

TECHNICAL MEMORANDUM

REF: NEX-2200417.00

DATE: January 11, 2023

TO: Ms. Richard Pomroy
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P.O. Box 445
East Bridgewater, MA 02333

FROM: Mr. John W. Diaz, PE, PTOE
Vice President

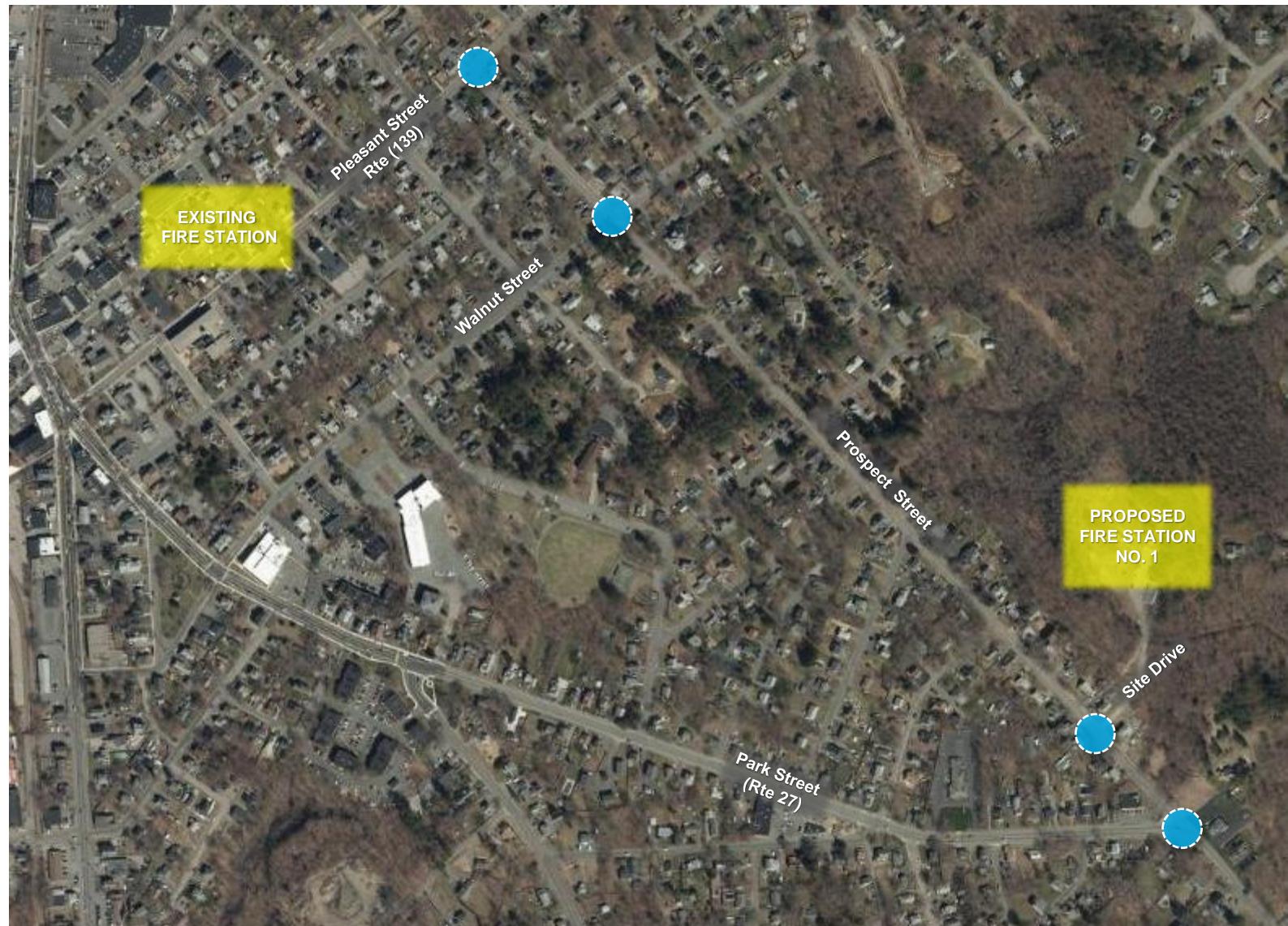
RE: Traffic Impact and Access Study
Fire Station No. 1
400 Prospect Street - Stoughton, Massachusetts

Revision 1

INTRODUCTION

Greenman-Pedersen, Inc. (GPI) has prepared this *Traffic Impact and Access Study* (TIAS) for the proposed Fire Station No. 1 to be located at 400 Prospect Street in Stoughton, Massachusetts. The project consists of constructing a 5 Bay, 25,200 square foot fire station building, with on-site parking for 31 vehicles. Access and egress to and from the site are proposed via one full-access driveway at on the north side of Prospect Street at 400 Prospect Street, approximately 450 ft northwest of the Park Street/Prospect Street intersection.

The site location in relation to the surrounding roadways is shown on the map on Figure 1. This TIAS evaluates the traffic impacts and access/egress requirements for the proposed development.



LEGEND



STUDY AREA INTERSECTION

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EXISTING CONDITIONS

Study Area

Evaluation of the traffic impacts associated with the proposed project requires an evaluation of existing and projected traffic volumes on the adjacent street, the volume of traffic expected to be generated by the project, and the impact that this traffic will have on the adjacent street. In preparing the TIAS for the proposed site, the following unsignalized intersections have been analyzed and evaluated:

- Prospect Street at Pleasant Street
- Prospect Street at Walnut Street
- Prospect Street at Proposed Site Driveway
- Park Street at Prospect Street

Prospect Street

Prospect Street is under the jurisdiction of the Town of Stoughton and is classified as an urban collector within the Boston Urbanized Area. Prospect Street runs in a general northwest-to-southeast direction in the study area and does not have a posted regulatory speed but is defined as a thickly settled area with a defacto speed limit of 30 miles per hour (mph). Prospect Street provides one general purpose travel lane in each direction, separated by a double-yellow centerline. Sidewalks are provided on the westerly side only and there are no specific or bicycle accommodations within the study area. Land uses along Prospect Street within the study consist of primarily of residential uses.

Prospect Street at Pleasant Street



Figure 2 Prospect Street looking north at Pleasant Street - Google Streetview 2019

Prospect Street intersections Pleasant Street (Route 139) to form the base of a “T” intersection. All roadways are under the jurisdiction of the Town of Stoughton. Walnut Street is under STOP control, while

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traffic on Pleasant Street is not controlled. There is a chevron sign opposite Prospect Street to reinforce the “T” intersection. Although there is a sidewalk on the westerly side of Prospect Street and on both sides of Pleasant Street, there are no crosswalks or other pedestrian accommodations present at the intersection. Each approach consists of a single approach lane, approximately 12 ft wide. No shoulders are provided on Prospect Street and approximately 1' shoulders are present on Pleasant Street.

Prospect Street at Walnut Street



Figure 3 Prospect looking north at Walnut -Street Google Streetview 2019

Walnut Street intersects Prospect Street to form a four-way STOP controlled intersection. Walnut Street runs in a generally northeast-southwest configuration providing a connection to Lincoln Street and Central Street to the east and Washington Street (Route 138) to the west. Both Walnut Street and Prospect Street are under the jurisdiction of the Town of Stoughton. Walnut Street between Pleasant Street and Park Street (Route 27) is scheduled for modifications by the town to provide additional traffic calming measures. Crosswalks and Stop Lines are provided on all four approaches to the intersection and an overhead flashing red beacon faces each approach. All approaches provide approximately 12' approach lanes. Sidewalks on Prospect Street continue to be on the westerly side, while Walnut Street provides sidewalks on both sides of the street. Prospect Street provide double yellow centerlines, while Walnut Street has no double yellow centerlines dividing eastbound and westbound traffic.

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Prospect Street at Park Street and Alder Street



Figure 4 Prospect Street looking south at Park Street – Google Streetview - 2019

Alder Street (a private road) intersects Prospect Street and Park Street from the east to form an offset four-way intersection. Alder Street has no pavement markings and is not controlled by a STOP or YIELD sign and functions as more of a residential driveway.

The major intersection is formed as Prospect Street intersection Park Street (Route 27) to form more of a "Y" intersection. Prospect Street is under STOP sign control and intersection Park Street at the crest of a horizontal curve. There are median islands on all three approaches (Park Street southeast bound, Prospect Street southbound and Park Street northbound) with "keep right" signs. There are also ground mounted flashing beacons facing each approach mounted on the median islands. While each approach is striped as a single lane, there is room on the Prospect Street southbound approach for left and right turning vehicles to both approach the stop line and wait for gaps in traffic.

Pedestrian crosswalks are present along the Prospect Street approach to connect to sidewalks on the east side of Park Street. Park Street (Route 27) is under the jurisdiction of the Massachusetts Department of Transportation.

Traffic Volumes

Base traffic conditions within the study area were developed by conducting manual-turning movement counts (TMCs) and vehicle classifications on November 16, 17 and 21, 2022. Automatic traffic recorder (ATR) counts were collected January 3 and 4, 2023 along Prospect Street, Park Street and Pleasant Street and included both daily traffic volumes and vehicle speeds. The TMCs and vehicle classification counts were performed during the weekday AM peak period (7:00 to 9:00 AM) and weekday PM peak period (4:00 to 6:00 PM). Existing AM and PM Weekday peak hour turning movement counts are illustrated in Figure 5. All traffic-count data are provided in the Appendix.

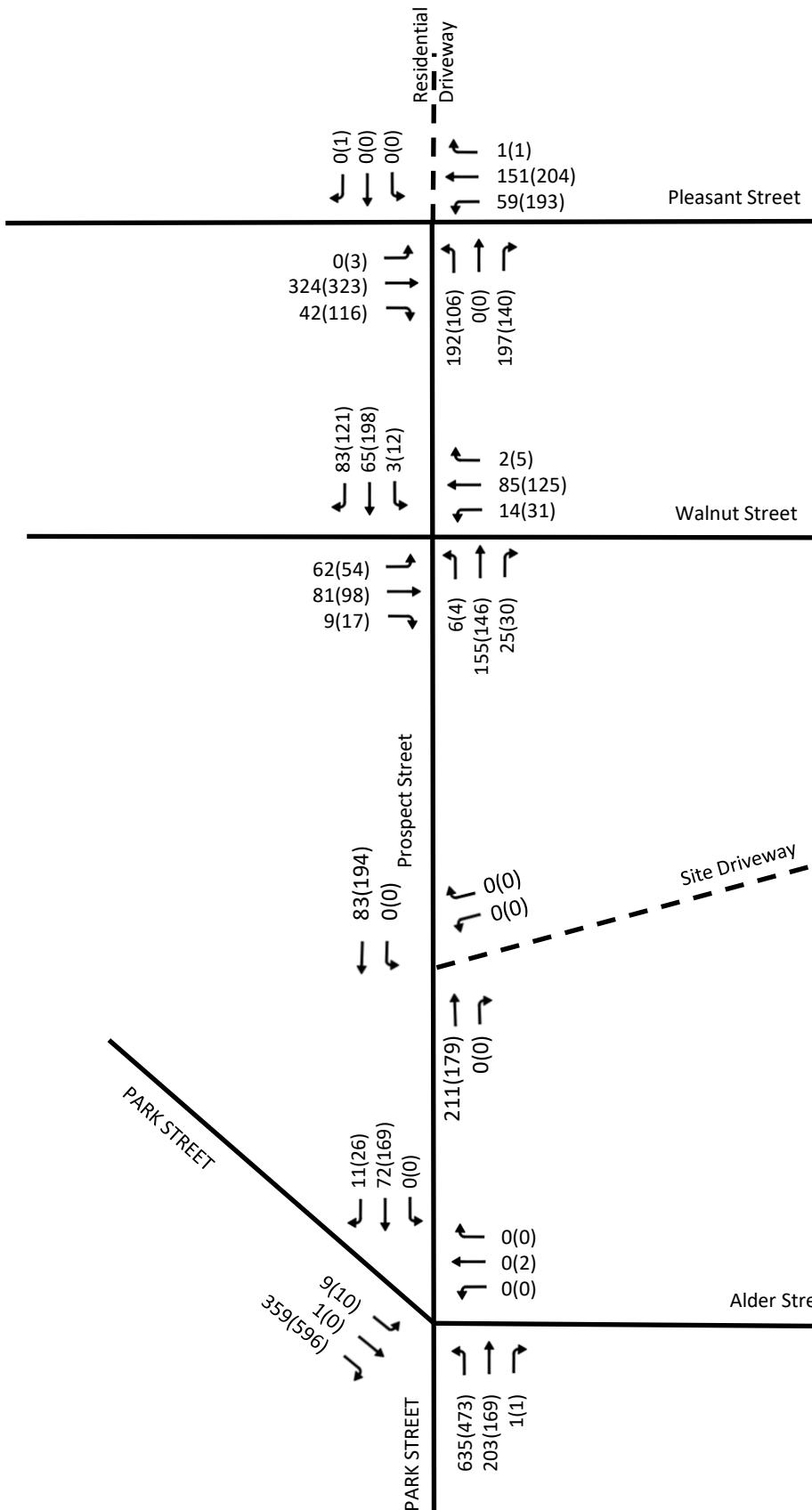


FIGURE 4
2022 EXISTING CONDITIONS
PEAK HOUR TRAFFIC VOLUMES

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Seasonal Adjustment

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. To determine if the November traffic-volume data needed to be adjusted to account for this fluctuation, historical traffic-volume data were reviewed from the MassDOT records.¹ This information revealed that November traffic volumes are approximately 2.0% above average-month conditions. Therefore, to provide a conservative analysis, the November traffic volumes were used as counted to represent average-month conditions. The MassDOT seasonal adjustment data is provided in the Appendix.

Collisions

Collision data for the study area intersections were obtained from MassDOT for the latest five years available. Table 1 summarizes the data. In addition to the collision summary, crash occurrence also should be compared to the volume of traffic through a particular intersection to determine any significance. Accordingly, the crash rates were calculated for each study area segment and intersection and compared with the statewide and district-wide averages. An intersection crash rate is a measure of the frequency of collisions compared to the volume of traffic through an intersection and is presented in crashes per million entering vehicles (c/mev). For unsignalized intersections, both the statewide and District 4 average is 0.57 c/mev. A comparison of the calculated crash rate to these averages can be used to establish the significance of collision occurrence and whether or not potential safety problems exist. All crash rate worksheets are provided in the Appendix.

Prospect Street at Pleasant Street

Based on the most recent MassDOT collision data (2018-2021), the unsignalized intersection of Pleasant Street at Prospect Street experienced a total of 3 collisions in 4 years, or an average of approximately 0.75 collisions per year, with a crash rate of 0.17 c/mev, which is less than the statewide and District 5 average (0.57 c/mev) for unsignalized intersections. Two crashes resulted in injuries and 1 crash was property damage. Two of the crashes were 2 vehicle angle and 1 was a single vehicle crash. All crashes occurred outside of peak hours with normal weather/road conditions.

There is currently no STOP line on the Prospect Street NB approach and the STOP sign is located behind the stopping point of most vehicles. The town should consider striping a STOP line on the Prospect Street NB approach and providing Intersection Ahead warning signs on the EB and WB Pleasant Street approaches to Prospect Street. However, due to the low crash rate, however, there is no safety concern that requires further investigation.

Prospect Street at Walnut Street

Based on the most recent MassDOT collision data (2018-2021), the unsignalized intersection of Prospect at Walnut Street experienced a total of 10 collisions in 4 years, or an average of approximately 2.5 collisions per year, with a crash rate of 0.73 c/mev, which is greater than the statewide and District 5 average (0.57 c/mev) for unsignalized intersections. Eight crashes resulted in property damage only and 2 crashes resulted in personal injuries. The majority (9) crashes involved 2 or more vehicles and 7 of the crashes were angle collisions. While all crashes occurred in normal weather/road conditions, 40% of the crashes occurred during the commuter peak periods.

It was noted that there is no Double Yellow Centerline (DYCL) on either Walnut Street approach and some of the STOP signs may be becoming faded. There is an existing Overhead Flashing Beacon present to

¹ MassDOT Weekday Seasonal and Axle Correction Factors, Average of 2014-2019 data.

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provide additional visibility. The town should consider upgrading the STOP signs to ensure optimum reflectivity as well as striping DYCL on both Walnut Street approaches.

Prospect Street at Park Street and Alder Street

Based on the most recent MassDOT collision data (2018-2021), the unsignalized intersection of Prospect at Walnut Street experienced a total of 8 collisions in 4 years, or an average of approximately 2 collisions per year, with a crash rate of 0.34 c/mev, which is below the statewide and District 5 average (0.57 c/mev) for unsignalized intersections. Six crashes resulted in property damage only and 2 crashes resulted in personal injuries. There were 4 crashes involving 2 or more vehicles and all 4 crashes were angle collisions. The majority of crashes (75) occurred during wet/icy weather and road conditions and 25% occurred during the commuter peak periods.

It was noted that there is no striping or signage for Alder Street. While there are minimal volumes associated with the street, a STOP sign, STOP line and centerline marking would reinforce its presence as a street. In addition, the town may want to consider adding W11-8 Emergency Vehicle signs along the NB and SEB Park Street approaches to Prospect Street as well as along the Prospect Street NB and SB approaches to the Fire Station driveway, to provide additional warning to drivers of the potential for emergency vehicles through the intersection and along Prospect Street. However, due to the low crash rate, however, there is no safety concern that requires further investigation.

TABLE 1
Collision Summary

Location	Number of Collisions			Severity			Type			Percent During		
	Total	Ave Per Year	Crash Rate ^a	Property Damage	Personal Injury/ Non Fatal	Fatal	Single Vehicle	Two or More Vehicles	Angle	Side Swipe- Opposite Direction	Wet/Icy Conditions	Commuter Peak ^b
MassDOT Collision Data (2018-2021)												
Prospect Street at Pleasant Street	3	0.75	0.17	1	2	0	1	2	2	0	0%	0%
Prospect Street at Walnut Street	10	2.5	0.73	8	2	0	-	9	7	2	0%	40%
Prospect Street at Park Street	8	2	0.34	6	2	0	4	4	4	-	75%	25%

^aMeasured in crashes per million entering vehicles for intersections and in crashes per million vehicle miles traveled for roadway segments.

^bPercent of vehicle incidents that occurred during the weekday AM (7:00 AM-9:00 AM) and weekday PM (4:00 PM -6:00 PM) commuter peak periods.

Vehicle Speeds

Travel speeds were noted utilizing the floating car methodology and were observed to be approximately 40 mph. Therefore, an average speed of 40 mph was noted and a slightly higher 45 mph 85% percentile speed was assumed and used for all sight distance evaluations.

Sight Distance

To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed site driveway to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the American Association of

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State Highway and Transportation Officials (AASHTO)². AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported. The Massachusetts Department of Transportation (MassDOT) and the Executive Office of Energy and Environmental Affairs (EEA) require the use of AASHTO sight distance standards when preparing traffic impact assessments and studies, as stated in their guidelines for traffic impact assessments.

Sight distance is the length of roadway ahead that is visible to the driver. Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling at a certain speed to safely stop before reaching a stationary object in its path. The values are based on a driver perception and reaction time of 2.5 seconds and a braking distance calculated for wet, level pavements. When the roadway is either on an upgrade or downgrade, grade correction factors are applied. Stopping sight distance is measured from an eye height of 3.5 feet to an object height of 2 feet above street level, equivalent to the taillight height of a passenger car. The SSD is measured along the centerline of the traveled way of the major road.

Intersection sight distance (ISD) is provided on minor street approaches to allow the drivers of stopped vehicles a sufficient view of the major roadway to decide when to enter the major roadway. By definition, ISD is the minimum distance required for a motorist exiting a minor street to turn onto the major street, without being overtaken by an approaching vehicle reducing its speed from the design speed to 70 percent of the design speed. ISD is measured from an eye height of 3.5 feet to an object height of 3.5 feet above street level. The use of an object height equal to the driver eye height makes intersection sight distances reciprocal (i.e., if one driver can see another vehicle, then the driver of that vehicle can also see the first vehicle). When the minor street is on an upgrade that exceeds 3 percent, grade correction factors are applied.

SSD is generally more important as it represents the minimum distance required for safe stopping while ISD is based only upon acceptable speed reductions to the approaching traffic stream. The ISD, however, must be equal to or greater than the minimum required SSD in order to provide safe operations at the intersection. In accordance with the AASHTO manual, *“If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.”* Accordingly, ISD should be at least equal to the distance required to allow a driver approaching the minor road to safely stop.

The available SSD and ISD at the proposed site driveway were measured and compared to minimum requirements as established by AASHTO. Based on the observed speeds, the SSD and ISD requirements at the intersections were calculated. Speeds were measured for a 48 hour period in the vicinity of the proposed Fire Station and indicated the northbound 85th percentile speed to be 37 mph and the southbound 85th percentile speed to be 30 mph. Furthermore, in the northbound direction more than 70% of the vehicles are traveling between 25-34 mph and in the southbound direction more than 75% of the vehicles are traveling between 20 -29 mph. The required minimum sight distances for the driveways are compared to the available distances, as shown in Table 2 and indicate that sight distances are adequate for conditions speeds in excess of 45 mph, well beyond the observed pace speeds..

² A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials (AASHTO); 2018.

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TABLE 2
Sight Distance Summary

Location/Direction	Stopping Sight Distance (feet)		Intersection Sight Distance (feet)	
	Measured	Minimum Required ^a	Measured	Desirable ^b
Prospect Street at Site Driveway: <i>Northwest of intersection (SEB)</i> <i>Southeast of intersection (NWB)</i>	500+ 500+	360 360	800+ 800+ ^c	430/695 500/765

^a Values based on AASHTO requirements for minimum SSD based on 85th percentile speed of 45 mph (NWB) and 45 mph (SEB) on Prospect Street.

^b Values based on AASHTO requirements for ISD for speed of 45 mph on Prospect Street (passenger car/combination truck).

^c Clear line of sight to the Park Street intersection at approximately 450' southeast of sight drive. Approaching vehicles visible along Park Street NB approach as well.

As indicated in Table 2 above, available sight distances at the proposed site driveway on Prospect Street exceed the minimum SSD and ISD requirements for safe operation. To maintain the sight distances at the driveway after development of the site, it is recommended that any proposed plantings, vegetation, landscaping, and signing along the site frontage be kept low to the ground (no more than 3.0 feet above street level) or set back sufficiently from Prospect Street so as not to inhibit the available sight lines.

FUTURE CONDITIONS

To estimate the impact of site-generated traffic within the study area, existing traffic volumes were projected to the year 2029, representing a seven-year design horizon in accordance with state requirements. The proposed development is expected to be completed and fully operational well within this time frame. Traffic volumes on the roadway network at that time will include existing traffic and new traffic due to normal traffic growth. Consideration of these factors resulted in the development of 2029 No-Build traffic volumes, which assume that the proposed development is not built. The incremental impacts of the proposed project may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the No-Build conditions.

Traffic Growth

To develop the 2029 No-Build forecast volumes, two components of traffic growth were considered. First, an annual growth percentage was determined. Based on historic traffic-volume data provided by MassDOT's permanent count stations (6238 and 6237) on Route 24 traffic volumes in the area have been increasing, on average between 2014-2019, at a rate of between 0.4% and 1.4% per year. Therefore, a 1.0% compounded annual growth was assumed for the project area, consistent with other traffic studies in the area. The MassDOT adjustment data are provided in the Appendix.

Second, any planned or approved specific developments in the area that would generate a significant volume of traffic on study area roadways within the next seven years were considered. Based on discussions with the Planning Department, there were no significant projects expected to impact traffic levels in the area of the project.

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Planned Roadway Improvements

Based on correspondence with the Stoughton Engineering Department, the section of Walnut Street from Pierce Street to Park Street (Route 27) is scheduled for reconstruction to provide enhanced bike and pedestrian accommodations.

No-Build Conditions

The 2029 No-Build peak-hour traffic volumes were accordingly developed by applying a 1.0% compounded annual traffic growth rate (7.2 % over seven years) to the 2022 Existing traffic volumes, and an appropriate accounting of previously noted development by others. The 2029 No-Build traffic volumes are shown graphically on Figure 6 for the peak hours.

Trip Generation

The project consists of constructing a 25,200 square foot fire station with 5 bays plus one maintenance bay and will provide parking for 31 vehicles. It is expected that the station will be staffed by 8 firefighters on 24-hour shifts. Traffic to be generated by the proposed development was forecast using trip rates contained in the ITE *Trip Generation, 11th Edition*³ for Land Use Code (LUC) 575 -Fire and Rescue Station; however, the data is very limited and only projects evening peak hour trips. Therefore, additional data on staffing, call responses, vehicle operations, etc. provided by the Stoughton Fire Department was used to estimate the projected trips. All trip-generation data are provided in the Appendix. Tables 3 summarizes the results of the trip-generation estimates based on ITE Rates.

TABLE 3
Trip-Generation Summary - ITE

Peak Hour/Direction	Proposed Trips ^c
Weekday Daily:	-
Weekday AM Peak Hour:	
Enter	-
Exit	-
Total	-
Weekday PM Peak Hour:	
Enter	3
Exit	9
Total	12

^a Based on ITE LUC 575 (Fire & Rescue Station)
25,200 sf.

³ *Trip Generation, 11th Edition*. Institute of Transportation Engineers; Washington, DC; 2021.

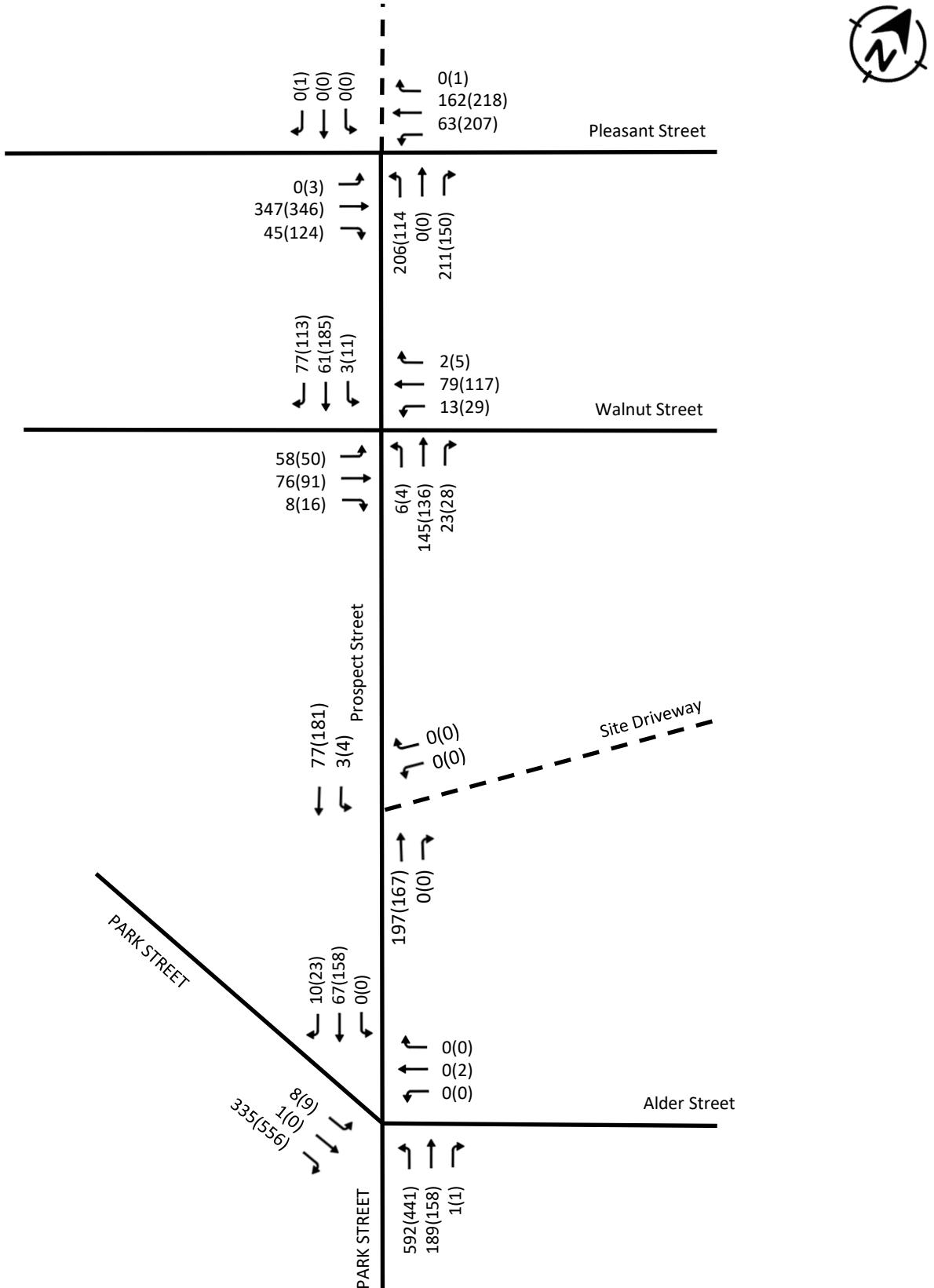


FIGURE 2
2029 NO-BUILD CONDITIONS
PEAK HOUR TRAFFIC VOLUMES

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The new Fire Station will have a staff of 8 Fire Fighters in the station on a 24-hour shift. Shift change occurs at 8:00 AM, with no staff changes anticipated during the evening peak hour.

Based on historical data from the existing Freeman Street Fire Station, there are on average between 10-12 calls during a 24-hour shift, or one call per two hours. In order to provide a conservative analysis, it has been assumed that an emergency call is responded to during both the morning and evening peak hours. Approximately 65% of the calls are responded to by an Ambulance and Engine truck. While the new Prospect Street station is anticipated to respond to slightly fewer calls per day (6-8), in order to provide a conservative estimate of site traffic, the data from Freeman Street (up to 12 calls) will be used. Table 4 summarizes the results of the trip-generation estimates based on actual past and project Fire Station operations data from the existing Freeman Street station.

TABLE 4
Trip-Generation Summary – Existing Operations

Staff	Emergency Vehicles		Total Vehicles
Morning Peak Hour *	Morning Peak Hour**		Morning Peak Hour
In 8	In 2	In 10	
Out 8	Out 2	Out 10	
16	4	20	
* Shift change at 0800			
Evening Peak Hour*	Evening Peak Hour**		Evening Peak Hour**
In 4	In 2	In 6	
Out 4	Out 2	Out 6	
8	4	12	
Daily	Daily**		Daily
In 8	In 24	In 32	
Out 8	Out 24	Out 32	
16	48	64	

* No staff change, "other"

**Responses (based on existing Freeman St 12 calls per 24 hr shift - one call per 2 hours)

for estimating assume 1 call per peak hour

average 2 vehicles per response

As shown in Table 4, the proposed development is expected to generate 20 vehicles trips (10 entering and 10 exiting) during the weekday AM peak hour and 12 vehicles trips (6 entering and 6 exiting) during the weekday PM peak hour.

It is also noted, that with the construction of the proposed Fire Station on Prospect Street, the existing Fire Station on Freeman Street would be closed and emergency vehicle impact on the downtown traffic flow and signal operations will be reduced.

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Trip Distribution

Having estimated project-generated vehicle trips, the next step is to determine the distribution of project traffic and assign these trips to the local roadway network. The distribution of the proposed Fire Station traffic is based on two factors: staff arrival and departure and call responses. Staff arrival and departure is based on existing travel patterns within the study area during the morning peak. Accordingly, approximately 72% of the staff traffic is expected to and from the south on Prospect Street and 38% is expected to and from the north.

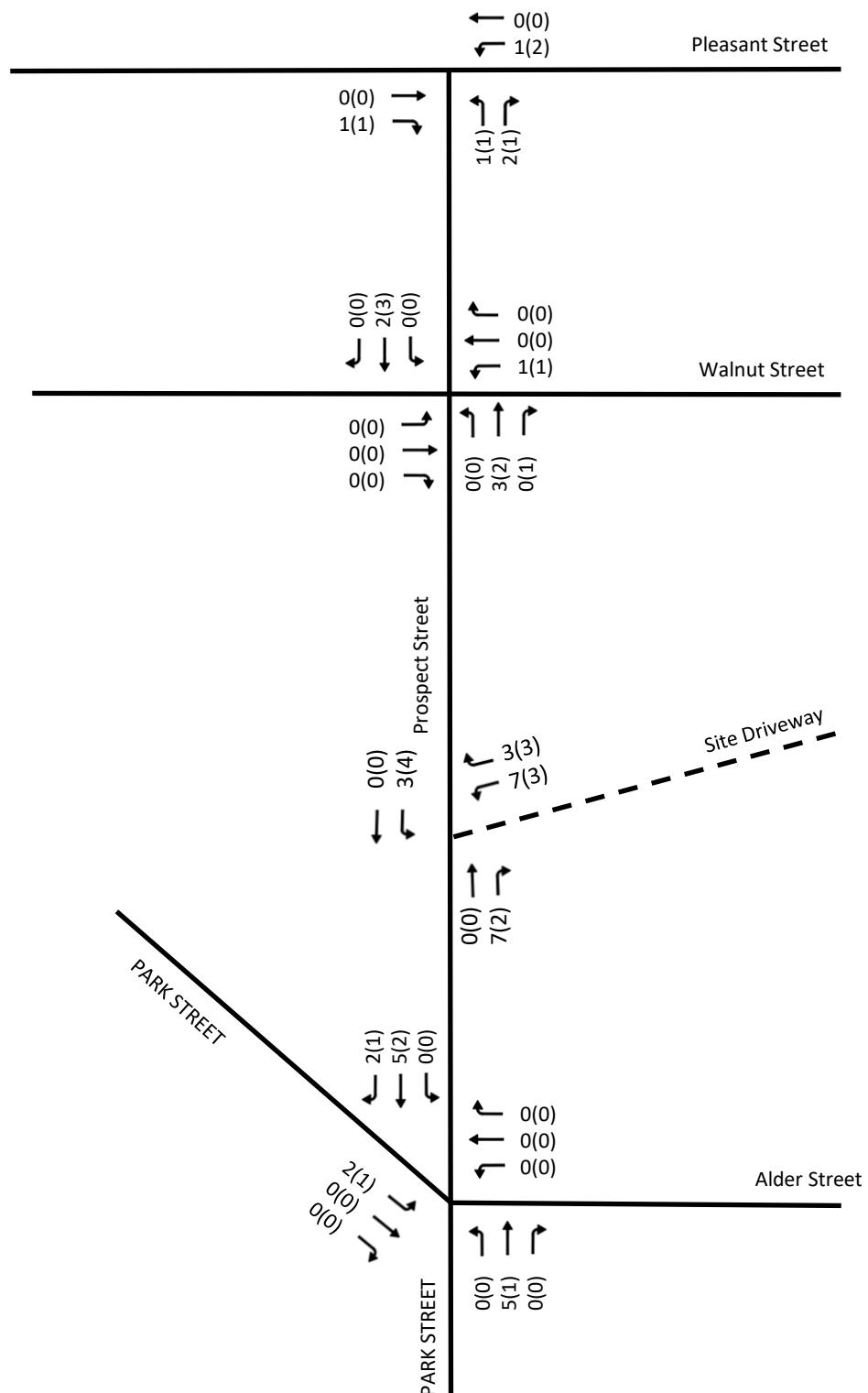
Based on discussions with the Fire Department and the coverage area of the station, the primary emergency response route will be via the Park Street intersection and all non-emergency responses will be via the Park Street intersection. It is therefore assumed that 75% of fire apparatus exiting and entering the station will travel through the Park Street intersection. At Park Street the majority (65%) of responses are expected to be to/from the north.

All site traffic at the remaining intersections is distributed based on existing distribution percentages.

The proposed development will result in minor increases in traffic on the study area roadways. As shown on Figure 7, traffic-volume increases beyond the study area during the peak hours are expected to be in the range of 3 to 9 vehicles trips. These increases represent, on average, one additional vehicle trip approximately every 9 minutes to every 20 minutes during the peak hours. Traffic distribution calculations are provided in the Appendix.

Build Traffic Volumes

Based on the traffic generation and distribution estimates for this project, the traffic volumes associated with the proposed development were assigned to the roadway network. The site-generated traffic networks are shown on Figure 4 for the weekday AM and weekday PM peak hours. The site-generated traffic volumes were then combined with the 2029 No-Build traffic volumes to develop the 2029 Build peak-hour traffic-volume networks. The 2029 Build weekday AM and weekday PM peak hour traffic volumes are illustrated on Figure 8.



XX(XX) = WEEKDAY AM (WEEKDAY PM)

GPI

Greenman-Pedersen, Inc.
FIRE STATION NO. 1 - STOUGHTON, MASSACHUSETTS

FIGURE 2
WEEKDAY SITE-GENERATED
PEAK HOUR TRAFFIC VOLUMES

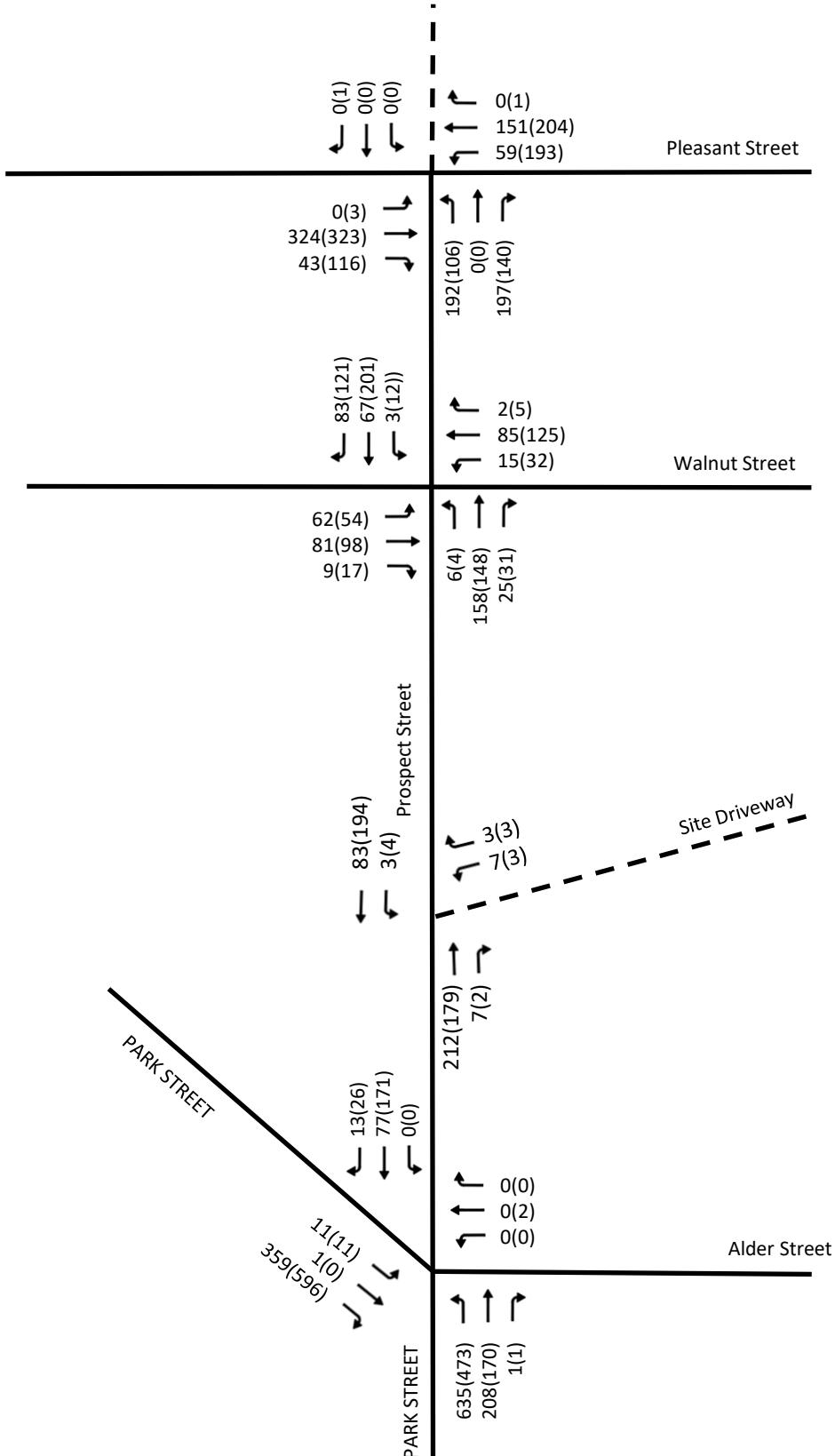


FIGURE 2
2029 BUILD CONDITIONS
PEAK HOUR TRAFFIC VOLUMES

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CAPACITY AND QUEUE ANALYSIS

Capacity and queue analyses were conducted at all study area locations under 2022 Existing, 2029 No-Build, and 2029 Build traffic-volume conditions. The impact of site-generated traffic can be measured by comparing 2029 No-Build conditions to 2029 Build conditions.

Methodology

The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM)⁴ and is described in the Appendix.

For unsignalized intersections, the 95th percentile queue represents the length of queue of the critical minor-street movement that is not expected to be exceeded 95 percent of the time during the analysis period (typically one hour). In this case, the queue length is a function of the capacity of the movement and the movement's degree of saturation.

Analysis Results

The results of the level-of-service (LOS) and queue analyses are shown in Table 5 and are discussed below. Capacity and queue analyses were conducted at the study area intersections utilizing *Synchro* software.⁵ The capacity and queue analysis worksheets for all conditions are provided in the Appendix.

Pleasant Street at Prospect Street

The northbound Prospect Street approach to Pleasant Street currently operates at a level-of-service D during the weekday morning and evening peak hours. Under future 2029 No-Build conditions, without the project the approach worsens to LOS E during the morning peak hour and LOS F during the evening peak hour.

However, the proposed fire station is anticipated to only add 3 vehicles during the morning peak hour and 2 vehicles in the evening peak hour, to the northbound approach. This represents one additional vehicle every twenty to thirty minutes. Furthermore, the site-generated vehicle trips are not expected to increase queues on this movement by more than one vehicle or increase the delay on the approach by more than 3 seconds. All other critical movements through this intersection are expected to operate at LOS A or better during all analysis time periods.

Prospect Street at Walnut Street

All movements at the Prospect Street intersection with Walnut Street are anticipated to operate at LOS B or better under all analysis time periods with queues not exceeding one vehicle.

⁴ *Highway Capacity Manual 6th Edition*, Transportation Research Board; Washington, D.C.; 2016.

⁵ *Synchro plus SimTraffic 11*; Trafficware LLC.; Sugar Land, TX; 2019.

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Prospect Street at the Site Driveway

All movements at the site driveway intersection with Prospect Street are anticipated to operate at LOS B or better under all analysis time periods with queues not exceeding one vehicle.

Prospect Street at Park Street

The southbound left turn from Prospect Street approach to Park Street currently operates at a level-of-service D during the weekday morning peak hour and a LOS F during the weekday evening peak hours. Under future 2029 No-Build conditions, without the project the approach continues to operate at LOS D and LOS F during the morning and afternoon peak hours, respectively.

However, the proposed fire station is anticipated to only add 7 vehicles during the morning peak hour and 3 vehicles in the evening peak hour, with the majority (65%) expected to turn right from Prospect Street to Park Street. This represents one additional vehicle every nine to twenty minutes. Furthermore, the additional site-generated vehicle trips are not expected to increase queues on this movement by more than one vehicle or increase the delay on the approach by more than 5 seconds. All other critical movements through this intersection are expected to operate at LOS A or better during all analysis time periods.

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TABLE 5
Intersection Capacity Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing				2029 No-Build				2029 Build			
	V/C ^a	Del. ^b	LOS ^c	Queue ^d	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Prospect Street at Pleasant Street												
<i>Weekday AM:</i>												
Prospect Street NB approach	0.72	28.0	D	--/148	0.82	37.6	E	--/198	0.83	38.9	E	--/203
Pleasant Street EB left-turn	0.00	0.0	A	--<25	0.00	0.0	A	--<25	0.00	0.0	A	--<25
Pleasant Street WB left-turn	0.05	8.2	A	--<25	0.05	8.3	A	--<25	0.05	8.3	A	--<25
Prospect Street SB approach	0.00	0.0	A	--<25	0.00	0.0	A	--<25	0.00	0.0	A	--<25
<i>Weekday PM:</i>												
Prospect Street NB approach	0.68	34.6	D	--/118	0.81	51.4	F	--/168	0.83	53.8	F	--/175
Pleasant Street EB left-turn	0.00	0.0	A	--<25	0.00	7.6	A	--<25	0.00	7.6	A	--<25
Pleasant Street WB left-turn	0.16	8.8	A	--<25	0.18	9.0	A	--<25	0.18	9.0	A	--<25
Prospect Street SB approach	0.00	9.2	A	--<25	0.00	9.3	A	--<25	0.00	9.3	A	--<25
Prospect Street at Walnut Street												
<i>Weekday AM:</i>												
Prospect Street NB approach	0.26	9.4	A	--/25	0.28	9.7	A	--/28	0.29	9.7	A	--/30
Walnut Street EB approach	0.22	9.4	A	--<25	0.24	9.6	A	--<25	0.24	9.7	A	--<25
Walnut Street WB approach	0.15	8.9	A	--<25	0.16	9.1	A	--<25	0.16	9.1	A	--<25
Prospect Street SB approach	0.20	8.7	A	--<25	0.22	8.9	A	--<25	0.22	8.9	A	--<25
<i>Weekday PM:</i>												
Prospect Street NB approach	0.26	10.1	B	--/25	0.29	10.6	B	--/30	0.30	10.7	B	--/30
Walnut Street EB approach	0.26	10.4	B	--/25	0.29	11.0	B	--/30	0.29	11.0	B	--/30
Walnut Street WB approach	0.25	10.5	B	--/25	0.28	11.0	B	--/28	0.28	11.0	B	--/28
Prospect Street SB approach	0.45	11.9	B	--/60	0.50	13.0	B	--/70	0.50	13.1	B	--/70

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^c Level of service.

^d Average/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

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TABLE 6 (continued)
Intersection Capacity Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing				2029 No-Build				2029 Build			
	V/C ^a	Del. ^b	LOS ^c	Queue ^d	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Prospect Street at Park Street												
Weekday AM:												
Park Street EB left-turn	0.01	9.5	A	--<25	0.01	9.7	A	--<25	0.02	9.7	A	--<25
Prospect Street SB left-turn	0.30	27.0	D	--/30	0.37	32.3	D	--/40	0.40	33.6	D	--/45
Prospect Street SB right-turn	0.02	13.6	B	--<25	0.03	14.2	B	--<25	0.03	14.3	B	--<25
Weekday PM:												
Park Street EB left-turn	0.01	8.8	A	--<25	0.01	8.9	A	--<25	0.01	8.9	A	--<25
Prospect Street SB left-turn	0.75	57.4	F	--/128	0.90	89.6	F	--/175	0.92	94.6	F	--/180
Prospect Street SB right-turn	0.05	12.0	B	--<25	0.05	12.4	B	--<25	0.06	12.4	B	--<25
Prospect Street at Site Driveway												
Weekday AM:												
Site Driveway WB approach	--	--	--	--/--	--	--	--	--/--	0.02	10.2	B	--<25
Prospect Street SB left-turn	--	--	--	--/--	--	--	--	--/--	0.00	7.7	A	--<25
Weekday PM:												
Site Driveway WB approach	--	--	--	--/--	--	--	--	--/--	0.01	10.2	B	--<25
Prospect Street SB left-turn	--	--	--	--/--	--	--	--	--/--	0.00	7.6	A	--<25

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^c Level of service.

^d Average/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

TECHNICAL MEMORANDUM

CONCLUSIONS

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed residential development. Conclusions of this effort are presented below.

- The proposed development is to be located at 400 Prospect Street in Stoughton, Massachusetts and consists of a 5 Bay 25,200 s.f. Fire Station to replace the existing station on Freeman Street.
- The station will be staffed by 8 fire fighters operating on a 24-hour shift, with shift changes at 0800, therefore there is minimal non-emergency vehicle activity at the site during the evening peak hour.
- Available sight distances (both SSD and ISD) at the proposed driveway intersection with Prospect Street exceed AASHTO standards for travel speed in excess of 45 mph along Prospect Street, which is a 30 mph thickly settled speed zone with 85th percentile observed travel speeds of less than 37 mph.
- The closure of the Fire Station on Freeman Street will have a net positive impact on traffic operations through the town square by reducing the frequency of emergency vehicle pre-empting the coordinated signal system.
- Prospect at Pleasant Street and Prospect at Park Street experienced crash rates below the state and District-wide averages for unsignalized intersections, indicating no significant safety issue exists.
- The Prospect Street at Walnut Street intersection experiences a higher-than-average crash rate. DYCL markings should be provided along the Walnut Street approaches and new STOP signs installed on all four approaches to improve intersection visibility.
- The proposed development is expected to generate 20 vehicles trips (10 entering and 10 exiting) during the weekday AM peak hour and 12 vehicles trips (6 entering and 6 exiting) during the weekday PM peak hour.
- Traffic volume increases beyond the study area during the peak hours are expected to be in the range of 3 to 9 vehicles trips. These increases represent, on average, one additional vehicle trip approximately every 9 minutes to every 20 minutes during the peak hours.
- At the Prospect Street at Pleasant Street intersection the proposed fire station is anticipated to only add 3 vehicles during the morning peak hour and 2 vehicles in the evening peak hour, to the northbound Prospect Street approach. This represents one additional vehicle every twenty to thirty minutes. Furthermore, the site-generated vehicle trips are not expected to increase queues on this movement by more than one vehicle or increase the delay on the approach by more than 3 seconds. All other critical movements through this intersection are expected to operate at LOS A or better during all analysis time periods.

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- All movements at the Prospect Street at Walnut Street intersection as well as the site driveway intersection with Prospect Street are anticipated to operate at LOS B or better under all analysis time periods with queues not exceeding one vehicle.
- At the Prospect Street at Park Street intersection, the proposed fire station is anticipated to only add 7 vehicles during the morning peak hour and 3 vehicles in the evening peak hour, with the majority (65%) expected to turn right from Prospect Street to Park Street. This represents one additional vehicle every nine to twenty minutes. Furthermore, the additional site-generated vehicle trips are not expected to increase queues on this movement by more than one vehicle or increase the delay on the approach by more than 5 seconds. All other critical movements through this intersection are expected to operate at LOS A or better during all analysis time periods.

Based on the results of the study, the additional traffic generated by the proposed fire station can be safely and efficiently accommodated by the existing roadway network. No additional project-specific mitigation is warranted based on the incremental impacts of the proposed development.

However, as part of the project, the following mitigation is proposed:

Pleasant Street at Prospect Street (Figure 9)

- Install new STOP Sign on the Prospect Street approach
- Install new STOP Line with "STOP" Legend on the Prospect Street approach
- Install new DYCL and Edge lines within 200' of the intersection.



Figure 9 Prospect Street at Pleasant Street

TECHNICAL MEMORANDUM

Prospect Street at Walnut Street (Figure 10)

- Install new STOP Signs on all approaches
- Install new STOP Lines with "STOP" Legends on all approaches
- Install new DYCL within 200' of the intersection.

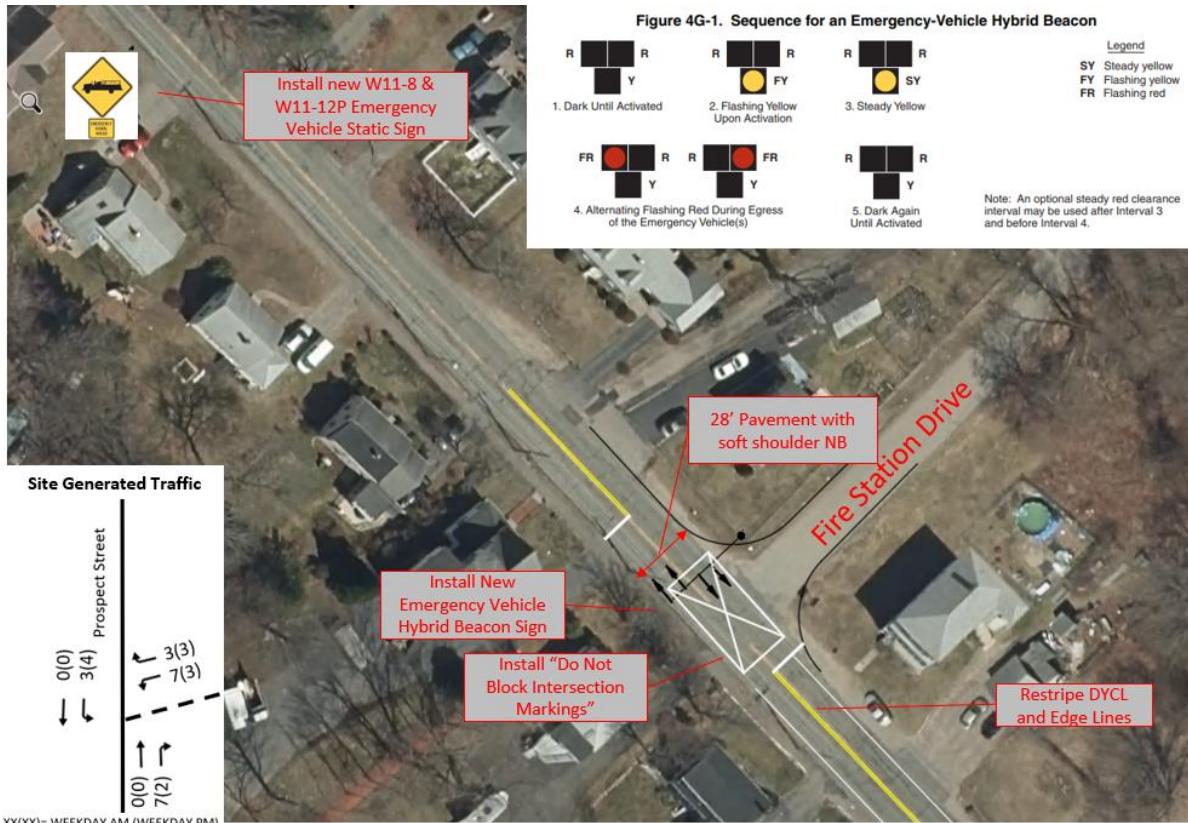


Figure 10- Prospect Street at Walnut Street

TECHNICAL MEMORANDUM

Prospect Street at Fire Station Drive (Figure 11)

- Install Emergency Vehicle Beacon Signal
- Install new STOP Lines on Prospect Street approaches
- Install “Do Not Block” intersection pavement markings
- Install new DYCL withing 200' of driveway



TECHNICAL MEMORANDUM

Prospect Street at Park Street (Route 27) (Figure 12)

- Install Emergency Vehicle Beacon Signal
- Install new STOP Lines on Prospect Street approaches
- Install “Do Not Block” intersection pavement markings
- Install new DYCL withing 200' of driveway
- Updated 2023 traffic volumes DO NOT Warrant Traffic Signal Warrants based on MassDOT Standards

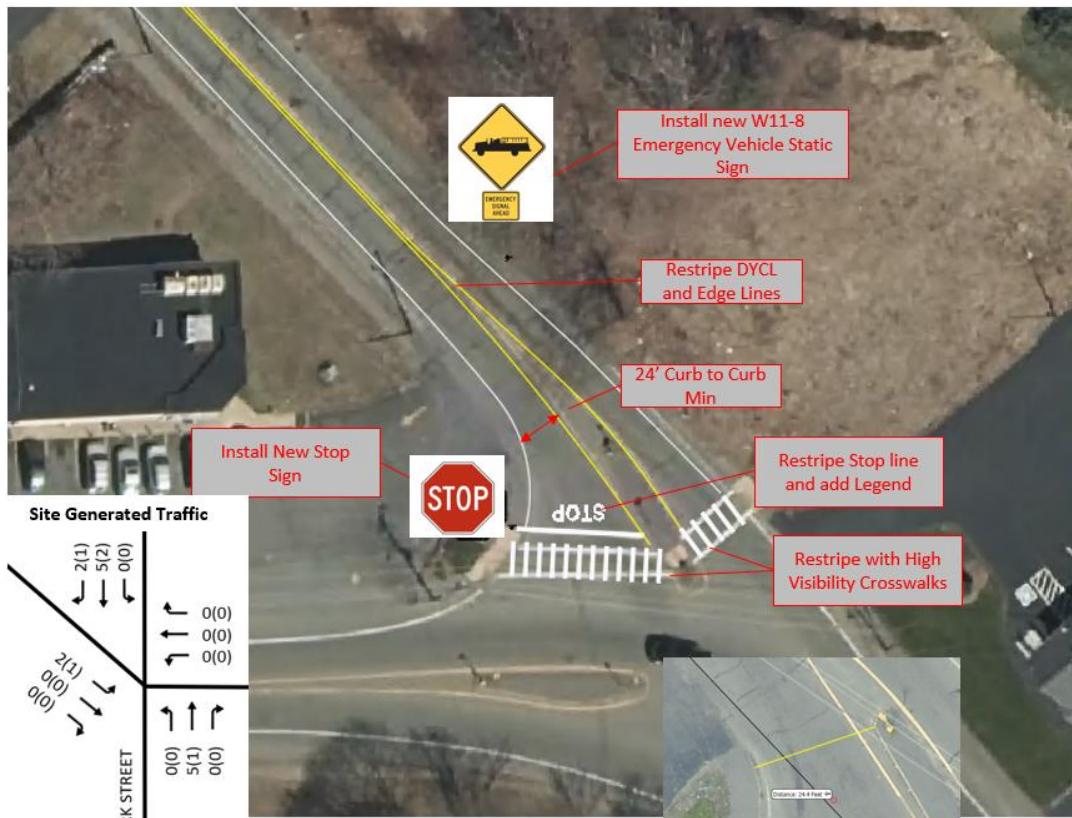


Figure 12 Prospect Street at Park Street (Route 27)

TECHNICAL MEMORANDUM

- APPENDIX

- ***Traffic Count Data***
- ***Traffic Signal Warrants***
- ***MassDOT Crash Rate Worksheets***
 - ***Sight Distance Calculations***
 - ***Trip Generation Calculations***
 - ***Capacity Analysis Methodology***
- ***Capacity and Queue Analysis Worksheets***

TECHNICAL MEMORANDUM**TRAFFIC COUNT DATA**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Prospect St/Park St S/O Park St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_006

DAILY TOTALS				NB 7,442	SB 7,584	EB 0	WB 0					Total 15,026	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
0:00	17	16	0	0	33		12:00	111	129	0	0	240	
0:15	17	16	0	0	33		12:15	116	113	0	0	229	
0:30	13	11	0	0	24		12:30	118	121	0	0	239	
0:45	14	61	11	54	25	115	12:45	116	461	110	473	226	934
1:00	10	10	0	0	20		13:00	104	120	0	0	224	
1:15	11	10	0	0	21		13:15	115	125	0	0	240	
1:30	9	5	0	0	14		13:30	99	118	0	0	217	
1:45	1	31	3	28	4	59	13:45	112	430	122	485	234	915
2:00	9	4	0	0	13		14:00	129	121	0	0	250	
2:15	5	7	0	0	12		14:15	119	133	0	0	252	
2:30	8	6	0	0	14		14:30	120	169	0	0	289	
2:45	5	27	3	20	8	47	14:45	97	465	158	581	255	1046
3:00	7	0	0	0	7		15:00	130	174	0	0	304	
3:15	8	8	0	0	16		15:15	129	145	0	0	274	
3:30	5	6	0	0	11		15:30	128	172	0	0	300	
3:45	11	31	5	19	16	50	15:45	136	523	156	647	292	1170
4:00	13	7	0	0	20		16:00	118	182	0	0	300	
4:15	16	12	0	0	28		16:15	137	156	0	0	293	
4:30	28	12	0	0	40		16:30	177	162	0	0	339	
4:45	23	80	20	51	43	131	16:45	127	559	192	692	319	1251
5:00	36	21	0	0	57		17:00	137	173	0	0	310	
5:15	45	31	0	0	76		17:15	131	155	0	0	286	
5:30	82	43	0	0	125		17:30	113	157	0	0	270	
5:45	93	256	38	133	0	389	17:45	96	477	133	618	229	1095
6:00	103	40	0	0	143		18:00	94	118	0	0	212	
6:15	117	60	0	0	177		18:15	76	105	0	0	181	
6:30	153	77	0	0	230		18:30	82	98	0	0	180	
6:45	148	521	76	253	0	774	18:45	89	341	99	420	188	761
7:00	131	73	0	0	204		19:00	81	117	0	0	198	
7:15	136	101	0	0	237		19:15	82	73	0	0	155	
7:30	123	102	0	0	225		19:30	77	73	0	0	150	
7:45	167	557	105	381	0	938	19:45	66	306	77	340	143	646
8:00	148	118	0	0	266		20:00	65	66	0	0	131	
8:15	144	137	0	0	281		20:15	64	69	0	0	133	
8:30	121	99	0	0	220		20:30	53	66	0	0	119	
8:45	115	528	105	459	0	987	20:45	39	221	56	257	95	478
9:00	110	98	0	0	208		21:00	46	52	0	0	98	
9:15	118	99	0	0	217		21:15	47	50	0	0	97	
9:30	95	108	0	0	203		21:30	34	33	0	0	67	
9:45	93	416	98	403	0	819	21:45	34	161	35	170	69	331
10:00	112	75	0	0	187		22:00	35	27	0	0	62	
10:15	94	90	0	0	184		22:15	31	38	0	0	69	
10:30	89	104	0	0	193		22:30	27	28	0	0	55	
10:45	100	395	109	378	0	773	22:45	19	112	20	113	39	225
11:00	96	112	0	0	208		23:00	26	33	0	0	59	
11:15	113	121	0	0	234		23:15	17	38	0	0	55	
11:30	105	132	0	0	237		23:30	24	29	0	0	53	
11:45	88	402	113	478	0	880	23:45	14	81	31	131	45	212
TOTALS	3305				5962	TOTALS	4137	4927				9064	
SPLIT %	55.4%				39.7%	SPLIT %	45.6%	54.4%				60.3%	
DAILY TOTALS				NB 7,442	SB 7,584	EB 0	WB 0						Total 15,026

AM Peak Hour	7:30	11:15	7:30	PM Peak Hour	16:15	16:00		16:15
AM Pk Volume	582	495	1044	PM Pk Volume	578	692		1261
Pk Hr Factor	0.871	0.938	0.929	Pk Hr Factor	0.816	0.901		0.930
7 - 9 Volume	1085	840	0	7:30	1925	1036	0	2346
7 - 9 Peak Hour	7:30	7:30		4 - 6 Volume	1310	0	0	16:15
7 - 9 Pk Volume	582	462	0	4 - 6 Peak Hour	16:15	16:00		1261
Pk Hr Factor	0.871	0.843	0.000	4 - 6 Pk Volume	578	692	0	0.930
				Pk Hr Factor	0.816	0.901	0.000	

VOLUME

Park St W/O Prospect St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_005

DAILY TOTALS				NB 0	SB 0	EB 6,478	WB 6,016					Total 12,494
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
0:00	0	0	17	13	30	12:00	0	0	114	92	206	
0:15	0	0	13	12	25	12:15	0	0	98	99	197	
0:30	0	0	8	10	18	12:30	0	0	110	93	203	
0:45	0	0	7	45	19 92	12:45	0	0	95	417	186 792	
1:00	0	0	9	4	13	13:00	0	0	96	93	189	
1:15	0	0	8	11	19	13:15	0	0	107	85	192	
1:30	0	0	5	9	14	13:30	0	0	102	86	188	
1:45	0	0	3	25	1 25	13:45	0	0	107	412	203 772	
2:00	0	0	4	9	13	14:00	0	0	103	101	204	
2:15	0	0	7	2	9	14:15	0	0	108	99	207	
2:30	0	0	5	6	11	14:30	0	0	140	92	232	
2:45	0	0	3	19	4 21	14:45	0	0	136	487	217 860	
3:00	0	0	0	7	7	15:00	0	0	140	100	240	
3:15	0	0	8	7	15	15:15	0	0	125	101	226	
3:30	0	0	5	5	10	15:30	0	0	130	94	224	
3:45	0	0	6	19	10 29	15:45	0	0	129	524	242 932	
4:00	0	0	6	12	18	16:00	0	0	147	106	253	
4:15	0	0	13	13	26	16:15	0	0	129	107	236	
4:30	0	0	11	25	36	16:30	0	0	138	129	267	
4:45	0	0	15	45	18 68	16:45	0	0	163	577	261 1017	
5:00	0	0	18	32	50	17:00	0	0	149	108	257	
5:15	0	0	30	35	65	17:15	0	0	124	102	226	
5:30	0	0	40	72	112	17:30	0	0	130	92	222	
5:45	0	0	36	124	74 213	17:45	0	0	113	516	197 902	
6:00	0	0	35	80	115	18:00	0	0	91	78	169	
6:15	0	0	61	99	160	18:15	0	0	94	72	166	
6:30	0	0	67	121	188	18:30	0	0	91	69	160	
6:45	0	0	67	230	116 416	18:45	0	0	82	358	160 655	
7:00	0	0	61	99	160	19:00	0	0	94	66	160	
7:15	0	0	98	101	199	19:15	0	0	64	70	134	
7:30	0	0	86	105	191	19:30	0	0	64	57	121	
7:45	0	0	94	339	131 436	19:45	0	0	62	284	118 533	
8:00	0	0	106	109	215	20:00	0	0	61	54	115	
8:15	0	0	112	118	230	20:15	0	0	59	55	114	
8:30	0	0	88	99	187	20:30	0	0	58	42	100	
8:45	0	0	93	399	95 421	20:45	0	0	49	227	82 411	
9:00	0	0	89	91	180	21:00	0	0	47	37	84	
9:15	0	0	85	88	173	21:15	0	0	38	36	74	
9:30	0	0	92	84	176	21:30	0	0	30	27	57	
9:45	0	0	87	353	72 335	21:45	0	0	31	146	58 273	
10:00	0	0	63	95	158	22:00	0	0	21	29	50	
10:15	0	0	74	81	155	22:15	0	0	31	23	54	
10:30	0	0	89	65	154	22:30	0	0	24	20	44	
10:45	0	0	87	313	87 328	22:45	0	0	17	93	33 181	
11:00	0	0	99	72	171	23:00	0	0	30	27	57	
11:15	0	0	96	86	182	23:15	0	0	35	12	47	
11:30	0	0	121	83	204	23:30	0	0	25	22	47	
11:45	0	0	97	413	74 315	23:45	0	0	23	113	37 188	
TOTALS			2324	2654	4978	TOTALS			4154	3362	7516	
SPLIT %			46.7%	53.3%	39.8%	SPLIT %			55.3%	44.7%	60.2%	
DAILY TOTALS				NB 0	SB 0	EB 6,478	WB 6,016					Total 12,494
AM Peak Hour			11:30	7:30	7:30	PM Peak Hour			16:15	15:45	16:15	
AM Pk Volume			430	463	861	PM Pk Volume			579	455	1021	
Pk Hr Factor			0.888	0.884	0.936	Pk Hr Factor			0.888	0.882	0.956	
7 - 9 Volume	0	0	738	857	1595	4 - 6 Volume	0	0	1093	826	1919	
7 - 9 Peak Hour			7:45	7:30	7:30	4 - 6 Peak Hour			16:15	16:15	16:15	
7 - 9 Pk Volume	0	0	400	463	861	4 - 6 Pk Volume	0	0	579	442	1021	
Pk Hr Factor	0.000	0.000	0.893	0.884	0.936	Pk Hr Factor	0.000	0.000	0.888	0.857	0.956	

VOLUME

Pleasant St N/O Prospect St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_001

DAILY TOTALS				NB 4,306	SB 3,078	EB 0	WB 0			Total 7,384	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
0:00	5	9	0	0	14	12:00	49	37	0	0	86
0:15	7	9	0	0	16	12:15	68	41	0	0	109
0:30	6	6	0	0	12	12:30	60	44	0	0	104
0:45	4	22	2	26	48	12:45	66	243	52	174	417
1:00	3	6	0	0	9	13:00	66	46	0	0	112
1:15	5	3	0	0	8	13:15	63	41	0	0	104
1:30	2	3	0	0	5	13:30	61	41	0	0	102
1:45	1	11	1	13	24	13:45	59	249	45	173	422
2:00	1	2	0	0	3	14:00	66	48	0	0	114
2:15	0	2	0	0	2	14:15	70	55	0	0	125
2:30	3	3	0	0	6	14:30	90	63	0	0	153
2:45	3	7	2	9	16	14:45	86	312	62	228	540
3:00	3	2	0	0	5	15:00	82	78	0	0	160
3:15	5	5	0	0	10	15:15	92	64	0	0	156
3:30	4	2	0	0	6	15:30	75	64	0	0	139
3:45	6	18	0	9	27	15:45	96	345	72	278	623
4:00	8	0	0	0	8	16:00	96	75	0	0	171
4:15	7	2	0	0	9	16:15	68	78	0	0	146
4:30	16	3	0	0	19	16:30	79	86	0	0	165
4:45	16	47	5	10	57	16:45	98	341	75	314	655
5:00	20	8	0	0	28	17:00	104	79	0	0	183
5:15	35	2	0	0	37	17:15	97	70	0	0	167
5:30	28	8	0	0	36	17:30	70	81	0	0	151
5:45	42	125	7	25	150	17:45	69	340	74	304	644
6:00	48	14	0	0	62	18:00	40	53	0	0	93
6:15	48	11	0	0	59	18:15	49	56	0	0	105
6:30	59	27	0	0	86	18:30	43	48	0	0	91
6:45	74	229	26	78	307	18:45	35	167	53	210	377
7:00	94	37	0	0	131	19:00	44	42	0	0	86
7:15	71	41	0	0	112	19:15	49	35	0	0	84
7:30	90	42	0	0	132	19:30	40	45	0	0	85
7:45	94	349	35	155	504	19:45	29	162	20	142	304
8:00	113	45	0	0	158	20:00	35	31	0	0	66
8:15	106	54	0	0	160	20:15	39	33	0	0	72
8:30	84	47	0	0	131	20:30	25	25	0	0	50
8:45	65	368	53	199	567	20:45	34	133	19	108	241
9:00	56	36	0	0	92	21:00	30	16	0	0	46
9:15	71	38	0	0	109	21:15	17	26	0	0	43
9:30	63	37	0	0	100	21:30	17	21	0	0	38
9:45	57	247	30	141	388	21:45	10	74	15	78	152
10:00	44	41	0	0	85	22:00	14	12	0	0	26
10:15	50	45	0	0	95	22:15	7	14	0	0	21
10:30	58	34	0	0	92	22:30	12	10	0	0	22
10:45	62	214	32	152	366	22:45	7	40	10	46	86
11:00	59	39	0	0	98	23:00	10	12	0	0	22
11:15	54	34	0	0	88	23:15	7	17	0	0	24
11:30	59	34	0	0	93	23:30	5	13	0	0	18
11:45	64	236	47	154	390	23:45	5	27	10	52	79
TOTALS	1873	971			2844	TOTALS	2433	2107			4540
SPLIT %	65.9%	34.1%			38.5%	SPLIT %	53.6%	46.4%			61.5%

DAILY TOTALS				NB 4,306	SB 3,078	EB 0	WB 0			Total 7,384
AM Peak Hour	7:30	8:00		7:30	PM Peak Hour	16:30	16:15			16:30
AM Pk Volume	403	199		579	PM Pk Volume	378	318			688
Pk Hr Factor	0.892	0.921		0.905	Pk Hr Factor	0.909	0.924			0.940
7 - 9 Volume	717	354	0	1071	4 - 6 Volume	681	618	0	0	1299
7 - 9 Peak Hour	7:30	8:00		7:30	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	403	199	0	579	4 - 6 Pk Volume	378	318	0	0	688
Pk Hr Factor	0.892	0.921	0.000	0.905	Pk Hr Factor	0.909	0.924	0.000	0.000	0.940

VOLUME

Pleasant St S/O Prospect St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_003

DAILY TOTALS				NB 4,272	SB 2,926	EB 0	WB 0					Total 7,198	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
0:00	4	11	0	0	15		12:00	56	44	0	0	100	
0:15	4	8	0	0	12		12:15	67	37	0	0	104	
0:30	6	4	0	0	10		12:30	64	47	0	0	111	
0:45	3	17	1	24	41		12:45	68	255	46	174	429	
1:00	3	9	0	0	12		13:00	73	48	0	0	121	
1:15	3	1	0	0	4		13:15	69	42	0	0	111	
1:30	2	4	0	0	6		13:30	65	43	0	0	108	
1:45	1	9	1	15	24		13:45	58	265	44	177	442	
2:00	1	1	0	0	2		14:00	58	46	0	0	104	
2:15	0	2	0	0	2		14:15	85	48	0	0	133	
2:30	2	5	0	0	7		14:30	80	62	0	0	142	
2:45	1	4	1	9	13		14:45	85	308	52	208	516	
3:00	3	2	0	0	5		15:00	84	54	0	0	138	
3:15	4	1	0	0	5		15:15	84	53	0	0	137	
3:30	3	2	0	0	5		15:30	104	53	0	0	157	
3:45	6	16	1	6	22		15:45	93	365	56	216	581	
4:00	8	1	0	0	9		16:00	113	58	0	0	171	
4:15	7	1	0	0	8		16:15	70	65	0	0	135	
4:30	12	6	0	0	18		16:30	86	67	0	0	153	
4:45	19	46	8	16	62		16:45	96	365	50	240	605	
5:00	19	12	0	0	31		17:00	99	58	0	0	157	
5:15	29	9	0	0	38		17:15	114	61	0	0	175	
5:30	25	13	0	0	38		17:30	74	50	0	0	124	
5:45	30	103	19	53	156		17:45	82	369	67	236	605	
6:00	36	27	0	0	63		18:00	62	47	0	0	109	
6:15	36	22	0	0	58		18:15	52	43	0	0	95	
6:30	51	41	0	0	92		18:30	42	43	0	0	85	
6:45	57	180	48	138	318		18:45	50	206	44	177	383	
7:00	87	66	0	0	153		19:00	66	34	0	0	100	
7:15	69	67	0	0	136		19:15	51	28	0	0	79	
7:30	71	40	0	0	111		19:30	46	42	0	0	88	
7:45	73	300	49	222	522		19:45	34	197	28	132	329	
8:00	78	43	0	0	121		20:00	38	25	0	0	63	
8:15	86	52	0	0	138		20:15	40	24	0	0	64	
8:30	69	55	0	0	124		20:30	25	20	0	0	45	
8:45	58	291	52	202	493		20:45	39	142	17	86	228	
9:00	49	49	0	0	98		21:00	28	20	0	0	48	
9:15	66	39	0	0	105		21:15	21	17	0	0	38	
9:30	57	30	0	0	87		21:30	20	16	0	0	36	
9:45	56	228	34	152	380		21:45	15	84	8	61	145	
10:00	41	39	0	0	80		22:00	13	12	0	0	25	
10:15	51	44	0	0	95		22:15	13	12	0	0	25	
10:30	58	29	0	0	87		22:30	9	15	0	0	24	
10:45	59	209	36	148	357		22:45	11	46	11	50	96	
11:00	62	36	0	0	98		23:00	13	9	0	0	22	
11:15	56	32	0	0	88		23:15	10	16	0	0	26	
11:30	57	38	0	0	95		23:30	5	8	0	0	13	
11:45	56	231	41	147	378		23:45	8	36	4	37	73	
TOTALS	1634	1132			2766		TOTALS	2638	1794			4432	
SPLIT %	59.1%	40.9%			38.4%		SPLIT %	59.5%	40.5%			61.6%	
DAILY TOTALS				NB 4,272	SB 2,926	EB 0	WB 0					Total 7,198	
AM Peak Hour	7:30	6:30			7:00		PM Peak Hour	16:30	15:45			16:30	
AM Pk Volume	308	222			522		PM Pk Volume	395	246			631	
Pk Hr Factor	0.895	0.828			0.853		Pk Hr Factor	0.866	0.918			0.901	
7 - 9 Volume	591	424	0	0	1015		4 - 6 Volume	734	476	0	0	1210	
7 - 9 Peak Hour	7:30	7:00			7:00		4 - 6 Peak Hour	16:30	16:00			16:30	
7 - 9 Pk Volume	308	222	0	0	522		4 - 6 Pk Volume	395	240	0	0	631	
Pk Hr Factor	0.895	0.828	0.000	0.000	0.853		Pk Hr Factor	0.866	0.896	0.000	0.000	0.901	

VOLUME

Pleasant St N/O Park St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_004

DAILY TOTALS				NB 1,670	SB 1,348	EB 0	WB 0			Total 3,018	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
0:00	3	3	0	0	6	12:00	27	28	0	0	55
0:15	5	1	0	0	6	12:15	26	20	0	0	46
0:30	4	2	0	0	6	12:30	30	19	0	0	49
0:45	3	15	3	9	24	12:45	25	108	17	84	42 192
1:00	3	2	0	0	5	13:00	18	27	0	0	45
1:15	2	2	0	0	4	13:15	26	16	0	0	42
1:30	1	1	0	0	2	13:30	20	26	0	0	46
1:45	0	6	2	7	13	13:45	21	85	19	88	40 173
2:00	0	2	0	0	2	14:00	30	17	0	0	47
2:15	2	0	0	0	2	14:15	24	31	0	0	55
2:30	3	2	0	0	5	14:30	34	34	0	0	68
2:45	1	6	1	5	11	14:45	20	108	28	110	48 218
3:00	0	1	0	0	1	15:00	35	39	0	0	74
3:15	1	2	0	0	3	15:15	34	28	0	0	62
3:30	1	1	0	0	2	15:30	27	49	0	0	76
3:45	1	3	0	4	7	15:45	34	130	25	141	59 271
4:00	1	2	0	0	3	16:00	21	43	0	0	64
4:15	4	0	0	0	4	16:15	34	30	0	0	64
4:30	4	3	0	0	7	16:30	50	36	0	0	86
4:45	4	13	2	7	20	16:45	33	138	33	142	66 280
5:00	6	2	0	0	8	17:00	38	27	0	0	65
5:15	11	1	0	0	12	17:15	31	36	0	0	67
5:30	9	4	0	0	13	17:30	31	24	0	0	55
5:45	19	45	3	10	55	17:45	23	123	22	109	45 232
6:00	24	3	0	0	27	18:00	11	25	0	0	36
6:15	20	6	0	0	26	18:15	18	18	0	0	36
6:30	26	10	0	0	36	18:30	18	15	0	0	33
6:45	38	108	12	31	139	18:45	15	62	22	80	37 142
7:00	38	19	0	0	57	19:00	12	26	0	0	38
7:15	33	6	0	0	39	19:15	16	18	0	0	34
7:30	24	10	0	0	34	19:30	23	13	0	0	36
7:45	40	135	18	53	188	19:45	14	65	13	70	27 135
8:00	39	18	0	0	57	20:00	12	5	0	0	17
8:15	28	18	0	0	46	20:15	10	15	0	0	25
8:30	22	12	0	0	34	20:30	14	9	0	0	23
8:45	24	113	17	65	178	20:45	4	40	6	35	10 75
9:00	26	14	0	0	40	21:00	11	6	0	0	17
9:15	35	11	0	0	46	21:15	9	14	0	0	23
9:30	19	22	0	0	41	21:30	7	6	0	0	13
9:45	21	101	11	58	159	21:45	8	35	7	33	15 68
10:00	22	16	0	0	38	22:00	7	11	0	0	18
10:15	23	29	0	0	52	22:15	7	7	0	0	14
10:30	19	14	0	0	33	22:30	8	4	0	0	12
10:45	20	84	25	84	168	22:45	3	25	5	27	8 52
11:00	24	19	0	0	43	23:00	6	6	0	0	12
11:15	35	20	0	0	55	23:15	4	3	0	0	7
11:30	27	22	0	0	49	23:30	3	5	0	0	8
11:45	21	107	15	76	183	23:45	2	15	6	20	8 35
TOTALS	736	409			1145	TOTALS	934	939			1873
SPLIT %	64.3%	35.7%			37.9%	SPLIT %	49.9%	50.1%			62.1%
DAILY TOTALS				NB 1,670	SB 1,348	EB 0	WB 0				
AM Peak Hour	7:15	10:15			7:30	PM Peak Hour	16:15	15:30			16:30
AM Pk Volume	136	87			195	PM Pk Volume	155	147			284
Pk Hr Factor	0.850	0.750			0.841	Pk Hr Factor	0.775	0.750			0.826
7 - 9 Volume	248	118	0	0	366	4 - 6 Volume	261	251	0	0	512
7 - 9 Peak Hour	7:15	7:45			7:30	4 - 6 Peak Hour	16:15	16:00			16:30
7 - 9 Pk Volume	136	66	0	0	195	4 - 6 Pk Volume	155	142	0	0	284
Pk Hr Factor	0.850	0.917	0.000	0.000	0.841	Pk Hr Factor	0.775	0.826	0.000	0.000	0.826

VOLUME

Prospect St E/O Pleasant St

Day: Tuesday
Date: 1/3/2023City: Stoughton
Project #: MA23_430001_002

DAILY TOTALS				NB 0	SB 0	EB 2,317	WB 2,239					Total 4,556
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
0:00	0	0	2	4	6	12:00	0	0	32	32	64	
0:15	0	0	3	5	8	12:15	0	0	29	26	55	
0:30	0	0	5	3	8	12:30	0	0	34	33	67	
0:45	0	0	4	14	8	12:45	0	0	33	128	57	243
1:00	0	0	1	5	6	13:00	0	0	37	35	72	
1:15	0	0	3	2	5	13:15	0	0	37	27	64	
1:30	0	0	1	2	3	13:30	0	0	25	22	47	
1:45	0	0	0	5	9	13:45	0	0	29	128	55	238
2:00	0	0	1	0	1	14:00	0	0	28	35	63	
2:15	0	0	1	1	2	14:15	0	0	58	36	94	
2:30	0	0	1	4	5	14:30	0	0	47	60	107	
2:45	0	0	1	4	7	14:45	0	0	46	179	81	345
3:00	0	0	0	0	0	15:00	0	0	68	39	107	
3:15	0	0	4	2	6	15:15	0	0	52	45	97	
3:30	0	0	1	1	2	15:30	0	0	71	36	107	
3:45	0	0	0	5	1	15:45	0	0	62	253	109	420
4:00	0	0	0	1	1	16:00	0	0	68	37	105	
4:15	0	0	4	4	8	16:15	0	0	69	47	116	
4:30	0	0	3	9	12	16:30	0	0	70	47	117	
4:45	0	0	5	12	21	16:45	0	0	73	280	127	465
5:00	0	0	4	9	13	17:00	0	0	60	50	110	
5:15	0	0	2	16	18	17:15	0	0	67	44	111	
5:30	0	0	4	11	15	17:30	0	0	65	31	96	
5:45	0	0	5	15	26	17:45	0	0	45	237	75	392
6:00	0	0	7	31	38	18:00	0	0	42	18	60	
6:15	0	0	5	26	31	18:15	0	0	38	29	67	
6:30	0	0	14	34	48	18:30	0	0	27	18	45	
6:45	0	0	11	37	48	18:45	0	0	40	147	58	230
7:00	0	0	23	62	85	19:00	0	0	40	24	64	
7:15	0	0	15	44	59	19:15	0	0	24	21	45	
7:30	0	0	31	52	83	19:30	0	0	24	21	45	
7:45	0	0	29	98	62	19:45	0	0	16	104	34	188
8:00	0	0	37	71	108	20:00	0	0	26	19	45	
8:15	0	0	35	52	87	20:15	0	0	25	15	40	
8:30	0	0	32	44	76	20:30	0	0	17	14	31	
8:45	0	0	30	134	38	20:45	0	0	16	84	27	143
9:00	0	0	19	38	57	21:00	0	0	10	13	23	
9:15	0	0	30	41	71	21:15	0	0	20	7	27	
9:30	0	0	29	21	50	21:30	0	0	13	11	24	
9:45	0	0	25	103	28	21:45	0	0	14	57	20	94
10:00	0	0	26	26	52	22:00	0	0	11	11	22	
10:15	0	0	28	30	58	22:15	0	0	12	4	16	
10:30	0	0	29	21	50	22:30	0	0	7	16	23	
10:45	0	0	23	106	33	22:45	0	0	7	37	11	72
11:00	0	0	26	25	51	23:00	0	0	10	6	16	
11:15	0	0	33	25	58	23:15	0	0	10	5	15	
11:30	0	0	26	29	55	23:30	0	0	6	1	7	
11:45	0	0	26	111	27	23:45	0	0	13	39	17	55
TOTALS			644	1027	1671	TOTALS			1673	1212	2885	
SPLIT %			38.5%	61.5%	36.7%	SPLIT %			58.0%	42.0%	63.3%	
DAILY TOTALS				NB 0	SB 0	EB 2,317	WB 2,239					Total 4,556
AM Peak Hour			8:00	7:30	7:30	PM Peak Hour			16:00	16:15	16:15	
AM Pk Volume			134	237	369	PM Pk Volume			280	198	470	
Pk Hr Factor			0.905	0.835	0.854	Pk Hr Factor			0.959	0.917	0.925	
7 - 9 Volume	0	0	232	425	657	4 - 6 Volume	0	0	517	340	857	
7 - 9 Peak Hour			8:00	7:30	7:30	4 - 6 Peak Hour			16:00	16:15	16:15	
7 - 9 Pk Volume	0	0	134	237	369	4 - 6 Pk Volume	0	0	280	198	470	
Pk Hr Factor	0.000	0.000	0.905	0.835	0.854	Pk Hr Factor	0.000	0.000	0.959	0.917	0.925	

AM Volumes		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds	Volume	Volume	%	Volume	Volume	%	Volume	Volume	%
AM % AM	0	10	36	153	364	150	31	0	748
AM Peak Hour		1%	2%	9%	21%	9%	2%	0%	43%
AM Peak Hour Volume	3	9	26	81	34	7	2	1	151
PM Volumes	1	18	75	283	417	170	21	3	988
PM % PM	0%	1%	4%	16%	24%	10%	1%	0%	57%
PM Peak Hour	23:00	17:00	15:00	17:00	15:00	12:00	17:00	17:00	15:00
PM Peak Hour Volume	1	5	17	46	69	32	4	2	146

Direction	Percentiles				ADT
	15th	50th	Average	85th	
North Bound	26	32	32	37	40
South Bound	21	26	26	30	34

Direction	Pace				% of Vehicles >= 25 MPH
	10mph Pace	# in Pace	% in Pace	Number of Vehicles >= 25 MPH	
North Bound	25 - 34	1217	70.10%	1596	91.94%
South Bound	20 - 29	1124	75.74%	955	64.35%

SPEED

Prospect St N/O Park St

Day: Wednesday
Date: 1/4/2023

City: Stoughton
Project #: MA23_430001_004s

South Bound		North Bound												
Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	5	8	6	1	0	0	0	0	0	0	0	20
1:00	0	0	2	5	4	0	0	0	0	0	0	0	0	11
2:00	0	0	5	5	3	2	0	0	0	0	0	0	0	15
3:00	0	0	1	3	1	0	0	0	0	0	0	0	0	5
4:00	0	0	3	5	1	0	0	0	0	0	0	0	0	9
5:00	0	0	2	8	3	0	0	0	0	0	0	0	0	15
6:00	0	3	6	15	13	0	0	0	0	0	0	0	0	37
7:00	2	0	7	17	18	2	0	0	0	0	0	0	0	46
8:00	2	6	19	42	9	3	0	0	0	0	0	0	0	81
9:00	2	4	11	23	11	1	0	0	0	0	0	0	0	52
10:00	2	4	14	33	24	3	0	0	0	0	0	0	0	80
11:00	2	4	17	65	8	3	0	0	0	0	0	0	0	99
12:00 PM	0	3	18	42	17	1	0	0	0	0	0	0	0	81
13:00	0	3	22	49	10	3	0	0	0	0	0	0	0	87
14:00	4	3	26	57	16	3	0	0	0	0	0	0	0	109
15:00	4	15	42	87	11	0	0	0	0	0	0	0	0	159
16:00	3	11	60	79	15	0	0	0	0	0	0	0	0	168
17:00	6	18	63	37	2	0	0	0	0	0	0	0	0	126
18:00	1	13	39	44	11	0	0	0	0	0	0	0	0	108
19:00	0	0	10	42	8	1	0	0	0	0	0	0	0	61
20:00	0	1	12	30	7	3	0	0	0	0	0	0	0	53
21:00	4	7	9	10	1	0	0	0	0	0	0	0	0	31
22:00	0	0	5	16	3	0	0	0	0	0	0	0	0	24
23:00	0	0	2	2	1	0	0	0	0	0	0	0	0	7
Totals	32	97	400	724	27									1484
% of Totals	2%	7%	27%	49%	14%									100%

Direction	Percentiles			Off Peak Volumes		
	15th	50th	Average	85th	95th	ADT
North Bound	26	32	32	37	40	1736
South Bound	21	26	26	30	34	1484
Direction	10mph Pace	# in Pace	% in Pace	Number of Vehicles > = 25 MPH	% of Vehicles > = 25 MPH	
North Bound	25 - 34	1217	70.10%	1596	91.94%	
South Bound	20 - 29	1124	75.74%	955	64.35%	

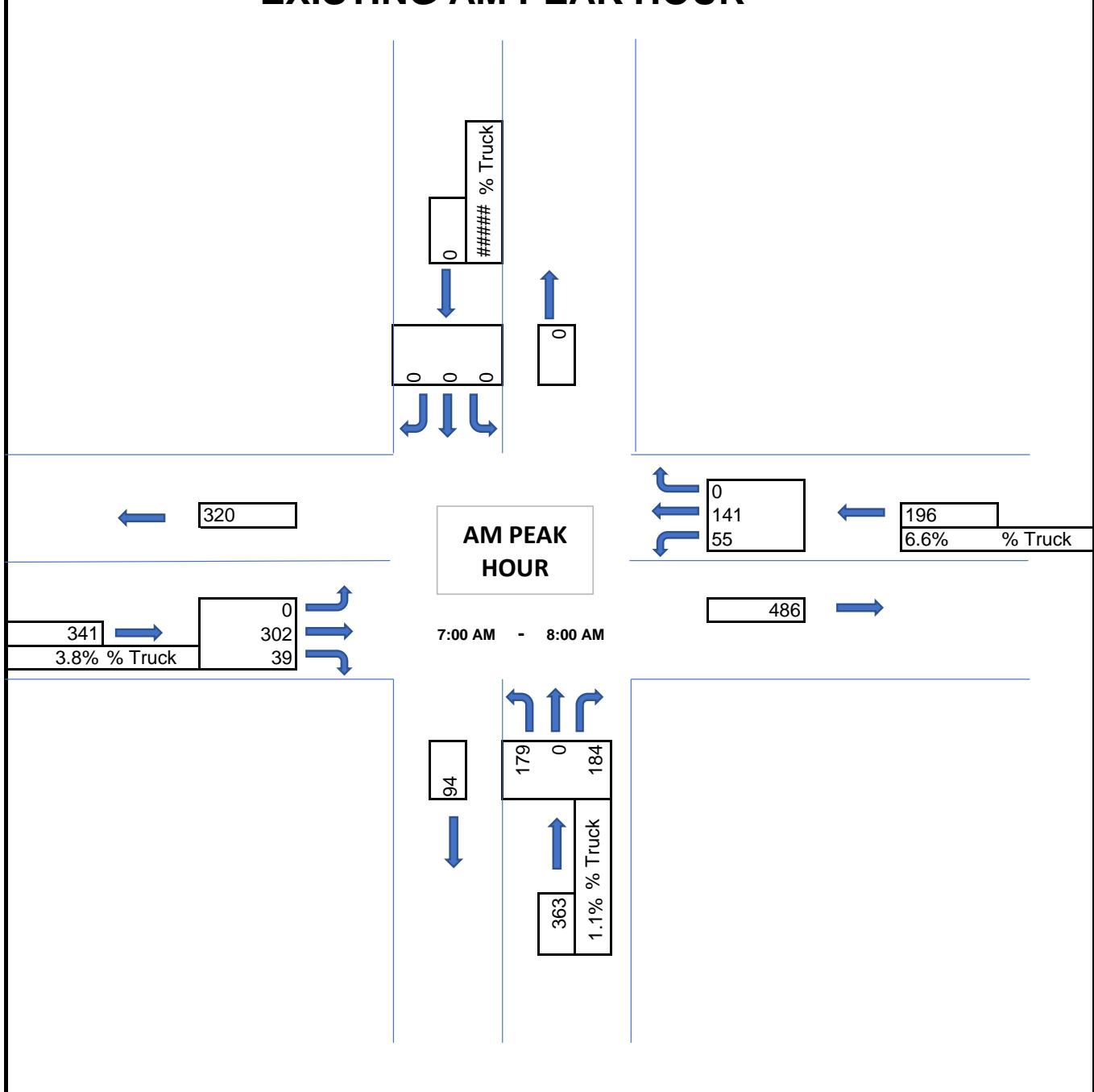
Start Date: 11/17/2022
Start Time: 7:00:00 AM - 9:00:00 AM
Intersection: Pleasant Street at Prospect Street
Municipality: Stoughton, MA

Base Year: 2022
 Annual Growth Rate: 1.0%
 Number of Projected Years: 7

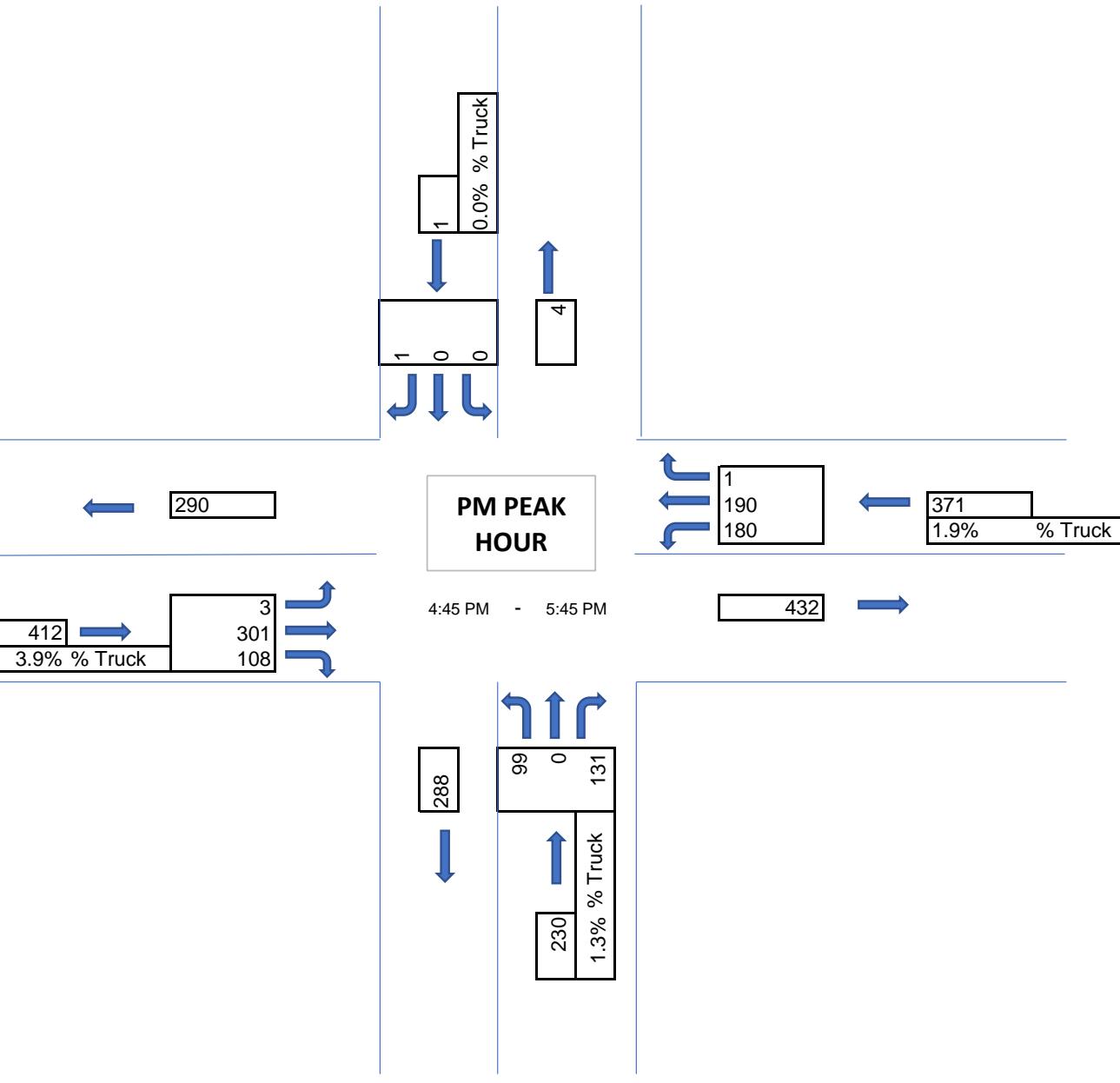
CAR	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	7	33	0	0	53	0	54	3	0	67	5	3
7:15:00 AM	0	0	0	0	0	10	41	0	0	57	0	42	0	0	71	7	0
7:30:00 AM	0	0	0	0	0	14	27	0	0	38	0	44	0	0	81	16	0
7:45:00 AM	0	0	0	0	0	20	31	0	0	31	0	40	0	0	72	9	0
8:00:00 AM	0	0	0	0	0	25	33	0	0	30	0	41	0	0	61	13	0
8:15:00 AM	0	0	0	0	0	28	31	0	0	36	0	30	1	0	75	12	2
8:30:00 AM	0	0	0	0	0	30	34	0	0	21	1	26	0	0	64	14	0
8:45:00 AM	0	0	0	0	0	22	32	0	0	15	0	23	0	0	38	8	0
BIKE	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	2	3	0	0	0	0	1	0	0	3	0	0
7:15:00 AM	0	0	0	0	0	0	3	0	0	0	0	1	0	0	1	0	0
7:30:00 AM	0	0	0	0	0	2	3	0	0	0	0	0	0	0	2	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	2	0
8:00:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	0
8:15:00 AM	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	0
8:30:00 AM	0	0	0	0	0	2	1	0	0	0	0	1	0	0	2	0	0
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
TOTAL	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	9	36	0	0	53	0	55	3	0	70	5	3
7:15:00 AM	0	0	0	0	0	10	44	0	0	57	0	43	0	0	72	7	0
7:30:00 AM	0	0	0	0	0	16	30	0	0	38	0	44	0	0	83	16	0
7:45:00 AM	0	0	0	0	0	20	31	0	0	31	0	42	0	0	77	11	0
8:00:00 AM	0	0	0	0	0	27	33	0	0	30	0	41	0	0	63	14	0
8:15:00 AM	0	0	0	0	0	28	33	0	0	38	0	31	1	0	76	12	2
8:30:00 AM	0	0	0	0	0	32	35	0	0	21	1	27	0	0	66	14	0
8:45:00 AM	0	0	0	0	0	22	32	0	0	15	0	23	0	0	42	8	0
% Truck	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0%	0%	0%	0%	0%	22%	8%	0%	0%	0%	0%	2%	0%	0%	4%	0%	0%
7:15:00 AM	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%	0%
7:30:00 AM	0%	0%	0%	0%	0%	13%	10%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
7:45:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	6%	18%	0%
8:00:00 AM	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	3%	7%	0%
8:15:00 AM	0%	0%	0%	0%	0%	6%	0%	0%	0%	5%	0%	3%	0%	0%	1%	0%	0%
8:30:00 AM	0%	0%	0%	0%	0%	6%	3%	0%	0%	0%	0%	4%	0%	0%	3%	0%	0%
8:45:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%
PEAK HOUR TOTAL	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	9	36	0	0	53	0	55	3	0	70	5	3
7:15:00 AM	0	0	0	0	0	10	44	0	0	57	0	43	0	0	72	7	0
7:30:00 AM	0	0	0	0	0	16	30	0	0	38	0	44	0	0	83	16	0
7:45:00 AM	0	0	0	0	0	20	31	0	0	31	0	42	0	0	77	11	0
PEAK HOUR	0	0	0	0	0	55	141	0	0	179	0	184	3	0	302	39	3
PEAK HOUR TRUCK PERCENT	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	2	3	0	0	0	0	1	0	0	3	0	0
7:15:00 AM	0	0	0	0	0	0	3	0	0	0	0	1	0	0	1	0	0
7:30:00 AM	0	0	0	0	0	2	3	0	0	0	0	0	0	0	2	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	2	0
PEAK HOUR	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	7.3%	6.4%	#DIV/0!	#DIV/0!	0.0%	#DIV/0!	2.2%	0.0%	#DIV/0!	3.6%	5.1%	0.0%
Truck Percent on Enitre Approach	#DIV/0!					6.6%				1.1%					3.8%		

Start Date:	44882	Base Year:	2022														
Start Time:	4:00:00 PM	-	6:00:00 PM														
Intersection:	Pleasant Street at Prospect Street	Annual Growth Rate:	1.0%														
Municipality:	Stoughton, MA	Number of Projected Years:	7														
CAR	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	TOTAL
4:00:00 PM	0	0	0	0	50	42	0	0	16	0	18	0	0	81	37	0	
4:15:00 PM	0	0	0	0	38	44	0	0	30	0	18	2	0	68	37	0	
4:30:00 PM	0	0	0	0	40	47	0	0	20	0	28	0	0	76	28	0	
4:45:00 PM	0	0	0	0	45	56	0	0	17	0	30	2	0	74	25	1	970
5:00:00 PM	0	0	1	0	53	55	0	0	16	0	33	1	1	68	21	0	975
5:15:00 PM	0	0	0	0	37	35	0	0	25	0	33	0	0	74	33	0	975
5:30:00 PM	0	0	0	0	41	41	1	1	40	0	33	1	2	70	28	1	995
5:45:00 PM	0	0	0	0	47	50	0	0	27	0	23	0	0	50	23	0	965
BIKE	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM	0	0	0	0	1	1	0	0	0	0	1	0	0	5	1	0	
4:15:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	
4:30:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	2	1	0	
4:45:00 PM	0	0	0	0	3	2	0	0	0	1	0	0	0	7	0	0	31
5:00:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	2	1	0	27
5:15:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	30
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	26
5:45:00 PM	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	0	17
TOTAL	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM	0	0	0	0	51	43	0	0	16	0	19	0	0	86	38	0	
4:15:00 PM	0	0	0	0	40	44	0	0	30	0	18	2	0	69	37	0	
4:30:00 PM	0	0	0	0	40	48	0	0	21	0	28	0	0	78	29	0	
4:45:00 PM	0	0	0	0	48	58	0	0	18	0	31	2	0	81	25	1	1001
5:00:00 PM	0	0	1	0	53	56	0	0	16	0	34	1	1	70	22	0	1002
5:15:00 PM	0	0	0	0	38	35	0	0	25	0	33	0	0	79	33	0	1005
5:30:00 PM	0	0	0	0	41	41	1	1	40	0	33	1	2	71	28	1	1021
5:45:00 PM	0	0	0	0	48	52	0	0	27	0	24	0	0	51	23	0	982
% Truck	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM	0%	0%	0%	0%	2%	2%	0%	0%	0%	0%	5%	0%	0%	6%	3%	0%	
4:15:00 PM	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	
4:30:00 PM	0%	0%	0%	0%	0%	2%	0%	0%	5%	0%	0%	0%	0%	3%	3%	0%	
4:45:00 PM	0%	0%	0%	0%	6%	3%	0%	0%	6%	0%	3%	0%	0%	9%	0%	0%	
5:00:00 PM	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	3%	0%	0%	3%	5%	0%	
5:15:00 PM	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	
5:30:00 PM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	
5:45:00 PM	0%	0%	0%	0%	2%	4%	0%	0%	0%	0%	4%	0%	0%	2%	0%	0%	
PEAK HOUR TOTAL	N/A Southbound				PLEASANT STREET Westbound				PROSPECT STREET Northbound				PLEASANT STREET Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:45:00 PM	0	0	0	0	48	58	0	0	18	0	31	2	0	81	25	1	
5:00:00 PM	0	0	1	0	53	56	0	0	16	0	34	1	1	70	22	0	
5:15:00 PM	0	0	0	0	38	35	0	0	25	0	33	0	0	79	33	0	
5:30:00 PM	0	0	0	0	41	41	1	1	40	0	33	1	2	71	28	1	1021
PEAK HOUR TRUCK PERCENT	#DIV/0!	#DIV/0!	0.0%	#DIV/0!	2.2%	1.6%	0.0%	0.0%	1.0%	#DIV/0!	1.5%	0.0%	0.0%	5.0%	0.9%	0.0%	
Truck Percent on Entire Approach			0.0%		1.9%				1.3%					3.9%			

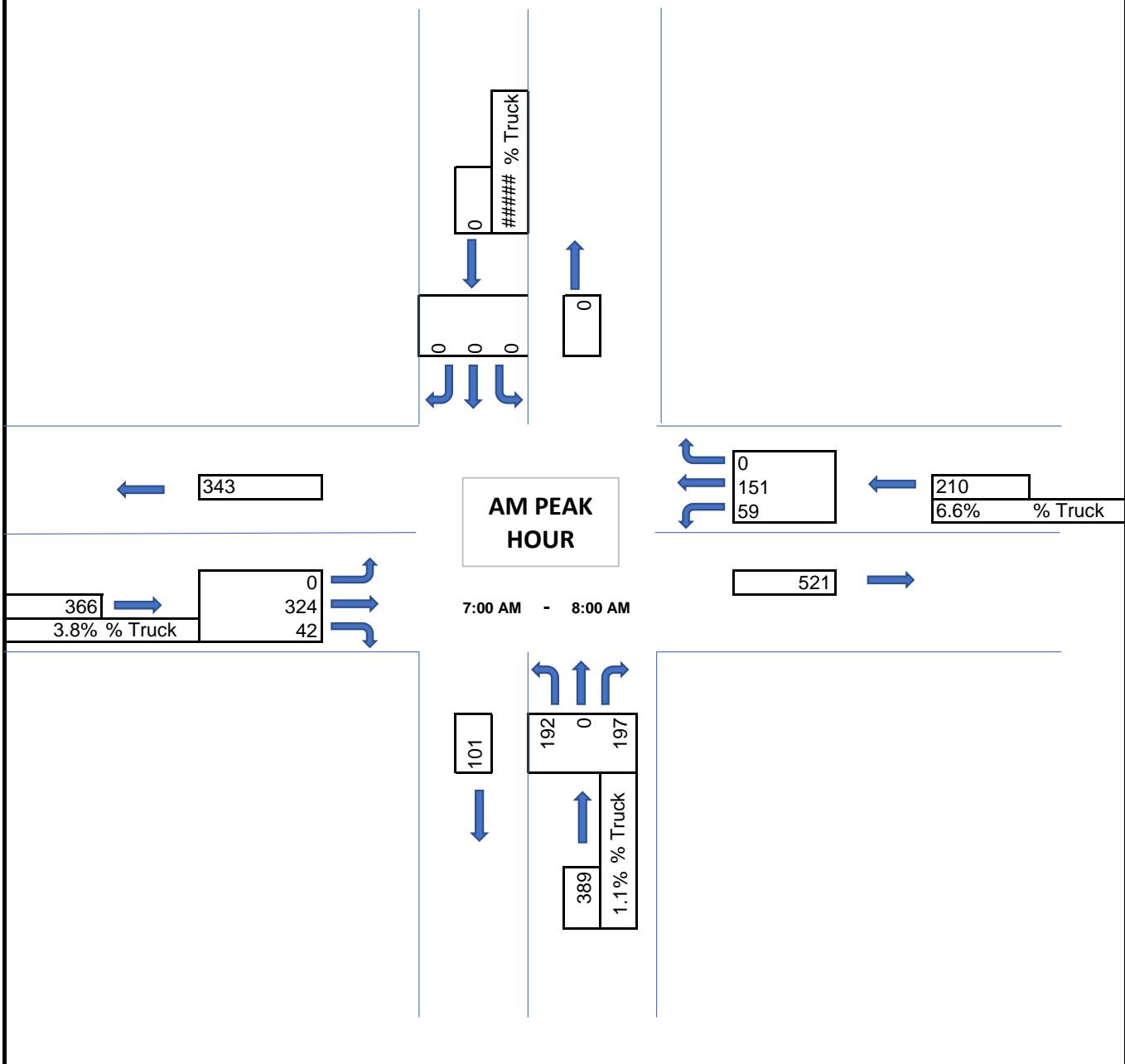
EXISTING AM PEAK HOUR



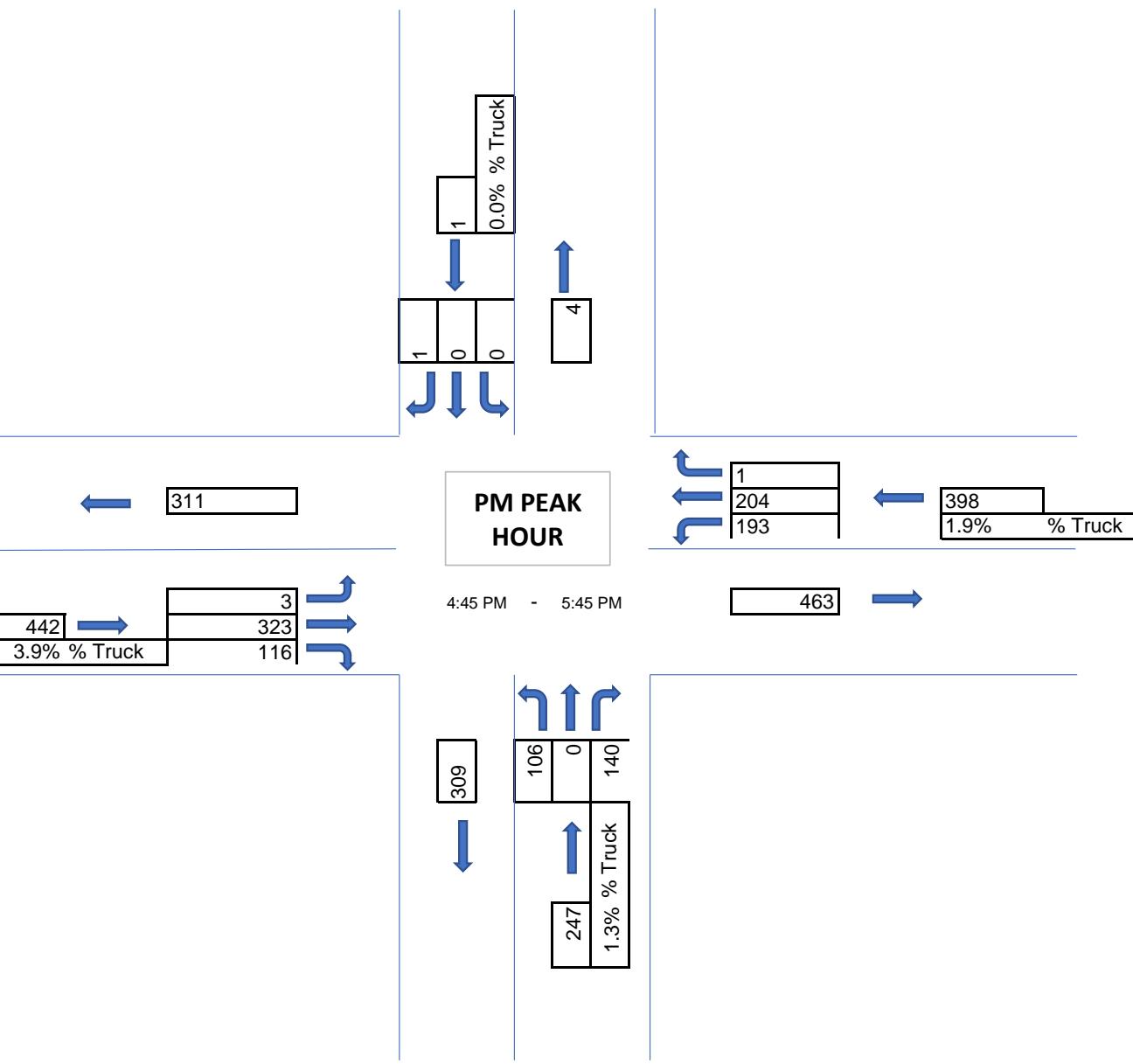
EXISTING PM PEAK HOUR



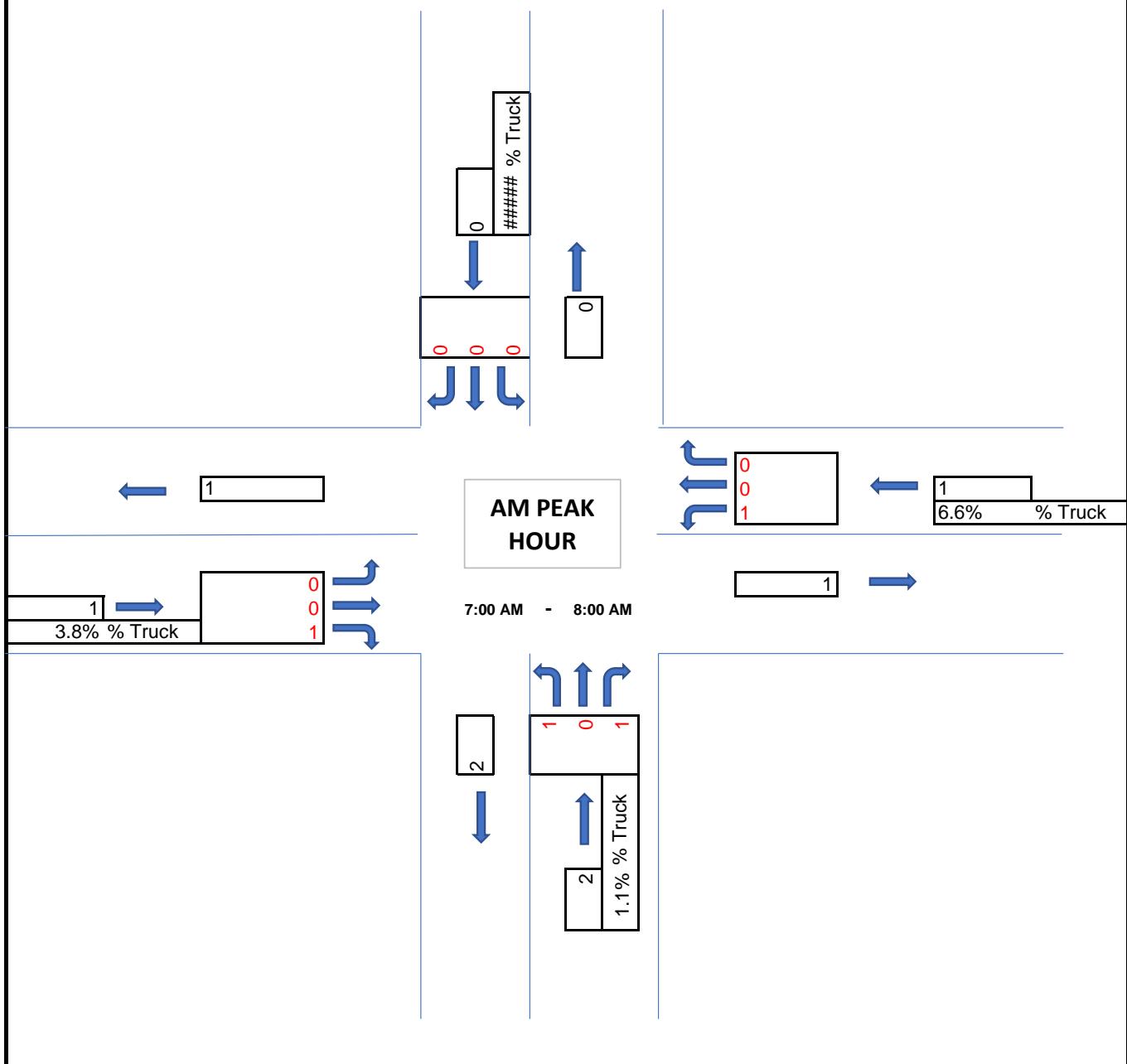
FUTURE AM NO-BUILD



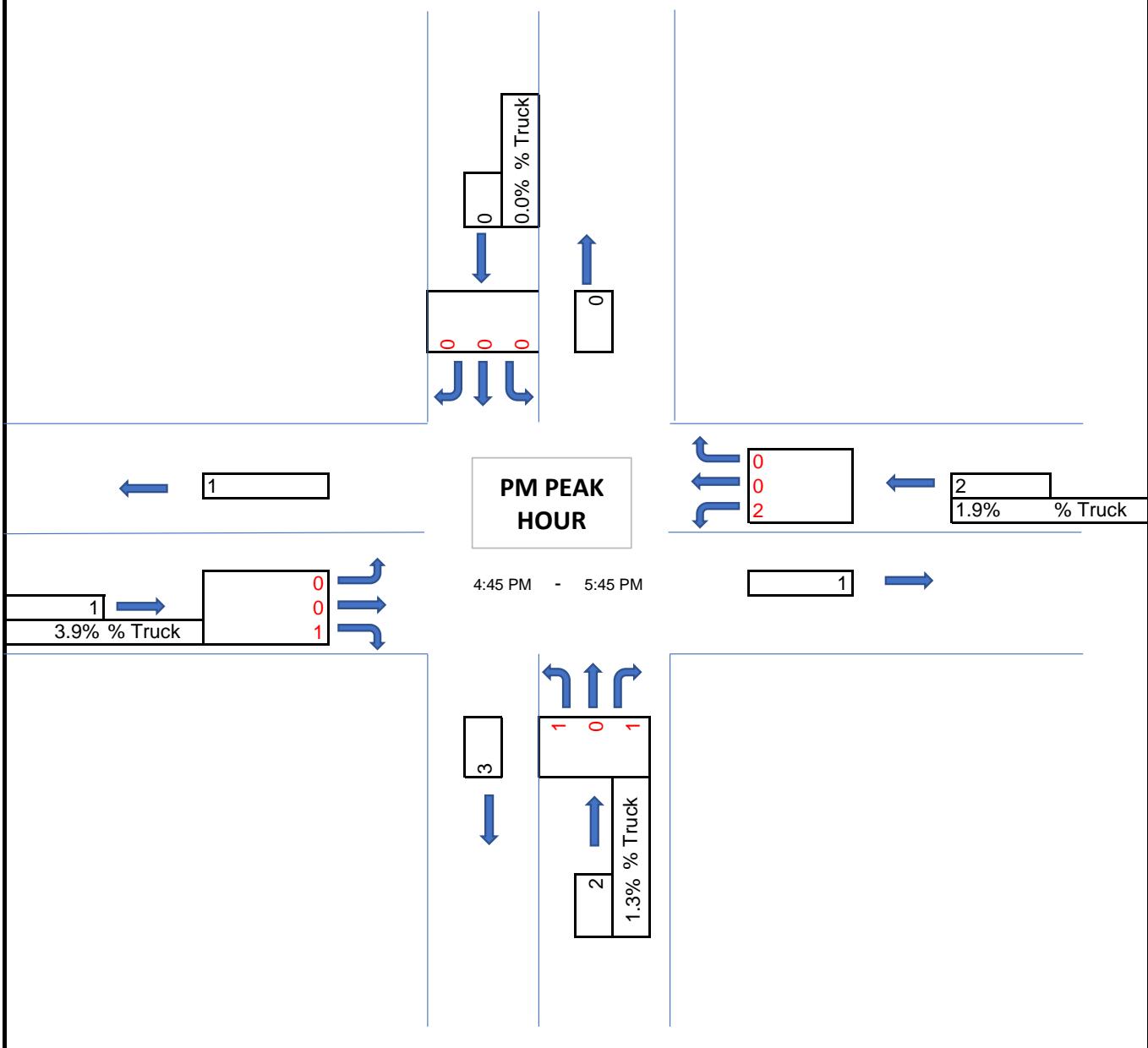
FUTURE PM NO-BUILD



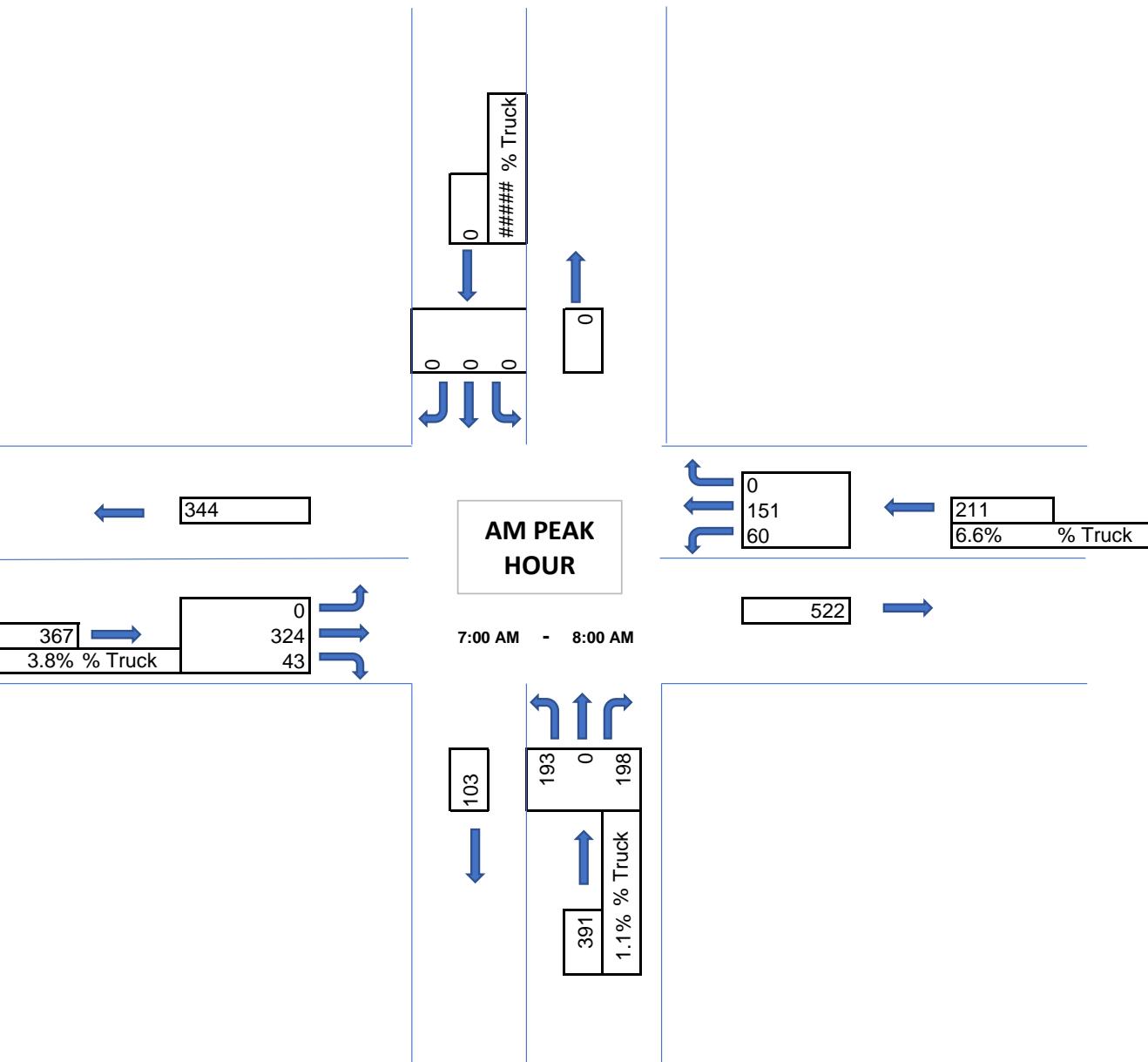
FUTURE AM NO-BUILD



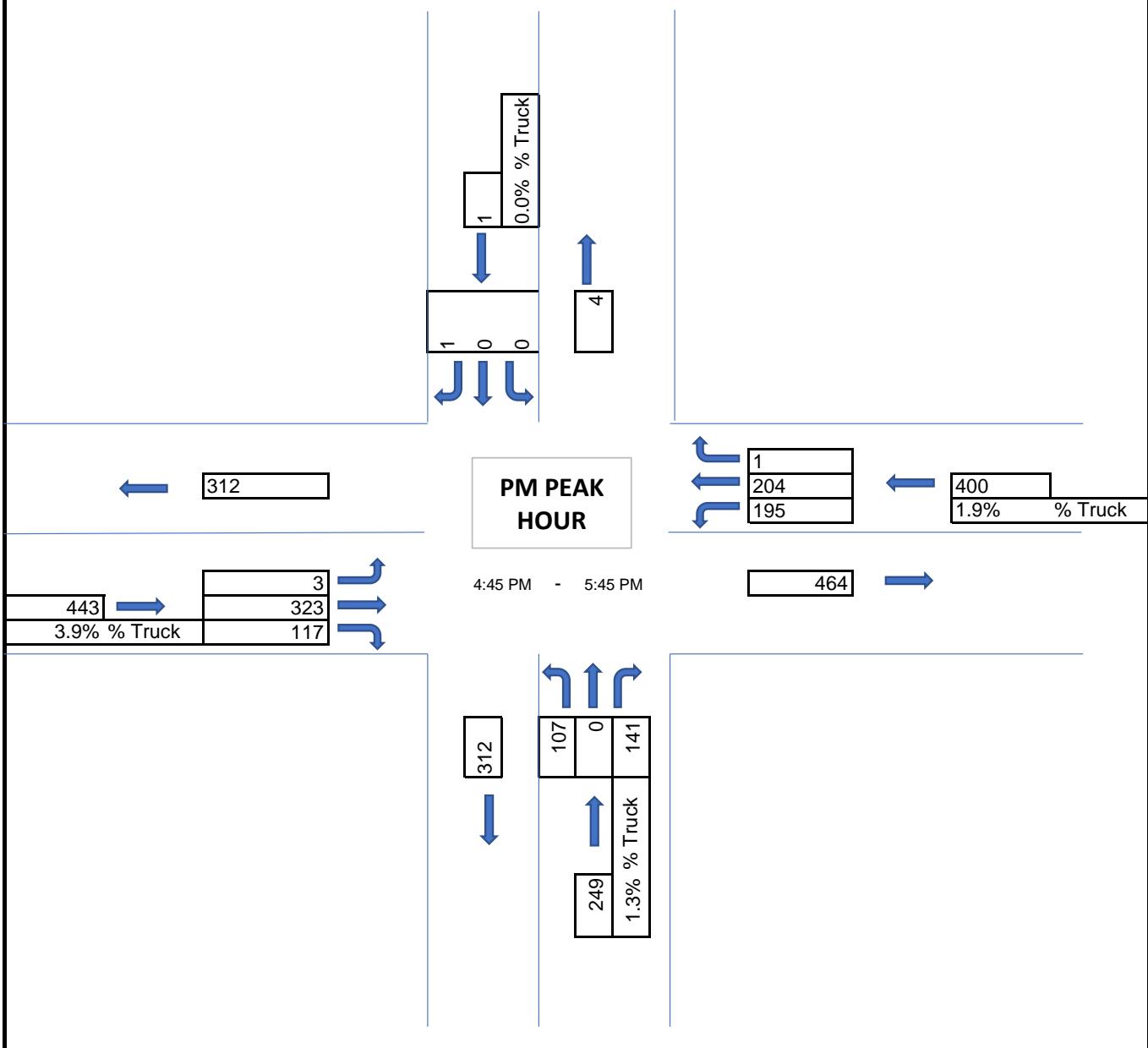
FUTURE PM NO-BUILD



FUTURE AM NO-BUILD



FUTURE PM NO-BUILD



Start Date: 11/21/2022
Start Time: 7:00:00 AM - 9:00:00 AM
Intersection: Prospect Street at Walnut Street
Municipality: Stoughton, MA

Base Year: 2022
 Annual Growth Rate: 1.0%
 Number of Projected Years: 7

CAR	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM		0	13	1	0	3	15	7	0	3	43	4	0	13	9	5	0
7:15:00 AM		0	11	7	0	0	13	5	0	1	58	5	0	10	8	2	0
7:30:00 AM		2	15	9	0	3	16	4	0	1	36	4	0	12	17	1	1
7:45:00 AM		1	11	9	1	0	25	0	0	4	43	8	0	8	23	1	1
8:00:00 AM		0	8	22	1	4	22	1	0	1	33	5	0	12	12	2	3
8:15:00 AM		2	22	20	0	4	16	1	0	1	41	5	0	17	25	1	0
8:30:00 AM		0	17	19	0	5	15	0	0	0	26	5	0	21	13	4	0
8:45:00 AM		1	18	17	0	0	19	0	0	1	22	4	0	4	15	0	1
																	508

BIKE	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
																	0

TRUCK	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM		0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:15:00 AM		0	0	1	0	0	2	0	0	0	1	1	0	0	0	0	0
7:30:00 AM		0	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0
7:45:00 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	15
8:00:00 AM		0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	18
8:15:00 AM		0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	17
8:30:00 AM		0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	16
8:45:00 AM		0	1	1	0	0	2	0	0	0	2	0	0	0	0	0	19

TOTAL	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM		0	14	1	0	3	15	7	0	3	44	4	0	13	9	5	0
7:15:00 AM		0	11	8	0	0	15	5	0	1	59	6	0	10	8	2	0
7:30:00 AM		2	16	10	0	3	17	4	0	1	37	4	0	12	18	1	1
7:45:00 AM		1	12	9	1	0	25	0	0	4	43	8	0	8	25	1	507
8:00:00 AM		0	8	27	1	4	22	1	0	1	33	5	0	12	12	2	3
8:15:00 AM		2	22	22	0	4	16	1	0	1	42	5	0	17	26	1	0
8:30:00 AM		0	19	19	0	5	16	0	0	0	27	5	0	21	13	4	0
8:45:00 AM		1	19	18	0	0	21	0	0	1	24	4	0	4	15	0	1
																	527

% Truck	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM		0%	7%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%
7:15:00 AM		0%	0%	13%	0%	0%	13%	0%	0%	0%	2%	17%	0%	0%	0%	0%	0%
7:30:00 AM		0%	6%	10%	0%	0%	6%	0%	0%	0%	3%	0%	0%	0%	6%	0%	0%
7:45:00 AM		0%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%
8:00:00 AM		0%	0%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8:15:00 AM		0%	0%	9%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	4%	0%	0%
8:30:00 AM		0%	11%	0%	0%	0%	6%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
8:45:00 AM		0%	5%	6%	0%	0%	10%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%

PEAK HOUR TOTAL	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:45:00 AM		1	12	9	1	0	25	0	0	4	43	8	0	8	25	1	1
8:00:00 AM		0	8	27	1	4	22	1	0	1	33	5	0	12	12	2	3
8:15:00 AM		2	22	22	0	4	16	1	0	1	42	5	0	17	26	1	0
8:30:00 AM		0	19	19	0	5	16	0	0	0	27	5	0	21	13	4	0
PEAK HOUR	3	61	77	2	13	79	2	0	6	145	23	0	58	76	8	4	557

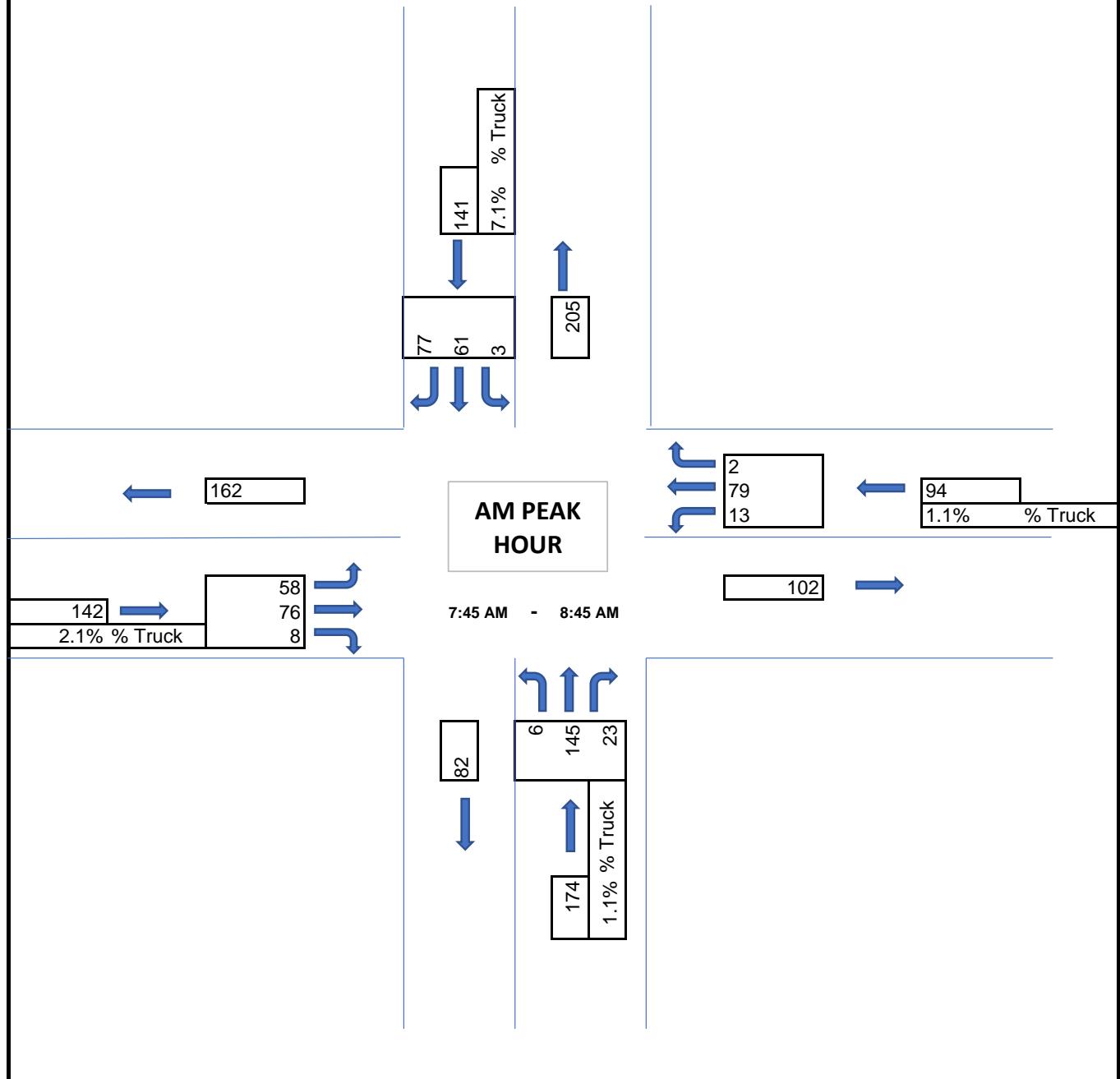
PEAK HOUR TRUCK PERCENT	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound			
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Start Date: 44886
Start Time: 4:00:00 PM - 6:00:00 PM
Intersection: Prospect Street at Walnut Street
Municipality: Stoughton, MA

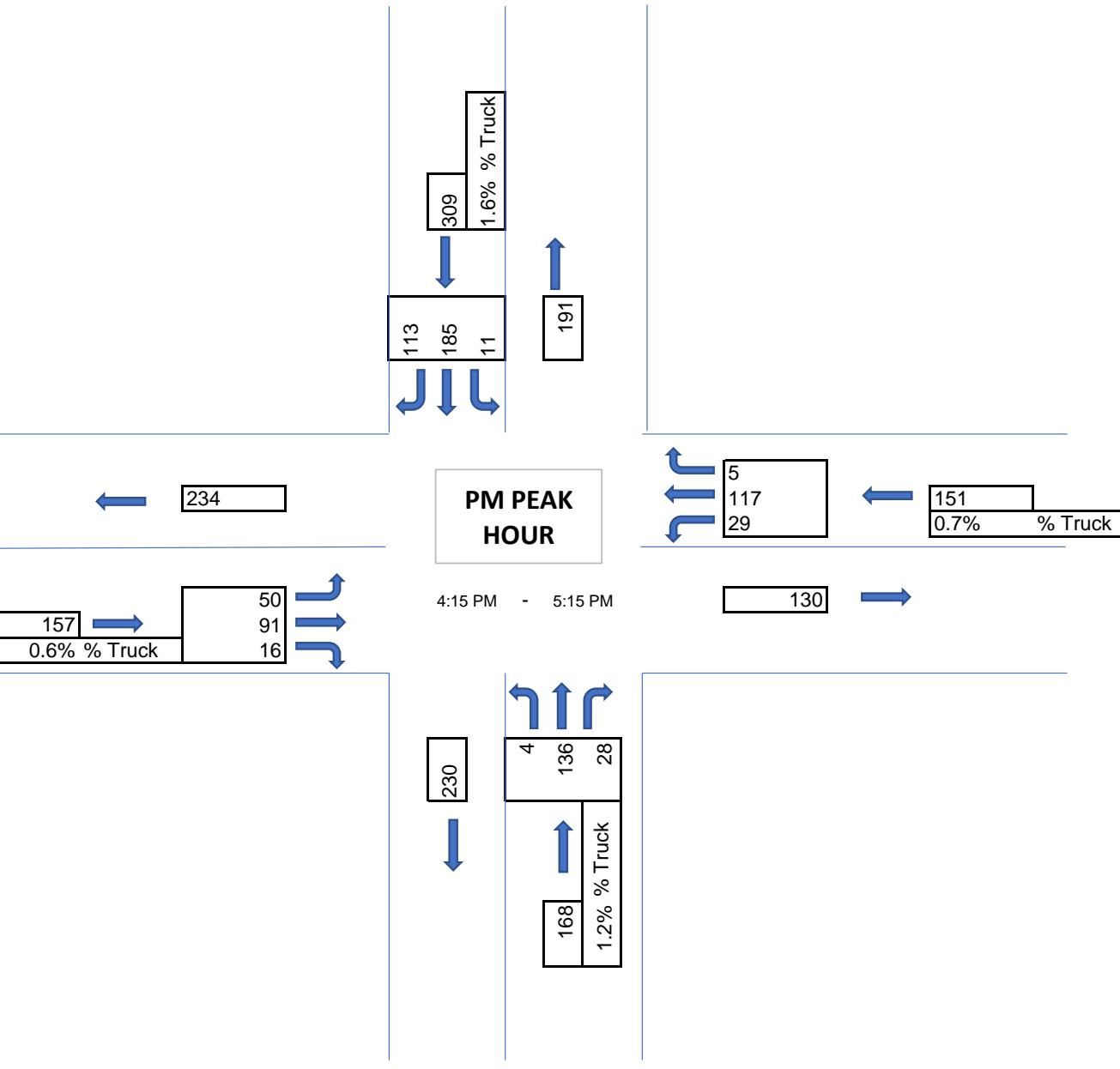
Base Year: 2022
Annual Growth Rate: 1.0%
Number of Projected Years: 7

CAR	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound				TOTAL	
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM		1	45	18	1	4	26	4	0	0	26	9	0	5	24	1	0	
4:15:00 PM		4	53	29	2	11	32	0	0	2	31	5	1	11	19	7	2	
4:30:00 PM		3	41	33	0	5	24	1	0	0	38	7	0	11	24	4	0	
4:45:00 PM		1	38	27	0	9	28	2	1	2	38	8	1	12	17	2	1	751
5:00:00 PM		3	52	20	0	3	33	2	0	0	28	7	0	16	30	3	0	784
5:15:00 PM		4	33	28	0	7	29	4	0	5	39	5	0	12	24	4	1	770
5:30:00 PM		2	35	16	0	7	27	3	0	3	42	4	0	5	22	0	0	745
5:45:00 PM		1	24	20	0	2	23	4	0	2	23	4	0	8	16	2	0	687
BIKE	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM		0	1	4	0	0	2	0	0	0	0	0	0	0	0	0	0	
4:15:00 PM		0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0	
4:30:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15
5:00:00 PM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9
5:15:00 PM		0	0	0	0	0	2	0	0	0	1	0	0	1	0	0	0	8
5:30:00 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM		1	46	22	1	4	28	4	0	0	26	9	0	5	24	1	0	
4:15:00 PM		4	54	30	2	11	32	0	0	2	32	6	1	11	20	7	2	
4:30:00 PM		3	41	34	0	5	24	1	0	0	38	7	0	11	24	4	0	
4:45:00 PM		1	38	29	0	9	28	2	1	2	38	8	1	12	17	2	1	766
5:00:00 PM		3	52	20	0	4	33	2	0	0	28	7	0	16	30	3	0	793
5:15:00 PM		4	33	28	0	9	29	4	0	5	40	5	0	13	24	4	1	778
5:30:00 PM		2	36	16	0	7	27	3	0	3	42	4	0	5	22	0	0	753
5:45:00 PM		1	24	20	0	2	23	4	0	2	23	4	0	8	16	2	0	693
% Truck	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:00:00 PM		0%	2%	18%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4:15:00 PM		0%	2%	3%	0%	0%	0%	0%	0%	0%	3%	17%	0%	0%	5%	0%	0%	0%
4:30:00 PM		0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4:45:00 PM		0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5:00:00 PM		0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5:15:00 PM		0%	0%	0%	0%	22%	0%	0%	0%	0%	3%	0%	0%	8%	0%	0%	0%	0%
5:30:00 PM		0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5:45:00 PM		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PEAK HOUR TOTAL	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:15:00 PM		4	54	30	2	11	32	0	0	2	32	6	1	11	20	7	2	
4:30:00 PM		3	41	34	0	5	24	1	0	0	38	7	0	11	24	4	0	
4:45:00 PM		1	38	29	0	9	28	2	1	2	38	8	1	12	17	2	1	
5:00:00 PM		3	52	20	0	4	33	2	0	0	28	7	0	16	30	3	0	793
PEAK HOUR TRUCK PERCENT	PROSPECT STREET Southbound				WALNUT STREET Westbound				PROSPECT STREET Northbound				WALNUT STREET Eastbound					
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
4:15:00 PM		0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0	
4:30:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HOUR	0%	1%	4%	0%	3%	0%	0%	0%	0%	1%	4%	0%	0%	1%	0%	0%	0%	
Truck Percent on Entire Approach		1.6%			0.7%					1.2%					0.6%			

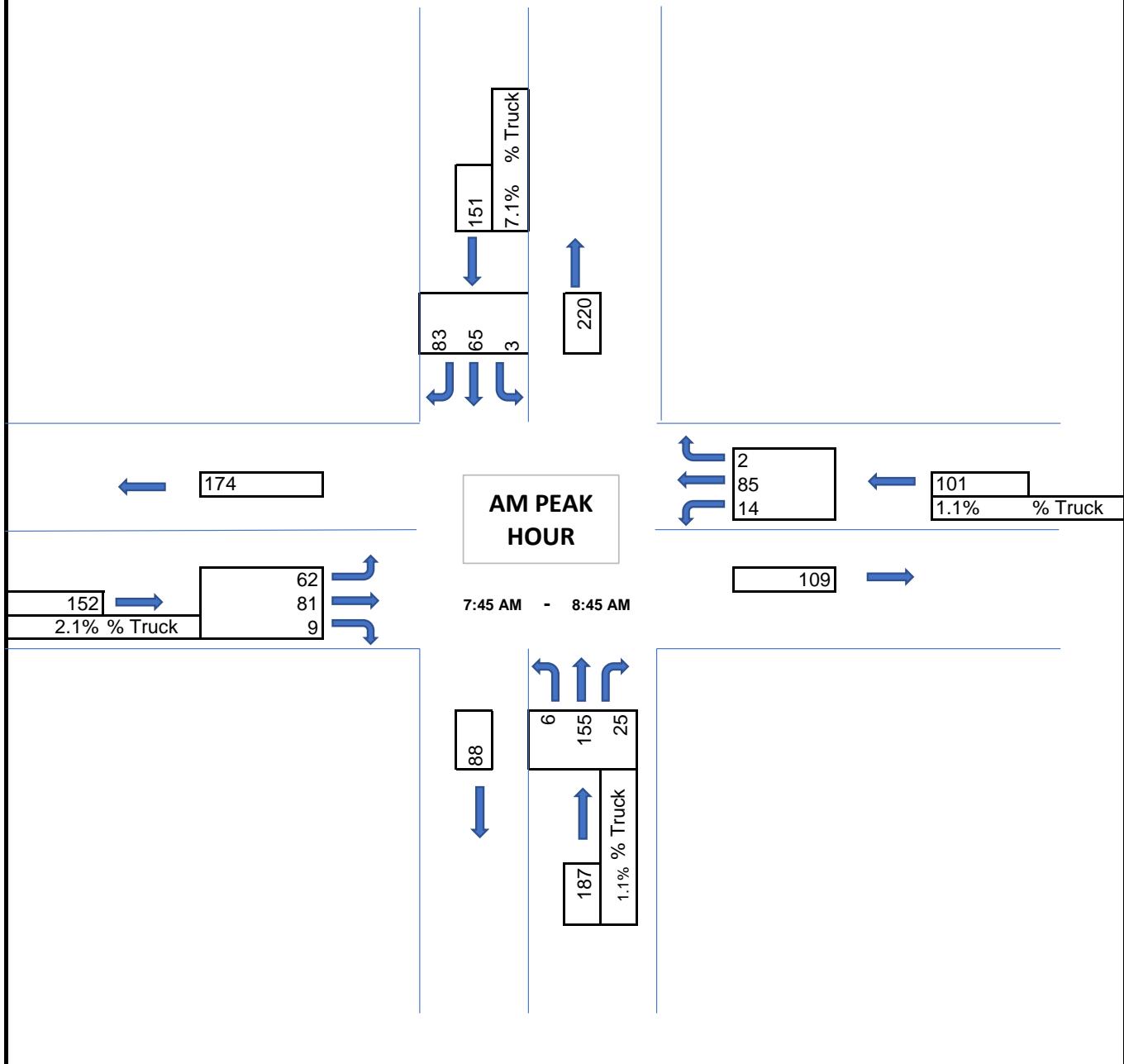
EXISTING AM PEAK HOUR



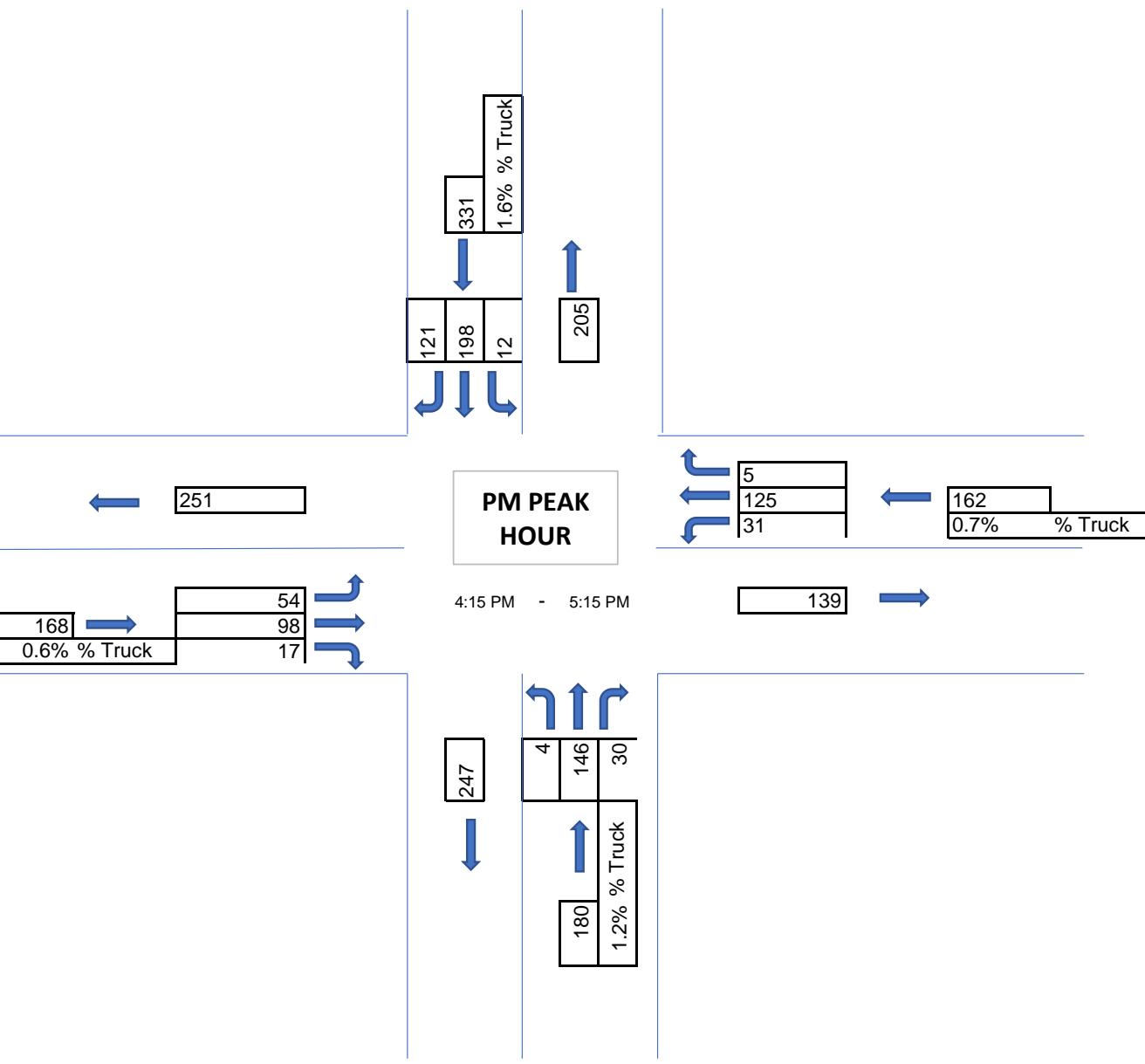
EXISTING PM PEAK HOUR



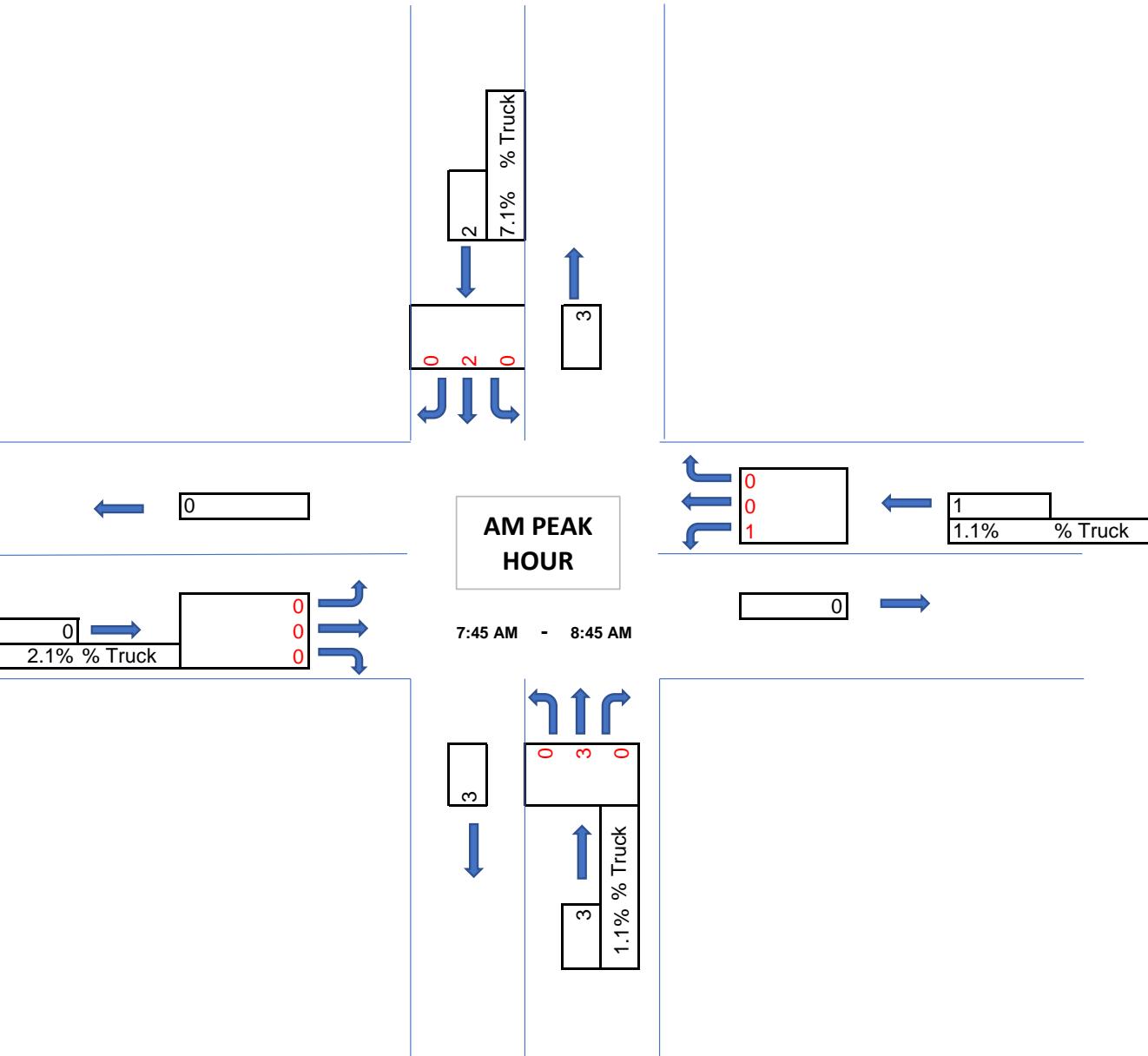
FUTURE AM NO-BUILD



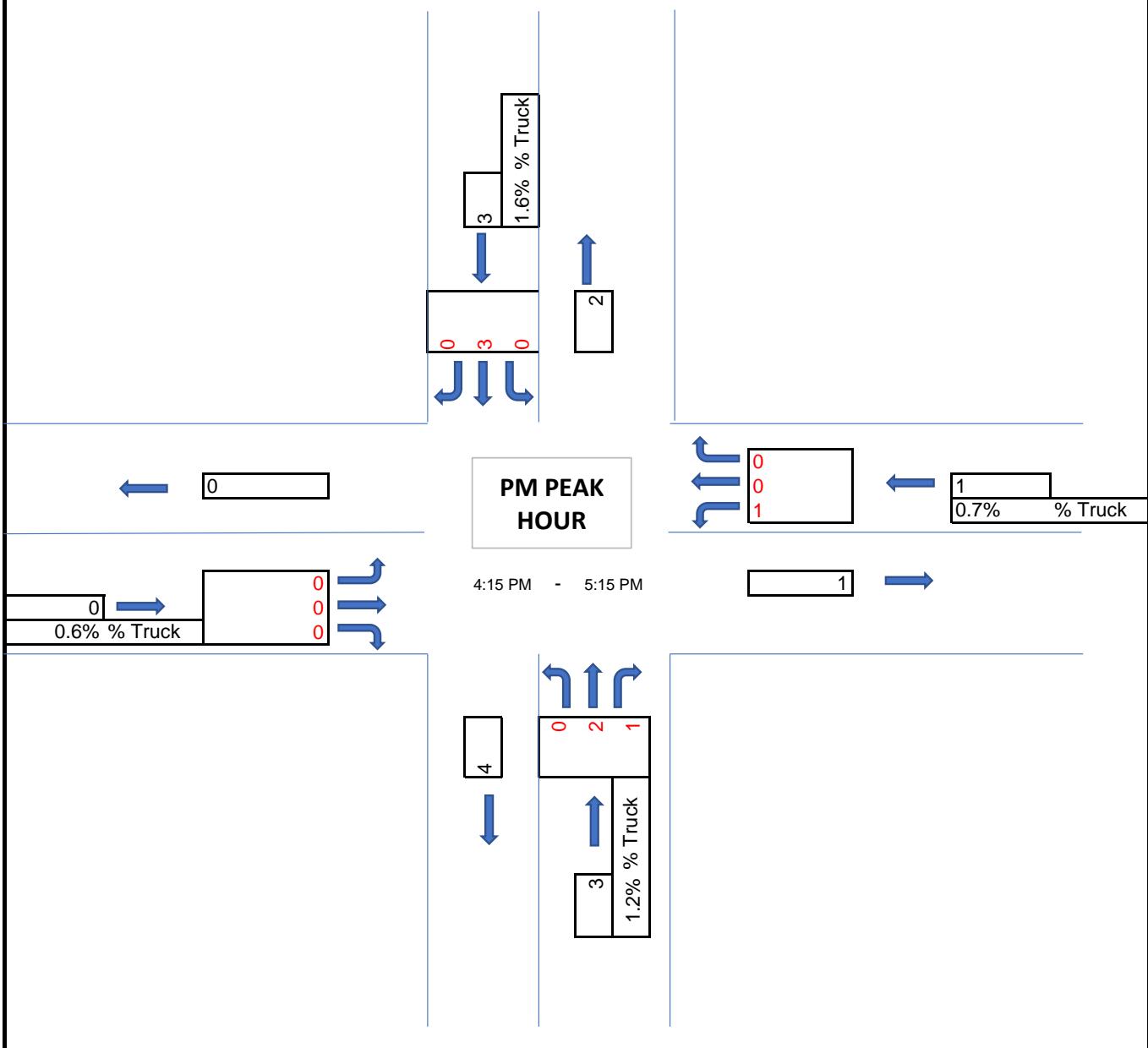
FUTURE PM NO-BUILD



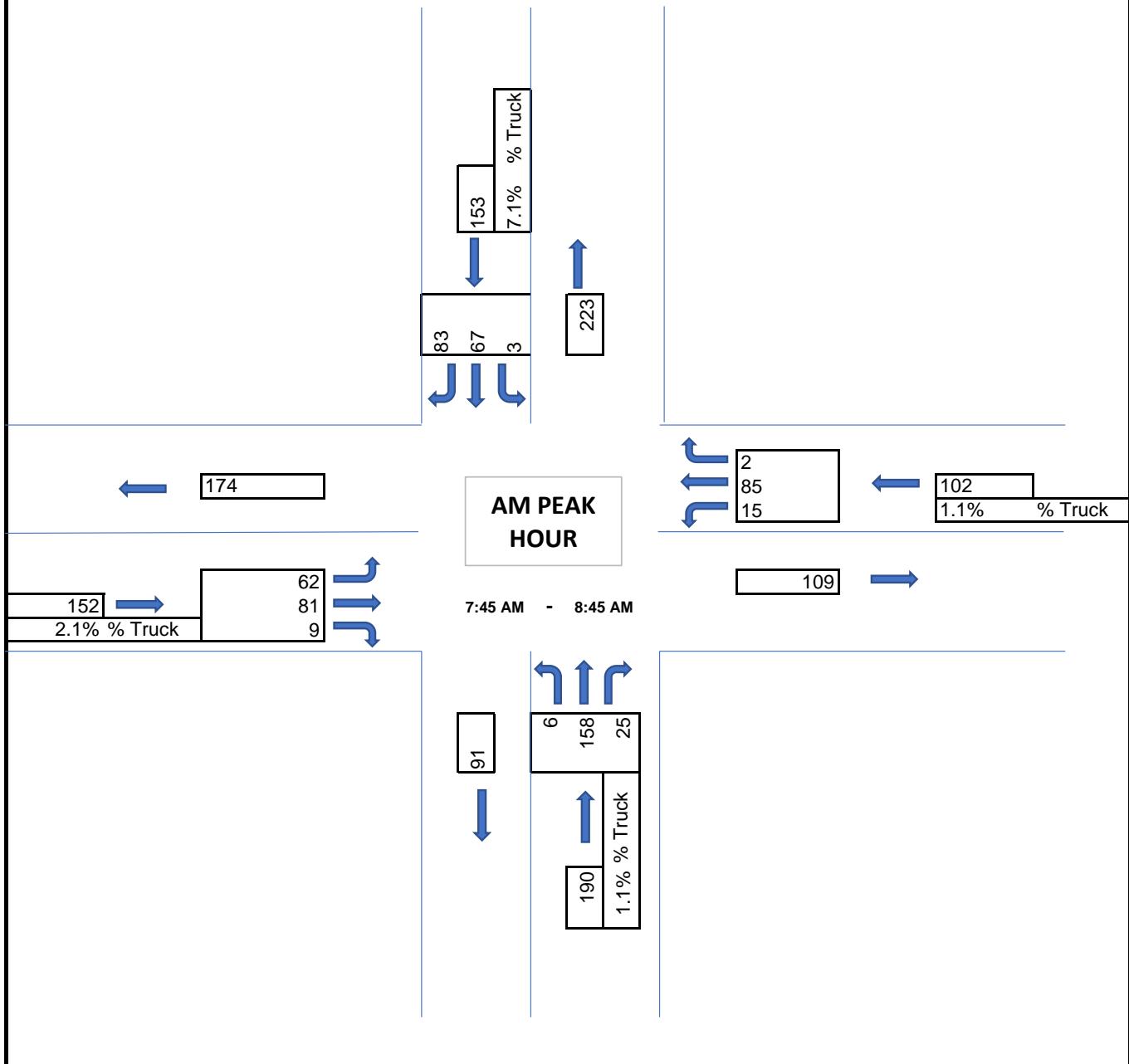
FUTURE AM NO-BUILD



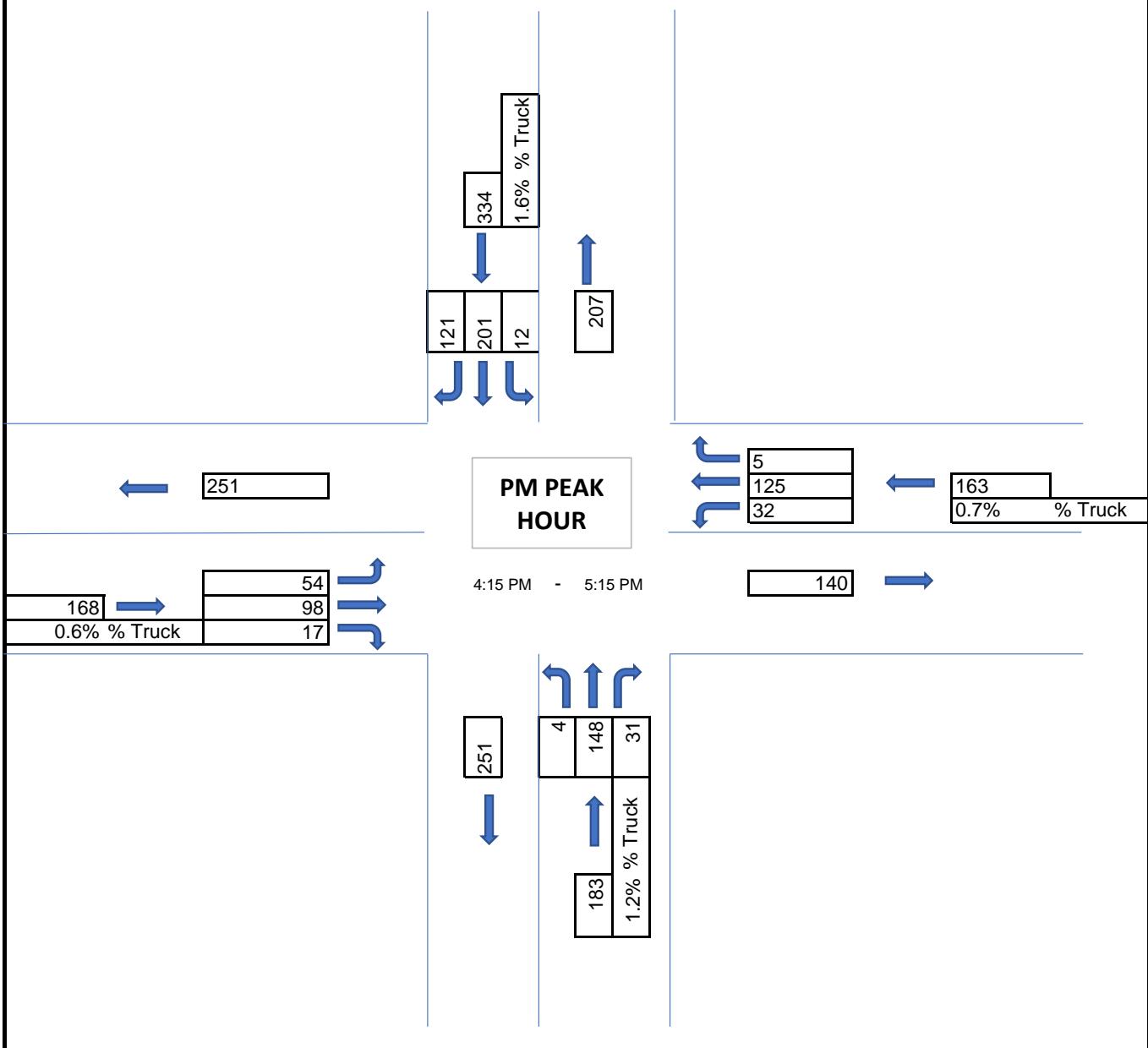
FUTURE PM NO-BUILD



FUTURE AM NO-BUILD



FUTURE PM NO-BUILD



Start Date: 11/16/2022
Start Time: 7:00:00 AM - 9:00:00 AM
Intersection: Park Street at Prospect Street and Alder Street
Municipality: Stoughton, MA

Base Year: 2022

Annual Growth Rate: 1.0%

Number of Projected Years: 7

CAR	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	16	2	0	0	0	0	0	0	146	43	0	0	3	0	64	3
7:15:00 AM	0	8	2	0	0	0	0	0	0	158	46	0	0	3	1	68	0
7:30:00 AM	0	19	2	0	0	0	0	0	0	144	62	0	0	1	0	85	0
7:45:00 AM	0	22	4	0	0	0	0	0	0	129	35	1	0	1	0	99	0
8:00:00 AM	0	19	0	0	0	0	0	0	0	106	34	0	0	1	0	110	0
8:15:00 AM	0	22	0	0	1	0	0	0	0	116	41	0	0	2	1	95	0
8:30:00 AM	0	18	1	0	0	0	1	0	0	115	24	2	0	2	0	113	1
8:45:00 AM	0	17	1	0	1	0	0	0	0	104	27	0	0	2	0	82	0
																	1059

BIKE	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUCK	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	1	0	0	0	0	0	0	0	6	2	0	0	0	0	3	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	2	0
7:45:00 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	10	0
8:00:00 AM	0	3	0	0	0	0	0	0	0	6	2	0	0	0	0	4	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	8	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0
8:45:00 AM	0	1	0	0	0	0	0	0	0	3	1	0	0	0	0	6	0

TOTAL	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	17	2	0	0	0	0	0	0	152	45	0	0	3	0	67	3
7:15:00 AM	0	8	2	0	0	0	0	0	0	161	47	0	0	3	1	72	0
7:30:00 AM	0	19	2	0	0	0	0	0	0	148	62	0	0	1	0	87	0
7:45:00 AM	0	23	4	0	0	0	0	0	0	131	35	1	0	1	0	109	0
8:00:00 AM	0	22	0	0	0	0	0	0	0	112	36	0	0	1	0	114	0
8:15:00 AM	0	22	0	0	1	0	0	0	0	122	41	0	0	3	1	103	0
8:30:00 AM	0	18	1	0	0	0	1	0	0	117	24	2	0	2	0	114	1
8:45:00 AM	0	18	1	0	1	0	0	0	0	107	28	0	0	2	0	88	0
																	1103

% Truck	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0%	6%	0%	0%	0%	0%	0%	0%	0%	4%	4%	0%	0%	0%	0%	4%	0%
7:15:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	0%	0%	0%	0%	6%	0%
7:30:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	2%	0%
7:45:00 AM	0%	4%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	9%	0%
8:00:00 AM	0%	14%	0%	0%	0%	0%	0%	0%	0%	5%	6%	0%	0%	0%	0%	4%	0%
8:15:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	8%	0%
8:30:00 AM	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
8:45:00 AM	0%	6%	0%	0%	0%	0%	0%	0%	0%	3%	4%	0%	0%	0%	0%	7%	0%

PEAK HOUR TOTAL	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	17	2	0	0	0	0	0	0	152	45	0	0	3	0	67	3
7:15:00 AM	0	8	2	0	0	0	0	0	0	161	47	0	0	3	1	72	0
7:30:00 AM	0	19	2	0	0	0	0	0	0	148	62	0	0	1	0	87	0
7:45:00 AM	0	23	4	0	0	0	0	0	0	131	35	1	0	1	0	109	0
PEAK HOUR	0	67	10	0	0	0	0	0	0	592	189	1	0	8	1	335	3

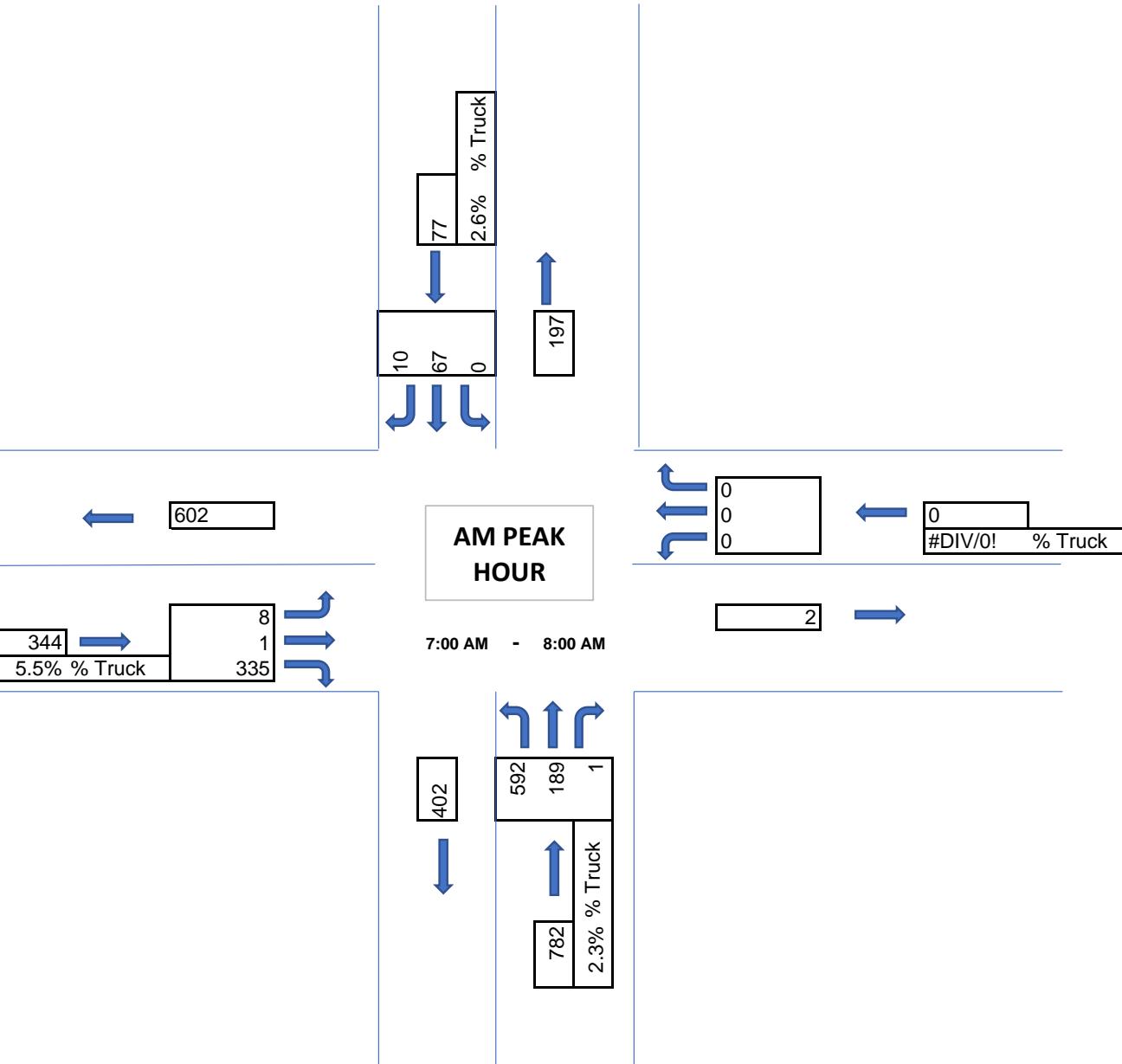
PEAK HOUR TRUCK PERCENT	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00:00 AM	0	1	0	0	0	0	0</td										

Start Date: 11/16/2022
Start Time: 4:00:00 PM - 6:00:00 PM
Intersection: Park Street at Prospect Street and Alder Street
Municipality: Stoughton, MA

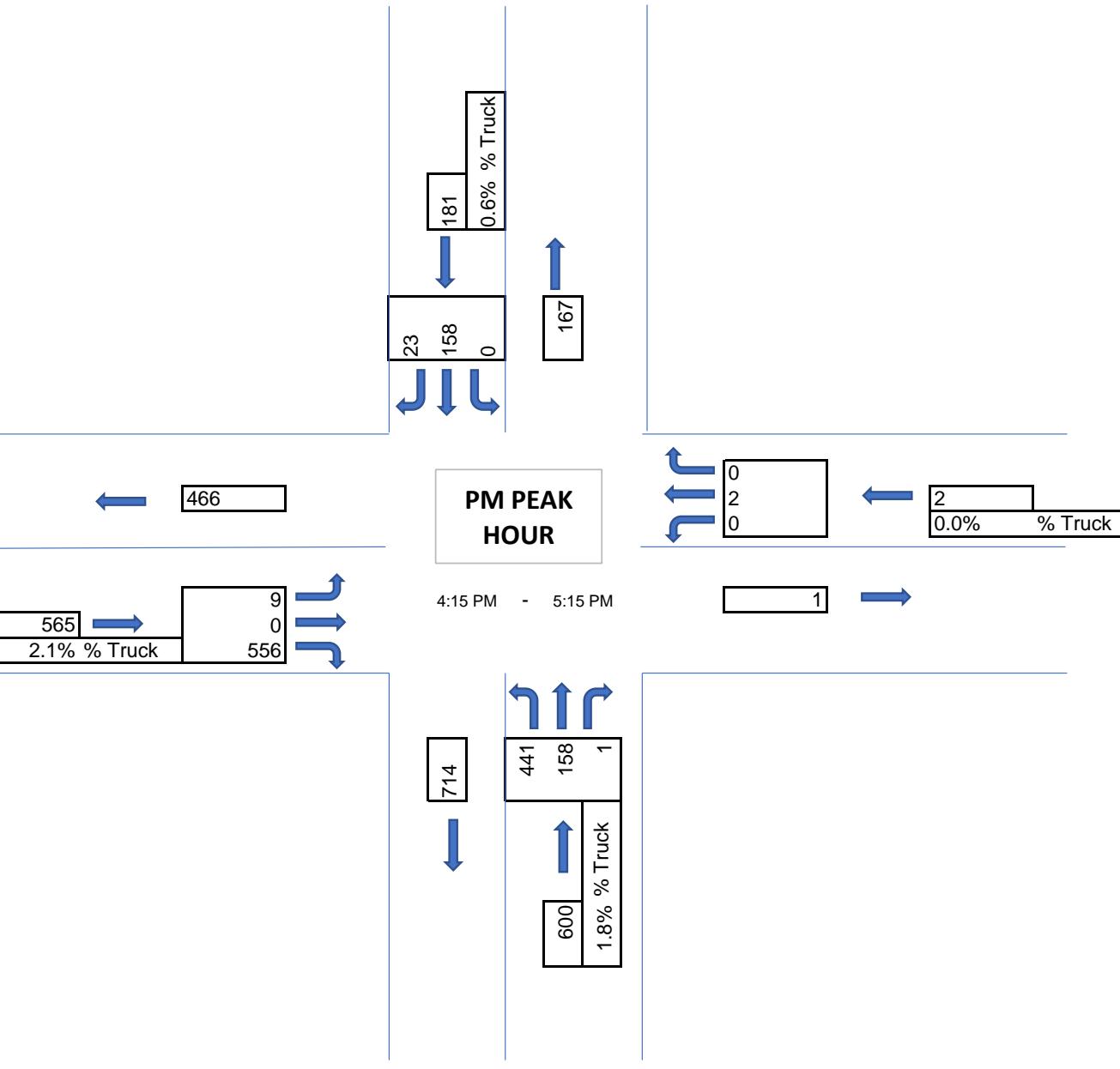
Base Year: 2022
Annual Growth Rate: 1.0%
Number of Projected Years: 7

CAR	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				TOTAL
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00:00 PM		0	40	7	0	0	0	0	0	104	38	0	1	1	0	126	0
4:15:00 PM		0	49	9	0	0	1	0	0	113	42	1	0	2	0	127	0
4:30:00 PM		0	40	7	0	0	0	0	0	101	41	0	0	3	0	139	0
4:45:00 PM		0	40	4	0	0	1	0	0	96	36	0	0	2	0	144	0
5:00:00 PM		0	28	3	0	0	0	0	0	122	37	0	0	2	0	134	0
5:15:00 PM		0	46	4	0	1	0	0	0	99	15	0	0	3	0	129	0
5:30:00 PM		0	24	3	0	0	0	0	0	121	28	0	0	4	1	133	0
5:45:00 PM		0	33	4	0	1	0	0	0	87	26	0	0	2	0	118	0
BIKE	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUCK	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:15:00 PM		0	0	0	0	0	0	0	0	2	0	0	0	0	5	0	0
4:30:00 PM		0	0	0	0	0	0	0	0	5	1	0	0	0	0	1	0
4:45:00 PM		0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0
5:00:00 PM		0	1	0	0	0	0	0	0	1	0	0	0	0	0	4	0
5:15:00 PM		0	0	1	0	0	0	0	0	2	0	0	0	0	0	3	0
5:30:00 PM		0	1	0	0	0	0	0	0	3	0	0	0	0	0	2	0
5:45:00 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
TOTAL	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00:00 PM		0	40	7	0	0	0	0	0	104	38	0	1	1	0	128	0
4:15:00 PM		0	49	9	0	0	1	0	0	115	42	1	0	2	0	132	0
4:30:00 PM		0	40	7	0	0	0	0	0	106	42	0	0	3	0	140	0
4:45:00 PM		0	40	4	0	0	1	0	0	97	37	0	0	2	0	146	0
5:00:00 PM		0	29	3	0	0	0	0	0	123	37	0	0	2	0	138	0
5:15:00 PM		0	46	5	0	1	0	0	0	101	15	0	0	3	0	132	0
5:30:00 PM		0	25	3	0	0	0	0	0	124	28	0	0	4	1	135	0
5:45:00 PM		0	34	4	0	0	1	0	0	87	26	0	0	2	0	120	0
% Truck	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00:00 PM		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
4:15:00 PM		0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	4%	0%	0%
4:30:00 PM		0%	0%	0%	0%	0%	0%	0%	0%	5%	2%	0%	0%	0%	1%	0%	0%
4:45:00 PM		0%	0%	0%	0%	0%	0%	0%	0%	1%	3%	0%	0%	0%	1%	0%	0%
5:00:00 PM		0%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	3%	0%
5:15:00 PM		0%	0%	20%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	2%	0%
5:30:00 PM		0%	4%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	1%	0%	0%
5:45:00 PM		0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
PEAK HOUR TOTAL	PROSPECT STREET Southbound				ALDER STREET Westbound				PARK STREET Northbound				ROUTE 27 Eastbound				
	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:15:00 PM		0	49	9	0	0	1	0	0	115	42	1	0	2	0	132	0
4:30:00 PM		0	40	7	0	0	0	0	0	106	42	0	0	3	0	140	0
4:45:00 PM		0	40	4	0	0	1	0	0	97	37	0	0	2	0	146	0
5:00:00 PM		0	29	3	0	0	0	0	0	123	37	0	0	2	0	138	0
PEAK HOUR	#DIV/0!	0.6%	0.0%	#DIV/0!	#DIV/0!	0.0%	#DIV/0!	#DIV/0!	2.0%	1.3%	0.0%	#DIV/0!	0.0%	#DIV/0!	2.2%	#DIV/0!	
Truck Percent on Entire Approach		0.6%				0.0%				1.8%					2.1%		

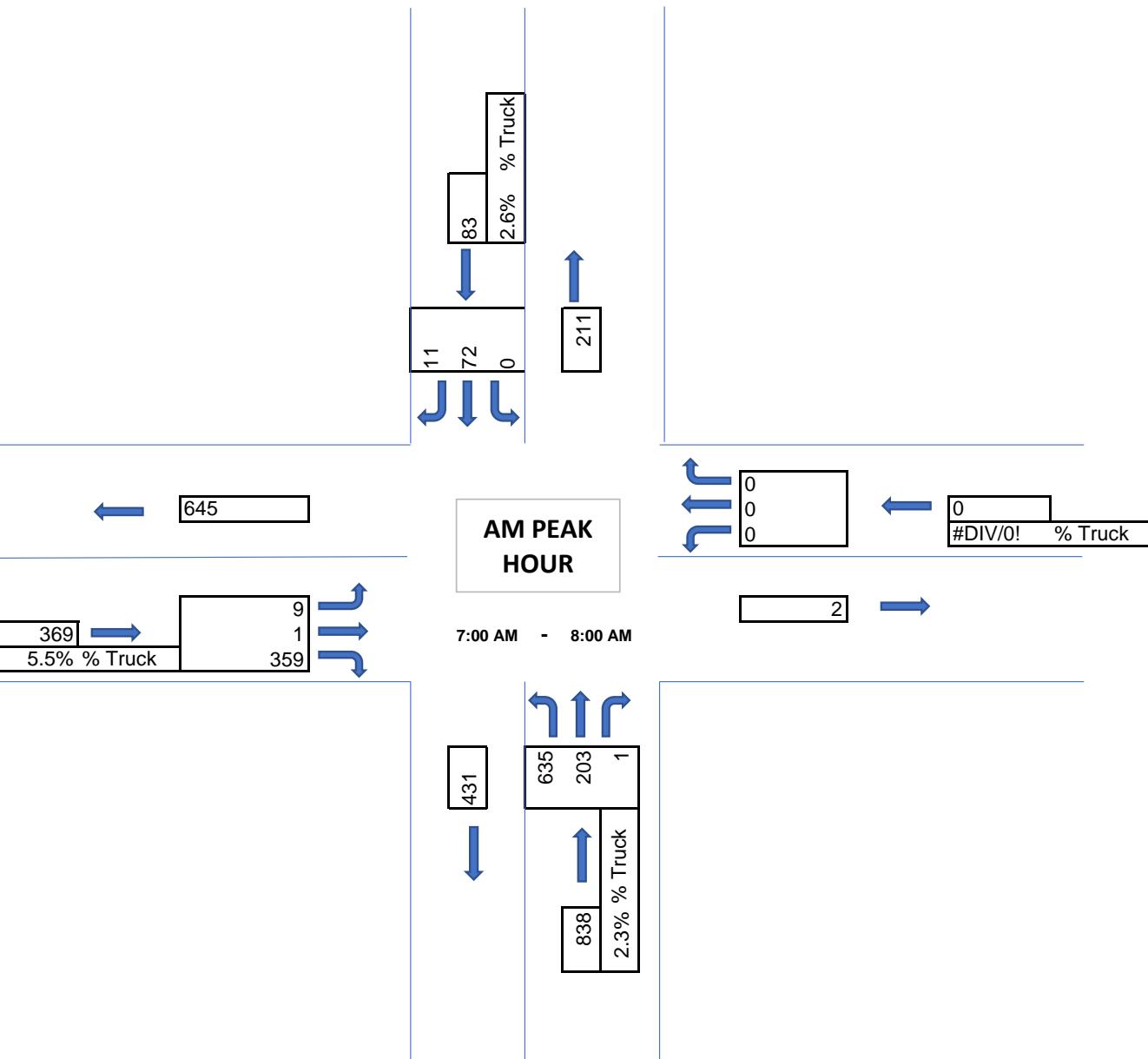
EXISTING AM PEAK HOUR



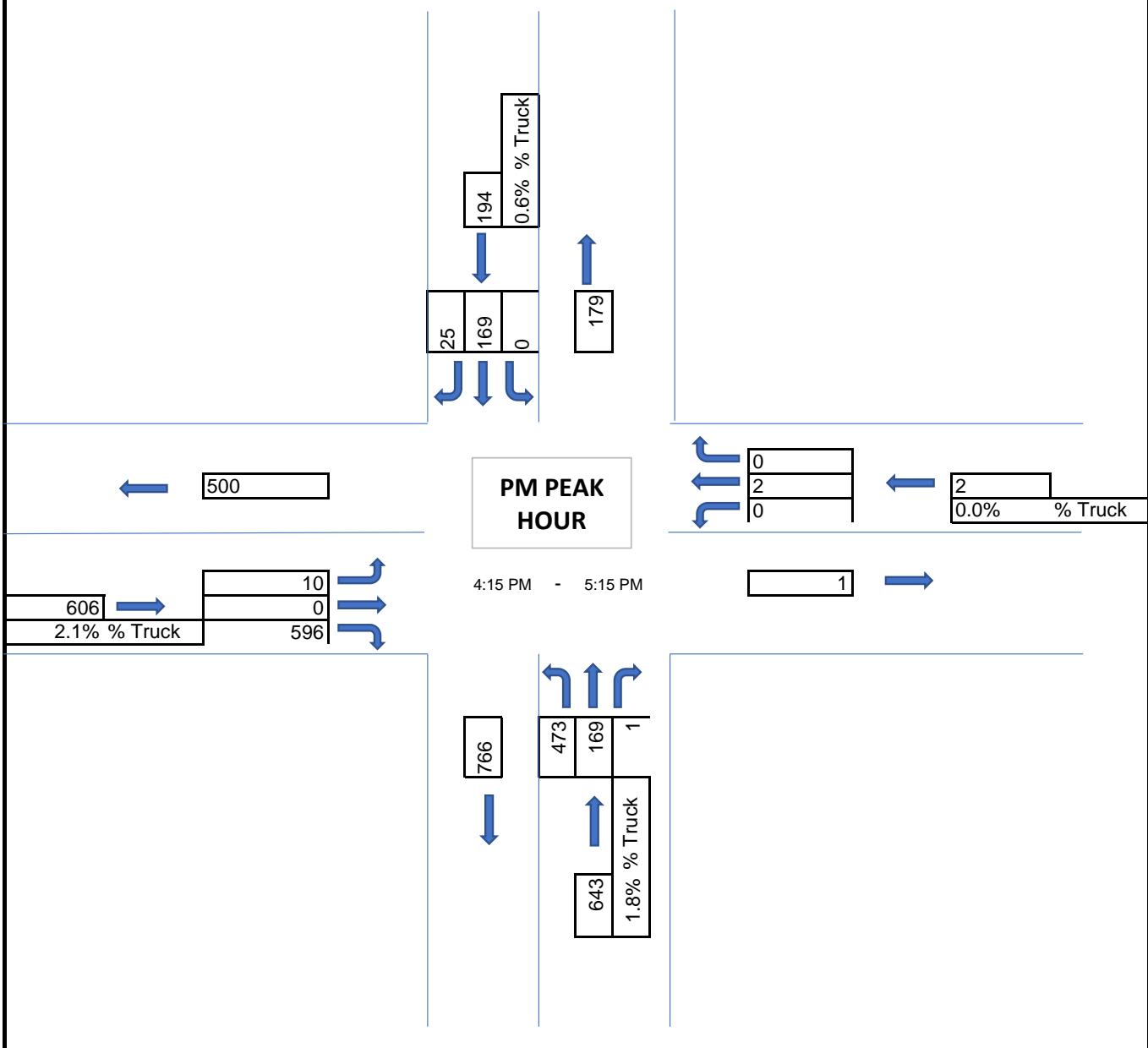
EXISTING PM PEAK HOUR



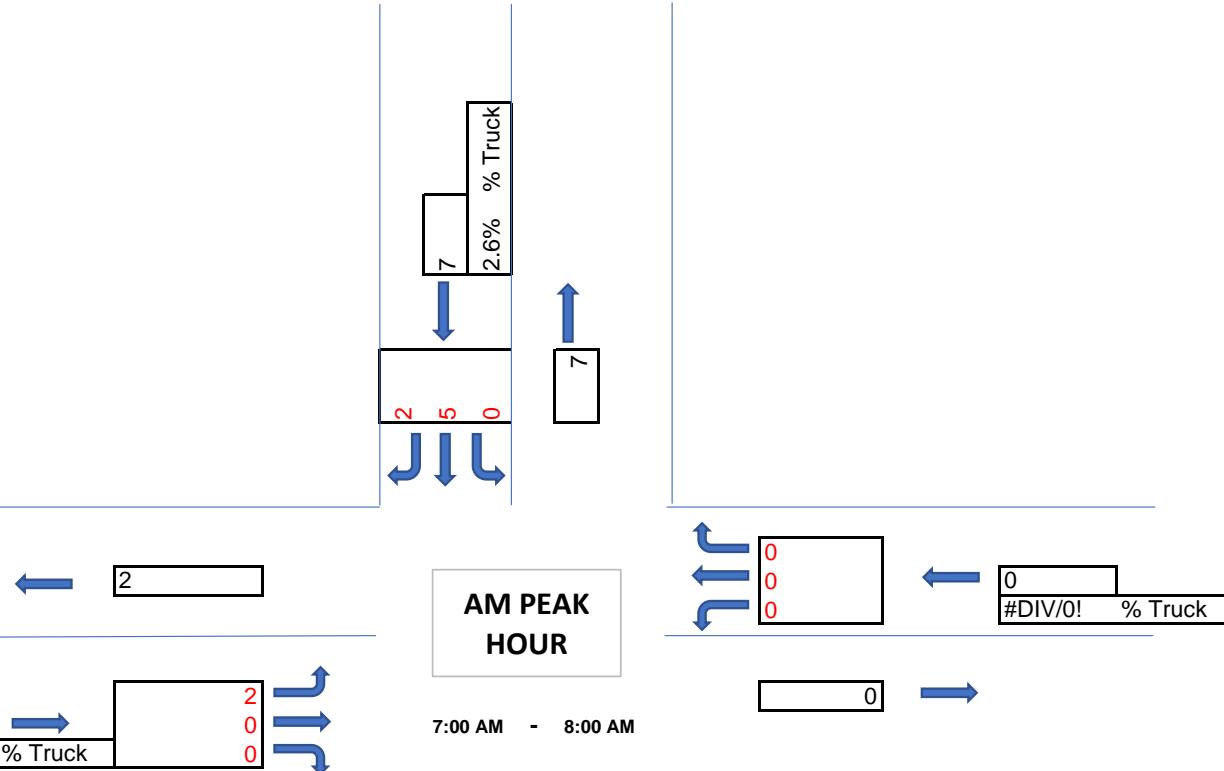
FUTURE AM NO-BUILD



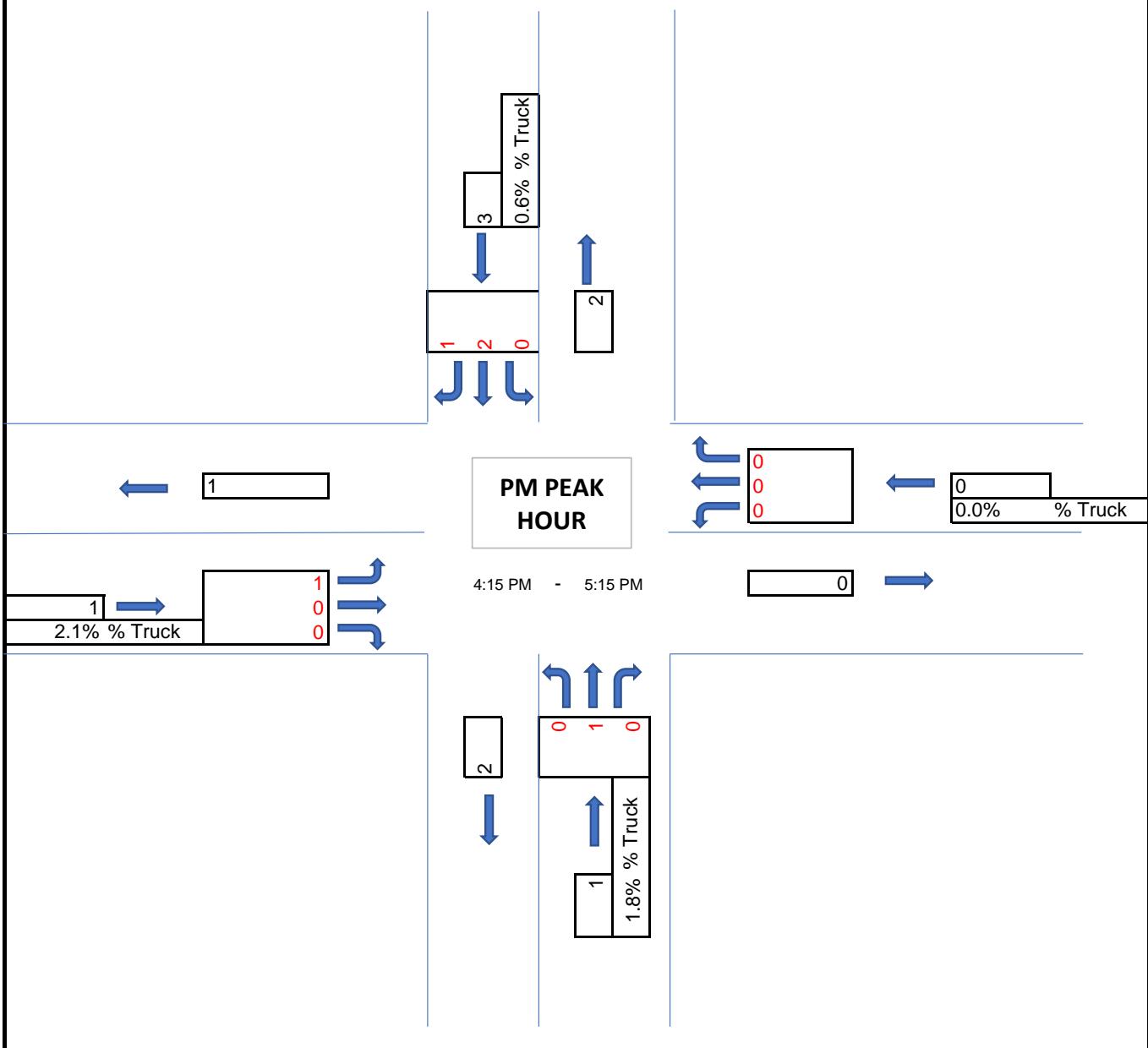
FUTURE PM NO-BUILD



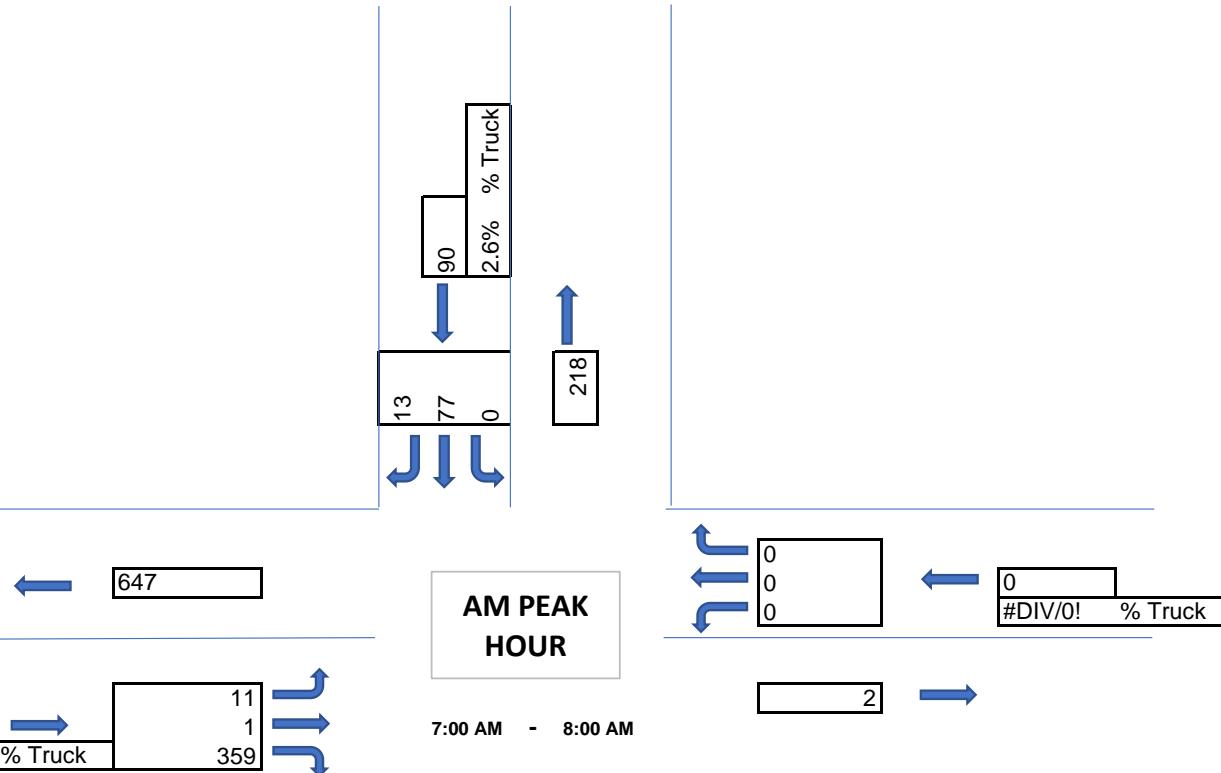
FUTURE AM NO-BUILD



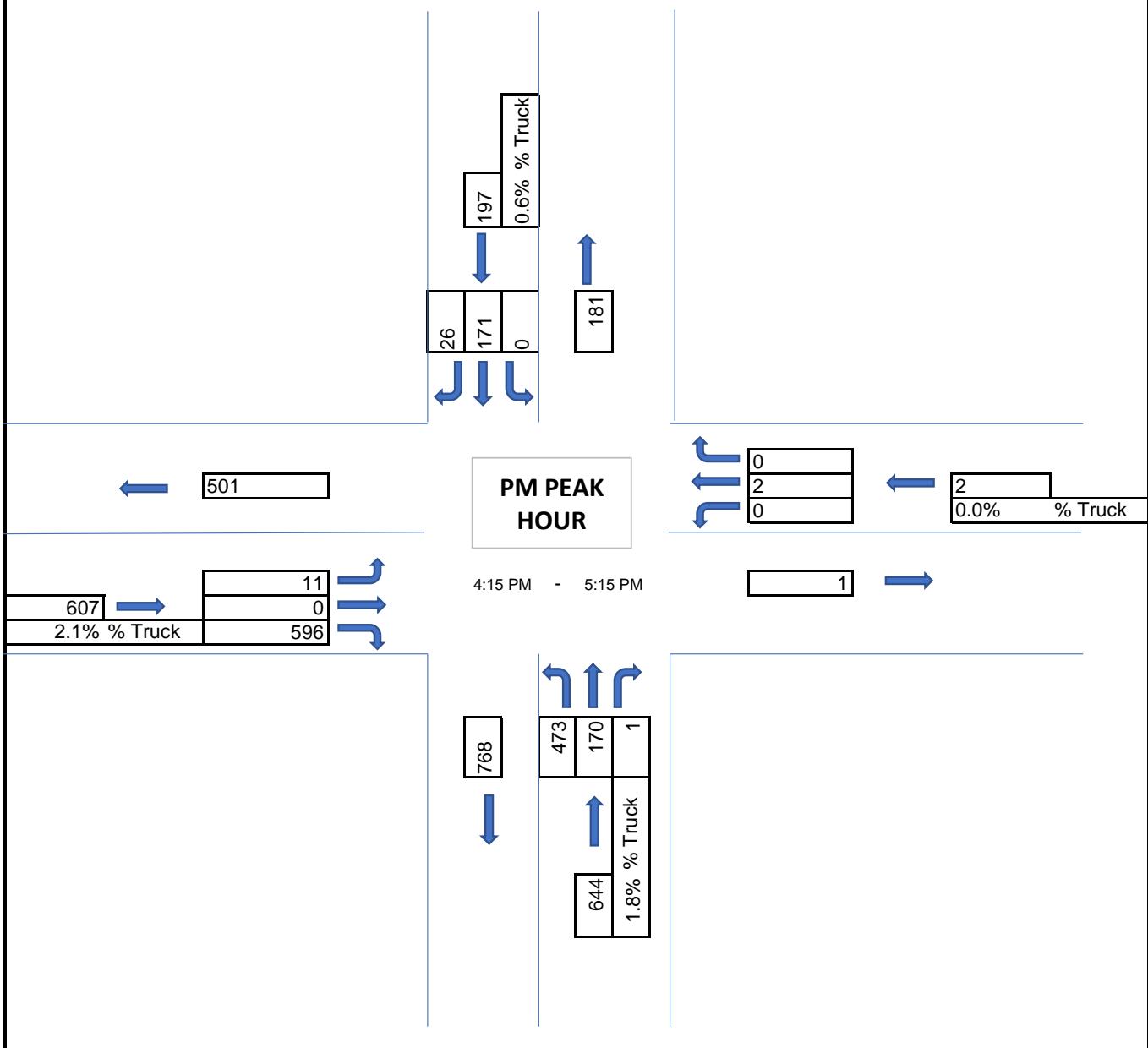
FUTURE PM NO-BUILD



FUTURE AM NO-BUILD



FUTURE PM NO-BUILD



TECHNICAL MEMORANDUM**MASSDOT CRASH RATE WORKSHEETS**



INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Stoughton COUNT DATE : Nov-22

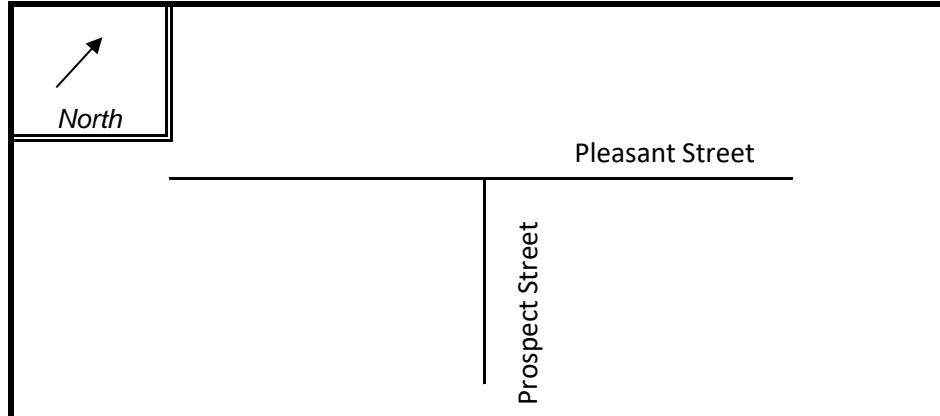
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Pleasant Street

MINOR STREET(S) : Prospect Street

INTERSECTION
DIAGRAM
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	442	398	246	1		1,087

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

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

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

Comments : _____

Project Title & Date: Stoughton Fire 11-23-22



INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Stoughton COUNT DATE : Nov-22

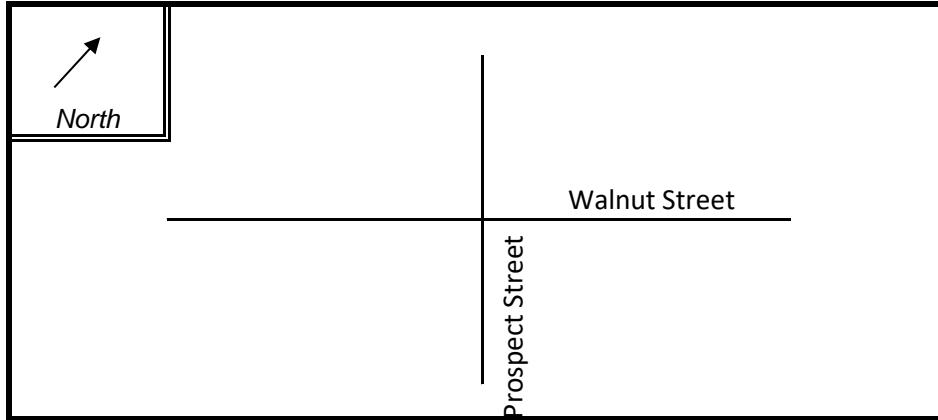
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Prospect Street

MINOR STREET(S) : Walnut Street

INTERSECTION
DIAGRAM
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	169	161	180	331		841

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

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

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

Comments : _____

Project Title & Date: Stoughton Fire 11-23-22

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Stoughton COUNT DATE : Nov-22

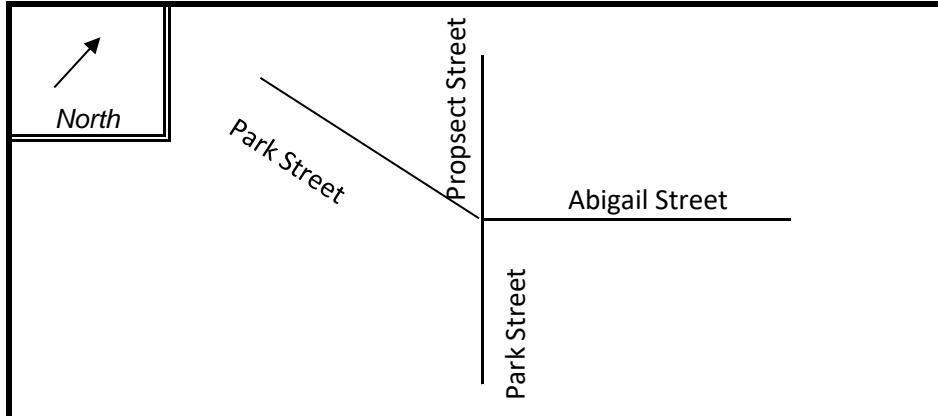
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Park Street

MINOR STREET(S) : Pleasant Street

**INTERSECTION
DIAGRAM
(Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SEB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	606	2	643	195		1,446

" K " FACTOR : **0.090** INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : **16,067**

TOTAL # OF CRASHES : **8** # OF YEARS : **4** AVERAGE # OF CRASHES PER YEAR (A) : **2.00**

CRASH RATE CALCULATION : **0.34** RATE =
$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : _____

Project Title & Date: Stoughton Fire 11-23-22

TECHNICAL MEMORANDUM**TRAFFIC SIGNAL WARRANTS**

Traffic Control Signal Warrant Analyses

(Based on MUTCD-2009 Edition)

Intersection:
Pop. <10,000? (Y/N)
Speed (in mph):

Is Major?* (Y/N):

#Lanes* (one way):

EB

WB

NB

SB

N

40 mph

Y

1

Y

1

n

n

1

*Note: If intersection is a "T" intersection, leave cells blank for the non-existent approach

Park Street at Prospect Street

Count Date:	1/4/2023	Analysis Date:	01/11/23	
Analysis Year:	2022	Analyst:	JWD	
Adjustment Factor:	1	Raw counts		

Major Lanes:	1	Enter the higher number of lanes for the major street approach
Minor Lanes:	1	Enter the number of lanes for the minor street approach you want to analyze

Time	Σ EB	Σ WB	Σ NB	Σ SB	Σ Major	Σ Minor	Σ Max	Minor	W1 A	W1 B	W1 combo	W2
7:00	295	629	0	46	924	46	46		N	N	N	N
8:00	359	580	0	81	939	81	81		N	Y	N	N
9:00	328	391	0	52	719	52	52		N	N	N	N
10:00	360	403	0	80	763	80	80		N	Y	N	N
11:00	364	378	0	99	742	99	99		N	N	N	N
12:00	392	426	0	81	818	81	81		N	Y	N	N
13:00	406	523	0	87	929	87	87		N	Y	N	N
14:00	524	521	0	109	1045	109	109		N	Y	N	Y
15:00	589	569	0	159	1158	159	159		Y	Y	Y	N
16:00	576	626	0	168	1202	168	168		Y	Y	Y	Y
17:00	581	551	0	126	1132	126	126		N	Y	Y	N
18:00	449	413	0	108	862	108	108		N	Y	N	N
19:00	305	323	0	61	628	61	61		N	N	N	N
									2 of 8	9 of 8	3 of 8	4 of 4
												1 of 1

Warrant Analyses

Warrant 1: Condition A Minimum Vehicular Volume Warrant is Not Met

Warrant 1: Condition B Interruption of Continuous Traffic Warrant is Met

Warrant 1: Combination of Warrants 1A and 1B is Not Met

Warrant 2: Four-Hour Warrant is Met

Warrant 3: One-Hour Warrant is Met

TECHNICAL MEMORANDUM**SIGHT DISTANCE CALCULATIONS**

AASHTO Recommended Sight Distance Summary (Passenger Vehicles)

LOCATION:	Prospect Street at Site Drive	
Side Street Direction:	WB	
Number of Lanes on Mainline =	2	
Median Width (Feet) =	0	
STOPPING SIGHT DISTANCE		
Mainline Direction:	NB	
85th Percentile Speed (V) =	45 MPH	
Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Brake Reaction Time (T) =	2.5 seconds	
Deceleration Rate (A) =	11.2 ft/s ²	
SSD = 1.47 V * T + 1.075 V ² /A =	360 FT	
	SSD =	360 FT
INTERSECTION SIGHT DISTANCE		
RIGHT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap (t _g) =		
ISD (Right Turn from Stop) = 1.47 * t _g * V =	6.5 seconds	
	ISD (Right Turn from Stop) =	430 FT
LEFT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap (t _g) =		
ISD (Left Turn from Stop) = 1.47 * t _g * V =	7.5 seconds	
	ISD (Left Turn from Stop) =	497 FT
	SSD =	500 FT
	SSD =	360 FT

AASHTO Recommended Sight Distance Summary (Single-Unit Trucks)

LOCATION:	Prospect Street at Site Drive	
Side Street Direction:	WB	
Number of Lanes on Mainline =	2	
Median Width (Feet) =	0	
STOPPING SIGHT DISTANCE		
Mainline Direction:	NB	
85th Percentile Speed (V) =	45 MPH	
Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Brake Reaction Time (T) =	2.5 seconds	
Deceleration Rate (A) =	11.2 ft/s ²	
SSD = 1.47 V * T + 1.075 V ² /A =	360 FT	
	SSD =	360 FT
INTERSECTION SIGHT DISTANCE		
RIGHT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap (t _g) =		
ISD (Right Turn from Stop) = 1.47 * t _g * V =	8.5 seconds	
	ISD (Right Turn from Stop) =	563 FT
LEFT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap (t _g) =		
ISD (Left Turn from Stop) = 1.47 * t _g * V =	9.5 seconds	
	ISD (Left Turn from Stop) =	629 FT
MAINLINE SIGHT DISTANCE		
Mainline Direction:	SB	
85th Percentile Speed (V) =	45 MPH	
Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Brake Reaction Time (T) =	2.5 seconds	
Deceleration Rate (A) =	11.2 ft/s ²	
SSD = 1.47 V * T + 1.075 V ² /A =	360 FT	
	SSD =	360 FT

AASHTO Recommended Sight Distance Summary (Combination Trucks)

LOCATION:	Prospect Street at Site Drive	
Side Street Direction:	WB	
Number of Lanes on Mainline =	2	
Median Width (Feet) =	0	
STOPPING SIGHT DISTANCE		
Mainline Direction:	NB	45 MPH
85th Percentile Speed (V) =	0.0%	
Grade (G) =	No	
Apply Grade Adjustment		
Brake Reaction Time (T) =	2.5 seconds	
Deceleration Rate (A) =	11.2 ft/s ²	
SSD = 1.47 V * T + 1.075 V ² /A =	360 FT	
	SSD =	360 FT
INTERSECTION SIGHT DISTANCE		
RIGHT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap t _g =		
ISD (Right Turn from Stop) = 1.47 * t _g * V =	10.5 seconds	
	ISD (Right Turn from Stop) =	695 FT
LEFT TURN FROM STOP:		
Posted Speed (V) =	45 MPH	
Minor Street Approach Grade (G) =	0.0%	
Apply Grade Adjustment	No	
Time Gap t _g =		
ISD (Left Turn from Stop) = 1.47 * t _g * V =	11.5 seconds	
	ISD (Left Turn from Stop) =	761 FT
	SSD =	360 FT

TECHNICAL MEMORANDUM**TRIP-GENERATION CALCULATIONS**

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 575 - Fire and Rescue Station

General Urban/Suburban

Average Vehicle Trips Ends vs:
Independent Variable (X):

1000 Sq. Ft. Gross Floor Area

####

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.48 *X
T = 0.48 * (25.200)
T = 12.10
T = 12
vehicle trips with 50% (3 vph) entering and 50% (9 vph) exiting.

General Urban/Suburban

Average Vehicle Trips Ends vs:
Independent Variable (X):

Number of Employees

8.000

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.44 *X
T = 0.44 * (8.000)
T = 3.52
T = 4
vehicle trips with 50% (1 vph) entering and 50% (3 vph) exiting.

Staff	Emergency Vehicles		Total Vehicles	
Morning Peak Hour *	Morning Peak Hour**		Morning Peak Hour	
In	8	In	2	In 10
Out	8	Out	2	Out 10
	16		4	20
* Shift change at 0800				
Evening Peak Hour*	Evening Peak Hour**		Evening Peak Hour**	
In	4	In	2	In 6
Out	4	Out	2	Out 6
	8		4	12
Daily				
In	8	In	24	In 32
Out	8	Out	24	Out 32
	16		48	64

* No staff change, "other"

**Responses (based on existing Freeman St 12 calls per 24 hr shift - one call per 2 hours)
for estimating assume 1 call per peak hour
average 2 vehicles per response

10 to 12	calls per 24 hr shift	Freeman	65%
Average Response	Engine & Ambulance		35%
Fire/Rescue	C-5, Engine Ladder		
6400 Annual Calls Total			
3600 Prospect			
10-Aug	daily calls		
6 to 8	oriented to Park St		
8 staff	0800-0800		

STAFF	EMERGENCY EQUIPMENT				TOTAL	
	AM	PM	AM	PM	AM	PM
From South	197	167	72%	48% To/From North	35%	
From North	77	181	28%	52% To/From South	65%	
	274	348	1	1	1	
Morning Staff Enter			Morning Equip Enter		Morning Equip Exit	
LT IN	RT IN	LT OUT	RT OUT	LT IN	RT IN	LT OUT RT OUT
2	6	6	2	1	1	1
Evening Staff Enter			Evening Equip Enter		Evening Equip Exit	
LT IN	RT IN	LT OUT	RT OUT	LT IN	RT IN	LT OUT RT OUT
3	1	2	2	1	1	1
			AM	PM		
	L	T	R	L T R		
Park Street	0	67	10	0 158	23	
Staff % Distribution	0%	87%	13%	0% 87%	13%	
Staff Distribution	0	5	1	0 2	0	
Equipment % Distribution	0%	35%	65%	0% 35%	65%	
Equipment Distribution	0	0	1	0 0	1	
Total	0	5	2	0 2	1	

TECHNICAL MEMORANDUM**CAPACITY ANALYSIS METHODOLOGY**

TECHNICAL MEMORANDUM

CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).⁶ The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year. A description of the operating condition under each level of service is provided below:

- LOS A describes conditions with little to no delay to motorists.
- LOS B represents a desirable level with relatively low delay to motorists.
- LOS C describes conditions with average delays to motorists.
- LOS D describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- LOS E represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- LOS F is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection control (STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for unsignalized intersections are shown in Table A-1.

⁶ *Highway Capacity Manual 6th Edition*, Transportation Research Board; Washington, D.C.; 2016.

TECHNICAL MEMORANDUM

TABLE A-1
Level-of-Service Criteria for Intersections

Level of Service	Unsignalized Intersection Criteria	Signalized Intersection Criteria
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle)
A	≤ 10	≤ 10
B	>10 and ≤ 15	>10 and ≤ 20
C	>15 and ≤ 25	>20 and ≤ 35
D	>25 and ≤ 35	>35 and ≤ 55
E	>35 and ≤ 50	>55 and ≤ 80
F	>50 or $v/c > 1.0$	>80 or $v/c > 1.0$

Source *Highway Capacity Manual 6th Edition*, Transportation Research Board; Washington, D.C.; 2016. Pages 19-16, 20-6, and 21-9.

For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups or to individual intersection approaches.

TECHNICAL MEMORANDUM**CAPACITY AND QUEUE ANALYSIS WORKSHEETS**

Lanes, Volumes, Timings

3: Prospect Street/Prospect St/Driveway & Pleasant Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	302	39	55	141	0	179	0	184	0	0	0
Future Volume (vph)	0	302	39	55	141	0	179	0	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	4%	5%	7%	6%	0%	0%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	302	39	55	141	0	179	0	184	0	0	0
Future Vol, veh/h	0	302	39	55	141	0	179	0	184	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	4	5	7	6	0	0	0	2	0	0	0
Mvmt Flow	0	311	40	57	145	0	185	0	190	0	0	0

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	145	0	0	351	0	0	590	590	331	685	610	145
Stage 1	-	-	-	-	-	-	331	331	-	259	259	-
Stage 2	-	-	-	-	-	-	259	259	-	426	351	-
Critical Hdwy	4.1	-	-	4.17	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.263	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1450	-	-	1181	-	-	422	423	711	365	412	908
Stage 1	-	-	-	-	-	-	687	649	-	750	697	-
Stage 2	-	-	-	-	-	-	750	697	-	610	636	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1450	-	-	1181	-	-	405	401	711	257	390	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	405	401	-	257	390	-
Stage 1	-	-	-	-	-	-	687	649	-	750	660	-
Stage 2	-	-	-	-	-	-	710	660	-	447	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.3	28	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	518	1450	-	-	1181	-	-	-
HCM Lane V/C Ratio	0.722	-	-	-	0.048	-	-	-
HCM Control Delay (s)	28	0	-	-	8.2	0	-	0
HCM Lane LOS	D	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	5.9	0	-	-	0.2	-	-	-

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2022 Existing
Timing Plan: Weekday AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	76	8	13	79	2	6	145	23	3	61	77
Future Volume (vph)	58	76	8	13	79	2	6	145	23	3	61	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	0%	0%	1%	0%	0%	1%	0%	0%	5%	9%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 9.1
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	76	8	13	79	2	6	145	23	3	61	77
Future Vol, veh/h	58	76	8	13	79	2	6	145	23	3	61	77
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	4	0	0	1	0	0	1	0	0	5	9
Mvmt Flow	66	86	9	15	90	2	7	165	26	3	69	88
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			WB			NB			SB		
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	9.4			8.9			9.4			8.7		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	41%	14%	2%
Vol Thru, %	83%	54%	84%	43%
Vol Right, %	13%	6%	2%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	142	94	141
LT Vol	6	58	13	3
Through Vol	145	76	79	61
RT Vol	23	8	2	77
Lane Flow Rate	198	161	107	160
Geometry Grp	1	1	1	1
Degree of Util (X)	0.257	0.22	0.147	0.199
Departure Headway (Hd)	4.674	4.907	4.948	4.478
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	728	720	796
Service Time	2.728	2.966	3.011	2.534
HCM Lane V/C Ratio	0.259	0.221	0.149	0.201
HCM Control Delay	9.4	9.4	8.9	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.8	0.5	0.7

Lanes, Volumes, Timings

12: Prospect Street/Park Street & Prospect St / Alder St

2022 Existing

Timing Plan: Weekday AM

Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	67	10	9	335	592	190
Future Volume (vph)	67	10	9	335	592	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	654			1047	774	
Travel Time (s)	14.9			23.8	17.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	0%	6%	3%	2%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh	1.7					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑	↑	↑		
Traffic Vol, veh/h	67	10	9	335	592	190
Future Vol, veh/h	67	10	9	335	592	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	0	0	6	3	2
Mvmt Flow	71	11	9	353	623	200

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1094	723	823	0	-	0
Stage 1	723	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	236	430	816	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	233	430	816	-	-	-
Mov Cap-2 Maneuver	233	-	-	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s	25.3	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	816	-	233	430
HCM Lane V/C Ratio	-	-	0.012	-	0.303	0.024
HCM Control Delay (s)	-	-	9.5	0	27	13.6
HCM Lane LOS	-	-	A	A	D	B
HCM 95th %tile Q(veh)	-	-	0	-	1.2	0.1

Lanes, Volumes, Timings

3: Prospect Street/Prospect St/Driveway & Pleasant Street

2022 Existing

Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	301	108	180	190	1	99	0	131	0	0	1
Future Volume (vph)	0	301	108	180	190	1	99	0	131	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	5%	1%	2%	2%	0%	1%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	301	108	180	190	1	99	0	131	0	0	1
Future Vol, veh/h	0	301	108	180	190	1	99	0	131	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	5	1	2	2	0	1	0	2	0	0	0
Mvmt Flow	0	310	111	186	196	1	102	0	135	0	0	1

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	197	0	0	421	0	0	935	935	366	1002	990	197
Stage 1	-	-	-	-	-	-	366	366	-	569	569	-
Stage 2	-	-	-	-	-	-	569	569	-	433	421	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1388	-	-	1138	-	-	247	267	679	223	248	849
Stage 1	-	-	-	-	-	-	655	626	-	511	509	-
Stage 2	-	-	-	-	-	-	509	509	-	605	592	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1388	-	-	1138	-	-	212	218	679	153	202	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	218	-	153	202	-
Stage 1	-	-	-	-	-	-	655	626	-	511	415	-
Stage 2	-	-	-	-	-	-	415	415	-	485	592	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	0	4.3			34.6			9.2		
HCM LOS					D			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	349	1388	-	-	1138	-	-	849
HCM Lane V/C Ratio	0.679	-	-	-	0.163	-	-	0.001
HCM Control Delay (s)	34.6	0	-	-	8.8	0	-	9.2
HCM Lane LOS	D	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	4.7	0	-	-	0.6	-	-	0

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2022 Existing
Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	91	16	29	117	5	4	136	28	11	185	113
Future Volume (vph)	50	91	16	29	117	5	4	136	28	11	185	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		383			550			592			255	
Travel Time (s)		8.7			12.5			13.5			5.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	1%	0%	3%	0%	0%	0%	1%	4%	0%	1%	4%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 10.9
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	50	91	16	29	117	5	4	136	28	11	185	113
Future Vol, veh/h	50	91	16	29	117	5	4	136	28	11	185	113
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	1	0	3	0	0	0	1	4	0	1	4
Mvmt Flow	54	98	17	31	126	5	4	146	30	12	199	122
Number of Lanes	0	1	0	0	1	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	10.4			10.5			10.1			11.9		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	32%	19%	4%
Vol Thru, %	81%	58%	77%	60%
Vol Right, %	17%	10%	3%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	157	151	309
LT Vol	4	50	29	11
Through Vol	136	91	117	185
RT Vol	28	16	5	113
Lane Flow Rate	181	169	162	332
Geometry Grp	1	1	1	1
Degree of Util (X)	0.262	0.258	0.251	0.452
Departure Headway (Hd)	5.226	5.5	5.576	4.901
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	653	645	734
Service Time	3.261	3.536	3.613	2.931
HCM Lane V/C Ratio	0.264	0.259	0.251	0.452
HCM Control Delay	10.1	10.4	10.5	11.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1	1	2.4

Lanes, Volumes, Timings

12: Prospect Street/Park Street & Prospect St / Alder St

2022 Existing

Timing Plan: Weekday PM



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑		↑	↑	
Traffic Volume (vph)	158	25	9	556	441	159
Future Volume (vph)	158	25	9	556	441	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	654			1047	774	
Travel Time (s)	14.9			23.8	17.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	2%	2%	1%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 7

Movement	SBL	SBR	SEL	SET	NWT	NWR
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Lane Configurations	↖	↗	↖	↗		
Traffic Vol, veh/h	158	25	9	556	441	159
Future Vol, veh/h	158	25	9	556	441	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	0	0	2	2	1
Mvmt Flow	165	26	9	579	459	166

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1139	542	625	0	-	0
Stage 1	542	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Critical Hdwy	6.41	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	224	544	966	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	221	544	966	-	-	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	SB	SE	NW
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HCM Control Delay, s	51.2	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	966	-	221	544
HCM Lane V/C Ratio	-	-	0.01	-	0.745	0.048
HCM Control Delay (s)	-	-	8.8	0	57.4	12
HCM Lane LOS	-	-	A	A	F	B
HCM 95th %tile Q(veh)	-	-	0	-	5.1	0.1

Lanes, Volumes, Timings

3: Prospect Street/Prospect St/Driveway & Pleasant Street

2029 No-Build

Timing Plan: Weekday AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	324	42	59	151	0	192	0	197	0	0	0
Future Volume (vph)	0	324	42	59	151	0	192	0	197	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	4%	5%	7%	6%	0%	0%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 15.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	324	42	59	151	0	192	0	197	0	0	0
Future Vol, veh/h	0	324	42	59	151	0	192	0	197	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	4	5	7	6	0	0	0	2	0	0	0
Mvmt Flow	0	334	43	61	156	0	198	0	203	0	0	0

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	156	0	0	377	0	0	634	634	356	735	655	156
Stage 1	-	-	-	-	-	-	356	356	-	278	278	-
Stage 2	-	-	-	-	-	-	278	278	-	457	377	-
Critical Hdwy	4.1	-	-	4.17	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.263	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1436	-	-	1155	-	-	395	399	688	338	388	895
Stage 1	-	-	-	-	-	-	666	633	-	733	684	-
Stage 2	-	-	-	-	-	-	733	684	-	587	619	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1436	-	-	1155	-	-	378	376	688	228	365	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	378	376	-	228	365	-
Stage 1	-	-	-	-	-	-	666	633	-	733	644	-
Stage 2	-	-	-	-	-	-	690	644	-	414	619	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.3	37.6	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	490	1436	-	-	1155	-	-	-
HCM Lane V/C Ratio	0.818	-	-	-	0.053	-	-	-
HCM Control Delay (s)	37.6	0	-	-	8.3	0	-	0
HCM Lane LOS	E	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	7.9	0	-	-	0.2	-	-	-

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2029 No-Build
Timing Plan: Weekday AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	81	9	14	85	2	6	155	25	3	65	83
Future Volume (vph)	62	81	9	14	85	2	6	155	25	3	65	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	0%	0%	1%	0%	0%	1%	0%	0%	5%	9%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 9.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	62	81	9	14	85	2	6	155	25	3	65	83
Future Vol, veh/h	62	81	9	14	85	2	6	155	25	3	65	83
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	4	0	0	1	0	0	1	0	0	5	9
Mvmt Flow	70	92	10	16	97	2	7	176	28	3	74	94
Number of Lanes	0	1	0	0	1	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	9.6			9.1			9.7			8.9		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	41%	14%	2%
Vol Thru, %	83%	53%	84%	43%
Vol Right, %	13%	6%	2%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	152	101	151
LT Vol	6	62	14	3
Through Vol	155	81	85	65
RT Vol	25	9	2	83
Lane Flow Rate	211	173	115	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.279	0.239	0.16	0.217
Departure Headway (Hd)	4.745	4.982	5.033	4.552
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	752	715	706	782
Service Time	2.807	3.054	3.111	2.618
HCM Lane V/C Ratio	0.281	0.242	0.163	0.22
HCM Control Delay	9.7	9.6	9.1	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.9	0.6	0.8



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑		↑	↑	
Traffic Volume (vph)	72	11	10	359	635	204
Future Volume (vph)	72	11	10	359	635	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	654			1047	774	
Travel Time (s)	14.9			23.8	17.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	0%	6%	3%	2%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↖	↗	↔	↗		
Traffic Vol, veh/h	72	11	10	359	635	204
Future Vol, veh/h	72	11	10	359	635	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	0	0	6	3	2
Mvmt Flow	76	12	11	378	668	215

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1176	776	883	0	-	0
Stage 1	776	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	210	401	775	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	206	401	775	-	-	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s	29.9	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	775	-	206	401
HCM Lane V/C Ratio	-	-	0.014	-	0.368	0.029
HCM Control Delay (s)	-	-	9.7	0	32.3	14.2
HCM Lane LOS	-	-	A	A	D	B
HCM 95th %tile Q(veh)	-	-	0	-	1.6	0.1

Lanes, Volumes, Timings

3: Prospect Street/Prospect St/Driveway & Pleasant Street

2029 No-Build

Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	323	116	193	204	1	106	0	140	0	0	1
Future Volume (vph)	3	323	116	193	204	1	106	0	140	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	5%	1%	2%	2%	0%	1%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 13.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	323	116	193	204	1	106	0	140	0	0	1
Future Vol, veh/h	3	323	116	193	204	1	106	0	140	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	5	1	2	2	0	1	0	2	0	0	0
Mvmt Flow	3	333	120	199	210	1	109	0	144	0	0	1

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	211	0	0	453	0	0	1008	1008	393	1080	1068	211
Stage 1	-	-	-	-	-	-	399	399	-	609	609	-
Stage 2	-	-	-	-	-	-	609	609	-	471	459	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1372	-	-	1108	-	-	220	242	656	197	223	834
Stage 1	-	-	-	-	-	-	629	606	-	486	488	-
Stage 2	-	-	-	-	-	-	484	488	-	577	570	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1372	-	-	1108	-	-	185	192	656	129	177	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	192	-	129	177	-
Stage 1	-	-	-	-	-	-	627	604	-	485	388	-
Stage 2	-	-	-	-	-	-	385	388	-	449	568	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	0.1	4.3			51.4			9.3		
HCM LOS					F			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	313	1372	-	-	1108	-	-	834
HCM Lane V/C Ratio	0.81	0.002	-	-	0.18	-	-	0.001
HCM Control Delay (s)	51.4	7.6	0	-	9	0	-	9.3
HCM Lane LOS	F	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	6.7	0	-	-	0.7	-	-	0

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2029 No-Build
Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	98	17	31	125	5	4	146	30	12	198	121
Future Volume (vph)	54	98	17	31	125	5	4	146	30	12	198	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)												30
Link Distance (ft)												255
Travel Time (s)												5.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	1%	0%	3%	0%	0%	0%	1%	4%	0%	1%	4%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 11.7
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	98	17	31	125	5	4	146	30	12	198	121
Future Vol, veh/h	54	98	17	31	125	5	4	146	30	12	198	121
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	1	0	3	0	0	0	1	4	0	1	4
Mvmt Flow	58	105	18	33	134	5	4	157	32	13	213	130
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			WB			NB			SB		
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	11			11			10.6			13		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	32%	19%	4%
Vol Thru, %	81%	58%	78%	60%
Vol Right, %	17%	10%	3%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	169	161	331
LT Vol	4	54	31	12
Through Vol	146	98	125	198
RT Vol	30	17	5	121
Lane Flow Rate	194	182	173	356
Geometry Grp	1	1	1	1
Degree of Util (X)	0.289	0.286	0.276	0.497
Departure Headway (Hd)	5.373	5.657	5.737	5.023
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	666	634	625	715
Service Time	3.423	3.708	3.789	3.066
HCM Lane V/C Ratio	0.291	0.287	0.277	0.498
HCM Control Delay	10.6	11	11	13
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1.2	1.1	2.8



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑		↑	↑	
Traffic Volume (vph)	169	27	10	596	473	170
Future Volume (vph)	169	27	10	596	473	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	654			1047	774	
Travel Time (s)	14.9			23.8	17.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	2%	2%	1%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 10.8

Movement	SBL	SBR	SEL	SET	NWT	NWR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	↖	↗	↖	↗		
Traffic Vol, veh/h	169	27	10	596	473	170
Future Vol, veh/h	169	27	10	596	473	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	0	0	2	2	1
Mvmt Flow	176	28	10	621	493	177

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1223	582	670	0	-	0
Stage 1	582	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.41	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	199	517	930	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	196	517	930	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	SB	SE	NW
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HCM Control Delay, s	79	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	930	-	196	517
HCM Lane V/C Ratio	-	-	0.011	-	0.898	0.054
HCM Control Delay (s)	-	-	8.9	0	89.6	12.4
HCM Lane LOS	-	-	A	A	F	B
HCM 95th %tile Q(veh)	-	-	0	-	7	0.2

Lanes, Volumes, Timings

2029 Build

3: Prospect Street/Prospect St/Driveway & Pleasant Street

Timing Plan: Weekday AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	324	43	60	151	0	193	0	198	0	0	0
Future Volume (vph)	0	324	43	60	151	0	193	0	198	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	4%	5%	7%	6%	0%	0%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 16.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	324	43	60	151	0	193	0	198	0	0	0
Future Vol, veh/h	0	324	43	60	151	0	193	0	198	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	4	5	7	6	0	0	0	2	0	0	0
Mvmt Flow	0	334	44	62	156	0	199	0	204	0	0	0

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	156	0	0	378	0	0	636	636	356	738	658	156
Stage 1	-	-	-	-	-	-	356	356	-	280	280	-
Stage 2	-	-	-	-	-	-	280	280	-	458	378	-
Critical Hdwy	4.1	-	-	4.17	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.263	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1436	-	-	1154	-	-	393	398	688	336	387	895
Stage 1	-	-	-	-	-	-	666	633	-	731	683	-
Stage 2	-	-	-	-	-	-	731	683	-	587	619	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1436	-	-	1154	-	-	375	375	688	226	364	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	375	375	-	226	364	-
Stage 1	-	-	-	-	-	-	666	633	-	731	643	-
Stage 2	-	-	-	-	-	-	688	643	-	413	619	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	0	2.4			38.9			0		
HCM LOS					E			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	487	1436	-	-	1154	-	-	-
HCM Lane V/C Ratio	0.828	-	-	-	0.054	-	-	-
HCM Control Delay (s)	38.9	0	-	-	8.3	0	-	0
HCM Lane LOS	E	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	8.1	0	-	-	0.2	-	-	-

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2029 Build
Timing Plan: Weekday AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	81	9	15	85	2	6	158	25	3	67	83
Future Volume (vph)	62	81	9	15	85	2	6	158	25	3	67	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	4%	0%	0%	1%	0%	0%	1%	0%	0%	5%	9%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 9.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	62	81	9	15	85	2	6	158	25	3	67	83
Future Vol, veh/h	62	81	9	15	85	2	6	158	25	3	67	83
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	4	0	0	1	0	0	1	0	0	5	9
Mvmt Flow	70	92	10	17	97	2	7	180	28	3	76	94
Number of Lanes	0	1	0	0	1	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	9.7			9.1			9.7			8.9		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	41%	15%	2%
Vol Thru, %	84%	53%	83%	44%
Vol Right, %	13%	6%	2%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	152	102	153
LT Vol	6	62	15	3
Through Vol	158	81	85	67
RT Vol	25	9	2	83
Lane Flow Rate	215	173	116	174
Geometry Grp	1	1	1	1
Degree of Util (X)	0.284	0.24	0.163	0.221
Departure Headway (Hd)	4.755	5	5.052	4.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	750	712	704	779
Service Time	2.82	3.074	3.131	2.635
HCM Lane V/C Ratio	0.287	0.243	0.165	0.223
HCM Control Delay	9.7	9.7	9.1	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.9	0.6	0.8



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑		↑	↑	
Traffic Volume (vph)	77	13	12	359	635	209
Future Volume (vph)	77	13	12	359	635	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	489			1047	774	
Travel Time (s)	11.1			23.8	17.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	0%	6%	3%	2%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	SBL	SBR	SEL	SET	NWT	NWR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	↖	↗	↖	↗		
Traffic Vol, veh/h	77	13	12	359	635	209
Future Vol, veh/h	77	13	12	359	635	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	0	0	6	3	2
Mvmt Flow	81	14	13	378	668	220

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1182	778	888	0	-	0
Stage 1	778	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	209	400	771	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	205	400	771	-	-	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	SB	SE	NW
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HCM Control Delay, s	30.8	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	771	-	205	400
HCM Lane V/C Ratio	-	-	0.016	-	0.395	0.034
HCM Control Delay (s)	-	-	9.7	0	33.6	14.3
HCM Lane LOS	-	-	A	A	D	B
HCM 95th %tile Q(veh)	-	-	0.1	-	1.8	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	7	3	212	7	3	83
Future Volume (vph)	7	3	212	7	3	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	366		489			483
Travel Time (s)	8.3		11.1			11.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		10			10
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B			↑
Traffic Vol, veh/h	7	3	212	7	3	83
Future Vol, veh/h	7	3	212	7	3	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	8	3	230	8	3	90

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	330	234	0	0 238 0
Stage 1	234	-	-	-
Stage 2	96	-	-	-
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	665	805	-	- 1329 -
Stage 1	805	-	-	-
Stage 2	928	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	664	805	-	- 1329 -
Mov Cap-2 Maneuver	664	-	-	-
Stage 1	805	-	-	-
Stage 2	926	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL	Ln1	SBL	SBT
Capacity (veh/h)	-	-	701	1329	-	-
HCM Lane V/C Ratio	-	-	0.016	0.002	-	-
HCM Control Delay (s)	-	-	10.2	7.7	0	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Lanes, Volumes, Timings

2029 Build

3: Prospect Street/Prospect St/Driveway & Pleasant Street

Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	323	117	195	204	1	107	0	141	0	0	1
Future Volume (vph)	3	323	117	195	204	1	107	0	141	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			475			478			144	
Travel Time (s)		13.8			10.8			10.9			3.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	5%	1%	2%	2%	0%	1%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	323	117	195	204	1	107	0	141	0	0	1
Future Vol, veh/h	3	323	117	195	204	1	107	0	141	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	5	1	2	2	0	1	0	2	0	0	0
Mvmt Flow	3	333	121	201	210	1	110	0	145	0	0	1

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	211	0	0	454	0	0	1013	1013	394	1085	1073	211
Stage 1	-	-	-	-	-	-	400	400	-	613	613	-
Stage 2	-	-	-	-	-	-	613	613	-	472	460	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1372	-	-	1107	-	-	218	241	655	196	222	834
Stage 1	-	-	-	-	-	-	628	605	-	483	486	-
Stage 2	-	-	-	-	-	-	481	486	-	576	569	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1372	-	-	1107	-	-	183	191	655	128	176	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	183	191	-	128	176	-
Stage 1	-	-	-	-	-	-	626	603	-	482	386	-
Stage 2	-	-	-	-	-	-	381	386	-	447	567	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	0.1	4.4			53.8			9.3		
HCM LOS					F			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	310	1372	-	-	1107	-	-	834
HCM Lane V/C Ratio	0.825	0.002	-	-	0.182	-	-	0.001
HCM Control Delay (s)	53.8	7.6	0	-	9	0	-	9.3
HCM Lane LOS	F	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	7	0	-	-	0.7	-	-	0

Lanes, Volumes, Timings
8: Prospect Street & Walnut Street

2029 Build
Timing Plan: Weekday PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	98	17	32	125	5	4	148	31	12	201	121
Future Volume (vph)	54	98	17	32	125	5	4	148	31	12	201	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)												30
Link Distance (ft)												255
Travel Time (s)												5.8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	1%	0%	3%	0%	0%	0%	1%	4%	0%	1%	4%
Shared Lane Traffic (%)												
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh 11.8
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	54	98	17	32	125	5	4	148	31	12	201	121
Future Vol, veh/h	54	98	17	32	125	5	4	148	31	12	201	121
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	1	0	3	0	0	0	1	4	0	1	4
Mvmt Flow	58	105	18	34	134	5	4	159	33	13	216	130
Number of Lanes	0	1	0	0	1	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	11			11			10.7			13.1		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	32%	20%	4%
Vol Thru, %	81%	58%	77%	60%
Vol Right, %	17%	10%	3%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	169	162	334
LT Vol	4	54	32	12
Through Vol	148	98	125	201
RT Vol	31	17	5	121
Lane Flow Rate	197	182	174	359
Geometry Grp	1	1	1	1
Degree of Util (X)	0.294	0.287	0.279	0.502
Departure Headway (Hd)	5.384	5.68	5.76	5.037
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	631	622	715
Service Time	3.436	3.731	3.811	3.081
HCM Lane V/C Ratio	0.296	0.288	0.28	0.502
HCM Control Delay	10.7	11	11	13.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1.2	1.1	2.8



Lane Group	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations	↑	↑		↑	↑	
Traffic Volume (vph)	171	28	11	596	473	171
Future Volume (vph)	171	28	11	596	473	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	16	16	12	12
Storage Length (ft)	60	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Link Speed (mph)	30			30	30	
Link Distance (ft)	489			1047	774	
Travel Time (s)	11.1			23.8	17.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	2%	2%	1%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.85	0.85	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 11.5

Movement	SBL	SBR	SEL	SET	NWT	NWR
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Lane Configurations	↖	↗	↖	↗		
Traffic Vol, veh/h	171	28	11	596	473	171
Future Vol, veh/h	171	28	11	596	473	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	60	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	0	0	2	2	1
Mvmt Flow	178	29	11	621	493	178

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1225	582	671	0	-	0
Stage 1	582	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Critical Hdwy	6.41	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	198	517	929	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	194	517	929	-	-	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	SB	SE	NW
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HCM Control Delay, s	83	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1	SBLn2
Capacity (veh/h)	-	-	929	-	194	517
HCM Lane V/C Ratio	-	-	0.012	-	0.918	0.056
HCM Control Delay (s)	-	-	8.9	0	94.6	12.4
HCM Lane LOS	-	-	A	A	F	B
HCM 95th %tile Q(veh)	-	-	0	-	7.2	0.2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	3	3	179	2	4	194
Future Volume (vph)	3	3	179	2	4	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		30			30
Link Distance (ft)	366		489			483
Travel Time (s)	8.3		11.1			11.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	2%	2%	1%
Shared Lane Traffic (%)						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		10			10
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60		60	60	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	3	3	179	2	4	194
Future Vol, veh/h	3	3	179	2	4	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	2	2	1
Mvmt Flow	3	3	195	2	4	211

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	415	196	0	0	197	0
Stage 1	196	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	594	845	-	-	1376	-
Stage 1	837	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	592	845	-	-	1376	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	10.2	0	0.2
HCM LOS	B	-	-

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	696	1376	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	10.2	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-