0	65.0		16.0	16.0	16.0	39.4	39.4		12.0		
Total Split (%)	42.4%	42.4%		10.4%	10.4%	10.4%	25.7%	25.7%		7.8%		
Maximum Green (s)	60.5	60.5		11.5	11.5	11.5	34.9	34.9		7.5		
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5		
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0		
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0		0.0		
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Lead/Lag	Lag	Lag					Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		
Recall Mode	None	None		None	None	None	Max	Max		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	60.7	60.7			11.5	11.5		35.0		42.5	47.1	132.1
Actuated g/C Ratio	0.44	0.44			0.08	0.08		0.26		0.31	0.34	0.97
v/c Ratio	1.00	0.96			0.92	0.70		0.91		0.79	0.42	0.28

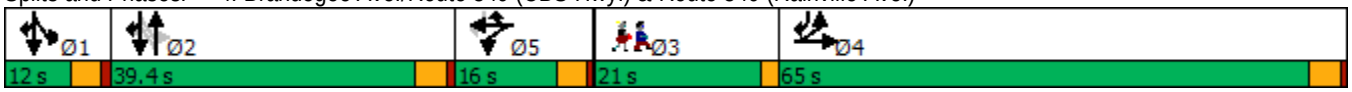
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	14%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	71.2	62.5			118.9	18.8		65.0		68.7	38.2	0.6
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	71.2	62.5			118.9	18.8		65.0		68.7	38.2	0.6
LOS	E	E			F	B		E		E	D	A
Approach Delay		66.8			54.5			65.0			23.4	
Approach LOS		E			D			E			C	
Queue Length 50th (ft)	600	590			115	0		302		73	164	0
Queue Length 95th (ft)	#904	#889			#214	20		#498		#115	293	12
Internal Link Dist (ft)		1007			347			427			973	
Turn Bay Length (ft)										100		
Base Capacity (vph)	696	731			144	344		773		155	599	1442
Starvation Cap Reductn	0	0			0	0		0		0	0	0
Spillback Cap Reductn	0	0			0	0		0		0	0	0
Storage Cap Reductn	0	0			0	0		0		0	0	0
Reduced v/c Ratio	1.00	0.96			0.92	0.70		0.91		0.79	0.42	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 153.4			
Actuated Cycle Length: 136.6			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 54.6		Intersection LOS: D	
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

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

Splits and Phases: 4: Brandegee Ave./Route 349 (CBS Hwy.) & Route 349 (Rainville Ave.)



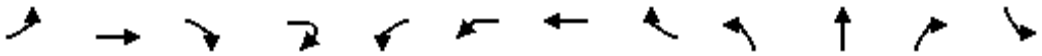
Lane Group	Ø3
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Future Volume (vph)	941	149	22	40	58	173	25	515	47	83	225	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.95			1.00	1.00		0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97			0.98	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)	1569	1642			1703	1478		3238		1652	1739	1478
Flt Permitted	0.95	0.97			0.98	1.00		0.92		0.14	1.00	1.00
Satd. Flow (perm)	1569	1642			1703	1478		2993		248	1739	1478
Peak-hour factor, PHF	0.80	0.80	0.62	0.73	0.74	0.72	0.72	0.88	0.59	0.68	0.89	0.86
Adj. Flow (vph)	1176	186	35	55	78	240	35	585	80	122	253	407
RTOR Reduction (vph)	0	1	0	0	0	220	0	6	0	0	0	42
Lane Group Flow (vph)	694	702	0	0	133	20	0	694	0	122	253	365
Confl. Peds. (#/hr)							1					
Turn Type	Split	NA		Split	NA	Prot	Perm	NA		pm+pt	NA	custom
Protected Phases	4	4		5	5	5		2		1	1 2	1 2 4
Permitted Phases							2			1 2		5
Actuated Green, G (s)	60.7	60.7			11.5	11.5		35.0		42.5	47.0	123.7
Effective Green, g (s)	60.7	60.7			11.5	11.5		35.0		42.5	47.0	123.7
Actuated g/C Ratio	0.44	0.44			0.08	0.08		0.25		0.31	0.34	0.90
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5		4.5		
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		
Lane Grp Cap (vph)	689	721			141	123		758		152	591	1372
v/s Ratio Prot	c0.44	0.43			c0.08	0.01				c0.04	0.15	0.22
v/s Ratio Perm								c0.23		0.20		0.03
v/c Ratio	1.01	0.97			0.94	0.16		0.92		0.80	0.43	0.27
Uniform Delay, d1	38.7	37.9			63.0	58.8		50.1		38.2	35.2	1.0
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	36.1	26.8			58.4	0.6		17.6		25.5	0.5	0.1
Delay (s)	74.8	64.8			121.4	59.4		67.7		63.6	35.7	1.1
Level of Service	E	E			F	E		E		E	D	A
Approach Delay (s)		69.7			81.5			67.7			22.0	
Approach LOS		E			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	138.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
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		0.984					0.911			0.996		
Flt Protected		0.966					0.993			0.997		
Satd. Flow (prot)	0	1771	0	0	0	0	1685	0	0	1850	0	0
Flt Permitted		0.550					0.934			0.997		
Satd. Flow (perm)	0	1008	0	0	0	0	1585	0	0	1850	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)							73			1		
Link Speed (mph)		25					25			25		
Link Distance (ft)		836					602			696		
Travel Time (s)		22.8					16.4			19.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	54	33	4	15	16	46	149	20	348	12	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	313	0	0	0	0	226	0	0	380	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Detector Phase	4	4			4	4	4		2	2		1
Switch Phase												
Minimum Initial (s)	8.0	8.0			8.0	8.0	8.0		10.0	10.0		20.0
Minimum Split (s)	13.0	13.0			13.0	13.0	13.0		15.0	15.0		25.0
Total Split (s)	31.0	31.0			31.0	31.0	31.0		24.0	24.0		25.0
Total Split (%)	25.4%	25.4%			25.4%	25.4%	25.4%		19.7%	19.7%		20.5%
Maximum Green (s)	26.0	26.0			26.0	26.0	26.0		19.0	19.0		20.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag	Lag	Lag			Lag	Lag	Lag		Lag	Lag		Lead
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	4.0	4.0			4.0	4.0	4.0		4.0	4.0		3.0
Recall Mode	None	None			None	None	None		Max	Max		Max
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		26.0					26.0			19.0		
Actuated g/C Ratio		0.27					0.27			0.20		
v/c Ratio		1.16					0.47			1.05		
Control Delay		139.3					23.6			99.4		
Queue Delay		0.0					0.0			0.0		
Total Delay		139.3					23.6			99.4		
LOS		F					C			F		
Approach Delay		139.3					23.6			99.4		
Approach LOS		F					C			F		

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Lane Configurations							
Traffic Volume (vph)	150	120	94	10	240	11	
Future Volume (vph)	150	120	94	10	240	11	
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		0.850			0.994		
Flt Protected	0.983				0.954		
Satd. Flow (prot)	1831	1583	0	0	1766	0	
Flt Permitted	0.983				0.954		
Satd. Flow (perm)	1831	1583	0	0	1766	0	
Right Turn on Red			Yes				
Satd. Flow (RTOR)		143					
Link Speed (mph)	25				25		
Link Distance (ft)	1056				667		
Travel Time (s)	28.8				18.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	163	130	102	11	261	12	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	250	232	0	0	284	0	
Turn Type	NA	Prot		Prot	Prot		
Protected Phases	1	1		5	5		3
Permitted Phases							
Detector Phase	1	1		5	5		
Switch Phase							
Minimum Initial (s)	20.0	20.0		6.0	6.0		5.0
Minimum Split (s)	25.0	25.0		11.0	11.0		25.0
Total Split (s)	25.0	25.0		17.0	17.0		25.0
Total Split (%)	20.5%	20.5%		13.9%	13.9%		20%
Maximum Green (s)	20.0	20.0		12.0	12.0		21.0
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	5.0	5.0			5.0		
Lead/Lag	Lead	Lead					Lead
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0		2.0	2.0		3.0
Recall Mode	Max	Max		Max	Max		None
Walk Time (s)							6.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	20.0	20.0			12.0		
Actuated g/C Ratio	0.21	0.21			0.12		
v/c Ratio	0.66	0.53			1.30		
Control Delay	45.0	18.5			201.7		
Queue Delay	0.0	0.0			0.0		
Total Delay	45.0	18.5			201.7		
LOS	D	B			F		
Approach Delay	32.2				201.7		
Approach LOS	C				F		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Queue Length 50th (ft)		~230					77			~256		
Queue Length 95th (ft)		#395					149			#439		
Internal Link Dist (ft)		756					522			616		
Turn Bay Length (ft)												
Base Capacity (vph)		270					478			363		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		1.16					0.47			1.05		

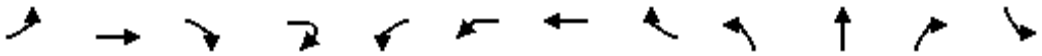
Intersection Summary			
Area Type:	Other		
Cycle Length: 122			
Actuated Cycle Length: 97			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 94.7		Intersection LOS: F	
Intersection Capacity Utilization 98.8%		ICU Level of Service F	
Analysis Period (min) 15			

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

Splits and Phases: 6: Chicago Ave. & Benham Rd./Mitchell St. & Poquonnock Rd.

Lane Group	SBT	SBR	SBR2	NEL2	NEL	NER	Ø3
Queue Length 50th (ft)	143	47			~226		
Queue Length 95th (ft)	226	121			#386		
Internal Link Dist (ft)	976				587		
Turn Bay Length (ft)							
Base Capacity (vph)	377	439			218		
Starvation Cap Reductn	0	0			0		
Spillback Cap Reductn	0	0			0		
Storage Cap Reductn	0	0			0		
Reduced v/c Ratio	0.66	0.53			1.30		

Intersection Summary



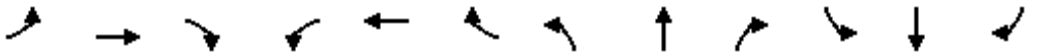
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Future Volume (vph)	204	50	30	4	14	15	42	137	18	320	11	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0					5.0			5.0		
Lane Util. Factor		1.00					1.00			1.00		
Frt		0.98					0.91			1.00		
Flt Protected		0.97					0.99			1.00		
Satd. Flow (prot)		1770					1685			1850		
Flt Permitted		0.55					0.93			1.00		
Satd. Flow (perm)		1009					1584			1850		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	54	33	4	15	16	46	149	20	348	12	87
RTOR Reduction (vph)	0	0	0	0	0	0	53	0	0	1	0	0
Lane Group Flow (vph)	0	313	0	0	0	0	173	0	0	379	0	0
Turn Type	Perm	NA			Perm	Perm	NA		Split	NA		Split
Protected Phases		4					4		2	2		1
Permitted Phases	4				4	4						
Actuated Green, G (s)		26.0					26.0			19.0		
Effective Green, g (s)		26.0					26.0			19.0		
Actuated g/C Ratio		0.27					0.27			0.20		
Clearance Time (s)		5.0					5.0			5.0		
Vehicle Extension (s)		4.0					4.0			4.0		
Lane Grp Cap (vph)		270					424			362		
v/s Ratio Prot										c0.20		
v/s Ratio Perm		c0.31					0.11					
v/c Ratio		1.16					0.41			1.05		
Uniform Delay, d1		35.5					29.2			39.0		
Progression Factor		1.00					1.00			1.00		
Incremental Delay, d2		104.8					0.9			60.3		
Delay (s)		140.3					30.0			99.3		
Level of Service		F					C			F		
Approach Delay (s)		140.3					30.0			99.3		
Approach LOS		F					C			F		

Intersection Summary			
HCM 2000 Control Delay	99.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NER
Lane Configurations						
Traffic Volume (vph)	150	120	94	10	240	11
Future Volume (vph)	150	120	94	10	240	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	1.00			1.00	
Frt	1.00	0.85			0.99	
Flt Protected	0.98	1.00			0.95	
Satd. Flow (prot)	1831	1583			1767	
Flt Permitted	0.98	1.00			0.95	
Satd. Flow (perm)	1831	1583			1767	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	130	102	11	261	12
RTOR Reduction (vph)	0	114	0	0	0	0
Lane Group Flow (vph)	250	118	0	0	284	0
Turn Type	NA	Prot		Prot	Prot	
Protected Phases	1	1		5	5	
Permitted Phases						
Actuated Green, G (s)	20.0	20.0			12.0	
Effective Green, g (s)	20.0	20.0			12.0	
Actuated g/C Ratio	0.21	0.21			0.12	
Clearance Time (s)	5.0	5.0			5.0	
Vehicle Extension (s)	3.0	3.0			2.0	
Lane Grp Cap (vph)	377	326			218	
v/s Ratio Prot	c0.14	0.07			c0.16	
v/s Ratio Perm						
v/c Ratio	0.66	0.36			1.30	
Uniform Delay, d1	35.4	33.0			42.5	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	8.9	3.1			165.5	
Delay (s)	44.3	36.2			208.0	
Level of Service	D	D			F	
Approach Delay (s)	40.4				208.0	
Approach LOS	D				F	

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Future Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	105		0	0		0	38		0	75		0
Storage Lanes	2		0	0		1	1		0	1		1
Taper Length (ft)	300			25			25			75		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.950				0.850		0.998				0.850
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	3319	1770	0	0	1850	1583	1770	3532	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				239		1				167
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		550			441			176			423	
Travel Time (s)		15.0			12.0			4.0			11.5	
Peak Hour Factor	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	1037	12	89	438	228
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	200	0	0	58	239	68	1049	0	89	438	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Detector Phase	4	4		5	5	1 5	2	2		1	1	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		20.0	20.0		15.0	15.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		25.0	25.0		20.0	20.0	
Total Split (s)	20.0	20.0		13.0	13.0		45.0	45.0		38.0	38.0	
Total Split (%)	13.9%	13.9%		9.0%	9.0%		31.3%	31.3%		26.4%	26.4%	
Maximum Green (s)	15.0	15.0		8.0	8.0		40.0	40.0		33.0	33.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag					Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5		3.0	3.0		3.0	3.0		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	15.0	15.0			8.0	41.0	40.0	40.0		33.0	33.0	116.0
Actuated g/C Ratio	0.13	0.13			0.07	0.35	0.34	0.34		0.28	0.28	1.00
v/c Ratio	0.72	0.83			0.46	0.33	0.11	0.86		0.18	0.83	0.14
Control Delay	58.7	73.5			64.0	3.1	26.6	44.0		32.5	53.5	0.2
Queue Delay	0.0	0.0			0.0	0.0	0.0	19.4		0.0	0.0	0.0

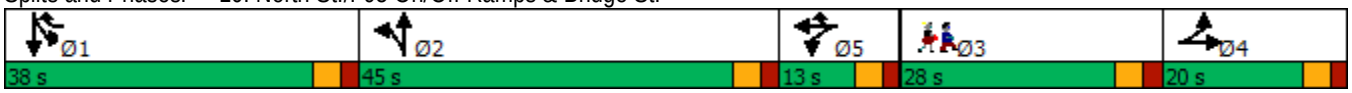
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	19%
Maximum Green (s)	23.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	17.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	58.7	73.5			64.0	3.1	26.6	63.3		32.5	53.5	0.2
LOS	E	E			E	A	C	E		C	D	A
Approach Delay		64.5			15.0			61.1			34.9	
Approach LOS		E			B			E			C	
Queue Length 50th (ft)	114	138			42	0	34	381		50	306	0
Queue Length 95th (ft)	163	#178			85	10	68	417		80	#470	0
Internal Link Dist (ft)		470			361			96			343	
Turn Bay Length (ft)	105						38			75		
Base Capacity (vph)	429	241			127	714	610	1218		503	529	1583
Starvation Cap Reductn	0	0			0	0	0	194		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.72	0.83			0.46	0.33	0.11	1.02		0.18	0.83	0.14

Intersection Summary

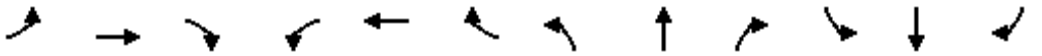
Area Type: Other
Cycle Length: 144
Actuated Cycle Length: 116
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 49.3 Intersection LOS: D
Intersection Capacity Utilization 65.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: North St./I-95 On/Off Ramps & Bridge St.



Lane Group	Ø3
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Future Volume (vph)	295	99	60	4	44	170	65	861	8	70	403	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0		5.0	5.0	4.0
Lane Util. Factor	0.97	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.95			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3319	1771			1850	1583	1770	3533		1770	1863	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3319	1771			1850	1583	1770	3533		1770	1863	1583
Peak-hour factor, PHF	0.96	0.74	0.91	0.50	0.88	0.71	0.95	0.83	0.67	0.79	0.92	0.87
Adj. Flow (vph)	307	134	66	8	50	239	68	1037	12	89	438	228
RTOR Reduction (vph)	0	12	0	0	0	155	0	1	0	0	0	0
Lane Group Flow (vph)	307	188	0	0	58	84	68	1048	0	89	438	228
Turn Type	Split	NA		Split	NA	pt+ov	Split	NA		Split	NA	Free
Protected Phases	4	4		5	5	1 5	2	2		1	1	
Permitted Phases												Free
Actuated Green, G (s)	15.0	15.0			8.0	41.0	40.0	40.0		33.0	33.0	116.0
Effective Green, g (s)	15.0	15.0			8.0	41.0	40.0	40.0		33.0	33.0	116.0
Actuated g/C Ratio	0.13	0.13			0.07	0.35	0.34	0.34		0.28	0.28	1.00
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	2.5	2.5			3.0		3.0	3.0		2.5	2.5	
Lane Grp Cap (vph)	429	229			127	559	610	1218		503	529	1583
v/s Ratio Prot	0.09	c0.11			c0.03	0.05	0.04	c0.30		0.05	c0.24	
v/s Ratio Perm												0.14
v/c Ratio	0.72	0.82			0.46	0.15	0.11	0.86		0.18	0.83	0.14
Uniform Delay, d1	48.5	49.2			51.9	25.6	25.9	35.4		31.3	38.8	0.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	20.0			2.6	0.1	0.4	8.1		0.1	10.1	0.2
Delay (s)	53.7	69.2			54.5	25.7	26.3	43.5		31.4	48.9	0.2
Level of Service	D	E			D	C	C	D		C	D	A
Approach Delay (s)		59.8			31.3			42.4			32.1	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			