



Traffic Impact, Access, and Parking Study for

ST. GOBAIN

**PROJECT EUROPA
ST. GOBAIN ABRASIVES DIVISION
HEADQUARTERS BUILDING**

WORCESTER, MASSACHUSETTS



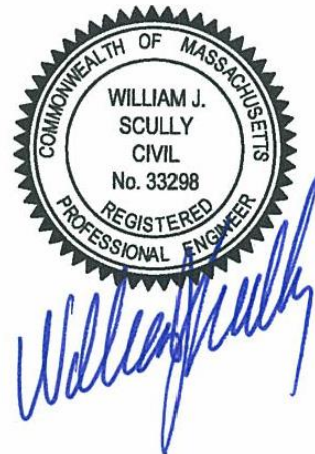
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May 2024
112968000

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PREPARED FOR
ST. GOBAIN

PREPARED BY
KIMLEY-HORN AND ASSOCIATES, INC.



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EXECUTIVE SUMMARY

PURPOSE OF REPORT AND STUDY OBJECTIVES

The report presents the results of the traffic impact, access, and parking study (TIAPS) for the development of a 43,692 square foot (SF) office building along Stores Street located in the City of Worcester. The new office building is proposed to replace the 1 New Bond Street building that houses the administrative personnel. This report describes the area transportation system, existing traffic volumes, parking conditions, the estimate of site generated trips, the calculation of Future No-Build and Future Build traffic volumes, and analysis. The Future Build year for this project is 2031. The methodology is consistent with Massachusetts Department of Transportation (MassDOT) traffic analysis guidelines and the scope of the study was reviewed with City transportation staff.

SITE LOCATION AND STUDY AREA

The proposed development is located along Stores Street in the City of Worcester within the current St. Gobain campus that includes Building 7 and Building 8 off Stores Street. The proposed building site is in the northern area of the existing parking and to a limited extent, trailer storage, which is shown in **Figure 1**. The employees currently working at 1 New Bond Street will be relocated to the proposed office building. Employee arrival and departure routes will slightly change due to the relocation of the building from New Bond Street. Employee access will be provided via existing roadways, Stores Street, and New Bond Street. The study area includes four (4) study intersections.

PRINCIPAL FINDINGS AND CONCLUSIONS

The analysis of traffic for the proposed development of a 43,692 SF office building was completed following standard practice. The future sections described the current roadway network and traffic characteristics, the forecasts of future traffic and parking conditions, and the analysis of impact and access. The key findings of this study are as follows:

- The project does not add new traffic to the road system as a whole but relocates and shifts existing volumes.
- Under Existing Conditions, No Build, and Build Conditions, all study intersections operate at LOS B or better.
- During the 2031 Future Build Conditions, operations remain similar to No Building Conditions for both the AM and PM peak hours.
- The proposed development does not result in significant changes at the study area intersections.
- The flexibility of employees to work from home on multiple days is expected to reduce the parking supply requirements. While zoning criteria will be satisfied, more than adequate parking supply will be provided at the proposed development.

PROPOSED MITIGATION

While the project itself is not creating any new anticipated operational deficiencies, the importance of creating safe and efficient access for the project is essential to maintain a safe multimodal traveling network for non-site related traffic. The following potential mitigation measures have been identified below and are intended to provide for safe site access.

- Enhance the existing transit stop along Shore Drive, including a pedestrian shelter and bench. There will need to be coordination with the Worcester Regional Transit Authority (WRTA) regarding the transit stop.
- Provide transit information inside of the building lobby regarding routes and schedules.
- A new pedestrian connection between Stores Street and the new building will be provided and while it will be a secure entry point, it does accommodate pedestrian movement connections.
- The proposed center median with a tree landscape in the new parking field for the building will have sidewalks along both sides will begin to form a more enhanced and protected pedestrian connection in this large parking area and begin a connection between the new administrative building and the manufacturing buildings.
- A ten (10) capacity bike rack will be provided in a convenient location to the main building entry.

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INTRODUCTION

This report has been prepared by Kimley-Horn and Associates, Inc. to document the potential traffic impacts associated with the proposed development of a 43,692 square foot (SF) office building located along Stores Street in the City of Worcester. The employees currently working at 1 New Bond Street will be relocated to the proposed office building. Site access will remain the same, and vehicles can enter the site via Stores Street or New Bond Street. The project does not add new traffic to the road system as a whole but relocates and shifts existing volumes. The site plan depicting the proposed development and site driveways is included in **Appendix F** and **Figure 1** illustrates the location of the proposed development and study intersections. The purpose of this study was to assess the developments' impact on the roadway network, review the site access, and parking analysis.

This report summarizes the data collection, parking conditions, site-generated traffic forecasts, intersection capacity analysis, and proposed mitigation.



Figure 1
 Site Vicinity and Study Intersections
 Project Europa
 Traffic Impact, Access, and Parking Study

EXISTING CONDITIONS

ROADWAY NETWORKS

Evaluation of the traffic impacts associated with the proposed development in the surrounding roadway network in the City of Worcester requires a thorough understanding of the existing roadway system in the vicinity of the site. The existing conditions observed in the study area include an inventory of the roadways, speed limits, intersection geometry, and traffic control devices. Key roadways in the study area include Frontage Road South, Frontage Road North, Norton Drive, Shore Drive, Stores Street, and New Bond Street. For orientation purposes, Frontage Road South, Frontage Road North, and Stores Street are northbound/southbound, and other intersecting roadways are eastbound/westbound in the vicinity.

Frontage Road South is a north-south, two-lane undivided roadway with a posted speed limit of 45 miles per hour (MPH). It is classified by the Massachusetts Department of Transportation (MassDOT) as an Urban Minor Arterial and is under the jurisdiction of MassDOT. Frontage Road South is a one-way roadway heading southbound and provides on/off-ramp access to Interstate 190 (I-190).

Frontage Road North is a north-south, two-lane undivided roadway with a posted speed limit of 45 MPH. It is classified by MassDOT as an Urban Minor Arterial and is under the jurisdiction of the City of Worcester. Frontage Road North is a one-way roadway heading northbound and provides on/off-ramp access to I-190.

Norton Drive is a north-south, four-lane divided roadway with a posted speed limit of 25 MPH. It is classified by MassDOT as an Urban Minor Arterial and is under the jurisdiction of the City of Worcester. Norton Drive provides a connection to I-190 and Route 12.

Shore Drive is an east-west, two-lane undivided roadway without a posted speed limit. Shore Drive becomes a divided roadway east of Frontage Road South. It is classified by MassDOT as an Urban Minor Arterial and is under the jurisdiction of the City of Worcester.

Stores Street is a north-south, two-lane undivided roadway without a posted speed limit. It is classified by MassDOT as a Local Road and is under the jurisdiction of the City of Worcester.

New Bond Street is an east-west, two-lane undivided roadway without a posted speed limit. It is classified by MassDOT as a Local Road and is under the jurisdiction of the City of Worcester.

DESCRIPTION OF STUDY INTERSECTIONS

Frontage Road South at Shore Drive is a three-legged signalized intersection. The southbound approach provided by Frontage Road South permits left-turn and right-turn movements via two (2) dedicated left-turn lanes and one (1) dedicated right-turn lane. Frontage Road South provides connections from I-190 and Ararat Street to the north. The eastbound approach provided by Shore Drive permits through movements via two (2) through lanes and the westbound approach permits through movements via two (2) through lanes. Crosswalk markings are provided along the north and west legs of the intersection, however, there are no pedestrian signal heads.

Frontage Road North/Norton Drive at Shore Drive is a four-legged signalized intersection. The northbound approach provided by Norton Drive permits all movements via one (1) dedicated left-turn lane, one (1) dedicated through lane, and one (1) dedicated right-turn lane. The southbound approach provided by Frontage Road North is a one-way roadway heading northbound that allows connection to Ararat Street and I-190. The eastbound approach provided by Shore Drive permits all movements via one (1) shared left-turn/through lane, one (1) shared through/right-turn lane, and one (1) dedicated right-turn lane and the

westbound approach permits all movements via one (1) shared left-turn/through lane and one (1) shared through/right-turn lane. Crosswalk markings are provided on all approaches except the eastbound approach, however, there are no pedestrian signal heads.

Shore Drive at Stores Street is a three-legged unsignalized intersection. The northbound approach provided by Stores Street permits left-turn and through movements via one (1) dedicated left-turn lane and one (1) dedicated through lane and the southbound approach permits through and right-turn movements via one (1) dedicated through lane and one (1) dedicated right-turn lane. The eastbound approach provided by Shore Drive permits left-turn and right-turn movement via one (1) shared left/right-turn lane. Shore Drive operates as a free-flow condition and Stores Street operates as STOP-controlled. Note that there is no dedicated STOP sign along Stores Street, however, includes a STOP bar pavement marking. Crosswalk markings are provided along the north and south legs of the intersection. Currently, the St. Gobain security gate is located between Norton Drive and Stores Street. In the future, the campus control will shift to Stores Street between Shore Drive and the main parking access drive.

Stores Street at New Bond Street is a three-legged unsignalized intersection. The southbound approach provided by Stores Street permits left-turn and through movements via one (1) shared left-turn/through lane and the northbound approach permits through and right-turn movements via one (1) shared through/right-turn. The westbound approach provided by New Bond Street permits left-turn and right-turn movement via one (1) shared left/right-turn lane. All of the approaches operate as STOP-controlled. Crosswalk markings are provided along all legs of the intersection. Currently, access to New Bond Street at this point is limited by gate control security. However, in the future, New Bond Street will become fully a public way with through connections between Stores Street and West Boylston Street (Route 12).

PEDESTRIAN, BICYCLE, AND TRANSIT FACILITIES

Sidewalk facilities are provided on both sides along Shore Drive, Norton Drive, and New Bond Street. Additionally, sidewalk facilities are provided on the west side of Frontage Road South and the east side of Stores Street. In general, sidewalk facilities are currently in fair to below average conditions including non-compliant ADA curb ramps and moderate distress. Turning movement counts (TMCs), including pedestrian peak hour volumes were collected on Tuesday, March 26, 2024, at all study intersections. There was a total of 19 pedestrians crossing at the study intersections, five (5) during the AM peak hour and 14 during the PM peak hour. There was mostly pedestrian crossing at the north leg and west leg of Stores Street at New Bond Street. **Figure 2** shows the peak hour pedestrian movements at the study intersections.

Bicycle facilities do not currently exist within the project vicinity.

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic
- ↔ Existing Crosswalk
- ↔ Crosswalk Does Not Exist

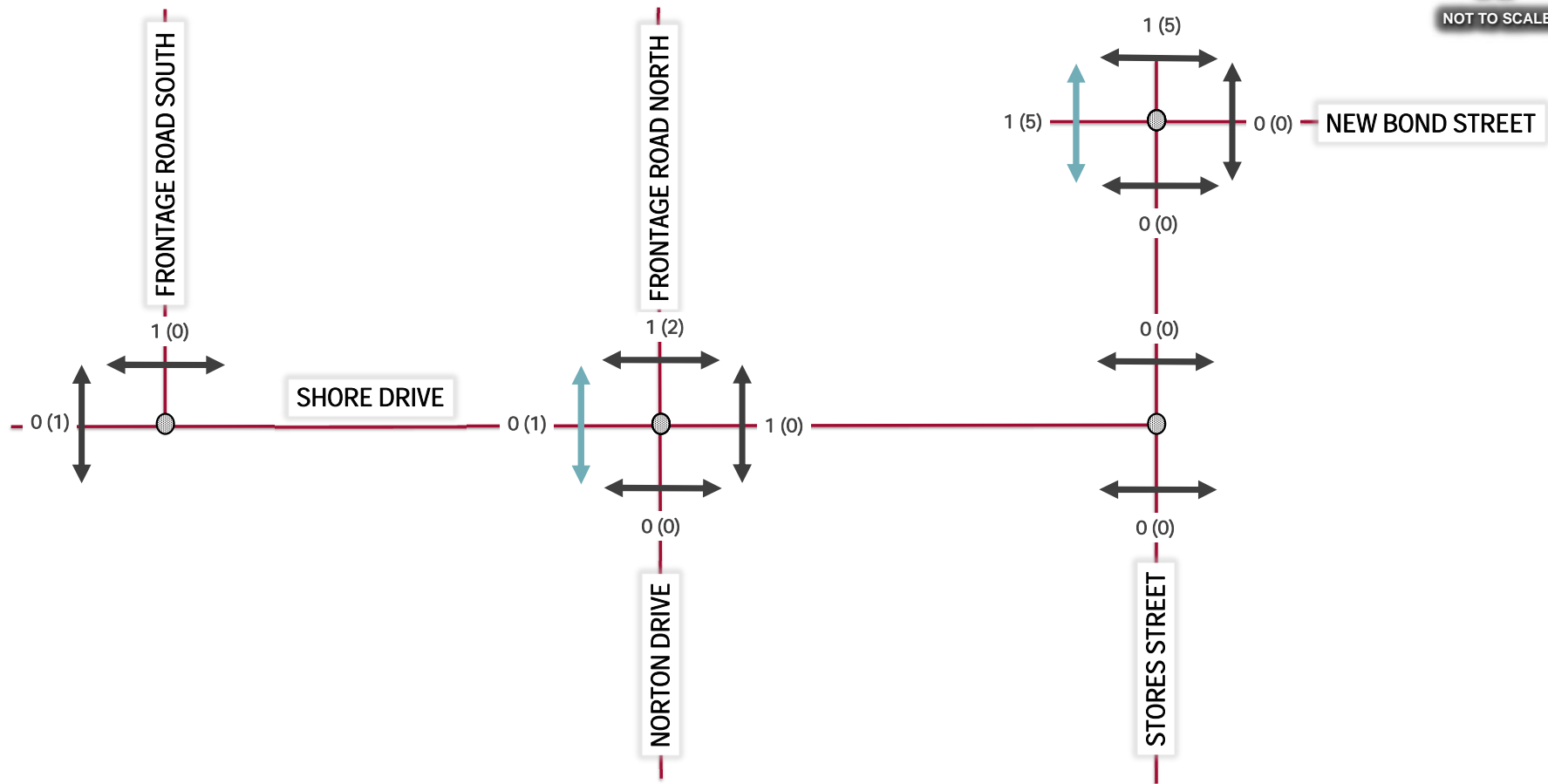


Figure 2
 Pedestrian Peak Hour Volumes
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Public transportation service in the City and region is provided by Worcester Regional Transit Authority (WRTA). The following bus routes are listed below, and **Figure 3** depicts the transit routes for Bus Route 30 (shown as the purple line), Bus Route 31 (shown as the orange line), and Bus Route 825 (shown as the teal line).

- Bus Route 30 (Union Station Hub – West Boylston Walmart via Grove & West Boylston St) runs along West Boylston Street (Route 12) with a flag stop at New Bond Street. Service is provided during the weekday, Monday to Friday, from 5:30 AM – 10:30 PM, Saturday from 6:00 AM – 9:30 PM, and Sunday from 11:00 AM – 6:30 PM. The headways are typically 15 minutes during the weekdays and 60 minutes during the weekend.
- Bus Route 31 (Union Station Hub – Lincoln Plaza Outer Loop) runs along Gold Star Boulevard and West Boylston Street (Route 12) with a flag stop at New Bond Street. Service is provided during the weekday, Monday to Friday, from 6:15 AM – 10:00 PM and Saturday from 8:30 AM – 5:00 PM. Service is not provided on Sunday. The headways are typically 40 minutes during the weekdays and 80 minutes on Saturday.
- Bus Route 825 (Canterbury St./Webster Sq. Plaza/Park Ave Connector/Greendale/Shore Drive) runs Canterbury Street and Park Avenue. A dedicated stop is located at the YMCA along Shore Drive. Service is provided during the weekday, Monday to Friday, from 6:15 AM – 8:45 PM. Weekend service is not provided. The headways are typically 60 minutes during the weekdays.

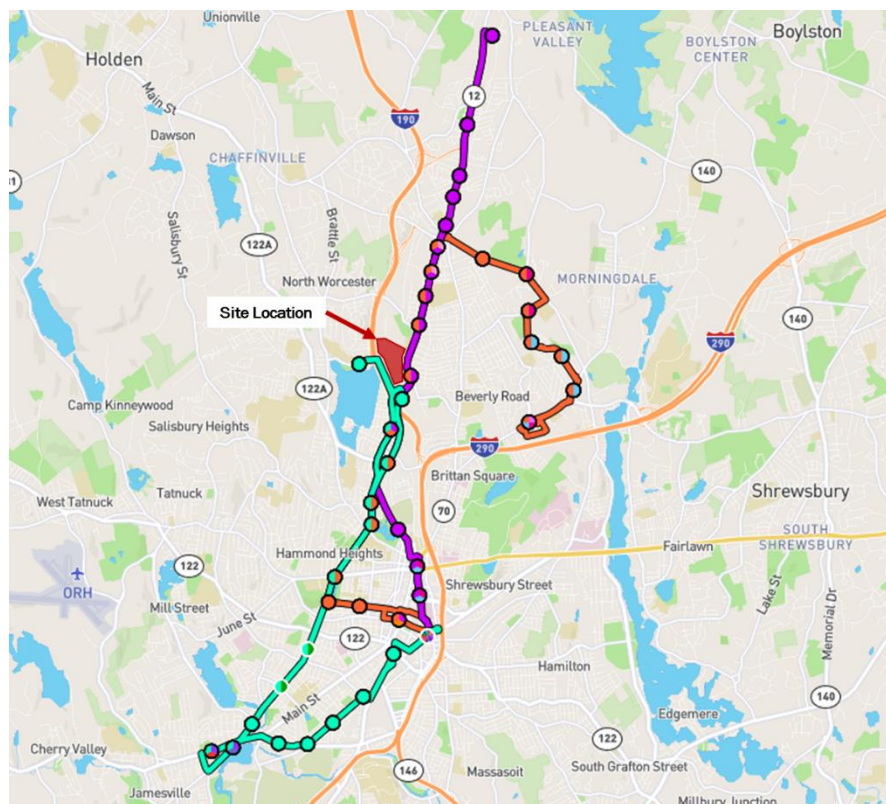


Figure 3. Bus Route 30, Bus Route 31 & Bus Route 825

TRAFFIC DATA COLLECTION

Automatic traffic recorders (ATRs) for 48 hours were conducted from Tuesday, March 26, 2024 to Wednesday, March 27, 2024, to collect daily flow data along Stores Street, south of Shore Drive.

The average weekday volume measured along Stores Street, south of Shore Drive was approximately 1,700 vehicles per day (VPD). Typical commuter peak hour time period flows at this location represent approximately 2% and 8% of the weekday average 24-hour volume during the AM and PM peak hours, respectively. The 85th percentile speed is 32 MPH in the northbound direction and 23 MPH in the southbound direction. The observed 85th percentile speed for the northbound direction is significantly higher than the southbound direction. A summary of the traffic volume data can be found in **Table 1**.

Table 1. Summary of Traffic Volume Data along Stores Street, south of Shore Drive									
85 th Percentile Speed (MPH)	Average Weekday Volume	Weekday AM Peak Hour				Weekday PM Peak Hour			
		Time	Veh. Vol.	Truck Volume	Dir. Dist.	Time	Veh. Vol.	Truck Volume	Dir. Dist.
32 NB / 23 SB	1,700	7:45 – 8:45	38	0 NB / 0 SB	58% NB / 42% SB	4:00 – 5:00	96	4 NB / 3 SB	75% NB / 25% SB

Existing traffic volumes analysis networks were based on turning movement counts (TMCs) collected on Wednesday, March 27, 2024, as part of this analysis. These four-hour TMCs were conducted at the following study intersections during the typical AM peak period (7:00 – 9:00 AM) and typical PM peak period (4:00 – 6:00 PM):

- Frontage Road South at Shore Drive (Signalized)
- Frontage Road North/Norton Street at Shore Drive (Signalized)
- Shore Drive at Stores Street (Unsignalized)
- Stores Street at New Bond Street (Unsignalized)

Frontage Road North/Norton Drive at Shore Drive, approximately 20.0% of the total vehicles (passenger vehicles and heavy vehicles) in the westbound approach were heavy vehicles during the AM peak hour. The percentage of heavy vehicles is 50.0% for the westbound right-turn movement. On the Norton Drive northbound approach, only approximately 1.6% of the total vehicles (passenger vehicles and heavy vehicles) were heavy vehicles during the PM peak hour, however, the percentage of heavy vehicles is 18.0% for the northbound right-turn movements. Based on observations at this intersection, heavy vehicles are exiting the site and heading northbound on North Frontage Road during the AM peak hour while entering the site via Norton Drive during the PM peak hour.

Shore Drive at Stores Street, approximately 14.8% of the total vehicles (passenger vehicles and heavy vehicles) in the northbound approach were heavy vehicles during the AM peak hour. Specifically, the percentage of heavy vehicles is 15.0% for the northbound left-turn movement. Shore Drive in the eastbound approach, approximately 16.0% of the total vehicles (passenger vehicles and heavy vehicles) were heavy

vehicles during the PM peak hour. Specifically, the percentage of heavy vehicles is 19.0% for the eastbound right-turn movements. Heavy vehicles are exiting the site during the AM peak hour and entering the site during the PM peak hour.

Stores Street at New Bond Street approximately 37.5% of the total vehicles (passenger vehicles and heavy vehicles) in the westbound approach were heavy vehicles during the AM peak hour. Specifically, the percentage of heavy vehicles is 60.0% for the westbound through movement. The parking lot in the eastbound approach, approximately 75.0% of the total vehicles (passenger vehicles and heavy vehicles) were heavy vehicles during the AM peak hour. Specifically, the percentage of heavy vehicles is 75.0% for the eastbound through movements. Heavy vehicles are entering and exiting the parking lot during the AM peak hour.

The March 2024 traffic volumes throughout the network were noted to be above the average conditions based on the 2019 MassDOT weekday seasonal and axle correction factors. Thus, a seasonal adjustment factor was not applied to the traffic volume data collected to develop a based network. **Figure 4** presents the existing turning movement volumes at the study intersections during the AM and PM peak hours and the traffic data are included in **Appendix A**.

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

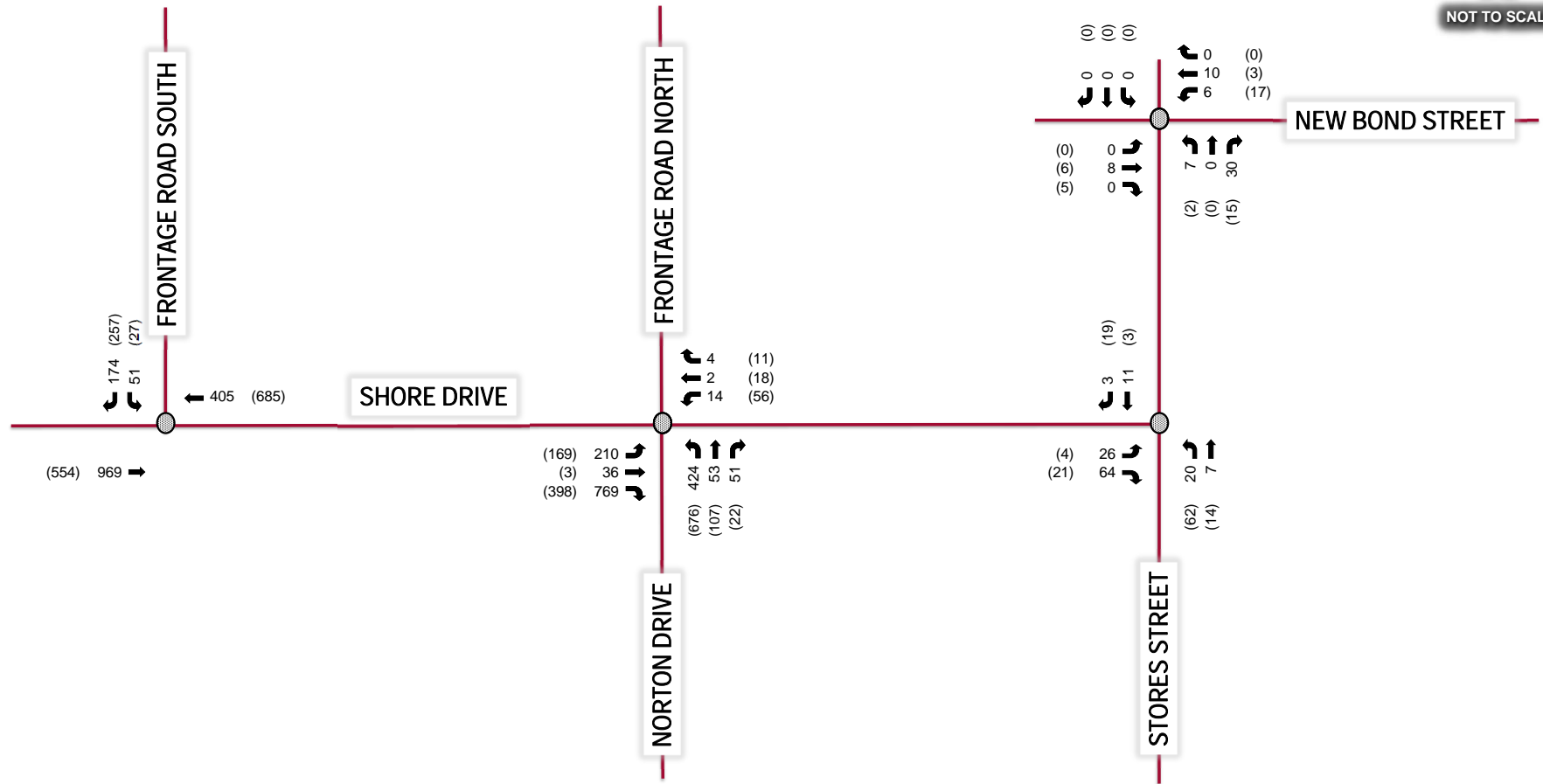


Figure 4
2024 Existing Condition Volumes
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PARKING COLLECTION AND ANALYSIS

In order to understand the site's parking demand and capacity, a site visit was conducted on Tuesday, April 9, 2024, in the afternoon at 2:15 PM. A parking count was conducted at the two (2) available parking lots as identified in **Figure 5**. Location A represents the current lot serving the administration building on 1 New Bond Street and the demand of 51 parked vehicles associated with St. Gobain were observed. A total of 169 parked vehicles were observed at Location B. A total of 430 parking spaces are estimated in this area based on current markings and general estimating where markings are not clear.

The proposed development will be providing on-site parking, as shown in the site plan included in **Appendix F**. The proposed development includes a total of 124 parking spaces, 28 remaining spaces and 96 proposed spaces. Factors that would be considered in justifying lower parking needs include being located on a corridor that is walkable to commercial uses and the regional transit authority serving the route with the three (3) bus routes.

Per the City of Worcester Zoning Ordinance, Section 7 – Off-Street Parking and Loading, for an office building, one (1) parking space per 300 square feet of gross floor area is required. Approximately a total of 112 parking spaces would be required per the zoning code. The current plan includes 333 spaces on the lower lot in front of the new building and 27 spaces up in the Stores Street area. In total, 124 spaces are provided, and zoning requirements will be satisfied.

The proposed lot is located north of the existing parking lot at Stores Street. The existing lot on the southern side of the site will be slightly modified and re-stripped as part of a separate site maintenance task at a date likely to coincide with the opening of the new building.

Based on the evaluation of available parking and the anticipated demand generated by the new building, Currently, employees have the flexibility to work from home multiple days, and it is anticipated that there will be more than adequate parking provided for the new building. In addition, there remains available parking in the southern lot at this time and this provides some additional supply in the event of special meetings that generate more than the 112 spaces.



Figure 5
Parking Lot Locations
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CRASH HISTORY

Crash data was obtained from the MassDOT Crash Data Portal for the most recently completed five-year period from January 1, 2019, to December 31, 2023, at the study intersections. MassDOT District 3, which includes the study area, has an average crash rate of 0.89 for a signalized intersection and 0.61 for an unsignalized intersection. Statewide crash rates have an average crash rate of 0.78 for a signalized intersection and 0.57 for an unsignalized intersection. **Table 2** provides a summary of the crash history at the study intersections and **Appendix B** includes the calculation sheets of the crash rates. Please note that data from 2020 was during the pandemic when traffic volumes were significantly reduced in general on the entire State roadway system and crash data from 2021 or later is not yet considered complete by MassDOT. The following summarizes the key aspects.

- There were no crashes at Shore Drive at Stores Street and Stores Street at New Bond Street.
- There were a total of six (6) crashes at the two signalized study intersections.
- The majority of the crashes were property damage only crashes and occurred during the day.
- The crash rate at both study intersections were below the MassDOT District 3 average crash rate of 0.89 and statewide crash rate of 0.78 for a signalized intersection.
- Based on the review of the data, there are no safety issues identified as a result of the recent crash experience.

Table 2. Crash Summary (2019-2023)		
	Frontage Road South at Shore Drive	Frontage Road North at Shore Drive
Total Number of Crashes	3	3
Property Damage	3	2
Injury	0	0
Fatality	0	0
Not Reported	0	1
Manner of Collision		
Rear End	1	1
Angle	1	1
Sideswipe	0	1
Head On	0	0
Single Vehicle	1	0
Collision with Ped	0	0
Collision with Bike	0	0
Unknown	0	0
Time of Day		
6:01 AM - 10:00 AM	0	0
10:01 AM - 4:00 PM	2	0
4:01 PM - 7:00 PM	0	2
7:01 PM - 6:00 AM	1	1

Year		
2019	0	0
2020	1	0
2021	1	1
2022	1	2
2023	0	0
Weather Conditions		
Clear	1	3
Cloudy	0	0
Wet	1	0
Snow	1	0
Other/Unknown	0	0
Light Conditions		
Daylight	2	1
Dawn/Dusk	0	0
Dark (Unlit)	0	0
Dark (Lit)	1	2
Unknown	0	0
Annual Average Crashes	0.60	0.60
Intersection Crash Rate	0.08	0.08
MassDOT District 3 Average Crash Rate	0.89	0.89
Signal Control	Signalized	Signalized

FUTURE NO-BUILD CONDITIONS

Future No-Build traffic conditions are defined as the expected traffic conditions on the roadway network in the year 2031 without the construction of the proposed development. In this specific case, the St. Gobain office at 1 New Bond Street would continue to be used under the No-Build condition. Future No-Build traffic volumes used in the analysis are the sum of the existing traffic, vicinity development traffic, and additional traffic generated by the general overall background growth in the City or region that could affect the project area. The following discusses the background traffic growth rate and a summary of the relevant site specific development traffic that could affect the project area.

BACKGROUND TRAFFIC GROWTH

Traffic growth on the transportation network was determined based on historic growth trends at nearby MassDOT traffic count stations from the year 2019 to 2022 and population census data from the year 2010 and 2020. The growth rate calculations are contained in **Appendix C**.

The MassDOT count stations referenced in this analysis include the following intersections. The historic growth rate analysis based on the combined MassDOT count stations is - one percent (-1.0%) over the four (4) year period.

- MassDOT count station no. 3162 located on Shore Drive, east of Holden Street
- MassDOT count station no. 250918 located on West Boylston Street, north of Assumption Avenue
- MassDOT count station no. 237237 located on Ararat Street, east of I-190

Population census data for the City of Worcester and the surrounding towns of West Boylston and Holden were analyzed over a 10-year period. In 2010, the total population between the municipalities were 206,060 and the total population in 2020 was 234,300, resulting in one percent (1.1%) over the historical 10-year period.

To provide a conservative analysis, an annual growth of 1.0 percent (1.0%) was selected as a background growth rate and will be applied annually to the Existing (2024) traffic volumes in developing Future (2031) No-Build Conditions.

VICINITY DEVELOPMENTS

The City of Worcester's Economic Development | Planning & Regulatory Services Division was contacted to identify if there are any upcoming and planned developments within close proximity to the project site to be included in the Future No-Build Conditions. Based on the information provided, three (3) developments were identified.

- Greendale Revitalization Initiative – Life Sciences Development located at C Street
- Food Service with Drive-Thru Window – 2,328 square feet located at 79 Pullman Street
- Five Story Residential Building – 28 units located at 342 West Boylston Street

At the time of this report, there are no formal traffic studies completed for the developments listed above. It is assumed that trip generated from these sites are included in the background growth. The area north of the railroad tracks that had been owned by St. Gobain was transferred to the Worcester Business Development Corporation (WBDC). While the land and old property is being set up to encourage major redevelopment, there is currently no master plan or any definitive plans for the site as a whole or portion. As a result, nothing specific has been assumed at this point for analysis purposes.

Figure 6 presents the Future No-Build traffic conditions.

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

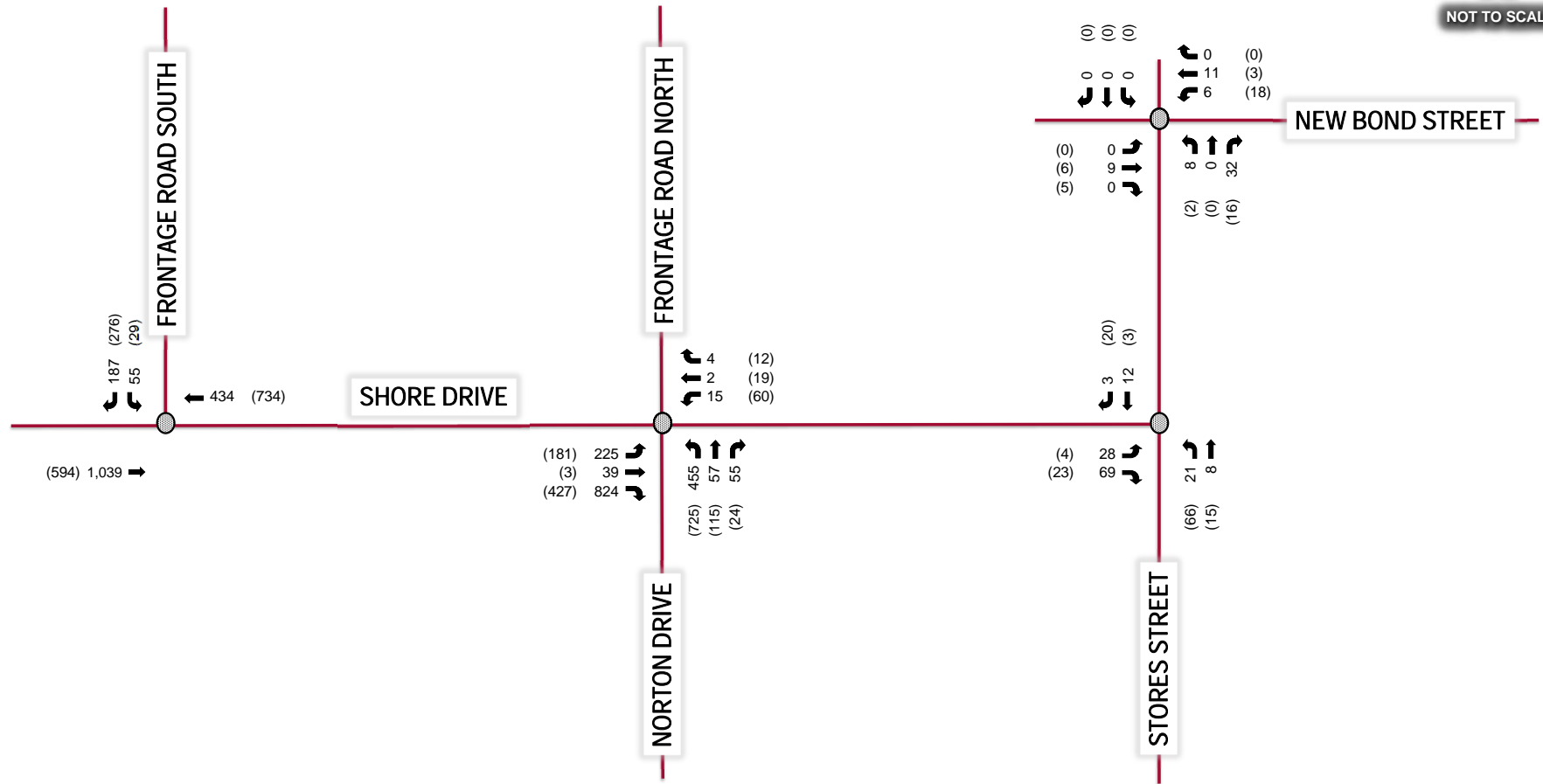
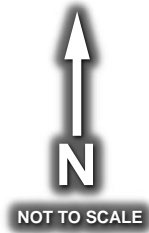


Figure 6
2031 No Build Condition Volumes
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Traffic Impact, Access, and Parking Study

PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development, which will include a 43,692 SF office building. The employees currently working at 1 New Bond Street will be relocated to the proposed office building. It is anticipated that there will be a no net change in building population or trips. The distribution and assignment of the proposed development over the study roadway network is included in this section.

TRIP GENERATION

Trip generation calculations for the proposed development was performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the proposed development was determined using ITE Land Use Code (LUC) 715 (Single Tenant Office Building). Other LUC, such as LUC 710 (General Office Building) and LUC 714 (Corporate Headquarters Building) were evaluated as potential land uses for the development, but not used due to occupancy of other tenants and description of the building. Project trips were estimated for the weekday daily and weekday AM and PM peak hours. Since Covid-19, there has been extensive "work from home" practices overall including St. Gobain and they expect to continue this pattern. Based on discussions with St. Gobain, it is expected that at the most, 115 staff will be on site at the new building during the peak time and this was used as a basis for estimating vehicle trips. As shown in **Table 3**, the proposed development is expected to generate 73 net new vehicle trips (65 entering and 8 exiting) during the AM peak hour and 83 net new vehicle trips (12 entering and 71 exiting) during the PM peak hour.

Table 3. Trip Generation					
AM Peak Hour (PM Peak Hour)					
Future Land Use (ITE Code)	Scale	Daily	Total Peak Hour Trips	Entering Trips	Exiting Trips
Single Tenant Office Building (715)	115 Employees	864	73 (83)	65 (12)	8 (71)
Net New Vehicle Trips		864	73 (83)	65 (12)	8 (71)

Employee arrival and departure routes will slightly change due to the relocation of the building from New Bond Street, but it is anticipated that there will be no net change in trips and the number of employees remains the same.

TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project traffic was estimated for the trips expected to be generated by the development. The distribution was estimated for all vehicles who may access the site and used a type of general gravity type model as well as the US Census Bureau's Journey to Work. This data source provides information on individuals who reside in the City of Worcester and where they work. Based on a review and analysis of this information, the trip distribution along the roadway network is forecast to be the following.

- 35% coming to/from the north
- 5% coming to/from the south
- 35% coming to/from the east
- 25% coming to/from the west

The trip distribution was modified to account for the vehicle trips that will reroute to the proposed building.

Figure 7 and **Figure 8** presents the original trip distribution and assignment for 1 New Bond Street. The reroute trip distribution and assignment for 1 New Bond Street are shown in **Figure 9** and **Figure 10**. The total trip assignment is shown in **Figure 11**.

Legend

- Study Roadway
- XX IN% Distribution
- (XX) OUT% Distribution

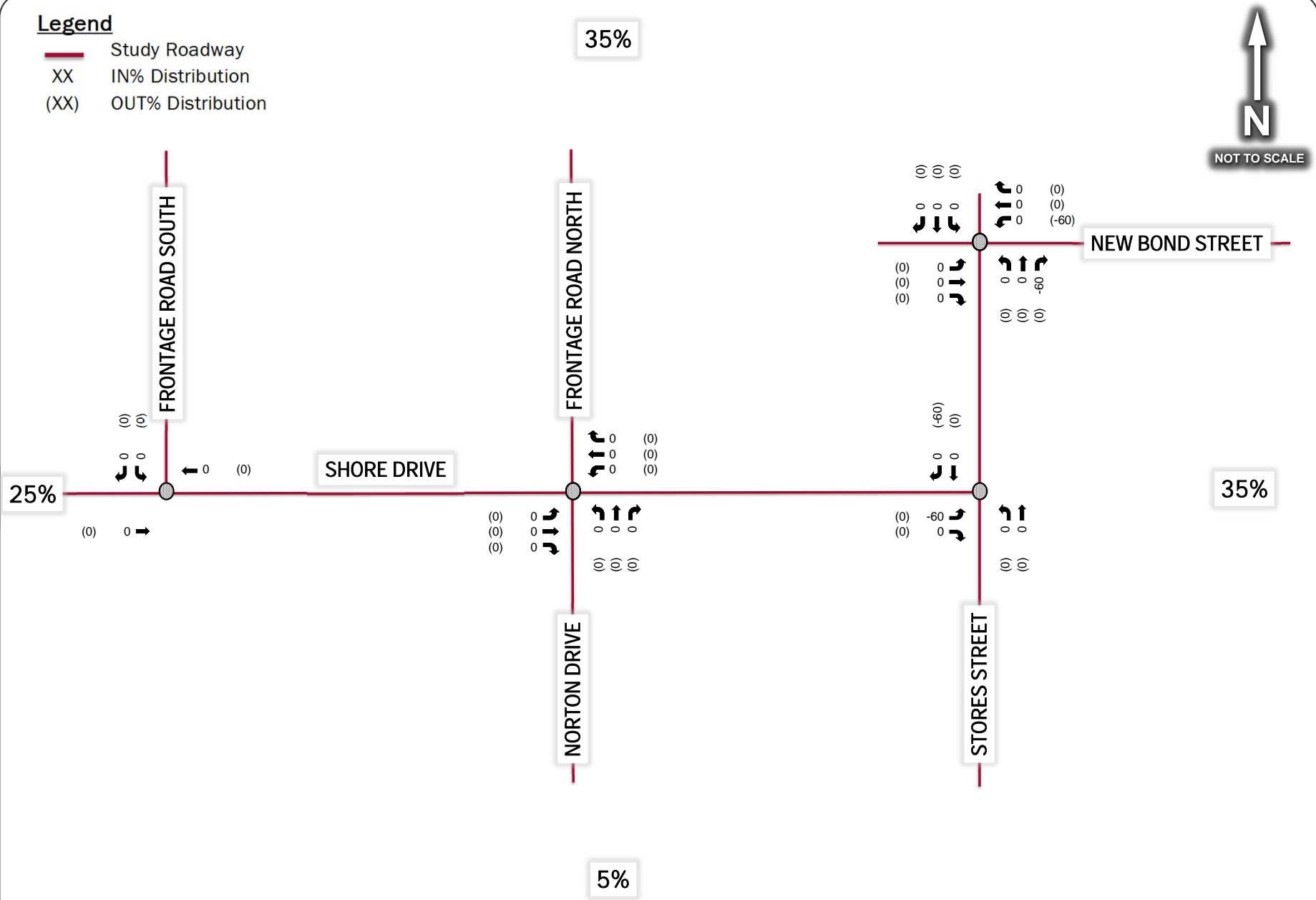


Figure 7
 Estimated Original Distribution - 1 New Bond Street
 Project Europa
 Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Trip Assignment
- (XX) PM Peak Hour Trip Assignment

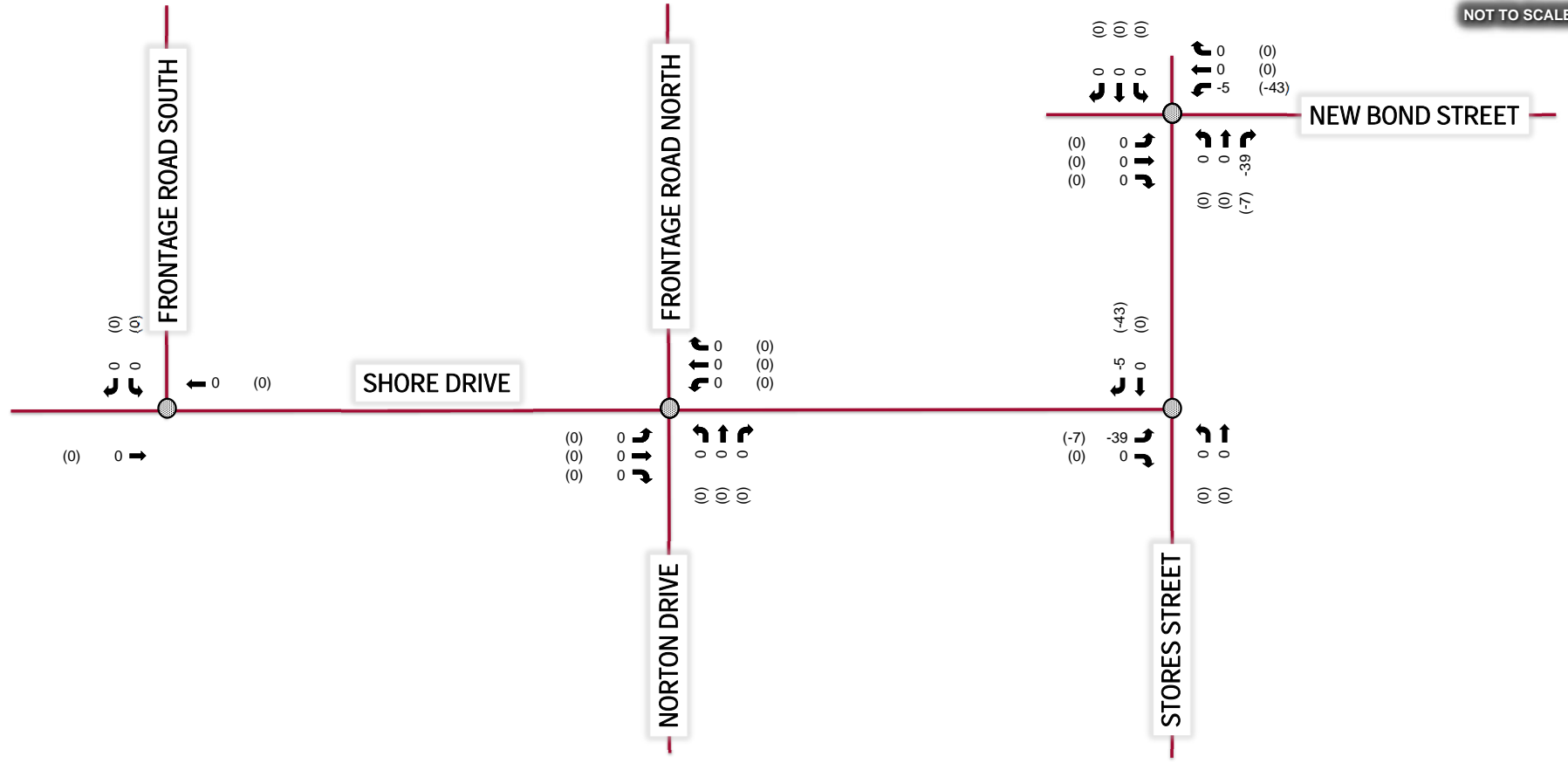


Figure 8
 Estimated Original Trip Assignment - 1 New Bond Street
 Project Europa
 Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX IN% Distribution
- (XX) OUT% Distribution

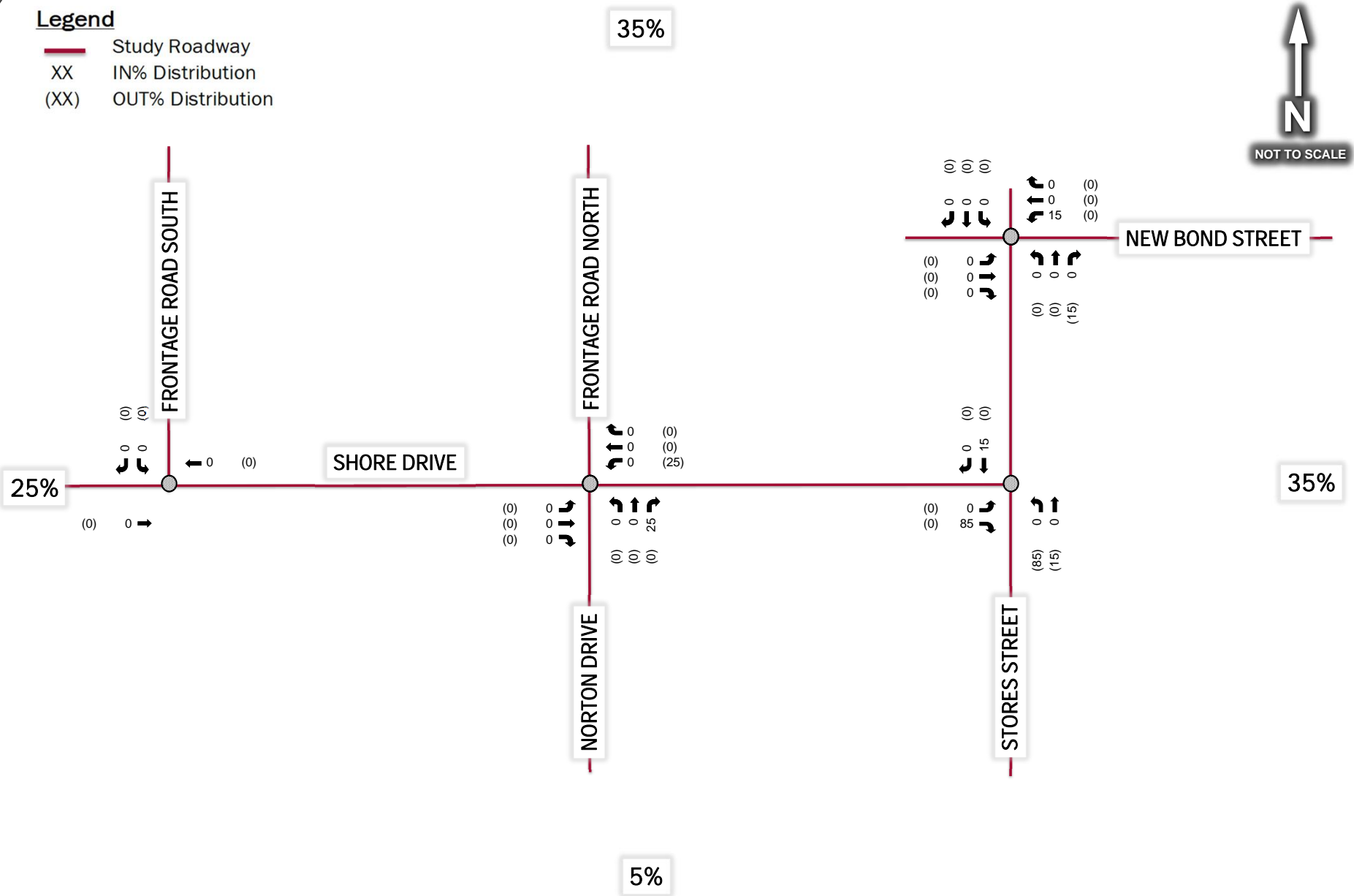


Figure 9
 Estimated Reroute Distribution - 1 New Bond Street
 Project Europa
 Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Trip Assignment
- (XX) PM Peak Hour Trip Assignment

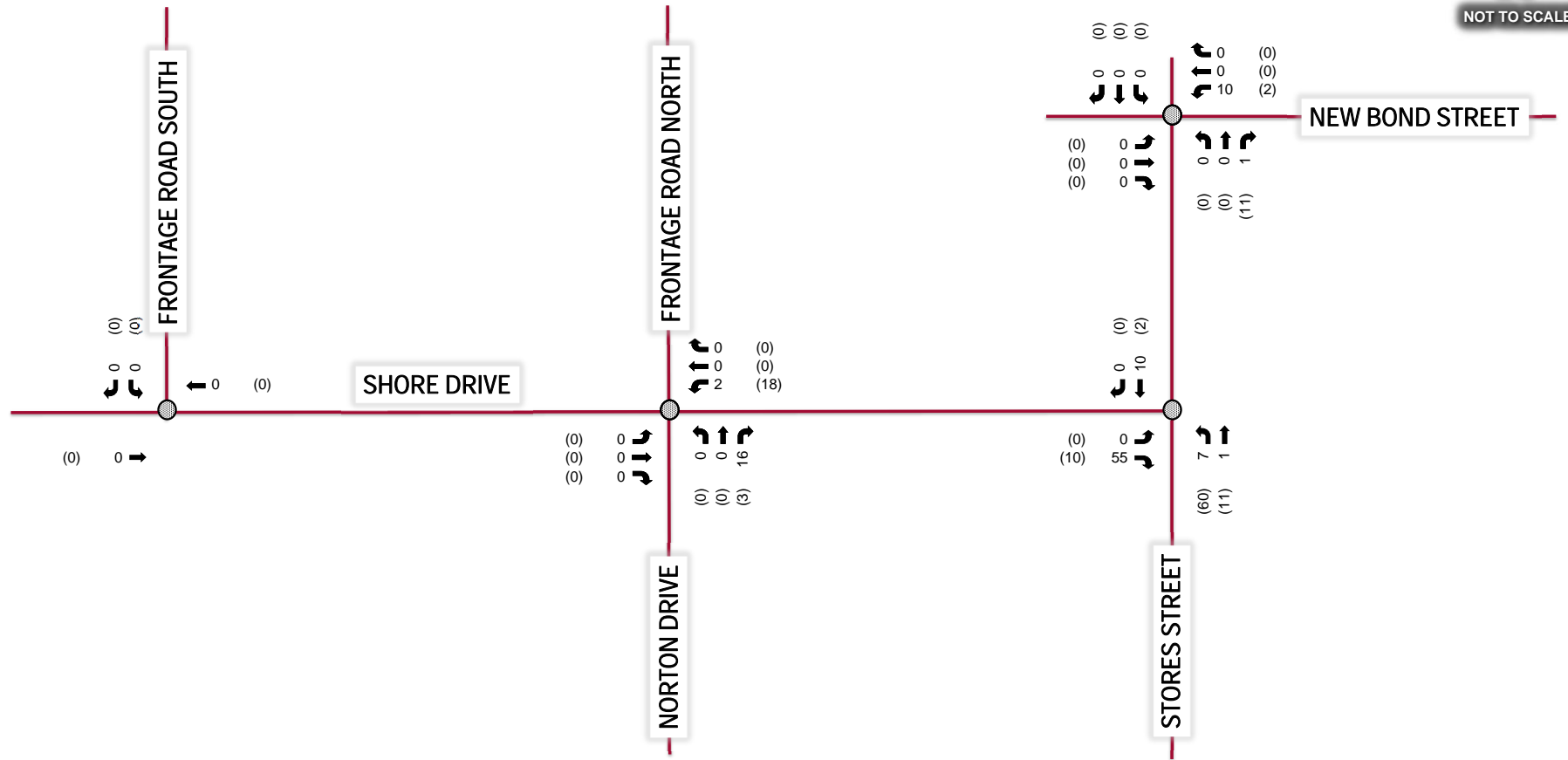


Figure 10
 Estimated Reroute Trip Assignment - 1 New Bond Street
 Project Europa
 Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Trip Assignment
- (XX) PM Peak Hour Trip Assignment

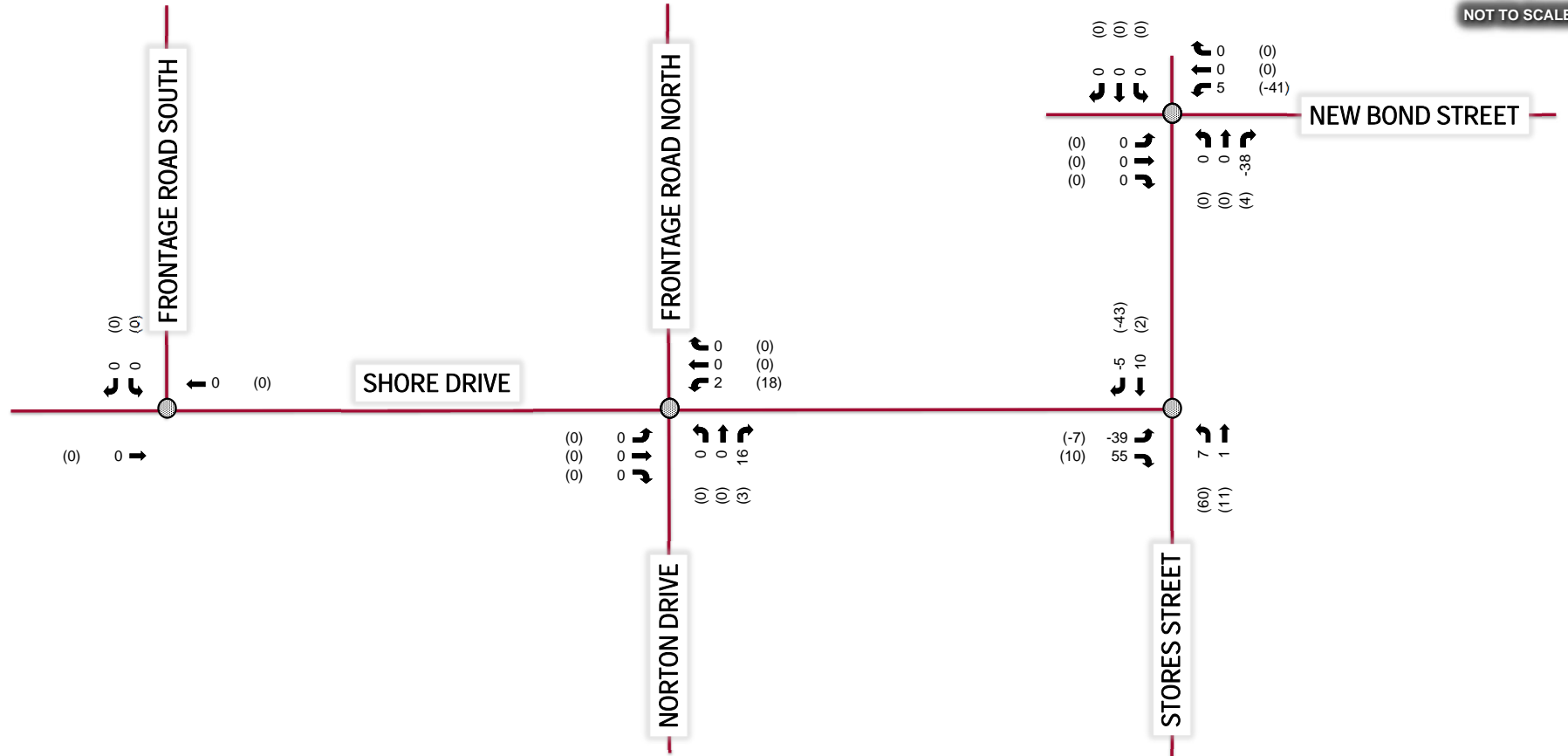


Figure 11
 Peak Hour Trip Assignment
 Project Europa
 Traffic Impact, Access, and Parking Study

FUTURE BUILD CONDITIONS

Future Build Conditions are defined as the expected traffic conditions in the year 2031 after the opening of the project. The total traffic volumes considered in the analysis for this project are the sum of the background growth related traffic volumes unrelated to this specific project and the expected site-generated traffic volumes. **Figure 12** presents the future total turning movement volumes at the study intersections during the weekday AM and PM peak hours for 2031. Volume Development worksheets for the study intersections are included in **Appendix D**.

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

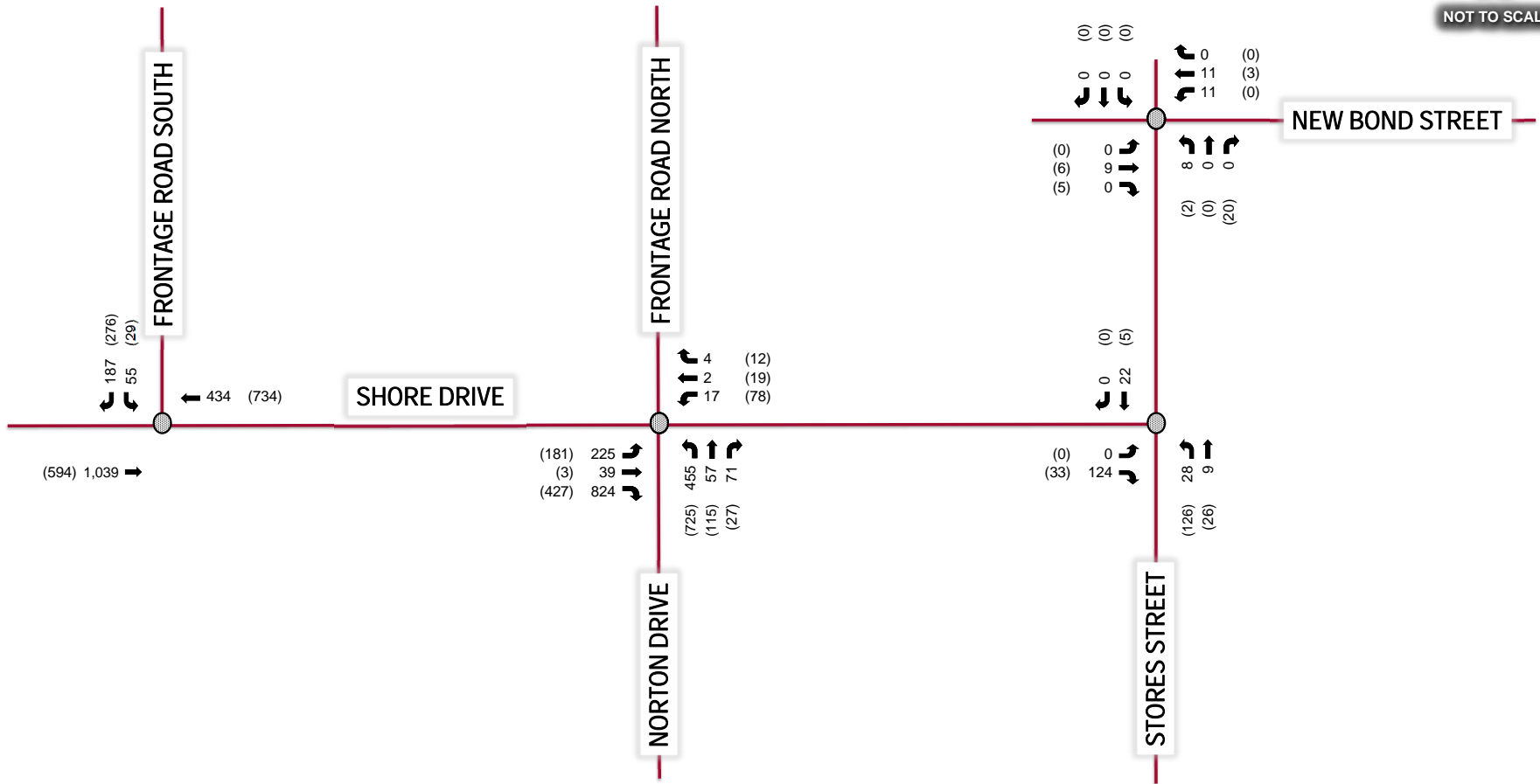


Figure 12
 2031 Build Conditions Volumes
 Project Europa
 Traffic Impact, Access, and Parking Study

ANALYSIS

INTERSECTION CAPACITY ANALYSIS

Methodology

Intersection capacity analyses were performed for Existing, 2031 Future No-Build, and 2031 Future Build traffic volumes for the study area intersections. The analyses were performed using the Synchro Software Package (Version 12), which utilizes methodologies contained in the *Highway Capacity Manual (7th Edition)* for signalized and unsignalized intersections. For intersections with timing configurations that are incompatible with *HCM 7th Edition*, the built-in Synchro analysis methodology is used. According to the *HCM 7th Edition*, capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a fixed time duration. The analyses is described qualitatively by Level of Service (LOS) to indicate the operating characteristics of a road segment or intersection. LOS is defined as a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream and relates to the level of delay experienced. The *HCM 7th Edition* defines six levels of service, LOS A through LOS F, with A being the best and F being the worst. Typically, a LOS “D” or better at signalized and unsignalized intersections is preferred, although lower levels are tolerated during peak travel hours. The ranges of delay for each level of service are shown in **Table 4**.

Level of Service (LOS)	Delay per Vehicle (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	10 -20	10 -15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	≥ 80	≥ 50

Intersection Capacity Analysis Summary

A summary of the intersection capacity analysis for the weekday AM and PM peak hours for the Existing Conditions, 2031 Future No-Build Conditions, and 2031 Future Conditions and can be found in **Table 5**. The intersection analysis worksheets are contained in **Appendix E**.

The key findings of the intersection capacity analysis as it pertains to the proposed project are as follows:

- Under Existing Conditions, No Build, and Build Conditions, all study intersections operate at LOS B or better.
- During the PM peak hour, specific movements at South Frontage Road at Shore Drive and North Frontage Road at Shore Drive operate at LOS C under Existing Conditions.
- During the 2031 Future Build Conditions, operations remain similar to No Building Conditions for both the AM and PM peak hour.
- The project does not add new traffic to the system but relocates existing volumes. The proposed development does not result in significant changes at the study area intersection.

Intersection	Movement	2024 Existing Conditions				2031 No Build Conditions				2031 Build Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)
South Frontage Road & Shore Drive (Signalized)	EBT	B (17.3)	250	C (20.1)	160	B (16.6)	255	B (19.4)	165	B (16.6)	255	B (19.4)	165
	WBT	B (14.1)	115	C (21.1)	195	B (13.2)	120	C (20.4)	200	B (13.2)	120	C (20.4)	200
	SBL	B (12.2)	25	A (8.7)	25	B (13.6)	25	A (9.7)	25	B (13.6)	25	A (9.7)	25
	Intersection	B (15.6)	-	B (18.2)	-	B (15.1)	-	B (17.2)	-	B (15.1)	-	B (17.8)	-
North Frontage Road/Norton Drive & Shore Drive (Signalized)	EBT	B (10.3)	74	B (15.7)	68	A (9.8)	73	B (15.4)	71	A (9.8)	73	B (15.4)	71
	EBR	A (5.3)	48	A (7.3)	47	A (5.0)	46	A (7.0)	48	A (5.0)	46	A (7.0)	48
	Approach	A (8.5)	-	B (12.9)	-	A (8.1)	-	B (12.5)	-	A (8.1)	-	B (12.5)	-
	WBT	B (11.4)	25	C (20.7)	27	B (10.4)	25	C (20.1)	28	B (10.6)	25	C (21.3)	33
	Approach	B (11.4)	-	C (20.7)	-	B (10.5)	-	C (20.1)	-	B (10.7)	-	C (21.3)	-
	NBL	B (14.6)	266	B (10.8)	336	B (17.6)	#349	B (12.9)	#419	B (17.5)	#349	B (13.1)	#456
	NBT	B (10.2)	36	A (5.6)	42	B (11.3)	41	A (6.0)	46	B (11.3)	41	A (6.1)	46
	NBR	A (4.0)	25	A (4.0)	25	A (4.3)	25	A (2.5)	25	A (4.0)	25	A (2.8)	25
	Approach	B (13.2)	-	A (9.9)	-	B (15.7)	-	B (11.8)	-	B (15.4)	-	B (11.9)	-
	Intersection	B (10.2)	-	B (11.9)	-	B (10.8)	-	B (12.7)	-	B (10.8)	-	B (12.9)	-

Table 5. Intersection Capacity Analysis

Intersection	Movement	2024 Existing Conditions				2031 No Build Conditions				2031 Build Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)	LOS Delay (s)	95th% Queue Length (ft)
Shore Drive & Stores Street (Unsignalized)	EBL	A (2.3)	25	A (1.1)	0	A (2.3)	25	A (1.1)	0	A (0.0)	0	A (0.0)	0
	NBL	A (9.6)	25	A (9.3)	25	A (9.6)	25	A (9.4)	25	A (9.6)	25	A (9.4)	25
	SBT	A (9.8)	25	A (8.5)	25	A (9.9)	25	A (8.5)	25	A (10.6)	25	A (10.6)	25
	Intersection	A (2.5)	-	B (11.3)	-	A (5.3)	-	A (7.8)	-	A (4.1)	-	A (7.8)	-
Stores Street & New Bond Street (Unsignalized)	EBL	A (8.4)	25	A (7.7)	25	A (8.4)	0	A (7.7)	0	A (8.3)	0	A (7.7)	0
	WBL	A (7.2)	25	A (7.4)	25	A (7.2)	25	A (7.4)	25	A (7.2)	25	A (7.0)	25
	NBL	A (6.7)	25	A (6.6)	25	A (6.7)	25	A (6.7)	25	A (7.3)	0	A (6.6)	25
	SBL	A (0.0)	0	A (0.0)	0	A (0.0)	0	A (0.0)	0	A (0.0)	0	A (0.0)	0
	Intersection	A (7.1)	-	B (11.3)	-	A (7.1)	-	A (7.2)	-	A (7.1)	-	A (7.0)	-

CONCLUSIONS AND PROPOSED MITIGATION

The analysis of traffic for the proposed development of a 43,692 SF office building was completed following standard practice. The previous sections described the current roadway network and traffic characteristics, the forecasts of future traffic and parking conditions, and the analysis of impact and access. The key findings of this study are as follows:

- The project does not add new traffic to the system but relocates existing volumes.
- Under Existing Conditions, No Build, and Build Conditions, all study intersections operate at LOS B or better.
- During the 2031 Future Build Conditions, operations remain similar to No Building Conditions for both the AM and PM peak hour.
- The proposed development does not result in any significant changes at the study area intersections.
- The flexibility of employees to work from home on multiple days reduces the need for extensive parking. More than adequate parking will be provided at the proposed development site for the relocated administrative use and the proposed plan meets the current zoning requirement without any adjustments taken into consideration.

PROPOSED MITIGATION

While the project itself is not creating any new anticipated operational deficiencies, the importance of creating safe and efficient access for the project is essential to maintain a safe multimodal traveling network for non-site related traffic. The following potential mitigation measures have been identified below and are intended to provide for safe site access.

- Enhance the existing transit stop along Shore Drive, including a pedestrian shelter and bench. There will need to be coordination with the Worcester Regional Transit Authority (WRTA) regarding the transit stop.
- Provide transit information inside of the building lobby regarding routes and schedules.
- A new pedestrian connection between Stores Street and the new building will be provided and while it will be a secure entry point, it does accommodate pedestrian movement connections.
- The proposed center median with a tree landscape in the new parking field for the building will have sidewalks along both sides will begin to form a more enhanced and protected pedestrian connection in this large parking area and begin a connection between the new administrative building and the manufacturing buildings.
- A ten (10) capacity bike rack will be provided in a convenient location to the main building entry.

APPENDIX

APPENDIX A

Traffic Data

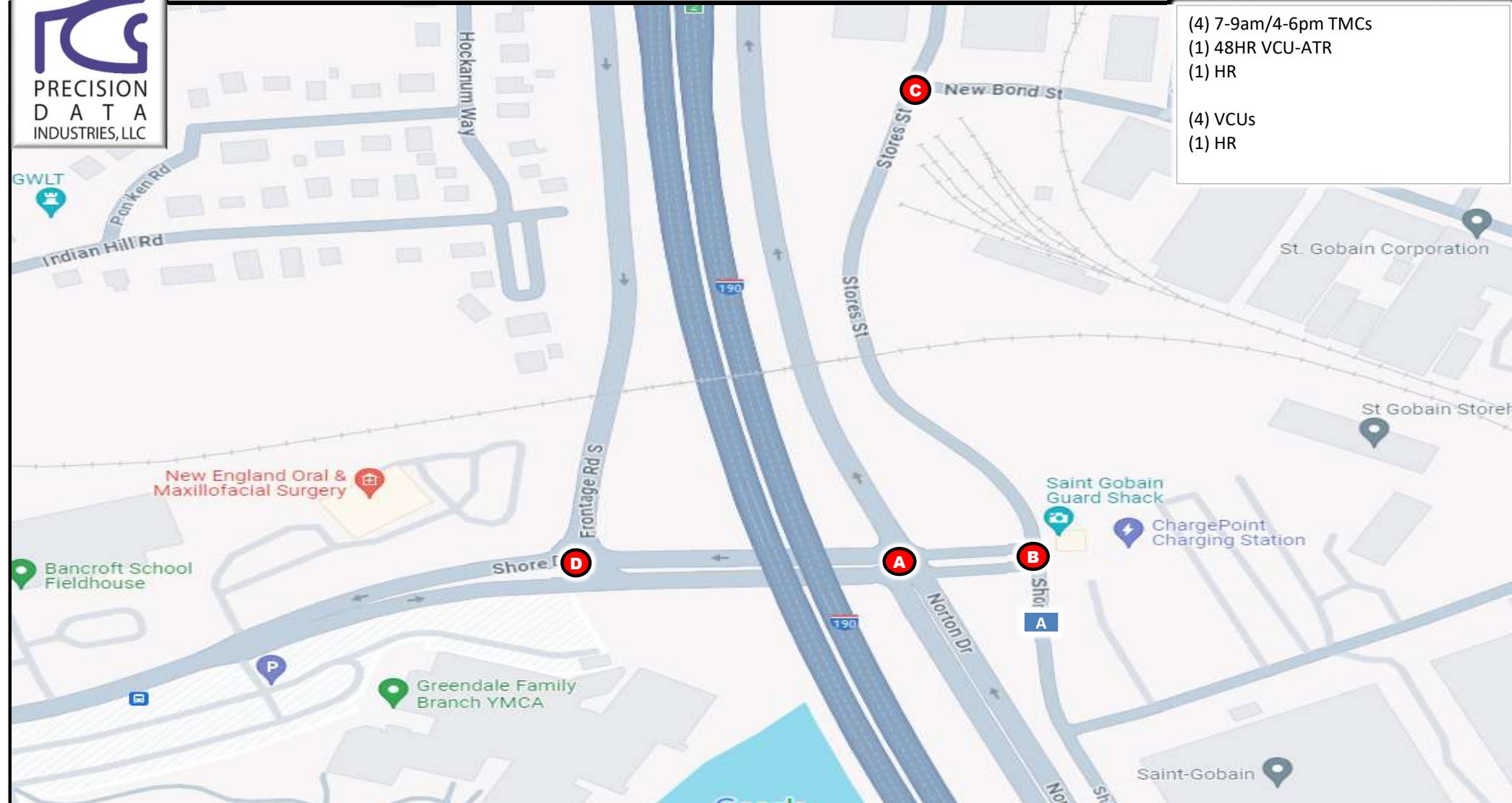


Location Map: 249914 Worcester, MA

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

- (4) 7-9am/4-6pm TMCs
- (1) 48HR VCU-ATR
- (1) HR

- (4) VCUs
- (1) HR



Client: Kimley-Horn	Engineer: P. Graham	Site Code: TBD	Date: Tues 3/26/24 - Wed 3/27/24	PDI Job # 249914	City, State: Worcester, MA
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Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A

Count Date: Tuesday, March 26, 2024
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	6	0	0	0	6
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	1	0	0	0	1
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	2	0	0	0	2
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	6	0	0	0	6
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	4	0	0	0	4
3:15 AM	0	0	2	0	0	0	2
3:30 AM	0	0	2	0	0	0	2
3:45 AM	0	0	2	0	0	0	2
4:00 AM	0	0	3	0	0	0	3
4:15 AM	0	0	3	0	0	0	3
4:30 AM	0	0	2	0	0	1	3
4:45 AM	0	0	5	0	0	0	5
5:00 AM	0	0	12	0	0	0	12
5:15 AM	0	0	4	0	2	0	6
5:30 AM	0	0	8	0	1	0	9
5:45 AM	0	0	4	0	0	0	4
6:00 AM	0	0	10	0	0	0	10
6:15 AM	0	0	6	0	0	0	6
6:30 AM	0	0	2	0	1	0	3
6:45 AM	0	0	4	0	2	0	6
7:00 AM	0	0	8	0	0	0	8
7:15 AM	0	0	1	0	3	0	4
7:30 AM	0	0	1	0	1	0	2
7:45 AM	0	0	4	0	3	0	7
8:00 AM	0	0	3	0	2	0	5
8:15 AM	0	0	2	0	1	0	3
8:30 AM	0	0	3	0	1	1	5
8:45 AM	0	0	1	0	2	0	3
9:00 AM	0	0	3	0	2	1	6
9:15 AM	0	0	7	0	0	0	7
9:30 AM	0	0	3	0	0	0	3
9:45 AM	0	0	4	0	2	0	6
10:00 AM	0	0	3	0	1	2	6
10:15 AM	0	0	7	0	5	0	12
10:30 AM	0	0	7	0	5	1	13
10:45 AM	0	0	6	0	3	0	9
11:00 AM	0	0	5	0	0	2	7
11:15 AM	0	0	3	0	1	0	4
11:30 AM	0	0	19	0	0	1	20
11:45 AM	0	0	10	0	3	0	13

AM Total	0	0	197	0	41	9	247
Percentage	0.00%	0.00%	79.76%	0.00%	16.60%	3.64%	
AM Peak	12:00 AM	12:00 AM	11:00 AM	12:00 AM	10:00 AM	9:45 AM	11:00 AM
Volume	0	0	37	0	14	3	44

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	13	0	1	0	14
12:15 PM	0	0	11	0	1	2	14
12:30 PM	0	0	12	0	1	0	13
12:45 PM	1	0	11	0	1	3	16
1:00 PM	0	0	20	0	0	0	20
1:15 PM	0	0	8	0	1	0	9
1:30 PM	0	0	43	0	0	0	43
1:45 PM	0	0	17	0	0	0	17
2:00 PM	0	0	66	0	2	1	69
2:15 PM	0	0	12	0	0	0	12
2:30 PM	0	0	46	1	0	0	47
2:45 PM	0	0	18	0	0	0	18
3:00 PM	0	0	29	0	1	0	30
3:15 PM	0	0	10	0	1	0	11
3:30 PM	0	0	20	0	2	2	24
3:45 PM	0	0	14	0	1	0	15
4:00 PM	0	0	21	0	0	0	21
4:15 PM	0	0	9	0	1	0	10
4:30 PM	0	0	20	0	0	1	21
4:45 PM	1	0	16	0	0	0	17
5:00 PM	0	0	18	0	0	0	18
5:15 PM	0	0	10	0	0	0	10
5:30 PM	0	0	10	0	0	0	10
5:45 PM	0	0	3	0	0	2	5
6:00 PM	0	0	11	0	0	0	11
6:15 PM	0	0	5	0	0	0	5
6:30 PM	0	0	5	0	0	0	5
6:45 PM	0	0	5	0	0	0	5
7:00 PM	0	0	3	0	0	0	3
7:15 PM	0	0	3	0	0	0	3
7:30 PM	0	0	2	0	0	0	2
7:45 PM	0	0	2	0	0	0	2
8:00 PM	0	0	6	0	0	0	6
8:15 PM	0	0	3	0	0	0	3
8:30 PM	0	0	6	0	0	0	6
8:45 PM	0	0	2	0	0	0	2
9:00 PM	0	0	7	0	0	0	7
9:15 PM	0	0	4	0	0	0	4
9:30 PM	0	0	8	0	0	0	8
9:45 PM	0	0	2	0	0	0	2
10:00 PM	0	0	1	0	0	0	1
10:15 PM	0	0	5	0	0	0	5
10:30 PM	0	1	27	0	0	0	28
10:45 PM	0	0	5	0	0	0	5
11:00 PM	0	0	9	0	0	0	9
11:15 PM	0	0	3	0	0	0	3
11:30 PM	0	0	4	0	0	0	4
11:45 PM	0	0	2	0	0	0	2

PM Total	2	1	587	1	13	11	615
Percentage	0.33%	0.16%	95.45%	0.16%	2.11%	1.79%	
PM Peak	12:00 PM	9:45 PM	2:00 PM	1:45 PM	3:00 PM	12:00 PM	2:00 PM
Volume	1	1	142	1	5	5	146
Day Total	2	1	784	1	54	20	862
Percentage	0.23%	0.12%	90.95%	0.12%	6.26%	2.32%	

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A

Count Date: Wednesday, March 27, 2024
Direction: NB

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	0	0	0	0	0
12:30 AM	0	0	4	0	0	0	4
12:45 AM	0	0	1	0	0	0	1
1:00 AM	0	0	1	0	0	0	1
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	1	0	0	0	1
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	1	0	0	0	1
3:00 AM	0	0	5	0	0	0	5
3:15 AM	0	0	3	0	0	0	3
3:30 AM	0	0	2	0	1	0	3
3:45 AM	0	0	1	0	0	0	1
4:00 AM	0	0	2	0	0	0	2
4:15 AM	0	0	4	0	0	0	4
4:30 AM	0	0	5	0	0	0	5
4:45 AM	0	0	7	0	0	1	8
5:00 AM	0	0	8	0	0	0	8
5:15 AM	0	0	5	0	0	0	5
5:30 AM	0	0	8	0	1	0	9
5:45 AM	0	0	4	1	1	0	6
6:00 AM	0	0	11	0	0	0	11
6:15 AM	0	0	6	0	2	0	8
6:30 AM	0	0	1	0	0	0	1
6:45 AM	0	0	6	0	0	0	6
7:00 AM	0	0	6	0	0	1	7
7:15 AM	0	0	3	0	1	0	4
7:30 AM	0	0	9	0	0	0	9
7:45 AM	0	0	7	0	2	1	10
8:00 AM	0	0	4	0	0	0	4
8:15 AM	0	0	1	0	1	0	2
8:30 AM	0	0	5	0	3	0	8
8:45 AM	0	0	6	0	1	0	7
9:00 AM	0	0	1	0	0	0	1
9:15 AM	0	0	3	0	1	0	4
9:30 AM	0	0	3	0	0	0	3
9:45 AM	0	0	6	0	2	0	8
10:00 AM	0	0	5	0	1	1	7
10:15 AM	0	0	4	0	1	1	6
10:30 AM	0	0	2	0	2	2	6
10:45 AM	0	0	8	0	0	0	8
11:00 AM	0	0	2	0	0	1	3
11:15 AM	0	0	9	0	0	0	9
11:30 AM	0	0	11	0	0	0	11
11:45 AM	0	0	15	0	0	1	16

AM Total	0	0	203	1	20	9	233
Percentage	0.00%	0.00%	87.12%	0.43%	8.58%	3.86%	
AM Peak	12:00 AM	12:00 AM	11:00 AM	5:00 AM	7:45 AM	9:45 AM	11:00 AM
Volume	0	0	37	1	6	4	39

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	21	0	0	0	21
12:15 PM	0	0	19	0	1	0	20
12:30 PM	0	0	11	0	0	1	12
12:45 PM	1	0	5	0	1	0	7
1:00 PM	0	0	21	0	0	0	21
1:15 PM	0	0	12	0	0	2	14
1:30 PM	0	0	45	0	0	1	46
1:45 PM	0	0	16	0	1	1	18
2:00 PM	0	0	62	0	0	0	62
2:15 PM	0	0	9	0	0	0	9
2:30 PM	0	0	41	0	0	0	41
2:45 PM	0	0	26	0	0	0	26
3:00 PM	0	0	21	0	2	0	23
3:15 PM	0	0	23	0	0	0	23
3:30 PM	0	0	17	0	1	2	20
3:45 PM	0	0	10	0	0	0	10
4:00 PM	0	0	17	0	1	1	19
4:15 PM	0	0	9	0	0	2	11
4:30 PM	0	0	14	0	1	0	15
4:45 PM	0	0	29	0	0	1	30
5:00 PM	0	0	20	0	0	1	21
5:15 PM	0	0	7	0	0	1	8
5:30 PM	0	0	7	0	0	0	7
5:45 PM	0	0	9	0	0	0	9
6:00 PM	0	0	6	0	0	0	6
6:15 PM	0	0	6	0	0	1	7
6:30 PM	0	0	5	0	0	0	5
6:45 PM	0	0	1	0	0	0	1
7:00 PM	0	0	2	0	0	0	2
7:15 PM	0	0	2	0	0	0	2
7:30 PM	0	0	3	0	0	0	3
7:45 PM	0	0	3	0	0	0	3
8:00 PM	0	0	6	0	0	0	6
8:15 PM	0	0	3	0	0	0	3
8:30 PM	0	0	5	0	0	0	5
8:45 PM	0	0	0	0	0	0	0
9:00 PM	0	0	7	0	0	0	7
9:15 PM	0	0	7	0	0	0	7
9:30 PM	0	0	10	0	0	0	10
9:45 PM	0	0	2	0	0	0	2
10:00 PM	0	0	4	0	0	0	4
10:15 PM	0	0	5	0	0	0	5
10:30 PM	0	0	26	0	0	0	26
10:45 PM	0	0	2	0	0	0	2
11:00 PM	0	0	6	0	0	0	6
11:15 PM	0	0	3	0	0	0	3
11:30 PM	0	0	5	0	0	0	5
11:45 PM	0	0	2	0	0	0	2

PM Total	1	0	592	0	8	14	615
Percentage	0.16%	0.00%	96.26%	0.00%	1.30%	2.28%	
PM Peak	12:00 PM	12:00 PM	2:00 PM	12:00 PM	2:45 PM	3:30 PM	1:15 PM
Volume	1	0	138	0	3	5	140
Day Total	1	0	795	1	28	23	848
Percentage	0.12%	0.00%	93.75%	0.12%	3.30%	2.71%	

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A

Count Date: Tuesday, March 26, 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	2	0	0	0	2
12:30 AM	0	0	1	0	0	0	1
12:45 AM	0	0	2	0	0	0	2
1:00 AM	0	0	1	0	0	0	1
1:15 AM	0	0	1	0	0	0	1
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	4	0	0	0	4
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	14	0	0	1	15
3:00 AM	0	0	7	0	0	0	7
3:15 AM	0	0	12	0	0	0	12
3:30 AM	0	0	10	0	0	0	10
3:45 AM	0	0	18	0	0	0	18
4:00 AM	0	0	15	0	0	0	15
4:15 AM	0	0	22	0	0	0	22
4:30 AM	0	0	27	0	0	0	27
4:45 AM	0	0	40	0	0	0	40
5:00 AM	0	0	21	0	1	0	22
5:15 AM	0	0	38	0	0	0	38
5:30 AM	0	0	9	0	0	0	9
5:45 AM	0	0	31	0	0	0	31
6:00 AM	1	0	19	0	0	0	20
6:15 AM	0	0	15	0	0	0	15
6:30 AM	0	0	16	0	3	0	19
6:45 AM	0	0	21	0	2	0	23
7:00 AM	0	0	13	0	1	0	14
7:15 AM	0	0	7	0	1	1	9
7:30 AM	0	0	13	0	1	0	14
7:45 AM	0	0	22	0	1	0	23
8:00 AM	0	0	15	0	3	0	18
8:15 AM	0	0	13	0	2	0	15
8:30 AM	0	0	12	0	2	0	14
8:45 AM	1	0	7	0	1	1	10
9:00 AM	0	0	11	0	2	0	13
9:15 AM	0	0	6	0	2	0	8
9:30 AM	0	0	5	0	0	1	6
9:45 AM	0	0	3	0	2	1	6
10:00 AM	0	0	3	0	4	1	8
10:15 AM	0	0	2	0	2	1	5
10:30 AM	0	0	6	1	2	1	10
10:45 AM	0	0	5	0	3	0	8
11:00 AM	0	0	6	0	2	1	9
11:15 AM	0	0	4	0	2	0	6
11:30 AM	0	0	10	0	2	0	12
11:45 AM	0	0	9	0	1	0	10

AM Total	2	0	525	1	42	9	579
Percentage	0.35%	0.00%	90.67%	0.17%	7.25%	1.55%	
AM Peak	5:15 AM	12:00 AM	4:30 AM	9:45 AM	10:00 AM	9:30 AM	4:30 AM
Volume	1	0	126	1	11	4	127

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	11	0	0	3	14
12:15 PM	0	0	19	0	2	0	21
12:30 PM	0	0	12	0	2	0	14
12:45 PM	0	0	21	0	0	2	23
1:00 PM	0	0	7	0	0	0	7
1:15 PM	0	0	14	0	0	0	14
1:30 PM	0	1	13	0	1	0	15
1:45 PM	0	0	11	0	1	1	13
2:00 PM	0	0	9	0	0	0	9
2:15 PM	0	0	5	0	1	0	6
2:30 PM	0	0	3	1	0	0	4
2:45 PM	0	0	5	0	1	1	7
3:00 PM	0	0	5	0	1	0	6
3:15 PM	0	0	3	0	1	1	5
3:30 PM	0	0	3	0	0	0	3
3:45 PM	0	0	4	0	0	0	4
4:00 PM	0	0	3	0	0	2	5
4:15 PM	0	0	7	0	1	0	8
4:30 PM	0	0	3	0	0	0	3
4:45 PM	0	0	8	0	0	0	8
5:00 PM	0	0	4	0	0	0	4
5:15 PM	0	0	4	0	0	0	4
5:30 PM	0	0	3	0	0	1	4
5:45 PM	0	0	2	0	0	0	2
6:00 PM	0	0	2	0	0	0	2
6:15 PM	0	0	1	0	0	0	1
6:30 PM	0	0	3	0	0	0	3
6:45 PM	0	0	5	0	0	0	5
7:00 PM	0	0	3	0	0	0	3
7:15 PM	0	0	4	0	0	0	4
7:30 PM	0	0	1	0	0	0	1
7:45 PM	0	0	9	0	0	0	9
8:00 PM	0	0	5	0	0	0	5
8:15 PM	0	0	6	0	0	0	6
8:30 PM	0	0	4	0	0	0	4
8:45 PM	0	0	6	0	0	0	6
9:00 PM	0	0	0	0	0	0	0
9:15 PM	0	0	2	0	0	0	2
9:30 PM	0	0	3	0	0	0	3
9:45 PM	0	0	2	0	0	0	2
10:00 PM	0	0	3	0	0	0	3
10:15 PM	0	0	3	0	0	0	3
10:30 PM	0	0	1	0	0	0	1
10:45 PM	0	0	3	0	0	0	3
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	1	0	0	0	1
11:45 PM	0	0	0	0	0	0	0

PM Total	0	1	246	1	11	11	270
Percentage	0.00%	0.37%	91.11%	0.37%	4.07%	4.07%	
PM Peak	12:00 PM	12:45 PM	12:00 PM	1:45 PM	12:00 PM	12:00 PM	12:00 PM
Volume	0	1	63	1	4	5	72
Day Total	2	1	771	2	53	20	849
Percentage	0.24%	0.12%	90.81%	0.24%	6.24%	2.36%	

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A

Count Date: Wednesday, March 27, 2024
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	1	0	0	0	1
12:15 AM	0	0	1	0	0	0	1
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	2	0	0	0	2
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	1	0	0	0	1
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	4	0	0	0	4
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	12	0	0	0	12
3:00 AM	0	0	6	0	0	0	6
3:15 AM	0	0	9	0	0	1	10
3:30 AM	0	0	9	0	1	0	10
3:45 AM	0	0	22	0	0	0	22
4:00 AM	0	0	17	0	0	0	17
4:15 AM	0	0	26	0	0	0	26
4:30 AM	0	0	12	0	0	0	12
4:45 AM	0	0	33	0	0	0	33
5:00 AM	0	0	26	0	0	0	26
5:15 AM	0	0	35	0	0	0	35
5:30 AM	0	0	18	1	1	0	20
5:45 AM	0	0	31	0	1	0	32
6:00 AM	0	0	22	0	1	1	24
6:15 AM	0	0	11	0	1	1	13
6:30 AM	0	0	16	0	0	0	16
6:45 AM	1	0	29	0	1	0	31
7:00 AM	0	0	9	0	0	0	9
7:15 AM	0	0	10	0	2	0	12
7:30 AM	0	0	16	0	0	0	16
7:45 AM	0	0	22	0	0	0	22
8:00 AM	0	0	23	0	1	0	24
8:15 AM	0	0	11	0	2	0	13
8:30 AM	0	0	9	0	1	0	10
8:45 AM	1	0	4	0	0	1	6
9:00 AM	0	0	8	0	0	0	8
9:15 AM	0	0	9	0	2	1	12
9:30 AM	0	0	5	0	2	1	8
9:45 AM	0	0	3	0	0	0	3
10:00 AM	0	0	5	0	2	0	7
10:15 AM	0	0	5	0	1	0	6
10:30 AM	0	0	9	0	0	1	10
10:45 AM	0	0	2	0	0	1	3
11:00 AM	0	0	5	0	0	0	5
11:15 AM	0	0	8	0	0	0	8
11:30 AM	0	0	7	0	0	0	7
11:45 AM	0	0	15	0	1	1	17

AM Total	2	0	537	1	20	9	569
Percentage	0.35%	0.00%	94.38%	0.18%	3.51%	1.58%	
AM Peak	6:00 AM	12:00 AM	4:45 AM	4:45 AM	9:15 AM	8:45 AM	4:45 AM
Volume	1	0	112	1	6	3	114

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	16	0	0	0	16
12:15 PM	0	0	11	0	1	1	13
12:30 PM	0	0	22	0	0	0	22
12:45 PM	0	1	15	1	0	0	17
1:00 PM	0	0	12	0	0	1	13
1:15 PM	0	0	15	0	0	2	17
1:30 PM	0	1	12	0	1	1	15
1:45 PM	0	0	13	0	0	0	13
2:00 PM	0	0	3	0	0	0	3
2:15 PM	0	0	7	0	0	0	7
2:30 PM	0	0	6	0	1	0	7
2:45 PM	0	0	1	0	1	1	3
3:00 PM	0	0	7	0	1	1	9
3:15 PM	0	0	4	0	0	0	4
3:30 PM	0	0	4	0	1	0	5
3:45 PM	0	0	4	0	0	2	6
4:00 PM	0	0	1	0	0	0	1
4:15 PM	0	0	3	0	1	1	5
4:30 PM	0	0	6	0	0	0	6
4:45 PM	0	0	5	0	0	1	6
5:00 PM	0	0	7	0	0	1	8
5:15 PM	0	0	3	0	0	0	3
5:30 PM	0	0	5	0	0	0	5
5:45 PM	0	0	1	0	0	0	1
6:00 PM	0	0	5	0	0	1	6
6:15 PM	0	0	1	0	0	0	1
6:30 PM	0	0	1	0	0	0	1
6:45 PM	0	0	5	0	0	0	5
7:00 PM	0	0	2	0	0	0	2
7:15 PM	0	0	7	0	0	0	7
7:30 PM	0	0	1	0	0	0	1
7:45 PM	0	0	3	0	0	0	3
8:00 PM	0	0	6	0	0	0	6
8:15 PM	0	0	5	0	0	0	5
8:30 PM	0	0	4	0	0	0	4
8:45 PM	0	0	4	0	0	0	4
9:00 PM	0	0	3	0	0	0	3
9:15 PM	0	0	3	0	0	0	3
9:30 PM	0	0	3	0	0	0	3
9:45 PM	0	0	4	0	0	0	4
10:00 PM	0	0	2	0	0	0	2
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	0	0	0	0	0
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	0	2	245	1	7	13	268
Percentage	0.00%	0.75%	91.42%	0.37%	2.61%	4.85%	
PM Peak	12:00 PM	12:45 PM	12:00 PM	12:00 PM	2:15 PM	12:45 PM	12:30 PM
Volume	0	2	64	1	3	4	69
Day Total	2	2	782	2	27	22	837
Percentage	0.24%	0.24%	93.43%	0.24%	3.23%	2.63%	

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



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

PDI File # 249914 ATR-A

Direction: NB

Weekly Report

Day Date	Tuesday 03/26/24		Wednesday 03/27/24												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	6	14	5	21	0	0	0	0	0	0	0	0	0	0	6	18
12:15	4	14	0	20	0	0	0	0	0	0	0	0	0	0	2	17
12:30	4	13	4	12	0	0	0	0	0	0	0	0	0	0	4	13
12:45	1	16	1	7	0	0	0	0	0	0	0	0	0	0	1	12
1:00	0	20	1	21	0	0	0	0	0	0	0	0	0	0	1	21
1:15	0	9	0	14	0	0	0	0	0	0	0	0	0	0	0	12
1:30	2	43	0	46	0	0	0	0	0	0	0	0	0	0	1	45
1:45	0	17	1	18	0	0	0	0	0	0	0	0	0	0	1	18
2:00	6	69	1	62	0	0	0	0	0	0	0	0	0	0	4	66
2:15	0	12	0	9	0	0	0	0	0	0	0	0	0	0	0	11
2:30	0	47	1	41	0	0	0	0	0	0	0	0	0	0	1	44
2:45	1	18	1	26	0	0	0	0	0	0	0	0	0	0	1	22
3:00	4	30	5	23	0	0	0	0	0	0	0	0	0	0	5	27
3:15	2	11	3	23	0	0	0	0	0	0	0	0	0	0	3	17
3:30	2	24	3	20	0	0	0	0	0	0	0	0	0	0	3	22
3:45	2	15	1	10	0	0	0	0	0	0	0	0	0	0	2	13
4:00	3	21	2	19	0	0	0	0	0	0	0	0	0	0	3	20
4:15	3	10	4	11	0	0	0	0	0	0	0	0	0	0	4	11
4:30	3	21	5	15	0	0	0	0	0	0	0	0	0	0	4	18
4:45	5	17	8	30	0	0	0	0	0	0	0	0	0	0	7	24
5:00	12	18	8	21	0	0	0	0	0	0	0	0	0	0	10	20
5:15	6	10	5	8	0	0	0	0	0	0	0	0	0	0	6	9
5:30	9	10	9	7	0	0	0	0	0	0	0	0	0	0	9	9
5:45	4	5	6	9	0	0	0	0	0	0	0	0	0	0	5	7
6:00	10	11	11	6	0	0	0	0	0	0	0	0	0	0	11	9
6:15	6	5	8	7	0	0	0	0	0	0	0	0	0	0	7	6
6:30	3	5	1	5	0	0	0	0	0	0	0	0	0	0	2	5
6:45	6	5	6	1	0	0	0	0	0	0	0	0	0	0	6	3
7:00	8	3	7	2	0	0	0	0	0	0	0	0	0	0	8	3
7:15	4	3	4	2	0	0	0	0	0	0	0	0	0	0	4	3
7:30	2	2	9	3	0	0	0	0	0	0	0	0	0	0	6	3
7:45	7	2	10	3	0	0	0	0	0	0	0	0	0	0	9	3
8:00	5	6	4	6	0	0	0	0	0	0	0	0	0	0	5	6
8:15	3	3	2	3	0	0	0	0	0	0	0	0	0	0	3	3
8:30	5	6	8	5	0	0	0	0	0	0	0	0	0	0	7	6
8:45	3	2	7	0	0	0	0	0	0	0	0	0	0	0	5	1
9:00	6	7	1	7	0	0	0	0	0	0	0	0	0	0	4	7
9:15	7	4	4	7	0	0	0	0	0	0	0	0	0	0	6	6
9:30	3	8	3	10	0	0	0	0	0	0	0	0	0	0	3	9
9:45	6	2	8	2	0	0	0	0	0	0	0	0	0	0	7	2
10:00	6	1	7	4	0	0	0	0	0	0	0	0	0	0	7	3
10:15	12	5	6	5	0	0	0	0	0	0	0	0	0	0	9	5
10:30	13	28	6	26	0	0	0	0	0	0	0	0	0	0	10	27
10:45	9	5	8	2	0	0	0	0	0	0	0	0	0	0	9	4
11:00	7	9	3	6	0	0	0	0	0	0	0	0	0	0	5	8
11:15	4	3	9	3	0	0	0	0	0	0	0	0	0	0	7	3
11:30	20	4	11	5	0	0	0	0	0	0	0	0	0	0	16	5
11:45	13	2	16	2	0	0	0	0	0	0	0	0	0	0	15	2
Total	247	615	233	615	0	0	0	0	0	0	0	0	0	0	240	615
Day Total	862		848		0		0		0		0		0		855	
Peak HR	11:00 AM	2:00 PM	11:00 AM	1:15 PM											11:00 AM	2:00 PM
Volume	44	146	39	140											42	142

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



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

PDI File # 249914 ATR-A

Direction: SB

Weekly Report

Day Date	Tuesday 03/26/24		Wednesday 03/27/24												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	0	14	1	16	0	0	0	0	0	0	0	0	0	0	1	15		
12:15	2	21	1	13	0	0	0	0	0	0	0	0	0	0	2	17		
12:30	1	14	0	22	0	0	0	0	0	0	0	0	0	0	1	18		
12:45	2	23	2	17	0	0	0	0	0	0	0	0	0	0	2	20		
1:00	1	7	0	13	0	0	0	0	0	0	0	0	0	0	1	10		
1:15	1	14	2	17	0	0	0	0	0	0	0	0	0	0	2	16		
1:30	0	15	1	15	0	0	0	0	0	0	0	0	0	0	1	15		
1:45	0	13	1	13	0	0	0	0	0	0	0	0	0	0	1	13		
2:00	4	9	2	3	0	0	0	0	0	0	0	0	0	0	3	6		
2:15	3	6	4	7	0	0	0	0	0	0	0	0	0	0	4	7		
2:30	4	4	4	7	0	0	0	0	0	0	0	0	0	0	4	6		
2:45	15	7	12	3	0	0	0	0	0	0	0	0	0	0	14	5		
3:00	7	6	6	9	0	0	0	0	0	0	0	0	0	0	7	8		
3:15	12	5	10	4	0	0	0	0	0	0	0	0	0	0	11	5		
3:30	10	3	10	5	0	0	0	0	0	0	0	0	0	0	10	4		
3:45	18	4	22	6	0	0	0	0	0	0	0	0	0	0	20	5		
4:00	15	5	17	1	0	0	0	0	0	0	0	0	0	0	16	3		
4:15	22	8	26	5	0	0	0	0	0	0	0	0	0	0	24	7		
4:30	27	3	12	6	0	0	0	0	0	0	0	0	0	0	20	5		
4:45	40	8	33	6	0	0	0	0	0	0	0	0	0	0	37	7		
5:00	22	4	26	8	0	0	0	0	0	0	0	0	0	0	24	6		
5:15	38	4	35	3	0	0	0	0	0	0	0	0	0	0	37	4		
5:30	9	4	20	5	0	0	0	0	0	0	0	0	0	0	15	5		
5:45	31	2	32	1	0	0	0	0	0	0	0	0	0	0	32	2		
6:00	20	2	24	6	0	0	0	0	0	0	0	0	0	0	22	4		
6:15	15	1	13	1	0	0	0	0	0	0	0	0	0	0	14	1		
6:30	19	3	16	1	0	0	0	0	0	0	0	0	0	0	18	2		
6:45	23	5	31	5	0	0	0	0	0	0	0	0	0	0	27	5		
7:00	14	3	9	2	0	0	0	0	0	0	0	0	0	0	12	3		
7:15	9	4	12	7	0	0	0	0	0	0	0	0	0	0	11	6		
7:30	14	1	16	1	0	0	0	0	0	0	0	0	0	0	15	1		
7:45	23	9	22	3	0	0	0	0	0	0	0	0	0	0	23	6		
8:00	18	5	24	6	0	0	0	0	0	0	0	0	0	0	21	6		
8:15	15	6	13	5	0	0	0	0	0	0	0	0	0	0	14	6		
8:30	14	4	10	4	0	0	0	0	0	0	0	0	0	0	12	4		
8:45	10	6	6	4	0	0	0	0	0	0	0	0	0	0	8	5		
9:00	13	0	8	3	0	0	0	0	0	0	0	0	0	0	11	2		
9:15	8	2	12	3	0	0	0	0	0	0	0	0	0	0	10	3		
9:30	6	3	8	3	0	0	0	0	0	0	0	0	0	0	7	3		
9:45	6	2	3	4	0	0	0	0	0	0	0	0	0	0	5	3		
10:00	8	3	7	2	0	0	0	0	0	0	0	0	0	0	8	3		
10:15	5	3	6	2	0	0	0	0	0	0	0	0	0	0	6	3		
10:30	10	1	10	1	0	0	0	0	0	0	0	0	0	0	10	1		
10:45	8	3	3	0	0	0	0	0	0	0	0	0	0	0	6	2		
11:00	9	0	5	0	0	0	0	0	0	0	0	0	0	0	7	0		
11:15	6	0	8	0	0	0	0	0	0	0	0	0	0	0	7	0		
11:30	12	1	7	0	0	0	0	0	0	0	0	0	0	0	10	1		
11:45	10	0	17	0	0	0	0	0	0	0	0	0	0	0	14	0		
Total	579	270	569	268	0	0	0	0	0	0	0	0	0	0	574	269		
Day Total	849		837		0		0		0		0		0		843			
Peak HR	4:30 AM	12:00 PM	4:45 AM	12:30 PM													4:30 AM	12:00 PM
Volume	127	72	114	69													117	70

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A (Speed)

Count Date
Tuesday, March 26, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	8	2	3	1	0	0	0	0	0	0	0	16	31.8	24.5
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	21.7	21.0
2:00 AM	0	2	4	0	1	0	0	0	0	0	0	0	0	7	24.7	21.1
3:00 AM	0	3	2	3	0	0	0	0	0	0	0	0	0	8	28.0	22.6
4:00 AM	0	2	5	5	0	1	0	0	0	0	0	0	0	13	26.0	24.0
5:00 AM	2	1	17	7	4	5	0	0	0	0	0	0	0	36	33.5	25.3
6:00 AM	1	2	9	7	1	1	1	0	0	0	0	0	0	22	29.0	24.8
7:00 AM	1	1	3	4	2	1	1	0	0	0	0	0	0	13	32.8	25.8
8:00 AM	1	3	3	2	2	0	0	0	0	0	0	0	0	11	28.0	22.6
9:00 AM	0	3	10	3	3	2	0	0	0	0	0	0	0	21	31.0	24.4
10:00 AM	3	17	7	3	5	3	0	0	0	0	0	0	0	38	33.0	22.1
11:00 AM	0	11	14	7	5	1	0	0	0	0	0	0	0	38	29.4	23.4
12:00 PM	2	11	16	7	9	3	0	0	0	0	0	0	0	48	32.0	24.2
1:00 PM	1	8	31	21	15	3	0	0	0	0	0	0	0	79	32.0	25.4
2:00 PM	0	13	42	32	31	8	0	0	0	0	0	0	0	126	32.0	26.2
3:00 PM	3	11	35	17	16	4	3	0	0	0	0	0	0	89	32.8	25.0
4:00 PM	0	5	28	18	10	6	0	0	0	0	0	0	0	67	33.0	25.6
5:00 PM	0	6	16	11	9	2	2	0	0	0	0	0	0	46	31.3	25.9
6:00 PM	0	2	11	4	6	2	0	0	0	0	0	0	0	25	33.0	25.8
7:00 PM	0	0	4	4	3	0	0	0	0	0	0	0	0	11	32.5	27.0
8:00 PM	1	1	6	3	3	1	0	0	0	0	0	0	0	15	33.7	24.9
9:00 PM	0	4	5	6	3	2	0	0	0	0	0	0	0	20	32.2	25.6
10:00 PM	0	12	10	6	7	1	1	0	0	0	0	0	0	37	32.6	24.1
11:00 PM	0	6	5	3	4	2	0	0	0	0	0	0	0	20	32.0	24.7
Total	15	126	293	175	142	49	8	0	0	0	0	0	0	808	32.0	25.0
Percent	1.86%	15.59%	36.26%	21.66%	17.57%	6.06%	0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	10:00 AM	10:00 AM	5:00 AM	5:00 AM	10:00 AM	5:00 AM	6:00 AM								10:00 AM
Volume	3	17	17	7	5	5	1	0	0	0	0	0	0	0	38
PM Peak	3:00 PM	2:00 PM	2:00 PM	2:00 PM	2:00 PM	2:00 PM	3:00 PM								2:00 PM
Volume	3	13	42	32	31	8	3	0	0	0	0	0	0	126	

15th Percentile:	19.0 MPH	Average Speed:	25.0 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	24.0 MPH	10 MPH Pace:	18 to 27 MPH	Number of Vehicles > 25 MPH:	317
85th Percentile:	32.0 MPH	Number in Pace:	501	Percent of Vehicles > 25 MPH:	39.2%
95th Percentile:	35.0 MPH	Percent in Pace:	62.0%		

Stores Street
 south of Shore Drive
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000



PDI File #: 249914 ATR-A (Speed)

Count Date
 Tuesday, March 26, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	3	18.7	17.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	3	7	6	2	0	0	0	0	0	0	0	0	0	18	24.0	19.5
3:00 AM	1	13	15	0	2	0	0	0	0	0	0	0	0	31	21.5	19.7
4:00 AM	8	47	31	6	2	0	0	0	0	0	0	0	0	94	23.0	19.1
5:00 AM	5	26	36	6	0	0	0	0	0	0	0	0	0	73	24.0	19.9
6:00 AM	6	26	23	2	0	0	0	0	0	0	0	0	0	57	22.0	18.9
7:00 AM	7	11	17	0	1	0	0	0	0	0	0	0	0	36	22.0	18.6
8:00 AM	10	11	16	1	0	0	0	0	0	0	0	0	0	38	21.5	17.2
9:00 AM	5	8	8	4	0	0	0	0	0	0	0	0	0	25	24.4	18.9
10:00 AM	8	14	3	2	0	0	0	0	0	0	0	0	0	27	21.0	16.4
11:00 AM	4	17	12	2	1	0	0	0	0	0	0	0	0	36	22.0	18.9
12:00 PM	7	21	24	3	1	0	0	0	0	0	0	0	0	56	23.0	18.7
1:00 PM	6	13	15	3	2	0	0	0	0	0	0	0	0	39	24.0	19.2
2:00 PM	5	11	9	0	0	0	0	0	0	0	0	0	0	25	20.4	16.9
3:00 PM	1	5	3	0	0	0	0	0	0	0	0	0	0	9	20.0	17.6
4:00 PM	1	6	9	2	0	0	0	0	0	0	0	0	0	18	22.9	20.2
5:00 PM	2	7	3	2	0	0	0	0	0	0	0	0	0	14	24.1	19.4
6:00 PM	0	5	3	0	0	0	0	0	0	0	0	0	0	8	21.0	19.1
7:00 PM	0	4	5	0	1	0	0	0	0	0	0	0	0	10	23.7	21.2
8:00 PM	1	4	3	2	1	0	0	0	0	0	0	0	0	11	27.0	21.6
9:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	2	21.8	19.0
10:00 PM	2	0	3	0	0	0	0	0	0	0	0	0	0	5	22.4	18.6
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20.0	20.0
Total	83	259	246	37	11	0	0	0	0	0	0	0	0	636	23.0	18.9
Percent	13.05%	40.72%	38.68%	5.82%	1.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	4:00 AM	5:00 AM	4:00 AM	3:00 AM										4:00 AM
Volume	10	47	36	6	2	0	0	0	0	0	0	0	0	0	94
PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM										12:00 PM
Volume	7	21	24	3	2	0	0	0	0	0	0	0	0	56	

15th Percentile:	15.0 MPH	Average Speed:	18.9 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	19.0 MPH	10 MPH Pace:	15 to 24 MPH	Number of Vehicles > 25 MPH:	41
85th Percentile:	23.0 MPH	Number in Pace:	505	Percent of Vehicles > 25 MPH:	6.4%
95th Percentile:	27.0 MPH	Percent in Pace:	79.4%		

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A (Speed)

Count Date
Tuesday, March 26, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	1	4	8	2	3	1	0	0	0	0	0	0	0	19	31.3	23.3
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	21.7	21.0
2:00 AM	3	9	10	2	1	0	0	0	0	0	0	0	0	25	24.0	20.0
3:00 AM	1	16	17	3	2	0	0	0	0	0	0	0	0	39	23.3	20.3
4:00 AM	8	49	36	11	2	1	0	0	0	0	0	0	0	107	24.0	19.7
5:00 AM	7	27	53	13	4	5	0	0	0	0	0	0	0	109	26.8	21.7
6:00 AM	7	28	32	9	1	1	1	0	0	0	0	0	0	79	24.3	20.6
7:00 AM	8	12	20	4	3	1	1	0	0	0	0	0	0	49	25.0	20.5
8:00 AM	11	14	19	3	2	0	0	0	0	0	0	0	0	49	23.8	18.4
9:00 AM	5	11	18	7	3	2	0	0	0	0	0	0	0	46	27.0	21.4
10:00 AM	11	31	10	5	5	3	0	0	0	0	0	0	0	65	27.4	19.7
11:00 AM	4	28	26	9	6	1	0	0	0	0	0	0	0	74	27.0	21.2
12:00 PM	9	32	40	10	10	3	0	0	0	0	0	0	0	104	28.0	21.2
1:00 PM	7	21	46	24	17	3	0	0	0	0	0	0	0	118	30.5	23.3
2:00 PM	5	24	51	32	31	8	0	0	0	0	0	0	0	151	32.0	24.7
3:00 PM	4	16	38	17	16	4	3	0	0	0	0	0	0	98	32.0	24.3
4:00 PM	1	11	37	20	10	6	0	0	0	0	0	0	0	85	31.4	24.4
5:00 PM	2	13	19	13	9	2	2	0	0	0	0	0	0	60	31.0	24.4
6:00 PM	0	7	14	4	6	2	0	0	0	0	0	0	0	33	31.4	24.2
7:00 PM	0	4	9	4	4	0	0	0	0	0	0	0	0	21	30.0	24.2
8:00 PM	2	5	9	5	4	1	0	0	0	0	0	0	0	26	30.3	23.5
9:00 PM	0	5	6	6	3	2	0	0	0	0	0	0	0	22	31.7	25.0
10:00 PM	2	12	13	6	7	1	1	0	0	0	0	0	0	42	32.0	23.4
11:00 PM	0	6	6	3	4	2	0	0	0	0	0	0	0	21	32.0	24.5
Total	98	385	539	212	153	49	8	0	0	0	0	0	0	1444	29.0	22.3
Percent	6.79%	26.66%	37.33%	14.68%	10.60%	3.39%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	4:00 AM	5:00 AM	5:00 AM	11:00 AM	5:00 AM	6:00 AM									5:00 AM
Volume	11	49	53	13	6	5	1	0	0	0	0	0	0	0	0	109
PM Peak	12:00 PM	12:00 PM	2:00 PM	2:00 PM	2:00 PM	2:00 PM	3:00 PM									2:00 PM
Volume	9	32	51	32	31	8	3	0	0	0	0	0	0	0	151	

15th Percentile:	17.0 MPH	Average Speed:	22.3 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	21.0 MPH	10 MPH Pace:	16 to 25 MPH	Number of Vehicles > 25 MPH:	358
85th Percentile:	29.0 MPH	Number in Pace:	947	Percent of Vehicles > 25 MPH:	24.8%
95th Percentile:	34.0 MPH	Percent in Pace:	65.6%		

Stores Street
 south of Shore Drive
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000



PDI File #: 249914 ATR-A (Speed)

Count Date
 Wednesday, March 27, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	1	4	3	0	2	0	0	0	0	0	0	0	10	32.9	26.6
1:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	2	32.2	28.0
2:00 AM	0	0	2	1	1	0	0	0	0	0	0	0	0	4	30.0	25.8
3:00 AM	0	2	6	1	1	0	0	0	0	0	0	0	0	10	26.9	22.6
4:00 AM	0	5	5	3	2	1	0	0	0	0	0	0	0	16	30.5	23.8
5:00 AM	1	3	12	7	5	3	0	0	0	0	0	0	0	31	32.0	25.1
6:00 AM	1	2	12	4	3	1	0	0	0	0	0	0	0	23	30.4	24.4
7:00 AM	1	10	18	3	4	2	0	0	0	0	0	0	0	38	29.9	22.9
8:00 AM	1	8	5	5	0	2	0	0	0	0	0	0	0	21	27.0	22.2
9:00 AM	0	9	7	1	2	1	0	0	0	0	0	0	0	20	26.1	22.0
10:00 AM	2	11	8	3	2	0	0	0	0	0	0	0	0	26	28.3	20.8
11:00 AM	0	6	18	12	6	5	0	0	0	0	0	0	0	47	33.1	25.7
12:00 PM	0	11	25	13	9	4	0	0	0	0	0	0	0	62	32.0	24.5
1:00 PM	5	5	38	28	18	2	0	0	0	0	0	0	0	96	31.0	25.0
2:00 PM	2	14	50	23	39	8	1	0	0	0	0	0	0	137	33.0	26.2
3:00 PM	0	8	31	16	9	2	1	0	0	0	0	0	0	67	31.1	25.1
4:00 PM	0	11	32	9	16	7	0	0	0	0	0	0	0	75	33.0	25.4
5:00 PM	0	7	14	10	10	4	0	1	0	0	0	0	0	46	34.0	26.3
6:00 PM	0	2	9	4	5	1	0	0	0	0	0	0	0	21	32.0	25.8
7:00 PM	0	0	6	3	1	0	1	0	0	0	0	0	0	11	31.0	26.4
8:00 PM	0	5	4	4	1	1	1	0	0	0	0	0	0	16	31.8	24.8
9:00 PM	0	4	12	7	3	1	0	0	0	0	0	0	0	27	29.1	24.1
10:00 PM	0	6	14	5	6	1	0	0	0	0	0	0	0	32	31.4	24.6
11:00 PM	0	2	6	1	2	2	1	0	0	0	0	0	0	14	36.2	26.6
Total	13	132	339	166	146	50	5	1	0	0	0	0	0	852	32.4	24.9
Percent	1.53%	15.49%	39.79%	19.48%	17.14%	5.87%	0.59%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	10:00 AM	10:00 AM	7:00 AM	11:00 AM	11:00 AM	11:00 AM									11:00 AM	
Volume	2	11	18	12	6	5	0	0	0	0	0	0	0	0	47	
PM Peak	1:00 PM	2:00 PM	2:00 PM	1:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM							2:00 PM	
Volume	5	14	50	28	39	8	1	1	0	0	0	0	0	137		

15th Percentile:	19.0 MPH	Average Speed:	24.9 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	24.0 MPH	10 MPH Pace:	18 to 27 MPH	Number of Vehicles > 25 MPH:	328
85th Percentile:	32.4 MPH	Number in Pace:	541	Percent of Vehicles > 25 MPH:	38.5%
95th Percentile:	35.0 MPH	Percent in Pace:	63.5%		

Stores Street
south of Shore Drive
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Client: Kimley-Horn/ P. Graham
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PDI File #: 249914 ATR-A (Speed)

Count Date
Wednesday, March 27, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15.0	15.0
1:00 AM	3	1	1	0	0	0	0	0	0	0	0	0	0	5	20.6	16.2
2:00 AM	1	7	6	1	0	0	0	0	0	0	0	0	0	15	21.9	19.4
3:00 AM	3	12	14	1	0	0	0	0	0	0	0	0	0	30	21.0	19.2
4:00 AM	5	29	14	3	1	0	0	0	0	0	0	0	0	52	22.0	19.0
5:00 AM	4	40	24	4	1	0	0	0	0	0	0	0	0	73	22.2	19.0
6:00 AM	9	17	17	2	0	0	0	0	0	0	0	0	0	45	23.0	18.2
7:00 AM	4	20	15	3	0	0	0	0	0	0	0	0	0	42	22.0	18.8
8:00 AM	3	19	20	3	0	0	0	0	0	0	0	0	0	45	22.0	19.2
9:00 AM	5	10	9	4	0	0	0	0	0	0	0	0	0	28	24.0	18.9
10:00 AM	3	7	6	1	0	0	0	0	0	0	0	0	0	17	21.6	18.7
11:00 AM	3	8	15	4	0	0	0	0	0	0	0	0	0	30	22.0	19.5
12:00 PM	6	21	15	4	3	0	0	0	0	0	0	0	0	49	23.8	19.6
1:00 PM	5	13	22	6	0	0	0	0	0	0	0	0	0	46	23.3	20.0
2:00 PM	1	6	10	0	0	0	0	0	0	0	0	0	0	17	23.0	19.9
3:00 PM	1	10	10	0	1	0	0	0	0	0	0	0	0	22	22.9	19.9
4:00 PM	0	4	8	0	0	0	0	0	0	0	0	0	0	12	23.0	19.8
5:00 PM	2	2	8	3	0	0	0	0	0	0	0	0	0	15	24.9	20.2
6:00 PM	1	2	2	0	0	0	0	0	0	0	0	0	0	5	20.8	17.8
7:00 PM	1	4	3	1	0	0	0	0	0	0	0	0	0	9	23.4	20.0
8:00 PM	0	6	6	1	0	0	0	0	0	0	0	0	0	13	22.4	20.0
9:00 PM	2	4	2	0	0	0	0	0	0	0	0	0	0	8	20.9	17.5
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	18.0	18.0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Total	62	245	227	41	6	0	0	0	0	0	0	0	0	581	23.0	19.2
Percent	10.67%	42.17%	39.07%	7.06%	1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	5:00 AM	5:00 AM	5:00 AM	4:00 AM											5:00 AM
Volume	9	40	24	4	1	0	0	0	0	0	0	0	0	0	0	73
PM Peak	12:00 PM	12:00 PM	1:00 PM	1:00 PM	12:00 PM											12:00 PM
Volume	6	21	22	6	3	0	0	0	0	0	0	0	0	0	49	

15th Percentile:	16.0 MPH	Average Speed:	19.2 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	19.0 MPH	10 MPH Pace:	14 to 23 MPH	Number of Vehicles > 25 MPH:	36
85th Percentile:	23.0 MPH	Number in Pace:	472	Percent of Vehicles > 25 MPH:	6.2%
95th Percentile:	26.0 MPH	Percent in Pace:	81.2%		

Stores Street
south of Shore Drive
City, State: Worcester, MA
Client: Kimley-Horn/ P. Graham
Site Code: 112968000



PDI File #: 249914 ATR-A (Speed)

Count Date
Wednesday, March 27, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	3	4	3	0	2	0	0	0	0	0	0	0	12	31.1	24.7
1:00 AM	3	1	2	0	1	0	0	0	0	0	0	0	0	7	24.1	19.6
2:00 AM	1	7	8	2	1	0	0	0	0	0	0	0	0	19	24.3	20.7
3:00 AM	3	14	20	2	1	0	0	0	0	0	0	0	0	40	22.0	20.1
4:00 AM	5	34	19	6	3	1	0	0	0	0	0	0	0	68	24.0	20.1
5:00 AM	5	43	36	11	6	3	0	0	0	0	0	0	0	104	26.0	20.9
6:00 AM	10	19	29	6	3	1	0	0	0	0	0	0	0	68	24.0	20.3
7:00 AM	5	30	33	6	4	2	0	0	0	0	0	0	0	80	24.2	20.8
8:00 AM	4	27	25	8	0	2	0	0	0	0	0	0	0	66	24.3	20.2
9:00 AM	5	19	16	5	2	1	0	0	0	0	0	0	0	48	25.0	20.2
10:00 AM	5	18	14	4	2	0	0	0	0	0	0	0	0	43	24.0	20.0
11:00 AM	3	14	33	16	6	5	0	0	0	0	0	0	0	77	29.0	23.3
12:00 PM	6	32	40	17	12	4	0	0	0	0	0	0	0	111	29.0	22.3
1:00 PM	10	18	60	34	18	2	0	0	0	0	0	0	0	142	28.0	23.4
2:00 PM	3	20	60	23	39	8	1	0	0	0	0	0	0	154	33.0	25.5
3:00 PM	1	18	41	16	10	2	1	0	0	0	0	0	0	89	29.0	23.8
4:00 PM	0	15	40	9	16	7	0	0	0	0	0	0	0	87	32.1	24.7
5:00 PM	2	9	22	13	10	4	0	1	0	0	0	0	0	61	33.0	24.8
6:00 PM	1	4	11	4	5	1	0	0	0	0	0	0	0	26	32.0	24.3
7:00 PM	1	4	9	4	1	0	1	0	0	0	0	0	0	20	27.3	23.5
8:00 PM	0	11	10	5	1	1	1	0	0	0	0	0	0	29	26.8	22.7
9:00 PM	2	8	14	7	3	1	0	0	0	0	0	0	0	35	28.9	22.6
10:00 PM	0	7	14	5	6	1	0	0	0	0	0	0	0	33	31.2	24.4
11:00 PM	0	2	6	1	2	2	1	0	0	0	0	0	0	14	36.2	26.6
Total	75	377	566	207	152	50	5	1	0	0	0	0	0	1433	29.0	22.6
Percent	5.23%	26.31%	39.50%	14.45%	10.61%	3.49%	0.35%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	5:00 AM	5:00 AM	11:00 AM	5:00 AM	11:00 AM									5:00 AM
Volume	10	43	36	16	6	5	0	0	0	0	0	0	0	0	104
PM Peak	1:00 PM	12:00 PM	1:00 PM	1:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM							2:00 PM
Volume	10	32	60	34	39	8	1	1	0	0	0	0	0	154	

15th Percentile:	17.0 MPH	Average Speed:	22.6 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	22.0 MPH	10 MPH Pace:	17 to 26 MPH	Number of Vehicles > 25 MPH:	364
85th Percentile:	29.0 MPH	Number in Pace:	969	Percent of Vehicles > 25 MPH:	25.4%
95th Percentile:	34.0 MPH	Percent in Pace:	67.6%		

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	2	0	4	0	6	13	16	50	0	79	144	5	33	0	182	267
7:15 AM	0	0	0	0	0	2	0	2	0	4	14	5	79	2	100	167	9	33	0	209	313
7:30 AM	0	0	0	0	0	1	2	3	0	6	13	8	111	1	133	199	8	48	0	255	394
7:45 AM	0	0	0	0	0	0	0	6	0	6	13	12	129	1	155	216	9	50	0	275	436
Total	0	0	0	0	0	5	2	15	0	22	53	41	369	4	467	726	31	164	0	921	1410
8:00 AM	0	0	0	0	0	2	0	3	0	5	13	17	87	1	118	197	11	51	0	259	382
8:15 AM	0	0	0	0	0	1	0	2	0	3	12	16	92	2	122	157	8	60	1	226	351
8:30 AM	0	0	0	0	0	1	0	3	0	4	4	15	62	0	81	159	6	54	0	219	304
8:45 AM	0	0	0	0	0	2	0	6	0	8	6	22	83	1	112	143	4	56	0	203	323
Total	0	0	0	0	0	6	0	14	0	20	35	70	324	4	433	656	29	221	1	907	1360
Grand Total	0	0	0	0	0	11	2	29	0	42	88	111	693	8	900	1382	60	385	1	1828	2770
Approach %	0.0	0.0	0.0	0.0	0.0	26.2	4.8	69.0	0.0	42	9.8	12.3	77.0	0.9	900	75.6	3.3	21.1	0.1	1828	
Total %	0.0	0.0	0.0	0.0	0.0	0.4	0.1	1.0	0.0	1.5	3.2	4.0	25.0	0.3	32.5	49.9	2.2	13.9	0.0	66.0	
Exiting Leg Total	507					148					1419					696					2770
Cars	0	0	0	0	0	5	2	24	0	31	81	106	677	8	872	1374	56	373	1	1804	2707
% Cars	0.0	0.0	0.0	0.0	0.0	45.5	100.0	82.8	0.0	73.8	92.0	95.5	97.7	100.0	96.9	99.4	93.3	96.9	100.0	98.7	97.7
Exiting Leg Total	484					137					1406					680					2707
Heavy Vehicles	0	0	0	0	0	6	0	5	0	11	7	5	16	0	28	8	4	12	0	24	63
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	54.5	0.0	17.2	0.0	26.2	8.0	4.5	2.3	0.0	3.1	0.6	6.7	3.1	0.0	1.3	2.3
Exiting Leg Total	23					11					13					16					63

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

7:30 AM	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	1	2	3	0	6	13	8	111	1	133	199	8	48	0	255	394
7:45 AM	0	0	0	0	0	0	0	6	0	6	13	12	129	1	155	216	9	50	0	275	436
8:00 AM	0	0	0	0	0	2	0	3	0	5	13	17	87	1	118	197	11	51	0	259	382
8:15 AM	0	0	0	0	0	1	0	2	0	3	12	16	92	2	122	157	8	60	1	226	351
Total Volume	0	0	0	0	0	4	2	14	0	20	51	53	419	5	528	769	36	209	1	1015	1563
% Approach Total	0.0	0.0	0.0	0.0	0.0	20.0	10.0	70.0	0.0	20	9.7	10.0	79.4	0.9	528	75.8	3.5	20.6	0.1	1015	
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.583	0.000	0.833	0.981	0.779	0.812	0.625	0.852	0.890	0.818	0.871	0.250	0.923	0.896
Cars	0	0	0	0	0	2	2	12	0	16	47	52	408	5	512	766	33	205	1	1005	1533
Cars %	0.0	0.0	0.0	0.0	0.0	50.0	100.0	85.7	0.0	80.0	92.2	98.1	97.4	100.0	97.0	99.6	91.7	98.1	100.0	99.0	98.1
Heavy Vehicles	0	0	0	0	0	2	0	2	0	4	4	1	11	0	16	3	3	4	0	10	30
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	50.0	0.0	14.3	0.0	20.0	7.8	1.9	2.6	0.0	3.0	0.4	8.3	1.9	0.0	1.0	1.9
Cars Enter Leg	0	0	0	0	0	2	2	12	0	16	47	52	408	5	512	766	33	205	1	1005	1533
Heavy Enter Leg	0	0	0	0	0	2	0	2	0	4	4	1	11	0	16	3	3	4	0	10	30
Total Entering Leg	0	0	0	0	0	4	2	14	0	20	51	53	419	5	528	769	36	209	1	1015	1563
Cars Exiting Leg	259					80					783					411					1533
Heavy Exiting Leg	7					7					5					11					30
Total Exiting Leg	266					87					788					422					1563

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	0	4	0	5	13	15	49	0	77	144	5	31	0	180	262
7:15 AM	0	0	0	0	0	1	0	2	0	3	12	5	78	2	97	166	9	33	0	208	308
7:30 AM	0	0	0	0	0	1	2	3	0	6	12	8	107	1	128	199	7	48	0	254	388
7:45 AM	0	0	0	0	0	0	0	5	0	5	11	11	126	1	149	215	8	48	0	271	425
Total	0	0	0	0	0	3	2	14	0	19	48	39	360	4	451	724	29	160	0	913	1383
8:00 AM	0	0	0	0	0	1	0	3	0	4	13	17	85	1	116	196	11	49	0	256	376
8:15 AM	0	0	0	0	0	0	0	1	0	1	11	16	90	2	119	156	7	60	1	224	344
8:30 AM	0	0	0	0	0	0	0	3	0	3	4	14	62	0	80	157	6	53	0	216	299
8:45 AM	0	0	0	0	0	1	0	3	0	4	5	20	80	1	106	141	3	51	0	195	305
Total	0	0	0	0	0	2	0	10	0	12	33	67	317	4	421	650	27	213	1	891	1324
Grand Total	0	0	0	0	0	5	2	24	0	31	81	106	677	8	872	1374	56	373	1	1804	2707
Approach %	0.0	0.0	0.0	0.0	0.0	16.1	6.5	77.4	0.0	0.0	9.3	12.2	77.6	0.9	0.0	76.2	3.1	20.7	0.1	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.9	0.0	1.1	3.0	3.9	25.0	0.3	32.2	50.8	2.1	13.8	0.0	66.6	0.0
Exiting Leg Total	484					137					1406					680					2707

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	1	2	3	0	6	12	8	107	1	128	199	7	48	0	254	388
7:30 AM	0	0	0	0	0	0	0	5	0	5	11	11	126	1	149	215	8	48	0	271	425
7:45 AM	0	0	0	0	0	1	0	3	0	4	13	17	85	1	116	196	11	49	0	256	376
8:00 AM	0	0	0	0	0	0	0	1	0	1	11	16	90	2	119	156	7	60	1	224	344
Total Volume	0	0	0	0	0	2	2	12	0	16	47	52	408	5	512	766	33	205	1	1005	1533
% Approach Total	0.0	0.0	0.0	0.0	0.0	12.5	12.5	75.0	0.0	0.0	9.2	10.2	79.7	1.0	0.0	76.2	3.3	20.4	0.1	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.600	0.000	0.667	0.904	0.765	0.810	0.625	0.859	0.891	0.750	0.854	0.250	0.927	0.902
Entering Leg	0	0	0	0	0	2	2	12	0	16	47	52	408	5	512	766	33	205	1	1005	1533
Exiting Leg	259					80					783					411					1533
Total	259					96					1295					1416					3066

PDI File #: 249914 A
 Location: N: Frontage Road N S: Norton Drive
 Location: E: Shore Drive W: Shore Drive
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000
 Count Date: Wednesday, March 27, 2024
 Start Time: 7:00 AM
 End Time: 9:00 AM



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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	0	0	0	1	0	1	1	0	2	0	0	2	0	2	5
7:15 AM	0	0	0	0	0	1	0	0	0	1	2	0	1	0	3	1	0	0	0	1	5
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	0	1	0	0	1	6
7:45 AM	0	0	0	0	0	0	0	1	0	1	2	1	3	0	6	1	1	2	0	4	11
Total	0	0	0	0	0	2	0	1	0	3	5	2	9	0	16	2	2	4	0	8	27
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	1	0	2	0	3	6
8:15 AM	0	0	0	0	0	1	0	1	0	2	1	0	2	0	3	1	1	0	0	2	7
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0	1	0	3	5
8:45 AM	0	0	0	0	0	1	0	3	0	4	1	2	3	0	6	2	1	5	0	8	18
Total	0	0	0	0	0	4	0	4	0	8	2	3	7	0	12	6	2	8	0	16	36
Grand Total	0	0	0	0	0	6	0	5	0	11	7	5	16	0	28	8	4	12	0	24	63
Approach %	0.0	0.0	0.0	0.0	0.0	54.5	0.0	45.5	0.0	11.1	25.0	17.9	57.1	0.0	44.4	33.3	16.7	50.0	0.0	38.1	
Total %	0.0	0.0	0.0	0.0	0.0	9.5	0.0	7.9	0.0	17.5	11.1	7.9	25.4	0.0	44.4	12.7	6.3	19.0	0.0	38.1	
Exiting Leg Total	23					11					13					16					63
Buses	0	0	0	0	0	0	0	0	0	0	0	4	5	0	9	4	1	8	0	13	22
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	31.3	0.0	32.1	50.0	25.0	66.7	0.0	54.2	34.9
Exiting Leg Total	12					1					4					5					22
Single-Unit Trucks	0	0	0	0	0	5	0	5	0	10	6	1	10	0	17	4	3	2	0	9	36
% Single-Unit	0.0	0.0	0.0	0.0	0.0	83.3	0.0	100.0	0.0	90.9	85.7	20.0	62.5	0.0	60.7	50.0	75.0	16.7	0.0	37.5	57.1
Exiting Leg Total	8					9					9					10					36
Articulated Trucks	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	0	0	2	0	2	5
% Articulated	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	9.1	14.3	0.0	6.3	0.0	7.1	0.0	0.0	16.7	0.0	8.3	7.9
Exiting Leg Total	3					1					0					1					5

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	1	0	2	0	3	6
8:15 AM	0	0	0	0	0	1	0	1	0	2	1	0	2	0	3	1	1	0	0	2	7
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0	1	0	3	5
8:45 AM	0	0	0	0	0	1	0	3	0	4	1	2	3	0	6	2	1	5	0	8	18
Total Volume	0	0	0	0	0	4	0	4	0	8	2	3	7	0	12	6	2	8	0	16	36
% Approach Total	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	16.7	25.0	58.3	0.0	0.0	37.5	12.5	50.0	0.0	0.0	0.500	0.500
PHF	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.333	0.000	0.500	0.500	0.375	0.583	0.000	0.500	0.750	0.500	0.400	0.000	0.500	0.500
Buses	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	2	0	5	0	7	12
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	42.9	0.0	41.7	33.3	0.0	62.5	0.0	43.8	33.3
Single-Unit Trucks	0	0	0	0	0	4	0	4	0	8	1	1	4	0	6	4	2	2	0	8	22
Single-Unit %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	50.0	33.3	57.1	0.0	50.0	66.7	100.0	25.0	0.0	50.0	61.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	2
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	8.3	0.0	0.0	12.5	0.0	6.3	5.6
Buses	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	2	0	5	0	7	12
Single-Unit Trucks	0	0	0	0	0	4	0	4	0	8	1	1	4	0	6	4	2	2	0	8	22
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	2
Total Entering Leg	0	0	0	0	0	4	0	4	0	8	2	3	7	0	12	6	2	8	0	16	36
Buses	7					0					2					3					12
Single-Unit Trucks	7					3					8					4					22
Articulated Trucks	1					1					0					0					2
Total Exiting Leg	15					4					10					7					36

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	3	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	1	0	2	4	
Total	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	2	1	3	0	6	10	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	1	0	4	0	5	8	
Total	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	2	0	5	0	7	12	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	4	5	0	9	4	1	8	0	13	22	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.4	55.6	0.0	0.0	30.8	7.7	61.5	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	22.7	0.0	40.9	18.2	4.5	36.4	0.0	59.1		
Exiting Leg Total						12					1					4					5	22

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

8:00 AM	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	1	0	4	0	5	8	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	2	0	5	0	7	12	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	60.0	0.0	0.0	28.6	0.0	71.4	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.750	0.000	0.417	0.500	0.000	0.313	0.000	0.350	0.375	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	2	0	5	0	7	12	
Exiting Leg						7					0					2					3	12
Total						7					0					7					10	24

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	1	0	0	0	1	2	0	1	0	3	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	1	0	1	2	0	2	0	4	0	1	0	0	1	1	
Total	0	0	0	0	0	1	0	1	0	2	5	0	6	0	11	0	1	0	0	1	14	
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	3	
8:15 AM	0	0	0	0	0	1	0	1	0	2	1	0	1	0	2	1	1	0	0	2	6	
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0	0	0	2	4	
8:45 AM	0	0	0	0	0	1	0	3	0	4	0	0	2	0	2	1	1	1	0	3	9	
Total	0	0	0	0	0	4	0	4	0	8	1	1	4	0	6	4	2	2	0	8	22	
Grand Total	0	0	0	0	0	5	0	5	0	10	6	1	10	0	17	4	3	2	0	9	36	
Approach %	0.0	0.0	0.0	0.0		50.0	0.0	50.0	0.0		35.3	5.9	58.8	0.0		44.4	33.3	22.2	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	13.9	0.0	13.9	0.0	27.8	16.7	2.8	27.8	0.0	47.2	11.1	8.3	5.6	0.0	25.0		
Exiting Leg Total						8					9					9					10	36

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

8:00 AM	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	3	
8:15 AM	0	0	0	0	0	1	0	1	0	2	1	0	1	0	2	1	1	0	0	2	6	
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0	0	0	2	4	
8:45 AM	0	0	0	0	0	1	0	3	0	4	0	0	2	0	2	1	1	1	0	3	9	
Total Volume	0	0	0	0	0	4	0	4	0	8	1	1	4	0	6	4	2	2	0	8	22	
% Approach Total	0.0	0.0	0.0	0.0		50.0	0.0	50.0	0.0		16.7	16.7	66.7	0.0		50.0	25.0	25.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.333	0.000	0.500	0.250	0.250	0.500	0.000	0.750	0.500	0.500	0.500	0.000	0.667	0.611	
Entering Leg	0	0	0	0	0	4	0	4	0	8	1	1	4	0	6	4	2	2	0	8	22	
Exiting Leg						7					3					8					4	22
Total						7					11					14					12	44

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total				
	from North					from East					from South					from West									
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total					
7:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1				
7:15 AM	0	0	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	1	0	1	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	1	0	1	1				
Total	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	3				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1				
8:15 AM	0	0	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	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1				
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	2				
Grand Total	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	0	0	2	0	2	5				
Approach %	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		50.0	0.0	50.0	0.0		0.0	0.0	100.0	0.0						
Total %	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0	20.0	0.0	20.0	0.0	40.0	0.0	0.0	40.0	0.0	40.0					
Exiting Leg Total						3						1						0						1	5

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total				
	from North					from East					from South					from West									
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total					
7:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1				
7:15 AM	0	0	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	1	0	1	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	1	0	1	1				
Total Volume	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	3				
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0					
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.750				
Entering Leg	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	3				
Exiting Leg						2						0						0						1	3
Total						2						1						1						2	6

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Frontage Road N							Shore Drive							Norton Drive							Shore Drive							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						1						0						0						1				

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

8:00 AM	Frontage Road N							Shore Drive							Norton Drive							Shore Drive							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
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	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
Exiting Leg	0						1						0						0						1				
Total	0						1						1						0						2				

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grand Total	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Approach %	0	0	0	0	0	100			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	50	50		0	0	0	0	0	50	50		0	0	0	0	0	0	0	0	0	0	0	0	0				
Exiting Leg Total	1								1								0								0								2

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

	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
% Approach Total	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	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	0.250	0.250		0.000	0.000	0.000	0.000	0.000	0.250	0.250		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250			
Entering Leg	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
Exiting Leg	1								1								0								0								2
Total	2								2								0								0								4

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	4	7	10	0	21	2	25	151	5	183	92	1	41	0	134	338
4:15 PM	0	0	0	0	0	2	3	8	0	13	4	24	172	2	202	102	1	39	0	142	357
4:30 PM	0	0	0	1	1	1	1	16	0	18	6	23	175	2	206	106	0	42	1	149	374
4:45 PM	1	0	0	0	1	4	9	16	0	29	6	24	157	2	189	96	0	47	0	143	362
Total	1	0	0	1	2	11	20	50	0	81	18	96	655	11	780	396	2	169	1	568	1431
5:00 PM	0	0	0	0	0	4	5	16	0	25	6	36	164	2	208	94	2	40	0	136	369
5:15 PM	0	0	0	0	0	3	4	6	0	13	1	33	170	1	205	94	2	34	0	130	348
5:30 PM	0	0	0	0	0	1	3	5	0	9	4	24	128	0	156	119	1	38	0	158	323
5:45 PM	0	0	0	0	0	3	1	5	0	9	1	23	130	1	155	105	0	31	0	136	300
Total	0	0	0	0	0	11	13	32	0	56	12	116	592	4	724	412	5	143	0	560	1340
Grand Total	1	0	0	1	2	22	33	82	0	137	30	212	1247	15	1504	808	7	312	1	1128	2771
Approach %	50.0	0.0	0.0	50.0		16.1	24.1	59.9	0.0		2.0	14.1	82.9	1.0		71.6	0.6	27.7	0.1		
Total %	0.0	0.0	0.0	0.0	0.1	0.8	1.2	3.0	0.0	4.9	1.1	7.7	45.0	0.5	54.3	29.2	0.3	11.3	0.0	40.7	
Exiting Leg Total	547					37					905					1282					2771
Cars	1	0	0	1	2	19	33	77	0	129	26	209	1236	15	1486	799	6	299	1	1105	2722
% Cars	100.0	0.0	0.0	100.0	100.0	86.4	100.0	93.9	0.0	94.2	86.7	98.6	99.1	100.0	98.8	98.9	85.7	95.8	100.0	98.0	98.2
Exiting Leg Total	528					32					891					1271					2722
Heavy Vehicles	0	0	0	0	0	3	0	5	0	8	4	3	11	0	18	9	1	13	0	23	49
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	13.6	0.0	6.1	0.0	5.8	13.3	1.4	0.9	0.0	1.2	1.1	14.3	4.2	0.0	2.0	1.8
Exiting Leg Total	19					5					14					11					49

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

4:15 PM	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	2	3	8	0	13	4	24	172	2	202	102	1	39	0	142	357
4:30 PM	0	0	0	1	1	1	1	16	0	18	6	23	175	2	206	106	0	42	1	149	374
4:45 PM	1	0	0	0	1	4	9	16	0	29	6	24	157	2	189	96	0	47	0	143	362
5:00 PM	0	0	0	0	0	4	5	16	0	25	6	36	164	2	208	94	2	40	0	136	369
Total Volume	1	0	0	1	2	11	18	56	0	85	22	107	668	8	805	398	3	168	1	570	1462
% Approach Total	50.0	0.0	0.0	50.0		12.9	21.2	65.9	0.0		2.7	13.3	83.0	1.0		69.8	0.5	29.5	0.2		
PHF	0.250	0.000	0.000	0.250	0.500	0.688	0.500	0.875	0.000	0.733	0.917	0.743	0.954	1.000	0.968	0.939	0.375	0.894	0.250	0.956	0.977
Cars	1	0	0	1	2	10	18	53	0	81	18	107	659	8	792	390	3	159	1	553	1428
Cars %	100.0	0.0	0.0	100.0	100.0	90.9	100.0	94.6	0.0	95.3	81.8	100.0	98.7	100.0	98.4	98.0	100.0	94.6	100.0	97.0	97.7
Heavy Vehicles	0	0	0	0	0	1	0	3	0	4	4	0	9	0	13	8	0	9	0	17	34
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	9.1	0.0	5.4	0.0	4.7	18.2	0.0	1.3	0.0	1.6	2.0	0.0	5.4	0.0	3.0	2.3
Cars Enter Leg	1	0	0	1	2	10	18	53	0	81	18	107	659	8	792	390	3	159	1	553	1428
Heavy Enter Leg	0	0	0	0	0	1	0	3	0	4	4	0	9	0	13	8	0	9	0	17	34
Total Entering Leg	1	0	0	1	2	11	18	56	0	85	22	107	668	8	805	398	3	168	1	570	1462
Cars Exiting Leg	277					21					451					679					1428
Heavy Exiting Leg	10					4					11					9					34
Total Exiting Leg	287					25					462					688					1462

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
4:00 PM	0	0	0	0	0	3	7	9	0	19	2	24	150	5	181	92	1	39	0	132	332					
4:15 PM	0	0	0	0	0	2	3	8	0	13	2	24	170	2	198	98	1	36	0	135	346					
4:30 PM	0	0	0	1	1	1	1	14	0	16	6	23	173	2	204	105	0	38	1	144	365					
4:45 PM	1	0	0	0	1	3	9	16	0	28	5	24	155	2	186	94	0	46	0	140	355					
Total	1	0	0	1	2	9	20	47	0	76	15	95	648	11	769	389	2	159	1	551	1398					
5:00 PM	0	0	0	0	0	4	5	15	0	24	5	36	161	2	204	93	2	39	0	134	362					
5:15 PM	0	0	0	0	0	2	4	6	0	12	1	32	170	1	204	94	2	33	0	129	345					
5:30 PM	0	0	0	0	0	1	3	4	0	8	4	23	127	0	154	119	0	37	0	156	318					
5:45 PM	0	0	0	0	0	3	1	5	0	9	1	23	130	1	155	104	0	31	0	135	299					
Total	0	0	0	0	0	10	13	30	0	53	11	114	588	4	717	410	4	140	0	554	1324					
Grand Total	1	0	0	1	2	19	33	77	0	129	26	209	1236	15	1486	799	6	299	1	1105	2722					
Approach %	50.0	0.0	0.0	50.0		14.7	25.6	59.7	0.0		1.7	14.1	83.2	1.0		72.3	0.5	27.1	0.1							
Total %	0.0	0.0	0.0	0.0	0.1	0.7	1.2	2.8	0.0	4.7	1.0	7.7	45.4	0.6	54.6	29.4	0.2	11.0	0.0	40.6						
Exiting Leg Total						528					32					891					1271					2722

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	2	3	8	0	13	2	24	170	2	198	98	1	36	0	135	346
4:30 PM	0	0	0	1	1	1	1	14	0	16	6	23	173	2	204	105	0	38	1	144	365
4:45 PM	1	0	0	0	1	3	9	16	0	28	5	24	155	2	186	94	0	46	0	140	355
5:00 PM	0	0	0	0	0	4	5	15	0	24	5	36	161	2	204	93	2	39	0	134	362
Total Volume	1	0	0	1	2	10	18	53	0	81	18	107	659	8	792	390	3	159	1	553	1428
% Approach Total	50.0	0.0	0.0	50.0		12.3	22.2	65.4	0.0		2.3	13.5	83.2	1.0		70.5	0.5	28.8	0.2		
PHF	0.250	0.000	0.000	0.250	0.500	0.625	0.500	0.828	0.000	0.723	0.750	0.743	0.952	1.000	0.971	0.929	0.375	0.864	0.250	0.960	0.978
Entering Leg	1	0	0	1	2	10	18	53	0	81	18	107	659	8	792	390	3	159	1	553	1428
Exiting Leg						277					21					451					679
Total						279					102					1243					1232

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	0	2	0	1	1	0	2	0	0	2	0	2	6
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	4	0	3	0	7	11
4:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2	1	0	4	0	5	9
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	2	0	3	2	0	1	0	3	7
Total	0	0	0	0	0	2	0	3	0	5	3	1	7	0	11	7	0	10	0	17	33
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	3	0	4	1	0	1	0	2	7
5:15 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	3
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	1	1	0	2	0	1	1	0	2	5
5:45 PM	0	0	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	1	0	2	0	3	1	2	4	0	7	2	1	3	0	6	16
Grand Total	0	0	0	0	0	3	0	5	0	8	4	3	11	0	18	9	1	13	0	23	49
Approach %	0.0	0.0	0.0	0.0	0.0	37.5	0.0	62.5	0.0	0.0	22.2	16.7	61.1	0.0	0.0	39.1	4.3	56.5	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	6.1	0.0	10.2	0.0	16.3	8.2	6.1	22.4	0.0	36.7	18.4	2.0	26.5	0.0	46.9	
Exiting Leg Total	19					5					14					11					49
Buses	0	0	0	0	0	0	0	1	0	1	0	1	3	0	4	2	0	8	0	10	15
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	12.5	0.0	33.3	27.3	0.0	22.2	22.2	0.0	61.5	0.0	43.5	30.6
Exiting Leg Total	9					0					3					3					15
Single-Unit Trucks	0	0	0	0	0	0	0	2	0	2	1	1	6	0	8	7	1	5	0	13	23
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	25.0	25.0	33.3	54.5	0.0	44.4	77.8	100.0	38.5	0.0	56.5	46.9
Exiting Leg Total	6					2					9					6					23
Articulated Trucks	0	0	0	0	0	3	0	2	0	5	3	1	2	0	6	0	0	0	0	0	11
% Articulated	0.0	0.0	0.0	0.0	0.0	100.0	0.0	40.0	0.0	62.5	75.0	33.3	18.2	0.0	33.3	0.0	0.0	0.0	0.0	0.0	22.4
Exiting Leg Total	4					3					2					2					11

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	4	0	3	0	7	11
4:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2	1	0	4	0	5	9
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	2	0	3	2	0	1	0	3	7
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	3	0	4	1	0	1	0	2	7
Total Volume	0	0	0	0	0	1	0	3	0	4	4	0	9	0	13	8	0	9	0	17	34
% Approach Total	0.0	0.0	0.0	0.0	0.0	25.0	0.0	75.0	0.0	0.0	30.8	0.0	69.2	0.0	0.0	47.1	0.0	52.9	0.0	0.0	0.773
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.500	0.500	0.000	0.750	0.000	0.813	0.500	0.000	0.563	0.000	0.607	0.773
Buses	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	2	0	6	0	8	11
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	23.1	25.0	0.0	66.7	0.0	47.1	32.4
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	1	1	0	4	0	5	6	0	3	0	9	15
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	25.0	25.0	0.0	44.4	0.0	38.5	75.0	0.0	33.3	0.0	52.9	44.1
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	3	0	2	0	5	0	0	0	0	0	8
Articulated %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	66.7	0.0	75.0	75.0	0.0	22.2	0.0	38.5	0.0	0.0	0.0	0.0	0.0	23.5
Buses	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	2	0	6	0	8	11
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	1	1	0	4	0	5	6	0	3	0	9	15
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	3	0	2	0	5	0	0	0	0	0	8
Total Entering Leg	0	0	0	0	0	1	0	3	0	4	4	0	9	0	13	8	0	9	0	17	34
Buses	6					0					2					3					11
Single-Unit Trucks	3					1					7					4					15
Articulated Trucks	1					3					2					2					8
Total Exiting Leg	10					4					11					9					34

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	8	0	10	11
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	0	0	0	0	0	4
Grand Total	0	0	0	0	0	0	0	1	0	1	0	1	3	0	4	2	0	8	0	10	15
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	25.0	75.0	0.0		20.0	0.0	80.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	6.7	0.0	6.7	20.0	0.0	26.7	13.3	0.0	53.3	0.0	66.7	
Exiting Leg Total						9					0					3					15

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	8	0	10	11
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		20.0	0.0	80.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.500	0.000	0.667	0.000	0.625	0.688
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	8	0	10	11
Exiting Leg						9					0					2					11
Total						9					0					3					10

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2	
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	3	0	0	0	0	6	
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	1	0	2	0	3	5	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	
Total	0	0	0	0	0	0	0	2	0	2	1	0	5	0	6	5	0	2	0	7	15	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	2	3	
5:45 PM	0	0	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	0	0	0	0	0	1	1	1	0	2	2	1	3	0	6	8
Grand Total	0	0	0	0	0	0	0	2	0	2	1	1	6	0	8	7	1	5	0	13	23	
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		12.5	12.5	75.0	0.0		53.8	7.7	38.5	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	8.7	4.3	4.3	26.1	0.0	34.8	30.4	4.3	21.7	0.0	56.5		
Exiting Leg Total	6					2					9					6					23	

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

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	3	0	0	0	3	6
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	1	0	2	0	3	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total Volume	0	0	0	0	0	0	0	2	0	2	1	0	5	0	6	5	0	2	0	7	15
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		16.7	0.0	83.3	0.0		71.4	0.0	28.6	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.250	0.000	0.625	0.000	0.500	0.417	0.000	0.250	0.000	0.583	0.625
Entering Leg	0	0	0	0	0	0	0	2	0	2	1	0	5	0	6	5	0	2	0	7	15
Exiting Leg	2					1					7					5					15
Total	2					3					13					12					30

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total				
	from North					from East					from South					from West									
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total					
4:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1				
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1				
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2				
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	0	0	0	0	0	3				
Total	0	0	0	0	0	2	0	1	0	3	2	0	2	0	4	0	0	0	0	0	7				
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2				
5:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	4				
Grand Total	0	0	0	0	0	3	0	2	0	5	3	1	2	0	6	0	0	0	0	0	11				
Approach %	0.0	0.0	0.0	0.0		60.0	0.0	40.0	0.0		50.0	16.7	33.3	0.0		0.0	0.0	0.0	0.0						
Total %	0.0	0.0	0.0	0.0	0.0	27.3	0.0	18.2	0.0	45.5	27.3	9.1	18.2	0.0	54.5	0.0	0.0	0.0	0.0	0.0					
Exiting Leg Total						4						3						2						2	11

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

4:15 PM	Frontage Road N					Shore Drive					Norton Drive					Shore Drive					Total				
	from North					from East					from South					from West									
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total					
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1				
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2				
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	0	0	0	0	0	3				
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2				
Total Volume	0	0	0	0	0	1	0	2	0	3	3	0	2	0	5	0	0	0	0	0	8				
% Approach Total	0.0	0.0	0.0	0.0		33.3	0.0	66.7	0.0		60.0	0.0	40.0	0.0		0.0	0.0	0.0	0.0						
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.750	0.750	0.000	0.500	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.667				
Entering Leg	0	0	0	0	0	1	0	2	0	3	3	0	2	0	5	0	0	0	0	0	8				
Exiting Leg						1						3						2						2	8
Total						1						6						7						2	16

PDI File #: **249914 A**
 Location: **N: Frontage Road N S: Norton Drive**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total		
	from North								from East								from South								from West										
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total				
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0								0								1								0								1		

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

4:45 PM	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total		
	from North								from East								from South								from West										
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0								0								1								0								1		
Total	0								0								1								1								2		

PDI File #: 249914 A
 Location: N: Frontage Road N S: Norton Drive
 Location: E: Shore Drive W: Shore Drive
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000
 Count Date: Wednesday, March 27, 2024
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
Total	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grand Total	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
Approach %	0	0	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	100					
Total %	0	0	0	0	0	66.7	66.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.3	33.3				
Exiting Leg Total	2							0							0							1							3				

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

	Frontage Road N								Shore Drive								Norton Drive								Shore Drive								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
Total Volume	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
% Approach Total	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	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0					
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375			
Entering Leg	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
Exiting Leg	2							0							0							1							3				
Total	4							0							0							2							6				

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	1	1	0	2	3	4	0	7	8	11	1	20	29
7:15 AM	0	0	0	0	0	4	0	4	12	11	0	23	27
7:30 AM	2	4	0	6	3	6	0	9	13	7	0	20	35
7:45 AM	0	2	0	2	4	6	0	10	20	3	0	23	35
Total	3	7	0	10	10	20	0	30	53	32	1	86	126
8:00 AM	1	5	0	6	0	4	0	4	19	5	0	24	34
8:15 AM	2	0	0	2	1	1	0	2	13	7	0	20	24
8:30 AM	1	1	0	2	5	3	0	8	9	1	0	10	20
8:45 AM	2	0	0	2	2	4	0	6	5	4	1	10	18
Total	6	6	0	12	8	12	0	20	46	17	1	64	96
Grand Total	9	13	0	22	18	32	0	50	99	49	2	150	222
Approach %	40.9	59.1	0.0		36.0	64.0	0.0		66.0	32.7	1.3		
Total %	4.1	5.9	0.0	9.9	8.1	14.4	0.0	22.5	44.6	22.1	0.9	67.6	
Exiting Leg Total				67				112				43	222
Cars	4	10	0	14	13	27	0	40	94	45	1	140	194
% Cars	44.4	76.9	0.0	63.6	72.2	84.4	0.0	80.0	94.9	91.8	50.0	93.3	87.4
Exiting Leg Total				58				104				32	194
Heavy Vehicles	5	3	0	8	5	5	0	10	5	4	1	10	28
% Heavy Vehicles	55.6	23.1	0.0	36.4	27.8	15.6	0.0	20.0	5.1	8.2	50.0	6.7	12.6
Exiting Leg Total				9				8				11	28

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	4	0	4	12	11	0	23	27
7:30 AM	2	4	0	6	3	6	0	9	13	7	0	20	35
7:45 AM	0	2	0	2	4	6	0	10	20	3	0	23	35
8:00 AM	1	5	0	6	0	4	0	4	19	5	0	24	34
Total Volume	3	11	0	14	7	20	0	27	64	26	0	90	131
% Approach Total	21.4	78.6	0.0		25.9	74.1	0.0		71.1	28.9	0.0		
PHF	0.375	0.550	0.000	0.583	0.438	0.833	0.000	0.675	0.800	0.591	0.000	0.938	0.936
Cars	2	9	0	11	6	17	0	23	62	22	0	84	118
Cars %	66.7	81.8	0.0	78.6	85.7	85.0	0.0	85.2	96.9	84.6	0.0	93.3	90.1
Heavy Vehicles	1	2	0	3	1	3	0	4	2	4	0	6	13
Heavy Vehicles %	33.3	18.2	0.0	21.4	14.3	15.0	0.0	14.8	3.1	15.4	0.0	6.7	9.9
Cars Enter Leg	2	9	0	11	6	17	0	23	62	22	0	84	118
Heavy Enter Leg	1	2	0	3	1	3	0	4	2	4	0	6	13
Total Entering Leg	3	11	0	14	7	20	0	27	64	26	0	90	131
Cars Exiting Leg				28				71				19	118
Heavy Exiting Leg				5				4				4	13
Total Exiting Leg				33				75				23	131

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	1	1	0	2	3	3	0	6	8	11	1	20	28
7:15 AM	0	0	0	0	0	3	0	3	10	11	0	21	24
7:30 AM	2	3	0	5	3	6	0	9	13	6	0	19	33
7:45 AM	0	2	0	2	3	4	0	7	20	0	0	20	29
Total	3	6	0	9	9	16	0	25	51	28	1	80	114
8:00 AM	0	4	0	4	0	4	0	4	19	5	0	24	32
8:15 AM	0	0	0	0	0	1	0	1	11	7	0	18	19
8:30 AM	0	0	0	0	2	3	0	5	9	1	0	10	15
8:45 AM	1	0	0	1	2	3	0	5	4	4	0	8	14
Total	1	4	0	5	4	11	0	15	43	17	0	60	80
Grand Total	4	10	0	14	13	27	0	40	94	45	1	140	194
Approach %	28.6	71.4	0.0		32.5	67.5	0.0		67.1	32.1	0.7		
Total %	2.1	5.2	0.0	7.2	6.7	13.9	0.0	20.6	48.5	23.2	0.5	72.2	
Exiting Leg Total				58				104				32	194

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	3	0	3	10	11	0	21	24
7:30 AM	2	3	0	5	3	6	0	9	13	6	0	19	33
7:45 AM	0	2	0	2	3	4	0	7	20	0	0	20	29
8:00 AM	0	4	0	4	0	4	0	4	19	5	0	24	32
Total Volume	2	9	0	11	6	17	0	23	62	22	0	84	118
% Approach Total	18.2	81.8	0.0		26.1	73.9	0.0		73.8	26.2	0.0		
PHF	0.250	0.563	0.000	0.550	0.500	0.708	0.000	0.639	0.775	0.500	0.000	0.875	0.894
Entering Leg	2	9	0	11	6	17	0	23	62	22	0	84	118
Exiting Leg				28				71				19	118
Total				39				94				103	236

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
7:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	2
7:45 AM	0	0	0	0	1	2	0	3	0	3	0	3	6
Total	0	1	0	1	1	4	0	5	2	4	0	6	12
8:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	2
8:15 AM	2	0	0	2	1	0	0	1	2	0	0	2	5
8:30 AM	1	1	0	2	3	0	0	3	0	0	0	0	5
8:45 AM	1	0	0	1	0	1	0	1	1	0	1	2	4
Total	5	2	0	7	4	1	0	5	3	0	1	4	16
Grand Total	5	3	0	8	5	5	0	10	5	4	1	10	28
Approach %	62.5	37.5	0.0		50.0	50.0	0.0		50.0	40.0	10.0		
Total %	17.9	10.7	0.0	28.6	17.9	17.9	0.0	35.7	17.9	14.3	3.6	35.7	
Exiting Leg Total				9				8				11	28
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Single-Unit Trucks	5	3	0	8	5	3	0	8	4	4	1	9	25
% Single-Unit	100.0	100.0	0.0	100.0	100.0	60.0	0.0	80.0	80.0	100.0	100.0	90.0	89.3
Exiting Leg Total				9				7				9	25
Articulated Trucks	0	0	0	0	0	2	0	2	1	0	0	1	3
% Articulated	0.0	0.0	0.0	0.0	0.0	40.0	0.0	20.0	20.0	0.0	0.0	10.0	10.7
Exiting Leg Total				0				1				2	3

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:45 AM	0	0	0	0	1	2	0	3	0	3	0	3	6
8:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	2
8:15 AM	2	0	0	2	1	0	0	1	2	0	0	2	5
8:30 AM	1	1	0	2	3	0	0	3	0	0	0	0	5
Total Volume	4	2	0	6	5	2	0	7	2	3	0	5	18
% Approach Total	66.7	33.3	0.0		71.4	28.6	0.0		40.0	60.0	0.0		
PHF	0.500	0.500	0.000	0.750	0.417	0.250	0.000	0.583	0.250	0.250	0.000	0.417	0.750
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	4	2	0	6	5	1	0	6	2	3	0	5	17
Single-Unit %	100.0	100.0	0.0	100.0	100.0	50.0	0.0	85.7	100.0	100.0	0.0	100.0	94.4
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	50.0	0.0	14.3	0.0	0.0	0.0	0.0	5.6
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	4	2	0	6	5	1	0	6	2	3	0	5	17
Articulated Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Entering Leg	4	2	0	6	5	2	0	7	2	3	0	5	18
Buses				0				0				0	0
Single-Unit Trucks				8				4				5	17
Articulated Trucks				0				0				1	1
Total Exiting Leg				8				4				6	18

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	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	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0
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	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	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
Exiting Leg Total	0				0				0				0

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

7:00 AM	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	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	0	0	0	0	0	0	0	0
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 Volume	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
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
Entering Leg	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 #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	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	2	0	0	0	2
7:30 AM	0	1	0	1	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	0	0	1	1	0	2	0	3	0	3	5
Total	0	1	0	1	1	2	0	3	2	4	0	6	10
8:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	2
8:15 AM	2	0	0	2	1	0	0	1	2	0	0	2	5
8:30 AM	1	1	0	2	3	0	0	3	0	0	0	0	5
8:45 AM	1	0	0	1	0	1	0	1	0	0	1	1	3
Total	5	2	0	7	4	1	0	5	2	0	1	3	15
Grand Total	5	3	0	8	5	3	0	8	4	4	1	9	25
Approach %	62.5	37.5	0.0		62.5	37.5	0.0		44.4	44.4	11.1		
Total %	20.0	12.0	0.0	32.0	20.0	12.0	0.0	32.0	16.0	16.0	4.0	36.0	
Exiting Leg Total				9				7				9	25

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

7:45 AM	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:45 AM	0	0	0	0	1	1	0	2	0	3	0	3	5
8:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	2
8:15 AM	2	0	0	2	1	0	0	1	2	0	0	2	5
8:30 AM	1	1	0	2	3	0	0	3	0	0	0	0	5
Total Volume	4	2	0	6	5	1	0	6	2	3	0	5	17
% Approach Total	66.7	33.3	0.0		83.3	16.7	0.0		40.0	60.0	0.0		
PHF	0.500	0.500	0.000	0.750	0.417	0.250	0.000	0.500	0.250	0.250	0.000	0.417	0.850
Entering Leg	4	2	0	6	5	1	0	6	2	3	0	5	17
Exiting Leg				8				4				5	17
Total				14				10				10	34

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:15 AM	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
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	2
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	0	0	0	0	0	0	0	0
8:45 AM	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
Grand Total	0	0	0	0	0	2	0	2	1	0	0	1	3
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	66.7	0.0	66.7	33.3	0.0	0.0	33.3	
Exiting Leg Total				0				1				2	3

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

7:00 AM	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:15 AM	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
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	2
% 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	2	0	2	0	0	0	0	2
Exiting Leg				0				0				2	2
Total				0				2				2	4

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	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	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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	0						1						0						1

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

8:00 AM	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
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	1	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Exiting Leg	0						1						0						1
Total	0						1						1						2

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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

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

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	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	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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 #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	8	0	0	8	3	16	0	19	1	2	0	3	30
4:15 PM	3	1	0	4	4	6	0	10	4	1	1	6	20
4:30 PM	3	0	0	3	0	15	0	15	6	0	0	6	24
4:45 PM	4	0	0	4	4	26	0	30	5	0	0	5	39
Total	18	1	0	19	11	63	0	74	16	3	1	20	113
5:00 PM	9	2	0	11	6	15	0	21	6	2	0	8	40
5:15 PM	4	1	0	5	0	8	0	8	2	1	0	3	16
5:30 PM	3	3	0	6	0	7	0	7	2	2	1	5	18
5:45 PM	0	0	0	0	0	9	0	9	1	0	0	1	10
Total	16	6	0	22	6	39	0	45	11	5	1	17	84
Grand Total	34	7	0	41	17	102	0	119	27	8	2	37	197
Approach %	82.9	17.1	0.0		14.3	85.7	0.0		73.0	21.6	5.4		
Total %	17.3	3.6	0.0	20.8	8.6	51.8	0.0	60.4	13.7	4.1	1.0	18.8	
Exiting Leg Total				25				34				138	197
Cars	33	7	0	40	16	95	0	111	23	8	2	33	184
% Cars	97.1	100.0	0.0	97.6	94.1	93.1	0.0	93.3	85.2	100.0	100.0	89.2	93.4
Exiting Leg Total				24				30				130	184
Heavy Vehicles	1	0	0	1	1	7	0	8	4	0	0	4	13
% Heavy Vehicles	2.9	0.0	0.0	2.4	5.9	6.9	0.0	6.7	14.8	0.0	0.0	10.8	6.6
Exiting Leg Total				1				4				8	13

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

4:15 PM	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:15 PM	3	1	0	4	4	6	0	10	4	1	1	6	20
4:30 PM	3	0	0	3	0	15	0	15	6	0	0	6	24
4:45 PM	4	0	0	4	4	26	0	30	5	0	0	5	39
5:00 PM	9	2	0	11	6	15	0	21	6	2	0	8	40
Total Volume	19	3	0	22	14	62	0	76	21	3	1	25	123
% Approach Total	86.4	13.6	0.0		18.4	81.6	0.0		84.0	12.0	4.0		
PHF	0.528	0.375	0.000	0.500	0.583	0.596	0.000	0.633	0.875	0.375	0.250	0.781	0.769
Cars	19	3	0	22	13	58	0	71	17	3	1	21	114
Cars %	100.0	100.0	0.0	100.0	92.9	93.5	0.0	93.4	81.0	100.0	100.0	84.0	92.7
Heavy Vehicles	0	0	0	0	1	4	0	5	4	0	0	4	9
Heavy Vehicles %	0.0	0.0	0.0	0.0	7.1	6.5	0.0	6.6	19.0	0.0	0.0	16.0	7.3
Cars Enter Leg	19	3	0	22	13	58	0	71	17	3	1	21	114
Heavy Enter Leg	0	0	0	0	1	4	0	5	4	0	0	4	9
Total Entering Leg	19	3	0	22	14	62	0	76	21	3	1	25	123
Cars Exiting Leg				16				20				78	114
Heavy Exiting Leg				1				4				4	9
Total Exiting Leg				17				24				82	123

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	8	0	0	8	3	14	0	17	1	2	0	3	28
4:15 PM	3	1	0	4	3	5	0	8	2	1	1	4	16
4:30 PM	3	0	0	3	0	14	0	14	6	0	0	6	23
4:45 PM	4	0	0	4	4	25	0	29	4	0	0	4	37
Total	18	1	0	19	10	58	0	68	13	3	1	17	104
5:00 PM	9	2	0	11	6	14	0	20	5	2	0	7	38
5:15 PM	4	1	0	5	0	7	0	7	2	1	0	3	15
5:30 PM	2	3	0	5	0	7	0	7	2	2	1	5	17
5:45 PM	0	0	0	0	0	9	0	9	1	0	0	1	10
Total	15	6	0	21	6	37	0	43	10	5	1	16	80
Grand Total	33	7	0	40	16	95	0	111	23	8	2	33	184
Approach %	82.5	17.5	0.0		14.4	85.6	0.0		69.7	24.2	6.1		
Total %	17.9	3.8	0.0	21.7	8.7	51.6	0.0	60.3	12.5	4.3	1.1	17.9	
Exiting Leg Total				24				30				130	184

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:15 PM	3	1	0	4	3	5	0	8	2	1	1	4	16
4:30 PM	3	0	0	3	0	14	0	14	6	0	0	6	23
4:45 PM	4	0	0	4	4	25	0	29	4	0	0	4	37
5:00 PM	9	2	0	11	6	14	0	20	5	2	0	7	38
Total Volume	19	3	0	22	13	58	0	71	17	3	1	21	114
% Approach Total	86.4	13.6	0.0		18.3	81.7	0.0		81.0	14.3	4.8		
PHF	0.528	0.375	0.000	0.500	0.542	0.580	0.000	0.612	0.708	0.375	0.250	0.750	0.750
Entering Leg	19	3	0	22	13	58	0	71	17	3	1	21	114
Exiting Leg				16				20				78	114
Total				38				91				99	228

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	1	1	0	2	2	0	0	2	4
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	1	5	0	6	3	0	0	3	9
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	2	0	2	1	0	0	1	4
Grand Total	1	0	0	1	1	7	0	8	4	0	0	4	13
Approach %	100.0	0.0	0.0		12.5	87.5	0.0		100.0	0.0	0.0		
Total %	7.7	0.0	0.0	7.7	7.7	53.8	0.0	61.5	30.8	0.0	0.0	30.8	
Exiting Leg Total				1				4				8	13
Buses	1	0	0	1	0	0	0	0	0	0	0	0	1
% Buses	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7
Exiting Leg Total				0				0				1	1
Single-Unit Trucks	0	0	0	0	0	2	0	2	1	0	0	1	3
% Single-Unit	0.0	0.0	0.0	0.0	0.0	28.6	0.0	25.0	25.0	0.0	0.0	25.0	23.1
Exiting Leg Total				0				1				2	3
Articulated Trucks	0	0	0	0	1	5	0	6	3	0	0	3	9
% Articulated	0.0	0.0	0.0	0.0	100.0	71.4	0.0	75.0	75.0	0.0	0.0	75.0	69.2
Exiting Leg Total				1				3				5	9

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

4:00 PM	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	1	1	0	2	2	0	0	2	4
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Volume	0	0	0	0	1	5	0	6	3	0	0	3	9
% Approach Total	0.0	0.0	0.0		16.7	83.3	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.625	0.000	0.750	0.375	0.000	0.000	0.375	0.563
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	2	0	2	1	0	0	1	3
Single-Unit %	0.0	0.0	0.0	0.0	0.0	40.0	0.0	33.3	33.3	0.0	0.0	33.3	33.3
Articulated Trucks	0	0	0	0	1	3	0	4	2	0	0	2	6
Articulated %	0.0	0.0	0.0	0.0	100.0	60.0	0.0	66.7	66.7	0.0	0.0	66.7	66.7
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	0	2	0	2	1	0	0	1	3
Articulated Trucks	0	0	0	0	1	3	0	4	2	0	0	2	6
Total Entering Leg	0	0	0	0	1	5	0	6	3	0	0	3	9
Buses				0				0				0	0
Single-Unit Trucks				0				1				2	3
Articulated Trucks				1				2				3	6
Total Exiting Leg				1				3				5	9

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	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	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0
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	1	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	1	0	0	0	0	0	0	0	0	1
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				1	1

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:45 PM	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	1
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	1	0	0	1	0	0	0	0	0	0	0	0	1
Exiting Leg				0				0				1	1
Total				1				0				1	2

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
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	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	0	0	0	0	0	0	0	0
5:45 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	2	0	2	1	0	0	1	3
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	66.7	0.0	66.7	33.3	0.0	0.0	33.3	
Exiting Leg Total				0				1				2	3

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	1	0	0	1	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	0.500	0.000	0.500	0.250	0.000	0.000	0.250	0.750
Entering Leg	0	0	0	0	0	2	0	2	1	0	0	1	3
Exiting Leg				0				1				2	3
Total				0				3				3	6

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	1	1	0	2	1	0	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	1	3	0	4	2	0	0	2	6
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
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	0	0	0	0	0
5:45 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	0	0	0	0	1	5	0	6	3	0	0	3	9
Approach %	0.0	0.0	0.0		16.7	83.3	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	11.1	55.6	0.0	66.7	33.3	0.0	0.0	33.3	
Exiting Leg Total				1				3				5	9

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

	Stores Street				Stores Street				Shore Drive				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:15 PM	0	0	0	0	1	1	0	2	1	0	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Volume	0	0	0	0	1	3	0	4	3	0	0	3	7
% Approach Total	0.0	0.0	0.0		25.0	75.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.750	0.000	0.500	0.750	0.000	0.000	0.750	0.583
Entering Leg	0	0	0	0	1	3	0	4	3	0	0	3	7
Exiting Leg				1				3				3	7
Total				1				7				6	14

PDI File #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**



**PRECISION
D A T A
INDUSTRIES, LLC**

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

Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**

Class: **Bicycles (on Roadway and Crosswalks)**

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0

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

4:00 PM	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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 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	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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 #: **249914 B**
 Location: **N: Stores Street S: Stores Street**
 Location: **W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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

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

	Stores Street						Stores Street						Shore Drive						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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 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	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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 #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	2	0	0	2	6	0	3	0	9	0	2	0	0	2	13
7:15 AM	0	0	0	0	0	0	5	1	0	6	8	0	4	0	12	0	3	0	0	3	21
7:30 AM	0	0	0	0	0	0	3	3	0	6	9	0	0	0	9	0	3	0	0	3	18
7:45 AM	0	0	0	0	0	0	0	2	0	2	7	0	0	0	7	0	0	0	0	0	9
Total	0	0	0	0	0	0	10	6	0	16	30	0	7	0	37	0	8	0	0	8	61
8:00 AM	0	0	0	0	0	0	1	5	0	6	4	0	0	0	4	0	1	0	0	1	11
8:15 AM	0	0	0	0	0	0	0	2	0	2	7	0	0	0	7	0	1	0	0	1	10
8:30 AM	0	0	0	0	0	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	7
8:45 AM	0	0	0	0	0	0	0	2	0	2	6	0	0	0	6	0	0	0	0	0	8
Total	0	0	0	0	0	0	1	11	0	12	22	0	0	0	22	0	2	0	0	2	36
Grand Total	0	0	0	0	0	0	11	17	0	28	52	0	7	0	59	0	10	0	0	10	97
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	39.3	60.7	0.0	0.0	88.1	0.0	11.9	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	11.3	17.5	0.0	28.9	53.6	0.0	7.2	0.0	60.8	0.0	10.3	0.0	0.0	10.3	
Exiting Leg Total	0					62					17					18					97
Cars	0	0	0	0	0	0	4	9	0	13	44	0	7	0	51	0	2	0	0	2	66
% Cars	0.0	0.0	0.0	0.0	0.0	0.0	36.4	52.9	0.0	46.4	84.6	0.0	100.0	0.0	86.4	0.0	20.0	0.0	0.0	20.0	68.0
Exiting Leg Total	0					46					9					11					66
Heavy Vehicles	0	0	0	0	0	0	7	8	0	15	8	0	0	0	8	0	8	0	0	8	31
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	63.6	47.1	0.0	53.6	15.4	0.0	0.0	0.0	13.6	0.0	80.0	0.0	0.0	80.0	32.0
Exiting Leg Total	0					16					8					7					31

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

7:00 AM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	2	0	0	2	6	0	3	0	9	0	2	0	0	2	13
7:15 AM	0	0	0	0	0	0	5	1	0	6	8	0	4	0	12	0	3	0	0	3	21
7:30 AM	0	0	0	0	0	0	3	3	0	6	9	0	0	0	9	0	3	0	0	3	18
7:45 AM	0	0	0	0	0	0	0	2	0	2	7	0	0	0	7	0	0	0	0	0	9
Total Volume	0	0	0	0	0	0	10	6	0	16	30	0	7	0	37	0	8	0	0	8	61
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	62.5	37.5	0.0	0.0	81.1	0.0	18.9	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.667	0.833	0.000	0.438	0.000	0.771	0.000	0.667	0.000	0.000	0.667	0.726
Cars	0	0	0	0	0	0	4	6	0	10	26	0	7	0	33	0	2	0	0	2	45
Cars %	0.0	0.0	0.0	0.0	0.0	0.0	40.0	100.0	0.0	62.5	86.7	0.0	100.0	0.0	89.2	0.0	25.0	0.0	0.0	25.0	73.8
Heavy Vehicles	0	0	0	0	0	0	6	0	0	6	4	0	0	0	4	0	6	0	0	6	16
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	37.5	13.3	0.0	0.0	0.0	10.8	0.0	75.0	0.0	0.0	75.0	26.2
Cars Enter Leg	0	0	0	0	0	0	4	6	0	10	26	0	7	0	33	0	2	0	0	2	45
Heavy Enter Leg	0	0	0	0	0	0	6	0	0	6	4	0	0	0	4	0	6	0	0	6	16
Total Entering Leg	0	0	0	0	0	0	10	6	0	16	30	0	7	0	37	0	8	0	0	8	61
Cars Exiting Leg	0					28					6					11					45
Heavy Exiting Leg	0					10					0					6					16
Total Exiting Leg	0					38					6					17					61

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	6	0	3	0	9	0	0	0	0	0	10
7:15 AM	0	0	0	0	0	0	1	1	0	2	8	0	4	0	12	0	0	0	0	0	14
7:30 AM	0	0	0	0	0	0	2	3	0	5	8	0	0	0	8	0	2	0	0	2	15
7:45 AM	0	0	0	0	0	0	0	2	0	2	4	0	0	0	4	0	0	0	0	0	6
Total	0	0	0	0	0	0	4	6	0	10	26	0	7	0	33	0	2	0	0	2	45
8:00 AM	0	0	0	0	0	0	0	3	0	3	3	0	0	0	3	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	6
Total	0	0	0	0	0	0	0	3	0	3	18	0	0	0	18	0	0	0	0	0	21
Grand Total	0	0	0	0	0	0	4	9	0	13	44	0	7	0	51	0	2	0	0	2	66
Approach %	0.0	0.0	0.0	0.0		0.0	30.8	69.2	0.0		86.3	0.0	13.7	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	6.1	13.6	0.0	19.7	66.7	0.0	10.6	0.0	77.3	0.0	3.0	0.0	0.0	3.0	
Exiting Leg Total	0					46					9					11					66

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	6	0	3	0	9	0	0	0	0	0	10
7:15 AM	0	0	0	0	0	0	1	1	0	2	8	0	4	0	12	0	0	0	0	0	14
7:30 AM	0	0	0	0	0	0	2	3	0	5	8	0	0	0	8	0	2	0	0	2	15
7:45 AM	0	0	0	0	0	0	0	2	0	2	4	0	0	0	4	0	0	0	0	0	6
Total Volume	0	0	0	0	0	0	4	6	0	10	26	0	7	0	33	0	2	0	0	2	45
% Approach Total	0.0	0.0	0.0	0.0		0.0	40.0	60.0	0.0		78.8	0.0	21.2	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.500	0.813	0.000	0.438	0.000	0.688	0.000	0.250	0.000	0.000	0.250	0.750
Entering Leg	0	0	0	0	0	0	4	6	0	10	26	0	7	0	33	0	2	0	0	2	45
Exiting Leg	0					28					6					11					45
Total	0					38					39					13					90

PDI File #: 249914 C
 Location: N: Stores Street (closed) S: Stores Street
 Location: E: New Bond Street W: Parking Lot
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000
 Count Date: Wednesday, March 27, 2024
 Start Time: 7:00 AM
 End Time: 9:00 AM



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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
7:30 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	6	0	0	6	4	0	0	0	4	0	6	0	0	6	16
8:00 AM	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	1	0	0	1	5
8:15 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3
8:30 AM	0	0	0	0	0	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	1	8	0	9	4	0	0	0	4	0	2	0	0	2	15
Grand Total	0	0	0	0	0	0	7	8	0	15	8	0	0	0	8	0	8	0	0	8	31
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	46.7	53.3	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	48.4
Total %	0.0	0.0	0.0	0.0	0.0	0.0	22.6	25.8	0.0	48.4	25.8	0.0	0.0	0.0	25.8	0.0	25.8	0.0	0.0	25.8	
Exiting Leg Total	0					16					8					7					31
Buses	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	15
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	48.4
Exiting Leg Total	0					8					0					7					15
Single-Unit Trucks	0	0	0	0	0	0	0	8	0	8	8	0	0	0	8	0	0	0	0	0	16
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	53.3	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	51.6
Exiting Leg Total	0					8					8					0					16
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
7:30 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	1	0	0	1	5
Total Volume	0	0	0	0	0	0	6	2	0	8	5	0	0	0	5	0	5	0	0	5	18
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.643
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.250	0.000	0.500	0.417	0.000	0.000	0.000	0.417	0.000	0.417	0.000	0.000	0.417	
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	61.1
Single-Unit Trucks	0	0	0	0	0	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	7
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	25.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	38.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
Single-Unit Trucks	0	0	0	0	0	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	0	6	2	0	8	5	0	0	0	5	0	5	0	0	5	18
Buses	0					5					0					6					11
Single-Unit Trucks	0					5					2					0					7
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	0					10					2					6					18

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	12
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	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	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Grand Total	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	15
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0	53.3	0.0	0.0	53.3	
Exiting Leg Total	0					8					0					7					15

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	12
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.429
Entering Leg	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	12
Exiting Leg	0					6					0					6					12
Total	0					12					0					12					24

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	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	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	8	0	8	4	0	0	0	4	0	0	0	0	0	12
Grand Total	0	0	0	0	0	0	0	8	0	8	8	0	0	0	8	0	0	0	0	0	16
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					8					8					0					16

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	6	0	6	7	0	0	0	7	0	0	0	0	0	13
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.583	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.650
Entering Leg	0	0	0	0	0	0	0	6	0	6	7	0	0	0	7	0	0	0	0	0	13
Exiting Leg	0					7					6					0					13
Total	0					13					13					0					26

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	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	0	0
7:30 AM	0	0	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	0	0
Total	0	0	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	0	0
8:15 AM	0	0	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	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

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

7:00 AM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	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	0	0
7:30 AM	0	0	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	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: 249914 C
 Location: N: Stores Street (closed) S: Stores Street
 Location: E: New Bond Street W: Parking Lot
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000
 Count Date: Wednesday, March 27, 2024
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Bicycles (on Roadway and Crosswalks)

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot							
	from North								from East								from South								from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
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			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0				
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0				
Exiting Leg Total	0							0							0							0										

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

7:00 AM	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot							
	from North								from East								from South								from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Exiting Leg	0							0							0							0										
Total	0							0							0							0										

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total					
	from North								from East								from South								from West													
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total							
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Approach %	0	0	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	100	0		0	0	0	0	0	0	0	
Total %	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	0	50	0	50	0	0	0	0	0	0	50	
Exiting Leg Total	1							0							0							1							2									

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

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total					
	from North								from East								from South								from West													
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total							
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
% Approach Total	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	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250								
Entering Leg	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Exiting Leg	1							0							0							1							2									
Total	2							0							0							2							4									

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	5	0	6	5	0	0	0	5	3	1	0	0	4	15
4:15 PM	0	0	0	0	0	0	2	2	0	4	5	0	0	0	5	2	3	0	0	5	14
4:30 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	3	0	3	4	0	0	0	4	1	0	0	0	1	8
Total	0	0	0	0	0	0	3	13	0	16	14	0	0	0	14	6	4	0	0	10	40
5:00 PM	0	0	0	0	0	0	1	9	0	10	6	0	2	0	8	2	3	0	0	5	23
5:15 PM	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	1	1	0	0	2	7
5:30 PM	0	0	0	0	0	0	1	4	0	5	1	0	0	0	1	2	0	0	0	2	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	17	0	19	9	0	2	0	11	5	4	0	0	9	39
Grand Total	0	0	0	0	0	0	5	30	0	35	23	0	2	0	25	11	8	0	0	19	79
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	14.3	85.7	0.0	0.0	92.0	0.0	8.0	0.0	0.0	57.9	42.1	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	6.3	38.0	0.0	44.3	29.1	0.0	2.5	0.0	31.6	13.9	10.1	0.0	0.0	24.1	
Exiting Leg Total	0					31					41					7					79
Cars	0	0	0	0	0	0	0	30	0	30	22	0	2	0	24	10	4	0	0	14	68
% Cars	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	85.7	95.7	0.0	100.0	0.0	96.0	90.9	50.0	0.0	0.0	73.7	86.1
Exiting Leg Total	0					26					40					2					68
Heavy Vehicles	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	1	4	0	0	5	11
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	14.3	4.3	0.0	0.0	0.0	4.0	9.1	50.0	0.0	0.0	26.3	13.9
Exiting Leg Total	0					5					1					5					11

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

4:15 PM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	2	2	0	4	5	0	0	0	5	2	3	0	0	5	14
4:30 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	3	0	3	4	0	0	0	4	1	0	0	0	1	8
5:00 PM	0	0	0	0	0	0	1	9	0	10	6	0	2	0	8	2	3	0	0	5	23
Total Volume	0	0	0	0	0	0	3	17	0	20	15	0	2	0	17	5	6	0	0	11	48
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	15.0	85.0	0.0	0.0	88.2	0.0	11.8	0.0	0.0	45.5	54.5	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.472	0.000	0.500	0.625	0.000	0.250	0.000	0.531	0.625	0.500	0.000	0.000	0.550	0.522
Cars	0	0	0	0	0	0	0	17	0	17	14	0	2	0	16	5	3	0	0	8	41
Cars %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	85.0	93.3	0.0	100.0	0.0	94.1	100.0	50.0	0.0	0.0	72.7	85.4
Heavy Vehicles	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	15.0	6.7	0.0	0.0	0.0	5.9	0.0	50.0	0.0	0.0	27.3	14.6
Cars Enter Leg	0	0	0	0	0	0	0	17	0	17	14	0	2	0	16	5	3	0	0	8	41
Heavy Enter Leg	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
Total Entering Leg	0	0	0	0	0	0	3	17	0	20	15	0	2	0	17	5	6	0	0	11	48
Cars Exiting Leg	0					17					22					2					41
Heavy Exiting Leg	0					4					0					3					7
Total Exiting Leg	0					21					22					5					48

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	5	0	5	5	0	0	0	5	3	0	0	0	3	13
4:15 PM	0	0	0	0	0	0	0	2	0	2	4	0	0	0	4	2	1	0	0	3	9
4:30 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	3	0	3	4	0	0	0	4	1	0	0	0	1	8
Total	0	0	0	0	0	0	0	13	0	13	13	0	0	0	13	6	1	0	0	7	33
5:00 PM	0	0	0	0	0	0	0	9	0	9	6	0	2	0	8	2	2	0	0	4	21
5:15 PM	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	1	1	0	0	2	7
5:30 PM	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	1	0	0	0	1	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	17	0	17	9	0	2	0	11	4	3	0	0	7	35
Grand Total	0	0	0	0	0	0	0	30	0	30	22	0	2	0	24	10	4	0	0	14	68
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		91.7	0.0	8.3	0.0		71.4	28.6	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.1	0.0	44.1	32.4	0.0	2.9	0.0	35.3	14.7	5.9	0.0	0.0	20.6	
Exiting Leg Total	0					26					40					2					68

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	0	0	0	0	0	0	0	3	0	3	4	0	0	0	4	1	0	0	0	1	8
5:00 PM	0	0	0	0	0	0	0	9	0	9	6	0	2	0	8	2	2	0	0	4	21
5:15 PM	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	1	1	0	0	2	7
5:30 PM	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	1	0	0	0	1	6
Total Volume	0	0	0	0	0	0	0	20	0	20	12	0	2	0	14	5	3	0	0	8	42
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		85.7	0.0	14.3	0.0		62.5	37.5	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.556	0.000	0.556	0.500	0.000	0.250	0.000	0.438	0.625	0.375	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	20	0	20	12	0	2	0	14	5	3	0	0	8	42
Exiting Leg	0					15					25					2					42
Total	0					35					39					10					84

PDI File #: 249914 C
 Location: N: Stores Street (closed) S: Stores Street
 Location: E: New Bond Street W: Parking Lot
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: 112968000
 Count Date: Wednesday, March 27, 2024
 Start Time: 4:00 PM
 End Time: 6:00 PM



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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
Grand Total	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	1	4	0	0	5	11
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	20.0	80.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	45.5	0.0	0.0	45.5	9.1	0.0	0.0	0.0	9.1	9.1	36.4	0.0	0.0	45.5	45.5
Exiting Leg Total	0					5					1					5					11
Buses	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	1	4	0	0	5	10
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	90.9
Exiting Leg Total	0					4					1					5					10
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	9.1
Exiting Leg Total	0					1					0					0					1

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

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.250	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.375	0.350
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	85.7
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	14.3
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Entering Leg	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
Buses	0					3					0					3					6
Single-Unit Trucks	0					0					0					0					0
Articulated Trucks	0					1					0					0					1
Total Exiting Leg	0					4					0					3					7

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	1	4	0	0	5	10
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	10.0	40.0	0.0	0.0	50.0	
Exiting Leg Total	0					4					1					5					10

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

4:00 PM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.375
Entering Leg	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Exiting Leg	0					3					0					3					6
Total	0					6					0					6					12

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

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

4:00 PM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Approach %	0.0	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		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					1					0					0					1

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

4:00 PM	Stores Street (closed)					New Bond Street					Stores Street					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Approach Total	0.0	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		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Exiting Leg	0					1					0					0					1
Total	0					1					1					0					2

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Exiting Leg Total	0								0								0								0								0

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

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Exiting Leg	0								0								0								0								0
Total	0								0								0								0								0

PDI File #: **249914 C**
 Location: **N: Stores Street (closed) S: Stores Street**
 Location: **E: New Bond Street W: Parking Lot**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4		
4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
Total	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	8		
5:00 PM	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6		
5:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	7		
Grand Total	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	15		
Approach %	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	100				
Total %	0	0	0	0	0	53.3	53.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.7	46.7			
Exiting Leg Total	8							0							0							7							15				

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

	Stores Street (closed)								New Bond Street								Stores Street								Parking Lot								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
5:00 PM	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6		
Total Volume	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	10		
% Approach Total	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	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.417	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.417	0.417			
Entering Leg	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	10		
Exiting Leg	5							0							0							5							10				
Total	10							0							0							10							20				

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Frontage Road S				Shore Drive				Shore Drive				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	22	9	0	31	0	50	0	50	175	0	0	175	256
7:15 AM	34	12	0	46	0	78	1	79	198	0	0	198	323
7:30 AM	37	8	0	45	0	105	0	105	248	0	0	248	398
7:45 AM	56	19	0	75	0	134	0	134	257	0	0	257	466
Total	149	48	0	197	0	367	1	368	878	0	0	878	1443
8:00 AM	38	10	0	48	0	80	0	80	253	0	0	253	381
8:15 AM	43	14	0	57	0	86	0	86	211	0	0	211	354
8:30 AM	54	9	0	63	0	61	0	61	209	0	0	209	333
8:45 AM	30	9	0	39	0	82	0	82	199	0	0	199	320
Total	165	42	0	207	0	309	0	309	872	0	0	872	1388
Grand Total	314	90	0	404	0	676	1	677	1750	0	0	1750	2831
Approach %	77.7	22.3	0.0		0.0	99.9	0.1		100.0	0.0	0.0		
Total %	11.1	3.2	0.0	14.3	0.0	23.9	0.0	23.9	61.8	0.0	0.0	61.8	
Exiting Leg Total				0				1841				990	2831
Cars	303	88	0	391	0	660	1	661	1728	0	0	1728	2780
% Cars	96.5	97.8	0.0	96.8	0.0	97.6	100.0	97.6	98.7	0.0	0.0	98.7	98.2
Exiting Leg Total				0				1817				963	2780
Heavy Vehicles	11	2	0	13	0	16	0	16	22	0	0	22	51
% Heavy Vehicles	3.5	2.2	0.0	3.2	0.0	2.4	0.0	2.4	1.3	0.0	0.0	1.3	1.8
Exiting Leg Total				0				24				27	51

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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	37	8	0	45	0	105	0	105	248	0	0	248	398
7:45 AM	56	19	0	75	0	134	0	134	257	0	0	257	466
8:00 AM	38	10	0	48	0	80	0	80	253	0	0	253	381
8:15 AM	43	14	0	57	0	86	0	86	211	0	0	211	354
Total Volume	174	51	0	225	0	405	0	405	969	0	0	969	1599
% Approach Total	77.3	22.7	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.777	0.671	0.000	0.750	0.000	0.756	0.000	0.756	0.943	0.000	0.000	0.943	0.858
Cars	167	49	0	216	0	394	0	394	960	0	0	960	1570
Cars %	96.0	96.1	0.0	96.0	0.0	97.3	0.0	97.3	99.1	0.0	0.0	99.1	98.2
Heavy Vehicles	7	2	0	9	0	11	0	11	9	0	0	9	29
Heavy Vehicles %	4.0	3.9	0.0	4.0	0.0	2.7	0.0	2.7	0.9	0.0	0.0	0.9	1.8
Cars Enter Leg	167	49	0	216	0	394	0	394	960	0	0	960	1570
Heavy Enter Leg	7	2	0	9	0	11	0	11	9	0	0	9	29
Total Entering Leg	174	51	0	225	0	405	0	405	969	0	0	969	1599
Cars Exiting Leg				0				1009				561	1570
Heavy Exiting Leg				0				11				18	29
Total Exiting Leg				0				1020				579	1599

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Frontage Road S				Shore Drive				Shore Drive				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	22	9	0	31	0	49	0	49	173	0	0	173	253
7:15 AM	33	12	0	45	0	77	1	78	197	0	0	197	320
7:30 AM	35	8	0	43	0	103	0	103	248	0	0	248	394
7:45 AM	55	18	0	73	0	131	0	131	254	0	0	254	458
Total	145	47	0	192	0	360	1	361	872	0	0	872	1425
8:00 AM	37	10	0	47	0	77	0	77	248	0	0	248	372
8:15 AM	40	13	0	53	0	83	0	83	210	0	0	210	346
8:30 AM	53	9	0	62	0	61	0	61	207	0	0	207	330
8:45 AM	28	9	0	37	0	79	0	79	191	0	0	191	307
Total	158	41	0	199	0	300	0	300	856	0	0	856	1355
Grand Total	303	88	0	391	0	660	1	661	1728	0	0	1728	2780
Approach %	77.5	22.5	0.0		0.0	99.8	0.2		100.0	0.0	0.0		
Total %	10.9	3.2	0.0	14.1	0.0	23.7	0.0	23.8	62.2	0.0	0.0	62.2	
Exiting Leg Total				0				1817				963	2780

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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	35	8	0	43	0	103	0	103	248	0	0	248	394
7:45 AM	55	18	0	73	0	131	0	131	254	0	0	254	458
8:00 AM	37	10	0	47	0	77	0	77	248	0	0	248	372
8:15 AM	40	13	0	53	0	83	0	83	210	0	0	210	346
Total Volume	167	49	0	216	0	394	0	394	960	0	0	960	1570
% Approach Total	77.3	22.7	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.759	0.681	0.000	0.740	0.000	0.752	0.000	0.752	0.945	0.000	0.000	0.945	0.857
Entering Leg	167	49	0	216	0	394	0	394	960	0	0	960	1570
Exiting Leg				0				1009				561	1570
Total				216				1403				1521	3140

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Frontage Road S				Shore Drive				Shore Drive				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	1	0	1	2	0	0	2	3
7:15 AM	1	0	0	1	0	1	0	1	1	0	0	1	3
7:30 AM	2	0	0	2	0	2	0	2	0	0	0	0	4
7:45 AM	1	1	0	2	0	3	0	3	3	0	0	3	8
Total	4	1	0	5	0	7	0	7	6	0	0	6	18
8:00 AM	1	0	0	1	0	3	0	3	5	0	0	5	9
8:15 AM	3	1	0	4	0	3	0	3	1	0	0	1	8
8:30 AM	1	0	0	1	0	0	0	0	2	0	0	2	3
8:45 AM	2	0	0	2	0	3	0	3	8	0	0	8	13
Total	7	1	0	8	0	9	0	9	16	0	0	16	33
Grand Total	11	2	0	13	0	16	0	16	22	0	0	22	51
Approach %	84.6	15.4	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	21.6	3.9	0.0	25.5	0.0	31.4	0.0	31.4	43.1	0.0	0.0	43.1	
Exiting Leg Total				0				24				27	51
Buses	10	0	0	10	0	4	0	4	16	0	0	16	30
% Buses	90.9	0.0	0.0	76.9	0.0	25.0	0.0	25.0	72.7	0.0	0.0	72.7	58.8
Exiting Leg Total				0				16				14	30
Single-Unit Trucks	1	2	0	3	0	12	0	12	5	0	0	5	20
% Single-Unit	9.1	100.0	0.0	23.1	0.0	75.0	0.0	75.0	22.7	0.0	0.0	22.7	39.2
Exiting Leg Total				0				7				13	20
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	4.5	2.0
Exiting Leg Total				0				1				0	1

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

	Frontage Road S				Shore Drive				Shore Drive				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	3	0	3	5	0	0	5	9
8:15 AM	3	1	0	4	0	3	0	3	1	0	0	1	8
8:30 AM	1	0	0	1	0	0	0	0	2	0	0	2	3
8:45 AM	2	0	0	2	0	3	0	3	8	0	0	8	13
Total Volume	7	1	0	8	0	9	0	9	16	0	0	16	33
% Approach Total	87.5	12.5	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.583	0.250	0.000	0.500	0.000	0.750	0.000	0.750	0.500	0.000	0.000	0.500	0.635
Buses	7	0	0	7	0	3	0	3	10	0	0	10	20
Buses %	100.0	0.0	0.0	87.5	0.0	33.3	0.0	33.3	62.5	0.0	0.0	62.5	60.6
Single-Unit Trucks	0	1	0	1	0	6	0	6	5	0	0	5	12
Single-Unit %	0.0	100.0	0.0	12.5	0.0	66.7	0.0	66.7	31.3	0.0	0.0	31.3	36.4
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	6.3	3.0
Buses	7	0	0	7	0	3	0	3	10	0	0	10	20
Single-Unit Trucks	0	1	0	1	0	6	0	6	5	0	0	5	12
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Entering Leg	7	1	0	8	0	9	0	9	16	0	0	16	33
Buses				0				10				10	20
Single-Unit Trucks				0				6				6	12
Articulated Trucks				0				1				0	1
Total Exiting Leg				0				17				16	33

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Frontage Road S				Shore Drive				Shore Drive				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	2	0	0	2	2
7:15 AM	1	0	0	1	0	0	0	0	0	1	0	0	1	2
7:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	1	0	1	1	3	0	0	3	4
Total	3	0	0	3	0	1	0	1	1	6	0	0	6	10
8:00 AM	1	0	0	1	0	1	0	1	1	4	0	0	4	6
8:15 AM	3	0	0	3	0	1	0	1	1	0	0	0	0	4
8:30 AM	1	0	0	1	0	0	0	0	0	1	0	0	1	2
8:45 AM	2	0	0	2	0	1	0	1	1	5	0	0	5	8
Total	7	0	0	7	0	3	0	3	3	10	0	0	10	20
Grand Total	10	0	0	10	0	4	0	4	4	16	0	0	16	30
Approach %	100.0	0.0	0.0		0.0	100.0	0.0			100.0	0.0	0.0		
Total %	33.3	0.0	0.0	33.3	0.0	13.3	0.0	13.3		53.3	0.0	0.0	53.3	
Exiting Leg Total				0				16					14	30

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

8:00 AM	Frontage Road S				Shore Drive				Shore Drive				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	1	0	1	1	4	0	0	4	6
8:15 AM	3	0	0	3	0	1	0	1	1	0	0	0	0	4
8:30 AM	1	0	0	1	0	0	0	0	0	1	0	0	1	2
8:45 AM	2	0	0	2	0	1	0	1	1	5	0	0	5	8
Total Volume	7	0	0	7	0	3	0	3	3	10	0	0	10	20
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0			100.0	0.0	0.0		
PHF	0.583	0.000	0.000	0.583	0.000	0.750	0.000	0.750		0.500	0.000	0.000	0.500	0.625
Entering Leg	7	0	0	7	0	3	0	3	3	10	0	0	10	20
Exiting Leg				0				10					10	20
Total				7				13					20	40

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Frontage Road S				Shore Drive				Shore Drive				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	1	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
7:45 AM	1	1	0	2	0	2	0	2	0	0	0	0	4
Total	1	1	0	2	0	6	0	6	0	0	0	0	8
8:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
8:15 AM	0	1	0	1	0	2	0	2	1	0	0	1	4
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	2	0	2	3	0	0	3	5
Total	0	1	0	1	0	6	0	6	5	0	0	5	12
Grand Total	1	2	0	3	0	12	0	12	5	0	0	5	20
Approach %	33.3	66.7	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	5.0	10.0	0.0	15.0	0.0	60.0	0.0	60.0	25.0	0.0	0.0	25.0	
Exiting Leg Total				0				7				13	20

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

7:30 AM	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
7:45 AM	1	1	0	2	0	2	0	2	0	0	0	0	4
8:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
8:15 AM	0	1	0	1	0	2	0	2	1	0	0	1	4
Total Volume	1	2	0	3	0	8	0	8	1	0	0	1	12
% Approach Total	33.3	66.7	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.500	0.000	0.375	0.000	1.000	0.000	1.000	0.250	0.000	0.000	0.250	0.750
Entering Leg	1	2	0	3	0	8	0	8	1	0	0	1	12
Exiting Leg				0				3				9	12
Total				3				11				10	24

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Frontage Road S				Shore Drive				Shore Drive				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	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0
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
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total				0				1				0	1

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

7:15 AM	Frontage Road S				Shore Drive				Shore Drive				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	0	0	0	0	0	0	0	0
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
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	1	0	0	1	1
Exiting Leg				0				1				0	1
Total				0				1				1	2

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Frontage Road S						Shore Drive						Shore Drive						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	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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0

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

7:00 AM	Frontage Road S						Shore Drive						Shore Drive						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	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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 #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Frontage Road S						Shore Drive						Shore Drive						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	1	1	0	0	0	0	0	0	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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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
Grand Total	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0	0	0	0	100		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	100		0	0	0	0	0		0	0	0	0	0		
Exiting Leg Total	1						0						0						1

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

7:00 AM	Frontage Road S						Shore Drive						Shore Drive						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	1	1	0	0	0	0	0	0	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 Volume	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	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	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg	1						0						0						1
Total	2						0						0						2

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	53	6	0	59	0	163	1	164	135	0	0	135	358
4:15 PM	66	11	0	77	0	172	0	172	131	0	0	131	380
4:30 PM	76	8	0	84	0	179	0	179	143	0	0	143	406
4:45 PM	62	2	0	64	0	171	0	171	145	0	0	145	380
Total	257	27	0	284	0	685	1	686	554	0	0	554	1524
5:00 PM	57	5	0	62	0	153	0	153	134	0	0	134	349
5:15 PM	50	4	0	54	0	167	0	167	125	0	0	125	346
5:30 PM	43	0	0	43	0	138	3	141	160	0	0	160	344
5:45 PM	48	6	0	54	0	132	2	134	122	0	0	122	310
Total	198	15	0	213	0	590	5	595	541	0	0	541	1349
Grand Total	455	42	0	497	0	1275	6	1281	1095	0	0	1095	2873
Approach %	91.5	8.5	0.0		0.0	99.5	0.5		100.0	0.0	0.0		
Total %	15.8	1.5	0.0	17.3	0.0	44.4	0.2	44.6	38.1	0.0	0.0	38.1	
Exiting Leg Total	0				1143				1730				2873
Cars	452	41	0	493	0	1266	6	1272	1075	0	0	1075	2840
% Cars	99.3	97.6	0.0	99.2	0.0	99.3	100.0	99.3	98.2	0.0	0.0	98.2	98.9
Exiting Leg Total	0				1122				1718				2840
Heavy Vehicles	3	1	0	4	0	9	0	9	20	0	0	20	33
% Heavy Vehicles	0.7	2.4	0.0	0.8	0.0	0.7	0.0	0.7	1.8	0.0	0.0	1.8	1.1
Exiting Leg Total	0				21				12				33

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

4:00 PM	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	53	6	0	59	0	163	1	164	135	0	0	135	358
4:15 PM	66	11	0	77	0	172	0	172	131	0	0	131	380
4:30 PM	76	8	0	84	0	179	0	179	143	0	0	143	406
4:45 PM	62	2	0	64	0	171	0	171	145	0	0	145	380
Total Volume	257	27	0	284	0	685	1	686	554	0	0	554	1524
% Approach Total	90.5	9.5	0.0		0.0	99.9	0.1		100.0	0.0	0.0		
PHF	0.845	0.614	0.000	0.845	0.000	0.957	0.250	0.958	0.955	0.000	0.000	0.955	0.938
Cars	254	26	0	280	0	679	1	680	538	0	0	538	1498
Cars %	98.8	96.3	0.0	98.6	0.0	99.1	100.0	99.1	97.1	0.0	0.0	97.1	98.3
Heavy Vehicles	3	1	0	4	0	6	0	6	16	0	0	16	26
Heavy Vehicles %	1.2	3.7	0.0	1.4	0.0	0.9	0.0	0.9	2.9	0.0	0.0	2.9	1.7
Cars Enter Leg	254	26	0	280	0	679	1	680	538	0	0	538	1498
Heavy Enter Leg	3	1	0	4	0	6	0	6	16	0	0	16	26
Total Entering Leg	257	27	0	284	0	685	1	686	554	0	0	554	1524
Cars Exiting Leg	0				565				933				1498
Heavy Exiting Leg	0				17				9				26
Total Exiting Leg	0				582				942				1524

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	52	6	0	58	0	162	1	163	133	0	0	133	354
4:15 PM	66	10	0	76	0	171	0	171	126	0	0	126	373
4:30 PM	74	8	0	82	0	177	0	177	138	0	0	138	397
4:45 PM	62	2	0	64	0	169	0	169	141	0	0	141	374
Total	254	26	0	280	0	679	1	680	538	0	0	538	1498
5:00 PM	57	5	0	62	0	150	0	150	133	0	0	133	345
5:15 PM	50	4	0	54	0	167	0	167	124	0	0	124	345
5:30 PM	43	0	0	43	0	138	3	141	159	0	0	159	343
5:45 PM	48	6	0	54	0	132	2	134	121	0	0	121	309
Total	198	15	0	213	0	587	5	592	537	0	0	537	1342
Grand Total	452	41	0	493	0	1266	6	1272	1075	0	0	1075	2840
Approach %	91.7	8.3	0.0		0.0	99.5	0.5		100.0	0.0	0.0		
Total %	15.9	1.4	0.0	17.4	0.0	44.6	0.2	44.8	37.9	0.0	0.0	37.9	
Exiting Leg Total				0				1122				1718	2840

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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	52	6	0	58	0	162	1	163	133	0	0	133	354
4:15 PM	66	10	0	76	0	171	0	171	126	0	0	126	373
4:30 PM	74	8	0	82	0	177	0	177	138	0	0	138	397
4:45 PM	62	2	0	64	0	169	0	169	141	0	0	141	374
Total Volume	254	26	0	280	0	679	1	680	538	0	0	538	1498
% Approach Total	90.7	9.3	0.0		0.0	99.9	0.1		100.0	0.0	0.0		
PHF	0.858	0.650	0.000	0.854	0.000	0.959	0.250	0.960	0.954	0.000	0.000	0.954	0.943
Entering Leg	254	26	0	280	0	679	1	680	538	0	0	538	1498
Exiting Leg				0				565				933	1498
Total				280				1245				1471	2996

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
4:15 PM	0	1	0	1	0	1	0	1	5	0	0	5	7
4:30 PM	2	0	0	2	0	2	0	2	5	0	0	5	9
4:45 PM	0	0	0	0	0	2	0	2	4	0	0	4	6
Total	3	1	0	4	0	6	0	6	16	0	0	16	26
5:00 PM	0	0	0	0	0	3	0	3	1	0	0	1	4
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	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	3	0	3	4	0	0	4	7
Grand Total	3	1	0	4	0	9	0	9	20	0	0	20	33
Approach %	75.0	25.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	9.1	3.0	0.0	12.1	0.0	27.3	0.0	27.3	60.6	0.0	0.0	60.6	
Exiting Leg Total				0				21				12	33
Buses	2	0	0	2	0	1	0	1	9	0	0	9	12
% Buses	66.7	0.0	0.0	50.0	0.0	11.1	0.0	11.1	45.0	0.0	0.0	45.0	36.4
Exiting Leg Total				0				9				3	12
Single-Unit Trucks	1	1	0	2	0	7	0	7	10	0	0	10	19
% Single-Unit	33.3	100.0	0.0	50.0	0.0	77.8	0.0	77.8	50.0	0.0	0.0	50.0	57.6
Exiting Leg Total				0				11				8	19
Articulated Trucks	0	0	0	0	0	1	0	1	1	0	0	1	2
% Articulated	0.0	0.0	0.0	0.0	0.0	11.1	0.0	11.1	5.0	0.0	0.0	5.0	6.1
Exiting Leg Total				0				1				1	2

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

4:00 PM	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
4:15 PM	0	1	0	1	0	1	0	1	5	0	0	5	7
4:30 PM	2	0	0	2	0	2	0	2	5	0	0	5	9
4:45 PM	0	0	0	0	0	2	0	2	4	0	0	4	6
Total Volume	3	1	0	4	0	6	0	6	16	0	0	16	26
% Approach Total	75.0	25.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.375	0.250	0.000	0.500	0.000	0.750	0.000	0.750	0.800	0.000	0.000	0.800	0.722
Buses	2	0	0	2	0	1	0	1	9	0	0	9	12
Buses %	66.7	0.0	0.0	50.0	0.0	16.7	0.0	16.7	56.3	0.0	0.0	56.3	46.2
Single-Unit Trucks	1	1	0	2	0	4	0	4	6	0	0	6	12
Single-Unit %	33.3	100.0	0.0	50.0	0.0	66.7	0.0	66.7	37.5	0.0	0.0	37.5	46.2
Articulated Trucks	0	0	0	0	0	1	0	1	1	0	0	1	2
Articulated %	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	6.3	0.0	0.0	6.3	7.7
Buses	2	0	0	2	0	1	0	1	9	0	0	9	12
Single-Unit Trucks	1	1	0	2	0	4	0	4	6	0	0	6	12
Articulated Trucks	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Entering Leg	3	1	0	4	0	6	0	6	16	0	0	16	26
Buses				0				9				3	12
Single-Unit Trucks				0				7				5	12
Articulated Trucks				0				1				1	2
Total Exiting Leg				0				17				9	26

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	2	0	0	2	3
4:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
4:30 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	2	0	0	2	0	1	0	1	9	0	0	9	12
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	0	0	0	0	0	0	0	0
5:45 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	2	0	0	2	0	1	0	1	9	0	0	9	12
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	16.7	0.0	0.0	16.7	0.0	8.3	0.0	8.3	75.0	0.0	0.0	75.0	
Exiting Leg Total				0				9				3	12

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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	2	0	0	2	3
4:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
4:30 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	2	0	0	2	0	1	0	1	9	0	0	9	12
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.750	0.000	0.000	0.750	0.750
Entering Leg	2	0	0	2	0	1	0	1	9	0	0	9	12
Exiting Leg				0				9				3	12
Total				2				10				12	24

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
4:30 PM	1	0	0	1	0	1	0	1	3	0	0	3	5
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	1	1	0	2	0	4	0	4	6	0	0	6	12
5:00 PM	0	0	0	0	0	3	0	3	1	0	0	1	4
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	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	3	0	3	4	0	0	4	7
Grand Total	1	1	0	2	0	7	0	7	10	0	0	10	19
Approach %	50.0	50.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	5.3	5.3	0.0	10.5	0.0	36.8	0.0	36.8	52.6	0.0	0.0	52.6	
Exiting Leg Total				0				11				8	19

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

	Frontage Road S				Shore Drive				Shore Drive				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	0	1	0	1	0	1	0	1	2	0	0	2	4
4:30 PM	1	0	0	1	0	1	0	1	3	0	0	3	5
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:00 PM	0	0	0	0	0	3	0	3	1	0	0	1	4
Total Volume	1	1	0	2	0	6	0	6	7	0	0	7	15
% Approach Total	50.0	50.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.250	0.000	0.500	0.000	0.500	0.000	0.500	0.583	0.000	0.000	0.583	0.750
Entering Leg	1	1	0	2	0	6	0	6	7	0	0	7	15
Exiting Leg				0				8				7	15
Total				2				14				14	30

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	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	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
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	0	0	0	0	0	0	0	0
5:45 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	1	0	1	1	0	0	1	2
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	50.0	0.0	50.0	50.0	0.0	0.0	50.0	
Exiting Leg Total				0				1				1	2

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

	Frontage Road S				Shore Drive				Shore Drive				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	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	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Volume	0	0	0	0	0	1	0	1	1	0	0	1	2
% 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	0.250	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	1	0	1	1	0	0	1	2
Exiting Leg				0				1				1	2
Total				0				2				2	4

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Frontage Road S						Shore Drive						Shore Drive						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	
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	1	0	0	0	0	0	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	0	0	0	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Exiting Leg Total	0						1						0						1

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

4:45 PM	Frontage Road S						Shore Drive						Shore Drive						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	
4:45 PM	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	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Exiting Leg	0						1						0						1
Total	0						1						1						2

PDI File #: **249914 D**
 Location: **N: Frontage Road S**
 Location: **E: Shore Drive W: Shore Drive**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **112968000**
 Count Date: **Wednesday, March 27, 2024**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Frontage Road S						Shore Drive						Shore Drive						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		
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	1	0	1	1	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
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	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	0	
Exiting Leg Total	0						0						0						1	1

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

4:00 PM	Frontage Road S						Shore Drive						Shore Drive						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		
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	1	0	1	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
Exiting Leg	0						0						0						1	1
Total	0						0						0						2	2

APPENDIX B

Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Worcester COUNT DATE : March 26, 2024

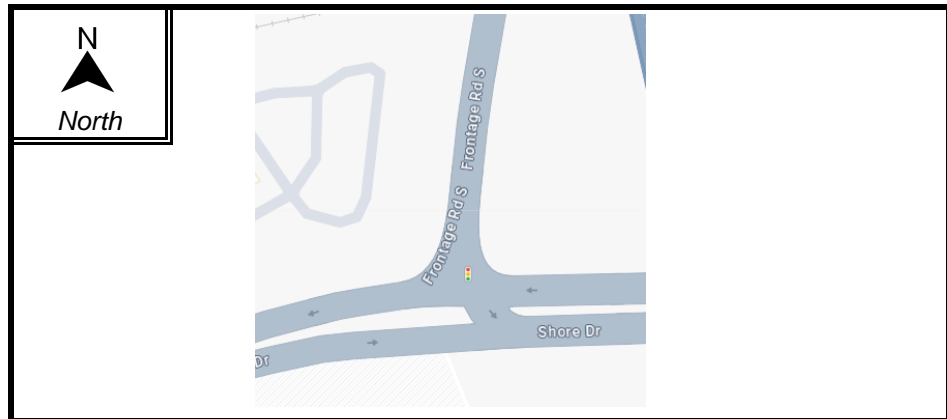
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Frontage Road South

MINOR STREET(S) : Shore Drive

**INTERSECTION
 DIAGRAM
 (Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM): 4:00 - 5:00 PM	284	554	685			1,523

" K " FACTOR :

0.059	INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :	21,672
-------	--	--------

TOTAL # OF CRASHES :

3	# OF YEARS :	5	AVERAGE # OF CRASHES PER YEAR (A) :	0.6
---	--------------	---	---------------------------------------	-----

CRASH RATE CALCULATION :

0.08

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

Comments : MassDOT District 3 Signalized Crash Rate = 0.89 | Statewide = 0.78

Project Title & Date : Project Europa - Traffic Impact, Access, and Parking Study

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Worcester COUNT DATE : March 26, 2024

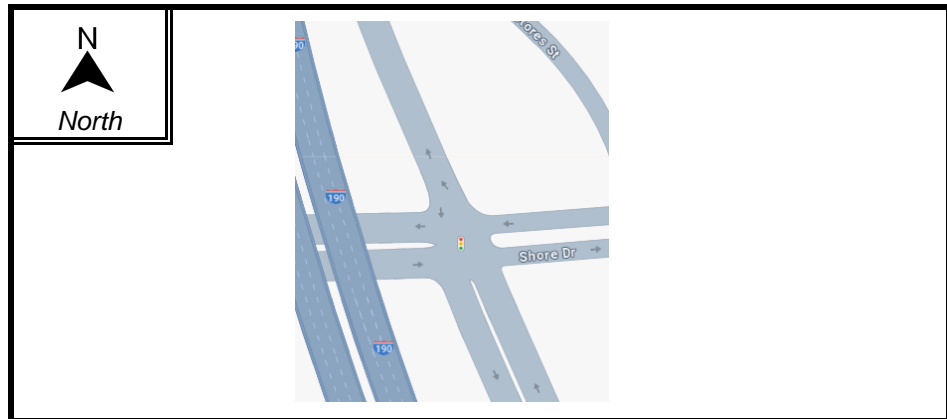
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Frontage Road North

MINOR STREET(S) : Shore Drive

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM): 4:15 - 5:15 PM	805	570	85			1,460

" K " FACTOR :

0.07	INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :	20,775
------	---	--------

TOTAL # OF CRASHES :

3	# OF YEARS :	5	AVERAGE # OF CRASHES PER YEAR (A) :	0.6
---	-----------------	---	--	-----

CRASH RATE CALCULATION :

0.08

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

Comments : MassDOT District 3 Signalized Crash Rate = 0.89 | Statewide = 0.78

Project Title & Date : Project Europa - Traffic Impact, Access, and Parking Study

APPENDIX C

Growth Rate Calculations

Project Name:
Project Number:

Project Europa TIAPS
 112968000

Data Source:
Local District:

MassDOT
 District 3

The table below summarizes traffic count data from traffic count maps. The locations chosen are in the general vicinity of the project site. Four years worth of data was evaluated and the growth averaged over the four year period.

Historical Daily Traffic Volumes						
Location	Count Station	2019	2020	2021	2022	Average Annual Growth
Shore Drive East of Holden St	3162	13,021	10,742	12,031	11,455	-3.4%
West Boylston St North of Assumption Ave	250918	13,040	10,758	12,049	12,037	-1.9%
Ararat Street East of I-190	237237	6,536	5,392	6,039	6,033	-1.9%
Average Annual Growth Rate						-2.4%
Proposed Annual Growth Rate						1.00%

Current Year **2024**
 Project Year **2031**
 Synchro Growth Factor **1.07**
 Growth Years **7**

A growth rate of 1% is proposed for the site.

Population Growth Rate			
Municipality	2010	2020	Average Annual Growth
Worcester	181,045	206,518	1.4%
West Boylston	7,669	7,877	0.3%
Holden	17,346	19,905	1.5%
Average Annual Growth Rate			1.1%

Current Year **2024**
 Project Year **2031**
 Synchro Growth Factor **1.07**
 Growth Years **7**

APPENDIX D

Volume Development

APPENDIX E

Capacity Analysis

2024 Existing AM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study
 1: Shore Drive & South Frontage Road Existing AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	969	405	0	51	174
Future Volume (veh/h)	0	969	405	0	51	174
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1885	1856	0	1841	1841
Adj Flow Rate, veh/h	0	1031	533	0	68	232
Peak Hour Factor	0.94	0.94	0.76	0.76	0.75	0.75
Percent Heavy Veh, %	0	1	3	0	4	4
Cap, veh/h	0	1420	1398	0	1529	701
Arrive On Green	0.00	0.40	0.40	0.00	0.45	0.45
Sat Flow, veh/h	0	3770	3711	0	3401	1560
Grp Volume(v), veh/h	0	1031	533	0	68	232
Grp Sat Flow(s),veh/h/ln	0	1791	1763	0	1700	1560
Q Serve(g_s), s	0.0	15.9	7.0	0.0	0.7	6.3
Cycle Q Clear(g_c), s	0.0	15.9	7.0	0.0	0.7	6.3
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1420	1398	0	1529	701
V/C Ratio(X)	0.00	0.73	0.38	0.00	0.04	0.33
Avail Cap(c_a), veh/h	0	2204	2170	0	1529	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.86	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.6	13.9	0.0	10.0	11.6
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.1	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.9	4.6	0.0	0.4	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	17.3	14.1	0.0	10.1	12.8
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1031	533		300	
Approach Delay, s/veh		17.3	14.1		12.2	
Approach LOS		B	B		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				30.8	34.2	30.8
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				17.9	8.3	9.0
Green Ext Time (p_c), s				7.9	0.5	3.9
Intersection Summary						
HCM 7th Control Delay, s/veh			15.6			
HCM 7th LOS			B			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	36	769	14	2	4	424	53	51	0	0	0
Future Volume (vph)	210	36	769	14	2	4	424	53	51	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2954	1421	0	2808	0	1694	1801	1446	0	0	0
Flt Permitted		0.844			0.737		0.950					
Satd. Flow (perm)	0	2533	1421	0	2142	0	1694	1801	1446	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		418	418		5				60			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	0%	14%	0%	50%	3%	2%	8%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	685	418	0	24	0	499	62	60	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		19.9	19.9		19.9		40.1	40.1	40.1			
Actuated g/C Ratio		0.28	0.28		0.28		0.57	0.57	0.57			
v/c Ratio		0.67	0.59		0.03		0.51	0.06	0.07			
Control Delay (s/veh)		10.3	5.3		11.4		14.6	10.2	4.0			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

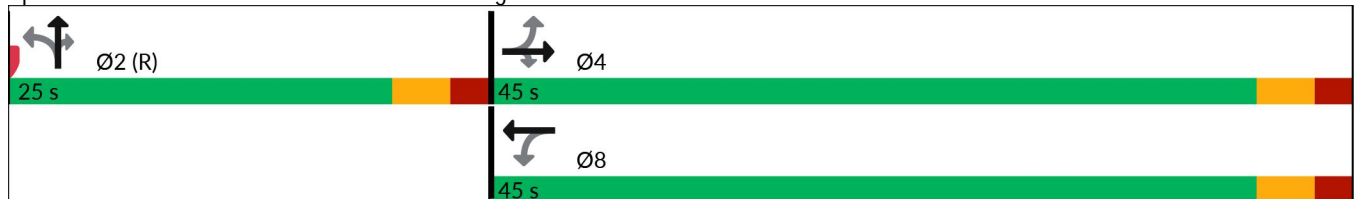


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		10.3	5.3		11.4		14.6	10.2	4.0			
LOS		B	A		B		B	B	A			
Approach Delay (s/veh)		8.5			11.4			13.2				
Approach LOS		A			B			B				
Queue Length 50th (ft)		50	0		3		117	11	0			
Queue Length 95th (ft)		74	48		7		266	36	18			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)									350			
Base Capacity (vph)		1626	991		1226		970	1031	853			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.42	0.42		0.02		0.51	0.06	0.07			

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay (s/veh):	10.2
Intersection LOS:	B
Intersection Capacity Utilization	50.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study
 3: Shore Drive & Stores Street Existing AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	64	20	7	11	3
Future Volume (Veh/h)	26	64	20	7	11	3
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.68	0.68	0.58	0.58
Hourly flow rate (vph)	28	68	29	10	19	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		100	90	124	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		100	90	124	0
tC, single (s)	4.2		7.2	6.6	6.7	6.5
tC, 2 stage (s)						
tF (s)	2.3		3.6	4.1	4.2	3.6
p0 queue free %	98		96	99	97	100
cM capacity (veh/h)	1542		819	764	724	1001
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	96	29	10	24		
Volume Left	28	29	0	0		
Volume Right	68	0	0	5		
cSH	1542	819	764	915		
Volume to Capacity	0.02	0.04	0.01	0.03		
Queue Length 95th (ft)	1	3	1	2		
Control Delay (s/veh)	2.3	9.6	9.8	9.8		
Lane LOS	A	A	A	A		
Approach Delay (s/veh)	2.3	9.6		9.8		
Approach LOS		A		A		
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization			19.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	8	0	6	10	0	7	0	30	0	0	0
Future Vol, veh/h	0	8	0	6	10	0	7	0	30	0	0	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.77	0.77	0.77	0.92	0.92	0.92
Heavy Vehicles, %	0	75	0	0	60	0	0	0	13	2	2	2
Mvmt Flow	0	12	0	9	15	0	9	0	39	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.4	7.2	6.7	0
HCM LOS	A	A	A	-



















Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	38%	0%
Vol Thru, %	0%	100%	63%	100%
Vol Right, %	81%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	8	16	0
LT Vol	7	0	6	0
Through Vol	0	8	10	0
RT Vol	30	0	0	0
Lane Flow Rate	48	12	24	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.047	0.018	0.027	0
Departure Headway (Hd)	3.513	5.279	4.069	4.033
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1018	680	882	0
Service Time	1.539	3.292	2.083	2.062
HCM Lane V/C Ratio	0.047	0.018	0.027	0
HCM Control Delay, s/veh	6.7	8.4	7.2	7.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.1	0.1	0.1	0

2024 Existing PM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study
 1: Shore Drive & South Frontage Road Existing PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	554	685	0	27	257
Future Volume (veh/h)	0	554	685	0	27	257
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1856	1885	0	1841	1885
Adj Flow Rate, veh/h	0	577	714	0	32	302
Peak Hour Factor	0.96	0.96	0.96	0.96	0.85	0.85
Percent Heavy Veh, %	0	3	1	0	4	1
Cap, veh/h	0	1023	1040	0	1891	888
Arrive On Green	0.00	0.29	0.29	0.00	0.56	0.56
Sat Flow, veh/h	0	3711	3770	0	3401	1598
Grp Volume(v), veh/h	0	577	714	0	32	302
Grp Sat Flow(s),veh/h/ln	0	1763	1791	0	1700	1598
Q Serve(g_s), s	0.0	9.0	11.5	0.0	0.3	6.7
Cycle Q Clear(g_c), s	0.0	9.0	11.5	0.0	0.3	6.7
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1023	1040	0	1891	888
V/C Ratio(X)	0.00	0.56	0.69	0.00	0.02	0.34
Avail Cap(c_a), veh/h	0	2170	2204	0	1891	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.81	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.6	20.4	0.0	6.5	7.9
Incr Delay (d2), s/veh	0.0	0.5	0.7	0.0	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.3	7.7	0.0	0.1	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	20.1	21.1	0.0	6.5	8.9
LnGrp LOS		C	C		A	A
Approach Vol, veh/h		577	714		334	
Approach Delay, s/veh		20.1	21.1		8.7	
Approach LOS		C	C		A	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				23.9	41.1	23.9
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				11.0	8.7	13.5
Green Ext Time (p_c), s				4.3	0.6	5.4
Intersection Summary						
HCM 7th Control Delay, s/veh			18.2			
HCM 7th LOS			B			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	3	398	56	18	11	676	107	22	0	0	0
Future Volume (vph)	169	3	398	56	18	11	676	107	22	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2907	1393	0	3282	0	1728	1837	1323	0	0	0
Flt Permitted		0.782			0.651		0.950					
Satd. Flow (perm)	0	2324	1393	0	2207	0	1728	1837	1323	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208	207		15				31			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.96	0.96	0.96	0.73	0.73	0.73	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	2%	5%	0%	9%	1%	0%	18%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	387	207	0	117	0	697	110	23	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		13.3	13.3		13.3		46.7	46.7	46.7			
Actuated g/C Ratio		0.19	0.19		0.19		0.67	0.67	0.67			
v/c Ratio		0.63	0.47		0.27		0.60	0.08	0.02			
Control Delay (s/veh)		15.7	7.3		20.7		10.8	5.6	2.3			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

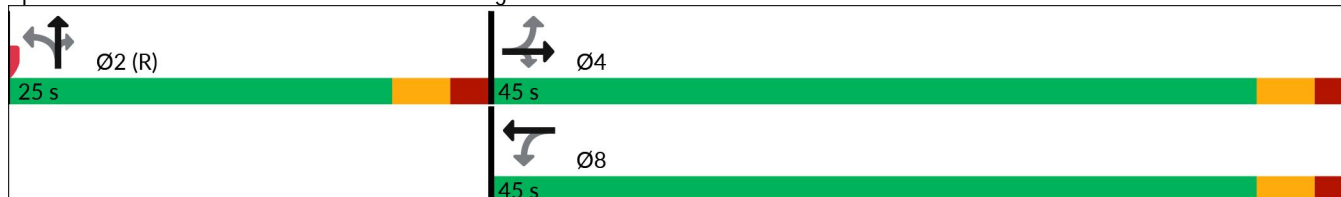


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		15.7	7.3		20.7		10.8	5.6	2.3			
LOS		B	A		C		B	A	A			
Approach Delay (s/veh)		12.9			20.8			9.9				
Approach LOS		B			C			A				
Queue Length 50th (ft)		38	0		20		133	13	0			
Queue Length 95th (ft)		68	47		27		336	42	7			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)										350		
Base Capacity (vph)		1417	884		1267		1152	1225	892			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.27	0.23		0.09		0.61	0.09	0.03			












Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay (s/veh):	11.9
Intersection LOS:	B
Intersection Capacity Utilization	66.0%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study
 3: Shore Drive & Stores Street Existing PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	21	62	14	3	19
Future Volume (Veh/h)	4	21	62	14	3	19
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.63	0.63	0.50	0.50
Hourly flow rate (vph)	5	27	98	22	6	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	7					
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		27	24	37	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		27	24	37	0
tC, single (s)	4.1		7.2	6.6	6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2		3.6	4.1	4.0	3.3
p0 queue free %	100		89	97	99	97
cM capacity (veh/h)	1636		930	858	857	1091
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	32	98	22	44		
Volume Left	5	98	0	0		
Volume Right	27	0	0	38		
cSH	1636	930	858	1263		
Volume to Capacity	0.00	0.11	0.03	0.03		
Queue Length 95th (ft)	0	9	2	3		
Control Delay (s/veh)	1.1	9.3	9.3	8.5		
Lane LOS	A	A	A	A		
Approach Delay (s/veh)	1.1	9.3		8.5		
Approach LOS		A		A		
Intersection Summary						
Average Delay			7.8			
Intersection Capacity Utilization			20.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	6	5	17	3	0	2	0	15	0	0	0
Future Vol, veh/h	0	6	5	17	3	0	2	0	15	0	0	0
Peak Hour Factor	0.55	0.55	0.55	0.50	0.50	0.50	0.53	0.53	0.53	0.92	0.92	0.92
Heavy Vehicles, %	0	50	0	0	100	0	0	0	7	2	2	2
Mvmt Flow	0	11	9	34	6	0	4	0	28	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.7	7.4	6.6	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	0%	85%	0%
Vol Thru, %	0%	55%	15%	100%
Vol Right, %	88%	45%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	11	20	0
LT Vol	2	0	17	0
Through Vol	0	6	3	0
RT Vol	15	5	0	0
Lane Flow Rate	32	20	40	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.031	0.025	0.046	0
Departure Headway (Hd)	3.499	4.565	4.143	4.064
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1020	787	868	0
Service Time	1.531	2.578	2.152	2.099
HCM Lane V/C Ratio	0.031	0.025	0.046	0
HCM Control Delay, s/veh	6.6	7.7	7.4	7.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.1	0.1	0.1	0

2031 No-Build AM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study

1: Shore Drive & South Frontage Road

No Build AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1039	434	0	55	187
Future Volume (veh/h)	0	1039	434	0	55	187
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1885	1856	0	1841	1841
Adj Flow Rate, veh/h	0	1105	571	0	73	249
Peak Hour Factor	0.94	0.94	0.76	0.76	0.75	0.75
Percent Heavy Veh, %	0	1	3	0	4	4
Cap, veh/h	0	1503	1479	0	1451	665
Arrive On Green	0.00	0.42	0.42	0.00	0.43	0.43
Sat Flow, veh/h	0	3770	3711	0	3401	1560
Grp Volume(v), veh/h	0	1105	571	0	73	249
Grp Sat Flow(s),veh/h/ln	0	1791	1763	0	1700	1560
Q Serve(g_s), s	0.0	16.8	7.3	0.0	0.8	7.1
Cycle Q Clear(g_c), s	0.0	16.8	7.3	0.0	0.8	7.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1503	1479	0	1451	665
V/C Ratio(X)	0.00	0.74	0.39	0.00	0.05	0.37
Avail Cap(c_a), veh/h	0	2204	2170	0	1451	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.85	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.8	13.1	0.0	10.9	12.7
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.1	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.3	4.7	0.0	0.5	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	16.6	13.2	0.0	11.0	14.3
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1105	571		322	
Approach Delay, s/veh		16.6	13.2		13.6	
Approach LOS		B	B		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				32.3	32.7	32.3
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				18.8	9.1	9.3
Green Ext Time (p_c), s				8.4	0.5	4.3
Intersection Summary						
HCM 7th Control Delay, s/veh			15.1			
HCM 7th LOS			B			

Lanes, Volumes, Timings

Project Europa Traffic Impact Access & Parking Study

2: Norton Drive/North Frontage Road & Shore Drive

No Build AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	39	824	15	2	4	455	57	55	0	0	0
Future Volume (vph)	225	39	824	15	2	4	455	57	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2957	1421	0	2814	0	1694	1801	1446	0	0	0
Flt Permitted		0.842			0.734		0.950					
Satd. Flow (perm)	0	2530	1421	0	2140	0	1694	1801	1446	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		448	448		5				65			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	0%	14%	0%	50%	3%	2%	8%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	735	448	0	25	0	535	67	65	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		21.4	21.4		21.4		38.6	38.6	38.6			
Actuated g/C Ratio		0.31	0.31		0.31		0.55	0.55	0.55			
v/c Ratio		0.67	0.60		0.03		0.57	0.06	0.07			
Control Delay (s/veh)		9.8	5.0		10.4		17.6	11.3	4.3			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

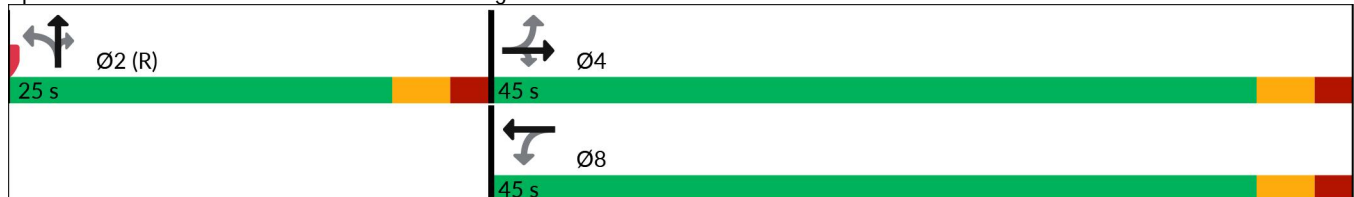


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		9.8	5.0		10.4		17.6	11.3	4.3			
LOS		A	A		B		B	B	A			
Approach Delay (s/veh)		8.1			10.5			15.7				
Approach LOS		A			B			B				
Queue Length 50th (ft)		52	0		3		138	12	0			
Queue Length 95th (ft)		73	46		7		#349	41	20			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)									350			
Base Capacity (vph)		1637	1004		1225		933	992	826			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.45	0.45		0.02		0.57	0.07	0.08			

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay (s/veh):	10.8
Intersection LOS:	B
Intersection Capacity Utilization	53.5%
ICU Level of Service	A
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study
 3: Shore Drive & Stores Street No Build AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	↑
Traffic Volume (veh/h)	28	69	21	8	12	3
Future Volume (Veh/h)	28	69	21	8	12	3
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.68	0.68	0.58	0.58
Hourly flow rate (vph)	30	73	31	12	21	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		107	97	133	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		107	97	133	0
tC, single (s)	4.2		7.2	6.6	6.7	6.5
tC, 2 stage (s)						
tF (s)	2.3		3.6	4.1	4.2	3.6
p0 queue free %	98		96	98	97	100
cM capacity (veh/h)	1542		807	756	715	1001
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	103	31	12	26		
Volume Left	30	31	0	0		
Volume Right	73	0	0	5		
cSH	1542	807	756	885		
Volume to Capacity	0.02	0.04	0.02	0.03		
Queue Length 95th (ft)	1	3	1	2		
Control Delay (s/veh)	2.3	9.6	9.8	9.9		
Lane LOS	A	A	A	A		
Approach Delay (s/veh)	2.3	9.7		9.9		
Approach LOS		A		A		
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			20.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	9	0	6	11	0	8	0	32	0	0	0
Future Vol, veh/h	0	9	0	6	11	0	8	0	32	0	0	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.77	0.77	0.77	0.92	0.92	0.92
Heavy Vehicles, %	0	75	0	0	60	0	0	0	13	2	2	2
Mvmt Flow	0	13	0	9	16	0	10	0	42	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.4	7.2	6.7	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	0%	35%	0%
Vol Thru, %	0%	100%	65%	100%
Vol Right, %	80%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	9	17	0
LT Vol	8	0	6	0
Through Vol	0	9	11	0
RT Vol	32	0	0	0
Lane Flow Rate	52	13	25	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.02	0.029	0
Departure Headway (Hd)	3.528	5.287	4.072	4.041
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1014	679	881	0
Service Time	1.555	3.302	2.088	2.073
HCM Lane V/C Ratio	0.051	0.019	0.028	0
HCM Control Delay, s/veh	6.7	8.4	7.2	7.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.2	0.1	0.1	0

2031 No-Build PM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study
 1: Shore Drive & South Frontage Road No Build PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	594	734	0	29	276
Future Volume (veh/h)	0	594	734	0	29	276
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1856	1885	0	1841	1885
Adj Flow Rate, veh/h	0	619	765	0	34	325
Peak Hour Factor	0.96	0.96	0.96	0.96	0.85	0.85
Percent Heavy Veh, %	0	3	1	0	4	1
Cap, veh/h	0	1086	1103	0	1830	860
Arrive On Green	0.00	0.31	0.31	0.00	0.54	0.54
Sat Flow, veh/h	0	3711	3770	0	3401	1598
Grp Volume(v), veh/h	0	619	765	0	34	325
Grp Sat Flow(s),veh/h/ln	0	1763	1791	0	1700	1598
Q Serve(g_s), s	0.0	9.6	12.2	0.0	0.3	7.7
Cycle Q Clear(g_c), s	0.0	9.6	12.2	0.0	0.3	7.7
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1086	1103	0	1830	860
V/C Ratio(X)	0.00	0.57	0.69	0.00	0.02	0.38
Avail Cap(c_a), veh/h	0	2170	2204	0	1830	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.76	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	19.8	0.0	7.0	8.7
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.6	7.9	0.0	0.2	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	19.4	20.4	0.0	7.0	10.0
LnGrp LOS		B	C		A	A
Approach Vol, veh/h		619	765		359	
Approach Delay, s/veh		19.4	20.4		9.7	
Approach LOS		B	C		A	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				25.0	40.0	25.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				11.6	9.7	14.2
Green Ext Time (p_c), s				4.6	0.6	5.8
Intersection Summary						
HCM 7th Control Delay, s/veh			17.8			
HCM 7th LOS			B			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	3	427	60	19	12	725	115	24	0	0	0
Future Volume (vph)	181	3	427	60	19	12	725	115	24	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2907	1393	0	3281	0	1728	1837	1323	0	0	0
Flt Permitted		0.778			0.643		0.950					
Satd. Flow (perm)	0	2312	1393	0	2180	0	1728	1837	1323	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		223	222		16				31			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.96	0.96	0.96	0.73	0.73	0.73	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	2%	5%	0%	9%	1%	0%	18%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	415	222	0	124	0	747	119	25	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		14.2	14.2		14.2		45.8	45.8	45.8			
Actuated g/C Ratio		0.20	0.20		0.20		0.65	0.65	0.65			
v/c Ratio		0.64	0.48		0.27		0.66	0.09	0.02			
Control Delay (s/veh)		15.4	7.0		20.1		12.9	6.0	2.5			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

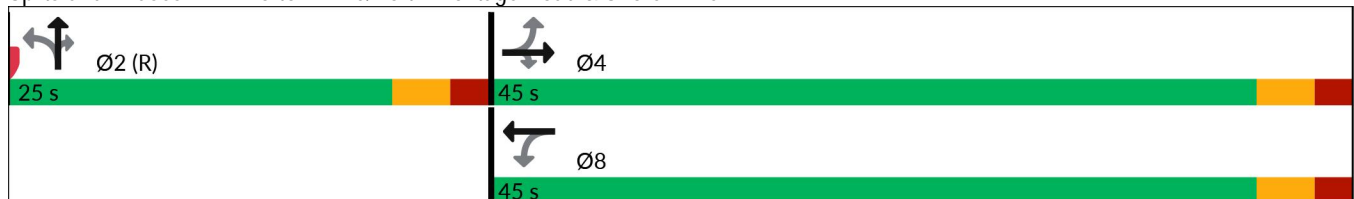


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		15.4	7.0		20.1		12.9	6.0	2.5			
LOS		B	A		C		B	A	A			
Approach Delay (s/veh)		12.5			20.1			11.8				
Approach LOS		B			C			B				
Queue Length 50th (ft)		40	0		21		163	16	0			
Queue Length 95th (ft)		71	48		28		#419	46	8			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)									350			
Base Capacity (vph)		1416	891		1252		1131	1202	877			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.29	0.25		0.10		0.66	0.10	0.03			

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay (s/veh): 12.7 Intersection LOS: B
 Intersection Capacity Utilization 69.4% 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: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study
 3: Shore Drive & Stores Street No Build PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	↑
Traffic Volume (veh/h)	4	23	66	15	3	20
Future Volume (Veh/h)	4	23	66	15	3	20
Sign Control	Free		Stop		Stop	
Grade	0%		0%		0%	
Peak Hour Factor	0.78	0.78	0.63	0.63	0.50	0.50
Hourly flow rate (vph)	5	29	105	24	6	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		28	25	39	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		28	25	39	0
tC, single (s)	4.1		7.2	6.6	6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2		3.6	4.1	4.0	3.3
p0 queue free %	100		89	97	99	96
cM capacity (veh/h)	1636		927	856	854	1091
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	34	105	24	46		
Volume Left	5	105	0	0		
Volume Right	29	0	0	40		
cSH	1636	927	856	1255		
Volume to Capacity	0.00	0.11	0.03	0.04		
Queue Length 95th (ft)	0	10	2	3		
Control Delay (s/veh)	1.1	9.4	9.3	8.5		
Lane LOS	A	A	A	A		
Approach Delay (s/veh)	1.1	9.4		8.5		
Approach LOS		A		A		
Intersection Summary						
Average Delay			7.8			
Intersection Capacity Utilization			20.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	6	5	18	3	0	2	0	16	0	0	0
Future Vol, veh/h	0	6	5	18	3	0	2	0	16	0	0	0
Peak Hour Factor	0.55	0.55	0.55	0.50	0.50	0.50	0.53	0.53	0.53	0.92	0.92	0.92
Heavy Vehicles, %	0	50	0	0	100	0	0	0	7	2	2	2
Mvmt Flow	0	11	9	36	6	0	4	0	30	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.7	7.4	6.7	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	0%	86%	0%
Vol Thru, %	0%	55%	14%	100%
Vol Right, %	89%	45%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	11	21	0
LT Vol	2	0	18	0
Through Vol	0	6	3	0
RT Vol	16	5	0	0
Lane Flow Rate	34	20	42	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.033	0.025	0.048	0
Departure Headway (Hd)	3.495	4.568	4.146	4.067
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1020	786	866	0
Service Time	1.53	2.584	2.158	2.105
HCM Lane V/C Ratio	0.033	0.025	0.048	0
HCM Control Delay, s/veh	6.7	7.7	7.4	7.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.1	0.1	0.2	0

2031 Build AM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study
 1: Shore Drive & South Frontage Road Build AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	1039	434	0	55	187
Future Volume (veh/h)	0	1039	434	0	55	187
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1885	1856	0	1841	1841
Adj Flow Rate, veh/h	0	1105	571	0	73	249
Peak Hour Factor	0.94	0.94	0.76	0.76	0.75	0.75
Percent Heavy Veh, %	0	1	3	0	4	4
Cap, veh/h	0	1503	1479	0	1451	665
Arrive On Green	0.00	0.42	0.42	0.00	0.43	0.43
Sat Flow, veh/h	0	3770	3711	0	3401	1560
Grp Volume(v), veh/h	0	1105	571	0	73	249
Grp Sat Flow(s),veh/h/ln	0	1791	1763	0	1700	1560
Q Serve(g_s), s	0.0	16.8	7.3	0.0	0.8	7.1
Cycle Q Clear(g_c), s	0.0	16.8	7.3	0.0	0.8	7.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1503	1479	0	1451	665
V/C Ratio(X)	0.00	0.74	0.39	0.00	0.05	0.37
Avail Cap(c_a), veh/h	0	2204	2170	0	1451	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.85	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.8	13.1	0.0	10.9	12.7
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.1	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.3	4.7	0.0	0.5	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	16.6	13.2	0.0	11.0	14.3
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1105	571		322	
Approach Delay, s/veh		16.6	13.2		13.6	
Approach LOS		B	B		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				32.3	32.7	32.3
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				18.8	9.1	9.3
Green Ext Time (p_c), s				8.4	0.5	4.3
Intersection Summary						
HCM 7th Control Delay, s/veh			15.1			
HCM 7th LOS			B			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	39	824	17	2	4	455	57	71	0	0	0
Future Volume (vph)	225	39	824	17	2	4	455	57	71	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2957	1421	0	2828	0	1694	1801	1446	0	0	0
Flt Permitted		0.842			0.721		0.950					
Satd. Flow (perm)	0	2530	1421	0	2115	0	1694	1801	1446	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		448	448		5				84			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	0%	14%	0%	50%	3%	2%	8%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	735	448	0	27	0	535	67	84	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		21.4	21.4		21.4		38.6	38.6	38.6			
Actuated g/C Ratio		0.31	0.31		0.31		0.55	0.55	0.55			
v/c Ratio		0.67	0.60		0.04		0.57	0.06	0.10			
Control Delay (s/veh)		9.8	5.0		10.6		17.6	11.3	4.0			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

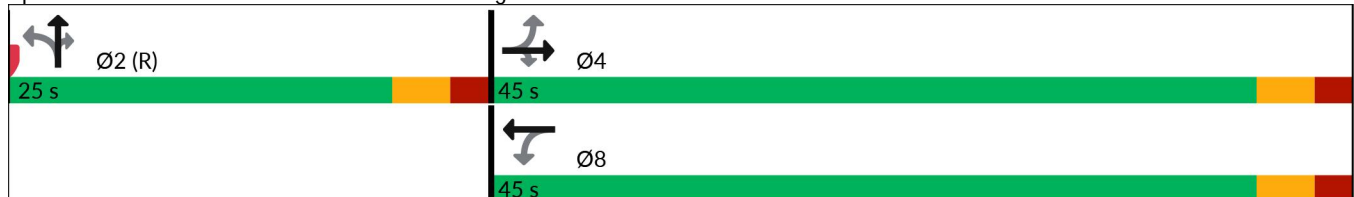


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		9.8	5.0		10.6		17.6	11.3	4.0			
LOS		A	A		B		B	B	A			
Approach Delay (s/veh)		8.1			10.7			15.4				
Approach LOS		A			B			B				
Queue Length 50th (ft)		52	0		3		138	12	0			
Queue Length 95th (ft)		73	46		7		#349	41	23			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)									350			
Base Capacity (vph)		1637	1004		1210		933	992	834			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.45	0.45		0.02		0.57	0.07	0.10			

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay (s/veh):	10.8
Intersection LOS:	B
Intersection Capacity Utilization:	53.5%
ICU Level of Service:	A
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study

3: Shore Drive & Stores Street

Build AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	124	28	8	22	0
Future Volume (Veh/h)	0	124	28	8	22	0
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.68	0.68	0.58	0.58
Hourly flow rate (vph)	0	132	41	12	38	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		85	66	132	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		85	66	132	0
tC, single (s)	4.2		7.2	6.6	6.7	6.5
tC, 2 stage (s)						
tF (s)	2.3		3.6	4.1	4.2	3.6
p0 queue free %	100		95	99	95	100
cM capacity (veh/h)	1542		836	802	730	1001
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	132	41	12	38		
Volume Left	0	41	0	0		
Volume Right	132	0	0	0		
cSH	1542	836	802	682		
Volume to Capacity	0.00	0.05	0.01	0.06		
Queue Length 95th (ft)	0	4	1	4		
Control Delay (s/veh)	0.0	9.5	9.6	10.6		
Lane LOS		A	A	B		
Approach Delay (s/veh)	0.0	9.5		10.6		
Approach LOS		A		B		
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			22.6%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	9	0	11	11	0	8	0	0	0	0	0
Future Vol, veh/h	0	9	0	11	11	0	8	0	0	0	0	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.77	0.77	0.77	0.92	0.92	0.92
Heavy Vehicles, %	0	75	0	0	60	0	0	0	13	2	2	2
Mvmt Flow	0	13	0	16	16	0	10	0	0	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.3	7.2	7.3	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	50%	0%
Vol Thru, %	0%	100%	50%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	9	22	0
LT Vol	8	0	11	0
Through Vol	0	9	11	0
RT Vol	0	0	0	0
Lane Flow Rate	10	13	33	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.012	0.019	0.037	0
Departure Headway (Hd)	4.18	5.218	4.028	4.022
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	855	689	891	0
Service Time	2.209	3.23	2.04	2.054
HCM Lane V/C Ratio	0.012	0.019	0.037	0
HCM Control Delay, s/veh	7.3	8.3	7.2	7.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0	0.1	0.1	0

2031 Build PM Peak

HCM 7th Signalized Intersection Summary Project Europa Traffic Impact Access & Parking Study
 1: Shore Drive & South Frontage Road Build PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (veh/h)	0	594	734	0	29	276
Future Volume (veh/h)	0	594	734	0	29	276
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1856	1885	0	1841	1885
Adj Flow Rate, veh/h	0	619	765	0	34	325
Peak Hour Factor	0.96	0.96	0.96	0.96	0.85	0.85
Percent Heavy Veh, %	0	3	1	0	4	1
Cap, veh/h	0	1086	1103	0	1830	860
Arrive On Green	0.00	0.31	0.31	0.00	0.54	0.54
Sat Flow, veh/h	0	3711	3770	0	3401	1598
Grp Volume(v), veh/h	0	619	765	0	34	325
Grp Sat Flow(s),veh/h/ln	0	1763	1791	0	1700	1598
Q Serve(g_s), s	0.0	9.6	12.2	0.0	0.3	7.7
Cycle Q Clear(g_c), s	0.0	9.6	12.2	0.0	0.3	7.7
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1086	1103	0	1830	860
V/C Ratio(X)	0.00	0.57	0.69	0.00	0.02	0.38
Avail Cap(c_a), veh/h	0	2170	2204	0	1830	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.76	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	19.8	0.0	7.0	8.7
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.6	7.9	0.0	0.2	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	19.4	20.4	0.0	7.0	10.0
LnGrp LOS		B	C		A	A
Approach Vol, veh/h		619	765		359	
Approach Delay, s/veh		19.4	20.4		9.7	
Approach LOS		B	C		A	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				25.0	40.0	25.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				40.0	15.0	40.0
Max Q Clear Time (g_c+I1), s				11.6	9.7	14.2
Green Ext Time (p_c), s				4.6	0.6	5.8
Intersection Summary						
HCM 7th Control Delay, s/veh			17.8			
HCM 7th LOS			B			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	3	427	78	19	12	725	115	27	0	0	0
Future Volume (vph)	181	3	427	78	19	12	725	115	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	0		350	0		0
Storage Lanes	0		1	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2907	1393	0	3279	0	1728	1837	1323	0	0	0
Flt Permitted		0.769			0.653		0.950					
Satd. Flow (perm)	0	2286	1393	0	2219	0	1728	1837	1323	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		223	222		16				31			
Link Speed (mph)		30			30			25				45
Link Distance (ft)		446			192			701				825
Travel Time (s)		10.1			4.4			19.1				12.5
Peak Hour Factor	0.96	0.96	0.96	0.73	0.73	0.73	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	2%	5%	0%	9%	1%	0%	18%	2%	2%	2%
Shared Lane Traffic (%)			50%									
Lane Group Flow (vph)	0	415	222	0	149	0	747	119	28	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4		4	8			2		2			
Detector Phase	4	4	4	8	8		2	2	2			
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0			
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		13.0	13.0	13.0			
Total Split (s)	45.0	45.0	45.0	45.0	45.0		25.0	25.0	25.0			
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%		35.7%	35.7%	35.7%			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0			
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max			
Act Effct Green (s)		14.2	14.2		14.2		45.8	45.8	45.8			
Actuated g/C Ratio		0.20	0.20		0.20		0.65	0.65	0.65			
v/c Ratio		0.64	0.48		0.32		0.66	0.09	0.03			
Control Delay (s/veh)		15.4	6.9		21.2		13.1	6.1	2.8			
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0			

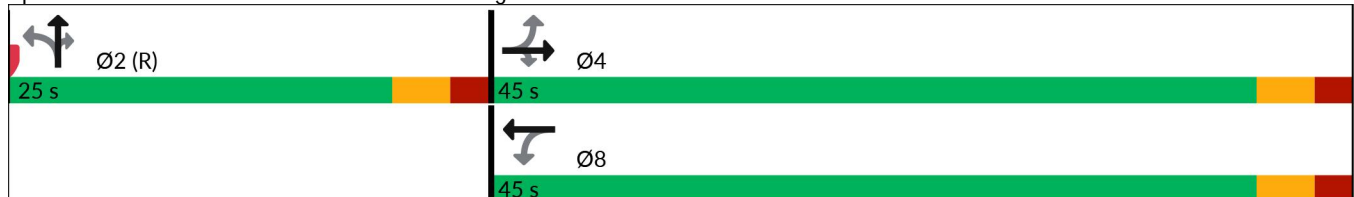


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (s/veh)		15.4	6.9		21.2		13.1	6.1	2.8			
LOS		B	A		C		B	A	A			
Approach Delay (s/veh)		12.5			21.3			11.9				
Approach LOS		B			C			B				
Queue Length 50th (ft)		40	0		25		164	16	0			
Queue Length 95th (ft)		71	48		33		#456	46	10			
Internal Link Dist (ft)		366			112			621			745	
Turn Bay Length (ft)									350			
Base Capacity (vph)		1401	891		1274		1129	1200	875			
Starvation Cap Reductn		0	0		0		0	0	0			
Spillback Cap Reductn		0	0		0		0	0	0			
Storage Cap Reductn		0	0		0		0	0	0			
Reduced v/c Ratio		0.30	0.25		0.12		0.66	0.10	0.03			

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay (s/veh):	12.9
Intersection LOS:	B
Intersection Capacity Utilization:	69.4%
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: 2: Norton Drive/North Frontage Road & Shore Drive



HCM Unsignalized Intersection Capacity Analysis - Europa Traffic Impact Access & Parking Study
 3: Shore Drive & Stores Street Build PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	↑
Traffic Volume (veh/h)	0	33	126	26	5	0
Future Volume (Veh/h)	0	33	126	26	5	0
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.63	0.63	0.50	0.50
Hourly flow rate (vph)	0	42	200	41	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None					
Median storage (veh)						
Upstream signal (ft)	192					
pX, platoon unblocked						
vC, conflicting volume	0		26	21	42	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		26	21	42	0
tC, single (s)	4.1		7.2	6.6	6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2		3.6	4.1	4.0	3.3
p0 queue free %	100		79	95	99	100
cM capacity (veh/h)	1636		963	863	854	1091
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	42	200	41	10		
Volume Left	0	200	0	0		
Volume Right	42	0	0	0		
cSH	1636	963	863	648		
Volume to Capacity	0.00	0.21	0.05	0.02		
Queue Length 95th (ft)	0	19	4	1		
Control Delay (s/veh)	0.0	9.7	9.4	10.6		
Lane LOS		A	A	B		
Approach Delay (s/veh)	0.0	9.7		10.6		
Approach LOS		A		B		
Intersection Summary						
Average Delay			8.3			
Intersection Capacity Utilization			23.6%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕				↕			↕	
Traffic Vol, veh/h	0	6	5	0	3	0	2	0	20	0	0	0
Future Vol, veh/h	0	6	5	0	3	0	2	0	20	0	0	0
Peak Hour Factor	0.55	0.55	0.55	0.50	0.50	0.50	0.53	0.53	0.53	0.92	0.92	0.92
Heavy Vehicles, %	0	50	0	0	100	0	0	0	7	2	2	2
Mvmt Flow	0	11	9	0	6	0	4	0	38	0	0	0
Number of Lanes	0	1	0	1	0	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.7	7	6.6	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	0%	0%
Vol Thru, %	0%	55%	100%	100%
Vol Right, %	91%	45%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	11	3	0
LT Vol	2	0	0	0
Through Vol	0	6	3	0
RT Vol	20	5	0	0
Lane Flow Rate	42	20	6	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.039	0.025	0.007	0
Departure Headway (Hd)	3.417	4.555	3.988	4.01
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1049	790	901	0
Service Time	1.435	2.561	1.998	2.03
HCM Lane V/C Ratio	0.04	0.025	0.007	0
HCM Control Delay, s/veh	6.6	7.7	7	7
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.1	0.1	0	0

APPENDIX F

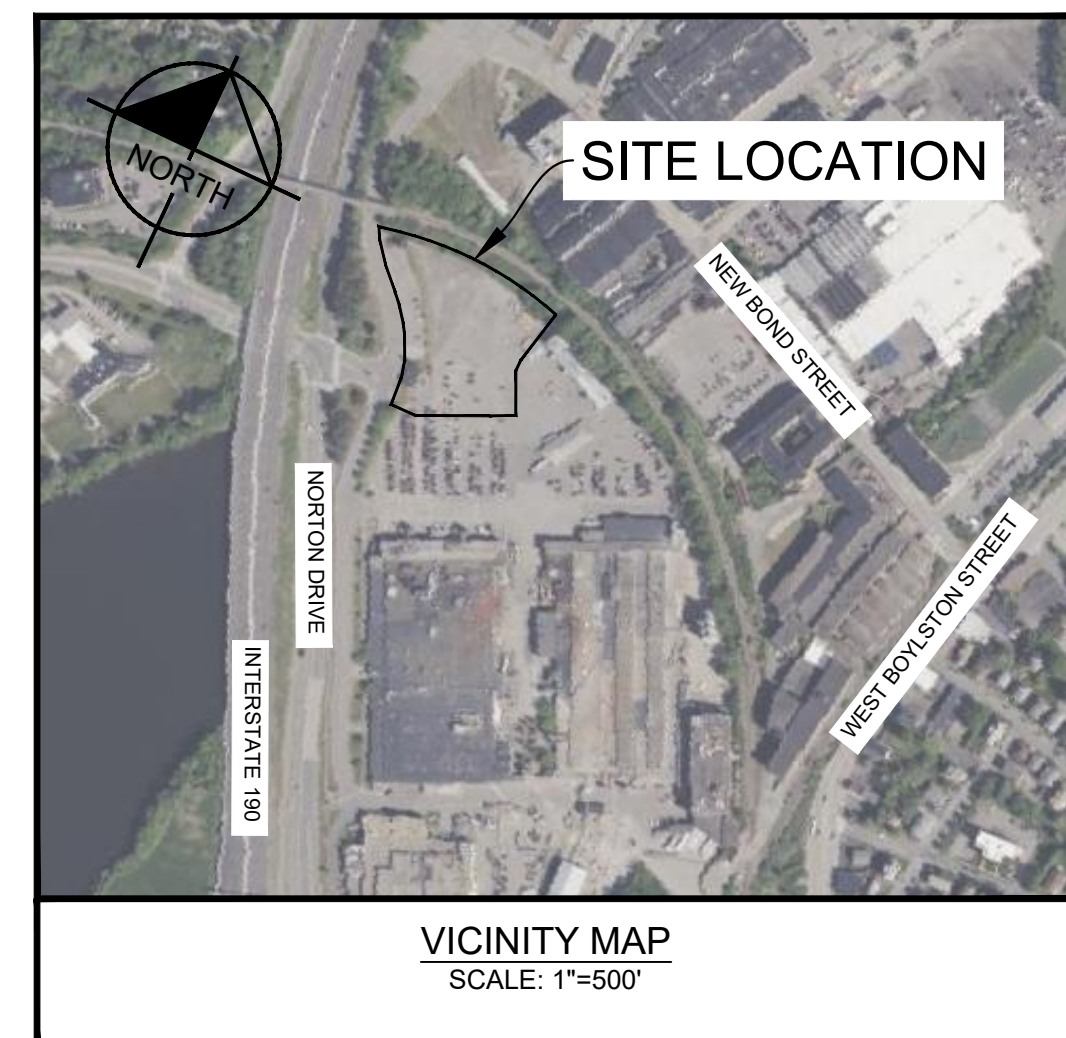
Site Plan

Plotted By: Poudel, Samiksha - Sheet Set: St Gobain Office - Layout: Layout April 22, 2024 02:08:38pm - K:\BOS_Civil\BOS Projects\112966000 - Worcester St Gobain Office\CAD\PlanSheets\C-000 COVER SHEET.dwg
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PROJECT EUROPA

100 NEW BOND STREET CITY OF WORCESTER, MA

April 12, 2024



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MECHANICAL & PLUMBING & ELECTRICAL ENGINEER BER 66 MAIN STREET NORTH EASTON, MA 02356 TEL: (508) 230-0260

GENERAL NOTES
1. THIS PORTION OF THE PARCEL LIES WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR WORCESTER COUNTY, MASSACHUSETTS, MAP NUMBER 25027C0616E, CITY OF WORCESTER COMMUNITY NUMBER 250349, PANEL NUMBER 0616E, HAVING AN EFFECTIVE DATE OF JULY 4, 2011.
2. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY EXACT UTILITY LOCATION IS NOT GUARANTEED BY THIS SURVEY. THE ACTUAL LOCATION OF THE SUBSURFACE UTILITIES SHALL BE DETERMINED PRIOR TO BEGINNING CONSTRUCTION.
4. CONTRACTOR SHALL CALL THE DIG SAFE CALL CENTER 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. DIAL 811 OR CALL 1-888-344-7233 FOR LOCATION OF UNDERGROUND UTILITIES.
5. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS, RELOCATIONS, NEW SERVICES, AND TEMPORARY SERVICES WITH THE UTILITY OWNER PRIOR TO BEGINNING WORK.

Sheet List Table	
Sheet Number	Sheet Title
C-000	COVER SHEET
C-001	GENERAL NOTES
SV-100	SURVEY
C-100	OVERALL KEY MAP
C-200	DEMOLITION PLAN
C-201	DEMOLITION PLAN
C-300	EROSION & SEDIMENT CONTROL PLAN - PHASE I
C-301	EROSION & SEDIMENT CONTROL PLAN - PHASE II
C-302	EROSION & SEDIMENT CONTROL DETAILS
C-303	EROSION & SEDIMENT CONTROL NOTES
C-400	SITE PLAN
C-401	SITE PLAN
C-402	FIRE TRUCK TURN PLAN
C-500	GRADING PLAN
C-501	GRADING PLAN
C-502	DRAINAGE PLAN
C-503	PRE DEVELOPMENT DRAINAGE AREA MAP
C-504	POST DEVELOPMENT DRAINAGE AREA MAP
C-505	POST DEVELOPMENT INLET DRAINAGE AREAS
C-600	UTILITY PLAN
C-601	UTILITY PLAN
C-700	CONSTRUCTION DETAILS
C-701	CONSTRUCTION DETAILS
C-702	CONSTRUCTION DETAILS
C-800	LIGHTING PLAN - NOT IN THIS SET
L-100	LANDSCAPE PLAN
L-101	LANDSCAPE NOTES AND DETAILS

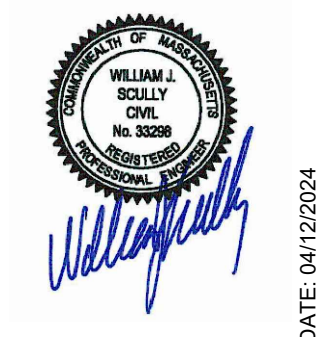
SITE DATA:

ADDRESS:	100 NEW BOND STREET
PARCEL ID:	13-035-00001
ZONED:	MFG-1.0 (MANUFACTURING, GENERAL)
OVERLAY DISTRICTS:	N/A
FRONT SETBACK:	15'
SIDE SETBACK:	0'
REAR SETBACKS:	15'
FRONT LANDSCAPE BUFFER:	0'
EXISTING USE:	PARKING LOT
PROPOSED USE:	OFFICE BUILDING
PARCEL SIZE:	28.43 ACRE
TOTAL DISTURBED AREA:	130,117 SF = 2.99 AC
EXISTING IMPERVIOUS AREA:	117,612 SF = 2.70 AC
EXISTING PERVIOUS AREA:	13,068 SF = 0.30 AC
PROPOSED IMPERVIOUS AREA:	94,525 SF = 2.17 AC
PROPOSED PERVIOUS AREA:	35,719 SF = 0.82 AC
EXISTING BUILDING AREA:	0 SF
PROPOSED BUILDING AREA:	21,434 SF
PROPOSED BUILDING HEIGHT:	XX
NO. OF STORIES:	2
PARKING REQUIREMENTS:	1 SPACE PER 300 SF GROSS FLOOR SPACE (UTILITY, ENERGY, CORRIDOR, STAIRWAY, RESTROOM, AND BUILDING MAINTENANCE AREA ARE EXEMPT FROM SPACE ASSIGNMENT)
PROPOSED BUILDING GROSS FLOOR AREA:	43,000 SF
MECHANICAL, RESTROOMS AND CIRCULATION:	9,500 SF
MINIMUM PARKING REQUIRED:	33500 SF/300 = 112 SPACES
EXISTING PARKING TO REMAIN:	27 SPACES
PROPOSED PARKING:	96 SPACES
TOTAL PARKING PROVIDED:	123 SPACES

NOTICE OF INTENT
WORCESTER CONSERVATION COMMISSION
MAY 6, 2024



Kimley»Horn
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 271 WAVERLEY OAKS ROAD, SUITE 302, WALTHAM, MA 02452
 PHONE: 781-328-0676
 WWW.KIMLEY-HORN.COM



KHA PROJECT 112966000
 DATE 04/12/2024
 SCALE AS SHOWN
 DESIGNED BY: SP
 DRAWN BY: EIW
 CHECKED BY: DDL
 LICENSED PROFESSIONAL
 DATE: 04/12/2024

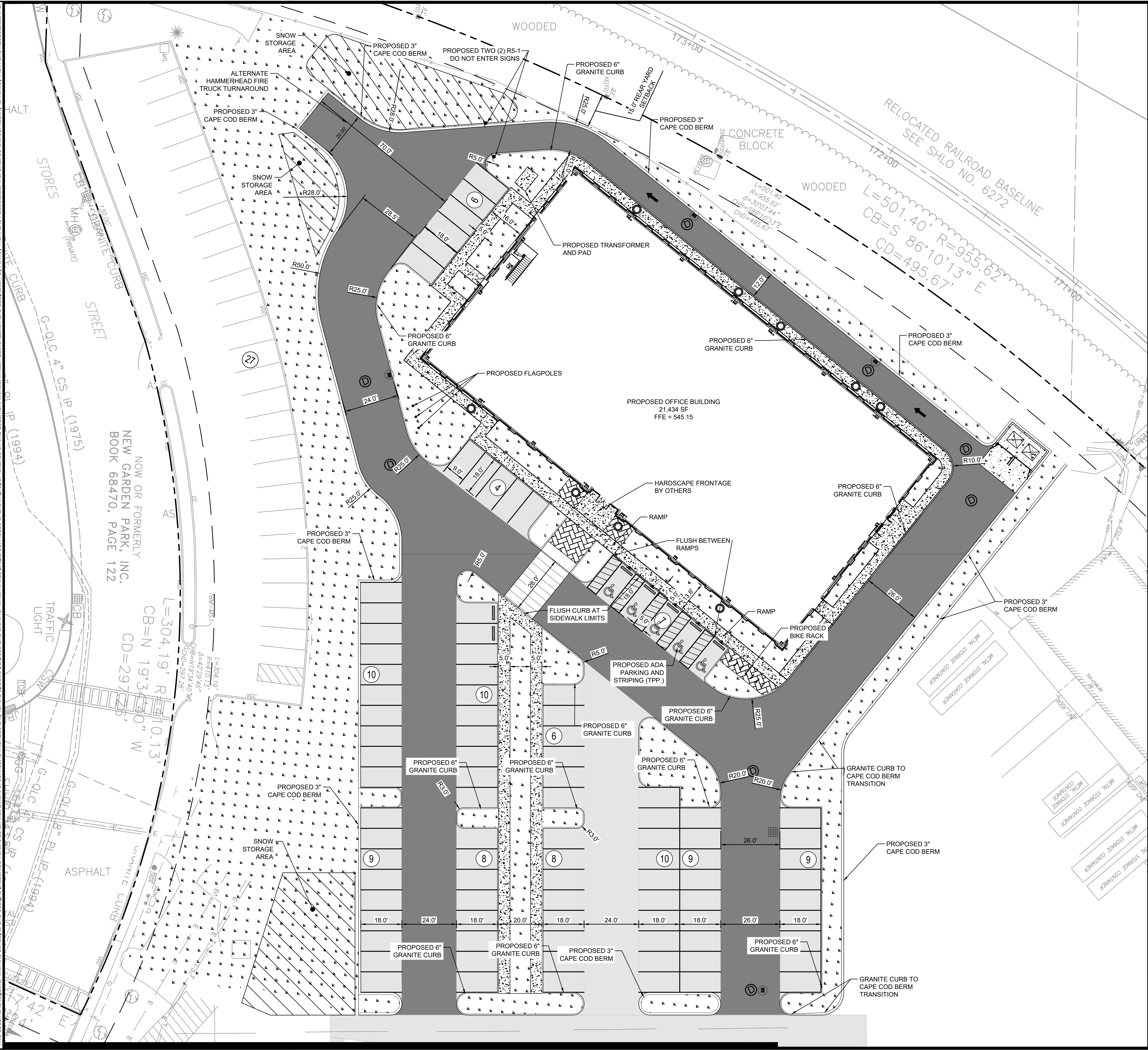
COVER SHEET

PROJECT EUROPA
 PREPARED FOR
 PURE DEVELOPMENT

SHEET NUMBER
C-000

REVISIONS
 No. BY DATE

Plotted By: Poulsen, Samiksha. Sheet Set: St Gobain Office. Layout: C-400. April 22, 2024. 02:10:58pm. K:\BOS_Civil\BOS Projects\112866000 - Worcester St Gobain Office\CAD\PlanSheets\C-400 SITE PLAN.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

	PROPERTY LINE
	SETBACKS
	CONSTRUCTION LIMITS
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED LIGHT DUTY ASPHALT
	PROPOSED VEGETATION
	SNOW STORAGE AREA
	CAPE COD BERM
	GRANITE CURB
	PARKING COUNT

SITE NOTES

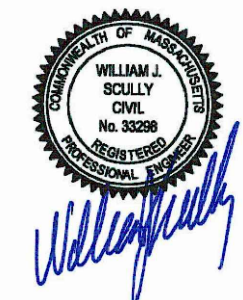
- ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL CURB RADII ARE 5.0' UNLESS OTHERWISE NOTED.
- BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- ALL EXISTING SIDEWALK AND CURB AND GUTTER CUTS SHALL BE TO THE NEAREST CONSTRUCTION JOINT.
- REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
- ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.
- CONTRACTOR IS TO REPLACE ANY PAVEMENT MARKING THAT IS AFFECTED BY THE CONSTRUCTION.

NO.	REVISIONS	DATE	BY

Kimley»Horn

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LICENSED PROFESSIONAL



DATE: 04/12/2024

KHA PROJECT	112866000
DATE	04/12/2024
SCALE	AS SHOWN
DESIGNED BY	SP
DRAWN BY	EIW
CHECKED BY	DDL

SITE PLAN

PROJECT EUROPA
 PREPARED FOR
 PURE DEVELOPMENT

CITY OF WORCESTER
 MASSACHUSETTS

SHEET NUMBER
C-400