

McLean Hospital - Zone 4: Child and Adolescent Campus

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Belmont, Massachusetts

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February 4, 2025

Table of Contents

1	Executive Summary	vi
2	Introduction	8
	Project Description	8
	Residence Building	9
	School Building	9
	Parking Garage	9
	Study Methodology	9
3	Existing Conditions	12
	Study Area	12
	Roadway Geometry	12
	Roadways	12
	Intersections	15
	Pedestrian and Bicycle Facilities	15
	Traffic Volumes	17
	Public Transportation Facilities	19
	Crash History	19
4	Future Conditions	21
	Background Traffic Growth	21
	Historic Traffic Growth	21
	Site-specific Growth	22
	Planned Roadway Improvements	22
	Project-Generated Traffic Volumes	24
	Trip Generation	24
	Trip Distribution	25
	Site Access and Parking	30
	Site Access	30
	Parking	31
5	Traffic Operation Analysis	33
	Level-of-Service Criteria	33
	Intersection Capacity Analysis	34
6	Improvement Measures	36

Operational Enhancements.....	36
2024 TMMA - Traffic Monitoring and Mitigation Agreement	37
Signal Warrants Analysis: Pleasant Street at Olmsted Drive	37
Data Collection.....	37
Preliminary Signal Warrant Evaluation.....	37
Warrant Analysis Findings.....	38
7 Conclusions	40

List of Tables

Table No.	Description	Page
Table 1	48-Hour ATR Traffic Volumes	17
Table 2	2016-2021 Vehicle Crash Summary.....	20
Table 3	Proposed Program Operations Specifications.....	24
Table 4	Trip Generation Summary	25
Table 5	Trip Distribution Summary	26
Table 6	Level-of-Service Criteria	34
Table 7	Signalized Intersection Operations Analysis.....	35
Table 8	Unsignalized Intersection Operations Analysis.....	35
Table 9	Volume-Based Warrants: Olmsted Drive at Pleasant Street	39

List of Figures

Figure No.	Description	Page
Figure 1	Site Location and Study Area	11
Figure 2	Traffic Control and Lane Usage	14
Figure 3	Existing Pedestrian Facilities	16
Figure 4	2024 Existing Conditions Weekday Peak Hour Traffic Volumes.....	18
Figure 5	2031 No-Build Conditions Weekday Peak Hour Traffic Volumes.....	23
Figure 6	Trip Distribution Map	27
Figure 7	Site Generated Weekday Peak Hour Traffic Volumes.....	28
Figure 8	2031 Build Conditions Weekday Peak Hour Traffic Volumes.....	29



Executive Summary

On behalf of McLean Hospital (the “Proponent”), VHB has prepared this Transportation Impact Assessment (TIA) to evaluate the impacts of the proposed Zone 4 development of the Child and Adolescent Campus (CAC) facility and supporting parking (the “Project”) in Belmont, Massachusetts.

The CAC facility will consist of two new buildings (one 60,000 square feet [sf] building and one 29,500 sf building) that will house program and support space for the Arlington School, Pathways Academy, and McLean’s Residential/Partial Hospital Program. These programs are being relocated from their existing locations in Zone 5 and from an offsite location in Arlington, Massachusetts. In addition to the two new buildings, a 226-space parking garage and an adjacent 44-space surface parking lot will also be constructed to support the parking needs of the CAC.

Access to the Project will be provided by driveway connections along and extension of Olmsted Drive. The primary point of access and egress to the surrounding roadway network will be provided by the unsignalized intersection of Pleasant Street at Olmsted Drive.

The scope of the TIA was reviewed and approved by the Town of Belmont Planning Department staff and in accordance with the Massachusetts Department of Transportation (MassDOT) guidelines for the preparation of Transportation Impact Assessments. The scope of the Study is also consistent with that of the previously approved McLean District Zone 3 Residential development traffic study filed in April 2021¹ by others. Some of the information contained in this report will serve as a baseline comparison framework for the traffic requirements outlined in the June 26, 2024 Traffic Monitoring and Mitigation Agreement (TMMA).

Specifically, the TIA includes an assessment of existing traffic conditions in the study area including new traffic counts conducted in November 2024; the development of future traffic conditions traffic estimates with and without the Project; quantification of Project-related impacts, and a preliminary traffic signal warrant analysis to determine if the estimated traffic

¹ Transportation Impact Assessment, McLean Zone 3 Residential Development, dated April 2021 and prepared by VAI

volumes for Zone 4 would trigger the need for traffic signal control at the intersection of Pleasant Street at Olmsted Drive.

Based on input from the Planning Department staff, the study area selected for this TIA includes the signalized intersection of Trapelo Road at Pleasant Street and the unsignalized intersection of Olmsted Drive at Pleasant Street.

The Massachusetts Bay Transit Authority (MBTA) operates public transit services near the Site. The MBTA offers both commuter rail service via the Fitchburg Line as well as MBTA buses with stops in the Waverley Square area which is located approximately half a mile from the Site. The Site is well connected by a system of sidewalks in the area, with pedestrian connections to nearby properties including the Waverley Square area. The Proponent currently runs an employee shuttle from the campus to the Waverley Square train station. The shuttle service will be available to the future occupants and visitors of the proposed Zone 4 development.

Independent of the Project, traffic volumes on the roadway network under No-Build condition were assumed to include existing traffic and new traffic resulting from background traffic growth and known development, including the approved residential development on Zone 3 proposed by others, that were identified in consultation with the Planning Department staff.

Trip generation estimates were developed based on user-specific empirical data from the Proponent relative to the number of students and staff and the hourly operational characteristics of the campus. The analysis shows that the Project is expected to generate 284 vehicle trips (176 enter/108 exit) during the weekday morning commute peak hour (approximately 7:30 – 8:30 AM), and 24 vehicle trips (0 enter/24 exit) during the weekday evening commute peak hour (approximately 4:45 – 5:45 PM) on Olmsted Drive.

Detailed traffic operations analyses indicate that the Project would have relatively limited impact within the study area. The preliminary traffic signal warrant analysis, based on estimated future traffic that would use Olmsted Drive, does not support the installation of a traffic signal at the intersection of Pleasant Street at Olmsted Drive at this time.

The Study highlights certain access and circulation enhancements that are part of the site plan to enhance multimodal access to/from the Site.

The Proponent makes the following traffic mitigation commitments pursuant to the requirements of the June 2024 TMMA:

- › Contribute up to \$210,000 towards the upgrade of the existing traffic signal at the intersection of Mill Street at McLean driveway. The contribution amount is inclusive of the remaining \$110,000 that is due to the Town of Belmont under the superseded 1999 TMMA.
- › At the direction of the Town Engineer, perform a post-occupancy traffic signal warrant analysis for the intersection of Pleasant Street at Olmsted Drive. If the future traffic volume at the intersection satisfies the thresholds for consideration of traffic signal control, construct a traffic signal at the intersection within 12 months of receipt of necessary approvals from the Select Board.



1

Introduction

VHB has prepared this Transportation Impact and Assessment (the “Study”) on behalf of McLean Hospital (the “Proponent”) to evaluate the impacts of the proposed Zone 4 development of the Child and Adolescent Campus (CAC) facility and supporting parking (the “Project”) in Belmont, Massachusetts. The location of the Site is shown in Figure 1.

Project Description

The CAC facility will consist of two new buildings that will house program and support space for the Arlington School, Pathways Academy, and Residential/Partial Hospital Program. These programs are being relocated from their existing locations in Zone 5 and from an offsite location in Arlington. In addition to the two new buildings, a parking garage will be constructed to support the CAC. Other notable features of the site plan include a small surface parking lot adjacent to and connected to the proposed parking garage, a circulation drive for building access, student drop-off/pickup zone, designated building loading areas, associated site utility services, and context sensitive landscaping, courtyards, and playground areas to serve the educational and clinical needs of the student population and onsite programming. A well-designed pedestrian circulation system meanders through the Site. While the sidewalk system is designed to connect to the future planned sidewalk by the Zone 3 developer, which eventually connects to the sidewalks on Pleasant Street and Trapelo Road, thoughtful consideration is placed into wayfinding and signage design that ensures separation of general pedestrian traffic from the sensitive needs of the student population that will be using the on-campus pedestrian amenities during the day.

Access to the Project will be provided by driveways along an extension of Olmsted Drive. The primary point of access and egress to the surrounding roadway network will be provided via the unsignalized intersection Pleasant Street at Olmsted Drive.

Residence Building

Residence programs and Partial Hospital programs will be provided in one of the two new buildings proposed in Zone 4. This building will be four-stories and include approximately 60,000 sf in space. This building will serve approximately 90 residential students, 32 patients in the partial hospital program (PHP) and approximately 106 staff members. Residential students stay on the campus for extended duration and do not contribute to the daily traffic flow to/from Zone 4. Employee related traffic primarily occurs during shift changes.

School Building

The Arlington School and Pathways Academy will be housed in the second new building in Zone 4, which is an approximately 29,500 sf two-story building. Pathways Academy will be located in one wing of the school building, and Arlington School in another. At the connection of these two programs will be a multi-function activity space, which opens into an adjacent outdoor courtyard. This building will support the needs of approximately 75 day students and 53 employees.

Parking Garage

The proposed parking garage will provide spaces for 226 vehicles, including van accessible spaces on the ground floor. An on-grade exterior 44-space parking lot will be located immediately adjacent to and connected to the parking structure to provide a total parking capacity of 270 spaces for Zone 4.

Study Methodology

This Study quantifies existing and projected future traffic conditions with and without the Project and estimates the impacts of the development.

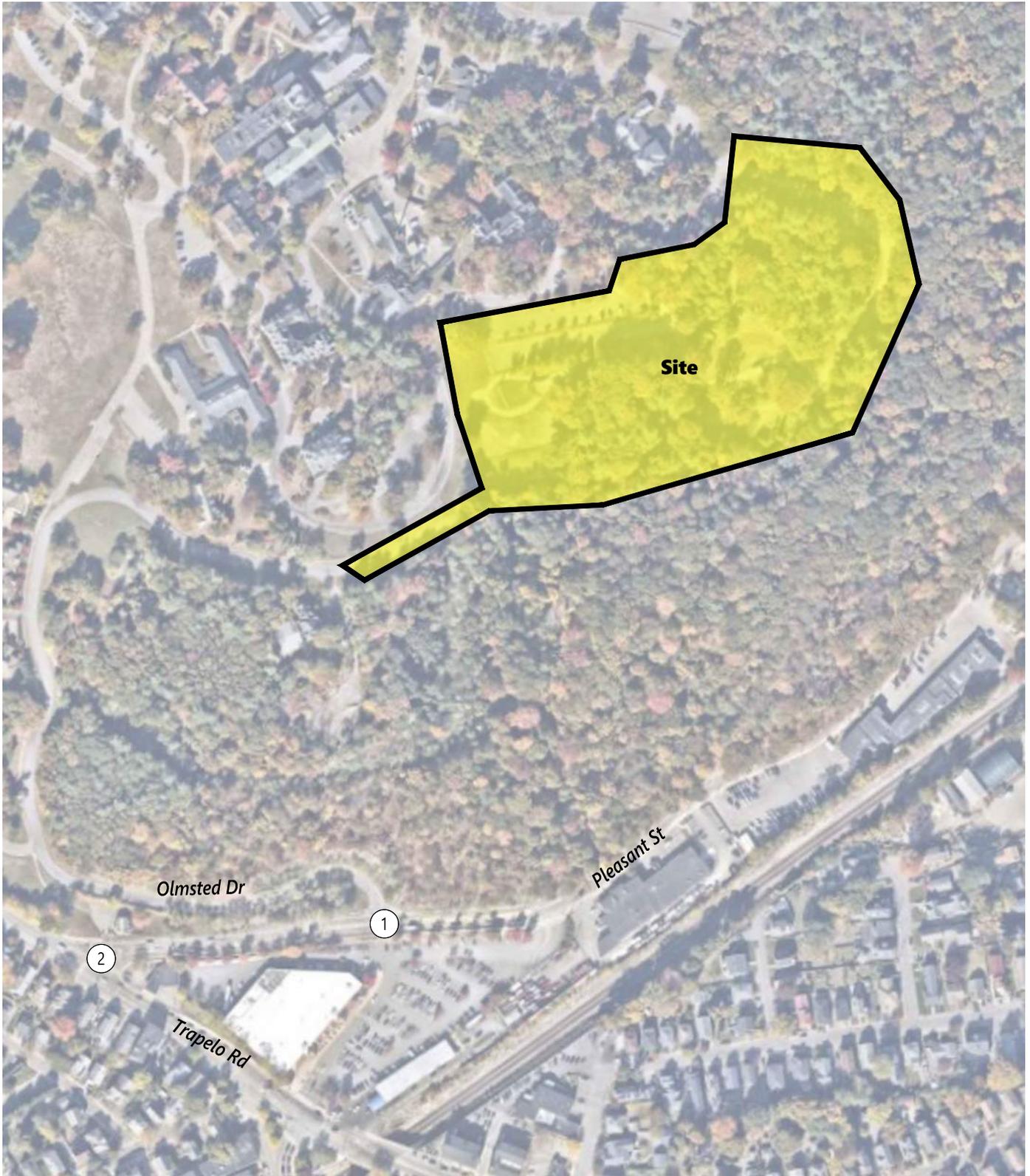
The study area selected for this TIA, which was approved by the Belmont Planning Department staff prior to the initiation of the Study, includes the signalized intersection of Trapelo Road at Pleasant Street and the unsignalized intersection of Olmsted Drive at Pleasant Street.

The study was conducted in accordance with the Town of Belmont and Massachusetts Department of Transportation (MassDOT) Traffic Impact Assessment guidelines.

This Study was conducted in three stages:

- › The first stage involved a preliminary review to understand the Project's transportation characteristics to develop the study area.
- › The second stage involved an assessment of existing traffic conditions in the study area and included an inventory of roadway geometry, observations of traffic flow, and collection of daily and peak period traffic counts.
- › The third stage involved developing future traffic conditions with and without the Project and were projected to a seven-year planning horizon and analyzed. The future traffic

conditions consider a general background growth rate, and traffic expected to be generated by planned development projects in the area, as well as the potential for fully constructed and occupied CAC. Specific travel demand forecasts were evaluated for the Project along with future traffic demands due to expected traffic growth independent of the Project. The traffic analysis identifies existing and projected future roadway capacities. This stage of the study is used to determine if any improvement measures are necessary to support the Project.



0 150 300 Feet



Figure 1: Site Location and Study Area
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Study Intersections:

1. Pleasant Street at Olmsted Drive (Unsignalized)
2. Pleasant Street at Trapelo Road (Signalized)

2



Existing Conditions

Evaluation of the transportation impacts associated with the Project requires a thorough understanding of the existing transportation conditions in the Project study area including roadway geometry, traffic controls, daily and peak hour traffic flow, and traffic safety data. Each of these elements is described in detail below.

Study Area

Based on an understanding of the area roadway network and the expected transportation characteristics of the Project, and in consultation with the Town's Planning Department, a study area was defined to encompass roadway segments that would be used the most by Project traffic. The study area locations are shown in Figure 1 and listed below:

- › Trapelo Road at Pleasant Street
- › Olmsted Drive at Pleasant Street

The existing conditions evaluation consisted 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 (from new counts), and a review of recent crash history.

Roadway Geometry

Descriptions of the study area roadways and some of the key intersections are included below. Figure 2 shows traffic control and lane usage at the study intersections.

Roadways

Trapelo Road

Trapelo Road is a principal arterial roadway that runs in a north-south direction from Belmont Street in the south to the north where it ends in Lincoln. The number of lanes on the roadway varies from two lanes further north and south from Pleasant Street to four lanes where Pleasant Street meets Trapelo Road. The roadway is under the town jurisdiction. Land uses along Trapelo Road in the vicinity of the Site is primarily commercial and residential in nature.

Pleasant Street

Pleasant Street is a principal arterial roadway that runs in an east-west direction between Trapelo Road to the west and continues east through Arlington until it reaches

Massachusetts Avenue. At the westernmost end, Pleasant Street provides access to Olmsted Drive, connecting the Site to the rest of the town. Pleasant Street has one travel lane in each direction, and it occasionally opens up for a center running turn lane. The roadway is under the town jurisdiction. Land uses along the roadway are characterized by commercial, residential, and office uses.

Olmsted Drive

Olmsted Drive is a local road that leads into the McLean campus and provides access to Zones 3, 4 and 6. Direct vehicular access from outside the McLean District to Zone 5 and other McLean Districts is not allowed via Olmsted Drive. The roadway currently provides two-way access to Waverley Woods residences in Zone 6.

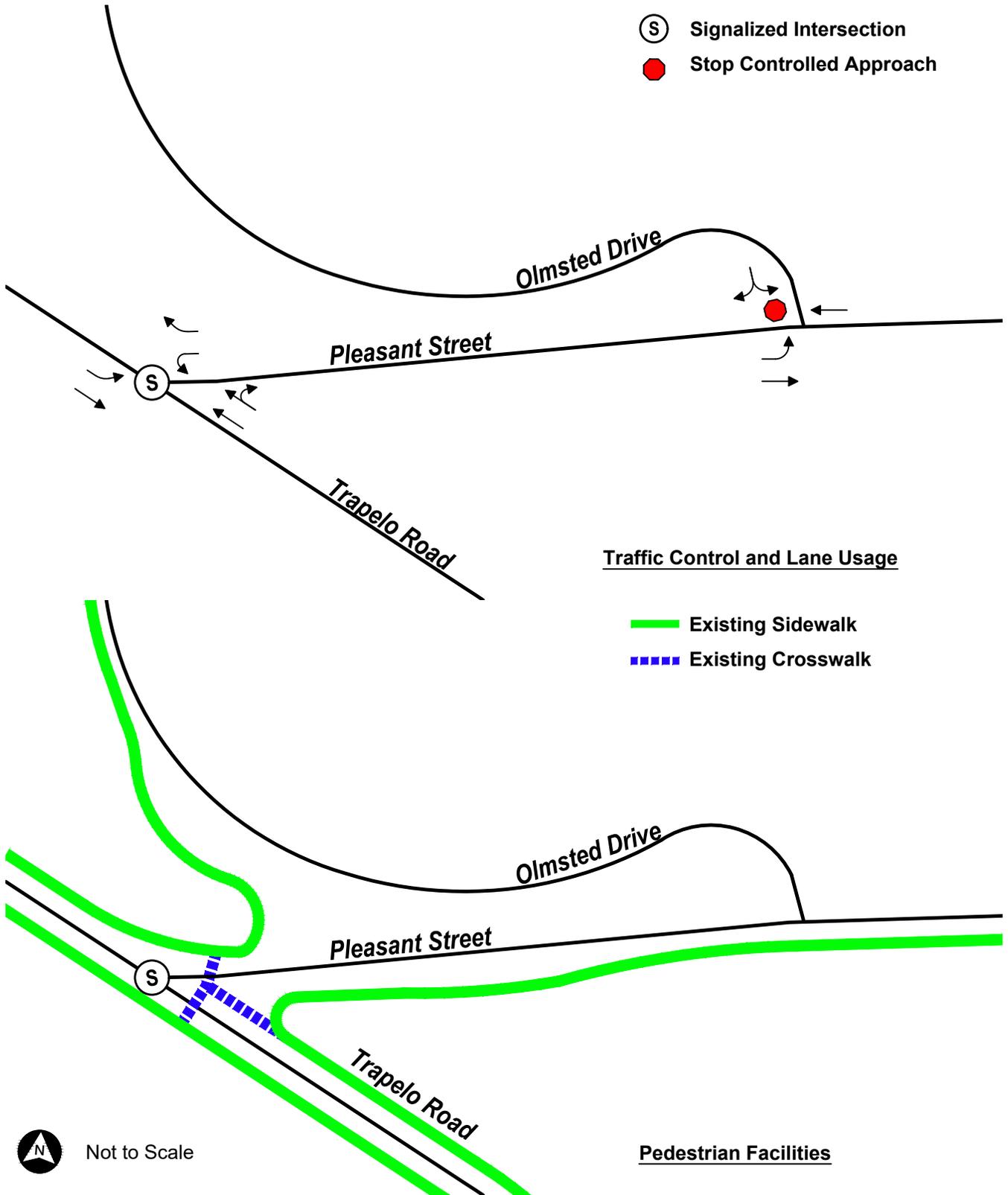
Figure 2: Existing Traffic Control, Lane Usage, and Pedestrian Facilities

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Intersections

The study area intersections are described below.

Trapelo Road at Pleasant Street

Pleasant Street intersects with Trapelo Road to form a signalized intersection. Trapelo Road southbound consists of an exclusive left-turn lane to access Pleasant Street and a through lane continuing along Trapelo Road. The northbound approach has a through lane and a shared through and right lane to provide access to Pleasant Street. Pleasant Street westbound splits around a center triangle island, for exclusive right and left-turn lanes. Residential driveways south of the intersection are also controlled by the signal. Sidewalks are present along the southern side of Pleasant Street and along both sides of Trapelo Road. Crosswalks are provided across the northern side of Trapelo Street and across Pleasant Street on both sides of the center island. Land use near the intersection primarily consists of residential uses.

Olmsted Drive at Pleasant Street

Pleasant Street intersects Olmsted Drive from the north to form an unsignalized T-intersection. Pleasant Street consists of a through lane in each direction and an exclusive left turn lane for vehicles turning onto Olmsted Drive. The roadway is unstriped, supporting two-way traffic to/from Pleasant Street. Sidewalks are present on the southern side of Pleasant Street. There are no crosswalks located at the intersection. Land use near the intersection consists primarily of commercial uses.

Pedestrian and Bicycle Facilities

As part of the Study, existing pedestrian and bicycle facilities in the area were reviewed. The location of sidewalks, crosswalks, and bicycle facilities through the study area were identified.

Continuous pedestrian connectivity is provided along both sides of Trapelo Road, the south side of Pleasant Street, and the west side of Olmsted Drive. The Olmsted Drive sidewalk terminates at the private driveway to the *Waverley Woods* development and instead an off-street pathway provides a more direct connection to the intersection of Trapelo Road at Pleasant Street.

Figure 3 shows the existing bicycle and pedestrian accommodations in the study area.

Traffic Volumes

Traffic volume data for the study area roadways and intersections were obtained from new traffic counts conducted in November 2024. The traffic counts were conducted in accordance with the MassDOT guidelines for data collection. A review of the most recent MassDOT seasonal factors indicates that traffic volumes in November are above average month conditions and do not require additional adjustments. Turning movement and classification (TMC) counts were conducted during the weekday morning (7:00 – 9:00 AM) and weekday evening (4:00 – 6:00 PM) peak periods on Thursday November 21, 2024 at the study area intersections. These count periods represent the morning and evening commute peak times in the area. In addition, a 12-hour TMC was conducted at Olmsted Drive at Pleasant Street for use in the traffic signal warrant analysis presented later in this report.

A review of the TMC data indicated that the morning and evening commute peak times at the study locations occurred from 7:30 – 8:30 AM and 4:45 – 5:45 PM, respectively.

In addition to the TMCs, automatic traffic recorder (ATR) counts were conducted along Olmsted Drive, north of Pleasant Street and on Pleasant Street, west of Olmsted Drive, over the course of a two-day period (November 20-21, 2024). The data collected includes traffic volumes and vehicle classification.

Table 1 presents the traffic data for the 48-hour ATRs. The 2024 Existing conditions weekday morning and evening peak hour traffic volume networks are presented in Figure 4. Detailed traffic count worksheets are provided in the Appendix.

Table 1 48-Hour ATR Traffic Volumes

	Olmsted Drive, north of Pleasant St.	Pleasant Street, west of Olmsted Dr.
Weekday Daily		
<i>Volume (two-way)</i>	329	11,681
Weekday Morning Peak Hour		
<i>Volume</i>	21	904
<i>K Factor^b</i>	6.4%	7.7%
<i>Directional Flow^c</i>	45% SB	64% WB
Weekday Evening Peak Hour		
<i>Volume</i>	31	910
<i>K Factor</i>	9.4%	7.8%
<i>Directional Flow</i>	54% NB	55% WB

^b Percentage of daily volume that occurs during the peak hour

^c Percentage of vehicles traveling in one direction during the peak hour

Figure 3: 2024 Existing Condition Weekday Peak Hour Traffic Volumes

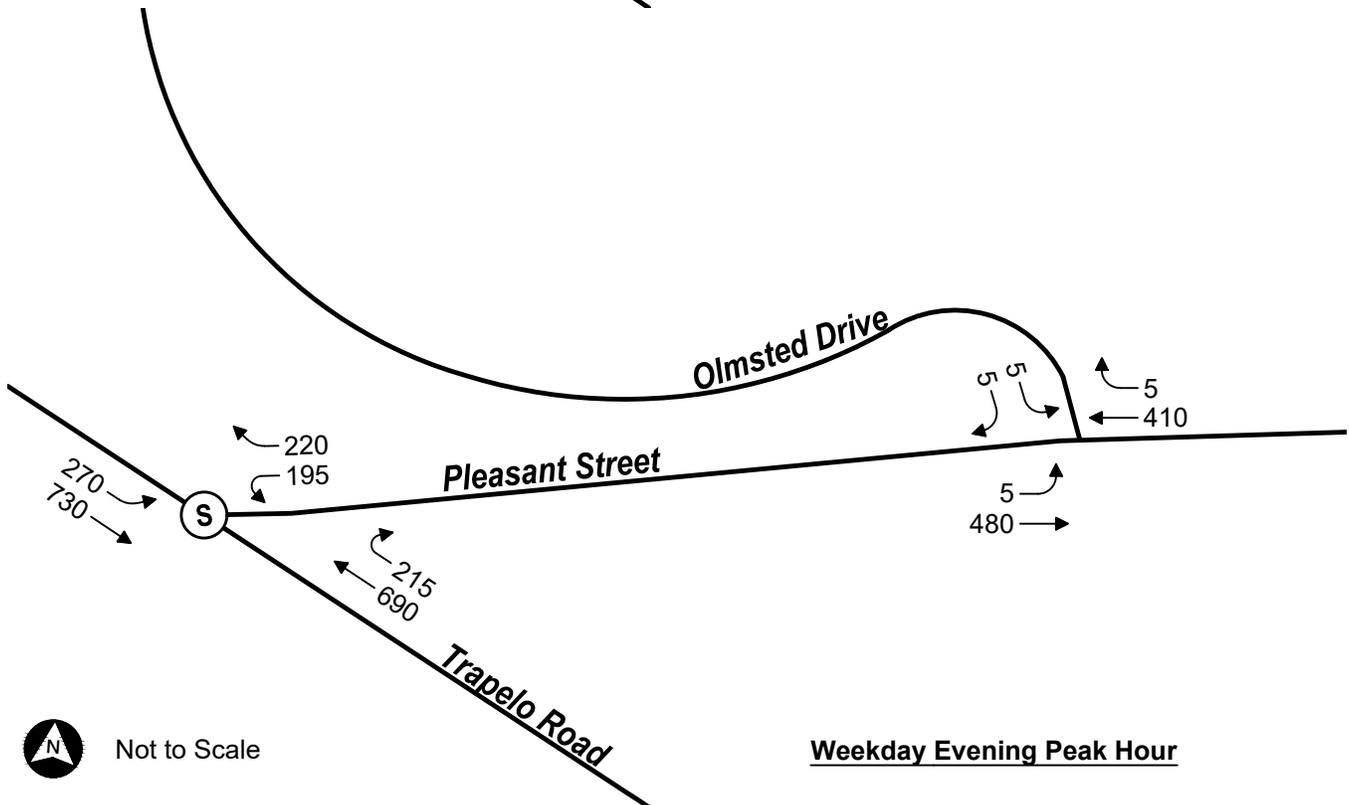
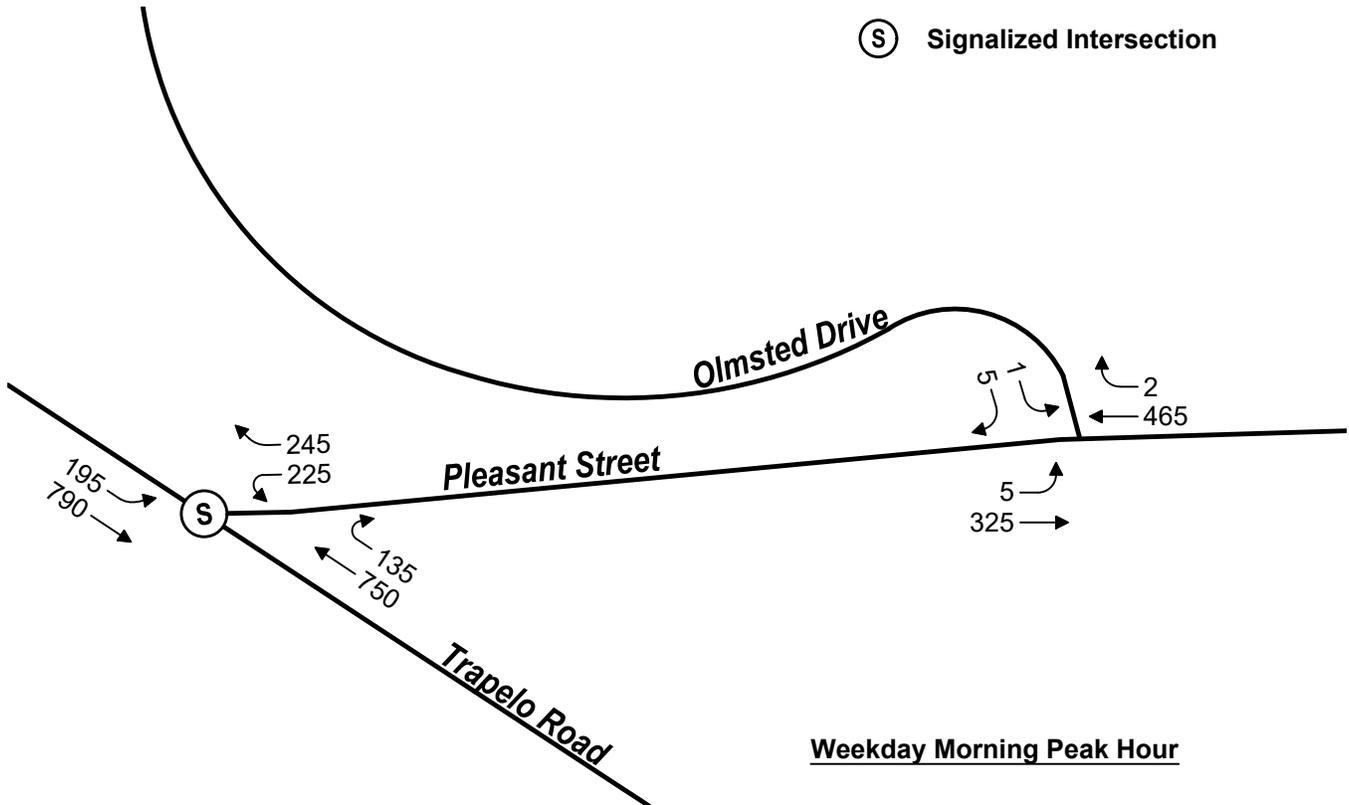
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Signalized Intersection



Not to Scale

Public Transportation Facilities

The Massachusetts Bay Transportation Authority (MBTA) operates buses and commuter rail through Belmont, several of which travel within the vicinity of the Project Site. Waverley Square, located approximately a 0.5-mile from the Site, has Waverley Station which is used by the Fitchburg commuter rail as well as multiple bus routes. There are bus shelters on the south and east side of Waverley station for bus Routes 73 and 554, respectively.

A map showing the bus routes within the study area is provided in the Appendix. The following outlines the commuter rail and bus routes in proximity to the Site.

- › **Fitchburg Line** is the commuter rail line that runs through Belmont with a stop at Waverley Station. The train runs between North station and Wachusett from 7:57 AM to 1:27 AM each day. The commuter rail has a varied scheduled throughout the day.
- › **Route 73** is a bus route connecting Waverley Square in Belmont to Harvard. Route 73 runs between 5:05 AM and 1:06 AM on weekdays, between 5:01 AM and 1:17 AM on Saturdays, and between 6:37 AM and 12:39 AM on Sundays.
- › **Route 554** is a circuitous route running counterclockwise inbound from Waverley Square through Waltham and ending in Newton Corner. Route 554 provides access between 6:25 AM and 8:40 PM on weekdays and 6:30 AM and 6:35 PM on Saturdays.

Crash History

To identify vehicle crash trends in the study area, reported vehicular crash data for the study area intersections was obtained from MassDOT for the years 2016 through 2021. A summary of the MassDOT vehicle crash history is presented in Table 2 and the detailed crash data is provided in the Appendix.

The MassDOT average crash rate for District 4 is 0.73 collisions per million entering vehicles (mev) for signalized intersections and 0.57 for unsignalized intersections. The crash rates represent the number of reported crashes for every million vehicles that pass through an intersection.

A review of the crash data in Table 2 indicates that over the five years of reported data, a total of 36 crashes occurred at the study area intersections. The calculated crash rate at the Trapelo Road at Pleasant Street intersection is slightly higher than the MassDOT District 4 average crash rates for similar location.

The predominant types of collisions within the study area are angle (13 total), rear-end (16 total), sideswipe (3 total), and head-on crashes (3 total). Angle and rear-end type crashes are typically the most common types of collisions at signalized intersections. Sideswipe collisions were prevalent at the Trapelo Road at Pleasant Street intersection. Approaches at this intersection have multiple lanes and the sideswipe collisions may be caused by a combination of lane changing maneuvers and weaving vehicles combined with traffic congestion.

Table 2 2016-2021 Vehicle Crash Summary

	Trapelo Rd at Pleasant St	Pleasant St at Olmsted Dr
Total	35	1
Year		
2016	8	0
2017	6	1
2018	13	0
2019	5	0
2021	3	0
Collision Type		
Angle	12	1
Head-on	3	0
Rear-end	16	0
Sideswipe, opposite direction	0	0
Sideswipe, same direction	0	0
Single-vehicle crash	3	0
Crash Severity		
Non-fatal injury	11	1
Property damage only	23	0
Not reported	1	0
Time of Day		
Weekday, 7:00 AM - 9:00 AM	3	0
Weekday, 4:00 PM - 6:00 PM	5	0
Saturday, 11:00 AM - 2:00 PM	0	0
Weekday, other time	21	1
Weekend, other time	3	0
Pavement Conditions		
Dry	27	1
Wet	5	0
Snow, ice, and slush	0	0
Unknown/Not reported	1	0
Non-Motorist (Bike, Pedestrian)		
Total	1	1
MassDOT D4 Average Crash Rate	0.73	0.57
Calculated Crash Rate ¹	0.75	0.05

Source: MassDOT Crash Database

¹ Calculated Crash Rate based on data from 2016 – 2019 and 2021. Data for 2020 was excluded in the calculation as traffic conditions that year were significantly affected by COVID-19 pandemic conditions.

3

Future Conditions

Traffic volumes in the study area were projected to the year 2031, which reflects a seven-year traffic-planning horizon. Independent of the Project, volumes on the roadway network under year 2031 No-Build conditions were assumed to include existing traffic and new traffic resulting from background traffic growth assumptions. Specifically, the No-Build conditions were developed by applying an annual growth rate and incorporating traffic volumes from planned projects in the vicinity of the Project Site, as well as the full occupancy usage of the CAC.

Under the Build conditions, traffic that would be generated by the full Build usage of the Project was estimated and added to reflect the year 2031 Build conditions.

Background Traffic Growth

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. A procedure frequently employed is to estimate an annual percentage increase and apply that increase to study area traffic volumes. An alternative procedure is to identify estimated traffic generated by planned new major developments that would be expected to impact the project study area roadways. Both methods were used for this assessment.

Historic Traffic Growth

To determine an applicable annual growth rate, both MassDOT permanent count stations and previous studies conducted for projects in the vicinity of the study area were reviewed. Based on this review, and to maintain consistency with the prior studies in the area, an annual growth rate of one-percent was used for the future conditions traffic analyses.

Site-specific Growth

In addition to accounting for background growth, the traffic associated with other planned and/or approved developments near the Site were considered. Based on input from the Town of Belmont Planning Department staff and a review of recent traffic studies prepared for projects in the area, the following project proposed by others was identified for consideration in the No-Build analysis:

- › **McLean District Zone 3 Residential Development:** This project is located within Zone 3 of the McLean District and is accessed via Olmsted Drive. It consists of the construction of 40 for sale, age-restricted townhouse condominiums and 110 multi-family rental units, comprised of 53 age-restricted units and 57 non-age restricted units. The project includes on-site parking for 257 vehicles.

The resulting 2031 No-Build weekday morning and evening peak hour conditions volume networks and are show in Figure 5.

Planned Roadway Improvements

While communications with the Town of Belmont Engineering and Planning staff identified no infrastructure improvements currently planned at the two study locations beyond general maintenance, the following information was provided by the town and is presented herein for completeness of the record.

- › **McLean Driveway at Mill Street traffic signal upgrade:** At the time of preparing this Study, the Town Engineer indicated that the Town's design consultant is in the process of designing upgrades to the existing traffic signal system at the McLean Driveway at Mill Street, located to the north and west of the study area. Feedback from the design consultant indicated that traffic analysis and draft traffic signal plans for the intersection will be ready in February 2025. These improvements are funded, in part, by the Proponent, pursuant to the provisions of the June 2024 TMMA.
- › **Future signalization of Pleasant Street at Olmsted Drive:** The June 2024 TMMA requires that the developers of Zones 3 and 4 fund the design and construction of a traffic signal at the intersection of Pleasant Street at Olmsted Drive when traffic volumes at the intersection exceed the thresholds for signalization, and in accordance with the provisions of the June 2024 TMMA.

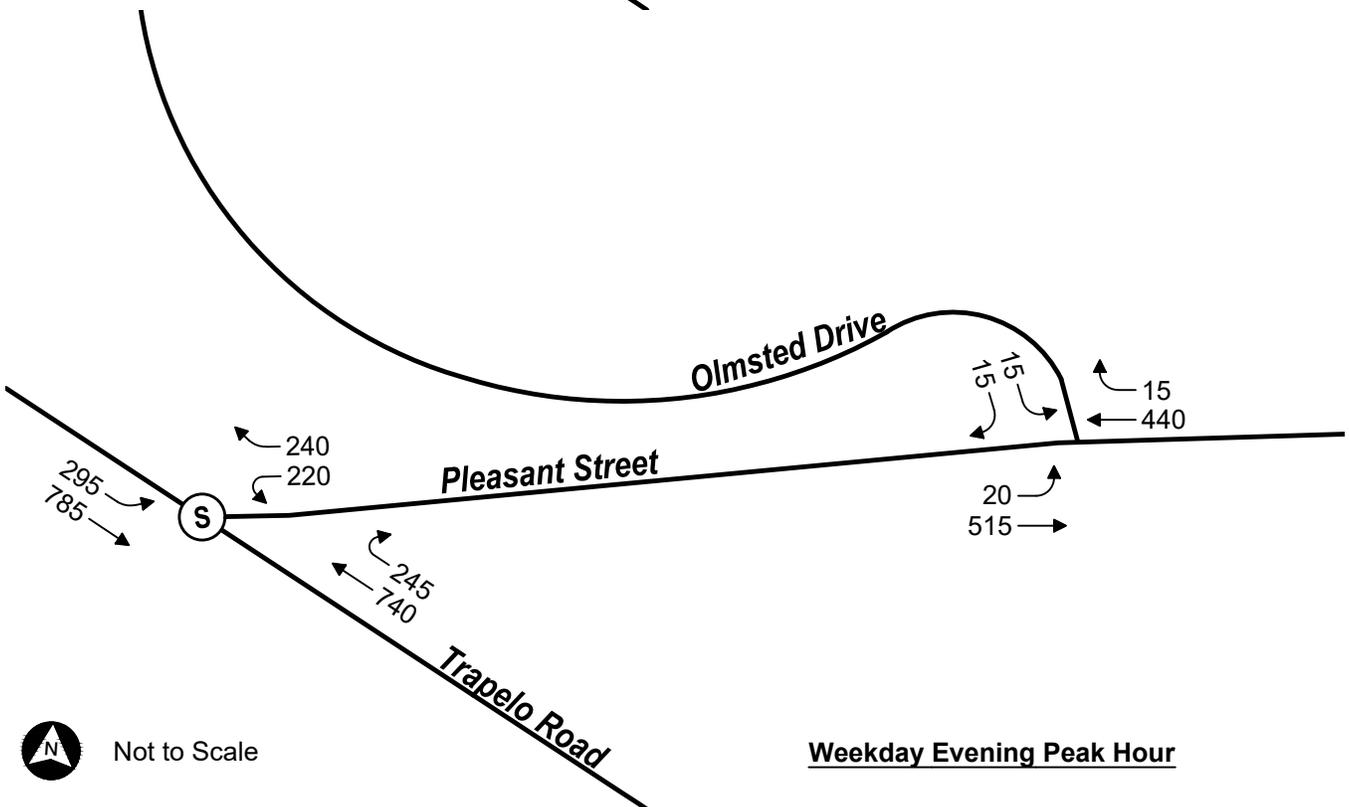
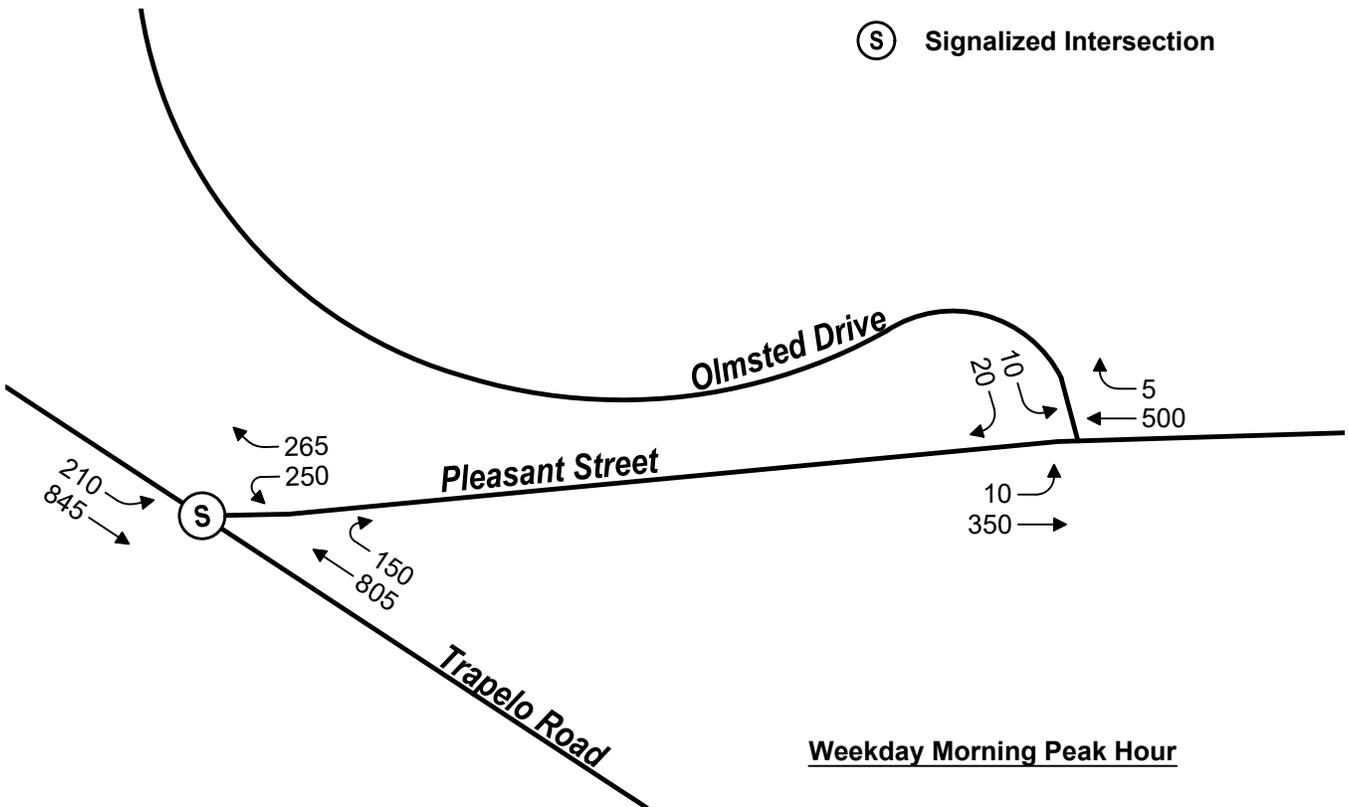
Figure 4: 2031 No-Build Condition Weekday Peak Hour Traffic Volumes

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Signalized Intersection



Not to Scale

Project-Generated Traffic Volumes

2031 Build traffic volumes for study area roadways were determined by estimating Project-generated traffic volumes and distributing these volumes over the study area roadways. The estimated Project-generated volumes were added to the 2031 No-Build traffic volumes to develop the year 2031 Build traffic volume networks. The following sections describe the procedures used to develop the Build condition traffic volume networks.

Trip Generation

The rate at which any development generates traffic is dependent upon a number of factors such as size, location, and nature of the use. For typical types of developments like residential uses, hospitals, clinics, k-12 schools etc., trip-generating characteristics are generally derived from trip generation rates published in references such as the Institute of Transportation Engineers (ITE) *Trip Generation Manual*². However, the proposed uses on Zone 4 do not fit any of the known land use types available in the ITE manual. Therefore, projections for the numbers of future students and staff associated with the Arlington School, Pathways Academy, and Residential/Partial Hospital Program that were available from the Proponent were used in the development of empirical trip generation data presented in this Study.

The residence program and Partial Hospital program (PHP) will be provided in an approximately 60,000 sf four-story building. This building will serve approximately 90 residential students, 32 patients in the partial hospital program and approximately 106 staff members. Residential students stay on the campus for extended duration and do not contribute to the daily traffic flow to/from Zone 4. The Arlington School and Pathways Academy will be housed in an approximately 29,500 sf two-story building. This building will support the needs of approximately 75 day students and 53 employees. Employee related traffic primarily occurs during shift changes.

Table 3 summarizes the hours of operations of each of the proposed Zone 4 programs, as they relate to the traffic operational analysis:

Table 3 Proposed Program Operations Specifications

Program	Hours of Operation
Residence	24 hours, 365 days per year
Partial Hospital Program (PHP)	M - F 8:30 AM – 3:00 PM
<i>Pathways</i>	M - F 8:15 AM – 2:30 PM
<i>Arlington</i>	M - F 8:15 AM – 3:00 PM

Table 4 summarizes the trip generation estimates for the Project. The calculation worksheets are included in the technical appendices.

The amended and restated June 2024 TMMA was approved by Town Meeting vote to replace the 1999 TMMA. Specifically, traffic monitoring and management provisions related

² *Trip Generation Manual, 11th Edition*; Institute of Transportation Engineers; Washington, DC, 2021.

to Zones 3 and 4 that were in the 1999 TMMA were eliminated from the June 2024 TMMA. Instead, the 2024 TMMA identified specific mitigation actions that would need to be taken by the Proponent upon developing Zone 4. Notwithstanding these changes in the amended TMMA, the trip thresholds set forth in the 1999 TMMA are shown in the last column of Table 4 for reference.

Table 4 Trip Generation Summary

Time Period	PROPOSED TRIP GENERATION FOR ZONE 4			Superseded Thresholds in the 1999 TMMA ¹
	Future Students	Future Staff	Future CAC Total	
Weekday Daily				
In	214	226	440	
<u>Out</u>	<u>214</u>	<u>226</u>	<u>440</u>	
Total	428	452	880	1,784
AM Commute Peak Hour (7:30-8:30 AM)				
In	100	76	176	
<u>Out</u>	<u>100</u>	<u>8</u>	<u>108</u>	
Total	200	84	284	206
PM Commute Peak Hour (4:45-5:45 PM)				
In	0	0	0	
<u>Out</u>	<u>0</u>	<u>24</u>	<u>24</u>	
Total	0	24	24	180

Note: The trip estimates were developed based on use projections for Zone 4 prepared by the Proponent

1. The June 2024 TMMA does not include any traffic thresholds for the Zone 4 development. For references, trip thresholds in the 1999 TMMA are presented in the table.

As shown in Table 4, the Project is expected to generate approximately 880 vehicle trips on a daily basis, 284 vehicle trips (176 enter/108 exit) during the weekday morning peak hour, and 24 vehicle trips (0 enter/24 exit) during the weekday evening peak hour.

Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the Site is a function of the land use, population densities, the location of employment, existing travel patterns, and the efficiency of the existing roadway system. Since the Proponent has data related to the existing students and staff associated with the current CAC program at McLean, the trip distribution patterns used in this study were developed using the actual zip code data of the students and employees. The trip distribution patterns are shown in Table 5 and in Figure 6.

Table 5 Trip Distribution Summary

Direction	Direction (to/from)	Percentage Staff (to/from)	Percentage Students (to/from)
Trapelo Road	North/West	33%	53%
Trapelo Road	South/East	24%	21%
Pleasant Street	East	43%	26%
Total		100%	100%

Note: The trip distribution patterns were developed using student and staff residential zip code data

The trip distribution patterns shown in Table 5 were applied to the trip generation estimates by user group to develop the trip assignments by turning movement.

The weekday morning and evening peak hour Project generated traffic volumes were assigned to the roadway network based on the trip distribution patterns and are shown on Figure 6. The Project generated traffic volumes were added to the 2031 No-Build Conditions peak hour traffic volume networks to develop the 2031 Build conditions weekday morning and evening peak hour traffic volume networks, which are shown on Figure 7.

Figure 5: Trip Distribution Map

McLean Hospital CAC | Belmont, MA



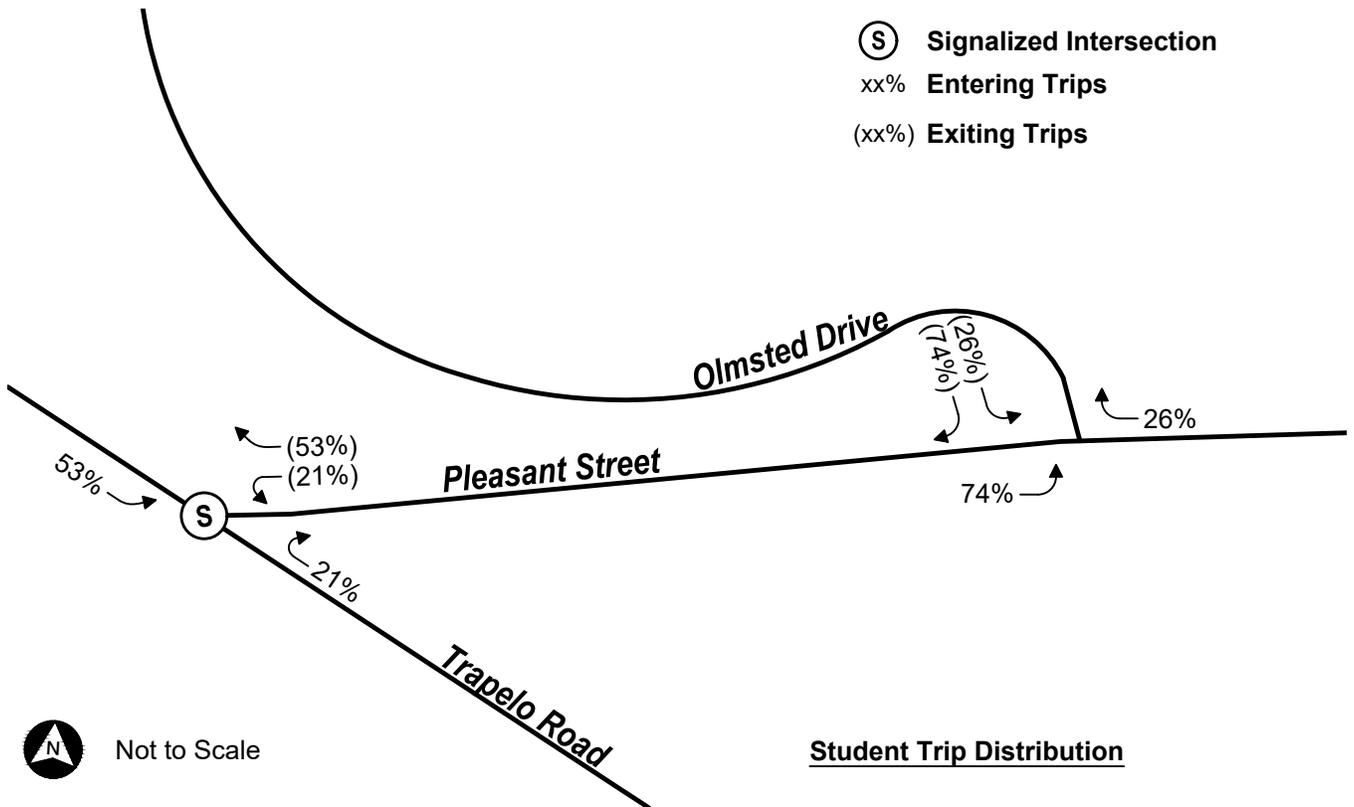
DRAFT

| 1/31/2025

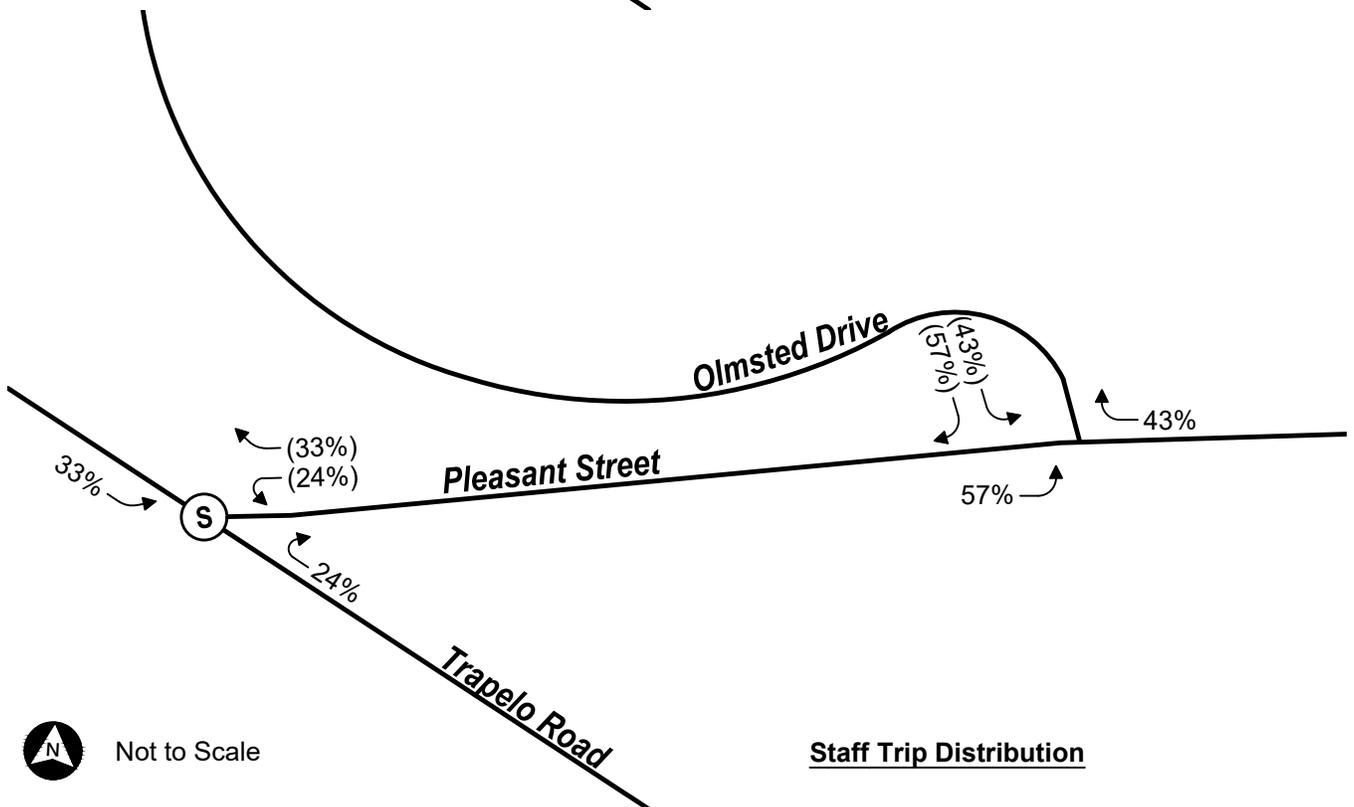
(S) Signalized Intersection

xx% Entering Trips

(xx%) Exiting Trips



Not to Scale



Not to Scale

Figure 6: Site-Generated Weekday Peak Hour Traffic Volumes

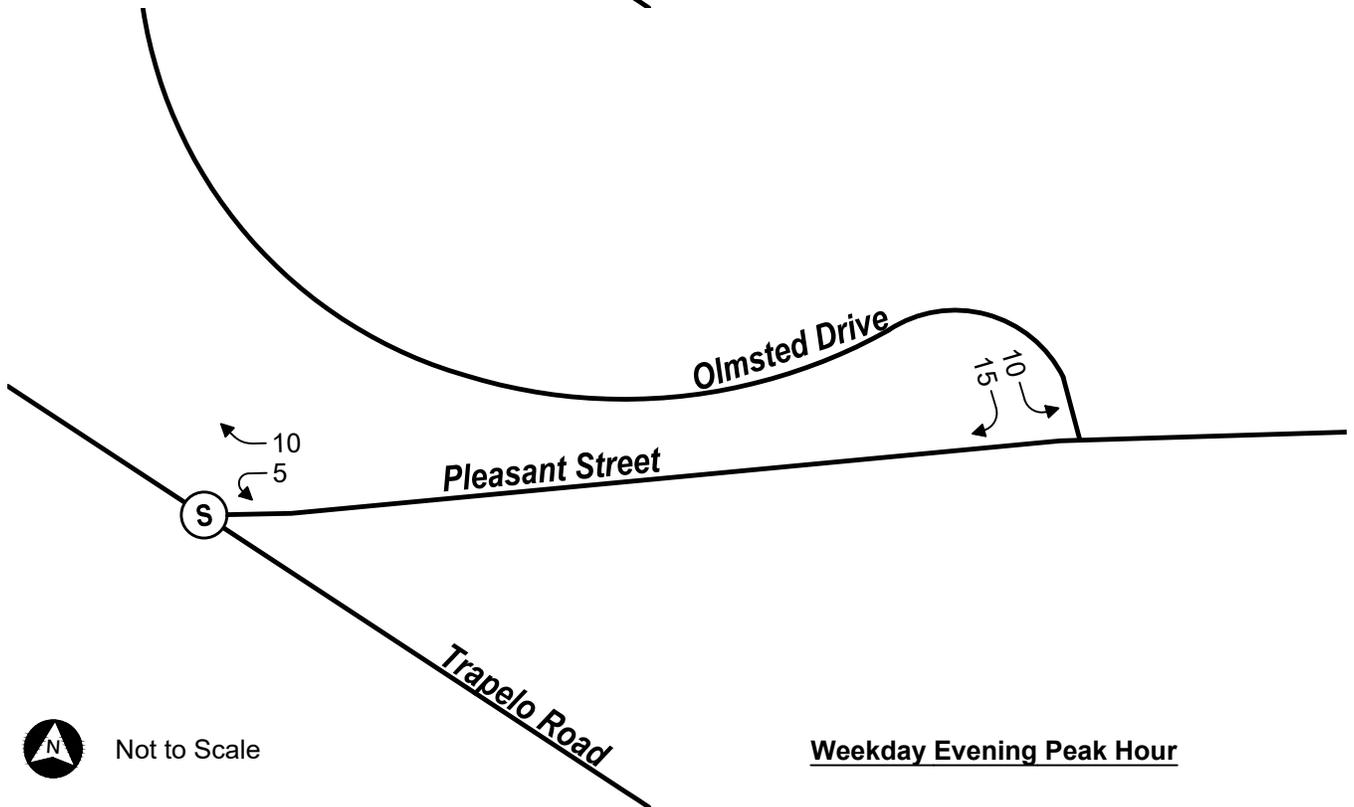
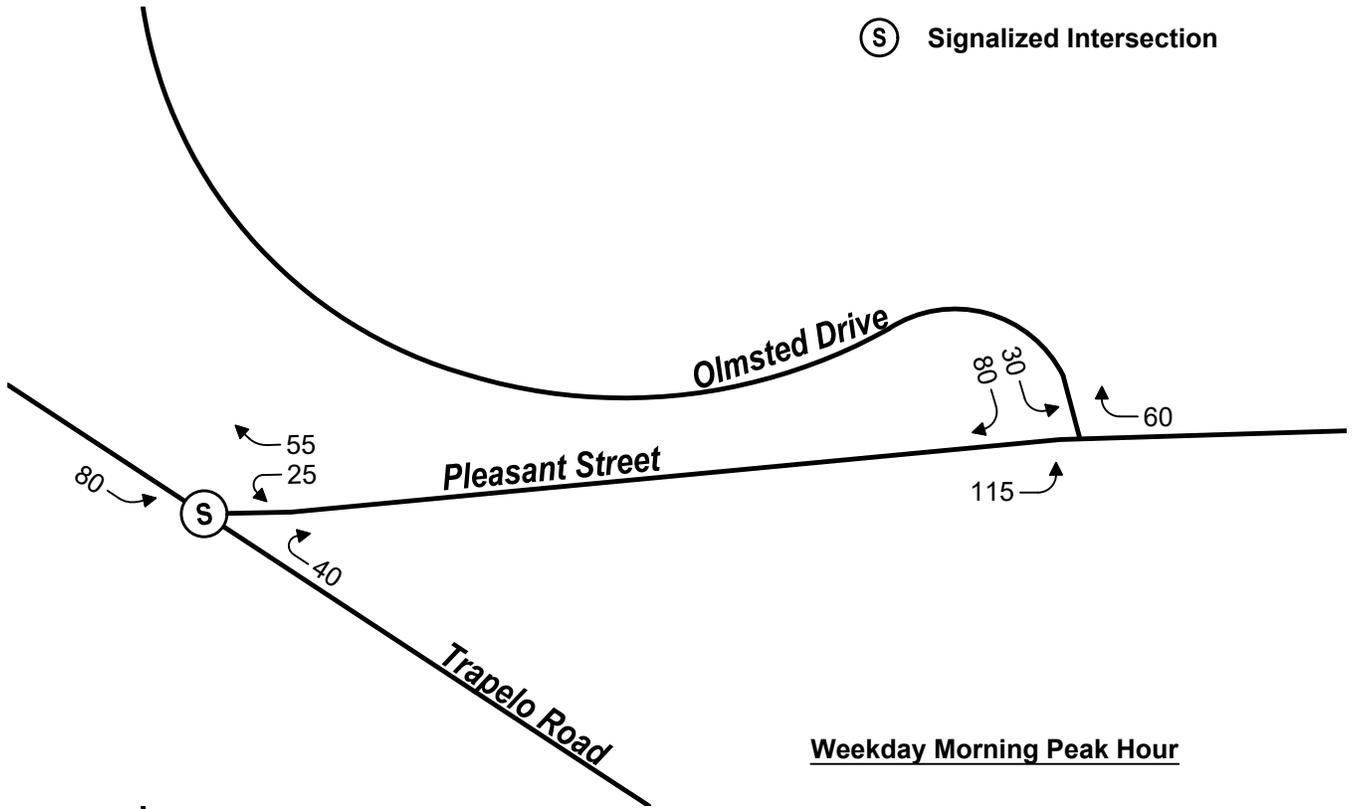
McLean Hospital CAC | Belmont, MA



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Ⓢ Signalized Intersection



Not to Scale

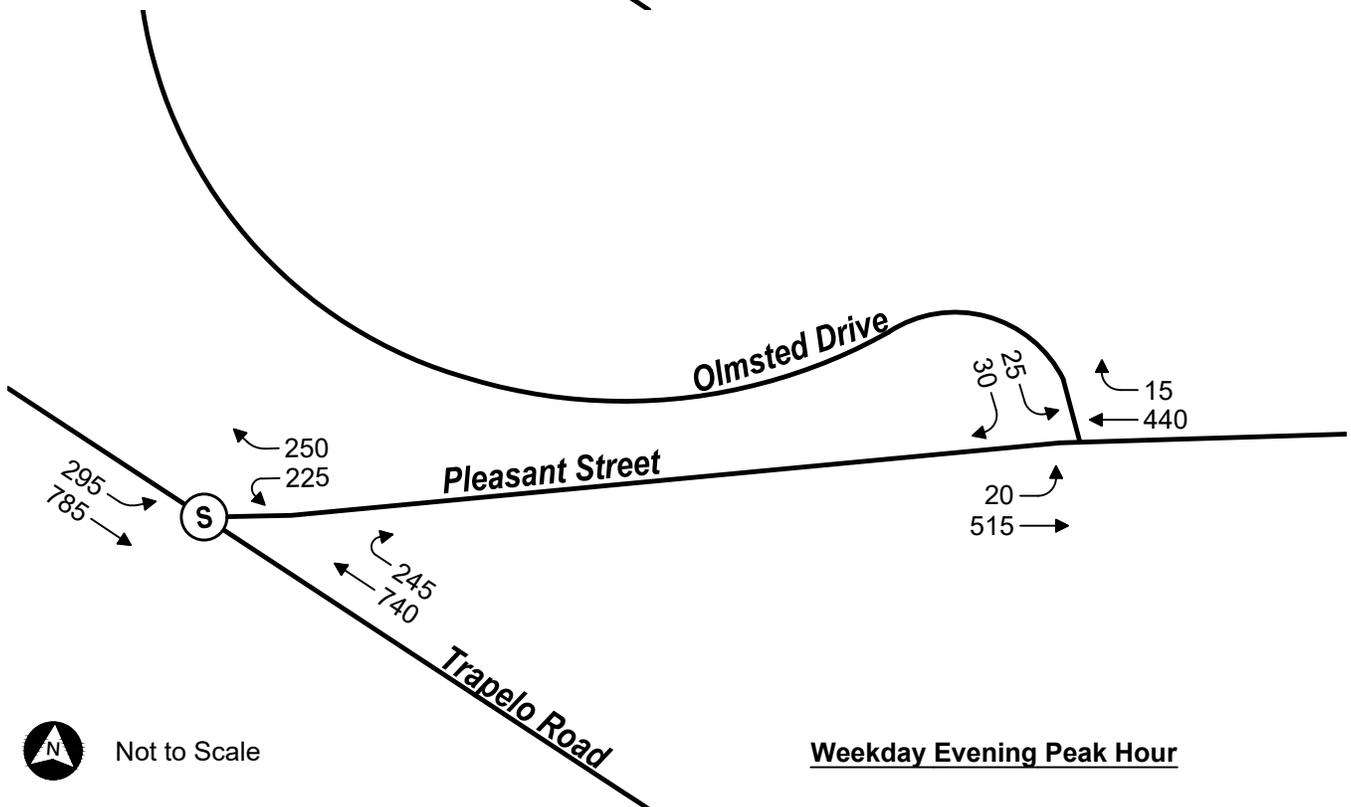
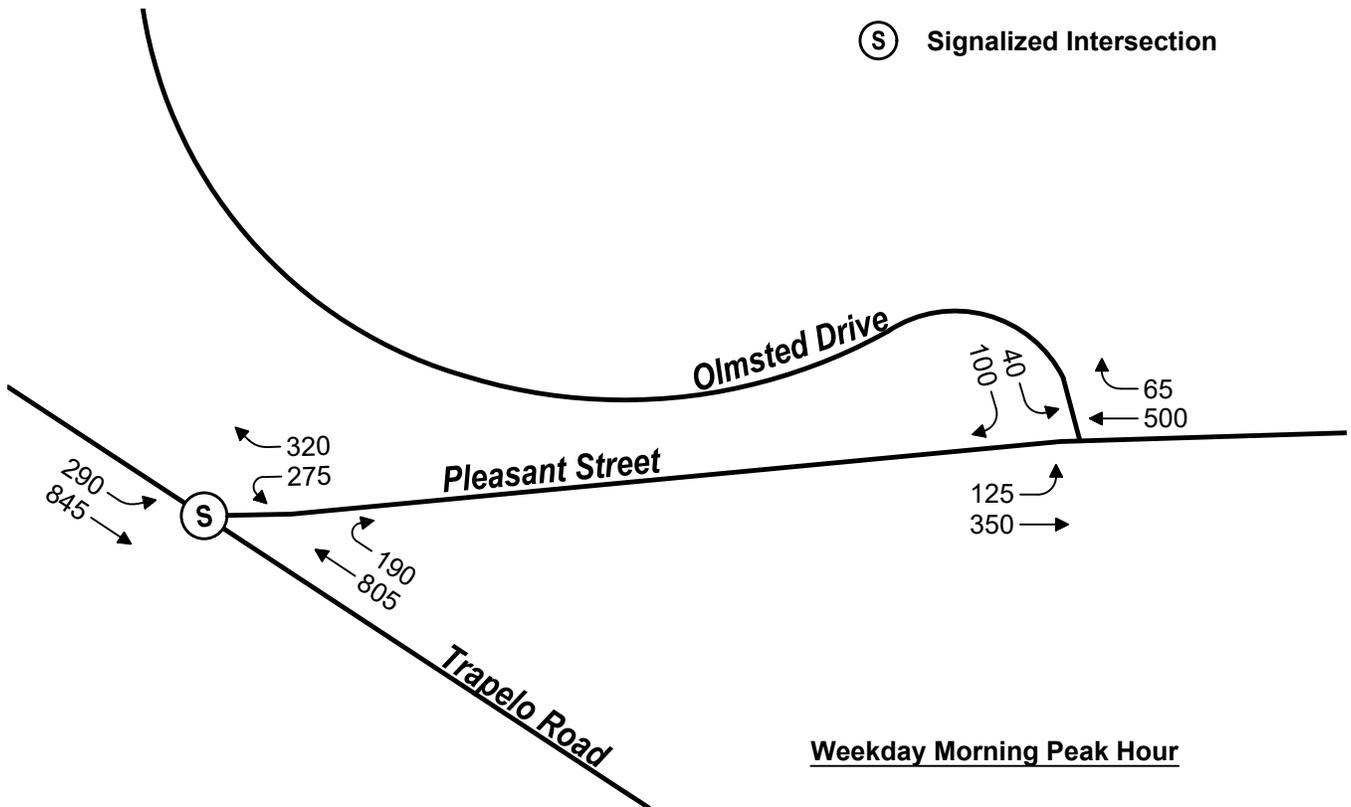
Figure 7: 2031 Build Condition Weekday Peak Hour Traffic Volumes

McLean Hospital CAC | Belmont, MA

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| 1/31/2025

Signalized Intersection



Not to Scale

Site Access and Parking

Site Access

Olmsted Drive runs along a circuitous alignment from Pleasant Street to its terminus at Zone 4. Along this route, it provides access to existing residential uses in Zone 6 (Waverley Woods) and residential uses proposed in Zone 3 by others (yet to be constructed). Near Zone 4, the extension of Olmsted Drive runs in a general east to west orientation, on the south side of the proposed CAC development. A 20-foot wide loop driveway, intersecting Olmsted Drive just to the west of the CAC development, runs in a clockwise direction around the development, and connects back to the extension of Olmsted Drive adjacent to the proposed parking garage. A short section of the loop driveway is two-way, to provide access to a loading dock on the west side of the CAC development. The remainder of the loop driveway is one-way. Defined student drop-off/pickup zones (eight foot wide) are provided along the north and east frontages of the CAC development. The proposed driveway cross-section will allow through vehicles to by-pass vehicles queued for drop-off and pickup.

Employees, students, and visitors will access the Site from Olmsted Drive at the southwest corner of Zone 4. Those wishing to proceed directly to parking will remain on the two-way driveway running along the south edge of Zone 4 to the parking garage. Students being dropped off at any of the two buildings will be directed to the one-way circulation loop around the buildings, moving in a clockwise direction to allow for passenger drop-off. Upon exiting the one-way circulation loop, drivers can either continue into the parking garage via one of the two proposed garage entry points, or head west to exit the site.

The proposed parking garage can be accessed either via a two-way entry portal on the south side of the structure, or via the driveway connection to the exterior surface parking lot located to the north of the proposed garage. Vehicles parked in the garage can exit to the west toward Olmsted Drive from either garage driveway.

New crosswalks are proposed at the intersection of Olmsted Drive and the loop driveway around the CAC building. These crosswalks connect the Zone 4 pedestrian circulation system with the sidewalk proposed by others as part of the Zone 3 residential development. Crosswalks are also proposed at other locations along the loop driveway to accommodate on-site pedestrian circulation and for accessing the parking garage.

The site plan shows a gated driveway connection between Zones 4 and 5. This gated driveway, which will be available only to emergency vehicles and authorized McLean vehicles for transporting food and other supplies, and maintenance vehicles traveling between Zones 4 and 5. With this one exception, there will be no direct vehicular connection between Zones 4 and 5. This operational arrangement would eliminate additional trips on the Town of Belmont roadway network that would otherwise be generated if these authorized vehicles were required to leave on Mill Street and reenter the campus from Pleasant Street to access Zone 4.

Emergency vehicles (fire, police, ambulance) are anticipated to access Zone 4 from Pleasant Street via Olmsted Drive. The proposed driveways have been designed to accommodate the Town of Belmont aerial ladder trucks. Additionally, at the request of the Belmont Fire

Department, access has been provided to the exterior parking lot from the circulation loop and the proposed gated vehicular connection between Zones 4 and 5 has been designed to accommodate movement of the aerial ladder truck.

Pedestrian circulation is incorporated throughout the design of the Project. Pedestrian access to Zone 4 from Pleasant Street will be provided by means of a sidewalk extension along the north side of Olmsted Drive connecting to the planned Zone 3 sidewalk proposed by others. Within the Zone 4 Site, pedestrian connections are proposed between the parking structure/exterior lot and the Pathways School drop-off, with additional circulation routing pedestrians to the Arlington School and the Residential/PHP building. An additional pedestrian connection to Zone 5 will be provided at the northwest corner of Zone 4 to facilitate employee access to Zone 5 amenities such as the cafeteria, post-office, etc.

The CAC campus is designed to provide a private therapeutic and learning environment. Separation from general pedestrian connectivity is necessary to maintain the privacy of students, patients and families. Therefore, although the CAC will allow for pedestrian access to the larger public sidewalk system outside of McLean Hospital, the design intentionally incorporates features such as restricted-use signage to discourage general pedestrian access into private educational and therapeutic spaces. However, Zone 4 does provide connections for employees to walk to/from Pleasant Street and for Zone 4 site users to access the entire CAC campus and McLean main campus, as appropriate.

Zone 4 staff who may choose to ride bicycles to work can access the Site from Pleasant Street via Olmsted Drive. Given the low-speed driveways, bicycles will be accommodated by shared travel lanes on Olmsted Drive with automobiles. Covered bicycle parking will be provided within the parking garage.

Parking

The proposed parking supply for the Project was developed after taking into consideration various operational and design factors such as the following:

- › Employees who will be in the Zone 4 CAC program will work in three shifts. In addition to spaces for the employees during the largest shift, additional parking will be required during the shift change.
- › Monday through Friday, parents arrive for appointments with caregivers and staff on a regular basis during school hours.
- › Parking is needed during discharges/admissions for parents and guardians.
- › Parking is needed for vehicles that arrive during the school day for new applicant interviews.
- › Commencement, Fall Open House, and three all-school events a year require 90 to 100 visitor spaces, in addition to regular staff parking.
- › Efficient geometry of the parking garage (including internal ramping, turning radii, etc.) as well as the proposed photovoltaic (PV) array on top of the garage require a garage footprint of certain dimensions.

- › The design includes 10% electric vehicle (EV) charging stations to meet Belmont's new energy code requirements. Based on coordination with Belmont Fire Department for ease of access for emergency vehicles and McLean's desire to provide a safer design for vehicle charging, EV spaces are located in the surface parking lot outside of the garage.
- › Belmont's Zoning regulations require that all Zone 4 parking must be accommodated in Zone 4.

The aforementioned considerations, coupled with the desire to minimize impervious surface and storm water runoff, and create sheltered parking close to the buildings, resulted in a design that includes a parking structure with a capacity for 226 vehicles and a connected surface parking lot with an additional 44-spaces, for a total of 270 parking spaces. This total includes 27 EV charging spaces required to meet Belmont's new energy code requirements.

It is noted that Belmont's Zoning Regulations for Zone 4 allows a maximum parking ratio of up to 3.5 parking spaces for 1,000 gross sf of development area. The two proposed CAC buildings add up to a total of 89,500 sf of gross floor area. Applying the zoning allowed parking ratio to the proposed building area, a maximum of 313 parking spaces are allowed, which is much higher than the proposed parking supply.



4

Traffic Operation Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, intersection operations analyses were conducted with respect to Existing and projected No Build and Build traffic volumes. The operations analyses were conducted using the Synchro traffic engineering software. Traffic signal timing and phasing plans for the signalized study area intersections were obtained from field observations and supplemented by information available in previous traffic studies conducted for nearby projects. The operations 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 on a given roadway segment 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.

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 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 intersections is based on the *Highway Capacity Manual* (HCM). The LOS criteria are summarized in Table 6.

Table 6 Level-of-Service Criteria

Level of Service	Unsignalized Intersections	Signalized Intersections
	Delay (secs/veh)	Delay (secs/veh)
A	0 - 10 seconds	0 - 10 seconds
B	10 - 15 seconds	10 - 20 seconds
C	15 - 25 seconds	20 - 35 seconds
D	25 - 35 seconds	35 - 55 seconds
E	35 - 50 seconds	55 - 80 seconds
F	>50 seconds	>80 seconds

Source: Highway Capacity Manual 6

Intersection Capacity Analysis

Capacity analyses conducted for the study area are summarized in Table 7 and 8. The capacity analyses were conducted for 2024 Existing, 2031 No-Build and 2031 Build conditions. The detailed operations analysis worksheets are provided in the Appendix.

The analysis summary tables show that, in general, the Project will have relatively minimal impact on the operations of the study area intersections. The following summarizes the major conclusions from the operations analysis:

- › The signalized intersection of Trapelo Road at Pleasant Street will operate at acceptable levels of service under the future conditions for most movements with or without the Project. During the morning peak hour, the overall delay increases by approximately four seconds. During the evening peak hour, the overall average delay increase by one second per vehicle.
- › The unsignalized intersection of Olmsted Drive at Pleasant Street will operate at acceptable levels of service under the future conditions for most movements with or without the Project. During the morning peak hour, the delay of the Olmsted Drive southbound approach, for vehicles exiting the Site, increases by approximately nine seconds, with approximately a three-vehicle average queue. The limited traffic exiting the driveway during the evening peak hour results in minimal to no change in the intersection operations during that peak hour. In all conditions, the analysis shows that Olmsted Drive operations do not impact the through traffic flow on Pleasant Street.

Table 7 Signalized Intersection Operations Analysis

	2024 Existing Conditions					2031 No-Build Conditions					2031 Build Conditions				
	v/c ^a	Del ^b	LOS ^c	50Q ^d	95Q ^e	v/c	Del	LOS	50Q	95Q	v/c	Del	LOS	50Q	95Q
Trapelo Road (Route 60) at Pleasant Street (Route 60)															
<i>Weekday Morning</i>															
Trapelo Road EB L	0.56	12	B	43	73	0.62	16	B	47	105	0.81	34	C	106	#220
Trapelo Road EB T	0.71	15	B	290	443	0.77	17	B	332	513	0.77	17	B	332	513
Trapelo Road WB T/R	0.62	20	C	205	310	0.69	23	C	234	353	0.79	28	C	281	#387
Private Driveway NB L/T/R	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0.0	A	0	0
Pleasant Street SB L	0.85	59	E	144	#236	0.88	63	E	158	#297	0.91	67	E	165	#311
Pleasant Street SB R	0.45	18	B	94	129	0.40	16	B	86	129	0.47	16	B	106	175
Overall	0.85	22	C	-	-	0.88	24	C	-	-	0.91	28	C	-	-
<i>Weekday Evening</i>															
Trapelo Road EB L	0.66	17	B	53	128	0.74	25	C	82	172	0.74	25	C	84	173
Trapelo Road EB T	0.59	11	B	201	335	0.65	12	B	246	382	0.65	12	B	250	382
Trapelo Road WB T/R	0.63	21	C	209	326	0.71	24	C	254	355	0.71	24	C	257	355
Private Driveway NB L/T/R	0.00	0	A	0	0	0.00	0.0	A	0	0	0.00	0.0	A	0	0
Pleasant Street SB L	0.74	51	D	113	183	0.79	54	D	126	#223	0.80	54	D	129	#231
Pleasant Street SB R	0.36	13	B	61	98	0.37	14	B	67	114	0.38	14	B	70	120
Overall	0.74	19	B	-	-	0.79	22	C	-	-	0.80	23	C	-	-

a volume to capacity ratio

b delay, measured in seconds

c level of service

d 50th percentile queue in feet

e 95th percentile queue in feet

95th percentile volume exceeds capacity and queues may be longer

Table 8 Unsignalized Intersection Operations Analysis

	2024 Existing Conditions			2031 No-Build Conditions			2031 Build Conditions		
	Del ^a	LOS ^b	95Q ^c	Del	LOS	95Q	Del	LOS	95Q
Olmsted Drive at Pleasant Street (Route 60)									
<i>Weekday Morning</i>									
Olmsted Drive SB L/R	13	B	3	14	B	8	25	D	60
<i>Weekday Evening</i>									
Olmsted Drive SB L/R	15	C	3	17	C	8	17	C	15

a delay, measured in seconds

b level of service

c 95th percentile queue in feet

5

Improvement Measures

The preceding analyses of traffic conditions within the study area indicate that the Project will have relatively minimal impact on traffic capacity or intersection operations. This chapter discusses the operational enhancements that are incorporated into the site plan, and the framework for determining future traffic improvement needs for the Project, as required by the June 2024 TMMA.

Operational Enhancements

All project trips will access the site via Olmsted Drive at its intersection with Pleasant Street. The recommendations below will be incorporated into the Project design and Site operations.

- › Refresh Olmsted Drive striping of travel lanes and centerlines, with signage provided where appropriate.
- › Vehicles exiting the Project site onto Olmsted Drive will be placed under STOP-sign control, with a painted STOP bar.
- › Landscaping or building features near the new driveways will be designed to not limit lines of sight for motorists.
- › Snow windrows within sight triangle areas will be promptly removed where such accumulations would impede sight lines.
- › The McLean Hospital shuttle service that currently operates between Zone 5 and the Waverley Square MBTA station will be available to future users of Zone 4.
- › The proponent will make available public transportation schedules which will be posted in common areas of the two proposed buildings.
- › Secure bicycle parking will be provided in the proposed garage.

2024 TMMA - Traffic Monitoring and Mitigation Agreement

As part of the Amended and Restated Traffic Monitoring and Mitigation Agreement (TMMA) adopted by Town Meeting vote on June 26, 2024, the Proponent is subject to traffic mitigation commitments as follows:

- › Contribute up to \$210,000 towards the upgrade of the existing traffic signal at the intersection of Mill Street at McLean driveway. The contribution amount is inclusive of the remaining \$110,000 that is due to the Town of Belmont under the superseded 1999 TMMA.
- › At the direction of the Town Engineer, perform a post-occupancy traffic signal warrant analysis for the intersection of Pleasant Street at Olmsted Drive. When the traffic volumes at the intersection satisfy the thresholds for consideration of traffic signal control, prepare design plans for signaling the intersection. Within 12 months of receipt of necessary approvals from the Select Board, construct the traffic signal control at the intersection.

Signal Warrants Analysis: Pleasant Street at Olmsted Drive

Per Massachusetts General Law, Chapter 85, Section 2, municipalities are required to adhere to the requirements of the Manual on Uniform Traffic Control Devices (MUTCD) with regard to the criteria that shall be satisfied before the consideration of signalization. To provide a baseline for comparison to the analysis that will be presented in the post occupancy traffic signal warrant analysis, a preliminary warrant analysis has been conducted using currently available traffic data and site generated empirical traffic estimates. The analysis methodology and findings are presented below.

Data Collection

Concurrent with the peak hour TMC and 48-hour ATR counts within the study area, TMC data was collected at the intersection of Pleasant Street at Olmsted Drive on November 21, 2024 from 7 AM to 7 PM to support the traffic signal warrant analysis.

Preliminary Signal Warrant Evaluation

The MUTCD includes nine warrants, including three vehicular traffic volume-based warrants, to justify the installation of a traffic signal system. While the satisfaction of any or several of the warranting conditions does not, in and of itself, require the installation of a traffic signal, satisfaction of the warrants indicates that traffic signal control may be considered further as part of an engineering study. More importantly, if none of the traffic signal warrants outlined by the MUTCD are satisfied, traffic control shall not be considered any further.

A review of the traffic data developed for this Study indicates that neither the pedestrian traffic at the intersection nor the crash experience would support justification of traffic signal control based on those two criteria. Other non-traffic volume-based criteria were also not determined to apply to the location. Therefore, the three vehicular traffic volume-based warrants outlined below were evaluated to determine whether the estimated future traffic on Olmsted Drive would be satisfied.

- **Warrant 1 (Eight-Hour Vehicular Volume):** Warrant 1 is satisfied if either of Condition A or B is met. In addition, Warrant 1 can be satisfied by 80 percent satisfaction of both Condition A and Condition B.
 - **Condition A (Minimum Vehicular Volume):** Satisfied when the volume of intersecting traffic (major and minor streets) exceeds MUTCD thresholds for eight or more hours.
 - **Condition B (Interruption of Continuous Traffic):** Satisfied when the volume of major street traffic is so heavy that minor street traffic suffers excessive delay in entering or crossing the major street for eight or more hours.
- **Warrant 2 (Four-Hour Vehicular Volume):** Satisfied when volumes (major and minor streets) exceed MUTCD thresholds for four or more hours.
- **Warrant 3 (Peak Hour):** Satisfied when for the peak hour of a typical day, major and minor street traffic exceeds MUTCD thresholds.

Table 9 summarizes the twelve (12) highest hours of estimated traffic volumes for Olmsted Drive at Pleasant Street and whether the combination of volumes meet any of the three vehicle volume-based traffic signal warrants: Warrant 1 (Eight-Hour), Warrant 2 (Four-Hour), and Warrant 3 (Peak-Hour). The traffic volumes for Olmsted Drive include existing traffic on the roadway and estimated future traffic for Zones 3 (by others) and the proposed CAC Project in Zone 4.

Warrant Analysis Findings

As shown in Table 9, the results of the warrants evaluation for the intersection of Olmsted Drive at Pleasant Street are as follows:

- Warrant 1 (eight-hour volume) – Warrant is not satisfied.
- Warrant 2 (four-hour vehicle volume) – Warrant is not satisfied.
- Warrant 3 (peak hour volume) – Warrant is not satisfied.

This analysis has determined that the installation of a traffic control signal at the intersection is not warranted under any of the conditions reviewed as part of the Study. The analysis worksheets are included in the appendix. As shown in the worksheets, the estimates of future traffic into and out of Olmsted Drive do not exceed the peak hour traffic signal warrant threshold.

The Proponent will follow the requirements of the June 2024 TMMA to perform a post occupancy traffic signal warrant analysis to determine if actual traffic volumes and operational data at the intersection in the future would satisfy the warrants that support

further consideration of traffic signal control. It is noted that typically, either the eight-hour warrant (Warrant #1) or the four-hour warrant (Warrant #2) be satisfied before signalization is considered as a potential improvement option.

Table 9 Volume-Based Warrants: Olmsted Drive at Pleasant Street

Hour	Entering Volume on Minor Road	Entering Volume on Major Road		Total Entering Volume on Major Road	Meetings the following volume-based warrants?				
		Eastbound	Westbound		1A	1B	80%	2	3
7-8 AM	45	350	357	707	No	No	No	No	No
8-9 AM	142	408	523	931	No	No	No	No	No
9-10 AM	30	300	482	782	No	No	No	No	No
10-11 AM	29	239	368	607	No	No	No	No	No
11-12 AM	26	301	331	632	No	No	No	No	No
12-1 PM	77	301	337	638	No	No	No	No	No
1-2 PM	35	278	324	602	No	No	No	No	No
2-3 PM	131	383	423	806	No	No	yes	No	No
3-4 PM	103	433	427	860	No	No	No	No	No
4-5 PM	83	489	401	902	No	No	No	No	No
5-6 PM	55	455	418	873	No	No	No	No	No
6-7 PM	23	381	357	738	No	No	No	No	No
Warrant					1			2	3
Met?					No			No	No

6

Conclusions

The transportation analyses presented in this Study evaluates the impacts of the proposed Zone 4 development of the Child and Adolescent Campus (CAC) facility.

The proposed CAC facility will consist of two new buildings that will house program and support space for the Arlington School, Pathways Academy, and Residential/Partial Hospital Program. These programs are being relocated from their existing locations in Zone 5 and in the Town of Arlington. In addition, 270 parking spaces, located in a parking garage and surface parking lot, would be constructed to support the CAC.

New traffic count data for the study area roadways and intersections was collected in November 2024 for use in the analysis. The analysis takes into consideration the previously approved Zone 3 development by others as well as general traffic growth in the area.

The Study estimates that, on a daily basis, the Project in Zone 4 is estimated to generate approximately 880 trips (440 enter/440 exit). Included in the total daily traffic estimate is 284 vehicle trips (176 enter/108 exit) during the weekday morning commute peak hour, and 24 vehicle trips (0 enter/24 exit) during the weekday evening commute peak hour. A majority of these trips already occur on the area roadways (traveling to/from Zone 5) and will be redirected to Zone 4.

Intersection operations analyses were conducted for the existing, No-Build, and Build conditions for the weekday morning and evening peak hours to quantify traffic impacts unrelated to the Project (i.e., background traffic growth) as well as site generated traffic. The analysis indicates that Project generated traffic will have a relatively limited effect on the traffic operations in the area.

The Study highlights certain access and circulation enhancements that are part of the site plan to enhance multimodal access to/from the Site.

Traffic signal warrant analysis indicates that the estimated traffic flow at the intersection of Pleasant Street at Olmsted Drive does not exceed the thresholds for further consideration of traffic signal control at this time.

In addition to funding traffic signal upgrades at the intersection of Mill Street at McLean driveway in compliance with the 2024 TMMA requirements, the Proponent also commits to performing a post occupancy traffic signal warrant analysis for the intersection of Pleasant Street at Olmsted Drive to determine future signalization needs for the location.



A

Appendix

1. Site Plan
2. Turning Movement Counts
3. Automatic Traffic Recorder
4. Seasonal Adjustment
5. Motor Vehicle Crash Data
6. Public Transportation Schedule
7. Background Development
8. General Background Traffic Growth
9. Trip Generation
10. Trip Distribution
11. Traffic Signal Warrant Analysis (TSWA)
12. Capacity Analysis

Site Plan

Turning Movement Counts

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Cars and Heavy Vehicles (Combined)

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	76	0	76	56	1	0	57	134
7:15 AM	2	3	0	5	1	84	0	85	63	1	0	64	154
7:30 AM	2	1	0	3	0	96	0	96	102	0	0	102	201
7:45 AM	2	0	0	2	0	101	0	101	81	1	0	82	185
Total	7	4	0	11	1	357	0	358	302	3	0	305	674
8:00 AM	1	0	0	1	0	141	0	141	71	2	2	75	217
8:15 AM	2	0	0	2	2	126	0	128	65	2	0	67	197
8:30 AM	1	2	0	3	0	126	0	126	83	1	0	84	213
8:45 AM	2	2	0	4	1	130	0	131	60	2	0	62	197
Total	6	4	0	10	3	523	0	526	279	7	2	288	824
9:00 AM	1	2	0	3	0	146	0	146	57	1	0	58	207
9:15 AM	3	0	0	3	1	119	0	120	78	3	0	81	204
9:30 AM	0	1	0	1	0	93	0	93	78	2	0	80	174
9:45 AM	2	2	0	4	0	124	0	124	57	0	0	57	185
Total	6	5	0	11	1	482	0	483	270	6	0	276	770
10:00 AM	0	0	0	0	1	101	0	102	59	0	0	59	161
10:15 AM	0	1	0	1	1	85	0	86	57	1	0	58	145
10:30 AM	0	0	0	0	0	84	0	84	61	0	0	61	145
10:45 AM	0	0	0	0	0	98	0	98	51	2	0	53	151
Total	0	1	0	1	2	368	0	370	228	3	0	231	602
11:00 AM	1	0	0	1	1	79	0	80	73	1	0	74	155
11:15 AM	2	0	1	3	1	84	1	86	72	1	0	73	162
11:30 AM	1	1	0	2	3	73	0	76	71	2	0	73	151
11:45 AM	2	1	0	3	2	95	0	97	70	1	0	71	171
Total	6	2	1	9	7	331	1	339	286	5	0	291	639
12:00 PM	1	2	0	3	0	75	0	75	54	2	0	56	134
12:15 PM	1	2	0	3	2	78	0	80	70	2	0	72	155
12:30 PM	2	1	0	3	0	97	0	97	77	2	0	79	179
12:45 PM	3	0	0	3	0	87	0	87	49	0	0	49	139
Total	7	5	0	12	2	337	0	339	250	6	0	256	607
1:00 PM	2	6	0	8	2	80	1	83	53	4	0	57	148
1:15 PM	3	0	0	3	1	76	0	77	60	0	0	60	140
1:30 PM	1	1	0	2	2	97	0	99	70	2	0	72	173
1:45 PM	2	1	0	3	2	71	1	74	76	2	0	78	155
Total	8	8	0	16	7	324	2	333	259	8	0	267	616
2:00 PM	3	0	0	3	2	88	0	90	63	0	0	63	156
2:15 PM	3	1	0	4	3	97	0	100	66	2	0	68	172
2:30 PM	1	2	0	3	3	139	0	142	83	3	0	86	231
2:45 PM	3	1	0	4	2	99	0	101	93	2	0	95	200
Total	10	4	0	14	10	423	0	433	305	7	0	312	759
3:00 PM	1	1	0	2	1	88	0	89	96	2	0	98	189
3:15 PM	3	1	0	4	0	102	0	102	84	2	0	86	192
3:30 PM	2	1	0	3	3	128	0	131	111	1	0	112	246
3:45 PM	1	0	0	1	1	109	0	110	112	3	0	115	226
Total	7	3	0	10	5	427	0	432	403	8	0	411	853
4:00 PM	1	1	0	2	2	112	0	114	101	2	0	103	219
4:15 PM	1	2	0	3	3	91	0	94	119	0	0	119	216
4:30 PM	3	0	0	3	3	100	0	103	108	1	0	109	215
4:45 PM	2	1	0	3	1	98	0	99	126	2	0	128	230
Total	7	4	0	11	9	401	0	410	454	5	0	459	880
5:00 PM	0	0	0	0	0	110	0	110	139	0	0	139	249
5:15 PM	1	3	0	4	0	93	0	93	99	1	0	100	197
5:30 PM	3	1	0	4	3	114	0	117	99	2	0	101	222
5:45 PM	0	2	0	2	0	101	0	101	95	1	0	96	199
Total	4	6	0	10	3	418	0	421	432	4	0	436	867
6:00 PM	0	0	0	0	1	106	1	108	106	0	0	106	214
6:15 PM	2	0	0	2	2	82	0	84	95	1	1	97	183
6:30 PM	2	1	0	3	1	94	0	95	75	1	0	76	174
6:45 PM	0	0	0	0	0	75	0	75	88	0	0	88	163
Total	4	1	0	5	4	357	1	362	364	2	1	367	734
Grand Total	72	47	1	120	54	4748	4	4806	3832	64	3	3899	8825
Approach %	60.0	39.2	0.8		1.1	98.8	0.1		98.3	1.6	0.1		
Total %	0.8	0.5	0.0	1.4	0.6	53.8	0.0	54.5	43.4	0.7	0.0	44.2	

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Cars and Heavy Vehicles (Combined)

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Exiting Leg Total	119				3883				4823				8825
Cars	67	46	1	114	53	4613	4	4670	3733	59	3	3795	8579
% Cars	93.1	97.9	100.0	95.0	98.1	97.2	100.0	97.2	97.4	92.2	100.0	97.3	97.2
Exiting Leg Total	113				3783				4683				8579
Heavy Vehicles	5	1	0	6	1	135	0	136	99	5	0	104	246
% Heavy Vehicles	6.9	2.1	0.0	5.0	1.9	2.8	0.0	2.8	2.6	7.8	0.0	2.7	2.8
Exiting Leg Total	6				100				140				246

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
8:00 AM	1	0	0	1	0	141	0	141	71	2	2	75	217
8:15 AM	2	0	0	2	2	126	0	128	65	2	0	67	197
8:30 AM	1	2	0	3	0	126	0	126	83	1	0	84	213
8:45 AM	2	2	0	4	1	130	0	131	60	2	0	62	197
Total Volume	6	4	0	10	3	523	0	526	279	7	2	288	824
% Approach Total	60.0	40.0	0.0		0.6	99.4	0.0		96.9	2.4	0.7		
PHF	0.750	0.500	0.000	0.625	0.375	0.927	0.000	0.933	0.840	0.875	0.250	0.857	0.949
Cars	6	4	0	10	3	513	0	516	273	7	2	282	808
Cars %	100.0	100.0	0.0	100.0	100.0	98.1	0.0	98.1	97.8	100.0	100.0	97.9	98.1
Heavy Vehicles	0	0	0	0	0	10	0	10	6	0	0	6	16
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9	2.2	0.0	0.0	2.1	1.9
Cars Enter Leg	6	4	0	10	3	513	0	516	273	7	2	282	808
Heavy Enter Leg	0	0	0	0	0	10	0	10	6	0	0	6	16
Total Entering Leg	6	4	0	10	3	523	0	526	279	7	2	288	824
Cars Exiting Leg	10				277				521				808
Heavy Exiting Leg	0				6				10				16
Total Exiting Leg	10				283				531				824

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
1:45 PM	2	1	0	3	2	71	1	74	76	2	0	78	155
2:00 PM	3	0	0	3	2	88	0	90	63	0	0	63	156
2:15 PM	3	1	0	4	3	97	0	100	66	2	0	68	172
2:30 PM	1	2	0	3	3	139	0	142	83	3	0	86	231
Total Volume	9	4	0	13	10	395	1	406	288	7	0	295	714
% Approach Total	69.2	30.8	0.0		2.5	97.3	0.2		97.6	2.4	0.0		
PHF	0.750	0.500	0.000	0.813	0.833	0.710	0.250	0.715	0.867	0.583	0.000	0.858	0.773
Cars	8	4	0	12	10	388	1	399	278	6	0	284	695
Cars %	88.9	100.0	0.0	92.3	100.0	98.2	100.0	98.3	96.5	85.7	0.0	96.3	97.3
Heavy Vehicles	1	0	0	1	0	7	0	7	10	1	0	11	19
Heavy Vehicles %	11.1	0.0	0.0	7.7	0.0	1.8	0.0	1.7	3.5	14.3	0.0	3.7	2.7
Cars Enter Leg	8	4	0	12	10	388	1	399	278	6	0	284	695
Heavy Enter Leg	1	0	0	1	0	7	0	7	10	1	0	11	19
Total Entering Leg	9	4	0	13	10	395	1	406	288	7	0	295	714
Cars Exiting Leg	16				283				396				695
Heavy Exiting Leg	1				10				8				19
Total Exiting Leg	17				293				404				714

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:15 PM	1	2	0	3	3	91	0	94	119	0	0	119	216
4:30 PM	3	0	0	3	3	100	0	103	108	1	0	109	215
4:45 PM	2	1	0	3	1	98	0	99	126	2	0	128	230
5:00 PM	0	0	0	0	0	110	0	110	139	0	0	139	249
Total Volume	6	3	0	9	7	399	0	406	492	3	0	495	910
% Approach Total	66.7	33.3	0.0		1.7	98.3	0.0		99.4	0.6	0.0		
PHF	0.500	0.375	0.000	0.750	0.583	0.907	0.000	0.923	0.885	0.375	0.000	0.890	0.914
Cars	6	3	0	9	7	391	0	398	492	3	0	495	902

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Cars and Heavy Vehicles (Combined)

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Cars %	100.0	100.0	0.0	100.0	100.0	98.0	0.0	98.0	100.0	100.0	0.0	100.0	99.1
Heavy Vehicles	0	0	0	0	0	8	0	8	0	0	0	0	8
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.9
Cars Enter Leg	6	3	0	9	7	391	0	398	492	3	0	495	902
Heavy Enter Leg	0	0	0	0	0	8	0	8	0	0	0	0	8
Total Entering Leg	6	3	0	9	7	399	0	406	492	3	0	495	910
Cars Exiting Leg				10				495				397	902
Heavy Exiting Leg				0				0				8	8
Total Exiting Leg				10				495				405	910

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Class:

Cars

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	74	0	74	54	1	0	55	130
7:15 AM	2	3	0	5	1	80	0	81	63	1	0	64	150
7:30 AM	2	1	0	3	0	92	0	92	100	0	0	100	195
7:45 AM	2	0	0	2	0	100	0	100	78	1	0	79	181
Total	7	4	0	11	1	346	0	347	295	3	0	298	656
8:00 AM	1	0	0	1	0	136	0	136	69	2	2	73	210
8:15 AM	2	0	0	2	2	125	0	127	65	2	0	67	196
8:30 AM	1	2	0	3	0	123	0	123	81	1	0	82	208
8:45 AM	2	2	0	4	1	129	0	130	58	2	0	60	194
Total	6	4	0	10	3	513	0	516	273	7	2	282	808
9:00 AM	1	2	0	3	0	140	0	140	54	1	0	55	198
9:15 AM	3	0	0	3	1	111	0	112	73	3	0	76	191
9:30 AM	0	1	0	1	0	92	0	92	75	1	0	76	169
9:45 AM	1	2	0	3	0	117	0	117	55	0	0	55	175
Total	5	5	0	10	1	460	0	461	257	5	0	262	733
10:00 AM	0	0	0	0	1	97	0	98	57	0	0	57	155
10:15 AM	0	1	0	1	1	81	0	82	56	1	0	57	140
10:30 AM	0	0	0	0	0	83	0	83	58	0	0	58	141
10:45 AM	0	0	0	0	0	94	0	94	47	1	0	48	142
Total	0	1	0	1	2	355	0	357	218	2	0	220	578
11:00 AM	1	0	0	1	1	76	0	77	69	1	0	70	148
11:15 AM	1	0	1	2	1	79	1	81	68	1	0	69	152
11:30 AM	1	1	0	2	3	70	0	73	69	2	0	71	146
11:45 AM	2	1	0	3	2	86	0	88	64	1	0	65	156
Total	5	2	1	8	7	311	1	319	270	5	0	275	602
12:00 PM	1	2	0	3	0	71	0	71	52	2	0	54	128
12:15 PM	1	1	0	2	2	73	0	75	65	1	0	66	143
12:30 PM	2	1	0	3	0	95	0	95	74	2	0	76	174
12:45 PM	3	0	0	3	0	85	0	85	47	0	0	47	135
Total	7	4	0	11	2	324	0	326	238	5	0	243	580
1:00 PM	2	6	0	8	2	74	1	77	52	4	0	56	141
1:15 PM	3	0	0	3	1	74	0	75	58	0	0	58	136
1:30 PM	1	1	0	2	2	97	0	99	68	2	0	70	171
1:45 PM	1	1	0	2	2	70	1	73	74	1	0	75	150
Total	7	8	0	15	7	315	2	324	252	7	0	259	598
2:00 PM	3	0	0	3	2	84	0	86	60	0	0	60	149
2:15 PM	3	1	0	4	3	96	0	99	63	2	0	65	168
2:30 PM	1	2	0	3	3	138	0	141	81	3	0	84	228
2:45 PM	3	1	0	4	2	95	0	97	91	2	0	93	194
Total	10	4	0	14	10	413	0	423	295	7	0	302	739
3:00 PM	1	1	0	2	1	87	0	88	90	1	0	91	181
3:15 PM	2	1	0	3	0	100	0	100	82	2	0	84	187
3:30 PM	2	1	0	3	3	127	0	130	109	1	0	110	243
3:45 PM	1	0	0	1	1	107	0	108	109	3	0	112	221
Total	6	3	0	9	5	421	0	426	390	7	0	397	832
4:00 PM	1	1	0	2	2	111	0	113	100	2	0	102	217
4:15 PM	1	2	0	3	3	88	0	91	119	0	0	119	213
4:30 PM	3	0	0	3	3	98	0	101	108	1	0	109	213
4:45 PM	2	1	0	3	1	97	0	98	126	2	0	128	229
Total	7	4	0	11	9	394	0	403	453	5	0	458	872
5:00 PM	0	0	0	0	0	108	0	108	139	0	0	139	247
5:15 PM	1	3	0	4	0	90	0	90	99	1	0	100	194
5:30 PM	3	1	0	4	3	113	0	116	97	2	0	99	219
5:45 PM	0	2	0	2	0	99	0	99	94	1	0	95	196
Total	4	6	0	10	3	410	0	413	429	4	0	433	856
6:00 PM	0	0	0	0	1	105	1	107	106	0	0	106	213
6:15 PM	1	0	0	1	1	79	0	80	95	1	1	97	178
6:30 PM	2	1	0	3	1	92	0	93	74	1	0	75	171
6:45 PM	0	0	0	0	0	75	0	75	88	0	0	88	163
Total	3	1	0	4	3	351	1	355	363	2	1	366	725
Grand Total	67	46	1	114	53	4613	4	4670	3733	59	3	3795	8579
Approach %	58.8	40.4	0.9		1.1	98.8	0.1		98.4	1.6	0.1		

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Cars

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Total %	0.8	0.5	0.0	1.3	0.6	53.8	0.0	54.4	43.5	0.7	0.0	44.2	
Exiting Leg Total	113				3783				4683				8579

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
8:00 AM	1	0	0	1	0	136	0	136	69	2	2	73	210
8:15 AM	2	0	0	2	2	125	0	127	65	2	0	67	196
8:30 AM	1	2	0	3	0	123	0	123	81	1	0	82	208
8:45 AM	2	2	0	4	1	129	0	130	58	2	0	60	194
Total Volume	6	4	0	10	3	513	0	516	273	7	2	282	808
% Approach Total	60.0	40.0	0.0		0.6	99.4	0.0		96.8	2.5	0.7		
PHF	0.750	0.500	0.000	0.625	0.375	0.943	0.000	0.949	0.843	0.875	0.250	0.860	0.962
Entering Leg	6	4	0	10	3	513	0	516	273	7	2	282	808
Exiting Leg	10				277				521				808
Total	20				793				803				1616

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
1:45 PM	1	1	0	2	2	70	1	73	74	1	0	75	150
2:00 PM	3	0	0	3	2	84	0	86	60	0	0	60	149
2:15 PM	3	1	0	4	3	96	0	99	63	2	0	65	168
2:30 PM	1	2	0	3	3	138	0	141	81	3	0	84	228
Total Volume	8	4	0	12	10	388	1	399	278	6	0	284	695
% Approach Total	66.7	33.3	0.0		2.5	97.2	0.3		97.9	2.1	0.0		
PHF	0.667	0.500	0.000	0.750	0.833	0.703	0.250	0.707	0.858	0.500	0.000	0.845	0.762
Entering Leg	8	4	0	12	10	388	1	399	278	6	0	284	695
Exiting Leg	16				283				396				695
Total	28				682				680				1390

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:15 PM	1	2	0	3	3	88	0	91	119	0	0	119	213
4:30 PM	3	0	0	3	3	98	0	101	108	1	0	109	213
4:45 PM	2	1	0	3	1	97	0	98	126	2	0	128	229
5:00 PM	0	0	0	0	0	108	0	108	139	0	0	139	247
Total Volume	6	3	0	9	7	391	0	398	492	3	0	495	902
% Approach Total	66.7	33.3	0.0		1.8	98.2	0.0		99.4	0.6	0.0		
PHF	0.500	0.375	0.000	0.750	0.583	0.905	0.000	0.921	0.885	0.375	0.000	0.890	0.913
Entering Leg	6	3	0	9	7	391	0	398	492	3	0	495	902
Exiting Leg	10				495				397				902
Total	19				893				892				1804

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



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

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
7:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	4
7:30 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
7:45 AM	0	0	0	0	0	1	0	1	3	0	0	3	4
Total	0	0	0	0	0	11	0	11	7	0	0	7	18
8:00 AM	0	0	0	0	0	5	0	5	2	0	0	2	7
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
8:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	0	0	0	0	10	0	10	6	0	0	6	16
9:00 AM	0	0	0	0	0	6	0	6	3	0	0	3	9
9:15 AM	0	0	0	0	0	8	0	8	5	0	0	5	13
9:30 AM	0	0	0	0	0	1	0	1	3	1	0	4	5
9:45 AM	1	0	0	1	0	7	0	7	2	0	0	2	10
Total	1	0	0	1	0	22	0	22	13	1	0	14	37
10:00 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
10:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	5
10:30 AM	0	0	0	0	0	1	0	1	3	0	0	3	4
10:45 AM	0	0	0	0	0	4	0	4	4	1	0	5	9
Total	0	0	0	0	0	13	0	13	10	1	0	11	24
11:00 AM	0	0	0	0	0	3	0	3	4	0	0	4	7
11:15 AM	1	0	0	1	0	5	0	5	4	0	0	4	10
11:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
11:45 AM	0	0	0	0	0	9	0	9	6	0	0	6	15
Total	1	0	0	1	0	20	0	20	16	0	0	16	37
12:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
12:15 PM	0	1	0	1	0	5	0	5	5	1	0	6	12
12:30 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
12:45 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total	0	1	0	1	0	13	0	13	12	1	0	13	27
1:00 PM	0	0	0	0	0	6	0	6	1	0	0	1	7
1:15 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
1:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
1:45 PM	1	0	0	1	0	1	0	1	2	1	0	3	5
Total	1	0	0	1	0	9	0	9	7	1	0	8	18
2:00 PM	0	0	0	0	0	4	0	4	3	0	0	3	7
2:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
2:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
2:45 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
Total	0	0	0	0	0	10	0	10	10	0	0	10	20
3:00 PM	0	0	0	0	0	1	0	1	6	1	0	7	8
3:15 PM	1	0	0	1	0	2	0	2	2	0	0	2	5
3:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
3:45 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
Total	1	0	0	1	0	6	0	6	13	1	0	14	21
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	7	0	7	1	0	0	1	8
5:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
5:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
5:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
5:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	0	0	0	0	0	8	0	8	3	0	0	3	11
6:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
6:15 PM	1	0	0	1	1	3	0	4	0	0	0	0	5
6:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	6	0	7	1	0	0	1	9
Grand Total	5	1	0	6	1	135	0	136	99	5	0	104	246
Approach %	83.3	16.7	0.0		0.7	99.3	0.0		95.2	4.8	0.0		
Total %	2.0	0.4	0.0	2.4	0.4	54.9	0.0	55.3	40.2	2.0	0.0	42.3	

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



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

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Exiting Leg Total	6				100				140				246
Buses	1	1	0	2	0	20	0	20	12	2	0	14	36
% Buses	20.0	100.0	0.0	33.3	0.0	14.8	0.0	14.7	12.1	40.0	0.0	13.5	14.6
Exiting Leg Total	2				13				21				36
Single-Unit Trucks	4	0	0	4	1	102	0	103	79	3	0	82	189
% Single-Unit	80.0	0.0	0.0	66.7	100.0	75.6	0.0	75.7	79.8	60.0	0.0	78.8	76.8
Exiting Leg Total	4				79				106				189
Articulated Trucks	0	0	0	0	0	13	0	13	8	0	0	8	21
% Articulated	0.0	0.0	0.0	0.0	0.0	9.6	0.0	9.6	8.1	0.0	0.0	7.7	8.5
Exiting Leg Total	0				8				13				21

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

9:00 AM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
9:00 AM	0	0	0	0	0	6	0	6	3	0	0	3	9
9:15 AM	0	0	0	0	0	8	0	8	5	0	0	5	13
9:30 AM	0	0	0	0	0	1	0	1	3	1	0	4	5
9:45 AM	1	0	0	1	0	7	0	7	2	0	0	2	10
Total Volume	1	0	0	1	0	22	0	22	13	1	0	14	37
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		92.9	7.1	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.688	0.000	0.688	0.650	0.250	0.000	0.700	0.712
Buses	0	0	0	0	0	3	0	3	0	0	0	0	3
Buses %	0.0	0.0	0.0	0.0	0.0	13.6	0.0	13.6	0.0	0.0	0.0	0.0	8.1
Single-Unit Trucks	1	0	0	1	0	18	0	18	13	1	0	14	33
Single-Unit %	100.0	0.0	0.0	100.0	0.0	81.8	0.0	81.8	100.0	100.0	0.0	100.0	89.2
Articulated Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	4.5	0.0	4.5	0.0	0.0	0.0	0.0	2.7
Buses	0	0	0	0	0	3	0	3	0	0	0	0	3
Single-Unit Trucks	1	0	0	1	0	18	0	18	13	1	0	14	33
Articulated Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Entering Leg	1	0	0	1	0	22	0	22	13	1	0	14	37
Buses	0				0				3				3
Single-Unit Trucks	1				13				19				33
Articulated Trucks	0				0				1				1
Total Exiting Leg	1				13				23				37

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

11:30 AM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
11:45 AM	0	0	0	0	0	9	0	9	6	0	0	6	15
12:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
12:15 PM	0	1	0	1	0	5	0	5	5	1	0	6	12
Total Volume	0	1	0	1	0	21	0	21	15	1	0	16	38
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		93.8	6.3	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.583	0.000	0.583	0.625	0.250	0.000	0.667	0.633
Buses	0	1	0	1	0	1	0	1	2	1	0	3	5
Buses %	0.0	100.0	0.0	100.0	0.0	4.8	0.0	4.8	13.3	100.0	0.0	18.8	13.2
Single-Unit Trucks	0	0	0	0	0	18	0	18	13	0	0	13	31
Single-Unit %	0.0	0.0	0.0	0.0	0.0	85.7	0.0	85.7	86.7	0.0	0.0	81.3	81.6
Articulated Trucks	0	0	0	0	0	2	0	2	0	0	0	0	2
Articulated %	0.0	0.0	0.0	0.0	0.0	9.5	0.0	9.5	0.0	0.0	0.0	0.0	5.3
Buses	0	1	0	1	0	1	0	1	2	1	0	3	5
Single-Unit Trucks	0	0	0	0	0	18	0	18	13	0	0	13	31
Articulated Trucks	0	0	0	0	0	2	0	2	0	0	0	0	2
Total Entering Leg	0	1	0	1	0	21	0	21	15	1	0	16	38
Buses	1				3				1				5
Single-Unit Trucks	0				13				18				31
Articulated Trucks	0				0				2				2
Total Exiting Leg	1				16				21				38

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



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

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:30 PM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
2:45 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
3:00 PM	0	0	0	0	0	1	0	1	6	1	0	7	8
3:15 PM	1	0	0	1	0	2	0	2	2	0	0	2	5
Total Volume	1	0	0	1	0	8	0	8	12	1	0	13	22
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		92.3	7.7	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.500	0.500	0.250	0.000	0.464	0.688
Buses	0	0	0	0	0	0	0	0	2	0	0	2	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	15.4	9.1
Single-Unit Trucks	1	0	0	1	0	5	0	5	8	1	0	9	15
Single-Unit %	100.0	0.0	0.0	100.0	0.0	62.5	0.0	62.5	66.7	100.0	0.0	69.2	68.2
Articulated Trucks	0	0	0	0	0	3	0	3	2	0	0	2	5
Articulated %	0.0	0.0	0.0	0.0	0.0	37.5	0.0	37.5	16.7	0.0	0.0	15.4	22.7
Buses	0	0	0	0	0	0	0	0	2	0	0	2	2
Single-Unit Trucks	1	0	0	1	0	5	0	5	8	1	0	9	15
Articulated Trucks	0	0	0	0	0	3	0	3	2	0	0	2	5
Total Entering Leg	1	0	0	1	0	8	0	8	12	1	0	13	22
Buses				0				2				0	2
Single-Unit Trucks				1				8				6	15
Articulated Trucks				0				2				3	5
Total Exiting Leg				1				12				9	22

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Buses

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	0	0	0	3	0	3	0	0	0	0	3
10:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
11:00 AM	0	0	0	0	0	2	0	2	1	0	0	1	3
11:15 AM	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
11:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	0	0	0	0	3	0	3	3	0	0	3	6
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
12:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
12:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	1	0	1	0	0	0	0	3	1	0	4	5
1:00 PM	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
1:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
1:45 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	1	0	0	1	0	1	0	1	1	1	0	2	4
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	1	0	1	2	0	0	2	3
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:30 PM	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
Total	0	0	0	0	0	2	0	2	1	0	0	1	3
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	0	0	0	5	0	5	0	0	0	0	5
6:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
6:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	1	0	0	1	3
Grand Total	1	1	0	2	0	20	0	20	12	2	0	14	36

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Buses

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Approach %	50.0	50.0	0.0		0.0	100.0	0.0		85.7	14.3	0.0		
Total %	2.8	2.8	0.0	5.6	0.0	55.6	0.0	55.6	33.3	5.6	0.0	38.9	
Exiting Leg Total	2				13				21				36

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

9:15 AM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
9:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
10:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	4
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	4	0	4	0	0	0	0	4
Exiting Leg	0				0				4				4
Total	0				4				4				8

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

11:45 AM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
12:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	1	0	1	0	1	0	1	4	1	0	5	7
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		80.0	20.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.500	0.250	0.000	0.625	0.583
Entering Leg	0	1	0	1	0	1	0	1	4	1	0	5	7
Exiting Leg	1				5				1				7
Total	2				6				6				14

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

3:30 PM	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
3:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	3	0	3	2	0	0	2	5
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.500	0.000	0.000	0.500	0.625
Entering Leg	0	0	0	0	0	3	0	3	2	0	0	2	5
Exiting Leg	0				2				3				5
Total	0				5				5				10

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Single-Unit Trucks

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
7:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
7:30 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
7:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	0	0	0	0	9	0	9	6	0	0	6	15
8:00 AM	0	0	0	0	0	5	0	5	1	0	0	1	6
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
8:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	0	0	0	0	9	0	9	5	0	0	5	14
9:00 AM	0	0	0	0	0	6	0	6	3	0	0	3	9
9:15 AM	0	0	0	0	0	7	0	7	5	0	0	5	12
9:30 AM	0	0	0	0	0	1	0	1	3	1	0	4	5
9:45 AM	1	0	0	1	0	4	0	4	2	0	0	2	7
Total	1	0	0	1	0	18	0	18	13	1	0	14	33
10:00 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
10:15 AM	0	0	0	0	0	3	0	3	1	0	0	1	4
10:30 AM	0	0	0	0	0	1	0	1	3	0	0	3	4
10:45 AM	0	0	0	0	0	4	0	4	3	1	0	4	8
Total	0	0	0	0	0	11	0	11	9	1	0	10	21
11:00 AM	0	0	0	0	0	1	0	1	3	0	0	3	4
11:15 AM	1	0	0	1	0	3	0	3	4	0	0	4	8
11:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
11:45 AM	0	0	0	0	0	7	0	7	4	0	0	4	11
Total	1	0	0	1	0	14	0	14	13	0	0	13	28
12:00 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
12:15 PM	0	0	0	0	0	5	0	5	5	0	0	5	10
12:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
12:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	0	0	0	0	0	12	0	12	9	0	0	9	21
1:00 PM	0	0	0	0	0	5	0	5	1	0	0	1	6
1:15 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
1:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	7	0	7	6	0	0	6	13
2:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
2:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
2:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
2:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
Total	0	0	0	0	0	9	0	9	6	0	0	6	15
3:00 PM	0	0	0	0	0	0	0	0	5	1	0	6	6
3:15 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
3:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
3:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	1	0	0	1	0	3	0	3	10	1	0	11	15
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	4
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	2	0	2	2	0	0	2	4
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	1	0	0	1	1	2	0	3	0	0	0	0	4
6:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	4	0	5	0	0	0	0	6
Grand Total	4	0	0	4	1	102	0	103	79	3	0	82	189

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Single-Unit Trucks

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Approach %	100.0	0.0	0.0		1.0	99.0	0.0		96.3	3.7	0.0		
Total %	2.1	0.0	0.0	2.1	0.5	54.0	0.0	54.5	41.8	1.6	0.0	43.4	
Exiting Leg Total	4				79				106				189

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
9:00 AM	0	0	0	0	0	6	0	6	3	0	0	3	9
9:15 AM	0	0	0	0	0	7	0	7	5	0	0	5	12
9:30 AM	0	0	0	0	0	1	0	1	3	1	0	4	5
9:45 AM	1	0	0	1	0	4	0	4	2	0	0	2	7
Total Volume	1	0	0	1	0	18	0	18	13	1	0	14	33
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		92.9	7.1	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.643	0.000	0.643	0.650	0.250	0.000	0.700	0.688
Entering Leg	1	0	0	1	0	18	0	18	13	1	0	14	33
Exiting Leg	1				13				19				33
Total	2				31				33				66

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
11:45 AM	0	0	0	0	0	7	0	7	4	0	0	4	11
12:00 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
12:15 PM	0	0	0	0	0	5	0	5	5	0	0	5	10
Total Volume	0	0	0	0	0	18	0	18	13	0	0	13	31
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.643	0.000	0.643	0.650	0.000	0.000	0.650	0.705
Entering Leg	0	0	0	0	0	18	0	18	13	0	0	13	31
Exiting Leg	0				13				18				31
Total	0				31				31				62

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
2:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
2:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
2:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	0	0	0	0	0	9	0	9	6	0	0	6	15
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.563	0.500	0.000	0.000	0.500	0.625
Entering Leg	0	0	0	0	0	9	0	9	6	0	0	6	15
Exiting Leg	0				6				9				15
Total	0				15				15				30

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**



Articulated Trucks

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	3
12:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
12:15 PM	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
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
1:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
1:15 PM	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
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	0	1	0	1	3	0	0	3	4
3:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	2	0	2	1	0	0	1	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:30 PM	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
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
5:00 PM	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
5:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	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
Grand Total	0	0	0	0	0	13	0	13	8	0	0	8	21

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Articulated Trucks

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	61.9	0.0	61.9	38.1	0.0	0.0	38.1	
Exiting Leg Total	0				8				13				21

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	1	0	1	2	0	0	2	3
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500	0.000	0.000	0.500	0.750
Entering Leg	0	0	0	0	0	1	0	1	2	0	0	2	3
Exiting Leg	0				2				1				3
Total	0				3				3				6

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
11:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
12:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	4
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	4	0	4	0	0	0	0	4
Exiting Leg	0				0				4				4
Total	0				4				4				8

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

	Olmstead Drive				Pleasant Street (Route 60)				Pleasant Street (Route 60)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
3:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	3	0	3	2	0	0	2	5
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.500	0.000	0.000	0.500	0.625
Entering Leg	0	0	0	0	0	3	0	3	2	0	0	2	5
Exiting Leg	0				2				3				5
Total	0				5				5				10

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
7:45 AM	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	1	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
8:45 AM	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	3	0	0	0	3	0	0	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
9:45 AM	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	1	0	0	0	0	1	1
10:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	2
11:00 AM	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
11:30 AM	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
Total	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
12:15 PM	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
12:45 PM	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
1:00 PM	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
1:30 PM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	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
4:00 PM	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	2	0	0	0	0	2	2
4:30 PM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
5:00 PM	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
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1
5:45 PM	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	1	0	0	0	1	0	0	0	0	0	1	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	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	2	0	0	0	0	2	2
Grand Total	0	0	0	0	0	0	1	6	0	0	0	7	6	0	0	0	0	6	13

PDI File #: 240294 A
 Location: N: Olmstead Drive
 Location: E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11
 Count Date: Thursday, November 21, 2024
 Start Time: 7:00 AM
 End Time: 7:00 PM



Bicycles (on Roadway and Crosswalks)

	Olmstead Drive							Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North							from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	14.3	85.7	0.0	0.0	0.0	100.0	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	7.7	46.2	0.0	0.0	0.0	53.8	46.2	0.0	0.0	0.0	0.0	46.2		
Exiting Leg Total	1							6						6						13

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

	Olmstead Drive							Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North							from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0		
% Approach Total	0.0	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	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0		
Exiting Leg	0							0						3						3
Total	0							3						3						6

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

	Olmstead Drive							Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North							from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
10:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0		
Exiting Leg	1							0						1						2
Total	1							2						1						4

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

	Olmstead Drive							Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North							from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	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		
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
Total Volume	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	2		
% Approach Total	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	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.500		
Entering Leg	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	2		
Exiting Leg	0							2						1						3
Total	0							3						3						6

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Pedestrians

	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	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
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	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
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	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
11:00 AM	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
11:30 AM	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
Total	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
12:15 PM	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
12:45 PM	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
1:00 PM	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
1:30 PM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	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
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	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
4:00 PM	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
4:30 PM	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
Total	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
5:15 PM	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
5:45 PM	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
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PDI File #: **240294 A**
 Location: **N: Olmstead Drive**
 Location: **E: Pleasant Street (Route 60) W: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **7:00 PM**
 Class:



Pedestrians

	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
Approach %	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
Exiting Leg Total	0						0						0						0

AM Peak Hour Analysis from 07:00 AM to 10:00 AM begins at:

7:00 AM	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	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
% 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	0.000
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
Entering Leg	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

MidDay Peak Hour Analysis from 10:00 AM to 2:00 PM begins at:

10:00 AM	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	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
% 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	0.000
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
Entering Leg	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

PM Peak Hour Analysis from 2:00 PM to 07:00 PM begins at:

2:00 PM	Olmstead Drive						Pleasant Street (Route 60)						Pleasant Street (Route 60)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	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
% 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	0.000
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
Entering Leg	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 #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	157	26	0	183	48	30	0	78	32	137	0	169	430
7:15 AM	192	38	0	230	45	34	0	79	26	132	0	158	467
7:30 AM	198	66	0	264	58	48	0	106	38	182	0	220	590
7:45 AM	215	48	0	263	43	54	0	97	34	209	0	243	603
Total	762	178	0	940	194	166	0	360	130	660	0	790	2090
8:00 AM	186	39	0	225	77	63	0	140	35	189	0	224	589
8:15 AM	192	40	0	232	67	60	0	127	27	170	0	197	556
8:30 AM	188	53	0	241	70	62	0	132	34	158	0	192	565
8:45 AM	191	30	0	221	65	59	0	124	31	177	0	208	553
Total	757	162	0	919	279	244	0	523	127	694	0	821	2263
Grand Total	1519	340	0	1859	473	410	0	883	257	1354	0	1611	4353
Approach %	81.7	18.3	0.0		53.6	46.4	0.0		16.0	84.0	0.0		
Total %	34.9	7.8	0.0	42.7	10.9	9.4	0.0	20.3	5.9	31.1	0.0	37.0	
Exiting Leg Total				1827				597				1929	4353
Cars	1477	332	0	1809	465	397	0	862	250	1314	0	1564	4235
% Cars	97.2	97.6	0.0	97.3	98.3	96.8	0.0	97.6	97.3	97.0	0.0	97.1	97.3
Exiting Leg Total				1779				582				1874	4235
Heavy Vehicles	42	8	0	50	8	13	0	21	7	40	0	47	118
% Heavy Vehicles	2.8	2.4	0.0	2.7	1.7	3.2	0.0	2.4	2.7	3.0	0.0	2.9	2.7
Exiting Leg Total				48				15				55	118

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	198	66	0	264	58	48	0	106	38	182	0	220	590
7:45 AM	215	48	0	263	43	54	0	97	34	209	0	243	603
8:00 AM	186	39	0	225	77	63	0	140	35	189	0	224	589
8:15 AM	192	40	0	232	67	60	0	127	27	170	0	197	556
Total Volume	791	193	0	984	245	225	0	470	134	750	0	884	2338
% Approach Total	80.4	19.6	0.0		52.1	47.9	0.0		15.2	84.8	0.0		
PHF	0.920	0.731	0.000	0.932	0.795	0.893	0.000	0.839	0.882	0.897	0.000	0.909	0.969
Cars	774	188	0	962	240	219	0	459	130	724	0	854	2275
Cars %	97.9	97.4	0.0	97.8	98.0	97.3	0.0	97.7	97.0	96.5	0.0	96.6	97.3
Heavy Vehicles	17	5	0	22	5	6	0	11	4	26	0	30	63
Heavy Vehicles %	2.1	2.6	0.0	2.2	2.0	2.7	0.0	2.3	3.0	3.5	0.0	3.4	2.7
Cars Enter Leg	774	188	0	962	240	219	0	459	130	724	0	854	2275
Heavy Enter Leg	17	5	0	22	5	6	0	11	4	26	0	30	63
Total Entering Leg	791	193	0	984	245	225	0	470	134	750	0	884	2338
Cars Exiting Leg				964				318				993	2275
Heavy Exiting Leg				31				9				23	63
Total Exiting Leg				995				327				1016	2338

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	152	26	0	178	47	29	0	76	31	136	0	167	421
7:15 AM	185	37	0	222	43	33	0	76	26	125	0	151	449
7:30 AM	196	64	0	260	56	46	0	102	37	172	0	209	571
7:45 AM	210	47	0	257	42	54	0	96	32	201	0	233	586
Total	743	174	0	917	188	162	0	350	126	634	0	760	2027
8:00 AM	180	37	0	217	75	60	0	135	34	185	0	219	571
8:15 AM	188	40	0	228	67	59	0	126	27	166	0	193	547
8:30 AM	181	52	0	233	70	58	0	128	32	155	0	187	548
8:45 AM	185	29	0	214	65	58	0	123	31	174	0	205	542
Total	734	158	0	892	277	235	0	512	124	680	0	804	2208
Grand Total	1477	332	0	1809	465	397	0	862	250	1314	0	1564	4235
Approach %	81.6	18.4	0.0		53.9	46.1	0.0		16.0	84.0	0.0		
Total %	34.9	7.8	0.0	42.7	11.0	9.4	0.0	20.4	5.9	31.0	0.0	36.9	
Exiting Leg Total				1779				582				1874	4235

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	196	64	0	260	56	46	0	102	37	172	0	209	571
7:45 AM	210	47	0	257	42	54	0	96	32	201	0	233	586
8:00 AM	180	37	0	217	75	60	0	135	34	185	0	219	571
8:15 AM	188	40	0	228	67	59	0	126	27	166	0	193	547
Total Volume	774	188	0	962	240	219	0	459	130	724	0	854	2275
% Approach Total	80.5	19.5	0.0		52.3	47.7	0.0		15.2	84.8	0.0		
PHF	0.921	0.734	0.000	0.925	0.800	0.913	0.000	0.850	0.878	0.900	0.000	0.916	0.971
Entering Leg	774	188	0	962	240	219	0	459	130	724	0	854	2275
Exiting Leg				964				318				993	2275
Total				1926				777				1847	4550

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	0	0	5	1	1	0	2	1	1	0	2	9
7:15 AM	7	1	0	8	2	1	0	3	0	7	0	7	18
7:30 AM	2	2	0	4	2	2	0	4	1	10	0	11	19
7:45 AM	5	1	0	6	1	0	0	1	2	8	0	10	17
Total	19	4	0	23	6	4	0	10	4	26	0	30	63
8:00 AM	6	2	0	8	2	3	0	5	1	4	0	5	18
8:15 AM	4	0	0	4	0	1	0	1	0	4	0	4	9
8:30 AM	7	1	0	8	0	4	0	4	2	3	0	5	17
8:45 AM	6	1	0	7	0	1	0	1	0	3	0	3	11
Total	23	4	0	27	2	9	0	11	3	14	0	17	55
Grand Total	42	8	0	50	8	13	0	21	7	40	0	47	118
Approach %	84.0	16.0	0.0		38.1	61.9	0.0		14.9	85.1	0.0		
Total %	35.6	6.8	0.0	42.4	6.8	11.0	0.0	17.8	5.9	33.9	0.0	39.8	
Exiting Leg Total				48				15				55	118
Buses	4	2	0	6	0	2	0	2	1	9	0	10	18
% Buses	9.5	25.0	0.0	12.0	0.0	15.4	0.0	9.5	14.3	22.5	0.0	21.3	15.3
Exiting Leg Total				9				3				6	18
Single-Unit Trucks	35	5	0	40	8	9	0	17	4	24	0	28	85
% Single-Unit	83.3	62.5	0.0	80.0	100.0	69.2	0.0	81.0	57.1	60.0	0.0	59.6	72.0
Exiting Leg Total				32				9				44	85
Articulated Trucks	3	1	0	4	0	2	0	2	2	7	0	9	15
% Articulated	7.1	12.5	0.0	8.0	0.0	15.4	0.0	9.5	28.6	17.5	0.0	19.1	12.7
Exiting Leg Total				7				3				5	15

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	7	1	0	8	2	1	0	3	0	7	0	7	18
7:30 AM	2	2	0	4	2	2	0	4	1	10	0	11	19
7:45 AM	5	1	0	6	1	0	0	1	2	8	0	10	17
8:00 AM	6	2	0	8	2	3	0	5	1	4	0	5	18
Total Volume	20	6	0	26	7	6	0	13	4	29	0	33	72
% Approach Total	76.9	23.1	0.0		53.8	46.2	0.0		12.1	87.9	0.0		
PHF	0.714	0.750	0.000	0.813	0.875	0.500	0.000	0.650	0.500	0.725	0.000	0.750	0.947
Buses	2	2	0	4	0	1	0	1	1	7	0	8	13
Buses %	10.0	33.3	0.0	15.4	0.0	16.7	0.0	7.7	25.0	24.1	0.0	24.2	18.1
Single-Unit Trucks	17	3	0	20	7	4	0	11	1	18	0	19	50
Single-Unit %	85.0	50.0	0.0	76.9	100.0	66.7	0.0	84.6	25.0	62.1	0.0	57.6	69.4
Articulated Trucks	1	1	0	2	0	1	0	1	2	4	0	6	9
Articulated %	5.0	16.7	0.0	7.7	0.0	16.7	0.0	7.7	50.0	13.8	0.0	18.2	12.5
Buses	2	2	0	4	0	1	0	1	1	7	0	8	13
Single-Unit Trucks	17	3	0	20	7	4	0	11	1	18	0	19	50
Articulated Trucks	1	1	0	2	0	1	0	1	2	4	0	6	9
Total Entering Leg	20	6	0	26	7	6	0	13	4	29	0	33	72
Buses				7				3				3	13
Single-Unit Trucks				25				4				21	50
Articulated Trucks				4				3				2	9
Total Exiting Leg				36				10				26	72

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	1	0	3	0	1	0	1	0	2	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	2	1	0	3	0	1	0	1	1	5	0	6	10
8:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	3
8:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
8:30 AM	1	0	0	1	0	1	0	1	0	1	0	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	1	0	3	0	1	0	1	0	4	0	4	8
Grand Total	4	2	0	6	0	2	0	2	1	9	0	10	18
Approach %	66.7	33.3	0.0		0.0	100.0	0.0		10.0	90.0	0.0		
Total %	22.2	11.1	0.0	33.3	0.0	11.1	0.0	11.1	5.6	50.0	0.0	55.6	
Exiting Leg Total				9				3				6	18

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	2	1	0	3	0	1	0	1	0	2	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	3
Total Volume	2	2	0	4	0	1	0	1	1	7	0	8	13
% Approach Total	50.0	50.0	0.0		0.0	100.0	0.0		12.5	87.5	0.0		
PHF	0.250	0.500	0.000	0.333	0.000	0.250	0.000	0.250	0.250	0.875	0.000	1.000	0.542
Entering Leg	2	2	0	4	0	1	0	1	1	7	0	8	13
Exiting Leg				7				3				3	13
Total				11				4				11	26

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	0	0	5	1	1	0	2	1	1	0	2	9
7:15 AM	5	0	0	5	2	0	0	2	0	4	0	4	11
7:30 AM	2	1	0	3	2	1	0	3	0	6	0	6	12
7:45 AM	5	1	0	6	1	0	0	1	1	6	0	7	14
Total	17	2	0	19	6	2	0	8	2	17	0	19	46
8:00 AM	5	1	0	6	2	3	0	5	0	2	0	2	13
8:15 AM	3	0	0	3	0	1	0	1	0	1	0	1	5
8:30 AM	6	1	0	7	0	3	0	3	2	1	0	3	13
8:45 AM	4	1	0	5	0	0	0	0	0	3	0	3	8
Total	18	3	0	21	2	7	0	9	2	7	0	9	39
Grand Total	35	5	0	40	8	9	0	17	4	24	0	28	85
Approach %	87.5	12.5	0.0		47.1	52.9	0.0		14.3	85.7	0.0		
Total %	41.2	5.9	0.0	47.1	9.4	10.6	0.0	20.0	4.7	28.2	0.0	32.9	
Exiting Leg Total				32				9				44	85

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	5	0	0	5	2	0	0	2	0	4	0	4	11
7:30 AM	2	1	0	3	2	1	0	3	0	6	0	6	12
7:45 AM	5	1	0	6	1	0	0	1	1	6	0	7	14
8:00 AM	5	1	0	6	2	3	0	5	0	2	0	2	13
Total Volume	17	3	0	20	7	4	0	11	1	18	0	19	50
% Approach Total	85.0	15.0	0.0		63.6	36.4	0.0		5.3	94.7	0.0		
PHF	0.850	0.750	0.000	0.833	0.875	0.333	0.000	0.550	0.250	0.750	0.000	0.679	0.893
Entering Leg	17	3	0	20	7	4	0	11	1	18	0	19	50
Exiting Leg				25				4				21	50
Total				45				15				40	100

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	1	0	1	0	1	0	1	0	3	0	3	5
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	1	0	1	0	1	0	1	1	4	0	5	7
8:00 AM	1	0	0	1	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:45 AM	2	0	0	2	0	1	0	1	0	0	0	0	3
Total	3	0	0	3	0	1	0	1	1	3	0	4	8
Grand Total	3	1	0	4	0	2	0	2	2	7	0	9	15
Approach %	75.0	25.0	0.0		0.0	100.0	0.0		22.2	77.8	0.0		
Total %	20.0	6.7	0.0	26.7	0.0	13.3	0.0	13.3	13.3	46.7	0.0	60.0	
Exiting Leg Total				7				3				5	15

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	0	1	0	1	0	1	0	1	0	3	0	3	5
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:00 AM	1	0	0	1	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	1	1	0	2	0	1	0	1	2	5	0	7	10
% Approach Total	50.0	50.0	0.0		0.0	100.0	0.0		28.6	71.4	0.0		
PHF	0.250	0.250	0.000	0.500	0.000	0.250	0.000	0.250	0.500	0.417	0.000	0.583	0.500
Entering Leg	1	1	0	2	0	1	0	1	2	5	0	7	10
Exiting Leg				5				3				2	10
Total				7				4				9	20

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
7:45 AM	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	1	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	0	0	1	4
Grand Total	0	0	0	0	0	0	4	0	0	0	0	4	0	1	0	0	0	1	5
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	20.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	80.0	0.0	20.0	0.0	0.0	0.0	20.0	
Exiting Leg Total	5						0						0						5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total Volume	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	0	0	1	4
% 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	100.0	0.0	0.0	0.0	0.0	25.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.375	0.000	0.250	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	0	0	1	4
Exiting Leg	4						0						0						4
Total	4						3						1						8

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	1	2	3	0	0	0	1	1	2	0	0	0	0	0	0	0	5
7:30 AM	0	0	0	0	3	3	0	0	0	0	1	1	0	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2
Total	0	0	0	1	5	6	0	0	0	1	5	6	0	0	0	0	0	0	0	12
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	1	0	0	0	3	1	4	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	1	0	1	0	0	0	0	4	4	0	0	0	0	0	0	0	5
Total	0	0	0	1	1	2	0	0	0	4	8	12	0	0	0	0	0	0	0	14
Grand Total	0	0	0	2	6	8	0	0	0	5	13	18	0	0	0	0	0	0	0	26
Approach %	0	0	0	25	75		0	0	0	27.778	72.222		0	0	0	0	0	0		
Total %	0	0	0	7.6923	23.077	30.769	0	0	0	19.231	50	69.231	0	0	0	0	0	0		
Exiting Leg Total	8						18						0						26	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	1	0	0	0	3	1	4	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	1	0	1	0	0	0	0	4	4	0	0	0	0	0	0	0	5
Total Volume	0	0	0	1	1	2	0	0	0	4	8	12	0	0	0	0	0	0	0	14
% Approach Total	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.333	0.500	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.700
Entering Leg	0	0	0	1	1	2	0	0	0	4	8	12	0	0	0	0	0	0	0	14
Exiting Leg	2						12						0						14	
Total	4						24						0						28	

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	168	72	0	240	58	57	0	115	33	164	0	197	552
4:15 PM	159	72	0	231	46	48	0	94	47	187	0	234	559
4:30 PM	172	57	0	229	44	53	0	97	60	167	0	227	553
4:45 PM	167	83	0	250	50	42	0	92	62	165	0	227	569
Total	666	284	0	950	198	200	0	398	202	683	0	885	2233
5:00 PM	184	69	0	253	53	56	0	109	69	183	0	252	614
5:15 PM	187	61	0	248	53	49	0	102	41	176	0	217	567
5:30 PM	190	60	0	250	57	47	0	104	46	165	0	211	565
5:45 PM	191	54	0	245	52	54	0	106	44	142	0	186	537
Total	752	244	0	996	215	206	0	421	200	666	0	866	2283
Grand Total	1418	528	0	1946	413	406	0	819	402	1349	0	1751	4516
Approach %	72.9	27.1	0.0		50.4	49.6	0.0		23.0	77.0	0.0		
Total %	31.4	11.7	0.0	43.1	9.1	9.0	0.0	18.1	8.9	29.9	0.0	38.8	
Exiting Leg Total				1762				930				1824	4516
Cars	1408	522	0	1930	406	398	0	804	402	1329	0	1731	4465
% Cars	99.3	98.9	0.0	99.2	98.3	98.0	0.0	98.2	100.0	98.5	0.0	98.9	98.9
Exiting Leg Total				1735				924				1806	4465
Heavy Vehicles	10	6	0	16	7	8	0	15	0	20	0	20	51
% Heavy Vehicles	0.7	1.1	0.0	0.8	1.7	2.0	0.0	1.8	0.0	1.5	0.0	1.1	1.1
Exiting Leg Total				27				6				18	51

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	167	83	0	250	50	42	0	92	62	165	0	227	569
5:00 PM	184	69	0	253	53	56	0	109	69	183	0	252	614
5:15 PM	187	61	0	248	53	49	0	102	41	176	0	217	567
5:30 PM	190	60	0	250	57	47	0	104	46	165	0	211	565
Total Volume	728	273	0	1001	213	194	0	407	218	689	0	907	2315
% Approach Total	72.7	27.3	0.0		52.3	47.7	0.0		24.0	76.0	0.0		
PHF	0.958	0.822	0.000	0.989	0.934	0.866	0.000	0.933	0.790	0.941	0.000	0.900	0.943
Cars	721	269	0	990	209	189	0	398	218	679	0	897	2285
Cars %	99.0	98.5	0.0	98.9	98.1	97.4	0.0	97.8	100.0	98.5	0.0	98.9	98.7
Heavy Vehicles	7	4	0	11	4	5	0	9	0	10	0	10	30
Heavy Vehicles %	1.0	1.5	0.0	1.1	1.9	2.6	0.0	2.2	0.0	1.5	0.0	1.1	1.3
Cars Enter Leg	721	269	0	990	209	189	0	398	218	679	0	897	2285
Heavy Enter Leg	7	4	0	11	4	5	0	9	0	10	0	10	30
Total Entering Leg	728	273	0	1001	213	194	0	407	218	689	0	907	2315
Cars Exiting Leg				888				487				910	2285
Heavy Exiting Leg				14				4				12	30
Total Exiting Leg				902				491				922	2315

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	166	71	0	237	58	56	0	114	33	162	0	195	546
4:15 PM	159	72	0	231	45	47	0	92	47	184	0	231	554
4:30 PM	171	57	0	228	43	53	0	96	60	166	0	226	550
4:45 PM	166	83	0	249	49	42	0	91	62	161	0	223	563
Total	662	283	0	945	195	198	0	393	202	673	0	875	2213
5:00 PM	182	69	0	251	51	55	0	106	69	181	0	250	607
5:15 PM	184	60	0	244	53	45	0	98	41	172	0	213	555
5:30 PM	189	57	0	246	56	47	0	103	46	165	0	211	560
5:45 PM	191	53	0	244	51	53	0	104	44	138	0	182	530
Total	746	239	0	985	211	200	0	411	200	656	0	856	2252
Grand Total	1408	522	0	1930	406	398	0	804	402	1329	0	1731	4465
Approach %	73.0	27.0	0.0		50.5	49.5	0.0		23.2	76.8	0.0		
Total %	31.5	11.7	0.0	43.2	9.1	8.9	0.0	18.0	9.0	29.8	0.0	38.8	
Exiting Leg Total				1735				924				1806	4465

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	166	83	0	249	49	42	0	91	62	161	0	223	563
5:00 PM	182	69	0	251	51	55	0	106	69	181	0	250	607
5:15 PM	184	60	0	244	53	45	0	98	41	172	0	213	555
5:30 PM	189	57	0	246	56	47	0	103	46	165	0	211	560
Total Volume	721	269	0	990	209	189	0	398	218	679	0	897	2285
% Approach Total	72.8	27.2	0.0		52.5	47.5	0.0		24.3	75.7	0.0		
PHF	0.954	0.810	0.000	0.986	0.933	0.859	0.000	0.939	0.790	0.938	0.000	0.897	0.941
Entering Leg	721	269	0	990	209	189	0	398	218	679	0	897	2285
Exiting Leg				888				487				910	2285
Total				1878				885				1807	4570

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	1	0	3	0	1	0	1	0	2	0	2	6
4:15 PM	0	0	0	0	1	1	0	2	0	3	0	3	5
4:30 PM	1	0	0	1	1	0	0	1	0	1	0	1	3
4:45 PM	1	0	0	1	1	0	0	1	0	4	0	4	6
Total	4	1	0	5	3	2	0	5	0	10	0	10	20
5:00 PM	2	0	0	2	2	1	0	3	0	2	0	2	7
5:15 PM	3	1	0	4	0	4	0	4	0	4	0	4	12
5:30 PM	1	3	0	4	1	0	0	1	0	0	0	0	5
5:45 PM	0	1	0	1	1	1	0	2	0	4	0	4	7
Total	6	5	0	11	4	6	0	10	0	10	0	10	31
Grand Total	10	6	0	16	7	8	0	15	0	20	0	20	51
Approach %	62.5	37.5	0.0		46.7	53.3	0.0		0.0	100.0	0.0		
Total %	19.6	11.8	0.0	31.4	13.7	15.7	0.0	29.4	0.0	39.2	0.0	39.2	
Exiting Leg Total				27				6				18	51
Buses	2	1	0	3	4	4	0	8	0	3	0	3	14
% Buses	20.0	16.7	0.0	18.8	57.1	50.0	0.0	53.3	0.0	15.0	0.0	15.0	27.5
Exiting Leg Total				7				1				6	14
Single-Unit Trucks	7	3	0	10	2	3	0	5	0	14	0	14	29
% Single-Unit	70.0	50.0	0.0	62.5	28.6	37.5	0.0	33.3	0.0	70.0	0.0	70.0	56.9
Exiting Leg Total				16				3				10	29
Articulated Trucks	1	2	0	3	1	1	0	2	0	3	0	3	8
% Articulated	10.0	33.3	0.0	18.8	14.3	12.5	0.0	13.3	0.0	15.0	0.0	15.0	15.7
Exiting Leg Total				4				2				2	8

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	2	0	0	2	2	1	0	3	0	2	0	2	7
5:15 PM	3	1	0	4	0	4	0	4	0	4	0	4	12
5:30 PM	1	3	0	4	1	0	0	1	0	0	0	0	5
5:45 PM	0	1	0	1	1	1	0	2	0	4	0	4	7
Total Volume	6	5	0	11	4	6	0	10	0	10	0	10	31
% Approach Total	54.5	45.5	0.0		40.0	60.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.417	0.000	0.688	0.500	0.375	0.000	0.625	0.000	0.625	0.000	0.625	0.646
Buses	1	0	0	1	3	3	0	6	0	1	0	1	8
Buses %	16.7	0.0	0.0	9.1	75.0	50.0	0.0	60.0	0.0	10.0	0.0	10.0	25.8
Single-Unit Trucks	5	3	0	8	0	3	0	3	0	6	0	6	17
Single-Unit %	83.3	60.0	0.0	72.7	0.0	50.0	0.0	30.0	0.0	60.0	0.0	60.0	54.8
Articulated Trucks	0	2	0	2	1	0	0	1	0	3	0	3	6
Articulated %	0.0	40.0	0.0	18.2	25.0	0.0	0.0	10.0	0.0	30.0	0.0	30.0	19.4
Buses	1	0	0	1	3	3	0	6	0	1	0	1	8
Single-Unit Trucks	5	3	0	8	0	3	0	3	0	6	0	6	17
Articulated Trucks	0	2	0	2	1	0	0	1	0	3	0	3	6
Total Entering Leg	6	5	0	11	4	6	0	10	0	10	0	10	31
Buses				4				0				4	8
Single-Unit Trucks				6				3				8	17
Articulated Trucks				4				2				0	6
Total Exiting Leg				14				5				12	31

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	1	0	2	0	1	0	1	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	1	1	0	2	1	1	0	2	0	2	0	2	6
5:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:15 PM	1	0	0	1	0	2	0	2	0	1	0	1	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	1	0	0	1	3	3	0	6	0	1	0	1	8
Grand Total	2	1	0	3	4	4	0	8	0	3	0	3	14
Approach %	66.7	33.3	0.0		50.0	50.0	0.0		0.0	100.0	0.0		
Total %	14.3	7.1	0.0	21.4	28.6	28.6	0.0	57.1	0.0	21.4	0.0	21.4	
Exiting Leg Total				7				1				6	14

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
5:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:15 PM	1	0	0	1	0	2	0	2	0	1	0	1	4
Total Volume	1	0	0	1	3	2	0	5	0	2	0	2	8
% Approach Total	100.0	0.0	0.0		60.0	40.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.375	0.250	0.000	0.625	0.000	0.500	0.000	0.500	0.500
Entering Leg	1	0	0	1	3	2	0	5	0	2	0	2	8
Exiting Leg				5				0				3	8
Total				6				5				5	16

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
4:15 PM	0	0	0	0	1	0	0	1	0	2	0	2	3
4:30 PM	1	0	0	1	1	0	0	1	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
Total	2	0	0	2	2	0	0	2	0	8	0	8	12
5:00 PM	2	0	0	2	0	1	0	1	0	1	0	1	4
5:15 PM	2	0	0	2	0	2	0	2	0	3	0	3	7
5:30 PM	1	2	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	5	3	0	8	0	3	0	3	0	6	0	6	17
Grand Total	7	3	0	10	2	3	0	5	0	14	0	14	29
Approach %	70.0	30.0	0.0		40.0	60.0	0.0		0.0	100.0	0.0		
Total %	24.1	10.3	0.0	34.5	6.9	10.3	0.0	17.2	0.0	48.3	0.0	48.3	
Exiting Leg Total				16				3				10	29

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	1	0	0	1	1	0	0	1	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
5:00 PM	2	0	0	2	0	1	0	1	0	1	0	1	4
5:15 PM	2	0	0	2	0	2	0	2	0	3	0	3	7
Total Volume	5	0	0	5	1	3	0	4	0	8	0	8	17
% Approach Total	100.0	0.0	0.0		25.0	75.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.250	0.375	0.000	0.500	0.000	0.667	0.000	0.667	0.607
Entering Leg	5	0	0	5	1	3	0	4	0	8	0	8	17
Exiting Leg				9				0				8	17
Total				14				4				16	34

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	1	0	1	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	2	0	2	1	0	0	1	0	3	0	3	6
Grand Total	1	2	0	3	1	1	0	2	0	3	0	3	8
Approach %	33.3	66.7	0.0		50.0	50.0	0.0		0.0	100.0	0.0		
Total %	12.5	25.0	0.0	37.5	12.5	12.5	0.0	25.0	0.0	37.5	0.0	37.5	
Exiting Leg Total				4				2				2	8

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

	Trapelo Road				Pleasant Street (Route 60)				Trapelo Road				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	2	0	2	1	0	0	1	0	3	0	3	6
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.500	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.375	0.000	0.375	0.750
Entering Leg	0	2	0	2	1	0	0	1	0	3	0	3	6
Exiting Leg				4				2				0	6
Total				6				3				3	12

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	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
4:15 PM	0	2	0	1	0	3	0	0	0	1	0	1	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	1	0	3	0	0	0	1	0	1	0	1	0	0	0	1	5
5:00 PM	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
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	0	0	2	0	1	0	0	0	1	3
Grand Total	0	2	0	1	0	3	2	0	0	1	0	3	0	2	0	0	0	2	8
Approach %	0.0	66.7	0.0	33.3	0.0		66.7	0.0	0.0	33.3	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	0.0	25.0	0.0	12.5	0.0	37.5	25.0	0.0	0.0	12.5	0.0	37.5	0.0	25.0	0.0	0.0	0.0	25.0	
Exiting Leg Total	5						3						0						8

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

4:00 PM	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	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
4:15 PM	0	2	0	1	0	3	0	0	0	1	0	1	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	1	0	3	0	0	0	1	0	1	0	1	0	0	0	1	5
% Approach Total	0.0	66.7	0.0	33.3	0.0		0.0	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.313
Entering Leg	0	2	0	1	0	3	0	0	0	1	0	1	0	1	0	0	0	1	5
Exiting Leg	2						3						0						5
Total	5						4						1						10

PDI File #: **240294 B**
 Location: **N: Trapelo Road S: Trapelo Road**
 Location: **E: Pleasant Street (Route 60)**
 City, State: **Belmont, MA**
 Client: **VHB/ V. Kalikiri**
 Site Code: **13555.11**
 Count Date: **Thursday, November 21, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	5	6	0	0	0	2	0	2	0	0	0	0	0	0	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	2	2	4	0	0	0	0	1	1	0	0	0	0	0	0	5
Total	0	0	0	2	3	5	0	0	0	1	2	3	0	0	0	0	0	0	8
Grand Total	0	0	0	3	8	11	0	0	0	3	2	5	0	0	0	0	0	0	16
Approach %	0	0	0	27.273	72.727		0	0	0	60	40		0	0	0	0	0		
Total %	0	0	0	18.75	50	68.75	0	0	0	18.75	12.5	31.25	0	0	0	0	0		
Exiting Leg Total	11						5						0						16

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

4:00 PM	Trapelo Road						Pleasant Street (Route 60)						Trapelo Road						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	1	5	6	0	0	0	2	0	2	0	0	0	0	0	0	8
% Approach Total	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.417	0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.667
Entering Leg	0	0	0	1	5	6	0	0	0	2	0	2	0	0	0	0	0	0	8
Exiting Leg	6						2						0						8
Total	12						4						0						16

Automatic Traffic Recorder

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 240294 ATR-A

Count Date: **Wednesday, November 20, 2024**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	1	0	0	0	1
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	1
5:15 AM	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0
6:15 AM	0	0	1	0	0	0	1
6:30 AM	0	0	0	0	0	0	0
6:45 AM	0	0	2	0	0	0	2
7:00 AM	0	0	1	0	0	0	1
7:15 AM	0	0	1	0	0	0	1
7:30 AM	0	0	1	0	0	0	1
7:45 AM	0	0	1	0	0	0	1
8:00 AM	0	0	0	0	0	0	0
8:15 AM	0	0	2	0	0	0	2
8:30 AM	0	0	1	0	0	0	1
8:45 AM	0	0	1	0	0	0	1
9:00 AM	0	0	7	0	0	0	7
9:15 AM	0	0	2	0	0	0	2
9:30 AM	0	0	0	0	0	0	0
9:45 AM	0	0	1	0	0	0	1
10:00 AM	0	0	2	0	0	0	2
10:15 AM	0	0	0	0	0	0	0
10:30 AM	1	0	1	0	0	0	2
10:45 AM	0	0	2	0	0	0	2
11:00 AM	0	0	2	0	0	0	2
11:15 AM	0	0	3	0	0	0	3
11:30 AM	0	0	2	0	0	0	2
11:45 AM	0	0	1	0	0	0	1

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	4	0	0	0	4
12:15 PM	0	0	5	1	0	0	6
12:30 PM	0	0	2	0	1	0	3
12:45 PM	0	0	2	0	0	0	2
1:00 PM	0	0	1	0	0	0	1
1:15 PM	0	0	5	0	0	0	5
1:30 PM	0	0	3	0	0	0	3
1:45 PM	0	0	1	0	0	0	1
2:00 PM	0	0	0	0	0	0	0
2:15 PM	0	0	1	0	0	0	1
2:30 PM	0	0	3	0	0	0	3
2:45 PM	0	0	1	0	0	0	1
3:00 PM	0	0	5	0	0	0	5
3:15 PM	0	0	1	0	0	0	1
3:30 PM	0	0	4	0	0	0	4
3:45 PM	0	0	2	0	1	0	3
4:00 PM	0	0	8	1	0	0	9
4:15 PM	0	0	3	0	0	0	3
4:30 PM	0	0	4	0	0	0	4
4:45 PM	0	0	2	0	0	0	2
5:00 PM	0	0	2	0	0	0	2
5:15 PM	0	0	3	0	0	0	3
5:30 PM	0	0	1	0	0	0	1
5:45 PM	0	0	4	0	0	0	4
6:00 PM	0	0	1	0	0	0	1
6:15 PM	0	0	5	0	0	0	5
6:30 PM	0	0	2	0	0	0	2
6:45 PM	0	0	3	0	0	0	3
7:00 PM	0	0	3	0	0	0	3
7:15 PM	0	0	1	0	0	0	1
7:30 PM	0	0	0	0	0	0	0
7:45 PM	0	0	2	0	0	0	2
8:00 PM	0	0	0	0	0	0	0
8:15 PM	0	0	2	0	0	0	2
8:30 PM	0	0	1	0	0	0	1
8:45 PM	0	0	0	0	0	0	0
9:00 PM	0	0	1	0	0	0	1
9:15 PM	0	0	1	0	0	0	1
9:30 PM	0	0	3	0	0	0	3
9:45 PM	0	0	0	0	0	0	0
10:00 PM	0	0	1	0	0	0	1
10:15 PM	0	0	2	0	0	0	2
10:30 PM	0	0	1	0	0	0	1
10:45 PM	0	0	2	0	0	0	2
11:00 PM	0	0	2	0	0	0	2
11:15 PM	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0

AM Total	1	0	37	0	0	0	38
Percentage	2.63%	0.00%	97.37%	0.00%	0.00%	0.00%	
AM Peak	9:45 AM	12:00 AM	8:15 AM	12:00 AM	12:00 AM	12:00 AM	8:15 AM
Volume	1	0	11	0	0	0	11

PM Total	0	0	100	2	2	0	104
Percentage	0.00%	0.00%	96.15%	1.92%	1.92%	0.00%	
PM Peak	12:00 PM	12:00 PM	3:30 PM	12:00 PM	12:00 PM	12:00 PM	3:30 PM
Volume	0	0	17	1	1	0	19

Day Total	1	0	137	2	2	0	142
Percentage	0.70%	0.00%	96.48%	1.41%	1.41%	0.00%	

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 240294 ATR-A

Count Date: Thursday, November 21, 2024
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0
5:45 AM	0	0	1	0	0	0	1
6:00 AM	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0
6:30 AM	0	0	1	0	0	0	1
6:45 AM	0	0	2	0	0	0	2
7:00 AM	0	0	1	0	0	0	1
7:15 AM	0	0	2	0	0	0	2
7:30 AM	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	1
8:00 AM	0	0	2	0	0	0	2
8:15 AM	0	0	3	0	0	0	3
8:30 AM	0	0	2	0	0	0	2
8:45 AM	0	0	3	0	0	0	3
9:00 AM	0	0	1	0	0	0	1
9:15 AM	0	0	4	0	0	0	4
9:30 AM	0	0	1	0	1	0	2
9:45 AM	0	0	0	0	0	0	0
10:00 AM	0	0	1	0	0	0	1
10:15 AM	0	0	2	0	0	0	2
10:30 AM	0	0	0	0	0	0	0
10:45 AM	1	0	1	0	1	0	3
11:00 AM	0	0	2	0	0	0	2
11:15 AM	0	0	1	0	0	0	1
11:30 AM	0	0	5	0	0	0	5
11:45 AM	0	0	3	0	0	0	3

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	2	0	0	0	2
12:15 PM	0	0	3	1	0	0	4
12:30 PM	0	0	2	0	0	0	2
12:45 PM	0	0	0	0	0	0	0
1:00 PM	0	0	5	0	0	0	5
1:15 PM	0	0	1	0	0	0	1
1:30 PM	0	0	4	0	0	0	4
1:45 PM	0	0	2	1	0	0	3
2:00 PM	0	0	2	0	0	0	2
2:15 PM	0	0	5	0	0	0	5
2:30 PM	0	0	6	0	0	0	6
2:45 PM	0	0	4	0	0	0	4
3:00 PM	0	0	2	0	1	0	3
3:15 PM	0	0	2	0	0	0	2
3:30 PM	0	0	4	0	0	0	4
3:45 PM	0	0	4	0	0	0	4
4:00 PM	0	0	3	0	0	0	3
4:15 PM	0	0	4	0	0	0	4
4:30 PM	0	0	4	0	0	0	4
4:45 PM	0	0	3	0	0	0	3
5:00 PM	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	1
5:30 PM	0	0	6	0	0	0	6
5:45 PM	0	0	1	0	0	0	1
6:00 PM	0	0	1	0	0	0	1
6:15 PM	0	0	2	0	1	0	3
6:30 PM	0	0	2	0	0	0	2
6:45 PM	0	0	0	0	0	0	0
7:00 PM	0	0	1	0	0	0	1
7:15 PM	0	0	3	0	0	0	3
7:30 PM	0	0	1	0	0	0	1
7:45 PM	0	0	2	0	0	0	2
8:00 PM	0	0	1	0	0	0	1
8:15 PM	0	0	2	0	0	0	2
8:30 PM	0	0	3	0	0	0	3
8:45 PM	0	0	1	0	0	0	1
9:00 PM	0	0	2	0	0	0	2
9:15 PM	0	0	2	0	0	0	2
9:30 PM	0	0	0	0	0	0	0
9:45 PM	0	0	1	0	0	0	1
10:00 PM	0	0	1	0	0	0	1
10:15 PM	0	0	1	0	0	0	1
10:30 PM	0	0	2	0	0	0	2
10:45 PM	0	0	0	0	0	0	0
11:00 PM	0	0	5	0	0	0	5
11:15 PM	0	0	2	0	0	0	2
11:30 PM	0	0	0	0	0	0	0
11:45 PM	0	0	1	0	0	0	1

AM Total	1	0	40	0	2	0	43
Percentage	2.33%	0.00%	93.02%	0.00%	4.65%	0.00%	
AM Peak	10:00 AM	12:00 AM	11:00 AM	12:00 AM	8:45 AM	12:00 AM	10:45 AM
Volume	1	0	11	0	1	0	11

PM Total	0	0	106	2	2	0	110
Percentage	0.00%	0.00%	96.36%	1.82%	1.82%	0.00%	
PM Peak	12:00 PM	12:00 PM	2:00 PM	12:00 PM	2:15 PM	12:00 PM	2:15 PM
Volume	0	0	17	1	1	0	18

Day Total	1	0	146	2	4	0	153
Percentage	0.65%	0.00%	95.42%	1.31%	2.61%	0.00%	

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PDI File #: 240294 ATR-A

Count Date: **Wednesday, November 20, 2024**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	1	0	0	0	1
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	1
5:15 AM	0	0	1	0	0	0	1
5:30 AM	0	0	2	0	0	0	2
5:45 AM	0	0	1	0	0	0	1
6:00 AM	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0
6:45 AM	0	0	3	0	0	0	3
7:00 AM	0	0	3	0	0	0	3
7:15 AM	0	0	3	0	0	0	3
7:30 AM	0	0	3	0	0	0	3
7:45 AM	0	0	1	0	0	0	1
8:00 AM	0	0	3	0	0	0	3
8:15 AM	0	0	2	0	0	0	2
8:30 AM	0	0	1	0	0	0	1
8:45 AM	0	0	3	0	0	0	3
9:00 AM	0	0	5	0	0	0	5
9:15 AM	0	0	4	0	0	0	4
9:30 AM	0	0	1	0	0	0	1
9:45 AM	0	0	2	0	0	0	2
10:00 AM	0	0	2	0	0	0	2
10:15 AM	0	0	2	0	0	0	2
10:30 AM	0	0	1	0	0	0	1
10:45 AM	0	0	0	0	0	0	0
11:00 AM	0	0	4	0	0	0	4
11:15 AM	0	0	3	0	0	0	3
11:30 AM	0	0	4	0	0	0	4
11:45 AM	0	0	0	0	0	0	0

AM Total	0	0	56	0	0	0	56
Percentage	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
AM Peak	12:00 AM	12:00 AM	8:30 AM	12:00 AM	12:00 AM	12:00 AM	8:30 AM
Volume	0	0	13	0	0	0	13

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	4	0	0	0	4
12:15 PM	0	0	0	0	0	0	0
12:30 PM	0	0	5	1	0	0	6
12:45 PM	0	0	3	0	1	0	4
1:00 PM	0	0	0	0	0	0	0
1:15 PM	0	0	5	0	0	0	5
1:30 PM	0	0	1	0	0	0	1
1:45 PM	0	0	3	0	0	0	3
2:00 PM	0	0	1	0	0	0	1
2:15 PM	0	0	1	0	0	0	1
2:30 PM	0	0	3	0	0	0	3
2:45 PM	0	0	0	0	0	0	0
3:00 PM	0	0	1	0	0	0	1
3:15 PM	0	0	1	0	0	0	1
3:30 PM	0	0	2	0	0	0	2
3:45 PM	0	1	2	0	0	0	3
4:00 PM	0	0	3	0	0	0	3
4:15 PM	0	0	5	1	0	0	6
4:30 PM	0	0	5	0	0	0	5
4:45 PM	0	0	2	0	1	0	3
5:00 PM	0	0	2	0	0	0	2
5:15 PM	1	0	1	0	0	0	2
5:30 PM	1	0	3	0	0	0	4
5:45 PM	0	0	1	0	0	0	1
6:00 PM	0	0	4	0	0	0	4
6:15 PM	0	0	1	0	0	0	1
6:30 PM	0	0	2	0	0	0	2
6:45 PM	1	0	0	0	0	0	1
7:00 PM	0	0	1	0	0	0	1
7:15 PM	0	0	0	0	0	0	0
7:30 PM	0	0	3	0	0	0	3
7:45 PM	0	0	1	0	0	0	1
8:00 PM	0	0	1	0	0	0	1
8:15 PM	0	0	0	0	0	0	0
8:30 PM	0	0	1	0	0	0	1
8:45 PM	0	0	1	0	0	0	1
9:00 PM	0	0	1	0	0	0	1
9:15 PM	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0
10:00 PM	0	0	2	0	0	0	2
10:15 PM	0	0	1	0	0	0	1
10:30 PM	0	0	3	0	0	0	3
10:45 PM	0	0	1	0	0	0	1
11:00 PM	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0

PM Total	3	1	77	2	2	0	85
Percentage	3.53%	1.18%	90.59%	2.35%	2.35%	0.00%	
PM Peak	4:45 PM	3:00 PM	3:45 PM	12:00 PM	12:00 PM	12:00 PM	3:45 PM
Volume	2	1	15	1	1	0	17
Day Total	3	1	133	2	2	0	141
Percentage	2.13%	0.71%	94.33%	1.42%	1.42%	0.00%	

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PDI File #: 240294 ATR-A

Count Date: Thursday, November 21, 2024
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	1	0	0	0	1
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	1	0	0	0	1
5:00 AM	0	0	0	0	0	0	0
5:15 AM	0	0	2	0	0	0	2
5:30 AM	0	0	1	0	0	0	1
5:45 AM	0	0	1	0	0	0	1
6:00 AM	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0
6:30 AM	0	0	1	0	1	0	2
6:45 AM	0	0	3	0	0	0	3
7:00 AM	0	0	1	0	0	0	1
7:15 AM	0	0	5	0	0	0	5
7:30 AM	0	0	3	0	0	0	3
7:45 AM	0	0	2	0	0	0	2
8:00 AM	0	0	1	0	0	0	1
8:15 AM	0	0	2	0	0	0	2
8:30 AM	0	0	3	0	0	0	3
8:45 AM	0	0	4	0	0	0	4
9:00 AM	0	0	3	0	0	0	3
9:15 AM	0	0	3	0	0	0	3
9:30 AM	0	0	1	0	0	0	1
9:45 AM	0	0	3	0	1	0	4
10:00 AM	0	0	0	0	0	0	0
10:15 AM	0	0	1	0	0	0	1
10:30 AM	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0
11:00 AM	0	0	1	0	0	0	1
11:15 AM	0	0	1	0	1	0	2
11:30 AM	0	0	3	0	0	0	3
11:45 AM	0	0	4	0	0	0	4

AM Total	0	0	51	0	3	0	54
Percentage	0.00%	0.00%	94.44%	0.00%	5.56%	0.00%	
AM Peak	12:00 AM	12:00 AM	8:30 AM	12:00 AM	5:45 AM	12:00 AM	8:30 AM
Volume	0	0	13	0	1	0	13

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	2	0	0	0	2
12:15 PM	0	0	2	1	0	0	3
12:30 PM	0	0	3	0	0	0	3
12:45 PM	0	0	3	0	0	0	3
1:00 PM	0	0	7	0	0	0	7
1:15 PM	0	0	3	0	0	0	3
1:30 PM	0	0	1	0	0	0	1
1:45 PM	0	0	2	1	0	0	3
2:00 PM	0	0	3	0	0	0	3
2:15 PM	0	0	4	0	0	0	4
2:30 PM	0	0	3	0	0	0	3
2:45 PM	0	0	4	0	0	0	4
3:00 PM	0	0	2	0	0	0	2
3:15 PM	0	0	3	0	1	0	4
3:30 PM	0	0	4	0	0	0	4
3:45 PM	0	0	1	0	0	0	1
4:00 PM	0	0	2	0	0	0	2
4:15 PM	0	0	2	0	0	0	2
4:30 PM	0	0	2	0	0	0	2
4:45 PM	0	0	3	0	0	0	3
5:00 PM	0	0	0	0	0	0	0
5:15 PM	0	0	5	0	0	0	5
5:30 PM	0	0	3	0	0	0	3
5:45 PM	0	0	2	0	0	0	2
6:00 PM	0	0	0	0	0	0	0
6:15 PM	0	0	1	0	1	0	2
6:30 PM	0	1	2	0	0	0	3
6:45 PM	0	0	0	0	0	0	0
7:00 PM	0	0	1	0	0	0	1
7:15 PM	0	0	1	0	0	0	1
7:30 PM	0	0	1	0	0	0	1
7:45 PM	0	0	2	0	0	0	2
8:00 PM	0	0	1	0	0	0	1
8:15 PM	0	0	2	0	0	0	2
8:30 PM	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0
9:00 PM	0	0	1	0	0	0	1
9:15 PM	0	0	1	0	0	0	1
9:30 PM	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0
10:00 PM	0	0	3	0	0	0	3
10:15 PM	0	0	1	0	0	0	1
10:30 PM	0	0	0	0	0	0	0
10:45 PM	0	0	1	0	0	0	1
11:00 PM	0	0	1	0	0	0	1
11:15 PM	0	0	1	0	0	0	1
11:30 PM	0	0	1	0	0	0	1
11:45 PM	0	0	0	0	0	0	0

PM Total	0	1	87	2	2	0	92
Percentage	0.00%	1.09%	94.57%	2.17%	2.17%	0.00%	
PM Peak	12:00 PM	5:45 PM	12:30 PM	12:00 PM	2:30 PM	12:00 PM	12:15 PM
Volume	0	1	16	1	1	0	16
Day Total	0	1	138	2	5	0	146
Percentage	0.00%	0.68%	94.52%	1.37%	3.42%	0.00%	

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PDI File # 240294 ATR-A

Direction: NB

Weekly Report

Day Date	Wednesday 11/20/24		Thursday 11/21/24												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	3
12:15	0	6	0	4	0	0	0	0	0	0	0	0	0	0	0	5
12:30	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	3
12:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	3
1:15	0	5	0	1	0	0	0	0	0	0	0	0	0	0	0	3
1:30	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:45	1	1	0	3	0	0	0	0	0	0	0	0	0	0	1	2
2:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	1	1	5	0	0	0	0	0	0	0	0	0	0	1	3
2:30	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	5
2:45	1	1	0	4	0	0	0	0	0	0	0	0	0	0	1	3
3:00	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	4
3:15	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00	0	9	0	3	0	0	0	0	0	0	0	0	0	0	0	6
4:15	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:30	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:45	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5:30	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	4
5:45	0	4	1	1	0	0	0	0	0	0	0	0	0	0	1	3
6:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:15	1	5	0	3	0	0	0	0	0	0	0	0	0	0	1	4
6:30	0	2	1	2	0	0	0	0	0	0	0	0	0	0	1	2
6:45	2	3	2	0	0	0	0	0	0	0	0	0	0	0	2	2
7:00	1	3	1	1	0	0	0	0	0	0	0	0	0	0	1	2
7:15	1	1	2	3	0	0	0	0	0	0	0	0	0	0	2	2
7:30	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
7:45	1	2	1	2	0	0	0	0	0	0	0	0	0	0	1	2
8:00	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	1
8:15	2	2	3	2	0	0	0	0	0	0	0	0	0	0	3	2
8:30	1	1	2	3	0	0	0	0	0	0	0	0	0	0	2	2
8:45	1	0	3	1	0	0	0	0	0	0	0	0	0	0	2	1
9:00	7	1	1	2	0	0	0	0	0	0	0	0	0	0	4	2
9:15	2	1	4	2	0	0	0	0	0	0	0	0	0	0	3	2
9:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	1	2
9:45	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
10:00	2	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1
10:15	0	2	2	1	0	0	0	0	0	0	0	0	0	0	1	2
10:30	2	1	0	2	0	0	0	0	0	0	0	0	0	0	1	2
10:45	2	2	3	0	0	0	0	0	0	0	0	0	0	0	3	1
11:00	2	2	2	5	0	0	0	0	0	0	0	0	0	0	2	4
11:15	3	0	1	2	0	0	0	0	0	0	0	0	0	0	2	1
11:30	2	0	5	0	0	0	0	0	0	0	0	0	0	0	4	0
11:45	1	0	3	1	0	0	0	0	0	0	0	0	0	0	2	1
Total	38	104	43	110	0	41	107									
Day Total	142		153		0		0		0		0		0		148	
Peak HR	8:15 AM	3:30 PM	10:45 AM	2:15 PM											8:30 AM	3:30 PM
Volume	11	19	11	18											11	17

Olmstead Drive
north of Pleasant Street (Route 60)
City, State: Belmont, MA
Client: VHB/ V. Kalikiri
Site Code: 13555.11



PDI File # 240294 ATR-A

Direction: SB

Weekly Report

Day Date	Wednesday 11/20/24		Thursday 11/21/24												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	3
12:15	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2
12:30	0	6	0	3	0	0	0	0	0	0	0	0	0	0	0	5
12:45	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	4
1:00	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	4
1:15	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	4
1:30	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00	1	1	0	3	0	0	0	0	0	0	0	0	0	0	1	2
2:15	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	3
2:30	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:45	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	3
3:30	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	3
3:45	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	3
4:15	0	6	1	2	0	0	0	0	0	0	0	0	0	0	1	4
4:30	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	4
4:45	0	3	1	3	0	0	0	0	0	0	0	0	0	0	1	3
5:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15	1	2	2	5	0	0	0	0	0	0	0	0	0	0	2	4
5:30	2	4	1	3	0	0	0	0	0	0	0	0	0	0	2	4
5:45	1	1	1	2	0	0	0	0	0	0	0	0	0	0	1	2
6:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:30	0	2	2	3	0	0	0	0	0	0	0	0	0	0	1	3
6:45	3	1	3	0	0	0	0	0	0	0	0	0	0	0	3	1
7:00	3	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1
7:15	3	0	5	1	0	0	0	0	0	0	0	0	0	0	4	1
7:30	3	3	3	1	0	0	0	0	0	0	0	0	0	0	3	2
7:45	1	1	2	2	0	0	0	0	0	0	0	0	0	0	2	2
8:00	3	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1
8:15	2	0	2	2	0	0	0	0	0	0	0	0	0	0	2	1
8:30	1	1	3	0	0	0	0	0	0	0	0	0	0	0	2	1
8:45	3	1	4	0	0	0	0	0	0	0	0	0	0	0	4	1
9:00	5	1	3	1	0	0	0	0	0	0	0	0	0	0	4	1
9:15	4	0	3	1	0	0	0	0	0	0	0	0	0	0	4	1
9:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
9:45	2	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0
10:00	2	2	0	3	0	0	0	0	0	0	0	0	0	0	1	3
10:15	2	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1
10:30	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	2
10:45	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00	4	0	1	1	0	0	0	0	0	0	0	0	0	0	3	1
11:15	3	0	2	1	0	0	0	0	0	0	0	0	0	0	3	1
11:30	4	0	3	1	0	0	0	0	0	0	0	0	0	0	4	1
11:45	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	56	85	54	92	0	55	89									
Day Total	141		146		0		0		0		0		0		144	
Peak HR	8:30 AM	3:45 PM	8:30 AM	12:15 PM											8:30 AM	12:30 PM
Volume	13	17	13	16											13	16

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File #: 240294 ATR-B

Count Date: **Wednesday, November 20, 2024**
 Direction: **EB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	5	0	0	0	5
12:15 AM	0	0	5	0	0	0	5
12:30 AM	0	0	3	0	0	0	3
12:45 AM	0	0	3	0	0	0	3
1:00 AM	0	0	2	0	0	0	2
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	2	0	1	0	3
1:45 AM	0	0	5	0	1	0	6
2:00 AM	0	0	7	0	0	0	7
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	1
3:15 AM	0	0	3	0	0	0	3
3:30 AM	0	0	2	0	0	0	2
3:45 AM	0	0	1	0	0	0	1
4:00 AM	0	0	3	0	0	0	3
4:15 AM	0	0	2	0	0	0	2
4:30 AM	0	0	4	0	0	0	4
4:45 AM	0	0	4	0	0	0	4
5:00 AM	0	0	12	0	1	0	13
5:15 AM	0	0	7	0	1	0	8
5:30 AM	0	0	8	1	1	0	10
5:45 AM	0	0	17	1	0	0	18
6:00 AM	0	0	25	0	2	0	27
6:15 AM	0	0	29	1	2	0	32
6:30 AM	1	0	50	1	6	1	59
6:45 AM	0	0	52	2	1	1	56
7:00 AM	0	0	53	0	4	1	58
7:15 AM	0	0	84	0	6	0	90
7:30 AM	1	0	83	0	4	0	88
7:45 AM	0	0	56	0	3	0	59
8:00 AM	0	0	82	1	0	0	83
8:15 AM	0	0	86	0	1	1	88
8:30 AM	0	0	59	0	2	0	61
8:45 AM	0	0	86	1	2	1	90
9:00 AM	0	0	52	1	3	0	56
9:15 AM	1	0	53	1	2	0	57
9:30 AM	0	0	56	0	2	0	58
9:45 AM	1	0	53	0	3	0	57
10:00 AM	0	0	56	1	5	1	63
10:15 AM	1	0	67	0	3	0	71
10:30 AM	0	0	65	1	2	0	68
10:45 AM	0	0	54	0	1	1	56
11:00 AM	0	0	58	1	3	0	62
11:15 AM	0	0	65	0	3	0	68
11:30 AM	0	0	49	0	1	1	51
11:45 AM	0	1	78	0	3	0	82

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	56	0	2	0	58
12:15 PM	1	0	69	1	2	0	73
12:30 PM	0	0	38	1	2	0	41
12:45 PM	0	0	54	0	1	0	55
1:00 PM	0	0	47	0	3	0	50
1:15 PM	1	0	37	0	4	0	42
1:30 PM	0	0	41	0	4	1	46
1:45 PM	0	0	42	0	4	0	46
2:00 PM	0	0	54	0	1	0	55
2:15 PM	0	0	65	0	0	0	65
2:30 PM	0	0	70	0	1	0	71
2:45 PM	1	0	87	0	3	0	91
3:00 PM	0	0	93	1	0	1	95
3:15 PM	0	0	101	0	3	0	104
3:30 PM	0	0	101	2	0	0	103
3:45 PM	0	0	91	0	2	0	93
4:00 PM	1	0	106	0	2	0	109
4:15 PM	0	1	124	0	0	1	126
4:30 PM	3	0	109	0	1	2	115
4:45 PM	0	0	110	0	1	1	112
5:00 PM	0	0	142	0	1	2	145
5:15 PM	2	0	132	1	0	0	135
5:30 PM	0	0	105	0	1	0	106
5:45 PM	0	0	88	0	0	0	88
6:00 PM	1	0	88	0	1	0	90
6:15 PM	1	0	100	0	0	0	101
6:30 PM	1	0	82	0	0	0	83
6:45 PM	1	0	62	0	2	0	65
7:00 PM	0	0	61	0	0	0	61
7:15 PM	0	0	68	0	0	0	68
7:30 PM	0	1	66	0	0	0	67
7:45 PM	2	0	57	1	0	0	60
8:00 PM	0	0	50	0	1	0	51
8:15 PM	0	0	68	0	0	0	68
8:30 PM	0	0	46	2	0	0	48
8:45 PM	0	0	53	0	0	0	53
9:00 PM	0	0	54	0	0	0	54
9:15 PM	0	0	41	2	0	0	43
9:30 PM	0	0	32	0	0	1	33
9:45 PM	0	0	18	0	0	0	18
10:00 PM	0	0	26	0	0	0	26
10:15 PM	0	0	16	0	0	0	16
10:30 PM	0	0	25	0	0	0	25
10:45 PM	0	0	7	0	0	0	7
11:00 PM	0	0	16	0	0	0	16
11:15 PM	0	0	10	0	0	0	10
11:30 PM	0	0	22	0	2	0	24
11:45 PM	0	0	7	0	0	0	7

AM Total	5	1	1552	13	69	8	1648
Percentage	0.30%	0.06%	94.17%	0.79%	4.19%	0.49%	
AM Peak	9:00 AM	11:00 AM	8:00 AM	6:00 AM	6:30 AM	6:15 AM	8:00 AM
Volume	2	1	313	4	17	3	322

PM Total	15	2	3037	11	44	9	3118
Percentage	0.48%	0.06%	97.40%	0.35%	1.41%	0.29%	
PM Peak	4:30 PM	3:30 PM	4:30 PM	8:30 PM	1:00 PM	4:15 PM	4:30 PM
Volume	5	1	493	4	15	6	507

Day Total	20	3	4589	24	113	17	4766
Percentage	0.42%	0.06%	96.29%	0.50%	2.37%	0.36%	

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 D A T A
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File #: 240294 ATR-B

Count Date: Thursday, November 21, 2024
 Direction: EB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	9	0	0	0	9
12:15 AM	0	0	4	0	0	0	4
12:30 AM	0	0	4	0	0	0	4
12:45 AM	0	0	3	0	0	0	3
1:00 AM	0	0	0	0	1	0	1
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	1	0	0	0	1
1:45 AM	0	0	2	0	0	0	2
2:00 AM	0	0	7	0	0	0	7
2:15 AM	0	0	2	0	0	0	2
2:30 AM	0	0	2	0	0	0	2
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	4	0	1	0	5
3:15 AM	0	0	3	0	0	0	3
3:30 AM	0	0	5	0	0	0	5
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	1	0	1
4:15 AM	0	0	3	0	1	0	4
4:30 AM	0	0	3	0	1	0	4
4:45 AM	0	0	3	0	0	0	3
5:00 AM	0	0	6	0	0	0	6
5:15 AM	0	0	11	1	0	0	12
5:30 AM	0	0	16	0	1	0	17
5:45 AM	0	0	12	0	0	0	12
6:00 AM	0	0	14	0	0	0	14
6:15 AM	0	0	26	0	0	0	26
6:30 AM	0	0	32	2	3	0	37
6:45 AM	0	0	61	2	1	0	64
7:00 AM	0	0	51	0	1	0	52
7:15 AM	0	0	56	1	0	0	57
7:30 AM	0	0	85	0	2	0	87
7:45 AM	0	0	67	0	2	1	70
8:00 AM	0	0	73	1	1	1	76
8:15 AM	0	0	67	0	0	0	67
8:30 AM	0	0	86	0	2	0	88
8:45 AM	0	0	62	0	1	0	63
9:00 AM	0	0	54	0	1	0	55
9:15 AM	0	0	75	1	5	0	81
9:30 AM	0	1	76	0	4	0	81
9:45 AM	0	0	55	0	2	0	57
10:00 AM	0	0	53	0	3	0	56
10:15 AM	0	0	58	0	1	0	59
10:30 AM	0	0	58	0	2	0	60
10:45 AM	0	0	47	0	3	1	51
11:00 AM	0	0	71	1	3	0	75
11:15 AM	0	0	69	0	2	0	71
11:30 AM	0	0	72	1	1	0	74
11:45 AM	0	0	67	2	3	0	72

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	54	0	2	0	56
12:15 PM	0	0	67	1	4	0	72
12:30 PM	0	0	76	2	1	0	79
12:45 PM	0	0	46	1	1	0	48
1:00 PM	0	0	53	0	1	0	54
1:15 PM	0	0	61	0	4	0	65
1:30 PM	0	0	73	1	1	0	75
1:45 PM	0	0	77	2	1	0	80
2:00 PM	0	0	61	0	1	1	63
2:15 PM	0	0	66	0	2	0	68
2:30 PM	0	0	85	1	0	1	87
2:45 PM	1	0	91	1	1	0	94
3:00 PM	0	0	93	0	5	0	98
3:15 PM	0	0	86	0	2	0	88
3:30 PM	0	0	106	0	2	0	108
3:45 PM	0	0	109	1	2	0	112
4:00 PM	0	0	103	0	1	0	104
4:15 PM	3	0	121	0	0	0	124
4:30 PM	0	0	116	0	0	0	116
4:45 PM	0	0	146	0	0	0	146
5:00 PM	0	0	134	0	1	0	135
5:15 PM	0	0	96	0	0	0	96
5:30 PM	0	0	100	0	1	1	102
5:45 PM	0	0	96	0	1	0	97
6:00 PM	1	0	106	0	0	0	107
6:15 PM	0	0	98	0	0	0	98
6:30 PM	0	0	75	1	0	0	76
6:45 PM	0	0	88	0	0	0	88
7:00 PM	0	0	61	1	0	0	62
7:15 PM	0	0	65	0	1	0	66
7:30 PM	0	0	54	0	0	0	54
7:45 PM	0	0	50	1	0	0	51
8:00 PM	0	0	44	0	0	0	44
8:15 PM	0	0	49	0	0	0	49
8:30 PM	0	0	52	0	0	0	52
8:45 PM	0	0	43	0	0	0	43
9:00 PM	0	0	33	0	0	0	33
9:15 PM	0	0	31	0	0	0	31
9:30 PM	0	0	33	0	0	0	33
9:45 PM	0	0	29	0	0	0	29
10:00 PM	0	0	30	0	0	0	30
10:15 PM	0	0	14	0	0	0	14
10:30 PM	0	0	25	0	0	0	25
10:45 PM	0	0	11	0	0	0	11
11:00 PM	0	0	16	0	1	0	17
11:15 PM	0	0	17	0	0	0	17
11:30 PM	0	0	24	0	0	0	24
11:45 PM	0	0	11	0	0	0	11

AM Total	0	1	1535	12	49	3	1600
Percentage	0.00%	0.06%	95.94%	0.75%	3.06%	0.19%	
AM Peak	12:00 AM	8:45 AM	7:45 AM	6:30 AM	9:15 AM	7:15 AM	7:45 AM
Volume	0	1	293	5	14	2	301

PM Total	5	0	3175	13	36	3	3232
Percentage	0.15%	0.00%	98.24%	0.40%	1.11%	0.09%	
PM Peak	3:30 PM	12:00 PM	4:15 PM	12:00 PM	3:00 PM	1:45 PM	4:15 PM
Volume	3	0	517	4	11	2	521

Day Total	5	1	4710	25	85	6	4832
Percentage	0.10%	0.02%	97.48%	0.52%	1.76%	0.12%	

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File #: 240294 ATR-B

Count Date: **Wednesday, November 20, 2024**
 Direction: **WB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	10	0	0	0	10
12:15 AM	0	0	4	0	0	0	4
12:30 AM	0	0	5	0	0	0	5
12:45 AM	0	0	4	0	0	0	4
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	4	0	0	0	4
1:30 AM	0	0	4	0	0	0	4
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	3	0	1	0	4
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	1	0	0	0	1
3:15 AM	0	0	1	0	0	1	2
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	2	0	0	1	3
4:00 AM	0	0	4	0	0	0	4
4:15 AM	0	0	3	0	0	0	3
4:30 AM	0	0	8	0	0	0	8
4:45 AM	0	0	14	0	0	0	14
5:00 AM	0	0	12	0	1	1	14
5:15 AM	0	0	19	0	1	0	20
5:30 AM	0	0	23	0	0	0	23
5:45 AM	0	0	37	1	1	1	40
6:00 AM	0	0	29	0	4	0	33
6:15 AM	0	0	65	0	0	0	65
6:30 AM	1	0	81	0	6	3	91
6:45 AM	0	0	74	0	2	1	77
7:00 AM	0	0	92	1	4	4	101
7:15 AM	2	0	102	0	2	1	107
7:30 AM	0	0	96	0	7	1	104
7:45 AM	3	0	101	1	5	0	110
8:00 AM	1	0	111	0	5	1	118
8:15 AM	0	0	151	0	2	0	153
8:30 AM	1	0	164	0	8	1	174
8:45 AM	1	1	180	0	3	0	185
9:00 AM	3	0	232	1	9	1	246
9:15 AM	0	0	217	0	5	2	224
9:30 AM	0	0	187	1	8	1	197
9:45 AM	0	0	142	0	6	0	148
10:00 AM	0	0	118	2	6	2	128
10:15 AM	0	0	114	1	7	1	123
10:30 AM	1	0	133	0	4	3	141
10:45 AM	0	0	118	1	4	1	124
11:00 AM	0	0	103	0	9	1	113
11:15 AM	0	0	106	1	3	0	110
11:30 AM	0	0	128	2	4	2	136
11:45 AM	0	0	139	1	5	1	146

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	142	0	4	0	146
12:15 PM	1	0	111	1	7	0	120
12:30 PM	0	0	124	0	4	0	128
12:45 PM	0	1	130	1	10	2	144
1:00 PM	0	0	109	0	4	0	113
1:15 PM	0	1	128	1	5	0	135
1:30 PM	0	0	116	2	6	1	125
1:45 PM	0	0	162	1	6	1	170
2:00 PM	0	0	155	1	1	0	157
2:15 PM	1	0	135	0	5	0	141
2:30 PM	0	0	193	0	6	0	199
2:45 PM	1	0	182	0	4	0	187
3:00 PM	1	0	109	1	0	1	112
3:15 PM	2	0	107	1	2	0	112
3:30 PM	0	1	125	0	1	0	127
3:45 PM	0	0	121	0	0	0	121
4:00 PM	0	0	121	0	0	0	121
4:15 PM	0	0	115	2	1	0	118
4:30 PM	0	1	109	2	2	0	114
4:45 PM	0	0	98	2	0	0	100
5:00 PM	0	0	117	0	4	2	123
5:15 PM	0	1	129	1	1	0	132
5:30 PM	0	0	112	0	1	0	113
5:45 PM	0	0	112	3	2	0	117
6:00 PM	1	0	104	0	0	0	105
6:15 PM	0	0	100	1	0	0	101
6:30 PM	0	0	90	0	0	0	90
6:45 PM	0	0	76	0	2	0	78
7:00 PM	0	0	74	1	1	0	76
7:15 PM	0	0	68	0	2	0	70
7:30 PM	0	0	62	0	0	0	62
7:45 PM	0	0	61	0	0	0	61
8:00 PM	0	0	60	0	1	0	61
8:15 PM	0	0	59	0	1	1	61
8:30 PM	0	1	35	0	0	1	37
8:45 PM	0	0	33	1	1	0	35
9:00 PM	0	0	40	0	0	0	40
9:15 PM	0	0	42	1	0	0	43
9:30 PM	0	0	40	2	0	0	42
9:45 PM	0	1	20	0	1	0	22
10:00 PM	0	1	34	0	0	0	35
10:15 PM	0	0	25	0	0	0	25
10:30 PM	0	0	25	0	1	0	26
10:45 PM	0	0	24	0	0	1	25
11:00 PM	0	0	11	0	0	0	11
11:15 PM	0	0	16	0	0	0	16
11:30 PM	0	0	8	0	0	0	8
11:45 PM	0	0	13	0	1	0	14

AM Total	13	1	3155	13	122	31	3335
Percentage	0.39%	0.03%	94.60%	0.39%	3.66%	0.93%	
AM Peak	7:15 AM	8:00 AM	8:45 AM	9:30 AM	9:00 AM	6:30 AM	8:45 AM
Volume	6	1	816	4	28	9	852

PM Total	7	8	4182	25	87	10	4319
Percentage	0.16%	0.19%	96.83%	0.58%	2.01%	0.23%	
PM Peak	2:30 PM	12:30 PM	2:00 PM	4:00 PM	12:00 PM	12:45 PM	2:00 PM
Volume	4	2	665	6	25	3	684

Day Total	20	9	7337	38	209	41	7654
Percentage	0.26%	0.12%	95.86%	0.50%	2.73%	0.54%	

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 D A T A
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File #: 240294 ATR-B

Count Date: **Thursday, November 21, 2024**
 Direction: **WB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	4	0	0	0	4
12:15 AM	0	0	8	0	0	0	8
12:30 AM	0	0	7	0	0	0	7
12:45 AM	0	0	3	0	0	0	3
1:00 AM	0	0	7	0	1	0	8
1:15 AM	0	0	7	0	0	0	7
1:30 AM	0	0	4	0	1	0	5
1:45 AM	0	0	6	0	0	0	6
2:00 AM	0	0	4	0	0	0	4
2:15 AM	0	0	5	0	0	0	5
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	1	0	0	0	1
3:00 AM	0	0	0	0	2	0	2
3:15 AM	0	0	4	0	0	1	5
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	6	0	0	0	6
4:15 AM	0	0	2	0	1	0	3
4:30 AM	0	0	10	0	0	0	10
4:45 AM	0	0	7	0	1	0	8
5:00 AM	0	0	13	0	0	0	13
5:15 AM	0	0	18	0	0	0	18
5:30 AM	0	0	30	0	0	0	30
5:45 AM	0	0	31	0	0	1	32
6:00 AM	0	0	36	1	1	0	38
6:15 AM	0	0	53	1	0	1	55
6:30 AM	1	0	72	0	2	1	76
6:45 AM	1	0	80	0	0	0	81
7:00 AM	0	0	76	0	2	0	78
7:15 AM	0	0	80	1	3	1	85
7:30 AM	1	0	95	0	4	0	100
7:45 AM	0	0	102	0	1	0	103
8:00 AM	1	0	137	0	5	0	143
8:15 AM	0	0	126	0	1	0	127
8:30 AM	1	0	124	1	2	0	128
8:45 AM	1	0	130	0	1	0	132
9:00 AM	0	0	142	0	6	0	148
9:15 AM	0	0	113	1	7	0	121
9:30 AM	0	0	92	0	1	0	93
9:45 AM	0	0	118	2	5	1	126
10:00 AM	1	0	93	1	3	0	98
10:15 AM	0	0	77	0	3	0	80
10:30 AM	0	0	82	0	1	0	83
10:45 AM	0	0	89	0	3	0	92
11:00 AM	0	0	76	2	1	0	79
11:15 AM	0	0	80	0	4	2	86
11:30 AM	0	0	71	0	3	0	74
11:45 AM	0	0	88	1	7	1	97

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	73	0	3	1	77
12:15 PM	0	0	75	0	5	0	80
12:30 PM	0	0	94	0	2	0	96
12:45 PM	0	0	89	0	2	0	91
1:00 PM	0	0	75	0	5	1	81
1:15 PM	0	0	77	0	2	0	79
1:30 PM	0	0	98	0	0	0	98
1:45 PM	0	0	71	2	0	0	73
2:00 PM	0	0	87	0	4	0	91
2:15 PM	0	0	99	0	1	0	100
2:30 PM	0	0	139	0	1	0	140
2:45 PM	0	1	97	0	3	1	102
3:00 PM	0	0	89	0	0	1	90
3:15 PM	0	0	101	0	3	0	104
3:30 PM	0	0	129	1	0	0	130
3:45 PM	0	0	108	0	2	0	110
4:00 PM	0	0	112	1	0	0	113
4:15 PM	0	0	89	1	1	1	92
4:30 PM	0	0	102	1	0	0	103
4:45 PM	0	0	99	0	1	0	100
5:00 PM	0	0	108	1	1	0	110
5:15 PM	0	0	92	2	1	0	95
5:30 PM	1	0	116	0	0	1	118
5:45 PM	0	0	100	2	0	0	102
6:00 PM	0	0	109	1	0	0	110
6:15 PM	0	0	79	1	4	0	84
6:30 PM	0	0	90	0	2	0	92
6:45 PM	0	0	75	0	0	0	75
7:00 PM	0	0	76	3	0	0	79
7:15 PM	0	0	61	0	0	0	61
7:30 PM	0	0	62	1	0	0	63
7:45 PM	0	0	53	1	0	0	54
8:00 PM	0	0	53	0	0	0	53
8:15 PM	0	0	42	0	0	0	42
8:30 PM	0	0	40	0	0	0	40
8:45 PM	0	0	43	0	1	1	45
9:00 PM	0	0	42	1	0	0	43
9:15 PM	0	0	34	0	0	0	34
9:30 PM	0	0	28	0	0	0	28
9:45 PM	0	0	33	0	1	0	34
10:00 PM	0	0	35	0	0	0	35
10:15 PM	0	0	25	0	0	1	26
10:30 PM	0	0	24	1	0	0	25
10:45 PM	0	0	28	2	0	1	31
11:00 PM	0	0	15	0	0	0	15
11:15 PM	0	0	19	0	0	0	19
11:30 PM	0	0	14	0	0	0	14
11:45 PM	0	0	15	0	0	0	15

AM Total	7	0	2418	11	72	9	2517
Percentage	0.28%	0.00%	96.07%	0.44%	2.86%	0.36%	
AM Peak Volume	8:00 AM	12:00 AM	8:15 AM	9:15 AM	9:00 AM	5:45 AM	8:15 AM
	3	0	522	4	19	3	535

PM Total	1	1	3414	22	45	9	3492
Percentage	0.03%	0.03%	97.77%	0.63%	1.29%	0.26%	
PM Peak Volume	4:45 PM	2:00 PM	3:15 PM	5:00 PM	12:15 PM	2:15 PM	3:15 PM
	1	1	450	5	14	2	457

Day Total	8	1	5832	33	117	18	6009
Percentage	0.13%	0.02%	97.05%	0.55%	1.95%	0.30%	

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File # 240294 ATR-B

Direction: EB

Weekly Report

Day Date	Wednesday 11/20/24		Thursday 11/21/24												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	5	58	9	56	0	0	0	0	0	0	0	0	0	0	7	57		
12:15	5	73	4	72	0	0	0	0	0	0	0	0	0	0	5	73		
12:30	3	41	4	79	0	0	0	0	0	0	0	0	0	0	4	60		
12:45	3	55	3	48	0	0	0	0	0	0	0	0	0	0	3	52		
1:00	2	50	1	54	0	0	0	0	0	0	0	0	0	0	2	52		
1:15	2	42	0	65	0	0	0	0	0	0	0	0	0	0	1	54		
1:30	3	46	1	75	0	0	0	0	0	0	0	0	0	0	2	61		
1:45	6	46	2	80	0	0	0	0	0	0	0	0	0	0	4	63		
2:00	7	55	7	63	0	0	0	0	0	0	0	0	0	0	7	59		
2:15	0	65	2	68	0	0	0	0	0	0	0	0	0	0	1	67		
2:30	3	71	2	87	0	0	0	0	0	0	0	0	0	0	3	79		
2:45	0	91	0	94	0	0	0	0	0	0	0	0	0	0	0	93		
3:00	1	95	5	98	0	0	0	0	0	0	0	0	0	0	3	97		
3:15	3	104	3	88	0	0	0	0	0	0	0	0	0	0	3	96		
3:30	2	103	5	108	0	0	0	0	0	0	0	0	0	0	4	106		
3:45	1	93	0	112	0	0	0	0	0	0	0	0	0	0	1	103		
4:00	3	109	1	104	0	0	0	0	0	0	0	0	0	0	2	107		
4:15	2	126	4	124	0	0	0	0	0	0	0	0	0	0	3	125		
4:30	4	115	4	116	0	0	0	0	0	0	0	0	0	0	4	116		
4:45	4	112	3	146	0	0	0	0	0	0	0	0	0	0	4	129		
5:00	13	145	6	135	0	0	0	0	0	0	0	0	0	0	10	140		
5:15	8	135	12	96	0	0	0	0	0	0	0	0	0	0	10	116		
5:30	10	106	17	102	0	0	0	0	0	0	0	0	0	0	14	104		
5:45	18	88	12	97	0	0	0	0	0	0	0	0	0	0	15	93		
6:00	27	90	14	107	0	0	0	0	0	0	0	0	0	0	21	99		
6:15	32	101	26	98	0	0	0	0	0	0	0	0	0	0	29	100		
6:30	59	83	37	76	0	0	0	0	0	0	0	0	0	0	48	80		
6:45	56	65	64	88	0	0	0	0	0	0	0	0	0	0	60	77		
7:00	58	61	52	62	0	0	0	0	0	0	0	0	0	0	55	62		
7:15	90	68	57	66	0	0	0	0	0	0	0	0	0	0	74	67		
7:30	88	67	87	54	0	0	0	0	0	0	0	0	0	0	88	61		
7:45	59	60	70	51	0	0	0	0	0	0	0	0	0	0	65	56		
8:00	83	51	76	44	0	0	0	0	0	0	0	0	0	0	80	48		
8:15	88	68	67	49	0	0	0	0	0	0	0	0	0	0	78	59		
8:30	61	48	88	52	0	0	0	0	0	0	0	0	0	0	75	50		
8:45	90	53	63	43	0	0	0	0	0	0	0	0	0	0	77	48		
9:00	56	54	55	33	0	0	0	0	0	0	0	0	0	0	56	44		
9:15	57	43	81	31	0	0	0	0	0	0	0	0	0	0	69	37		
9:30	58	33	81	33	0	0	0	0	0	0	0	0	0	0	70	33		
9:45	57	18	57	29	0	0	0	0	0	0	0	0	0	0	57	24		
10:00	63	26	56	30	0	0	0	0	0	0	0	0	0	0	60	28		
10:15	71	16	59	14	0	0	0	0	0	0	0	0	0	0	65	15		
10:30	68	25	60	25	0	0	0	0	0	0	0	0	0	0	64	25		
10:45	56	7	51	11	0	0	0	0	0	0	0	0	0	0	54	9		
11:00	62	16	75	17	0	0	0	0	0	0	0	0	0	0	69	17		
11:15	68	10	71	17	0	0	0	0	0	0	0	0	0	0	70	14		
11:30	51	24	74	24	0	0	0	0	0	0	0	0	0	0	63	24		
11:45	82	7	72	11	0	0	0	0	0	0	0	0	0	0	77	9		
Total	1648	3118	1600	3232	0	1624	3175											
Day Total	4766		4832		0		0		0		0		0		4799			
Peak HR	8:00 AM	4:30 PM	7:45 AM	4:15 PM													7:30 AM	4:15 PM
Volume	322	507	301	521													309	510

Pleasant Street (Route 60)
 west of Olmstead Drive
 City, State: Belmont, MA
 Client: VHB/ V. Kalikiri
 Site Code: 13555.11



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

PDI File # 240294 ATR-B

Direction: WB

Weekly Report

Day Date	Wednesday 11/20/24		Thursday 11/21/24												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	10	146	4	77	0	0	0	0	0	0	0	0	0	0	7	112
12:15	4	120	8	80	0	0	0	0	0	0	0	0	0	0	6	100
12:30	5	128	7	96	0	0	0	0	0	0	0	0	0	0	6	112
12:45	4	144	3	91	0	0	0	0	0	0	0	0	0	0	4	118
1:00	5	113	8	81	0	0	0	0	0	0	0	0	0	0	7	97
1:15	4	135	7	79	0	0	0	0	0	0	0	0	0	0	6	107
1:30	4	125	5	98	0	0	0	0	0	0	0	0	0	0	5	112
1:45	1	170	6	73	0	0	0	0	0	0	0	0	0	0	4	122
2:00	5	157	4	91	0	0	0	0	0	0	0	0	0	0	5	124
2:15	4	141	5	100	0	0	0	0	0	0	0	0	0	0	5	121
2:30	1	199	3	140	0	0	0	0	0	0	0	0	0	0	2	170
2:45	2	187	1	102	0	0	0	0	0	0	0	0	0	0	2	145
3:00	1	112	2	90	0	0	0	0	0	0	0	0	0	0	2	101
3:15	2	112	5	104	0	0	0	0	0	0	0	0	0	0	4	108
3:30	0	127	3	130	0	0	0	0	0	0	0	0	0	0	2	129
3:45	3	121	3	110	0	0	0	0	0	0	0	0	0	0	3	116
4:00	4	121	6	113	0	0	0	0	0	0	0	0	0	0	5	117
4:15	3	118	3	92	0	0	0	0	0	0	0	0	0	0	3	105
4:30	8	114	10	103	0	0	0	0	0	0	0	0	0	0	9	109
4:45	14	100	8	100	0	0	0	0	0	0	0	0	0	0	11	100
5:00	14	123	13	110	0	0	0	0	0	0	0	0	0	0	14	117
5:15	20	132	18	95	0	0	0	0	0	0	0	0	0	0	19	114
5:30	23	113	30	118	0	0	0	0	0	0	0	0	0	0	27	116
5:45	40	117	32	102	0	0	0	0	0	0	0	0	0	0	36	110
6:00	33	105	38	110	0	0	0	0	0	0	0	0	0	0	36	108
6:15	65	101	55	84	0	0	0	0	0	0	0	0	0	0	60	93
6:30	91	90	76	92	0	0	0	0	0	0	0	0	0	0	84	91
6:45	77	78	81	75	0	0	0	0	0	0	0	0	0	0	79	77
7:00	101	76	78	79	0	0	0	0	0	0	0	0	0	0	90	78
7:15	107	70	85	61	0	0	0	0	0	0	0	0	0	0	96	66
7:30	104	62	100	63	0	0	0	0	0	0	0	0	0	0	102	63
7:45	110	61	103	54	0	0	0	0	0	0	0	0	0	0	107	58
8:00	118	61	143	53	0	0	0	0	0	0	0	0	0	0	131	57
8:15	153	61	127	42	0	0	0	0	0	0	0	0	0	0	140	52
8:30	174	37	128	40	0	0	0	0	0	0	0	0	0	0	151	39
8:45	185	35	132	45	0	0	0	0	0	0	0	0	0	0	159	40
9:00	246	40	148	43	0	0	0	0	0	0	0	0	0	0	197	42
9:15	224	43	121	34	0	0	0	0	0	0	0	0	0	0	173	39
9:30	197	42	93	28	0	0	0	0	0	0	0	0	0	0	145	35
9:45	148	22	126	34	0	0	0	0	0	0	0	0	0	0	137	28
10:00	128	35	98	35	0	0	0	0	0	0	0	0	0	0	113	35
10:15	123	25	80	26	0	0	0	0	0	0	0	0	0	0	102	26
10:30	141	26	83	25	0	0	0	0	0	0	0	0	0	0	112	26
10:45	124	25	92	31	0	0	0	0	0	0	0	0	0	0	108	28
11:00	113	11	79	15	0	0	0	0	0	0	0	0	0	0	96	13
11:15	110	16	86	19	0	0	0	0	0	0	0	0	0	0	98	18
11:30	136	8	74	14	0	0	0	0	0	0	0	0	0	0	105	11
11:45	146	14	97	15	0	0	0	0	0	0	0	0	0	0	122	15
Total	3335	4319	2517	3492	0	2926	3906									
Day Total	7654		6009		0	6832										
Peak HR	8:45 AM	2:00 PM	8:15 AM	3:15 PM											8:30 AM	2:00 PM
Volume	852	684	535	457											679	559

Seasonal Adjustment

Massachusetts Highway Department
Statewide Traffic Data Collection
2023 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.23	1.14	1.11	1.06	1.01	0.96	0.93	0.91	1.00	0.97	1.04	1.08	0.77
R3	1.11	1.07	1.02	0.95	0.90	0.89	0.87	0.87	0.92	0.89	0.95	0.99	0.98
R4-R7	1.19	1.16	1.10	1.00	0.92	0.91	0.87	0.88	0.93	0.93	1.01	1.06	0.98
U1-Boston	1.07	1.05	1.00	0.95	0.93	0.92	0.92	0.92	0.94	0.93	0.96	0.99	0.94
U1-Essex	1.14	1.11	1.06	1.00	0.95	0.91	0.87	0.87	0.94	0.95	1.00	1.03	0.96
U1-Southeast	1.12	1.09	1.04	0.96	0.91	0.87	0.84	0.86	0.92	0.94	0.98	1.03	0.96
U1-West	1.05	1.02	0.98	0.96	0.94	0.93	0.94	0.94	0.95	0.92	0.96	0.98	0.81
U1-Worcester	1.06	1.04	0.97	0.93	0.92	0.90	0.92	0.92	0.93	0.92	0.94	0.97	0.88
U3	1.05	1.02	0.96	0.92	0.89	0.89	0.91	0.92	0.91	0.90	0.94	0.96	0.98
U4-U7	1.02	1.00	0.94	0.89	0.86	0.88	0.91	0.92	0.89	0.88	0.91	0.91	0.99
UR2	1.05	1.01	0.97	0.92	0.90	0.90	0.91	0.91	0.91	0.90	0.94	0.97	0.98
Rec - East	1.17	1.16	1.09	1.04	0.92	0.84	0.76	0.80	0.93	1.00	1.03	1.06	0.98
Rec - West	1.46	1.38	1.32	1.06	0.94	0.79	0.59	0.69	0.97	0.99	1.18	1.28	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

UR2 Group - Combination of Urban Freeways and Expressways and Rural Freeways and Expressways.

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

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

Motor Vehicle Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Belmont, MA COUNT DATE : 11/21/2024

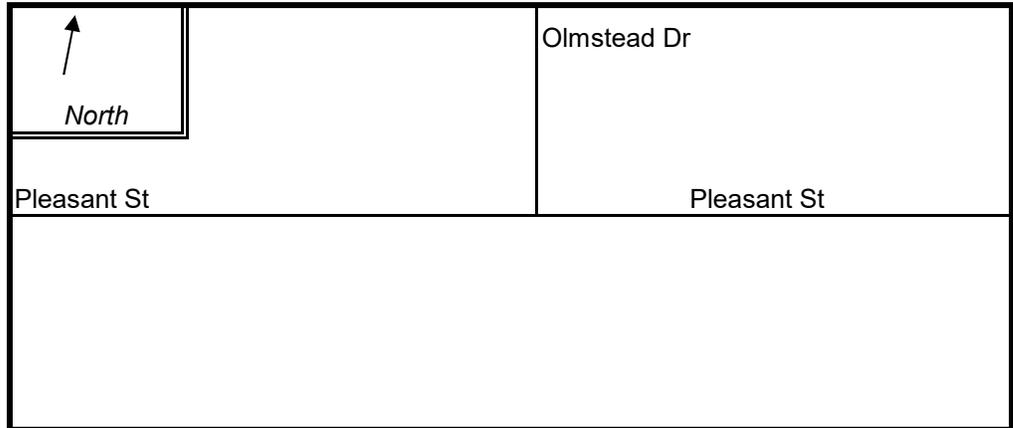
DISTRICT : 4 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Pleasant St

MINOR STREET(S) : Olmstead Dr

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



PEAK HOUR VOLUMES

	Pleasant St	Pleasant St	Olmstead Dr			Total Peak Hourly Approach Volume
approach:	EB	WB	SB			
PEAK HOURLY VOLUMES (AM/PM) :	470	419	11			900

" 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 : PM Peak Hourly Voulmes

Project Title & Date: McLean Hospital CAC

Public Transportation Schedule

FITCHBURG LINE

FALL/WINTER SCHEDULE

Effective November 18, 2024

Monday to Friday

Inbound to Boston

ZONE	STATION	TRAIN #	AM										PM									
			400	402	404	482	406	408	410	486	414	490	418	494	422	424	498	426	428	430	432	
	Bikes Allowed																					
8	Wachusett	♻️	4:25	5:20	6:10	-	7:15	8:20	9:25	-	11:25	-	1:25	-	3:25	4:35	-	6:15	7:30	9:25	10:55	
8	Fitchburg	♻️	4:33	5:28	6:18	-	7:23	8:28	9:33	-	11:33	-	1:33	-	3:33	4:43	-	6:25	7:38	9:33	11:03	
8	North Leominster	♻️	4:40	5:35	6:25	-	7:30	8:35	9:40	-	11:40	-	1:40	-	3:40	4:50	-	6:32	7:45	9:40	11:10	
8	Shirley		4:48	5:43	6:33	-	7:38	8:43	f 9:48	-	f 11:48	-	f 1:48	-	f 3:48	f 4:58	-	f 6:40	f 7:53	f 9:48	11:18	
8	Ayer		4:53	5:48	6:38	-	7:43	8:48	9:53	-	11:53	-	1:53	-	3:53	5:03	-	6:45	7:58	9:53	11:23	
7	Littleton/Rte 495	♻️	5:01	5:56	6:46	7:03	7:51	8:56	10:01	11:01	12:01	1:01	2:01	3:01	4:01	5:11	5:48	6:53	8:06	10:01	11:31	
6	South Acton	♻️	5:07	6:02	6:52	7:09	7:57	9:02	10:07	11:07	12:07	1:07	2:07	3:07	4:07	5:17	5:54	6:59	8:12	10:07	11:37	
5	West Concord	♻️	5:11	6:06	-	7:13	8:01	9:06	10:11	11:11	12:11	1:11	2:11	3:11	4:11	5:21	5:58	7:03	8:16	10:11	11:41	
5	Concord		5:15	6:11	-	7:18	8:05	9:10	10:15	11:15	12:15	1:15	2:15	3:15	4:15	5:25	6:02	7:07	8:20	10:15	11:45	
4	Lincoln		5:21	6:17	-	7:24	8:11	9:16	f 10:21	f 11:21	f 12:21	f 1:21	f 2:21	f 3:21	f 4:21	f 5:31	f 6:08	f 7:13	f 8:26	f 10:21	11:51	
3	Silver Hill		-	f 6:19	-	-	f 8:13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	Kendal Green		5:27	6:24	-	7:30	8:18	9:22	f 10:27	f 11:27	f 12:27	f 1:27	f 2:27	f 3:27	f 4:27	f 5:37	f 6:14	f 7:19	f 8:32	f 10:27	11:57	
2	Brandeis/Roberts	♻️	5:30	6:28	-	7:34	8:22	9:26	10:30	11:30	12:30	1:30	2:30	3:30	4:30	5:40	6:17	7:22	8:35	10:30	12:00	
2	Waltham	♻️	5:34	6:32	-	7:38	8:26	9:30	10:34	11:34	12:34	1:34	2:34	3:34	4:34	5:44	6:21	7:26	8:39	10:34	12:04	
1	Waverley		5:39	6:37	-	7:43	8:31	9:35	f 10:39	f 11:39	f 12:39	f 1:39	f 2:39	f 3:39	f 4:39	f 5:49	f 6:26	f 7:31	f 8:44	f 10:39	12:09	
1	Belmont		5:41	6:39	-	7:46	8:33	9:37	f 10:41	f 11:41	f 12:41	f 1:41	f 2:41	f 3:41	f 4:41	f 5:51	f 6:28	f 7:33	f 8:46	f 10:41	12:11	
1A	Porter Square	♻️	5:47	6:45	7:18	7:52	8:39	9:43	10:47	11:47	12:47	1:47	2:47	3:47	4:47	5:57	6:34	7:39	8:52	10:47	12:17	
1A	North Station	♻️	6:03	7:03	7:35	8:09	8:57	10:00	11:03	12:03	1:03	2:03	3:03	4:03	5:03	6:13	6:49	7:55	9:08	11:03	12:33	

Weekend

Inbound to Boston

ZONE	STATION	SATURDAY TRAIN #	AM					PM				
			2400	2402	2404	2406	2408	2410	2412	2414	2414	
	Bikes Allowed		♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️
8	Wachusett	♻️	5:00	8:00	10:25	12:25	2:25	4:25	6:25	8:55		
8	Fitchburg	♻️	5:08	8:08	10:33	12:33	2:33	4:33	6:33	9:03		
8	North Leominster	♻️	5:15	8:15	10:40	12:40	2:40	4:40	6:40	9:10		
8	Shirley		f 5:23	f 8:23	f 10:48	f 12:48	f 2:48	f 4:48	f 6:48	9:18		
8	Ayer		5:28	8:28	10:53	12:53	2:53	4:53	6:53	9:23		
7	Littleton/Rte 495	♻️	5:36	8:36	11:01	1:01	3:01	5:01	7:01	9:31		
6	South Acton	♻️	5:42	8:42	11:07	1:07	3:07	5:07	7:07	9:37		
5	West Concord	♻️	5:46	8:46	11:11	1:11	3:11	5:11	7:11	9:41		
5	Concord		5:50	8:50	11:15	1:15	3:15	5:15	7:15	9:45		
4	Lincoln		f 5:56	f 8:56	f 11:21	f 1:21	f 3:21	f 5:21	f 7:21	9:51		
3	Kendal Green		f 6:01	f 9:01	f 11:26	f 1:26	f 3:26	f 5:26	f 7:26	9:56		
2	Brandeis/Roberts	♻️	6:05	9:05	11:30	1:30	3:30	5:30	7:30	10:00		
2	Waltham	♻️	6:09	9:09	11:34	1:34	3:34	5:34	7:34	10:04		
1	Waverley		f 6:14	f 9:14	f 11:39	f 1:39	f 3:39	f 5:39	f 7:39	10:09		
1	Belmont		f 6:16	f 9:16	f 11:41	f 1:41	f 3:41	f 5:41	f 7:41	10:11		
1A	Porter Square	♻️	6:22	9:22	11:47	1:47	3:47	5:47	7:47	10:17		
1A	North Station	♻️	6:38	9:38	12:03	2:03	4:03	6:03	8:03	10:33		

SKI TRAIN

Weekend

Outbound from Boston

ZONE	STATION	SATURDAY TRAIN #	AM					PM				
			2401	2403	2405	2407	2409	2411	2413	2415		
	Bikes Allowed		♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	
1A	North Station	♻️	7:45	10:15	12:15	2:15	4:15	6:15	8:40	11:40		
1A	Porter Square	♻️	7:55	10:25	12:25	2:25	4:25	6:25	8:50	11:50		
1	Belmont		f 8:00	f 10:30	f 12:30	f 2:30	f 4:30	f 6:30	f 8:55	11:55		
1	Waverley		f 8:02	f 10:32	f 12:32	f 2:32	f 4:32	f 6:32	f 8:57	11:57		
2	Waltham	♻️	8:07	10:37	12:37	2:37	4:37	6:37	9:02	12:02		
2	Brandeis/Roberts	♻️	8:10	10:40	12:40	2:40	4:40	6:40	9:05	12:05		
3	Kendal Green		f 8:14	f 10:44	f 12:44	f 2:44	f 4:44	f 6:44	f 9:09	12:09		
4	Lincoln		f 8:19	f 10:49	f 12:49	f 2:49	f 4:49	f 6:49	f 9:14	12:14		
5	Concord		8:24	10:54	12:54	2:54	4:54	6:54	9:19	12:19		
5	West Concord	♻️	8:28	10:58	12:58	2:58	4:58	6:58	9:23	12:23		
6	South Acton	♻️	8:33	11:03	1:03	3:03	5:03	7:03	9:28	12:28		
7	Littleton/Rte 495	♻️	8:40	11:10	1:10	3:10	5:10	7:10	9:35	12:35		
8	Ayer		8:48	11:18	1:18	3:18	5:18	7:18	9:43	12:43		
8	Shirley		f 8:53	f 11:23	f 1:23	f 3:23	f 5:23	f 7:23	f 9:48	12:48		
8	North Leominster	♻️	9:02	11:32	1:32	3:32	5:32	7:32	9:57	12:57		
8	Fitchburg	♻️	9:10	11:40	1:40	3:40	5:40	7:40	10:05	1:05		
8	Wachusett	♻️	9:22	11:52	1:52	3:52	5:52	7:52	10:17	1:17		

SKI TRAIN

HOLIDAY SERVICE:

The following Holidays will operate on a WEEKEND Schedule:

- THANKSGIVING DAY | Thursday, November 28th, 2024
- DAY AFTER THANKSGIVING | Friday, November 29th, 2024
- CHRISTMAS DAY | Wednesday, December 25th, 2024
- NEW YEAR'S DAY | Wednesday, January 1st, 2025
- PRESIDENTS' DAY | Monday, February 17th, 2025
- MEMORIAL DAY | Monday, May 26th, 2025

Keep in Mind:

This schedule will be effective from November 18, 2024 and will replace the schedule of May 20, 2024.

REGULAR WEEKDAY SERVICE WILL OPERATE ON:

- MARTIN LUTHER KING DAY | Monday, January 20th, 2025
- PATRIOT'S DAY | Monday, April 15th, 2024

Times in purple with "f" indicate a flag stop:
Passengers must tell the conductor that they wish to leave. Passengers waiting to board must be visible on the platform for the train to stop.

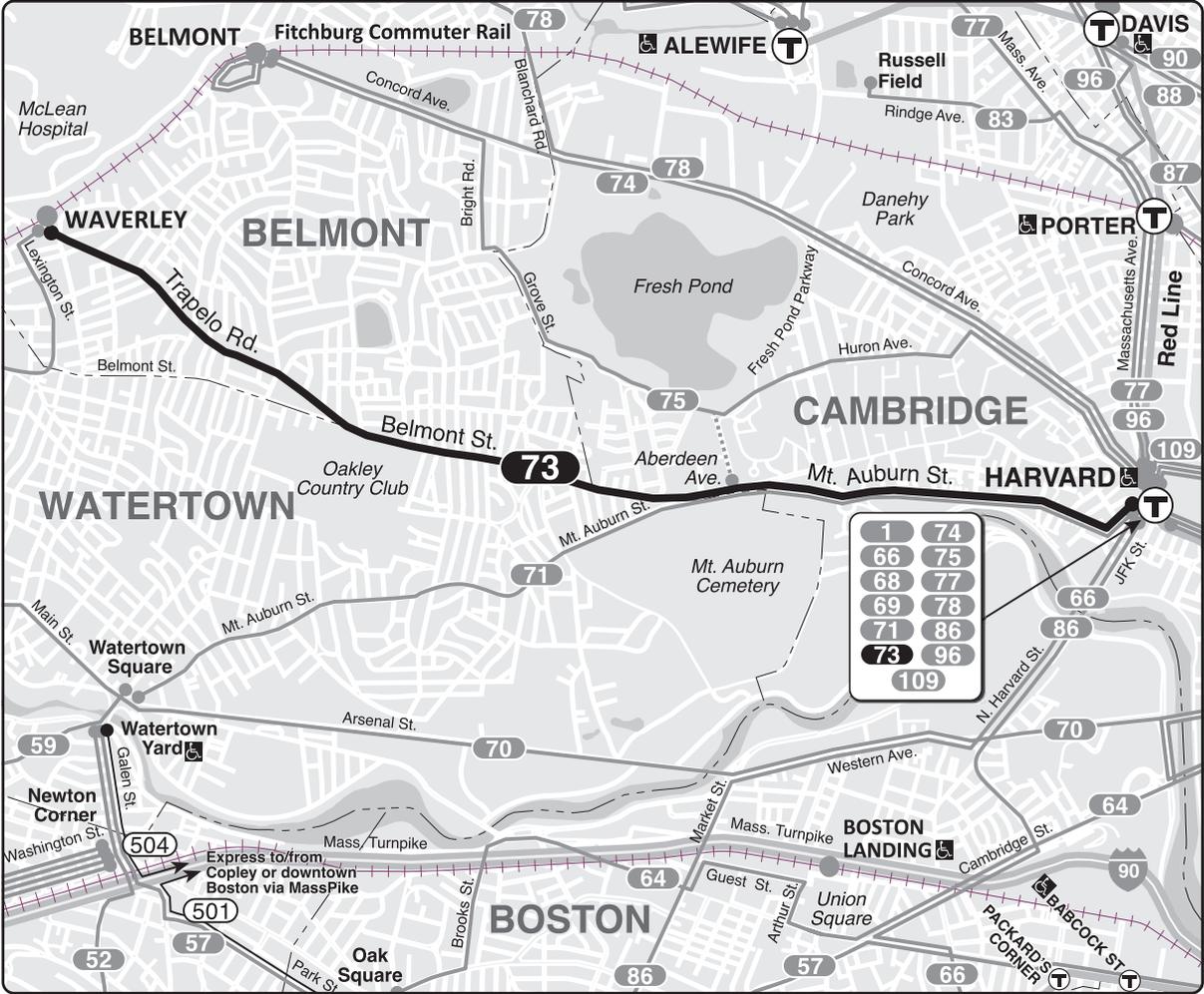
Bikes: Bicycles are allowed on trains with the bicycle symbol shown below the train number.

High level platform and bridge plate available.
Visit [mbta.com/accessibility](https://www.mbta.com/accessibility) for more information.

Effective December 15, 2024

Replaces August 2024

73 Waverley Sq – Harvard Sta



Connections

- RED LINE
- FITCHBURG LINE

Frequency



Most buses every **20 minutes** or less



Information **617-222-3200**
 Lost and Found **617-222-2229**
 TTY **617-222-5146**

Realtime arrival information, maps, and more

mbta.com

- Transfer to bus/subway available on CharlieCard and contactless—good for 2 hours, pay fare difference.
- Children 11 & under ride free.

All MBTA buses are accessible to people with disabilities.

	CharlieCard & Contactless	Cash on board	Reduced fare
Local Bus	\$1.70	\$1.70	\$0.85
Bus + Subway	\$2.40	\$4.10	\$1.10

Complete fare/pass rules and free/reduced fare eligibility:
mbta.com/fares or call **617-222-3200**

A125-3-22.1

Weekday 73

Inbound				Outbound			
Waverley Square	Mt. Auburn St & Belmont St	Mt. Auburn St & Story St	Harvard Station	Harvard Station	Mt. Auburn St & Story St	Mt. Auburn St & Belmont St	Waverley Square
5:05	5:13	5:19	5:27	4:45	4:47	4:52	5:02
5:21	5:29	5:35	5:43	5:01	5:03	5:08	5:18
5:39	5:47	5:53	6:01	5:19	5:21	5:26	5:36
5:56	6:04	6:10	6:18	5:36	5:38	5:43	5:53
6:09	6:17	6:23	6:31	5:49	5:51	5:56	6:06
6:22	6:30	6:36	6:45	6:01	6:03	6:08	6:18
6:35	6:43	6:49	6:58	6:14	6:16	6:21	6:31
6:47	6:55	7:01	7:04	6:25	6:27	6:32	6:42
6:55	7:05	7:11	7:14	6:35	6:37	6:42	6:52
7:04	7:15	7:21	7:24	6:44	6:46	6:51	7:01
7:14	7:25	7:31	7:34	6:57	6:59	7:04	7:15
7:24	7:35	7:41	7:44	7:04	7:06	7:11	7:22
every 16 min or less				every 17 min or less			
10:30	10:40	10:47	10:57	10:37	10:39	10:46	10:57
10:46	10:56	11:03	11:13	10:53	10:55	11:02	11:13
11:01	11:11	11:18	11:29	11:09	11:11	11:18	11:29
11:17	11:27	11:34	11:45	11:25	11:27	11:34	11:45
11:33	11:43	11:50	12:01	11:41	11:43	11:50	12:01
11:49	11:59	12:06	12:17	11:57	11:59	12:06	12:18
12:05	12:15	12:22	12:33	12:13	12:15	12:22	12:34
12:22	12:32	12:39	12:50	12:29	12:31	12:38	12:50
12:38	12:48	12:55	1:06	12:45	12:47	12:54	1:06
12:54	1:04	1:11	1:22	1:02	1:04	1:11	1:23
1:10	1:20	1:27	1:38	1:18	1:20	1:27	1:39
1:27	1:37	1:44	1:55	1:34	1:36	1:43	1:55
every 20 min or less				every 21 min or less			
9:08	9:16	9:21	9:31	9:05	9:07	9:12	9:23
9:28	9:36	9:41	9:51	9:25	9:27	9:32	9:43
9:48	9:56	10:01	10:11	9:45	9:47	9:52	10:03
10:08	10:16	10:21	10:31	10:05	10:07	10:12	10:23
10:28	10:36	10:41	10:50	10:25	10:27	10:32	10:43
10:48	10:56	11:01	11:09	10:46	10:48	10:53	11:04
11:08	11:16	11:21	11:29	11:09	11:11	11:16	11:27
11:32	11:40	11:45	11:53	11:33	11:35	11:40	11:51
11:56	12:04	12:09	12:17	11:57	11:59	12:04	12:15
12:19	12:27	12:32	12:40	12:21	12:23	12:28	12:39
12:42	12:50	12:55	1:03	12:43	12:45	12:50	1:01
1:06	1:14	1:19	1:27	W 1:07	1:09	1:14	1:25

W waits for last train to arrive station

PM times are **bold**

Saturday 73

Inbound				Outbound			
Waverley Square	Mt. Auburn St & Belmont St	Mt. Auburn St & Story St	Harvard Station	Harvard Station	Mt. Auburn St & Story St	Mt. Auburn St & Belmont St	Waverley Square
5:01	5:08	5:14	5:22	4:44	4:45	4:50	4:58
5:21	5:28	5:34	5:42	5:04	5:05	5:10	5:18
5:41	5:48	5:54	6:02	5:23	5:24	5:29	5:37
6:00	6:07	6:13	6:21	5:40	5:41	5:46	5:54
6:19	6:26	6:32	6:40	5:59	6:00	6:05	6:13
6:39	6:46	6:52	7:00	6:19	6:20	6:25	6:33
6:57	7:05	7:12	7:21	6:38	6:39	6:44	6:52
7:16	7:24	7:31	7:40	6:55	6:56	7:01	7:11
7:35	7:43	7:50	7:59	7:11	7:13	7:18	7:28
7:53	8:01	8:08	8:17	7:27	7:29	7:34	7:44
8:13	8:21	8:28	8:38	7:45	7:47	7:52	8:02
8:31	8:41	8:49	8:59	8:04	8:06	8:11	8:22
every 20 min or less				every 20 min or less			
10:10	10:21	10:29	10:40	10:04	10:06	10:11	10:22
10:30	10:41	10:49	11:00	10:24	10:26	10:31	10:42
10:50	11:01	11:09	11:21	10:44	10:46	10:51	11:02
11:10	11:21	11:29	11:41	11:04	11:07	11:13	11:25
11:30	11:41	11:49	12:01	11:24	11:27	11:33	11:45
11:50	12:01	12:09	12:21	11:44	11:47	11:53	12:05
12:10	12:21	12:29	12:41	12:04	12:07	12:13	12:25
12:30	12:41	12:49	1:01	12:24	12:27	12:33	12:45
12:50	1:01	1:09	1:21	12:44	12:47	12:53	1:05
1:10	1:21	1:29	1:41	1:04	1:07	1:13	1:25
1:30	1:41	1:49	2:01	1:24	1:27	1:33	1:45
1:50	2:01	2:09	2:21	1:44	1:47	1:53	2:05
every 21 min or less				every 21 min or less			
9:48	9:56	10:02	10:13	9:25	9:27	9:32	9:42
10:08	10:16	10:22	10:33	9:45	9:47	9:52	10:02
10:28	10:36	10:42	10:53	10:05	10:07	10:12	10:22
10:48	10:56	11:02	11:12	10:25	10:27	10:32	10:42
11:10	11:16	11:22	11:32	10:45	10:47	10:52	11:02
11:30	11:36	11:42	11:52	11:05	11:07	11:12	11:22
11:50	11:56	12:01	12:11	11:25	11:27	11:32	11:42
12:10	12:16	12:21	12:31	11:45	11:47	11:52	12:02
12:30	12:36	12:41	12:51	12:05	12:07	12:12	12:22
12:50	12:56	1:01	1:11	12:25	12:27	12:32	12:42
1:10	1:16	1:21	1:31	12:50	12:52	12:57	1:05
1:17	1:23	1:28	1:32	W 1:10	1:12	1:17	1:25

Information in this timetable is subject to change without notice. Traffic and weather may affect running times.

Always check bus destination signs before boarding. Some buses may only serve a part, or skip portions of this route.

Sunday 73

Inbound				Outbound			
Waverley Square	Mt. Auburn St & Belmont St	Mt. Auburn St & Story St	Harvard Station	Harvard Station	Mt. Auburn St & Story St	Mt. Auburn St & Belmont St	Waverley Square
6:37	6:44	6:50	6:58	6:37	6:40	6:44	6:52
6:57	7:04	7:10	7:18	6:57	7:00	7:04	7:12
7:17	7:24	7:30	7:38	7:17	7:20	7:24	7:32
7:37	7:44	7:50	7:58	7:37	7:40	7:44	7:52
7:57	8:04	8:10	8:18	7:57	8:00	8:04	8:12
8:17	8:24	8:30	8:39	8:17	8:20	8:24	8:32
8:37	8:45	8:51	9:00	8:37	8:40	8:44	8:52
8:57	9:05	9:11	9:20	8:54	8:57	9:01	9:12
9:17	9:25	9:31	9:40	9:12	9:15	9:20	9:31
9:37	9:45	9:51	10:00	9:31	9:34	9:39	9:50
9:57	10:07	10:14	10:24	9:51	9:54	9:59	10:10
10:17	10:27	10:34	10:44	10:11	10:14	10:19	10:30
every 20 min				every 20 min			
11:57	12:07	12:14	12:25	11:50	11:53	11:59	12:11
12:17	12:27	12:34	12:45	12:10	12:14	12:20	12:32
12:37	12:47	12:54	1:05	12:30	12:34	12:40	12:52
12:57	1:07	1:14	1:25	12:50	12:54	1:00	1:12
1:17	1:27	1:34	1:45	1:10	1:14	1:20	1:32
1:37	1:47	1:54	2:05	1:30	1:34	1:40	1:52
1:57	2:07	2:14	2:25	1:50	1:54	2:00	2:12
2:17	2:27	2:34	2:45	2:10	2:14	2:20	2:32
2:37	2:47	2:54	3:05	2:30	2:34	2:40	2:52
2:57	3:07	3:14	3:25	2:50	2:54	3:00	3:12
3:17	3:27	3:34	3:45	3:10	3:14	3:20	3:32
3:37	3:47	3:54	4:05	3:30	3:34	3:40	3:52
every 20 min				every 20 min			
8:57	9:04	9:10	9:19	9:30	9:33	9:37	9:48
9:17	9:24	9:30	9:39	9:50	9:53	9:57	10:08
9:37	9:43	9:49	9:58	10:10	10:13	10:17	10:28
9:57	10:03	10:09	10:18	10:35	10:38	10:42	10:53
10:17	10:23	10:29	10:38	10:55	10:58	11:02	11:13
10:37	10:43	10:49	10:58	11:15	11:18	11:22	11:32
10:57	11:03	11:09	11:17	11:35	11:38	11:42	11:50
11:17	11:23	11:29	11:37	11:55	11:58	12:02	12:10
11:37	11:43	11:49	11:57	12:15	12:18	12:22	12:30
11:57	12:03	12:09	12:17	12:35	12:38	12:42	12:50
12:18	12:24	12:30	12:38	12:55	12:58	1:02	1:10
12:39	12:45	12:51	12:59	W 1:11	1:14	1:18	1:26

Holidays

- SUN New Year's Day
- SUN Labor Day
- SAT MLK Jr. Day
- SAT Columbus/Indigenous Peoples Day
- SAT Presidents Day
- SAT Patriots' Day
- SUN Thanksgiving
- SUN Memorial Day
- SUN Christmas Day
- SUN Independence Day

Effective December 15, 2024

Replaces August 2024

553

Roberts – Newton Corner

554

Waverley Sq – Newton Corner

Schedule Change
i

Weekday - 554

Connections

FITCHBURG LINE

FRAMINGHAM/WORCESTER LINE

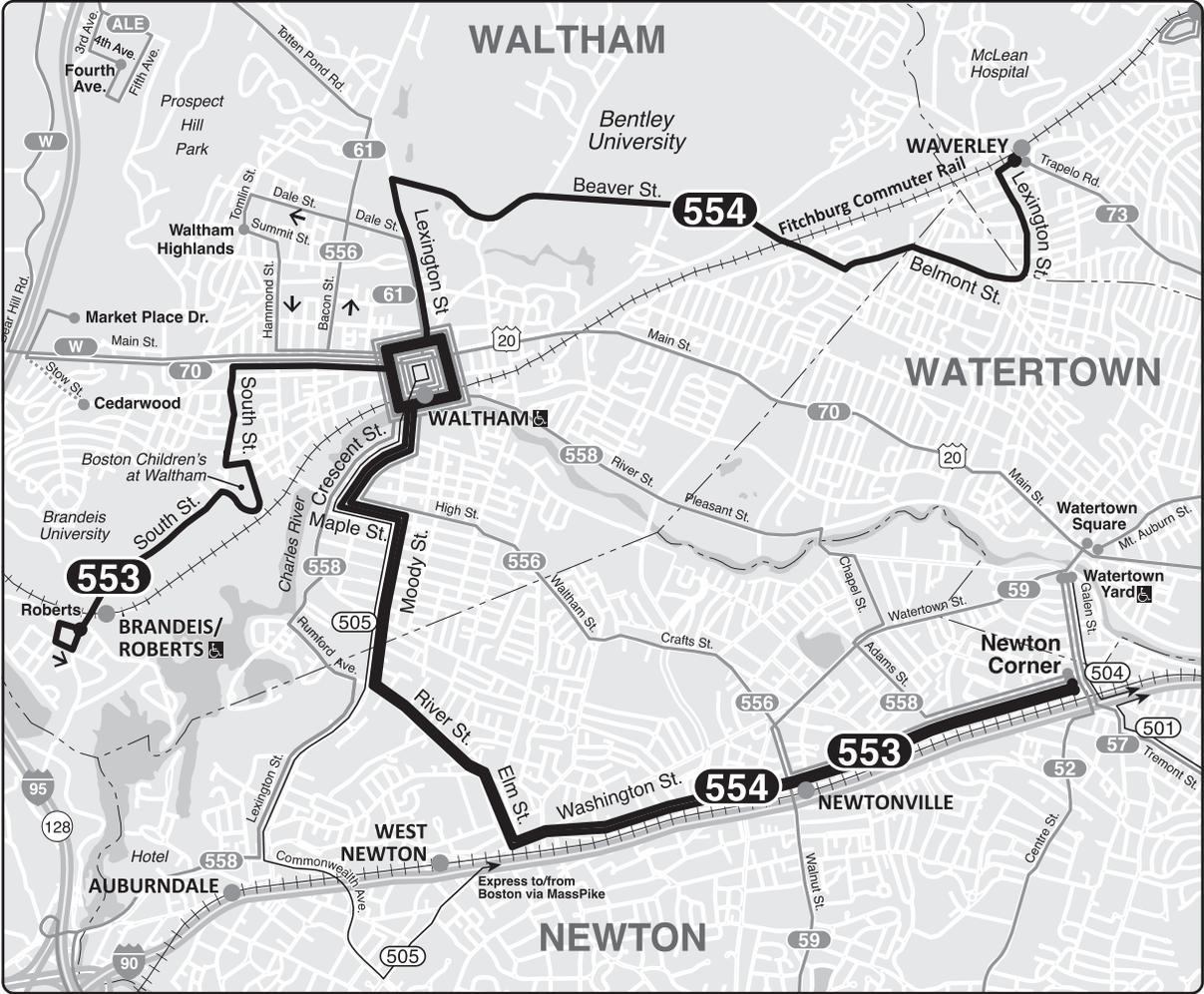


Information **617-222-3200**
 Lost and Found **617-222-1450**
 TTY **617-222-5146**

Realtime arrival information, maps, and more

mbta.com

A123-XP2-3-22.1



- Transfer to bus/subway available on CharlieCard and contactless—good for 2 hours, pay fare difference.
- Children 11 & under ride free.

All MBTA buses are accessible to people with disabilities.

	CharlieCard & Contactless	Cash on board	Reduced fare
Local Bus	\$1.70	\$1.70	\$0.85
Local + Exp	\$4.25	\$5.95	\$2.10
Local + Subway	\$2.40	\$4.10	\$2.10

Complete fare/pass rules and free/reduced fare eligibility:
mbta.com/fares or call **617-222-3200**

Weekday 553 554

Inbound				
Roberts	Central Sq, Waltham	West Newton	Newton Corner	
6:25	6:36	6:46	7:00	
A 6:45	6:58	7:10	7:23	
7:10	7:21	7:31	7:45	
7:55	8:06	8:16	8:30	
A 8:15	8:30	8:43	9:00	
8:40	8:51	9:01	9:15	
9:25	9:36	9:46	10:00	
A 9:45	9:58	10:08	10:24	
10:10	10:20	10:30	10:42	
10:55	11:06	11:16	11:30	
11:40	11:52	12:02	12:16	
12:25	12:37	12:47	1:01	
1:10	1:22	1:32	1:46	
1:55	2:07	2:17	2:31	
2:40	2:52	3:02	3:16	
3:25	3:39	3:52	4:07	
4:10	4:24	4:37	4:50	
A 4:15	4:32	4:45	5:03	
4:55	5:09	5:22	5:35	
5:40	5:54	6:07	6:20	
A 5:55	6:11	6:23	6:40	
6:25	6:37	6:49	7:02	
7:10	7:22	7:34	7:47	
A 7:25	7:37	7:48	7:59	
7:55	8:05	8:16	8:27	
8:40	8:50	9:01	9:12	

Outbound

Newton Corner	West Newton	Central Sq, Waltham	Roberts	
6:00	6:05	6:13	A 6:30	
6:30	6:37	6:46	6:59	
7:05	7:12	7:22	7:37	
7:30	7:37	7:47	A 8:07	
7:55	8:05	8:17	8:35	
8:40	8:50	9:00	9:17	
9:05	9:12	9:22	A 9:42	
9:20	9:29	9:39	9:56	
10:05	10:14	10:24	10:41	
10:50	10:58	11:06	11:23	
11:35	11:43	11:54	12:12	
12:20	12:28	12:39	12:57	
1:05	1:13	1:24	1:42	
1:50	1:58	2:09	2:27	
2:35	2:45	2:58	3:16	
3:20	3:30	3:43	4:01	
3:30	3:39	3:51	A 4:12	
4:10	4:20	4:33	4:51	
4:55	5:05	5:18	5:36	
5:05	5:15	5:27	A 5:48	
5:40	5:50	6:03	6:21	
6:25	6:35	6:48	7:05	
6:45	6:54	7:03	A 7:20	
7:05	7:12	7:23	7:38	
7:50	7:57	8:08	8:23	
8:30	8:37	8:48	9:03	

Saturday 553

Inbound				
Roberts	Central Sq, Waltham	West Newton	Newton Corner	
6:30	6:38	6:47	6:56	
7:30	7:38	7:47	7:56	
8:40	8:50	8:59	9:09	
9:50	10:00	10:12	10:23	
11:15	11:27	11:39	11:50	
12:45	12:58	1:09	1:22	
2:15	2:27	2:39	2:49	
3:40	3:52	4:04	4:14	
5:10	5:22	5:34	5:45	
6:35	6:45	6:55	7:06	

Outbound

Newton Corner	West Newton	Central Sq, Waltham	Roberts	
7:00	7:05	7:13	7:26	
8:05	8:10	8:18	8:31	
9:15	9:22	9:30	9:44	
10:35	10:44	10:53	11:09	
12:00	12:11	12:21	12:37	
1:30	1:40	1:50	2:05	
3:00	3:09	3:19	3:33	
4:25	4:34	4:43	4:57	
5:55	6:04	6:13	6:27	
7:15	7:23	7:31	7:45	

A start/end at Waverley Square at this time

554 trips are shaded

PM times are **bold**

Information in this timetable is subject to change without notice. Traffic and weather may affect running times.

Always check bus destination signs before boarding. Some buses may only serve a part, or skip portions of this route.

Holidays

- SUN** New Year's Day
- SUN** Labor Day
- SAT** MLK Jr. Day
- SAT** Columbus/Indigenous Peoples Day
- SAT** Presidents Day
- SAT** Patriots' Day
- SUN** Thanksgiving
- SUN** Memorial Day
- SUN** Christmas Day
- SUN** Independence Day

Background Development

TRAFFIC GROWTH CALCULATIONS

Project Name: McLean Hospital CAC

Project No: 13555

Location: Belmont, MA

Count Date: 11/21/2024

INTERSECTION	MOVEMENT	BACKGROUND DEVELOPMENTS	
		McLean Hospital Residential Development	
		AM	PM
1 :: Pleasant Street at Olmstead Drive Pleasant Street Pleasant Street Olmstead Drive	EBU		
	EBL	7	16
	EBT		
	WBU		
	WBT		
	WBR	4	10
	SBU		
	SBL	10	8
	SBR	15	12
2 :: Pleasant Street at Trapelo Road Pleasant Street Trapelo Road Trapelo Road	WBU		
	WBL	11	9
	WBR	4	3
	NBU		
	NBT		
	NBR	5	12
	SBU		
	SBL	2	4
	SBT		

General Background Traffic Growth

1/8/2024 - McLean Hospital CAC TIA

General Background Traffic Growth - Daily Traffic Volumes

Location IC Location	2015	2016	2017	2018	2019	2020	2021	2022	2023
4119 YANKEE DIVISION HIGHWAY SOUTH OF WINTER ST.INTERSTATE 95		164,855	168,019	172,064	171,892	121,783	153,011	160,320	157,890
8098 INTERSTATE 93 AT MEDFORD	148,021	152,241	151,784	155,803	147,366	126,838	150,721	150,764	150,556

	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	Average Annual Growth
4119 YANKEE DIVISION HIGHWAY SOUTH OF WINTER ST.INTERSTATE 95	-	2%	2%	0%	-29%	26%	5%	-2%	1%
8098 INTERSTATE 93 AT MEDFORD		3%	0%	3%	-5%	-14%	19%	0%	0%
					excluded from average				

SAY 1%

Trip Generation

HOURLY DISTRIBUTION - PROPOSED CONDITIONS

Head Count	Students		Pathways Staff		Arlington Staff		PHP staff		Residence staff		Campus Support		School Visitors			Grand Total Enter	Grand Total Exit	Grand Total						
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Total	Enter	Exit							
6:00 AM			0		0		0		0		0		0		0	0	0	0						
7:00 AM	7	7	14	23	21	21	5	5	0	0	0	0	0	0	0	56	7	63						
8:00 AM	100	100	200	5	5	4	4	12	12	48	8	56	7	7	0	176	108	284						
9:00 AM			0		0		0	17	17	0	0	0	0	0	10	27	0	27						
10:00 AM			0		0		0	0	0	0	0	0	0	0	10	0	10	10						
11:00 AM			0		0		0	0	0	0	0	0	0	0	0	0	0	0						
12:00 PM			0	10	20	8	8	16	5	5	15	15	30	7	7	45	45	90						
1:00 PM			0		0		0	0	0	0	0	0	0	0	0	0	0	0						
2:00 PM	100	100	200		0		0	0	0	0	0	0	0	0	0	100	100	200						
3:00 PM	7	7	14		28		25	25	17	17	0	0	0	0	5	12	77	89						
4:00 PM			0		0		0	0	0	16	48	64	0	0	5	16	53	69						
5:00 PM			0		0		0	0	17	17	0	0	0	7	0	0	24	24						
6:00 PM			0		0		0	0	0	0	0	0	0	0	0	0	0	0						
7:00 PM			0		0		0	0	0	0	0	0	0	0	0	0	0	0						
8:00 PM			0		0		0	0	0	8	16	24	0	0	8	16	24	24						
	214	214	428	38	38	76	33	33	66	39	39	78	87	87	174	14	14	28	15	15	30	440	440	880

Trip Distribution

Zip Code	City	State	TAZ	OCDEI Jr Staff	Arlington Students	Pathways Students	Pathways staff	Arlington Staff	All Staff	All Students
01106	Longmeadow	MA	I-90 (west)	0	0	0	0	0	0	0
01450	Groton	MA	Rt 2 (west)	0	1	0	0	0	0	1
01451	Harvard	MA	Rt 2 (west)	0	1	0	0	0	0	1
01453	Leominster	MA	Rt 2 (west)	0	0	0	0	0	0	0
01464	Shirley	MA	Rt 2 (west)	0	1	0	0	0	0	1
01520	Holden	MA	Rt 2 (west)	0	0	1	0	0	0	1
01605	Worcester	MA	I-90 (west)	1	0	0	0	0	1	0
01701	Framingham	MA	I-90 (west)	0	0	0	0	1	1	0
01718	Village Of Nagog Woods	MA	Rt 2 (west)	0	0	0	0	1	1	0
01719	Boxborough	MA	Rt 2 (west)	0	0	0	1	0	1	0
01720	Acton	MA	Rt 2 (west)	1	0	0	0	2	3	0
01730	Bedford	MA	Rt 2 (west)	1	1	1	0	0	1	2
01749	Hudson	MA	Rt 2 (west)	0	0	1	0	0	0	1
01754	Maynard	MA	Rt 2 (west)	0	0	1	1	0	1	1
01757	Milford	MA	I-90 (west)	0	0	1	0	0	0	1
01760	Natick	MA	I-90 (west) or Rt 2 (west)	0	1	0	0	1	1	1
01772	Southborough	MA	I-90 (west)	0	0	0	0	0	0	0
01773	Lincoln	MA	Rt 2 (west)	0	0	1	0	0	0	1
01776	Sudbury	MA	Rt 2 (west)	0	1	1	0	0	0	2
01778	Wayland	MA	Rt 2 (west)	0	0	1	0	0	0	1
01780	Wayland	MA	Rt 2 (west)	0	0	0	0	1	1	0
01801	Woburn	MA	Rt 3 (north)	0	1	0	0	2	2	1
01803	Burlington	MA	Rt 2 (west)	0	0	1	0	0	0	1
01810	Andover	MA	I-93 (north)	1	0	1	0	0	1	1
01821	Billerica	MA	Rt 3 (north)	0	0	0	0	0	0	0
01830	Haverhill	MA	I-93 (north)	0	0	0	2	0	2	0
01840	Lawrence	MA	I-93 (north)	0	0	0	0	0	0	0
01851	Lowell	MA	Rt 3 (north)	1	0	1	0	0	1	1
01864	North Reading	MA	I-95 (north)	1	0	0	0	0	1	0
01867	Reading	MA	I-95 (north)	0	0	1	0	0	0	1
01880	Wakefield	MA	I-95 (north)	0	0	0	1	0	1	0
01886	Westford	MA	Rt 3 (north)	0	2	0	0	0	0	2
01887	Wilmington	MA	I-95 (north)	0	1	0	0	0	0	1
01890	Winchester	MA	local (Pleasant St - north)	2	0	0	0	0	2	0
01906	Saugus	MA	I-93 (north)	0	0	0	1	0	1	0
01923	Danvers	MA	I-95 (north)	0	0	1	0	0	0	1
01945	Marblehead	MA	I-95 (north)	0	0	1	0	0	0	1
02026	Dedham	MA	I-95 (south)	0	0	0	0	0	0	0
02038	Franklin	MA	I-95 (south)	0	0	1	0	0	0	1
02048	Mansfield	MA	I-95 (south)	0	0	0	1	0	1	0
02050	Marshfield	MA	I-90 (east)	0	0	0	1	0	1	0
02056	Norfolk	MA	I-95 (south)	0	0	0	0	0	0	0
02062	Norwood	MA	I-95 (south)	0	0	0	0	0	0	0
02067	Sharon	MA	I-95 (south)	0	0	0	0	0	0	0
02111	Boston	MA	I-90 (east)	1	0	0	0	0	1	0
02113	Boston	MA	I-90 (east)	2	0	1	0	0	2	1
02128	Boston	MA	I-90 (east)	1	0	0	0	0	1	0
02130	Jamaica Plain	MA	I-90 (east)	1	0	0	0	0	1	0
02131	Roslindale	MA	local (Trapelo - south)	0	1	1	0	0	0	2
02134	Allston	MA	I-90 (east)	0	0	1	0	0	0	1
02135	Brighton	MA	I-90 (east)	1	0	0	1	0	2	0
02136	Hyde Park	MA	I-90 (east)	0	1	0	0	0	0	1
02138	Cambridge	MA	local (Trapelo - south)	1	0	0	0	0	1	0
02139	Cambridge	MA	local (Trapelo - south)	2	1	0	0	0	2	1
02140	Cambridge	MA	local (Trapelo - south)	0	0	1	0	1	1	1
02142	Cambridge	MA	local (Trapelo - south)	0	0	0	0	0	0	0
02143	Somerville	MA	local (Pleasant St - north)	1	1	0	1	1	3	1
02144	Somerville	MA	local (Pleasant St - north)	1	1	0	0	0	1	1
02145	Somerville	MA	local (Pleasant St - north)	0	0	1	1	0	1	1
02155	Medford	MA	local (Pleasant St - north)	0	0	0	2	1	3	0
02176	Melrose	MA	local (Pleasant St - north)	2	0	2	0	0	2	2
02180	Stoneham	MA	local (Pleasant St - north)	0	0	1	1	0	1	1
02186	Milton	MA	I-90 (east)	0	0	1	0	0	0	1
02188	Weymouth	MA	I-90 (east)	1	0	0	0	0	1	0
02360	Plymouth	MA	I-90 (east)	0	0	0	0	0	0	0
02382	Whitman	MA	I-90 (east)	0	0	0	0	0	0	0
02420	Lexington	MA	local (Trapelo - north)	0	0	0	0	0	0	0
02421	Lexington	MA	local (Trapelo - north)	0	1	0	0	0	0	1
02446	Brookline	MA	local (Trapelo - south)	1	0	0	0	1	2	0
02451	Waltham	MA	local (Trapelo - north)	0	0	1	1	0	1	1
02452	Waltham	MA	local (Trapelo - north)	0	0	0	1	0	1	0
02453	Waltham	MA	local (Trapelo - north)	4	0	0	0	1	5	0
02460	Newtonville	MA	local (Trapelo - north)	0	0	0	1	1	2	0
02464	Newton Upper Falls	MA	local (Trapelo - north)	1	0	2	0	0	1	2
02465	West Newton	MA	local (Trapelo - north)	0	0	0	0	1	1	0
02467	Chestnut Hill	MA	local (Trapelo - south)	0	0	0	0	0	0	0
02472	Watertown	MA	local (Trapelo - south)	0	0	2	1	1	2	2
02474	Arlington	MA	local (Pleasant St - north)	0	0	0	2	2	4	0
02476	Arlington	MA	local (Pleasant St - north)	1	0	0	1	1	3	0
02478	Belmont	MA	-	1	3	0	2	2	5	2
02481	Wellesley Hills	MA	I-95 (south)	0	0	1	0	0	0	1
02482	Wellesley	MA	I-95 (south)	0	1	0	0	0	0	1
02493	Weston	MA	local (Trapelo - north)	0	0	0	0	0	0	0
02494	Needham Heights	MA	I-95 (south)	0	1	1	0	0	0	2
02840	Newport	RI	I-95 (south)	0	0	0	0	0	0	0
03045	Goffstown	NH	Rt 3 (north)	0	0	0	0	0	0	0
03051	Hudson	NH	Rt 2 (west)	0	0	0	0	0	0	0
03062	Nashua	NH	Rt 3 (north)	0	0	0	1	0	1	0
03076	Pelham	NH	Rt 3 (north)	0	0	0	0	1	1	0
03087	Windham	NH	Rt 3 (north)	1	0	0	0	0	1	0

TAZ	Local Assignment	Staff	Students
I-90 (west)	Trapelo - north	2	1
I-90 (east)	Trapelo - south	9	4
I-90 (west) or Rt 2 (west)	1/2 - Trapelo - north, 1/2 - Trapelo - south	1	1
Rt 2 (west)	Trapelo - north	8	13
Rt 3 (north)	Pleasant	6	4
I-93 (north)	Pleasant	4	1
I-95 (north)	1/2 - Trapelo - north, 1/2 - Pleasant	2	4
I-95 (south)	Trapelo - north	1	5
local (Pleasant St - north)	Pleasant	20	6
local (Trapelo - south)	Trapelo - south	8	6
local (Trapelo - north)	Trapelo - north	11	4
		72	49
		0	0

Assignment - Staff

Trapelo - north	24	33%
Trapelo - south	18	24%
Pleasant	31	43%
	73	100%

Assignment - Students

Trapelo - north	26	53%
Trapelo - south	11	21%
Pleasant	13	26%
	50	100%

Traffic Signal Warrant Analysis (TSWA)

2009 MUTCD

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: **Olmstead Drive at Pleasant Street**

Major Street Direction: Eastbound-Westbound ▼

Year: **2031** Condition: **Build - Peak Conditions**

Operating speed on major roadway: **30** mph

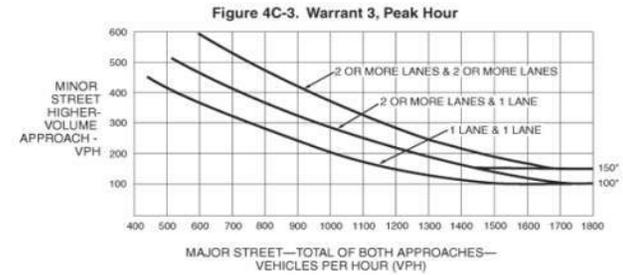
Number of approaches: **3**

Required approach volumes

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Adjusted	
		Minimum*	Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A AND WARRANT 1B		Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road		Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants?				
		Eastbound	Westbound		1A	1B	80%(1A&1B)	2	3
6:00 - 7:00 AM				0	No	No	No	No	No
7:00 - 8:00 AM	45	350	357	707	No	No	No	No	No
8:00 - 9:00 AM	142	408	523	931	No	Yes	Yes	Yes	No
9:00 - 10:00 AM	30	300	482	782	No	No	No	No	No
10:00 - 11:00 AM	29	239	368	607	No	No	No	No	No
11:00 - 12:00 AM	26	301	331	632	No	No	No	No	No
12:00 - 1:00 PM	77	301	337	638	No	No	No	No	No
1:00 - 2:00 PM	35	278	324	602	No	No	No	No	No
2:00 - 3:00 PM	131	383	423	806	No	Yes	Yes	Verify	No
3:00 - 4:00 PM	103	433	427	860	No	Yes	No	No	No
4:00 - 5:00 PM	83	501	401	902	No	Yes	No	No	No
5:00 - 6:00 PM	55	455	418	873	No	No	No	No	No
6:00 - 7:00 PM	23	381	357	738	No	No	No	No	No
					No	No	No	No	No
					1	2	3		
Warrants Met?					NO	No	No	No	No

ESTIMATE OF EXITING TRAFFIC VOLUME

EXISTING ZONE 4 ZONE 3 TOTAL EXITS

11	7	27	45
10	108	24	142
11	0	19	30
1	10	18	29
9	0	17	26
12	45	20	77
16	0	19	35
14	100	17	131
10	77	16	103
11	53	19	83
10	24	21	55
5	0	18	23

*From the criteria described for the warrant in the MUTCD.

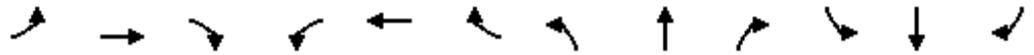
**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

*If more than one approach, report the approach that has the higher volume.

Capacity Analysis

McLean School TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

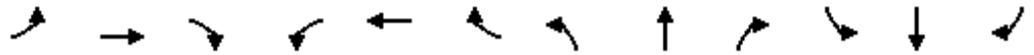
2024 Existing Condition - AM
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕		↖		↗
Traffic Volume (vph)	195	790	0	0	750	135	0	0	0	225	0	245
Future Volume (vph)	195	790	0	0	750	135	0	0	0	225	0	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1694	1801	0	0	3290	0	0	2153	0	1928	0	1583
Flt Permitted	0.181									0.757		
Satd. Flow (perm)	323	1801	0	0	3290	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					26							55
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)	8					8						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	0%	0%	3%	3%	0%	0%	0%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	210	849	0	0	972	0	0	0	0	268	0	292
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	59.5	59.5			42.7					18.5		35.3
Actuated g/C Ratio	0.66	0.66			0.47					0.21		0.39
v/c Ratio	0.56	0.71			0.62					0.85		0.45
Control Delay	12.3	14.5			20.3					59.2		17.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	12.3	14.5			20.3					59.2		17.5

McLean School TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

2024 Existing Condition - AM
 Timing Plan: AM Peak Hour

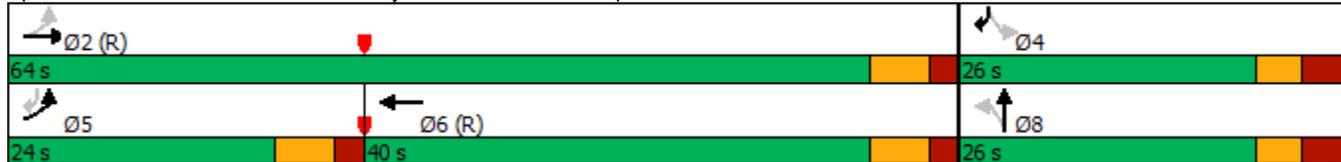


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B			C					E		B
Approach Delay		14.1			20.3						37.4	
Approach LOS		B			C						D	
Queue Length 50th (ft)	43	290			205					144		94
Queue Length 95th (ft)	73	443			310					#236		129
Internal Link Dist (ft)		652			423			118			598	
Turn Bay Length (ft)										300		
Base Capacity (vph)	487	1190			1575					341		638
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.43	0.71			0.62					0.79		0.46

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 21.5
 Intersection LOS: C
 Intersection Capacity Utilization 62.4%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	325	465	2	1	5
Future Vol, veh/h	5	325	465	2	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	83	83	67	67
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	6	406	560	2	1	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	562	0	-	0	979
Stage 1	-	-	-	-	561
Stage 2	-	-	-	-	418
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1019	-	-	-	280
Stage 1	-	-	-	-	575
Stage 2	-	-	-	-	669
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1019	-	-	-	278
Mov Cap-2 Maneuver	-	-	-	-	278
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	669

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1019	-	-	-	461
HCM Lane V/C Ratio	0.006	-	-	-	0.019
HCM Control Delay (s)	8.6	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

McLean School TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

2024 Existing Condition - PM
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	730	0	0	690	215	0	0	0	195	0	220
Future Volume (vph)	270	730	0	0	690	215	0	0	0	195	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1728	1818	0	0	3339	0	0	2153	0	1928	0	1583
Flt Permitted	0.169									0.757		
Satd. Flow (perm)	307	1818	0	0	3339	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					53							73
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	273	737	0	0	1006	0	0	0	0	210	0	237
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	61.4	61.4			42.6					16.6		35.4
Actuated g/C Ratio	0.68	0.68			0.47					0.18		0.39
v/c Ratio	0.66	0.59			0.63					0.74		0.36
Control Delay	16.7	10.8			20.6					50.5		13.0
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	16.7	10.8			20.6					50.5		13.0

McLean School TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

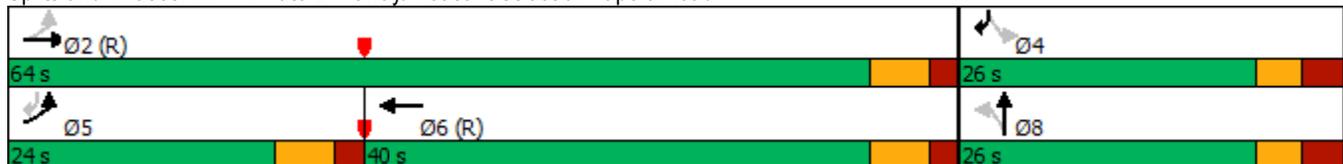
2024 Existing Condition - PM
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B			C					D		B
Approach Delay		12.4			20.6						30.6	
Approach LOS		B			C						C	
Queue Length 50th (ft)	53	201			209					113		61
Queue Length 95th (ft)	128	335			326					183		98
Internal Link Dist (ft)		652			423			118			598	
Turn Bay Length (ft)										300		
Base Capacity (vph)	493	1240			1607					341		653
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.55	0.59			0.63					0.62		0.36

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	19.0
Intersection LOS:	B
Intersection Capacity Utilization:	65.0%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	480	410	5	5	5
Future Vol, veh/h	5	480	410	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	90	90	69	69
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	6	565	456	6	7	7

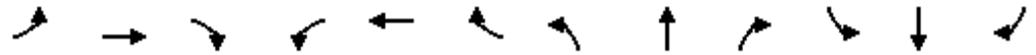
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	462	0	-	0	1036 459
Stage 1	-	-	-	-	459 -
Stage 2	-	-	-	-	577 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1110	-	-	-	259 606
Stage 1	-	-	-	-	641 -
Stage 2	-	-	-	-	566 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1110	-	-	-	258 606
Mov Cap-2 Maneuver	-	-	-	-	258 -
Stage 1	-	-	-	-	638 -
Stage 2	-	-	-	-	566 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1110	-	-	-	362
HCM Lane V/C Ratio	0.005	-	-	-	0.04
HCM Control Delay (s)	8.3	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

McLean TIA
1: Private Driveway/Pleasant Street & Trapelo Road

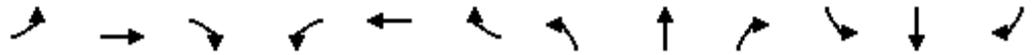
2031 NB Conditions
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	845	0	0	805	150	0	0	0	265	0	250
Future Volume (vph)	210	845	0	0	805	150	0	0	0	265	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1694	1801	0	0	3286	0	0	2153	0	1928	0	1583
Flt Permitted	0.150									0.757		
Satd. Flow (perm)	267	1801	0	0	3286	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27							46
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)	8					8						
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	0%	0%	3%	3%	0%	0%	0%	3%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	226	909	0	0	1038	0	0	0	0	288	0	272
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	58.9	58.9			40.8					19.1		37.2
Actuated g/C Ratio	0.65	0.65			0.45					0.21		0.41
v/c Ratio	0.62	0.77			0.69					0.88		0.40
Control Delay	16.4	16.9			23.3					63.0		16.1
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	16.4	16.9			23.3					63.0		16.1
LOS	B	B			C					E		B
Approach Delay		16.8			23.3							40.2
Approach LOS		B			C							D
Queue Length 50th (ft)	47	332			234					158		86
Queue Length 95th (ft)	105	513			353					#297		129
Internal Link Dist (ft)		652			423			118				598

McLean TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

2031 NB Conditions
 Timing Plan: AM Peak Hour

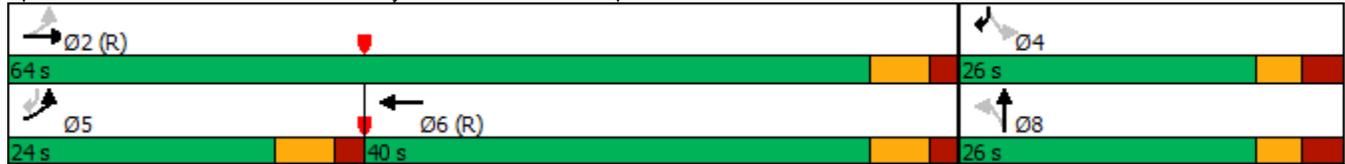


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)										300		
Base Capacity (vph)	460	1177			1503					341		675
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.49	0.77			0.69					0.84		0.40

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 24.1 Intersection LOS: C
 Intersection Capacity Utilization 67.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



McLean TIA
2: Pleasant Street & Olmstead Drive

2031 NB Conditions
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	350	500	5	10	20
Future Vol, veh/h	10	350	500	5	10	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	11	380	543	5	11	22

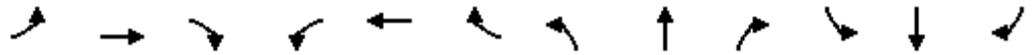
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	548	0	-	0	948
Stage 1	-	-	-	-	546
Stage 2	-	-	-	-	402
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1032	-	-	-	292
Stage 1	-	-	-	-	584
Stage 2	-	-	-	-	680
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1032	-	-	-	289
Mov Cap-2 Maneuver	-	-	-	-	289
Stage 1	-	-	-	-	578
Stage 2	-	-	-	-	680

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1032	-	-	-	419
HCM Lane V/C Ratio	0.011	-	-	-	0.078
HCM Control Delay (s)	8.5	-	-	-	14.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

McLean TIA
1: Private Driveway/Pleasant Street & Trapelo Road

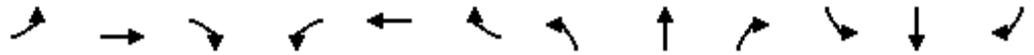
2031 NB Conditions
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	785	0	0	740	245	0	0	0	220	0	240
Future Volume (vph)	295	785	0	0	740	245	0	0	0	220	0	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1728	1818	0	0	3335	0	0	2153	0	1928	0	1583
Flt Permitted	0.135									0.757		
Satd. Flow (perm)	245	1818	0	0	3335	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					58							63
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	793	0	0	1070	0	0	0	0	237	0	258
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	60.4	60.4			40.0					17.6		38.0
Actuated g/C Ratio	0.67	0.67			0.44					0.20		0.42
v/c Ratio	0.74	0.65			0.71					0.79		0.37
Control Delay	25.0	12.4			23.8					53.7		13.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	25.0	12.4			23.8					53.7		13.5

McLean TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

2031 NB Conditions
 Timing Plan: PM Peak Hour

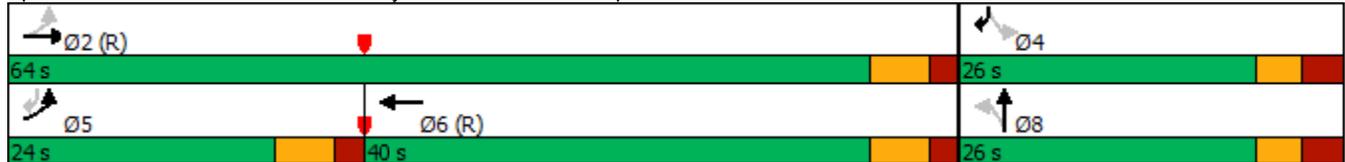


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B			C					D		B
Approach Delay		15.8			23.8						32.7	
Approach LOS		B			C						C	
Queue Length 50th (ft)	82	246			254					126		67
Queue Length 95th (ft)	172	382			355					#223		114
Internal Link Dist (ft)		652			423			118			598	
Turn Bay Length (ft)										300		
Base Capacity (vph)	461	1220			1514					341		679
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.65	0.65			0.71					0.70		0.38

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 22.2
 Intersection LOS: C
 Intersection Capacity Utilization 70.1%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	515	440	15	15	15
Future Vol, veh/h	20	515	440	15	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	0	0	0
Mvmt Flow	22	560	478	16	16	16

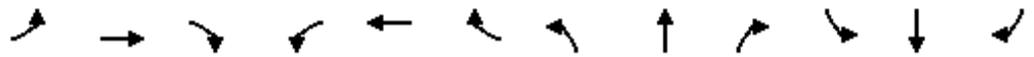
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	494	0	-	0	1090
Stage 1	-	-	-	-	486
Stage 2	-	-	-	-	604
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1080	-	-	-	240
Stage 1	-	-	-	-	623
Stage 2	-	-	-	-	550
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1080	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	235
Stage 1	-	-	-	-	611
Stage 2	-	-	-	-	550

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	16.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1080	-	-	-	335
HCM Lane V/C Ratio	0.02	-	-	-	0.097
HCM Control Delay (s)	8.4	-	-	-	16.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

McLean TIA
1: Private Driveway/Pleasant Street & Trapelo Road

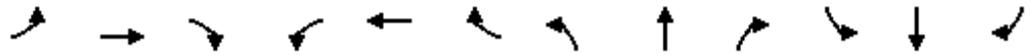
2031 Build Conditions
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	845	0	0	805	190	0	0	0	275	0	320
Future Volume (vph)	290	845	0	0	805	190	0	0	0	275	0	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1694	1801	0	0	3265	0	0	2153	0	1928	0	1583
Flt Permitted	0.115									0.757		
Satd. Flow (perm)	205	1801	0	0	3265	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					37							46
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)	8					8						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	0%	0%	3%	3%	0%	0%	0%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	909	0	0	1082	0	0	0	0	299	0	348
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	58.7	58.7			37.3					19.3		40.7
Actuated g/C Ratio	0.65	0.65			0.41					0.21		0.45
v/c Ratio	0.81	0.77			0.79					0.91		0.47
Control Delay	34.2	17.1			28.3					66.6		16.3
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	34.2	17.1			28.3					66.6		16.3

McLean TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

2031 Build Conditions
 Timing Plan: AM Peak Hour

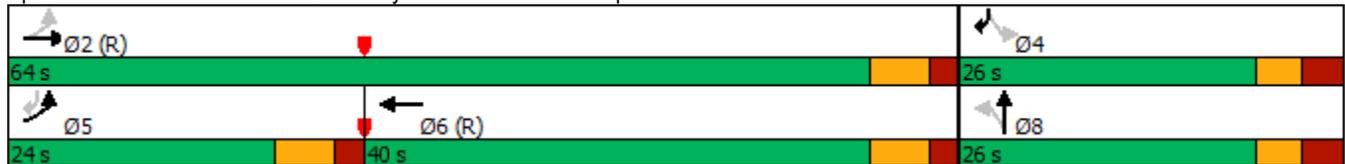


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B			C					E		B
Approach Delay		21.5			28.3						39.6	
Approach LOS		C			C						D	
Queue Length 50th (ft)	106	332			281					165		106
Queue Length 95th (ft)	#220	513			#387					#311		175
Internal Link Dist (ft)		652			423			118			598	
Turn Bay Length (ft)										300		
Base Capacity (vph)	431	1173			1374					341		731
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.72	0.77			0.79					0.88		0.48

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 28.0
 Intersection LOS: C
 Intersection Capacity Utilization 73.1%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	125	350	500	65	40	100
Future Vol, veh/h	125	350	500	65	40	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	136	380	543	71	43	109

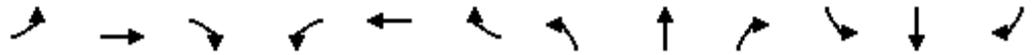
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	614	0	-	0	1231 579
Stage 1	-	-	-	-	579 -
Stage 2	-	-	-	-	652 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	975	-	-	-	198 519
Stage 1	-	-	-	-	564 -
Stage 2	-	-	-	-	522 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	975	-	-	-	170 519
Mov Cap-2 Maneuver	-	-	-	-	170 -
Stage 1	-	-	-	-	486 -
Stage 2	-	-	-	-	522 -

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	25.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	327
HCM Lane V/C Ratio	0.139	-	-	-	0.465
HCM Control Delay (s)	9.3	-	-	-	25.2
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.5	-	-	-	2.4

McLean TIA
1: Private Driveway/Pleasant Street & Trapelo Road

2031 Build Conditions
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕		↖		↗
Traffic Volume (vph)	295	785	0	0	740	245	0	0	0	225	0	250
Future Volume (vph)	295	785	0	0	740	245	0	0	0	225	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	15	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	300		0
Storage Lanes	1		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1728	1818	0	0	3335	0	0	2153	0	1928	0	1583
Flt Permitted	0.133									0.757		
Satd. Flow (perm)	242	1818	0	0	3335	0	0	2153	0	1536	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					58							63
Link Speed (mph)		30			30			30				30
Link Distance (ft)		732			503			198				678
Travel Time (s)		16.6			11.4			4.5				15.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	0%	0%	1%	0%	0%	0%	0%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	793	0	0	1070	0	0	0	0	242	0	269
Turn Type	pm+pt	NA			NA					Perm		custom
Protected Phases	5	2			6			8				4
Permitted Phases	2						8			4		5
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	24.0			24.0		24.0	24.0		24.0		24.0
Total Split (s)	24.0	64.0			40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%			44.4%		28.9%	28.9%		28.9%		28.9%
Yellow Time (s)	4.0	4.0			4.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0			2.0		3.0	3.0		3.0		3.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0			6.0		6.0		6.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	Min	C-Min			C-Max		Min	Min		Min		Min
Act Effct Green (s)	60.2	60.2			39.8					17.8		38.2
Actuated g/C Ratio	0.67	0.67			0.44					0.20		0.42
v/c Ratio	0.74	0.65			0.71					0.80		0.38
Control Delay	25.4	12.5			24.0					54.2		13.8
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	25.4	12.5			24.0					54.2		13.8

McLean TIA
 1: Private Driveway/Pleasant Street & Trapelo Road

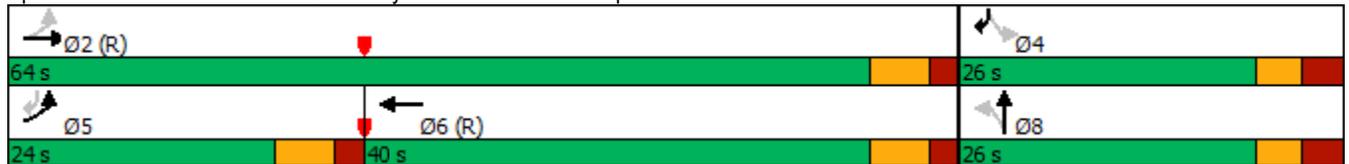
2031 Build Conditions
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B			C					D		B
Approach Delay		16.0			24.0						32.9	
Approach LOS		B			C						C	
Queue Length 50th (ft)	84	250			257					129		70
Queue Length 95th (ft)	173	382			355					#231		120
Internal Link Dist (ft)		652			423			118			598	
Turn Bay Length (ft)										300		
Base Capacity (vph)	459	1216			1506					341		680
Starvation Cap Reductn	0	0			0					0		0
Spillback Cap Reductn	0	0			0					0		0
Storage Cap Reductn	0	0			0					0		0
Reduced v/c Ratio	0.65	0.65			0.71					0.71		0.40

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.5
 Intersection LOS: C
 Intersection Capacity Utilization 70.4%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Driveway/Pleasant Street & Trapelo Road



Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	515	440	15	25	30
Future Vol, veh/h	20	515	440	15	25	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	0	0	0
Mvmt Flow	22	560	478	16	27	33

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	494	0	-	0	1090 486
Stage 1	-	-	-	-	486 -
Stage 2	-	-	-	-	604 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1080	-	-	-	240 585
Stage 1	-	-	-	-	623 -
Stage 2	-	-	-	-	550 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1080	-	-	-	235 585
Mov Cap-2 Maneuver	-	-	-	-	235 -
Stage 1	-	-	-	-	611 -
Stage 2	-	-	-	-	550 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1080	-	-	-	349
HCM Lane V/C Ratio	0.02	-	-	-	0.171
HCM Control Delay (s)	8.4	-	-	-	17.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6