
Traffic Impact and Access Study
Proposed Halifax 40B Development

314 Plymouth Street
Halifax, Massachusetts

Prepared for
R&J, LLC

October 2019

Prepared by



GREEN INTERNATIONAL AFFILIATES, INC.
TRANSPORTATION | STRUCTURAL | WATER RESOURCES | CIVIL/SITE

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

This report evaluates the potential traffic impacts associated with the proposed Halifax 40B Residential Development project located near 318 Plymouth Street Halifax, MA. The development consists of 30 duplex units and developed by R&J, LLC. Access to this proposed site will be provided through a two-lane driveway on Plymouth Street.

This report describes the potential traffic impacts on the adjacent roadways and nearby intersections as a result of the development project. Intersection capacity analyses were completed at the study intersections for the existing, future No-Build, and future Build conditions.

The analysis and evaluation in this report includes traffic volumes, safety data and review, and an analysis of the roadway/site access interface. The guidelines of the Massachusetts Department of Transportation (MassDOT) and the Institute of Transportation Engineers (ITE) were used for completing this traffic impact and access study. The report's content contains descriptions of existing characteristics of the abutting roadway network, current traffic conditions, estimated traffic impacts and access/egress characteristics of the proposed residential development.

1.1 Future Conditions

For this study, the future year 2026 was chosen based on current MassDOT analysis guidelines. The evaluation of future conditions involves comparing No-Build and Build conditions. The proposed development project is expected to generate approximately 26 and 32 net new vehicle trips during the weekday AM and PM peak hours, respectively. The trips were distributed across the study area network based on existing traffic patterns.

1.2 Conclusions and Recommendations

The roadways within the study area are able to accommodate the additional traffic associated with the proposed development project. The analyses indicated the following:

- The proposed project results in minimal changes in level of service and vehicle delays for the study area intersection compared to 2026 Future No-Build conditions.
- The analysis predicts that traffic will be able to access the proposed site driveway safely and efficiently, with minimal delays (LOS 'A' to 'B') and queues during the weekday AM and PM peak hour.
- All the other approaches at the signalized study intersection operate at adequate level of service LOS 'C' in Future Build conditions.
- Sufficient sight distance with respect to the site drive location is expected to be available following construction.

1.2.1 Recommendations

While the analyses show that the proposed development can be accommodated on the study area network, several recommendations have been made to enhance the network. The proposed actions are as follows:

- Pavement markings for a one-lane signalized intersection approach configuration consistent with current Manual on Uniform Traffic Control Devices (MUTCD) standards and guidelines, should be installed at the site access driveway approach to Plymouth street.
- Any proposed landscaping and signage should be low enough and/or set back sufficiently so as not to create any sight distance constraints at the proposed site drives.

- Update the existing two crosswalks to be ADA-compliant on the intersection at Stop & Shop Driveway to accommodate safe pedestrian access from the proposed site.
- Install equipment at the site driveway approach and update the signal at the intersection at Stop & Shop Driveway. Requirements for this new setup shall include two signal posts, one remove and reset post, and signal detection.

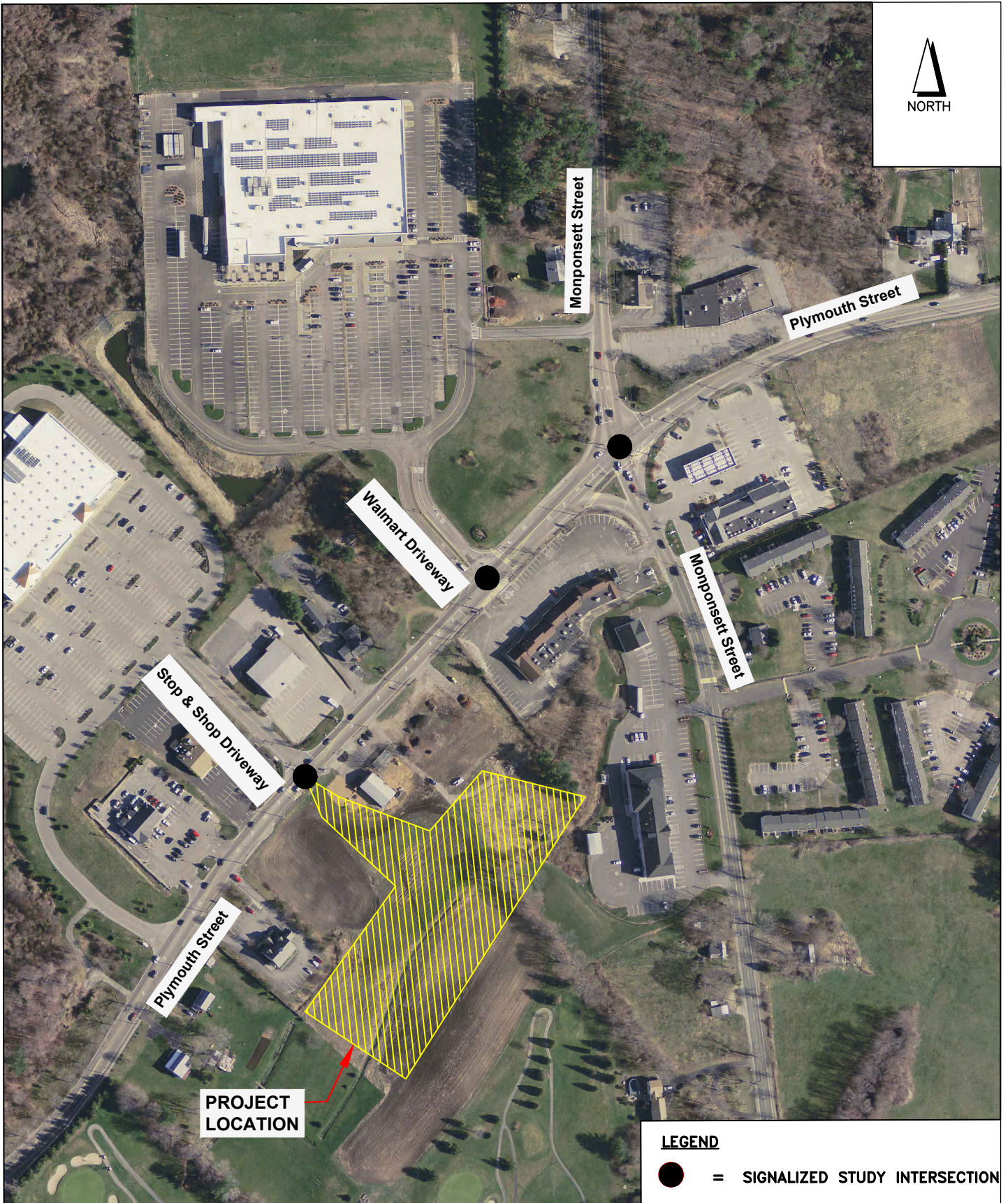


Figure 1
Project Location
Proposed Residential Development
Halifax, MA

2.0 EXISTING TRAFFIC CONDITIONS

The following sections describe the existing transportation system in terms of physical and operational characteristics. The selection of the study area took into account the location and type of project and focused on the evaluation of the roadways and intersections in the vicinity of the site that are anticipated to be most impacted by the proposed commercial development project.

2.1 Study Roadway Network

The study focused on the roadway network in the vicinity of the proposed project with an emphasis on the following 3 intersections:

- Plymouth Street (Route 106) & Stop & Shop
- Plymouth Street (Route 106) & Walmart
- Plymouth Street (Route 106) & Monponsett Street

As part of this study, a field reconnaissance was conducted on September 2, 2019 to verify the physical and geometric layout of the study intersections and roadways and to observe traffic operations in the study area. Figure 1 shows the proposed site location in the context of the surrounding roadways. A description of the study roadways serving the project site is as follows:

2.1.1 Plymouth Street

Plymouth Street is functionally classified as an Urban Minor Arterial that is owned and maintained by the Town of Halifax, which is not under the Complete Streets Program. It is generally oriented in the east-west direction.

Throughout the study area, Plymouth Street operates as a two-lane, two-way roadway accommodating eastbound and westbound vehicles. The total width of the roadway is approximately 33 feet west of Stop & Shop Driveway, and 36 feet east of the Walmart Driveway. The two travel lanes are separated by a double yellow centerline and have one-foot-wide shoulders on each side. There is a sidewalk on the south side of the road along with at least one crosswalk at each intersection to access the shopping plazas. There are no sidewalks on the north side of the road. There are also no bicycle accommodations on this arterial. The surrounding land use is mainly commercial and recreational areas comprising of groceries stores, local restaurants and a golf course that shall remain in operation during the site development. The posted speed limit in the project area for Plymouth Street is 25 mph.

2.1.2 Plymouth Street at Stop & Shop Driveway

Plymouth Street and the driveway to Stop & Shop Plaza form a signalized T-intersection. Plymouth Street forms the east-west leg, while the driveway forms the southbound approach. Sidewalk is present along the south side and the northwest corner of the intersection. A crosswalk and cement concrete wheelchair ramps are present across the south leg of the intersection. The approaches of this intersection are at approximately 90 degrees of each other, along with a



Plymouth Street looking east



*Plymouth Street at Stop & Shop Driveway,
looking east from Plymouth Street*

relatively flat grade. The signal control at this intersection is actuated and consisted of three primary phases as observed. The first phase allows the Stop & Shop driveway southbound movements. The second phase allows for Plymouth Street eastbound and westbound movements, and the third phase is for an exclusive pedestrian phase if a pushbutton is pressed.

2.1.3 Plymouth Street at Walmart Driveway

Plymouth Street and the driveway to Walmart Plaza intersect at about 400 ft east of the proposed development to form a signalized T-intersection. Plymouth Street forms the east-west leg, while the driveway forms the southbound approach. Crosswalks are mainly limited on the north side, where it terminates at the only crosswalk the crosses the westbound approach on Plymouth Street, which can limit pedestrian access to the Stop & Shop Plaza. The approaches of this intersection are at approximately 90 degrees of each other, along with a relatively flat grade. The signal control at this intersection is actuated and consisted of three primary phases as observed. The first phase allows the Walmart driveway southbound movements and Plaza northbound movements. The second phase allows for Plymouth Street westbound and eastbound movements with a protected left turn, and the third phase is for an exclusive pedestrian phase if a pushbutton is pressed.



*Plymouth Street at Walmart Driveway,
looking east from Plymouth Street*

2.1.4 Plymouth Street at Monponsett Street

Plymouth Street and Monponsett Street intersect at about 800 ft West of the proposed development to form a 4-way signalized intersection. Plymouth Street forms the east-west leg, while the driveway forms the southbound approach. Crosswalks are mainly limited on the north side, where it terminates at the only crosswalk the crosses the westbound approach on Plymouth Street, which can limit pedestrian access to the Stop & Shop Plaza. The approaches of this intersection are at approximately 90 degrees of each other, along with a relatively flat grade. The signal control at this intersection is actuated and consisted of three primary phases as observed. The first phase allows protected left turns on Monponsett Street for both northbound and southbound directions. The second phase allows for Monponsett Street northbound and southbound permitted movements. The third phase allows for Plymouth Street Westbound movements with a leading protected left turn, and eastbound movements with a lagging protected left turn.



*Plymouth Street at Monponsett Street,
looking north from Monponsett Street*

2.2 Traffic Volumes

Traffic count data were obtained from Old Colony Planning Council and collected along Plymouth Street at or near the study area. The count program included turning movement count (TMC) data collected from 7-9 AM and 4-6 PM on Wednesday, August 21st, 2018, which included the three study intersections. In addition, a 48-hour automatic traffic recorder (ATR) count was conducted on Plymouth Street west of Holmes Street and at Plymouth Street (east of Thompson Street) from Wednesday, December 13, 2017

through Thursday, December 14, 2017. The ATR data are summarized in Table 1. The TMC data are illustrated in Figure 2 for the weekday AM and weekday PM peak hours.

The measured average weekday traffic volume on Plymouth Street (West of Holmes Street) was 10,933 vehicles per day representing a typical weekday. On a weekday, 7.3% of the traffic occurs during the AM peak hour and 8.9% occurs during the PM peak hour. The directional distribution of traffic is approximately 50% WB/50% EB on a daily basis. During the weekday AM peak hour, approximately 60% of traffic travels westbound and during the weekday PM peak hour, approximately 54% of traffic travels eastbound. Overall, Plymouth Street in the vicinity of the project considered a high-volume road. The seasonal variation calculations are included in the appendix data.

Table 1 – Summary of Plymouth Street (West of Holmes Street) Traffic Volumes³

	Weekday Average	AM Peak Hour	PM Peak Hour
Time Period	Daily	7:30-8:30	4:00-5:00
Traffic Volume	10,933 vpd	1159 vph	1424 vph
K-Factor	-	7.3%	8.9%
Directional Distribution	50.4% EB	59.8% WB	54.1% EB
Average Speed	39 MPH EB / 38 MPH WB		
85th % Speed	44 MPH EB / 43 MPH WB		

1 vpd = vehicles per day, vph = vehicles per hour

2 Percent of daily traffic that occurs during the peak hour

3 Based on automatic traffic recorder count December 2017

In developing the average typical volume condition, a review of permanent traffic count station data maintained by MassDOT was completed to determine seasonal variation. Historical traffic count data collected at MassDOT Count Stations No. 36 located on Centre Street in Brockton, MA and on Pilgrim's Highway in Hanover, MA show that between 2008 and 2018, traffic volumes in the region have generally increased by approximately 0.5 percent per year.

The seasonal variation of traffic flow on roadways similar in function and/or in the general region served as the basis of any appropriate seasonal adjustments. The ATR volumes and TMC volumes on Plymouth Street were collected in the month of December and August, respectively. The seasonal variation for both months were lower than the typical month, thus no seasonal adjustments were made to the existing volumes. The traffic data is included in the appendix.

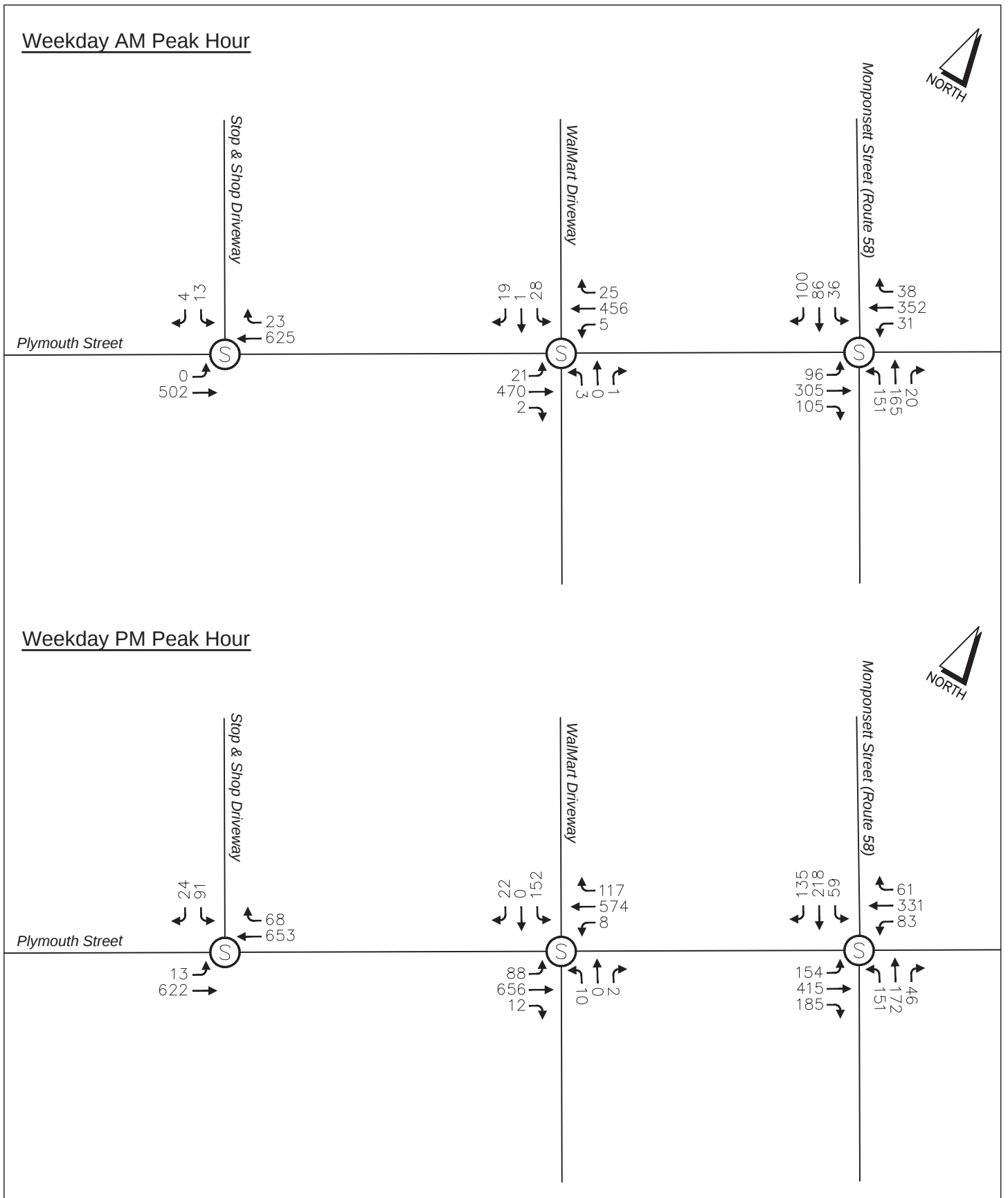


Figure 2
2019 Existing Traffic Volumes
314 Plymouth Street
Halifax, MA

2.3 Public Transportation Network

As part of the inventory, the presence of nearby public transit systems was identified to better understand the potential interaction among multiple modes of travel as well as the impact that commuters driving from/to transit stations will have on the roadway network.

There are no public transit routes that exist within the study area. There is a Halifax Commuter Rail Station for the Kingston/Plymouth line that residents may drive to for commuting to larger areas like Boston for work. However, the trip assignments used for this study were only used for vehicular travel so as to make a conservative estimate of the journey-to-work data.

2.4 Crash Experience

Recent crash history for the study intersections for the most recent three-year period available (2016-2018) were reviewed as part of this study. Crash data presented in this report were obtained from the MassDOT Crash Record System (CRS). As part of this safety review, the “crash rate”, measured in crashes per million entering vehicles (MEV) for the study intersection, was also determined. The standard MassDOT Crash Rate Worksheet was used to determine the crash rate at the study intersection. The calculation of the crash rate relates the number of accidents at a location to the amount of traffic that passes through the location. It is a more comprehensive measure for identifying potentially hazardous locations compared to simple averages as it takes into account volume, although crash rates can skew higher due to low volumes. The calculated rate is compared to the MassDOT District -wide averages. Intersections experiencing crash rates greater than the above averages are potentially experiencing an unusually high number or higher than expected number of crashes relative to traffic volumes at that particular location and may warrant further investigation or improvements. MassDOT District 5, which includes the study area, has an average crash rate of 0.73 crashes per MEV for signalized intersections.

Table 3 provides a summary of the crash history at the study intersections. The following summarizes the key aspects of the review:

- The signalized study intersection at Plymouth Street and Stop & Shop Driveway, has a crash rate of 0.42 MEV (8 crashes total), below the 0.73 MEV average rate for District 5.
 - Of the 8 crashes at the intersection 38% were rear-end crashes, 25% were Angle crashes, and 25% were Sideswipe crashes. The rear ends can possibly be attributed to drivers’ lack of attention to stop properly in traffic, while the angles and sideswipes were attributed to drivers not yielding properly to oncoming vehicles when turning left into or out of the plaza driveway.
- The signalized study intersection at Plymouth Street and Walmart Driveway had no reported crashes during the study time period.
- The signalized study intersection at Plymouth Street and Monponsett Street, has a crash rate of 0.70 MEV (18 crashes total), just below the 0.73 MEV average rate for District 5.
 - Of the 18 crashes at the intersection 56% were rear-end crashes, and 33% were Angle crashes. The rear ends can possibly be attributed to drivers’ lack of attention to stop properly in the stop-and-go traffic, while the angles crashes were most likely attributed to drivers not yielding properly to oncoming vehicles when taking left turns at the intersection.
 - Of the 18 crashes at the intersection, 83% were property damage only, 11% were non-fatal injuries, and 5% were unknown. No Fatalities were present.
 - Weather seemed to play a major factor for crashes in the year 2017 as the majority of it took place on wet surfaces.

Table 2 – Summary of Reported Crash Data

	Plymouth Street (Route 106) & Stop & Shop			Plymouth Street (Route 106) & Walmart			Plymouth Street (Route 106) & Monponsett Street		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Severity									
Property Damage	1	1	2	0	0	0	4	8	3
Injury	2	1	1	0	0	0	1	1	0
Fatality	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	1	0	0
Collision Type									
Rear End	1	1	1	0	0	0	3	6	1
Angle	1	1	0	0	0	0	2	2	2
Side Swipe	0	0	2	0	0	0	1	0	0
Head On	0	0	0	0	0	0	0	0	0
Single Vehicle	1	0	0	0	0	0	0	1	0
Collision with Ped	0	0	0	0	0	0	0	0	0
Collision with Bike	0	0	0	0	0	0	0	0	0
Other/Unknown	0	0	0	0	0	0	0	0	0
Time of Day									
6:01 AM – 10:00 AM	0	0	1	0	0	0	3	1	0
10:01 AM – 4:00 PM	0	0	1	0	0	0	0	3	1
4:01 PM – 7:00 PM	2	2	1	0	0	0	2	3	1
7:01 PM – 6:00 AM	1	0	0	0	0	0	1	2	1
Roadway Conditions									
Dry	3	2	3	0	0	0	6	3	3
Wet	0	0	0	0	0	0	0	6	0
Snow/Ice	0	0	0	0	0	0	0	0	0
Other/Unknown	0	0	0	0	0	0	0	0	0
Season									
Dec-Feb	0	0	0	0	0	0	2	3	1
Mar-May	1	0	1	0	0	0	1	3	0
June-Aug	0	0	2	0	0	0	2	2	2
Sept-Nov	2	2	0	0	0	0	1	1	0
Light Conditions									
Daylight	1	0	3	0	0	0	4	6	2
Dawn/Dusk	0	1	0	0	0	0	1	1	0
Dark (Unlit)	0	0	0	0	0	0	0	0	0
Dark (Lit)	2	1	0	0	0	0	1	2	1
Unknown	0	0	0	0	0	0	0	0	0
Totals									
Annual Ave. Crashes	2.67			0.00			6.00		
Intersection Crash Rate	0.42			0			0.70		
MassDOT District 5 Average Crash Rate	0.73			0.73			0.73		

3.0 PROBABLE IMPACTS OF THE PROJECT

The impact of the proposed residential/commercial development project on the roadway network within the study area was evaluated and the results are described in this section. This study used the year 2026 for the future analysis year, which represents a seven-year permitting and build-out timeframe from the present condition and is consistent with current MassDOT guidelines for traffic studies.

3.1 No-Build Traffic Volumes

A year 2026 No-Build traffic volume network was developed by identifying potential area-wide background traffic volume growth and known specific nearby development projects that could contribute to traffic flow on the 2026 study network.

3.1.1 Background Traffic Growth

Traffic growth and historical traffic count trends for the project's analysis area have been reviewed. Based upon a review of local count stations and other recently completed studies for projects in the project location, an annual growth rate of 0.5% per year for seven years was used to forecast future roadway volumes. The count station used was MassDOT Permanent Count Station 703 (Brockton – Centre Street) and Station 36 (Hanover – Pilgrim Highway South of River Street). These rates would presumably account for some of the more remote growth in the region as well as potential nearby smaller residential and business growth that could result in added traffic through the study area. The count station data can be found in the Appendix.

3.1.2 Specific Development Projects

Correspondence regarding other projects in the area was conducted with the Town of Halifax Planning Board. There is a proposed O'Reilly's automotive parts store just west of the project area. Traffic was estimated for this development and incorporated into the No build volume networks.

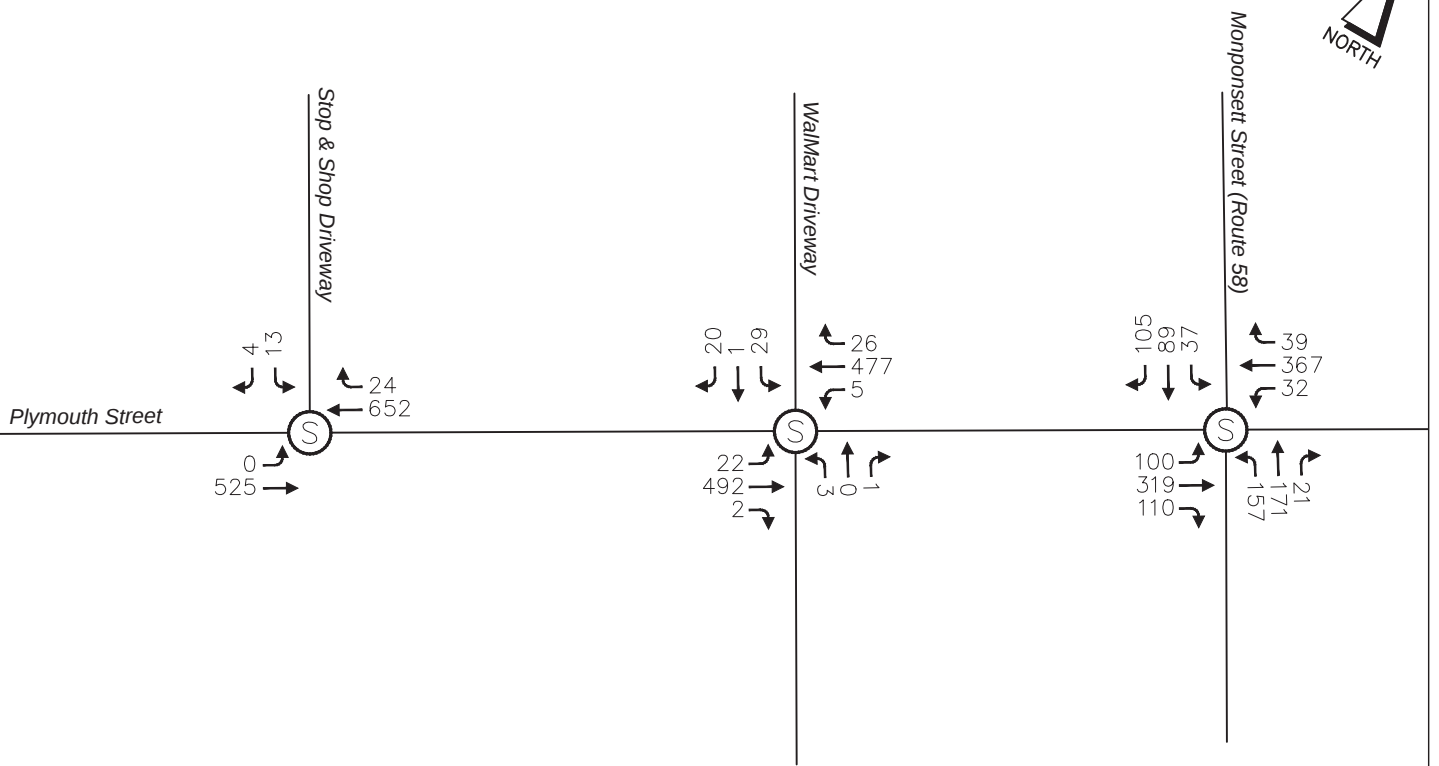
3.1.3 No-Build Traffic Volumes

Based on the above noted research, the year 2026 No-Build peak hour traffic volume projections were developed by adding seven (7) years' background traffic growth of 0.5% percent annually plus the volumes projected to result from the proposed O'Reilly Auto Body development to the existing traffic volumes in the study area. The projected year 2026 No-Build traffic volumes projected for the weekday morning and weekday afternoon at the study intersections are shown in Figures 4 and 5, respectively.

Table 3 – Summary of Estimated No Build Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
O'Reilly's Auto Body Shop	10	9	19	17	18	35

Weekday AM Peak Hour



Weekday PM Peak Hour

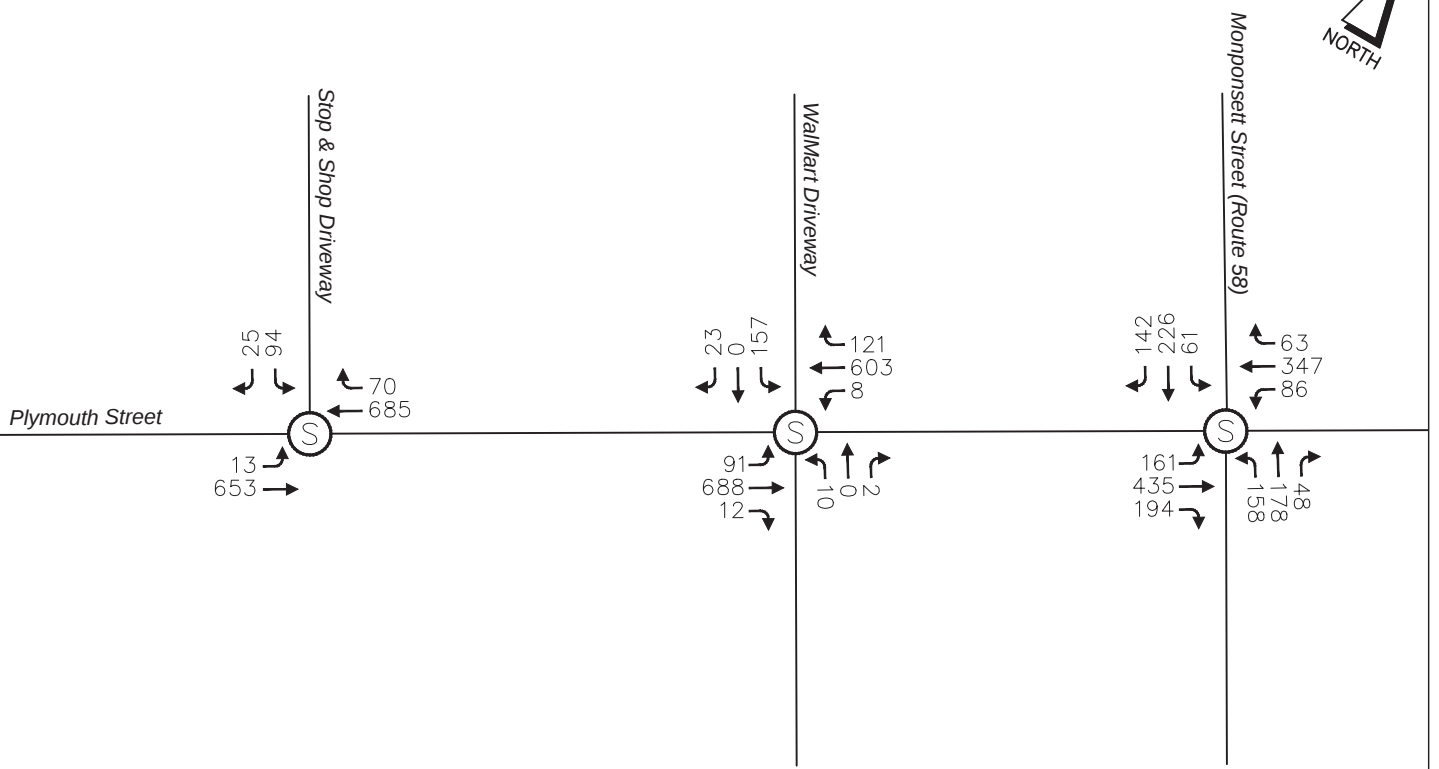


Figure 3
2026 No Build Traffic Volumes
314 Plymouth Street
Halifax, MA

3.2 Site Generated Traffic Volumes

In this section, the traffic forecasts related to the Halifax 40B residential development project at 314 Plymouth Street are described. The development consists of 30 residential duplex units. Its proposed driveway will connect directly across the Stop & Shop Driveway to complete a four-approach intersection. An estimate of traffic to be generated by the proposed development project was completed and assigned to roadways/intersections within the study area to develop the Build traffic condition, based upon the year 2026 No-Build traffic volume network. Site Generated Traffic Volumes

In this section, the traffic forecasts related to the development project are described. An estimate of traffic to be generated by the proposed development project was completed and assigned to roadways/intersections within the study area to develop the Build traffic condition, based upon the year 2026 No-Build traffic volume network.

3.2.1 Site Trip Generation

In order to estimate the number of trips that could be generated by the proposed development, statistics published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual¹ for similar land uses were examined. The ITE trip generation statistics represent compilations of data from studies/projects throughout the United States collected over the past 40+ years on trip generation characteristics for different types of land uses. The data have been compiled to provide transportation analysts with guidelines in forecasting daily and peak hour volumes for the specified use. The ITE report is based on observations of actual developments located in both general urban / suburban and dense multi-use urban setting. Based on a review of the ITE database, Land Use Code (LUC) 210 Single Family Detached Housing has been selected as the most similar to the project type, which comprises of 30 residential duplex units. This is a conservative estimate as the units are duplexes which tend to generate a smaller number of trips than single family homes.

The total estimated trips generated by the project are presented in Table 3. Detailed trip generation calculations for the proposed development are included in the Appendix. In summary, the proposed project is expected to generate a total of approximately 344 net new vehicle trips over the course of an average weekday including 172 entering trips and 172 exiting trips. On a typical weekday morning peak hour, the proposed development is expected to generate a total of 27 vehicle trips, including 7 entering and 20 exiting trips. During the average weekday afternoon peak hour, the proposed development is expected to generate approximately 32 vehicle trips with 20 entering and 12 exiting trips.

Table 4 – Summary of Estimated Site Trip Generation

Land Use	Weekday						
	AM Peak Hour			PM Peak Hour			Daily
	Enter	Exit	Total	Enter	Exit	Total	
Residential Housing (30 Units)	7	20	26	20	12	32	343

3.2.2 Site Trip Distribution/Assignment

¹ Institute of Transportation Engineers, *Trip Generation Manual*, 10th Edition, Washington, D.C., September 2017.

The vehicle trips generated by the proposed residential development were distributed onto the roadway network to develop future build peak hour traffic volumes. The distribution of trips to and from the site is based on the U.S. Census American Community Survey journey-to-work data from 2012-2016. Figure 4 shows the trip distribution percentages within the study area.

3.2.3 Build Traffic Volumes

The vehicle-trips estimated for the proposed residential development project were assigned to the study intersections and the study area roadways using the trip distribution percentages discussed above. Figure 5 shows the additional traffic expected to be generated by the proposed development project during the weekday AM and PM peak hours. The peak hour site traffic volumes were then added to the future No-Build traffic volumes in order to establish the 2026 Build condition traffic volume networks. Figure 6 presents the 2026 Build traffic volumes for the weekday morning and evening peak hours. And raw Census data for Journey to Work is included in the Appendix.

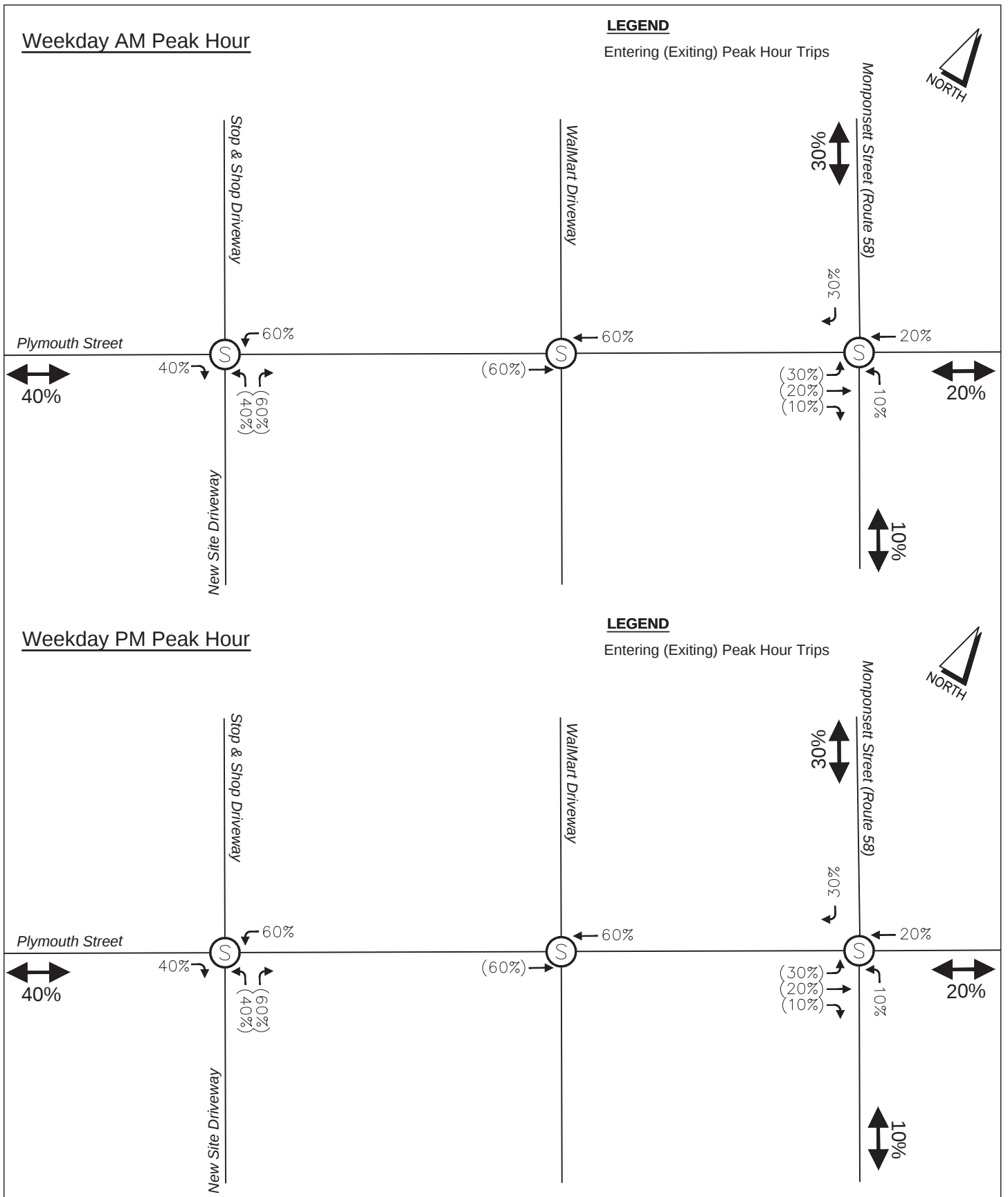
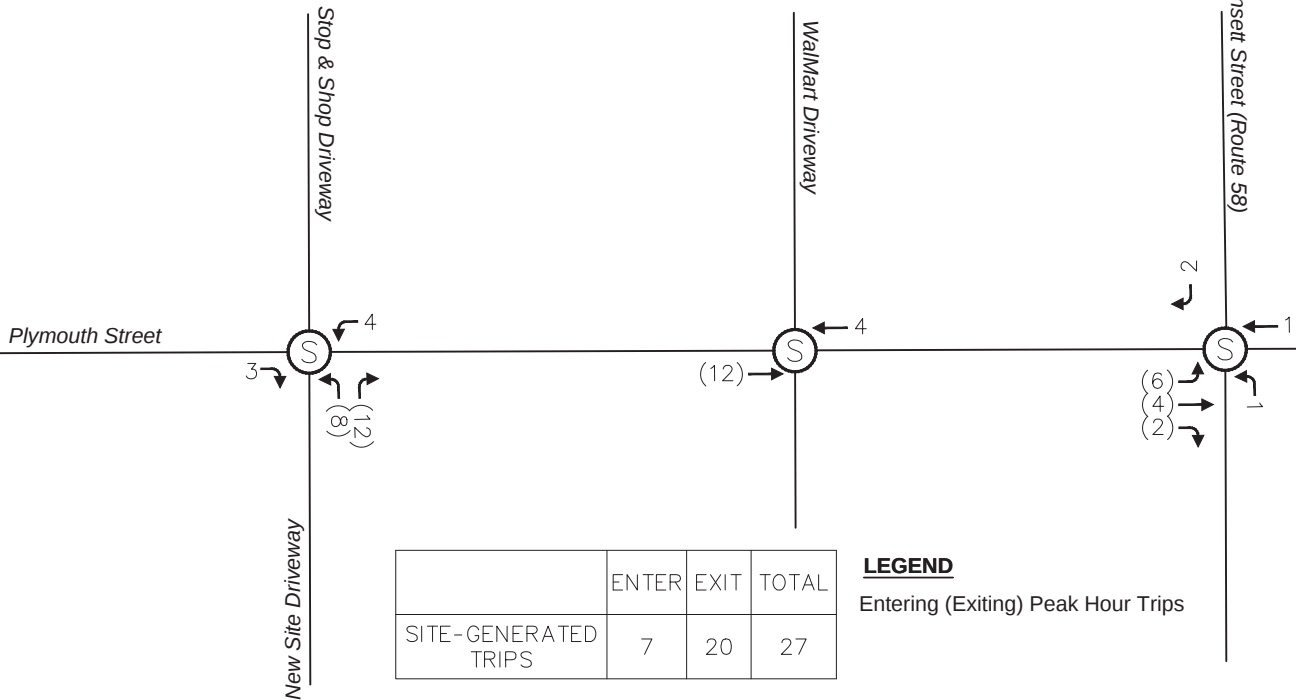


Figure 4
Weekday AM/PM Estimated Trip Distribution
314 Plymouth Street
Halifax, MA

Weekday AM Peak Hour



Weekday PM Peak Hour

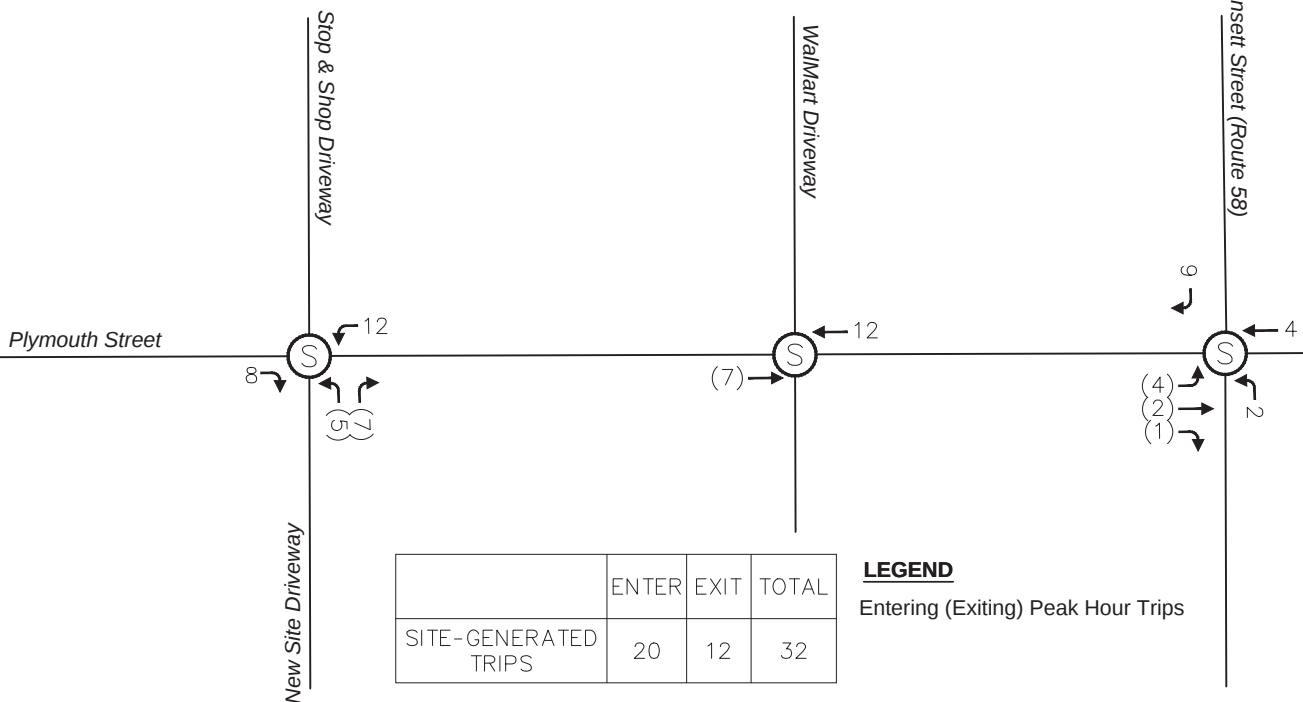


Figure 5
Weekday Site-Generated Vehicle Trips
314 Plymouth Street
Halifax, MA

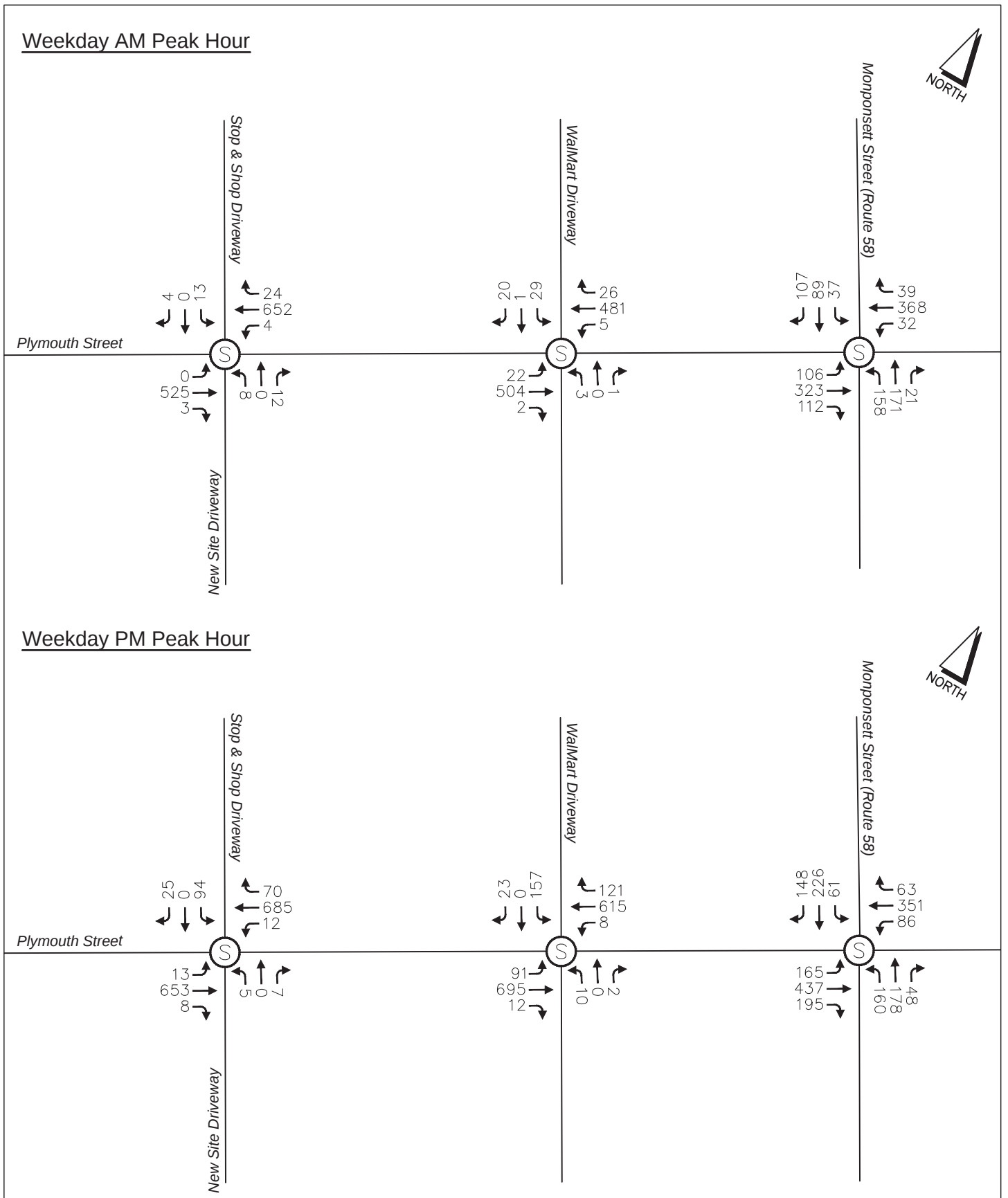


Figure 6
2026 Build Traffic Volumes
314 Plymouth Street
Halifax, MA

4.0 ANALYSIS

Previous sections of this report described the current conditions of the study intersections and the development of the 2026 No-Build and 2026 Build traffic volume networks, including the site-generated trip forecasts. Included in this section is an examination of the intersection capacity analyses for the study intersections and an analysis of available sight distances at the proposed site driveway.

4.1.1 Intersection Capacity Analysis

The study intersections were examined with regard to flow rates, capacity and delay characteristics to determine the Level of Service (LOS), using the methodology defined in the Highway Capacity Manual (HCM)² for the existing and future (No-Build and Build) traffic conditions. Level of Service is an indicator of operating conditions which occur on a given roadway feature while accommodating varying levels of traffic volumes. It is a qualitative measure that accounts for a number of operational factors including roadway geometry, speed, traffic composition, peak hour factors, travel delay, freedom to maneuver and driver expectation. When all of these measures are assessed, and a Level of Service is assigned to a roadway or intersection, it is equivalent to presenting an “index” to the operational qualities of the section under study. Level of Service is classified into six levels that are designated ‘A’ through ‘F’ based on the control delay ranges they fall under. Additionally, a movement with a volume-to-capacity (v/c) ratio of over 1.00 also has a LOS of ‘F’, regardless of delay. These are presented in Table 5 for both signalized and unsignalized intersections.

In practice, any given roadway/intersection may operate at a wide LOS range depending upon time of day, day of week or period of year. It should be noted that for unsignalized intersections, the LOS is not computed for the intersection as a whole. Instead, the level of service is determined by the computed or measured control delay for each individual critical movement (typically the side street movements).

Table 5 – Level of Service Criteria for Signalized Intersections

LOS	Signalized Intersection (S)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80 or v/c ≥1.00

The study intersections were evaluated using the Synchro 10 computer software to complete the analysis for the signalized study intersections. At the signalized intersections it is noted that the reported results are based on the Synchro 10 statistical models that are based on HCM 6 methodologies. While MassDOT generally prefers the use of HCM 6 intersection capacity analysis results, there are several limitations with the HCM 6 methodology. Most notably, the methodology does not allow the evaluation of traffic signals with an exclusive pedestrian phase. As all three of the study intersections have exclusive pedestrian phases, the intersection capacity analyses based on the Synchro 10 statistical models were used. Using existing roadway features and the intersection controls, traffic operations at the study intersection were evaluated

² Transportation Research Board, of the National Academies, Highway Capacity Manual 6th Edition, Washington, D.C., 2017.

for existing as well as predicted 2026 conditions. Analysis results are presented in Tables 6 and 7 for the weekday AM and PM peak hours at the study intersections, respectively. Highlights of the analysis include the following:

- The proposed project results in minor changes in level of service and vehicles delays for study intersections compared to 2026 Future No-Build and Build conditions. The overall intersection delays only increase by 1.1 seconds and 0.9 seconds for the AM and PM conditions, respectively.
- The analysis predicts that traffic will be able to utilize the proposed site driveway with a low delay under a level of service of LOS 'A' and LOS 'B' during the weekday AM and weekday PM peak hour respectively. The addition of the site driveway at the Stop & Shop intersection increases the overall intersection delay by less than two seconds during the peak hour.
- Some of the minor road approaches in the signalized intersections do operate at a LOS D due to the higher volume of traffic on the major Plymouth Street, especially with the left turn movements. However, no intersection experiences an overall level of service that is any worse than LOS C. Moreover, the approach delays only increase by less than two seconds from the No-Build to Build conditions too.
- No Degradation of LOS was apparent for any of the intersection approaches between the No-Build and Build Conditions.

Table 6 – Summary of Level of Service Analysis Period: Weekday AM Peak Hour

	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	Delay (s)	LOS	V/C	50th Q (FT)	95th Q (FT)	Delay (s)	LOS	V/C	50th Q (FT)	95th Q (FT)	Delay (s)	LOS	V/C	50th Q (FT)	95th Q (FT)
Plymouth Street (Route 106) / Stop & Shop															
Plymouth Street EB L	0.0	A	0.00	0	0	0.0	A	0.00	0	0	0.0	A	0.00	0	0
Plymouth Street EB T	5.0	A	0.41	0	279	5.1	A	0.42	0	296	6.2	A	0.5	0	300
Plymouth Street WB TR	4.9	A	0.40	0	381	5	A	0.42	0	404	6.1	A	0.5	0	411
Site Driveway NB LTR	--	--	--	--	--	--	--	--	--	--	15.6	B	0.1	0	23
Stop & Shop Driveway SB LR	25.7	C	0.07	3	29	26.4	C	0.07	3	30	16.3	B	0.1	0	26
<i>Overall Intersection</i>	5.3	A				5.4	A				6.5	A			
Plymouth Street (Route 106) / Walmart															
Plymouth Street EB L	2.3	A	0.03	1	5	2.3	A	0.04	1	5	2.3	A	0	1	5
Plymouth Street EB TR	3.0	A	0.32	30	69	3.0	A	0.33	33	73	3.0	A	0.3	34	76
Plymouth Street WB LT	10.6	B	0.58	74	148	10.4	B	0.58	79	157	10.4	B	0.6	80	159
Plymouth Street WB R	0.2	A	0.03	0	1	0.2	A	0.03	0	1	0.2	A	0	0	1
Plaza Driveway NB LTR	0.0	A	0.02	0	0	0.0	A	0.02	0	0	0.0	A	0	0	0
Walmart Driveway SB L	15.9	B	0.09	6	23	16.4	B	0.10	7	24	16.6	B	0.1	7	25
Walmart Driveway SB TR	8.9	A	0.07	0	13	9.0	A	0.07	0	13	9.1	A	0.1	0	13
<i>Overall Intersection</i>	6.9	A				6.8	A				6.8	A			
Plymouth Street (Route 106) / Monponsett Street															
Plymouth Street EB L	16.9	B	0.25	28	62	18.2	B	0.27	31	64	18.6	B	0.3	33	68
Plymouth Street EB TR	25.9	C	0.76	150	254	28.3	C	0.80	169	273	28.6	C	0.8	173	286
Plymouth Street WB L	16.2	B	0.11	9	26	16.4	B	0.12	9	27	16.4	B	0.1	9	27
Plymouth Street WB TR	27.3	C	0.73	138	236	29.9	C	0.77	149	250	30.2	C	0.8	150	250
Monponsett Street NB L	40.1	D	0.61	60	165	45.9	D	0.70	64	175	46.8	D	0.7	65	176
Monponsett Street NB TR	22.3	C	0.41	53	131	24.3	C	0.44	72	136	24.4	C	0.4	72	136
Monponsett Street SB L	29.8	C	0.21	15	41	30.8	C	0.24	16	43	30.9	C	0.2	16	43
Monponsett Street SB T	26.1	C	0.34	36	69	26.4	C	0.35	37	70	26.5	C	0.4	37	70
Monponsett Street SB R	7.4	A	0.32	0	29	7.6	A	0.34	0	31	7.6	A	0.3	0	31
<i>Overall Intersection</i>	25.2	C				27.4	C				27.7	C			

Abbreviations:

EB = Eastbound L = Left S = Seconds
 WB = Westbound T = Through FT = Feet
 NB = Northbound R = Right LOS = Level of Service
 SB = Southbound v/c = Volume-to-Capacity Ratio

Notes:

Delay = Average delay per vehicle (measured in seconds)
 50th Q = 50th percentile queue length (measured in feet), assumes 25 feet per vehicle
 95th Q = 95th percentile queue length (measured in feet), assumes 25 feet per vehicle

Table 7 – Summary of Level of Service Analysis Period: Weekday PM Peak Hour

	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	Delay (S)	LOS	V/C	50th Q (FT)	95th Q (FT)	Delay (S)	LOS	V/C	50th Q (FT)	95th Q (FT)	Delay (S)	LOS	V/C	50th Q (FT)	95th Q (FT)
Plymouth Street (Route 106) / Stop & Shop															
Plymouth Street EB L	5.8	A	0.05	1	13	5.7	A	0.06	1	13	5.2	A	0.04	1	12
Plymouth Street EB T	8.3	A	0.56	55	381	8.3	A	0.58	60	407	8.5	B	0.59	61	413
Plymouth Street WB TR	10.1	B	0.66	71	487	10.3	B	0.68	77	522	10.9	B	0.71	80	540
Site Driveway NB LTR	--	--	--	--	--	--	--	--	--	--	10.0	A	0.05	0	12
Stop & Shop Driveway SB LR	38.7	D	0.64	35	194	41.2	D	0.67	37	211	46.6	D	0.76	30	317
<i>Overall Intersection</i>	<i>12.2</i>	<i>B</i>				<i>12.5</i>	<i>B</i>				<i>13.4</i>	<i>B</i>			
Plymouth Street (Route 106) / Walmart															
Plymouth Street EB L	3.8	A	0.23	7	16	4.1	A	0.25	8	17	4.1	A	0.25	8	17
Plymouth Street EB TR	6.2	A	0.57	87	149	6.5	A	0.60	94	162	6.6	A	0.61	96	165
Plymouth Street WB LT	13.6	B	0.68	138	223	14.5	B	0.71	148	241	15.1	B	0.73	153	250
Plymouth Street WB R	3.1	A	0.15	5	23	3.2	A	0.15	6	24	3.2	A	0.15	6	24
Plaza Driveway NB LTR	0.3	A	0.07	0	0	0.3	A	0.07	0	0	0.3	A	0.07	0	0
Walmart Driveway SB L	39.1	D	0.72	57	114	41.3	D	0.75	60	119	41.3	D	0.75	60	119
Walmart Driveway SB TR	0.1	A	0.04	0	0	0.1	A	0.04	0	0	0.1	A	0.04	0	0
<i>Overall Intersection</i>	<i>11.7</i>	<i>B</i>				<i>12.5</i>	<i>B</i>				<i>12.7</i>	<i>B</i>			
Plymouth Street (Route 106) / Monponsett Street															
Plymouth Street EB L	24.0	C	0.38	44	99	26.0	C	0.43	47	104	26.5	C	0.44	48	107
Plymouth Street EB TR	37.3	D	0.88	224	491	44.3	D	0.93	245	530	45.3	D	0.94	247	534
Plymouth Street WB L	20.6	C	0.35	29	60	20.8	C	0.37	30	63	20.8	C	0.37	30	63
Plymouth Street WB TR	34.2	C	0.82	173	265	35.6	D	0.84	178	284	35.7	D	0.84	180	288
Monponsett Street NB L	49.4	D	0.71	66	172	52.1	D	0.74	70	184	52.9	D	0.75	71	187
Monponsett Street NB TR	22.8	C	0.44	80	145	22.8	C	0.45	84	151	22.8	C	0.45	84	151
Monponsett Street SB L	34.8	C	0.35	27	65	35.4	D	0.36	28	67	35.4	D	0.36	28	67
Monponsett Street SB T	31.6	C	0.63	98	155	31.8	C	0.64	102	161	31.8	C	0.64	102	161
Monponsett Street SB R	6.2	A	0.34	0	35	6.0	A	0.34	0	36	6.0	A	0.35	0	37
<i>Overall Intersection</i>	<i>31.4</i>	<i>C</i>				<i>34.0</i>	<i>C</i>				<i>34.3</i>	<i>C</i>			

Abbreviations:

EB = Eastbound L = Left S = Seconds
 WB = Westbound T = Through FT = Feet
 NB = Northbound R = Right LOS = Level of Service
 SB = Southbound
 v/c = Volume-to-Capacity Ratio

Notes:

Delay = Average delay per vehicle (measured in seconds)
 50th Q = 50th percentile queue length (measured in feet), assumes 25 feet per vehicle
 95th Q = 95th percentile queue length (measured in feet), assumes 25 feet per vehicle

4.1.2 Sight Distance Analysis

Adequate sight distance is an important safety consideration at intersections and driveways. While the site drive will be a new leg of the existing signalized intersection, a review of sight distance was completed to verify conditions. Stopping sight distance (SSD) is the distance required for an approaching driver (with an eye height of 3.5 feet) to perceive and stop in time to avoid a collision with an object 2 feet high in the roadway. The values are based on a perception and reaction time of 2.5 seconds and braking distance required under wet, level pavements. Corner or intersection sight distance (ISD) is based upon the time required to perceive, react, and complete a desired exiting maneuver from a driveway once the driver decides to execute the maneuver. Adjustments for the grade of the roadway are applied to both SSD and ISD.

Values for ISD represent the time to (1) turn left or right, in addition to accelerating to the operating speed of the roadway, without causing approaching vehicles to reduce speed to less than 70 percent of their initial speed, and (2) upon turning left, to clear the near half of the intersection without conflicting with the vehicles approaching from the left. ISD is more related to operations and to some degree, the convenience or inconvenience of oncoming motorists. The minimum criteria are defined by the American Association of State and Highway and Transportation Officials (AASHTO)³. SSD relates specifically to safety. As indicated by AASHTO, if the available ISD meets or exceeds the minimum SSD criteria, then there is adequate safe sight distance available for motorists to avoid collisions. A criterion for calculating minimum required sight distances can be established based on operating speed, the speed at or under which most motorists (85th-percentile) actually travel along a particular portion of roadway. While the

The ATR data collected on Plymouth Street in vicinity of the site show that the 85th-percentile travel speed was approximately 45 mph for both directions. The posted Speed Limit for the Plymouth Street was 35 mph in both directions.

The SSD and ISD were measured in the field and compared to minimum and desirable distances Table 8 summarizes the results of the evaluation. As noted in Table 8, both the minimum SSD and ISD were met in both directions for the proposed site drive based on measured 85th-percentile travel speeds and posted speed limit.

³ American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, (Green Book) Washington, D.C., 2011.

Table 8 – Summary of Sight Distance Analysis

Location	Sight Distance				
	Available	Posted Speed Limit		85th %-ile Speed	
	Measured (ft)	Minimum Required (ft)	Desirable (ft)	Minimum Required (ft)	Desirable (ft)
Stopping Sight Distance					
Plymouth Street Eastbound	595	250	-	360	-
Plymouth Street Westbound	805	250	-	360	-
Intersection Sight Distance					
Plymouth Street Eastbound	475	250	390	360	500
Plymouth Street Westbound	685	250	390	360	500

³ American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, (Green Book) Washington, D.C., 2011.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The analyses demonstrate that traffic impacts to the surrounding roadway network associated with the proposed residential development project are not expected to cause any new operational issues on the adjacent roadways. The roadways within the study area are able to accommodate the additional traffic associated with the proposed development project. Safe sight distances with respect to the site drive location should be provided after construction.

5.1.1 Recommendations

While the analyses show that the proposed residential development can be accommodated on the study area network, several recommendations have been made to enhance the transportation system. The proposed actions are as follows:

- Pavement markings for a one-lane signalized intersection approach configuration consistent with current Manual on Uniform Traffic Control Devices (MUTCD) standards and guidelines, should be installed at the site access driveway approach to Plymouth street
- Any proposed landscaping and signage should be low enough and/or set back sufficiently so as not to create any sight distance constraints at the proposed site drives.
- Update the existing two crosswalks to be ADA-compliant on the intersection at Stop & Shop Driveway to accommodate safe pedestrian access from the proposed site.
- Install equipment at the site driveway approach and update the signal at the intersection at Stop & Shop Driveway. Requirements for this new setup shall include two signal posts, one remove and reset post, and signal detection.

Appendix

Proposed Site Plan

Traffic Volume Data

MassDOT Seasonal Adjustment Factors and Historical Growth

Crash Rate Calculations

Trip Generation Calculations

Census Data

Intersection Capacity Analysis Worksheets



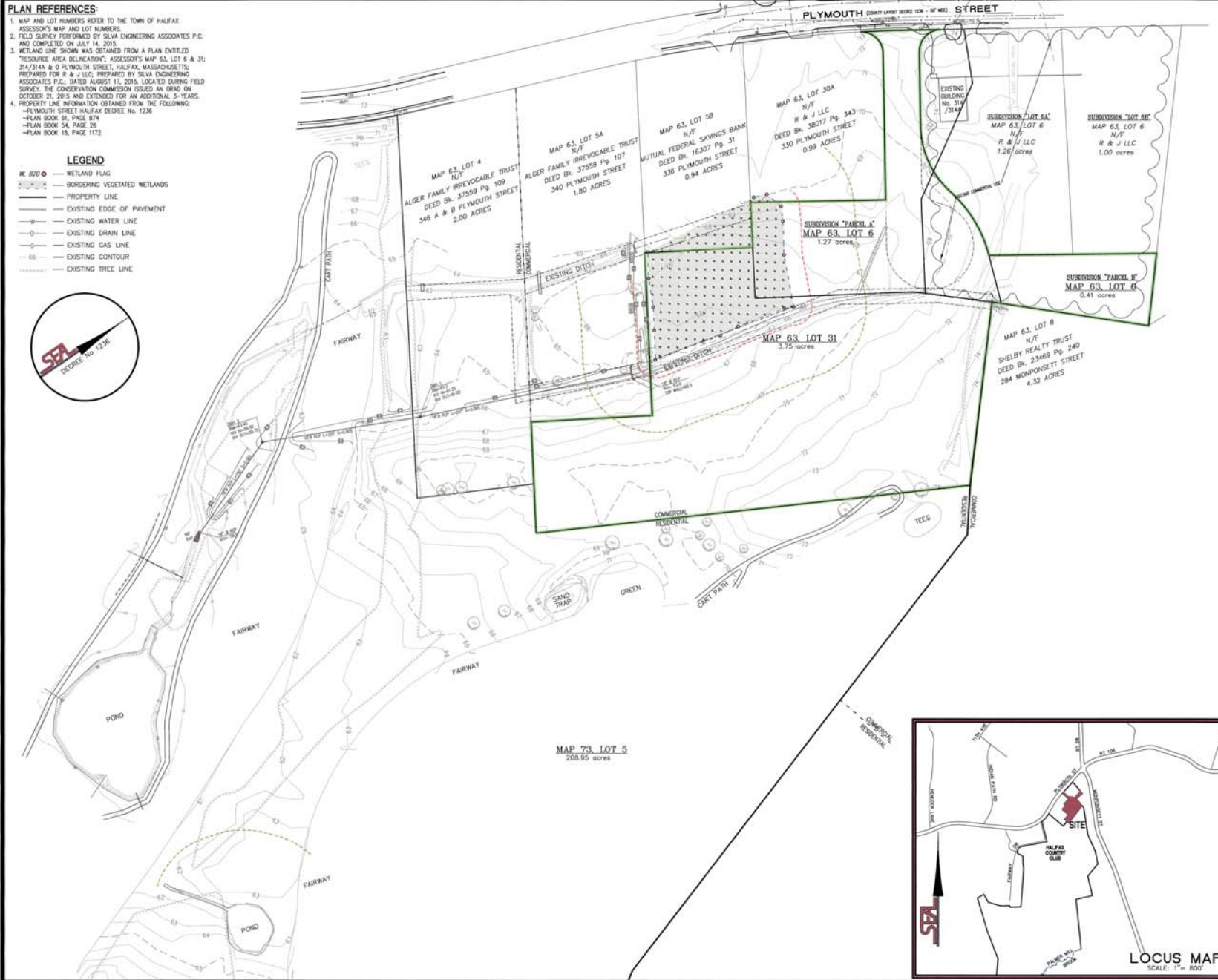
PROPOSED SITE PLAN

PLAN REFERENCES:

1. MAP AND LOT NUMBERS REFER TO THE TOWN OF HALIFAX.
2. ASSESSOR'S MAP AND LOT NUMBERS.
3. FIELD SURVEY PERFORMED BY SILVA ENGINEERING ASSOCIATES P.C. AND COMPLETED ON JULY 14, 2015.
4. METALINE SHOWN WAS OBTAINED FROM A PLAN ENTITLED "RESOURCE AREA DELINEATION", ASSESSOR'S MAP 63, LOT 6 & 31, 214/314A & 0 PLYMOUTH STREET, HALIFAX, MASSACHUSETTS, PREPARED FOR R & J LLC, PREPARED BY SILVA ENGINEERING ASSOCIATES P.C., DATED AUGUST 17, 2015, LOCATED DURING FIELD SURVEY. THE CONSERVATION COMMISSION ISSUED AN GRAD ON OCTOBER 21, 2015 AND EXTENDED FOR AN ADDITIONAL 3-YEARS.
5. PROPERTY LINE INFORMATION OBTAINED FROM THE FOLLOWING:
 - PLYMOUTH STREET, HALIFAX, DEED NO. 1236
 - PLAN BOOK 61, PAGE 874
 - PLAN BOOK 54, PAGE 26
 - PLAN BOOK 18, PAGE 1172

LEGEND

- WE 8020
- WETLAND FLAG
- BORDERING VEGETATED WETLANDS
- PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING WATER LINE
- EXISTING DRAIN LINE
- EXISTING GAS LINE
- EXISTING CONTOUR
- EXISTING TREE LINE



LAWRENCE P. SILVA, P.E. REG No. 33381-C

DATE

REVISIONS		
DATE	DRAWN	DESCRIPTION

PARCEL DATA:

ASSESSOR'S REFERENCE: MAP 63, LOT 6
314 PLYMOUTH STREET
CURRENT OWNER: R & J LLC
415 THOMPSON ST, HALIFAX, MA
DEED REFERENCE: BOOK 38017, PAGE 343
TOTAL AREA: 1.68 Acres (PARCEL A & B)

ASSESSOR'S REFERENCE: MAP 63, LOT 31
0 PLYMOUTH STREET
CURRENT OWNER: R & J LLC
415 THOMPSON ST, HALIFAX, MA
DEED REFERENCE: BOOK 38017, PAGE 343
TOTAL AREA: 3.75 Acres

TOTAL AREA: 5.43 Acres

ZONING REFERENCE: COMMERCIAL AGRICULTURAL & BUSINESS & RESIDENTIAL
MIN. LOT SIZE: 40,000 S.F. 40,000 S.F.
MIN. FRONTAGE: 150 FEET 150 FEET
MIN. DEPTH: 200 FEET 200 FEET
MIN. FRONT YARD: 50 FEET 50 FEET
MIN. SIDE YARD: 30 FEET 30 FEET
MIN. REAR YARD: 40 FEET 40 FEET
BLOG TO BLDG:
THE FLOOD INSURANCE RATE MAP IDENTIFIES THE SUBJECT PROPERTY AS BEING IN ZONE X, AREAS OF MINIMAL FLOODING, COMMUNITY PANEL No. 250230326A, DATED JULY 17, 2012.

COMPREHENSIVE PERMIT 'EXISTING CONDITIONS'

SITE:
ASSESSOR'S MAP 63, LOT 6 & LOT 31
ASSESSOR'S MAP 73, LOT 5
PLYMOUTH STREET
HALIFAX, MASSACHUSETTS

PREPARED FOR:
R & J LLC

SILVA ENGINEERING ASSOCIATES, P.C.
CIVIL ENGINEERS, LAND SURVEYORS & ENVIRONMENTAL CONSULTANTS
1615 BEDFORD STREET
BRIDGEWATER, MA, 02324
PHONE (508) 697-3100 FAX (508) 697-3136
www.silvaeng.com

SCALE	DRAWN	DATE	ACAD FILE	SHEET
1"=60'	MGB/RAB	12/10/18	13002-4082	1 OF 2

PLAN REFERENCES

1. MAP AND LOT NUMBERS REFER TO THE TOWN OF HALIFAX
2. ASSESSOR'S MAP AND LOT NUMBERS
3. FIELD SURVEY PERFORMED BY SILVA ENGINEERING ASSOCIATES P.C. AND COMPLETED ON JULY 14, 2015.
4. METLAND LINE SHOWN WAS OBTAINED FROM A PLAN ENTITLED "RESOURCE AREA DELINEATION", ASSESSOR'S MAP 63, LOT 6 & 31; 314/314A & D PLYMOUTH STREET, HALIFAX, MASSACHUSETTS, PREPARED FOR R & J LLC, PREPARED BY SILVA ENGINEERING ASSOCIATES P.C., DATED AUGUST 17, 2015. LOCATED DURING FIELD SURVEY. THE CONSERVATION COMMISSION ISSUED AN ORDO ON OCTOBER 21, 2015 AND EXTENDED FOR AN ADDITIONAL 3-YEARS.
5. PROPERTY LINE INFORMATION OBTAINED FROM THE FOLLOWING:
 - PLYMOUTH STREET HALIFAX DECREE No. 1236
 - PLAN BOOK 61, PAGE 874
 - PLAN BOOK 54, PAGE 26
 - PLAN BOOK 18, PAGE 1172

LEGEND

- WE 520' 0" METLAND FLAG
- BORDERING VEGETATED WETLANDS
- PROPERTY LINE
- EXISTING EDGE OF PAVEMENT

SPECIAL PERMIT REQUEST:

A SPECIAL PERMIT IS REQUESTED TO ALLOW A MULTIFAMILY DEVELOPMENT ON LAND ZONED AR AND B PURSUANT TO 187-7-2(2)(d)-(e)

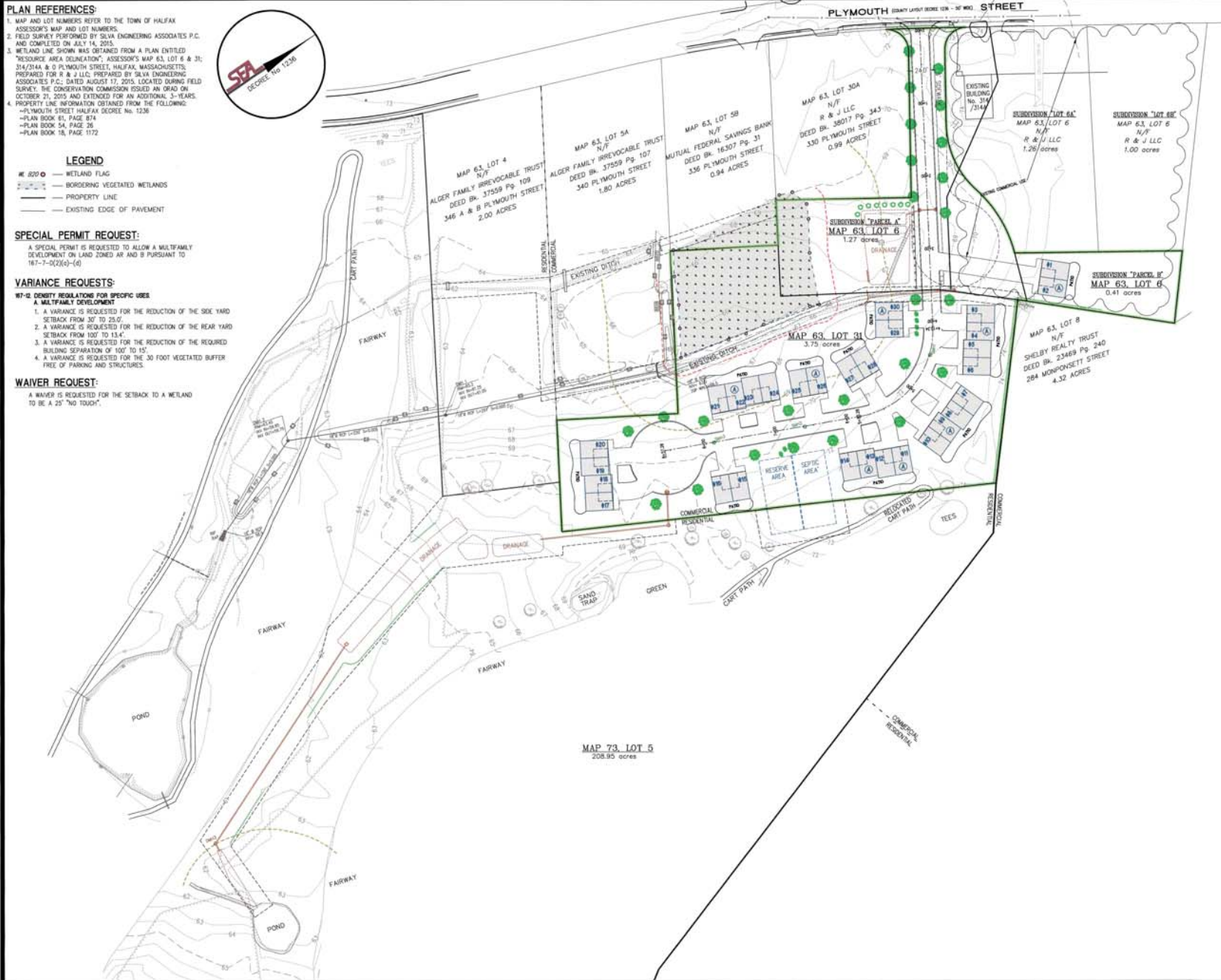
VARIANCE REQUESTS:

W7-2 DENSITY REGULATIONS FOR SPECIFIC USES

1. A VARIANCE IS REQUESTED FOR THE REDUCTION OF THE SIDE YARD SETBACK FROM 30' TO 25.0'
2. A VARIANCE IS REQUESTED FOR THE REDUCTION OF THE REAR YARD SETBACK FROM 100' TO 13.4'
3. A VARIANCE IS REQUESTED FOR THE REDUCTION OF THE REQUIRED BUILDING SEPARATION OF 100' TO 15'
4. A VARIANCE IS REQUESTED FOR THE 30 FOOT VEGETATED BUFFER FREE OF PARKING AND STRUCTURES.

WAIVER REQUEST:

A WAIVER IS REQUESTED FOR THE SETBACK TO A METLAND TO BE A 25' "NO TOUCH".



LAWRENCE P. SILVA, P.E. REG No. 38381-C

DATE

REVISIONS	
DATE	DESCRIPTION

PARCEL DATA:

ASSESSOR'S REFERENCE: MAP 63, LOT 6
314 PLYMOUTH STREET
CURRENT OWNER: R & J LLC
415 THOMPSON ST, HALIFAX, MA
DEED REFERENCE: BOOK 38017, PAGE 343
TOTAL AREA: 1.68 Acres (PARCEL A & B)

ASSESSOR'S REFERENCE: MAP 63, LOT 31
0 PLYMOUTH STREET
CURRENT OWNER: R & J LLC
415 THOMPSON ST, HALIFAX, MA
DEED REFERENCE: BOOK 38017, PAGE 343
TOTAL AREA: 3.75 Acres

TOTAL AREA: 5.43 Acres

TOTAL AREA: 208.95 Acres
ZONING REFERENCE: COMMERCIAL AGRICULTURAL & BUSINESS & RESIDENTIAL
MIN. LOT SIZE: 40,000 S.F. 40,000 S.F.
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MIN. DEPTH: 200 FEET 200 FEET
MIN. FRONT YARD: 50 FEET 50 FEET
MIN. SIDE YARD: 30 FEET 30 FEET
MIN. REAR YARD: 40 FEET 40 FEET
BLOG TO BLDG:

THE FLOOD INSURANCE RATE MAP IDENTIFIES THE SUBJECT PROPERTY AS BEING IN ZONE X- AREAS OF MINIMAL FLOODING. COMMUNITY PANEL No. 2502X032KJ, DATED JULY 17, 2012.

COMPREHENSIVE PERMIT 'SITE PLAN'

SITE:
ASSESSOR'S MAP 63, LOT 6 & LOT 31
ASSESSOR'S MAP 73, LOT 5
PLYMOUTH STREET
HALIFAX, MASSACHUSETTS

PREPARED FOR:
R & J LLC

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SCALE	DRAWN	DATE	ACAD FILE	SHEET
1"=60'	MOB/RAB	12/10/18	13002-4082	2 OF 2

TRAFFIC VOLUME DATA

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

Start Time	11-Dec-17		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	27	16	23	26	*	*	*	*	*	*	25	21
01:00	*	*	*	*	8	10	10	12	*	*	*	*	*	*	9	11
02:00	*	*	*	*	6	8	2	12	*	*	*	*	*	*	4	10
03:00	*	*	*	*	18	18	10	8	*	*	*	*	*	*	14	13
04:00	*	*	*	*	21	42	18	43	*	*	*	*	*	*	20	42
05:00	*	*	*	*	65	107	56	102	*	*	*	*	*	*	60	104
06:00	*	*	*	*	255	248	255	224	*	*	*	*	*	*	255	236
07:00	*	*	*	*	346	455	338	440	*	*	*	*	*	*	342	448
08:00	*	*	*	*	382	396	339	344	*	*	*	*	*	*	360	370
09:00	*	*	*	*	292	309	255	299	*	*	*	*	*	*	274	304
10:00	*	*	*	*	283	321	259	272	*	*	*	*	*	*	271	296
11:00	*	*	*	*	309	317	272	307	*	*	*	*	*	*	290	312
12:00 PM	*	*	*	*	340	344	302	310	*	*	*	*	*	*	321	327
01:00	*	*	*	*	343	324	335	303	*	*	*	*	*	*	339	314
02:00	*	*	*	*	424	403	420	383	*	*	*	*	*	*	422	393
03:00	*	*	*	*	469	395	426	418	*	*	*	*	*	*	448	406
04:00	*	*	*	*	484	463	469	437	*	*	*	*	*	*	476	450
05:00	*	*	*	*	472	401	462	418	*	*	*	*	*	*	467	410
06:00	*	*	*	*	391	266	392	301	*	*	*	*	*	*	392	284
07:00	*	*	*	*	265	203	283	193	*	*	*	*	*	*	274	198
08:00	*	*	*	*	201	197	204	152	*	*	*	*	*	*	202	174
09:00	*	*	*	*	137	141	156	111	*	*	*	*	*	*	146	126
10:00	*	*	*	*	94	77	106	101	*	*	*	*	*	*	100	89
11:00	*	*	*	*	39	35	45	46	*	*	*	*	*	*	42	40
Lane	0	0	0	0	5671	5496	5437	5262	0	0	0	0	0	0	5553	5378
Day	0		0		11167		10699		0		0		0		10931	
AM Peak	-	-	-	-	08:00	07:00	08:00	07:00	-	-	-	-	-	-	08:00	07:00
Vol.	-	-	-	-	382	455	339	440	-	-	-	-	-	-	360	448
PM Peak	-	-	-	-	16:00	16:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	-	-	-	-	484	463	469	437	-	-	-	-	-	-	476	450

Comb. Total	0	0	11167	10699	0	0	0	10931
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Old Colony Planning Council
70 School Street
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Community: Halifax
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Start Time	13-Dec-17		EB		WB		Combined		14-Dec	EB		WB		Combined	
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			10	87	6	80	16	167		4	82	8	80	12	162
12:15			6	77	4	105	10	182		8	66	5	86	13	152
12:30			6	96	4	79	10	175		7	84	9	59	16	143
12:45			5	80	2	80	7	160		4	70	4	85	8	155
01:00			1	77	3	83	4	160		3	90	3	88	6	178
01:15			1	97	5	74	6	171		2	90	4	70	6	160
01:30			2	77	1	81	3	158		1	76	1	75	2	151
01:45			4	92	1	86	5	178		4	79	4	70	8	149
02:00			0	92	2	85	2	177		0	84	0	74	0	158
02:15			1	116	4	114	5	230		0	116	3	122	3	238
02:30			0	108	2	106	2	214		0	111	5	97	5	208
02:45			5	108	0	98	5	206		2	109	4	90	6	199
03:00			1	104	6	100	7	204		0	100	1	93	1	193
03:15			2	135	1	109	3	244		1	97	2	94	3	191
03:30			9	107	8	103	17	210		4	108	3	111	7	219
03:45			6	123	3	83	9	206		5	121	2	120	7	241
04:00			7	118	7	117	14	235		3	108	4	89	7	197
04:15			2	108	7	127	9	235		4	94	8	135	12	229
04:30			7	119	9	130	16	249		4	133	12	113	16	246
04:45			5	139	19	89	24	228		7	134	19	100	26	234
05:00			7	117	21	87	28	204		9	118	17	106	26	224
05:15			13	110	22	120	35	230		8	120	21	113	29	233
05:30			24	126	28	96	52	222		23	123	29	107	52	230
05:45			21	119	36	98	57	217		16	101	35	92	51	193
06:00			27	115	53	65	80	180		29	109	39	77	68	186
06:15			59	89	50	73	109	162		58	84	53	101	111	185
06:30			69	113	64	77	133	190		78	111	65	64	143	175
06:45			100	74	81	51	181	125		90	88	67	59	157	147
07:00			94	74	95	57	189	131		93	78	88	62	181	140
07:15			86	60	123	53	209	113		69	74	123	50	192	124
07:30			89	71	117	35	206	106		97	54	110	52	207	106
07:45			77	60	120	58	197	118		79	77	119	29	198	106
08:00			86	55	96	63	182	118		62	55	97	44	159	99
08:15			105	51	126	55	231	106		93	59	86	44	179	103
08:30			106	53	96	41	202	94		94	45	87	44	181	89
08:45			85	42	78	38	163	80		90	45	74	20	164	65
09:00			74	35	81	39	155	74		61	41	66	36	127	77
09:15			72	43	72	14	144	57		64	42	81	31	145	73
09:30			77	36	64	38	141	74		72	37	77	23	149	60
09:45			69	23	92	50	161	73		58	36	75	21	133	57
10:00			58	30	86	25	144	55		61	27	65	26	126	53
10:15			80	24	69	25	149	49		58	31	55	30	113	61
10:30			82	12	81	17	163	29		73	31	74	24	147	55
10:45			63	28	85	10	148	38		67	17	78	21	145	38
11:00			72	12	75	8	147	20		69	8	71	14	140	22
11:15			72	16	71	11	143	27		62	19	79	15	141	34
11:30			83	6	80	9	163	15		77	7	69	9	146	16
11:45			82	5	91	7	173	12		64	11	88	8	152	19
Total			2012	3659	2247	3249	4259	6908		1837	3600	2089	3173	3926	6773
Day Total			5671		5496		11167			5437		5262		10699	
% Total			18.0%	32.8%	20.1%	29.1%				17.2%	33.6%	19.5%	29.7%		
Peak	-		08:00	04:45	07:30	04:00	07:30	04:00	-	06:45	04:30	07:15	03:45	07:00	04:30
Vol.	-		382	492	459	463	816	947	-	349	505	449	457	778	937
P.H.F.			0.901	0.885	0.911	0.890	0.883	0.951		0.899	0.942	0.913	0.846	0.940	0.952

Old Colony Planning Council
70 School Street
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Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

Start Time	11-Dec-17 Mon	12-Dec-17 Tue	13-Dec-17 Wed	14-Dec-17 Thu	15-Dec-17 Fri	16-Dec-17 Sat	17-Dec-17 Sun	Week Average
12:00 AM	*	*	43	49	*	*	*	46
01:00	*	*	18	22	*	*	*	20
02:00	*	*	14	14	*	*	*	14
03:00	*	*	36	18	*	*	*	27
04:00	*	*	63	61	*	*	*	62
05:00	*	*	172	158	*	*	*	165
06:00	*	*	503	479	*	*	*	491
07:00	*	*	801	778	*	*	*	790
08:00	*	*	778	683	*	*	*	730
09:00	*	*	601	554	*	*	*	578
10:00	*	*	604	531	*	*	*	568
11:00	*	*	626	579	*	*	*	602
12:00 PM	*	*	684	612	*	*	*	648
01:00	*	*	667	638	*	*	*	652
02:00	*	*	827	803	*	*	*	815
03:00	*	*	864	844	*	*	*	854
04:00	*	*	947	906	*	*	*	926
05:00	*	*	873	880	*	*	*	876
06:00	*	*	657	693	*	*	*	675
07:00	*	*	468	476	*	*	*	472
08:00	*	*	398	356	*	*	*	377
09:00	*	*	278	267	*	*	*	272
10:00	*	*	171	207	*	*	*	189
11:00	*	*	74	91	*	*	*	82
Total	0	0	11167	10699	0	0	0	
Percentage	0.0%	0.0%	102.2%	97.9%	0.0%	0.0%	0.0%	
AM Peak	-	-	07:00	07:00	-	-	-	-
Vol.	-	-	801	778	-	-	-	-
PM Peak	-	-	16:00	16:00	-	-	-	-
Vol.	-	-	947	906	-	-	-	-

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Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total
12/13/17	3	8	6	7	3	0	0	0	0	0	0	0	0	0	27
01:00	2	1	1	1	3	0	0	0	0	0	0	0	0	0	8
02:00	2	2	0	2	0	0	0	0	0	0	0	0	0	0	6
03:00	2	5	7	2	0	1	0	0	0	1	0	0	0	0	18
04:00	1	6	7	7	0	0	0	0	0	0	0	0	0	0	21
05:00	3	15	29	15	2	1	0	0	0	0	0	0	0	0	65
06:00	18	93	107	29	6	2	0	0	0	0	0	0	0	0	255
07:00	37	109	145	47	7	0	0	0	0	0	0	0	0	1	346
08:00	33	145	161	38	1	2	1	0	0	1	0	0	0	0	382
09:00	23	87	142	38	2	0	0	0	0	0	0	0	0	0	292
10:00	31	102	126	23	1	0	0	0	0	0	0	0	0	0	283
11:00	33	110	129	35	2	0	0	0	0	0	0	0	0	0	309
12 PM	21	149	126	37	5	1	0	0	1	0	0	0	0	0	340
13:00	29	145	142	24	2	1	0	0	0	0	0	0	0	0	343
14:00	53	161	186	22	2	0	0	0	0	0	0	0	0	0	424
15:00	37	168	210	46	7	0	1	0	0	0	0	0	0	0	469
16:00	75	198	180	31	0	0	0	0	0	0	0	0	0	0	484
17:00	60	213	178	16	4	1	0	0	0	0	0	0	0	0	472
18:00	49	170	149	17	6	0	0	0	0	0	0	0	0	0	391
19:00	21	119	105	19	0	1	0	0	0	0	0	0	0	0	265
20:00	12	60	108	21	0	0	0	0	0	0	0	0	0	0	201
21:00	7	41	72	14	3	0	0	0	0	0	0	0	0	0	137
22:00	5	37	34	17	1	0	0	0	0	0	0	0	0	0	94
23:00	2	12	17	7	1	0	0	0	0	0	0	0	0	0	39
Total	559	2156	2367	515	58	10	2	0	1	2	0	0	0	1	5671

Daily

15th Percentile : 35 MPH
50th Percentile : 40 MPH
85th Percentile : 44 MPH
95th Percentile : 47 MPH

Mean Speed(Average) : 39 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 4523
Percent in Pace : 79.8%
Number of Vehicles > 35 MPH : 5112
Percent of Vehicles > 35 MPH : 90.1%

Old Colony Planning Council
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Page 2

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/14/17	1	9	6	6	1	0	0	0	0	0	0	0	0	0	23
01:00	1	4	3	2	0	0	0	0	0	0	0	0	0	0	10
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
03:00	0	6	3	1	0	0	0	0	0	0	0	0	0	0	10
04:00	1	5	5	3	2	2	0	0	0	0	0	0	0	0	18
05:00	8	20	20	7	0	0	1	0	0	0	0	0	0	0	56
06:00	72	104	67	11	1	0	0	0	0	0	0	0	0	0	255
07:00	46	110	142	33	4	2	0	1	0	0	0	0	0	0	338
08:00	105	147	80	7	0	0	0	0	0	0	0	0	0	0	339
09:00	103	110	31	10	1	0	0	0	0	0	0	0	0	0	255
10:00	14	50	121	58	15	1	0	0	0	0	0	0	0	0	259
11:00	38	91	110	31	2	0	0	0	0	0	0	0	0	0	272
12 PM	21	110	134	34	3	0	0	0	0	0	0	0	0	0	302
13:00	38	133	130	33	0	1	0	0	0	0	0	0	0	0	335
14:00	54	175	163	26	2	0	0	0	0	0	0	0	0	0	420
15:00	43	159	186	33	4	1	0	0	0	0	0	0	0	0	426
16:00	66	195	168	33	6	1	0	0	0	0	0	0	0	0	469
17:00	84	246	110	20	2	0	0	0	0	0	0	0	0	0	462
18:00	43	187	140	22	0	0	0	0	0	0	0	0	0	0	392
19:00	39	124	90	27	3	0	0	0	0	0	0	0	0	0	283
20:00	13	76	90	23	2	0	0	0	0	0	0	0	0	0	204
21:00	13	50	64	24	5	0	0	0	0	0	0	0	0	0	156
22:00	2	23	58	20	3	0	0	0	0	0	0	0	0	0	106
23:00	1	17	20	6	1	0	0	0	0	0	0	0	0	0	45
Total	806	2151	1941	472	57	8	1	1	0	0	0	0	0	0	5437

Daily

15th Percentile : 35 MPH
50th Percentile : 39 MPH
85th Percentile : 44 MPH
95th Percentile : 47 MPH

Mean Speed(Average) : 38 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 4092
Percent in Pace : 75.3%
Number of Vehicles > 35 MPH : 4631
Percent of Vehicles > 35 MPH : 85.2%

Grand Total	1365	4307	4308	987	115	18	3	1	1	2	0	0	0	1	11108
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Overall

15th Percentile : 35 MPH
50th Percentile : 39 MPH
85th Percentile : 44 MPH
95th Percentile : 47 MPH

Mean Speed(Average) : 39 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 8615
Percent in Pace : 77.6%
Number of Vehicles > 35 MPH : 9743
Percent of Vehicles > 35 MPH : 87.7%

Old Colony Planning Council
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Community: Halifax
 Com#_UR/FC: 118_U5
 Recorder #: 25310
 Layout: L6 Basic (2')

Station ID:
 Site Code: 118
 Date Start: 13-Dec-17
 Date End: 14-Dec-17
 Plymouth St (106), w of Holmes St (36)

WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total
12/13/17	0	7	6	3	0	0	0	0	0	0	0	0	0	0	16
01:00	2	5	0	3	0	0	0	0	0	0	0	0	0	0	10
02:00	1	4	2	1	0	0	0	0	0	0	0	0	0	0	8
03:00	3	9	5	1	0	0	0	0	0	0	0	0	0	0	18
04:00	1	13	17	10	1	0	0	0	0	0	0	0	0	0	42
05:00	17	51	32	6	1	0	0	0	0	0	0	0	0	0	107
06:00	38	106	91	11	2	0	0	0	0	0	0	0	0	0	248
07:00	46	187	186	34	2	0	0	0	0	0	0	0	0	0	455
08:00	50	148	168	28	2	0	0	0	0	0	0	0	0	0	396
09:00	38	109	141	20	1	0	0	0	0	0	0	0	0	0	309
10:00	41	140	110	28	2	0	0	0	0	0	0	0	0	0	321
11:00	23	144	130	20	0	0	0	0	0	0	0	0	0	0	317
12 PM	41	131	138	33	1	0	0	0	0	0	0	0	0	0	344
13:00	39	120	123	41	1	0	0	0	0	0	0	0	0	0	324
14:00	65	156	158	24	0	0	0	0	0	0	0	0	0	0	403
15:00	50	160	158	27	0	0	0	0	0	0	0	0	0	0	395
16:00	87	200	158	18	0	0	0	0	0	0	0	0	0	0	463
17:00	86	213	96	6	0	0	0	0	0	0	0	0	0	0	401
18:00	49	108	95	13	1	0	0	0	0	0	0	0	0	0	266
19:00	24	101	63	15	0	0	0	0	0	0	0	0	0	0	203
20:00	22	91	72	12	0	0	0	0	0	0	0	0	0	0	197
21:00	12	57	57	15	0	0	0	0	0	0	0	0	0	0	141
22:00	5	40	26	6	0	0	0	0	0	0	0	0	0	0	77
23:00	0	13	15	7	0	0	0	0	0	0	0	0	0	0	35
Total	740	2313	2047	382	14	0	0	0	0	0	0	0	0	0	5496

Daily

15th Percentile :	35 MPH
50th Percentile :	39 MPH
85th Percentile :	43 MPH
95th Percentile :	46 MPH

Mean Speed(Average) :	38 MPH
10 MPH Pace Speed :	36-45 MPH
Number in Pace :	4360
Percent in Pace :	79.3%
Number of Vehicles > 35 MPH :	4756
Percent of Vehicles > 35 MPH :	86.5%

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Brockton, MA 02301
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Community: Halifax
 Com#_UR/FC: 118_U5
 Recorder #: 25310
 Layout: L6 Basic (2')

Station ID:
 Site Code: 118
 Date Start: 13-Dec-17
 Date End: 14-Dec-17
 Plymouth St (106), w of Holmes St (36)

WB

Start Time	1 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 90	91 95	96 99	Total
12/14/17	1	8	10	6	0	1	0	0	0	0	0	0	0	0	26
01:00	3	3	6	0	0	0	0	0	0	0	0	0	0	0	12
02:00	1	3	5	3	0	0	0	0	0	0	0	0	0	0	12
03:00	1	3	3	1	0	0	0	0	0	0	0	0	0	0	8
04:00	3	11	19	9	1	0	0	0	0	0	0	0	0	0	43
05:00	21	51	25	5	0	0	0	0	0	0	0	0	0	0	102
06:00	92	104	22	5	1	0	0	0	0	0	0	0	0	0	224
07:00	102	190	126	18	4	0	0	0	0	0	0	0	0	0	440
08:00	98	163	73	9	1	0	0	0	0	0	0	0	0	0	344
09:00	155	123	20	1	0	0	0	0	0	0	0	0	0	0	299
10:00	52	88	107	21	4	0	0	0	0	0	0	0	0	0	272
11:00	28	126	131	20	2	0	0	0	0	0	0	0	0	0	307
12 PM	37	146	107	19	0	1	0	0	0	0	0	0	0	0	310
13:00	26	122	129	23	3	0	0	0	0	0	0	0	0	0	303
14:00	35	181	140	26	1	0	0	0	0	0	0	0	0	0	383
15:00	44	187	158	28	1	0	0	0	0	0	0	0	0	0	418
16:00	68	210	143	12	3	0	0	0	0	0	0	0	0	1	437
17:00	113	220	77	8	0	0	0	0	0	0	0	0	0	0	418
18:00	72	156	66	7	0	0	0	0	0	0	0	0	0	0	301
19:00	33	74	75	11	0	0	0	0	0	0	0	0	0	0	193
20:00	19	61	63	9	0	0	0	0	0	0	0	0	0	0	152
21:00	13	50	38	9	1	0	0	0	0	0	0	0	0	0	111
22:00	8	41	44	6	2	0	0	0	0	0	0	0	0	0	101
23:00	1	21	16	6	2	0	0	0	0	0	0	0	0	0	46
Total	1026	2342	1603	262	26	2	0	0	0	0	0	0	0	1	5262

Daily

15th Percentile : 26 MPH
 50th Percentile : 38 MPH
 85th Percentile : 43 MPH
 95th Percentile : 45 MPH

Mean Speed(Average) : 36 MPH
 10 MPH Pace Speed : 36-45 MPH
 Number in Pace : 3945
 Percent in Pace : 75.0%
 Number of Vehicles > 35 MPH : 4236
 Percent of Vehicles > 35 MPH : 80.5%

Grand Total	1766	4655	3650	644	40	2	0	0	0	0	0	0	0	1	10758
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Overall

15th Percentile : 31 MPH
 50th Percentile : 38 MPH
 85th Percentile : 43 MPH
 95th Percentile : 46 MPH

Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 36-45 MPH
 Number in Pace : 8305
 Percent in Pace : 77.2%
 Number of Vehicles > 35 MPH : 8992
 Percent of Vehicles > 35 MPH : 83.6%

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Page 5

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB, WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total
12/13/17	3	15	12	10	3	0	0	0	0	0	0	0	0	0	43
01:00	4	6	1	4	3	0	0	0	0	0	0	0	0	0	18
02:00	3	6	2	3	0	0	0	0	0	0	0	0	0	0	14
03:00	5	14	12	3	0	1	0	0	0	1	0	0	0	0	36
04:00	2	19	24	17	1	0	0	0	0	0	0	0	0	0	63
05:00	20	66	61	21	3	1	0	0	0	0	0	0	0	0	172
06:00	56	199	198	40	8	2	0	0	0	0	0	0	0	0	503
07:00	83	296	331	81	9	0	0	0	0	0	0	0	0	1	801
08:00	83	293	329	66	3	2	1	0	0	1	0	0	0	0	778
09:00	61	196	283	58	3	0	0	0	0	0	0	0	0	0	601
10:00	72	242	236	51	3	0	0	0	0	0	0	0	0	0	604
11:00	56	254	259	55	2	0	0	0	0	0	0	0	0	0	626
12 PM	62	280	264	70	6	1	0	0	1	0	0	0	0	0	684
13:00	68	265	265	65	3	1	0	0	0	0	0	0	0	0	667
14:00	118	317	344	46	2	0	0	0	0	0	0	0	0	0	827
15:00	87	328	368	73	7	0	1	0	0	0	0	0	0	0	864
16:00	162	398	338	49	0	0	0	0	0	0	0	0	0	0	947
17:00	146	426	274	22	4	1	0	0	0	0	0	0	0	0	873
18:00	98	278	244	30	7	0	0	0	0	0	0	0	0	0	657
19:00	45	220	168	34	0	1	0	0	0	0	0	0	0	0	468
20:00	34	151	180	33	0	0	0	0	0	0	0	0	0	0	398
21:00	19	98	129	29	3	0	0	0	0	0	0	0	0	0	278
22:00	10	77	60	23	1	0	0	0	0	0	0	0	0	0	171
23:00	2	25	32	14	1	0	0	0	0	0	0	0	0	0	74
Total	1299	4469	4414	897	72	10	2	0	1	2	0	0	0	1	11167

Daily

15th Percentile :	35 MPH
50th Percentile :	39 MPH
85th Percentile :	44 MPH
95th Percentile :	47 MPH

Mean Speed(Average) :	39 MPH
10 MPH Pace Speed :	36-45 MPH
Number in Pace :	8883
Percent in Pace :	79.5%
Number of Vehicles > 35 MPH :	9868
Percent of Vehicles > 35 MPH :	88.4%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
 Com#_UR/FC: 118_U5
 Recorder #: 25310
 Layout: L6 Basic (2')

Station ID:
 Site Code: 118
 Date Start: 13-Dec-17
 Date End: 14-Dec-17
 Plymouth St (106), w of Holmes St (36)

EB, WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/14/17	2	17	16	12	1	1	0	0	0	0	0	0	0	0	49
01:00	4	7	9	2	0	0	0	0	0	0	0	0	0	0	22
02:00	1	3	5	5	0	0	0	0	0	0	0	0	0	0	14
03:00	1	9	6	2	0	0	0	0	0	0	0	0	0	0	18
04:00	4	16	24	12	3	2	0	0	0	0	0	0	0	0	61
05:00	29	71	45	12	0	0	1	0	0	0	0	0	0	0	158
06:00	164	208	89	16	2	0	0	0	0	0	0	0	0	0	479
07:00	148	300	268	51	8	2	0	1	0	0	0	0	0	0	778
08:00	203	310	153	16	1	0	0	0	0	0	0	0	0	0	683
09:00	258	233	51	11	1	0	0	0	0	0	0	0	0	0	554
10:00	66	138	228	79	19	1	0	0	0	0	0	0	0	0	531
11:00	66	217	241	51	4	0	0	0	0	0	0	0	0	0	579
12 PM	58	256	241	53	3	1	0	0	0	0	0	0	0	0	612
13:00	64	255	259	56	3	1	0	0	0	0	0	0	0	0	638
14:00	89	356	303	52	3	0	0	0	0	0	0	0	0	0	803
15:00	87	346	344	61	5	1	0	0	0	0	0	0	0	0	844
16:00	134	405	311	45	9	1	0	0	0	0	0	0	0	1	906
17:00	197	466	187	28	2	0	0	0	0	0	0	0	0	0	880
18:00	115	343	206	29	0	0	0	0	0	0	0	0	0	0	693
19:00	72	198	165	38	3	0	0	0	0	0	0	0	0	0	476
20:00	32	137	153	32	2	0	0	0	0	0	0	0	0	0	356
21:00	26	100	102	33	6	0	0	0	0	0	0	0	0	0	267
22:00	10	64	102	26	5	0	0	0	0	0	0	0	0	0	207
23:00	2	38	36	12	3	0	0	0	0	0	0	0	0	0	91
Total	1832	4493	3544	734	83	10	1	1	0	0	0	0	0	1	10699

Daily

15th Percentile : 30 MPH
 50th Percentile : 38 MPH
 85th Percentile : 43 MPH
 95th Percentile : 47 MPH

Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 36-45 MPH
 Number in Pace : 8037
 Percent in Pace : 75.1%
 Number of Vehicles > 35 MPH : 8867
 Percent of Vehicles > 35 MPH : 82.9%

Grand Total	3131	8962	7958	1631	155	20	3	1	1	2	0	0	0	2	21866
-------------	------	------	------	------	-----	----	---	---	---	---	---	---	---	---	-------

Overall

15th Percentile : 35 MPH
 50th Percentile : 39 MPH
 85th Percentile : 44 MPH
 95th Percentile : 47 MPH

Mean Speed(Average) : 38 MPH
 10 MPH Pace Speed : 36-45 MPH
 Number in Pace : 16920
 Percent in Pace : 77.4%
 Number of Vehicles > 35 MPH : 18735
 Percent of Vehicles > 35 MPH : 85.7%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
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Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/13/17	0	19	6	0	1	0	0	0	1	0	0	0	0	27	2
01:00	0	7	0	0	1	0	0	0	0	0	0	0	0	8	1
02:00	0	3	1	0	1	0	0	0	1	0	0	0	0	6	2
03:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18	1
04:00	0	13	5	1	2	0	0	0	0	0	0	0	0	21	3
05:00	0	40	16	0	8	1	0	0	0	0	0	0	0	65	9
06:00	1	157	71	9	17	0	0	0	0	0	0	0	0	255	26
07:00	2	237	87	1	15	0	0	2	0	0	0	0	0	344	18
08:00	7	240	86	16	26	3	0	2	0	0	0	0	0	380	47
09:00	1	178	89	3	18	0	0	2	1	0	0	0	0	292	24
10:00	2	201	60	3	14	1	0	1	0	0	0	0	0	282	19
11:00	4	209	78	2	12	2	0	1	0	0	0	0	0	308	17
12 PM	0	230	92	0	15	1	0	2	0	0	0	0	0	340	18
13:00	5	236	83	5	11	2	0	1	0	0	0	0	0	343	19
14:00	6	316	79	3	18	2	0	0	0	0	0	0	0	424	23
15:00	5	328	115	3	16	2	0	0	0	0	0	0	0	469	21
16:00	3	357	107	2	13	0	0	1	0	0	0	0	0	483	16
17:00	0	365	79	1	24	2	0	0	0	0	0	0	0	471	27
18:00	2	277	94	0	16	1	0	0	0	0	0	0	0	390	17
19:00	4	204	52	0	5	0	0	0	0	0	0	0	0	265	5
20:00	1	145	47	0	8	0	0	0	0	0	0	0	0	201	8
21:00	0	106	24	0	7	0	0	0	0	0	0	0	0	137	7
22:00	0	76	14	1	3	0	0	0	0	0	0	0	0	94	4
23:00	0	30	9	0	0	0	0	0	0	0	0	0	0	39	0
Total	43	3989	1296	50	252	17	0	12	3	0	0	0	0	5662	334
Percent	0.8%	70.5%	22.9%	0.9%	4.5%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		5.9%
AM Peak Vol.	08:00	08:00	09:00	08:00	08:00	08:00		07:00	00:00					08:00	08:00
PM Peak Vol.	14:00	17:00	15:00	13:00	17:00	13:00		12:00						16:00	17:00
	6	365	115	5	24	2		2						483	27

Old Colony Planning Council
70 School Street
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www.ocpcrpa.org

Community: Halifax
 Com#_UR/FC: 118_U5
 Recorder #: 25310
 Layout: L6 Basic (2')

Station ID:
 Site Code: 118
 Date Start: 13-Dec-17
 Date End: 14-Dec-17
 Plymouth St (106), w of Holmes St (36)

EB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/14/17	0	20	0	0	3	0	0	0	0	0	0	0	0	23	3
01:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10	0
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
03:00	0	5	2	0	2	1	0	0	0	0	0	0	0	10	3
04:00	0	15	1	1	1	0	0	0	0	0	0	0	0	18	2
05:00	0	31	10	0	15	0	0	0	0	0	0	0	0	56	15
06:00	1	154	59	9	25	3	0	1	1	0	0	0	0	253	39
07:00	5	217	77	3	35	1	0	0	0	0	0	0	0	338	39
08:00	3	217	86	10	20	2	0	0	0	0	0	0	0	338	32
09:00	5	119	81	8	36	4	0	0	2	0	0	0	0	255	50
10:00	0	80	117	3	54	3	0	2	0	0	0	0	0	259	62
11:00	1	172	71	3	21	3	0	0	0	0	0	0	0	271	27
12 PM	1	217	67	1	15	1	0	0	0	0	0	0	0	302	17
13:00	1	222	68	4	34	3	0	1	2	0	0	0	0	335	44
14:00	0	312	91	2	12	0	0	0	0	0	0	0	0	417	14
15:00	5	288	96	9	26	1	0	1	0	0	0	0	0	426	37
16:00	8	321	109	6	22	2	0	0	0	0	0	0	0	468	30
17:00	5	345	85	0	25	0	0	2	0	0	0	0	0	462	27
18:00	5	295	71	0	21	0	0	0	0	0	0	0	0	392	21
19:00	1	205	60	0	16	0	0	0	0	0	0	0	0	282	16
20:00	0	143	45	0	16	0	0	0	0	0	0	0	0	204	16
21:00	0	112	26	1	16	0	0	0	0	0	0	0	0	155	17
22:00	0	69	26	0	11	0	0	0	0	0	0	0	0	106	11
23:00	0	31	9	0	4	1	0	0	0	0	0	0	0	45	5
Total	41	3599	1260	60	430	25	0	7	5	0	0	0	0	5427	527
Percent	0.8%	66.3%	23.2%	1.1%	7.9%	0.5%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%		9.7%
AM Peak	07:00	07:00	10:00	08:00	10:00	09:00		10:00	09:00					07:00	10:00
Vol.	5	217	117	10	54	4		2	2					338	62
PM Peak	16:00	17:00	16:00	15:00	13:00	13:00		17:00	13:00					16:00	13:00
Vol.	8	345	109	9	34	3		2	2					468	44
Grand Total	84	7588	2556	110	682	42	0	19	8	0	0	0	0	11089	861
Percent	0.8%	68.4%	23.0%	1.0%	6.2%	0.4%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		7.8%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/13/17	0	14	1	0	1	0	0	0	0	0	0	0	0	16	1
01:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10	0
02:00	0	5	2	0	1	0	0	0	0	0	0	0	0	8	1
03:00	0	13	4	0	1	0	0	0	0	0	0	0	0	18	1
04:00	0	20	17	0	5	0	0	0	0	0	0	0	0	42	5
05:00	0	65	32	1	8	1	0	0	0	0	0	0	0	107	10
06:00	5	160	63	7	11	0	1	0	1	0	0	0	0	248	20
07:00	5	339	86	7	15	2	0	0	0	0	0	0	0	454	24
08:00	4	302	68	6	9	5	0	1	1	0	0	0	0	396	22
09:00	6	213	64	2	19	2	0	1	1	0	0	0	0	308	25
10:00	3	227	70	3	14	2	0	1	0	0	1	0	0	321	21
11:00	1	236	60	4	13	1	0	1	0	0	0	0	0	316	19
12 PM	6	235	76	3	19	2	0	1	1	0	0	0	0	343	26
13:00	6	227	66	6	11	4	0	2	2	0	0	0	0	324	25
14:00	5	293	74	8	20	0	0	1	0	0	0	0	0	401	29
15:00	2	284	85	3	17	1	0	3	0	0	0	0	0	395	24
16:00	12	317	112	1	18	2	0	0	0	0	0	0	0	462	21
17:00	9	295	80	0	16	1	0	0	0	0	0	0	0	401	17
18:00	7	192	56	1	9	1	0	0	0	0	0	0	0	266	11
19:00	4	151	41	0	6	1	0	0	0	0	0	0	0	203	7
20:00	1	152	42	0	2	0	0	0	0	0	0	0	0	197	2
21:00	2	111	25	0	3	0	0	0	0	0	0	0	0	141	3
22:00	1	61	13	0	2	0	0	0	0	0	0	0	0	77	2
23:00	0	27	8	0	0	0	0	0	0	0	0	0	0	35	0
Total	79	3947	1147	52	220	25	1	11	6	0	1	0	0	5489	316
Percent	1.4%	71.9%	20.9%	0.9%	4.0%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		5.8%
AM Peak	09:00	07:00	07:00	06:00	09:00	08:00	06:00	08:00	06:00		10:00			07:00	09:00
Vol.	6	339	86	7	19	5	1	1	1		1			454	25
PM Peak	16:00	16:00	16:00	14:00	14:00	13:00		15:00	13:00					16:00	14:00
Vol.	12	317	112	8	20	4		3	2					462	29

Old Colony Planning Council
70 School Street
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Page 4

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/14/17	0	24	2	0	0	0	0	0	0	0	0	0	0	26	0
01:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12	0
02:00	0	11	0	0	1	0	0	0	0	0	0	0	0	12	1
03:00	0	2	5	0	1	0	0	0	0	0	0	0	0	8	1
04:00	0	23	16	0	4	0	0	0	0	0	0	0	0	43	4
05:00	0	68	25	0	9	0	0	0	0	0	0	0	0	102	9
06:00	4	156	46	6	11	0	0	0	0	0	0	0	0	223	17
07:00	5	328	86	5	10	4	0	0	2	0	0	0	0	440	21
08:00	7	251	64	5	13	2	0	0	0	0	0	0	0	342	20
09:00	7	205	61	3	18	3	0	1	1	0	0	0	0	299	26
10:00	3	173	65	4	22	2	0	1	2	0	0	0	0	272	31
11:00	2	210	74	2	14	4	0	1	0	0	0	0	0	307	21
12 PM	3	216	67	6	14	1	0	1	1	0	0	0	0	309	23
13:00	1	208	78	3	11	2	0	0	0	0	0	0	0	303	16
14:00	4	264	87	12	12	3	0	1	0	0	0	0	0	383	28
15:00	5	282	98	3	24	1	0	1	2	0	0	0	0	416	31
16:00	4	308	105	3	10	2	0	4	0	0	0	0	0	436	19
17:00	10	320	74	1	9	1	0	1	0	0	0	0	0	416	12
18:00	1	215	68	0	15	0	0	0	0	0	0	0	0	299	15
19:00	1	138	46	0	7	1	0	0	0	0	0	0	0	193	8
20:00	0	123	25	0	4	0	0	0	0	0	0	0	0	152	4
21:00	0	89	19	0	3	0	0	0	0	0	0	0	0	111	3
22:00	0	81	18	0	2	0	0	0	0	0	0	0	0	101	2
23:00	1	35	8	0	2	0	0	0	0	0	0	0	0	46	2
Total	58	3740	1139	53	216	26	0	11	8	0	0	0	0	5251	314
Percent	1.1%	71.2%	21.7%	1.0%	4.1%	0.5%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%		6.0%
AM Peak Vol.	08:00	07:00	07:00	06:00	10:00	07:00		09:00	07:00					07:00	10:00
PM Peak Vol.	17:00	17:00	16:00	14:00	15:00	14:00		16:00	15:00					16:00	15:00
Grand Total	137	7687	2286	105	436	51	1	22	14	0	1	0	0	10740	630
Percent	1.3%	71.6%	21.3%	1.0%	4.1%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		5.9%

Old Colony Planning Council
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Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB, WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/13/17	0	33	7	0	2	0	0	0	1	0	0	0	0	43	3
01:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18	1
02:00	0	8	3	0	2	0	0	0	1	0	0	0	0	14	3
03:00	0	28	6	0	2	0	0	0	0	0	0	0	0	36	2
04:00	0	33	22	1	7	0	0	0	0	0	0	0	0	63	8
05:00	0	105	48	1	16	2	0	0	0	0	0	0	0	172	19
06:00	6	317	134	16	28	0	1	0	1	0	0	0	0	503	46
07:00	7	576	173	8	30	2	0	2	0	0	0	0	0	798	42
08:00	11	542	154	22	35	8	0	3	1	0	0	0	0	776	69
09:00	7	391	153	5	37	2	0	3	2	0	0	0	0	600	49
10:00	5	428	130	6	28	3	0	2	0	0	1	0	0	603	40
11:00	5	445	138	6	25	3	0	2	0	0	0	0	0	624	36
12 PM	6	465	168	3	34	3	0	3	1	0	0	0	0	683	44
13:00	11	463	149	11	22	6	0	3	2	0	0	0	0	667	44
14:00	11	609	153	11	38	2	0	1	0	0	0	0	0	825	52
15:00	7	612	200	6	33	3	0	3	0	0	0	0	0	864	45
16:00	15	674	219	3	31	2	0	1	0	0	0	0	0	945	37
17:00	9	660	159	1	40	3	0	0	0	0	0	0	0	872	44
18:00	9	469	150	1	25	2	0	0	0	0	0	0	0	656	28
19:00	8	355	93	0	11	1	0	0	0	0	0	0	0	468	12
20:00	2	297	89	0	10	0	0	0	0	0	0	0	0	398	10
21:00	2	217	49	0	10	0	0	0	0	0	0	0	0	278	10
22:00	1	137	27	1	5	0	0	0	0	0	0	0	0	171	6
23:00	0	57	17	0	0	0	0	0	0	0	0	0	0	74	0
Total	122	7936	2443	102	472	42	1	23	9	0	1	0	0	11151	650
Percent	1.1%	71.2%	21.9%	0.9%	4.2%	0.4%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		5.8%
AM Peak Vol.	08:00	07:00	07:00	08:00	09:00	08:00	06:00	08:00	09:00		10:00			07:00	08:00
PM Peak Vol.	11	576	173	22	37	8	1	3	2		1			798	69
PM Peak Vol.	16:00	16:00	16:00	13:00	17:00	13:00		12:00	13:00					16:00	14:00
	15	674	219	11	40	6		3	2					945	52

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 25310
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 13-Dec-17
Date End: 14-Dec-17
Plymouth St (106), w of Holmes St (36)

EB, WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/14/17	0	44	2	0	3	0	0	0	0	0	0	0	0	49	3
01:00	0	17	5	0	0	0	0	0	0	0	0	0	0	22	0
02:00	0	13	0	0	1	0	0	0	0	0	0	0	0	14	1
03:00	0	7	7	0	3	1	0	0	0	0	0	0	0	18	4
04:00	0	38	17	1	5	0	0	0	0	0	0	0	0	61	6
05:00	0	99	35	0	24	0	0	0	0	0	0	0	0	158	24
06:00	5	310	105	15	36	3	0	1	1	0	0	0	0	476	56
07:00	10	545	163	8	45	5	0	0	2	0	0	0	0	778	60
08:00	10	468	150	15	33	4	0	0	0	0	0	0	0	680	52
09:00	12	324	142	11	54	7	0	1	3	0	0	0	0	554	76
10:00	3	253	182	7	76	5	0	3	2	0	0	0	0	531	93
11:00	3	382	145	5	35	7	0	1	0	0	0	0	0	578	48
12 PM	4	433	134	7	29	2	0	1	1	0	0	0	0	611	40
13:00	2	430	146	7	45	5	0	1	2	0	0	0	0	638	60
14:00	4	576	178	14	24	3	0	1	0	0	0	0	0	800	42
15:00	10	570	194	12	50	2	0	2	2	0	0	0	0	842	68
16:00	12	629	214	9	32	4	0	4	0	0	0	0	0	904	49
17:00	15	665	159	1	34	1	0	3	0	0	0	0	0	878	39
18:00	6	510	139	0	36	0	0	0	0	0	0	0	0	691	36
19:00	2	343	106	0	23	1	0	0	0	0	0	0	0	475	24
20:00	0	266	70	0	20	0	0	0	0	0	0	0	0	356	20
21:00	0	201	45	1	19	0	0	0	0	0	0	0	0	266	20
22:00	0	150	44	0	13	0	0	0	0	0	0	0	0	207	13
23:00	1	66	17	0	6	1	0	0	0	0	0	0	0	91	7
Total	99	7339	2399	113	646	51	0	18	13	0	0	0	0	10678	841
Percent	0.9%	68.7%	22.5%	1.1%	6.0%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		7.9%
AM Peak	09:00	07:00	10:00	06:00	10:00	09:00		10:00	09:00					07:00	10:00
Vol.	12	545	182	15	76	7		3	3					778	93
PM Peak	17:00	17:00	16:00	14:00	15:00	13:00		16:00	13:00					16:00	15:00
Vol.	15	665	214	14	50	5		4	2					904	68
Grand Total	221	15275	4842	215	1118	93	1	41	22	0	1	0	0	21829	1491
Percent	1.0%	70.0%	22.2%	1.0%	5.1%	0.4%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		6.8%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

Start Time	04-Dec-17		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	24	18	30	22	*	*	*	*	*	*	27	20
01:00	*	*	*	*	18	23	15	15	*	*	*	*	*	*	16	19
02:00	*	*	*	*	9	14	13	16	*	*	*	*	*	*	11	15
03:00	*	*	*	*	7	19	9	21	*	*	*	*	*	*	8	20
04:00	*	*	*	*	33	60	28	64	*	*	*	*	*	*	30	62
05:00	*	*	*	*	109	193	123	206	*	*	*	*	*	*	116	200
06:00	*	*	*	*	241	416	247	383	*	*	*	*	*	*	244	400
07:00	*	*	*	*	339	666	341	597	*	*	*	*	*	*	340	632
08:00	*	*	*	*	327	567	349	564	*	*	*	*	*	*	338	566
09:00	*	*	*	*	320	362	321	417	*	*	*	*	*	*	320	390
10:00	*	*	*	*	324	331	342	394	*	*	*	*	*	*	333	362
11:00	*	*	*	*	369	334	399	344	*	*	*	*	*	*	384	339
12:00 PM	*	*	*	*	379	367	413	381	*	*	*	*	*	*	396	374
01:00	*	*	*	*	420	357	395	350	*	*	*	*	*	*	408	354
02:00	*	*	*	*	459	395	532	416	*	*	*	*	*	*	496	406
03:00	*	*	*	*	590	494	595	497	*	*	*	*	*	*	592	496
04:00	*	*	*	*	664	508	650	508	*	*	*	*	*	*	657	508
05:00	*	*	*	*	670	465	666	475	*	*	*	*	*	*	668	470
06:00	*	*	*	*	445	306	469	366	*	*	*	*	*	*	457	336
07:00	*	*	*	*	304	226	287	228	*	*	*	*	*	*	296	227
08:00	*	*	*	*	218	176	237	194	*	*	*	*	*	*	228	185
09:00	*	*	*	*	153	109	148	149	*	*	*	*	*	*	150	129
10:00	*	*	*	*	81	69	101	94	*	*	*	*	*	*	91	82
11:00	*	*	*	*	60	47	57	63	*	*	*	*	*	*	58	55
Lane	0	0	0	0	6563	6522	6767	6764	0	0	0	0	0	0	6664	6647
Day	0		0		13085		13531		0		0		0		13311	
AM Peak	-	-	-	-	11:00	07:00	11:00	07:00	-	-	-	-	-	-	11:00	07:00
Vol.	-	-	-	-	369	666	399	597	-	-	-	-	-	-	384	632
PM Peak	-	-	-	-	17:00	16:00	17:00	16:00	-	-	-	-	-	-	17:00	16:00
Vol.	-	-	-	-	670	508	666	508	-	-	-	-	-	-	668	508

Comb. Total	0	0	13085	13531	0	0	0	13311
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Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

Start Time	06-Dec-17 Wed	EB		WB		Combined		07-Dec Thu	EB		WB		Combined	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		11	110	4	78	15	188		8	95	6	84	14	179
12:15		10	107	5	97	15	204		8	102	8	108	16	210
12:30		0	78	3	102	3	180		8	123	4	98	12	221
12:45		3	84	6	90	9	174		6	93	4	91	10	184
01:00		6	96	6	94	12	190		3	94	6	97	9	191
01:15		5	96	6	98	11	194		1	92	4	90	5	182
01:30		4	121	5	85	9	206		4	98	3	92	7	190
01:45		3	107	6	80	9	187		7	111	2	71	9	182
02:00		2	129	2	71	4	200		4	129	3	114	7	243
02:15		3	92	5	104	8	196		1	130	4	83	5	213
02:30		2	133	1	104	3	237		4	149	5	108	9	257
02:45		2	105	6	116	8	221		4	124	4	111	8	235
03:00		1	134	3	119	4	253		1	103	4	112	5	215
03:15		0	156	5	120	5	276		2	155	3	130	5	285
03:30		3	150	6	135	9	285		6	155	4	114	10	269
03:45		3	150	5	120	8	270		0	182	10	141	10	323
04:00		2	167	6	119	8	286		5	163	9	132	14	295
04:15		8	161	17	127	25	288		5	145	11	139	16	284
04:30		8	160	15	129	23	289		9	165	21	123	30	288
04:45		15	176	22	133	37	309		9	177	23	114	32	291
05:00		19	160	36	115	55	275		13	175	47	118	60	293
05:15		22	187	48	120	70	307		36	157	42	120	78	277
05:30		33	158	44	120	77	278		39	174	54	119	93	293
05:45		35	165	65	110	100	275		35	160	63	118	98	278
06:00		38	114	79	101	117	215		40	132	59	98	99	230
06:15		56	128	100	74	156	202		49	127	105	92	154	219
06:30		74	109	106	72	180	181		78	119	103	101	181	220
06:45		73	94	131	59	204	153		80	91	116	75	196	166
07:00		89	80	135	63	224	143		99	95	117	61	216	156
07:15		77	87	161	66	238	153		80	74	151	67	231	141
07:30		93	76	182	52	275	128		82	52	161	51	243	103
07:45		80	61	188	45	268	106		80	66	168	49	248	115
08:00		84	67	139	40	223	107		83	58	145	50	228	108
08:15		70	60	152	39	222	99		93	71	160	62	253	133
08:30		71	51	152	59	223	110		72	67	134	49	206	116
08:45		102	40	124	38	226	78		101	41	125	33	226	74
09:00		88	46	78	34	166	80		68	41	121	44	189	85
09:15		79	28	98	26	177	54		94	34	112	46	206	80
09:30		78	49	81	22	159	71		75	39	102	30	177	69
09:45		75	30	105	27	180	57		84	34	82	29	166	63
10:00		91	22	81	27	172	49		85	21	91	29	176	50
10:15		81	22	84	23	165	45		86	25	94	23	180	48
10:30		86	14	78	12	164	26		83	30	123	26	206	56
10:45		66	23	88	7	154	30		88	25	86	16	174	41
11:00		89	24	68	7	157	31		100	13	84	21	184	34
11:15		104	9	92	15	196	24		105	14	86	14	191	28
11:30		93	15	88	17	181	32		100	12	89	14	189	26
11:45		83	12	86	8	169	20		94	18	85	14	179	32
Total		2120	4443	3003	3519	5123	7962		2217	4550	3043	3721	5260	8271
Day Total		6563		6522		13085			6767		6764		13531	
% Total		16.2%	34.0%	22.9%	26.9%				16.4%	33.6%	22.5%	27.5%		
Peak	-	11:00	04:30	07:15	04:00	07:00	04:30	-	11:00	04:45	07:30	03:45	07:30	03:45
Vol.	-	369	683	670	508	1005	1180	-	399	683	634	535	972	1190
P.H.F.		0.887	0.913	0.891	0.955	0.914	0.955		0.950	0.965	0.943	0.949	0.960	0.921

Old Colony Planning Council
70 School Street
Brockton, MA 02301
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Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

Start Time	04-Dec-17 Mon	05-Dec-17 Tue	06-Dec-17 Wed	07-Dec-17 Thu	08-Dec-17 Fri	09-Dec-17 Sat	10-Dec-17 Sun	Week Average
12:00 AM	*	*	42	52	*	*	*	47
01:00	*	*	41	30	*	*	*	36
02:00	*	*	23	29	*	*	*	26
03:00	*	*	26	30	*	*	*	28
04:00	*	*	93	92	*	*	*	92
05:00	*	*	302	329	*	*	*	316
06:00	*	*	657	630	*	*	*	644
07:00	*	*	1005	938	*	*	*	972
08:00	*	*	894	913	*	*	*	904
09:00	*	*	682	738	*	*	*	710
10:00	*	*	655	736	*	*	*	696
11:00	*	*	703	743	*	*	*	723
12:00 PM	*	*	746	794	*	*	*	770
01:00	*	*	777	745	*	*	*	761
02:00	*	*	854	948	*	*	*	901
03:00	*	*	1084	1092	*	*	*	1088
04:00	*	*	1172	1158	*	*	*	1165
05:00	*	*	1135	1141	*	*	*	1138
06:00	*	*	751	835	*	*	*	793
07:00	*	*	530	515	*	*	*	522
08:00	*	*	394	431	*	*	*	412
09:00	*	*	262	297	*	*	*	280
10:00	*	*	150	195	*	*	*	172
11:00	*	*	107	120	*	*	*	114
Total	0	0	13085	13531	0	0	0	
Percentage	0.0%	0.0%	98.3%	101.7%	0.0%	0.0%	0.0%	
AM Peak	-	-	07:00	07:00	-	-	-	-
Vol.	-	-	1005	938	-	-	-	-
PM Peak	-	-	16:00	16:00	-	-	-	-
Vol.	-	-	1172	1158	-	-	-	-

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/06/17	0	7	13	4	0	0	0	0	0	0	0	0	0	0	24
01:00	2	3	11	2	0	0	0	0	0	0	0	0	0	0	18
02:00	3	3	0	2	1	0	0	0	0	0	0	0	0	0	9
03:00	1	1	4	1	0	0	0	0	0	0	0	0	0	0	7
04:00	8	10	9	4	2	0	0	0	0	0	0	0	0	0	33
05:00	15	32	41	19	2	0	0	0	0	0	0	0	0	0	109
06:00	50	73	91	24	2	1	0	0	0	0	0	0	0	0	241
07:00	57	97	134	46	2	3	0	0	0	0	0	0	0	0	339
08:00	59	74	133	56	5	0	0	0	0	0	0	0	0	0	327
09:00	47	78	144	45	6	0	0	0	0	0	0	0	0	0	320
10:00	45	82	135	49	9	3	0	0	0	1	0	0	0	0	324
11:00	49	77	153	78	11	1	0	0	0	0	0	0	0	0	369
12 PM	48	76	176	70	8	0	0	0	0	1	0	0	0	0	379
13:00	45	107	178	83	7	0	0	0	0	0	0	0	0	0	420
14:00	71	125	184	71	8	0	0	0	0	0	0	0	0	0	459
15:00	99	134	247	100	8	0	1	0	0	0	0	0	0	1	590
16:00	132	242	234	51	4	0	0	0	0	0	0	0	0	1	664
17:00	153	281	211	22	2	0	0	1	0	0	0	0	0	0	670
18:00	114	132	158	39	2	0	0	0	0	0	0	0	0	0	445
19:00	44	89	112	51	8	0	0	0	0	0	0	0	0	0	304
20:00	45	60	82	29	2	0	0	0	0	0	0	0	0	0	218
21:00	17	57	56	20	3	0	0	0	0	0	0	0	0	0	153
22:00	11	24	30	14	2	0	0	0	0	0	0	0	0	0	81
23:00	7	15	23	11	3	1	0	0	0	0	0	0	0	0	60
Total	1122	1879	2559	891	97	9	1	1	0	2	0	0	0	2	6563

Daily

15th Percentile :	30 MPH
50th Percentile :	40 MPH
85th Percentile :	45 MPH
95th Percentile :	48 MPH

Mean Speed(Average) :	38 MPH
10 MPH Pace Speed :	36-45 MPH
Number in Pace :	4438
Percent in Pace :	67.6%
Number of Vehicles > 35 MPH :	5441
Percent of Vehicles > 35 MPH :	82.9%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Page 2

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/07/17	4	6	10	7	3	0	0	0	0	0	0	0	0	0	30
01:00	2	7	6	0	0	0	0	0	0	0	0	0	0	0	15
02:00	5	4	3	1	0	0	0	0	0	0	0	0	0	0	13
03:00	1	2	4	2	0	0	0	0	0	0	0	0	0	0	9
04:00	7	9	9	1	1	1	0	0	0	0	0	0	0	0	28
05:00	14	31	57	17	1	2	0	0	0	0	0	0	0	1	123
06:00	40	60	81	62	3	1	0	0	0	0	0	0	0	0	247
07:00	58	67	145	56	10	2	0	0	0	1	0	0	0	2	341
08:00	48	82	141	62	13	3	0	0	0	0	0	0	0	0	349
09:00	38	53	142	76	12	0	0	0	0	0	0	0	0	0	321
10:00	55	71	141	62	13	0	0	0	0	0	0	0	0	0	342
11:00	58	90	159	82	9	1	0	0	0	0	0	0	0	0	399
12 PM	54	71	166	103	16	3	0	0	0	0	0	0	0	0	413
13:00	49	75	189	75	6	0	0	0	0	1	0	0	0	0	395
14:00	94	137	224	72	4	0	0	0	0	0	0	0	0	1	532
15:00	116	153	251	62	10	3	0	0	0	0	0	0	0	0	595
16:00	150	220	206	69	3	1	0	0	0	0	0	0	0	1	650
17:00	187	261	183	33	1	0	0	0	0	0	0	0	0	1	666
18:00	94	166	167	36	5	1	0	0	0	0	0	0	0	0	469
19:00	62	97	83	40	5	0	0	0	0	0	0	0	0	0	287
20:00	31	69	88	41	8	0	0	0	0	0	0	0	0	0	237
21:00	24	38	59	25	1	1	0	0	0	0	0	0	0	0	148
22:00	13	37	33	16	1	1	0	0	0	0	0	0	0	0	101
23:00	12	5	20	15	4	1	0	0	0	0	0	0	0	0	57
Total	1216	1811	2567	1015	129	21	0	0	0	2	0	0	0	6	6767

Daily

15th Percentile : 29 MPH
50th Percentile : 40 MPH
85th Percentile : 45 MPH
95th Percentile : 49 MPH

Mean Speed(Average) : 38 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 4378
Percent in Pace : 64.7%
Number of Vehicles > 35 MPH : 5551
Percent of Vehicles > 35 MPH : 82.0%

Grand Total	2338	3690	5126	1906	226	30	1	1	0	4	0	0	0	8	13330
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Overall

15th Percentile : 29 MPH
50th Percentile : 40 MPH
85th Percentile : 45 MPH
95th Percentile : 48 MPH

Mean Speed(Average) : 38 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 8816
Percent in Pace : 66.1%
Number of Vehicles > 35 MPH : 10992
Percent of Vehicles > 35 MPH : 82.5%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
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Page 3

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/06/17	2	3	7	6	0	0	0	0	0	0	0	0	0	0	18
01:00	7	7	7	2	0	0	0	0	0	0	0	0	0	0	23
02:00	1	2	10	1	0	0	0	0	0	0	0	0	0	0	14
03:00	0	1	8	6	4	0	0	0	0	0	0	0	0	0	19
04:00	5	5	13	24	11	1	1	0	0	0	0	0	0	0	60
05:00	28	36	67	47	14	0	1	0	0	0	0	0	0	0	193
06:00	77	99	160	73	6	1	0	0	0	0	0	0	0	0	416
07:00	99	175	252	120	19	1	0	0	0	0	0	0	0	0	666
08:00	66	93	209	173	25	1	0	0	0	0	0	0	0	0	567
09:00	34	68	143	84	30	1	1	0	0	0	0	0	0	1	362
10:00	44	59	132	78	16	1	1	0	0	0	0	0	0	0	331
11:00	48	62	126	88	9	1	0	0	0	0	0	0	0	0	334
12 PM	49	73	114	101	28	2	0	0	0	0	0	0	0	0	367
13:00	48	67	124	92	23	2	0	0	0	0	0	1	0	0	357
14:00	50	106	129	85	24	1	0	0	0	0	0	0	0	0	395
15:00	66	107	158	134	23	5	1	0	0	0	0	0	0	0	494
16:00	89	118	172	115	13	1	0	0	0	0	0	0	0	0	508
17:00	79	152	163	59	11	0	0	0	1	0	0	0	0	0	465
18:00	50	83	101	61	10	1	0	0	0	0	0	0	0	0	306
19:00	16	42	100	60	7	1	0	0	0	0	0	0	0	0	226
20:00	21	50	52	43	10	0	0	0	0	0	0	0	0	0	176
21:00	8	16	37	32	12	4	0	0	0	0	0	0	0	0	109
22:00	6	11	25	18	8	1	0	0	0	0	0	0	0	0	69
23:00	2	7	12	19	6	1	0	0	0	0	0	0	0	0	47
Total	895	1442	2321	1521	309	26	5	0	1	0	0	1	0	1	6522

Daily

15th Percentile :	35 MPH
50th Percentile :	41 MPH
85th Percentile :	47 MPH
95th Percentile :	50 MPH
Mean Speed(Average) :	40 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	3842
Percent in Pace :	58.9%
Number of Vehicles > 35 MPH :	5627
Percent of Vehicles > 35 MPH :	86.3%

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Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	99	Total
12/07/17	2	3	2	8	6	0	1	0	0	0	0	0	0	0	22
01:00	0	3	2	7	1	2	0	0	0	0	0	0	0	0	15
02:00	1	2	6	2	5	0	0	0	0	0	0	0	0	0	16
03:00	0	1	5	8	5	1	1	0	0	0	0	0	0	0	21
04:00	2	4	10	24	18	5	1	0	0	0	0	0	0	0	64
05:00	20	17	53	74	30	12	0	0	0	0	0	0	0	0	206
06:00	33	44	113	139	48	4	0	2	0	0	0	0	0	0	383
07:00	41	77	157	239	67	15	1	0	0	0	0	0	0	0	597
08:00	58	72	180	184	67	2	1	0	0	0	0	0	0	0	564
09:00	47	107	125	106	26	6	0	0	0	0	0	0	0	0	417
10:00	66	61	118	133	14	2	0	0	0	0	0	0	0	0	394
11:00	39	53	132	95	24	1	0	0	0	0	0	0	0	0	344
12 PM	59	62	140	98	19	3	0	0	0	0	0	0	0	0	381
13:00	40	56	126	98	26	3	1	0	0	0	0	0	0	0	350
14:00	61	107	144	84	17	1	0	1	0	0	0	0	0	1	416
15:00	94	107	173	92	27	3	0	0	0	0	0	0	0	1	497
16:00	106	120	168	99	13	2	0	0	0	0	0	0	0	0	508
17:00	95	148	174	49	8	1	0	0	0	0	0	0	0	0	475
18:00	51	101	145	52	16	1	0	0	0	0	0	0	0	0	366
19:00	28	52	88	50	10	0	0	0	0	0	0	0	0	0	228
20:00	22	25	44	73	23	5	2	0	0	0	0	0	0	0	194
21:00	17	33	36	39	21	2	1	0	0	0	0	0	0	0	149
22:00	13	9	24	30	15	3	0	0	0	0	0	0	0	0	94
23:00	4	7	21	20	7	4	0	0	0	0	0	0	0	0	63
Total	899	1271	2186	1803	513	78	9	3	0	0	0	0	0	2	6764

Daily
15th Percentile : 35 MPH
50th Percentile : 42 MPH
85th Percentile : 48 MPH
95th Percentile : 52 MPH

Mean Speed(Average) : 41 MPH
10 MPH Pace Speed : 41-50 MPH
Number in Pace : 3989
Percent in Pace : 59.0%
Number of Vehicles > 35 MPH : 5865
Percent of Vehicles > 35 MPH : 86.7%

Grand Total	1794	2713	4507	3324	822	104	14	3	1	0	0	1	0	3	13286
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Overall
15th Percentile : 35 MPH
50th Percentile : 42 MPH
85th Percentile : 48 MPH
95th Percentile : 51 MPH
Mean Speed(Average) : 41 MPH
10 MPH Pace Speed : 41-50 MPH
Number in Pace : 7831
Percent in Pace : 58.9%
Number of Vehicles > 35 MPH : 11492
Percent of Vehicles > 35 MPH : 86.5%

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Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB, WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total
12/06/17	2	10	20	10	0	0	0	0	0	0	0	0	0	0	42
01:00	9	10	18	4	0	0	0	0	0	0	0	0	0	0	41
02:00	4	5	10	3	1	0	0	0	0	0	0	0	0	0	23
03:00	1	2	12	7	4	0	0	0	0	0	0	0	0	0	26
04:00	13	15	22	28	13	1	1	0	0	0	0	0	0	0	93
05:00	43	68	108	66	16	0	1	0	0	0	0	0	0	0	302
06:00	127	172	251	97	8	2	0	0	0	0	0	0	0	0	657
07:00	156	272	386	166	21	4	0	0	0	0	0	0	0	0	1005
08:00	125	167	342	229	30	1	0	0	0	0	0	0	0	0	894
09:00	81	146	287	129	36	1	1	0	0	0	0	0	0	1	682
10:00	89	141	267	127	25	4	1	0	0	1	0	0	0	0	655
11:00	97	139	279	166	20	2	0	0	0	0	0	0	0	0	703
12 PM	97	149	290	171	36	2	0	0	0	1	0	0	0	0	746
13:00	93	174	302	175	30	2	0	0	0	0	0	1	0	0	777
14:00	121	231	313	156	32	1	0	0	0	0	0	0	0	0	854
15:00	165	241	405	234	31	5	2	0	0	0	0	0	0	1	1084
16:00	221	360	406	166	17	1	0	0	0	0	0	0	0	1	1172
17:00	232	433	374	81	13	0	0	1	1	0	0	0	0	0	1135
18:00	164	215	259	100	12	1	0	0	0	0	0	0	0	0	751
19:00	60	131	212	111	15	1	0	0	0	0	0	0	0	0	530
20:00	66	110	134	72	12	0	0	0	0	0	0	0	0	0	394
21:00	25	73	93	52	15	4	0	0	0	0	0	0	0	0	262
22:00	17	35	55	32	10	1	0	0	0	0	0	0	0	0	150
23:00	9	22	35	30	9	2	0	0	0	0	0	0	0	0	107
Total	2017	3321	4880	2412	406	35	6	1	1	2	0	1	0	3	13085

Daily

15th Percentile :	34 MPH
50th Percentile :	41 MPH
85th Percentile :	46 MPH
95th Percentile :	49 MPH

Mean Speed(Average) :	39 MPH
10 MPH Pace Speed :	36-45 MPH
Number in Pace :	8201
Percent in Pace :	62.7%
Number of Vehicles > 35 MPH :	11068
Percent of Vehicles > 35 MPH :	84.6%

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Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB, WB

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96	
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total
12/07/17	6	9	12	15	9	0	1	0	0	0	0	0	0	0	52
01:00	2	10	8	7	1	2	0	0	0	0	0	0	0	0	30
02:00	6	6	9	3	5	0	0	0	0	0	0	0	0	0	29
03:00	1	3	9	10	5	1	1	0	0	0	0	0	0	0	30
04:00	9	13	19	25	19	6	1	0	0	0	0	0	0	0	92
05:00	34	48	110	91	31	14	0	0	0	0	0	0	0	1	329
06:00	73	104	194	201	51	5	0	2	0	0	0	0	0	0	630
07:00	99	144	302	295	77	17	1	0	0	1	0	0	0	2	938
08:00	106	154	321	246	80	5	1	0	0	0	0	0	0	0	913
09:00	85	160	267	182	38	6	0	0	0	0	0	0	0	0	738
10:00	121	132	259	195	27	2	0	0	0	0	0	0	0	0	736
11:00	97	143	291	177	33	2	0	0	0	0	0	0	0	0	743
12 PM	113	133	306	201	35	6	0	0	0	0	0	0	0	0	794
13:00	89	131	315	173	32	3	1	0	0	1	0	0	0	0	745
14:00	155	244	368	156	21	1	0	1	0	0	0	0	0	2	948
15:00	210	260	424	154	37	6	0	0	0	0	0	0	0	1	1092
16:00	256	340	374	168	16	3	0	0	0	0	0	0	0	1	1158
17:00	282	409	357	82	9	1	0	0	0	0	0	0	0	1	1141
18:00	145	267	312	88	21	2	0	0	0	0	0	0	0	0	835
19:00	90	149	171	90	15	0	0	0	0	0	0	0	0	0	515
20:00	53	94	132	114	31	5	2	0	0	0	0	0	0	0	431
21:00	41	71	95	64	22	3	1	0	0	0	0	0	0	0	297
22:00	26	46	57	46	16	4	0	0	0	0	0	0	0	0	195
23:00	16	12	41	35	11	5	0	0	0	0	0	0	0	0	120
Total	2115	3082	4753	2818	642	99	9	3	0	2	0	0	0	8	13531

Daily

15th Percentile : 33 MPH
50th Percentile : 41 MPH
85th Percentile : 47 MPH
95th Percentile : 50 MPH

Mean Speed(Average) : 40 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 7835
Percent in Pace : 57.9%
Number of Vehicles > 35 MPH : 11416
Percent of Vehicles > 35 MPH : 84.4%

Grand Total	4132	6403	9633	5230	1048	134	15	4	1	4	0	1	0	11	26616
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Overall

15th Percentile : 33 MPH
50th Percentile : 41 MPH
85th Percentile : 47 MPH
95th Percentile : 49 MPH

Mean Speed(Average) : 39 MPH
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 16036
Percent in Pace : 60.2%
Number of Vehicles > 35 MPH : 22484
Percent of Vehicles > 35 MPH : 84.5%

Old Colony Planning Council
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Brockton, MA 02301
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Page 1

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/06/17	0	21	3	0	0	0	0	0	0	0	0	0	0	24	0
01:00	0	11	5	0	1	0	0	0	1	0	0	0	0	18	2
02:00	0	4	3	0	1	0	0	0	1	0	0	0	0	9	2
03:00	0	4	2	0	1	0	0	0	0	0	0	0	0	7	1
04:00	0	23	4	2	4	0	0	0	0	0	0	0	0	33	6
05:00	1	72	32	0	2	1	0	0	1	0	0	0	0	109	4
06:00	4	159	54	2	13	6	0	1	1	0	0	0	0	240	23
07:00	5	226	84	1	16	1	0	0	4	0	0	0	0	337	22
08:00	9	208	74	7	16	7	0	3	2	0	0	0	0	326	35
09:00	1	210	78	3	15	3	0	4	5	0	0	0	0	319	30
10:00	2	222	74	1	13	3	1	2	5	0	0	0	0	323	25
11:00	3	254	82	1	14	6	0	4	5	0	0	0	0	369	30
12 PM	3	265	84	1	17	4	0	1	3	0	0	0	0	378	26
13:00	2	291	98	4	16	6	0	0	2	0	0	0	0	419	28
14:00	3	322	102	4	18	4	0	2	3	0	0	0	0	458	31
15:00	6	410	136	3	26	3	0	1	3	0	0	0	0	588	36
16:00	9	468	144	3	31	1	0	1	3	0	0	0	0	660	39
17:00	12	482	141	2	28	4	0	0	0	0	0	0	0	669	34
18:00	2	329	97	1	14	1	0	0	0	0	0	0	0	444	16
19:00	4	227	64	0	8	0	0	0	0	0	0	0	0	303	8
20:00	0	181	34	0	3	0	0	0	0	0	0	0	0	218	3
21:00	1	113	37	0	2	0	0	0	0	0	0	0	0	153	2
22:00	0	66	11	1	3	0	0	0	0	0	0	0	0	81	4
23:00	0	50	10	0	0	0	0	0	0	0	0	0	0	60	0
Total	67	4618	1453	36	262	50	1	19	39	0	0	0	0	6545	407
Percent	1.0%	70.6%	22.2%	0.6%	4.0%	0.8%	0.0%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%		6.2%
AM Peak Vol.	08:00	11:00	07:00	08:00	07:00	08:00	10:00	09:00	09:00					11:00	08:00
PM Peak Vol.	17:00	17:00	16:00	13:00	16:00	13:00		14:00	12:00					17:00	16:00
	12	482	144	4	31	6		2	3					669	39

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Page 2

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/07/17	0	21	5	0	3	0	0	1	0	0	0	0	0	30	4
01:00	0	10	4	0	1	0	0	0	0	0	0	0	0	15	1
02:00	0	11	1	0	0	0	0	1	0	0	0	0	0	13	1
03:00	0	6	0	0	3	0	0	0	0	0	0	0	0	9	3
04:00	0	18	5	1	3	1	0	0	0	0	0	0	0	28	5
05:00	0	72	42	3	6	0	0	0	0	0	0	0	0	123	9
06:00	3	166	53	5	15	3	0	1	0	0	0	0	0	246	24
07:00	7	201	87	4	20	8	0	7	3	0	0	0	0	337	42
08:00	5	241	73	4	13	5	0	1	4	0	0	0	0	346	27
09:00	2	221	72	2	18	5	0	0	1	0	0	0	0	321	26
10:00	6	235	66	4	22	5	0	3	1	0	0	0	0	342	35
11:00	6	284	83	0	20	4	0	1	1	0	0	0	0	399	26
12 PM	8	297	84	3	20	1	0	0	0	0	0	0	0	413	24
13:00	1	302	58	3	22	2	0	3	4	0	0	0	0	395	34
14:00	10	385	101	2	21	6	0	4	2	0	0	0	0	531	35
15:00	11	399	149	3	27	0	0	1	2	0	0	0	0	592	33
16:00	11	441	155	4	31	1	0	1	0	0	0	0	0	644	37
17:00	8	492	144	2	18	2	0	0	0	0	0	0	0	666	22
18:00	4	355	92	0	17	0	0	0	0	0	0	0	0	468	17
19:00	1	221	57	0	8	0	0	0	0	0	0	0	0	287	8
20:00	1	175	55	0	5	1	0	0	0	0	0	0	0	237	6
21:00	0	117	28	0	3	0	0	0	0	0	0	0	0	148	3
22:00	0	84	15	0	2	0	0	0	0	0	0	0	0	101	2
23:00	1	49	7	0	0	0	0	0	0	0	0	0	0	57	0
Total	85	4803	1436	40	298	44	0	24	18	0	0	0	0	6748	424
Percent	1.3%	71.2%	21.3%	0.6%	4.4%	0.7%	0.0%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%		6.3%
AM Peak Vol.	07:00	11:00	07:00	06:00	10:00	07:00		07:00	08:00					11:00	07:00
PM Peak Vol.	15:00	17:00	16:00	16:00	16:00	14:00		14:00	13:00					17:00	16:00
Grand Total	152	9421	2889	76	560	94	1	43	57	0	0	0	0	13293	831
Percent	1.1%	70.9%	21.7%	0.6%	4.2%	0.7%	0.0%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%		6.3%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
(508) 583-1833
www.ocpcrpa.org

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/06/17	0	15	2	0	1	0	0	0	0	0	0	0	0	18	1
01:00	0	17	2	0	3	0	0	0	1	0	0	0	0	23	4
02:00	0	11	2	0	0	0	0	1	0	0	0	0	0	14	1
03:00	0	7	5	0	7	0	0	0	0	0	0	0	0	19	7
04:00	0	23	18	0	19	0	0	0	0	0	0	0	0	60	19
05:00	1	88	67	1	32	0	0	3	1	0	0	0	0	193	37
06:00	4	250	98	4	54	2	2	0	0	0	0	0	0	414	62
07:00	8	448	138	3	62	1	0	1	2	0	0	0	0	663	69
08:00	9	380	122	2	42	3	1	4	2	0	0	0	0	565	54
09:00	2	226	82	3	39	2	1	2	4	0	0	0	0	361	51
10:00	1	204	82	1	28	3	1	2	6	0	0	0	0	328	41
11:00	4	198	70	4	43	2	2	0	10	0	0	0	0	333	61
12 PM	5	206	94	3	40	3	0	5	9	0	0	0	0	365	60
13:00	3	212	97	1	36	1	0	0	4	0	0	0	0	354	42
14:00	3	226	95	10	50	3	0	3	3	0	0	0	0	393	69
15:00	8	292	125	6	58	2	0	1	1	0	0	0	0	493	68
16:00	13	284	140	1	61	3	0	1	1	0	0	0	0	504	67
17:00	11	309	92	3	41	2	0	0	0	0	1	0	0	459	47
18:00	1	197	74	1	31	0	0	1	0	0	0	0	0	305	33
19:00	2	136	47	0	38	2	0	0	1	0	0	0	0	226	41
20:00	0	88	66	0	21	1	0	0	0	0	0	0	0	176	22
21:00	0	67	32	0	9	0	0	0	0	0	0	0	0	108	9
22:00	0	33	27	0	9	0	0	0	0	0	0	0	0	69	9
23:00	0	30	13	0	4	0	0	0	0	0	0	0	0	47	4
Total	75	3947	1590	43	728	30	7	24	45	0	1	0	0	6490	878
Percent	1.2%	60.8%	24.5%	0.7%	11.2%	0.5%	0.1%	0.4%	0.7%	0.0%	0.0%	0.0%	0.0%		13.5%
AM Peak	08:00	07:00	07:00	06:00	07:00	08:00	06:00	08:00	11:00					07:00	07:00
Vol.	9	448	138	4	62	3	2	4	10					663	69
PM Peak	16:00	17:00	16:00	14:00	16:00	12:00		12:00	12:00		17:00			16:00	14:00
Vol.	13	309	140	10	61	3		5	9		1			504	69

Old Colony Planning Council
70 School Street
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Community: Halifax
 Com#_UR/FC: 118_U5
 Recorder #: 32537
 Layout: L6 Basic (2')

Station ID:
 Site Code: 118
 Date Start: 06-Dec-17
 Date End: 07-Dec-17
 Plymouth (106), w of Thompson (105)

WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/07/17	0	19	2	0	1	0	0	0	0	0	0	0	0	22	1
01:00	0	7	6	0	2	0	0	0	0	0	0	0	0	15	2
02:00	0	5	9	0	1	0	0	1	0	0	0	0	0	16	2
03:00	0	5	8	0	7	0	0	0	0	0	1	0	0	21	8
04:00	0	20	21	0	23	0	0	0	0	0	0	0	0	64	23
05:00	2	77	78	1	45	2	0	0	1	0	0	0	0	206	49
06:00	5	159	127	6	84	1	0	0	0	0	0	0	0	382	91
07:00	10	302	214	1	61	3	0	1	3	0	0	0	0	595	69
08:00	2	312	161	5	71	4	0	4	4	0	0	0	0	563	88
09:00	2	235	117	4	48	3	0	3	4	0	0	0	0	416	62
10:00	7	247	90	5	37	4	0	1	2	0	0	0	0	393	49
11:00	7	198	92	4	39	1	0	0	3	0	0	0	0	344	47
12 PM	2	241	76	6	43	3	0	2	4	0	0	0	0	377	58
13:00	5	222	83	3	28	5	0	0	2	0	0	0	0	348	38
14:00	8	243	98	7	50	2	0	1	4	0	0	0	0	413	64
15:00	9	274	136	7	57	5	1	2	1	0	0	0	0	492	73
16:00	4	305	131	3	56	4	0	1	3	0	0	0	0	507	67
17:00	6	300	120	1	40	2	0	0	0	0	0	0	0	469	43
18:00	1	235	92	1	34	0	0	2	0	0	0	0	0	365	37
19:00	1	129	73	0	24	0	0	0	0	0	1	0	0	228	25
20:00	0	100	69	0	23	1	0	0	0	0	0	0	0	193	24
21:00	1	80	51	0	16	0	0	0	0	0	0	0	0	148	16
22:00	0	45	33	0	15	0	0	1	0	0	0	0	0	94	16
23:00	0	30	22	0	11	0	0	0	0	0	0	0	0	63	11
Total	72	3790	1909	54	816	40	1	19	31	0	2	0	0	6734	963
Percent	1.1%	56.3%	28.3%	0.8%	12.1%	0.6%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%		14.3%
AM Peak Vol.	07:00	08:00	07:00	06:00	06:00	08:00		08:00	08:00		03:00			07:00	06:00
PM Peak Vol.	15:00	16:00	15:00	14:00	15:00	13:00	15:00	12:00	12:00		19:00			16:00	15:00
Grand Total	147	7737	3499	97	1544	70	8	43	76	0	3	0	0	13224	1841
Percent	1.1%	58.5%	26.5%	0.7%	11.7%	0.5%	0.1%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%		13.9%

Old Colony Planning Council
70 School Street
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Page 5

Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB, WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/06/17	0	36	5	0	1	0	0	0	0	0	0	0	0	42	1
01:00	0	28	7	0	4	0	0	0	2	0	0	0	0	41	6
02:00	0	15	5	0	1	0	0	1	1	0	0	0	0	23	3
03:00	0	11	7	0	8	0	0	0	0	0	0	0	0	26	8
04:00	0	46	22	2	23	0	0	0	0	0	0	0	0	93	25
05:00	2	160	99	1	34	1	0	3	2	0	0	0	0	302	41
06:00	8	409	152	6	67	8	2	1	1	0	0	0	0	654	85
07:00	13	674	222	4	78	2	0	1	6	0	0	0	0	1000	91
08:00	18	588	196	9	58	10	1	7	4	0	0	0	0	891	89
09:00	3	436	160	6	54	5	1	6	9	0	0	0	0	680	81
10:00	3	426	156	2	41	6	2	4	11	0	0	0	0	651	66
11:00	7	452	152	5	57	8	2	4	15	0	0	0	0	702	91
12 PM	8	471	178	4	57	7	0	6	12	0	0	0	0	743	86
13:00	5	503	195	5	52	7	0	0	6	0	0	0	0	773	70
14:00	6	548	197	14	68	7	0	5	6	0	0	0	0	851	100
15:00	14	702	261	9	84	5	0	2	4	0	0	0	0	1081	104
16:00	22	752	284	4	92	4	0	2	4	0	0	0	0	1164	106
17:00	23	791	233	5	69	6	0	0	0	0	1	0	0	1128	81
18:00	3	526	171	2	45	1	0	1	0	0	0	0	0	749	49
19:00	6	363	111	0	46	2	0	0	1	0	0	0	0	529	49
20:00	0	269	100	0	24	1	0	0	0	0	0	0	0	394	25
21:00	1	180	69	0	11	0	0	0	0	0	0	0	0	261	11
22:00	0	99	38	1	12	0	0	0	0	0	0	0	0	150	13
23:00	0	80	23	0	4	0	0	0	0	0	0	0	0	107	4
Total	142	8565	3043	79	990	80	8	43	84	0	1	0	0	13035	1285
Percent	1.1%	65.7%	23.3%	0.6%	7.6%	0.6%	0.1%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%		9.9%
AM Peak	08:00	07:00	07:00	08:00	07:00	08:00	06:00	08:00	11:00					07:00	07:00
Vol.	18	674	222	9	78	10	2	7	15					1000	91
PM Peak	17:00	17:00	16:00	14:00	16:00	12:00		12:00	12:00		17:00			16:00	16:00
Vol.	23	791	284	14	92	7		6	12		1			1164	106

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Community: Halifax
Com#_UR/FC: 118_U5
Recorder #: 32537
Layout: L6 Basic (2')

Station ID:
Site Code: 118
Date Start: 06-Dec-17
Date End: 07-Dec-17
Plymouth (106), w of Thompson (105)

EB, WB

Start Time	Motorc	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
12/07/17	0	40	7	0	4	0	0	1	0	0	0	0	0	52	5
01:00	0	17	10	0	3	0	0	0	0	0	0	0	0	30	3
02:00	0	16	10	0	1	0	0	2	0	0	0	0	0	29	3
03:00	0	11	8	0	10	0	0	0	0	0	1	0	0	30	11
04:00	0	38	26	1	26	1	0	0	0	0	0	0	0	92	28
05:00	2	149	120	4	51	2	0	0	1	0	0	0	0	329	58
06:00	8	325	180	11	99	4	0	1	0	0	0	0	0	628	115
07:00	17	503	301	5	81	11	0	8	6	0	0	0	0	932	111
08:00	7	553	234	9	84	9	0	5	8	0	0	0	0	909	115
09:00	4	456	189	6	66	8	0	3	5	0	0	0	0	737	88
10:00	13	482	156	9	59	9	0	4	3	0	0	0	0	735	84
11:00	13	482	175	4	59	5	0	1	4	0	0	0	0	743	73
12 PM	10	538	160	9	63	4	0	2	4	0	0	0	0	790	82
13:00	6	524	141	6	50	7	0	3	6	0	0	0	0	743	72
14:00	18	628	199	9	71	8	0	5	6	0	0	0	0	944	99
15:00	20	673	285	10	84	5	1	3	3	0	0	0	0	1084	106
16:00	15	746	286	7	87	5	0	2	3	0	0	0	0	1151	104
17:00	14	792	264	3	58	4	0	0	0	0	0	0	0	1135	65
18:00	5	590	184	1	51	0	0	2	0	0	0	0	0	833	54
19:00	2	350	130	0	32	0	0	0	0	0	1	0	0	515	33
20:00	1	275	124	0	28	2	0	0	0	0	0	0	0	430	30
21:00	1	197	79	0	19	0	0	0	0	0	0	0	0	296	19
22:00	0	129	48	0	17	0	0	1	0	0	0	0	0	195	18
23:00	1	79	29	0	11	0	0	0	0	0	0	0	0	120	11
Total	157	8593	3345	94	1114	84	1	43	49	0	2	0	0	13482	1387
Percent	1.2%	63.7%	24.8%	0.7%	8.3%	0.6%	0.0%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%		10.3%
AM Peak	07:00	08:00	07:00	06:00	06:00	07:00		07:00	08:00		03:00			07:00	06:00
Vol.	17	553	301	11	99	11		8	8		1			932	115
PM Peak	15:00	17:00	16:00	15:00	16:00	14:00	15:00	14:00	13:00		19:00			16:00	15:00
Vol.	20	792	286	10	87	8	1	5	6		1			1151	106
Grand Total	299	17158	6388	173	2104	164	9	86	133	0	3	0	0	26517	2672
Percent	1.1%	64.7%	24.1%	0.7%	7.9%	0.6%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%		10.1%

***MASSDOT SEASONAL ADJUSTMENT FACTORS AND
HISTORICAL GROWTH***

Massachusetts Highway Department
Statewide Traffic Data Collection
2017 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.30	1.23	1.21	1.04	0.98	0.92	0.86	0.81	0.95	0.99	1.03	1.10	0.80
R2	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
R3	1.05	1.01	1.04	0.99	0.94	0.93	0.91	0.92	0.96	0.94	1.01	1.03	0.97
R4-R7	1.10	1.07	1.09	1.00	0.95	0.89	0.88	0.87	0.92	0.95	1.04	1.09	0.93
U1-Boston	1.01	1.04	0.99	0.94	0.93	0.92	0.96	0.93	0.94	0.93	0.95	0.98	0.95
U1-Essex	1.04	1.05	1.00	0.96	0.93	0.89	0.90	0.90	0.93	0.93	0.98	1.03	0.90
U1-Southeast	1.07	1.05	1.02	0.97	0.95	0.90	0.89	0.88	0.92	0.94	0.98	1.01	0.97
U1-West	1.00	0.96	0.94	0.92	0.93	0.92	0.95	0.93	0.92	0.92	0.97	0.97	0.89
U1-Worcester	1.10	1.10	1.04	0.97	0.95	0.94	0.93	0.91	0.95	0.96	0.98	1.04	0.89
U2	1.01	1.03	0.98	0.95	0.93	0.91	0.94	0.92	0.95	0.95	0.95	0.97	0.98
U3	1.03	1.05	1.01	0.95	0.92	0.90	0.94	0.93	0.93	0.92	0.96	0.99	0.96
U4-U7	1.06	1.05	1.02	0.96	0.92	0.89	0.95	0.95	0.92	0.92	0.98	1.03	0.98
Rec - East	1.18	1.17	1.08	1.03	0.95	0.87	0.83	0.83	0.97	0.98	1.19	1.19	0.98
Rec - West	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.95

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

Recreational - East Group - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

Recreational - West Group - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114,1116,2196,2197 and 2198.



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers
 239 Littleton Road, Suite 3
 WESTFORD, MA 01886

JOB 19075 Halifax 40b
 SHEET NO. 1 OF 1
 CALCULATED BY DP DATE 9/5/2019
 CHECKED BY DATE
 DESCRIPTION Annual Growth

STATION 703 - BROCKTON - CENTRE STREET

From MassDOT Interactive Transportation Data Management System

CENTRE STREET											
year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Daily traffic volume	13,185	13,347	13,675	13,212	13,235	13,139	13,055	12,887	12,943	12,924	12,561
Relative to 2008		1.2%	1.8%	0.1%	0.1%	-0.1%	-0.2%	-0.3%	-0.2%	-0.2%	-0.5%
Relative to 2009			2.5%	-0.5%	-0.3%	-0.4%	-0.4%	-0.6%	-0.4%	-0.4%	-0.7%
Relative to 2010				-3.4%	-1.6%	-1.3%	-1.2%	-1.2%	-0.9%	-0.8%	-1.1%
Relative to 2011					0.2%	-0.3%	-0.4%	-0.6%	-0.4%	-0.4%	-0.7%
Relative to 2012						-0.7%	-0.7%	-0.9%	-0.6%	-0.5%	-0.9%
Relative to 2013							-0.6%	-1.0%	-0.5%	-0.4%	-0.9%
Relative to 2014								-1.3%	-0.4%	-0.3%	-1.0%
Relative to 2015									0.4%	0.1%	-0.9%
Relative to 2016										-0.1%	-1.5%
average annual growth rate (relative to 2008)											-0.5%

Say 0.5%

STATION 36 - HANOVER - PILGRIM HIGHWAY SOUTH OF RIVER STREET

PILGRIMS HIGHWAY											
year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Daily traffic volume	70,560	71,449	71,958	70,770	68,198	72,958	70,137	74,105	71,125		74,315
Relative to 2008		1.3%	1.0%	0.1%	-0.8%	0.7%	-0.1%	0.7%	0.1%	-100.0%	0.5%
Relative to 2009			0.7%	-0.5%	-1.5%	0.5%	-0.4%	0.6%	-0.1%	-100.0%	0.4%
Relative to 2010				-1.7%	-2.6%	0.5%	-0.6%	0.6%	-0.2%	-100.0%	0.4%
Relative to 2011					-3.6%	1.5%	-0.3%	1.2%	0.1%	-100.0%	0.7%
Relative to 2012						7.0%	1.4%	2.8%	1.1%	-100.0%	1.4%
Relative to 2013							-3.9%	0.8%	-0.8%	-100.0%	0.4%
Relative to 2014								5.7%	0.7%	-100.0%	1.5%
Relative to 2015									-4.0%	-100.0%	0.1%
Relative to 2016										-100.0%	2.2%
average annual growth rate (relative to 2008)											0.5%

Say 0.5%

STATION 7111 - MIDDLEBOROUGH - INTERSTATE 495

INTERSTATE 495											
year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Daily traffic volume	47,300		42,857	44,997	43,491	43,321	43,766	44,864	47,945		46,800
Relative to 2008		#####	-4.8%	-1.7%	-2.1%	-1.7%	-1.3%	-0.8%	0.2%	-100.0%	-0.1%
Relative to 2009			#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Relative to 2010				5.0%	0.7%	0.4%	0.5%	0.9%	1.9%	-100.0%	1.1%
Relative to 2011					-3.3%	-1.9%	-0.9%	-0.1%	1.3%	-100.0%	0.6%
Relative to 2012						-0.4%	0.3%	1.0%	2.5%	-100.0%	1.2%
Relative to 2013							1.0%	1.8%	3.4%	-100.0%	1.6%
Relative to 2014								2.5%	4.7%	-100.0%	1.7%
Relative to 2015									6.9%	-100.0%	1.4%
Relative to 2016										-100.0%	-1.2%
average annual growth rate (relative to 2008)											-0.1%

Say 1%

CRASH RATE CALCULATIONS

INTERSECTION CRASH RATE WORKSHEET

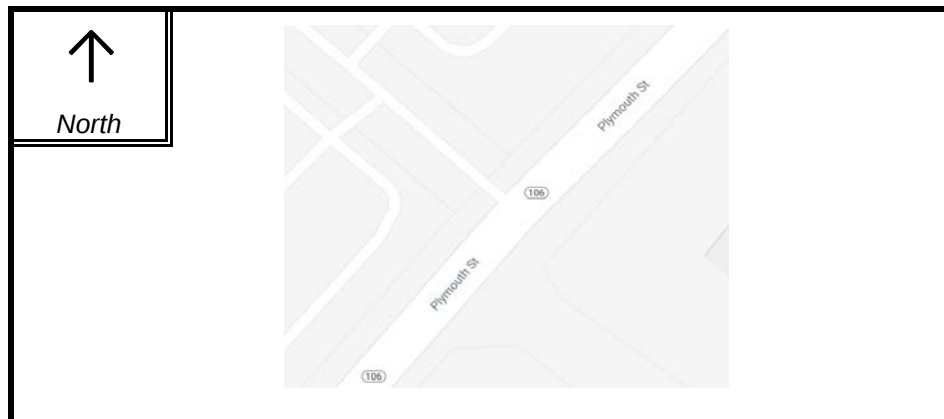
TOWN : Halifax COUNT DATE : 8/30/2018
 DISTRICT : 5 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : Plymouth Street (Route 106)

MINOR STREET(S) : Stop & Shop Driveway

INTERSECTION
DIAGRAM



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB			
PEAK HOURLY VOLUMES (PM) :	632	718	115			1,465

" K " FACTOR :

0.08

INTERSECTION ADT (V) = TOTAL DAILY
APPROACH VOLUME :

17,287

TOTAL # OF CRASHES :

8

OF
YEARS :

3

AVERAGE # OF
CRASHES PER YEAR (A) :

2.67

CRASH RATE CALCULATION :

0.42

RATE = $\frac{(A * 1,000,000)}{(V * 365)}$

Comments : The average crash rate for signalized intersections in District 5 is 0.73 MEV.

Project Title & Date: Halifax 40b

INTERSECTION CRASH RATE WORKSHEET

TOWN : Halifax COUNT DATE : 8/30/2018

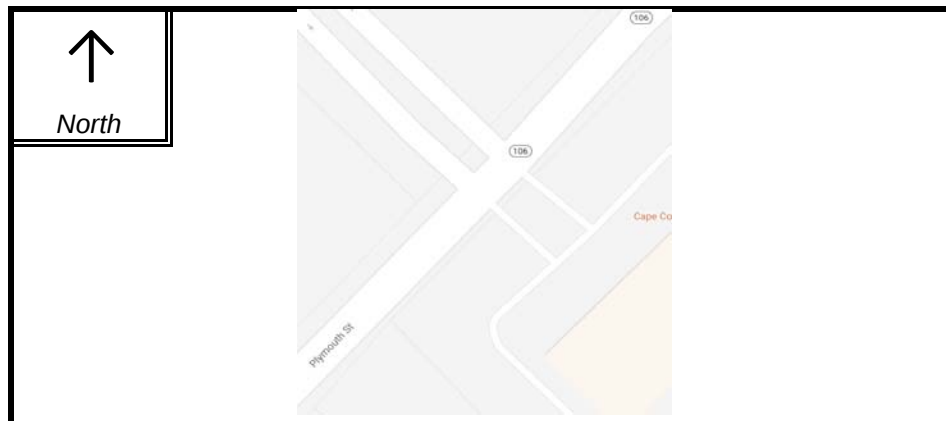
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : Plymouth Street (Route 106)

MINOR STREET(S) : WalMart Driveway

INTERSECTION
DIAGRAM



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	12	173	753	695		1,633

" K " FACTOR : 0.08 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 19,270

TOTAL # OF CRASHES : 0 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (A) : 0.00

CRASH RATE CALCULATION :

0.00

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : The average crash rate for signalized intersections in District 5 is 0.73 MEV.

Project Title & Date: Halifax 40b

INTERSECTION CRASH RATE WORKSHEET

TOWN : Halifax COUNT DATE : 8/30/2018

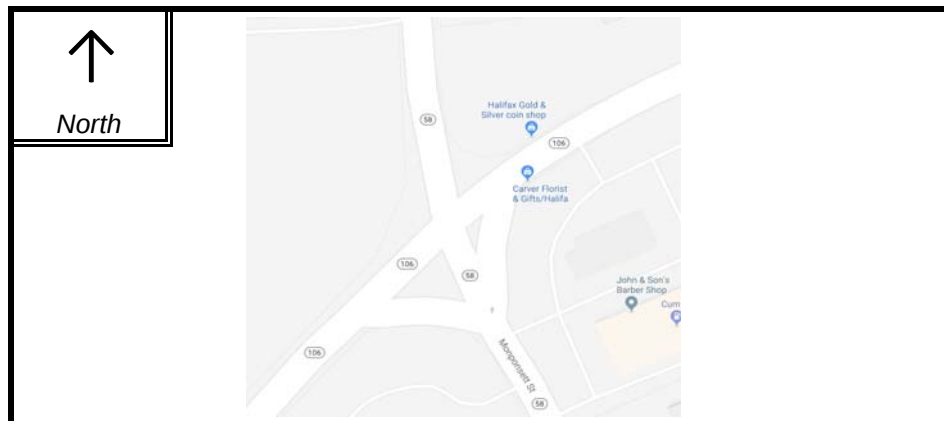
DISTRICT : 5 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : Plymouth Street (Route 106)

MINOR STREET(S) : Monponsett St

INTERSECTION
DIAGRAM



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	367	410	750	473		2,000

" K " FACTOR : 0.08 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 23,601

TOTAL # OF CRASHES : 18 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (A) : 6.00

CRASH RATE CALCULATION :

0.70

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : The average crash rate for signalized intersections in District 5 is 0.73 MEV.

Project Title & Date: Halifax 40b

TRIP GENERATION CALCULATIONS

TRIP GENERATION WORKSHEET

LAND USE: *Single Family Detached Housing*
 LAND USE CODE: 210 Independent Variable---Trips per DU
 SETTING/LOCATION: General Suburban
 JOB: Halifax 40b
 JOB NUMBER: 19075 Number of Units: 30

WEEKDAY

RATES:	Total Trip Ends			Directional Dist.		Number of Studies
	Average	Low	High	Enter	Exit	
DAILY	9.44	4.81	19.39	50%	50%	159
AM PEAK	0.74	0.33	2.27	25%	75%	173
PM PEAK	0.99	0.44	2.98	63%	37%	190
PK GEN AM	0.76	0.36	2.27	26%	74%	157
PK GEN PM	1	0.49	2.98	64%	36%	165

	BY AVERAGE			BY REGRESSION			R ²
	Total	Enter	Exit	Total	Enter	Exit	
DAILY	283	142	142	343	172	172	0.95
AM PEAK	22	6	17	26	7	20	0.89
PM PEAK	30	19	11	32	20	12	0.92
PK GEN AM	23	6	17	27	7	20	0.89
PK GEN PM	30	19	11	34	22	12	0.92

SATURDAY

RATES:	Total Trip Ends			Directional Dist.		Number of Studies
	Average	Low	High	Enter	Exit	
DAILY	9.54	5.32	15.25	50%	50%	52
PEAK HR	0.93	0.64	1.75	54%	46%	31

	BY AVERAGE			BY REGRESSION			R ²
	Total	Enter	Exit	Total	Enter	Exit	
DAILY	286	143	143	316	158	158	0.91
PEAK HR	28	15	13	43	23	20	0.87

SUNDAY

RATES:	Total Trip Ends			Directional Dist.		Number of Studies
	Average	Low	High	Enter	Exit	
DAILY	8.55	4.74	11.82	50%	50%	51
PEAK HR	0.85	0.6	1.45	53%	47%	31

	BY AVERAGE			BY REGRESSION			R ²
	Total	Enter	Exit	Total	Enter	Exit	
DAILY	257	129	129	201	101	101	0.94
PEAK HR	26	14	12	35	19	16	0.88

SOURCE: Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

CENSUS DATA

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil & Structural Engineers
 239 Littleton Road, Suite 3
 WESTFORD, MA 01886
 (978) 923-0400 (978) 399-0033 (Fax)

JOB 19075- 314 Plymouth Street, Halifax, MA
 SHEET NO. 2 OF 2
 CALCULATED BY DP DATE 9/10/2019
 CHECKED BY SM DATE 2/4/2019
 DESCRIPTION Traffic Distribution Based on CTPP Data

JOURNEY-TO-WORK TRIPS FROM HALIFAX*

A : 106 West of Site
 B : 106 East of Site
 C : 58 South of Site
 D : 58 North of Site

* Based on CTPP 2012-2016 data - ACS surveys provided by US Census Bureau

Town of Workplace	Residents Working in Municipality		Estimated % Splits										
	#	%			A	B	C	D					
Halifax town, Plymouth County, Massachusetts	505	12.4%			75%	10%	10%	5%					1.00
Plymouth town, Plymouth County, Massachusetts	370	9.1%				50%	50%						1.00
Brockton city, Plymouth County, Massachusetts	360	8.8%			100%								1.00
Kingston town, Plymouth County, Massachusetts	290	7.1%				90%	10%						1.00
Boston city, Suffolk County, Massachusetts	290	7.1%			10%			90%					1.00
Hanover town, Plymouth County, Massachusetts	210	5.1%				10%		90%					1.00
Middleborough town, Plymouth County, Massachusetts	165	4.0%			67%	33%							1.00
Hanson town, Plymouth County, Massachusetts	135	3.3%			20%			80%					1.00
Bridgewater town, Plymouth County, Massachusetts	105	2.6%			100%								1.00
Holbrook town, Norfolk County, Massachusetts	100	2.5%			60%			40%					1.00
East Bridgewater town, Plymouth County, Massachusetts	100	2.5%			100%								1.00
Rockland town, Plymouth County, Massachusetts	100	2.5%						100%					1.00
Braintree Town city, Norfolk County, Massachusetts	90	2.2%			35%	10%		55%					1.00
Quincy city, Norfolk County, Massachusetts	90	2.2%			40%	10%		50%					1.00
Pembroke town, Plymouth County, Massachusetts	75	1.8%				50%		50%					1.00
Weymouth Town city, Norfolk County, Massachusetts	70	1.7%			35%	10%		55%					1.00
Duxbury town, Plymouth County, Massachusetts	70	1.7%				100%							1.00
Abington town, Plymouth County, Massachusetts	65	1.6%			60%			40%					1.00
Stoughton town, Norfolk County, Massachusetts	60	1.5%			100%								1.00
Norwell town, Plymouth County, Massachusetts	60	1.5%				20%		80%					1.00
Bourne town, Barnstable County, Massachusetts	50	1.2%				25%	75%						1.00
Raynham town, Bristol County, Massachusetts	50	1.2%			100%								1.00
Avon town, Norfolk County, Massachusetts	50	1.2%			100%								1.00
Wareham town, Plymouth County, Massachusetts	50	1.2%			45%		55%						1.00
													0.00
													0.00
	4,078	86.1%			36%	18%	8%	24%					
		Balanced from Above			42%	21%	9%	28%					
		Say			40%	20%	10%	30%					



INTERSECTION CAPACITY ANALYSIS WORKSHEETS



Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	305	105	31	352	38	151	165	20	36	86	100
Future Volume (vph)	96	305	105	31	352	38	151	165	20	36	86	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1671	1737	0	1641	1815	0	1703	1771	0	1671	1759	1568
Flt Permitted	0.514			0.342			0.950			0.950		
Satd. Flow (perm)	904	1737	0	591	1815	0	1703	1771	0	1671	1759	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			7			8				123
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.78	0.78	0.78	0.94	0.94	0.94	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	8%	5%	6%	10%	3%	5%	6%	5%	10%	8%	8%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	526	0	33	414	0	164	201	0	43	104	120
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)		7.0										
Flash Dont Walk (s)		12.0										
Pedestrian Calls (#/hr)		5										
Act Effct Green (s)	22.9	22.9		18.2	18.2		9.3	16.2		7.2	10.4	10.4
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.16	0.27		0.12	0.18	0.18
v/c Ratio	0.25	0.76		0.11	0.73		0.61	0.41		0.21	0.34	0.32
Control Delay	16.9	25.9		16.2	27.3		40.1	22.3		29.8	26.1	7.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.9	25.9		16.2	27.3		40.1	22.3		29.8	26.1	7.4
LOS	B	C		B	C		D	C		C	C	A
Approach Delay		24.2			26.5			30.3			18.3	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	28	150		9	138		60	53		15	36	0
Queue Length 95th (ft)	62	254		26	236		#165	131		41	69	29
Internal Link Dist (ft)		325			1291			870			1037	
Turn Bay Length (ft)	220			120			120			150		150
Base Capacity (vph)	496	818		313	846		273	826		268	816	793
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	0.25	0.64		0.11	0.49		0.60	0.24		0.16	0.13	0.15

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 59

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 25.2

Intersection LOS: C

Intersection Capacity Utilization 54.0%

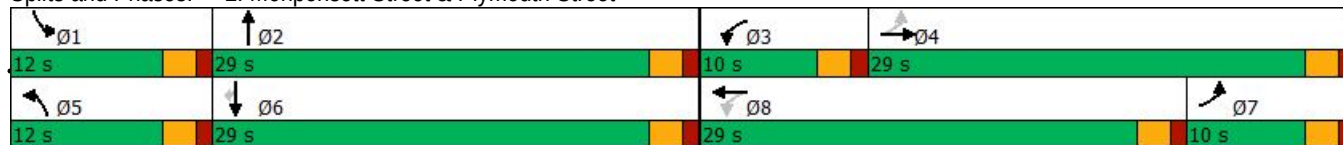
ICU Level of Service A

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings
3: Plymouth Street & Stop & Shop Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

							
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	0	502	625	23	13	4	
Future Volume (vph)	0	502	625	23	13	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	225			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Satd. Flow (prot)	1900	1792	1829	0	1669	0	
Flt Permitted					0.964		
Satd. Flow (perm)	1900	1792	1829	0	1669	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			3		6		
Link Speed (mph)		25	25		25		
Link Distance (ft)		533	578		399		
Travel Time (s)		14.5	15.8		10.9		
Peak Hour Factor	0.75	0.75	0.96	0.96	0.71	0.71	
Heavy Vehicles (%)	0%	6%	3%	13%	8%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	669	675	0	24	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2		1		
Detector Template	Left	Thru	Thru		Left		
Leading Detector (ft)	20	100	100		20		
Trailing Detector (ft)	0	0	0		0		
Detector 1 Position(ft)	0	0	0		0		
Detector 1 Size(ft)	20	6	6		20		
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex		CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		CI+Ex	CI+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Detector Phase	4	4	8		6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		7.0		5.0

Synchro 10: Lanes, Volumes, Timings

3: Plymouth Street & Stop & Shop Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Minimum Split (s)	29.0	29.0	22.5		10.0		29.0
Total Split (s)	90.0	90.0	90.0		10.0		29.0
Total Split (%)	69.8%	69.8%	69.8%		7.8%		22%
Maximum Green (s)	87.0	87.0	87.0		7.0		26.0
Yellow Time (s)	2.0	2.0	2.0		2.0		2.0
All-Red Time (s)	1.0	1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0
Recall Mode	Min	Min	Min		None		None
Walk Time (s)							10.0
Flash Dont Walk (s)							16.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)		43.1	43.1		9.0		
Actuated g/C Ratio		0.92	0.92		0.19		
v/c Ratio		0.41	0.40		0.07		
Control Delay		5.0	4.9		25.7		
Queue Delay		0.0	0.0		0.0		
Total Delay		5.0	4.9		25.7		
LOS		A	A		C		
Approach Delay		5.0	4.9		25.7		
Approach LOS		A	A		C		
Queue Length 50th (ft)		0	0		3		
Queue Length 95th (ft)		279	381		29		
Internal Link Dist (ft)		453	498		319		
Turn Bay Length (ft)							
Base Capacity (vph)		1727	1763		324		
Starvation Cap Reductn		0	80		0		
Spillback Cap Reductn		0	0		0		
Storage Cap Reductn		0	0		0		
Reduced v/c Ratio		0.39	0.40		0.07		

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 46.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 5.3

Intersection LOS: A

Intersection Capacity Utilization 46.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Plymouth Street & Stop & Shop Driveway

→ Ø4	90 s	→ Ø9	29 s
← Ø6	10 s	← Ø8	90 s

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	470	2	5	456	25	3	0	1	28	1	19
Future Volume (vph)	21	470	2	5	456	25	3	0	1	28	1	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1898	0	0	1881	1615	0	1769	0	1736	1626	0
Flt Permitted	0.294				0.996			0.972				
Satd. Flow (perm)	559	1898	0	0	1874	1615	0	1784	0	1827	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82		82			24	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.50	0.50	0.50	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	487	0	0	501	27	0	8	0	35	25	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	25.5	27.4			15.6	15.6		7.2		7.3	7.3	
Actuated g/C Ratio	0.75	0.81			0.46	0.46		0.21		0.22	0.22	
v/c Ratio	0.03	0.32			0.58	0.03		0.02		0.09	0.07	
Control Delay	2.3	3.0			10.6	0.2		0.0		15.9	8.9	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.3	3.0			10.6	0.2		0.0		15.9	8.9	
LOS	A	A			B	A		A		B	A	
Approach Delay	2.9			10.0						13.0		
Approach LOS	A			B						B		
Queue Length 50th (ft)	1	30			74	0		0		6	0	
Queue Length 95th (ft)	5	69			148	1		0		23	13	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380						150					
Base Capacity (vph)	669	1759			1497	1306		651		610	560	
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	0.03	0.28			0.33	0.02		0.01		0.06	0.04	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 33.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 6.9

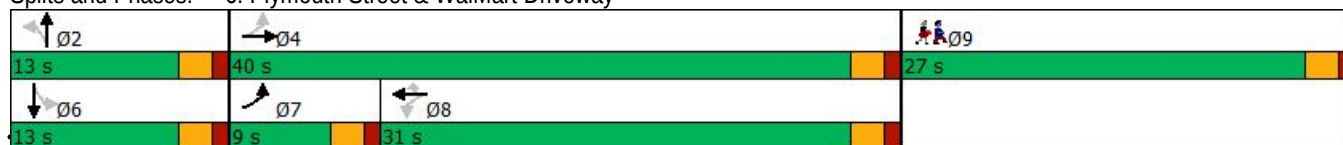
Intersection LOS: A

Intersection Capacity Utilization 43.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Plymouth Street & WalMart Driveway



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DMP

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2019 Existing Weekday AM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	415	185	83	331	61	151	172	46	59	218	135
Future Volume (vph)	154	415	185	83	331	61	151	172	46	59	218	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1736	1800	0	1787	1841	0	1770	1777	0	1770	1863	1599
Flt Permitted	0.332			0.272			0.950			0.950		
Satd. Flow (perm)	607	1800	0	512	1841	0	1770	1777	0	1770	1863	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			12			18				157
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.97	0.97	0.97	0.82	0.82	0.82	0.93	0.93	0.93	0.86	0.86	0.86
Heavy Vehicles (%)	4%	1%	0%	1%	1%	0%	2%	4%	2%	2%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	619	0	101	478	0	162	234	0	69	253	157
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	5											
Act Effct Green (s)	26.2	26.2		21.5	21.5		8.9	20.1		7.6	14.9	14.9
Actuated g/C Ratio	0.38	0.38		0.31	0.31		0.13	0.29		0.11	0.22	0.22
v/c Ratio	0.38	0.88		0.35	0.82		0.71	0.44		0.35	0.63	0.34
Control Delay	24.0	37.3		20.6	34.2		49.4	22.8		34.8	31.6	6.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.0	37.3		20.6	34.2		49.4	22.8		34.8	31.6	6.2
LOS	C	D		C	C		D	C		C	C	A
Approach Delay	34.6			31.8			33.7			23.7		
Approach LOS	C			C			C			C		
Queue Length 50th (ft)	44	224		29	173		66	80		27	98	0
Queue Length 95th (ft)	99	#491		60	265		#172	145		65	155	35
Internal Link Dist (ft)	325			1291			870			1037		
Turn Bay Length (ft)	220			120			120			150		150
Base Capacity (vph)	418	702		290	707		232	686		232	708	705
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	0.38	0.88		0.35	0.68		0.70	0.34		0.30	0.36	0.22

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 68.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 70.9%

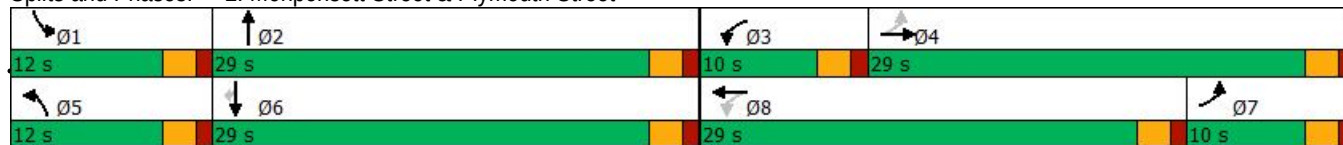
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings
3: Plymouth Street & Stop & Shop Driveway

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

							
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	13	622	653	68	91	24	
Future Volume (vph)	13	622	653	68	91	24	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	225			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Satd. Flow (prot)	1805	1900	1875	0	1777	0	
Flt Permitted	0.220				0.962		
Satd. Flow (perm)	418	1900	1875	0	1777	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			9		8		
Link Speed (mph)		25	25		25		
Link Distance (ft)		533	578		399		
Travel Time (s)		14.5	15.8		10.9		
Peak Hour Factor	0.88	0.88	0.87	0.87	0.67	0.67	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	15	707	829	0	172	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2		1		
Detector Template	Left	Thru	Thru		Left		
Leading Detector (ft)	20	100	100		20		
Trailing Detector (ft)	0	0	0		0		
Detector 1 Position(ft)	0	0	0		0		
Detector 1 Size(ft)	20	6	6		20		
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex		CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		CI+Ex	CI+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Detector Phase	4	4	8		6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		7.0		5.0

Synchro 10: Lanes, Volumes, Timings

3: Plymouth Street & Stop & Shop Driveway

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Minimum Split (s)	29.0	29.0	22.5		10.0		29.0
Total Split (s)	90.0	90.0	90.0		10.0		29.0
Total Split (%)	69.8%	69.8%	69.8%		7.8%		22%
Maximum Green (s)	87.0	87.0	87.0		7.0		26.0
Yellow Time (s)	2.0	2.0	2.0		2.0		2.0
All-Red Time (s)	1.0	1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0
Recall Mode	Min	Min	Min		None		None
Walk Time (s)							10.0
Flash Dont Walk (s)							16.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)	36.6	36.6	36.6		8.1		
Actuated g/C Ratio	0.67	0.67	0.67		0.15		
v/c Ratio	0.05	0.56	0.66		0.64		
Control Delay	5.8	8.3	10.1		38.7		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	5.8	8.3	10.1		38.7		
LOS	A	A	B		D		
Approach Delay		8.2	10.1		38.7		
Approach LOS		A	B		D		
Queue Length 50th (ft)	1	55	71		35		
Queue Length 95th (ft)	13	381	487		#194		
Internal Link Dist (ft)		453	498		319		
Turn Bay Length (ft)	225						
Base Capacity (vph)	402	1827	1804		270		
Starvation Cap Reductn	0	0	75		0		
Spillback Cap Reductn	0	0	0		0		
Storage Cap Reductn	0	0	0		0		
Reduced v/c Ratio	0.04	0.39	0.48		0.64		

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 54.6

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 51.7%

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: Plymouth Street & Stop & Shop Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	656	12	8	574	117	10	0	2	152	0	22
Future Volume (vph)	88	656	12	8	574	117	10	0	2	152	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	1876	0	0	1880	1615	0	1782	0	1805	1615	0
Flt Permitted	0.216				0.992			0.838		0.742		
Satd. Flow (perm)	406	1876	0	0	1866	1615	0	1556	0	1410	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				97		82			607	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.89	0.89	0.89	0.87	0.87	0.87	0.50	0.50	0.50	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	750	0	0	669	134	0	24	0	192	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	36.9	36.9		28.0	28.0		10.0			10.0	10.0	
Actuated g/C Ratio	0.70	0.70		0.53	0.53		0.19			0.19	0.19	
v/c Ratio	0.23	0.57		0.68	0.15		0.07			0.72	0.04	
Control Delay	3.8	6.2		13.6	3.1		0.3			39.1	0.1	
Queue Delay	0.0	0.0		0.4	0.0		0.0			0.0	0.0	
Total Delay	3.8	6.2		13.9	3.1		0.3			39.1	0.1	
LOS	A	A		B	A		A			D	A	
Approach Delay	5.9			12.1			0.3			34.2		
Approach LOS	A			B			A			C		
Queue Length 50th (ft)	7	87		138	5		0			57	0	
Queue Length 95th (ft)	16	149		223	23		0			#114	0	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380			150								
Base Capacity (vph)	439	1311		986	899		360			266	797	
Starvation Cap Reductn	0	10		61	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	0.23	0.58		0.72	0.15		0.07			0.72	0.04	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 52.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 11.7

Intersection LOS: B

Intersection Capacity Utilization 85.3%

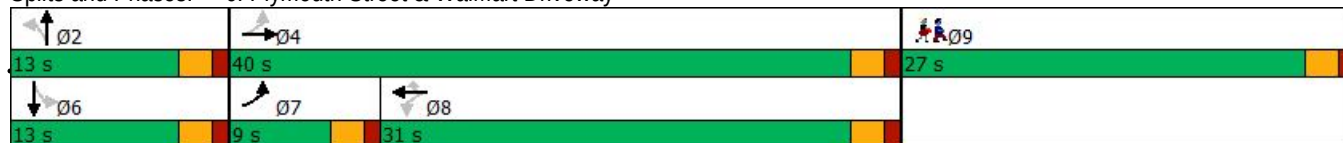
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Plymouth Street & WalMart Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2019 Existing Weekday PM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	319	110	32	367	39	157	171	21	37	89	105
Future Volume (vph)	100	319	110	32	367	39	157	171	21	37	89	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1671	1737	0	1641	1815	0	1703	1769	0	1671	1759	1568
Flt Permitted	0.438			0.308			0.950			0.950		
Satd. Flow (perm)	771	1737	0	532	1815	0	1703	1769	0	1671	1759	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			7			8				127
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.78	0.78	0.78	0.94	0.94	0.94	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	8%	5%	6%	10%	3%	5%	6%	5%	10%	8%	8%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	550	0	34	431	0	171	209	0	45	107	127
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)		7.0										
Flash Dont Walk (s)		12.0										
Pedestrian Calls (#/hr)		5										
Act Effct Green (s)	24.6	24.6		19.3	19.3		9.1	16.9		7.1	10.9	10.9
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.14	0.27		0.11	0.17	0.17
v/c Ratio	0.27	0.80		0.12	0.77		0.70	0.44		0.24	0.35	0.34
Control Delay	18.2	28.3		16.4	29.9		45.9	24.3		30.8	26.4	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	18.2	28.3		16.4	29.9		45.9	24.3		30.8	26.4	7.6
LOS	B	C		B	C		D	C		C	C	A
Approach Delay		26.4			28.9			34.0			18.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	31	169		9	149		64	72		16	37	0
Queue Length 95th (ft)	64	#273		27	250		#175	136		43	70	31
Internal Link Dist (ft)		325			1291			870			1037	
Turn Bay Length (ft)	220			120			120			150		150
Base Capacity (vph)	466	738		287	761		246	742		241	733	728
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	0.27	0.75		0.12	0.57		0.70	0.28		0.19	0.15	0.17

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 63.1

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 55.4%

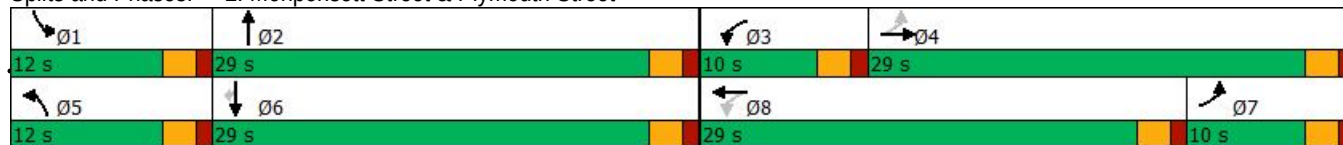
ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings
3: Plymouth Street & Stop & Shop Driveway

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

							
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	0	525	652	24	13	4	
Future Volume (vph)	0	525	652	24	13	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	225			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Satd. Flow (prot)	1900	1792	1829	0	1669	0	
Flt Permitted					0.964		
Satd. Flow (perm)	1900	1792	1829	0	1669	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			3		6		
Link Speed (mph)		25	25		25		
Link Distance (ft)		533	578		399		
Travel Time (s)		14.5	15.8		10.9		
Peak Hour Factor	0.75	0.75	0.96	0.96	0.71	0.71	
Heavy Vehicles (%)	0%	6%	3%	13%	8%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	700	704	0	24	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2		1		
Detector Template	Left	Thru	Thru		Left		
Leading Detector (ft)	20	100	100		20		
Trailing Detector (ft)	0	0	0		0		
Detector 1 Position(ft)	0	0	0		0		
Detector 1 Size(ft)	20	6	6		20		
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex		CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		CI+Ex	CI+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Detector Phase	4	4	8		6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		7.0		5.0

Synchro 10: Lanes, Volumes, Timings

3: Plymouth Street & Stop & Shop Driveway

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Minimum Split (s)	29.0	29.0	22.5		10.0		29.0
Total Split (s)	90.0	90.0	90.0		10.0		29.0
Total Split (%)	69.8%	69.8%	69.8%		7.8%		22%
Maximum Green (s)	87.0	87.0	87.0		7.0		26.0
Yellow Time (s)	2.0	2.0	2.0		2.0		2.0
All-Red Time (s)	1.0	1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0
Recall Mode	Min	Min	Min		None		None
Walk Time (s)							10.0
Flash Dont Walk (s)							16.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)		44.1	44.1		9.0		
Actuated g/C Ratio		0.92	0.92		0.19		
v/c Ratio		0.42	0.42		0.07		
Control Delay		5.1	4.9		26.4		
Queue Delay		0.0	0.0		0.0		
Total Delay		5.1	5.0		26.4		
LOS		A	A		C		
Approach Delay		5.1	5.0		26.4		
Approach LOS		A	A		C		
Queue Length 50th (ft)		0	0		3		
Queue Length 95th (ft)		296	404		30		
Internal Link Dist (ft)		453	498		319		
Turn Bay Length (ft)							
Base Capacity (vph)		1719	1754		320		
Starvation Cap Reductn		0	84		0		
Spillback Cap Reductn		0	0		0		
Storage Cap Reductn		0	0		0		
Reduced v/c Ratio		0.41	0.42		0.07		

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 47.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 5.4

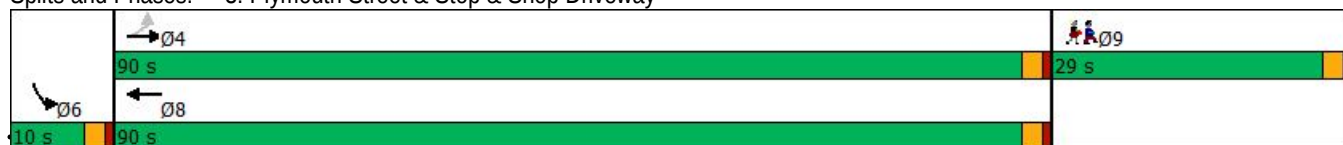
Intersection LOS: A

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Plymouth Street & Stop & Shop Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	492	2	5	477	26	3	0	1	29	1	20
Future Volume (vph)	22	492	2	5	477	26	3	0	1	29	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1898	0	0	1881	1615	0	1769	0	1736	1626	0
Flt Permitted	0.289				0.996			0.972				
Satd. Flow (perm)	549	1898	0	0	1874	1615	0	1784	0	1827	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82		82			25	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.50	0.50	0.50	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	509	0	0	523	28	0	8	0	36	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	26.5	28.5			16.8	16.8		7.2		7.2	7.2	
Actuated g/C Ratio	0.76	0.81			0.48	0.48		0.21		0.21	0.21	
v/c Ratio	0.04	0.33			0.58	0.03		0.02		0.10	0.07	
Control Delay	2.3	3.0			10.4	0.2		0.0		16.4	9.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.3	3.0			10.4	0.2		0.0		16.4	9.0	
LOS	A	A			B	A		A		B	A	
Approach Delay	2.9			9.9						13.3		
Approach LOS	A			A						B		
Queue Length 50th (ft)	1	33			79	0		0		7	0	
Queue Length 95th (ft)	5	73			157	1		0		24	13	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380						150					
Base Capacity (vph)	658	1732			1476	1290		628		587	539	
Starvation Cap Reductn	0	0			4	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	0.03	0.29			0.36	0.02		0.01		0.06	0.05	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 35

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 6.8

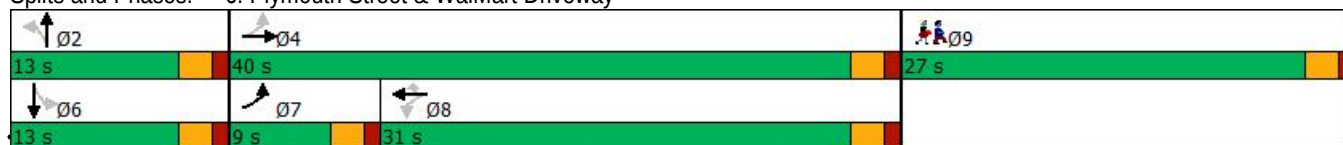
Intersection LOS: A

Intersection Capacity Utilization 44.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Plymouth Street & WalMart Driveway



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DMP

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 No Build Weekday AM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	161	435	194	86	347	63	158	178	48	61	226	142
Future Volume (vph)	161	435	194	86	347	63	158	178	48	61	226	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1736	1800	0	1787	1841	0	1770	1776	0	1770	1863	1599
Flt Permitted	0.299			0.260			0.950			0.950		
Satd. Flow (perm)	546	1800	0	489	1841	0	1770	1776	0	1770	1863	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			12			18				165
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.97	0.97	0.97	0.82	0.82	0.82	0.93	0.93	0.93	0.86	0.86	0.86
Heavy Vehicles (%)	4%	1%	0%	1%	1%	0%	2%	4%	2%	2%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	648	0	105	500	0	170	243	0	71	263	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	5											
Act Effct Green (s)	26.1	26.1		22.2	22.2		9.0	20.6		7.6	15.3	15.3
Actuated g/C Ratio	0.38	0.38		0.32	0.32		0.13	0.30		0.11	0.22	0.22
v/c Ratio	0.43	0.93		0.37	0.84		0.74	0.45		0.36	0.64	0.34
Control Delay	26.0	44.3		20.8	35.6		52.1	22.8		35.4	31.8	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.0	44.3		20.8	35.6		52.1	22.8		35.4	31.8	6.0
LOS	C	D		C	D		D	C		D	C	A
Approach Delay	40.6			33.0			34.9			23.8		
Approach LOS	D			C			C			C		
Queue Length 50th (ft)	47	245		30	178		70	84		28	102	0
Queue Length 95th (ft)	104	#530		63	284		#184	151		67	161	36
Internal Link Dist (ft)	325			1291			870			1037		
Turn Bay Length (ft)	220			120			120			150		
Base Capacity (vph)	389	697		288	701		230	680		230	702	705
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	0.43	0.93		0.36	0.71		0.74	0.36		0.31	0.37	0.23

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 69.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 34.0

Intersection LOS: C

Intersection Capacity Utilization 73.5%

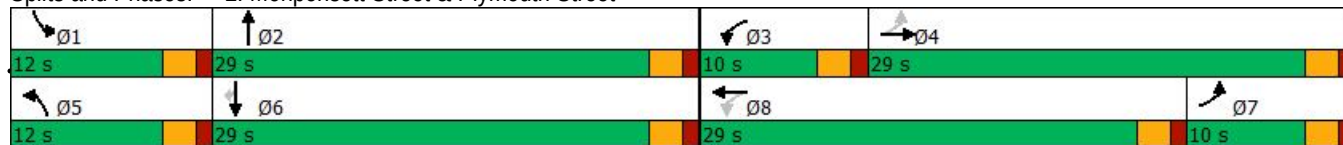
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings
3: Plymouth Street & Stop & Shop Driveway

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

							
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	13	653	685	70	94	25	
Future Volume (vph)	13	653	685	70	94	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	225			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Satd. Flow (prot)	1805	1900	1877	0	1777	0	
Flt Permitted	0.204				0.962		
Satd. Flow (perm)	388	1900	1877	0	1777	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			9		8		
Link Speed (mph)		25	25		25		
Link Distance (ft)		533	578		399		
Travel Time (s)		14.5	15.8		10.9		
Peak Hour Factor	0.88	0.88	0.87	0.87	0.67	0.67	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	15	742	867	0	177	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2		1		
Detector Template	Left	Thru	Thru		Left		
Leading Detector (ft)	20	100	100		20		
Trailing Detector (ft)	0	0	0		0		
Detector 1 Position(ft)	0	0	0		0		
Detector 1 Size(ft)	20	6	6		20		
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex		CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		CI+Ex	CI+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Perm	NA	NA		Perm		
Protected Phases		4	8				9
Permitted Phases	4				6		
Detector Phase	4	4	8		6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		7.0		5.0

Synchro 10: Lanes, Volumes, Timings

3: Plymouth Street & Stop & Shop Driveway

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Minimum Split (s)	29.0	29.0	22.5		10.0		29.0
Total Split (s)	90.0	90.0	90.0		10.0		29.0
Total Split (%)	69.8%	69.8%	69.8%		7.8%		22%
Maximum Green (s)	87.0	87.0	87.0		7.0		26.0
Yellow Time (s)	2.0	2.0	2.0		2.0		2.0
All-Red Time (s)	1.0	1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0
Recall Mode	Min	Min	Min		None		None
Walk Time (s)							10.0
Flash Dont Walk (s)							16.0
Pedestrian Calls (#/hr)							5
Act Effct Green (s)	38.2	38.2	38.2		8.2		
Actuated g/C Ratio	0.68	0.68	0.68		0.15		
v/c Ratio	0.06	0.58	0.68		0.67		
Control Delay	5.7	8.3	10.3		41.2		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	5.7	8.3	10.3		41.2		
LOS	A	A	B		D		
Approach Delay		8.3	10.3		41.2		
Approach LOS		A	B		D		
Queue Length 50th (ft)	1	60	77		37		
Queue Length 95th (ft)	13	407	522		#211		
Internal Link Dist (ft)		453	498		319		
Turn Bay Length (ft)	225						
Base Capacity (vph)	370	1815	1793		264		
Starvation Cap Reductn	0	0	79		0		
Spillback Cap Reductn	0	0	0		0		
Storage Cap Reductn	0	0	0		0		
Reduced v/c Ratio	0.04	0.41	0.51		0.67		

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 56.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 12.5

Intersection LOS: B

Intersection Capacity Utilization 53.7%

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: Plymouth Street & Stop & Shop Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	688	12	8	603	121	10	0	2	157	0	23
Future Volume (vph)	91	688	12	8	603	121	10	0	2	157	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	1878	0	0	1880	1615	0	1782	0	1805	1615	0
Flt Permitted	0.194				0.992			0.837		0.742		
Satd. Flow (perm)	365	1878	0	0	1866	1615	0	1554	0	1410	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				96		82			602	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.89	0.89	0.89	0.87	0.87	0.87	0.50	0.50	0.50	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	786	0	0	702	139	0	24	0	199	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	36.9	36.9		28.0	28.0		10.0			10.0	10.0	
Actuated g/C Ratio	0.70	0.70		0.53	0.53		0.19			0.19	0.19	
v/c Ratio	0.25	0.60		0.71	0.15		0.07			0.75	0.04	
Control Delay	4.1	6.5		14.5	3.2		0.3			41.3	0.1	
Queue Delay	0.0	0.0		0.4	0.0		0.0			0.0	0.0	
Total Delay	4.1	6.6		14.9	3.2		0.3			41.3	0.1	
LOS	A	A		B	A		A			D	A	
Approach Delay	6.3			13.0			0.3			36.0		
Approach LOS	A			B			A			D		
Queue Length 50th (ft)	8	94		148	6		0			60	0	
Queue Length 95th (ft)	17	162		241	24		0			#119	0	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380						150					
Base Capacity (vph)	415	1312		986	899		359			266	793	
Starvation Cap Reductn	0	11		59	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	0.25	0.60		0.76	0.15		0.07			0.75	0.04	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 52.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 12.5

Intersection LOS: B

Intersection Capacity Utilization 88.8%

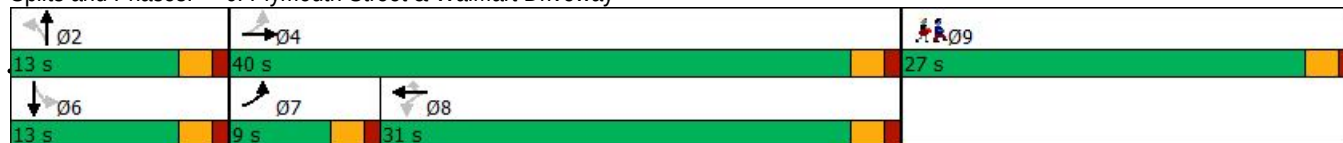
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Plymouth Street & WalMart Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 No Build Weekday PM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	323	112	32	368	39	158	171	21	37	89	107
Future Volume (vph)	106	323	112	32	368	39	158	171	21	37	89	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1671	1735	0	1641	1815	0	1703	1769	0	1671	1759	1568
Flt Permitted	0.432			0.305			0.950			0.950		
Satd. Flow (perm)	760	1735	0	527	1815	0	1703	1769	0	1671	1759	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			7			8				129
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.78	0.78	0.78	0.94	0.94	0.94	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	8%	5%	6%	10%	3%	5%	6%	5%	10%	8%	8%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	558	0	34	432	0	172	209	0	45	107	129
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40b Development TIAS
2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)		7.0										
Flash Dont Walk (s)		12.0										
Pedestrian Calls (#/hr)		5										
Act Effct Green (s)	25.0	25.0		19.3	19.3		9.1	16.9		7.1	11.0	11.0
Actuated g/C Ratio	0.39	0.39		0.30	0.30		0.14	0.27		0.11	0.17	0.17
v/c Ratio	0.29	0.80		0.13	0.78		0.71	0.44		0.24	0.35	0.34
Control Delay	18.6	28.6		16.4	30.2		46.8	24.4		30.9	26.5	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	18.6	28.6		16.4	30.2		46.8	24.4		30.9	26.5	7.6
LOS	B	C		B	C		D	C		C	C	A
Approach Delay		26.6			29.2			34.5			18.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	33	173		9	150		65	72		16	37	0
Queue Length 95th (ft)	68	#286		27	250		#176	136		43	70	31
Internal Link Dist (ft)		325			1291			870			1037	
Turn Bay Length (ft)	220			120			120			150		150
Base Capacity (vph)	471	731		284	754		243	736		239	727	724
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	0.29	0.76		0.12	0.57		0.71	0.28		0.19	0.15	0.18

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 63.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 27.7

Intersection LOS: C

Intersection Capacity Utilization 55.8%

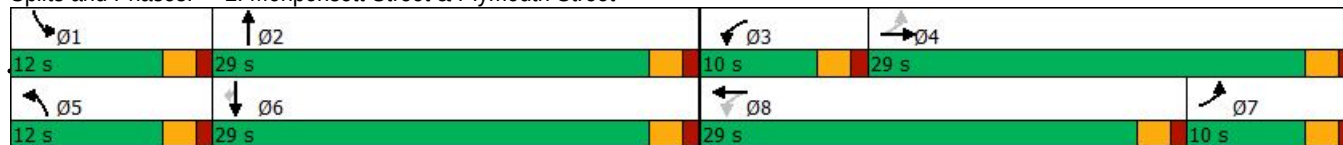
ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings

Halifax 40b Development TIAS

3: Site Driveway/Stop & Shop Driveway & Plymouth Street 2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	525	3	4	652	24	8	0	12	13	0	4
Future Volume (vph)	0	525	3	4	652	24	8	0	12	13	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1900	1791	0	0	1829	0	0	1679	0	0	1669	0
Flt Permitted					0.998							
Satd. Flow (perm)	1900	1791	0	0	1826	0	0	1714	0	0	1732	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3			25			25	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		533			578			431			399	
Travel Time (s)		14.5			15.8			11.8			10.9	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.96	0.96	0.92	0.92	0.92	0.71	0.92	0.71
Heavy Vehicles (%)	0%	6%	2%	2%	3%	13%	2%	2%	2%	8%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	703	0	0	708	0	0	22	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		7.0	7.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

3: Site Driveway/Stop & Shop Driveway & Plymouth Street 2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		22.5	22.5		10.0	10.0		10.0	10.0	
Total Split (s)	90.0	90.0		90.0	90.0		10.0	10.0		10.0	10.0	
Total Split (%)	69.8%	69.8%		69.8%	69.8%		7.8%	7.8%		7.8%	7.8%	
Maximum Green (s)	87.0	87.0		87.0	87.0		7.0	7.0		7.0	7.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
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	
Total Lost Time (s)	3.0	3.0			3.0			3.0			3.0	
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	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		42.7			42.7			7.5			8.9	
Actuated g/C Ratio		0.87			0.87			0.15			0.18	
v/c Ratio		0.45			0.45			0.08			0.07	
Control Delay		6.2			6.1			15.6			16.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.2			6.1			15.6			16.3	
LOS		A			A			B			B	
Approach Delay		6.2			6.1			15.6			16.3	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		0			0			0			0	
Queue Length 95th (ft)		300			411			23			26	
Internal Link Dist (ft)		453			498			351			319	
Turn Bay Length (ft)												
Base Capacity (vph)		1726			1760			331			334	
Starvation Cap Reductn		0			77			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.41			0.42			0.07			0.07	
Intersection Summary												
Area Type:	Other											
Cycle Length: 129												
Actuated Cycle Length: 49.2												
Natural Cycle: 75												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.45												
Intersection Signal Delay: 6.5												
Intersection LOS: A												
Intersection Capacity Utilization 51.5%												
ICU Level of Service A												
Analysis Period (min) 15												

Splits and Phases: 3: Site Driveway/Stop & Shop Driveway & Plymouth Street

 Ø2	 Ø4	 Ø9
10 s	90 s	29 s
 Ø6	 Ø8	
10 s	90 s	

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Lane Group	Ø9
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	22%
Maximum Green (s)	26.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	10.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	504	2	5	481	26	3	0	1	29	1	20
Future Volume (vph)	22	504	2	5	481	26	3	0	1	29	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1898	0	0	1881	1615	0	1769	0	1736	1626	0
Flt Permitted	0.287				0.996			0.972				
Satd. Flow (perm)	545	1898	0	0	1874	1615	0	1784	0	1827	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82		82			25	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.50	0.50	0.50	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	522	0	0	528	28	0	8	0	36	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 Build Weekday AM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	26.7	28.7		17.0	17.0	17.0		7.1		7.2	7.2	
Actuated g/C Ratio	0.76	0.82		0.48	0.48	0.48		0.20		0.20	0.20	
v/c Ratio	0.04	0.34		0.58	0.03	0.03		0.02		0.10	0.07	
Control Delay	2.3	3.0		10.4	0.2	0.2		0.0		16.6	9.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	2.3	3.0		10.4	0.2	0.2		0.0		16.6	9.1	
LOS	A	A		B	A	A		A		B	A	
Approach Delay	3.0			9.9						13.5		
Approach LOS	A			A						B		
Queue Length 50th (ft)	1	34		80	0	0		0		7	0	
Queue Length 95th (ft)	5	76		159	1	1		0		25	13	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380			150								
Base Capacity (vph)	655	1727		1473	1287	1287		625		582	536	
Starvation Cap Reductn	0	0		6	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	0.04	0.30		0.36	0.02	0.02		0.01		0.06	0.05	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 35.2

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 6.8

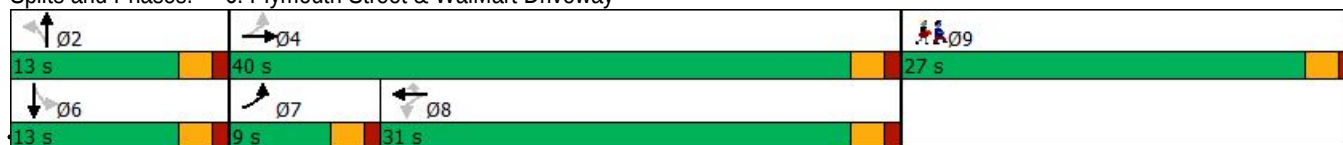
Intersection LOS: A

Intersection Capacity Utilization 45.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Plymouth Street & WalMart Driveway



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DMP

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40b Development TIAS
2026 Build Weekday AM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	437	195	86	351	63	160	178	48	61	226	148
Future Volume (vph)	165	437	195	86	351	63	160	178	48	61	226	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	120		0	120		0	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1736	1800	0	1787	1841	0	1770	1776	0	1770	1863	1599
Flt Permitted	0.293			0.256			0.950			0.950		
Satd. Flow (perm)	535	1800	0	482	1841	0	1770	1776	0	1770	1863	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			12			18				172
Link Speed (mph)		25			25			25				25
Link Distance (ft)		405			1371			950				1117
Travel Time (s)		11.0			37.4			25.9				30.5
Peak Hour Factor	0.97	0.97	0.97	0.82	0.82	0.82	0.93	0.93	0.93	0.86	0.86	0.86
Heavy Vehicles (%)	4%	1%	0%	1%	1%	0%	2%	4%	2%	2%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	652	0	105	505	0	172	243	0	71	263	172
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Synchro 10: Lanes, Volumes, Timings

2: Monponsett Street & Plymouth Street

Halifax 40B Development TIAS
2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		8.0	22.5		8.0	22.5		8.0	22.5	22.5
Total Split (s)	10.0	29.0		10.0	29.0		12.0	29.0		12.0	29.0	29.0
Total Split (%)	12.5%	36.3%		12.5%	36.3%		15.0%	36.3%		15.0%	36.3%	36.3%
Maximum Green (s)	7.0	26.0		7.0	26.0		9.0	26.0		9.0	26.0	26.0
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
All-Red Time (s)	1.0	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		0.0	0.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	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	3.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)		7.0										
Flash Dont Walk (s)		12.0										
Pedestrian Calls (#/hr)		5										
Act Effct Green (s)	26.1	26.1		22.3	22.3		9.0	20.6		7.6	15.3	15.3
Actuated g/C Ratio	0.38	0.38		0.32	0.32		0.13	0.30		0.11	0.22	0.22
v/c Ratio	0.44	0.94		0.37	0.84		0.75	0.45		0.36	0.64	0.35
Control Delay	26.5	45.3		20.8	35.7		52.9	22.8		35.4	31.8	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	26.5	45.3		20.8	35.7		52.9	22.8		35.4	31.8	6.0
LOS	C	D		C	D		D	C		D	C	A
Approach Delay		41.4			33.2			35.3			23.6	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	48	247		30	180		71	84		28	102	0
Queue Length 95th (ft)	107	#534		63	288		#187	151		67	161	37
Internal Link Dist (ft)		325			1291			870			1037	
Turn Bay Length (ft)	220			120			120			150		150
Base Capacity (vph)	384	697		287	701		230	680		230	702	709
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	0.44	0.94		0.37	0.72		0.75	0.36		0.31	0.37	0.24

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 69.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 34.3

Intersection LOS: C

Intersection Capacity Utilization 73.7%

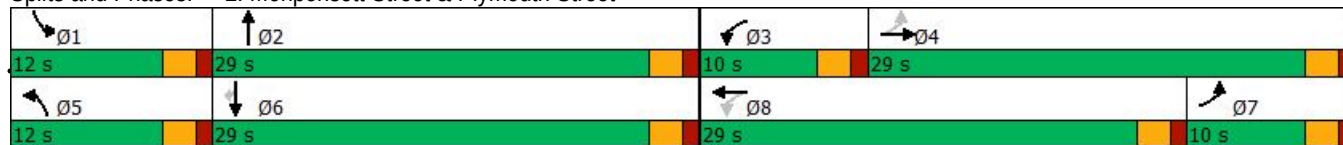
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Monponsett Street & Plymouth Street



Synchro 10: Lanes, Volumes, Timings

Halifax 40B Development TIAS

3: Site Driveway/Stop & Shop Driveway & Plymouth Street 2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	653	8	12	685	70	5	0	7	94	0	25
Future Volume (vph)	13	653	8	12	685	70	5	0	7	94	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1896	0	0	1875	0	0	1676	0	0	1777	0
Flt Permitted	0.310				0.990			0.944			0.762	
Satd. Flow (perm)	589	1896	0	0	1858	0	0	1612	0	0	1407	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			9			25			25	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		533			578			431			399	
Travel Time (s)		14.5			15.8			11.8			10.9	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.87	0.87	0.92	0.92	0.92	0.67	0.92	0.67
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	751	0	0	880	0	0	13	0	0	177	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

Halifax 40B Development TIAS

3: Site Driveway/Stop & Shop Driveway & Plymouth Street 2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		22.5	22.5		10.0	10.0		10.0	10.0	
Total Split (s)	90.0	90.0		90.0	90.0		10.0	10.0		10.0	10.0	
Total Split (%)	69.8%	69.8%		69.8%	69.8%		7.8%	7.8%		7.8%	7.8%	
Maximum Green (s)	87.0	87.0		87.0	87.0		7.0	7.0		7.0	7.0	
Yellow Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
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	
Total Lost Time (s)	3.0	3.0			3.0			3.0			3.0	
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	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	37.2	37.2		37.2				8.3			8.3	
Actuated g/C Ratio	0.67	0.67		0.67				0.15			0.15	
v/c Ratio	0.04	0.59		0.71				0.05			0.76	
Control Delay	5.2	8.5		10.9				10.0			46.6	
Queue Delay	0.0	0.0		0.0				0.0			0.0	
Total Delay	5.2	8.5		11.0				10.0			46.6	
LOS	A	A		B				A			D	
Approach Delay		8.5		11.0				10.0			46.6	
Approach LOS		A		B				A			D	
Queue Length 50th (ft)	1	61		80				0			30	
Queue Length 95th (ft)	12	413		540				12			#317	
Internal Link Dist (ft)		453		498				351			319	
Turn Bay Length (ft)	225											
Base Capacity (vph)	560	1803		1767				263			232	
Starvation Cap Reductn	0	0		80				0			0	
Spillback Cap Reductn	0	0		0				0			0	
Storage Cap Reductn	0	0		0				0			0	
Reduced v/c Ratio	0.03	0.42		0.52				0.05			0.76	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 55.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 13.4

Intersection LOS: B

Intersection Capacity Utilization 68.6%

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: 3: Site Driveway/Stop & Shop Driveway & Plymouth Street

 Ø2	 Ø4	 Ø9
10 s	90 s	29 s
 Ø6	 Ø8	
10 s	90 s	

Lane Group	Ø9
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	22%
Maximum Green (s)	26.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	10.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	

Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	695	12	8	615	121	10	0	2	157	0	23
Future Volume (vph)	91	695	12	8	615	121	10	0	2	157	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	1878	0	0	1880	1615	0	1782	0	1805	1615	0
Flt Permitted	0.185				0.992			0.837		0.742		
Satd. Flow (perm)	348	1878	0	0	1866	1615	0	1554	0	1410	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				94		82			600	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		578			405			363			375	
Travel Time (s)		15.8			11.0			9.9			10.2	
Peak Hour Factor	0.89	0.89	0.89	0.87	0.87	0.87	0.50	0.50	0.50	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	794	0	0	716	139	0	24	0	199	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0

Synchro 10: Lanes, Volumes, Timings

6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 Build Weekday PM Peak Hour Traffic Volumes

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	8.0	22.5		28.0	28.0	28.0	8.0	8.0		8.0	8.0	
Total Split (s)	9.0	40.0		31.0	31.0	31.0	13.0	13.0		13.0	13.0	
Total Split (%)	11.3%	50.0%		38.8%	38.8%	38.8%	16.3%	16.3%		16.3%	16.3%	
Maximum Green (s)	6.0	37.0		28.0	28.0	28.0	10.0	10.0		10.0	10.0	
Yellow Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
All-Red Time (s)	1.0	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	0.0	
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	36.9	36.9		28.0	28.0		10.0			10.0	10.0	
Actuated g/C Ratio	0.70	0.70		0.53	0.53		0.19			0.19	0.19	
v/c Ratio	0.25	0.61		0.73	0.15		0.07			0.75	0.04	
Control Delay	4.1	6.6		15.1	3.2		0.3			41.3	0.1	
Queue Delay	0.0	0.0		0.5	0.0		0.0			0.0	0.0	
Total Delay	4.1	6.7		15.6	3.2		0.3			41.3	0.1	
LOS	A	A		B	A		A			D	A	
Approach Delay	6.4			13.6			0.3			36.0		
Approach LOS	A			B			A			D		
Queue Length 50th (ft)	8	96		153	6		0			60	0	
Queue Length 95th (ft)	17	165		250	24		0			#119	0	
Internal Link Dist (ft)	498			325			283			295		
Turn Bay Length (ft)	380						150					
Base Capacity (vph)	405	1312		986	898		359			266	791	
Starvation Cap Reductn	0	11		58	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	0.25	0.61		0.77	0.15		0.07			0.75	0.04	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 52.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 12.7

Intersection LOS: B

Intersection Capacity Utilization 89.8%

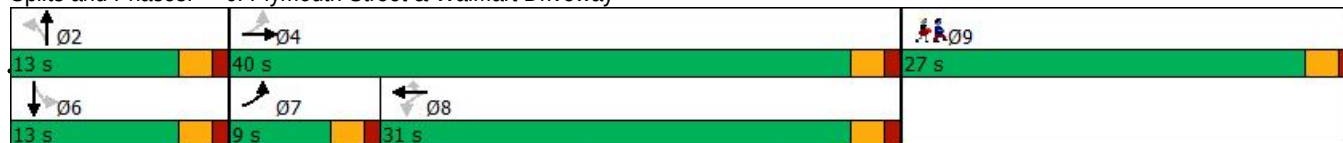
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Plymouth Street & WalMart Driveway



Synchro 10: Lanes, Volumes, Timings
6: Plymouth Street & WalMart Driveway

Halifax 40B Development TIAS
2026 Build Weekday PM Peak Hour Traffic Volumes

Lane Group	Ø9
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	34%
Maximum Green (s)	24.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
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	