



## Memorandum

To: Mr. Todd Finard  
Weston Roots Management, LLC  
419 Boylston Street, Suite 300  
Boston, Massachusetts 02116

Date: May 8, 2018

Project #: 14158.00

From: Randall C. Hart, Principal  
  
Matthew Duranleau, EIT

Re: Proposed Dispensary  
24-26 Elliot Street  
Newton, Massachusetts

VHB, Inc. has prepared a traffic memorandum to support the proposed redevelopment of 24-26 Elliot Street in Newton, Massachusetts (the Site). Specifically, the Project will include the conversion of an existing salon/spa establishment and 102-seat restaurant into a medical marijuana dispensary and retail space. The specific retail tenants that will occupy the space are unknown at this time. To improve the access, circulation, and parking onsite, modification to the site are part of the redevelopment proposal.

This memorandum includes an evaluation of the existing traffic operations and safety; assessment of future conditions without the project; an estimate of projected traffic volumes for the project; and its potential impact on future traffic operations in the area.

### Site Location and Proposed Development

The Site is located at 24-26 Elliot Street in Newton, Massachusetts, directly south of Route 9 (Boylston Street). The Site currently includes one building of approximately 8,157 square feet (sf) that consists of an operational salon/spa establishment, and a 102-seat restaurant that is currently not open for business. The proposed medical marijuana dispensary will occupy approximately 4,360 sf of the reconfigured building and adjacent retail space of approximately 3,421 sf.

Under the existing conditions, the Site is accessed via a curb cut on Elliot Street. A second point of egress connects the Site to the adjacent CVS retail plaza and provides a two-way vehicular connection between the two sites. Under the proposed redevelopment, the access configuration will remain similar to existing conditions. However, a speed bump will be added to the east end driveway connection to the CVS Plaza to slow down traffic in the parking area. A total of 36 parking spaces are provided under existing conditions. With the proposed redevelopment in place, a total of 30 parking spaces will be provided.

Figure 1 shows the project site in relation to the surrounding area. The existing and proposed site plans are included in the Attachments to this memorandum.

### Existing Conditions

The following section provides a summary of the local intersection and roadway conditions in the immediate vicinity of the Site. Based on an understanding of the current traffic operations in the region, a study area comprised of the following intersections and their approach roadways were selected for review:

- Route 9 (Boylston Street) at Elliot Street / Woodward Street
- Elliot Street at CVS Driveway
- Elliot Street at Site Driveway

101 Walnut Street  
PO Box 9151  
Watertown, MA 02472-4026  
P 617.924.1770

Figure 2 shows the observed existing geometry and traffic control at each study area intersection.

The existing conditions analysis consists of an inventory of the traffic control, roadway, driveway, and intersection geometry in the study area, the collection of daily and peak hour traffic volumes, a summary of public transit options in the area, a review of recent crash history, and a documentation of the existing sight distance at the site driveway.

## Study Area Roadways

### *Elliot Street*

In this study area, Elliot Street is a two-lane roadway running in a northeast-southwest direction. It connects to Route 9 (Boylston Street) and Woodward Street to the north and Central Avenue in Needham to the south. Sidewalks are provided along both sides of Elliot Street and on-street parking is prohibited on the east side of the roadway. MBTA bus route 59 travels down Elliot Street. Elliot Street falls under local jurisdiction and is classified as an urban collector. There is a posted speed limit of 30 mph. Land use along Elliot Street is primarily residential and commercial.

## Study Area Intersections

### *Route 9 (Boylston Street) at Elliot Street / Woodward Street*

Elliot Street intersects Route 9 (Boylston Street) from the south and Woodward Street intersects Route 9 (Boylston Street) from the north to form a four-way signalized intersection. The eastbound and westbound approaches on Route 9 (Boylston Street) consist of a dedicated left-turn lane, a through lane, and a shared through/right-turn lane. The Elliot Street northbound approach consists of a left-turn lane, a through lane, and a channelized right-turn lane under YIELD control. The southbound Woodward Street approach consists of a left-turn lane and a shared through/right-turn lane. Sidewalks are provided on all approaches and crosswalks are located across the westbound, northbound, and southbound approaches. Bus stops are located in both directions on Woodward Street north of the intersection. Land use around the intersection is mainly residential and commercial, with a CVS Pharmacy and a Sunoco gas station to the southeast of the intersection.

### *Elliot Street at CVS Driveway*

A CVS driveway intersects Elliot Street from the east to form a three-legged unsignalized intersection. All approaches consist of one general-purpose lane. The CVS driveway is unsigned but operates under STOP control. Sidewalks are provided on both sides of Elliot Street and no crosswalks are provided at this intersection. Land use at the intersection is mainly commercial and residential.

### *Elliot Street at Site Driveway*

The Site driveway intersects Elliot Street from the east to form a three-legged unsignalized intersection. All approaches consist of one general-purpose lane. The Site driveway is unsigned but operates under STOP control. Sidewalks are provided on both sides of Elliot Street and no crosswalks are provided at this intersection. Land use at the intersection is mainly commercial and residential.

## Traffic Volumes

To assess the existing operational conditions at the study area, a review of existing condition traffic volumes was conducted. Automatic traffic recorder (ATR) counts were conducted in February 2018 along Elliot Street in the vicinity of the Site. The observed traffic volume data were seasonally adjusted to reflect average month conditions. The average daily traffic volume data are summarized below in Table 1 and included in the Attachments to this document.

**Table 1 Existing Traffic Volume Summary**

Location	Weekday Daily	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Daily	Saturday Midday Peak Hour		
	Vol (vpd) <sup>a</sup>	Vol (vph) <sup>b</sup>	K Factor <sup>c</sup>	Dir. Dist. <sup>d</sup>	Vol (vph)	K Factor	Dir. Dist.	Vol (vpd)	Vol (vph)	K Factor	Dir. Dist.
Elliot Street south of Route 9	8,900	705	7.9%	NB 83%	780	8.7%	NB 58%	6,200	540	8.6%	NB 60%

Source: Automatic Traffic Recorder (ATR) counts conducted by VHB on 2/15/18 and 2/24/18 and adjusted to reflect average season conditions.

- a Daily traffic expressed in vehicles per day.
- b Peak hour volumes expressed in vehicles per hour.
- c Percent of daily traffic, which occurs during the peak hour.
- d Directional distribution of peak period traffic.

Note: Peak hours do not necessarily coincide with the peak hours of the individual intersection turning movement counts.

As shown in Table 1, during a typical weekday, Elliot Street carries approximately 8,900 vehicles per day with approximately 705 vehicles during the weekday morning peak period and approximately 780 vehicles during the weekday evening peak hour. Elliot Street traffic is significantly heavier in the northbound direction during the weekday morning peak hour and slightly heavier in the northbound direction during the weekday evening peak hour. During a typical Saturday, Elliot Street carries approximately 6,200 vehicles per day with approximately 540 vehicles during the Saturday midday peak hour. Traffic along Elliot Street is slightly heavier in the northbound direction during the Saturday midday peak hour.

In addition to daily traffic volumes, peak hour turning movement counts (TMCs) were conducted at the study area intersection in February 2018 during the weekday evening peak period from 4:00 PM to 6:00 PM and during the Saturday midday peak period from 11:00 AM to 2:00 PM. These time periods were considered following the standard practice of evaluating the combined peak period for roadway and development traffic. Based on a review of the count data, the weekday evening and Saturday midday peak hours of vehicular activity were determined to be 4:45 PM to 5:45 PM and 12:15 PM to 1:15 PM, respectively. The traffic volume count data is included in the Attachments to this memorandum.

*Seasonal Variation*

The traffic data collected for the study area was obtained during the month of February 2018. To quantify the seasonal variation of traffic volumes in the area, historic traffic data available from MassDOT were reviewed. Specifically, 2017 monthly traffic volumes were reviewed at MassDOT permanent counting stations along I-90 and I-95 in Newton, Needham, and Wellesley. Multiple count stations on I-90 and I-95 were reviewed in order to get an accurate representation of seasonal traffic volumes in the region. Based on the review, traffic volumes in February are approximately nine-percent lower than average-month conditions. To present a conservative analysis, the observed traffic volumes were adjusted upward by nine-percent to represent average-month conditions. The seasonal adjustment factors are included in the Attachments to this memorandum.

The resulting 2018 Existing traffic volume networks for the weekday evening and Saturday midday peak hours are shown in Figure 3.

## **Public Transportation**

Public transportation in Newton is provided in the area by the Massachusetts Bay Transportation Authority (MBTA). MBTA bus route 59 travels down Woodward Street and Elliot Street and provides direct access to the Site. The nearest bus stop to the site is located on Woodward Street north of Route 9 (Boylston Street) approximately 400 feet north of the Site. Route 59 travels between Watertown Square in Watertown and Needham Junction in Needham. Connections are provided to the Needham Line and the Worcester Line of the commuter rail at Needham Junction and Newtonville, respectively, and to the Green Line at Newton Highlands. Service is provided approximately every 30-40 minutes during peak hours.

The Site is also served by the D branch of the MBTA's Green Line. The D branch of the Green Line connects Newton with Brookline and Boston and travels from Riverside in Newton to Government Center in Downtown Boston. The nearest stops to the Site on the D branch of the Green Line are Eliot, approximately 1,200 feet west of the Site on Route 9, and Newton Highlands, approximately 2,500 feet northeast of the Site on Walnut Street. Service is provided approximately every six-to-eight minutes during peak hours.

Public transportation route maps and schedules are provided in the Attachments to this memorandum. While ample public transportation is provided near the Site, to present a conservative analysis, no credit was taken for customers or employees arriving and departing via public transportation.

## **Crash Summary**

A detailed crash analysis was conducted to identify potential vehicle accident trends and/or roadway deficiencies in the traffic study area. The most current vehicle accident data for the traffic study area intersections were obtained from MassDOT for the years 2011 to 2015. The MassDOT database is comprised of crash data from the Massachusetts Registry of Motor Vehicles (RMV) Division primarily for use in traffic studies and safety evaluations. Data files are provided for an entire city or town for an entire year, though it is possible that some crash records may be omitted either due to individual crashes not being reported, or the city crash records not being provided in a compatible format for RMV use. A summary of the study intersections vehicle accident history based on the available RMV data is presented in Table 2 and the detailed crash data is provided in the Attachments to this memorandum.

Crash rates are calculated based on the number of accidents at an intersection and the volume of traffic traveling through that intersection on a daily basis. Rates that exceed MassDOT's average for accidents at intersections in the MassDOT district in which the town or city is located could indicate safety or geometric issues for a particular intersection. For our study area, the calculated crash rates for the study area intersections were compared to MassDOT's District 6 (The MassDOT district for Newton) average. In District 6, the average crash rate is 0.70 for signalized intersection and 0.53 for unsignalized intersections. These rates imply that, on average, 0.70 accidents occurred per million vehicles entering signalized intersections throughout District 6 and 0.53 accidents occurred per million vehicles entering unsignalized intersections in District 6. It should be noted that the location for some accidents cannot be precisely determined from the database. Additionally, some accidents may have occurred but were either not reported or not included in the database, and therefore not considered.



▪ **Table 2 Vehicular Crash Data (2011-2015)**

	Route 9 (Boylston Street) at Elliot Street / Woodward Street	Elliot Street at CVS Driveway	Elliot Street at Site Driveway
Signalized?	Yes	No	No
MassDOT Average Crash Rate	0.70	0.53	0.53
Calculated Crash Rate	0.47	0.00	0.39
Exceeds Average?	No	No	No
<b>Year</b>			
2011	7	0	2
2012	10	0	2
2013	10	0	0
2014	15	0	2
<u>2015</u>	<u>9</u>	<u>0</u>	<u>0</u>
Total	51	0	6
<b>Collision Type</b>			
Angle	15	0	1
Head-On	0	0	2
Rear-End	27	0	0
Rear-to-Rear	0	0	1
Sideswipe, opposite direction	2	0	0
Sideswipe, same direction	2	0	0
Single Vehicle Crash	5	0	1
Unknown	0	0	1
<b>Severity</b>			
Fatal Injury	0	0	0
Non-Fatal Injury	19	0	2
Property Damage Only	29	0	2
Not Reported	3	0	2
<b>Time of day</b>			
Weekday, 7:00 AM - 9:00 AM	4	0	1
Weekday, 4:00 – 6:00 PM	6	0	0
Saturday, 11:00 AM – 2:00 PM	0	0	0
Weekday, other time	27	0	4
Weekend, other time	14	0	1
<b>Pavement Conditions</b>			
Dry	43	0	6
Wet	7	0	0
Snow	1	0	0
Not Reported	0	0	0
<b>Non-Motorist (Bike, Pedestrian)</b>	5	0	0

Source: Crash data was obtained from MassDOT Crash Portal, accessed February 2018.

As shown in Table 2, none of the study area intersections have a calculated crash rate higher than the MassDOT average crash rate for District 6. The intersection of Route 9 (Boylston Street) at Elliot Street / Woodward Street experienced 51 reported crashes over the five-year period and the intersection of Elliot Street at Site driveway experienced six reported crashes over the five-year period. The majority of crashes in the study area were angle and rear-end collisions on dry pavement resulting in property damage only. No fatal crashes were reported at any of the study area intersections. At the intersection of Route 9 (Boylston Street) at Elliot Street / Woodward Street, five crashes occurred that involved bicyclists or pedestrians over the five-year period.

#### *Highway Safety Improvement Program*

In addition to calculating the crash rate, study area intersections should also be reviewed in the MassDOT's Highway Safety Improvement Program (HSIP) database. An HSIP-eligible cluster is one in which the total number of "equivalent property damage only"<sup>1</sup> crashes in the area is within the top 5% of all clusters in that region. Being HSIP-eligible makes the location eligible for FHWA and MassDOT funds to address the identified safety issues at these locations. As part of this effort, VHB reviewed this database and found that one of the study area intersections is listed as an HSIP-eligible cluster based on the 2013-2015 HSIP cluster listing: Route 9 (Boylston Street) at Elliot Street / Woodward Street.

#### **Sight Distance**

A sight distance analysis was performed at the existing unsignalized Site driveway along Elliot Street in conformance with guidelines of the American Association of State Highway and Transportation Officials (AASHTO). Sight distance considerations are generally divided into two categories: Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD). Stopping Sight Distance (SSD) is the distance required for a vehicle approaching an intersection from either direction to perceive, react and come to a complete stop before colliding with an object in the road, in this case the exiting vehicle from a driveway. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

Intersection Sight Distance (ISD) is based on the time required for perception, reaction and completion of the desired critical exiting maneuver once the driver on a minor street or driveway approach decided to execute the maneuver. Calculation for the critical ISD includes the time to (1) turn left, and to clear the half of the intersection without conflicting with the vehicles approaching from the left; and (2) accelerate to the operating speed of the roadway without causing approaching vehicles to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the safe operation of an unsignalized intersection. Essentially, while SSD is the minimum distance needed to avoid collisions, ISD is the minimum distance needed so that mainline motorists will not have to substantially reduce their speed due to turning vehicles. To maintain the safe operation of an unsignalized intersection, ISD only needs to be equal to the stopping sight distance, though it is desirable to meet ISD requirements by themselves.

To calculate the required SSD and ISD at the unsignalized Site driveway, the 85<sup>th</sup> percentile speed along Elliot Street measured by the ATR count described above was utilized. The 85<sup>th</sup> percentile speed along Elliot Street was observed to be 32-34 mph in the northbound direction and 31-33 mph in the southbound direction.

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1 "Equivalent property damage only" is a method of combining the number of crashes with the severity of the crashes based on a weighted scale. Crashes involving property damage only are reported at a minimal level of importance, while collisions involving personal injury (or fatalities) are weighted more heavily.

Table 3 summarizes the sight distance analysis based on field measurements conducted by VHB. The sight distance worksheets are included in the Attachments to this memorandum.

▪ **Table 3 Sight Distance Analysis Summary**

Location	Stopping Sight Distance <sup>a</sup>			Intersection Sight Distance <sup>a</sup>		
	Traveling	Required	Measured	Looking	Desired	Measured
Elliot Street at Site driveway	Northbound	240	400	Left	325	400
	Southbound	230	200	Right	375	210 <sup>b</sup>

a Based on guidelines established in A Policy on the Geometric Design of Highways and Streets, Sixth Edition, American Association of State Highway and Transportation Officials (AASHTO), 2011 for the 85<sup>th</sup> percentile speed of 31-34 mph.

b Sight distance is visible to/from the intersection of Route 9 (Boylston Street) at Elliot Street / Woodward Street.

As shown in Table 3, the minimum stopping sight distance requirement is met travelling northbound and the desired intersection sight distance is met looking left (south). Both of these sight distances are visible to/from the far side of the Elliot Street underpass under the MBTA train tracks immediately south of the Site. The intersection sight distance looking right (north) is visible to the signalized intersection of Route 9 (Boylston Street) at Elliot Street / Woodward Street while the stopping sight distance travelling southbound is visible from just after the signalized intersection of Route 9 (Boylston Street) at Elliot Street / Woodward Street. Traveling southbound there is a horizontal curve departing the intersection on Elliot Street and the stopping sight distance is met from the beginning of the curve. While the sight distances are not met departing the Route 9 (Boylston Street) at Elliot Street / Woodward Street intersection, vehicles entering the Elliot Street approach and travelling around the horizontal curve are generally travelling slower than the 85<sup>th</sup> percentile speed, which were collected south of the Site driveway after vehicles had an opportunity to speed up to the cruising speed on Elliot Street.

### Future Conditions

To determine the impacts of the site-generated traffic volumes in the vicinity of the site, future traffic conditions were evaluated. A seven-year horizon (2025) was used for the evaluation consistent with MassDOT TIA requirements.

Traffic growth on area roadways is a function of the expected land development, environmental activity, and changes in demographics. A frequently used procedure is to identify estimated traffic generated by planned developments that would be expected to affect the project study area roadways. An alternative procedure is to estimate an annual percentage increase and apply that increase to study area traffic volumes. For this evaluation, both procedures were used. The following summarizes this traffic forecasting process.

### Historic Growth

Traffic studies conducted in the City of Newton and historic count data were reviewed to establish a rate at which traffic volumes can be expected to grow. A review of recent traffic studies indicated that a 0.5-percent per year growth rate is appropriate for analysis purposes.

### Site Specific Growth

In addition to the historic traffic growth, VHB contacted representatives of the City of Newton to identify any other development projects planned within the vicinity of the site. Based on these discussions, there are no planned development project that could affect traffic volumes in the vicinity of the site.

In addition to external background growth, VHB considered the effect of re-tenanting the currently empty restaurant space located on the Site. Since the 102-seat restaurant on Site can be re-occupied without going through an additional review, the No-Build condition traffic analysis assumed full occupancy of the restaurant space. Trips generated by the full occupancy of the restaurant space were projected based on ITE Trip Generation Manual and were distributed to the local roadway network based on the existing traffic distribution. A further discussion of trip generation and distribution methodology is provided below.

### **Background Transportation Projects**

In assessing future traffic conditions, proposed roadway improvements within the study area were considered. Based on discussions with the City of Newton, there are no projects in the study area that would affect traffic volumes within the seven-year horizon.

### **No-Build Traffic Volumes**

The 2025 No-Build traffic volumes were generated by consideration of the above described factors. Figure 4 illustrates the resulting 2025 No-Build condition traffic volumes for the weekday evening and Saturday midday peak hours.

### **Trip Generation**

The rate at which any development generates traffic is dependent upon the size, location, and concentration of surrounding developments. As previously discussed, the proposed project will include the redevelopment of an approximately 8,717 sf building currently housing a 102-seat restaurant and a salon/spa into a medical marijuana dispensary and adjacent retail. VHB used empirical traffic data and trip generation data provided in the *Trip Generation Manual*<sup>2</sup> published by the Institute of Transportation Engineers (ITE) to estimate the number of proposed and existing Site-generated trips.

The proposed project will include an approximately 4,360 sf medical marijuana dispensing facility as well as approximately 3,421 sf of retail. Since medical marijuana dispensary is a relatively new land use, standardized traffic generation information for these facilities is not available from typical sources such as the ITE's Trip Generation Manual. Therefore, the trip generation was estimated based on empirical traffic data that was collected at three similar facilities in eastern Massachusetts. The three facilities that were counted are identified below:

- Compassionate Care located at 31 Central Street, Ayer, Massachusetts
- Ermont Inc. located at 216 Ricciuti Avenue, Quincy, Massachusetts
- In Good Health located at 1200 West Chestnut Street, Brockton, Massachusetts

Traffic activity at each facility was collected on Friday December 16, 2016 and Saturday December 17, 2016 during the critical weekday evening peak commuter period (4:00 PM to 6:00 PM) and during the Saturday midday peak period (11:30 AM to 1:15 PM). The average traffic activity for the three facilities was determined for the weekday afternoon and Saturday midday peak hours and was used to estimate the number of new trips that will be generated by the medical marijuana dispensary portion of the Project.

For the retail portion of the Project, ITE land use code (LUC) 820 (Shopping Center) was determined to be the most appropriate land use code for estimating Site-generated trips. The retail uses are expected to be small, service

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2 Trip Generation Manual, 10<sup>th</sup> Edition, Institute of Transportation Engineers, Washington D.C., 2017.

oriented businesses. Although exact tenants have not yet been secured, these are not expected to be large destination-retail uses. While these don't exactly fit the description of a traditional ITE "Shopping Center", retail traffic was estimated using this land code resulting in an overly conservative analysis.

The unadjusted proposed Site-generated trips for the dispensary and the retail portions of the Project is presented below in Table 4. The empirical traffic data collected and the trip generation worksheets are presented in the Attachments to this memorandum.

▪ **Table 4 Unadjusted Proposed Trip Generation Summary**

Time Period	Movement	Proposed Dispensary Trips <sup>a</sup>	Proposed Retail Trips <sup>b</sup>	Total Vehicle Trips
Weekday Evening	Enter	17	21	38
	Exit	18	23	41
	Total	35	44	79
Saturday Midday	Enter	16	22	38
	Exit	15	21	36
	Total	31	43	74

a Based on an average of empirical traffic counts collected at three facilities, Ayer/Quincy/Brockton

a Based on ITE land use code 820 (Shopping Center) for 3,421 sf using regression equations

*Existing Site-Generated Trips*

The existing Site consists of an approximately 3,051 sf, 102-seat restaurant and an approximately 5,106 sf salon/spa. To determine the net new traffic that the redevelopment of the Site will generate, a credit was taken based on the traffic the Site has the potential to generate today. Since the restaurant is not currently operational, empirical count data at the existing driveways could not be used to determine how much traffic the Site has the potential to currently generate. VHB estimated the expected number of vehicle trips currently generated by the restaurant and the spa based on trip generation data provided in ITE's *Trip Generation Manual*. The existing trip generation was estimated using ITE data for land use code 932 (High-Turnover (Sit-Down) Restaurant) and land use code 918 (Hair Salon).

The unadjusted existing Site-generated trips are presented below in Table 5 and the trip generation worksheets are included in the Attachments to this memorandum.

▪ **Table 5 Unadjusted Existing Trip Generation Summary**

Time Period	Movement	Restaurant Trips <sup>a</sup>	Salon/Spa Trips <sup>b</sup>	Total Vehicle Trips
Weekday Evening	Enter	24	1	25
Peak Hour	<u>Exit</u>	<u>18</u>	<u>6</u>	<u>24</u>
	Total	42	7	49
Saturday Midday	Enter	29	9	38
Peak Hour	<u>Exit</u>	<u>25</u>	<u>17</u>	<u>42</u>
	Total	54	26	80

a Based on ITE land use code 932 (High-Turnover (Sit-Down) Restaurant) for 102 seats using average rates  
 a Based on ITE land use code 918 (Hair Salon) for 5,106 sf using average rates

It should be noted that the Hair Salon land use code in ITE has limited data points and therefore may not accurately represent the trips generated at the existing salon/spa. Based on observations at the Site, the existing salon/spa most likely generates traffic at a rate higher than expected by ITE. However, to present a conservative analysis, the ITE data was used to estimate the traffic generated by the salon/spa.

*Pass-By Trips*

While the ITE rates provide estimates for all the traffic associated with each land use, not all the trips generated by the Project will be new traffic that is added to the study area intersections and roadways. Retail uses typically attract a significant percentage of their traffic from the traffic streams passing the Site, particularly during peak periods. These trips, which are considered pass-by, are already on the roadway system traveling to and from locations other than the Site (such as home, work or other shopping destinations). For this evaluation, ITE pass-by rates for LUC 820 (Shopping Center) were utilized and applied to existing trips on Elliot Street. Specifically, 34-percent and 26-percent of the Site trip generation was assumed to be drawn from the surrounding roadway network. Pass-by rates were applied to the existing restaurant and salon/spa trips as well as the proposed retail trips. Pass-by rates were not applied to the dispensary trips as it is expected that most trips to the dispensary will be destination trips.

*Net New Project Generated Trips*

To estimate the net new Project-generated trips to the Site, pass-by rates were applied as discussed above and the existing Site-generated trips were subtracted from the Proposed Site-generated trips. Table 6 summarizes the net new Project-generated trips.

▪ **Table 6 Net New Trip Generation Summary**

Time Period	Movement	Unadjusted Proposed Trips	Pass-By <sup>a</sup>	New Proposed Trips	Unadjusted Existing Trips	Pass-By <sup>b</sup>	Existing Trips	Net New Trips
Weekday Evening	Enter	38	7	31	25	8	17	14
Peak Hour	<u>Exit</u>	<u>41</u>	<u>7</u>	<u>34</u>	<u>24</u>	<u>8</u>	<u>16</u>	<u>18</u>
	Total	79	14	65	49	16	33	32
Saturday Midday	Enter	38	6	32	38	10	28	4
Peak Hour	<u>Exit</u>	<u>36</u>	<u>6</u>	<u>30</u>	<u>42</u>	<u>10</u>	<u>32</u>	<u>-2</u>
	Total	74	12	62	80	20	60	2

a 34-percent and 26-percent pass-by credit applied to retail trips for the weekday evening and Saturday midday peak hours, respectively.

b 34-percent and 26-percent pass-by credit applied to restaurant and salon/spa trips for the weekday evening and Saturday midday peak hours, respectively.

As shown in Table 6, the proposed project is expected to result in approximately 32 vehicle trips (14 entering/18 exiting) during the weekday evening peak hour and approximately 2 vehicle trips (4 entering/-2 exiting) during the Saturday midday peak hour.

It should be noted that to present a conservative analysis, no credit was taken for shared trips. Because the proposed redevelopment is a mixed-use project, the trip generation characteristics of the Site will be different from a single-use project. Some of the traffic to be generated by the proposed redevelopment will be contained on site as "internal" or "shared vehicle" trips with customers that are visiting both the dispensary and the retail uses. In addition, with the location of the Project next to the CVS shopping center and the Sunoco gas station, some visitors may visit the dispensary or retail portion of the Site on their way to or coming back from the CVS shopping center or gas station without exiting back to Elliot Street or Route 9 (Boylston Street). While these shared trips represent new traffic to the individual uses, they would not show up as new vehicle trips on the surrounding roadway network.

### Trip Distribution

The directional distribution of traffic approaching and departing the site is a function of several variables. These include population densities, existing travel patterns, and the efficiency of the roadways leading to and from the site. The trip distribution of the site traffic used in this analysis is based on existing travel patterns within the study area. The trip distribution patterns for the project, based on existing traffic conditions are presented in Table 7 and illustrated in Figure 5.

▪ **Table 7 Trip Distribution**

Roadway	Direction (From/To)	Trip Distribution
Route 9 (Boylston Street)	East	45%
Route 9 (Boylston Street)	West	40%
Woodward Street	North	5%
<u>Elliot Street</u>	<u>South</u>	<u>10%</u>
<b>Total</b>		<b>100%</b>

### Build Traffic Volumes

The project-related traffic volumes are assigned to the study area roadway network based on the trip distribution patterns shown in Table 7 and added to the 2025 No-Build peak hour traffic volume networks to develop the 2025 Build weekday evening and Saturday midday peak hour traffic volume networks. The site-generated trip traffic volume networks are provided in the Attachments to this memorandum. The 2025 Build traffic volumes are shown in Figure 6 for the weekday evening and Saturday midday peak hours.

### Access and Parking

Under existing conditions, access to the Site is through a driveway on Elliot Street and through a connection to the CVS parking lot to the east of the Site. A separate driveway for the CVS retail plaza runs directly north of the Site and connects to Elliot Street approximately 40 feet north of the Site driveway. Based on observations conducted by VHB, vehicles accessing the CVS retail plaza frequently use the Site driveway and cut through the Site to reach their destination. From a driver's perspective, it is unclear which driveway belongs to which development and no signage is provided directing vehicles to the appropriate driveways. In addition, the existing CVS driveway is approximately 14 feet wide while the Site driveway is approximately 24 feet wide, which contributes to the greater use of the Site driveway over the CVS driveway.

Under the proposed conditions access will remain similar to existing conditions. However, a speed bump will be installed along the eastern internal driveway connection to the CVS Plaza.

Approximately 36 parking spaces are provided under existing conditions on Site. The parking lot is expected to generally maintain its current configuration under the proposed redevelopment and there will be 30 parking spaces for the proposed medical marijuana dispensary and retail facilities. Local parking requirements under zoning were reviewed as part of the site plan package development. The details are on the site plan and generally suggest the following:

- Marijuana Dispensary (4,360 sf) would require 18 parking stalls
- Retail Establishments (3,421 sf) would require 14 parking stalls
- Total Required would be 32 parking stalls
- Former Uses Required 58 so that use was 22 short of the requirement; proposed project is only 2 spaces short of requirement



## Traffic Operations Analysis

To assess quality of flow, intersection capacity analyses were conducted with respect to 2018 Existing, 2025 No-Build, and 2025 Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels-of-service.

### Level-Of-Service Criteria

Level-of-service (LOS) is the term used to denote the different operating conditions which occur for a given roadway segment or intersection under various traffic volume loads. It is a qualitative measure of a number of factors including roadway geometrics, speed, travel delay and freedom to maneuver. Level-of-service provides an index to the operational qualities of a roadway segment or an intersection. Level-of-service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing congested operating conditions.

For this study, capacity analyses were completed for the signalized and unsignalized intersections within the study area using Synchro traffic analysis software. Level-of-service designation is reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of each lane or lane group entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. The LOS is only determined for left-turns from the main street and all movements from the minor street.

The evaluation criteria used to analyze the signalized study area intersections in this traffic study is based on the percentile-delay method (SYNCHRO results). The evaluation criteria used to analyze the unsignalized study area intersections is based on the *2010 Highway Capacity Manual (HCM)*<sup>3</sup>.

### Intersection Capacity Analysis

Levels-of-service analyses were conducted for the 2018 Existing, 2025 No-Build, and 2025 Build conditions for the study area intersections. Tables 8 and 9 summarize the capacity analyses for the signalized and unsignalized intersections, respectively. The capacity analyses worksheets are included in the Attachments to this memorandum.

---

3 Highway Capacity Manual, Transportation Research Board, Washington D.C., 2010.

**Table 8 Signalized Intersection Capacity Analysis**

Location / Movement	2018 Existing Conditions					2025 No-Build Conditions					2025 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>Route 9 (Boylston Street) at Elliot Street / Woodward Street</b>															
<i>Weekday Evening</i>															
EB L	0.36	23	C	12	60	0.35	22	C	11	57	0.35	22	C	11	57
EB T/R	1.17	112	F	~1296	#1900	1.19	>120	F	~1310	#1948	1.19	>120	F	~1316	#1955
WB L	0.78	60	E	136	#340	0.84	67	E	168	#421	0.85	69	E	173	#435
WB T/R	1.00	46	D	1000	#1800	1.09	77	E	~1354	#2073	1.09	77	E	~1354	#2073
NB L	0.48	66	E	53	74	0.45	65	E	48	82	0.50	67	E	54	89
NB T	0.42	56	E	125	157	0.36	55	D	106	165	0.36	55	D	106	165
NB R	0.77	24	C	57	102	0.67	15	B	13	130	0.68	15	B	13	131
SB L	>1.20	>120	F	~280	#566	>1.20	>120	F	~282	#577	>1.20	>120	F	~282	#577
SB T/R	0.84	84	F	207	#448	0.84	85	F	205	#453	0.84	85	F	205	#453
<b>Overall</b>		<b>79</b>	<b>E</b>				<b>95</b>	<b>F</b>				<b>95</b>	<b>F</b>		
<i>Saturday Midday</i>															
EB L	0.63	46	D	65	175	0.65	49	D	69	179	0.65	49	D	70	179
EB T/R	0.78	28	C	527	#1103	0.82	31	C	573	#1140	0.82	31	C	582	#1140
WB L	0.73	50	D	116	#332	0.79	60	E	153	#413	0.80	61	E	155	#413
WB T/R	1.04	58	E	960	#1915	1.12	90	F	~1283	#2111	1.13	92	F	~1298	#2111
NB L	0.50	66	E	57	97	0.55	69	E	67	108	0.54	68	E	67	108
NB T	0.39	56	E	87	142	0.38	56	E	92	146	0.38	56	E	92	146
NB R	0.59	15	B	0	83	0.59	14	B	0	88	0.59	14	B	0	88
SB L	0.69	87	F	83	176	0.68	84	F	89	186	0.67	83	F	89	186
SB T/R	0.77	78	E	124	245	0.75	76	F	132	#261	0.74	75	E	132	#261
<b>Overall</b>		<b>47</b>	<b>D</b>				<b>64</b>	<b>E</b>				<b>65</b>	<b>E</b>		

- a Volume to capacity ratio.
- b Average total delay, in seconds per vehicle.
- c Level-of-service.
- d 50th percentile queue, in feet.
- e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
- # 95th percentile volume exceeds capacity, queue may be longer.

As shown in Table 8, the overall level-of-service at the intersection of Route 9 (Boylston Street) and Elliot Street / Woodward Street is expected to be maintained between the 2025 No Build conditions and the 2025 Build conditions at LOS F and LOS E during the weekday evening and Saturday midday peak hours, respectively. Overall level-of-service is expected to deteriorate between the 2018 Existing conditions and the 2025 No Build conditions from LOS E to LOS F during the weekday evening peak hour and from LOS D to LOS E during the Saturday midday peak hour. The expected additional Site-generated traffic in the 2025 Build conditions is expected to have a negligible effect on queue lengths on each approach.

**Table 9 Unsignalized Intersection Capacity Analysis**

Location / Movement	2018 Existing Conditions					2025 No-Build Conditions					2025 Build Conditions				
	D <sup>a</sup>	v/c <sup>b</sup>	Del <sup>c</sup>	LOS <sup>d</sup>	95 Q <sup>e</sup>	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
<b>Elliot Street at CVS Driveway</b>															
<i>Weekday Evening</i>															
WB L/R	5	0.02	12	B	3	5	0.01	11	B	0	5	0.01	11	B	0
SB L	15	0.02	9	A	3	15	0.02	8	A	0	15	0.02	8	A	0
<i>Saturday Midday</i>															
WB L/R	neg	-	0	A	0	neg	-	0	A	0	neg	-	0	A	0
SB L	20	0.02	8	A	3	20	0.02	8	A	3	20	0.02	8	a	3
<b>Elliot Street at Site Driveway</b>															
<i>Weekday Evening</i>															
WB L/R	35	0.14	17	C	13	55	0.15	16	C	13	70	0.19	16	C	18
SB L	20	0.02	9	A	3	40	0.04	8	A	3	55	0.05	8	A	5
<i>Saturday Midday</i>															
WB L/R	50	0.12	14	B	10	75	0.17	14	B	15	70	0.17	14	B	15
SB L	25	0.02	8	A	3	50	0.04	8	A	3	50	0.05	8	A	3

- a Demand
- b Volume to capacity ratio.
- c Average total delay, in seconds per vehicle.
- d Level-of-service.
- e 95th percentile queue, in feet.
- # 95th percentile volume exceeds capacity, queue may be longer.

As shown in Table 9, the two driveways are expected to operate at LOS C or better under the 2018 existing conditions, 2025 No Build conditions, and 2025 Build conditions. The 95<sup>th</sup> percentile queues on each driveway approach are expected to be less than one car length under all three conditions.

## Conclusion

VHB has conducted a traffic assessment to support the proposed redevelopment of 24-26 Elliot Street in Newton, Massachusetts. Specifically, the Project will include the conversion of an existing salon/spa establishment and 102-seat restaurant into a medical marijuana dispensary and retail space. The specific retail tenants that will occupy the space are unknown at this time.

Under the existing conditions, the Site is accessed via a curb cut on Elliot Street. A second point of egress connects the Site to the adjacent CVS retail plaza and provides a two-way vehicular connection between the two sites. Under the proposed redevelopment, the access will remain similar to existing conditions. However, a speed bump will be installed along the eastern internal driveway connection to the CVS Plaza to slow traffic movements in this area. A total of 36 parking spaces are provided under existing conditions and a total of 30 parking spaces will be available under the future redevelopment plan.

The proposed Project is expected to generate approximately 32 new vehicle trips (14 entering/18 exiting) during the weekday evening peak hour and approximately 2 new vehicle trips (4 entering/-2 exiting) during the Saturday midday peak hour. Based on the intersection capacity analysis, it is expected that the project will have a minimal impact upon intersection operations within the study area.

# Attachments

- Site Plan
- Traffic Count Data
- Seasonal Adjustment Factors
- Public Transit Schedules
- Crash Data
- Sight Distance Worksheet
- Trip Generation
- Site-Generated Traffic Volume Networks
- Capacity Analysis Worksheets











**24 Elliot Street – Newton, MA**  
**Section 51 – Block 25 – Lot 1**  
**Area Plan**

Scale: 1"=100'      February 14, 2018  
**VERNE T. PORTER Jr., PLS**  
 Land Surveyors – Civil Engineers  
 354 Elliot Street Newton, Massachusetts 02464

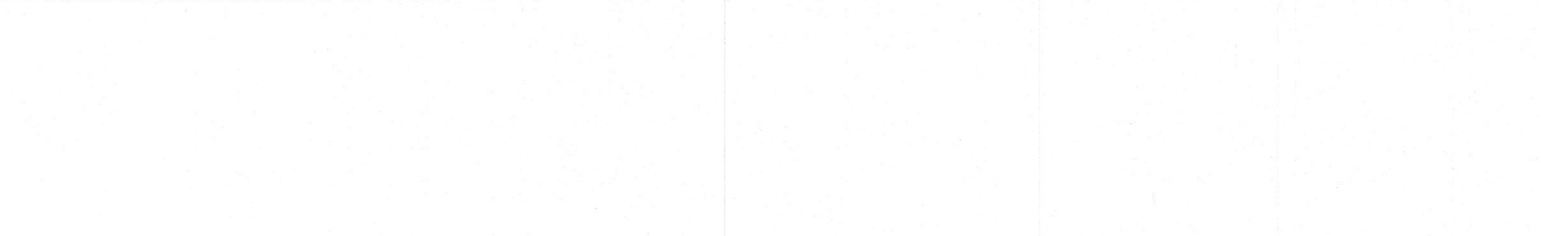
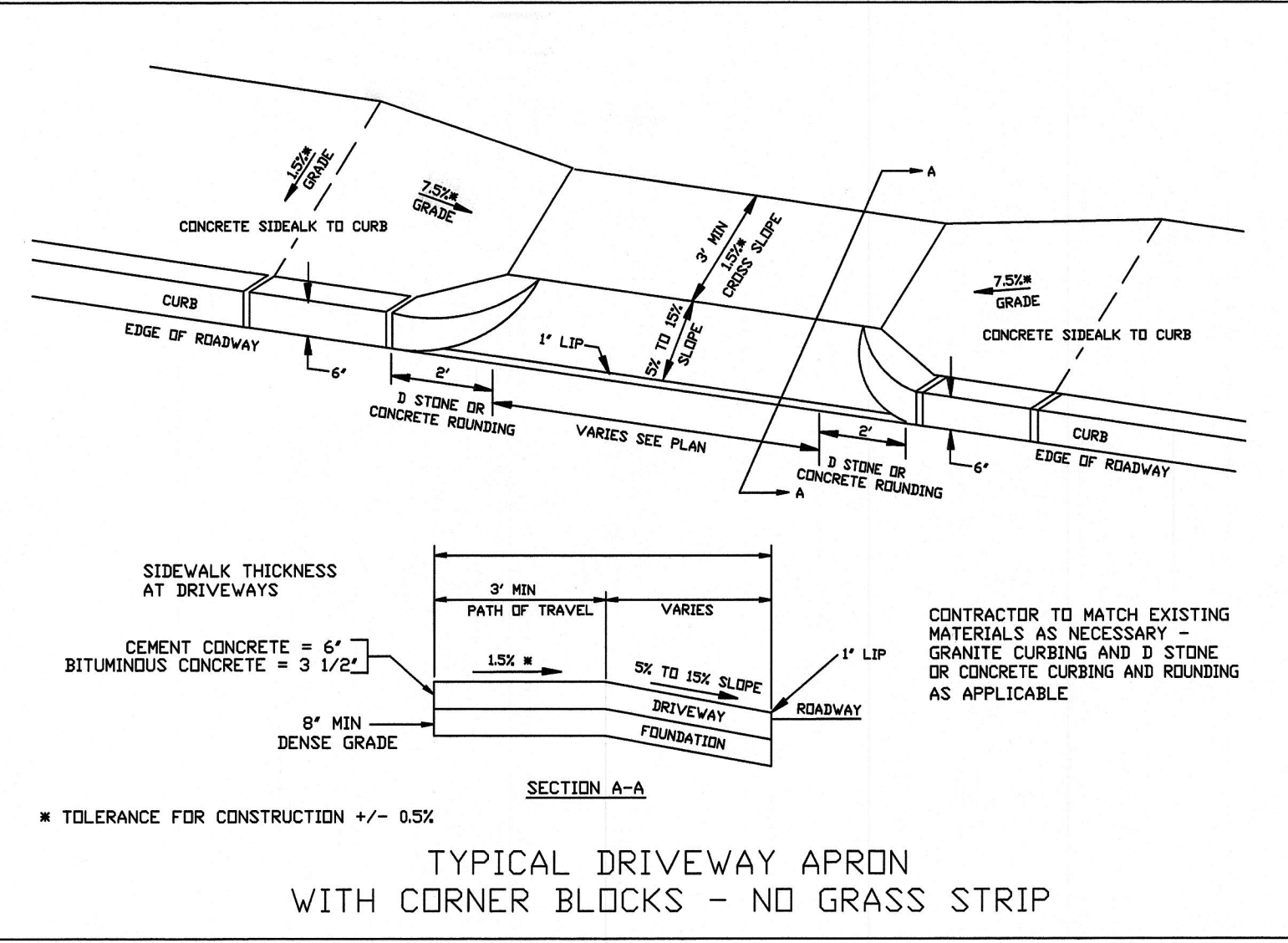
Project: 18004  
 Checked By: V. Porter Jr.  
 Drawn By: R. Jardine Jr.

0      20      40      60      80

Sheet 3 of 3



**Dig Safe**  
 Excavators  
 Before you dig contact the Dig Safe Center. To prevent damage to telephone, gas or electric underground facilities of member utilities, call toll free  
 Massachusetts state law requires notification at least three business days before you start digging operations. In an emergency, call immediately.



CONTRACTOR TO MATCH EXISTING MATERIALS AS NECESSARY - GRANITE CURBING AND 1\"/>

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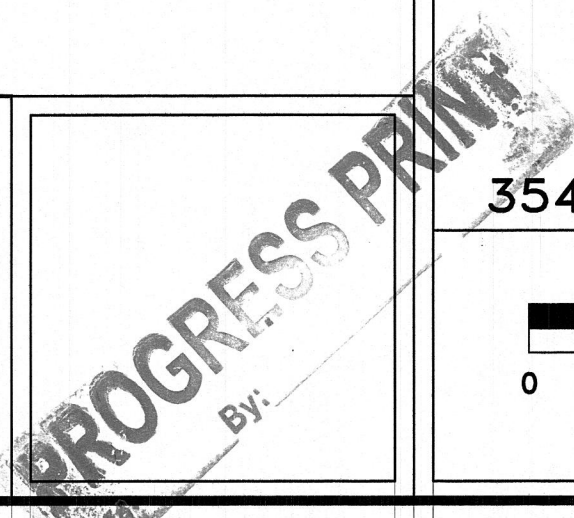
1\"/>

1\"/>

Note: Existing utilities shown are from field locations and available plans of record and may or may not be correct. Field verify all locations prior to any excavation.

Proposed Landscaped Areas (Design By Others)

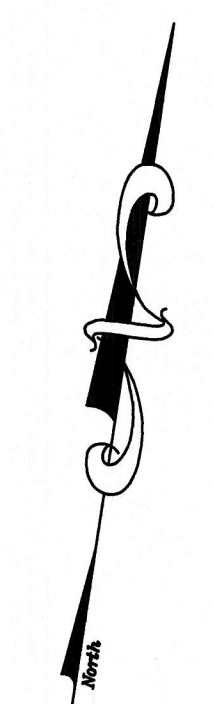
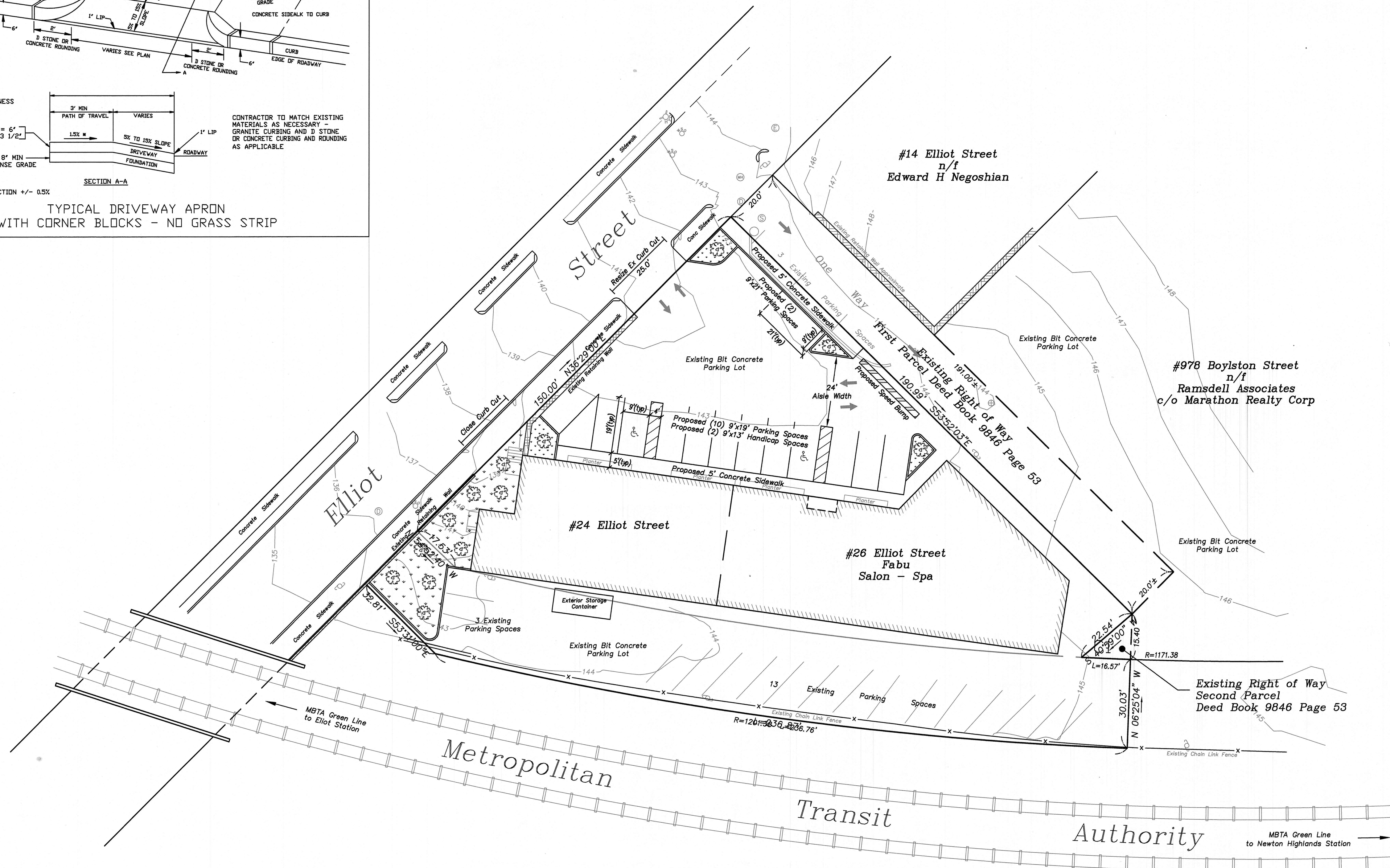
REVISIONS	
DATE	DESCRIPTION
3-12-18	RIGHT OF WAY LOCATIONS
4-12-18	TRAFFIC ISLAND/TRAFFIC PLAN
4-25-18	PARKING LAYOUT/LANDSCAPE AREAS
4-27-18	MISCELLANEOUS



**24-26 Elliot Street**  
 Newton, Massachusetts  
**Proposed Parking and Landscape Plan**  
 Scale: 1"=20' February 14, 2018  
**VERNE T. PORTER Jr., PLS**  
 Land Surveyors - Civil Engineers  
 354 Elliot Street Newton, Massachusetts 02464

Project: 18004  
 Checked By: V. Porter Jr.  
 Drawn By: R. Jardine Jr.

Sheet 2 of 3









PRECISION  
D A T A  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

31 Elliot Street  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client/ Engineer: VHB/ M. Durnaleau  
NB

186077 A Class  
Site Code: 84297.17

Start Time	Bikes	Cars & Trailers	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
02/14/1														
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	2	210	33	5	2	0	0	0	1	0	0	0	0	253
15:00	1	245	27	0	7	0	0	0	0	0	0	0	0	280
16:00	5	244	49	2	4	0	0	0	0	0	0	0	0	304
17:00	3	274	24	2	5	1	0	0	0	0	0	0	0	309
18:00	10	413	22	0	3	0	0	0	0	0	0	0	0	448
19:00	4	345	21	1	1	0	0	0	0	0	0	0	0	372
20:00	1	141	15	0	0	0	0	0	0	0	0	0	0	157
21:00	1	97	5	1	0	0	0	0	0	0	0	0	0	104
22:00	1	89	10	0	1	0	0	0	0	0	0	0	0	101
23:00	0	40	1	0	2	0	0	0	0	0	0	0	0	43
Total	28	2098	207	11	25	1	0	0	1	0	0	0	0	2371
Percent	1.2%	88.5%	8.7%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak Vol.	18:00	18:00	16:00	14:00	15:00	17:00			14:00					18:00
	10	413	49	5	7	1			1					448



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02/15/1														
8	0	29	4	0	0	0	0	0	0	0	0	0	0	33
01:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
04:00	0	4	3	0	1	0	0	0	0	0	0	0	0	8
05:00	0	6	5	0	1	2	0	0	0	0	0	0	0	14
06:00	0	61	15	0	2	4	0	0	0	0	0	0	0	82
07:00	1	219	29	1	8	5	0	0	0	0	0	0	0	263
08:00	9	440	65	2	16	3	0	0	0	0	0	0	0	535
09:00	9	394	46	0	12	6	1	0	0	0	0	0	0	468
10:00	7	373	49	1	8	5	0	0	0	0	0	0	0	443
11:00	1	245	42	2	11	3	0	0	0	0	0	0	0	304
12 PM	0	208	33	0	6	4	0	0	0	0	0	0	0	251
13:00	3	247	28	1	8	4	0	1	0	0	0	0	0	292
14:00	3	194	50	1	5	3	0	0	0	0	0	0	0	256
15:00	4	201	39	2	3	0	0	1	0	0	0	0	0	250
16:00	3	247	23	3	5	0	0	0	0	0	0	0	0	281
17:00	6	270	26	1	8	0	0	0	0	0	0	0	0	311
18:00	3	389	16	1	3	1	0	0	0	0	0	0	0	413
19:00	1	332	16	3	2	0	0	0	0	0	0	0	0	354
20:00	1	118	11	0	0	0	0	0	0	0	0	0	0	130
21:00	0	80	4	1	0	0	0	0	0	0	0	0	0	85
22:00	4	78	3	0	0	0	0	0	0	0	0	0	0	85
23:00	0	40	3	0	2	0	0	0	0	0	0	0	0	45
Total	55	4186	512	19	101	40	1	2	0	0	0	0	0	4916
Percent	1.1%	85.2%	10.4%	0.4%	2.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00	08:00	08:00	09:00	09:00							08:00
Vol.	9	440	65	2	16	6	1							535
PM Peak	17:00	18:00	14:00	16:00	13:00	12:00		13:00						18:00
Vol.	6	389	50	3	8	4		1						413



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02/16/1														
8	0	27	7	0	0	0	0	0	0	0	0	0	0	34
01:00	0	10	2	0	2	0	0	0	0	0	0	0	0	14
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
04:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
05:00	0	8	9	0	1	1	0	0	0	0	0	0	0	19
06:00	0	48	10	0	0	0	0	1	0	0	0	0	0	59
07:00	0	181	22	1	7	1	0	0	2	0	0	0	0	214
08:00	7	363	50	2	19	6	0	2	0	0	0	0	0	449
09:00	3	326	43	0	11	5	0	0	0	0	0	0	0	388
10:00	1	252	44	1	15	5	1	0	0	0	0	0	0	319
11:00	3	217	31	1	7	8	0	0	0	0	0	0	0	267
12 PM	3	212	42	1	6	2	0	1	0	0	0	0	0	267
13:00	0	224	27	2	18	8	0	0	0	0	0	0	0	279
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	17	1875	290	8	86	36	1	4	2	0	0	0	0	2319
Percent	0.7%	80.9%	12.5%	0.3%	3.7%	1.6%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	10:00	08:00	07:00					08:00
Vol.	7	363	50	2	19	8	1	2	2					449
PM Peak	12:00	13:00	12:00	13:00	13:00	13:00		12:00						13:00
Vol.	3	224	42	2	18	8		1						279



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02/14/18	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	0	204	36	3	8	0	0	0	0	0	0	0	0	251
15:00	4	153	32	1	8	1	0	0	1	0	0	0	0	200
16:00	3	195	30	2	7	1	0	0	0	0	0	0	0	238
17:00	2	241	22	1	0	1	0	0	0	0	0	0	0	267
18:00	5	300	17	3	5	0	0	0	0	0	0	0	0	330
19:00	3	270	23	1	0	0	0	0	0	0	0	0	0	297
20:00	2	186	12	1	0	1	0	0	0	0	0	0	0	202
21:00	0	150	11	0	2	0	0	0	0	0	0	0	0	163
22:00	1	112	10	0	1	0	0	0	0	0	0	0	0	124
23:00	0	74	2	0	0	0	0	0	0	0	0	0	0	76
Total	20	1885	195	12	31	4	0	0	1	0	0	0	0	2148
Percent	0.9%	87.8%	9.1%	0.6%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak Vol.	18:00	18:00	14:00	14:00	14:00	15:00			15:00					18:00
	5	300	36	3	8	1			1					330



PRECISION  
D A T A  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

31 Elliot Street  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client/ Engineer: VHB/ M. Durnaleau  
SB

186077 A Class  
Site Code: 84297.17

Start Time	Bikes	Cars & Trailers	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
02/15/1														
8	0	40	5	0	0	0	0	0	0	0	0	0	0	45
01:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
04:00	0	8	2	0	2	0	0	0	0	0	0	0	0	12
05:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
06:00	0	16	5	1	1	4	0	0	0	0	0	0	0	27
07:00	3	65	26	1	3	2	0	0	0	0	0	0	0	100
08:00	4	81	16	2	6	2	0	0	0	0	0	0	0	111
09:00	5	103	24	2	4	3	0	0	0	0	0	0	0	141
10:00	4	148	25	1	7	5	0	1	0	0	0	0	0	191
11:00	3	106	25	2	5	4	0	0	0	0	0	0	0	145
12 PM	2	141	20	1	8	2	0	0	0	0	0	0	0	174
13:00	4	177	25	1	8	4	0	1	0	0	0	0	0	220
14:00	5	161	37	2	7	3	0	0	0	0	0	0	0	215
15:00	0	188	32	1	8	1	0	0	0	0	0	0	0	230
16:00	3	187	23	2	5	0	0	0	0	0	0	0	0	220
17:00	6	233	26	1	4	0	0	0	0	0	0	0	0	270
18:00	4	279	14	1	1	0	0	0	0	0	0	0	0	299
19:00	6	218	17	1	2	0	0	0	0	0	0	0	0	244
20:00	2	187	13	1	1	0	0	0	0	0	0	0	0	204
21:00	0	144	10	0	0	0	0	0	0	0	0	0	0	154
22:00	0	122	7	1	1	0	0	0	0	0	0	0	0	131
23:00	0	80	7	0	0	0	0	0	0	0	0	0	0	87
Total	51	2719	363	21	73	30	0	2	0	0	0	0	0	3259
Percent	1.6%	83.4%	11.1%	0.6%	2.2%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	10:00	07:00	08:00	10:00	10:00		10:00						10:00
Vol.	5	148	26	2	7	5		1						191
PM Peak	17:00	18:00	14:00	14:00	12:00	13:00		13:00						18:00
Vol.	6	279	37	2	8	4		1						299





PRECISION  
DATA  
INDUSTRIES, LLC

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31 Elliot Street  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client/ Engineer: VHB/ M. Durnaleau  
NB

186077 A Speed  
Site Code: 84297.17

Start Time	14	15	19	20	24	25	29	30	34	35	39	40	44	45	49	50	54	55	59	60	64	65	69	70	9999	Total	85th % ile	Ave Speed
02/14/18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	1	10	28	99	94	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253	33	29	
15:00	5	8	27	102	121	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	280	32	29	
16:00	33	17	57	96	85	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	304	32	25	
17:00	4	14	33	129	116	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	309	32	28	
18:00	16	36	106	174	103	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	448	31	26	
19:00	13	19	107	158	68	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372	30	25	
20:00	0	3	26	70	48	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157	32	28	
21:00	0	3	12	36	41	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	33	29	
22:00	0	1	11	38	45	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101	32	29	
23:00	0	1	7	15	14	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	33	29	
Total	72	112	414	917	735	101	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2371			
%	3.0%	4.7%	17.5%	38.7%	31.0%	4.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				

AM Peak Vol.	16:00	18:00	19:00	18:00	15:00	14:00	16:00	18:00
PM Peak Vol.	33	36	107	174	121	19	4	448

Stats

15th Percentile : 21 MPH  
50th Percentile : 27 MPH  
85th Percentile : 32 MPH  
95th Percentile : 34 MPH

Mean Speed(Average) : 27 MPH  
10 MPH Pace Speed : 25-34 MPH  
Number in Pace : 1652  
Percent in Pace : 69.7%  
Number of Vehicles > 30 MPH : 709  
Percent of Vehicles > 30 MPH : 29.9%





PRECISION  
D A T A  
INDUSTRIES, LLC

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31 Elliot Street  
south of Boylston Street (Route 9)  
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Client/ Engineer: VHB/ M. Durnaleau  
NB

186077 A Speed  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
02/15/													9999			
18	0	0	1	10	17	3	2	0	0	0	0	0	0	33	34	31
01:00	0	0	1	1	5	1	0	0	0	0	0	0	0	8	33	31
02:00	0	0	0	1	1	0	1	0	0	0	0	0	0	3	41	34
03:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2	27	25
04:00	0	1	2	2	2	1	0	0	0	0	0	0	0	8	33	27
05:00	0	4	1	2	3	4	0	0	0	0	0	0	0	14	36	28
06:00	0	1	8	20	36	15	2	0	0	0	0	0	0	82	35	31
07:00	0	3	31	106	109	14	0	0	0	0	0	0	0	263	32	29
08:00	<b>227</b>	65	98	112	26	7	0	0	0	0	0	0	0	<b>535</b>	26	17
09:00	179	<b>82</b>	<b>99</b>	77	29	2	0	0	0	0	0	0	0	468	26	17
10:00	40	23	75	<b>171</b>	110	<b>22</b>	2	0	0	0	0	0	0	443	32	26
11:00	12	14	34	101	<b>120</b>	19	<b>4</b>	0	0	0	0	0	0	304	33	28
12 PM	7	10	56	93	67	15	2	<b>1</b>	0	0	0	0	0	251	32	27
13:00	6	8	46	141	74	16	1	0	0	0	0	0	0	292	32	27
14:00	3	3	28	111	93	<b>18</b>	0	0	0	0	0	0	0	256	32	29
15:00	5	4	35	117	73	14	2	0	0	0	0	0	0	250	32	28
16:00	<b>13</b>	20	42	107	80	16	2	1	0	0	0	0	0	281	32	27
17:00	5	16	30	132	<b>108</b>	16	<b>4</b>	0	0	0	0	0	0	311	32	28
18:00	4	<b>22</b>	<b>89</b>	<b>193</b>	90	13	1	0	0	0	0	0	<b>1</b>	<b>413</b>	31	27
19:00	13	15	74	171	67	13	0	0	0	0	0	0	1	354	31	26
20:00	0	2	10	69	38	11	0	0	0	0	0	0	0	130	32	29
21:00	0	0	14	37	27	6	1	0	0	0	0	0	0	85	32	29
22:00	4	0	4	38	34	4	1	0	0	0	0	0	0	85	32	28
23:00	0	1	10	12	21	1	0	0	0	0	0	0	0	45	32	28
Total	518	294	789	1825	1230	231	25	2	0	0	0	0	2	4916		
%	10.5%	6.0%	16.0%	37.1%	25.0%	4.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	09:00	10:00	11:00	10:00	11:00								08:00	
Vol.	227	82	99	171	120	22	4							535		
PM Peak	16:00	18:00	18:00	18:00	17:00	14:00	17:00	12:00					18:00	18:00		
Vol.	13	22	89	193	108	18	4	1					1	413		

Stats

15th Percentile : 17 MPH  
 50th Percentile : 26 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 34 MPH

Mean Speed(Average) : 25 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 3055  
 Percent in Pace : 62.1%  
 Number of Vehicles > 30 MPH : 1244  
 Percent of Vehicles > 30 MPH : 25.3%



PRECISION  
D A T A  
INDUSTRIES, LLC

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NB

186077 A Speed  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
02/16/																
18	0	1	2	8	20	2	1	0	0	0	0	0	0	34	33	30
01:00	0	0	1	2	5	4	2	0	0	0	0	0	0	14	38	33
02:00	0	0	0	1	1	1	0	0	0	0	0	0	0	3	36	32
03:00	0	0	0	1	0	1	0	0	0	0	0	0	0	2	37	32
04:00	0	0	1	1	3	0	0	0	0	0	0	0	0	5	32	29
05:00	1	5	2	4	4	3	0	0	0	0	0	0	0	19	34	25
06:00	0	0	2	13	22	21	1	0	0	0	0	0	0	59	37	33
07:00	0	0	16	80	95	20	3	0	0	0	0	0	0	214	33	30
08:00	149	57	100	81	60	2	0	0	0	0	0	0	0	449	28	19
09:00	81	47	85	96	69	9	1	0	0	0	0	0	0	388	30	22
10:00	1	18	61	128	93	18	0	0	0	0	0	0	0	319	32	27
11:00	0	9	38	114	86	17	3	0	0	0	0	0	0	267	32	28
12 PM	3	14	33	110	94	12	1	0	0	0	0	0	0	267	32	28
13:00	9	9	55	115	75	11	5	0	0	0	0	0	0	279	32	27
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	244	160	396	754	627	121	17	0	0	0	0	0	0	2319		
%	10.5%	6.9%	17.1%	32.5%	27.0%	5.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	10:00	07:00	06:00	07:00								08:00	
Vol.	149	57	100	128	95	21	3								449	
PM Peak	13:00	12:00	13:00	13:00	12:00	12:00	13:00								13:00	
Vol.	9	14	55	115	94	12	5								279	

Stats

15th Percentile : 17 MPH  
 50th Percentile : 26 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 34 MPH

Mean Speed(Average) : 25 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 1381  
 Percent in Pace : 59.6%  
 Number of Vehicles > 30 MPH : 640  
 Percent of Vehicles > 30 MPH : 27.6%



PRECISION  
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SB

186077 A Speed  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
02/14/18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	0	1	23	157	62	8	0	0	0	0	0	0	0	251	31	28
15:00	4	0	24	88	76	8	0	0	0	0	0	0	0	200	32	28
16:00	2	2	37	125	65	7	0	0	0	0	0	0	0	238	31	28
17:00	3	0	32	119	101	12	0	0	0	0	0	0	0	267	32	29
18:00	2	1	51	205	66	2	2	1	0	0	0	0	0	330	30	27
19:00	3	3	64	176	49	2	0	0	0	0	0	0	0	297	29	27
20:00	1	2	31	116	46	5	1	0	0	0	0	0	0	202	31	27
21:00	0	1	16	99	43	3	1	0	0	0	0	0	0	163	31	28
22:00	0	0	17	58	43	5	1	0	0	0	0	0	0	124	32	29
23:00	0	0	11	34	28	3	0	0	0	0	0	0	0	76	32	29
Total	15	10	306	1177	579	55	5	1	0	0	0	0	0	2148		
%	0.7%	0.5%	14.2%	54.8%	27.0%	2.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

AM Peak Vol.	15:00	19:00	19:00	18:00	17:00	17:00	18:00	18:00	18:00	18:00
PM Peak Vol.	4	3	64	205	101	12	2	1		330

Stats

15th Percentile : 23 MPH  
50th Percentile : 27 MPH  
85th Percentile : 31 MPH  
95th Percentile : 33 MPH

Mean Speed(Average) : 28 MPH  
10 MPH Pace Speed : 25-34 MPH  
Number in Pace : 1756  
Percent in Pace : 81.8%  
Number of Vehicles > 30 MPH : 524  
Percent of Vehicles > 30 MPH : 24.4%



PRECISION  
D A T A  
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31 Elliot Street  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client/ Engineer: VHB/ M. Durnaleau  
SB

186077 A Speed  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
02/15/	14	19	24	29	34	39	44	49	54	59	64	69	9999			
18	0	0	4	23	13	5	0	0	0	0	0	0	0	45	33	29
01:00	0	0	0	9	9	1	1	0	0	0	0	0	0	20	33	30
02:00	0	0	0	4	2	0	0	0	0	0	0	0	0	6	31	29
03:00	0	0	0	1	3	0	1	0	0	0	0	0	0	5	40	33
04:00	0	0	0	4	7	1	0	0	0	0	0	0	0	12	33	31
05:00	0	0	1	4	3	0	0	0	0	0	0	0	0	8	32	28
06:00	0	0	5	12	9	1	0	0	0	0	0	0	0	27	32	28
07:00	1	3	9	57	25	3	2	0	0	0	0	0	0	100	32	28
08:00	1	2	28	37	41	2	0	0	0	0	0	0	0	111	32	27
09:00	3	4	34	49	46	3	1	0	0	0	0	0	1	141	32	27
10:00	6	2	48	83	45	7	0	0	0	0	0	0	0	191	31	27
11:00	4	5	18	73	36	9	0	0	0	0	0	0	0	145	32	27
12 PM	2	1	18	94	49	9	1	0	0	0	0	0	0	174	32	28
13:00	4	3	18	106	86	3	0	0	0	0	0	0	0	220	32	28
14:00	6	3	26	118	58	4	0	0	0	0	0	0	0	215	31	27
15:00	0	1	23	117	77	11	1	0	0	0	0	0	0	230	32	29
16:00	4	8	33	94	73	8	0	0	0	0	0	0	0	220	32	28
17:00	3	1	24	132	99	11	0	0	0	0	0	0	0	270	32	29
18:00	3	1	26	188	77	3	1	0	0	0	0	0	0	299	31	28
19:00	7	3	48	135	49	2	0	0	0	0	0	0	0	244	30	26
20:00	0	1	25	113	59	6	0	0	0	0	0	0	0	204	31	28
21:00	0	2	14	79	55	4	0	0	0	0	0	0	0	154	32	28
22:00	0	0	15	60	53	2	0	0	0	0	1	0	0	131	32	29
23:00	0	0	11	41	33	2	0	0	0	0	0	0	0	87	32	28
Total	44	40	428	1633	1007	97	8	0	0	0	1	0	1	3259		
%	1.4%	1.2%	13.1%	50.1%	30.9%	3.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	11:00	10:00	10:00	09:00	11:00	07:00						09:00	10:00		
Vol.	6	5	48	83	46	9	2						1	191		
PM Peak	19:00	16:00	19:00	18:00	17:00	15:00	12:00				22:00			18:00		
Vol.	7	8	48	188	99	11	1				1			299		

Stats

15th Percentile : 23 MPH  
 50th Percentile : 27 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 33 MPH

Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 2640  
 Percent in Pace : 81.0%  
 Number of Vehicles > 30 MPH : 913  
 Percent of Vehicles > 30 MPH : 28.0%



PRECISION  
DATA  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

31 Elliot Street  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client/ Engineer: VHB/ M. Durnaleau  
SB

186077 A Speed  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
02/16/	14	19	24	29	34	39	44	49	54	59	64	69	9999			
18	0	0	1	11	13	4	0	0	0	0	0	0	0	29	33	30
01:00	0	0	3	4	7	2	0	0	0	0	0	0	0	16	33	30
02:00	0	0	2	2	4	3	0	0	0	0	0	0	0	11	36	31
03:00	0	0	0	3	2	1	0	1	0	0	0	0	0	7	38	33
04:00	0	0	0	5	1	1	0	0	0	0	0	0	0	7	33	29
05:00	0	0	0	6	1	1	1	0	0	0	0	0	0	9	37	30
06:00	0	1	3	14	8	0	0	0	0	0	0	0	0	26	31	28
07:00	0	1	8	33	28	2	0	0	0	0	0	0	0	72	32	29
08:00	1	2	20	29	49	9	0	0	0	0	0	0	0	110	33	29
09:00	3	6	26	82	40	4	0	0	0	0	0	0	0	161	31	27
10:00	1	3	14	80	72	7	0	0	0	0	0	0	0	177	32	29
11:00	3	5	19	67	68	5	0	0	0	0	0	0	0	167	32	28
12 PM	0	1	13	67	64	12	1	0	0	0	0	0	0	158	33	29
13:00	2	2	23	102	72	7	0	0	0	0	0	0	0	208	32	28
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	10	21	132	505	429	58	2	1	0	0	0	0	0	1158		
%	0.9%	1.8%	11.4%	43.6%	37.0%	5.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	09:00	09:00	10:00	08:00	05:00	03:00						10:00		
Vol.	3	6	26	82	72	9	1	1						177		
PM Peak	13:00	13:00	13:00	13:00	13:00	12:00	12:00							13:00		
Vol.	2	2	23	102	72	12	1							208		

Stats

15th Percentile : 24 MPH  
 50th Percentile : 28 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 34 MPH

Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 934  
 Percent in Pace : 80.7%  
 Number of Vehicles > 30 MPH : 404  
 Percent of Vehicles > 30 MPH : 34.9%

31 Elliot Street  
 south of Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client/ Engineer: VHB/ M. Durnaleau



186077 A Volume  
 Site Code: 84297.17

Start Time	NB		SB		Combin ed		2/14/2018 Wed			
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.				
12:00	*	*	*	*	*	*				
12:15	*	*	*	*	*	*				
12:30	*	*	*	*	*	*				
12:45	0	*	0	*	0	*	0			
01:00	*	*	*	*	*	*				
01:15	*	*	*	*	*	*				
01:30	*	*	*	*	*	*				
01:45	0	*	0	*	0	*	0			
02:00	*	68	*	58	*	126				
02:15	*	60	*	63	*	123				
02:30	*	60	*	62	*	122				
02:45	0	65	253	*	0	68	251	0	133	504
03:00	*	55	*	50	*	105				
03:15	*	74	*	46	*	120				
03:30	*	76	*	53	*	129				
03:45	0	75	280	*	0	51	200	0	126	480
04:00	*	111	*	55	*	166				
04:15	*	63	*	61	*	124				
04:30	*	68	*	57	*	125				
04:45	0	62	304	*	0	65	238	0	127	542
05:00	*	69	*	67	*	136				
05:15	*	76	*	50	*	126				
05:30	*	75	*	73	*	148				
05:45	0	89	309	*	0	77	267	0	166	576
06:00	*	97	*	76	*	173				
06:15	*	108	*	94	*	202				
06:30	*	115	*	82	*	197				
06:45	0	128	448	*	0	78	330	0	206	778
07:00	*	119	*	84	*	203				
07:15	*	114	*	75	*	189				
07:30	*	81	*	67	*	148				
07:45	0	58	372	*	0	71	297	0	129	669
08:00	*	53	*	58	*	111				
08:15	*	39	*	48	*	87				
08:30	*	31	*	61	*	92				
08:45	0	34	157	*	0	35	202	0	69	359
09:00	*	36	*	37	*	73				
09:15	*	22	*	44	*	66				
09:30	*	24	*	47	*	71				
09:45	0	22	104	*	0	35	163	0	57	267
10:00	*	34	*	42	*	76				
10:15	*	21	*	32	*	53				
10:30	*	28	*	22	*	50				
10:45	0	18	101	*	0	28	124	0	46	225
11:00	*	9	*	22	*	31				
11:15	*	11	*	20	*	31				
11:30	*	13	*	13	*	26				
11:45	0	10	43	*	0	21	76	0	31	119
Total	0	2371	0	2148	0	4519				
Percent	0.0%	52.5%	0.0%	47.5%						
Day Total		2371		2148		4519				
Peak	-	-	06:30	-	-	-	06:15	-	-	-
Vol.	-	-	476	-	-	-	338	-	-	808
P.H.F.			0.930				0.899			0.981

31 Elliot Street  
 south of Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client/ Engineer: VHB/ M. Durnaleau



186077 A Volume  
 Site Code: 84297.17

Start Time	NB		SB		Combin ed		2/15/2018 Thu						
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.							
12:00	11	66	16	36	27	102							
12:15	7	46	13	38	20	84							
12:30	7	62	12	50	19	112							
12:45	8	33 77	251 4	45 50	174 12	78 127	425						
01:00	5	80	3	59	8	139							
01:15	1	81	4	56	5	137							
01:30	2	62	7	63	9	125							
01:45	0	8 69	292 6	20 42	220 6	28 111	512						
02:00	1	55	4	58	5	113							
02:15	2	66	1	56	3	122							
02:30	0	64	1	50	1	114							
02:45	0	3 71	256 0	6 51	215 0	9 122	471						
03:00	1	58	0	62	1	120							
03:15	0	47	0	49	0	96							
03:30	1	68	3	61	4	129							
03:45	0	2 77	250 2	5 58	230 2	7 135	480						
04:00	4	93	0	40	4	133							
04:15	1	72	4	57	5	129							
04:30	0	62	3	60	3	122							
04:45	3	8 54	281 5	12 63	220 8	20 117	501						
05:00	2	80	0	57	2	137							
05:15	5	69	2	69	7	138							
05:30	5	91	3	70	8	161							
05:45	2	14 71	311 3	8 74	270 5	22 145	581						
06:00	11	112	5	64	16	176							
06:15	17	92	3	85	20	177							
06:30	17	112	5	74	22	186							
06:45	37	82 97	413 14	27 76	299 51	109 173	712						
07:00	28	116	13	55	41	171							
07:15	59	90	13	65	72	155							
07:30	78	76	35	64	113	140							
07:45	98	263 72	354 39	100 60	244 137	363 132	598						
08:00	136	40	25	50	161	90							
08:15	146	34	22	50	168	84							
08:30	141	32	26	57	167	89							
08:45	112	535 24	130 38	111 47	204 150	646 71	334						
09:00	116	23	24	41	140	64							
09:15	126	23	37	40	163	63							
09:30	122	22	43	40	165	62							
09:45	104	468 17	85 37	141 33	154 141	609 50	239						
10:00	117	22	54	33	171	55							
10:15	110	19	40	43	150	62							
10:30	119	19	52	35	171	54							
10:45	97	443 25	85 45	191 20	131 142	634 45	216						
11:00	76	13	27	29	103	42							
11:15	78	9	37	25	115	34							
11:30	80	12	42	20	122	32							
11:45	70	304 11	45 39	145 13	87 109	449 24	132						
Total	2163	2753	811	2448	2974	5201							
Percent	72.7%	52.9%	27.3%	47.1%									
Day Total		4916		3259		8175							
Peak	08:00	-	06:15	-	10:00	-	06:00	-	-	-			
Vol.	535	-	417	-	191	-	299	-	646	-	712	-	-
P.H.F.	0.916		0.899		0.884		0.879		0.961		0.957		

31 Elliot Street  
 south of Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client/ Engineer: VHB/ M. Durnaleau



186077 A Volume  
 Site Code: 84297.17

Start Time	NB		SB		Combin ed		2/16/2018 Fri					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.						
12:00	13	66	7	47	20	113						
12:15	7	73	9	39	16	112						
12:30	9	67	7	43	16	110						
12:45	5	34	61	267	6	29	158	11	63	90	425	
01:00	0	77	5	59	5	136						
01:15	2	71	5	51	7	122						
01:30	5	75	2	49	7	124						
01:45	7	14	56	279	4	16	49	208	11	30	105	487
02:00	1	*	6	*	7	*						
02:15	1	*	2	*	3	*						
02:30	1	*	0	*	1	*						
02:45	0	3	*	0	3	11	*	0	3	14	*	0
03:00	0	*	2	*	2	*						
03:15	1	*	3	*	4	*						
03:30	0	*	1	*	1	*						
03:45	1	2	*	0	1	7	*	0	2	9	*	0
04:00	0	*	1	*	1	*						
04:15	2	*	2	*	4	*						
04:30	2	*	1	*	3	*						
04:45	1	5	*	0	3	7	*	0	4	12	*	0
05:00	1	*	3	*	4	*						
05:15	12	*	0	*	12	*						
05:30	3	*	1	*	4	*						
05:45	3	19	*	0	5	9	*	0	8	28	*	0
06:00	5	*	2	*	7	*						
06:15	15	*	1	*	16	*						
06:30	18	*	8	*	26	*						
06:45	21	59	*	0	15	26	*	0	36	85	*	0
07:00	31	*	6	*	37	*						
07:15	40	*	12	*	52	*						
07:30	64	*	23	*	87	*						
07:45	79	214	*	0	31	72	*	0	110	286	*	0
08:00	116	*	24	*	140	*						
08:15	109	*	24	*	133	*						
08:30	118	*	25	*	143	*						
08:45	106	449	*	0	37	110	*	0	143	559	*	0
09:00	101	*	32	*	133	*						
09:15	102	*	33	*	135	*						
09:30	87	*	33	*	120	*						
09:45	98	388	*	0	63	161	*	0	161	549	*	0
10:00	96	*	40	*	136	*						
10:15	77	*	44	*	121	*						
10:30	70	*	39	*	109	*						
10:45	76	319	*	0	54	177	*	0	130	496	*	0
11:00	65	*	41	*	106	*						
11:15	58	*	38	*	96	*						
11:30	77	*	46	*	123	*						
11:45	67	267	*	0	42	167	*	0	109	434	*	0
Total	1773		546		792		366		2565		912	
Percent	69.1%		59.9%		30.9%		40.1%					
Day Total		2319			1158				3477			
Peak	08:00	-	00:45	-	09:45	-	01:00	-	08:00	-	01:00	-
Vol.	449	-	284	-	186	-	208	-	559	-	487	-
P.H.F.	0.951		0.922		0.738		0.881		0.977		0.895	





PRECISION  
D A T A  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client: VHB/M. Duranleau  
NB

186077 AA Class  
Site Code: 84297.17

Start Time	Bikes	Cars & Trailers	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
02/24/1														
8	0	7	0	0	0	1	0	0	0	0	0	0	0	8
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	6	0	0	2	0	0	0	0	0	0	0	0	8
05:00	0	13	5	0	0	0	0	0	0	0	0	0	0	18
06:00	0	45	5	0	2	0	0	0	0	0	0	0	0	52
07:00	0	71	13	1	7	0	0	0	0	0	0	0	0	92
08:00	0	130	22	1	4	0	0	1	0	0	0	0	0	158
09:00	0	181	22	0	4	0	0	0	0	0	0	0	0	207
10:00	3	178	30	1	9	0	0	0	0	0	0	0	0	221
11:00	5	247	26	1	5	1	0	0	0	0	0	0	0	285
12 PM	3	255	34	0	7	0	0	0	0	0	0	0	0	299
13:00	1	221	28	1	8	1	0	0	0	0	0	0	0	260
14:00	2	203	28	1	2	0	0	0	0	0	0	0	0	236
15:00	2	193	30	0	2	1	0	0	0	0	0	0	0	228
16:00	1	208	20	1	4	1	0	0	0	0	0	0	0	235
17:00	1	214	17	1	3	1	0	0	0	0	0	0	0	237
18:00	1	195	17	0	0	0	0	0	0	0	0	0	0	213
19:00	3	112	10	1	3	0	0	1	0	0	0	0	0	130
20:00	1	78	9	0	1	0	0	0	0	0	0	0	0	89
21:00	0	59	9	0	0	0	0	0	0	0	0	0	0	68
22:00	1	68	4	0	1	0	0	0	0	0	0	0	0	74
23:00	1	29	4	0	0	0	0	0	0	0	0	0	0	34
Total	25	2725	334	9	64	6	0	2	0	0	0	0	0	3165
Percent	0.8%	86.1%	10.6%	0.3%	2.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	07:00	10:00	00:00		08:00						11:00
Vol.	5	247	30	1	9	1		1						285
PM Peak	12:00	12:00	12:00	13:00	13:00	13:00		19:00						12:00
Vol.	3	255	34	1	8	1		1						299





PRECISION  
D A T A  
INDUSTRIES, LLC

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Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
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Client: VHB/M. Duranleau  
SB

186077 AA Class  
Site Code: 84297.17

Start Time	Bikes	Cars & Trailers	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
02/24/1														
8	0	28	2	0	1	0	0	0	0	0	0	0	0	31
01:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
02:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
03:00	0	5	2	0	1	0	0	0	0	0	0	0	0	8
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
05:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
06:00	0	19	4	1	1	0	0	0	0	0	0	0	0	25
07:00	0	30	8	0	5	0	0	0	0	0	0	0	0	43
08:00	0	61	14	1	4	0	0	0	0	0	0	0	0	80
09:00	1	110	15	1	3	0	0	0	0	0	0	0	0	130
10:00	3	134	23	0	5	1	0	0	0	0	0	0	0	166
11:00	4	171	20	1	7	0	0	0	0	0	0	0	0	203
12 PM	4	170	14	1	2	0	0	0	0	0	0	0	0	191
13:00	3	170	17	0	2	2	0	0	0	0	0	0	0	194
14:00	1	168	24	0	6	0	0	0	0	0	0	0	0	199
15:00	3	178	27	2	6	1	0	0	0	0	0	0	0	217
16:00	2	155	18	0	5	1	0	0	0	0	0	0	0	181
17:00	2	156	22	1	3	0	0	0	0	0	0	0	0	184
18:00	1	131	22	1	1	2	0	0	0	0	0	0	0	158
19:00	2	121	13	0	2	0	0	0	0	0	0	0	0	138
20:00	1	80	11	0	1	0	0	1	0	0	0	0	0	94
21:00	0	103	11	0	1	0	0	0	0	0	0	0	0	115
22:00	0	88	10	0	1	0	0	0	0	0	0	0	0	99
23:00	1	52	6	0	0	0	0	0	0	0	0	0	0	59
Total	28	2163	284	9	57	7	0	1	0	0	0	0	0	2549
Percent	1.1%	84.9%	11.1%	0.4%	2.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	10:00	06:00	11:00	10:00								11:00
Vol.	4	171	23	1	7	1								203
PM Peak	12:00	15:00	15:00	15:00	14:00	13:00		20:00						15:00
Vol.	4	178	27	2	6	2		1						217



PRECISION  
D A T A  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client: VHB/M. Duranleau  
SB

186077 AA Class  
Site Code: 84297.17

Start Time	Bikes	Cars & Trailers	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
02/25/1														
8	0	34	2	0	1	0	0	0	0	0	0	0	0	37
01:00	0	20	2	0	0	0	0	0	0	0	0	0	0	22
02:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
03:00	0	12	0	0	2	0	0	0	0	0	0	0	0	14
04:00	0	3	2	1	0	0	0	0	0	0	0	0	0	6
05:00	0	11	2	0	0	0	0	0	0	0	0	0	0	13
06:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
07:00	0	36	7	1	3	0	0	0	0	0	0	0	0	47
08:00	0	37	6	2	3	0	0	0	0	0	0	0	0	48
09:00	1	72	10	0	2	0	0	0	0	0	0	0	0	85
10:00	0	106	13	1	3	0	0	0	0	0	0	0	0	123
11:00	1	106	19	1	5	0	0	0	0	0	0	0	0	132
12 PM	0	142	15	0	2	0	0	0	0	0	0	0	0	159
13:00	2	153	16	1	3	0	0	0	0	0	0	0	0	175
14:00	4	134	21	1	3	1	0	0	0	0	0	0	0	164
15:00	0	143	11	0	1	0	0	0	1	0	0	0	0	156
16:00	1	137	22	1	1	0	0	1	0	0	0	0	0	163
17:00	4	124	14	1	7	0	0	0	0	0	0	0	0	150
18:00	0	109	19	0	3	0	0	0	0	0	0	0	0	131
19:00	0	78	13	1	5	0	0	0	0	0	0	0	0	97
20:00	0	80	11	0	2	0	0	0	0	0	0	0	0	93
21:00	0	58	6	0	0	0	0	0	0	0	0	0	0	64
22:00	0	39	4	0	0	0	0	0	0	0	0	0	0	43
23:00	0	38	1	0	2	0	0	0	0	0	0	0	0	41
Total	13	1695	219	11	48	1	0	1	1	0	0	0	0	1989
Percent	0.7%	85.2%	11.0%	0.6%	2.4%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	10:00	11:00	08:00	11:00									11:00
Vol.	1	106	19	2	5									132
PM Peak	14:00	13:00	16:00	13:00	17:00	14:00		16:00	15:00					13:00
Vol.	4	153	22	1	7	1		1	1					175



PRECISION  
D A T A  
INDUSTRIES, LLC

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Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client: VHB/M. Duranleau  
NB

186077 AA SPEED  
Site Code: 84297.17

Start Time	14	15	19	20	24	25	29	30	34	35	39	40	44	45	49	50	54	55	59	60	64	65	69	70	9999	Total	85th % ile	Ave Speed	
02/24/																													
18	0	0	1	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	37	31	
01:00	0	1	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	37	31	
02:00	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	27	23	
03:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	33	32	
04:00	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	38	32	
05:00	0	0	1	4	9	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	36	32	
06:00	0	0	1	6	18	18	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	39	35	
07:00	0	1	1	18	45	20	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	37	33	
08:00	0	0	6	24	86	39	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158	36	32	
09:00	0	1	7	66	97	34	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207	34	31	
10:00	0	1	16	89	83	26	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	33	30	
11:00	2	5	21	108	118	27	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	285	33	30	
12 PM	5	10	37	102	116	28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	299	33	29	
13:00	1	9	24	93	100	29	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	260	33	29	
14:00	1	1	19	90	94	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236	33	30	
15:00	0	1	11	86	109	17	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228	33	30	
16:00	0	4	21	88	90	30	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	33	30	
17:00	1	5	17	94	102	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237	33	29	
18:00	0	0	15	70	99	24	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213	33	30	
19:00	2	1	12	45	55	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	33	29	
20:00	0	2	6	23	47	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89	33	30	
21:00	0	0	5	21	28	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	35	31	
22:00	0	1	7	31	22	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	35	30	
23:00	0	0	2	11	12	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	36	31	
Total	12	44	232	1076	1339	400	55	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3165			
%	0.4%	1.4%	7.3%	34.0%	42.3%	12.6%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
AM Peak	11:00	11:00	11:00	11:00	11:00	08:00	06:00	06:00																			11:00		
Vol.	2	5	21	108	118	39	7	2																			285		
PM Peak	12:00	12:00	12:00	12:00	12:00	16:00	13:00	15:00																			12:00		
Vol.	5	10	37	102	116	30	4	1																			299		

Stats

15th Percentile : 24 MPH  
 50th Percentile : 29 MPH  
 85th Percentile : 33 MPH  
 95th Percentile : 37 MPH

Mean Speed(Average) : 30 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 2415  
 Percent in Pace : 76.3%  
 Number of Vehicles > 25 MPH : 2662  
 Percent of Vehicles > 25 MPH : 84.1%



PRECISION  
DATA  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
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Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client: VHB/M. Duranleau  
NB

186077 AA SPEED  
Site Code: 84297.17

Start Time	14	15	19	20	24	25	29	30	34	35	39	40	44	45	49	50	54	55	59	60	64	65	69	70	9999	Total	85th %ile	Ave Speed	
02/25/																													
18	0	1	2	2	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	37	31		
01:00	0	0	1	3	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	36	32		
02:00	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	32	30		
03:00	0	0	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	42	35		
04:00	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	37	35		
05:00	0	0	1	4	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	37	33		
06:00	0	0	3	8	13	16	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	38	34		
07:00	0	0	4	9	23	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	36	32		
08:00	0	0	5	30	34	18	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	36	31		
09:00	1	1	6	52	69	31	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	163	35	31		
10:00	0	1	2	60	74	25	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167	34	31		
11:00	0	0	7	59	83	24	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177	34	31		
12 PM	1	4	34	95	68	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	33	29		
13:00	0	3	7	84	85	33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213	34	30		
14:00	1	5	16	63	94	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203	33	30		
15:00	1	1	11	60	78	22	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176	33	30		
16:00	0	1	14	60	76	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	163	33	30		
17:00	1	1	6	60	58	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148	33	30		
18:00	1	5	19	65	60	14	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167	33	29		
19:00	0	1	7	37	33	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	33	30		
20:00	0	0	5	30	32	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	33	30		
21:00	0	1	3	12	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	33	29		
22:00	0	1	2	4	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	33	29		
23:00	0	0	0	5	18	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	35	32		
Total	6	26	155	805	940	316	38	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2290				
%	0.3%	1.1%	6.8%	35.2%	41.0%	13.8%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
AM Peak	09:00	00:00	11:00	10:00	11:00	09:00	06:00	06:00																		11:00			
Vol.	1	1	7	60	83	31	6	1																		177			
PM Peak	12:00	14:00	12:00	12:00	14:00	13:00	12:00	15:00																			12:00		
Vol.	1	5	34	95	94	33	2	1																			226		

Stats

15th Percentile : 24 MPH  
 50th Percentile : 29 MPH  
 85th Percentile : 34 MPH  
 95th Percentile : 37 MPH

Mean Speed(Average) : 30 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 1745  
 Percent in Pace : 76.2%  
 Number of Vehicles > 25 MPH : 1942  
 Percent of Vehicles > 25 MPH : 84.8%



PRECISION  
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SB

186077 AA SPEED  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th %ile	Ave Speed
02/24/	14	19	24	29	34	39	44	49	54	59	64	69	9999			
18	0	1	0	11	13	5	1	0	0	0	0	0	0	31	35	31
01:00	0	0	3	3	4	3	0	0	0	0	0	0	0	13	35	30
02:00	0	0	0	4	7	1	0	0	0	0	0	0	0	12	33	31
03:00	0	0	0	2	4	2	0	0	0	0	0	0	0	8	36	32
04:00	0	0	0	1	1	0	1	0	0	0	0	0	0	3	41	34
05:00	0	0	1	2	3	0	0	0	0	0	0	0	0	6	32	29
06:00	0	0	0	8	10	5	2	0	0	0	0	0	0	25	37	32
07:00	0	0	2	11	19	10	1	0	0	0	0	0	0	43	36	32
08:00	0	0	2	17	50	11	0	0	0	0	0	0	0	80	33	31
09:00	1	0	8	38	70	13	0	0	0	0	0	0	0	130	33	30
10:00	1	1	12	47	81	23	1	0	0	0	0	0	0	166	33	30
11:00	0	1	6	74	101	20	1	0	0	0	0	0	0	203	33	30
12 PM	2	2	14	77	82	12	2	0	0	0	0	0	0	191	33	29
13:00	1	0	9	72	86	26	0	0	0	0	0	0	0	194	33	30
14:00	0	1	9	74	94	20	1	0	0	0	0	0	0	199	33	30
15:00	0	1	14	87	95	17	2	1	0	0	0	0	0	217	33	30
16:00	1	0	16	83	67	14	0	0	0	0	0	0	0	181	33	29
17:00	0	1	10	86	71	14	2	0	0	0	0	0	0	184	33	30
18:00	0	0	8	74	67	8	0	1	0	0	0	0	0	158	32	29
19:00	0	1	17	55	56	8	1	0	0	0	0	0	0	138	32	29
20:00	1	1	7	48	32	4	1	0	0	0	0	0	0	94	32	29
21:00	0	0	5	51	47	10	2	0	0	0	0	0	0	115	33	30
22:00	0	0	8	36	47	7	1	0	0	0	0	0	0	99	33	30
23:00	0	0	4	13	34	8	0	0	0	0	0	0	0	59	33	31
Total	7	10	155	974	1141	241	19	2	0	0	0	0	0	2549		
%	0.3%	0.4%	6.1%	38.2%	44.8%	9.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	00:00	10:00	11:00	11:00	10:00	06:00							11:00		
Vol.	1	1	12	74	101	23	2							203		
PM Peak	12:00	12:00	19:00	15:00	15:00	13:00	12:00	15:00						15:00		
Vol.	2	2	17	87	95	26	2	1						217		

Stats

15th Percentile : 25 MPH  
50th Percentile : 29 MPH  
85th Percentile : 33 MPH  
95th Percentile : 36 MPH

Mean Speed(Average) : 30 MPH  
10 MPH Pace Speed : 25-34 MPH  
Number in Pace : 2115  
Percent in Pace : 83.0%  
Number of Vehicles > 25 MPH : 2182  
Percent of Vehicles > 25 MPH : 85.6%



PRECISION  
DATA  
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SB

186077 AA SPEED  
Site Code: 84297.17

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th %ile	Ave Speed
02/25/	14	19	24	29	34	39	44	49	54	59	64	69	9999			
18	1	1	1	7	21	6	0	0	0	0	0	0	0	37	34	31
01:00	0	0	1	9	8	3	0	0	1	0	0	0	0	22	35	31
02:00	0	0	0	3	5	3	0	0	0	0	0	0	0	11	36	32
03:00	0	0	0	2	9	3	0	0	0	0	0	0	0	14	35	32
04:00	0	0	1	1	3	1	0	0	0	0	0	0	0	6	34	30
05:00	0	0	0	6	5	1	1	0	0	0	0	0	0	13	34	31
06:00	0	0	0	2	6	6	1	0	0	0	0	0	0	15	37	34
07:00	0	1	5	10	20	10	1	0	0	0	0	0	0	47	35	31
08:00	0	0	7	19	15	5	2	0	0	0	0	0	0	48	33	29
09:00	0	0	3	29	40	12	1	0	0	0	0	0	0	85	34	31
10:00	0	0	5	42	58	17	1	0	0	0	0	0	0	123	33	31
11:00	0	5	21	49	48	9	0	0	0	0	0	0	0	132	32	28
12 PM	0	2	14	46	86	11	0	0	0	0	0	0	0	159	33	30
13:00	0	1	17	79	66	12	0	0	0	0	0	0	0	175	32	29
14:00	0	1	14	51	81	17	0	0	0	0	0	0	0	164	33	30
15:00	0	0	10	53	83	10	0	0	0	0	0	0	0	156	33	30
16:00	1	0	8	66	76	10	2	0	0	0	0	0	0	163	33	30
17:00	2	1	9	47	76	13	2	0	0	0	0	0	0	150	33	30
18:00	0	1	8	50	66	5	1	0	0	0	0	0	0	131	32	30
19:00	0	2	4	40	41	6	3	1	0	0	0	0	0	97	33	30
20:00	0	2	5	38	38	9	1	0	0	0	0	0	0	93	33	30
21:00	0	0	7	22	27	7	1	0	0	0	0	0	0	64	33	30
22:00	0	1	3	14	17	8	0	0	0	0	0	0	0	43	34	30
23:00	0	0	2	10	18	11	0	0	0	0	0	0	0	41	36	32
Total	4	18	145	695	913	195	17	1	1	0	0	0	0	1989		
%	0.2%	0.9%	7.3%	34.9%	45.9%	9.8%	0.9%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	00:00	11:00	11:00	11:00	10:00	10:00	08:00		01:00					11:00		
Vol.	1	5	21	49	58	17	2		1					132		
PM Peak	17:00	12:00	13:00	13:00	12:00	14:00	19:00	19:00						13:00		
Vol.	2	2	17	79	86	17	3	1						175		

Stats

15th Percentile : 24 MPH  
50th Percentile : 29 MPH  
85th Percentile : 33 MPH  
95th Percentile : 36 MPH

Mean Speed(Average) : 30 MPH  
10 MPH Pace Speed : 25-34 MPH  
Number in Pace : 1608  
Percent in Pace : 80.8%  
Number of Vehicles > 25 MPH : 1683  
Percent of Vehicles > 25 MPH : 84.6%





PRECISION  
D A T A  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: datarequests@pdillc.com

Elliot Street (at #31 Elliot Street)  
south of Boylston Street (Route 9)  
City, State: Newton, MA  
Client: VHB/M. Duranleau

186077 AA VOLUME  
Site Code: 84297.17

Start Time	NB		SB		Combin ed		2/24/2018 Sat
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	4	68	10	54	14	122	
12:15	1	67	7	40	8	107	
12:30	1	79	8	56	9	135	
12:45	2	85	299	6	31	41	191
01:00	1	61	3	48	4	109	
01:15	1	72	5	52	6	124	
01:30	3	53	4	47	7	100	
01:45	2	74	260	1	13	47	194
02:00	0	63	6	44	6	107	
02:15	2	65	3	48	5	113	
02:30	1	52	0	58	1	110	
02:45	1	56	236	3	12	49	199
03:00	0	66	3	58	3	124	
03:15	1	57	3	51	4	108	
03:30	0	53	0	59	0	112	
03:45	1	52	228	2	8	49	217
04:00	2	46	0	36	2	82	
04:15	0	60	0	51	0	111	
04:30	3	60	0	50	3	110	
04:45	3	69	235	3	3	44	181
05:00	5	66	2	53	7	119	
05:15	6	64	2	40	8	104	
05:30	4	57	1	41	5	98	
05:45	3	50	237	1	6	50	184
06:00	4	59	7	43	11	102	
06:15	10	57	2	44	12	101	
06:30	17	55	6	33	23	88	
06:45	21	42	213	10	25	38	158
07:00	11	37	9	33	20	70	
07:15	23	33	8	38	31	71	
07:30	23	28	16	30	39	58	
07:45	35	32	130	10	43	37	138
08:00	34	26	16	22	50	48	
08:15	35	26	16	24	51	50	
08:30	46	18	27	25	73	43	
08:45	43	19	89	21	80	23	94
09:00	49	23	40	28	89	51	
09:15	51	13	23	33	74	46	
09:30	59	17	32	25	91	42	
09:45	48	15	68	35	130	29	115
10:00	52	19	40	24	92	43	
10:15	54	21	36	32	90	53	
10:30	44	20	55	25	99	45	
10:45	71	14	74	35	166	18	99
11:00	67	16	57	23	106	39	
11:15	74	7	45	22	119	29	
11:30	75	4	50	7	125	11	
11:45	69	7	34	51	203	7	59
Total	1062	2103	720	1829	1782	3932	
Percent	59.6%	53.5%	40.4%	46.5%			
Day Total		3165		2549		5714	
Peak	10:45	-	12:00	-	11:00	-	00:30
Vol.	287	-	299	-	203	-	494
P.H.F.	0.957		0.879		0.890		0.915

Elliot Street (at #31 Elliot Street)  
 south of Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client: VHB/M. Duranleau



186077 AA VOLUME  
 Site Code: 84297.17

Start Time	NB		SB		Combin ed		2/25/2018 Sun	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	10	60	12	44	22	104		
12:15	2	70	9	45	11	115		
12:30	1	49	10	37	11	86		
12:45	1	47	6	33	7	80	385	
01:00	5	63	5	50	10	113		
01:15	4	35	7	39	11	74		
01:30	3	58	8	44	11	102		
01:45	2	57	2	42	4	99	388	
02:00	1	65	2	38	3	103		
02:15	2	43	3	43	5	86		
02:30	0	58	4	30	4	88		
02:45	0	37	2	53	2	90	367	
03:00	3	37	3	34	6	71		
03:15	1	53	9	36	10	89		
03:30	1	42	1	42	2	84		
03:45	0	44	1	44	1	88	332	
04:00	1	50	1	36	2	86		
04:15	1	45	2	48	3	93		
04:30	2	37	2	33	4	70		
04:45	2	31	1	46	3	77	326	
05:00	1	55	2	44	3	99		
05:15	7	29	6	41	13	70		
05:30	4	41	1	33	5	74		
05:45	4	23	4	32	8	55	298	
06:00	11	43	2	27	13	70		
06:15	10	45	3	29	13	74		
06:30	15	34	5	33	20	67		
06:45	11	45	5	42	16	87	298	
07:00	9	28	9	25	18	53		
07:15	10	20	18	22	28	42		
07:30	15	21	13	30	28	51		
07:45	13	21	7	20	20	41	187	
08:00	23	16	12	29	35	45		
08:15	18	21	5	27	23	48		
08:30	32	21	13	17	45	38		
08:45	17	17	18	20	35	37	168	
09:00	39	14	21	16	60	30		
09:15	42	4	16	22	58	26		
09:30	40	9	19	20	59	29		
09:45	42	7	29	6	71	13	98	
10:00	37	3	28	17	65	20		
10:15	46	5	41	9	87	14		
10:30	38	5	28	9	66	14		
10:45	46	5	26	8	72	13	61	
11:00	44	12	27	11	71	23		
11:15	44	7	34	11	78	18		
11:30	38	7	37	7	75	14		
11:45	51	2	34	12	85	14	69	
Total	749	1541	553	1436	1302	2977		
Percent	57.5%	51.8%	42.5%	48.2%				
Day Total		2290		1989		4279		
Peak	11:00	-	00:15	-	11:00	-	00:15	-
Vol.	177	-	229	-	132	-	394	-
P.H.F.	0.868		0.818		0.805		0.857	

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	10	22	24	0	56	4	498	41	4	547	45	21	15	0	81	8	414	11	6	439	1123
4:15 PM	16	25	43	0	84	10	463	38	2	513	41	21	17	0	79	6	449	22	2	479	1155
4:30 PM	11	31	29	0	71	8	505	46	4	563	47	32	15	0	94	5	445	19	5	474	1202
4:45 PM	20	39	49	0	108	13	509	42	1	565	46	18	4	0	68	5	516	9	3	533	1274
<b>Total</b>	57	117	145	0	319	35	1975	167	11	2188	179	92	51	0	322	24	1824	61	16	1925	4754
5:00 PM	9	31	39	0	79	12	495	43	2	552	62	28	19	0	109	5	469	10	0	484	1224
5:15 PM	10	44	52	0	106	8	478	47	7	540	70	21	8	0	99	7	419	10	5	441	1186
5:30 PM	11	27	55	0	93	4	512	35	13	564	93	32	11	0	136	5	433	9	0	447	1240
5:45 PM	8	25	42	0	75	10	491	48	7	556	89	32	11	0	132	2	435	12	1	450	1213
<b>Total</b>	38	127	188	0	353	34	1976	173	29	2212	314	113	49	0	476	19	1756	41	6	1822	4863
Grand Total	95	244	333	0	672	69	3951	340	40	4400	493	205	100	0	798	43	3580	102	22	3747	9617
Approach %	14.1	36.3	49.6	0.0		1.6	89.8	7.7	0.9		61.8	25.7	12.5	0.0		1.1	95.5	2.7	0.6		
Total %	1.0	2.5	3.5	0.0	7.0	0.7	41.1	3.5	0.4	45.8	5.1	2.1	1.0	0.0	8.3	0.4	37.2	1.1	0.2	39.0	
Exiting Leg Total	376					4446					627					4168					9617
Cars	91	240	332	0	663	67	3883	338	39	4327	489	197	95	0	781	42	3541	102	22	3707	9478
% Cars	95.8	98.4	99.7	0.0	98.7	97.1	98.3	99.4	97.5	98.3	99.2	96.1	95.0	0.0	97.9	97.7	98.9	100.0	100.0	98.9	98.6
Exiting Leg Total	366					4401					620					4091					9478
Heavy Vehicles	4	4	1	0	9	2	68	2	1	73	4	8	5	0	17	1	39	0	0	40	139
% Heavy Vehicles	4.2	1.6	0.3	0.0	1.3	2.9	1.7	0.6	2.5	1.7	0.8	3.9	5.0	0.0	2.1	2.3	1.1	0.0	0.0	1.1	1.4
Exiting Leg Total	10					45					7					77					139

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	20	39	49	0	108	13	509	42	1	565	46	18	4	0	68	5	516	9	3	533	1274
5:00 PM	9	31	39	0	79	12	495	43	2	552	62	28	19	0	109	5	469	10	0	484	1224
5:15 PM	10	44	52	0	106	8	478	47	7	540	70	21	8	0	99	7	419	10	5	441	1186
5:30 PM	11	27	55	0	93	4	512	35	13	564	93	32	11	0	136	5	433	9	0	447	1240
Total Volume	50	141	195	0	386	37	1994	167	23	2221	271	99	42	0	412	22	1837	38	8	1905	4924
% Approach Total	13.0	36.5	50.5	0.0		1.7	89.8	7.5	1.0		65.8	24.0	10.2	0.0		1.2	96.4	2.0	0.4		
PHF	0.625	0.801	0.886	0.000	0.894	0.712	0.974	0.888	0.442	0.983	0.728	0.773	0.553	0.000	0.757	0.786	0.890	0.950	0.400	0.894	0.966
Cars	49	140	194	0	383	35	1971	167	22	2195	270	95	40	0	405	22	1818	38	8	1886	4869
Cars %	98.0	99.3	99.5	0.0	99.2	94.6	98.8	100.0	95.7	98.8	99.6	96.0	95.2	0.0	98.3	100.0	99.0	100.0	100.0	99.0	98.9
Heavy Vehicles	1	1	1	0	3	2	23	0	1	26	1	4	2	0	7	0	19	0	0	19	55
Heavy Vehicles %	2.0	0.7	0.5	0.0	0.8	5.4	1.2	0.0	4.3	1.2	0.4	4.0	4.8	0.0	1.7	0.0	1.0	0.0	0.0	1.0	1.1
Cars Enter Leg	49	140	194	0	383	35	1971	167	22	2195	270	95	40	0	405	22	1818	38	8	1886	4869
Heavy Enter Leg	1	1	1	0	3	2	23	0	1	26	1	4	2	0	7	0	19	0	0	19	55
Total Entering Leg	50	141	195	0	386	37	1994	167	23	2221	271	99	42	0	412	22	1837	38	8	1905	4924
Cars Exiting Leg	168					2304					329					2068					4869
Heavy Exiting Leg	6					22					1					26					55
Total Exiting Leg	174					2326					330					2094					4924

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars-Combined (Motorcycles, Cars, Light Goods)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	10	22	24	0	56	4	486	41	4	535	45	20	14	0	79	8	406	11	6	431	1101
4:15 PM	16	24	43	0	83	10	455	38	2	505	41	21	15	0	77	5	444	22	2	473	1138
4:30 PM	8	30	29	0	67	8	491	46	4	549	45	30	15	0	90	5	441	19	5	470	1176
4:45 PM	20	39	49	0	108	12	503	42	1	558	46	17	4	0	67	5	512	9	3	529	1262
<b>Total</b>	54	115	145	0	314	34	1935	167	11	2147	177	88	48	0	313	23	1803	61	16	1903	4677
5:00 PM	9	31	38	0	78	12	489	43	2	546	62	27	18	0	107	5	465	10	0	480	1211
5:15 PM	10	44	52	0	106	7	471	47	7	532	70	21	8	0	99	7	415	10	5	437	1174
5:30 PM	10	26	55	0	91	4	508	35	12	559	92	30	10	0	132	5	426	9	0	440	1222
5:45 PM	8	24	42	0	74	10	480	46	7	543	88	31	11	0	130	2	432	12	1	447	1194
<b>Total</b>	37	125	187	0	349	33	1948	171	28	2180	312	109	47	0	468	19	1738	41	6	1804	4801
Grand Total	91	240	332	0	663	67	3883	338	39	4327	489	197	95	0	781	42	3541	102	22	3707	9478
Approach %	13.7	36.2	50.1	0.0		1.5	89.7	7.8	0.9		62.6	25.2	12.2	0.0		1.1	95.5	2.8	0.6		
Total %	1.0	2.5	3.5	0.0	7.0	0.7	41.0	3.6	0.4	45.7	5.2	2.1	1.0	0.0	8.2	0.4	37.4	1.1	0.2	39.1	
Exiting Leg Total	366					4401					620					4091					9478

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	20	39	49	0	108	12	503	42	1	558	46	17	4	0	67	5	512	9	3	529	1262
4:45 PM	9	31	38	0	78	12	489	43	2	546	62	27	18	0	107	5	465	10	0	480	1211
5:00 PM	10	44	52	0	106	7	471	47	7	532	70	21	8	0	99	7	415	10	5	437	1174
5:30 PM	10	26	55	0	91	4	508	35	12	559	92	30	10	0	132	5	426	9	0	440	1222
Total Volume	49	140	194	0	383	35	1971	167	22	2195	270	95	40	0	405	22	1818	38	8	1886	4869
% Approach Total	12.8	36.6	50.7	0.0		1.6	89.8	7.6	1.0		66.7	23.5	9.9	0.0		1.2	96.4	2.0	0.4		
PHF	0.613	0.795	0.882	0.000	0.887	0.729	0.970	0.888	0.458	0.982	0.734	0.792	0.556	0.000	0.767	0.786	0.888	0.950	0.400	0.891	0.965
Entering Leg	49	140	194	0	383	35	1971	167	22	2195	270	95	40	0	405	22	1818	38	8	1886	4869
Exiting Leg	168					2304					329					2068					4869
Total	551					4499					734					3954					9738

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	12	0	0	12	0	1	1	0	2	0	8	0	0	8	22
4:15 PM	0	1	0	0	1	0	8	0	0	8	0	0	2	0	2	1	5	0	0	6	17
4:30 PM	3	1	0	0	4	0	14	0	0	14	2	2	0	0	4	0	4	0	0	4	26
4:45 PM	0	0	0	0	0	1	6	0	0	7	0	1	0	0	1	0	4	0	0	4	12
<b>Total</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>77</b>
5:00 PM	0	0	1	0	1	0	6	0	0	6	0	1	1	0	2	0	4	0	0	4	13
5:15 PM	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	4	0	0	4	12
5:30 PM	1	1	0	0	2	0	4	0	1	5	1	2	1	0	4	0	7	0	0	7	18
5:45 PM	0	1	0	0	1	0	11	2	0	13	1	1	0	0	2	0	3	0	0	3	19
<b>Total</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>28</b>	<b>2</b>	<b>1</b>	<b>32</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>62</b>
<b>Grand Total</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>68</b>	<b>2</b>	<b>1</b>	<b>73</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>139</b>
Approach %	44.4	44.4	11.1	0.0		2.7	93.2	2.7	1.4		23.5	47.1	29.4	0.0		2.5	97.5	0.0	0.0		
Total %	2.9	2.9	0.7	0.0	6.5	1.4	48.9	1.4	0.7	52.5	2.9	5.8	3.6	0.0	12.2	0.7	28.1	0.0	0.0	28.8	
Exiting Leg Total	10					45					7					77					139
Buses	0	3	1	0	4	2	25	1	0	28	2	8	1	0	11	0	18	0	0	18	61
% Buses	0.0	75.0	100.0	0.0	44.4	100.0	36.8	50.0	0.0	38.4	50.0	100.0	20.0	0.0	64.7	0.0	46.2	0.0	0.0	45.0	43.9
Exiting Leg Total	10					21					4					26					61
Single-Unit Trucks	4	1	0	0	5	0	37	1	0	38	2	0	3	0	5	0	13	0	0	13	61
% Single-Unit	100.0	25.0	0.0	0.0	55.6	0.0	54.4	50.0	0.0	52.1	50.0	0.0	60.0	0.0	29.4	0.0	33.3	0.0	0.0	32.5	43.9
Exiting Leg Total	0					15					2					44					61
Articulated Trucks	0	0	0	0	0	0	6	0	1	7	0	0	1	0	1	1	8	0	0	9	17
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	100.0	9.6	0.0	0.0	20.0	0.0	5.9	100.0	20.5	0.0	0.0	22.5	12.2
Exiting Leg Total	0					9					1					7					17

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	12	0	0	12	0	1	1	0	2	0	8	0	0	8	22
4:15 PM	0	1	0	0	1	0	8	0	0	8	0	0	2	0	2	1	5	0	0	6	17
4:30 PM	3	1	0	0	4	0	14	0	0	14	2	2	0	0	4	0	4	0	0	4	26
4:45 PM	0	0	0	0	0	1	6	0	0	7	0	1	0	0	1	0	4	0	0	4	12
<b>Total Volume</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>77</b>
% Approach Total	60.0	40.0	0.0	0.0		2.4	97.6	0.0	0.0		22.2	44.4	33.3	0.0		4.5	95.5	0.0	0.0		
PHF	0.250	0.500	0.000	0.000	0.313	0.250	0.714	0.000	0.000	0.732	0.250	0.500	0.375	0.000	0.563	0.250	0.656	0.000	0.000	0.688	0.740
Buses	0	1	0	0	1	1	11	0	0	12	2	4	1	0	7	0	12	0	0	12	32
Buses %	0.0	50.0	0.0	0.0	20.0	100.0	27.5	0.0	0.0	29.3	100.0	100.0	33.3	0.0	77.8	0.0	57.1	0.0	0.0	54.5	41.6
Single-Unit Trucks	3	1	0	0	4	0	26	0	0	26	0	0	1	0	1	0	6	0	0	6	37
Single-Unit %	100.0	50.0	0.0	0.0	80.0	0.0	65.0	0.0	0.0	63.4	0.0	0.0	33.3	0.0	11.1	0.0	28.6	0.0	0.0	27.3	48.1
Articulated Trucks	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	3	0	0	4	8
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	7.3	0.0	0.0	33.3	0.0	11.1	100.0	14.3	0.0	0.0	18.2	10.4
Buses	0	1	0	0	1	1	11	0	0	12	2	4	1	0	7	0	12	0	0	12	32
Single-Unit Trucks	3	1	0	0	4	0	26	0	0	26	0	0	1	0	1	0	6	0	0	6	37
Articulated Trucks	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	3	0	0	4	8
<b>Total Entering Leg</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>77</b>
Buses	5					14					1					12					32
Single-Unit Trucks	0					6					1					30					37
Articulated Trucks	0					3					1					4					8
<b>Total Exiting Leg</b>	<b>5</b>					<b>23</b>					<b>3</b>					<b>46</b>					<b>77</b>

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	10	21	22	0	53	3	450	41	3	497	43	20	14	0	77	8	395	11	5	419	1046
4:15 PM	15	24	40	0	79	9	423	34	2	468	39	21	12	0	72	5	421	19	2	447	1066
4:30 PM	8	30	28	0	66	8	464	46	3	521	43	29	14	0	86	5	426	17	5	453	1126
4:45 PM	19	36	49	0	104	11	473	41	1	526	44	17	4	0	65	5	503	9	3	520	1215
Total	52	111	139	0	302	31	1810	162	9	2012	169	87	44	0	300	23	1745	56	15	1839	4453
5:00 PM	8	28	38	0	74	11	462	42	2	517	61	25	17	0	103	5	460	10	0	475	1169
5:15 PM	9	43	50	0	102	7	449	46	7	509	69	20	7	0	96	7	409	10	5	431	1138
5:30 PM	8	25	54	0	87	4	468	32	12	516	89	30	7	0	126	5	423	9	0	437	1166
5:45 PM	8	22	42	0	72	10	463	43	7	523	86	31	10	0	127	2	424	12	1	439	1161
Total	33	118	184	0	335	32	1842	163	28	2065	305	106	41	0	452	19	1716	41	6	1782	4634
Grand Total	85	229	323	0	637	63	3652	325	37	4077	474	193	85	0	752	42	3461	97	21	3621	9087
Approach %	13.3	35.9	50.7	0.0		1.5	89.6	8.0	0.9		63.0	25.7	11.3	0.0		1.2	95.6	2.7	0.6		
Total %	0.9	2.5	3.6	0.0	7.0	0.7	40.2	3.6	0.4	44.9	5.2	2.1	0.9	0.0	8.3	0.5	38.1	1.1	0.2	39.8	
Exiting Leg Total	353					4295					596					3843					9087

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	19	36	49	0	104	11	473	41	1	526	44	17	4	0	65	5	503	9	3	520	1215
4:45 PM	8	28	38	0	74	11	462	42	2	517	61	25	17	0	103	5	460	10	0	475	1169
5:00 PM	9	43	50	0	102	7	449	46	7	509	69	20	7	0	96	7	409	10	5	431	1138
5:15 PM	8	25	54	0	87	4	468	32	12	516	89	30	7	0	126	5	423	9	0	437	1166
Total Volume	44	132	191	0	367	33	1852	161	22	2068	263	92	35	0	390	22	1795	38	8	1863	4688
% Approach Total	12.0	36.0	52.0	0.0		1.6	89.6	7.8	1.1		67.4	23.6	9.0	0.0		1.2	96.3	2.0	0.4		
PHF	0.579	0.767	0.884	0.000	0.882	0.750	0.979	0.875	0.458	0.983	0.739	0.767	0.515	0.000	0.774	0.786	0.892	0.950	0.400	0.896	0.965
Entering Leg	44	132	191	0	367	33	1852	161	22	2068	263	92	35	0	390	22	1795	38	8	1863	4688
Exiting Leg	163					2271					315					1939					4688
Total	530					4339					705					3802					9376

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Light Goods Vehicle**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Light Goods Vehicle**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	1	2	0	3	1	36	0	1	38	2	0	0	0	2	0	11	0	1	12	55
4:15 PM	1	0	3	0	4	1	32	4	0	37	2	0	3	0	5	0	23	3	0	26	72
4:30 PM	0	0	1	0	1	0	27	0	1	28	2	1	1	0	4	0	15	2	0	17	50
4:45 PM	1	3	0	0	4	1	30	1	0	32	2	0	0	0	2	0	9	0	0	9	47
<b>Total</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>125</b>	<b>5</b>	<b>2</b>	<b>135</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>58</b>	<b>5</b>	<b>1</b>	<b>64</b>	<b>224</b>
5:00 PM	1	3	0	0	4	1	27	1	0	29	1	2	1	0	4	0	5	0	0	5	42
5:15 PM	1	1	2	0	4	0	22	1	0	23	1	1	1	0	3	0	6	0	0	6	36
5:30 PM	2	1	1	0	4	0	40	3	0	43	3	0	3	0	6	0	3	0	0	3	56
5:45 PM	0	2	0	0	2	0	17	3	0	20	2	0	1	0	3	0	8	0	0	8	33
<b>Total</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>106</b>	<b>8</b>	<b>0</b>	<b>115</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>167</b>
<b>Grand Total</b>	<b>6</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>26</b>	<b>4</b>	<b>231</b>	<b>13</b>	<b>2</b>	<b>250</b>	<b>15</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>80</b>	<b>5</b>	<b>1</b>	<b>86</b>	<b>391</b>
Approach %	23.1	42.3	34.6	0.0		1.6	92.4	5.2	0.8		51.7	13.8	34.5	0.0		0.0	93.0	5.8	1.2		
Total %	1.5	2.8	2.3	0.0	6.6	1.0	59.1	3.3	0.5	63.9	3.8	1.0	2.6	0.0	7.4	0.0	20.5	1.3	0.3	22.0	
Exiting Leg Total	13					106					24					248					391

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	1	2	0	3	1	36	0	1	38	2	0	0	0	2	0	11	0	1	12	55
4:15 PM	1	0	3	0	4	1	32	4	0	37	2	0	3	0	5	0	23	3	0	26	72
4:30 PM	0	0	1	0	1	0	27	0	1	28	2	1	1	0	4	0	15	2	0	17	50
4:45 PM	1	3	0	0	4	1	30	1	0	32	2	0	0	0	2	0	9	0	0	9	47
<b>Total Volume</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>125</b>	<b>5</b>	<b>2</b>	<b>135</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>58</b>	<b>5</b>	<b>1</b>	<b>64</b>	<b>224</b>
% Approach Total	16.7	33.3	50.0	0.0		2.2	92.6	3.7	1.5		61.5	7.7	30.8	0.0		0.0	90.6	7.8	1.6		
PHF	0.500	0.333	0.500	0.000	0.750	0.750	0.868	0.313	0.500	0.888	1.000	0.250	0.333	0.000	0.650	0.000	0.630	0.417	0.250	0.615	0.778
Entering Leg	2	4	6	0	12	3	125	5	2	135	8	1	4	0	13	0	58	5	1	64	224
Exiting Leg	9					74					9					132					224
<b>Total</b>	<b>21</b>					<b>209</b>					<b>22</b>					<b>196</b>					<b>448</b>

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Buses**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	0	4	0	0	4	9
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	5
4:30 PM	0	0	0	0	0	0	5	0	0	5	2	2	0	0	4	0	2	0	0	2	11
4:45 PM	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	0	3	0	0	3	7
<b>Total</b>	0	1	0	0	1	1	11	0	0	12	2	4	1	0	7	0	12	0	0	12	32
5:00 PM	0	0	1	0	1	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	6
5:15 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	6
5:30 PM	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	0	2	0	0	2	7
5:45 PM	0	1	0	0	1	0	5	1	0	6	0	1	0	0	1	0	2	0	0	2	10
<b>Total</b>	0	2	1	0	3	1	14	1	0	16	0	4	0	0	4	0	6	0	0	6	29
<b>Grand Total</b>	0	3	1	0	4	2	25	1	0	28	2	8	1	0	11	0	18	0	0	18	61
Approach %	0.0	75.0	25.0	0.0		7.1	89.3	3.6	0.0		18.2	72.7	9.1	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	4.9	1.6	0.0	6.6	3.3	41.0	1.6	0.0	45.9	3.3	13.1	1.6	0.0	18.0	0.0	29.5	0.0	0.0	29.5	
Exiting Leg Total	10					21					4					26					61

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	0	4	0	0	4	9
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	5
4:30 PM	0	0	0	0	0	0	5	0	0	5	2	2	0	0	4	0	2	0	0	2	11
4:45 PM	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	0	3	0	0	3	7
<b>Total Volume</b>	0	1	0	0	1	1	11	0	0	12	2	4	1	0	7	0	12	0	0	12	32
<b>% Approach Total</b>	0.0	100.0	0.0	0.0		8.3	91.7	0.0	0.0		28.6	57.1	14.3	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.550	0.000	0.000	0.600	0.250	0.500	0.250	0.000	0.438	0.000	0.750	0.000	0.000	0.750	0.727
Entering Leg	0	1	0	0	1	1	11	0	0	12	2	4	1	0	7	0	12	0	0	12	32
Exiting Leg	5					14					1					12					32
<b>Total</b>	6					26					8					24					64



PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Single-Unit Trucks**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	12
4:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	2	0	0	2	8
4:30 PM	3	1	0	0	4	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1	13
4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
<b>Total</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>37</b>
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	1	0	0	1	5
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
5:30 PM	1	0	0	0	1	0	1	0	0	1	1	0	1	0	2	0	4	0	0	4	8
5:45 PM	0	0	0	0	0	0	5	1	0	6	1	0	0	0	1	0	1	0	0	1	8
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>24</b>
<b>Grand Total</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>37</b>	<b>1</b>	<b>0</b>	<b>38</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>61</b>
Approach %	80.0	20.0	0.0	0.0		0.0	97.4	2.6	0.0		40.0	0.0	60.0	0.0		0.0	100.0	0.0	0.0		
Total %	6.6	1.6	0.0	0.0	8.2	0.0	60.7	1.6	0.0	62.3	3.3	0.0	4.9	0.0	8.2	0.0	21.3	0.0	0.0	21.3	
Exiting Leg Total	0					15					2					44					61

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	12
4:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	2	0	0	2	8
4:30 PM	3	1	0	0	4	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1	13
4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
<b>Total Volume</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>37</b>
<b>% Approach Total</b>	<b>75.0</b>	<b>25.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>	<b>100.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>	<b>0.0</b>	<b>100.0</b>	<b>0.0</b>		<b>0.0</b>	<b>100.0</b>	<b>0.0</b>	<b>0.0</b>		
PHF	0.250	0.250	0.000	0.000	0.250	0.000	0.722	0.000	0.000	0.722	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.712
Entering Leg	3	1	0	0	4	0	26	0	0	26	0	0	1	0	1	0	6	0	0	6	37
Exiting Leg	0					6					1					30					37
<b>Total</b>	<b>4</b>					<b>32</b>					<b>2</b>					<b>36</b>					<b>74</b>

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Articulated Trucks**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Articulated Trucks**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1	4
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<b>Total</b>	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	3	0	0	4	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
5:30 PM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	1	0	0	1	3
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	0	0	0	0	0	0	3	0	1	4	0	0	0	0	0	0	5	0	0	5	9
<b>Grand Total</b>	0	0	0	0	0	0	6	0	1	7	0	0	1	0	1	1	8	0	0	9	17
Approach %	0.0	0.0	0.0	0.0		0.0	85.7	0.0	14.3		0.0	0.0	100.0	0.0		11.1	88.9	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	35.3	0.0	5.9	41.2	0.0	0.0	5.9	0.0	5.9	5.9	47.1	0.0	0.0	52.9	
Exiting Leg Total	0					9					1					7					17

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1	4
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
<b>Total Volume</b>	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	4	0	0	5	9
<b>% Approach Total</b>	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		20.0	80.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.250	0.000	0.250	0.250	0.500	0.000	0.000	0.625	0.563
Entering Leg	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	1	4	0	0	5	9
Exiting Leg	0					4					1					4					9
<b>Total</b>	0					7					2					9					18

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Bicycles (on Roadway and Crosswalks)**

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							1							0							1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	
Exiting Leg	0							0							1							0							1
Total	0							0							2							0							2

PDI File #: 186077 A  
 Location: N: Woodward Street S: Elliot Street  
 Location: E: Boylston Street (Route 9) W: Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client: VHB/ M. Duranleau  
 Site Code: 84297.17  
 Count Date: Thursday, February 01, 2018  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Pedestrians**

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	2	1	3	0	0	0	0	2	0	2	8
4:15 PM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	1	3	4	0	0	0	0	2	1	3	0	0	0	0	2	0	2	10
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	5
Total	0	0	0	0	2	2	4	0	0	0	0	4	1	5	0	0	0	0	2	2	4	0	0	0	0	0	0	0	13
Grand Total	0	0	0	0	3	2	5	0	0	0	0	5	4	9	0	0	0	0	4	3	7	0	0	0	0	2	0	2	23
Approach %	0	0	0	0	60	40		0	0	0	0	55.6	44.4		0	0	0	0	57.1	42.9		0	0	0	0	100	0		
Total %	0	0	0	0	13	8.7	21.7	0	0	0	0	21.7	17.4	39.1	0	0	0	0	17.4	13	30.4	0	0	0	0	8.7	0	8.7	
Exiting Leg Total	5							9							7							2	23						

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	5
Total Volume	0	0	0	0	2	2	4	0	0	0	0	4	1	5	0	0	0	0	2	2	4	0	0	0	0	0	0	0	13
% Approach Total	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	80.0	20.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.500	0.333	0.000	0.000	0.000	0.000	0.500	0.250	0.625	0.000	0.000	0.000	0.000	0.250	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.650
Entering Leg	0	0	0	0	2	2	4	0	0	0	0	4	1	5	0	0	0	0	2	2	4	0	0	0	0	0	0	0	13
Exiting Leg	4							5							4							0	13						
Total	8							10							8							0	26						

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	16	11	26	0	53	10	412	33	6	461	36	25	15	0	76	6	267	22	6	301	891
11:15 AM	8	19	26	0	53	16	452	27	15	510	30	23	18	0	71	1	313	25	5	344	978
11:30 AM	14	22	26	0	62	18	424	33	2	477	42	22	14	0	78	4	281	16	4	305	922
11:45 AM	13	16	27	0	56	19	464	36	7	526	52	19	16	0	87	2	317	19	5	343	1012
Total	51	68	105	0	224	63	1752	129	30	1974	160	89	63	0	312	13	1178	82	20	1293	3803
12:00 PM	11	20	34	0	65	13	409	41	5	468	41	21	11	0	73	8	310	18	2	338	944
12:15 PM	16	20	23	0	59	17	505	42	3	567	46	22	7	0	75	6	361	28	5	400	1101
12:30 PM	15	27	17	0	59	14	484	42	3	543	37	32	18	0	87	6	298	21	6	331	1020
12:45 PM	12	18	20	0	50	17	466	39	6	528	44	20	14	0	78	5	322	21	6	354	1010
Total	54	85	94	0	233	61	1864	164	17	2106	168	95	50	0	313	25	1291	88	19	1423	4075
1:00 PM	16	13	22	0	51	28	438	41	10	517	47	15	16	0	78	5	320	21	8	354	1000
1:15 PM	11	20	18	0	49	16	460	34	3	513	32	26	14	0	72	5	380	14	3	402	1036
1:30 PM	19	20	21	0	60	22	493	32	6	553	29	27	15	0	71	2	311	16	3	332	1016
1:45 PM	18	28	28	0	74	14	452	36	3	505	34	28	20	0	82	12	228	32	5	277	938
Total	64	81	89	0	234	80	1843	143	22	2088	142	96	65	0	303	24	1239	83	19	1365	3990
Grand Total	169	234	288	0	691	204	5459	436	69	6168	470	280	178	0	928	62	3708	253	58	4081	11868
Approach %	24.5	33.9	41.7	0.0		3.3	88.5	7.1	1.1		50.6	30.2	19.2	0.0		1.5	90.9	6.2	1.4		
Total %	1.4	2.0	2.4	0.0	5.8	1.7	46.0	3.7	0.6	52.0	4.0	2.4	1.5	0.0	7.8	0.5	31.2	2.1	0.5	34.4	
Exiting Leg Total	737					4535					732					5864					11868
Cars	168	229	287	0	684	202	5413	433	69	6117	466	276	173	0	915	62	3674	250	54	4040	11756
% Cars	99.4	97.9	99.7	0.0	99.0	99.0	99.2	99.3	100.0	99.2	99.1	98.6	97.2	0.0	98.6	100.0	99.1	98.8	93.1	99.0	99.1
Exiting Leg Total	728					4496					724					5808					11756
Heavy Vehicles	1	5	1	0	7	2	46	3	0	51	4	4	5	0	13	0	34	3	4	41	112
% Heavy Vehicles	0.6	2.1	0.3	0.0	1.0	1.0	0.8	0.7	0.0	0.8	0.9	1.4	2.8	0.0	1.4	0.0	0.9	1.2	6.9	1.0	0.9
Exiting Leg Total	9					39					8					56					112

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:15 PM	16	20	23	0	59	17	505	42	3	567	46	22	7	0	75	6	361	28	5	400	1101
12:30 PM	15	27	17	0	59	14	484	42	3	543	37	32	18	0	87	6	298	21	6	331	1020
12:45 PM	12	18	20	0	50	17	466	39	6	528	44	20	14	0	78	5	322	21	6	354	1010
1:00 PM	16	13	22	0	51	28	438	41	10	517	47	15	16	0	78	5	320	21	8	354	1000
Total Volume	59	78	82	0	219	76	1893	164	22	2155	174	89	55	0	318	22	1301	91	25	1439	4131
% Approach Total	26.9	35.6	37.4	0.0		3.5	87.8	7.6	1.0		54.7	28.0	17.3	0.0		1.5	90.4	6.3	1.7		
PHF	0.922	0.722	0.891	0.000	0.928	0.679	0.937	0.976	0.550	0.950	0.926	0.695	0.764	0.000	0.914	0.917	0.901	0.813	0.781	0.899	0.938
Cars	58	77	81	0	216	76	1876	163	22	2137	170	87	52	0	309	22	1290	91	23	1426	4088
Cars %	98.3	98.7	98.8	0.0	98.6	100.0	99.1	99.4	100.0	99.2	97.7	97.8	94.5	0.0	97.2	100.0	99.2	100.0	92.0	99.1	99.0
Heavy Vehicles	1	1	1	0	3	0	17	1	0	18	4	2	3	0	9	0	11	0	2	13	43
Heavy Vehicles %	1.7	1.3	1.2	0.0	1.4	0.0	0.9	0.6	0.0	0.8	2.3	2.2	5.5	0.0	2.8	0.0	0.8	0.0	8.0	0.9	1.0
Cars Enter Leg	58	77	81	0	216	76	1876	163	22	2137	170	87	52	0	309	22	1290	91	23	1426	4088
Heavy Enter Leg	1	1	1	0	3	0	17	1	0	18	4	2	3	0	9	0	11	0	2	13	43
Total Entering Leg	59	78	82	0	219	76	1893	164	22	2155	174	89	55	0	318	22	1301	91	25	1439	4131
Cars Exiting Leg	254					1563					262					2009					4088
Heavy Exiting Leg	2					16					2					23					43
Total Exiting Leg	256					1579					264					2032					4131

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

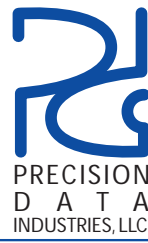
**Cars-Combined (Motorcycles, Cars, Light Goods)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	16	10	26	0	52	10	408	33	6	457	36	25	15	0	76	6	261	22	5	294	879
11:15 AM	8	18	26	0	52	16	451	26	15	508	30	23	18	0	71	1	311	25	4	341	972
11:30 AM	14	22	26	0	62	18	417	33	2	470	42	22	14	0	78	4	276	16	4	300	910
11:45 AM	13	16	27	0	56	19	462	36	7	524	52	18	15	0	85	2	316	19	5	342	1007
<b>Total</b>	51	66	105	0	222	63	1738	128	30	1959	160	88	62	0	310	13	1164	82	18	1277	3768
12:00 PM	11	20	34	0	65	12	405	41	5	463	41	21	11	0	73	8	307	17	2	334	935
12:15 PM	15	20	23	0	58	17	504	42	3	566	43	22	6	0	71	6	359	28	5	398	1093
12:30 PM	15	26	17	0	58	14	479	41	3	537	37	31	18	0	86	6	295	21	6	328	1009
12:45 PM	12	18	19	0	49	17	459	39	6	521	43	20	12	0	75	5	317	21	5	348	993
<b>Total</b>	53	84	93	0	230	60	1847	163	17	2087	164	94	47	0	305	25	1278	87	18	1408	4030
1:00 PM	16	13	22	0	51	28	434	41	10	513	47	14	16	0	77	5	319	21	7	352	993
1:15 PM	11	19	18	0	48	16	456	34	3	509	32	25	14	0	71	5	378	14	3	400	1028
1:30 PM	19	20	21	0	60	22	490	31	6	549	29	27	15	0	71	2	307	15	3	327	1007
1:45 PM	18	27	28	0	73	13	448	36	3	500	34	28	19	0	81	12	228	31	5	276	930
<b>Total</b>	64	79	89	0	232	79	1828	142	22	2071	142	94	64	0	300	24	1232	81	18	1355	3958
Grand Total	168	229	287	0	684	202	5413	433	69	6117	466	276	173	0	915	62	3674	250	54	4040	11756
Approach %	24.6	33.5	42.0	0.0		3.3	88.5	7.1	1.1		50.9	30.2	18.9	0.0		1.5	90.9	6.2	1.3		
Total %	1.4	1.9	2.4	0.0	5.8	1.7	46.0	3.7	0.6	52.0	4.0	2.3	1.5	0.0	7.8	0.5	31.3	2.1	0.5	34.4	
Exiting Leg Total	728					4496					724					5808					11756

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:15 PM	15	20	23	0	58	17	504	42	3	566	43	22	6	0	71	6	359	28	5	398	1093
12:30 PM	15	26	17	0	58	14	479	41	3	537	37	31	18	0	86	6	295	21	6	328	1009
12:45 PM	12	18	19	0	49	17	459	39	6	521	43	20	12	0	75	5	317	21	5	348	993
1:00 PM	16	13	22	0	51	28	434	41	10	513	47	14	16	0	77	5	319	21	7	352	993
Total Volume	58	77	81	0	216	76	1876	163	22	2137	170	87	52	0	309	22	1290	91	23	1426	4088
% Approach Total	26.9	35.6	37.5	0.0		3.6	87.8	7.6	1.0		55.0	28.2	16.8	0.0		1.5	90.5	6.4	1.6		
PHF	0.906	0.740	0.880	0.000	0.931	0.679	0.931	0.970	0.550	0.944	0.904	0.702	0.722	0.000	0.898	0.917	0.898	0.813	0.821	0.896	0.935
Entering Leg	58	77	81	0	216	76	1876	163	22	2137	170	87	52	0	309	22	1290	91	23	1426	4088
Exiting Leg	254					1563					262					2009					4088
Total	470					3700					571					3435					8176

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	6	0	1	7	12
11:15 AM	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	2	0	1	3	6
11:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	12
11:45 AM	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	0	1	0	0	1	5
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>2</b>	<b>16</b>	<b>35</b>
12:00 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	3	1	0	4	9
12:15 PM	1	0	0	0	1	0	1	0	0	1	3	0	1	0	4	0	2	0	0	2	8
12:30 PM	0	1	0	0	1	0	5	1	0	6	0	1	0	0	1	0	3	0	0	3	11
12:45 PM	0	0	1	0	1	0	7	0	0	7	1	0	2	0	3	0	5	0	1	6	17
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>45</b>
1:00 PM	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	0	1	0	1	2	7
1:15 PM	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	0	2	0	0	2	8
1:30 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	4	1	0	5	9
1:45 PM	0	1	0	0	1	1	4	0	0	5	0	0	1	0	1	0	0	1	0	1	8
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>32</b>
<b>Grand Total</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>46</b>	<b>3</b>	<b>0</b>	<b>51</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>34</b>	<b>3</b>	<b>4</b>	<b>41</b>	<b>112</b>
Approach %	14.3	71.4	14.3	0.0		3.9	90.2	5.9	0.0		30.8	30.8	38.5	0.0		0.0	82.9	7.3	9.8		
Total %	0.9	4.5	0.9	0.0	6.3	1.8	41.1	2.7	0.0	45.5	3.6	3.6	4.5	0.0	11.6	0.0	30.4	2.7	3.6	36.6	
<b>Exiting Leg Total</b>	<b>9</b>					<b>39</b>					<b>8</b>					<b>56</b>					<b>112</b>
Buses	0	3	1	0	4	1	5	0	0	6	0	2	0	0	2	0	7	0	0	7	19
% Buses	0.0	60.0	100.0	0.0	57.1	50.0	10.9	0.0	0.0	11.8	0.0	50.0	0.0	0.0	15.4	0.0	20.6	0.0	0.0	17.1	17.0
<b>Exiting Leg Total</b>	<b>3</b>					<b>8</b>					<b>3</b>					<b>5</b>					<b>19</b>
Single-Unit Trucks	1	2	0	0	3	0	36	3	0	39	4	2	5	0	11	0	20	3	4	27	80
% Single-Unit	100.0	40.0	0.0	0.0	42.9	0.0	78.3	100.0	0.0	76.5	100.0	50.0	100.0	0.0	84.6	0.0	58.8	100.0	100.0	65.9	71.4
<b>Exiting Leg Total</b>	<b>5</b>					<b>24</b>					<b>5</b>					<b>46</b>					<b>80</b>
Articulated Trucks	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	7	0	0	7	13
% Articulated	0.0	0.0	0.0	0.0	0.0	50.0	10.9	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0	17.1	11.6
<b>Exiting Leg Total</b>	<b>1</b>					<b>7</b>					<b>0</b>					<b>5</b>					<b>13</b>

**Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:**

12:00 PM	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:00 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	3	1	0	4	9
12:15 PM	1	0	0	0	1	0	1	0	0	1	3	0	1	0	4	0	2	0	0	2	8
12:30 PM	0	1	0	0	1	0	5	1	0	6	0	1	0	0	1	0	3	0	0	3	11
12:45 PM	0	0	1	0	1	0	7	0	0	7	1	0	2	0	3	0	5	0	1	6	17
<b>Total Volume</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>45</b>
<b>% Approach Total</b>	<b>33.3</b>	<b>33.3</b>	<b>33.3</b>	<b>0.0</b>		<b>5.3</b>	<b>89.5</b>	<b>5.3</b>	<b>0.0</b>		<b>50.0</b>	<b>12.5</b>	<b>37.5</b>	<b>0.0</b>		<b>0.0</b>	<b>86.7</b>	<b>6.7</b>	<b>6.7</b>		
<b>PHF</b>	<b>0.250</b>	<b>0.250</b>	<b>0.250</b>	<b>0.000</b>	<b>0.750</b>	<b>0.250</b>	<b>0.607</b>	<b>0.250</b>	<b>0.000</b>	<b>0.679</b>	<b>0.333</b>	<b>0.250</b>	<b>0.375</b>	<b>0.000</b>	<b>0.500</b>	<b>0.000</b>	<b>0.650</b>	<b>0.250</b>	<b>0.250</b>	<b>0.625</b>	<b>0.662</b>
Buses	0	1	1	0	2	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	7
Buses %	0.0	100.0	100.0	0.0	66.7	0.0	11.8	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	23.1	0.0	0.0	20.0	15.6
Single-Unit Trucks	1	0	0	0	1	0	12	1	0	13	4	1	3	0	8	0	8	1	1	10	32
Single-Unit %	100.0	0.0	0.0	0.0	33.3	0.0	70.6	100.0	0.0	68.4	100.0	100.0	100.0	0.0	100.0	0.0	61.5	100.0	100.0	66.7	71.1
Articulated Trucks	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	6
Articulated %	0.0	0.0	0.0	0.0	0.0	100.0	17.6	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	13.3	13.3
Buses	0	1	1	0	2	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	7
Single-Unit Trucks	1	0	0	0	1	0	12	1	0	13	4	1	3	0	8	0	8	1	1	10	32
Articulated Trucks	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	6
<b>Total Entering Leg</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>45</b>
Buses	<b>0</b>					<b>4</b>					<b>1</b>					<b>2</b>					<b>7</b>
Single-Unit Trucks	<b>2</b>					<b>12</b>					<b>1</b>					<b>17</b>					<b>32</b>
Articulated Trucks	<b>1</b>					<b>2</b>					<b>0</b>					<b>3</b>					<b>6</b>
<b>Total Exiting Leg</b>	<b>3</b>					<b>18</b>					<b>2</b>					<b>22</b>					<b>45</b>

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	16	10	26	0	52	10	395	32	6	443	34	25	14	0	73	6	252	21	5	284	852
11:15 AM	7	17	26	0	50	16	442	24	15	497	29	23	16	0	68	1	301	22	4	328	943
11:30 AM	11	21	25	0	57	17	404	33	2	456	40	22	14	0	76	4	270	16	4	294	883
11:45 AM	12	16	27	0	55	19	441	34	7	501	48	18	15	0	81	2	315	19	5	341	978
Total	46	64	104	0	214	62	1682	123	30	1897	151	88	59	0	298	13	1138	78	18	1247	3656
12:00 PM	10	18	34	0	62	12	393	39	5	449	37	20	10	0	67	8	296	15	2	321	899
12:15 PM	13	19	21	0	53	16	484	37	3	540	41	22	4	0	67	6	341	23	5	375	1035
12:30 PM	15	25	17	0	57	13	463	37	3	516	34	29	15	0	78	6	283	20	6	315	966
12:45 PM	12	17	19	0	48	17	438	35	6	496	43	19	11	0	73	5	301	21	5	332	949
Total	50	79	91	0	220	58	1778	148	17	2001	155	90	40	0	285	25	1221	79	18	1343	3849
1:00 PM	16	12	19	0	47	25	425	39	10	499	47	13	16	0	76	5	306	21	7	339	961
1:15 PM	11	18	18	0	47	16	446	33	2	497	30	25	14	0	69	3	368	14	3	388	1001
1:30 PM	18	20	21	0	59	22	479	29	4	534	29	27	12	0	68	2	296	15	3	316	977
1:45 PM	18	25	26	0	69	13	434	36	3	486	31	28	17	0	76	12	219	31	5	267	898
Total	63	75	84	0	222	76	1784	137	19	2016	137	93	59	0	289	22	1189	81	18	1310	3837
Grand Total	159	218	279	0	656	196	5244	408	66	5914	443	271	158	0	872	60	3548	238	54	3900	11342
Approach %	24.2	33.2	42.5	0.0		3.3	88.7	6.9	1.1		50.8	31.1	18.1	0.0		1.5	91.0	6.1	1.4		
Total %	1.4	1.9	2.5	0.0	5.8	1.7	46.2	3.6	0.6	52.1	3.9	2.4	1.4	0.0	7.7	0.5	31.3	2.1	0.5	34.4	
Exiting Leg Total	705					4336					686					5615					11342

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:15 PM	13	19	21	0	53	16	484	37	3	540	41	22	4	0	67	6	341	23	5	375	1035
12:30 PM	15	25	17	0	57	13	463	37	3	516	34	29	15	0	78	6	283	20	6	315	966
12:45 PM	12	17	19	0	48	17	438	35	6	496	43	19	11	0	73	5	301	21	5	332	949
1:00 PM	16	12	19	0	47	25	425	39	10	499	47	13	16	0	76	5	306	21	7	339	961
Total Volume	56	73	76	0	205	71	1810	148	22	2051	165	83	46	0	294	22	1231	85	23	1361	3911
% Approach Total	27.3	35.6	37.1	0.0		3.5	88.2	7.2	1.1		56.1	28.2	15.6	0.0		1.6	90.4	6.2	1.7		
PHF	0.875	0.730	0.905	0.000	0.899	0.710	0.935	0.949	0.550	0.950	0.878	0.716	0.719	0.000	0.942	0.917	0.902	0.924	0.821	0.907	0.945
Entering Leg	56	73	76	0	205	71	1810	148	22	2051	165	83	46	0	294	22	1231	85	23	1361	3911
Exiting Leg	239					1494					243					1935					3911
Total	444					3545					537					3296					7822



PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class: **Light Goods Vehicle**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Light Goods Vehicle**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	13	1	0	14	2	0	1	0	3	0	9	1	0	10	27
11:15 AM	1	1	0	0	2	0	9	2	0	11	1	0	2	0	3	0	10	3	0	13	29
11:30 AM	3	1	1	0	5	1	13	0	0	14	2	0	0	0	2	0	6	0	0	6	27
11:45 AM	1	0	0	0	1	0	21	2	0	23	4	0	0	0	4	0	1	0	0	1	29
<b>Total</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>56</b>	<b>5</b>	<b>0</b>	<b>62</b>	<b>9</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>26</b>	<b>4</b>	<b>0</b>	<b>30</b>	<b>112</b>
12:00 PM	1	2	0	0	3	0	12	2	0	14	4	1	1	0	6	0	11	2	0	13	36
12:15 PM	2	1	2	0	5	1	20	5	0	26	2	0	2	0	4	0	18	5	0	23	58
12:30 PM	0	1	0	0	1	1	16	4	0	21	3	2	3	0	8	0	12	1	0	13	43
12:45 PM	0	1	0	0	1	0	21	4	0	25	0	1	1	0	2	0	16	0	0	16	44
<b>Total</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>69</b>	<b>15</b>	<b>0</b>	<b>86</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>57</b>	<b>8</b>	<b>0</b>	<b>65</b>	<b>181</b>
1:00 PM	0	1	3	0	4	3	9	2	0	14	0	1	0	0	1	0	13	0	0	13	32
1:15 PM	0	1	0	0	1	0	10	1	1	12	2	0	0	0	2	2	10	0	0	12	27
1:30 PM	1	0	0	0	1	0	11	2	2	15	0	0	3	0	3	0	11	0	0	11	30
1:45 PM	0	2	2	0	4	0	14	0	0	14	3	0	2	0	5	0	9	0	0	9	32
<b>Total</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>3</b>	<b>44</b>	<b>5</b>	<b>3</b>	<b>55</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>121</b>
<b>Grand Total</b>	<b>9</b>	<b>11</b>	<b>8</b>	<b>0</b>	<b>28</b>	<b>6</b>	<b>169</b>	<b>25</b>	<b>3</b>	<b>203</b>	<b>23</b>	<b>5</b>	<b>15</b>	<b>0</b>	<b>43</b>	<b>2</b>	<b>126</b>	<b>12</b>	<b>0</b>	<b>140</b>	<b>414</b>
<b>Approach %</b>	<b>32.1</b>	<b>39.3</b>	<b>28.6</b>	<b>0.0</b>		<b>3.0</b>	<b>83.3</b>	<b>12.3</b>	<b>1.5</b>		<b>53.5</b>	<b>11.6</b>	<b>34.9</b>	<b>0.0</b>		<b>1.4</b>	<b>90.0</b>	<b>8.6</b>	<b>0.0</b>		
<b>Total %</b>	<b>2.2</b>	<b>2.7</b>	<b>1.9</b>	<b>0.0</b>	<b>6.8</b>	<b>1.4</b>	<b>40.8</b>	<b>6.0</b>	<b>0.7</b>	<b>49.0</b>	<b>5.6</b>	<b>1.2</b>	<b>3.6</b>	<b>0.0</b>	<b>10.4</b>	<b>0.5</b>	<b>30.4</b>	<b>2.9</b>	<b>0.0</b>	<b>33.8</b>	
<b>Exiting Leg Total</b>					<b>23</b>					<b>160</b>					<b>38</b>					<b>193</b>	<b>414</b>

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:00 PM	1	2	0	0	3	0	12	2	0	14	4	1	1	0	6	0	11	2	0	13	36
12:15 PM	2	1	2	0	5	1	20	5	0	26	2	0	2	0	4	0	18	5	0	23	58
12:30 PM	0	1	0	0	1	1	16	4	0	21	3	2	3	0	8	0	12	1	0	13	43
12:45 PM	0	1	0	0	1	0	21	4	0	25	0	1	1	0	2	0	16	0	0	16	44
<b>Total Volume</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>69</b>	<b>15</b>	<b>0</b>	<b>86</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>57</b>	<b>8</b>	<b>0</b>	<b>65</b>	<b>181</b>
<b>% Approach Total</b>	<b>30.0</b>	<b>50.0</b>	<b>20.0</b>	<b>0.0</b>		<b>2.3</b>	<b>80.2</b>	<b>17.4</b>	<b>0.0</b>		<b>45.0</b>	<b>20.0</b>	<b>35.0</b>	<b>0.0</b>		<b>0.0</b>	<b>87.7</b>	<b>12.3</b>	<b>0.0</b>		
<b>PHF</b>	<b>0.375</b>	<b>0.625</b>	<b>0.250</b>	<b>0.000</b>	<b>0.500</b>	<b>0.500</b>	<b>0.821</b>	<b>0.750</b>	<b>0.000</b>	<b>0.827</b>	<b>0.563</b>	<b>0.500</b>	<b>0.583</b>	<b>0.000</b>	<b>0.625</b>	<b>0.000</b>	<b>0.792</b>	<b>0.400</b>	<b>0.000</b>	<b>0.707</b>	<b>0.780</b>
<b>Entering Leg</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>69</b>	<b>15</b>	<b>0</b>	<b>86</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>57</b>	<b>8</b>	<b>0</b>	<b>65</b>	<b>181</b>
<b>Exiting Leg</b>					<b>14</b>					<b>68</b>					<b>20</b>					<b>79</b>	<b>181</b>
<b>Total</b>					<b>24</b>					<b>154</b>					<b>40</b>					<b>144</b>	<b>362</b>

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



**Buses**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
11:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
<b>Total</b>	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	3	0	0	3	7	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
12:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	
<b>Total</b>	0	1	1	0	2	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	7	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
<b>Total</b>	0	1	0	0	1	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	5	
<b>Grand Total</b>	0	3	1	0	4	1	5	0	0	6	0	2	0	0	2	0	7	0	0	7	19	
Approach %	0.0	75.0	25.0	0.0		16.7	83.3	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	15.8	5.3	0.0	21.1	5.3	26.3	0.0	0.0	31.6	0.0	10.5	0.0	0.0	10.5	0.0	36.8	0.0	0.0	36.8		
Exiting Leg Total						3					8					3					5	19

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
12:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4	
Total Volume	0	2	1	0	3	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	9	
% Approach Total	0.0	66.7	33.3	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.500	0.250	0.000	0.750	0.000	0.375	0.000	0.000	0.375	0.000	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.563	
Entering Leg	0	2	1	0	3	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	9	
Exiting Leg						1					3					2					3	9
Total						4					6					3					5	18

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Single-Unit Trucks**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
11:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	1	4	7					
11:15 AM	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	0	2	0	1	3	6					
11:30 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9					
11:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3					
<b>Total</b>	0	1	0	0	1	0	12	1	0	13	0	0	1	0	1	0	8	0	2	10	25					
12:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	6					
12:15 PM	1	0	0	0	1	0	1	0	0	1	3	0	1	0	4	0	1	0	0	1	7					
12:30 PM	0	0	0	0	0	0	3	1	0	4	0	1	0	0	1	0	3	0	0	3	8					
12:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	3	0	1	4	11					
<b>Total</b>	1	0	0	0	1	0	12	1	0	13	4	1	3	0	8	0	8	1	1	10	32					
1:00 PM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	1	0	1	2	6					
1:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2					
1:30 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	3	1	0	4	8					
1:45 PM	0	1	0	0	1	0	4	0	0	4	0	0	1	0	1	0	0	1	0	1	7					
<b>Total</b>	0	1	0	0	1	0	12	1	0	13	0	1	1	0	2	0	4	2	1	7	23					
<b>Grand Total</b>	1	2	0	0	3	0	36	3	0	39	4	2	5	0	11	0	20	3	4	27	80					
Approach %	33.3	66.7	0.0	0.0		0.0	92.3	7.7	0.0		36.4	18.2	45.5	0.0		0.0	74.1	11.1	14.8							
Total %	1.3	2.5	0.0	0.0	3.8	0.0	45.0	3.8	0.0	48.8	5.0	2.5	6.3	0.0	13.8	0.0	25.0	3.8	5.0	33.8						
Exiting Leg Total						5					24					5					46					80

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	6
12:15 PM	1	0	0	0	1	0	1	0	0	1	3	0	1	0	4	0	1	0	0	1	7
12:30 PM	0	0	0	0	0	0	3	1	0	4	0	1	0	0	1	0	3	0	0	3	8
12:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	3	0	1	4	11
Total Volume	1	0	0	0	1	0	12	1	0	13	4	1	3	0	8	0	8	1	1	10	32
% Approach Total	100.0	0.0	0.0	0.0		0.0	92.3	7.7	0.0		50.0	12.5	37.5	0.0		0.0	80.0	10.0	10.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.750	0.250	0.000	0.813	0.333	0.250	0.375	0.000	0.500	0.000	0.667	0.250	0.250	0.625	0.727
Entering Leg	1	0	0	0	1	0	12	1	0	13	4	1	3	0	8	0	8	1	1	10	32
Exiting Leg						2					12					1					17
Total	3					25					9					27					64

PDI File #: **186077 A**  
 Location: **N: Woodward Street S: Elliot Street**  
 Location: **E: Boylston Street (Route 9) W: Boylston Street (Route 9)**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class: **Articulated Trucks**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Articulated Trucks**

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
12:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	6
1:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Grand Total	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	7	0	0	7	13
Approach %	0.0	0.0	0.0	0.0		16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	7.7	38.5	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0	0.0	53.8	0.0	0.0	53.8	
Exiting Leg Total						1						7						0	5	13	

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street					Boylston Street (Route 9)					Elliot Street					Boylston Street (Route 9)					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
1:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.875
Entering Leg	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
Exiting Leg						0						2						0	5	7	
Total						0						7						0	7	14	

PDI File #: 186077 A  
 Location: N: Woodward Street S: Elliot Street  
 Location: E: Boylston Street (Route 9) W: Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client: VHB/ M. Duranleau  
 Site Code: 84297.17  
 Count Date: Saturday, February 03, 2018  
 Start Time: 11:00 AM  
 End Time: 2:00 PM  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Bicycles (on Roadway and Crosswalks)**

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: 186077 A  
 Location: N: Woodward Street S: Elliot Street  
 Location: E: Boylston Street (Route 9) W: Boylston Street (Route 9)  
 City, State: Newton, MA  
 Client: VHB/ M. Duranleau  
 Site Code: 84297.17  
 Count Date: Saturday, February 03, 2018  
 Start Time: 11:00 AM  
 End Time: 2:00 PM  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Pedestrians**

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2			
11:45 AM	0	0	0	0	0	3	3	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	5			
Total	0	0	0	0	0	4	4	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	1	1	10			
12:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2			
12:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
12:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	2	2	0	0	0	0	0	5			
12:45 PM	0	0	0	0	2	0	2	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	5			
Total	0	0	0	0	3	1	4	0	0	0	0	4	3	7	0	0	0	0	0	2	2	0	0	0	0	13			
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2			
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1			
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1			
1:45 PM	0	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4			
Total	0	0	0	0	2	0	2	0	0	0	0	3	2	5	0	0	0	0	0	1	1	0	0	0	0	8			
Grand Total	0	0	0	0	5	5	10	0	0	0	0	10	7	17	0	0	0	0	0	3	3	0	0	0	1	31			
Approach %	0	0	0	0	50	50		0	0	0	0	58.8	41.2		0	0	0	0	0	100		0	0	0	100				
Total %	0	0	0	0	16.1	16.1	32.3	0	0	0	0	32.3	22.6	54.8	0	0	0	0	0	9.68	9.68	0	0	0	3.23	3.23			
Exiting Leg Total	10							17							3							1							31

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Woodward Street							Boylston Street (Route 9)							Elliot Street							Boylston Street (Route 9)							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:45 AM	0	0	0	0	0	3	3	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	5			
12:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2			
12:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
12:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
Total Volume	0	0	0	0	1	5	6	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	9			
% Approach Total	0.0	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.250	0.417	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.450			
Entering Leg	0	0	0	0	1	5	6	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	9			
Exiting Leg	6							3							0							0							9
Total	12							6							0							0							18

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	57	6	3	0	66	1	0	0	0	1	0	1	8	0	9	1	2	61	0	64	140
4:15 PM	57	1	7	0	65	0	0	0	0	0	0	5	6	0	11	3	0	61	0	64	140
4:30 PM	62	6	6	0	74	1	0	0	0	1	0	6	8	0	14	3	3	67	0	73	162
4:45 PM	75	5	3	0	83	2	0	0	0	2	0	3	6	0	9	3	3	57	0	63	157
<b>Total</b>	<b>251</b>	<b>18</b>	<b>19</b>	<b>0</b>	<b>288</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>15</b>	<b>28</b>	<b>0</b>	<b>43</b>	<b>10</b>	<b>8</b>	<b>246</b>	<b>0</b>	<b>264</b>	<b>599</b>
5:00 PM	66	2	5	0	73	0	0	0	0	0	0	4	8	0	12	4	2	87	0	93	178
5:15 PM	81	7	2	0	90	0	0	0	0	0	0	3	4	0	7	3	0	94	0	97	194
5:30 PM	53	4	4	1	62	1	0	0	0	1	0	2	5	0	7	2	3	113	0	118	188
5:45 PM	69	5	2	0	76	0	0	0	0	0	0	2	5	0	7	5	1	115	0	121	204
<b>Total</b>	<b>269</b>	<b>18</b>	<b>13</b>	<b>1</b>	<b>301</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>22</b>	<b>0</b>	<b>33</b>	<b>14</b>	<b>6</b>	<b>409</b>	<b>0</b>	<b>429</b>	<b>764</b>
Grand Total	520	36	32	1	589	5	0	0	0	5	0	26	50	0	76	24	14	655	0	693	1363
Approach %	88.3	6.1	5.4	0.2		100.0	0.0	0.0	0.0		0.0	34.2	65.8	0.0		3.5	2.0	94.5	0.0		
Total %	38.2	2.6	2.3	0.1	43.2	0.4	0.0	0.0	0.0	0.4	0.0	1.9	3.7	0.0	5.6	1.8	1.0	48.1	0.0	50.8	
Exiting Leg Total	687					46					60					570					1363
Cars	514	35	32	1	582	5	0	0	0	5	0	26	49	0	75	24	14	640	0	678	1340
% Cars	98.8	97.2	100.0	100.0	98.8	100.0	0.0	0.0	0.0	100.0	0.0	100.0	98.0	0.0	98.7	100.0	100.0	97.7	0.0	97.8	98.3
Exiting Leg Total	672					46					59					563					1340
Heavy Vehicles	6	1	0	0	7	0	0	0	0	0	0	0	1	0	1	0	0	15	0	15	23
% Heavy Vehicles	1.2	2.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.3	0.0	0.0	2.3	0.0	2.2	1.7
Exiting Leg Total	15					0					1					7					23

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
5:00 PM	66	2	5	0	73	0	0	0	0	0	0	4	8	0	12	4	2	87	0	93	178
5:15 PM	81	7	2	0	90	0	0	0	0	0	0	3	4	0	7	3	0	94	0	97	194
5:30 PM	53	4	4	1	62	1	0	0	0	1	0	2	5	0	7	2	3	113	0	118	188
5:45 PM	69	5	2	0	76	0	0	0	0	0	0	2	5	0	7	5	1	115	0	121	204
Total Volume	269	18	13	1	301	1	0	0	0	1	0	11	22	0	33	14	6	409	0	429	764
% Approach Total	89.4	6.0	4.3	0.3		100.0	0.0	0.0	0.0		0.0	33.3	66.7	0.0		3.3	1.4	95.3	0.0		
PHF	0.830	0.643	0.650	0.250	0.836	0.250	0.000	0.000	0.000	0.250	0.000	0.688	0.688	0.000	0.688	0.700	0.500	0.889	0.000	0.886	0.936
Cars	267	17	13	1	298	1	0	0	0	1	0	11	22	0	33	14	6	402	0	422	754
Cars %	99.3	94.4	100.0	100.0	99.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	98.3	0.0	98.4	98.7
Heavy Vehicles	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	10
Heavy Vehicles %	0.7	5.6	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.6	1.3
Cars Enter Leg	267	17	13	1	298	1	0	0	0	1	0	11	22	0	33	14	6	402	0	422	754
Heavy Enter Leg	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	10
Total Entering Leg	269	18	13	1	301	1	0	0	0	1	0	11	22	0	33	14	6	409	0	429	764
Cars Exiting Leg	415					19					31					289					754
Heavy Exiting Leg	7					0					1					2					10
Total Exiting Leg	422					19					32					291					764

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars-Combined (Motorcycles, Cars, Light Goods)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	57	6	3	0	66	1	0	0	0	1	0	1	7	0	8	1	2	59	0	62	137
4:15 PM	55	1	7	0	63	0	0	0	0	0	0	5	6	0	11	3	0	59	0	62	136
4:30 PM	61	6	6	0	73	1	0	0	0	1	0	6	8	0	14	3	3	64	0	70	158
4:45 PM	74	5	3	0	82	2	0	0	0	2	0	3	6	0	9	3	3	56	0	62	155
<b>Total</b>	<b>247</b>	<b>18</b>	<b>19</b>	<b>0</b>	<b>284</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>15</b>	<b>27</b>	<b>0</b>	<b>42</b>	<b>10</b>	<b>8</b>	<b>238</b>	<b>0</b>	<b>256</b>	<b>586</b>
5:00 PM	66	2	5	0	73	0	0	0	0	0	0	4	8	0	12	4	2	85	0	91	176
5:15 PM	81	7	2	0	90	0	0	0	0	0	0	3	4	0	7	3	0	93	0	96	193
5:30 PM	52	4	4	1	61	1	0	0	0	1	0	2	5	0	7	2	3	110	0	115	184
5:45 PM	68	4	2	0	74	0	0	0	0	0	0	2	5	0	7	5	1	114	0	120	201
<b>Total</b>	<b>267</b>	<b>17</b>	<b>13</b>	<b>1</b>	<b>298</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>22</b>	<b>0</b>	<b>33</b>	<b>14</b>	<b>6</b>	<b>402</b>	<b>0</b>	<b>422</b>	<b>754</b>
Grand Total	514	35	32	1	582	5	0	0	0	5	0	26	49	0	75	24	14	640	0	678	1340
Approach %	88.3	6.0	5.5	0.2		100.0	0.0	0.0	0.0		0.0	34.7	65.3	0.0		3.5	2.1	94.4	0.0		
Total %	38.4	2.6	2.4	0.1	43.4	0.4	0.0	0.0	0.0	0.4	0.0	1.9	3.7	0.0	5.6	1.8	1.0	47.8	0.0	50.6	
Exiting Leg Total	672					46					59					563					1340

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
5:00 PM	66	2	5	0	73	0	0	0	0	0	0	4	8	0	12	4	2	85	0	91	176
5:15 PM	81	7	2	0	90	0	0	0	0	0	0	3	4	0	7	3	0	93	0	96	193
5:30 PM	52	4	4	1	61	1	0	0	0	1	0	2	5	0	7	2	3	110	0	115	184
5:45 PM	68	4	2	0	74	0	0	0	0	0	0	2	5	0	7	5	1	114	0	120	201
Total Volume	267	17	13	1	298	1	0	0	0	1	0	11	22	0	33	14	6	402	0	422	754
% Approach Total	89.6	5.7	4.4	0.3		100.0	0.0	0.0	0.0		0.0	33.3	66.7	0.0		3.3	1.4	95.3	0.0		
PHF	0.824	0.607	0.650	0.250	0.828	0.250	0.000	0.000	0.000	0.250	0.000	0.688	0.688	0.000	0.688	0.700	0.500	0.882	0.000	0.879	0.938
Entering Leg	267	17	13	1	298	1	0	0	0	1	0	11	22	0	33	14	6	402	0	422	754
Exiting Leg	415					19					31					289					754
Total	713					20					64					711					1508



PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	3
4:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>13</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
5:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
<b>Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>10</b>
<b>Grand Total</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>15</b>	<b>23</b>
Approach %	85.7	14.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		
Total %	26.1	4.3	0.0	0.0	30.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	0.0	0.0	65.2	0.0	65.2	
Exiting Leg Total	15					0					1					7					23
Buses	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	14
% Buses	50.0	0.0	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.3	0.0	73.3	60.9
Exiting Leg Total	11					0					0					3					14
Single-Unit Trucks	2	1	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	7
% Single-Unit	33.3	100.0	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	20.0	0.0	20.0	30.4
Exiting Leg Total	3					0					1					3					7
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
% Articulated	16.7	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	6.7	8.7
Exiting Leg Total	1					0					0					1					2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	3
4:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total Volume</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>13</b>
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.667	0.000	0.667	0.813
Buses	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	8
Buses %	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.5	0.0	87.5	61.5
Single-Unit Trucks	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Single-Unit %	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	23.1
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Articulated %	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	12.5	15.4
Buses	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	8
Single-Unit Trucks	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total Entering Leg</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>13</b>
Buses	7					0					0					1					8
Single-Unit Trucks	0					0					0					3					3
Articulated Trucks	1					0					0					1					2
<b>Total Exiting Leg</b>	<b>8</b>					<b>0</b>					<b>0</b>					<b>5</b>					<b>13</b>

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total					
	from North					from Northeast					from East					from South										
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total						
4:00 PM	55	6	3	0	64	1	0	0	0	1	0	1	6	0	7	1	2	57	0	60	132					
4:15 PM	53	1	7	0	61	0	0	0	0	0	0	5	6	0	11	3	0	56	0	59	131					
4:30 PM	58	6	6	0	70	1	0	0	0	1	0	5	8	0	13	3	3	60	0	66	150					
4:45 PM	71	5	3	0	79	2	0	0	0	2	0	3	4	0	7	2	3	54	0	59	147					
<b>Total</b>	<b>237</b>	<b>18</b>	<b>19</b>	<b>0</b>	<b>274</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>0</b>	<b>38</b>	<b>9</b>	<b>8</b>	<b>227</b>	<b>0</b>	<b>244</b>	<b>560</b>					
5:00 PM	63	2	5	0	70	0	0	0	0	0	0	3	7	0	10	4	2	82	0	88	168					
5:15 PM	79	7	2	0	88	0	0	0	0	0	0	3	4	0	7	3	0	89	0	92	187					
5:30 PM	49	4	3	1	57	1	0	0	0	1	0	2	5	0	7	2	3	105	0	110	175					
5:45 PM	63	4	2	0	69	0	0	0	0	0	0	2	5	0	7	5	1	110	0	116	192					
<b>Total</b>	<b>254</b>	<b>17</b>	<b>12</b>	<b>1</b>	<b>284</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>21</b>	<b>0</b>	<b>31</b>	<b>14</b>	<b>6</b>	<b>386</b>	<b>0</b>	<b>406</b>	<b>722</b>					
Grand Total	491	35	31	1	558	5	0	0	0	5	0	24	45	0	69	23	14	613	0	650	1282					
Approach %	88.0	6.3	5.6	0.2		100.0	0.0	0.0	0.0		0.0	34.8	65.2	0.0		3.5	2.2	94.3	0.0							
Total %	38.3	2.7	2.4	0.1	43.5	0.4	0.0	0.0	0.0	0.4	0.0	1.9	3.5	0.0	5.4	1.8	1.1	47.8	0.0	50.7						
Exiting Leg Total						643					45					58					536					1282

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total					
	from North					from Northeast					from East					from South										
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total						
5:00 PM	63	2	5	0	70	0	0	0	0	0	0	3	7	0	10	4	2	82	0	88	168					
5:15 PM	79	7	2	0	88	0	0	0	0	0	0	3	4	0	7	3	0	89	0	92	187					
5:30 PM	49	4	3	1	57	1	0	0	0	1	0	2	5	0	7	2	3	105	0	110	175					
5:45 PM	63	4	2	0	69	0	0	0	0	0	0	2	5	0	7	5	1	110	0	116	192					
Total Volume	254	17	12	1	284	1	0	0	0	1	0	10	21	0	31	14	6	386	0	406	722					
% Approach Total	89.4	6.0	4.2	0.4		100.0	0.0	0.0	0.0		0.0	32.3	67.7	0.0		3.4	1.5	95.1	0.0							
PHF	0.804	0.607	0.600	0.250	0.807	0.250	0.000	0.000	0.000	0.250	0.000	0.833	0.750	0.000	0.775	0.700	0.500	0.877	0.000	0.875	0.940					
Entering Leg	254	17	12	1	284	1	0	0	0	1	0	10	21	0	31	14	6	386	0	406	722					
Exiting Leg											18					31					275					722
Total						682					19					62					681					1444

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Light Goods Vehicle**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Light Goods Vehicle**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	5
4:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5
4:30 PM	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	4	0	4	8
4:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	2	0	2	1	0	2	0	3	8
<b>Total</b>	10	0	0	0	10	0	0	0	0	0	0	1	3	0	4	1	0	11	0	12	26
5:00 PM	3	0	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	3	0	3	8
5:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	6
5:30 PM	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	9
5:45 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	9
<b>Total</b>	13	0	1	0	14	0	0	0	0	0	0	1	1	0	2	0	0	16	0	16	32
Grand Total	23	0	1	0	24	0	0	0	0	0	0	2	4	0	6	1	0	27	0	28	58
Approach %	95.8	0.0	4.2	0.0		0.0	0.0	0.0	0.0		0.0	33.3	66.7	0.0		3.6	0.0	96.4	0.0		
Total %	39.7	0.0	1.7	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	3.4	6.9	0.0	10.3	1.7	0.0	46.6	0.0	48.3	
Exiting Leg Total	29					1					1					27					58

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
5:00 PM	3	0	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	3	0	3	8
5:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	6
5:30 PM	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	9
5:45 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	9
<b>Total Volume</b>	13	0	1	0	14	0	0	0	0	0	0	1	1	0	2	0	0	16	0	16	32
% Approach Total	92.9	0.0	7.1	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.650	0.000	0.250	0.000	0.700	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.250	0.000	0.000	0.800	0.000	0.800	0.889
Entering Leg	13	0	1	0	14	0	0	0	0	0	0	1	1	0	2	0	0	16	0	16	32
Exiting Leg	17					1					2					14					32
<b>Total</b>	31					1					2					30					64

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Buses**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>8</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
5:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>6</b>
Grand Total	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	14
Approach %	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	21.4	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.6	0.0	78.6	
Exiting Leg Total	11					0					0					3					14

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	8
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.583	0.667
Entering Leg	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	8
Exiting Leg	7					0					0					1					8
Total	8					0					0					8					16

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Single-Unit Trucks**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>
Grand Total	2	1	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	7
Approach %	66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		
Total %	28.6	14.3	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	14.3	0.0	0.0	42.9	0.0	42.9	
Exiting Leg Total	3					0					1					3					7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.500
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
Exiting Leg	3					0					1					0					4
<b>Total</b>	<b>4</b>					<b>0</b>					<b>1</b>					<b>3</b>					<b>8</b>

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Articulated Trucks**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Approach %	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total	1					0					0					1					2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Exiting Leg	1					0					0					1					2
Total	2					0					0					2					4

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Bicycles (on Roadway and Crosswalks)**

	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total	
	from North							from Northeast							from East							from South								
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total
	from North							from Northeast							from East							from South							
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Thursday, February 01, 2018**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



**Pedestrians**

	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total
	from North							from Northeast							from East							from South							
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	2	5
<b>Total</b>	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	1	1	2	7	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	1	1	4
<b>Grand Total</b>	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	3	1	4	0	0	0	0	1	2	3	11	
<b>Approach %</b>	0	0	0	0	66.7	33.3		0	0	0	0	100	0		0	0	0	75	25		0	0	0	0	33.3	66.7			
<b>Total %</b>	0	0	0	0	18.2	9.09	27.3	0	0	0	0	9.09	0	9.09	0	0	0	27.3	9.09	36.4	0	0	0	0	9.09	18.2	27.3		
<b>Exiting Leg Total</b>	3							1							4							3							11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total
	from North							from Northeast							from East							from South							
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	2	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
<b>Total Volume</b>	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	2	1	3	0	0	0	0	1	2	3	8	
<b>% Approach Total</b>	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	33.3	66.7			
<b>PHF</b>	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.500	0.250	0.375	0.000	0.000	0.000	0.000	0.250	0.500	0.375	0.400	
<b>Entering Leg</b>	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	2	1	3	0	0	0	0	1	2	3	8	
<b>Exiting Leg</b>	1							1							3							3							8
<b>Total</b>	2							2							6							6							16



PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	34	7	10	0	51	1	0	0	0	1	0	11	8	0	19	4	3	53	0	60	131
11:15 AM	43	1	7	0	51	1	0	0	0	1	1	2	9	0	12	8	6	52	0	66	130
11:30 AM	43	5	12	0	60	1	0	0	0	1	0	2	12	0	14	5	4	59	0	68	143
11:45 AM	42	4	12	0	58	0	0	0	0	0	0	1	10	0	11	4	6	75	0	85	154
<b>Total</b>	<b>162</b>	<b>17</b>	<b>41</b>	<b>0</b>	<b>220</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>16</b>	<b>39</b>	<b>0</b>	<b>56</b>	<b>21</b>	<b>19</b>	<b>239</b>	<b>0</b>	<b>279</b>	<b>558</b>
12:00 PM	50	10	4	0	64	0	0	0	0	0	0	6	9	0	15	7	3	56	0	66	145
12:15 PM	57	6	4	0	67	0	0	0	0	0	0	1	13	0	14	1	5	67	0	73	154
12:30 PM	55	5	7	0	67	0	0	0	0	0	0	5	7	0	12	0	2	56	0	58	137
12:45 PM	46	6	1	0	53	0	0	0	0	0	0	1	11	0	12	3	2	63	0	68	133
<b>Total</b>	<b>208</b>	<b>27</b>	<b>16</b>	<b>0</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>40</b>	<b>0</b>	<b>53</b>	<b>11</b>	<b>12</b>	<b>242</b>	<b>0</b>	<b>265</b>	<b>569</b>
1:00 PM	43	7	8	0	58	0	0	0	0	0	0	4	7	0	11	1	6	68	0	75	144
1:15 PM	44	1	11	0	56	0	1	0	0	1	2	5	7	0	14	6	13	51	0	70	141
1:30 PM	46	3	8	0	57	0	0	0	0	0	2	5	10	0	17	3	6	46	0	55	129
1:45 PM	56	5	12	0	73	0	2	0	0	2	0	4	12	0	16	1	10	59	0	70	161
<b>Total</b>	<b>189</b>	<b>16</b>	<b>39</b>	<b>0</b>	<b>244</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>18</b>	<b>36</b>	<b>0</b>	<b>58</b>	<b>11</b>	<b>35</b>	<b>224</b>	<b>0</b>	<b>270</b>	<b>575</b>
Grand Total	559	60	96	0	715	3	3	0	0	6	5	47	115	0	167	43	66	705	0	814	1702
Approach %	78.2	8.4	13.4	0.0		50.0	50.0	0.0	0.0		3.0	28.1	68.9	0.0		5.3	8.1	86.6	0.0		
Total %	32.8	3.5	5.6	0.0	42.0	0.2	0.2	0.0	0.0	0.4	0.3	2.8	6.8	0.0	9.8	2.5	3.9	41.4	0.0	47.8	
Exiting Leg Total	755					167					103					677					1702
Cars	551	59	95	0	705	3	3	0	0	6	5	47	115	0	167	43	66	696	0	805	1683
% Cars	98.6	98.3	99.0	0.0	98.6	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	98.7	0.0	98.9	98.9
Exiting Leg Total	746					166					102					669					1683
Heavy Vehicles	8	1	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	19
% Heavy Vehicles	1.4	1.7	1.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.1	1.1
Exiting Leg Total	9					1					1					8					19

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:30 AM	43	5	12	0	60	1	0	0	0	1	0	2	12	0	14	5	4	59	0	68	143
11:45 AM	42	4	12	0	58	0	0	0	0	0	0	1	10	0	11	4	6	75	0	85	154
12:00 PM	50	10	4	0	64	0	0	0	0	0	0	6	9	0	15	7	3	56	0	66	145
12:15 PM	57	6	4	0	67	0	0	0	0	0	0	1	13	0	14	1	5	67	0	73	154
<b>Total Volume</b>	<b>192</b>	<b>25</b>	<b>32</b>	<b>0</b>	<b>249</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>44</b>	<b>0</b>	<b>54</b>	<b>17</b>	<b>18</b>	<b>257</b>	<b>0</b>	<b>292</b>	<b>596</b>
% Approach Total	77.1	10.0	12.9	0.0		100.0	0.0	0.0	0.0		0.0	18.5	81.5	0.0		5.8	6.2	88.0	0.0		
PHF	0.842	0.625	0.667	0.000	0.929	0.250	0.000	0.000	0.000	0.250	0.000	0.417	0.846	0.000	0.900	0.607	0.750	0.857	0.000	0.859	0.968
Cars	192	25	32	0	249	1	0	0	0	1	0	10	44	0	54	17	18	252	0	287	591
Cars %	100.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	98.1	0.0	98.3	99.2
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.7	0.8
Cars Enter Leg	192	25	32	0	249	1	0	0	0	1	0	10	44	0	54	17	18	252	0	287	591
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
<b>Total Entering Leg</b>	<b>192</b>	<b>25</b>	<b>32</b>	<b>0</b>	<b>249</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>44</b>	<b>0</b>	<b>54</b>	<b>17</b>	<b>18</b>	<b>257</b>	<b>0</b>	<b>292</b>	<b>596</b>
Cars Exiting Leg	263					50					42					236					591
Heavy Exiting Leg	5					0					0					0					5
<b>Total Exiting Leg</b>	<b>268</b>					<b>50</b>					<b>42</b>					<b>236</b>					<b>596</b>

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars-Combined (Motorcycles, Cars, Light Goods)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	33	7	10	0	50	1	0	0	0	1	0	11	8	0	19	4	3	53	0	60	130
11:15 AM	40	1	7	0	48	1	0	0	0	1	1	2	9	0	12	8	6	52	0	66	127
11:30 AM	43	5	12	0	60	1	0	0	0	1	0	2	12	0	14	5	4	59	0	68	143
11:45 AM	42	4	12	0	58	0	0	0	0	0	0	1	10	0	11	4	6	73	0	83	152
<b>Total</b>	158	17	41	0	216	3	0	0	0	3	1	16	39	0	56	21	19	237	0	277	552
12:00 PM	50	10	4	0	64	0	0	0	0	0	0	6	9	0	15	7	3	56	0	66	145
12:15 PM	57	6	4	0	67	0	0	0	0	0	0	1	13	0	14	1	5	64	0	70	151
12:30 PM	53	5	6	0	64	0	0	0	0	0	0	5	7	0	12	0	2	55	0	57	133
12:45 PM	46	5	1	0	52	0	0	0	0	0	0	1	11	0	12	3	2	62	0	67	131
<b>Total</b>	206	26	15	0	247	0	0	0	0	0	0	13	40	0	53	11	12	237	0	260	560
1:00 PM	43	7	8	0	58	0	0	0	0	0	0	4	7	0	11	1	6	67	0	74	143
1:15 PM	43	1	11	0	55	0	1	0	0	1	2	5	7	0	14	6	13	50	0	69	139
1:30 PM	45	3	8	0	56	0	0	0	0	0	2	5	10	0	17	3	6	46	0	55	128
1:45 PM	56	5	12	0	73	0	2	0	0	2	0	4	12	0	16	1	10	59	0	70	161
<b>Total</b>	187	16	39	0	242	0	3	0	0	3	4	18	36	0	58	11	35	222	0	268	571
Grand Total	551	59	95	0	705	3	3	0	0	6	5	47	115	0	167	43	66	696	0	805	1683
Approach %	78.2	8.4	13.5	0.0		50.0	50.0	0.0	0.0		3.0	28.1	68.9	0.0		5.3	8.2	86.5	0.0		
Total %	32.7	3.5	5.6	0.0	41.9	0.2	0.2	0.0	0.0	0.4	0.3	2.8	6.8	0.0	9.9	2.6	3.9	41.4	0.0	47.8	
Exiting Leg Total	746					166					102					669					1683

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:30 AM	43	5	12	0	60	1	0	0	0	1	0	2	12	0	14	5	4	59	0	68	143
11:45 AM	42	4	12	0	58	0	0	0	0	0	0	1	10	0	11	4	6	73	0	83	152
12:00 PM	50	10	4	0	64	0	0	0	0	0	0	6	9	0	15	7	3	56	0	66	145
12:15 PM	57	6	4	0	67	0	0	0	0	0	0	1	13	0	14	1	5	64	0	70	151
<b>Total Volume</b>	192	25	32	0	249	1	0	0	0	1	0	10	44	0	54	17	18	252	0	287	591
<b>% Approach Total</b>	77.1	10.0	12.9	0.0		100.0	0.0	0.0	0.0		0.0	18.5	81.5	0.0		5.9	6.3	87.8	0.0		
PHF	0.842	0.625	0.667	0.000	0.929	0.250	0.000	0.000	0.000	0.250	0.000	0.417	0.846	0.000	0.900	0.607	0.750	0.863	0.000	0.864	0.972
Entering Leg	192	25	32	0	249	1	0	0	0	1	0	10	44	0	54	17	18	252	0	287	591
Exiting Leg																					591
<b>Total</b>	512					51					96					523					1182

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
<b>Total</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>6</b>
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
12:30 PM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>9</b>
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
1:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>
<b>Grand Total</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>19</b>
Approach %	80.0	10.0	10.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	42.1	5.3	5.3	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4	0.0	47.4	
Exiting Leg Total	9					1					1					8					19
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
% Buses	25.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	22.2	21.1
Exiting Leg Total	2					0					0					2					4
Single-Unit Trucks	6	1	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	15
% Single-Unit	75.0	100.0	100.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.8	0.0	77.8	78.9
Exiting Leg Total	7					1					1					6					15
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

**Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
12:30 PM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<b>Total Volume</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>10</b>
<b>% Approach Total</b>	<b>50.0</b>	<b>25.0</b>	<b>25.0</b>	<b>0.0</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>	<b>0.0</b>	<b>100.0</b>	<b>0.0</b>		
PHF	0.250	0.250	0.250	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.625
Buses	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Buses %	50.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Single-Unit Trucks	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	9
Single-Unit %	50.0	100.0	100.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	90.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Single-Unit Trucks	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Entering Leg</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>10</b>
Buses	0					0					0					1					1
Single-Unit Trucks	6					1					1					1					9
Articulated Trucks	0					0					0					0					0
<b>Total Exiting Leg</b>	<b>6</b>					<b>1</b>					<b>1</b>					<b>2</b>					<b>10</b>

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Cars**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	30	7	9	0	46	1	0	0	0	1	0	11	6	0	17	3	3	53	0	59	123
11:15 AM	38	1	7	0	46	1	0	0	0	1	1	1	9	0	11	7	5	51	0	63	121
11:30 AM	42	5	10	0	57	1	0	0	0	1	0	2	11	0	13	5	3	58	0	66	137
11:45 AM	41	4	12	0	57	0	0	0	0	0	0	0	10	0	10	4	6	70	0	80	147
<b>Total</b>	151	17	38	0	206	3	0	0	0	3	1	14	36	0	51	19	17	232	0	268	528
12:00 PM	48	10	4	0	62	0	0	0	0	0	0	6	9	0	15	7	2	53	0	62	139
12:15 PM	53	5	4	0	62	0	0	0	0	0	0	1	10	0	11	1	4	59	0	64	137
12:30 PM	49	5	6	0	60	0	0	0	0	0	0	4	6	0	10	0	2	49	0	51	121
12:45 PM	42	5	1	0	48	0	0	0	0	0	0	1	10	0	11	3	2	61	0	66	125
<b>Total</b>	192	25	15	0	232	0	0	0	0	0	0	12	35	0	47	11	10	222	0	243	522
1:00 PM	42	5	8	0	55	0	0	0	0	0	0	4	7	0	11	1	5	65	0	71	137
1:15 PM	41	1	10	0	52	0	1	0	0	1	1	3	7	0	11	6	10	49	0	65	129
1:30 PM	43	3	8	0	54	0	0	0	0	0	2	4	9	0	15	3	5	46	0	54	123
1:45 PM	53	5	11	0	69	0	2	0	0	2	0	4	12	0	16	1	10	55	0	66	153
<b>Total</b>	179	14	37	0	230	0	3	0	0	3	3	15	35	0	53	11	30	215	0	256	542
<b>Grand Total</b>	522	56	90	0	668	3	3	0	0	6	4	41	106	0	151	41	57	669	0	767	1592
Approach %	78.1	8.4	13.5	0.0		50.0	50.0	0.0	0.0		2.6	27.2	70.2	0.0		5.3	7.4	87.2	0.0		
Total %	32.8	3.5	5.7	0.0	42.0	0.2	0.2	0.0	0.0	0.4	0.3	2.6	6.7	0.0	9.5	2.6	3.6	42.0	0.0	48.2	
Exiting Leg Total	713					151					97					631					1592

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total			
	from North					from Northeast					from East					from South								
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total				
11:30 AM	42	5	10	0	57	1	0	0	0	1	0	2	11	0	13	5	3	58	0	66	137			
11:45 AM	41	4	12	0	57	0	0	0	0	0	0	0	10	0	10	4	6	70	0	80	147			
12:00 PM	48	10	4	0	62	0	0	0	0	0	0	6	9	0	15	7	2	53	0	62	139			
12:15 PM	53	5	4	0	62	0	0	0	0	0	0	1	10	0	11	1	4	59	0	64	137			
<b>Total Volume</b>	184	24	30	0	238	1	0	0	0	1	0	9	40	0	49	17	15	240	0	272	560			
% Approach Total	77.3	10.1	12.6	0.0		100.0	0.0	0.0	0.0		0.0	18.4	81.6	0.0		6.3	5.5	88.2	0.0					
PHF	0.868	0.600	0.625	0.000	0.960	0.250	0.000	0.000	0.000	0.250	0.000	0.375	0.909	0.000	0.817	0.607	0.625	0.857	0.000	0.850	0.952			
Entering Leg	184	24	30	0	238	1	0	0	0	1	0	9	40	0	49	17	15	240	0	272	560			
Exiting Leg																					45	41	224	560
<b>Total</b>	488					46					90					496					1120			

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class: **Light Goods Vehicle**



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Light Goods Vehicle**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	3	0	1	0	4	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	7
11:15 AM	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	1	1	0	3	6
11:30 AM	1	0	2	0	3	0	0	0	0	0	0	0	1	0	1	0	1	1	0	2	6
11:45 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	5
<b>Total</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>24</b>
12:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	6
12:15 PM	4	1	0	0	5	0	0	0	0	0	0	0	3	0	3	0	1	5	0	6	14
12:30 PM	4	0	0	0	4	0	0	0	0	0	0	1	1	0	2	0	0	6	0	6	12
12:45 PM	4	0	0	0	4	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	6
<b>Total</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>17</b>	<b>38</b>
1:00 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	6
1:15 PM	2	0	1	0	3	0	0	0	0	0	1	2	0	0	3	0	3	1	0	4	10
1:30 PM	2	0	0	0	2	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	5
1:45 PM	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	8
<b>Total</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>0</b>	<b>12</b>	<b>29</b>
Grand Total	29	3	5	0	37	0	0	0	0	0	1	6	9	0	16	2	9	27	0	38	91
Approach %	78.4	8.1	13.5	0.0		0.0	0.0	0.0	0.0		6.3	37.5	56.3	0.0		5.3	23.7	71.1	0.0		
Total %	31.9	3.3	5.5	0.0	40.7	0.0	0.0	0.0	0.0	0.0	1.1	6.6	9.9	0.0	17.6	2.2	9.9	29.7	0.0	41.8	
Exiting Leg Total	33					15					5					38					91

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
12:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	6
12:15 PM	4	1	0	0	5	0	0	0	0	0	0	0	3	0	3	0	1	5	0	6	14
12:30 PM	4	0	0	0	4	0	0	0	0	0	0	1	1	0	2	0	0	6	0	6	12
12:45 PM	4	0	0	0	4	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	6
<b>Total Volume</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>17</b>	<b>38</b>
% Approach Total	93.3	6.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	16.7	83.3	0.0		0.0	11.8	88.2	0.0		
PHF	0.875	0.250	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.417	0.000	0.500	0.000	0.500	0.625	0.000	0.708	0.679
Entering Leg	14	1	0	0	15	0	0	0	0	0	0	1	5	0	6	0	2	15	0	17	38
Exiting Leg	16					2					1					19					38
<b>Total</b>	<b>31</b>					<b>2</b>					<b>7</b>					<b>36</b>					<b>76</b>

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Buses**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>Grand Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>
Approach %	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total						2					0					2					4

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Exiting Leg						1					0					1					2
Total						2					0					2					4

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Single-Unit Trucks**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<b>Total</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
12:30 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>8</b>
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>
<b>Grand Total</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>15</b>
Approach %	75.0	12.5	12.5	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	40.0	6.7	6.7	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	46.7	
Exiting Leg Total						7					1					6					15

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
12:30 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	9
% Approach Total	33.3	33.3	33.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.250	0.250	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	9
Exiting Leg						6					1					1					9
Total	9					1					1					7					18

PDI File #: **186077 B**  
 Location: **N: Elliot Street S: Elliot Street NE: CVS Driveway**  
 Location: **E: Fabu Spa Driveway**  
 City, State: **Newton, MA**  
 Client: **VHB/ M. Duranleau**  
 Site Code: **84297.17**  
 Count Date: **Saturday, February 03, 2018**  
 Start Time: **11:00 AM**  
 End Time: **2:00 PM**  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Articulated Trucks**

	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0						0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Elliot Street					CVS Driveway					Fabu Spa Driveway					Elliot Street					Total
	from North					from Northeast					from East					from South					
	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Left	U-Turn	Total	Right	Bear Right	Thru	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0						0
Total					0					0					0						0



PDI File #: 186077 B  
 Location: N: Elliot Street S: Elliot Street NE: CVS Driveway  
 Location: E: Fabu Spa Driveway  
 City, State: Newton, MA  
 Client: VHB/ M. Duranleau  
 Site Code: 84297.17  
 Count Date: Saturday, February 03, 2018  
 Start Time: 11:00 AM  
 End Time: 2:00 PM  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Bicycles (on Roadway and Crosswalks)**

	Elliot Street								CVS Driveway								Fabu Spa Driveway								Elliot Street								Total				
	from North								from Northeast								from East								from South												
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total		Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total		Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total						
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0								0								0								0								0				

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

	Elliot Street								CVS Driveway								Fabu Spa Driveway								Elliot Street								Total				
	from North								from Northeast								from East								from South												
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total		Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total		Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total						
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0								0								0								0								0				
Total	0								0								0								0								0				

PDI File #: 186077 B  
 Location: N: Elliot Street S: Elliot Street NE: CVS Driveway  
 Location: E: Fabu Spa Driveway  
 City, State: Newton, MA  
 Client: VHB/ M. Duranleau  
 Site Code: 84297.17  
 Count Date: Saturday, February 03, 2018  
 Start Time: 11:00 AM  
 End Time: 2:00 PM  
 Class:



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

**Pedestrians**

	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total		
	from North							from Northeast							from East							from South									
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total			
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4	4	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	2	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	2	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	8	8		
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	25						
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	25	100					
Exiting Leg Total	0							0							0							8							8		

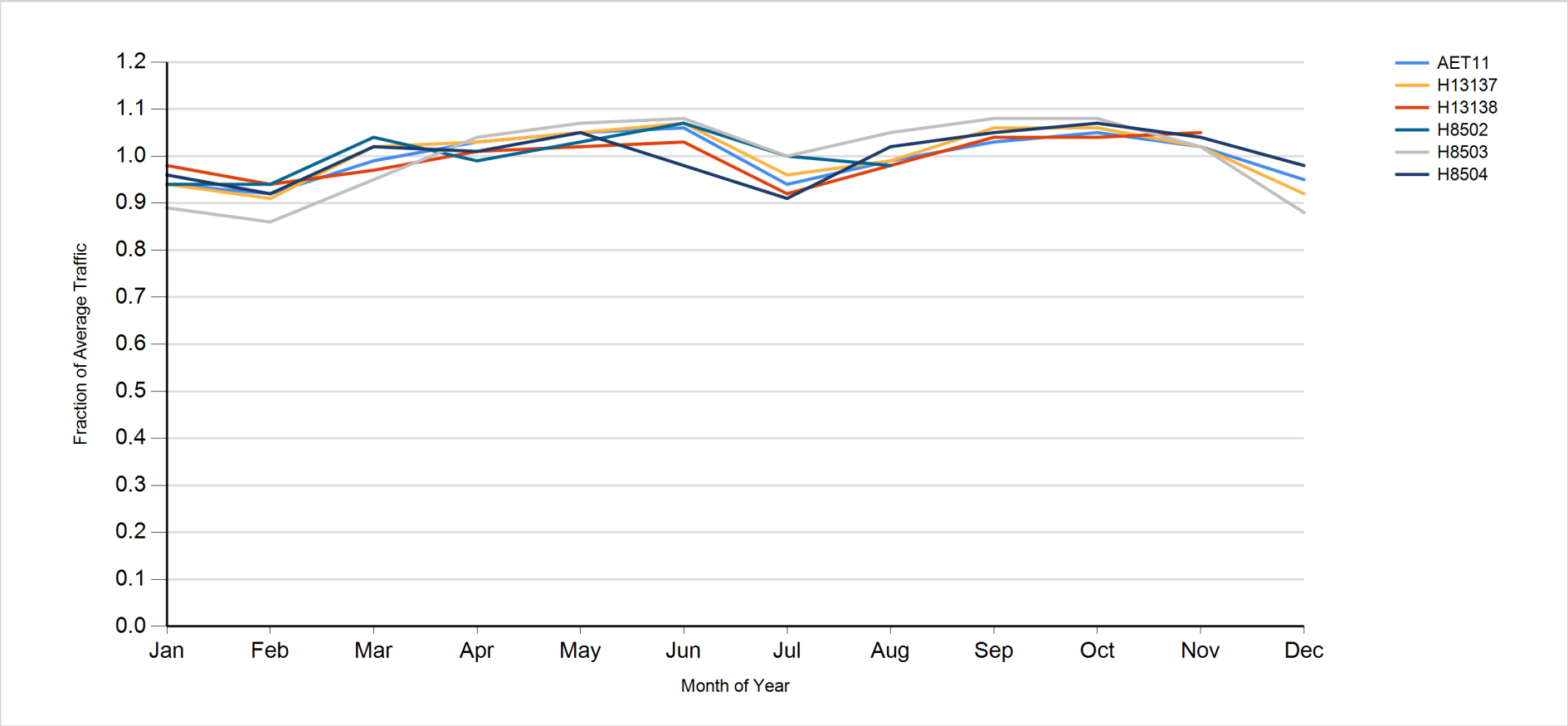
Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Elliot Street							CVS Driveway							Fabu Spa Driveway							Elliot Street							Total
	from North							from Northeast							from East							from South							
	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	U-Turn	CW-WB	CW-EB	Total	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.500	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	4		
Exiting Leg	0							0							0							4							4
Total	0							0							0							8							8



Traffic Pattern by Month for 1/1/2017 - 12/31/2017

Criteria: Location ID = 41, 6161, 6345, 4165, 415, H8504, 32, H8503, H8502, H8501, H8500, H8499, H13137, H13138, H13139, H13140, AET11



Massachusetts Highway Department

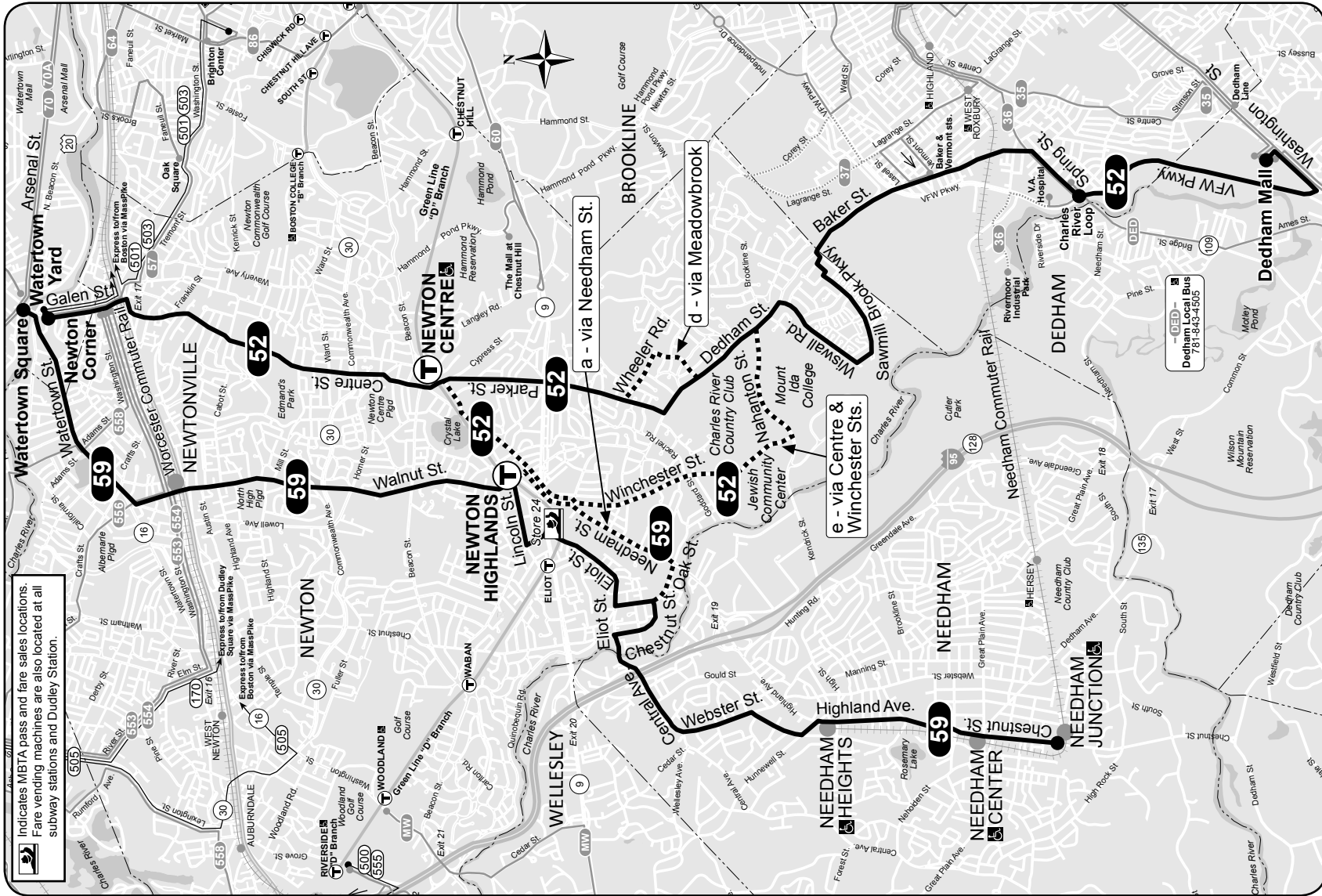
Traffic Pattern by Month for 1/1/2017 - 12/31/2017

Criteria: Location ID = 41, 6161, 6345, 4165, 415, H8504, 32, H8503, H8502, H8501, H8500, H8499, H13137, H13138, H13139, H13140, AET11

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U1-Boston	AET11		0.940	0.921	0.994	1.029	1.051	1.062	0.943	0.994	1.029	1.052	1.022	0.952
U1-Boston	H13137		0.937	0.906	1.016	1.033	1.054	1.067	0.956	0.987	1.060	1.059	1.015	0.918
U1-Boston	H13138		0.981	0.939	0.970	1.014	1.024	1.028	0.924	0.979	1.042	1.036	1.048	
U1-Boston	H8502		0.942	0.938	1.035	0.986	1.032	1.070	1.000	0.983				
U1-Boston	H8503		0.895	0.863	0.951	1.037	1.075	1.082	0.997	1.052	1.077	1.081	1.015	0.879
U1-Boston	H8504		0.956	0.922	1.024	1.012	1.049	0.983	0.906	1.018	1.047	1.073	1.043	0.975
	<b>Average of Weighted Factors</b>		<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>



**Route 52 Dedham Mall or Charles River Loop - Watertown Yard  
Route 59 Needham Junction - Watertown Square**



Indicates MBTA pass and fare sales locations.  
Fare vending machines are also located at all subway stations and Dudley Station.

# 52•59

Winter December 31, 2017 - March 31, 2018

**52 Dedham Mall or Charles River Loop - Watertown Yard**

**59 Needham Junction-Watertown Square**

**Serving**

- Newton Center
- Oak Hill
- Newton Corner
- Jewish Community Center
- BC Law School
- Needham Center
- Needham Heights
- Newton Highlands
- Newtonville
- Green Line
- Needham Commuter Rail
- Worcester Commuter Rail



**T** Massachusetts Bay Transportation Authority **massDOT**  
Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100  
(TTY) 617-222-5146 • www.mbta.com

52 Weekday							
Inbound				Outbound			
Leave Dedham Mall	Lv/Arrive Charles River	Arrive Newton Center	Arrive Watertown Yard	Leave Watertown Yard	Arrive Newton Center	Arrive Charles River	Arrive Dedham Mall
.....	6:15A	6:33A	6:43A	d 7:00A	7:10A	7:31A	.....
.....	6:45	7:03	7:13	d 7:25	7:37	7:59	.....
.....	7:15	7:34	7:48	d 8:05	8:19	8:42	8:46A
.....	d 7:45	8:07	8:19	e 8:30	8:44	9:08	.....
.....	d 8:15	8:37	8:49	9:00	9:09	9:26	9:32
9:00A	9:13	9:27	9:35	9:45	9:54	10:10	10:16
e 10:30	10:36	10:56	11:06	e 11:15	11:24	11:45	11:49
<b>12:00N</b>	<b>12:11P</b>	<b>12:30P</b>	<b>12:39P</b>	<b>12:45P</b>	<b>12:53P</b>	<b>1:08P</b>	<b>1:14P</b>
d 1:30P	1:34	1:53	2:10	e 2:15	2:24	2:46	2:50
d 2:20	2:24	2:48	3:03	ds 2:47	3:00	3:23	.....
d 3:05	3:09	3:28	3:43	e 3:10	3:22	3:43	3:51
e 3:50	3:54	4:16	4:29	e 3:50	4:01	4:21	4:29
4:25	4:32	4:48	5:02	e 4:35	4:47	5:08	5:16
e 4:45	4:49	5:12	5:25	5:10	5:25	5:47	5:52
5:30	5:39	5:55	6:09	e 5:45	5:57	6:18	6:26
e 6:10	6:14	6:37	6:50	6:20	6:32	6:52	6:59
e 6:45	6:49	7:12	7:22	6:55	7:05	7:23	.....
				7:30	7:39	7:57	.....

b - To Newton Corner  
d - Via Meadowbrook & Wheeler Roads  
e - Via Centre & Winchester Streets  
s - Does NOT run during school vacation

**No Route 52 service on Saturday or Sunday**

**Route 52  
Dedham Mall or Charles River Loop-  
Watertown Yard**

59 Weekday					
Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
6:20A	6:38A	6:52A	a 6:05A	6:19A	6:38A
a 6:55	7:14	7:31	6:35	6:48	7:07
7:30	7:53	8:17	a 7:10	7:30	7:53
8:05	8:28	8:43	a 7:45	8:08	8:31
a 8:40	9:01	9:21	8:20	8:40	9:03
9:15	9:35	9:51	a 8:55	9:11	9:33
a 9:50	10:10	10:25	a 9:30	9:46	10:08
10:35	10:54	11:10	10:05	10:21	10:42
a 11:20	11:40	11:55	a 10:35	10:51	11:13
			11:20	11:36	11:57
<b>12:05P</b>	<b>12:25P</b>	<b>12:42P</b>	<b>a 12:05P</b>	<b>12:21P</b>	<b>12:43P</b>
a 12:50	1:10	1:25	12:50	1:06	1:27
a 2:25	2:45	3:04	a 1:35	1:51	2:13
3:10	3:33	3:50	2:20	2:38	3:01
a 3:45	4:05	4:24	2:55	3:14	3:37
4:20	4:43	5:00	a 3:30	3:49	4:12
a 4:55	5:18	5:38	4:00	4:19	4:45
a 5:30	5:54	6:14	a 4:40	4:59	5:20
6:10	6:30	6:46	5:10	5:34	5:59
6:40	7:00	7:14	5:45	6:07	6:33
a 7:15	7:34	7:48	a 6:20	6:39	7:00
7:50	8:07	8:21	7:00	7:15	7:35

a - Via Needham Street

**Route 59  
Needham Junction-Watertown Square**

59 Saturday					
Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
7:05A	7:25A	7:40A	6:20A	6:31A	6:48A
8:35	8:55	9:10	7:50	8:04	8:21
10:05	10:25	10:40	9:20	9:37	9:55
11:35	11:55	<b>12:14P</b>	10:50	11:07	11:25
<b>1:05P</b>	<b>1:25P</b>	<b>1:42P</b>	<b>12:20P</b>	<b>12:37P</b>	<b>1:00P</b>
<b>2:35</b>	<b>2:54</b>	<b>3:10</b>	<b>1:50</b>	<b>2:07</b>	<b>2:27</b>
<b>4:05</b>	<b>4:23</b>	<b>4:39</b>	<b>3:20</b>	<b>3:37</b>	<b>3:57</b>
<b>5:35</b>	<b>5:53</b>	<b>6:09</b>	<b>4:50</b>	<b>5:05</b>	<b>5:24</b>
<b>7:05</b>	<b>7:22</b>	<b>7:35</b>	<b>6:20</b>	<b>6:35</b>	<b>6:54</b>

**NOTE:**


Approximate running time from Watertown Square to Newtonville Square is 7 minutes.

Approximate running time from Needham Junction to Newtonville Square is 25 minutes.

Approximate running time from Watertown Square to Homer and Walnut Streets is 11 minutes.

Approximate running time from Needham Junction to Homer and Walnut Streets is 18 minutes.

59 Sunday					
Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
7:50A	8:08A	8:20A	7:05A	7:16A	7:32A
9:20	9:38	9:50	8:35	8:48	9:07
10:50	11:08	11:22	10:05	10:18	10:37
			11:35	11:49	<b>12:08P</b>
<b>12:20P</b>	<b>12:39P</b>	<b>12:54P</b>			
<b>1:50</b>	<b>2:06</b>	<b>2:21</b>	<b>1:05P</b>	<b>1:19P</b>	<b>1:38P</b>
<b>3:20</b>	<b>3:39</b>	<b>3:56</b>	<b>2:35</b>	<b>2:49</b>	<b>3:08</b>
<b>4:50</b>	<b>5:08</b>	<b>5:24</b>	<b>4:05</b>	<b>4:19</b>	<b>4:39</b>
<b>6:20</b>	<b>6:36</b>	<b>6:51</b>	<b>5:35</b>	<b>5:49</b>	<b>6:09</b>

 All buses are accessible to persons with disabilities



Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.70	\$2.25	\$2.25
CharlieTicket	\$2.00	\$2.00	\$2.75	\$4.75
Cash-on-Board	\$2.00	\$4.00	\$2.75	\$4.75
Student*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10

**VALID PASSES:** LinkPass (\$84.50/mo.); Local Bus (\$55/mo.); \*Student LinkPass (\$30.00/mo.); \*\*Senior/TAP LinkPass (\$30/mo.); and express bus, commuter rail, and boat passes.  
**FREE FARES:** Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.  
\* Requires Student CharlieCard, available to students through participating middle schools and high schools.  
\*\* Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

**Winter 2018 Holidays**  
January 1: see Sunday January 15 & February 19: see Saturday



T Fares				
PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.50	\$2.25	\$2.25
CharlieTicket	\$2.00	\$2.00	\$2.75	\$4.75***
Cash-on-Board	\$2.00	\$4.00	\$2.75	\$4.75***
Student*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10
UNLIMITED TRIP PASSES				
1-Day	\$12.00	\$12.00	\$12.00	\$12.00
7-Day	\$21.25	\$21.25	\$21.25	\$21.25
Monthly	\$55.00	\$55.00	\$84.50	\$84.50
Senior/TAP Monthly\$30.00/month for unlimited travel on Local Bus and Rapid Transit				

**VALID PASSES:** LinkPass (\$84.50/mo.); Student LinkPass\* (\$30/mo.); Senior/TAP LinkPass\* (\$30/mo.); and express bus, commuter rail, and boat passes.

**FREE FARES:** Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free: if using a guide, the guide rides free

\* Available to students through participating middle schools and high schools.

\*\* Available to Medicare cardholders, seniors 65+, and persons with disabilities.

\*\*\* For Silver Line SL4 or SL5 pay \$2.75. Also see "transfers."

**TRANSFERS**

If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines and inside paid platform areas at gated stations.

**SCHEDULES**

Schedules are available at the following stations: Park Street, Airport, Malden, Harvard, Haymarket (Green Line Level), Back Bay, Downtown Crossing (Orange Line Level), and Quincy Center, or ask a Customer Service Agent. Schedules are also available at the State Transportation Building (10 Park Plaza), 45 High St, and online at mbta.com.



# Rapid Transit

Winter December 31, 2017 - March 31, 2018



**T** Massachusetts Bay Transportation Authority *massDOT* Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100  
(TTY) 617-222-5146 • www.mbta.com

Rapid Transit Line	Weekday							Saturday					Sunday						
	First Trip	AM Peak	Midday	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip
<b>Red Line</b>																			
<b>Alewife Braintree*</b>	5:24AM 5:15AM	9 min 9 min	14 min 14 min	9 min 9 min	12 min 12 min	12 min 12 min	12:15AM 12:17AM	5:24AM 5:15AM	14 min 14 min	14 min 14 min	14 min 14 min	14 min 14 min	12:15AM 12:17AM	6:08AM 6:00AM	15 min 15 min	15 min 15 min	15 min 15 min	16 min 16 min	12:15AM 12:17AM
<b>Alewife Ashmont</b>	5:16AM 5:16AM	9 min 9 min	14 min 14 min	9 min 9 min	12 min 12 min	12 min w 12 min w	12:22AM 12:30AM	5:16AM 5:16AM	14 min 14 min	14 min 14 min	14 min 14 min	14 min w 14 min w	12:22AM 12:30AM	6:00AM 6:00AM	15 min 15 min	15 min 15 min	15 min 15 min	16 min 16 min	12:22AM 12:30AM
<b>"M" Ashmont Mattapan</b>	5:17AM 5:05AM	5 min 5 min	8 min 8 min	5 min 5 min	12 min 12 min	12 min w 12 min w	1:05AM 12:53AM	5:15AM 5:05AM	26 min 26 min	12 min 12 min	12 min 12 min	26 min w 26 min w	1:05AM 12:53AM	6:03AM 5:51AM	26 min 26 min	12 min 12 min	12 min 12 min	26 min 26 min	1:05AM 12:53AM
<b>Blue Line</b>																			
<b>Wonderland</b>	5:13AM	5 min	9 min	5 min	9 min	9 min	12:28AM	5:25AM	9 min	9 min	9 min	13 min	12:28AM	5:58AM	13 min	9 min	9 min	13 min	12:28AM
<b>Orient Heights</b>	5:13AM	5 min	9 min	5 min	9 min	9 min	12:33AM	5:13AM	9 min	9 min	9 min	13 min	12:33AM	6:03AM	13 min	9 min	9 min	13 min	12:33AM
<b>Bowdoin</b>	5:29AM	5 min	9 min	5 min	9 min	9 min w	1:00AM	5:29AM	9 min	9 min	9 min	13 min w	1:00AM	6:21AM	13 min	9 min	9 min	13 min w	1:00AM
<b>Orange Line</b>																			
<b>Oak Grove</b>	5:16AM	6 min	9 min	6 min	10 min	10 min w	12:30AM	5:16AM	10 min	9 min	11 min	11 min w	12:30AM	6:00AM	13 min	11 min	11 min	11 min w	12:30AM
<b>Forest Hills</b>	5:16AM	6 min	9 min	6 min	10 min	10 min w	12:28AM	5:16AM	10 min	9 min	11 min	11 min w	12:28AM	6:00AM	13 min	11 min	11 min	11 min w	12:28AM
<b>Green Line</b>																			
<b>B Boston College Park Street</b>	5:01AM 5:42AM	6 min 6 min	8 min 8 min	6 min 6 min	8 min 8 min	9 min 9 min w	12:10AM 12:52AM	4:45AM <sup>2</sup> 5:40AM	11 min 11 min	7 min 7 min	7 min 7 min	11 min w 11 min w	12:09AM 12:52AM	5:20AM <sup>2</sup> 6:12AM	12 min 12 min	9 min 9 min	7 min 7 min	10 min 10 min w	12:10AM 12:52AM
<b>C Cleveland Circle North Station</b>	5:01AM <sup>1</sup> 5:55AM	6 min 6 min	9 min 9 min	7 min 7 min	7 min 7 min	10 min 10 min w	12:10AM 12:46AM	4:50AM <sup>2</sup> 5:30AM	10 min 10 min	9 min 9 min	8 min 8 min	10 min w 10 min w	12:10AM 12:46AM	5:30AM <sup>2</sup> 6:06AM	12 min 12 min	11 min 11 min	9 min 9 min	12 min 12 min w	12:10AM 12:46AM
<b>D Riverside Government Ctr.</b>	4:56AM 5:41AM	6 min 6 min	8 min 8 min	6 min 6 min	8 min 8 min	11 min 11 min w	12:05AM 12:49AM	4:55AM 5:38AM	13 min 13 min	9 min 9 min	8 min 8 min	10 min w 10 min w	12:02AM 12:49AM	5:25AM 6:10AM	13 min 13 min	11 min 11 min	11 min 11 min	11 min 11 min w	12:05AM 12:49AM
<b>E Lechmere Heath Street</b>	5:01AM 5:38AM	6 min 6 min	8 min 8 min	6 min 6 min	9 min 9 min	9 min 9 min	12:30AM 12:47AM <sup>3</sup>	5:01AM 5:39AM	11 min 11 min	9 min 9 min	11 min 11 min	11 min 11 min	12:30AM <sup>3</sup> 12:47AM	5:35AM 6:15AM	12 min 12 min	12 min 12 min	12 min 12 min	12 min 12 min	12:30AM <sup>3</sup> 12:47AM
<b>Silver Line</b>																			
<b>SL1 Logan Airport South Station</b>	5:38AM 5:40AM	8 min 8 min	8 min 8 min	10 min 10 min	8 min 8 min	12 min 12 min	f 12:44AM 12:30AM	5:33AM 5:35AM	12 min 12 min	12 min 12 min	12 min 12 min	12 min f 12:30AM	12:45AM 12:30AM	5:50AM 6:12AM	12 min 12 min	8 min 8 min	8 min 8 min	8 min 8 min	12:45AM 12:30AM
<b>SL2 Design Center South Station</b>	6:03AM 5:45AM	5 min 5 min	10 min 10 min	5 min 5 min	9 min 9 min	15 min 15 min w	12:30AM 12:50AM	6:10AM 5:50AM	15 min 15 min	15 min 15 min	15 min 15 min	15 min w 15 min w	12:35AM 12:49AM	6:50AM 6:35AM	15 min 15 min	15 min 15 min	15 min 15 min	15 min 15 min w	12:34AM 12:48AM
<small>Additional Waterfront-only service</small> <b>Silver Line Way South Station</b>	5:28AM 5:35AM	5 min 5 min	<b>Use SL1/SL2</b>				12:53AM	5:28AM	<b>Use SL1/SL2</b>				12:26AM	6:05AM	<b>Use SL1/SL2</b>				1:01AM
<b>SL4 Dudley Station South Station</b>	5:20AM 5:35AM	12 min 12 min	16 min 16 min	14 min 14 min	12 min 12 min	19 min 19 min	12:20AM 12:39AM	5:23AM 5:40AM	15 min 15 min	15 min 15 min	20 min 20 min	12:20AM 12:40AM	6:02AM 6:20AM	15 min 15 min	15 min 15 min	15 min 15 min	20 min 20 min	12:20AM 12:40AM	
<b>SL5 Dudley Station Downtown Xing</b>	5:15AM 5:32AM	8 min 8 min	10 min 10 min	8 min 8 min	7 min 7 min	17 min 17 min w	12:53AM 1:07AM	5:19AM 5:34AM	10 min 10 min	10 min 10 min	11 min 11 min	11 min 11 min w	12:46AM 1:00AM	6:00AM 6:15AM	10 min 10 min	8 min 8 min	9 min 9 min	9 min 9 min w	12:25AM 12:47AM

**Schedule Periods (approximate):**  
AM Rush Hour: 6:30 AM - 9:00 AM  
Midday: 9:00 AM - 3:30 PM  
PM Rush Hour: 3:30 PM - 6:30 PM  
Evening: 6:30 PM - 8:00 PM  
Late Night: 8:00 PM - CLOSE

**Red Line Note:**  
\*Braintree Line:  
Construction on Wollaston Station will begin in January 2018. Wollaston Station will be closed during construction and shuttle buses will operate between Wollaston and North Quincy Stations. Please visit [mbta.com/alerts](http://mbta.com/alerts) for updated service information.

**Mattapan Note:**  
Saturday and Sunday before 10:00 AM and after 8:00 PM trips depart every 26 minutes and the rest of the day every 12 minutes. Also, see Mattapan Line Schedule Card.

**Green Line Notes:**  
1 - The first two C Line AM inbound trips run through to Lechmere Station on weekdays.  
2 - The first B Line and second C Line AM inbound trips run through to Lechmere Station on weekends.  
3 - The 12:32AM trip from Heath St is the last connecting train to other lines downtown. The 12:47AM trip from Heath St. runs in service to Lechmere with no guaranteed connections.

f - After exiting Ted Williams Tunnel bus will only service World Trade Center and South Station stops.

w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

**Winter 2018 Holidays**  
January 1: see Sunday  
January 15 & February 19: see Saturday  
Silver Line see Weekday



24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Route 9 (Boylston Street) at Elliot Street / Woodward Street																					
3168352	2/28/2012	3:10 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Clear	WOODWARD STREET / ELLIOT STREET	State police	223690.2968	896528.8123
3604387	9/20/2013	8:57 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	1	Single vehicle crash	V1: Travelling straight ahead	V1:W	V1:(Collision with pedestrian)	V1:(Passenger car)	P2:Pedestrian	Dry	Dark - lighted roadway	Clear	BOYLSTON STREET Rte 9 W	State police	223744.7813	896528.4999
3792037	4/5/2014	4:06 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:N / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Cloudy	ELLIOT STREET / BOYLSTON STREET Rte 9 E	Local police	223698.0157	896517.6875
3799770	5/2/2014	10:31 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Dark - lighted roadway	Clear	Rte 9 W	State police	223690.2968	896528.8123
3803001	5/11/2014	4:25 AM	NEWTON	Property damage only (none injured)	No injury	0	0	1	Single vehicle crash	V1: Travelling straight ahead	V1:E	V1:(Other)	V1:(Passenger car)		Dry	Dark - lighted roadway	Clear	BOYLSTON STREET Rte 9 W	State police	223744.7813	896528.4999
3820563	5/27/2014	9:51 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	1	Angle	V1: Travelling straight ahead	V1:E	V1:(Collision with cyclist (bicycle, tricycle, unicycle, pedal car))	V1:(Passenger car)	P4:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)	Wet	Dark - lighted roadway	Rain	Rte 9 E / ELLIOT STREET	State police	223744.7813	896528.4999
4046694	5/27/2015	10:20 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 W	State police	223737.2273	896539.6892
2735865	6/16/2011	8:28 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Dusk	Clear/Clear	BOYLSTON ST Rte 9 E / ELLIOT ST	Local police	223690.2968	896528.8123
2736912	6/24/2011	10:48 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Slowing or stopped in traffic / V2:Backing	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Wet	Daylight	Cloudy	BOYLSTON ST / WOODWARD ST	Local police	223690.2968	896528.8123
2954271	2/11/2012	3:50 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON ST Rte 9 E / ELLIOT ST	Local police	223744.7813	896528.4999
3351336	2/1/2013	4:27 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7812	896528.4999
2678781	1/3/2011	12:14 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:E / V2:E	V1:( ) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Wet	Daylight	Clear	BOYLSTON ST Rte 9 E / ELLIOT ST	Local police	223690.2968	896528.8123



24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Route 9 (Boylston Street) at Elliot Street / Woodward Street (Continued)																					
2680572	1/4/2011	7:11 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Cloudy	BOYLSTON STREET Rte 9 E / ELLIOT STREET	State police	223698.0157	896517.6875
2701186	2/17/2011	12:35 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E / ELLIOT STREET	State police	223698.0157	896517.6875
3041312	4/9/2012	3:45 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Cloudy	ELLIOT ST	Local police	223703.3436	896477.9999
3092343	5/8/2012	10:01 PM	NEWTON	Not Reported	Not reported	0	0	3	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:W / V2:W / V3:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car) V3:(Passenger car)		Dry	Dark - lighted roadway	Clear	BOYLSTON STREET Rte 9 W	State police	223690.2968	896528.8123
3297452	11/10/2012	6:01 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Dark - lighted roadway	Clear	Rte 9 W / WOODWARD STREET	State police	223690.2968	896528.8123
3298218	11/30/2012	8:30 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:W / V2:W	V1:(Collision with light pole or other post/support) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Single-unit truck (2-axle, 6-tire))		Dry	Daylight	Cloudy	BOYLSTON STREET Rte 9 W	State police	223690.2968	896528.8123
3381435	2/22/2012	8:26 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Turning left / V2:Travelling straight ahead	V1:S / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Clear	ELLIOT STREET / BOYLSTON STREET Rte 9 E	State police	223698.0157	896517.6875
3714396	1/8/2014	11:28 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Turning right	V1:S / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Not Reported	WOODWARD ST / BOYLSTON ST	Local police	223690.2968	896528.8123
3729661	1/18/2014	8:55 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Sideswipe, opposite direction	V1: Slowing or stopped in traffic / V2:Backing	V1:W / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Snow	Dark - lighted roadway	Snow	Rte 9 W / WOODWARD STREET	State police	223690.2968	896528.8123
3928731	8/13/2014	5:00 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Travelling straight ahead / V2:Turning right	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Wet	Daylight	Rain	BOYLSTON STREET Rte SR9 W / WOODWARD STREET	State police	223690.2968	896528.8123
3356145	2/11/2013	4:23 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:S / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Wet	Daylight	Rain	BOYLSTON ST / WOODWARD STREET	Local police	223690.2968	896528.8123

24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Route 9 (Boylston Street) at Elliot Street / Woodward Street (Continued)																					
3361271	2/14/2013	2:27 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	2	0	2	Angle	V1: Travelling straight ahead / V2:Turning right	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3376169	3/12/2013	10:55 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	2	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:W / V2:S	V1:(Collision with other movable object) V2:(Collision with other movable object)	V1:(Passenger car) V2:(Passenger car)		Wet	Dark - lighted roadway	Not Reported	Rte 9 W	State police	223690.2968	896528.8123
3377440	9/16/2011	9:43 AM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3963751	9/23/2014	10:35 AM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Angle	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:E / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Truck/trailer) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
4019185	3/4/2015	2:13 PM	NEWTON	Not Reported	Not reported	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Single-unit truck (2-axle, 6-tire))		Dry	Daylight	Clear/Clear	BOYLSTON STREET / ELLIOT STREET	Local police	223744.7813	896528.4999
4108520	10/31/2015	10:40 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Changing lanes	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Dark - lighted roadway	Clear	BOYLSTON STREET Rte SR9 W / WOODWARD STREET	State police	223690.2968	896528.8123
4108523	11/7/2015	9:30 AM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Cloudy	BOYLSTON STREET Rte SR9 W / WOODWARD STREET	State police	223690.2968	896528.8123
3377962	3/16/2013	10:27 PM	NEWTON	Not Reported	Not reported	0	0	1	Angle	V1: Parked	V1:U	V1:(Collision with motor vehicle in traffic)	V1:(Passenger car)		Dry	Dark - roadway not lighted	Clear	BOYLSTON ST	Local police	223694.0248	896516.8783
3607923	9/16/2013	2:55 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Not Reported	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3871541	6/15/2014	2:28 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Not Reported	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3991775	12/26/2014	5:20 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Dark - lighted roadway	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999

24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Route 9 (Boylston Street) at Elliot Street / Woodward Street (Continued)																					
3993325	12/23/2014	4:08 PM	NEWTON	Property damage only (none injured)	No injury	0	0	1	Single vehicle crash	V1: Travelling straight ahead	V1:S	V1:(Collision with fence)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	P2:Other non-motorist (wheelchair, etc.)	Wet	Dusk	Rain	ELLIOT ST	Local police	223702.5749	896501.089
4007851	1/26/2015	1:20 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	2	Sideswipe, same direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Reported but invalid)		Dry	Daylight	Cloudy	Rte 9	State police	223690.2968	896528.8123
4061780	6/17/2015	7:23 AM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Daylight	Cloudy	Rte 9 E	State police	223744.7812	896528.4999
4072414	7/2/2015	12:00 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Sideswipe, same direction	V1: Travelling straight ahead / V2:Changing lanes	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	BOYLSTON ST / WOODWARD ST	Local police	223690.2968	896528.8123
4082077	7/12/2015	5:18 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	1	Single vehicle crash	V1: Turning left	V1:E	V1:(Collision with pedestrian)	V1:(Passenger car)	P1:Pedestrian	Dry	Daylight	Clear	BOYLSTON ST / ELLIOT ST	Local police	223744.7813	896528.4999
2833668	12/10/2011	6:15 PM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:N / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Dark - lighted roadway	Clear	Rte 9 W / ELLIOT STREET	State police	223690.2968	896528.8123
3241484	7/17/2012	2:50 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3245036	8/19/2012	7:40 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	2	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:W / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Dusk	Clear	Rte 9 W / WOODWARD STREET	State police	223690.2968	896528.8123
3268372	9/29/2012	8:22 AM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	2	0	3	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Not reported	V1:E / V2:E / V3:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:()	V1:(Passenger car) V2:(Passenger car) V3:()		Dry	Daylight	Cloudy	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3430251	4/15/2013	9:48 AM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	2	Rear-end	V1: Entering traffic lane / V2:Entering traffic lane	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	/ BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3509790	6/9/2013	5:05 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:E / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9	State police	223744.7813	896528.4999

24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Route 9 (Boylston Street) at Elliot Street / Woodward Street (Continued)																					
3534478	7/4/2013	10:30 AM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	3	0	2	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:E / V2:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car)		Dry	Daylight	Clear	BOYLSTON STREET Rte 9 W	State police	223690.2968	896528.8123
3738781	2/11/2014	2:59 PM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Travelling straight ahead / V2:Turning left	V1:E / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	ELLIOT ST	Local police	223703.3436	896477.9999
3748552	2/12/2014	3:51 PM	NEWTON	Property damage only (none injured)	No injury	0	0	3	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:N / V2:N / V3:N	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car) V3:(Passenger car)		Dry	Daylight	Clear	ELLIOT ST	Local police	223703.3436	896477.9999
3781166	3/14/2014	6:52 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Entering traffic lane	V1:E / V2:E	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Not Reported	BOYLSTON STREET Rte 9 E	State police	223744.7813	896528.4999
3986062	12/2/2014	12:24 PM	NEWTON	Property damage only (none injured)	No injury	0	0	1	Single vehicle crash	V1: Turning right	V1:N	V1:(Collision with pedestrian)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)	P2:Other non-motorist (wheelchair, etc.)	Dry	Daylight	Cloudy	ELLIOT STREET / BOYLSTON STREET	Local police	223744.7813	896528.4999
4119011	11/27/2015	4:00 PM	NEWTON	Non-fatal injury	Non-fatal injury - Incapacitating	2	0	2	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:W / V2:W	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Dusk	Clear	BOYLSTON STREET Rte SR9 W / WOODWARD STREET	State police	223690.2968	896528.8123



24 - 26 Elliot Street, Newton, MA  
Crash Data

Crash Number	Crash Date	Crash Time	City/Town	Crash Severity	Maximum Injury Severity Reported	Number of NonFatal Injuries	Number of Fatal Injuries	Number of Vehicles	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Non Motorist Type	Road Surface	Ambient Light	Weather Condition	Roadway	Police Agency	X	Y
Elliot Street at Site Driveway																					
2954219	3/10/2012	7:27 PM	NEWTON	Not Reported	Not reported	0	0	2	Unknown	V1: Backing / V2:Parked	V1:U / V2:8	V1:(Collision with parked motor vehicle) V2:()	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Passenger car)		Dry	Dark - lighted roadway	Clear	ELLIOT ST	Local police	223672.4522	896433.8575
2808785	11/25/2011	11:32 AM	NEWTON	Non-fatal injury	Non-fatal injury - Possible	1	0	3	Head-on	V1: Travelling straight ahead / V2:Turning left / V3:Parked	V1:N / V2:S / V3:8	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	V1:(Passenger car) V2:(Passenger car) V3:(Single-unit truck (2-axle, 6-tire))		Dry	Daylight	Clear	ELLIOT STREET	Local police	223672.4522	896433.8575
2707035	3/11/2011	2:34 PM	NEWTON	Non-fatal injury	Non-fatal injury - Non-incapacitating	1	0	1	Single vehicle crash	V1: Entering traffic lane	V1:U	V1:(Collision with other fixed object (wall, building, tunnel, etc.))	V1:(Passenger car)		Dry	Daylight	Cloudy	ELLIOT ST	Local police	223676.8121	896440.1025
3118606	5/30/2012	8:55 AM	NEWTON	Property damage only (none injured)	No injury	0	0	1	Head-on	V1: Slowing or stopped in traffic	V1:S	V1:(Collision with other fixed object (wall, building, tunnel, etc.))	V1:(Passenger car)		Dry	Daylight	Cloudy	ELLIOT ST	Local police	223668.0924	896427.6128
3735989	1/30/2014	10:44 AM	NEWTON	Property damage only (none injured)	No injury	0	0	2	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:N / V2:S	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	V1:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires) V2:(Light truck(van, mini-van, panel, pickup, sport utility) with only four tires)		Dry	Daylight	Clear	ELLIOT ST	Local police	223672.4522	896433.8575
3968056	10/20/2014	11:55 AM	NEWTON	Not Reported	Not Applicable	0	0	1	Rear-to-rear	V1: Parked	V1:N	V1:(Collision with motor vehicle in traffic)	V1:(Passenger car)		Dry	Daylight	Clear	ELLIOT ST	Local police	223672.4522	896433.8575



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Newton COUNT DATE : 2018

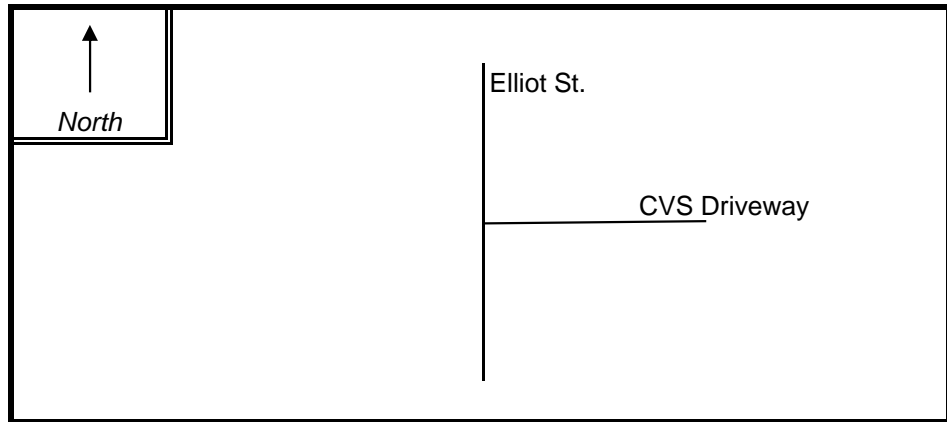
DISTRICT : 6 UNSIGNALIZED :  0.53 SIGNALIZED :  0.70

~ INTERSECTION DATA ~

MAJOR STREET : Elliot St.

MINOR STREET(S) : CVS Driveway

**INTERSECTION  
 DIAGRAM  
 (Label Approaches)**



**PEAK HOUR VOLUMES**

APPROACH :	1	2	3	4	5	<b>Total Peak Hourly Approach Volume</b>
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	405	335		5		<b>745</b>

" K " FACTOR :  INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

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

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

Comments : MassDOT Accident Data (2011-2015)

Project Title & Date: \_\_\_\_\_

## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Newton COUNTY DATE : 2018

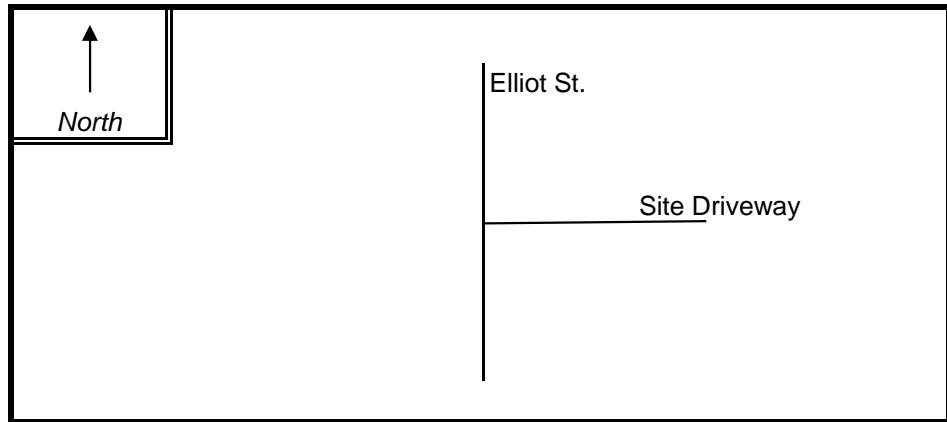
DISTRICT : 6 UNSIGNALIZED :  **x**  SIGNALIZED :   
0.53 0.70

~ INTERSECTION DATA ~

MAJOR STREET : Elliot St.

MINOR STREET(S) : Site Driveway

**INTERSECTION  
 DIAGRAM  
 (Label Approaches)**



**PEAK HOUR VOLUMES**

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	405	320		35		<b>760</b>

" K " FACTOR :  **0.090** INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :  **8,444**

TOTAL # OF CRASHES :  **6** # OF YEARS :  **5** AVERAGE # OF CRASHES PER YEAR ( A ) :  **1.20**

**CRASH RATE CALCULATION :**  **0.39** RATE =  $\frac{(A * 1,000,000)}{(V * 365)}$

Comments : MassDOT Accident Data (2011-2015)

Project Title & Date: \_\_\_\_\_



**Stopping Sight Distance and Intersection Sight Distance Calculator [v0.97]**  
 Based on 'A Policy on Geometric Design of Highways and Streets', AASHTO, 2004

Section I				Section III			
<b>Project Information</b>				<b>ISD and SSD Calculations</b> (rounded up to the next highest 5 feet) [sources: SSD - AASHTO, pp.110-117; ISD - AASHTO, pp. 650 - 664]			
Project Number:	14158.00	Analyst:	VHB	Cases are described in detail on subsequent pages. In summary... B1: left turn from minor road, from stop control B2: right turn from minor road, from stop control B3: crossing maneuver from minor road, from stop control, assuming left- and right turns are not permitted [otherwise, case B1 or B2 would supercede]			
City/Town, State:	Newton, Massachusetts	Client:					
Location:	24-26 Elliot Street						
<b>Street Names and Directions</b>		<b>Street Notes</b>					
Major Street name:	Elliot Street	NB/SB					
Minor Street name:	24-26 Elliot St Dwy	EB/WB					
Minor Street intersects from the:	east						
The minor street <i>predominantly</i> serves...	Passenger Cars						
Sight distance location intersection is...	Existing						
Total number of lanes on Major Street is...	2						
<b>Grade Information</b> [enter down slope as a negative number]							
Major Street Approach Grade:	0.00%	NB					
	0.00%	SB					
Minor Street Approach Grade:	0.00%	SB					
	0.00%	NB					
<b>Major Street Speed Information</b>							
	<i>Posted</i>		<i>Observed *</i>				
	-	NB	34				
	-	SB	33				
				* note: off-peak 85th percentile speeds			
<b>Desirable Calculated...</b>				<b>Condition Met?</b>			
... ISD, case B1:	375			Yes			
... ISD, case B2:	325			No			
... ISD, case B3:	325			Yes			
				[note: if number of lanes crossed exceeds 6, or if grades are steep, consult the manual]			
<b>Minimum Calculated ...</b>				<b>Condition Met?</b>			
... ISD, case B1:	240			Yes			
... ISD, case B2:	240			No			
... ISD, case B3:	240			Yes			
				[note: minimum ISD is equal to required SSD]			
<b>Calculated ...</b>				<b>Condition Met?</b>			
... SSD:	240	traveling NB		Yes			
	230	traveling SB		No			
<b>Section II</b>				<b>Section IV</b>			
<b>ISD and SSD Observations</b>				<b>AASHTO Guidance</b>			
Instructions on how to observe and measure ISD and SSD are included on subsequent pages.				Refer to AASHTO for specific guidance on SSD and ISD if presented with an unusual/atypical case.			
ISD - Intersection sight distance is the distance that is based on the time required for perception, reaction and completion of the desired critical exiting maneuver [typically, a left turn] once the driver on a minor street approach [or a site drive] decides to execute the maneuver. Calculation for the critical ISD includes the time to [1] turn left, and to clear the near half of the intersection without conflicting with the vehicles approaching from the left; and [2] upon turning left, to accelerate to the operating speed on the roadway without causing approaching vehicles on the main road to unduly reduce their speed. In this context, ISD can be considered as a <i>desirable</i> visibility criterion for the safe operation of an unsignalized intersection.				Adequate ISD is not needed at signalized intersections, assuming traffic signal heads are visible on all approaches. Any object that would obstruct the driver's view should be removed or lowered, if practical. Such objects include buildings, parked cars, highway structures, hedges/vegetation/trees/bushes/unmowed lawn, walls, fences, and terrain.			
SSD - Stopping sight distance is the distance required for a vehicle approaching an intersection from either direction to perceive, react, and come to a complete stop before colliding with the exiting vehicle from a driveway. In this respect, SSD can be considered as the <i>minimum</i> visibility criterion for the safe operation of an unsignalized intersection.				For ISD, an object should be considered an obstruction if it obstructs the vision of a driver whose eye height is 3.5 feet above the roadway surface and the object to be seen is 3.5 feet above the surface of the intersecting road.			
				Where horizontal sight restrictions occur on downgrades, particularly at the ends of long downgrades, it is desirable to provide SSD that exceeds those values indicated above (refer to page 114 of AASHTO).			
<b>Observed ISD:</b>		400	looking left [south]	<b>Limiting Factors:</b>			
(rounded to nearest 5 feet)		210	looking right [north]	horizontal curve			
				vertical curve			
<b>Observed SSD:</b>		400	traveling NB	horizontal curve			
(rounded to nearest 5 feet)		200	traveling SB	vertical curve			



**ITE TRIP GENERATION WORKSHEET**  
 (10th Edition, Updated 2017)

**\*EXISTING RESTAURANT (FULL OCCUPANCY)\***

**LANDUSE:** High-Turnover (Sit-Down) Restaurant  
**LANDUSE CODE:** 932 Independent Variable --- Seats  
**SETTING/LOCATION:** General Urban/Suburban  
**JOB NAME:** Number of Seats: 102  
**JOB NUMBER:**

**WEEKDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	1	--	4.37	4.37	4.37	148	148	148	50%	50%
AM PEAK OF GENERATOR	7	--	0.59	0.18	1.70	167	65	250	60%	40%
PM PEAK OF GENERATOR	12	--	0.73	0.37	2.09	144	65	250	52%	48%
AM PEAK (ADJACENT ST)	9	--	0.48	0.30	0.76	155	110	195	52%	48%
PM PEAK (ADJACENT ST)	16	--	0.42	0.16	1.73	142	60	250	57%	43%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	446	223	223	N/A	N/A	N/A
AM PEAK (ADJACENT ST)	49	25	24	N/A	N/A	N/A
PM PEAK (ADJACENT ST)	43	24	18	N/A	N/A	N/A

**SATURDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	1	--	5.60	5.60	5.60	148	148	148	50%	50%
PEAK OF GENERATOR	8	--	0.53	0.16	1.88	112	60	150	53%	47%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	571	286	286	N/A	N/A	N/A
PEAK OF GENERATOR	54	29	25	N/A	N/A	N/A

**SUNDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	1	--	3.87	3.87	3.87	148	148	148	50%	50%
PEAK OF GENERATOR	2	--	0.63	0.32	1.08	124	100	150	55%	45%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	395	197	197	N/A	N/A	N/A
PEAK OF GENERATOR	64	35	29	N/A	N/A	N/A



**ITE TRIP GENERATION WORKSHEET**

(10th Edition, Updated 2017)

**\*EXISTING SPA\***

**LANDUSE:** Hair Salon  
**LANDUSE CODE:** 918  
**SETTING/LOCATION:** General Urban/Suburban  
**JOB NAME:**  
**JOB NUMBER:**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

**FLOOR AREA (KSF):** 5.1

**WEEKDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
AM PEAK OF GENERATOR	1	--	1.21	1.21	1.21	4	4	4	N/A	N/A
PM PEAK OF GENERATOR	1	--	1.94	1.94	1.94	4	4	4	38%	62%
AM PEAK (ADJACENT ST)	1	--	1.21	1.21	1.21	4	4	4	N/A	N/A
PM PEAK (ADJACENT ST)	1	--	1.45	1.45	1.45	4	4	4	17%	83%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	N/A	N/A	N/A	N/A	N/A	N/A
AM PEAK (ADJACENT ST)	6	3	3	N/A	N/A	N/A
PM PEAK (ADJACENT ST)	7	1	6	N/A	N/A	N/A

**SATURDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	1	--	5.08	5.08	5.08	4	4	4	36%	64%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	N/A	N/A	N/A	N/A	N/A	N/A
PEAK OF GENERATOR	26	9	17	N/A	N/A	N/A

**SUNDAY**

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	N/A	N/A	N/A	N/A	N/A	N/A
PEAK OF GENERATOR	N/A	N/A	N/A	N/A	N/A	N/A

**ITE TRIP GENERATION WORKSHEET**  
 (10th Edition, Updated 2017)

**\*PROPOSED RETAIL\***

**LANDUSE:** Shopping Center  
**LANDUSE CODE:** 820  
**SETTING/LOCATION:** General Urban/Suburban  
**JOB NAME:**  
**JOB NUMBER:**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

**FLOOR AREA (KSF):** 3.42

**WEEKDAY**

RATES:	# Studies	R <sup>2</sup>	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	147	0.76	37.75	7.42	207.98	453	9	1,510	50%	50%
AM PEAK OF GENERATOR	47	0.71	3.00	0.70	23.74	323	8	1,320	54%	46%
PM PEAK OF GENERATOR	53	0.76	4.21	0.78	27.27	298	7	1,320	50%	50%
AM PEAK (ADJACENT ST)	84	0.90	0.94	0.18	23.74	351	9	1,510	62%	38%
PM PEAK (ADJACENT ST)	261	0.82	3.81	0.74	18.69	327	2	2,200	48%	52%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	129	65	65	606	303	303
AM PEAK (ADJACENT ST)	3	2	1	153	95	58
PM PEAK (ADJACENT ST)	13	6	7	45	21	23

**SATURDAY**

RATES:	# Studies	R <sup>2</sup>	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	58	0.71	46.12	13.07	167.89	602	56	1,510	50%	50%
PEAK OF GENERATOR	119	0.87	4.50	1.42	15.10	416	4	1,510	52%	48%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	158	79	79	1,099	550	550
PEAK OF GENERATOR	15	8	7	43	22	21

**SUNDAY**

RATES:	# Studies	R <sup>2</sup>	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	30	--	21.10	4.15	148.15	509	47	1,510	50%	50%
PEAK OF GENERATOR	24	--	2.79	0.39	12.40	382	47	1,268	49%	51%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	72	36	36	N/A	N/A	N/A
PEAK OF GENERATOR	10	5	5	N/A	N/A	N/A

**Central Avenue Compassionate Care**

**31 Central Avenue**

**City, State: Ayer, MA**

**PDI File# : 165422 A**

**Client: VHB/ V. Kalikiri**

**Site Code: 13678.00**

<b>Trip Gens</b>	<b>Left Front</b>	
<b>Fri 12/16/16</b>	<b>Enter</b>	<b>Exit</b>
4:00 PM	0	4
4:15 PM	3	3
4:30 PM	1	2
4:45 PM	5	4
5:00 PM	1	2
5:15 PM	2	5
5:30 PM	2	1
5:45 PM	0	1

<b>Trip Gens</b>	<b>Left Front</b>	
<b>Sat 12/17/16</b>	<b>Enter</b>	<b>Exit</b>
11:30 AM	0	0
11:45 AM	0	0
12:00 PM	0	0
12:15 PM	2	1
12:30 PM	1	0
12:45 PM	0	0
1:00 PM	1	1
1:15 PM	1	0

**Ermont Inc.**

**216 Ricciuti Avenue**

**City, State: Quincy, MA**

**PDI File# : 165422 B**

**Client: VHB/ V. Kalikiri**

**Site Code: 13678.00**

**Trip Gens**

<b>Fri 12/16/16</b>	<b>Enter</b>	<b>Exit</b>
4:00 PM	5	4
4:15 PM	2	6
4:30 PM	6	5
4:45 PM	2	2
5:00 PM	4	5
5:15 PM	3	3
5:30 PM	2	3
5:45 PM	0	2

**Trip Gens**

<b>Sat 12/17/16</b>	<b>Enter</b>	<b>Exit</b>
11:30 AM	2	2
11:45 AM	3	2
12:00 PM	0	3
12:15 PM	4	2
12:30 PM	2	2
12:45 PM	7	5
1:00 PM	3	4
1:15 PM	2	2

In Good Health  
1200 West Chestnut Street  
City, State: Brockton, MA  
PDI File# : 165422 C  
Client: VHB/ V. Kalikiri  
Site Code: 13678.00

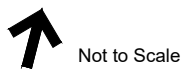
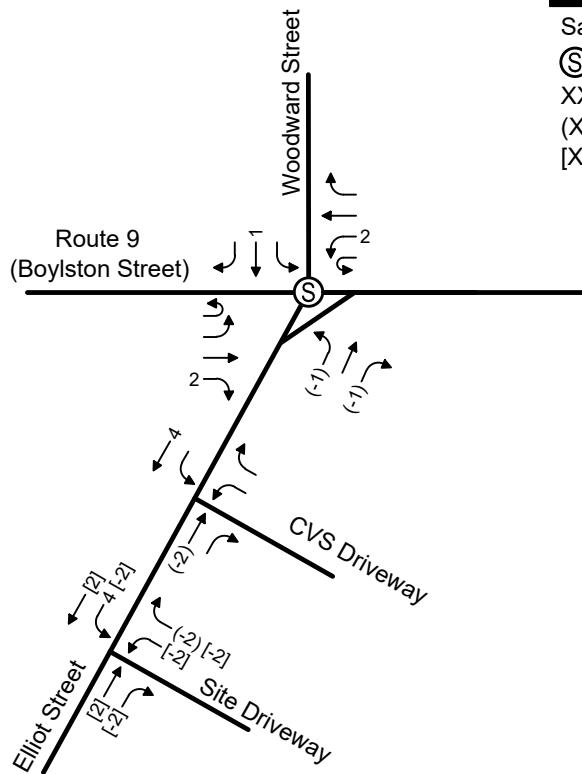
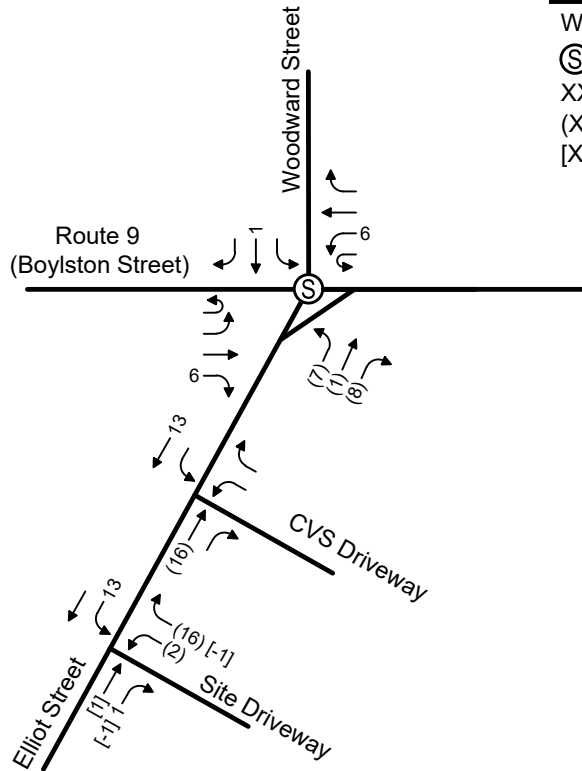
Trip Gens \*\* Entrance to site is in rear of building and is fenced and gated off on bth sides of the building. Vehicles Enter on Right side of building and exit on the left side of building

Fri 12/16/16	Enter	Exit
4:00 PM	4	6
4:15 PM	9	9
4:30 PM	4	6
4:45 PM	5	5
5:00 PM	8	5
5:15 PM	6	6
5:30 PM	3	6
5:45 PM	5	3

Sun 12/18/16	Enter	Exit
11:30 AM	8	8
11:45 AM	5	10
12:00 PM	9	6
12:15 PM	6	5
12:30 PM	7	6
12:45 PM	10	7
1:00 PM	3	5
1:15 PM	6	7

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## Site-Generated Traffic Volume Networks



Site-Generated Trips  
 24-26 Elliot Street  
 Newton, Massachusetts





Elliot Street Proposed Dispensary  
 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)

2018 Existing Conditions  
 Timing Plan: Weekday Evening



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	2010	25	210	2180	40	45	110	295	215	155	55
Future Volume (vph)	50	2010	25	210	2180	40	45	110	295	215	155	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3565	0	1787	3562	0	1770	1863	1583	1787	1808	0
Flt Permitted	0.049			0.046			0.259			0.665		
Satd. Flow (perm)	92	3565	0	87	3562	0	482	1863	1550	1241	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			1				319		8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	1		3	3		1			4	4		
Peak Hour Factor	0.89	0.89	0.89	0.98	0.98	0.98	0.76	0.76	0.76	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	2286	0	214	2265	0	59	145	388	242	236	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9		8	
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	90.3	80.6		106.0	93.3		26.2	27.4	22.2	22.2	22.2	
Actuated g/C Ratio	0.62	0.55		0.72	0.64		0.18	0.19	0.15	0.15	0.15	
v/c Ratio	0.36	1.17		0.78	1.00		0.48	0.42	0.77	1.29	0.84	
Control Delay	22.9	111.7		59.6	45.8		65.9	55.6	23.6	212.8	84.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	22.9	111.7		59.6	45.8		65.9	55.6	23.6	212.8	84.3	
LOS	C	F		E	D		E	E	C	F	F	
Approach Delay		109.5			47.0			35.7			149.3	
Approach LOS		F			D			D			F	
Queue Length 50th (ft)	12	-1296		136	1000		53	125	57	-280	207	
Queue Length 95th (ft)	60	#1900		#340	#1800		74	157	102	#566	#448	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	297	1962		296	2267		122	348	505	187	280	
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	0.19	1.17		0.72	1.00		0.48	0.42	0.77	1.29	0.84	

Intersection Summary

Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 146.5  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.29  
 Intersection Signal Delay: 79.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 109.3%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	0	5	395	10	15	320
Future Vol, veh/h	0	5	395	10	15	320
Conflicting Peds, #/hr	0	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	79	79	86	86
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	13	500	13	17	372
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	914	508	0	0	514	0
Stage 1	507	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	306	569	-	-	1057	-
Stage 1	609	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	300	568	-	-	1056	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.5	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	568	1056	-	
HCM Lane V/C Ratio	-	-	0.023	0.017	-	
HCM Control Delay (s)	-	-	11.5	8.5	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	25	10	395	10	20	300
Future Vol, veh/h	25	10	395	10	20	300
Conflicting Peds, #/hr	3	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	79	79	86	86
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	34	14	500	13	23	349
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	907	509	0	0	516	0
Stage 1	509	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	309	568	-	-	1055	-
Stage 1	608	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	299	566	-	-	1055	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	606	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.1	0		0.5		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	346	1055	-	
HCM Lane V/C Ratio	-	-	0.139	0.022	-	
HCM Control Delay (s)	-	-	17.1	8.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

Elliot Street Proposed Dispensary  
 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)

2018 Existing Conditions  
 Timing Plan: Saturday MIDDAY



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	1420	25	205	2070	85	60	95	190	90	85	65
Future Volume (vph)	125	1420	25	205	2070	85	60	95	190	90	85	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3562	0	1787	3547	0	1752	1845	1568	1787	1759	0
Flt Permitted	0.050			0.055			0.414			0.690		
Satd. Flow (perm)	94	3562	0	103	3547	0	764	1845	1520	1277	1759	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			3				209		18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	3		2	2		3			8	8		
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.91	0.91	0.91	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	1606	0	216	2268	0	66	104	209	97	161	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9		8	
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	93.5	79.7		103.3	84.9		19.1	20.2	15.3	15.3	15.3	
Actuated g/C Ratio	0.68	0.58		0.75	0.61		0.14	0.15	0.11	0.11	0.11	
v/c Ratio	0.63	0.78		0.73	1.04		0.50	0.39	0.59	0.69	0.77	
Control Delay	46.4	28.4		49.8	58.0		65.6	56.2	15.0	86.5	78.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	46.4	28.4		49.8	58.0		65.6	56.2	15.0	86.5	78.1	
LOS	D	C		D	E		E	E	B	F	E	
Approach Delay		29.8			57.3			35.1				81.3
Approach LOS		C			E			D				F
Queue Length 50th (ft)	65	527		116	960		57	87	0	83	124	
Queue Length 95th (ft)	175	#1103		#332	#1915		97	142	83	176	245	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	317	2096		325	2179		172	364	421	206	299	
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	0.77		0.66	1.04		0.38	0.29	0.50	0.47	0.54	

Intersection Summary

Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 138.2  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 47.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 104.5%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	290	15	20	245
Future Vol, veh/h	0	0	290	15	20	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	319	16	22	269
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	640	327	0	0	335	0
Stage 1	327	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	440	714	-	-	1224	-
Stage 1	731	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	431	714	-	-	1224	-
Mov Cap-2 Maneuver	431	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1224	-	
HCM Lane V/C Ratio	-	-	-	0.018	-	
HCM Control Delay (s)	-	-	0	8	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0.1	-	

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	40	10	295	5	25	220
Future Vol, veh/h	40	10	295	5	25	220
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	91	91	91	91
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	45	11	324	5	27	242
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	628	327	0	0	330	0
Stage 1	327	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	450	719	-	-	1229	-
Stage 1	735	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	437	719	-	-	1229	-
Mov Cap-2 Maneuver	437	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.6	0		0.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	474	1229	-	
HCM Lane V/C Ratio	-	-	0.12	0.022	-	
HCM Control Delay (s)	-	-	13.6	8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

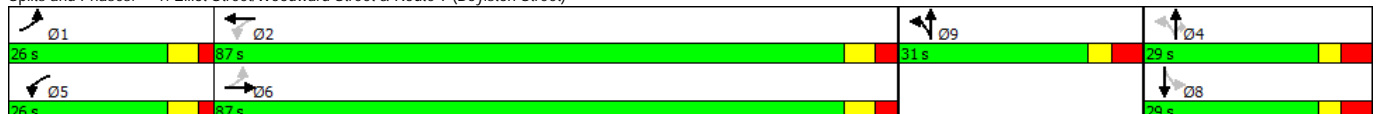


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	50	2080	35	225	2255	40	50	115	310	225	160	55
Future Volume (vph)	50	2080	35	225	2255	40	50	115	310	225	160	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3565	0	1787	3562	0	1770	1863	1583	1787	1810	0
Flt Permitted	0.049			0.046			0.256			0.677		
Satd. Flow (perm)	92	3565	0	87	3562	0	477	1863	1550	1263	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			1				321			8
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	1		3	3		1			4	4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	2299	0	245	2494	0	54	125	337	245	234	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9	8		
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	90.1	80.5		107.7	94.9		26.2	27.4	22.1	22.1	22.1	
Actuated g/C Ratio	0.61	0.54		0.73	0.64		0.18	0.18	0.15	0.15	0.15	
v/c Ratio	0.35	1.19		0.84	1.09		0.45	0.36	0.67	1.30	0.84	
Control Delay	22.0	121.6		66.6	76.7		64.5	54.7	14.8	216.9	85.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	22.0	121.6		66.6	76.7		64.5	54.7	14.8	216.9	85.1	
LOS	C	F		E	E		E	D	B	F	F	
Approach Delay		119.3			75.8			29.7			152.5	
Approach LOS		F			E			C			F	
Queue Length 50th (ft)	11	~1310		168	~1354		48	106	13	~282	205	
Queue Length 95th (ft)	57	#1948		#421	#2073		82	165	130	#577	#453	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	293	1936		293	2281		120	344	504	188	277	
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	0.18	1.19		0.84	1.09		0.45	0.36	0.67	1.30	0.84	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 148.2  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.30  
 Intersection Signal Delay: 94.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 112.7%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

**Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)**





Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	5	420	10	15	350
Future Vol, veh/h	0	5	420	10	15	350
Conflicting Peds, #/hr	0	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	5	457	11	16	380
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	876	464	0	0	468	0
Stage 1	463	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	322	602	-	-	1099	-
Stage 1	638	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	316	601	-	-	1098	-
Mov Cap-2 Maneuver	316	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	601	1098	-	
HCM Lane V/C Ratio	-	-	0.009	0.015	-	
HCM Control Delay (s)	-	-	11	8.3	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	30	25	405	15	40	310
Future Vol, veh/h	30	25	405	15	40	310
Conflicting Peds, #/hr	3	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	33	27	440	16	43	337
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	878	451	0	0	460	0
Stage 1	451	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	321	613	-	-	1106	-
Stage 1	646	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	304	611	-	-	1106	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.8	0	1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	394	1106	-	
HCM Lane V/C Ratio	-	-	0.152	0.039	-	
HCM Control Delay (s)	-	-	15.8	8.4	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

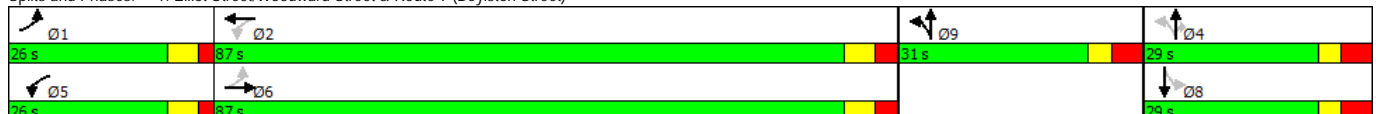


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	130	1470	35	220	2145	90	70	100	205	95	90	65
Future Volume (vph)	130	1470	35	220	2145	90	70	100	205	95	90	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3561	0	1787	3547	0	1752	1845	1568	1787	1763	0
Flt Permitted	0.050			0.047			0.403			0.687		
Satd. Flow (perm)	94	3561	0	88	3547	0	743	1845	1520	1271	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			3				223		17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	3		2	2		3			8	8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	1636	0	239	2430	0	76	109	223	103	169	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9		8	
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	93.4	79.4		105.0	86.1		20.9	22.0	17.0	17.0	17.0	
Actuated g/C Ratio	0.66	0.56		0.74	0.61		0.15	0.16	0.12	0.12	0.12	
v/c Ratio	0.65	0.82		0.79	1.12		0.55	0.38	0.59	0.68	0.75	
Control Delay	48.6	31.2		60.2	90.2		68.5	55.8	14.1	84.2	75.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.6	31.2		60.2	90.2		68.5	55.8	14.1	84.2	75.8	
LOS	D	C		E	F		E	E	B	F	E	
Approach Delay		32.6			87.5			35.4			79.0	
Approach LOS		C			F			D			E	
Queue Length 50th (ft)	69	573		153	-1283		67	92	0	89	132	
Queue Length 95th (ft)	179	#1140		#413	#2111		108	146	88	186	#261	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	309	2043		308	2161		165	357	427	200	292	
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	0.46	0.80		0.78	1.12		0.46	0.31	0.52	0.52	0.58	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 141.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 63.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 107.2%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

**Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)**



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	👉		👈			👈
Traffic Vol, veh/h	0	0	315	15	20	275
Future Vol, veh/h	0	0	315	15	20	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	342	16	22	299

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	693	351	0	0	359
Stage 1	351	-	-	-	-
Stage 2	342	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	409	692	-	-	1200
Stage 1	713	-	-	-	-
Stage 2	719	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	400	692	-	-	1200
Mov Cap-2 Maneuver	400	-	-	-	-
Stage 1	713	-	-	-	-
Stage 2	703	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1200	-
HCM Lane V/C Ratio	-	-	-	0.018	-
HCM Control Delay (s)	-	-	0	8.1	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	45	30	300	10	50	225
Future Vol, veh/h	45	30	300	10	50	225
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	49	33	326	11	54	245
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	689	332	0	0	337	0
Stage 1	332	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	415	714	-	-	1222	-
Stage 1	731	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	392	714	-	-	1222	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.1	0	1.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	478	1222	-	
HCM Lane V/C Ratio	-	-	0.171	0.044	-	
HCM Control Delay (s)	-	-	14.1	8.1	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-	

Elliot Street Proposed Dispensary  
 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)

2025 Build Conditions  
 Timing Plan: Weekday Evening



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	2080	40	230	2255	40	55	115	320	225	160	55
Future Volume (vph)	50	2080	40	230	2255	40	55	115	320	225	160	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3561	0	1787	3562	0	1770	1863	1583	1787	1810	0
Flt Permitted	0.049			0.046			0.256			0.677		
Satd. Flow (perm)	92	3561	0	87	3562	0	477	1863	1550	1263	1810	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			1				332		8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	1		3	3		1			4	4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	2304	0	250	2494	0	60	125	348	245	234	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9		8	
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	90.1	80.5		107.7	94.9		26.2	27.4	22.1	22.1	22.1	
Actuated g/C Ratio	0.61	0.54		0.73	0.64		0.18	0.18	0.15	0.15	0.15	
v/c Ratio	0.35	1.19		0.85	1.09		0.50	0.36	0.68	1.30	0.84	
Control Delay	22.0	123.2		68.9	76.7		67.3	54.7	14.8	216.9	85.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	22.0	123.2		68.9	76.7		67.3	54.7	14.8	216.9	85.1	
LOS	C	F		E	E		E	D	B	F	F	
Approach Delay		120.9			76.0			30.1			152.5	
Approach LOS		F			E			C			F	
Queue Length 50th (ft)	11	~1316		173	~1354		54	106	13	~282	205	
Queue Length 95th (ft)	57	#1955		#435	#2073		89	165	131	#577	#453	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	293	1934		293	2281		120	344	513	188	277	
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	0.18	1.19		0.85	1.09		0.50	0.36	0.68	1.30	0.84	

Intersection Summary

Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 148.2  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.30  
 Intersection Signal Delay: 95.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 113.1%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	0	5	435	10	15	365
Traffic Vol, veh/h	0	5	435	10	15	365
Future Vol, veh/h	0	1	0	1	1	0
Conflicting Peds, #/hr	0	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	5	473	11	16	397
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	908	480	0	0	485	0
Stage 1	479	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	308	590	-	-	1083	-
Stage 1	627	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	302	589	-	-	1082	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.2	0		0.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	589	1082	-	
HCM Lane V/C Ratio	-	-	0.009	0.015	-	
HCM Control Delay (s)	-	-	11.2	8.4	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	



Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	30	40	405	15	55	310
Future Vol, veh/h	30	40	405	15	55	310
Conflicting Peds, #/hr	3	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	33	43	440	16	60	337
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	911	451	0	0	460	0
Stage 1	451	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	307	613	-	-	1106	-
Stage 1	646	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	285	611	-	-	1106	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.8	0		1.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	410	1106	-	
HCM Lane V/C Ratio	-	-	0.186	0.054	-	
HCM Control Delay (s)	-	-	15.8	8.4	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-	

Elliot Street Proposed Dispensary  
 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)

2025 Build Conditions  
 Timing Plan: Saturday Midday



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1470	35	220	2145	90	70	100	205	95	90	65
Future Volume (vph)	130	1470	35	220	2145	90	70	100	205	95	90	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	310		0	50		100	140		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3561	0	1787	3547	0	1752	1845	1568	1787	1763	0
Flt Permitted	0.050			0.047			0.407			0.687		
Satd. Flow (perm)	94	3561	0	88	3547	0	751	1845	1520	1271	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			3				223		17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			1134			189			314	
Travel Time (s)		19.8			25.8			4.3			7.1	
Confl. Peds. (#/hr)	3		2	2		3			8	8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	1636	0	239	2430	0	76	109	223	103	169	0
Turn Type	pm+pt	NA		pm+pt	NA		custom	NA	custom	Perm	NA	
Protected Phases	1	6		5	2		9	4	9		8	
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	8.0	20.0		8.0	20.0		24.0		8.0	8.0	8.0	
Minimum Split (s)	14.0	27.0		14.0	27.0		31.0		15.0	15.0	15.0	
Total Split (s)	26.0	87.0		26.0	87.0		31.0		29.0	29.0	29.0	
Total Split (%)	15.0%	50.3%		15.0%	50.3%		17.9%		16.8%	16.8%	16.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0	3.0		2.0	3.0		4.0		4.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0		7.0		7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None		None	None	None	
Act Effct Green (s)	93.5	79.4		105.0	86.1		21.2	22.3	17.3	17.3	17.3	
Actuated g/C Ratio	0.66	0.56		0.74	0.61		0.15	0.16	0.12	0.12	0.12	
v/c Ratio	0.65	0.82		0.80	1.13		0.54	0.38	0.59	0.67	0.74	
Control Delay	48.6	31.4		60.6	91.5		67.7	55.6	14.0	83.0	74.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.6	31.4		60.6	91.5		67.7	55.6	14.0	83.0	74.7	
LOS	D	C		E	F		E	E	B	F	E	
Approach Delay		32.7			88.7			35.1			77.8	
Approach LOS		C			F			D			E	
Queue Length 50th (ft)	70	582		155	~1298		67	92	0	89	132	
Queue Length 95th (ft)	179	#1140		#413	#2111		108	146	88	186	#261	
Internal Link Dist (ft)		793			1054			109			234	
Turn Bay Length (ft)	220			310			50		100	140		
Base Capacity (vph)	309	2039		308	2156		166	356	426	200	291	
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	0.46	0.80		0.78	1.13		0.46	0.31	0.52	0.52	0.58	

**Intersection Summary**  
 Area Type: Other  
 Cycle Length: 173  
 Actuated Cycle Length: 141.7  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 64.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 107.2%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Elliot Street/Woodward Street & Route 9 (Boylston Street)



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	315	15	20	280
Future Vol, veh/h	0	0	315	15	20	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	342	16	22	304
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	699	351	0	0	359	0
Stage 1	351	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	406	692	-	-	1200	-
Stage 1	713	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	397	692	-	-	1200	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1200	-	
HCM Lane V/C Ratio	-	-	-	0.018	-	
HCM Control Delay (s)	-	-	0	8.1	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	45	25	305	10	50	230
Future Vol, veh/h	45	25	305	10	50	230
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	49	27	332	11	54	250
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	700	337	0	0	342	0
Stage 1	337	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	409	710	-	-	1217	-
Stage 1	728	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	386	710	-	-	1217	-
Mov Cap-2 Maneuver	386	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.3	0		1.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	461	1217	-	
HCM Lane V/C Ratio	-	-	0.165	0.045	-	
HCM Control Delay (s)	-	-	14.3	8.1	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-	