Traffic Impact and Access Study
Master Plan for Medical Office Buildings
Libbey Industrial Parkway
Weymouth, Massachusetts

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PRESENTED TO

FoxRock Properties

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EXECUTIVE SUMMARY

Tetra Tech has completed a Traffic Impact and Access Study for the proposed three-phased master plan of properties located on Libbey Industrial Parkway and Performance Drive in Weymouth, MA (the "Project"). Phase I, located at #90 Libbey Industrial Parkway, includes a 26,000 s.f. expansion of the existing medical office building. Phase II, located at #7 Performance Drive, includes an 80,000 s.f. medical office building. Phase III, located at #200 Libbey Industrial Parkway, includes the demolition of an existing office/warehouse building and construction of a 120,000 s.f. medical office building. Figure 1 illustrates the location of the three sites.

Key findings of the traffic study are as follows:

- **Traffic Volumes.** The weekday daily traffic on Libbey Industrial Parkway ranges from approximately 8,500 to 10,700 vehicles per day with approximately 6 to 8 percent of traffic occurring during peak hours.
- **Safety – Off Site.** The Route 18/Middle Street, Route 18/Park Avenue and Route 53/Pleasant Street intersections have higher than average crash rates. MassDOT has conducted Road Safety Audits (RSA) at these intersections. Safety improvements described in the RSA have been incorporated into current design plans for the three intersections.
- **Safety – On Site.** Adequate stopping and intersection sight lines are provided at all site driveways. Some clearing of vegetation will be required to obtain adequate sight lines.
- **Project Trips.** In total, the three-phase Project will generate approximately 8,774 new daily trips of which 534 (422 entering and 112 exiting) will occur during the morning peak hour and 645 (181 entering and 464 exiting) will occur during the afternoon peak hour. A comprehensive transportation demand management program is proposed for the Project with the goal of reducing single-occupant vehicle trips. Therefore, these trip estimates may be overstated.
- **Roadway Improvements**. Capacity or safety improvements are proposed by others at several study area intersections. These improvements include installation of traffic signals at the Middle Street/Libbey Industrial Parkway and Pleasant Street/Middle Industrial Parkway intersections, geometric improvements at Pleasant Street/Pine Street intersection, and modifications to the existing traffic signals at the Route 18/Middle Street and Route 18/Park Avenue intersections. These improvements are expected to be complete by 2022.
- **Project Impact**. Traffic increases associated with the full build-out (Phases I – III) of the Project at the Middle Street/Libbey Industrial Parkway and Route 18/Middle Street intersections result in increased delays and degradation in levels of service.
- **Phase I Mitigation – #90 Libbey Industrial Parkway (26,000 s.f.)**
  - ***Libbey Industrial Parkway/Performance Drive.*** To better define the travel ways at the intersection, FoxRock will restripe the Performance Drive southbound approach to include separate left and right turn lanes and a stop bar.
- **Phase II Mitigation – #7 Performance Drive (80,000 s.f.)**
  - ***Transportation Demand Management***. The Transportation Demand Management (TDM) program proposed for the Project includes establishing car/van pool programs, a guaranteed ride home program, preferential parking for carpools/vanpools and hybrid vehicles, and coordination with the Weymouth Department of Elder Services. Additionally, bicycle storage will be provided

on-site, flexible work schedules allowed, as appropriate, and a TDM coordinator designated to oversee the program.

- ***Traffic Monitoring.*** A traffic monitoring program will be conducted starting approximately six months after Phase II and continuing annually until three years after full occupancy of Phase III. The results of each year's monitoring program will be summarized in a report format and provided to Town of Weymouth officials. The monitoring program will include traffic counts and data calculations at the Project site driveways, and queue monitoring on the Middle Street approach to Route 18 during the afternoon peak hour.

  If the data indicates that the Project's total trip generation is more than 10 percent greater than predicted in this study, the proponent will contribute $10,000 to the Town of Weymouth to be used for the Town's traffic maintenance fund.

- **Phase III Mitigation – #200 Libbey Industrial Parkway (120,000 s.f.)**

  - ***Middle Street/Libbey Industrial Parkway.*** As an enhancement to the current MassDOT design for the intersection, a 100-foot long right turn lane on the Middle Street northbound approach is proposed as mitigation for the Project. A meeting was held with local and MassDOT officials on October 15, 2015 to discuss incorporation of these modifications into the final design plans for MassDOT Project #605721 and both the town and MassDOT have indicated a preliminary acceptance of this improvement. FoxRock would fund the additional design and construction costs associated with the proposed modification and would donate to the Town of Weymouth the 3,150 s.f. of right-of-way required to construct the right turn lane. It is likely that this mitigation will be completed in 2017/2018.

  - ***Route 18/Middle Street.*** This intersection is expected to operate at LOS F conditions under No-Build conditions (without the Project) and the Project is expected to increase peak hour traffic levels by 8 to 9 percent. The signal phasing, as currently proposed by MassDOT as part of the Route 18 project, results in reduced capacity at the intersection in favor of providing safer operations. The signal timing for the new phasing scheme was reviewed and found to be appropriate for the estimated Build condition traffic volumes. In other words, signal optimization did not result in a meaningful improvement based on projected volumes.

    As mitigation for this location, FoxRock will re-evaluate this intersection approximately six months after occupancy of Phase III, including obtaining peak hour traffic counts and reviewing the signal timing. If the signal timing can be improved at that time based on actual volumes, FoxRock would work with MassDOT to implement optimal signal timings.

  - ***Transportation Demand Management.*** The TDM Plan implemented in Phase II will be expanded to encompass Phase III of the Project.

  - ***Traffic Monitoring.*** The traffic monitoring program implemented six months after occupancy of Phase II, will continue annually until three year after occupancy of Phase III.

1.0 INTRODUCTION

Tetra Tech has prepared a traffic impact and access study associated with FoxRock's proposed master plan for development of properties located at #90 Libbey Industrial Parkway, #200 Libbey Industrial Parkway and #7 Performance Drive in Weymouth, Massachusetts. The three sites are shown on Figure 1.

Phase I. The Phase I site is located in the northwest corner of the Libbey Industrial Parkway/Performance Drive intersection. The existing building at #90 Libbey Industrial Parkway currently serves several medical office tenants, including the South Shore Hospital Center for Wound Healing and several medical practices operated by Atrius Health including a pulmonology and sleep center, an endoscopy center and a cardiovascular center. Under Phase I, the existing medical office building would be expanded by approximately 26,000 s.f.

The property is currently served by a median divided driveway located on Libbey Industrial Parkway and a second driveway on Performance Drive. The proposed Project would relocated the existing exit-only driveway on Libbey Industrial Parkway approximately 55 feet to the east and the existing driveway on Performance Drive approximately 15 feet to the south. A new driveway would be constructed on Performance Drive opposite the existing driveway serving #51 Performance Drive (Atrius Health), located on the east side of Performance Drive. The new driveway, along with the Atrius Health Driveway, would form a four-legged unsignalized intersection with Performance Drive.

Phase II. Phase II of the Project would be constructed at the northeast corner of the Libbey Industrial Parkway/Performance Drive intersection. The site is currently a surface parking lot that serves as overflow parking for #97 Libbey Industrial Parkway. An 80,000 s.f. medical office building is proposed on this site in Phase II.

The site is served by a single driveway on Performance Drive. The existing driveway would be reconfigured as an entrance only driveway and a second driveway, approximately 85 feet to the north would be constructed serving both inbound and outbound traffic. A new driveway would also be constructed on Libbey Industrial Parkway, approximately 165 feet east of Performance Drive. Due to sight line constraints, this driveway would be designated as an entrance only.

Phase III. The site on which Phase III of the proposed development would be constructed is currently occupied by Capital Paper Recycling and Spider scaffolding company. Under Phase III, the existing building would be demolished and replaced by a 120,000 s.f. medical office building.

#200 Libbey Industrial Parkway is currently served by two full access driveways along Libbey Industrial Parkway. These driveway would be reconstructed as part of the Project, but would essentially remain in their present locations.

The preliminary site layouts for the three phases which comprise the Master Plan is presented in Figure 2. A summary of the Master Plan by location and phase is provided in Table 1.

Table 1 Proposed Land Uses

Phase	Parcel	Existing Use	Change	Proposed Use
I	#90 Libbey Industrial Pkwy.	81,900 s.f. Medical Office	26,000 s.f. Medical Office	107,900 s.f. Medical Office
II	#7 Performance Drive	Parking Lot	80,000 s.f. Medical Office	80,000 s.f. Medical Office
III	#200 Libbey Industrial Pkwy.	35,200 s.f. Office/Warehouse	-35,200 s.f. Office/Warehouse +120,000 s.f. Medical Office	120,000 s.f. Medical Office

For this Project, the criteria set by the Town for evaluating traffic impacts is intersections for which the proposed master plan will add 75 or more peak hour trips. Based on this criteria and preliminary Project trip generation and distribution analyses, the study area was determined. The study area is shown on Figure 3 and includes the following intersections:

1. Middle Street/Libbey Industrial Parkway
2. Pleasant Street/Libbey Industrial Parkway
3. Libbey Industrial Parkway/Performance Drive
4. Pleasant Street/Pine Street
5. Route 18/Middle Street
6. Route 18/Park Avenue
7. Route 53/Pleasant Street

Although the Performance Drive/Site Drive/Atrius Drive intersection will not realize an increase of 75 peak hour trips as a result of the Project, it was requested by the Town that the intersection be included as a study intersection as it is the only proposed driveway which is located opposite an existing driveway.

2.0 EXISTING CONDITIONS

Evaluation of the transportation impacts associated with the proposed development requires an understanding of the existing transportation system in the study area including roadway geometrics, traffic control, transit, bicycle and pedestrian accommodations, peak hour traffic volumes and crash history. A summary of this information is provided below. Roadway classification and jurisdiction along with the lane configurations at the study intersections are shown on Figures 4 and 5 and described more fully below.

2.1.1 Study Roadways

Libbey Industrial Parkway. Libbey Industrial Parkway is classified as a local roadway and is under local jurisdiction. It has a generally straight alignment with a large-radius horizontal curve near its intersection with Performance Drive. Libbey Industrial Parkway is accessed by Pleasant Street to the east and Middle Street to the west. Libbey Industrial Parkway generally has a two-lane cross-section, with one lane in each direction, but widens at its intersections with Middle Street and Pleasant Street to provide turn lanes. The posted speed limit is 30 miles per hour. Land uses along this roadway consists of industrial, medical office, religious and fitness.

Speed surveys were conducted on Libbey Industrial Parkway in the vicinity of #90 and #200 Libbey Industrial Parkway on Wednesday, October 7, 2015 and Thursday, October 8, 2015. The data indicates that the average travel speed ranges from 26 to 38 mph with 85 percent of all measured vehicles traveling 42 mph or below. The speed survey data is provided in Appendix A.

Performance Drive. Performance Drive is classified as a local roadway and is under local jurisdiction. It has a slightly curved alignment. Performance Drive is a cul-de-sac roadway with access via Libbey Industrial Parkway. It has a two-lane cross-section, with one lane in each direction. Land use along this roadway is medical office use.

Speed surveys conducted on Performance Drive on Wednesday, October 7, 2015 and Thursday, October 8, 2015 indicate that the average travel speed ranges from 23 to 24 mph with 85 percent of all measured vehicles traveling 28 mph or below. The speed survey data is provided in Appendix A.

Middle Street. Middle Street is classified as an urban minor arterial roadway and is generally under local jurisdiction with the exception of the bridge over Route 3 which is under MassDOT jurisdiction. Within the study area, it has one travel lane in each direction with additional lanes at its intersections with Route 18. The posted speed limit along Middle Street in the study area is 30 mph. Land use along this roadway is primarily residential with some commercial uses near the intersections with Route 18 and Route 53.

Pleasant Street. Pleasant Street is classified as an urban minor arterial roadway and is under local jurisdiction. Within the study area, it provides one travel lane in each direction with an additional turn lane at its intersection with Libbey Industrial Parkway. The posted speed limit along Pleasant Street in the study area is 30 mph. Land use along this roadway is primarily residential with some commercial uses near its intersections with Route 18 and Route 53. Weymouth High School is located on Pleasant Street near the intersection with Park Avenue.

Pine Street. Pine Street is classified as a local roadway and is under local jurisdiction. Within the study area, Pine Street has a two-lane cross-section, with one lane in each direction. Land use along this roadway is residential.

Park Avenue/Park Avenue W. Park Avenue and Park Avenue W are classified as an urban minor arterial roadways and are under MassDOT jurisdiction. Land use along this roadway is primarily residential with some commercial uses near its intersections with Route 18.

Main Street (Route 18). Route 18 in Weymouth is classified as an urban principal arterial under the jurisdiction of MassDOT. Within the study area, Route 18 typically consists of two travel lanes in each direction with additional turn lanes at its intersection with Middle Street and West Street. Route 18 runs in a north-south direction and has a generally straight alignment. Sidewalks are provided along both sides of Route 18. The posted speed limit along Route 18 is 35 mph. Land use along Route 18 is a mix of commercial uses and single-family homes.

Washington Street (Route 53). Route 53 in Weymouth is classified as an urban minor arterial under the jurisdiction of MassDOT. Within the study area, Route 53 typically consists of one travel lane in each direction. Between Mutton Lane and Pleasant Street, Route 53 provides two lanes in each direction. In the study area, Route 53 runs in a northwest-southeast direction and has a generally straight alignment. Sidewalks are provided along both sides of Route 53. In the vicinity of the study area, land use along Route 53 is primarily commercial. The posted speed limit along Route 53 in the study area is 35 mph.

2.1.2 Study Intersections

Middle Street/Libbey Industrial Parkway. Libbey Industrial Parkway and Tara Drive intersect Middle Street to form a four-way, unsignalized intersection. Tara Drive is slightly offset from Middle Street by approximately 30 feet to the south. Each approach to the intersection consists of a single, general-purpose travel lane. Observations of the intersection indicate that the Libbey Industrial Parkway approach consists of a single, wide lane (approximately 20 feet) that generally operates as two lanes (a shared left/through lane and a right turn lane). Sidewalks are provided along both sides of Middle Street and for a short distance along Libbey Industrial Parkway. A crosswalk is provided across the Libbey Industrial Parkway approach to the intersection, but is placed behind the stop bar. Adjacent land use at the intersection consists of a single-family home, Tara Gardens Apartments and Planet Fitness.

Pleasant Street/Libbey Industrial Parkway. Libbey Industrial Parkway intersects Pleasant Street to form a three-way, unsignalized intersection. The Pleasant Street southbound approach to the intersection consists of a single travel lane. The Pleasant Street northbound approach consists of a left-turn lane and a shared through lane. The Libbey Industrial Parkway approach provides separate left and right turn lanes. Sidewalks are located on both sides of Pleasant Street and a crosswalk is provided on the Libbey Industrial Parkway approach to the intersection. Adjacent land use at the intersection consists of residential and medical (Weymouth MRI) uses.

Libbey Industrial Parkway/Performance Drive. Performance Drive intersects Libbey Industrial Parkway to form a three-legged, unsignalized intersection. A flashing warning beacon is located at the intersection with a flashing red indication facing Performance Drive and flashing yellow indications facing both approaches of Libbey Industrial Parkway. Each approach to the intersection provides a single travel lane. Although Performance Drive is not marked with two approach lanes, observations indicate that motorists form separate left and right turn lanes. A crosswalk is provided on Libbey Industrial Parkway east of the intersection.

Pleasant Street/Pine Street. Pine Street intersects Pleasant Street to form a three-legged, unsignalized intersection. Each approach to the intersection consists of a single-travel lane. Observations of the intersection indicate that the southbound lane is sufficiently wide to allow motorists to pass vehicles stopped while waiting to turn left onto Pine Street. Sidewalks are provided along Pleasant Street and the northerly side of the Pine Street approach to the intersection. A crosswalk is provided across Pine Street. Land use at the intersection consists of a utility building and wooded area.

Route 18/Middle Street/West Street. Middle Street approaches from the east, West Street approaches from the west and Route 18 approaches from the north and south to form a four-way, signalized intersection. Each approach to the intersection consists of a left-turn lane, two through lanes and a right-

turn lane. Pedestrian crosswalks and sidewalks are provided at each approach to the intersection. The existing signal phasing includes protected-permissive left turns for all approaches, except the Route 18 northbound left turn lane which operates under permissive-only phasing, and an exclusive pedestrian phase. Land use at the intersection consists of commercial uses including a Mobil gas station, Cumberland Farms, Verizon Wireless and a medical office building.

Route 18/Park Avenue. Park Avenue approaches from the east, Park Avenue W approaches from the west, and Route 18 approaches from the north and south to form a four-way, signalized intersection. The Route 18 northbound, Route 18 southbound, and Park Avenue W eastbound approaches each provide a left-turn lane, a through lane, and a shared through/right-turn lane. The Park Avenue westbound approach to the intersection provides a left-turn lane, a through lane, and a right-turn lane. Crosswalks and sidewalks are located on each approach to the intersection. The existing signal phasing includes protected-permissive left turns for all approaches and an exclusive pedestrian phase. A Cumberland Farms gas station, Dunkin Donuts, TD Bank and Marylou's coffee shop are located adjacent to the intersection.

Route 53/Pleasant Street. Pleasant Street intersects Route 53 to form a four-legged, signalized intersection. Each approach to the intersection provides a shared through/left-turn lane and shared through/right-turn lane. Crosswalks are provided across each approach to the intersection. Pedestrian-actuation push buttons are provided at each corner of the intersection. The existing signal phasing includes permissive phasing for all approaches and an exclusive pedestrian phase. Land uses at the intersection consists of Extra Space storage, Capone's Pizzeria and Prohibition Pub, a retail plaza and residential uses.

2.2 BICYCLE AND PEDESTRIAN ACCOMMODATIONS

Within the study area, sidewalks exist on both sides of Route 18 except between Highland Place and Front Street where sidewalk is only provided on the easterly side. Sidewalks are generally provided on both sides of Middle Street, Pleasant Street and Park Avenue W, and the northerly side of Pine Street and Park Avenue. Dedicated bicycle accommodations are generally not provided in the study area except on segments of Route 18 in the vicinity of Middle Street and West Street. Elsewhere, variable width shoulders along study area roadways can be used for bicycle travel.

2.3 PUBLIC TRANSIT

The Massachusetts Bay Transportation Authority (MBTA) operates Bus Routes 222 and 225 in the study area. Bus Route 225 operates closest to the site with the nearest stop from the site located at the intersection of Middle Street with Libbey Industrial Parkway (a less than 0.5-mile walk from the site properties). Bus schedule information is provided in Appendix B.

2.4 EXISTING TRAFFIC VOLUMES

Traffic counts were conducted to determine existing traffic conditions and to establish a base condition to evaluate the Project's impact at the study area intersections. The counts were taken during the weekday morning and afternoon commuter peak periods to coincide with the peak demand periods of site traffic and the adjacent street traffic. Traffic counts were obtained on Wednesday, June 17, 2015, Wednesday, October 7, 2015 and Tuesday, October 27, 2015 from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. Weymouth public schools were in session on these days.

For the Route 53/Pleasant Street intersection, traffic count data was obtained on Thursday, November 6, 2014 as part of a MassDOT Road Safety Audit.

In addition to peak hour turning movement counts, daily traffic count data was collected on Wednesday, October 7, 2015 and Thursday, October 8, 2015 using Automatic Traffic Recorders (ATRs). The ATRs were located on Libbey Industrial Parkway to the west of #90 and in the vicinity of #200 as well as along Performance Drive south of the medical office driveways.

Traffic count data and adjustment factors are provided in Appendix C. Factors used to adjust the count date are described below.

Average Annual Adjustments. In order to determine if traffic counts obtained in June, October and November needed to be adjusted seasonally to reflect average annual conditions, MassDOT traffic volume data obtained from permanent count stations #36 on Route 3 south of River Street in Norwell, and #6255 on Route 3 north of Route 18 in Weymouth were reviewed. The data indicates that June traffic volumes are above average annual volumes by approximately 7 percent and that October and November traffic volumes are below average by approximately 1 percent and 2 percent, respectively. Therefore, traffic volumes obtained in October and November traffic volumes were increased by one percent and two percent, respectively, to estimate average annual conditions.

Annual Growth Adjustment. Based on a review of count data obtained from MassDOT permanent count stations #36 and #6255, traffic volumes have generally decreased over the last few years. To provide a conservative analysis, a conservative growth factor of 1.005 (i.e., 0.5% growth) was applied to the 2014 traffic count data collected at the Route 53/Pleasant Street intersection to estimate existing 2015 peak hour traffic volumes.

The 2015 Existing Condition peak hour traffic volume networks are presented in Figures 6 and 7 for the weekday morning and weekday afternoon peak hours, respectively.

The daily (24-hour) traffic volume data indicates that Libbey Industrial Parkway carries approximately 10,650 vehicles per day (vpd) west of Performance Drive and 8,550 vpd east of Performance Drive. The daily traffic volume on Performance Drive is approximately 2,400 vpd.

3.0 SAFETY

Existing crash data at the study intersections and sight distance analysis at the seven proposed site driveways were evaluated as a part of a safety analysis conducted for the proposed Project.

3.1 CRASH HISTORY

Crash data was obtained from the MassDOT crash database for the study area intersections for the three most recent years available (2011, 2012 and 2013). Based on consultation with Town officials, crash analyses of the Libbey Industrial Parkway intersections with Middle Street and Pleasant Street are not required as part of this traffic study as they were recently analyzed by others. The crash data, including the crash rate calculations, are provided in Appendix D and summarized in Table 2. As presented below, the MassDOT data indicates that Route 18/Middle Street, Route 18/Park Avenue and Route 53/Pleasant Street intersections experienced higher than average crash rates. MassDOT conducted road safety audits (RSAs) at the Route 18 study intersections in 2011 and the Route 53 study intersection in 2015. The RSAs presented a range of safety improvements many of which are planned to be implemented by MassDOT prior to 2022.

Route 18/Park Avenue/Park Avenue W. At the Route 18/Park Avenue/Park Avenue W, 86 crashes occurred during the three-year period between 2011 and 2013. Twenty percent of crashes occurred during the morning and afternoon peak periods and 13 crashes occurred during inclement weather. The most common crashes were angle (39) and rear-end (35) collisions. Twenty percent of collisions involved personal injuries. There was one pedestrian crash and three crashes involving bicyclists. No fatalities were reported during the three-year study period. In accordance with MassDOT methodology, the crash rate for this intersection is 2.02 accidents per million entering vehicles which is above the district and statewide average of 0.76 and 0.80 million entering vehicles, respectively, for signalized intersections. Safety improvements planned at this intersection by MassDOT under project #601630 are expected to be implemented by 2022 and include a longer exclusive pedestrian phase and updated clearance times.

Route 18/Middle Street/West Street. At the Route 18 intersection with Middle Street and West Street, 86 crashes occurred between the years 2011 and 2013. Nineteen percent of the crashes occurred during the morning and afternoon peak periods and 17 occurred during inclement weather. The most common crashes were angle (32) and rear-end (32) collisions. Approximately one-third of the collisions involved a personal injury. None of the reported crashes involved pedestrians or bicyclists. No fatalities were reported during the three-year study period. In accordance with MassDOT methodology, the crash rate for this intersection is 1.77 accidents per million entering vehicles which is above the district and statewide average of 0.76 and 0.80 million entering vehicles, respectively, for signalized intersections. Safety improvements planned at this intersection by MassDOT under project #601630 are expected to be implemented by 2022 and include new signal phasing and timing including removal of permissive left turn phases, a longer exclusive pedestrian phase and updated clearance times.

Route 53/Pleasant Street. At the Route 53/Pleasant Street intersection, 61 crashes occurred between the years 2011 and 2013. Nine crashes occurred during the morning (7:00 am to 9:00 am) and afternoon (4:00 p.m. to 6:00 p.m.) peak periods and 14 occurred during inclement weather. The majority involved angle-type (38) crashes. Of the total, 23 percent involved personal injuries. None of the reported crashes involved pedestrians, bicyclists or fatalities. The crash rate for this intersection is 2.00 accidents per million entering vehicles which is above the district and statewide average of 0.76 and 0.80 million entering vehicles, respectively, for signalized intersections. Based on discussion with Town officials,

safety improvements are planned to be implemented at this location by 2022. Modifications are expected to include re-striping of the Pleasant Street southbound and Route 53 westbound approaches to each include an exclusive left-turn lane and a shared through/right-turn lane. Additionally, the southbound and westbound left-turns are expected to be under protected-only phasing.

Table 2 Intersection Crash Summary

	Route 18/ Park Ave.	Route 18/ Middle St.	Libbey Ind. Pkwy./ Performance Dr.	Route 53/ Pleasant St.	Pleasant St./ Pine St.
2011	29	38	2	20	3
2012	33	21	0	23	1
2013	24	27	0	18	3
Total	**86**	**86**	**2**	**61**	**7**
Angle	39	32	1	38	0
Rear-end	35	32	0	8	5
Head-on	0	6	0	3	0
Sideswipe	7	11	1	10	1
Single Vehicle	4	2	0	2	1
Rear-to-Rear	1	2	0	0	0
Unknown*	0	1	0	0	0
Total	**86**	**86**	**2**	**61**	**7**
Property	69	61	2	47	6
Injury	17	25	0	13	1
Fatality	0	0	0	0	0
Unknown*	0	0	0	1	0
Total	**86**	**86**	**2**	**61**	**7**
Pedestrians	1	0	0	0	0
Bicyclists	3	0	0	0	0
Vehicles Only	82	86	2	61	7
Total	**86**	**86**	**2**	**61**	**7**
Clear	59	65	2	43	5
Cloudy	14	4	0	4	0
Rain	11	14	0	12	2
Snow	2	3	0	2	0
Unknown*	0	0	0	0	0
Total	**86**	**86**	**2**	**61**	**7**
7am to 9am	5	7	0	1	1
9am to 4pm	48	38	1	31	4
4pm to 6pm	13	9	0	8	0
6pm to 12am	15	25	1	17	1
12am to 7am	5	7	0	4	1
Total	**86**	**86**	**2**	**61**	**7**
Crash Rates					
Statewide Rate	0.80	0.80	0.60	0.80	0.60
District 6 Rate	0.76	0.76	0.58	0.76	0.58
Intersection Rate	**2.02**	**1.77**	**0.22**	**2.00**	**0.26**

Source: MassDOT

4.0 FUTURE CONDITIONS

This study considers future conditions for a seven-year planning horizon, based on discussion with Town officials and consistent with State guidelines for the preparation of traffic impact studies. Traffic volumes for the future analysis year are a combination of existing volumes, background traffic growth and any specific development project-related traffic. The 2022 No-Build scenario is first considered, which provides an analysis of future conditions without the proposed Project in place. Finally, the 2022 Build scenario is considered, which provides an analysis of future conditions with Project generated traffic. At the Town's request, three Build scenarios will be evaluated: i) 2022 Phase I Build (completion of Phase I), ii) 2022 Phase II Build (completion of Phases I and II) and iii) 2022 Phase III Build (completion of Phase I, II and III).

4.1 NO-BUILD TRAFFIC VOLUMES

Future 2022 No-Build traffic volumes are a combination of 2015 existing traffic volumes and traffic from background growth. Projections of No-Build traffic volumes consider traffic growth within the study area and possibly changes in traffic patterns associated with proposed roadway improvements. Background growth generally considers two factors: general traffic growth rate and specific land developments in the immediate area.

General Traffic Growth Rate. Based on a review of count data obtained from MassDOT permanent count stations #36 and #6255, traffic volumes have generally decreased over the last few years. To provide a conservative analysis, an overall background growth rate of 0.5 percent per year will be applied to the existing peak hour traffic volumes. The 2015 peak hour traffic volumes will be increased by a factor of 1.036, representing seven years of growth.

Land Development. The Town of Weymouth Planning Department was contacted to identify specific development proposals by others that may impact future traffic volumes within the study area. Two projects were identified, including Alexan at Arbor Hill and the development of the former South Weymouth Naval Air Station.

Alexan at Arbor Hills is a 242-unit residential apartment project is located off Tall Oaks Drive. This project is under construction.

Based on consultation with Town planning staff, it is estimated that by 2022 approximately 2,000 residential units, including senior living units, condominiums and apartments, will be built at the Former South Weymouth Naval Air Station. As of June 2015, approximately 411 residential units were completed, resulting in a remaining build-out of 1,589 residential units. Table 3 provides a summary of the type of residential development expected to be built at the by 2022.

Table 3 Naval Air Station Development Residential

Phase	Estimated Number of Units
Existing[1]	411 units
Future – Fully Permitted	
Apartments	289 units
Other (assume Apartments)	100 units
Future – Assumed Development	
Senior Living Units (+55)	600 units
Condominiums	300 units
Apartments	300 units

[1]Approximate number of completed units in June 2015.

Applying the 0.5 percent annual growth rate to the 2015 existing traffic volumes for seven years and adding trips generated by the Alexan at Arbor Hills and South Weymouth Naval Air Station developments resulted in the 2022 No-Build traffic networks. The resulting 2022 No-Build weekday peak hour traffic volumes are presented in Figure 8 and Figure 9 for the weekday morning and afternoon peak hours, respectively. Trip generation calculations and trip assignments for site specific development are provided in Appendix E.

4.2 PLANNED ROADWAY IMPROVEMENTS

Roadway projects are currently under design by MassDOT or the Town of Weymouth which will enhance vehicular, bicycle and pedestrian accommodations in the study area. These include:

- Improvements to Middle Street/Libbey Industrial Parkway by MassDOT and the Town of Weymouth
- Improvements to the Pleasant Street/Libbey Industrial Parkway intersection as mitigation for the Alexan at Arbor Hills project
- Safety improvements to the Route 53/Pleasant Street intersection
- Route 18 Corridor Improvements including safety improvements at the Route 18/Middle Street/West Street and Route 18/Park Avenue intersections
- Improvements to the Pleasant Street/Pine Street intersection as mitigation for the Alexan at Arbor Hills project

Descriptions of each of these projects are described below.

Middle Street/Libbey Industrial Parkway. MassDOT, working with the Town of Weymouth, is proposing to implement improvements at this intersection as part of MassDOT Project #605721. The project was recently awarded funding for construction through the Boston Metropolitan Planning Organization and is on the 2016 Transportation Improvement Plan (TIP). In June 2015, Tetra Tech obtained a copy of the latest traffic signal plan available (75% design) from the traffic engineer for the Town of Weymouth. Based on this plan, the improvements include:

- Installation of a fully-actuated traffic signal
- New and/or improved pedestrian accommodations including pedestrian push button actuation
- New pavement markings and signs
- Bicycle accommodations

- Reconfiguration of the Middle Street southbound approach to include an exclusive left-turn lane and shared through/right turn lane

Pleasant Street/Libbey Industrial Parkway. According to the Town's Planning Director, improvements to this intersection are planned as part of the approved Alexan at Arbor Hills residential project and are required to be implemented prior to completion of the Alexan project. It is expected that the improvements would be completed in one to four years and are included in the Town of Weymouth Capital Improvement Plan for FY 2015-2019.

At this time, a conceptual plan for the improvement was not available from the Town. However, based on consultation with the Town's traffic engineer, the improvements are anticipated to include:

- Installation of a fully-actuated traffic signal
- Re-striping the southbound approach to include a through lane and a shared through/right-turn lane with two southbound receiving lanes

It is assumed that crosswalks would be provided across Pleasant Street and Libbey Industrial Parkway and would operate under exclusive pedestrian phasing.

Route 53/Pleasant Street. MassDOT conducted a RSA at this intersection in February 2015. The RSA identified several safety deficiencies and recommended modifications to the intersection's traffic signal phasing and intersection geometry. Based on consultation with the Town's traffic engineer, improvements at this intersection have been funded for Fiscal Year 2016, but design plans have not yet been submitted. Per the Town traffic engineer, the following improvements were assumed to be implemented by 2022:

- Convert the Pleasant Street southbound shared through/left-turn lane to an exclusive left-turn lane
- Convert the Route 53 westbound shared through/left-turn lane to an exclusive left-turn lane
- Implement protected-only phasing for the new southbound and westbound exclusive left-turn lanes

Route 18 Widening Project. MassDOT is proposing improvements to the Route 18 corridor (MassDOT Project #601630) including modifications to the study area intersections at Route 18/Middle Street/West Street and Route 18/Park Avenue/Park Avenue W. The project is between 75 and 100 percent design, and is on the 2016 Transportation Improvement Plan (TIP). It is assumed that construction of this project will be complete prior to 2022.

During the design of the Route 18 project, RSAs were conducted at both intersections and the recommendations of the RSAs were generally incorporated in the design.

At the Route 18/Middle Street/West Street intersection, improvements include new pavement markings, protected-only left turn phasing, and timing adjustments to the clearance intervals and an exclusive pedestrian phase.

At the Route 18/Park Avenue intersection improvements include new pavement markings and timing adjustments to the clearance intervals and an exclusive pedestrian phase.

Pleasant Street/Pine Street. Improvements to this intersection are planned as part of the approved Alexan at Arbor Hills residential project and are expected to be implemented by 2022.

The Town of Weymouth provided a conceptual improvement plan that indicated geometric modifications and installation of traffic signal control. However, per the Town's traffic engineer, traffic signal control is no

longer expected at this location, but the geometric improvements are still planned to be implemented. Based on consultation with the Town's traffic engineer, the intersection will consist of a shared through/ right-turn lane along Pleasant Street northbound, an exclusive left-turn lane along the Pleasant Street southbound approach and exclusive left and right-turn lanes along the Pine Street westbound approach. Pine Street will remain under Stop-sign control.

It is assumed that these improvements described above will be constructed by 2022 and as such will be incorporated in the 2022 No-Build and 2022 Build analyses. Available roadway improvement plans for these projects are provided in Appendix F.

4.3 PROJECT TRAFFIC

4.3.1 Trip Generation

In accordance with current standards for the preparation of a traffic impact study, trip rates obtained from the Institute of Transportation Engineers (ITE) publication *Trip Generation*, 9th Edition, 2012 were used to estimate trip generation for proposed FoxRock master plan for medical office space.

The trip generation analysis conducted for the Project is summarized in Table 4. In total, the entire Project (Phases I, II and III) is expected to generate approximately 8,774 weekday trips of which 534 trips (422 inbound and 112 outbound) will occur during the morning peak hour and 645 trips (181 inbound and 464 outbound) will occur during the afternoon peak hour. Trip generation calculations are provided in the Appendix G.

Table 4 Project Trip Generation

	Phase I (26,000 s.f.)	Phase II (80,000 s.f.)	Phase III (120,000 s.f.)			All Phases (226,000 s.f.)
	Total[1]	Total[2]	Proposed[3]	Existing[4]	Net New	**Total**
Morning Peak Hour						
Enter	49	151	227	5	222	**422**
Exit	13	40	60	1	59	**112**
Total	62	191	287	6	281	**534**
Afternoon Peak Hour						
Enter	19	67	96	1	95	**181**
Exit	50	171	247	4	243	**464**
Total	69	238	343	5	338	**645**
Daily	1,063	3,056	4,692	37	4,655	**8,774**

[1]Trip Generation, 9th Edition, Institute of Transportation Engineers, LUC 720 Medical Office – 107,900 s.f. minus 81,900 s.f.
[2]Trip Generation, 9th Edition, Institute of Transportation Engineers, LUC 720 Medical Office – 80,000 s.f.
[3]Trip Generation, 9th Edition, Institute of Transportation Engineers, LUC 720 Medical Office – 120,000 s.f.
[4]Trip Generation, 9th Edition, Institute of Transportation Engineers, LUC 110 – 8 employees and LUC 710 – 4 employees

Although a comprehensive TDM program has been developed for the Project to reduce single-occupant vehicle trips, it will be conservatively assumed that all of the trips shown in Table 4, would be generated by vehicles (534 in the morning peak hour and 645 in the afternoon peak hour).

4.3.2 Trip Distribution

The distribution of Project trips through the study area was based on a gravity model of area populations and developed in consultation with the Town's traffic engineer.

Regional Distribution. For purposes of this analysis, it is assumed that patients in the region will typically not need to travel more than 10 miles to a medical facility to receive services due to the large number of medical facilities in Weymouth and the surrounding communities. To estimate the distribution patterns for patients a 10-mile radius was drawn around the sites and the cities and towns within the service area were each assigned a route (or routes, if more than one seemed appropriate) to travel to/from the site. The routes were determined based on existing travel patterns observed during peak commuting periods. The population of each of the cities and towns within the service area was obtained (available through the 2009-2013 American Community Survey) and used as a method of "weighting" the trip distribution of each of the likely routes to the site.

The analysis indicates 68 percent of the site traffic will arrive/depart via Middle Street (60 percent to/from the south and 8 percent to/from the north) and 32 percent will arrive/depart via Pleasant Street (19 percent to/from the south and 13 percent to/from the south). The gravity model data and distribution analysis are provided in Appendix G.

Local Trip Distribution. There is a concern that during the morning peak hour, trips traveling to the site from the south along Route 3 may divert at Derby Street and use local roadways to travel to the site. The gravity model indicates that approximately 28 percent of Project trips will originate in communities south of Weymouth of which only a small portion would travel through the Route 3/Derby Street interchange. During peak commuting periods, it is expected that motorists from these communities will utilize alternative roadways such as Route 53 and Route 18, rather than Route 3, to travel to/from the site. Based on the gravity model, it is estimated that during peak hours approximately 5 percent of Project trips would access the site via Route 3 to/from the south.

To gain an understanding of this 5 percent of Project trips from the south to seek an alternative route for a portion of their trip to the site, two routes were identified and tested in the field. The two routes included (i) remaining on Route 3, exiting at Route 18 and turning left onto Middle Street and (ii) exiting Route 3 onto Derby Street, turning right onto Oak Street, right onto Pine Street and then right onto Pleasant Street.

Test runs were performed for the morning commuting period (7:00 a.m. to 9:00 a.m.) on Tuesday, September 29, 2015. The travel time was measured between the Route 3/Derby Street interchange and the Libbey Industrial Parkway/Performance Drive intersection. Travel conditions on the test day were satisfactory with intermittent rain, no significant accidents reported in the vicinity of Route 3 and public schools were open in nearby communities. The data indicated that the Oak Street/Pine Street route was approximately twice (7 minutes) as fast as remaining on Route 3 (14 minutes). Therefore, it possible that the majority of traffic (4 out of 5 drivers) on Route 3 at Derby Street would exit Route 3 and travel through the Oak Street/Pine Street neighborhood. The data for these test runs is provided in Appendix G.

The trip distribution patterns from the gravity model were then applied to the access driveways for each of the phases of the development. The trip distribution patterns at the site driveways were generally based on the location of parking relative to the site driveways for each phase. The trip distribution patterns are shown on Figures 10, 11 and 12 for Phase I, Phase II and Phase III, respectively. Using the trip distribution patterns for each phase of the Project, the net new trips shown in Table 4 were assigned to the study area roadway network. The Project-related peak hour volumes by phase are presented on Figures 13 – 18 for the weekday morning and weekday afternoon peak hours.

4.4 BUILD TRAFFIC VOLUMES

The Projected site-generated trips illustrated in Figures 13 – 18 were combined with the 2022 No-Build traffic volumes presented in Figures 8 and 9 to estimate the 2022 Build volumes for each phase of the Project.

- Phase I Build: includes 2022 No-Build traffic volumes plus traffic associated with Phase I
- Phase II Build: includes 2022 No-Build traffic volumes plus traffic associated with Phases I and II
- Phase III Build: includes 2022 No-Build traffic volumes plus net new traffic associated with the entire build-out of the Project

At the #90 Performance (Phase I) site, a second driveway will be constructed on Performance Drive, north of the existing site driveway and opposite the driveway serving Atrius Health (see Figure 2). This new driveway will serve as the primary driveway for the site. Therefore, a portion of the existing traffic entering and exiting the southerly driveway on Performance Drive was reassigned to the proposed driveway under the 2022 Phase I Build condition.

Under Phase III Build, the proposed medical office building will replace an existing industrial building that was active when the traffic counts were conducted. Trips associated with this existing building were estimated and removed from the existing roadway network based on existing travel patterns. Trip tracings for the removal of these existing site trips are provided in Appendix G.

Weekday morning and afternoon peak hour traffic volumes for the 2022 Phase I Build, 2022 Phase II Build and 2022 Phase III Build conditions are presented in Figures 19 through 24.

Tables 5 and 6 provides a summary of the total entering Project trips after completion of each phase and how they relate to the 2022 No-Build condition volumes for the for the study intersections.

With the addition of trips generated by the 26,000 s.f. of medical office space proposed for Phase I, the study intersections will realize increases of less than 2 percent with the exception of the intersections of Libbey Industrial Parkway with Middle Street and Performance Drive. Phase I trips will increase traffic volumes at these locations by 3 to 8 percent or by approximately one trip a minute. Under Phase I, none of the study area intersections would realize an increase of 75 or more peak hour trips, the town's criteria for impact analysis for the Master Plan Project.

When Phase II (80,000 s.f. of medical office space) is fully occupied, peak hour traffic levels at the Route 18/Middle Street intersection will increase by approximately 150 to 185 trips or by approximately 4 percent over No-Build levels. The Route 18 southbound left turn in the morning peak hour and the Middle Street westbound right turn in the afternoon peak hour are most affected by the project. At the Middle Street/Libbey Industrial Parkway intersection traffic levels would increase by approximately 12 percent during peak hours.

With the additional trips generated by the final phase of the Project (Phase III -120,000 s.f. of medical office space), the largest component of the Project, peak hour traffic volumes increase by 25 to 26 percent over No-Build levels at the Middle Street/Libbey Industrial Parkway intersection and by 7 to 9 percent at the Libbey Industrial Parkway/Pleasant Street and Route 18/Middle Street intersections. Increases to peak hour traffic at the Route 18/Park Avenue, Route 53/Pleasant Street and Pleasant Street/Pine Street intersections are 5 percent or less.

Table 5 Morning Peak Hour Traffic Volume Comparison

Intersection	2022 No-Build	Project Trips (Phase I)	% Change[1]	Project Trips (Phase I & II)	% Change[1]	Project Trips (Phase I, II & III)	% Change[1]
Libbey Industrial Pkwy/Middle St.	1,421	42	**3%**	172	**12%**	367	**26%**
Libbey Industrial Pkwy/Pleasant St.	2,464	20	**1%**	81	**3%**	173	**7%**
Libbey Industrial Pkwy/Performance Dr.	806	56	**7%**	211	**26%**	406	**50%**
Pleasant St/Pine St.	2,422	11	**1%**	47	**2%**	101	**4%**
Route 18/Middle St.	3,856	37	**1%**	152	**4%**	324	**8%**
Route 18/Park Ave.	3,748	9	**0%**	38	**1%**	81	**2%**
Route 53/Pleasant St.	2,722	9	**0%**	34	**1%**	72	**3%**

[1]Percent change is relative to the No-Build condition

Table 6 Afternoon Peak Hour Traffic Volume Comparison

Intersection	2022 No-Build	Project Trips (Phase I)	% Change[1]	Project Trips (Phase I & II)	% Change[1]	Project Trips (Phase I, II & III)	% Change[1]
Libbey Industrial Pkwy/Middle St.	1,773	47	**3%**	209	**12%**	442	**25%**
Libbey Industrial Pkwy/Pleasant St.	2,553	22	**1%**	98	**4%**	208	**8%**
Libbey Industrial Pkwy/Performance Dr.	777	62	**8%**	284	**37%**	517	**67%**
Pleasant St/Pine St.	2,427	14	**1%**	59	**2%**	124	**5%**
Route 18/Middle St.	4,265	41	**1%**	185	**4%**	390	**9%**
Route 18/Park Ave.	3,770	11	**0%**	48	**1%**	99	**3%**
Route 53/Pleasant St.	2,673	8	**0%**	39	**1%**	84	**3%**

[1]Percent change is relative to the No-Build condition

5.0 INTERSECTION CAPACITY ANALYSIS

5.1 LEVEL OF SERVICE

Intersection operating levels of service are calculated following the methodologies defined in the 2010 Highway Capacity Manual for signalized and unsignalized intersections. For both signalized and unsignalized intersections, the operating level of service (LOS) is based on travel delays. Delays can be measured in the field but generally are calculated as a function of traffic volume, peaking characteristic of traffic flow, percentage of heavy vehicles in the traffic stream, type of traffic control, number of travel lanes and lane use, intersection approach grades, pedestrian activity, and signal timing, phasing, and progression where applicable.

For this study, delays were both measured in the field and calculated.

The specific criteria applied per the 2010 Highway Capacity Manual (HCM) are summarized in Table 7. The calculated average delay per vehicle for signalized intersections applies to all vehicles entering the intersection and under control of the traffic signal. For unsignalized intersections, it is assumed that through movements on the main street have the right-of-way and are not delayed by side street traffic. Consequently, the total delay values in Table 7 for unsignalized intersections apply only to the major street left-turn movements and the minor street intersection movements, which must yield to oncoming traffic.

SYNCHRO 8.0 software was used to analyze peak hour operations at the study intersections. SYNCHRO 8.0 is a windows-based analysis tool that follows the procedures defined in the 2010 Highway Capacity Manual. Use of the 2000 Highway Capacity Manual (HCM) output from Synchro 8.0 will be required for the signalized intersection analyses because the 2010 HCM methodology does not support intersections with exclusive pedestrian phasing, which are present at the study intersections. The LOS delay criteria is the same as those presented in Table 7 for the 2010 HCM.

Table 7 Intersection Level of Service Criteria

	Average Delay per Vehicle (Seconds)	
Level of Service[1]	Signalized Intersections	Unsignalized Intersections
A	≤10.0	≤10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	>80.0	>50.0

Source: Highway Capacity Manual (Transportation Research Board, National Research Council, Washington, DC, 2010)
[1]Level of service presented is for v/c ratios less than 1.0. If the v/c ratio is greater than or equal to 1.0, then the level of service is F regardless of the delay.

5.2 INTERSECTION OPERATING CONDITIONS

The procedures described above were used to determine peak hour operations at the study area intersections for five conditions: 2015 Existing, 2022 No-Build, 2022 Phase I Build, 2022 Phase II Build and 2022 Phase III Build. The capacity analysis worksheets are provided in Appendix H and the results are summarized in Table 8 for the morning peak hour and Table 9 for the afternoon peak hour. Tables 8 and 9 present the level of service delay, volume to capacity ratio values and the average and 95th percentile queue lengths as determined by SYNCHRO. The 95th-percentile queue is defined in the Highway Capacity Manual Applications Guidebook (Transportation Research Board, 2003) "to be the queue length (in vehicles) that has only a 5-percent probability of being exceeded during the analysis time period."

2015 Existing. The study area signalized intersections generally operate at LOS D or better during both peak hours with the exception of Route 18/Park Avenue which operates at LOS F during the morning peak hour. At the unsignalized intersections, the capacity analyses performed with SYNCHRO indicate that vehicles exiting from the minor approaches generally operate at LOS F with long delays. The exception is the Performance Drive approach to Libbey Industrial Parkway which operates below capacity at LOS C or better operations during peak hours.

SYNCHRO software is the industry standard for impact analyses and is required for analysis work submitted to the MassDOT. However, it is known to overestimate volume to capacity ratios at unsignalized intersections which often results in the software providing unrealistic delay values or even no delay values for various turning movements.

This was confirmed during the preparation of this study at the Pleasant Street/Pine Street intersection. The typical delay while turning right from Pine Street onto Pleasant Street experienced by the driver conducting the travel time runs during the morning peak hour described above (Section 4.3.2 Trip Distribution) was typically less than 60 seconds as opposed to the 330 seconds indicated by Synchro.

Therefore, the Synchro generated results presented in Tables 8 and 9 for the STOP sign controlled approaches are reported as required, but should be considered as overstated.

2022 No-Build. By 2022 both capacity and safety improvements are expected to be implemented and/or constructed in the study area which will have significant implications to intersections operations. New traffic signals proposed by MassDOT/Town of Weymouth at the Middle Street/Libbey Industrial Parkway intersection and proposed by the Town of Weymouth at the Pleasant Street/Libbey Industrial Parkway intersection will improve operations at both locations to LOS C or better during peak hours.

As a result of needed safety improvements currently under design by MassDOT at the Route 18/Middle Street intersection, including protected-only left turn phasing, longer clearance intervals and a longer pedestrian phase, operations will degrade from LOS D to LOS F conditions during peak hours. As this intersection has a crash rate of 1.77 with a high number of angle collisions, this degradation in operations appears to be a reasonable trade-off to improve safety.

Similarly, MassDOT is proposing safety improvements at the Route 53/Pleasant Street intersection. Although this project is in the early design phases (pre-25 percent design), the town engineer suggested that the improvements would likely include re-striping of the Pleasant Street southbound and Route 53 westbound approaches to each provide a shared through/right-turn lane and an exclusive left-turn lane under protected-only left-turn phasing. The crash rate at this location is 2.0 with over half of the reported crashes angle-type collisions. This change in signal phasing is justified, but would result in changes to

level of service; LOS C to F during the morning peak hour and LOS C to D during the afternoon peak hour.

At Route 18/Park Avenue, minor adjustments to signal timing are proposed by MassDOT as safety enhancements. These include longer clearance intervals and a longer pedestrian phase. These safety improvements will cause the intersection to degrade to LOS F during the afternoon peak hour.

2022 Phase I Build. Overall, traffic operations at the study area intersections are not expected to change as a result of the minor increases in traffic associated with the construction of Phase I of the Project. A six second increase in overall delay to the Middle Street/Libbey Industrial Parkway during the afternoon peak hour results in a drop in level of service from C to D. The Libbey Industrial Parkway left turn drops from LOS E to LOS F.

2022 Phase II Build. With Phase I and II fully constructed and occupied, traffic operations as compared to the 2022 No-Build condition are not projected to change significantly. At the Route 18/ Middle Street intersection, overall delay experienced by motorists are forecasted to increase during peak hours by approximately 13 seconds. In the afternoon peak hour, operations at the Middle Street/Libbey Industrial Parkway intersection would drop from LOS C to LOS E. Overall delay to motorists would increase by approximately 39 seconds.

2022 Phase III Build. With all three phases of the Project implemented, the traffic impacts of the Project become notable at the following locations:

- **Middle Street/Libbey Industrial Parkway** – During peak hours, overall level of service drops to LOS E/F operations. The Project is expected to increase the vehicle queues on the Middle Street northbound approach as compared to No-Build conditions. Additionally a deterioration of operations for westbound left turns is expected. These turns are expected to operate at LOS F during peak hours.

- **Route 18/Middle Street -** The Project is expected to increase delays on the Route 18 southbound left-turn lane during the morning peak hour (vehicles traveling towards the site) and the Middle Street westbound approach lanes during the afternoon peak hour (vehicles exiting from the site). Overall, the intersection continues to operate at LOS F conditions but with increases in delay over No-Build conditions of approximately 40 seconds during both peak hours.

- **Libbey Industrial Parkway/Performance Drive -** This intersection generally operates at LOS D or better operations under Build Phase I and Build Phase II conditions. For vehicles turning left from Performance Drive operations will degrade to LOS E during both peak hours under Phase III conditions.

Table 8 Morning Peak Hour Capacity Analyses Summary

	2015 Existing					2022 No-Build					2022 Phase I Build					2022 Phase II Build					2022 Phase III Build				
	V/C[1]	Delay[2]	LOS[3]	50th Q[4]	95th Q[5]	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Libbey Ind. Pkwy./Middle St.																									
Tara Dr. EB LTR	0.24	51	F	-	20	0.14	43	D	2	30	0.15	45	D	3	30	0.15	49	D	3	30	0.15	49	D	3	30
Libbey Ind. WB LT	1.95	543	F	-	378	0.67	38	D	72	#320	0.75	46	D	83	#338	0.96	90	F	116	#389	1.13	140	F	140	#464
Libbey Ind. WB R	0.24	13	B	-	23	0.10	24	C	0	31	0.10	26	C	0	31	0.10	31	C	0	31	0.11	31	C	0	32
Middle St. NB LTR	0.01	8	A	-	0	0.87	35	C	189	#686	0.85	32	C	204	#742	0.88	34	C	259	#912	1.07	76	E	372	#1159
Middle St. SB L	0.19	10	A	-	18	0.43	14	B	20	113	0.43	13	B	21	116	0.47	13	B	23	124	0.60	16	B	26	#161
Driveway TR	0.00	0	A	-	0	0.43	12	B	72	320	0.42	12	B	72	320	0.39	11	B	72	320	0.39	11	B	72	320
Overall					**n/a**	**0.71**	**26**	**C**			**0.72**	**26**	**C**			**0.80**	**33**	**C**			**0.96**	**61**	**E**		
Libbey Ind. Pkwy./Pleasant St.																									
Libbey Ind. EB L	4.43	2283	F	-	78	0.31	39	D	19	58	0.32	39	D	20	60	0.37	40	D	23	67	0.43	41	D	27	#80
Libbey Ind. EB R	0.50	28	D	-	168	0.09	20	C	0	24	0.09	20	B	0	24	0.10	19	B	0	25	0.11	17	B	0	26
Pleasant St. NB L	0.52	16	C	-	68	0.86	48	D	164	#353	0.86	48	D	167	#369	0.86	45	D	173	#415	0.86	42	D	197	#484
Pleasant St. NB T	0.00	0	A	-	0	0.90	19	B	253	#1034	0.90	19	B	253	#1034	0.90	19	B	253	#1034	0.90	19	B	253	#1034
Pleasant St. SB TR	0.00	0	A	-	0	0.72	22	C	192	#464	0.73	23	C	199	#470	0.79	26	C	224	#485	0.89	34	C	238	#508
Overall						**0.86**	**24**	**C**			**0.86**	**25**	**C**			**0.86**	**26**	**C**			**0.87**	**28**	**C**		
Route 18/Middle St.																									
West St. EB L	0.63	34	C	79	#215	2.82	927	F	~232	#474	2.82	927	F	~232	#474	2.82	927	F	~232	#474	2.82	927	F	~232	#474
West St. EB T	0.46	39	D	66	140	1.35	253	F	~126	#281	1.37	263	F	~130	#285	1.44	290	F	~140	#300	1.54	330	F	~155	#320
West St. EB R	0.30	38	D	35	98	0.31	50	D	44	79	0.31	50	D	44	79	0.31	50	D	44	79	0.31	50	D	44	79
Middle St. WB L	0.93	80	E	100	#349	1.71	412	F	~236	#506	1.72	419	F	~240	#508	1.77	440	F	~249	#525	1.85	472	F	~264	#544
Middle St. WB T	0.92	74	E	103	#264	1.05	124	F	136	#319	1.05	125	F	137	#321	1.06	128	F	138	#324	1.07	133	F	~141	#330
Middle St. WB R	1.15	148	F	165	#463	0.79	57	E	186	#361	0.80	59	E	191	#378	0.85	64	E	204	#420	0.92	77	E	227	#494
Route 18 NB L	0.37	19	B	42	121	0.70	70	E	89	#211	0.70	70	E	89	#211	0.70	70	E	89	#211	0.70	70	E	89	#211
Route 18 NB T	0.84	30	C	322	#623	0.88	41	D	450	#875	0.88	41	D	450	#875	0.88	41	D	450	#875	0.88	41	D	450	#875
Route 18 NB R	0.27	11	B	62	166	0.28	15	B	81	213	0.29	15	B	84	219	0.31	15	B	94	241	0.36	16	B	110	278
Route 18 SB L	1.37	224	F	~121	#376	1.02	121	F	189	#475	1.11	148	F	~221	#526	1.38	254	F	~326	#673	1.79	431	F	~484	#894
Route 18 SB T	0.40	14	B	106	246	0.50	23	C	194	387	0.50	23	C	194	387	0.50	23	C	194	387	0.50	23	C	194	387
Route 18 SB R	0.24	5	A	35	144	0.34	15	B	97	255	0.34	15	B	97	255	0.34	15	B	97	255	0.34	15	B	97	255
Overall	**1.22**	**50**	**D**			**1.00**	**115**	**F**			**1.02**	**118**	**F**			**1.07**	**130**	**F**			**1.16**	**154**	**F**		
Route 18/Park Ave.																									
Park Ave. W EB L	0.83	59	E	75	#144	0.91	83	F	79	#177	0.92	86	F	80	#181	0.96	99	F	~89	#193	1.02	115	F	~100	#208
Park Ave. W EB TR	0.67	41	D	127	175	0.84	54	D	~133	#233	0.84	54	D	~133	#233	0.85	55	D	~135	#235	0.85	55	D	~136	#236
Park Ave. WB L	0.44	33	C	42	77	0.55	39	D	43	85	0.55	39	D	43	85	0.55	39	D	43	85	0.56	39	D	43	85
Park Ave. WB T	1.63	341	F	~461	#610	2.00	506	F	~488	#683	2.00	506	F	~488	#683	2.00	506	F	~488	#683	2.00	508	F	~490	#684
Park Ave. WB R	0.70	29	C	198	#457	0.69	29	C	180	#466	0.69	29	C	180	#466	0.69	29	C	180	#466	0.69	29	C	180	#466
Route 18 NB L	0.43	23	C	29	92	0.51	28	C	30	103	0.51	28	C	30	103	0.51	28	C	30	103	0.51	28	C	30	#104
Route 18 NB TR	1.42	229	F	~534	#737	2.13	551	F	~681	#890	2.13	555	F	~685	#894	2.16	566	F	~696	#906	2.19	582	F	~714	#924
Route 18 SB L	0.46	17	B	46	#235	0.39	16	B	46	#259	0.39	16	B	46	#259	0.39	16	B	46	#259	0.39	16	B	46	#259
Route 18 SB TR	0.58	24	C	176	308	0.66	29	C	184	#418	0.66	29	C	185	#421	0.66	29	C	187	#425	0.67	29	C	190	#432
Overall	**1.14**	**134**	**F**			**1.37**	**275**	**F**			**1.37**	**276**	**F**			**1.38**	**281**	**F**			**1.40**	**289**	**F**		

[1]Delay = Average delay per vehicle (seconds) [2]v/c = Volume to capacity ratio [3]LOS = Level of Service [4]50th percentile queue (feet) [5]95th percentile queue (feet)
~ the approach is above capacity; 50th percentile queue could be longer # volume for the 95th percentile queue exceeds capacity

Table 8 Morning Peak Hour Capacity Analyses Summary (CONTINUED)

	2015 Existing					2022 No-Build					2022 Phase I Build					2022 Phase II Build					2022 Phase III Build				
	V/C[1]	Delay[2]	LOS[3]	50th Q[4]	95th Q[5]	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Route 53/Pleasant St.																									
Route 53 EB LTR	0.32	16	B	45	105	0.60	38	D	96	184	0.61	38	D	96	184	0.61	38	D	96	184	0.61	38	D	96	184
Route 53 WB L	n/a	n/a	n/a	n/a	n/a	0.71	67	E	65	#177	0.72	68	E	67	#184	0.77	73	E	74	#203	0.86	89	F	84	#231
Route 53 WB TR	0.80	25	C	151	#380	1.21	144	F	~681	#1186	1.21	144	F	~681	#1186	1.21	144	F	~681	#1186	1.21	144	F	~681	#1186
Pleasant St. NB LTR	0.82	26	C	162	#407	1.19	138	F	~413	#705	1.20	142	F	~417	#709	1.23	153	F	~426	#720	1.27	171	F	~441	#736
Pleasant St. SB L						1.15	179	F	~116	#302	1.15	179	F	~116	#302	1.15	179	F	~116	#302	1.15	179	F	~116	#302
Pleasant St. SB TR	1.00dl	47	D	142	#372	0.74	30	C	303	#634	0.75	31	C	306	#643	0.77	32	C	317	#668	0.79	33	C	333	#705
Overall	**0.84**	**30**	**C**			**1.22**	**107**	**F**			**1.23**	**109**	**F**			**1.24**	**113**	**F**			**1.25**	**119**	**F**		
Libbey Ind. Pkwy./Performance Dr.																									
Libbey Ind. EB LT	0.07	9	A	-	5	0.07	9	A	-	5	0.10	9	A	-	8	0.13	9	A	-	10	0.13	9	A	-	13
Perf. Dr. SB L	0.08	19	C	-	5	0.07	19	C	-	5	0.09	21	C	-	8	0.19	28	D	-	18	0.26	40	E	-	25
Perf. Dr. SB R	0.05	11	B	-	5	0.04	11	B	-	3	0.06	11	B	-	5	0.11	12	B	-	10	0.12	12	B	-	10
Pleasant St./Pine St.																									
Pine St. WB L						0.02	36	E	-	3	0.02	37	E	-	3	0.02	38	E	-	3	0.02	39	E	-	3
Pine St. WB R	1.63	330	F	-	690	1.75	389	F	-	728	1.79	405	F	-	750	1.88	447	F	-	808	2.05	523	F	-	903
Pleasant St. SB L	0.36	14	B	-	43	0.32	14	B	-	35	0.33	14	B	-	35	0.34	14	B	-	38	0.36	15	B	-	40
Performance Drive/#90 North Driveway/Atrium Driveway																									
#90 Drive EB LTR											0.02	9	A	-	3	0.02	9	A	-	3	0.02	9	A	-	3
#51 Drive WB LTR											0.03	11	B	-	3	0.03	11	B	-	3	0.03	11	B	-	3
Perf. Dr NB LTR											0.04	7	A	-	3	0.04	7	A	-	3	0.04	7	A	-	3
Perf. Dr SB LTR											0.00	0	A	-	0	0.00	0	A	-	0	0.00	0	A	-	0

[1]Delay = Average delay per vehicle (seconds) [2]v/c = Volume to capacity ratio [3]LOS = Level of Service [4]50th percentile queue (feet) [5]95th percentile queue (feet)
~ the approach is above capacity; 50th percentile queue could be longer # volume for the 95th percentile queue exceeds capacity

Table 9 Afternoon Peak Hour Capacity Analyses Summary

	2015 Existing					2022 No-Build					2022 Phase I Build					2022 Phase II Build					2022 Phase III Build				
	V/C[1]	Delay[2]	LOS[3]	50th Q[4]	95th Q[5]	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Libbey Ind. Pkwy./Middle St.																									
Tara Dr. EB LTR	0.18	71	F	-	15	0.01	49	D	0	0	0.01	49	D	0	0	0.01	49	D	0	0	0.01	49	D	0	0
Libbey Ind. WB LT	2.95	978	F	-	665	0.86	63	E	120	#385	0.97	88	F	139	#448	1.38	235	F	~250	#660	1.97	492	F	~431	#956
Libbey Ind. WB R	0.62	25	D	-	103	0.15	30	C	0	38	0.16	30	C	0	38	0.31	32	C	26	69	0.46	33	C	53	130
Middle St. NB LTR	0.01	8	A	-	0	0.91	36	D	307	#1018	0.92	39	D	316	#1041	0.98	50	D	351	#1120	1.06	72	E	406	#1230
Middle St. SB L	0.16	10	B	-	15	0.41	12	B	20	107	0.42	13	B	20	109	0.45	13	B	21	112	0.50	14	B	22	118
Driveway TR	0.00	0	A	-	0	0.46	11	B	96	405	0.46	11	B	96	405	0.46	11	B	96	405	0.46	11	B	96	405
Overall						**0.81**	**30**	**C**			**0.84**	**36**	**D**			**0.96**	**69**	**E**			**1.14**	**145**	**F**		
Libbey Ind. Pkwy./Pleasant St.																									
Libbey Ind. EB L	2.89	1040	F	-	358	0.56	32	C	51	#149	0.58	33	C	54	#157	0.67	37	D	67	#195	0.79	45	D	83	#248
Libbey Ind. EB R	1.37	220	F	-	515	0.33	21	C	12	60	0.36	21	C	15	64	0.43	22	C	26	84	0.54	24	C	42	#137
Pleasant St. NB L	0.20	12	B	-	18	0.62	34	C	59	#181	0.64	35	C	61	#188	0.70	39	D	69	#208	0.79	47	D	79	#238
Pleasant St. NB T	0.00	0	A	-	0	0.81	14	B	196	#742	0.81	14	B	196	#742	0.81	15	B	196	#742	0.81	15	B	196	#742
Pleasant St. SB TR	0.00	0	A	-	0	0.80	21	C	188	#452	0.80	21	C	189	#454	0.81	21	C	191	#460	0.82	22	C	195	#469
Overall						**0.78**	**20**	**B**			**0.79**	**20**	**C**			**0.80**	**21**	**C**			**0.83**	**23**	**C**		
Route 18/Middle St.																									
West St. EB L	0.74	34	C	121	#326	2.73	855	F	~274	#574	2.73	855	F	~274	#574	2.73	855	F	~274	#574	2.73	855	F	~274	#574
West St. EB T	0.43	31	C	91	193	1.33	222	F	~138	#324	1.34	225	F	~139	#326	1.36	233	F	~142	#331	1.39	246	F	~147	#339
West St. EB R	0.26	30	C	44	122	0.42	41	D	48	85	0.42	41	D	48	85	0.42	41	D	48	85	0.42	41	D	48	85
Middle St. WB L	1.67	372	F	~151	#487	2.61	801	F	~256	#545	2.68	832	F	~265	#559	2.94	949	F	~298	#610	3.32	1120	F	~346	#684
Middle St. WB T	0.85	59	E	90	#242	1.12	140	F	~97	#266	1.13	144	F	~102	#270	1.18	161	F	~111	#283	1.25	187	F	~123	#301
Middle St. WB R	0.71	41	D	115	#275	0.61	37	D	106	#209	0.66	39	D	118	#251	0.85	53	D	161	#384	1.12	123	F	232	#636
Route 18 NB L	0.41	27	C	27	88	0.52	50	D	40	#121	0.52	50	D	40	#121	0.52	50	D	40	#121	0.52	50	D	40	#121
Route 18 NB T	0.85	37	D	250	467	0.91	44	D	292	#649	0.91	44	D	292	#649	0.91	44	D	292	#649	0.91	44	D	292	#649
Route 18 NB R	0.36	19	B	102	235	0.36	19	B	87	237	0.36	19	B	89	240	0.38	19	B	93	251	0.40	19	B	99	264
Route 18 SB L	1.02	88	F	96	#384	1.01	99	F	169	#470	1.03	105	F	174	#484	1.13	138	F	~209	#539	1.28	192	F	~259	#616
Route 18 SB T	0.69	21	C	221	469	0.87	34	C	318	#734	0.87	34	C	318	#734	0.87	34	C	318	#734	0.87	34	C	318	#734
Route 18 SB R	0.23	5	A	34	138	0.32	13	B	70	216	0.32	13	B	70	216	0.32	13	B	70	216	0.32	13	B	70	216
Overall	**1.06**	**54**	**D**			**1.11**	**151**	**F**			**1.11**	**154**	**F**			**1.15**	**167**	**F**			**1.22**	**194**	**F**		
Route 18/Park Ave.																									
Park Ave. W EB L	0.57	33	C	57	103	0.77	58	E	68	#123	0.77	59	E	69	#125	0.79	62	E	71	#131	0.82	67	E	74	#139
Park Ave. W EB TR	0.65	39	D	132	185	1.31	206	F	~192	#293	1.31	206	F	~192	#293	1.32	209	F	~194	#294	1.32	210	F	~194	#295
Park Ave. WB L	0.49	33	C	48	88	0.65	46	D	55	#120	0.65	46	D	55	#120	0.65	46	D	55	#120	0.65	46	D	55	#120
Park Ave. WB T	0.84	57	E	167	#289	1.51	299	F	~241	#400	1.51	302	F	~243	#403	1.52	306	F	~245	#404	1.53	311	F	~248	#408
Park Ave. WB R	0.37	24	C	85	114	0.41	27	C	87	#186	0.41	27	C	87	#186	0.41	27	C	87	#186	0.41	27	C	87	#186
Route 18 NB L	0.30	23	C	9	38	0.34	27	C	9	41	0.34	27	C	9	41	0.34	27	C	9	41	0.34	28	C	9	41
Route 18 NB TR	0.98	57	E	317	#587	1.29	175	F	386	#665	1.29	176	F	387	#666	1.30	179	F	391	#671	1.31	184	F	395	#677
Route 18 SB L	0.67	26	C	80	#324	0.60	22	C	80	#385	0.60	22	C	80	#385	0.60	22	C	80	#385	0.60	22	C	80	#385
Route 18 SB TR	0.87	32	C	344	#774	0.96	42	D	392	#869	0.97	43	D	396	#874	0.99	47	D	409	#893	1.01	53	D	428	#921
Overall	**0.81**	**41**	**D**			**1.08**	**114**	**F**			**1.08**	**115**	**F**			**1.09**	**117**	**F**			**1.11**	**121**	**F**		

[1]Delay = Average delay per vehicle (seconds) [2]v/c = Volume to capacity ratio [3]LOS = Level of Service [4]50th percentile queue (feet) [5]95th percentile queue (feet)
~ the approach is above capacity; 50th percentile queue could be longer # volume for the 95th percentile queue exceeds capacity

Table 9 Afternoon Peak Hour Capacity Analyses Summary (CONTINUED)

	2015 Existing					2022 No-Build					2022 Phase I Build					2022 Phase II Build					2022 Phase III Build				
	V/C[1]	Delay[2]	LOS[3]	50th Q[4]	95th Q[5]	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Route 53/Pleasant St.																									
Route 53 EB LTR	0.54	19	B	84	193	0.95	66	E	193	#393	0.95	66	E	193	#393	0.95	66	E	193	#393	0.95	66	E	193	#393
Route 53 WB L	n/a	n/a	n/a	n/a	n/a	0.79	79	E	71	#200	0.80	81	F	72	#202	0.83	86	F	75	#211	0.87	94	F	78	#223
Route 53 WB TR	0.74	24	C	108	#238	0.90	49	D	362	#762	0.90	49	D	362	#762	0.90	49	D	362	#762	0.90	49	D	362	#762
Pleasant St. NB LTR	0.78	23	C	169	#336	0.94	54	D	296	#559	0.95	56	E	300	#566	0.98	63	E	312	#592	1.03	75	E	332	#628
Pleasant St. SB L						0.85	81	F	102	#268	0.85	81	F	102	#268	0.85	81	F	102	#268	0.85	81	F	102	#268
Pleasant St. SB TR	1.15dl	62	E	166	#363	0.73	28	C	309	#626	0.73	28	C	309	#632	0.73	28	C	313	#663	0.75	29	C	320	#679
Overall	**0.85**	**33**	**C**			**0.93**	**52**	**D**			**0.93**	**53**	**D**			**0.95**	**55**	**E**			**0.97**	**60**	**E**		
Libbey Ind. Pkwy./Performance Dr.																									
Libbey Ind. EB LT	0.03	8	A	-	3	0.03	8	A	-	3	0.04	8	A	-	3	0.05	8	A	-	3	0.06	9	A	-	5
Perf. Dr. SB L	0.16	18	C	-	15	0.13	16	C	-	10	0.18	17	C	-	15	0.38	22	C	-	43	0.54	38	E	-	73
Perf. Dr. SB R	0.18	12	B	-	15	0.15	11	B	-	13	0.19	11	B	-	18	0.37	13	B	-	43	0.46	17	C	-	60
Pleasant St./Pine St.																									
Pine St. WB L						0.30	103	F	-	25	0.30	106	F	-	28	0.35	125	F	-	30	0.40	153	F	-	35
Pine St. WB R	1.21	173	F	-	343	0.77	41	E	-	155	0.78	42	E	-	160	0.81	46	E	-	173	0.84	52	F	-	193
Pleasant St. SB L	0.51	14	B	-	73	0.52	14	B	-	78	0.53	15	B	-	80	0.56	15	C	-	88	0.60	16	C	-	100
Performance Drive/#90 North Driveway/Atrium Driveway																									
#90 Drive EB LTR											0.07	9	A	-	5	0.07	9	A	-	5	0.07	9	A	-	5
#51 Drive WB LTR											0.08	11	B	-	5	0.08	11	B	-	5	0.08	11	B	-	5
Perf. Dr NB LTR											0.01	7	A	-	0	0.01	7	A	-	0	0.01	7	A	-	0
Perf. Dr SB LTR											0.00	0	A	-	0	0.00	0	A	-	0	0.00	0	A	-	0

[1]Delay = Average delay per vehicle (seconds) [2]v/c = Volume to capacity ratio [3]LOS = Level of Service [4]50th percentile queue (feet) [5]95th percentile queue (feet)
~ the approach is above capacity; 50th percentile queue could be longer # volume for the 95th percentile queue exceeds capacity

6.0 SIGHT DISTANCE ANALYSES

Stopping sight distance and intersection sight distance analyses were conducted at the Project's driveways in accordance with the methodology contained in A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011, American Association of State and Highway Transportation Officials (AASHTO). Sight distance calculations are provided in Appendix I.

6.1.1 Methodology and Definitions

Travel speed measurements were taken in the vicinity of the three parcels on Libbey Industrial Parkway and Performance Drive. The data was obtained for a two-day period beginning Wednesday, October 7, 2015 and Thursday, October 8, 2015. The speed data is necessary to determine if the measured sight lines are adequate.

6.1.1.1 Stopping Sight Distance (SSD)

Definition. Stopping sight distance (SSD) is the length of roadway ahead which is visible to the driver. The minimum sight distance available on a roadway should be sufficiently long enough to enable a vehicle to stop before reaching a stationary object in its path. SSD includes the length of roadway traveled during the perception and reaction time of a driver to an object in a road, and the distance traveled during braking. Stopping sight distance criteria are defined by AASHTO based on design speeds, anticipated driver behavior and vehicle performance, as well as physical roadway conditions.

Measurement Criteria. Per AASHTO guidelines, the stopping sight lines are measured with an eye height 3.5 feet above the road surface. The distance at which a 2-foot tall object located in the road is visible is measured for each approach to the study location.

AASHTO Recommendation. The stopping sight distance recommendation for the major road approach to the intersection is based on the measured 85th percentile travel speed and approach grade.

6.1.1.2 Intersection Sight Distance (ISD)

Definition. Intersection sight distance (ISD) is the length of roadway which is visible to a driver stopped on a minor road (or driveway) approach to an intersection. More specifically, AASHTO indicates that intersection sight distance should be long enough for drivers exiting a driveway to accelerate from a stop and complete the required maneuver without unduly interfering with traffic on the major street.

Measurement Criteria. Per AASHTO guidelines, the intersection sight lines are measured on the minor approach with an eye height 3.5 feet above the road surface and 14.5 feet from the edge of traveled way on the major street. The distance at which a 3.5 foot tall vehicle is visible is measured.

AASHTO Recommendation. The intersection sight distance recommendation for a left turn maneuver is based on the 85th percentile travel speeds on the major street and the approach grade on the minor street. The desirable sight distance exceeds the stopping sight distance. However, AASHTO indicates that "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". In other words, ISD can be at a minimum equal to SSD.

6.1.2 Phase I (#90 Libbey Industrial Parkway)

The speed data indicates that in the vicinity of the Phase I (#90 Libbey Industrial Parkway) parcel, the 85th percentile travel speed along Libbey Industrial Parkway is approximately 33 mph in the eastbound travel direction and 32 mph in the westbound travel direction. Along Performance Drive, the 85th percentile travel speed is 28 mph northbound and 27 mph southbound.

The 85th percentile travel speeds and average grades along Libbey Industrial Parkway and Performance Drive along with the calculated AASHTO desirable and recommended sight lines for these grades and the measured speeds are provided in Table 10.

The SSD and ISD measured at the proposed driveways along Libbey Industrial Parkway and Performance Drive exceed minimum AASHTO criteria with selective clearing of vegetation.

Table 10 Phase I Driveways – Sight Distance

Intersection	85th Percentile Speed (mph)	Approx. Grade	AASHTO Desirable (feet)	AASHTO Minimum (feet)	Measured Distance (feet)	Meets AASHTO Desirable	Meets AASHTO Minimum
Libbey Industrial Parkway/Proposed (Realigned) Site Driveway							
Stopping Distance							
From the West	33	-2%	235	NA	+500	Yes	-
From the East	32	+3%	210	NA	425	Yes	-
Intersection Sight Distance							
To the West	33		365	235	460	Yes	Yes
To the East	32		355	210	430	Yes	Yes
Performance Drive/Proposed (Realigned) Southerly Driveway							
Stopping Distance							
From the North	27	-1%	175	NA	400	Yes	-
From the South	28	+1%	180	NA	350	Yes	-
Intersection Sight Distance							
To the North	27		300	175	400	Yes	Yes
To the South	28		310	180	350[1]	Yes	Yes
Performance Drive/Proposed Northerly Site Driveway							
Stopping Distance							
From the North	27	-1%	175	NA	270	Yes	-
From the South	28	+1%	180	NA	480	Yes	-
Intersection Sight Distance							
To the North	27		300	175	270[1]	No	Yes
To the South	28		310	180	480	Yes	Yes

[1]with selective clearing of vegetation

6.1.3 Phase II (#7 Performance Drive)

The speed data indicates that in the vicinity of the Phase I (#7 Performance Drive) parcel, the 85th percentile travel speed along Libbey Industrial Parkway is approximately 41 mph in the eastbound travel

direction and 42 mph in the westbound travel direction. Along Performance Drive, the 85th percentile travel speed is 28 mph northbound and 27 mph southbound.

The 85th percentile travel speeds and average grades along Libbey Industrial Parkway and Performance Drive along with the calculated AASHTO desirable and recommended sight lines for these grades and the measured speeds are provided in Table 11.

The SSD and ISD measured at the proposed driveways along Libbey Industrial Parkway and Performance Drive exceed minimum AASHTO criteria.

Table 11 Phase II Driveways - Sight Distance

Intersection	85th Percentile Speed (mph)	Approx. Grade	AASHTO Desirable (feet)	AASHTO Minimum (feet)	Measured Distance (feet)	Meets AASHTO Desirable	Meets AASHTO Minimum
Libbey Industrial Parkway/Proposed Site Driveway (Inbound Only)							
Stopping Distance							
From the West	33	-4%	240	NA	280	Yes	-
Performance Drive/Proposed Northerly Site Driveway							
Stopping Distance							
From the North	27	-1%	175	NA	400	Yes	-
From the South	28	+1%	180	NA	270	Yes	-
Intersection Sight Distance							
To the North	27		300	175	335	Yes	Yes
To the South	28		310	180	270	No	Yes

6.1.4 Phase III (#200 Libbey Industrial Parkway)

The speed data indicates that in the vicinity of the Phase III (#200 Libbey Industrial Parkway) parcel, the 85th percentile travel speed along Libbey Industrial Parkway is approximately 41 mph in the eastbound travel direction and 42 mph in the westbound travel direction.

The 85th percentile travel speeds and average grades along Libbey Industrial Parkway along with the calculated AASHTO desirable and recommended sight lines for these grades and the measured speeds are provided in Table 12.

The SSD and ISD measured at the proposed driveways along Libbey Industrial Parkway exceed minimum AASHTO criteria with selective clearing of vegetation.

Table 12 Phase III Driveways Sight Distance

Intersection	85th Percentile Speed (mph)	Approx. Grade	AASHTO Desirable (feet)	AASHTO Minimum (feet)	Measured Distance (feet)	Meets AASHTO Desirable	Meets AASHTO Minimum
Libbey Industrial Parkway/Proposed (Realigned) Westerly Site Driveway							
Stopping Distance							
From the West	41	0%	315	NA	+500	Yes	-
From the East	42	-3%	340	NA	+500	Yes	-
Intersection Sight Distance							
To the West	41		455	315	+500[1]	Yes	Yes
To the East	42		465	340	+500	Yes	Yes
Libbey Industrial Parkway/Proposed (Realigned) Easterly Site Driveway							
Stopping Distance							
From the West	41	0%	315	NA	+500	Yes	-
From the East	42	-3%	340	NA	450	Yes	-
Intersection Sight Distance							
To the West	41		455	315	+500	Yes	Yes
To the East	42		465	340	375[1]	No	Yes

[1]with selective clearing of vegetation

7.0 MITIGATION

The proposed traffic mitigation for the Project consists of three key components including intersection improvements, a Transportation Demand Management plan and a Traffic Monitoring Program. Mitigation has been developed for each Project phase.

Additionally, to provide adequate sight lines for the site driveways, trees and shrubbery will be cleared.

7.1 PHASE I

The proposed 26,000 s.f. expansion of the existing medical facility at #90 Libbey Industrial Parkway generates approximately one trip a minute and does not have a significant impact to the study intersections. However, Phase I of the Project includes a new driveway on Performance Drive and will increase volumes at the Libbey Industrial Parkway/Performance Drive intersection. Therefore, it is recommended that minor improvements be implemented at the intersection as mitigation for Phase I.

Libbey Industrial Parkway/Performance Drive. Although this intersection has capacity to support full build-out of the Project with reasonably good levels of service (LOS E or better operations), the proponent will implement minor improvements at this location to better define the travel ways. Shown on Figure 25, the improvement includes restriping the Performance Drive approach to include separate left and right turn lanes and a stop bar.

7.2 PHASE II

Mitigation for the 80,000 s.f. medical office building to be constructed at #7 Performance Drive includes a comprehensive Transportation Demand Management program and a Traffic Monitoring program.

7.2.1 Transportation Demand Management

The traffic analyses conducted for this study has taken a “worse case” approach. No reduction in vehicle trips was assumed to account for TDM strategies being considered by the proponent to enhance the sustainability of the proposed Project.

To help mitigate the Project’s impacts on the local transportation network, establishment of a TDM program at the site is proposed to minimize the reliance on single-occupant vehicles and reduce the number of peak hour trips from the Project. Those TDM strategies include the following recommended measures:

High Occupancy Vehicles

- Establish car/van pool program that will be available to all employees in the area. The van pool program will also use the free services of MassRIDES to assist in matching potential van pool participants.
- Provide a ride matching service to facilitate employees in finding fellow workers who live in the same communities who are willing to share a ride to work.
- Establish a guaranteed ride home program, which will help alleviate concerns employees have of becoming involved in a car/van pool program when a need arises that requires them to arrive or leave work at a time different than is normal for the car/van pool (e.g., a family emergency)

- Provide preferential parking for ride sharing participants as an incentive for employees to become involved in a car or van pool. The spaces will be located closest to the proposed buildings and will be designated strictly for car/van pools, thereby providing participants a guaranteed parking space.
- Work with the Weymouth Department of Elder Services, local nursing homes, and other local senior programs to establish van service from these facilities that could transport several patients to visits at the medical offices.

Bicycle, Pedestrian, and Public Transportation Modes

- Provide bicycle racks on-site. The bicycle racks should be provided in locations close to the proposed buildings, preferably in locations where the bicycles would be protected from the elements. Storage for 10 bicycles will be provided.
- The Project sites are located less than a 0.5 mile from the nearest MBTA bus stop located at the intersection of Middle Street/Libbey Industrial Parkway. Promote the use of the bus service through on-site advertising and/or through the employee orientation process.

Other Measures

- Provide employees with opportunities to work alternative schedules, to the extent feasible, in order to reduce the number of peak hour trips accessing/egressing the site. Alternatives would include flexible work hours, compressed work week, and telecommuting.
- Establish a website that will provide information for employees on the car/van pool programs and ride matching services. The website would provide links to the MBTA and MassRIDES websites, as well as to the SIGALERT web site (where employees can get current traffic updates for the metropolitan Boston area).
- Designate an on-site TDM coordinator to oversee implementation and maintenance of the TDM program, including the website. The coordinator will also work with other businesses along Libbey Industrial Parkway to identify opportunities to expand the TDM program to include other employers in the area or assist in the organization of a Libbey Industrial Parkway Traffic Management Association (TMA).
- Provide preferential parking for drivers (employees or patients) who drive hybrid vehicles. The spaces will be located near the proposed building and will be designated for use by hybrid vehicles only.
- Provide an Electric Vehicle Charging Station at all three sites.

7.2.2 Traffic Monitoring Plan

A traffic monitoring program will be conducted starting approximately 6 months after Phase II and continuing annually until three years after full occupancy of Phase III. The results of each year's monitoring program will be summarized in a report format and provided to Town of Weymouth officials. The monitoring program will include traffic counts and data calculations at the Project site driveways, and queue monitoring on the Middle Street approach to Route 18 during the afternoon peak hour. The results of each year's monitoring program will be summarized in a report format and provided to Town of Weymouth officials. The monitoring program will include traffic counts and data calculations.

Turning movement counts will be performed at the site driveways along Libbey Industrial Parkway and Performance Drive during the weekday morning and afternoon peak hours. These volumes will be

compared to the projections from the traffic study to determine how traffic volumes have changed due to the Project.

If the data indicates that the sites (#90 Libbey Industrial Parkway, #7 Performance Drive and #200 Libbey Industrial Parkway) total trip generation is more than 10 percent greater than predicted in the study, the proponent will contribute $10,000 to the Town of Weymouth to be used for the Town's traffic maintenance fund.

7.3 PHASE III

As identified in Section 4.4 Build Traffic Volumes and 5.2 Intersection Operating Conditions, full build-out of the proposed Master Plan Project (Phases I - III) will increase traffic levels and potentially degrade traffic operations at two locations:

- Middle Street/Libbey Industrial Parkway
- Route 18/Middle Street

Consequently, mitigation for these two locations has been identified and is presented below.

Phase III mitigation also includes implementation of a Transportation Demand Management Plan and Traffic Monitoring Plan as described above for Phase II.

Middle Street/Libbey Industrial Parkway. With the additional trips generated by the full development of the Project, the Middle Street/Libbey Industrial Parkway intersection would operate with relatively long delays: LOS E during the morning peak hour and LOS F during the afternoon peak hour. Full build-out of the Project (Phases I, II and III) would increase the morning and afternoon peak hour volumes at this location by approximately 370 to 440 vehicles per hour; resulting in a 25 to 26 percent increase in volumes relative to No-Build conditions. Therefore, a new 100-foot long right turn lane on the Middle Street northbound approach is recommended to improve operations at the intersection. A concept plan of the intersection with the proposed right turn lane, using the current MassDOT 75 percent design plans as a base, is presented on Figure 26. The additional capacity on Middle Street would allow for the reapportionment of the signal's green time which would improve overall operations at the intersection.

A meeting was held with local and MassDOT officials on October 15, 2015 to discuss incorporation of these modifications into the final design plans for MassDOT Project #605721. Both the town and MassDOT have indicated a preliminary acceptance of this improvement. FoxRock would fund the additional design and construction costs associated with the proposed modification and would donate to the Town of Weymouth the 3,150 s.f. of right-of-way required to construct the right turn lane. The capacity analysis results with implementation of the northbound right-turn lane and revised signal phasing is shown in Table 13. The intersection, under Phase III Build conditions and with the proposed improvements, would operate at levels of service (LOS B) better than reported for the No-Build condition for the morning peak hour and at LOS D for the afternoon peak hour.

Route 18/Middle Street. The intersection operates at LOS F conditions under No-Build conditions (without the Project). The Project is expected to increase traffic at this location by 320 to 390 vehicles per hour during the morning and afternoon peak hours; an 8 to 9 percent increase in traffic volumes. The signal phasing as currently proposed by MassDOT results in reduced capacity at the intersection in favor of safer operations and consequently no changes to the proposed signal phasing are proposed. The proposed signal timing was reviewed and found to be appropriate for the estimated Build condition traffic volumes. In other words, signal optimization did not result in a meaningful improvement.

The intersection is located in a heavily developed area and widening the intersection to provide additional lanes is beyond FoxRock's capabilities. As a potential mitigation measure, FoxRock will re-evaluate this intersection approximately six months after occupancy of Phase III, including obtaining peak hour traffic counts, queue observations and review of signal timing. If the signal timing can be improved in the future to better accommodate the actual (vs. forecasted) demand, FoxRock would work with MassDOT to implement optimized signal timings.

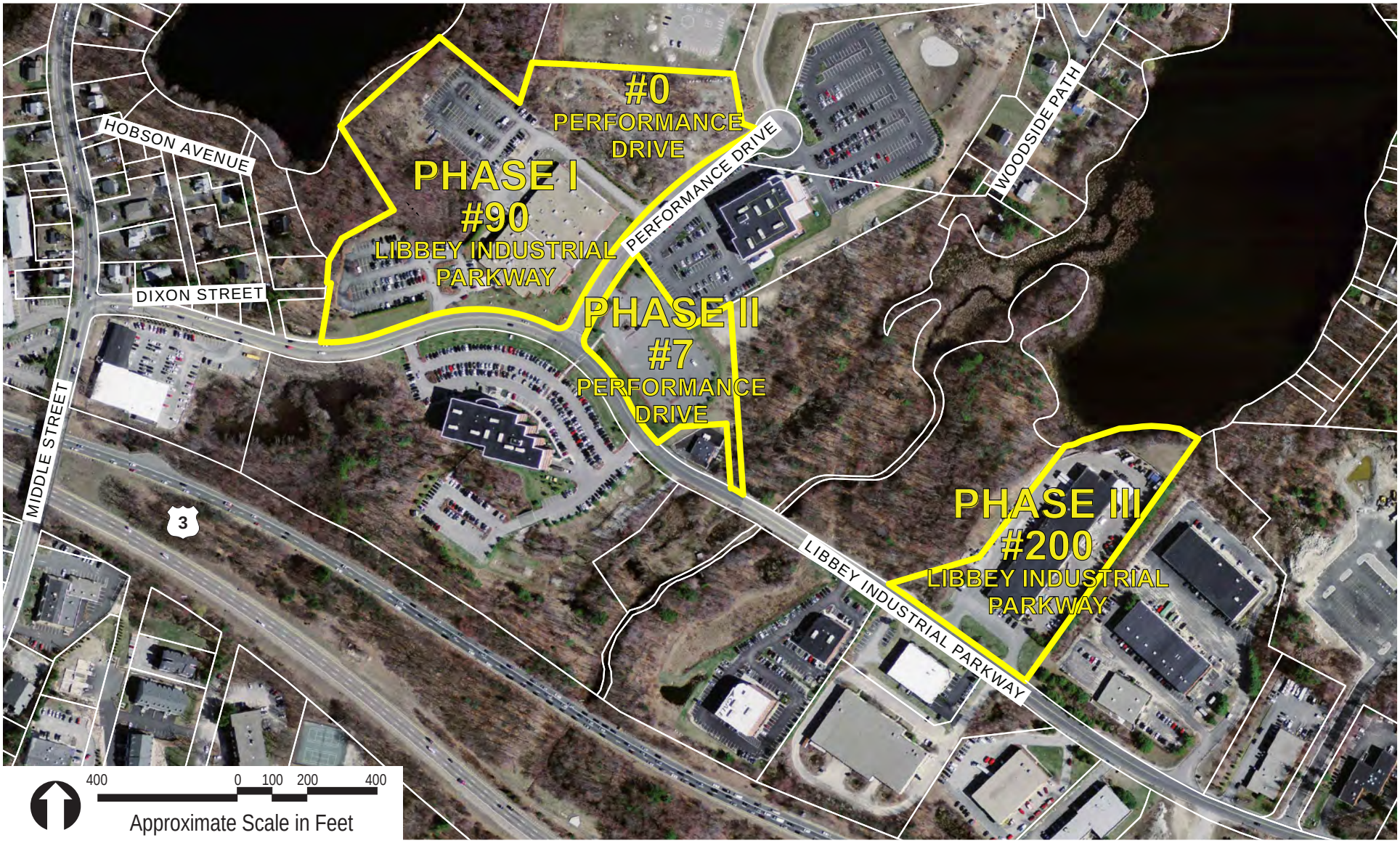
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Table 13 Intersection Level of Service Summary – Libbey Industrial Parkway/Middle Street

	2022 No-Build					2022 Build (Phase I)					2022 Build (Phase II)					2022 Build (Phase III)					2022 Build (Phase III) Mitigated				
	v/c[1]	Delay[2]	LOS[3]	Ave. Q[4]	95th Q[5]	v/c	Delay	LOS	Ave. Q	95th Q	v/c	Delay	LOS	Ave Q	95th Q	v/c	Delay	LOS	Ave. Q	95th Q	v/c	Delay	LOS	Ave. Q	95th Q
Weekday Morning Peak Hour																			AgQ[4]						
Tara Dr. EB LTR	0.14	43	D	2	30	0.15	45	D	3	30	0.15	49	D	3	30	0.15	49	D	3	30	0.25	35	C	2	24
Libbey Ind. WB LT	0.67	38	D	72	#320	0.75	46	D	83	#338	0.96	90	F	116	#389	1.13	140	F	140	#464	0.87	46	D	69	#345
Libbey Ind. WB R	0.10	24	C	0	31	0.10	26	C	0	31	0.10	31	C	0	31	0.11	31	C	0	32	0.11	15	B	0	30
Middle St. NB LTR	0.87	35	C	189	#686	0.85	32	C	204	#742	0.88	34	C	259	#912	1.07	76	E	372	#1159	0.71	25	C	80	#389
Middle St. NB R																					0.40	8	A	5	115
Middle St. SB L	0.43	14	B	20	113	0.43	13	B	21	116	0.47	13	B	23	124	0.60	16	B	26	#161	0.50	12	B	21	#163
Driveway TR	0.43	12	B	72	320	0.42	12	B	72	320	0.39	11	B	72	320	0.39	11	B	72	320	0.52	13	B	60	#356
Overall	**0.71**	**26**	**C**			**0.72**	**26**	**C**			**0.80**	**33**	**C**			**0.96**	**61**	**E**			**0.67**	**19**	**B**		
Weekday Afternoon Peak Hour																									
Tara Dr. EB LTR	0.01	49	D	0	0	0.01	49	D	0	0	0.01	49	D	0	0	0.01	49	D	0	0	0.01	51	D	0	0
Libbey Ind. WB LT	0.86	63	E	120	#385	0.97	88	F	139	#448	1.38	235	F	~250	#660	1.97	492	F	~431	#956	0.97	63	E	272	#786
Libbey Ind. WB R	0.15	30	C	0	38	0.16	30	C	0	38	0.31	32	C	26	69	0.46	33	C	53	130	0.28	21	C	32	79
Middle St. NB LTR	0.91	36	D	307	#1018	0.92	39	D	316	#1041	0.98	50	D	351	#1120	1.06	72	E	406	#1230	0.91	50	D	275	#785
Middle St. NB R																					0.27	5	A	14	130
Middle St. SB L	0.41	12	B	20	107	0.42	13	B	20	109	0.45	13	B	21	112	0.50	14	B	22	118	0.84	49	D	45	#241
Driveway TR	0.46	11	B	96	405	0.46	11	B	96	405	0.46	11	B	96	405	0.46	11	B	96	405	0.62	24	C	182	522
Overall	**0.81**	**30**	**C**			**0.84**	**36**	**D**			**0.96**	**69**	**E**			**1.14**	**145**	**F**			**0.87**	**37**	**D**		

[1]Delay = Average delay per vehicle (seconds) [2]v/c = Volume to capacity ratio [3]LOS = Level of Service [4]50th percentile queue (feet) [5]95th percentile queue (feet)
~ the approach is above capacity; 50th percentile queue could be longer # volume for the 95th percentile queue exceeds capacity

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Locus Map

Figure
1

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WHORTLEBERRY POND

HOBSON AVENUE

MIDDLE STREET

MALCOMB STREET

DIXON STREET

PERFORMANCE DRIVE

WOODSIDE PATH

WHITMANS POND

LIBBEY INDUSTRIAL PARKWAY

3

PHASE I
#90 LIBBEY/0# PERFORMANCE
26K S.F. MEDICAL OFFICE

PHASE II
#7 PERFORMANCE DRIVE
80K S.F. MEDICAL OFFICE

PHASE III
#200 LIBBEY
120K S.F. MEDICAL OFFICE

180 0 45 90 180

Approximate Scale in Feet

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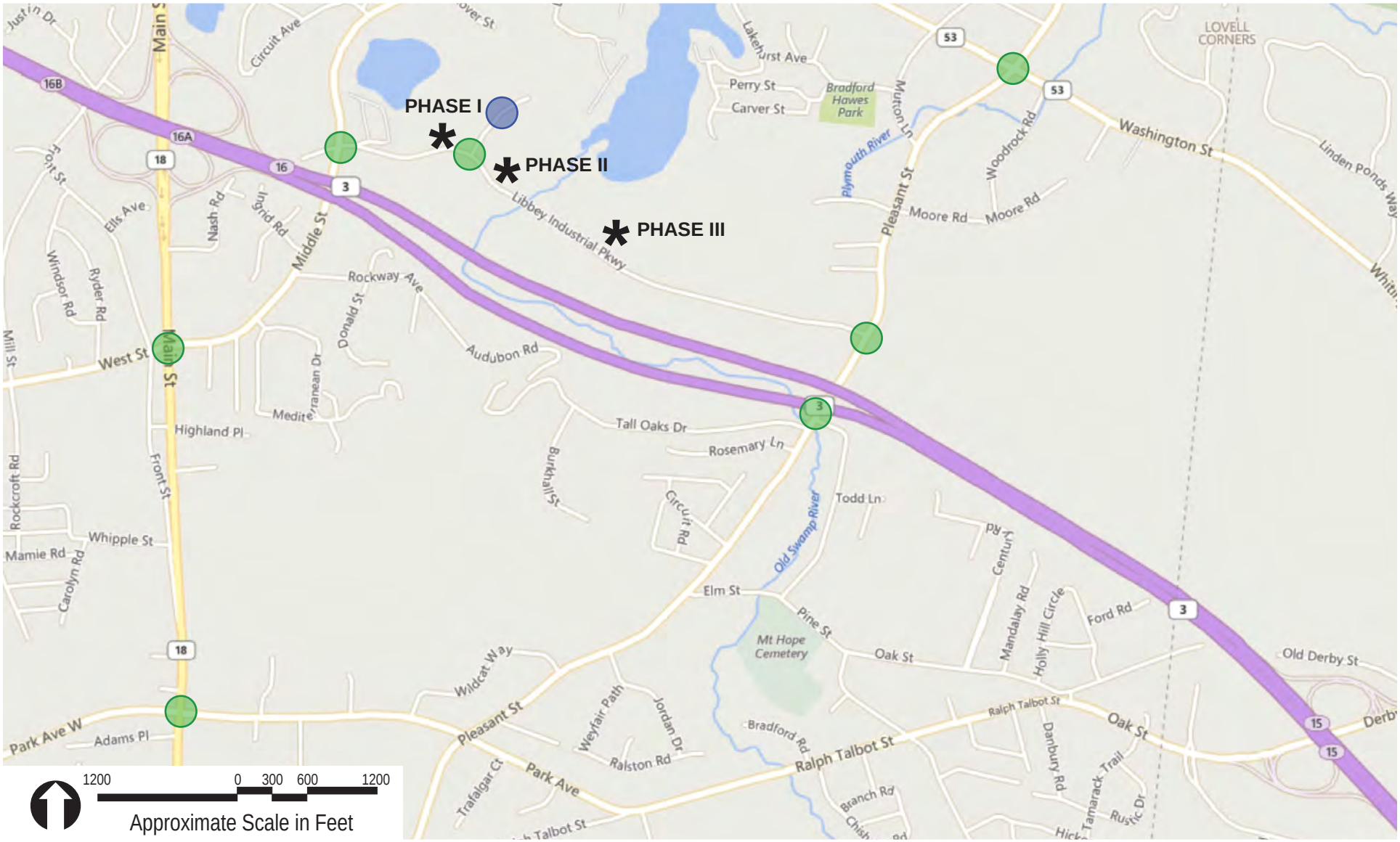
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Preliminary Site Layouts

Figure **2**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Fig 3 - Study Intersections (roadmap).ai



Map Source: Bing

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Legend

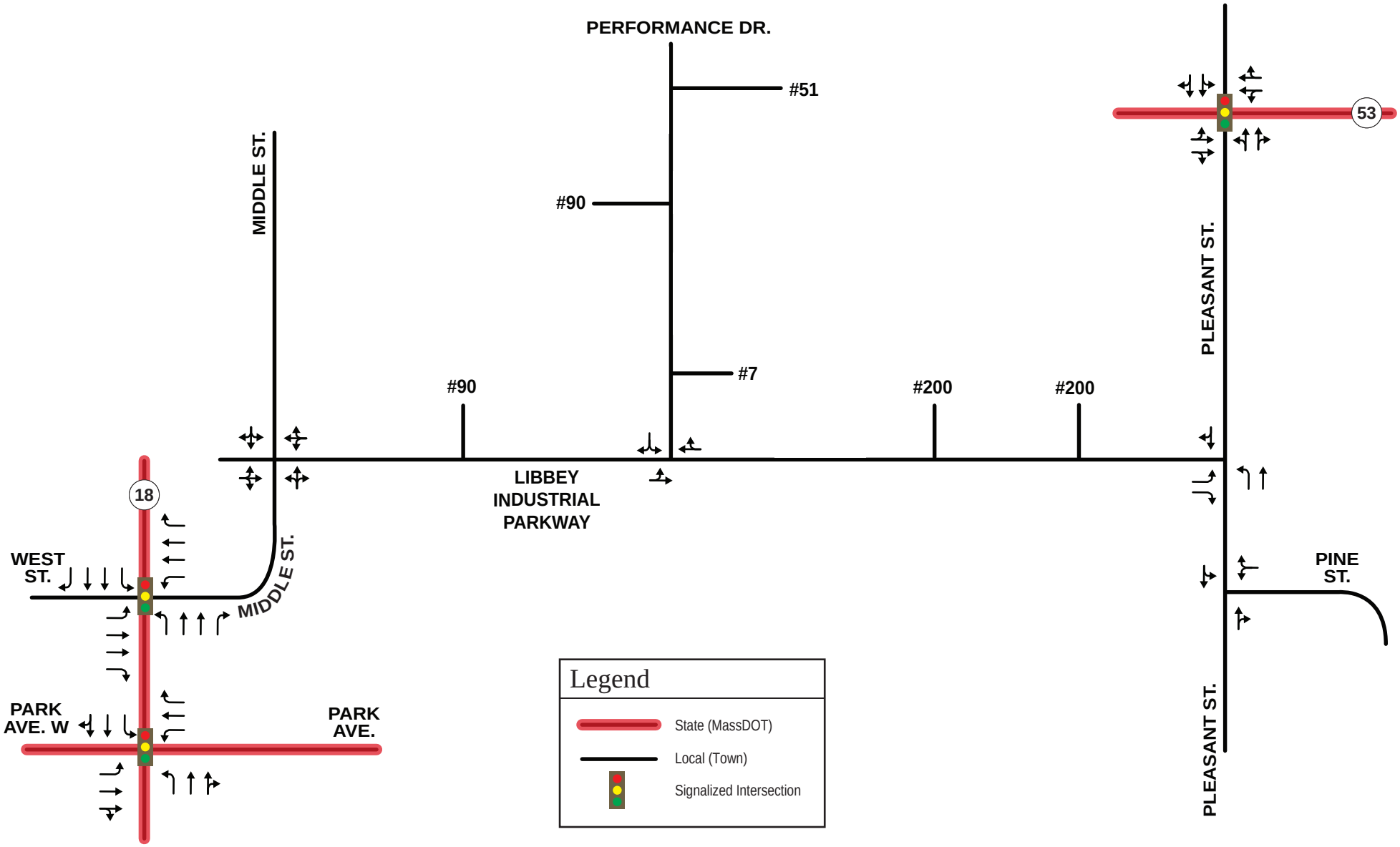
- Primary Study Intersections
- Site Driveway Intersection (2022 Build Analyses Only)
- Project Site

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Study Intersections

Figure **3**

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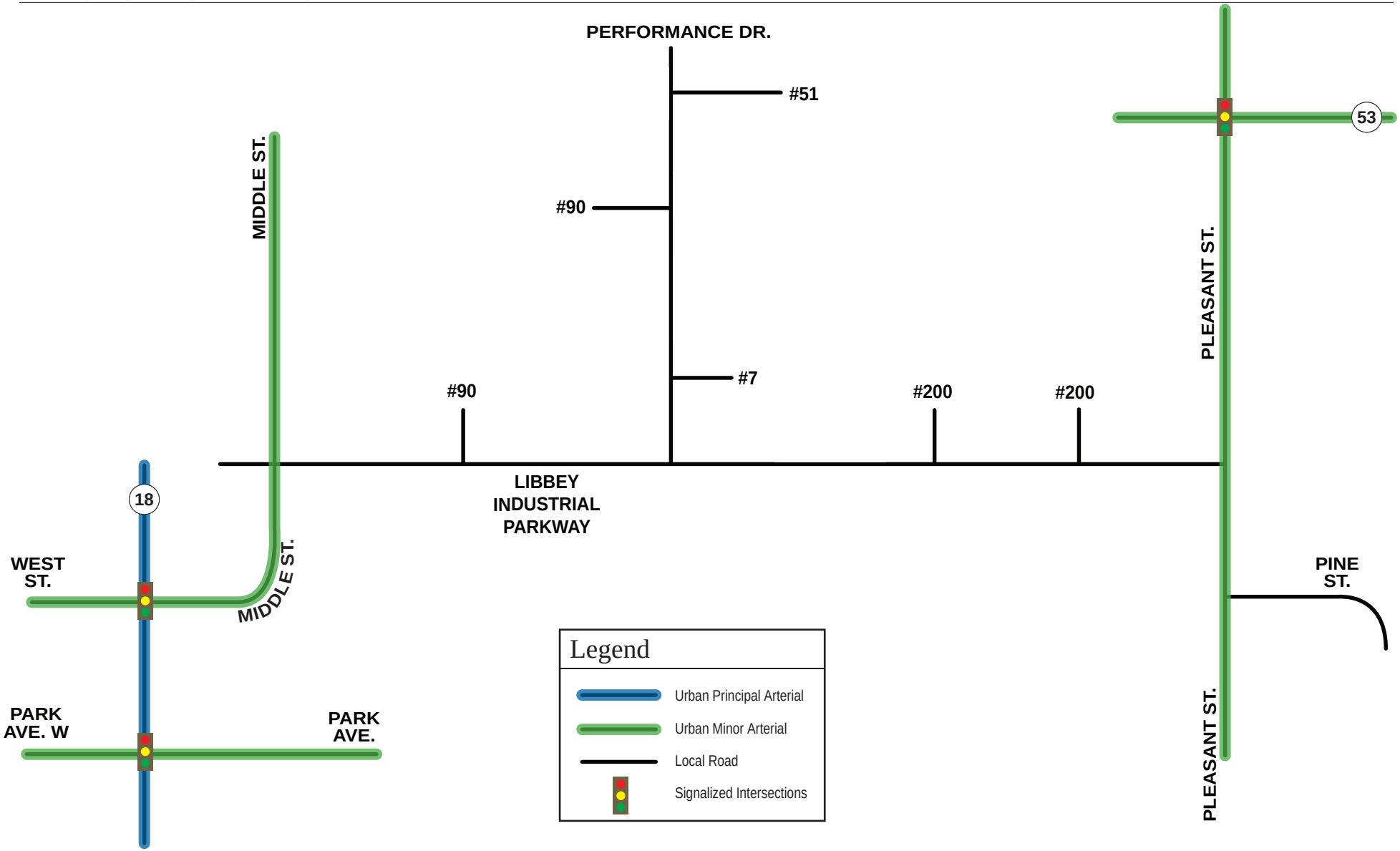
Not To Scale

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Existing Roadway Jurisdiction and Lane Configuration

Figure
4

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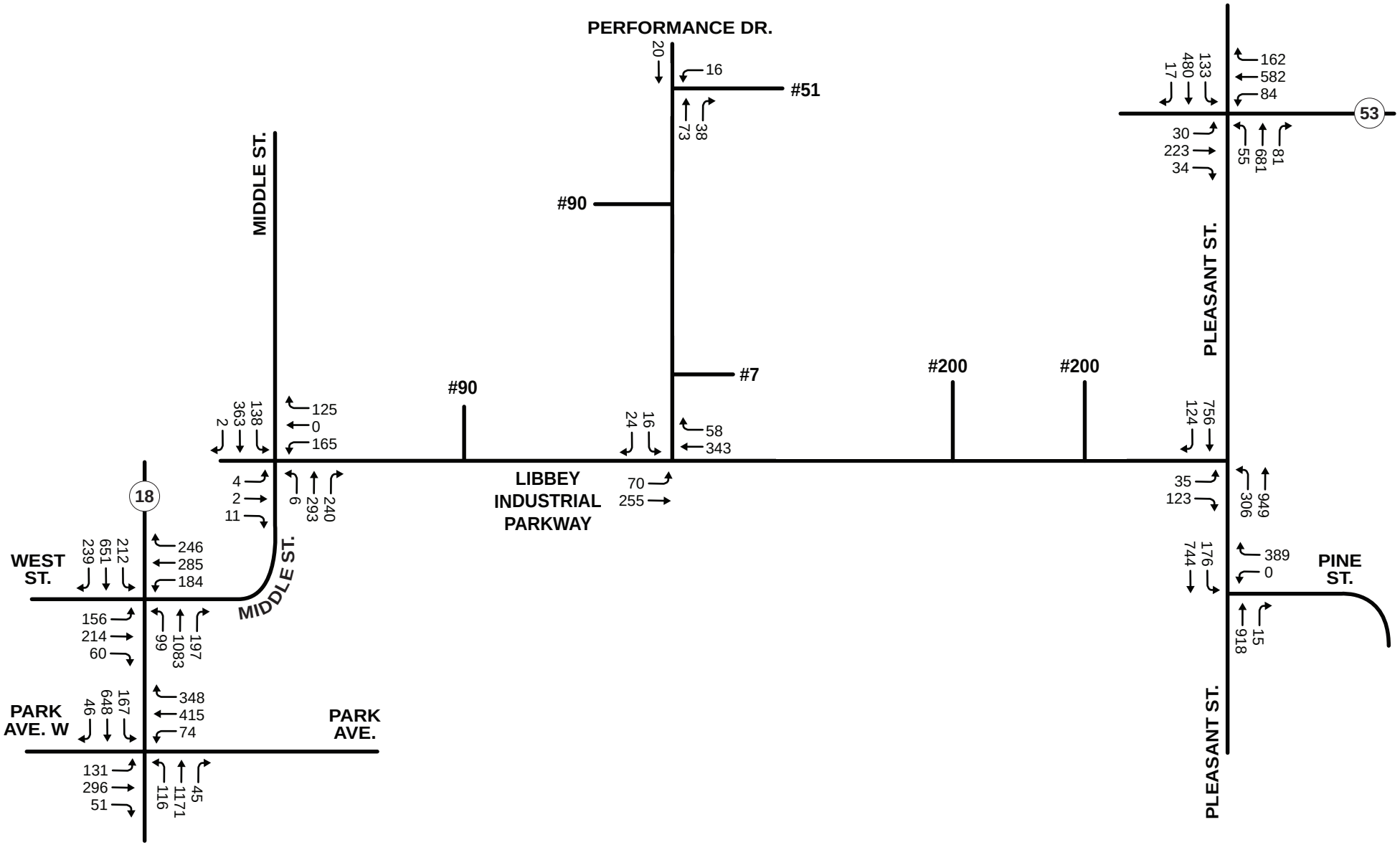
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Existing Roadway Functional Classification

Figure **5**



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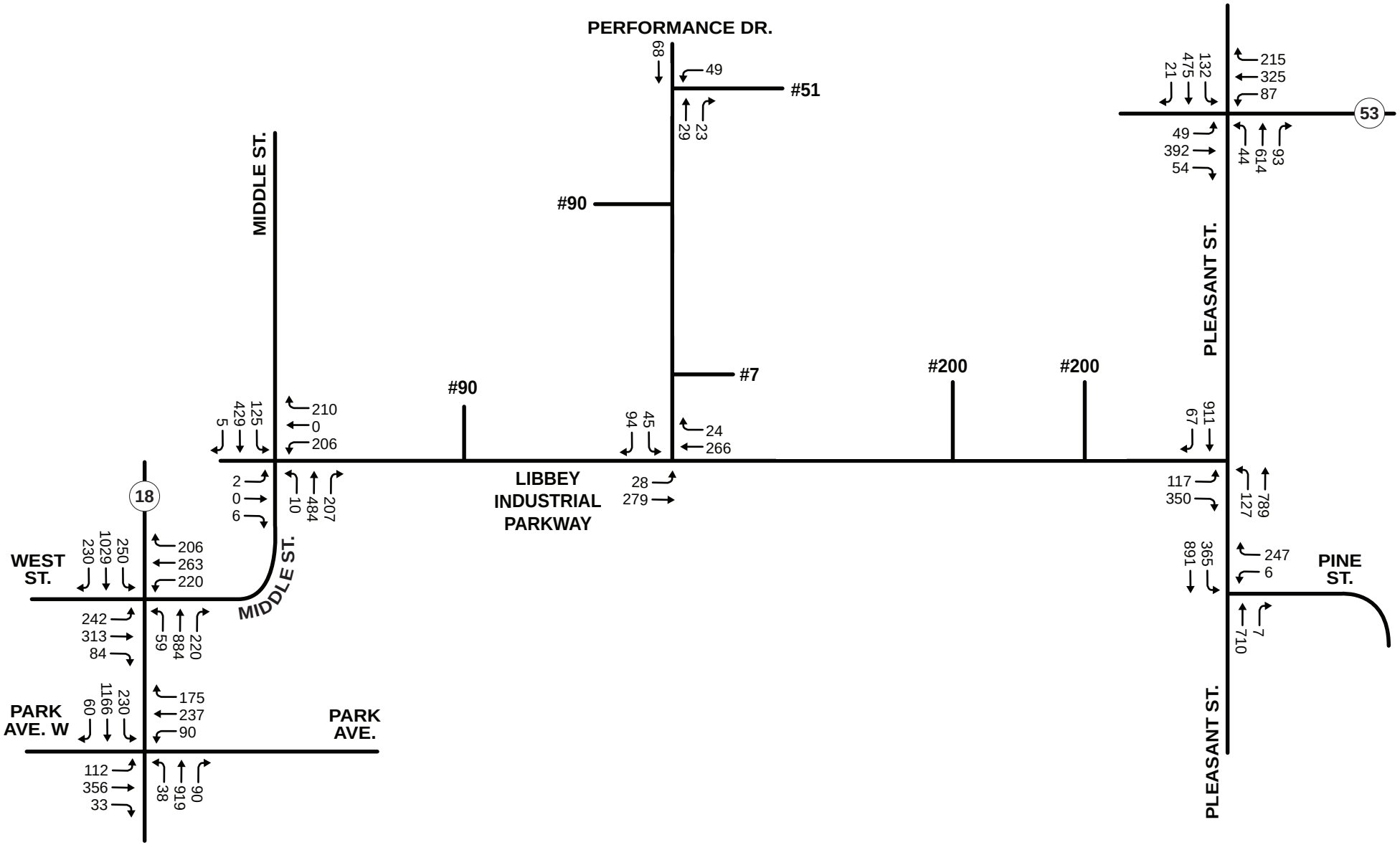
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2015 Existing Morning Peak Hour Traffic Volumes

Figure **6**

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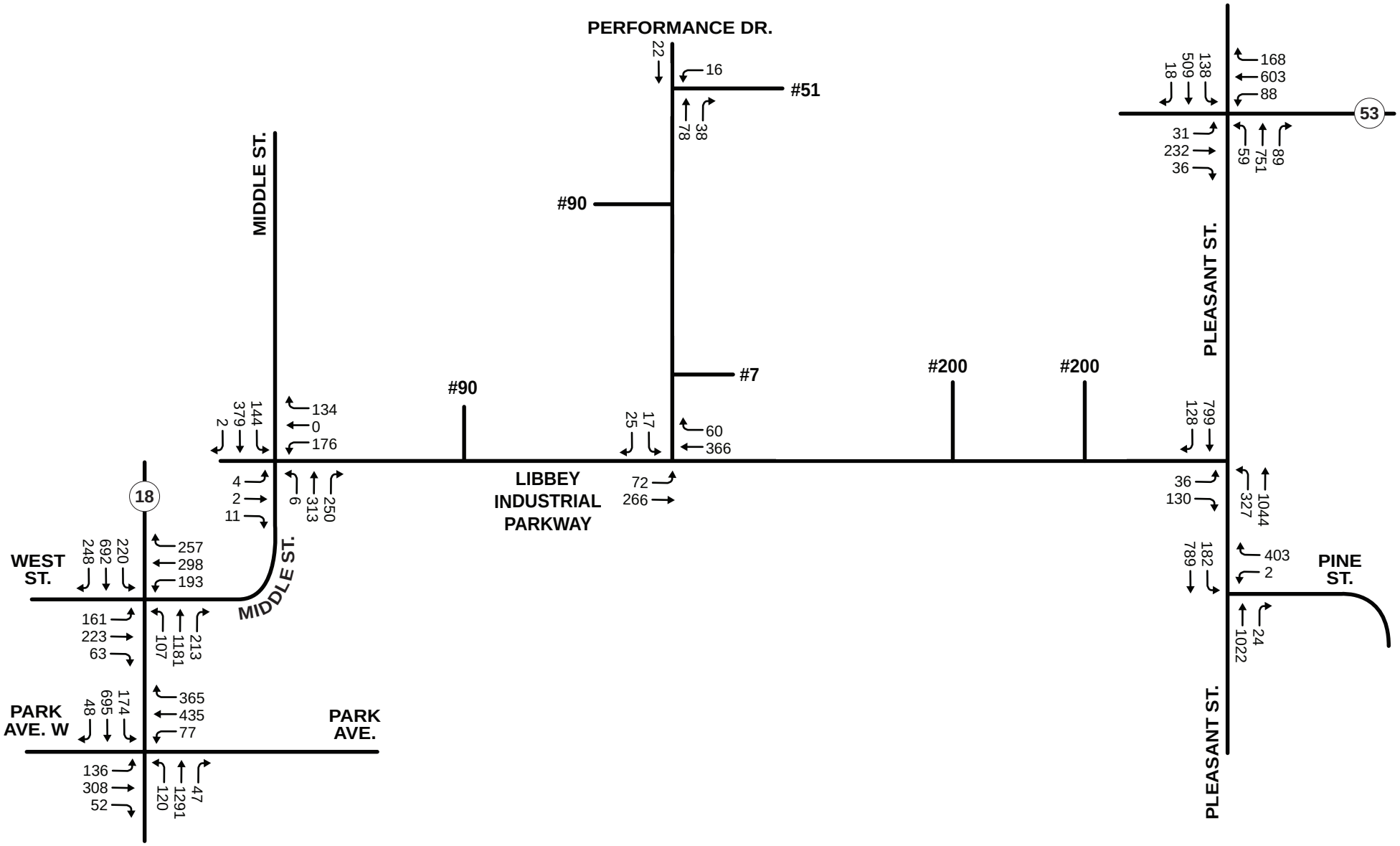
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2015 Existing Afternoon Peak Hour Traffic Volumes

Figure 7



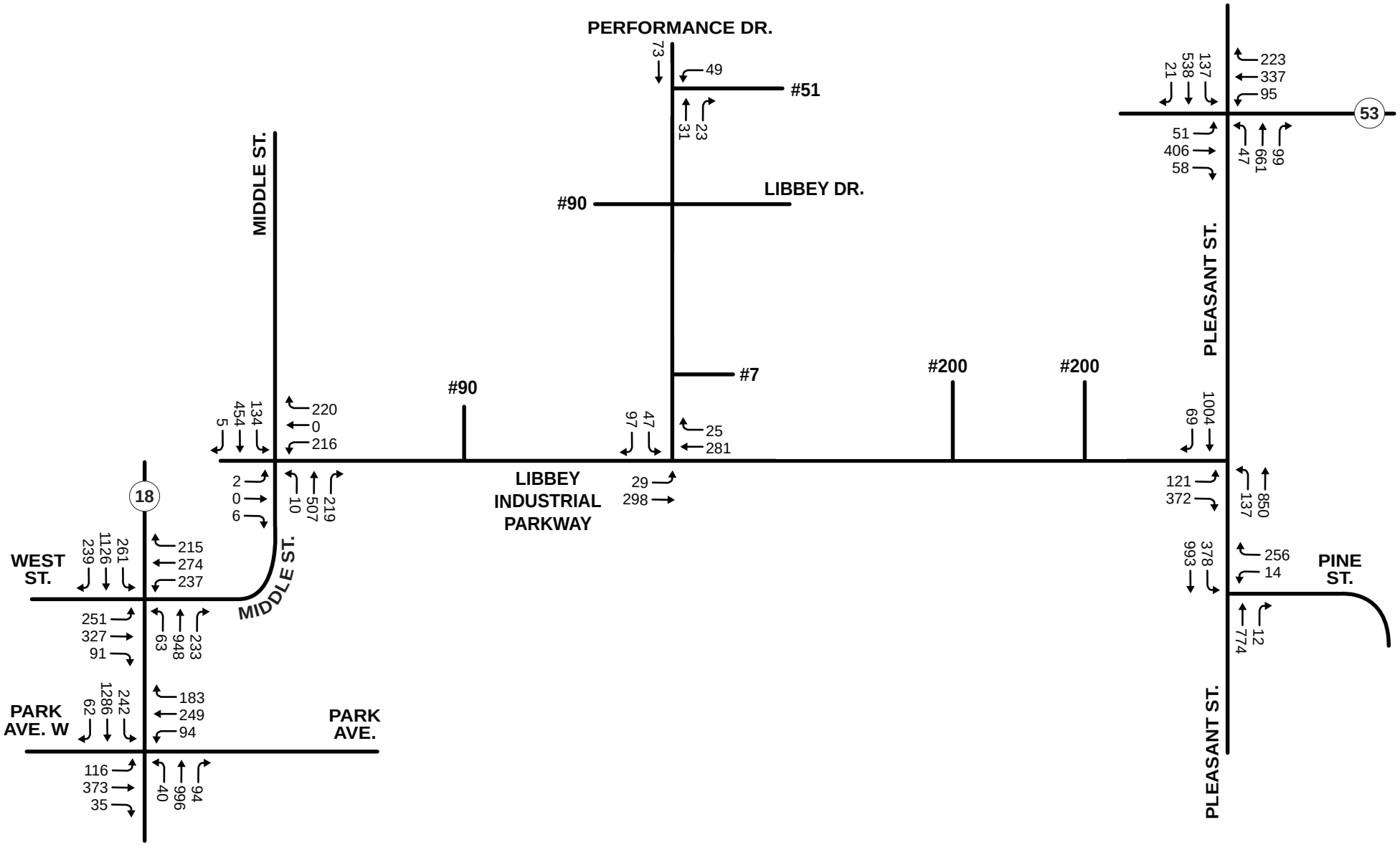
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2022 No-Build Morning Peak Hour Traffic Volumes

Figure **8**



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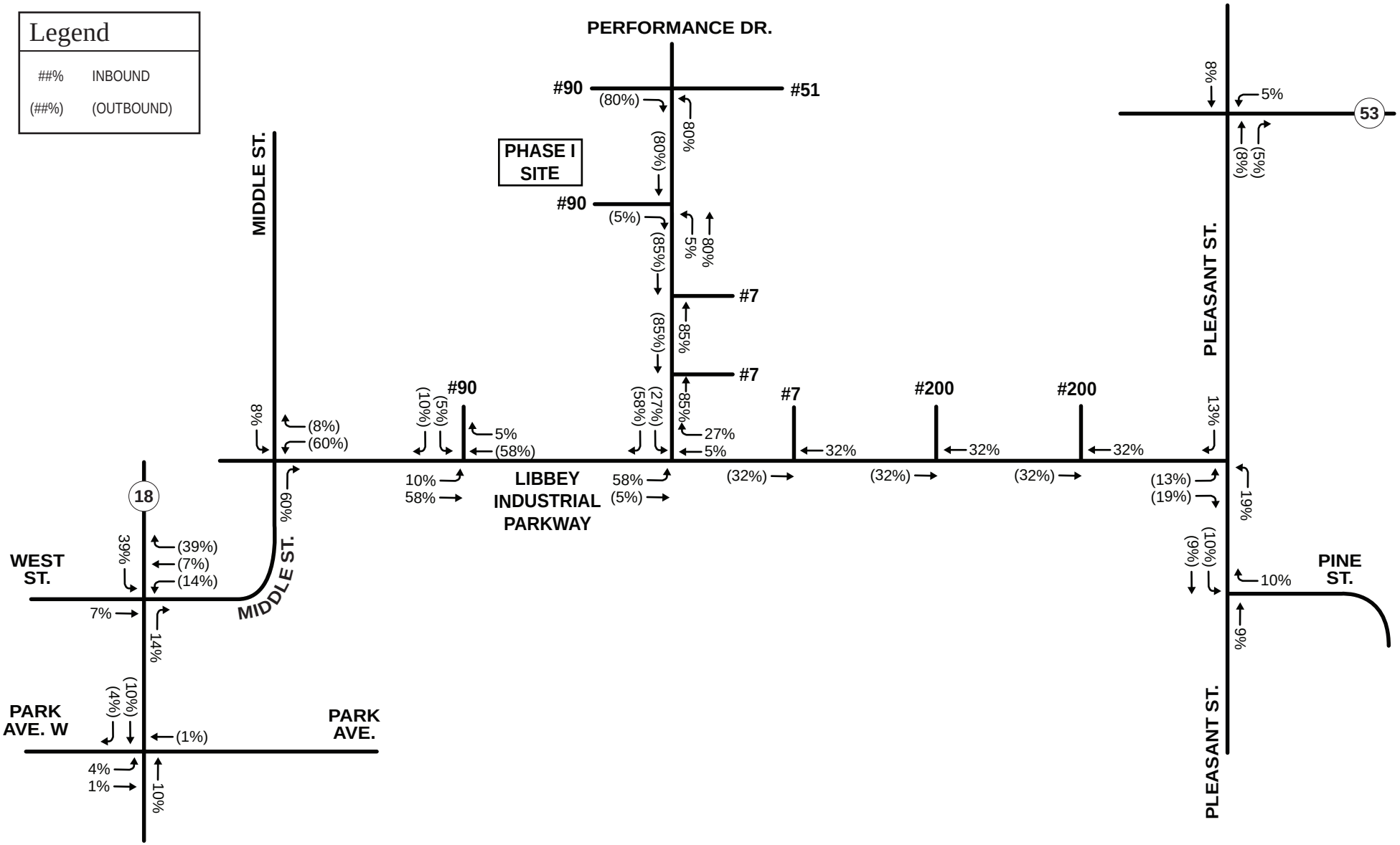
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2022 No-Build Afternoon Peak Hour Traffic Volumes

Figure **9**

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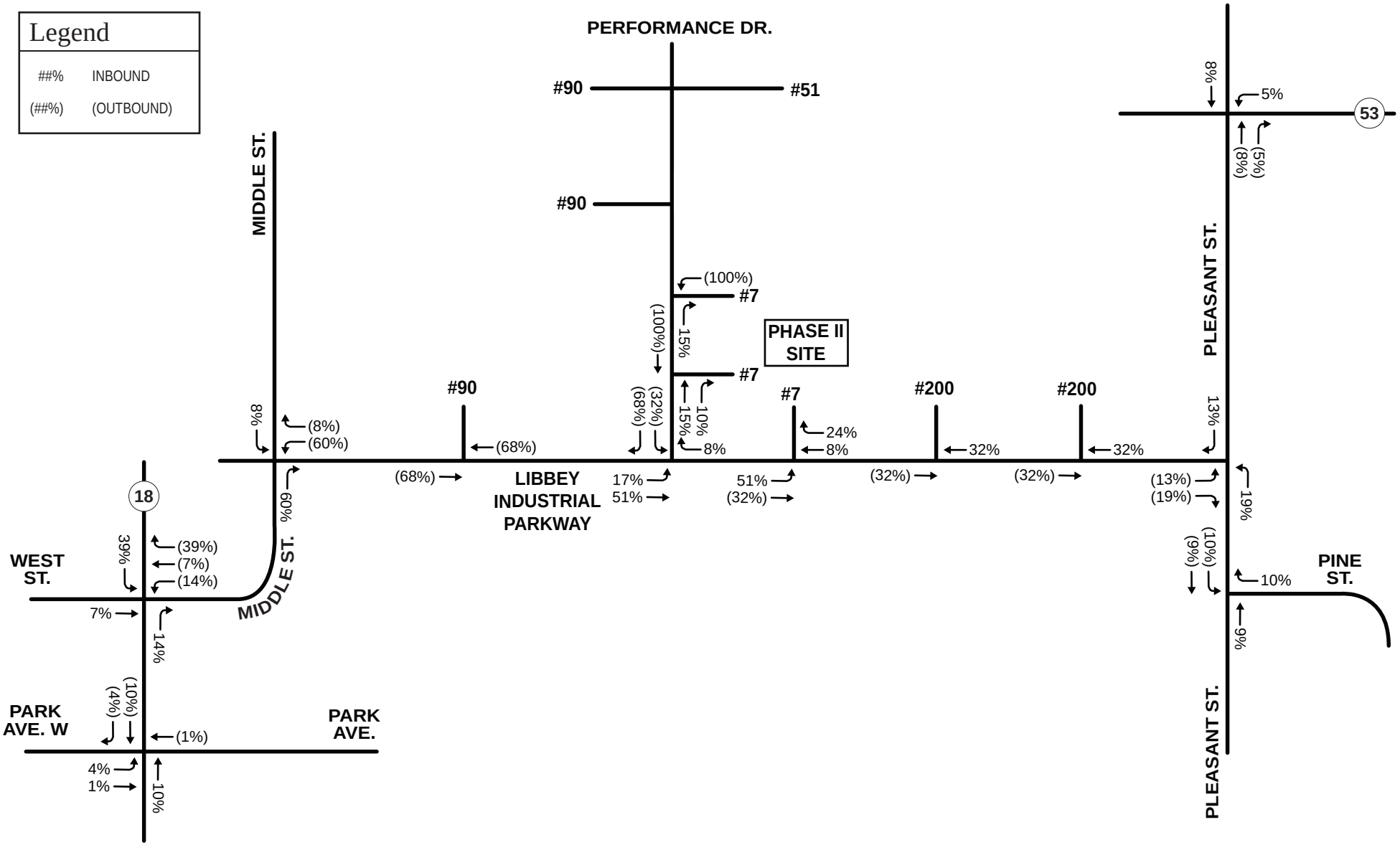
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Phase I
Trip Distribution

Figure **10**

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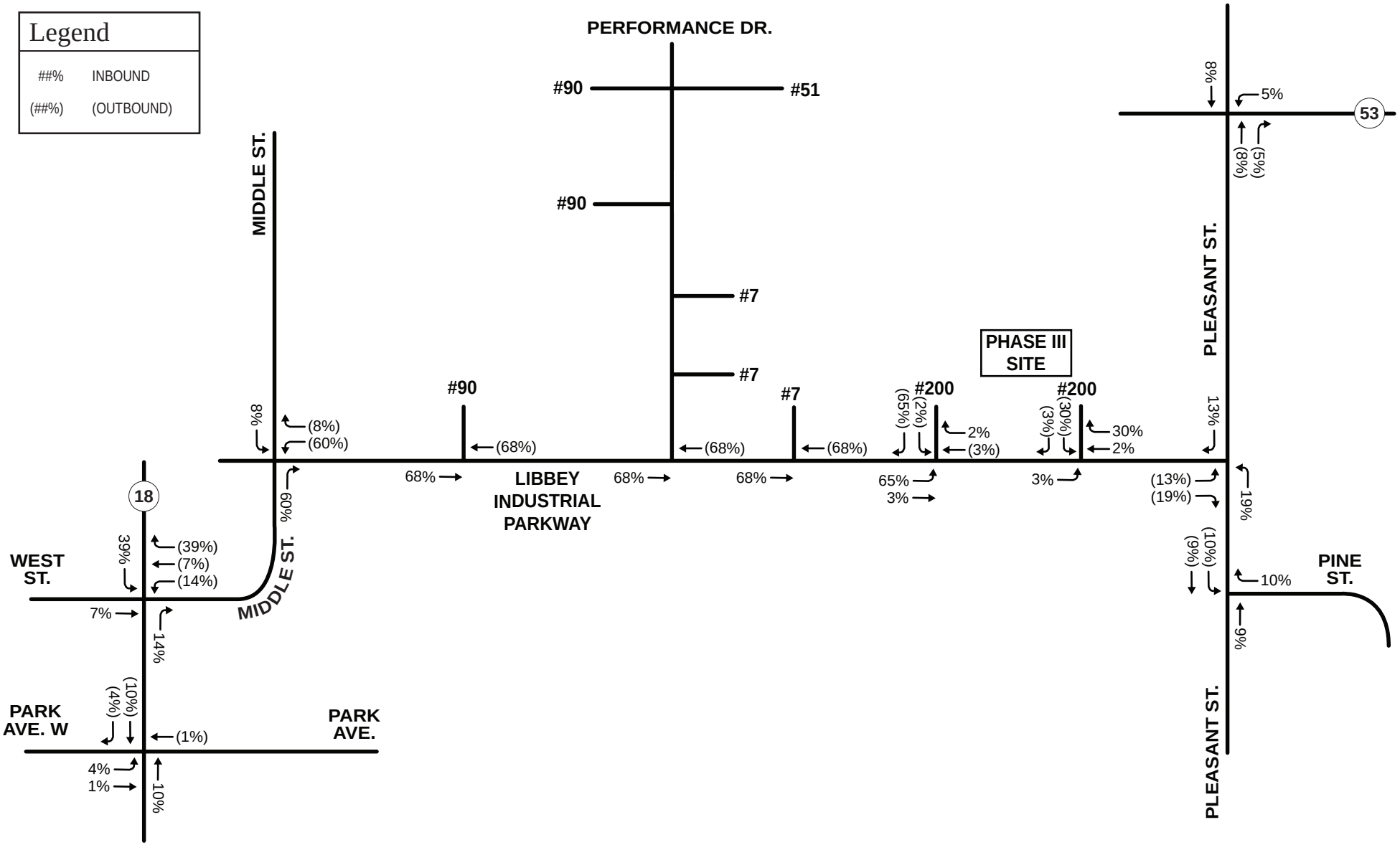
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Phase II Trip Distribution

Figure **11**

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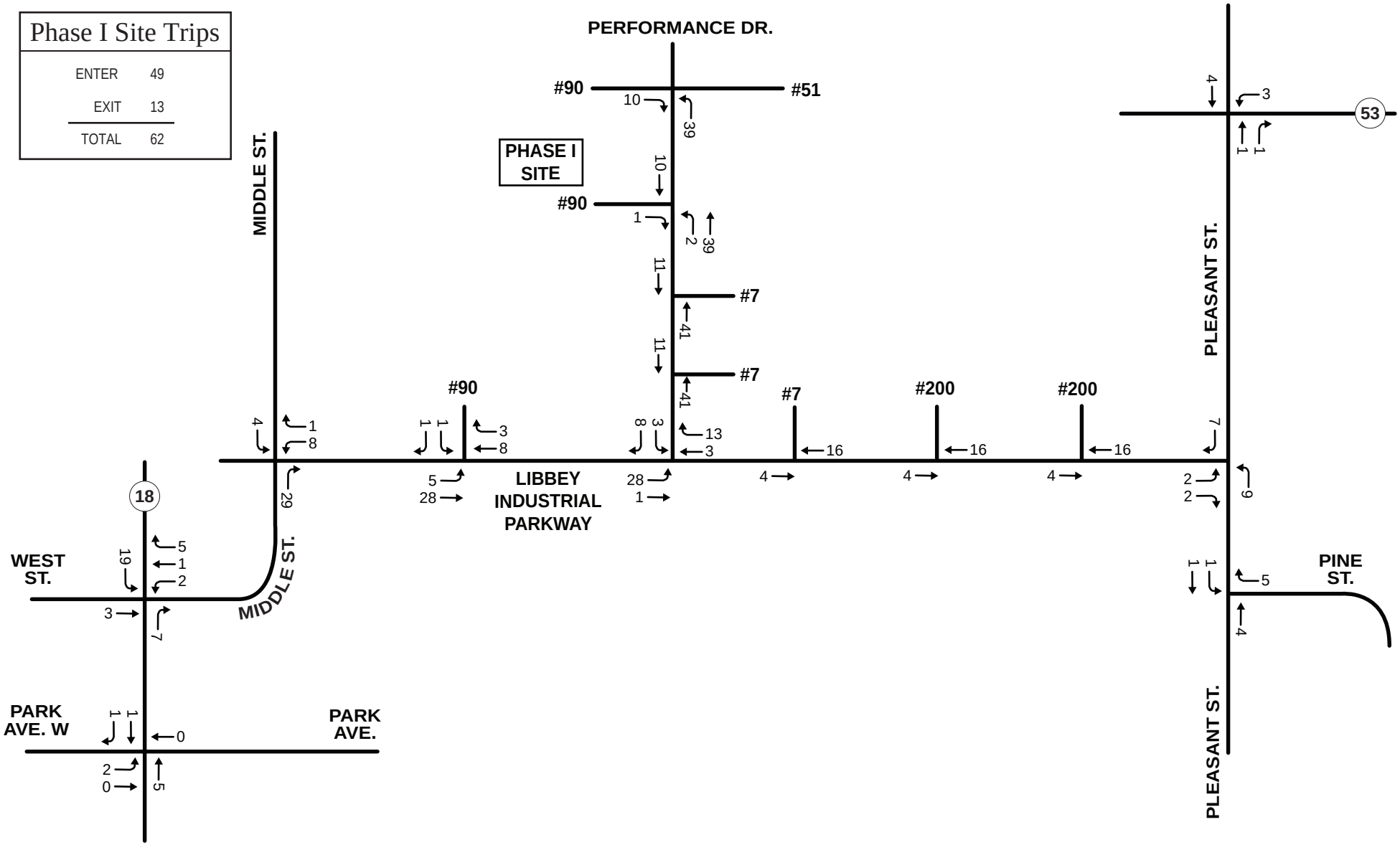
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Phase III Trip Distribution

Figure **12**

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Phase I Site Trips	
ENTER	49
EXIT	13
TOTAL	62



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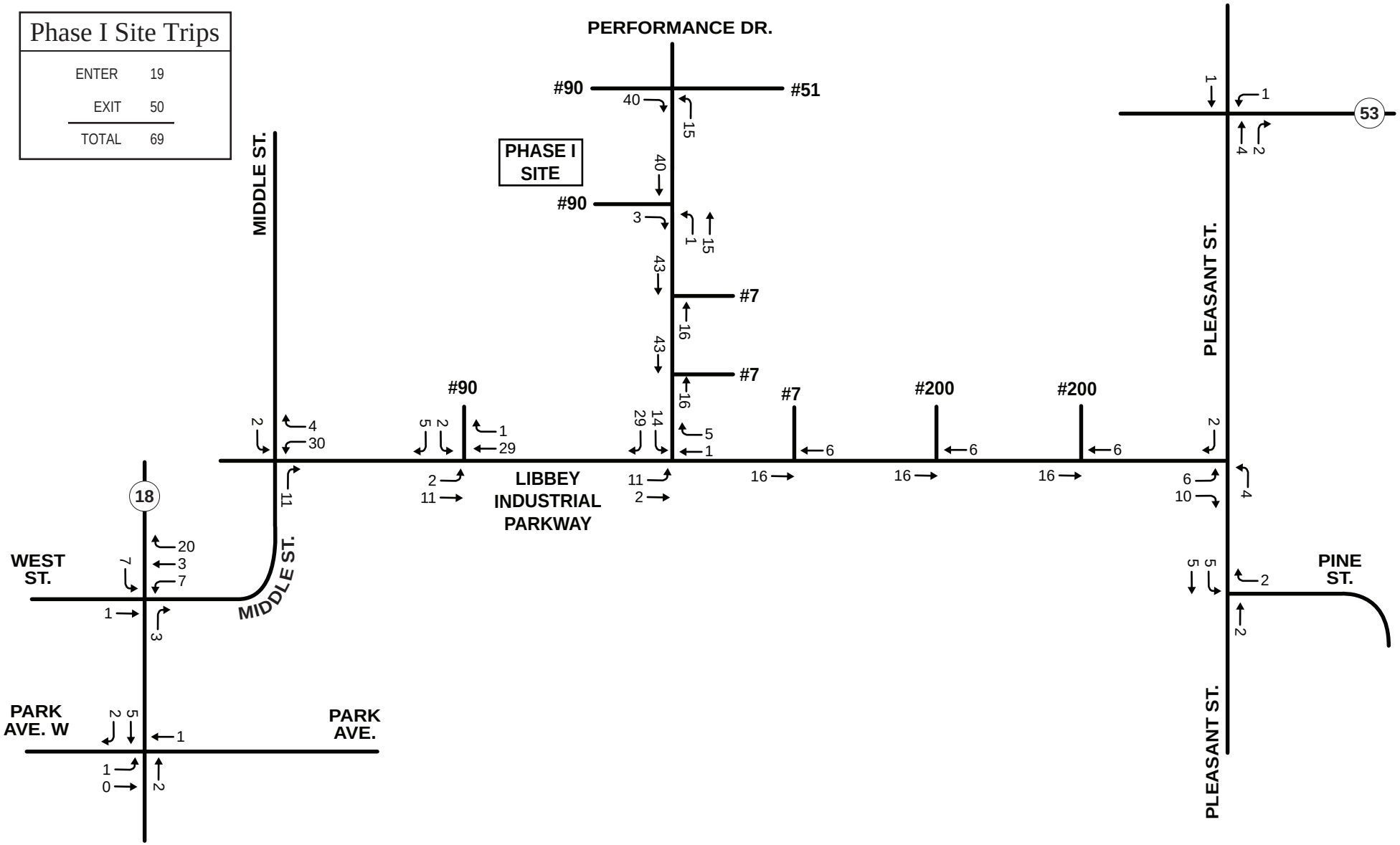
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Phase I Morning Project Trips

Figure **13**

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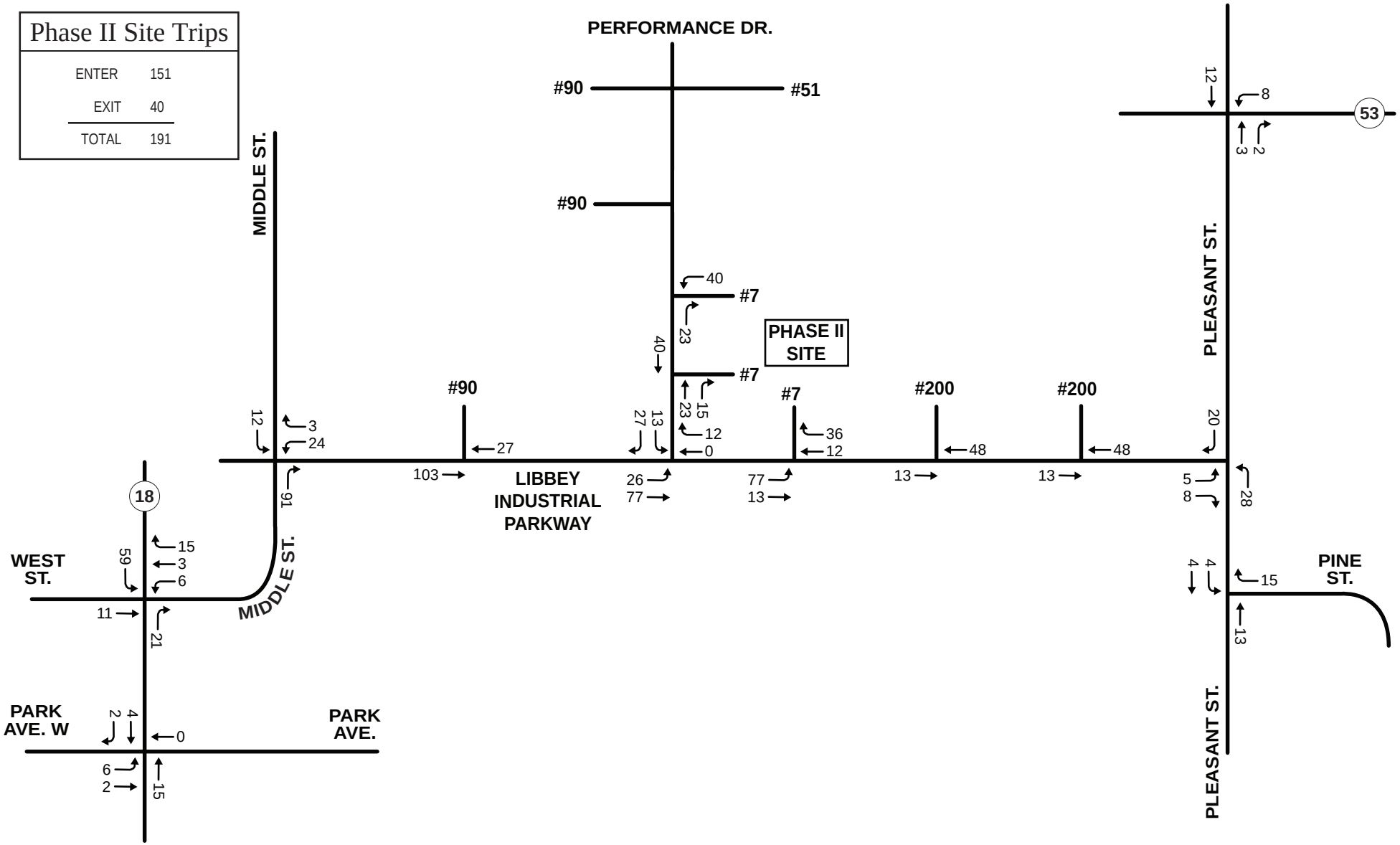
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Phase I Afternoon Project Trips

Figure 14

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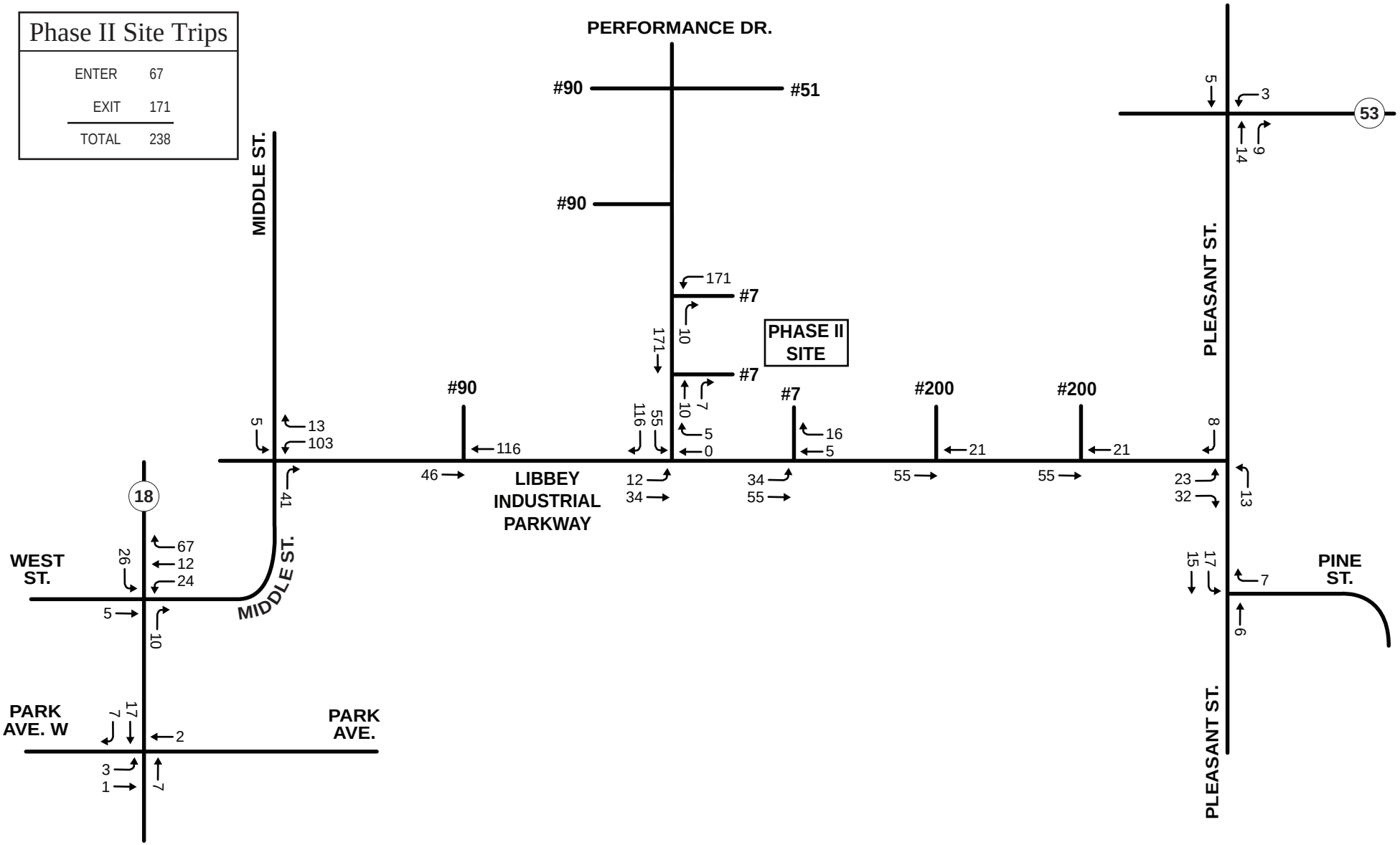
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Phase II Morning Project Trips

Figure **15**

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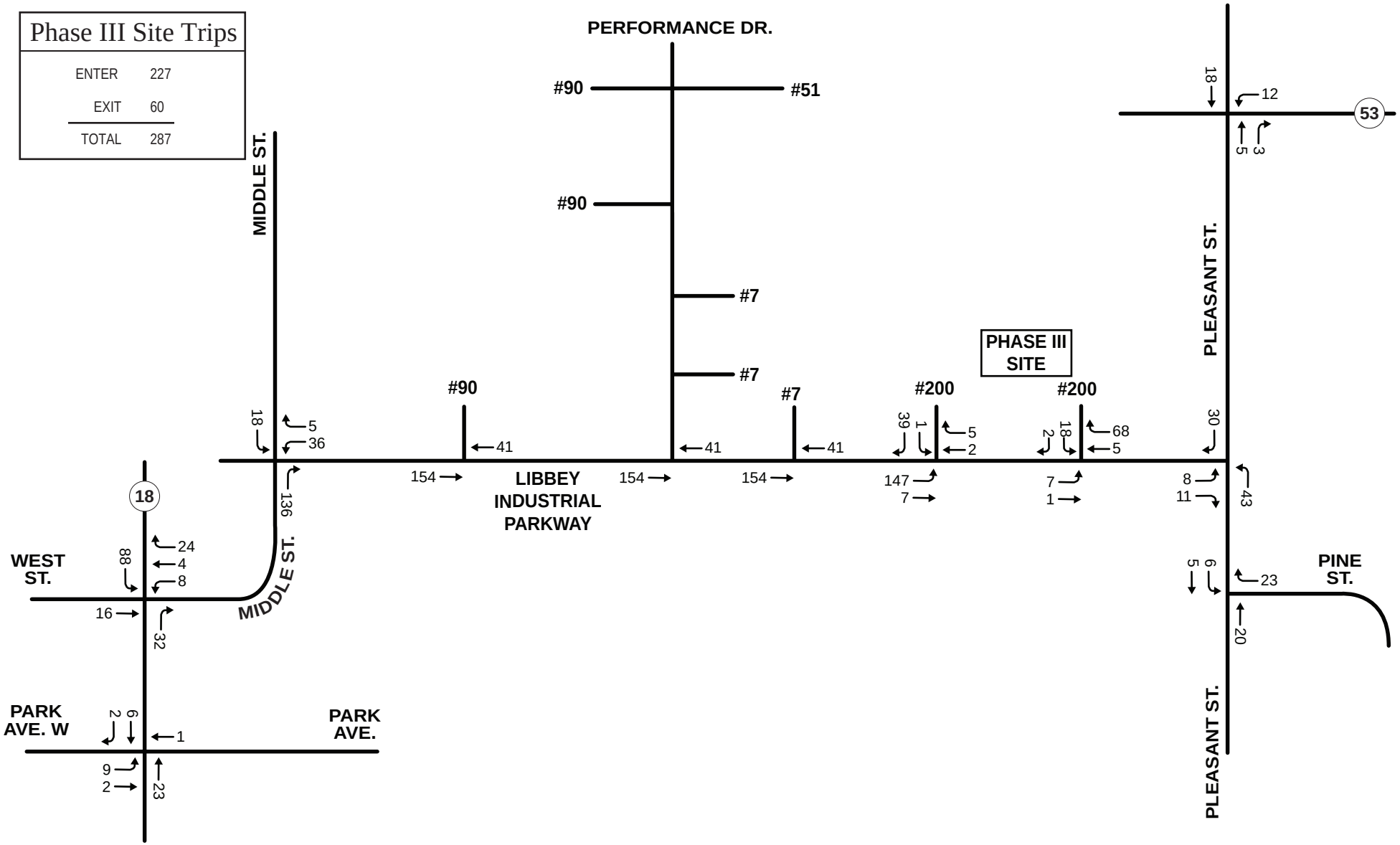
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www.tetratech.com

Not To Scale

Phase II Afternoon Project Trips

Figure **16**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



TETRA TECH

100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

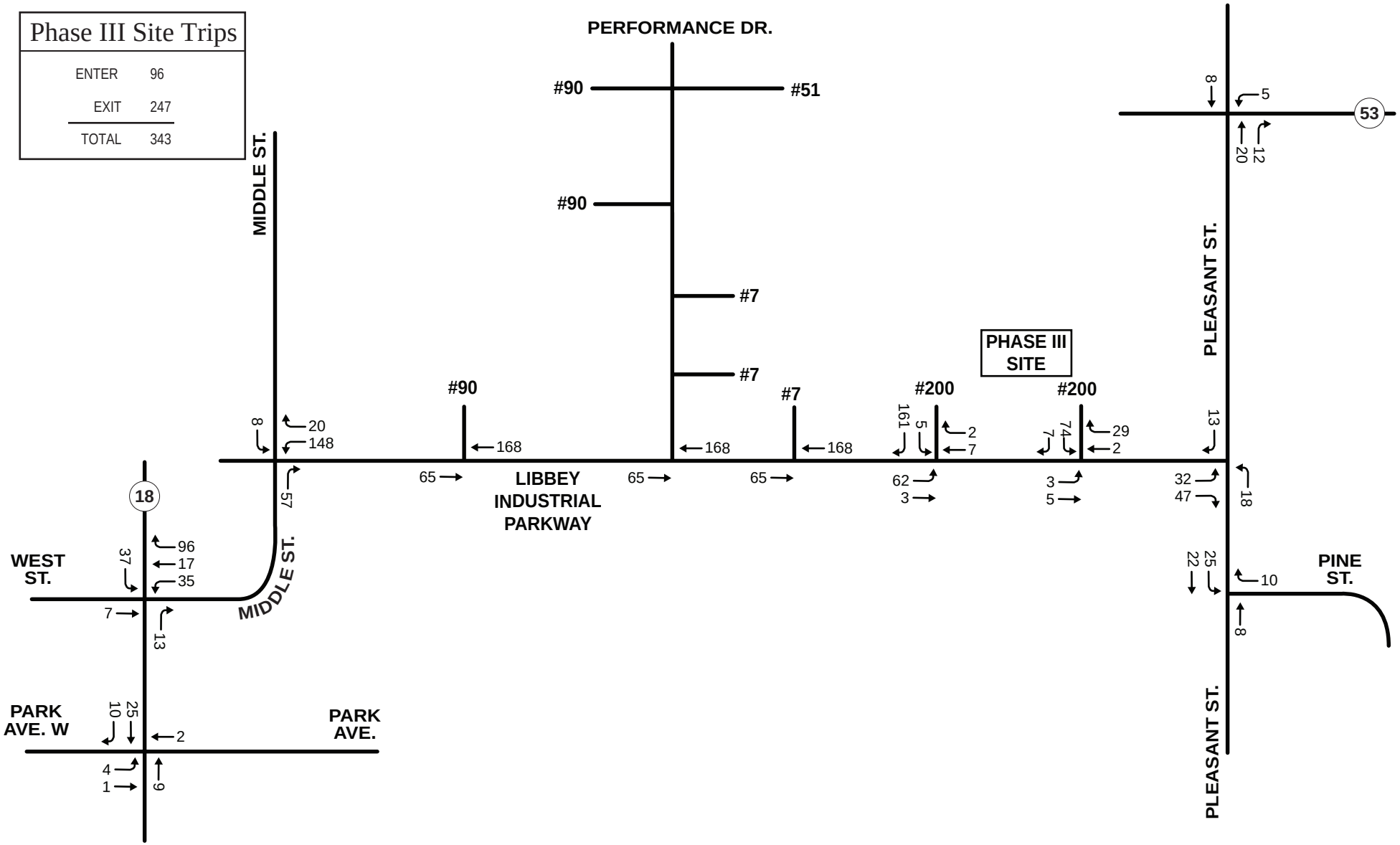
Not To Scale

Weymouth, Massachusetts

Phase III Morning Project Trips

Figure **17**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



Weymouth, Massachusetts

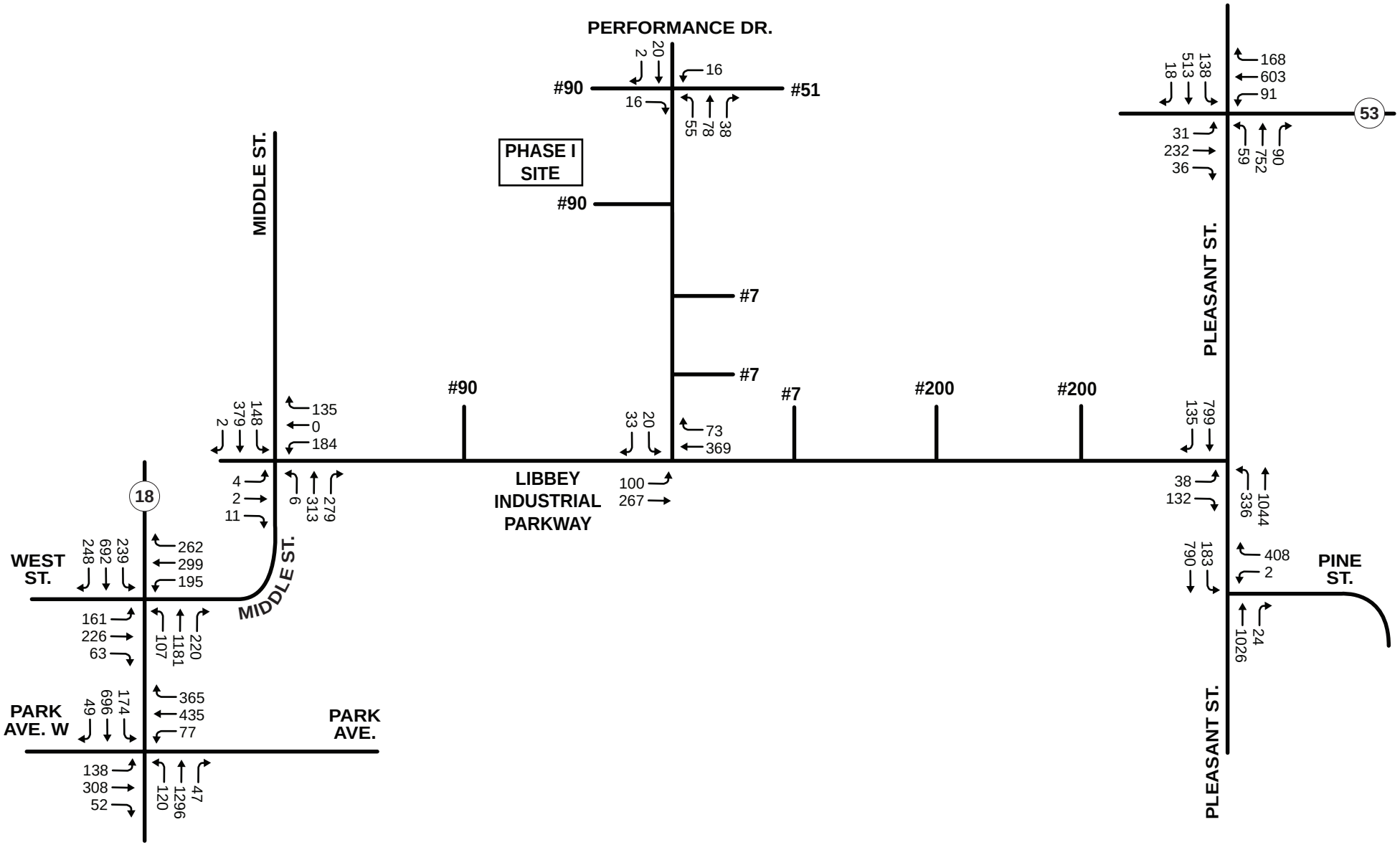
TETRA TECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

Not To Scale

Phase III Afternoon Project Trips

Figure **18**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



TETRA TECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

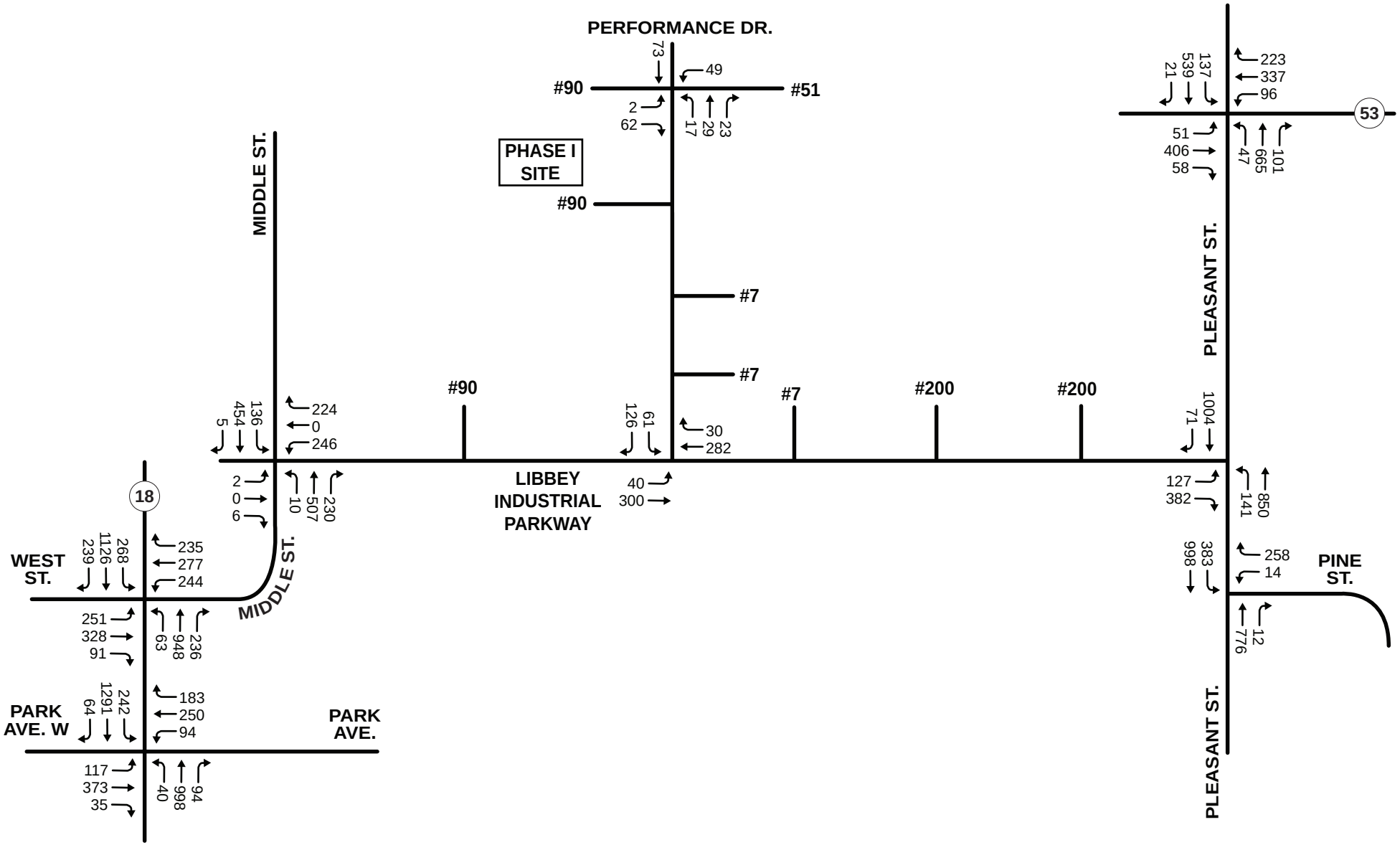
Not To Scale

Weymouth, Massachusetts

2022 Build Morning Peak Hour Traffic Volumes (Phase I)

Figure **19**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



TETRA TECH
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Marlborough, MA 01752
508.786.2200
www.tetratech.com

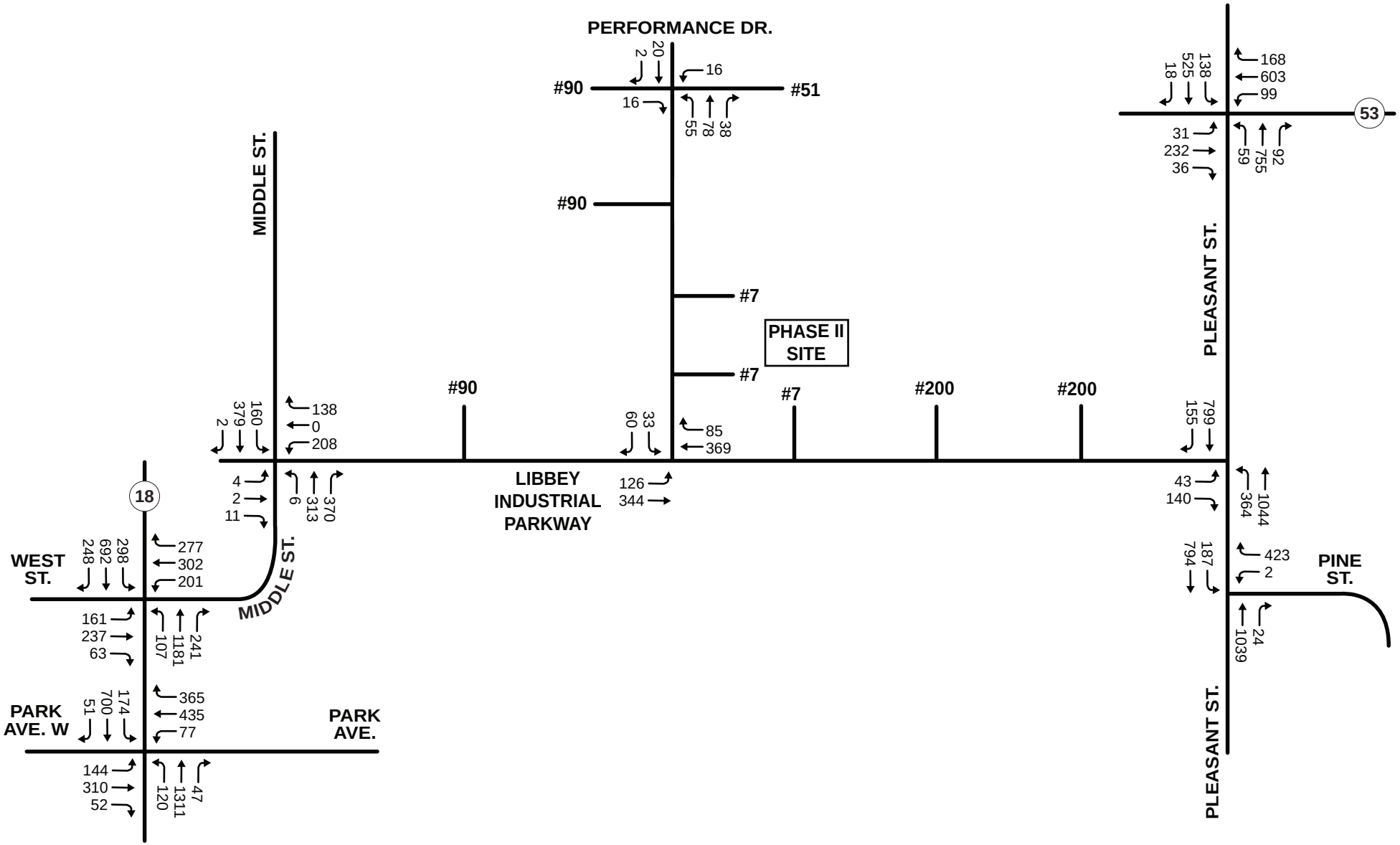
Not To Scale

Weymouth, Massachusetts

2022 Build Afternoon Peak Hour Traffic Volumes (Phase I)

Figure **20**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



TETRA TECH
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Marlborough, MA 01752
508.786.2200
www.tetratech.com

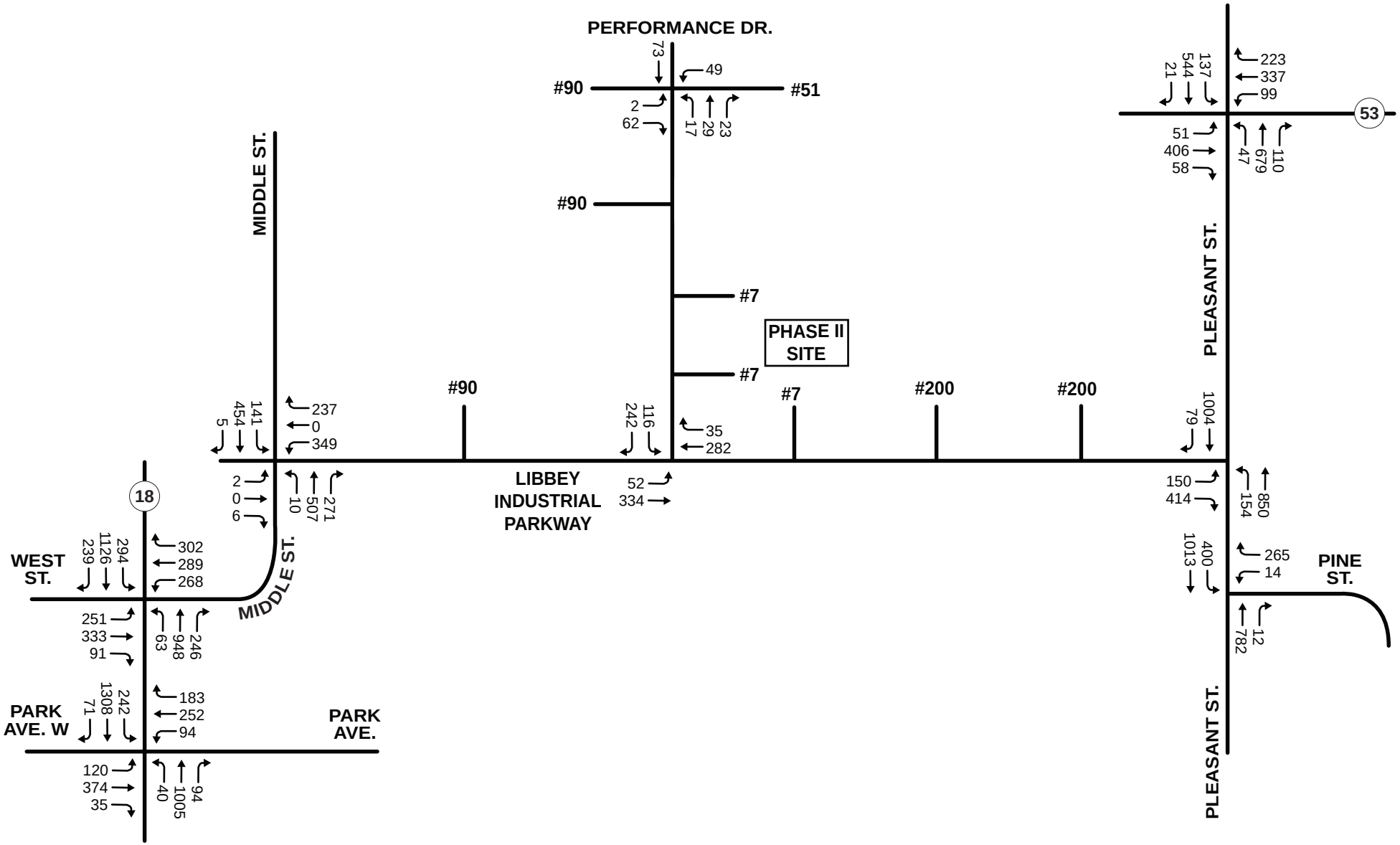
Not To Scale

Weymouth, Massachusetts

2022 Build Morning Peak Hour Traffic Volumes (Phase II)

Figure **21**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



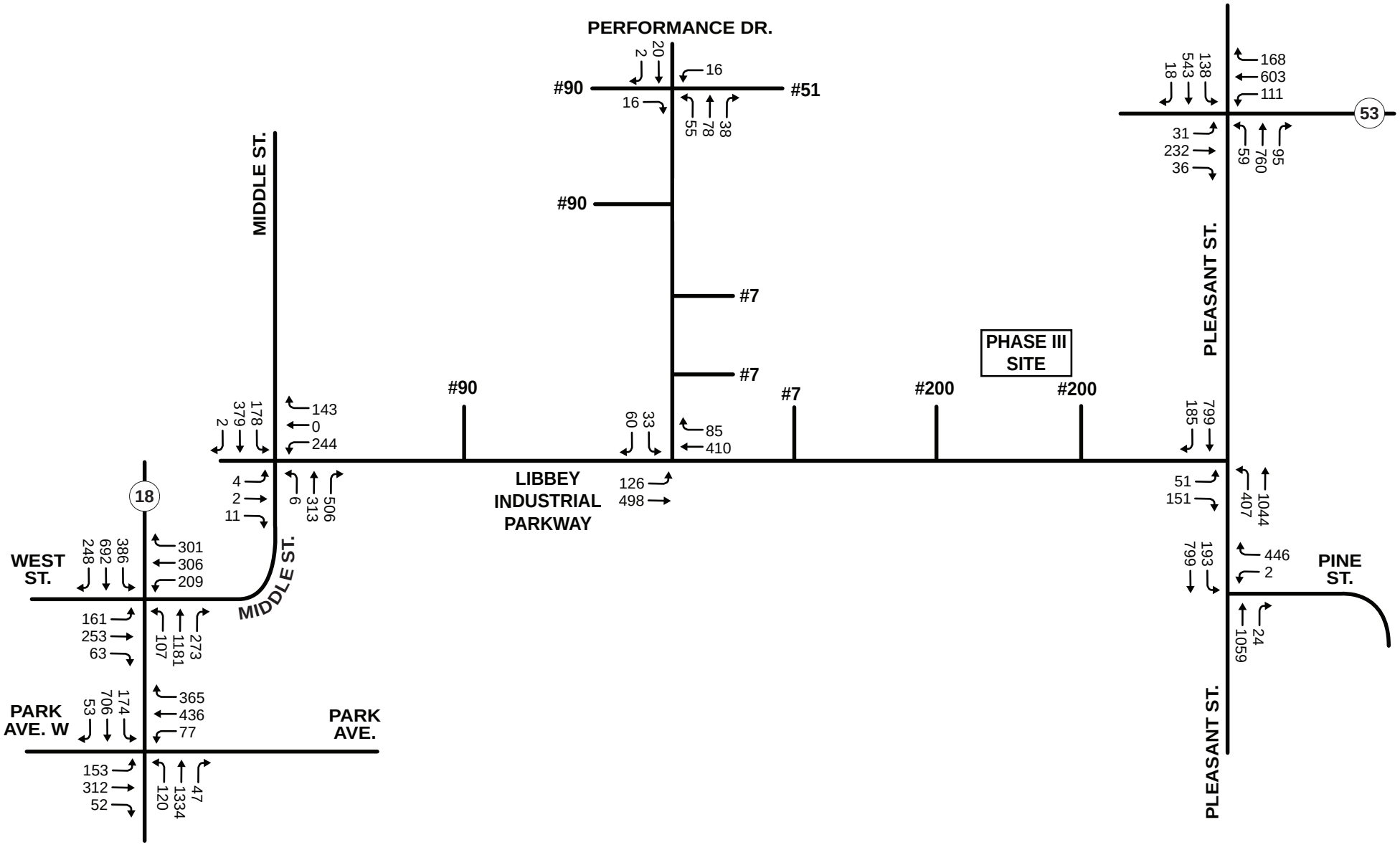
TETRA TECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

Not To Scale

Weymouth, Massachusetts

2022 Build Afternoon Peak Hour Traffic Volumes (Phase II)

Figure **22**



TETRA TECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

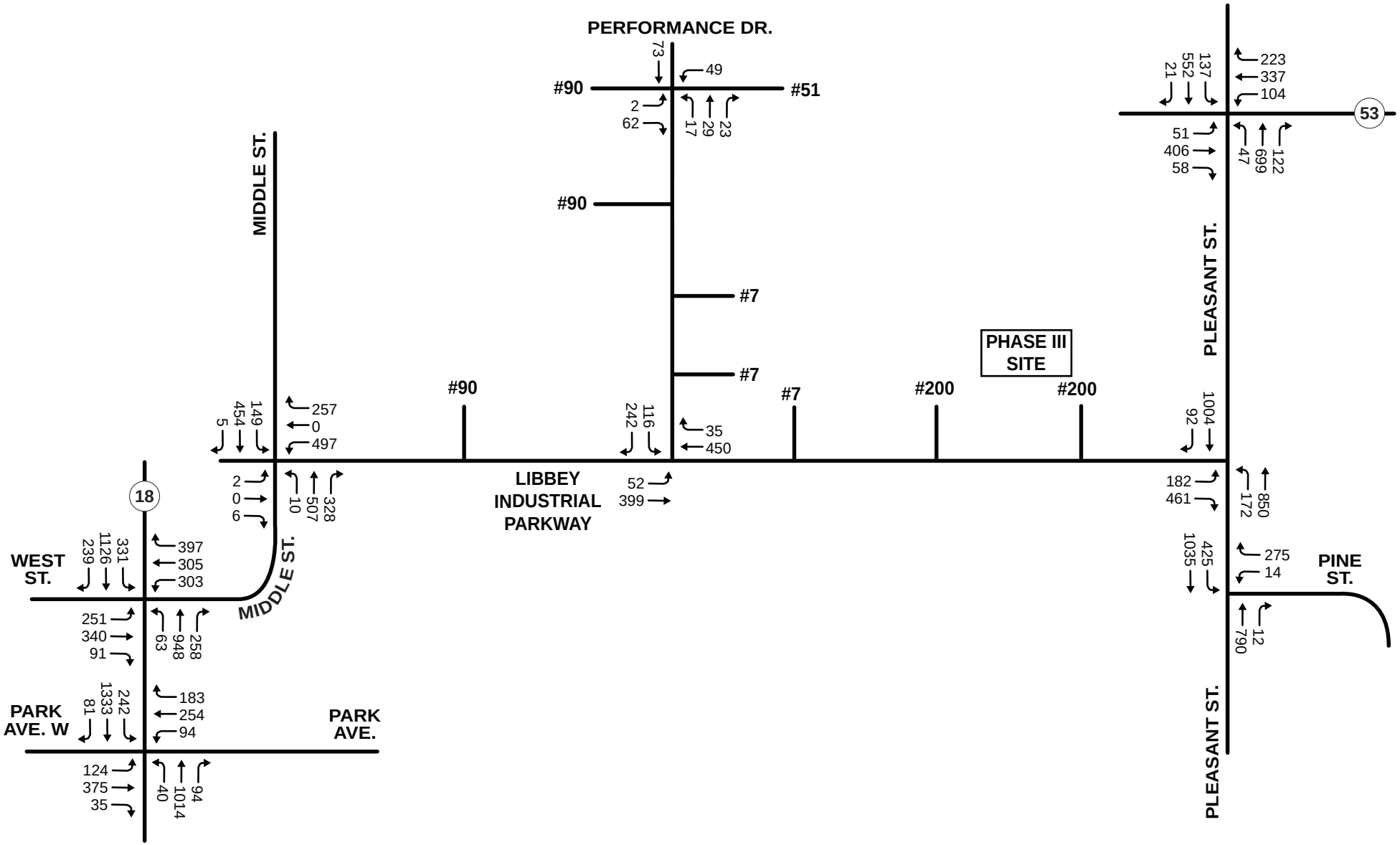
Not To Scale

Weymouth, Massachusetts

2022 Build Morning Peak Hour Traffic Volumes (Phase III)

Figure **23**

P:\143-42892-14009\SupportDocs\Graphics\Traffic\Preliminary Traffic Memo\Source\Traffic Volumes Expanded.ai



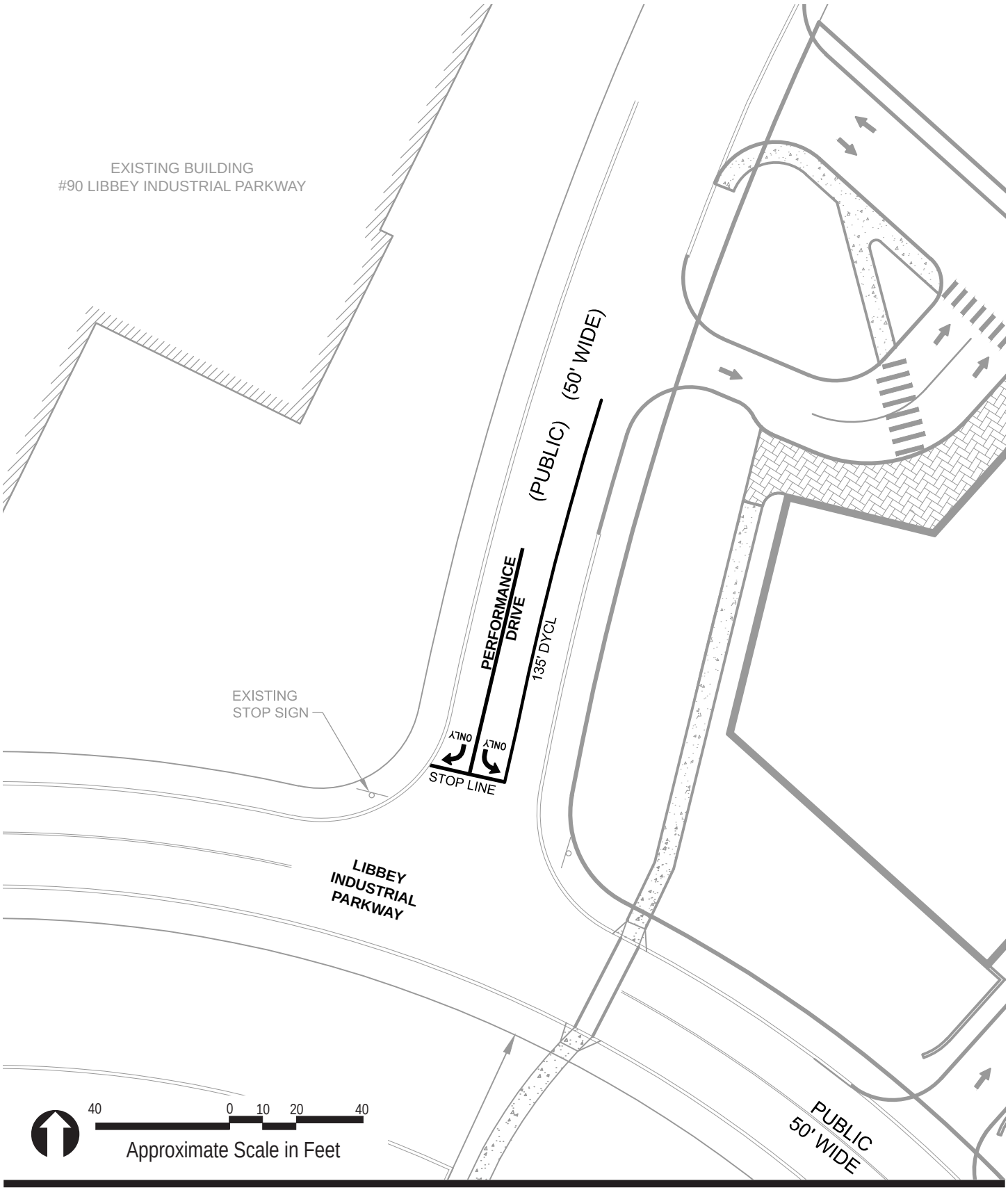
TETRA TECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com

Not To Scale

Weymouth, Massachusetts

2022 Build Afternoon Peak Hour Traffic Volumes (Phase III)

Figure **24**

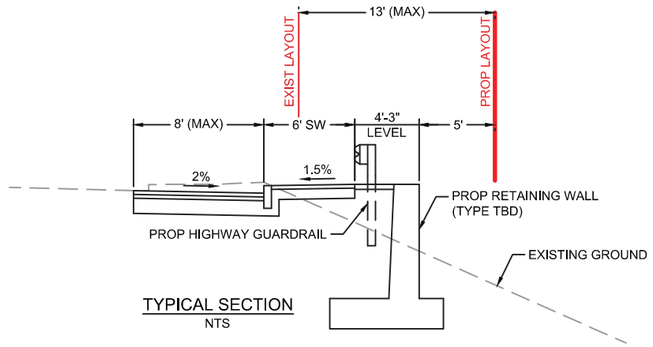


Weymouth, Massachusetts

Libbey Industrial Parkway/ Performance Drive Concept Plan

Figure **25**

TETRATECH
100 Nickerson Road
Marlborough, MA 01752
508.786.2200
www.tetratech.com



TYPICAL SECTION
NTS

40 0 10 20 40
Approximate Scale in Feet

Legend

- Proposed Pavement Marking
- Proposed Curb
- Existing Layout / Property Line
- Proposed Layout

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Marlborough, MA 01752
508.786.2200
www.tetratech.com

Weymouth, Massachusetts

Libbey Industrial Parkway/ Middle Street Concept Plan NB Right Turn Lane

Figure **26**

Appendix A

Speed Data

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 A Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	1	4	12	1	0	0	0	0	0	0	0	18	33	31
01:00	0	0	2	2	7	3	0	0	0	0	0	0	0	14	35	31
02:00	0	0	0	5	4	4	1	0	0	0	0	0	0	14	37	32
03:00	0	2	1	2	10	1	0	0	0	0	0	0	0	16	33	29
04:00	0	2	2	10	4	7	0	0	0	0	0	0	0	25	36	29
05:00	**1**	8	24	28	38	2	**3**	0	0	0	0	0	0	104	32	27
06:00	0	**10**	32	46	90	13	2	0	0	0	0	0	0	193	33	29
07:00	0	7	31	85	161	37	0	0	0	0	0	0	0	321	33	30
08:00	0	7	**51**	100	188	**58**	3	0	0	0	0	0	0	407	33	30
09:00	0	9	49	**118**	**212**	44	1	0	0	0	0	0	0	**433**	33	30
10:00	3	4	39	107	177	46	2	0	0	0	0	0	0	378	33	30
11:00	0	1	**42**	104	147	42	2	0	0	0	0	0	0	338	33	30
12 PM	0	3	25	**107**	141	53	3	0	0	0	0	0	0	332	34	30
13:00	0	0	27	101	**203**	48	**6**	0	0	0	0	0	0	**385**	33	31
14:00	**1**	**4**	42	92	180	**60**	3	0	0	0	0	0	0	382	34	30
15:00	0	8	54	**135**	**216**	**67**	**5**	0	0	0	0	0	0	**485**	33	30
16:00	0	6	**66**	93	149	38	2	0	0	0	0	0	0	354	33	29
17:00	**1**	11	60	57	144	44	3	0	0	0	0	0	0	320	33	29
18:00	0	**19**	46	97	138	54	4	0	0	0	0	0	0	358	34	29
19:00	0	15	42	79	102	18	0	0	0	0	0	0	0	256	33	28
20:00	0	4	11	45	47	10	1	0	0	0	0	0	0	118	33	29
21:00	0	7	15	27	38	6	0	0	0	0	0	0	0	93	32	28
22:00	1	6	3	17	32	11	1	0	0	0	0	0	0	71	34	30
23:00	0	0	2	10	21	5	2	0	0	0	0	0	0	40	35	31
Total	7	133	667	1471	2461	672	44	0	0	0	0	0	0	5455		
%	0.1%	2.4%	12.2%	27.0%	45.1%	12.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	05:00	06:00	08:00	09:00	09:00	08:00	05:00							09:00		
Vol.	1	10	51	118	212	58	3							433		
Midday Peak	14:00	14:00	11:00	12:00	13:00	14:00	13:00							13:00		
Vol.	1	4	42	107	203	60	6							385		
PM Peak	17:00	18:00	16:00	15:00	15:00	15:00	15:00							15:00		
Vol.	1	19	66	135	216	67	5							485		

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

Stats	
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	3932
Percent in Pace :	72.1%
Number of Vehicles > 30 MPH :	2685
Percent of Vehicles > 30 MPH :	49.2%
Mean Speed(Average) :	30 MPH

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 A Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	0	1	8	8	2	1	0	0	0	0	0	0	20	34	30
01:00	0	0	1	4	10	7	0	1	0	0	0	0	0	23	37	33
02:00	0	0	1	0	10	5	0	0	0	0	0	0	0	16	36	33
03:00	0	0	0	4	10	1	0	0	0	0	0	0	0	15	33	31
04:00	0	1	5	4	9	7	0	0	0	0	0	0	0	26	36	30
05:00	0	3	28	23	34	13	0	0	0	0	0	0	0	101	33	28
06:00	0	**10**	24	44	73	25	2	**2**	0	0	0	0	0	180	34	30
07:00	0	10	30	91	156	40	3	0	0	0	0	0	0	330	33	30
08:00	**1**	3	32	80	**190**	**71**	4	0	0	0	0	0	0	**381**	35	31
09:00	1	2	**35**	**102**	163	51	**5**	0	0	0	0	0	0	359	34	30
10:00	0	7	42	92	166	42	4	0	0	0	0	0	0	353	33	30
11:00	**1**	5	35	111	157	44	0	0	0	0	0	0	0	353	33	30
12 PM	0	4	**42**	90	142	42	0	0	0	0	0	0	0	320	33	30
13:00	0	1	34	111	185	49	4	0	0	0	0	0	0	384	33	30
14:00	1	**8**	39	**137**	**200**	**54**	**6**	**1**	0	0	0	0	0	**446**	33	30
15:00	0	**10**	**68**	**137**	**173**	44	4	0	0	0	0	0	0	**436**	33	29
16:00	**3**	9	44	67	159	**52**	3	0	0	0	0	0	0	337	34	30
17:00	0	7	57	77	128	44	3	0	0	0	0	0	0	316	33	29
18:00	0	9	43	58	140	42	1	0	0	0	0	0	0	293	33	30
19:00	1	6	31	55	154	28	**5**	0	0	0	0	0	0	280	33	30
20:00	0	8	22	50	78	18	0	0	0	0	0	0	0	176	33	29
21:00	0	7	16	20	45	16	2	0	0	0	0	0	0	106	34	30
22:00	0	1	9	15	33	13	0	0	0	0	0	0	0	71	34	30
23:00	1	0	1	13	23	10	2	0	0	0	0	0	0	50	36	31
Total	9	111	640	1393	2446	720	49	4	0	0	0	0	0	5372		
%	0.2%	2.1%	11.9%	25.9%	45.5%	13.4%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	06:00	09:00	09:00	08:00	08:00	09:00	06:00						08:00		
Vol.	1	10	35	102	190	71	5	2						381		
Midday Peak	11:00	14:00	12:00	14:00	14:00	14:00	14:00	14:00						14:00		
Vol.	1	8	42	137	200	54	6	1						446		
PM Peak	16:00	15:00	15:00	15:00	15:00	16:00	19:00							15:00		
Vol.	3	10	68	137	173	52	5							436		

% iles		
15th Percentile :	24	MPH
50th Percentile :	30	MPH
85th Percentile :	33	MPH
95th Percentile :	37	MPH

Stats		
10 MPH Pace Speed :	25-34	MPH
Number in Pace :	3839	
Percent in Pace :	71.5%	
Number of Vehicles > 30 MPH :	2730	
Percent of Vehicles > 30 MPH :	50.8%	
Mean Speed(Average) :	30	MPH

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 A Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	3	0	8	4	0	0	0	0	0	0	0	15	36	31
01:00	0	0	0	0	1	3	0	0	0	0	0	0	0	4	38	36
02:00	0	0	0	3	1	1	0	0	0	0	0	0	0	5	35	30
03:00	0	0	0	0	2	1	0	0	0	0	0	0	0	3	36	34
04:00	0	0	0	7	17	21	**4**	0	0	0	0	0	0	49	38	34
05:00	0	3	5	20	33	24	1	0	0	0	0	0	0	86	36	31
06:00	0	7	29	58	52	18	0	0	0	0	0	0	0	164	33	28
07:00	1	13	42	69	103	27	0	0	0	0	0	0	0	255	33	29
08:00	**17**	**40**	66	104	**104**	**32**	3	0	0	0	0	0	0	**366**	33	27
09:00	16	25	**75**	**116**	79	12	1	**1**	0	0	0	0	0	325	31	26
10:00	25	26	66	134	104	16	1	0	0	0	0	0	0	372	32	26
11:00	**17**	31	93	147	80	13	2	0	0	0	0	0	0	383	31	26
12 PM	8	33	**103**	**193**	82	9	0	0	0	0	0	0	0	**428**	30	26
13:00	2	14	48	128	**97**	**16**	**4**	0	0	0	0	0	0	309	32	28
14:00	9	**34**	86	134	85	8	1	0	0	0	0	0	0	357	31	26
15:00	20	32	83	139	81	**16**	0	0	0	0	0	0	0	371	31	25
16:00	**38**	33	92	**142**	70	11	0	0	0	0	0	0	0	386	30	24
17:00	34	**47**	**122**	110	72	12	1	0	**1**	0	0	0	0	**399**	30	24
18:00	27	37	93	111	**82**	9	0	0	0	0	0	0	0	359	31	25
19:00	14	25	57	83	60	9	1	0	0	0	0	0	0	249	31	25
20:00	0	17	33	45	56	9	0	0	0	0	0	0	0	160	32	27
21:00	0	12	20	49	44	5	**2**	0	0	0	0	0	0	132	32	28
22:00	0	7	11	19	19	6	2	0	0	0	0	0	0	64	33	28
23:00	0	4	6	11	17	5	0	0	0	0	0	0	0	43	33	29
Total	228	440	1133	1822	1349	287	23	1	1	0	0	0	0	5284		
%	4.3%	8.3%	21.4%	34.5%	25.5%	5.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	09:00	09:00	08:00	08:00	04:00	09:00						08:00		
Vol.	17	40	75	116	104	32	4	1						366		
Midday Peak	11:00	14:00	12:00	12:00	13:00	13:00	13:00							12:00		
Vol.	17	34	103	193	97	16	4							428		
PM Peak	16:00	17:00	17:00	16:00	18:00	15:00	21:00		17:00					17:00		
Vol.	38	47	122	142	82	16	2		1					399		

% iles	
15th Percentile :	19 MPH
50th Percentile :	26 MPH
85th Percentile :	32 MPH
95th Percentile :	34 MPH

Stats	
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	3171
Percent in Pace :	60.0%
Number of Vehicles > 30 MPH :	1391
Percent of Vehicles > 30 MPH :	26.3%
Mean Speed(Average) :	26 MPH

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
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INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	1	0	2	10	1	2	0	0	0	0	0	0	16	36	32
01:00	0	0	1	2	1	1	0	0	0	0	0	0	0	5	35	29
02:00	0	0	0	1	3	1	0	0	0	0	0	0	0	5	35	32
03:00	0	0	1	2	9	2	0	0	0	0	0	0	0	14	33	31
04:00	0	0	0	10	23	13	1	0	0	0	0	0	0	47	36	33
05:00	1	1	11	21	33	14	**3**	0	0	0	0	0	0	84	35	30
06:00	1	3	15	44	59	14	1	**1**	0	0	0	0	0	138	33	30
07:00	1	10	41	93	107	**20**	2	0	0	0	0	0	0	274	33	29
08:00	**6**	12	26	106	**127**	19	1	1	0	0	0	0	0	298	33	29
09:00	6	**30**	**88**	**119**	86	15	0	0	0	0	0	0	0	**344**	31	26
10:00	3	25	68	140	91	13	4	0	0	0	0	0	0	344	32	27
11:00	6	19	86	124	94	17	**1**	0	0	0	0	0	0	347	32	27
12 PM	10	31	99	**148**	100	**25**	1	0	0	0	0	0	0	**414**	32	26
13:00	4	13	60	127	**108**	10	0	0	**1**	0	0	0	0	323	32	27
14:00	**12**	**35**	**102**	133	81	10	0	0	0	0	0	0	0	373	31	25
15:00	**56**	**49**	**120**	131	34	12	0	0	0	0	0	0	0	402	28	22
16:00	15	23	66	141	**123**	**24**	1	0	0	0	0	0	0	393	32	27
17:00	14	40	111	**148**	94	17	0	0	0	0	0	0	0	**424**	31	26
18:00	15	21	47	77	107	23	**3**	0	0	0	0	0	0	293	33	27
19:00	4	13	47	71	81	15	0	0	0	0	0	0	0	231	32	27
20:00	3	15	35	60	45	5	1	0	0	0	0	0	0	164	31	26
21:00	0	5	23	23	45	10	2	0	0	0	0	0	0	108	33	29
22:00	0	7	15	13	24	8	0	0	0	0	0	0	0	67	33	28
23:00	0	1	5	13	21	5	1	0	0	0	0	0	0	46	33	30
Total	157	354	1067	1749	1506	294	24	2	1	0	0	0	0	5154		
%	3.0%	6.9%	20.7%	33.9%	29.2%	5.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	09:00	09:00	08:00	07:00	05:00	06:00						09:00		
Vol.	6	30	88	119	127	20	3	1						344		
Midday Peak	14:00	14:00	14:00	12:00	13:00	12:00	11:00		13:00					12:00		
Vol.	12	35	102	148	108	25	1		1					414		
PM Peak	15:00	15:00	15:00	17:00	16:00	16:00	18:00							17:00		
Vol.	56	49	120	148	123	24	3							424		

% iles

15th Percentile :	20 MPH
50th Percentile :	26 MPH
85th Percentile :	32 MPH
95th Percentile :	35 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	3255
Percent in Pace :	63.2%
Number of Vehicles > 30 MPH :	1526
Percent of Vehicles > 30 MPH :	29.6%
Mean Speed(Average) :	27 MPH

Libby Industrial Parkway
at #169 Libbey Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 B Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	0	0	3	5	4	2	0	0	0	0	0	14	43	39
01:00	0	0	0	1	3	6	5	1	1	0	0	0	0	17	43	38
02:00	0	0	0	0	2	2	5	2	0	0	0	0	0	11	44	40
03:00	0	0	1	0	3	6	4	1	1	0	0	0	0	16	43	38
04:00	**1**	0	1	2	6	3	2	4	0	0	0	0	0	19	45	35
05:00	0	1	**2**	7	13	35	10	6	0	0	0	0	0	74	41	36
06:00	1	**3**	1	3	34	39	28	5	**3**	0	0	0	0	117	42	36
07:00	0	0	0	3	**54**	103	43	6	0	0	0	0	0	209	41	37
08:00	1	0	0	4	27	**127**	**72**	**13**	1	0	**1**	0	**1**	**247**	42	38
09:00	0	1	0	**16**	41	117	58	6	1	**1**	0	0	0	241	41	37
10:00	3	4	2	6	51	102	49	10	1	0	0	0	0	228	41	36
11:00	3	**3**	2	11	61	113	67	11	0	0	0	0	0	271	41	36
12 PM	0	3	1	14	64	**143**	50	12	0	0	0	0	0	287	40	36
13:00	**5**	2	**3**	**22**	**71**	109	**78**	6	0	0	0	0	0	296	41	36
14:00	0	3	2	16	68	134	76	**17**	0	0	0	0	0	**316**	42	37
15:00	0	**4**	1	**29**	**108**	157	93	10	**1**	0	0	0	0	**403**	41	36
16:00	0	0	**2**	8	38	**178**	93	**16**	0	0	0	0	0	335	42	38
17:00	0	0	1	9	61	150	**112**	11	1	0	0	0	0	345	42	38
18:00	0	2	2	10	66	147	62	13	1	0	0	0	0	303	41	37
19:00	0	0	2	15	73	93	40	4	0	0	0	0	0	227	40	36
20:00	0	0	0	8	51	57	18	4	1	0	0	0	0	139	39	36
21:00	0	0	0	4	18	36	14	2	0	0	0	0	0	74	40	36
22:00	0	0	0	5	16	22	17	3	0	0	0	**1**	0	64	42	37
23:00	0	0	0	1	6	16	11	1	0	0	0	0	0	35	42	38
Total	14	26	23	194	938	1900	1011	166	12	1	1	1	1	4288		
%	0.3%	0.6%	0.5%	4.5%	21.9%	44.3%	23.6%	3.9%	0.3%	0.0%	0.0%	0.0%	0.0%			
AM Peak	04:00	06:00	05:00	09:00	07:00	08:00	08:00	08:00	06:00	09:00	08:00		08:00	08:00		
Vol.	1	3	2	16	54	127	72	13	3	1	1		1	247		
Midday Peak	13:00	11:00	13:00	13:00	13:00	12:00	13:00	14:00						14:00		
Vol.	5	3	3	22	71	143	78	17						316		
PM Peak		15:00	16:00	15:00	15:00	16:00	17:00	16:00	15:00			22:00		15:00		
Vol.		4	2	29	108	178	112	16	1			1		403		

% iles

15th Percentile :	31 MPH
50th Percentile :	36 MPH
85th Percentile :	41 MPH
95th Percentile :	43 MPH

Stats

10 MPH Pace Speed :	35-44 MPH
Number in Pace :	2911
Percent in Pace :	67.9%
Number of Vehicles > 35 MPH :	2713
Percent of Vehicles > 35 MPH :	63.3%
Mean Speed(Average) :	37 MPH

Libby Industrial Parkway
at #169 Libbey Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 B Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	0	0	0	4	10	3	0	0	**1**	0	0	0	18	41	38
01:00	0	0	0	0	1	11	7	3	0	1	0	0	0	23	44	40
02:00	0	0	0	2	1	5	4	2	1	0	0	0	0	15	45	39
03:00	0	0	0	1	7	4	4	1	0	0	0	0	0	17	42	36
04:00	0	1	0	1	3	7	5	5	1	0	0	0	0	23	46	39
05:00	1	1	1	5	14	22	27	5	1	0	0	0	0	77	42	37
06:00	**2**	**6**	**9**	5	25	46	27	3	0	0	0	0	0	123	41	34
07:00	2	1	1	3	32	**125**	53	10	1	0	0	0	0	228	41	37
08:00	0	1	2	6	27	104	**66**	**13**	**3**	0	0	0	0	222	42	38
09:00	1	1	3	**8**	**37**	124	58	6	1	0	0	0	0	**239**	41	37
10:00	0	1	4	18	49	123	60	10	1	0	0	0	0	266	41	37
11:00	1	**4**	4	10	57	115	66	8	0	0	0	0	0	265	41	36
12 PM	**2**	0	**5**	11	62	126	56	8	1	0	0	0	0	271	41	36
13:00	0	0	1	8	71	129	**72**	**15**	**3**	0	0	0	0	299	42	37
14:00	2	0	2	**19**	**85**	**167**	70	14	1	**1**	0	0	0	**361**	41	37
15:00	0	**4**	3	**15**	**92**	**172**	81	17	0	**1**	**1**	0	0	**386**	41	37
16:00	0	2	0	9	67	154	**108**	**19**	2	0	0	0	0	361	42	38
17:00	0	2	**8**	12	70	144	75	15	**3**	0	0	0	0	329	41	37
18:00	0	0	1	9	60	161	51	11	1	0	0	0	0	294	40	37
19:00	**1**	0	0	9	53	115	43	3	1	0	0	0	0	225	40	36
20:00	0	0	3	6	44	65	28	4	2	0	0	0	0	152	41	36
21:00	0	0	0	3	16	41	19	5	1	0	0	0	0	85	42	38
22:00	0	0	0	2	19	16	20	2	0	0	0	0	0	59	42	37
23:00	0	0	0	1	16	14	14	1	0	0	0	0	0	46	41	37
Total	12	24	47	163	912	2000	1017	180	24	4	1	0	0	4384		
%	0.3%	0.5%	1.1%	3.7%	20.8%	45.6%	23.2%	4.1%	0.5%	0.1%	0.0%	0.0%	0.0%			
AM Peak	06:00	06:00	06:00	09:00	09:00	07:00	08:00	08:00	08:00	00:00				09:00		
Vol.	2	6	9	8	37	125	66	13	3	1				239		
Midday Peak	12:00	11:00	12:00	14:00	14:00	14:00	13:00	13:00	13:00	14:00				14:00		
Vol.	2	4	5	19	85	167	72	15	3	1				361		
PM Peak	19:00	15:00	17:00	15:00	15:00	15:00	16:00	16:00	17:00	15:00	15:00			15:00		
Vol.	1	4	8	15	92	172	108	19	3	1	1			386		

% iles

15th Percentile :	31 MPH
50th Percentile :	36 MPH
85th Percentile :	41 MPH
95th Percentile :	43 MPH

Stats

10 MPH Pace Speed :	35-44 MPH
Number in Pace :	3017
Percent in Pace :	68.8%
Number of Vehicles > 35 MPH :	2826
Percent of Vehicles > 35 MPH :	64.5%
Mean Speed(Average) :	37 MPH

Libby Industrial Parkway
at #169 Libbey Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 B Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	0	0	2	1	1	1	0	**1**	0	0	0	6	54	41
01:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	48	47
02:00	0	0	0	0	1	2	3	0	0	0	0	0	0	6	42	39
03:00	0	0	0	1	1	3	4	0	2	0	0	0	0	11	49	40
04:00	0	0	0	0	7	15	15	10	**7**	1	0	0	0	55	48	42
05:00	**2**	1	0	2	14	47	22	12	0	0	0	0	0	100	43	38
06:00	0	**2**	1	6	35	84	63	10	1	0	0	0	0	202	42	38
07:00	1	1	1	6	37	133	**154**	24	2	0	0	0	0	359	43	39
08:00	0	2	1	**9**	49	**168**	146	**30**	4	1	0	0	0	**410**	43	39
09:00	0	0	**3**	6	**53**	111	95	29	3	0	0	0	0	300	43	38
10:00	0	1	6	10	57	124	65	16	3	0	0	0	0	282	42	37
11:00	**4**	3	2	8	50	106	75	13	0	**1**	0	0	0	262	42	37
12 PM	1	**5**	**3**	8	**54**	**150**	63	15	**2**	0	0	0	0	**301**	41	37
13:00	0	3	1	**10**	49	126	56	10	1	1	0	0	0	257	41	37
14:00	0	4	1	2	29	111	**77**	**20**	0	0	0	0	**1**	245	42	38
15:00	**1**	2	1	3	19	94	92	17	2	**2**	0	0	0	233	43	39
16:00	0	3	**2**	5	13	93	98	**28**	**5**	0	0	0	0	247	43	40
17:00	0	**4**	0	2	30	**107**	**105**	21	2	0	0	**1**	0	**272**	43	39
18:00	0	0	1	5	**55**	107	79	10	4	0	0	0	0	261	42	38
19:00	0	0	0	**8**	35	60	44	4	1	1	0	0	0	153	42	37
20:00	0	0	0	0	15	40	28	5	0	0	0	0	0	88	42	38
21:00	0	0	0	4	15	36	22	6	1	1	0	0	0	85	42	38
22:00	0	0	0	1	8	13	17	3	2	0	0	0	0	44	43	39
23:00	0	0	0	0	3	6	4	1	1	0	0	0	0	15	43	39
Total	9	31	23	96	631	1737	1328	286	43	9	0	1	1	4195		
%	0.2%	0.7%	0.5%	2.3%	15.0%	41.4%	31.7%	6.8%	1.0%	0.2%	0.0%	0.0%	0.0%			
AM Peak	05:00	06:00	09:00	08:00	09:00	08:00	07:00	08:00	04:00	00:00				08:00		
Vol.	2	2	3	9	53	168	154	30	7	1				410		
Midday Peak	11:00	12:00	12:00	13:00	12:00	12:00	14:00	14:00	12:00	11:00			14:00	12:00		
Vol.	4	5	3	10	54	150	77	20	2	1			1	301		
PM Peak	15:00	17:00	16:00	19:00	18:00	17:00	17:00	16:00	16:00	15:00		17:00		17:00		
Vol.	1	4	2	8	55	107	105	28	5	2		1		272		

% iles	
15th Percentile :	32 MPH
50th Percentile :	37 MPH
85th Percentile :	42 MPH
95th Percentile :	46 MPH

Stats	
10 MPH Pace Speed :	35-44 MPH
Number in Pace :	3065
Percent in Pace :	73.1%
Number of Vehicles > 35 MPH :	3058
Percent of Vehicles > 35 MPH :	72.9%
Mean Speed(Average) :	38 MPH

Libby Industrial Parkway
at #169 Libbey Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 B Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	0	0	0	0	5	3	0	0	0	0	0	0	8	42	39
01:00	0	0	0	0	0	1	1	1	0	0	0	0	0	3	46	42
02:00	0	0	0	0	0	3	3	0	0	0	0	0	0	6	42	40
03:00	0	0	0	0	2	7	6	1	0	0	0	0	0	16	42	39
04:00	0	0	0	2	2	17	14	13	3	0	0	0	0	51	47	41
05:00	1	0	0	4	13	36	39	11	1	0	0	**1**	0	106	43	39
06:00	0	1	1	**13**	36	94	42	9	1	0	0	0	0	197	41	37
07:00	0	**2**	0	5	41	144	**124**	**24**	1	0	0	0	0	341	42	39
08:00	0	2	**3**	7	**77**	**166**	124	19	**4**	**2**	0	0	0	**404**	42	38
09:00	**2**	0	2	12	59	124	83	17	2	0	0	0	0	301	42	37
10:00	0	1	1	3	36	131	98	13	2	0	0	0	0	285	42	38
11:00	0	4	1	**9**	46	92	75	**16**	1	0	0	0	0	244	42	38
12 PM	0	2	2	8	**57**	129	72	15	1	0	0	0	0	286	42	37
13:00	**1**	2	**4**	3	38	117	77	15	2	0	**1**	0	0	260	42	38
14:00	0	**7**	1	5	30	**139**	**108**	15	**3**	0	0	0	0	**308**	42	38
15:00	0	**3**	0	2	26	**105**	96	20	**3**	0	**1**	0	0	256	43	39
16:00	0	2	0	**6**	**31**	84	113	**29**	2	0	0	**1**	0	**268**	43	39
17:00	0	3	2	2	24	82	**116**	26	2	**1**	0	0	0	258	43	40
18:00	0	2	**3**	2	30	94	72	15	0	0	1	0	0	219	42	38
19:00	0	0	0	0	23	67	36	9	1	0	0	0	0	136	42	38
20:00	0	1	1	0	19	52	26	6	1	0	1	0	0	107	42	38
21:00	0	0	0	0	12	27	18	4	0	0	0	0	0	61	42	38
22:00	0	0	0	0	7	25	14	0	0	0	0	0	0	46	41	38
23:00	0	0	0	0	2	14	6	2	1	0	0	0	0	25	43	39
Total	4	32	21	83	611	1755	1366	280	31	3	4	2	0	4192		
%	0.1%	0.8%	0.5%	2.0%	14.6%	41.9%	32.6%	6.7%	0.7%	0.1%	0.1%	0.0%	0.0%			
AM Peak	09:00	07:00	08:00	06:00	08:00	08:00	07:00	07:00	08:00	08:00		05:00		08:00		
Vol.	2	2	3	13	77	166	124	24	4	2		1		404		
Midday Peak	13:00	14:00	13:00	11:00	12:00	14:00	14:00	11:00	14:00		13:00			14:00		
Vol.	1	7	4	9	57	139	108	16	3		1			308		
PM Peak		15:00	18:00	16:00	16:00	15:00	17:00	16:00	15:00	17:00	15:00	16:00		16:00		
Vol.		3	3	6	31	105	116	29	3	1	1	1		268		

% iles	
15th Percentile :	32 MPH
50th Percentile :	37 MPH
85th Percentile :	42 MPH
95th Percentile :	45 MPH

Stats	
10 MPH Pace Speed :	35-44 MPH
Number in Pace :	3121
Percent in Pace :	74.5%
Number of Vehicles > 35 MPH :	3090
Percent of Vehicles > 35 MPH :	73.7%
Mean Speed(Average) :	38 MPH

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 C Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	1	1	0	0	0	0	0	0	0	0	2	32	30
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	3	0	2	0	0	0	0	0	0	0	0	5	32	26
05:00	2	2	2	2	4	1	0	0	0	0	0	0	0	13	32	24
06:00	2	10	15	27	15	1	0	0	0	0	0	0	0	70	30	25
07:00	3	**29**	34	37	15	**3**	0	0	0	0	0	0	0	121	28	24
08:00	4	23	37	**39**	**18**	3	0	0	0	0	0	0	0	**124**	29	24
09:00	**7**	22	**44**	28	15	2	0	0	0	0	0	0	0	118	28	23
10:00	11	24	48	34	9	1	0	0	0	0	0	0	0	127	27	22
11:00	4	19	39	17	10	0	0	0	0	0	0	0	0	89	28	22
12 PM	3	**21**	39	26	**11**	**3**	0	0	0	0	0	0	0	103	28	23
13:00	**8**	20	**58**	27	7	0	0	0	0	0	0	0	0	**120**	26	22
14:00	4	12	33	**33**	11	1	0	0	0	0	0	0	0	94	28	24
15:00	0	6	**33**	**35**	**11**	0	0	0	0	0	0	0	0	**85**	28	25
16:00	**1**	6	19	21	6	0	0	0	0	0	0	0	0	53	28	24
17:00	1	4	11	18	7	0	0	0	0	0	0	0	0	41	29	25
18:00	1	**7**	13	17	5	0	0	0	0	0	0	0	0	43	28	24
19:00	0	3	3	6	2	0	0	0	0	0	0	0	0	14	28	25
20:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	18	17
21:00	0	0	1	2	1	0	0	0	0	0	0	0	0	4	31	27
22:00	0	0	1	5	3	0	0	0	0	0	0	0	0	9	31	28
23:00	0	0	0	2	0	**2**	0	0	0	0	0	0	0	4	37	32
Total	51	210	433	377	153	17	0	0	0	0	0	0	0	1241		
%	4.1%	16.9%	34.9%	30.4%	12.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	09:00	08:00	08:00	07:00								08:00		
Vol.	7	29	44	39	18	3								124		
Midday Peak	13:00	12:00	13:00	14:00	12:00	12:00								13:00		
Vol.	8	21	58	33	11	3								120		
PM Peak	16:00	18:00	15:00	15:00	15:00	23:00								15:00		
Vol.	1	7	33	35	11	2								85		

% iles

15th Percentile :	17 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	32 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	810
Percent in Pace :	65.3%
Number of Vehicles > 25 MPH :	472
Percent of Vehicles > 25 MPH :	38.0%
Mean Speed(Average) :	24 MPH

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 C Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	0	0	0	1	0	0	0	0	0	0	0	0	1	33	32
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	18	17
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3	36	30
05:00	0	4	2	5	4	0	0	0	0	0	0	0	0	15	31	25
06:00	3	14	16	12	9	**2**	**1**	0	0	0	0	0	0	57	30	24
07:00	3	27	34	25	**13**	2	0	0	0	0	0	0	0	104	28	23
08:00	**5**	**32**	**49**	**45**	13	1	0	0	0	0	0	0	0	**145**	28	23
09:00	1	16	34	32	8	1	0	0	0	0	0	0	0	92	28	24
10:00	4	9	41	30	7	2	0	0	0	0	0	0	0	93	28	24
11:00	2	16	26	31	9	0	0	0	0	0	0	0	0	84	28	24
12 PM	**4**	19	**47**	30	7	0	0	0	0	0	0	0	0	107	27	23
13:00	2	**20**	45	28	5	0	0	0	0	0	0	0	0	100	27	23
14:00	1	15	44	**35**	**12**	**1**	0	0	0	0	0	0	0	**108**	28	24
15:00	**1**	**6**	**30**	**34**	4	**3**	0	0	0	0	0	0	0	**78**	28	25
16:00	0	6	21	23	4	0	0	0	0	0	0	0	0	54	28	24
17:00	1	2	7	13	**5**	1	0	0	0	0	0	0	0	29	30	26
18:00	1	4	10	17	4	0	0	0	0	0	0	0	0	36	28	25
19:00	1	1	4	4	2	0	0	0	0	0	0	0	0	12	29	24
20:00	0	0	0	2	1	0	0	0	0	0	0	0	0	3	31	29
21:00	1	0	2	0	1	0	0	0	0	0	0	0	0	4	31	21
22:00	0	1	1	0	2	0	0	0	0	0	0	0	0	4	32	26
23:00	0	0	0	3	4	2	0	0	0	0	0	0	0	9	35	31
Total	30	193	413	371	115	16	1	0	0	0	0	0	0	1139		
%	2.6%	16.9%	36.3%	32.6%	10.1%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	07:00	06:00	06:00							08:00		
Vol.	5	32	49	45	13	2	1							145		
Midday Peak	12:00	13:00	12:00	14:00	14:00	14:00								14:00		
Vol.	4	20	47	35	12	1								108		
PM Peak	15:00	15:00	15:00	15:00	17:00	15:00								15:00		
Vol.	1	6	30	34	5	3								78		

% iles

15th Percentile :	17 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	32 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	784
Percent in Pace :	68.8%
Number of Vehicles > 25 MPH :	429
Percent of Vehicles > 25 MPH :	37.6%
Mean Speed(Average) :	24 MPH

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 C Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/07/ 15	0	0	0	2	1	0	0	0	0	0	0	0	0	3	31	29
01:00	0	0	1	2	1	0	0	0	0	0	0	0	0	4	31	27
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2	32	27
05:00	2	0	1	2	1	0	0	0	0	0	0	0	0	6	29	20
06:00	0	0	4	3	2	0	0	0	0	0	0	0	0	9	30	26
07:00	1	2	11	6	3	1	0	0	0	0	0	0	0	24	29	24
08:00	6	5	12	12	3	**2**	0	0	0	0	0	0	0	40	28	22
09:00	**12**	**11**	**29**	**20**	**10**	1	0	0	0	0	0	0	0	**83**	28	22
10:00	14	23	39	18	6	0	0	0	0	0	0	0	0	100	26	20
11:00	**9**	**26**	46	23	**5**	0	0	0	0	0	0	0	0	109	26	21
12 PM	8	20	**62**	**34**	5	**1**	0	0	0	0	0	0	0	**130**	27	22
13:00	8	21	44	22	3	1	0	0	0	0	0	0	0	99	26	21
14:00	1	22	59	22	5	1	0	0	0	0	0	0	0	110	26	22
15:00	0	**23**	**56**	41	13	1	0	0	0	0	0	0	0	134	28	24
16:00	**9**	21	44	**47**	**14**	**4**	0	0	0	0	0	0	0	**139**	28	23
17:00	4	14	28	46	4	2	0	0	0	0	0	0	0	98	28	24
18:00	3	8	29	19	6	0	0	0	0	0	0	0	0	65	28	23
19:00	2	13	16	9	3	1	0	0	0	0	0	0	0	44	27	22
20:00	2	2	11	9	0	1	0	0	0	0	0	0	0	25	27	23
21:00	0	1	5	10	5	0	0	0	0	0	0	0	0	21	30	27
22:00	0	0	1	3	1	0	0	0	0	0	0	0	0	5	30	27
23:00	0	0	5	6	4	0	0	0	0	0	0	0	0	15	31	27
Total	81	212	504	356	96	16	0	0	0	0	0	0	0	1265		
%	6.4%	16.8%	39.8%	28.1%	7.6%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	09:00	09:00	09:00	08:00								09:00		
Vol.	12	11	29	20	10	2								83		
Midday Peak	11:00	11:00	12:00	12:00	11:00	12:00								12:00		
Vol.	9	26	62	34	5	1								130		
PM Peak	16:00	15:00	15:00	16:00	16:00	16:00								16:00		
Vol.	9	23	56	47	14	4								139		

% iles	
15th Percentile :	16 MPH
50th Percentile :	22 MPH
85th Percentile :	27 MPH
95th Percentile :	31 MPH

Stats	
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	860
Percent in Pace :	68.0%
Number of Vehicles > 25 MPH :	397
Percent of Vehicles > 25 MPH :	31.4%
Mean Speed(Average) :	23 MPH

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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154694 C Speed
Site Code: 14342892-15007
Date Start: 07-Oct-15

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
10/08/ 15	0	0	3	1	0	0	0	0	0	0	0	0	0	4	26	23
01:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	23	22
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	**2**	0	5	1	1	0	0	0	0	0	0	0	0	9	27	20
06:00	0	1	5	2	1	0	0	0	0	0	0	0	0	9	28	24
07:00	1	4	14	8	1	0	0	0	0	0	0	0	0	28	27	23
08:00	2	**16**	24	13	1	0	**1**	0	0	0	0	0	0	57	26	22
09:00	1	6	**33**	**21**	**2**	0	0	0	0	0	0	0	0	**63**	27	23
10:00	1	11	37	18	3	1	0	0	0	0	0	0	0	71	27	23
11:00	**10**	**24**	**56**	13	2	1	0	0	0	0	0	0	0	106	24	20
12 PM	4	20	47	32	**8**	0	0	0	0	0	0	0	0	**111**	27	23
13:00	2	15	42	23	5	1	0	0	0	0	0	0	0	88	27	23
14:00	0	19	43	**38**	7	**3**	0	0	0	0	0	0	0	110	28	24
15:00	2	8	**50**	**54**	13	1	0	0	0	0	0	0	0	**128**	28	25
16:00	5	**22**	35	52	6	**2**	0	0	0	0	0	0	0	122	28	23
17:00	**6**	12	30	31	**14**	1	0	0	0	0	0	0	0	94	29	24
18:00	1	7	16	13	2	0	0	0	0	0	0	0	0	39	27	23
19:00	2	4	19	13	3	0	0	0	0	0	0	0	0	41	27	23
20:00	0	3	13	7	3	1	0	0	0	0	0	0	0	27	28	24
21:00	0	1	7	2	1	0	0	0	0	0	0	0	0	11	27	23
22:00	0	0	1	2	0	0	0	0	0	0	0	0	0	3	27	25
23:00	0	0	3	7	2	0	0	0	0	0	0	0	0	12	29	27
Total	39	173	484	351	75	11	1	0	0	0	0	0	0	1134		
%	3.4%	15.3%	42.7%	31.0%	6.6%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	05:00	08:00	09:00	09:00	09:00		08:00							09:00		
Vol.	2	16	33	21	2		1							63		
Midday Peak	11:00	11:00	11:00	14:00	12:00	14:00								12:00		
Vol.	10	24	56	38	8	3								111		
PM Peak	17:00	16:00	15:00	15:00	17:00	16:00								15:00		
Vol.	6	22	50	54	14	2								128		

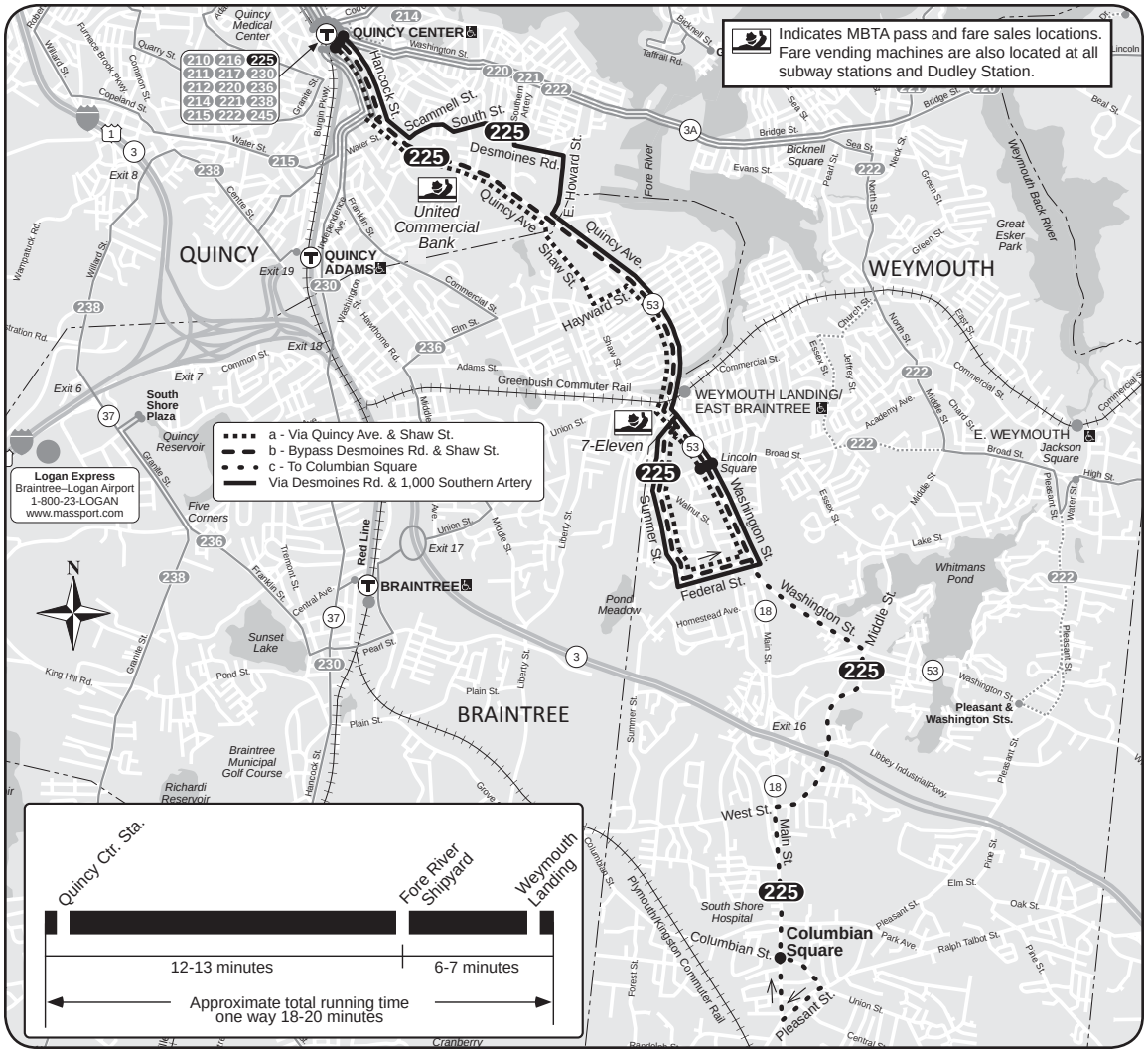
% iles		
	15th Percentile :	17 MPH
	50th Percentile :	22 MPH
	85th Percentile :	27 MPH
	95th Percentile :	31 MPH

Stats		
	10 MPH Pace Speed :	20-29 MPH
	Number in Pace :	835
	Percent in Pace :	73.6%
	Number of Vehicles > 25 MPH :	368
	Percent of Vehicles > 25 MPH :	32.4%
	Mean Speed(Average) :	23 MPH

Appendix B

Transit Data

Route 225 Weymouth Landing or Columbian Sq. - Quincy Station



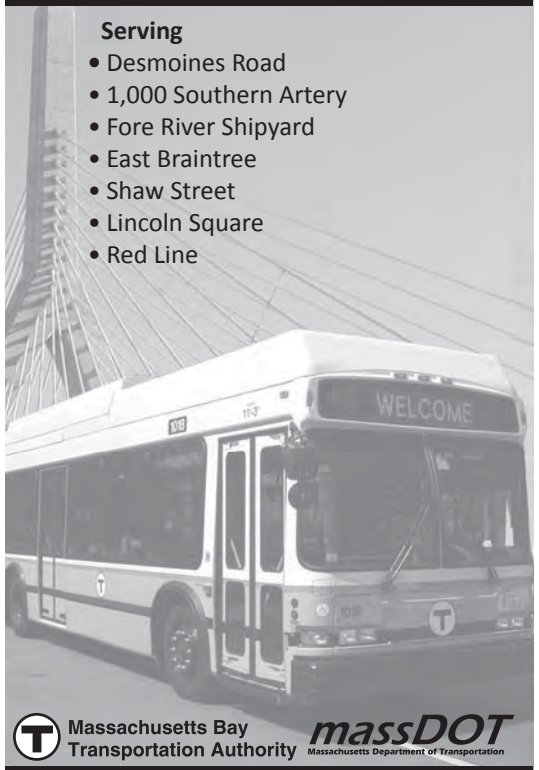
225

Fall September 5, 2015 - December 25, 2015

Weymouth Landing or Columbian Square- Quincy Center Station

Serving

- Desmoines Road
- 1,000 Southern Artery
- Fore River Shipyard
- East Braintree
- Shaw Street
- Lincoln Square
- Red Line



Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

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

225 Weekday

Inbound				Outbound			
Leave Columbian Square	Lv/Arrive Weymouth Landing	Arrive Howard/ Quincy Ave.	Arrive Quincy Center Station	Leave Quincy Center Station	Arrive Howard/ Quincy Ave.	Arrive Weymouth Landing	Arrive Columbian Square
.....	b 5:30A	5:35A	5:48A	b 5:10A	5:15A	5:26A	.....
.....	b 5:50	5:55	6:08	b 5:25	5:30	5:41	.....
.....	b 6:20	6:26	6:40	c 5:40	5:48	.....	6:06A
6:15A	6:26	6:31	6:46	b 5:55	6:00	6:11	.....
.....	b 6:40	6:46	7:00	c 6:10	6:18	.....	6:36
.....	a 6:50	6:56	7:10	6:15	6:23	6:34	.....
6:47	6:58	7:04	7:21	6:25	6:33	6:44	.....
.....	a 7:10	7:18	7:32	6:45	6:53	7:04	.....
.....	7:20	7:25	7:40	c 6:50	6:58	.....	7:16
.....	.....	at 7:32	7:42	6:55	7:03	7:14	.....
.....	a 7:30	7:38	7:52	a 7:05	7:12	7:24	.....
7:27	7:41	7:47	8:03	a 7:25	7:32	7:44	.....
.....	.....	at 7:52	8:02	7:35	7:43	7:54	.....
.....	a 7:51	7:59	8:13	a 7:45	7:52	8:03	.....
.....	8:00	8:05	8:20	7:50	7:58	8:09	.....
.....	a 8:08	8:16	8:30	ac 7:55	8:04	.....	8:23
.....	8:15	8:20	8:35	8:05	8:15	8:26	.....
.....	.....	at 8:34	8:47	a 8:15	8:23	8:34	.....
.....	a 8:30	8:37	8:50	8:35	8:45	8:56	.....
.....	a 8:40	8:47	9:00	a 9:05	9:14	9:26	.....
8:30	8:44	8:50	9:04	9:30	9:43	9:52	.....
.....	9:00	9:05	9:20	ac 9:45	9:57	.....	10:21
.....	a 9:32	9:40	9:53	10:30	10:42	10:53	.....
.....	10:08	10:13	10:28	a 11:05	11:15	11:28	.....
10:35	a10:52	11:01	11:13	11:35	11:47	11:58	.....
.....	11:12	11:17	11:33				
.....	a 11:36	11:44	11:57	**a 12:05P**	**12:15P**	**12:28P**	.....
				c 12:30	**12:41**	.....	**1:03P**
.....	**12:06P**	**12:11P**	**12:25P**	**a 1:05**	**1:15**	**1:28**	.....
.....	**a 12:36**	**12:44**	**12:57**	**1:35**	**1:47**	**1:58**	.....
1:11P	**1:25**	**1:31**	**1:47**	**a 2:05**	**2:15**	**2:28**	.....
.....	**a 1:36**	**1:43**	**1:55**	**c 2:15**	**2:25**	.....	**2:48**
.....	**2:06**	**2:11**	**2:25**	**a 2:34**	**2:44**	**2:57**	.....
.....	**a 2:36**	**2:43**	**2:55**	**ac 2:48**	**3:00**	.....	**3:24**
.....	**a 3:05**	**3:12**	**3:24**	**3:01**	**3:13**	**3:24**	.....
2:57	**3:12**	**3:18**	**3:33**	**3:25**	**3:37**	**3:48**	.....
.....	**3:32**	**3:36**	**3:49**	**a 3:37**	**3:47**	**3:59**	.....
3:32	**a 3:48**	**3:57**	**4:08**	**3:49**	**4:00**	**4:12**	.....
.....	**3:56**	**4:00**	**4:13**	**a 4:00**	**4:10**	**4:22**	.....
.....	**a 4:07**	**4:14**	**4:26**	**c 4:05**	**4:15**	.....	**4:37**
.....	**4:17**	**4:21**	**4:34**	**4:13**	**4:22**	**4:34**	.....
.....	**a 4:28**	**4:35**	**4:47**	**a 4:22**	**4:32**	**4:44**	.....
.....	**4:40**	**4:44**	**4:57**	**a 4:36**	**4:46**	**4:58**	.....
.....	**a 4:48**	**4:54**	**5:06**	**4:50**	**5:02**	**5:16**	.....
4:47	**4:59**	**5:04**	**5:19**	**a 5:00**	**5:10**	**5:22**	.....
.....	**a 5:08**	**5:14**	**5:26**	**ac 5:05**	**5:16**	.....	**5:37**
.....	**5:20**	**5:24**	**5:38**	**5:10**	**5:21**	**5:32**	.....
.....	**a 5:28**	**5:34**	**5:44**	**a 5:20**	**5:30**	**5:42**	.....
.....	**5:39**	**5:43**	**5:56**	**5:30**	**5:44**	**5:55**	.....
.....	**a 5:49**	**5:55**	**6:05**	**a 5:40**	**5:50**	**6:03**	.....
5:47	**a 5:59**	**6:06**	**6:15**	**5:50**	**6:03**	**6:14**	.....
.....	**6:02**	**6:06**	**6:18**	**at 6:00**	**6:10**	.....	.....
.....	**a 6:09**	**6:15**	**6:25**	**ac 6:05**	**6:18**	.....	**6:39**
.....	.....	**at 6:19**	**6:30**	**6:10**	**6:21**	**6:32**	.....
.....	**6:20**	**6:24**	**6:36**	**at 6:20**	**6:30**	.....	.....
.....	.....	**at 6:42**	**6:53**	**a 6:30**	**6:39**	**6:53**	.....
.....	**a 6:38**	**6:44**	**6:54**	**c 6:40**	**6:53**	.....	**7:13**
6:44	**a 6:56**	**7:03**	**7:13**	**a 6:50**	**6:59**	**7:13**	.....
.....	**a 6:59**	**7:05**	**7:15**	**c 7:05**	**7:17**	.....	**7:37**
.....	**7:19**	**7:23**	**7:35**	**b 7:35**	**7:44**	**7:56**	.....
7:18	**a 7:30**	**7:37**	**7:47**	**a 8:00**	**8:09**	**8:21**	.....
7:42	**7:53**	**7:58**	**8:07**	**c 8:30**	**8:39**	.....	**8:56**
.....	**b 8:07**	**8:11**	**8:21**	**b 9:40**	**9:47**	**9:56**	.....
.....	**a 8:30**	**8:34**	**8:44**	**c 10:35**	**10:44**	.....	**11:01**
9:05	**9:16**	**9:21**	**9:30**	**b 11:35**	**11:42**	**11:51**	.....
.....	**b10:02**	**10:06**	**10:16**				
11:10	**11:19**	**11:24**	**11:33**				
.....	**b 11:57**	12:01A	12:08A				

225 Saturday

Inbound			Outbound		
Leave Weymouth Landing	Arrive Howard/ Quincy Ave.	Arrive Quincy Center Station	Leave Quincy Center Station	Arrive Howard/ Quincy Ave.	Arrive Weymouth Landing
b 6:30A	6:33A	6:44A	b 6:05A	6:10A	6:23A
a 7:35	7:44	7:52	a 7:10	7:23	7:30
a 8:35	8:44	8:52	a 8:10	8:23	8:30
9:05	9:15	9:24	8:40	8:53	9:02
a 9:35	9:44	9:52	a 9:10	9:23	9:30
10:05	10:15	10:24	9:40	9:53	10:02
a 10:35	10:44	10:52	a 10:10	10:23	10:30
11:05	11:15	11:24	10:40	10:53	11:02
a 11:35	11:44	11:52	a 11:10	11:23	11:30
			11:40	11:53	**12:02P**
12:05P	**12:15P**	**12:24P**			
a 12:35	**12:44**	**12:52**	**a 12:10P**	**12:23P**	**12:30P**
1:05	**1:15**	**1:24**	**12:40**	**12:53**	**1:02**
a 1:35	**1:44**	**1:52**	**a 1:10**	**1:23**	**1:30**
2:05	**2:15**	**2:24**	**1:40**	**1:53**	**2:02**
a 2:35	**2:44**	**2:52**	**a 2:10**	**2:23**	**2:30**
3:05	**3:15**	**3:24**	**2:40**	**2:53**	**3:02**
a 3:35	**3:44**	**3:52**	**a 3:10**	**3:23**	**3:30**
4:05	**4:15**	**4:24**	**3:40**	**3:53**	**4:02**
a 4:35	**4:44**	**4:52**	**a 4:10**	**4:23**	**4:30**
5:05	**5:15**	**5:24**	**4:40**	**4:53**	**5:02**
a 5:35	**5:44**	**5:52**	**a 5:10**	**5:23**	**5:30**
6:05	**6:14**	**6:22**	**5:40**	**5:53**	**6:02**
a 6:35	**6:43**	**6:50**	**a 6:10**	**6:22**	**6:28**
7:05	**7:14**	**7:22**	**6:40**	**6:52**	**7:00**
b 7:55	**7:57**	**8:09**	**b 7:35**	**7:40**	**7:52**
8:57	**9:06**	**9:14**	**8:35**	**8:47**	**8:55**
b 9:55	**9:57**	**10:09**	**b 9:35**	**9:40**	**9:52**
10:57	**11:06**	**11:14**	**10:35**	**10:47**	**10:55**
b 11:55	**11:57**	12:09A	**b 11:35**	**11:40**	**11:52**

Unless noted all other trips run via
Desmoines Road & 1,000 Southern Artery

a - Via Quincy Avenue & Shaw Street
b - Bypasses Desmoines Road & Shaw Street
c - To Columbian Square
t - To/from Shaw Street at Quintree Mall.

Route 225
Weymouth Landing or Columbian Square-Quincy Center Station

225 Sunday

Inbound			Outbound		
Leave Weymouth Landing	Arrive Howard/ Quincy Ave.	Arrive Quincy Center Station	Leave Quincy Center Station	Arrive Howard/ Quincy Ave.	Arrive Weymouth Landing
7:50A	7:56A	8:13A	7:20A	7:28A	7:45A
8:50	8:56	9:13	8:20	8:28	8:45
9:50	9:56	10:13	9:20	9:28	9:45
10:50	10:56	11:13	10:20	10:28	10:45
11:50	11:56	**12:13P**	11:20	11:28	11:45
12:50P	**12:56P**	**1:13P**	**12:20P**	**12:28P**	**12:45P**
1:50	**1:56**	**2:13**	**1:20**	**1:28**	**1:45**
2:50	**2:56**	**3:13**	**2:20**	**2:28**	**2:45**
3:50	**3:56**	**4:13**	**3:20**	**3:28**	**3:45**
4:50	**4:56**	**5:13**	**4:20**	**4:28**	**4:45**
5:50	**5:56**	**6:13**	**5:20**	**5:28**	**5:45**
6:50	**6:56**	**7:13**	**6:20**	**6:28**	**6:45**
7:50	**7:56**	**8:13**	**7:20**	**7:28**	**7:45**
8:50	**8:56**	**9:13**	**8:20**	**8:28**	**8:45**
9:50	**9:56**	**10:13**	**9:20**	**9:28**	**9:45**
10:50	**10:56**	**11:13**	**10:20**	**10:28**	**10:45**
11:50	**11:56**	**12:13**	**11:20**	**11:28**	**11:45**

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Fall 2015 Holidays
October 12 & November 11: see Weekday
September 7, November 26, & December 25: see Sunday

Appendix C

Traffic Count Data and Adjustment Factors

ATR Data

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 A Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	EB				WB				Combined				07-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	7		86		8		115		15		201		
12:15	4		78		2		109		6		187		
12:30	5		80		4		102		9		182		
12:45	2	18	88	332	1	15	102	428	3	33	190	760	
01:00	1		103		2		90		3		193		
01:15	5		92		0		68		5		160		
01:30	3		95		2		84		5		179		
01:45	5	14	95	385	0	4	67	309	5	18	162	694	
02:00	8		101		1		89		9		190		
02:15	3		83		1		94		4		177		
02:30	2		95		2		96		4		191		
02:45	1	14	103	382	1	5	78	357	2	19	181	739	
03:00	2		127		1		89		3		216		
03:15	4		109		1		101		5		210		
03:30	7		121		0		86		7		207		
03:45	3	16	128	485	1	3	95	371	4	19	223	856	
04:00	2		101		9		101		11		202		
04:15	3		114		11		88		14		202		
04:30	8		81		12		93		20		174		
04:45	12	25	58	354	17	49	104	386	29	74	162	740	
05:00	19		80		17		111		36		191		
05:15	26		84		22		105		48		189		
05:30	36		78		18		93		54		171		
05:45	23	104	78	320	29	86	90	399	52	190	168	719	
06:00	46		107		30		72		76		179		
06:15	47		94		41		94		88		188		
06:30	46		69		44		77		90		146		
06:45	54	193	88	358	49	164	116	359	103	357	204	717	
07:00	76		80		56		84		132		164		
07:15	76		60		65		70		141		130		
07:30	99		54		64		50		163		104		
07:45	70	321	62	256	70	255	45	249	140	576	107	505	
08:00	97		30		100		46		197		76		
08:15	90		34		89		32		179		66		
08:30	113		26		99		30		212		56		
08:45	107	407	28	118	78	366	52	160	185	773	80	278	
09:00	131		31		76		43		207		74		
09:15	104		19		81		38		185		57		
09:30	102		24		96		26		198		50		
09:45	96	433	19	93	72	325	25	132	168	758	44	225	
10:00	108		18		86		19		194		37		
10:15	88		21		102		18		190		39		
10:30	91		12		101		12		192		24		
10:45	91	378	20	71	83	372	15	64	174	750	35	135	
11:00	79		11		99		10		178		21		
11:15	97		11		99		16		196		27		
11:30	80		10		88		9		168		19		
11:45	82	338	8	40	97	383	8	43	179	721	16	83	
Total	2261		3194		2027		3257		4288		6451		
Percent	52.7%		49.5%		47.3%		50.5%						
Day Total		5455				5284				10739			
Peak	08:30	-	03:00	-	10:15	-	12:00	-	08:30	-	03:00	-	- -
Vol.	455	-	485	-	385	-	428	-	789	-	856	-	- -
P.H.F.	0.868		0.947		0.944		0.930		0.930		0.960		

Libby Industrial Parkway
east of Middle Street
City, State: Weymouth, MA
Client: TTR/C.Jones

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154694 A Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	EB				WB				Combined				08-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	9		74		6		109		15		183		
12:15	4		71		2		119		6		190		
12:30	2		96		6		92		8		188		
12:45	5	20	79	320	2	16	94	414	7	36	173	734	
01:00	3		103		1		85		4		188		
01:15	7		103		1		77		8		180		
01:30	7		89		3		72		10		161		
01:45	6	23	89	384	0	5	89	323	6	28	178	707	
02:00	5		111		0		94		5		205		
02:15	5		117		3		91		8		208		
02:30	3		92		0		91		3		183		
02:45	3	16	126	446	2	5	97	373	5	21	223	819	
03:00	3		122		1		110		4		232		
03:15	4		101		2		83		6		184		
03:30	4		107		2		108		6		215		
03:45	4	15	106	436	9	14	101	402	13	29	207	838	
04:00	5		86		10		90		15		176		
04:15	2		89		10		100		12		189		
04:30	8		83		12		99		20		182		
04:45	11	26	79	337	15	47	104	393	26	73	183	730	
05:00	15		94		6		105		21		199		
05:15	26		76		27		129		53		205		
05:30	31		85		18		93		49		178		
05:45	29	101	61	316	33	84	97	424	62	185	158	740	
06:00	48		68		19		79		67		147		
06:15	32		67		36		74		68		141		
06:30	43		79		40		55		83		134		
06:45	57	180	79	293	43	138	85	293	100	318	164	586	
07:00	81		99		67		73		148		172		
07:15	88		65		61		69		149		134		
07:30	79		71		64		47		143		118		
07:45	82	330	45	280	82	274	42	231	164	604	87	511	
08:00	97		55		63		43		160		98		
08:15	91		51		81		62		172		113		
08:30	99		35		88		25		187		60		
08:45	94	381	35	176	66	298	34	164	160	679	69	340	
09:00	101		23		95		35		196		58		
09:15	97		35		74		33		171		68		
09:30	85		24		94		19		179		43		
09:45	76	359	24	106	81	344	21	108	157	703	45	214	
10:00	96		19		80		12		176		31		
10:15	66		12		93		22		159		34		
10:30	92		26		83		22		175		48		
10:45	99	353	14	71	88	344	11	67	187	697	25	138	
11:00	93		10		78		14		171		24		
11:15	66		19		81		12		147		31		
11:30	113		9		94		8		207		17		
11:45	81	353	12	50	94	347	12	46	175	700	24	96	
Total	2157		3215		1916		3238		4073		6453		
Percent	53.0%		49.8%		47.0%		50.2%						
Day Total		5372				5154				10526			
Peak	08:30	-	02:15	-	09:30	-	04:30	-	08:15	-	02:45	-	-	-
Vol.	391	-	457	-	348	-	437	-	715	-	854	-	-	-
P.H.F.	0.968		0.907		0.926		0.847		0.912		0.920			

Libby Industrial Parkway
at #169 Libbey Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154694 B Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	EB				WB				Combined				07-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	6		78		1		75		7		153		
12:15	4		72		3		70		7		142		
12:30	3		68		2		83		5		151		
12:45	1	14	69	287	0	6	73	301	1	20	142	588	
01:00	3		82		1		64		4		146		
01:15	3		69		0		68		3		137		
01:30	4		67		0		62		4		129		
01:45	7	17	78	296	0	1	63	257	7	18	141	553	
02:00	7		68		2		55		9		123		
02:15	2		80		2		59		4		139		
02:30	0		87		1		65		1		152		
02:45	2	11	81	316	1	6	66	245	3	17	147	561	
03:00	5		100		1		59		6		159		
03:15	4		82		0		59		4		141		
03:30	5		126		1		62		6		188		
03:45	2	16	95	403	9	11	53	233	11	27	148	636	
04:00	2		89		8		78		10		167		
04:15	3		88		13		52		16		140		
04:30	7		77		13		46		20		123		
04:45	7	19	81	335	21	55	71	247	28	74	152	582	
05:00	12		100		24		101		36		201		
05:15	19		75		26		64		45		139		
05:30	19		84		28		52		47		136		
05:45	24	74	86	345	22	100	55	272	46	174	141	617	
06:00	31		75		32		67		63		142		
06:15	22		81		40		40		62		121		
06:30	29		68		65		81		94		149		
06:45	35	117	79	303	65	202	73	261	100	319	152	564	
07:00	52		68		71		52		123		120		
07:15	58		49		76		37		134		86		
07:30	44		71		98		33		142		104		
07:45	55	209	39	227	114	359	31	153	169	568	70	380	
08:00	56		39		119		24		175		63		
08:15	58		37		120		18		178		55		
08:30	58		31		92		23		150		54		
08:45	75	247	32	139	79	410	23	88	154	657	55	227	
09:00	54		18		84		28		138		46		
09:15	56		16		88		22		144		38		
09:30	62		24		55		17		117		41		
09:45	69	241	16	74	73	300	18	85	142	541	34	159	
10:00	60		21		73		16		133		37		
10:15	52		15		63		11		115		26		
10:30	53		17		64		8		117		25		
10:45	63	228	11	64	82	282	9	44	145	510	20	108	
11:00	74		10		67		3		141		13		
11:15	64		8		73		2		137		10		
11:30	54		10		63		5		117		15		
11:45	79	271	7	35	59	262	5	15	138	533	12	50	
Total	1464		2824		1994		2201		3458		5025		
Percent	42.3%		56.2%		57.7%		43.8%						
Day Total		4288				4195				8483			
Peak	11:00	-	03:00	-	07:30	-	12:00	-	07:45	-	03:15	-	-	-
Vol.	271	-	403	-	451	-	301	-	672	-	644	-	-	-
P.H.F.	0.858		0.800		0.940		0.907		0.944		0.856			

Libby Industrial Parkway
at #169 Libbey Parkway
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154694 B Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	EB				WB				Combined				08-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	8		73		3		76		11		149		
12:15	3		62		3		58		6		120		
12:30	3		74		1		70		4		144		
12:45	4	18	62	271	1	8	82	286	5	26	144	557	
01:00	6		76		1		67		7		143		
01:15	5		66		2		64		7		130		
01:30	7		76		0		68		7		144		
01:45	5	23	81	299	0	3	61	260	5	26	142	559	
02:00	6		88		2		83		8		171		
02:15	2		85		1		68		3		153		
02:30	4		79		2		75		6		154		
02:45	3	15	109	361	1	6	82	308	4	21	191	669	
03:00	4		95		1		70		5		165		
03:15	5		93		3		64		8		157		
03:30	3		100		7		65		10		165		
03:45	5	17	98	386	5	16	57	256	10	33	155	642	
04:00	3		83		14		59		17		142		
04:15	7		90		12		67		19		157		
04:30	6		96		14		71		20		167		
04:45	7	23	92	361	11	51	71	268	18	74	163	629	
05:00	10		93		31		82		41		175		
05:15	19		89		22		71		41		160		
05:30	16		68		27		56		43		124		
05:45	32	77	79	329	26	106	49	258	58	183	128	587	
06:00	28		70		32		59		60		129		
06:15	18		81		42		47		60		128		
06:30	38		55		54		69		92		124		
06:45	39	123	88	294	69	197	44	219	108	320	132	513	
07:00	71		51		82		53		153		104		
07:15	56		67		64		35		120		102		
07:30	47		55		107		30		154		85		
07:45	54	228	52	225	88	341	18	136	142	569	70	361	
08:00	57		48		110		45		167		93		
08:15	44		38		117		19		161		57		
08:30	49		38		83		16		132		54		
08:45	72	222	28	152	94	404	27	107	166	626	55	259	
09:00	70		26		81		13		151		39		
09:15	51		22		79		22		130		44		
09:30	52		17		69		17		121		34		
09:45	66	239	20	85	72	301	9	61	138	540	29	146	
10:00	65		13		75		14		140		27		
10:15	65		19		80		13		145		32		
10:30	68		20		56		6		124		26		
10:45	68	266	7	59	74	285	13	46	142	551	20	105	
11:00	48		19		51		7		99		26		
11:15	79		12		68		6		147		18		
11:30	67		11		59		8		126		19		
11:45	71	265	4	46	66	244	4	25	137	509	8	71	
Total	1516		2868		1962		2230		3478		5098		
Percent	43.6%		56.3%		56.4%		43.7%						
Day Total		4384				4192				8576			
Peak	10:00	-	02:45	-	07:30	-	02:00	-	08:00	-	02:45	-	-	-
Vol.	266	-	397	-	422	-	308	-	626	-	678	-	-	-
P.H.F.	0.978		0.911		0.902		0.928		0.937		0.887			

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

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154694 C Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	NB				SB				Combined				07-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	0		24		1		45		1		69		
12:15	0		31		1		30		1		61		
12:30	0		16		0		27		0		43		
12:45	0	0	32	103	1	3	28	130	1	3	60	233	
01:00	1		29		2		22		3		51		
01:15	1		36		2		26		3		62		
01:30	0		23		0		20		0		43		
01:45	0	2	32	120	0	4	31	99	0	6	63	219	
02:00	0		15		0		32		0		47		
02:15	0		22		0		30		0		52		
02:30	0		18		0		21		0		39		
02:45	0	0	39	94	0	0	27	110	0	0	66	204	
03:00	0		21		0		38		0		59		
03:15	0		18		0		26		0		44		
03:30	0		17		0		39		0		56		
03:45	0	0	29	85	0	0	31	134	0	0	60	219	
04:00	0		16		0		42		0		58		
04:15	0		11		0		30		0		41		
04:30	3		12		1		39		4		51		
04:45	2	5	14	53	1	2	28	139	3	7	42	192	
05:00	3		9		2		32		5		41		
05:15	1		12		1		31		2		43		
05:30	4		3		0		17		4		20		
05:45	5	13	17	41	3	6	18	98	8	19	35	139	
06:00	14		16		3		25		17		41		
06:15	9		7		3		15		12		22		
06:30	12		11		2		14		14		25		
06:45	35	70	9	43	1	9	11	65	36	79	20	108	
07:00	20		2		1		8		21		10		
07:15	33		4		9		12		42		16		
07:30	31		5		6		10		37		15		
07:45	37	121	3	14	8	24	14	44	45	145	17	58	
08:00	23		1		4		9		27		10		
08:15	40		0		11		7		51		7		
08:30	20		0		12		3		32		3		
08:45	41	124	1	2	13	40	6	25	54	164	7	27	
09:00	28		2		17		14		45		16		
09:15	35		0		20		5		55		5		
09:30	17		1		22		1		39		2		
09:45	38	118	1	4	24	83	1	21	62	201	2	25	
10:00	32		0		25		1		57		1		
10:15	28		1		27		1		55		2		
10:30	23		0		21		0		44		0		
10:45	44	127	8	9	27	100	3	5	71	227	11	14	
11:00	26		3		26		5		52		8		
11:15	27		1		19		5		46		6		
11:30	20		0		31		4		51		4		
11:45	16	89	0	4	33	109	1	15	49	198	1	19	
Total	669		572		380		885		1049		1457		
Percent	63.8%		39.3%		36.2%		60.7%						
Day Total		1241				1265				2506			
Peak	07:30	-	00:45	-	11:00	-	03:30	-	10:00	-	12:00	-	- -
Vol.	131	-	120	-	109	-	142	-	227	-	233	-	- -
P.H.F.	0.819		0.833		0.826		0.845		0.799		0.844		

Performance Drive
north of Industrial Parkway
City, State: Weymouth, MA
Client: TTR/C.Jones

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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154694 C Volume
Site Code: 14342892-15007
Date Start: 07-Oct-15

Start	NB				SB				Combined				08-Oct-15
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	0		30		0		29		0		59		
12:15	0		29		2		27		2		56		
12:30	1		19		1		32		2		51		
12:45	0	1	29	107	1	4	23	111	1	5	52	218	
01:00	1		29		1		17		2		46		
01:15	0		23		0		13		0		36		
01:30	0		16		0		26		0		42		
01:45	0	1	32	100	0	1	32	88	0	2	64	188	
02:00	0		32		0		29		0		61		
02:15	0		26		0		32		0		58		
02:30	0		16		0		21		0		37		
02:45	0	0	34	108	0	0	28	110	0	0	62	218	
03:00	0		22		0		38		0		60		
03:15	0		13		0		27		0		40		
03:30	0		17		0		31		0		48		
03:45	0	0	26	78	0	0	32	128	0	0	58	206	
04:00	0		16		0		24		0		40		
04:15	1		15		0		24		1		39		
04:30	0		11		0		45		0		56		
04:45	2	3	12	54	0	0	29	122	2	3	41	176	
05:00	2		6		2		29		4		35		
05:15	3		9		0		29		3		38		
05:30	2		8		0		20		2		28		
05:45	8	15	6	29	7	9	16	94	15	24	22	123	
06:00	9		10		1		14		10		24		
06:15	7		8		0		11		7		19		
06:30	12		8		2		7		14		15		
06:45	29	57	10	36	6	9	7	39	35	66	17	75	
07:00	23		2		9		11		32		13		
07:15	29		8		7		9		36		17		
07:30	29		2		7		14		36		16		
07:45	23	104	0	12	5	28	7	41	28	132	7	53	
08:00	39		3		12		9		51		12		
08:15	33		0		11		5		44		5		
08:30	32		0		16		10		48		10		
08:45	41	145	0	3	18	57	3	27	59	202	3	30	
09:00	21		1		12		9		33		10		
09:15	28		2		16		1		44		3		
09:30	24		1		17		0		41		1		
09:45	19	92	0	4	18	63	1	11	37	155	1	15	
10:00	22		0		18		0		40		0		
10:15	18		1		23		2		41		3		
10:30	27		0		11		1		38		1		
10:45	26	93	3	4	19	71	0	3	45	164	3	7	
11:00	21		6		23		6		44		12		
11:15	23		1		25		2		48		3		
11:30	24		2		31		4		55		6		
11:45	16	84	0	9	27	106	0	12	43	190	0	21	
Total	595		544		348		786		943		1330		
Percent	63.1%		40.9%		36.9%		59.1%						
Day Total		1139				1134				2273			
Peak	08:00	-	02:00	-	11:00	-	04:30	-	08:00	-	01:30	-	- -
Vol.	145	-	108	-	106	-	132	-	202	-	225	-	- -
P.H.F.	0.884		0.794		0.855		0.733		0.856		0.879		

Turning Movement Count Data

N/S: Middle Street
E/W: Libbey Industrial Pkwy/ Tara Drive
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154509 A
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	63	38	0	24	0	36	0	57	54	0	0	5	1	1	0	280
07:15 AM	0	54	33	0	27	0	29	0	56	68	1	0	3	1	2	0	274
07:30 AM	0	80	20	0	32	0	37	0	54	88	0	0	0	1	1	0	313
07:45 AM	0	64	32	0	25	0	44	0	69	91	0	0	5	0	2	0	332
Total	1	261	123	0	108	0	146	0	236	301	1	0	13	3	6	0	1199
08:00 AM	0	89	29	0	30	0	47	0	45	73	2	0	3	1	0	0	319
08:15 AM	0	114	50	0	35	0	37	0	58	67	1	0	3	1	2	0	368
08:30 AM	1	72	29	0	33	0	40	0	55	76	1	0	2	0	2	0	311
08:45 AM	1	88	30	0	27	0	41	0	82	77	2	0	3	0	0	0	351
Total	2	363	138	0	125	0	165	0	240	293	6	0	11	2	4	0	1349
Grand Total	3	624	261	0	233	0	311	0	476	594	7	0	24	5	10	0	2548
Apprch %	0.3	70.3	29.4	0	42.8	0	57.2	0	44.2	55.2	0.6	0	61.5	12.8	25.6	0	
Total %	0.1	24.5	10.2	0	9.1	0	12.2	0	18.7	23.3	0.3	0	0.9	0.2	0.4	0	
Cars	3	602	255	0	225	0	279	0	450	567	7	0	24	5	10	0	2427
% Cars	100	96.5	97.7	0	96.6	0	89.7	0	94.5	95.5	100	0	100	100	100	0	95.3
Heavy Vehicles	0	22	6	0	8	0	32	0	26	27	0	0	0	0	0	0	121
% Heavy Vehicles	0	3.5	2.3	0	3.4	0	10.3	0	5.5	4.5	0	0	0	0	0	0	4.7

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	89	29	0	118	30	0	47	0	77	45	73	2	0	120	3	1	0	0	4	319
08:15 AM	0	114	50	0	164	35	0	37	0	72	58	67	1	0	126	3	1	2	0	6	368
08:30 AM	1	72	29	0	102	33	0	40	0	73	55	76	1	0	132	2	0	2	0	4	311
08:45 AM	1	88	30	0	119	27	0	41	0	68	82	77	2	0	161	3	0	0	0	3	351
Total Volume	2	363	138	0	503	125	0	165	0	290	240	293	6	0	539	11	2	4	0	17	1349
% App. Total	0.4	72.2	27.4	0		43.1	0	56.9	0		44.5	54.4	1.1	0		64.7	11.8	23.5	0		
PHF	.500	.796	.690	.000	.767	.893	.000	.878	.000	.942	.732	.951	.750	.000	.837	.917	.500	.500	.000	.708	.916
Cars	2	348	135	0	485	118	0	149	0	267	224	284	6	0	514	11	2	4	0	17	1283
% Cars	100	95.9	97.8	0	96.4	94.4	0	90.3	0	92.1	93.3	96.9	100	0	95.4	100	100	100	0	100	95.1
Heavy Vehicles	0	15	3	0	18	7	0	16	0	23	16	9	0	0	25	0	0	0	0	0	66
% Heavy Vehicles	0	4.1	2.2	0	3.6	5.6	0	9.7	0	7.9	6.7	3.1	0	0	4.6	0	0	0	0	0	4.9

N/S: Middle Street
E/W: Libbey Industrial Pkwy/ Tara Drive
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

PRECISION DATA INDUSTRIES, LLC
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File Name : 154509 A
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Cars

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	62	37	0	24	0	31	0	56	47	0	0	5	1	1	0	265
07:15 AM	0	52	33	0	27	0	21	0	53	67	1	0	3	1	2	0	260
07:30 AM	0	77	19	0	31	0	36	0	52	84	0	0	0	1	1	0	301
07:45 AM	0	63	31	0	25	0	42	0	65	85	0	0	5	0	2	0	318
Total	1	254	120	0	107	0	130	0	226	283	1	0	13	3	6	0	1144
08:00 AM	0	87	28	0	28	0	42	0	42	72	2	0	3	1	0	0	305
08:15 AM	0	108	48	0	32	0	36	0	55	65	1	0	3	1	2	0	351
08:30 AM	1	67	29	0	32	0	37	0	51	72	1	0	2	0	2	0	294
08:45 AM	1	86	30	0	26	0	34	0	76	75	2	0	3	0	0	0	333
Total	2	348	135	0	118	0	149	0	224	284	6	0	11	2	4	0	1283
Grand Total	3	602	255	0	225	0	279	0	450	567	7	0	24	5	10	0	2427
Apprch %	0.3	70	29.7	0	44.6	0	55.4	0	43.9	55.4	0.7	0	61.5	12.8	25.6	0	
Total %	0.1	24.8	10.5	0	9.3	0	11.5	0	18.5	23.4	0.3	0	1	0.2	0.4	0	

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	87	28	0	115	28	0	42	0	70	42	72	2	0	116	3	1	0	0	4	305
08:15 AM	0	108	48	0	156	32	0	36	0	68	55	65	1	0	121	3	1	2	0	6	351
08:30 AM	1	67	29	0	97	32	0	37	0	69	51	72	1	0	124	2	0	2	0	4	294
08:45 AM	1	86	30	0	117	26	0	34	0	60	76	75	2	0	153	3	0	0	0	3	333
Total Volume	2	348	135	0	485	118	0	149	0	267	224	284	6	0	514	11	2	4	0	17	1283
% App. Total	0.4	71.8	27.8	0		44.2	0	55.8	0		43.6	55.3	1.2	0		64.7	11.8	23.5	0		
PHF	.500	.806	.703	.000	.777	.922	.000	.887	.000	.954	.737	.947	.750	.000	.840	.917	.500	.500	.000	.708	.914

N/S: Middle Street
E/W: Libbey Industrial Pkwy/ Tara Drive
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

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File Name : 154509 A
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	0	1	1	0	0	0	5	0	1	7	0	0	0	0	0	0	15
07:15 AM	0	2	0	0	0	0	8	0	3	1	0	0	0	0	0	0	14
07:30 AM	0	3	1	0	1	0	1	0	2	4	0	0	0	0	0	0	12
07:45 AM	0	1	1	0	0	0	2	0	4	6	0	0	0	0	0	0	14
Total	0	7	3	0	1	0	16	0	10	18	0	0	0	0	0	0	55
08:00 AM	0	2	1	0	2	0	5	0	3	1	0	0	0	0	0	0	14
08:15 AM	0	6	2	0	3	0	1	0	3	2	0	0	0	0	0	0	17
08:30 AM	0	5	0	0	1	0	3	0	4	4	0	0	0	0	0	0	17
08:45 AM	0	2	0	0	1	0	7	0	6	2	0	0	0	0	0	0	18
Total	0	15	3	0	7	0	16	0	16	9	0	0	0	0	0	0	66
Grand Total	0	22	6	0	8	0	32	0	26	27	0	0	0	0	0	0	121
Apprch %	0	78.6	21.4	0	20	0	80	0	49.1	50.9	0	0	0	0	0	0	
Total %	0	18.2	5	0	6.6	0	26.4	0	21.5	22.3	0	0	0	0	0	0	

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	2	1	0	3	2	0	5	0	7	3	1	0	0	4	0	0	0	0	0	14
08:15 AM	0	6	2	0	8	3	0	1	0	4	3	2	0	0	5	0	0	0	0	0	17
08:30 AM	0	5	0	0	5	1	0	3	0	4	4	4	0	0	8	0	0	0	0	0	17
08:45 AM	0	2	0	0	2	1	0	7	0	8	6	2	0	0	8	0	0	0	0	0	18
Total Volume	0	15	3	0	18	7	0	16	0	23	16	9	0	0	25	0	0	0	0	0	66
% App. Total	0	83.3	16.7	0		30.4	0	69.6	0		64	36	0	0		0	0	0	0		
PHF	.000	.625	.375	.000	.563	.583	.000	.571	.000	.719	.667	.563	.000	.000	.781	.000	.000	.000	.000	.000	.917

N/S: Middle Street
E/W: Libbey Industrial Pkwy/ Tara Drive
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

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File Name : 154509 A
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Peds and Bikes

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Grand Total	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	1	0	7
Apprch %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	100	0	0	0	100	0	
Total %	0	0	0	0	0	0	0	0	0	71.4	0	0	0	0	14.3	0	0	0	14.3	0	

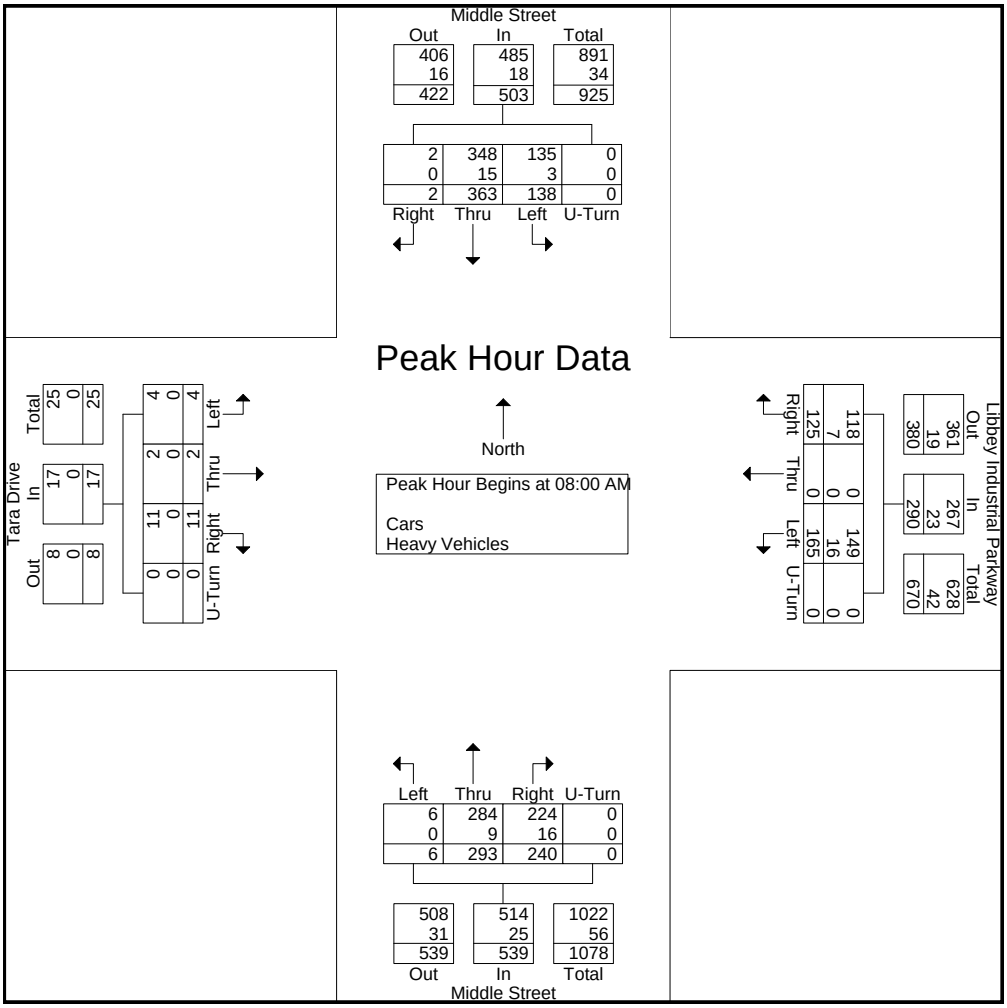
	Middle Street From North						Libbey Industrial Parkway From East						Middle Street From South						Tara Drive From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
% App. Total	0	0	0	0	0		0	0	0	0	100		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417

N/S: Middle Street
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	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	89	29	0	118	30	0	47	0	77	45	73	2	0	120	3	1	0	0	4	319
08:15 AM	0	114	50	0	164	35	0	37	0	72	58	67	1	0	126	3	1	2	0	6	368
08:30 AM	1	72	29	0	102	33	0	40	0	73	55	76	1	0	132	2	0	2	0	4	311
08:45 AM	1	88	30	0	119	27	0	41	0	68	82	77	2	0	161	3	0	0	0	3	351
Total Volume	2	363	138	0	503	125	0	165	0	290	240	293	6	0	539	11	2	4	0	17	1349
% App. Total	0.4	72.2	27.4	0		43.1	0	56.9	0		44.5	54.4	1.1	0		64.7	11.8	23.5	0		
PHF	.500	.796	.690	.000	.767	.893	.000	.878	.000	.942	.732	.951	.750	.000	.837	.917	.500	.500	.000	.708	.916
Cars	2	348	135	0	485	118	0	149	0	267	224	284	6	0	514	11	2	4	0	17	1283
% Cars	100	95.9	97.8	0	96.4	94.4	0	90.3	0	92.1	93.3	96.9	100	0	95.4	100	100	100	0	100	95.1
Heavy Vehicles	0	15	3	0	18	7	0	16	0	23	16	9	0	0	25	0	0	0	0	0	66
% Heavy Vehicles	0	4.1	2.2	0	3.6	5.6	0	9.7	0	7.9	6.7	3.1	0	0	4.6	0	0	0	0	0	4.9



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File Name : 154509 AA
Site Code : 42892140
Start Date : 6/17/2015
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Groups Printed- Cars - Heavy Vehicles

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	2	117	34	0	60	0	49	0	58	90	1	0	2	0	0	0	413
04:15 PM	2	89	40	0	44	0	54	0	57	110	6	0	0	1	0	0	403
04:30 PM	3	82	28	0	37	2	70	0	49	117	4	0	0	1	2	0	395
04:45 PM	0	101	32	0	48	0	43	0	51	103	5	0	2	0	0	0	385
Total	7	389	134	0	189	2	216	0	215	420	16	0	4	2	2	0	1596
05:00 PM	2	111	33	0	72	0	66	0	58	142	3	0	2	0	0	0	489
05:15 PM	1	101	32	0	44	0	52	0	53	118	2	0	2	0	1	0	406
05:30 PM	2	116	28	0	46	0	45	0	45	121	0	0	0	0	1	0	404
05:45 PM	2	113	36	0	33	0	42	0	43	87	2	0	1	0	3	0	362
Total	7	441	129	0	195	0	205	0	199	468	7	0	5	0	5	0	1661
Grand Total	14	830	263	0	384	2	421	0	414	888	23	0	9	2	7	0	3257
Apprch %	1.3	75	23.8	0	47.6	0.2	52.2	0	31.2	67	1.7	0	50	11.1	38.9	0	
Total %	0.4	25.5	8.1	0	11.8	0.1	12.9	0	12.7	27.3	0.7	0	0.3	0.1	0.2	0	
Cars	14	813	257	0	380	2	412	0	399	877	22	0	9	2	7	0	3194
% Cars	100	98	97.7	0	99	100	97.9	0	96.4	98.8	95.7	0	100	100	100	0	98.1
Heavy Vehicles	0	17	6	0	4	0	9	0	15	11	1	0	0	0	0	0	63
% Heavy Vehicles	0	2	2.3	0	1	0	2.1	0	3.6	1.2	4.3	0	0	0	0	0	1.9

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	101	32	0	133	48	0	43	0	91	51	103	5	0	159	2	0	0	0	2	385
05:00 PM	2	111	33	0	146	72	0	66	0	138	58	142	3	0	203	2	0	0	0	2	489
05:15 PM	1	101	32	0	134	44	0	52	0	96	53	118	2	0	173	2	0	1	0	3	406
05:30 PM	2	116	28	0	146	46	0	45	0	91	45	121	0	0	166	0	0	1	0	1	404
Total Volume	5	429	125	0	559	210	0	206	0	416	207	484	10	0	701	6	0	2	0	8	1684
% App. Total	0.9	76.7	22.4	0		50.5	0	49.5	0		29.5	69	1.4	0		75	0	25	0		
PHF	.625	.925	.947	.000	.957	.729	.000	.780	.000	.754	.892	.852	.500	.000	.863	.750	.000	.500	.000	.667	.861
Cars	5	421	122	0	548	210	0	204	0	414	195	479	10	0	684	6	0	2	0	8	1654
% Cars	100	98.1	97.6	0	98.0	100	0	99.0	0	99.5	94.2	99.0	100	0	97.6	100	0	100	0	100	98.2
Heavy Vehicles	0	8	3	0	11	0	0	2	0	2	12	5	0	0	17	0	0	0	0	0	30
% Heavy Vehicles	0	1.9	2.4	0	2.0	0	0	1.0	0	0.5	5.8	1.0	0	0	2.4	0	0	0	0	0	1.8

N/S: Middle Street
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File Name : 154509 AA
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Cars

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	2	114	33	0	59	0	45	0	57	88	1	0	2	0	0	0	401
04:15 PM	2	88	39	0	43	0	54	0	57	110	6	0	0	1	0	0	400
04:30 PM	3	79	27	0	35	2	67	0	47	113	4	0	0	1	2	0	380
04:45 PM	0	98	31	0	48	0	43	0	48	102	5	0	2	0	0	0	377
Total	7	379	130	0	185	2	209	0	209	413	16	0	4	2	2	0	1558
05:00 PM	2	110	33	0	72	0	66	0	52	140	3	0	2	0	0	0	480
05:15 PM	1	98	31	0	44	0	50	0	52	118	2	0	2	0	1	0	399
05:30 PM	2	115	27	0	46	0	45	0	43	119	0	0	0	0	1	0	398
05:45 PM	2	111	36	0	33	0	42	0	43	87	1	0	1	0	3	0	359
Total	7	434	127	0	195	0	203	0	190	464	6	0	5	0	5	0	1636
Grand Total	14	813	257	0	380	2	412	0	399	877	22	0	9	2	7	0	3194
Apprch %	1.3	75	23.7	0	47.9	0.3	51.9	0	30.7	67.6	1.7	0	50	11.1	38.9	0	
Total %	0.4	25.5	8	0	11.9	0.1	12.9	0	12.5	27.5	0.7	0	0.3	0.1	0.2	0	

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	98	31	0	129	48	0	43	0	91	48	102	5	0	155	2	0	0	0	2	377
05:00 PM	2	110	33	0	145	72	0	66	0	138	52	140	3	0	195	2	0	0	0	2	480
05:15 PM	1	98	31	0	130	44	0	50	0	94	52	118	2	0	172	2	0	1	0	3	399
05:30 PM	2	115	27	0	144	46	0	45	0	91	43	119	0	0	162	0	0	1	0	1	398
Total Volume	5	421	122	0	548	210	0	204	0	414	195	479	10	0	684	6	0	2	0	8	1654
% App. Total	0.9	76.8	22.3	0		50.7	0	49.3	0		28.5	70	1.5	0		75	0	25	0		
PHF	.625	.915	.924	.000	.945	.729	.000	.773	.000	.750	.938	.855	.500	.000	.877	.750	.000	.500	.000	.667	.861

N/S: Middle Street
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File Name : 154509 AA
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Middle Street From North				Libbey Industrial Parkway From East				Middle Street From South				Tara Drive From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	3	1	0	1	0	4	0	1	2	0	0	0	0	0	0	12
04:15 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	0	3	1	0	2	0	3	0	2	4	0	0	0	0	0	0	15
04:45 PM	0	3	1	0	0	0	0	0	3	1	0	0	0	0	0	0	8
Total	0	10	4	0	4	0	7	0	6	7	0	0	0	0	0	0	38
05:00 PM	0	1	0	0	0	0	0	0	6	2	0	0	0	0	0	0	9
05:15 PM	0	3	1	0	0	0	2	0	1	0	0	0	0	0	0	0	7
05:30 PM	0	1	1	0	0	0	0	0	2	2	0	0	0	0	0	0	6
05:45 PM	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Total	0	7	2	0	0	0	2	0	9	4	1	0	0	0	0	0	25
Grand Total	0	17	6	0	4	0	9	0	15	11	1	0	0	0	0	0	63
Apprch %	0	73.9	26.1	0	30.8	0	69.2	0	55.6	40.7	3.7	0	0	0	0	0	
Total %	0	27	9.5	0	6.3	0	14.3	0	23.8	17.5	1.6	0	0	0	0	0	

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	3	1	0	4	2	0	3	0	5	2	4	0	0	6	0	0	0	0	0	15
04:45 PM	0	3	1	0	4	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	8
05:00 PM	0	1	0	0	1	0	0	0	0	0	6	2	0	0	8	0	0	0	0	0	9
05:15 PM	0	3	1	0	4	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	7
Total Volume	0	10	3	0	13	2	0	5	0	7	12	7	0	0	19	0	0	0	0	0	39
% App. Total	0	76.9	23.1	0		28.6	0	71.4	0		63.2	36.8	0	0		0	0	0	0		
PHF	.000	.833	.750	.000	.813	.250	.000	.417	.000	.350	.500	.438	.000	.000	.594	.000	.000	.000	.000	.000	.650

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Groups Printed- Peds and Bikes

	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	4
04:30 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	1	6
Grand Total	1	0	0	0	0	0	0	0	0	5	2	0	0	1	0	0	0	0	4	1	14
Apprch %	100	0	0	0	0	0	0	0	0	100	66.7	0	0	33.3	0	0	0	0	80	20	
Total %	7.1	0	0	0	0	0	0	0	0	35.7	14.3	0	0	7.1	0	0	0	0	28.6	7.1	

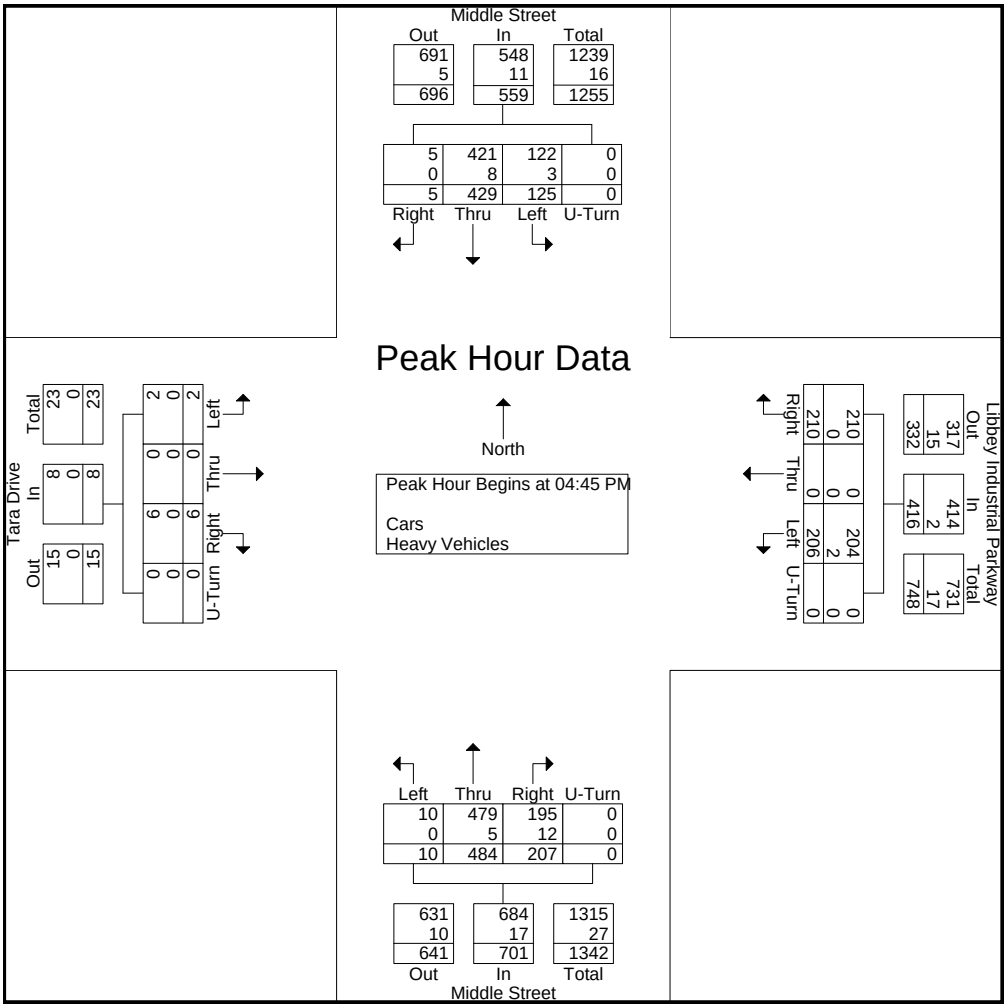
	Middle Street From North						Libbey Industrial Parkway From East						Middle Street From South						Tara Drive From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	3	3	1	0	0	0	0	1	0	0	0	0	0	0	4
04:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	0	1	0	0	0	0	5	5	2	0	0	0	0	2	0	0	0	0	0	0	8
% App. Total	100	0	0	0	0		0	0	0	0	100		100	0	0	0	0		0	0	0	0	0		
PHF	.250	.000	.000	.000	.000	.250	.000	.000	.000	.000	.417	.417	.500	.000	.000	.000	.000	.500	.000	.000	.000	.000	.000	.000	.500

N/S: Middle Street
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	Middle Street From North					Libbey Industrial Parkway From East					Middle Street From South					Tara Drive From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	101	32	0	133	48	0	43	0	91	51	103	5	0	159	2	0	0	0	2	385
05:00 PM	2	111	33	0	146	72	0	66	0	138	58	142	3	0	203	2	0	0	0	2	489
05:15 PM	1	101	32	0	134	44	0	52	0	96	53	118	2	0	173	2	0	1	0	3	406
05:30 PM	2	116	28	0	146	46	0	45	0	91	45	121	0	0	166	0	0	1	0	1	404
Total Volume	5	429	125	0	559	210	0	206	0	416	207	484	10	0	701	6	0	2	0	8	1684
% App. Total	0.9	76.7	22.4	0		50.5	0	49.5	0		29.5	69	1.4	0		75	0	25	0		
PHF	.625	.925	.947	.000	.957	.729	.000	.780	.000	.754	.892	.852	.500	.000	.863	.750	.000	.500	.000	.667	.861
Cars	5	421	122	0	548	210	0	204	0	414	195	479	10	0	684	6	0	2	0	8	1654
% Cars	100	98.1	97.6	0	98.0	100	0	99.0	0	99.5	94.2	99.0	100	0	97.6	100	0	100	0	100	98.2
Heavy Vehicles	0	8	3	0	11	0	0	2	0	2	12	5	0	0	17	0	0	0	0	0	30
% Heavy Vehicles	0	1.9	2.4	0	2.0	0	0	1.0	0	0.5	5.8	1.0	0	0	2.4	0	0	0	0	0	1.8



N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

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Start Date : 6/17/2015
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Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	19	237	0	0	0	0	0	0	0	174	65	0	41	0	9	0	545
07:15 AM	24	217	0	0	1	0	0	0	0	263	61	0	33	0	4	0	603
07:30 AM	29	140	0	0	0	0	0	0	0	260	95	0	19	0	9	0	552
07:45 AM	52	162	0	0	0	0	0	0	0	252	85	0	30	0	13	0	594
Total	124	756	0	0	1	0	0	0	0	949	306	0	123	0	35	0	2294
08:00 AM	28	153	0	0	0	0	0	0	0	229	96	0	24	0	8	0	538
08:15 AM	44	164	0	0	0	0	0	0	0	213	82	0	39	0	18	0	560
08:30 AM	32	159	0	0	0	0	0	0	0	176	85	0	23	0	14	0	489
08:45 AM	41	154	0	0	0	0	0	0	0	198	80	0	42	0	11	0	526
Total	145	630	0	0	0	0	0	0	0	816	343	0	128	0	51	0	2113
Grand Total	269	1386	0	0	1	0	0	0	0	1765	649	0	251	0	86	0	4407
Apprch %	16.3	83.7	0	0	100	0	0	0	0	73.1	26.9	0	74.5	0	25.5	0	
Total %	6.1	31.4	0	0	0	0	0	0	0	40	14.7	0	5.7	0	2	0	
Cars	260	1284	0	0	1	0	0	0	0	1659	611	0	224	0	77	0	4116
% Cars	96.7	92.6	0	0	100	0	0	0	0	94	94.1	0	89.2	0	89.5	0	93.4
Heavy Vehicles	9	102	0	0	0	0	0	0	0	106	38	0	27	0	9	0	291
% Heavy Vehicles	3.3	7.4	0	0	0	0	0	0	0	6	5.9	0	10.8	0	10.5	0	6.6

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	19	237	0	0	256	0	0	0	0	0	0	174	65	0	239	41	0	9	0	50	545
07:15 AM	24	217	0	0	241	1	0	0	0	1	0	263	61	0	324	33	0	4	0	37	603
07:30 AM	29	140	0	0	169	0	0	0	0	0	0	260	95	0	355	19	0	9	0	28	552
07:45 AM	52	162	0	0	214	0	0	0	0	0	0	252	85	0	337	30	0	13	0	43	594
Total Volume	124	756	0	0	880	1	0	0	0	1	0	949	306	0	1255	123	0	35	0	158	2294
% App. Total	14.1	85.9	0	0		100	0	0	0		0	75.6	24.4	0		77.8	0	22.2	0		
PHF	.596	.797	.000	.000	.859	.250	.000	.000	.000	.250	.000	.902	.805	.000	.884	.750	.000	.673	.000	.790	.951
Cars	120	708	0	0	828	1	0	0	0	1	0	891	289	0	1180	116	0	31	0	147	2156
% Cars	96.8	93.7	0	0	94.1	100	0	0	0	100	0	93.9	94.4	0	94.0	94.3	0	88.6	0	93.0	94.0
Heavy Vehicles	4	48	0	0	52	0	0	0	0	0	0	58	17	0	75	7	0	4	0	11	138
% Heavy Vehicles	3.2	6.3	0	0	5.9	0	0	0	0	0	0	6.1	5.6	0	6.0	5.7	0	11.4	0	7.0	6.0

N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
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File Name : 154509 B
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Cars

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	18	219	0	0	0	0	0	0	0	165	57	0	39	0	8	0	506
07:15 AM	24	206	0	0	1	0	0	0	0	249	57	0	31	0	4	0	572
07:30 AM	27	130	0	0	0	0	0	0	0	245	91	0	17	0	9	0	519
07:45 AM	51	153	0	0	0	0	0	0	0	232	84	0	29	0	10	0	559
Total	120	708	0	0	1	0	0	0	0	891	289	0	116	0	31	0	2156
08:00 AM	28	143	0	0	0	0	0	0	0	214	92	0	18	0	7	0	502
08:15 AM	42	150	0	0	0	0	0	0	0	199	76	0	33	0	15	0	515
08:30 AM	30	145	0	0	0	0	0	0	0	169	83	0	20	0	14	0	461
08:45 AM	40	138	0	0	0	0	0	0	0	186	71	0	37	0	10	0	482
Total	140	576	0	0	0	0	0	0	0	768	322	0	108	0	46	0	1960
Grand Total	260	1284	0	0	1	0	0	0	0	1659	611	0	224	0	77	0	4116
Apprch %	16.8	83.2	0	0	100	0	0	0	0	73.1	26.9	0	74.4	0	25.6	0	
Total %	6.3	31.2	0	0	0	0	0	0	0	40.3	14.8	0	5.4	0	1.9	0	

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	18	219	0	0	237	0	0	0	0	0	0	165	57	0	222	39	0	8	0	47	506
07:15 AM	24	206	0	0	230	1	0	0	0	1	0	249	57	0	306	31	0	4	0	35	572
07:30 AM	27	130	0	0	157	0	0	0	0	0	0	245	91	0	336	17	0	9	0	26	519
07:45 AM	51	153	0	0	204	0	0	0	0	0	0	232	84	0	316	29	0	10	0	39	559
Total Volume	120	708	0	0	828	1	0	0	0	1	0	891	289	0	1180	116	0	31	0	147	2156
% App. Total	14.5	85.5	0	0		100	0	0	0		0	75.5	24.5	0		78.9	0	21.1	0		
PHF	.588	.808	.000	.000	.873	.250	.000	.000	.000	.250	.000	.895	.794	.000	.878	.744	.000	.775	.000	.782	.942

N/S: Pleasant Street
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Groups Printed- Heavy Vehicles

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	18	0	0	0	0	0	0	0	9	8	0	2	0	1	0	39
07:15 AM	0	11	0	0	0	0	0	0	0	14	4	0	2	0	0	0	31
07:30 AM	2	10	0	0	0	0	0	0	0	15	4	0	2	0	0	0	33
07:45 AM	1	9	0	0	0	0	0	0	0	20	1	0	1	0	3	0	35
Total	4	48	0	0	0	0	0	0	0	58	17	0	7	0	4	0	138
08:00 AM	0	10	0	0	0	0	0	0	0	15	4	0	6	0	1	0	36
08:15 AM	2	14	0	0	0	0	0	0	0	14	6	0	6	0	3	0	45
08:30 AM	2	14	0	0	0	0	0	0	0	7	2	0	3	0	0	0	28
08:45 AM	1	16	0	0	0	0	0	0	0	12	9	0	5	0	1	0	44
Total	5	54	0	0	0	0	0	0	0	48	21	0	20	0	5	0	153
Grand Total	9	102	0	0	0	0	0	0	0	106	38	0	27	0	9	0	291
Apprch %	8.1	91.9	0	0	0	0	0	0	0	73.6	26.4	0	75	0	25	0	
Total %	3.1	35.1	0	0	0	0	0	0	0	36.4	13.1	0	9.3	0	3.1	0	

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	10	0	0	10	0	0	0	0	0	0	15	4	0	19	6	0	1	0	7	36
08:15 AM	2	14	0	0	16	0	0	0	0	0	0	14	6	0	20	6	0	3	0	9	45
08:30 AM	2	14	0	0	16	0	0	0	0	0	0	7	2	0	9	3	0	0	0	3	28
08:45 AM	1	16	0	0	17	0	0	0	0	0	0	12	9	0	21	5	0	1	0	6	44
Total Volume	5	54	0	0	59	0	0	0	0	0	0	48	21	0	69	20	0	5	0	25	153
% App. Total	8.5	91.5	0	0		0	0	0	0		0	69.6	30.4	0		80	0	20	0		
PHF	.625	.844	.000	.000	.868	.000	.000	.000	.000	.000	.000	.800	.583	.000	.821	.833	.000	.417	.000	.694	.850

N/S: Pleasant Street
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Groups Printed- Peds and Bikes

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

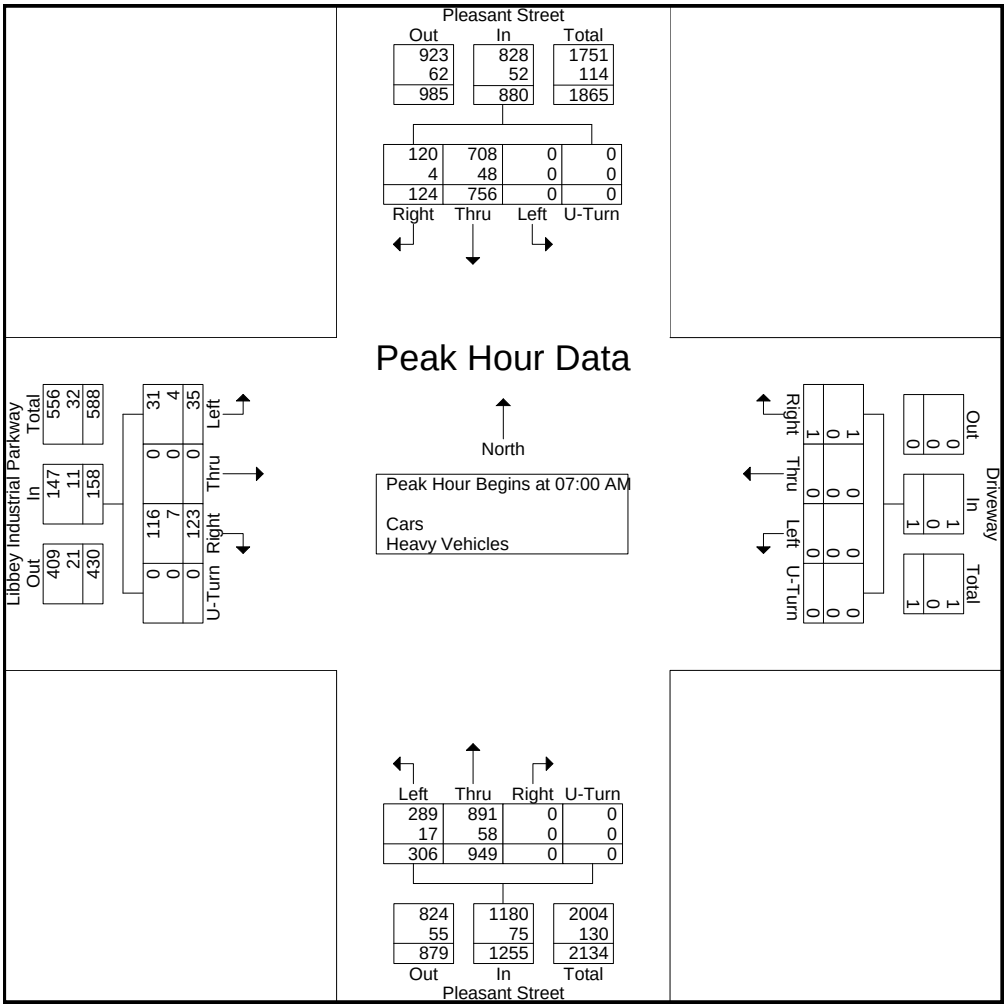
	Pleasant Street From North						Driveway From East						Pleasant Street From South						Libbey Industrial Parkway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	50	50	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
PHF	.250	.250	.000	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

N/S: Pleasant Street
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	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	19	237	0	0	256	0	0	0	0	0	0	174	65	0	239	41	0	9	0	50	545
07:15 AM	24	217	0	0	241	1	0	0	0	1	0	263	61	0	324	33	0	4	0	37	603
07:30 AM	29	140	0	0	169	0	0	0	0	0	0	260	95	0	355	19	0	9	0	28	552
07:45 AM	52	162	0	0	214	0	0	0	0	0	0	252	85	0	337	30	0	13	0	43	594
Total Volume	124	756	0	0	880	1	0	0	0	1	0	949	306	0	1255	123	0	35	0	158	2294
% App. Total	14.1	85.9	0	0		100	0	0	0		0	75.6	24.4	0		77.8	0	22.2	0		
PHF	.596	.797	.000	.000	.859	.250	.000	.000	.000	.250	.000	.902	.805	.000	.884	.750	.000	.673	.000	.790	.951
Cars	120	708	0	0	828	1	0	0	0	1	0	891	289	0	1180	116	0	31	0	147	2156
% Cars	96.8	93.7	0	0	94.1	100	0	0	0	100	0	93.9	94.4	0	94.0	94.3	0	88.6	0	93.0	94.0
Heavy Vehicles	4	48	0	0	52	0	0	0	0	0	0	58	17	0	75	7	0	4	0	11	138
% Heavy Vehicles	3.2	6.3	0	0	5.9	0	0	0	0	0	0	6.1	5.6	0	6.0	5.7	0	11.4	0	7.0	6.0



N/S: Pleasant Street
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Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	19	217	0	0	0	0	0	0	0	178	29	0	85	0	24	0	552
04:15 PM	9	213	0	0	0	0	0	0	0	194	43	0	94	0	26	0	579
04:30 PM	14	229	1	0	0	0	0	0	0	194	22	0	82	0	36	2	580
04:45 PM	19	242	0	0	1	0	0	0	2	203	34	0	69	0	25	0	595
Total	61	901	1	0	1	0	0	0	2	769	128	0	330	0	111	2	2306
05:00 PM	25	227	0	0	0	0	0	0	1	198	28	0	105	0	28	0	612
05:15 PM	17	241	0	0	2	0	0	0	0	206	22	0	66	0	23	0	577
05:30 PM	15	233	1	0	0	1	0	0	0	174	27	0	89	0	34	0	574
05:45 PM	20	190	0	0	0	0	0	0	0	184	31	0	66	0	27	0	518
Total	77	891	1	0	2	1	0	0	1	762	108	0	326	0	112	0	2281
Grand Total	138	1792	2	0	3	1	0	0	3	1531	236	0	656	0	223	2	4587
Apprch %	7.1	92.8	0.1	0	75	25	0	0	0.2	86.5	13.3	0	74.5	0	25.3	0.2	
Total %	3	39.1	0	0	0.1	0	0	0	0.1	33.4	5.1	0	14.3	0	4.9	0	
Cars	137	1721	2	0	3	1	0	0	3	1511	232	0	636	0	218	2	4466
% Cars	99.3	96	100	0	100	100	0	0	100	98.7	98.3	0	97	0	97.8	100	97.4
Heavy Vehicles	1	71	0	0	0	0	0	0	0	20	4	0	20	0	5	0	121
% Heavy Vehicles	0.7	4	0	0	0	0	0	0	0	1.3	1.7	0	3	0	2.2	0	2.6

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	9	213	0	0	222	0	0	0	0	0	0	194	43	0	237	94	0	26	0	120	579
04:30 PM	14	229	1	0	244	0	0	0	0	0	0	194	22	0	216	82	0	36	2	120	580
04:45 PM	19	242	0	0	261	1	0	0	0	1	2	203	34	0	239	69	0	25	0	94	595
05:00 PM	25	227	0	0	252	0	0	0	0	0	1	198	28	0	227	105	0	28	0	133	612
Total Volume	67	911	1	0	979	1	0	0	0	1	3	789	127	0	919	350	0	115	2	467	2366
% App. Total	6.8	93.1	0.1	0		100	0	0	0		0.3	85.9	13.8	0		74.9	0	24.6	0.4		
PHF	.670	.941	.250	.000	.938	.250	.000	.000	.000	.250	.375	.972	.738	.000	.961	.833	.000	.799	.250	.878	.967
Cars	66	879	1	0	946	1	0	0	0	1	3	778	127	0	908	340	0	111	2	453	2308
% Cars	98.5	96.5	100	0	96.6	100	0	0	0	100	100	98.6	100	0	98.8	97.1	0	96.5	100	97.0	97.5
Heavy Vehicles	1	32	0	0	33	0	0	0	0	0	0	11	0	0	11	10	0	4	0	14	58
% Heavy Vehicles	1.5	3.5	0	0	3.4	0	0	0	0	0	0	1.4	0	0	1.2	2.9	0	3.5	0	3.0	2.5

N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

PRECISION DATA INDUSTRIES, LLC
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File Name : 154509 BB
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

Groups Printed- Cars

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	19	205	0	0	0	0	0	0	0	174	26	0	82	0	24	0	530
04:15 PM	9	203	0	0	0	0	0	0	0	189	43	0	90	0	25	0	559
04:30 PM	14	220	1	0	0	0	0	0	0	191	22	0	82	0	34	2	566
04:45 PM	18	235	0	0	1	0	0	0	2	201	34	0	67	0	25	0	583
Total	60	863	1	0	1	0	0	0	2	755	125	0	321	0	108	2	2238
05:00 PM	25	221	0	0	0	0	0	0	1	197	28	0	101	0	27	0	600
05:15 PM	17	234	0	0	2	0	0	0	0	204	21	0	63	0	22	0	563
05:30 PM	15	224	1	0	0	1	0	0	0	173	27	0	86	0	34	0	561
05:45 PM	20	179	0	0	0	0	0	0	0	182	31	0	65	0	27	0	504
Total	77	858	1	0	2	1	0	0	1	756	107	0	315	0	110	0	2228
Grand Total	137	1721	2	0	3	1	0	0	3	1511	232	0	636	0	218	2	4466
Apprch %	7.4	92.5	0.1	0	75	25	0	0	0.2	86.5	13.3	0	74.3	0	25.5	0.2	
Total %	3.1	38.5	0	0	0.1	0	0	0	0.1	33.8	5.2	0	14.2	0	4.9	0	

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	14	220	1	0	235	0	0	0	0	0	0	191	22	0	213	82	0	34	2	118	566
04:45 PM	18	235	0	0	253	1	0	0	0	1	2	201	34	0	237	67	0	25	0	92	583
05:00 PM	25	221	0	0	246	0	0	0	0	0	1	197	28	0	226	101	0	27	0	128	600
05:15 PM	17	234	0	0	251	2	0	0	0	2	0	204	21	0	225	63	0	22	0	85	563
Total Volume	74	910	1	0	985	3	0	0	0	3	3	793	105	0	901	313	0	108	2	423	2312
% App. Total	7.5	92.4	0.1	0		100	0	0	0		0.3	88	11.7	0		74	0	25.5	0.5		
PHF	.740	.968	.250	.000	.973	.375	.000	.000	.000	.375	.375	.972	.772	.000	.950	.775	.000	.794	.250	.826	.963

N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

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File Name : 154509 BB
Site Code : 42892140
Start Date : 6/17/2015
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Groups Printed- Heavy Vehicles

	Pleasant Street From North				Driveway From East				Pleasant Street From South				Libbey Industrial Parkway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	12	0	0	0	0	0	0	0	4	3	0	3	0	0	0	22
04:15 PM	0	10	0	0	0	0	0	0	0	5	0	0	4	0	1	0	20
04:30 PM	0	9	0	0	0	0	0	0	0	3	0	0	0	0	2	0	14
04:45 PM	1	7	0	0	0	0	0	0	0	2	0	0	2	0	0	0	12
Total	1	38	0	0	0	0	0	0	0	14	3	0	9	0	3	0	68
05:00 PM	0	6	0	0	0	0	0	0	0	1	0	0	4	0	1	0	12
05:15 PM	0	7	0	0	0	0	0	0	0	2	1	0	3	0	1	0	14
05:30 PM	0	9	0	0	0	0	0	0	0	1	0	0	3	0	0	0	13
05:45 PM	0	11	0	0	0	0	0	0	0	2	0	0	1	0	0	0	14
Total	0	33	0	0	0	0	0	0	0	6	1	0	11	0	2	0	53
Grand Total	1	71	0	0	0	0	0	0	0	20	4	0	20	0	5	0	121
Apprch %	1.4	98.6	0	0	0	0	0	0	0	83.3	16.7	0	80	0	20	0	
Total %	0.8	58.7	0	0	0	0	0	0	0	16.5	3.3	0	16.5	0	4.1	0	

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	12	0	0	12	0	0	0	0	0	0	4	3	0	7	3	0	0	0	3	22
04:15 PM	0	10	0	0	10	0	0	0	0	0	0	5	0	0	5	4	0	1	0	5	20
04:30 PM	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	14
04:45 PM	1	7	0	0	8	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	12
Total Volume	1	38	0	0	39	0	0	0	0	0	0	14	3	0	17	9	0	3	0	12	68
% App. Total	2.6	97.4	0	0		0	0	0	0		0	82.4	17.6	0		75	0	25	0		
PHF	.250	.792	.000	.000	.813	.000	.000	.000	.000	.000	.000	.700	.250	.000	.607	.563	.000	.375	.000	.600	.773

N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
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Site Code : 42892140
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Groups Printed- Peds and Bikes

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	1	5
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	4
Grand Total	0	1	0	0	0	0	0	0	1	1	0	4	0	0	0	0	0	0	0	2	9
Apprch %	0	100	0	0	0	0	0	0	50	50	0	100	0	0	0	0	0	0	0	100	
Total %	0	11.1	0	0	0	0	0	0	11.1	11.1	0	44.4	0	0	0	0	0	0	0	22.2	

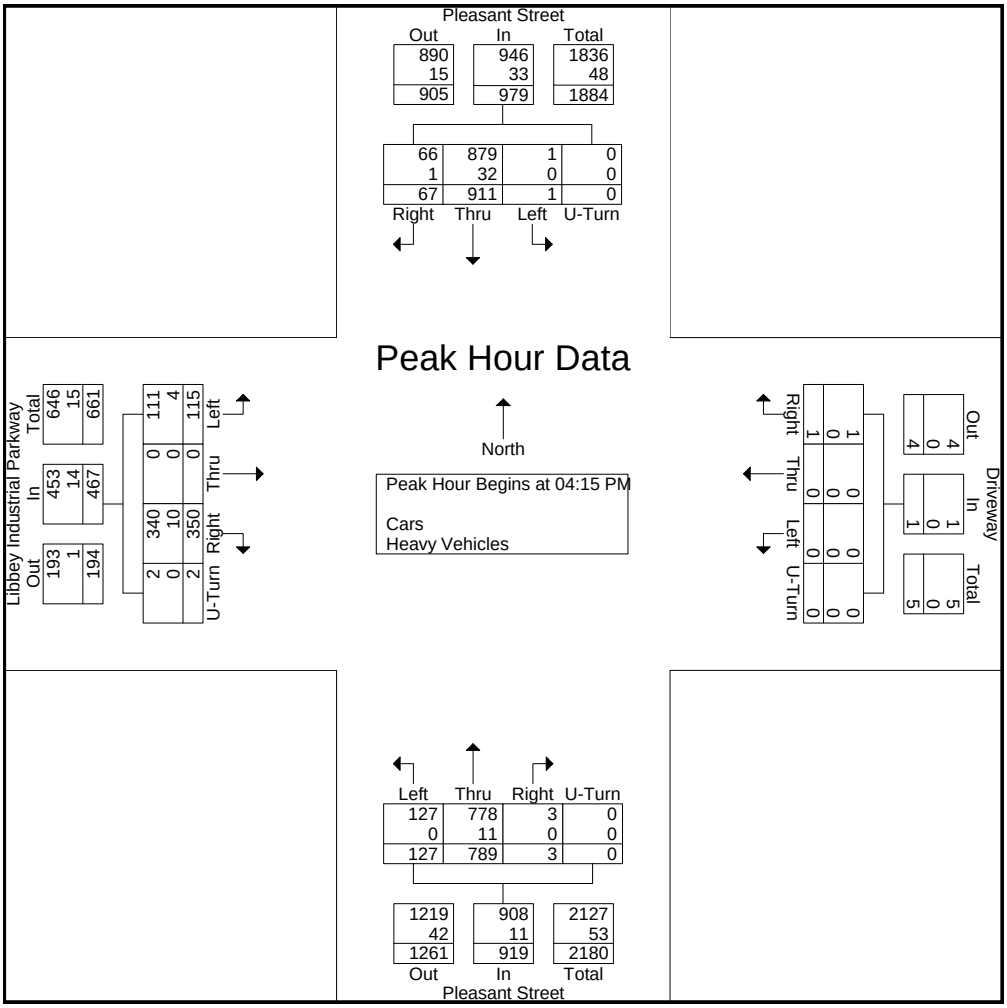
	Pleasant Street From North						Driveway From East						Pleasant Street From South						Libbey Industrial Parkway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:15 PM																									
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	2	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	1	1	2	0	3	0	0	0	3	0	0	0	0	1	1	6
% App. Total	0	0	0	0	0		0	0	0	50	50		0	100	0	0	0		0	0	0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.000	.375	.000	.000	.000	.375	.000	.000	.000	.000	.250	.250	.500

N/S: Pleasant Street
E/W: Driveway/ Libbey Industrial Pkwy
City, State: Weymouth, MA
Client: Tetra Tech/ N. Doherty

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File Name : 154509 BB
Site Code : 42892140
Start Date : 6/17/2015
Page No : 1

	Pleasant Street From North					Driveway From East					Pleasant Street From South					Libbey Industrial Parkway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	9	213	0	0	222	0	0	0	0	0	0	194	43	0	237	94	0	26	0	120	579
04:30 PM	14	229	1	0	244	0	0	0	0	0	0	194	22	0	216	82	0	36	2	120	580
04:45 PM	19	242	0	0	261	1	0	0	0	1	2	203	34	0	239	69	0	25	0	94	595
05:00 PM	25	227	0	0	252	0	0	0	0	0	1	198	28	0	227	105	0	28	0	133	612
Total Volume	67	911	1	0	979	1	0	0	0	1	3	789	127	0	919	350	0	115	2	467	2366
% App. Total	6.8	93.1	0.1	0		100	0	0	0		0.3	85.9	13.8	0		74.9	0	24.6	0.4		
PHF	.670	.941	.250	.000	.938	.250	.000	.000	.000	.250	.375	.972	.738	.000	.961	.833	.000	.799	.250	.878	.967
Cars	66	879	1	0	946	1	0	0	0	1	3	778	127	0	908	340	0	111	2	453	2308
% Cars	98.5	96.5	100	0	96.6	100	0	0	0	100	100	98.6	100	0	98.8	97.1	0	96.5	100	97.0	97.5
Heavy Vehicles	1	32	0	0	33	0	0	0	0	0	0	11	0	0	11	10	0	4	0	14	58
% Heavy Vehicles	1.5	3.5	0	0	3.4	0	0	0	0	0	0	1.4	0	0	1.2	2.9	0	3.5	0	3.0	2.5



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N/S: Main Street (Route 18)
E/W: Middle Street/ West Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 A
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	32	179	29	0	60	52	40	0	18	304	18	0	17	30	29	0	808
07:15 AM	36	177	44	0	50	40	59	0	47	321	28	0	16	28	33	0	879
07:30 AM	39	129	37	0	40	56	47	0	32	318	28	0	5	33	38	0	802
07:45 AM	53	165	58	0	50	67	41	0	47	261	23	0	17	45	30	0	857
Total	160	650	168	0	200	215	187	0	144	1204	97	0	55	136	130	0	3346
08:00 AM	67	164	42	0	75	78	41	0	44	254	21	0	17	52	45	0	900
08:15 AM	57	154	49	1	75	71	53	0	57	300	38	0	15	64	35	0	969
08:30 AM	60	162	60	0	44	66	47	0	47	257	16	0	10	51	44	0	864
08:45 AM	65	168	61	2	54	58	44	0	51	217	18	0	14	47	42	0	841
Total	249	648	212	3	248	273	185	0	199	1028	93	0	56	214	166	0	3574
Grand Total	409	1298	380	3	448	488	372	0	343	2232	190	0	111	350	296	0	6920
Apprch %	19.6	62.1	18.2	0.1	34.3	37.3	28.4	0	12.4	80.7	6.9	0	14.7	46.2	39.1	0	
Total %	5.9	18.8	5.5	0	6.5	7.1	5.4	0	5	32.3	2.7	0	1.6	5.1	4.3	0	
Cars	382	1209	354	3	417	476	354	0	324	2155	183	0	103	332	285	0	6577
% Cars	93.4	93.1	93.2	100	93.1	97.5	95.2	0	94.5	96.6	96.3	0	92.8	94.9	96.3	0	95
Heavy Vehicles	27	89	26	0	31	12	18	0	19	77	7	0	8	18	11	0	343
% Heavy Vehicles	6.6	6.9	6.8	0	6.9	2.5	4.8	0	5.5	3.4	3.7	0	7.2	5.1	3.7	0	5

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	53	**165**	58	0	276	50	67	41	0	158	47	261	23	0	331	**17**	45	30	0	92	857
08:00 AM	**67**	164	42	0	273	**75**	**78**	41	0	194	44	254	21	0	319	17	52	**45**	0	**114**	900
08:15 AM	57	154	49	**1**	261	75	71	**53**	0	**199**	**57**	**300**	**38**	0	**395**	15	**64**	35	0	114	**969**
08:30 AM	60	162	**60**	0	**282**	44	66	47	0	157	47	257	16	0	320	10	51	44	0	105	864
Total Volume	237	645	209	1	1092	244	282	182	0	708	195	1072	98	0	1365	59	212	154	0	425	3590
% App. Total	21.7	59.1	19.1	0.1		34.5	39.8	25.7	0		14.3	78.5	7.2	0		13.9	49.9	36.2	0		
PHF	.884	.977	.871	.250	.968	.813	.904	.858	.000	.889	.855	.893	.645	.000	.864	.868	.828	.856	.000	.932	.926
Cars	217	597	192	1	1007	228	275	169	0	672	182	1030	93	0	1305	55	203	147	0	405	3389
% Cars	91.6	92.6	91.9	100	92.2	93.4	97.5	92.9	0	94.9	93.3	96.1	94.9	0	95.6	93.2	95.8	95.5	0	95.3	94.4
Heavy Vehicles	20	48	17	0	85	16	7	13	0	36	13	42	5	0	60	4	9	7	0	20	201
% Heavy Vehicles	8.4	7.4	8.1	0	7.8	6.6	2.5	7.1	0	5.1	6.7	3.9	5.1	0	4.4	6.8	4.2	4.5	0	4.7	5.6

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File Name : 154694 A
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	31	174	28	0	54	51	40	0	17	293	17	0	15	27	29	0	776
07:15 AM	34	169	43	0	46	40	58	0	46	311	27	0	16	27	32	0	849
07:30 AM	38	119	35	0	38	54	45	0	30	308	28	0	5	32	38	0	770
07:45 AM	50	149	52	0	46	64	40	0	45	253	22	0	14	44	30	0	809
Total	153	611	158	0	184	209	183	0	138	1165	94	0	50	130	129	0	3204
08:00 AM	64	157	41	0	70	76	40	0	39	243	21	0	16	48	44	0	859
08:15 AM	51	150	45	1	71	71	48	0	55	288	35	0	15	62	32	0	924
08:30 AM	52	141	54	0	41	64	41	0	43	246	15	0	10	49	41	0	797
08:45 AM	62	150	56	2	51	56	42	0	49	213	18	0	12	43	39	0	793
Total	229	598	196	3	233	267	171	0	186	990	89	0	53	202	156	0	3373
Grand Total	382	1209	354	3	417	476	354	0	324	2155	183	0	103	332	285	0	6577
Apprch %	19.6	62.1	18.2	0.2	33.4	38.2	28.4	0	12.2	81	6.9	0	14.3	46.1	39.6	0	
Total %	5.8	18.4	5.4	0	6.3	7.2	5.4	0	4.9	32.8	2.8	0	1.6	5	4.3	0	

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	50	149	52	0	251	46	64	40	0	150	45	253	22	0	320	14	44	30	0	88	809
08:00 AM	**64**	**157**	41	0	**262**	70	**76**	40	0	186	39	243	21	0	303	**16**	48	**44**	0	108	859
08:15 AM	51	150	45	**1**	247	**71**	71	**48**	0	**190**	**55**	**288**	**35**	0	**378**	15	**62**	32	0	**109**	**924**
08:30 AM	52	141	**54**	0	247	41	64	41	0	146	43	246	15	0	304	10	49	41	0	100	797
Total Volume	217	597	192	1	1007	228	275	169	0	672	182	1030	93	0	1305	55	203	147	0	405	3389
% App. Total	21.5	59.3	19.1	0.1		33.9	40.9	25.1	0		13.9	78.9	7.1	0		13.6	50.1	36.3	0		
PHF	.848	.951	.889	.250	.961	.803	.905	.880	.000	.884	.827	.894	.664	.000	.863	.859	.819	.835	.000	.929	.917

PRECISION
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N/S: Main Street (Route 18)
E/W: Middle Street/ West Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 A
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	5	1	0	6	1	0	0	1	11	1	0	2	3	0	0	32
07:15 AM	2	8	1	0	4	0	1	0	1	10	1	0	0	1	1	0	30
07:30 AM	1	10	2	0	2	2	2	0	2	10	0	0	0	1	0	0	32
07:45 AM	3	16	6	0	4	3	1	0	2	8	1	0	3	1	0	0	48
Total	7	39	10	0	16	6	4	0	6	39	3	0	5	6	1	0	142
08:00 AM	3	7	1	0	5	2	1	0	5	11	0	0	1	4	1	0	41
08:15 AM	6	4	4	0	4	0	5	0	2	12	3	0	0	2	3	0	45
08:30 AM	8	21	6	0	3	2	6	0	4	11	1	0	0	2	3	0	67
08:45 AM	3	18	5	0	3	2	2	0	2	4	0	0	2	4	3	0	48
Total	20	50	16	0	15	6	14	0	13	38	4	0	3	12	10	0	201
Grand Total	27	89	26	0	31	12	18	0	19	77	7	0	8	18	11	0	343
Apprch %	19	62.7	18.3	0	50.8	19.7	29.5	0	18.4	74.8	6.8	0	21.6	48.6	29.7	0	
Total %	7.9	25.9	7.6	0	9	3.5	5.2	0	5.5	22.4	2	0	2.3	5.2	3.2	0	

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	3	16	**6**	0	25	4	**3**	1	0	8	2	8	1	0	11	**3**	1	0	0	4	48
08:00 AM	3	7	1	0	11	**5**	2	1	0	8	**5**	11	0	0	16	1	**4**	1	0	**6**	41
08:15 AM	6	4	4	0	14	4	0	5	0	9	2	**12**	**3**	0	**17**	0	2	**3**	0	5	45
08:30 AM	**8**	**21**	6	0	**35**	3	2	**6**	0	**11**	4	11	1	0	16	0	2	3	0	5	**67**
Total Volume	20	48	17	0	85	16	7	13	0	36	13	42	5	0	60	4	9	7	0	20	201
% App. Total	23.5	56.5	20	0		44.4	19.4	36.1	0		21.7	70	8.3	0		20	45	35	0		
PHF	.625	.571	.708	.000	.607	.800	.583	.542	.000	.818	.650	.875	.417	.000	.882	.333	.563	.583	.000	.833	.750

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N/S: Main Street (Route 18)
E/W: Middle Street/ West Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 A
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Grand Total	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	6
Apprch %	0	0	0	100	0	0	0	0	0	0	0	0	0	20	80	0	0	0	0	0	
Total %	0	0	0	16.7	0	0	0	0	0	0	0	0	0	16.7	66.7	0	0	0	0	0	

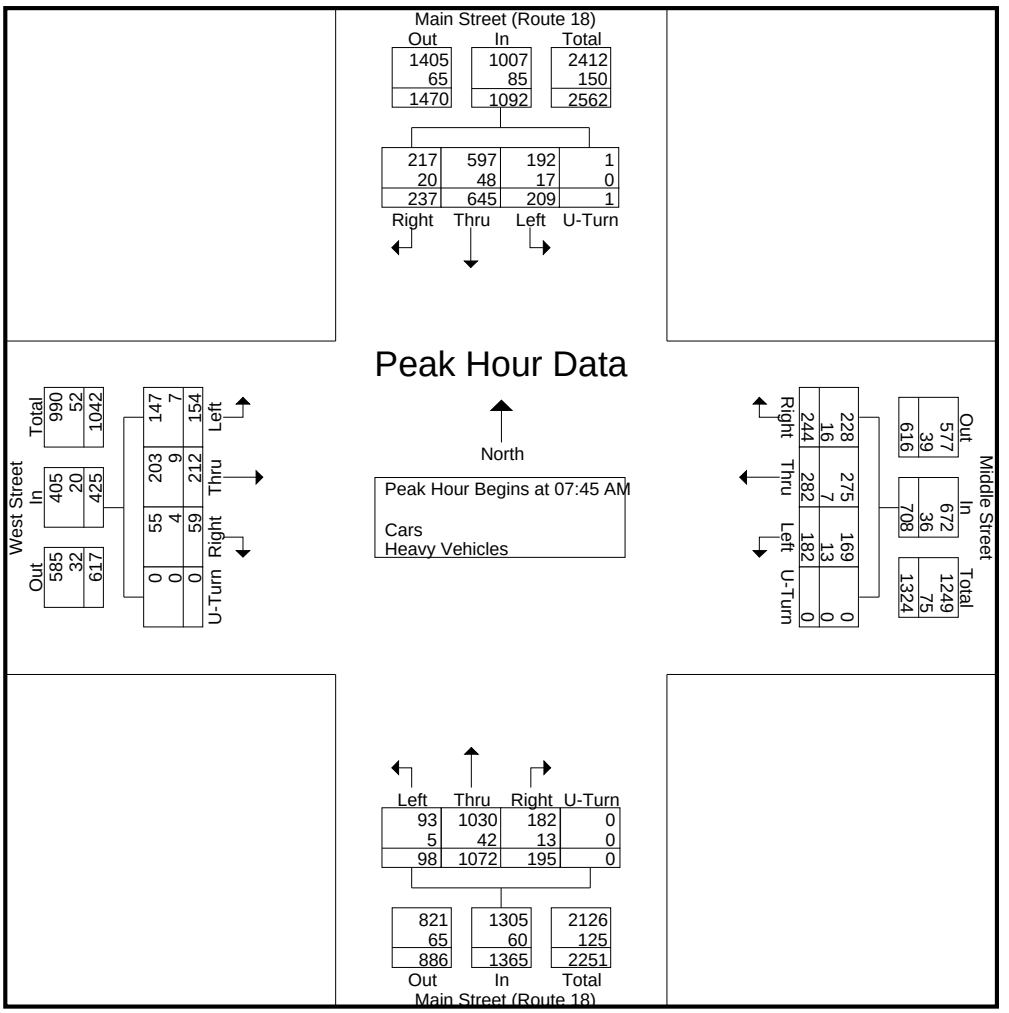
	Main Street (Route 18) From North						Middle Street From East						Main Street (Route 18) From South						West Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	0	0	0	0	0	**3**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	4
% App. Total	0	0	0	0	0		0	0	0	0	0		0	0	0	25	75		0	0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.333	.000	.000	.000	.000	.000	.000	.333

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N/S: Main Street (Route 18)
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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 A
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	53	**165**	58	0	276	50	67	41	0	158	47	261	23	0	331	**17**	45	30	0	92	857
08:00 AM	**67**	164	42	0	273	**75**	**78**	41	0	194	44	254	21	0	319	17	52	**45**	0	**114**	900
08:15 AM	57	154	49	**1**	261	75	71	**53**	0	**199**	**57**	**300**	**38**	0	**395**	15	**64**	35	0	114	**969**
08:30 AM	60	162	**60**	0	**282**	44	66	47	0	157	47	257	16	0	320	10	51	44	0	105	864
Total Volume	237	645	209	1	1092	244	282	182	0	708	195	1072	98	0	1365	59	212	154	0	425	3590
% App. Total	21.7	59.1	19.1	0.1		34.5	39.8	25.7	0		14.3	78.5	7.2	0		13.9	49.9	36.2	0		
PHF	.884	.977	.871	.250	.968	.813	.904	.858	.000	.889	.855	.893	.645	.000	.864	.868	.828	.856	.000	.932	.926
Cars	217	597	192	1	1007	228	275	169	0	672	182	1030	93	0	1305	55	203	147	0	405	3389
% Cars	91.6	92.6	91.9	100	92.2	93.4	97.5	92.9	0	94.9	93.3	96.1	94.9	0	95.6	93.2	95.8	95.5	0	95.3	94.4
Heavy Vehicles	20	48	17	0	85	16	7	13	0	36	13	42	5	0	60	4	9	7	0	20	201
% Heavy Vehicles	8.4	7.4	8.1	0	7.8	6.6	2.5	7.1	0	5.1	6.7	3.9	5.1	0	4.4	6.8	4.2	4.5	0	4.7	5.6



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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 AA
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	58	241	74	1	55	68	54	0	54	184	12	0	18	78	77	0	974
04:15 PM	54	260	56	1	43	60	54	0	51	199	25	0	15	59	54	0	931
04:30 PM	59	226	55	1	56	58	45	0	54	211	13	0	25	77	66	0	946
04:45 PM	67	235	59	4	52	75	42	0	52	227	26	0	14	82	45	0	980
Total	238	962	244	7	206	261	195	0	211	821	76	0	72	296	242	0	3831
05:00 PM	61	256	59	0	53	51	60	0	50	223	11	0	28	75	86	0	1013
05:15 PM	43	255	65	0	58	75	65	0	54	202	10	0	26	76	59	0	988
05:30 PM	57	273	61	0	41	59	51	0	62	223	11	0	15	77	50	0	980
05:45 PM	48	264	78	0	39	58	50	0	55	200	15	0	10	86	45	0	948
Total	209	1048	263	0	191	243	226	0	221	848	47	0	79	314	240	0	3929
Grand Total	447	2010	507	7	397	504	421	0	432	1669	123	0	151	610	482	0	7760
Apprch %	15	67.7	17.1	0.2	30	38.1	31.8	0	19.4	75	5.5	0	12.1	49.1	38.8	0	
Total %	5.8	25.9	6.5	0.1	5.1	6.5	5.4	0	5.6	21.5	1.6	0	1.9	7.9	6.2	0	
Cars	426	1967	495	7	388	494	411	0	427	1639	122	0	151	604	475	0	7606
% Cars	95.3	97.9	97.6	100	97.7	98	97.6	0	98.8	98.2	99.2	0	100	99	98.5	0	98
Heavy Vehicles	21	43	12	0	9	10	10	0	5	30	1	0	0	6	7	0	154
% Heavy Vehicles	4.7	2.1	2.4	0	2.3	2	2.4	0	1.2	1.8	0.8	0	0	1	1.5	0	2

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**67**	235	59	**4**	365	52	**75**	42	0	169	52	**227**	**26**	0	**305**	14	**82**	45	0	141	980
05:00 PM	61	256	59	0	376	53	51	60	0	164	50	223	11	0	284	**28**	75	**86**	0	**189**	**1013**
05:15 PM	43	255	**65**	0	363	**58**	75	**65**	0	**198**	54	202	10	0	266	26	76	59	0	161	988
05:30 PM	57	**273**	61	0	**391**	41	59	51	0	151	**62**	223	11	0	296	15	77	50	0	142	980
Total Volume	228	1019	244	4	1495	204	260	218	0	682	218	875	58	0	1151	83	310	240	0	633	3961
% App. Total	15.3	68.2	16.3	0.3		29.9	38.1	32	0		18.9	76	5	0		13.1	49	37.9	0		
PHF	.851	.933	.938	.250	.956	.879	.867	.838	.000	.861	.879	.964	.558	.000	.943	.741	.945	.698	.000	.837	.978
Cars	220	998	237	4	1459	200	258	214	0	672	214	855	58	0	1127	83	306	237	0	626	3884
% Cars	96.5	97.9	97.1	100	97.6	98.0	99.2	98.2	0	98.5	98.2	97.7	100	0	97.9	100	98.7	98.8	0	98.9	98.1
Heavy Vehicles	8	21	7	0	36	4	2	4	0	10	4	20	0	0	24	0	4	3	0	7	77
% Heavy Vehicles	3.5	2.1	2.9	0	2.4	2.0	0.8	1.8	0	1.5	1.8	2.3	0	0	2.1	0	1.3	1.3	0	1.1	1.9

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Client: Tetra Tech/ C. Jones

File Name : 154694 AA
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	53	237	74	1	54	67	52	0	54	181	12	0	18	77	75	0	955
04:15 PM	52	255	54	1	40	55	52	0	51	196	25	0	15	59	53	0	908
04:30 PM	55	222	53	1	55	56	43	0	54	209	13	0	25	76	65	0	927
04:45 PM	66	229	55	4	49	74	40	0	52	220	26	0	14	80	44	0	953
Total	226	943	236	7	198	252	187	0	211	806	76	0	72	292	237	0	3743
05:00 PM	57	253	58	0	53	51	60	0	48	218	11	0	28	74	85	0	996
05:15 PM	43	251	64	0	57	75	64	0	53	197	10	0	26	75	58	0	973
05:30 PM	54	265	60	0	41	58	50	0	61	220	11	0	15	77	50	0	962
05:45 PM	46	255	77	0	39	58	50	0	54	198	14	0	10	86	45	0	932
Total	200	1024	259	0	190	242	224	0	216	833	46	0	79	312	238	0	3863
Grand Total	426	1967	495	7	388	494	411	0	427	1639	122	0	151	604	475	0	7606
Apprch %	14.7	67.9	17.1	0.2	30	38.2	31.8	0	19.5	74.9	5.6	0	12.3	49.1	38.6	0	
Total %	5.6	25.9	6.5	0.1	5.1	6.5	5.4	0	5.6	21.5	1.6	0	2	7.9	6.2	0	

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**66**	229	55	**4**	354	49	74	40	0	163	52	**220**	**26**	0	**298**	14	**80**	44	0	138	953
05:00 PM	57	253	58	0	368	53	51	60	0	164	48	218	11	0	277	**28**	74	**85**	0	**187**	**996**
05:15 PM	43	251	**64**	0	358	**57**	**75**	**64**	0	**196**	53	197	10	0	260	26	75	58	0	159	973
05:30 PM	54	**265**	60	0	**379**	41	58	50	0	149	**61**	220	11	0	292	15	77	50	0	142	962
Total Volume	220	998	237	4	1459	200	258	214	0	672	214	855	58	0	1127	83	306	237	0	626	3884
% App. Total	15.1	68.4	16.2	0.3		29.8	38.4	31.8	0		19	75.9	5.1	0		13.3	48.9	37.9	0		
PHF	.833	.942	.926	.250	.962	.877	.860	.836	.000	.857	.877	.972	.558	.000	.945	.741	.956	.697	.000	.837	.975

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Groups Printed- Heavy Vehicles

	Main Street (Route 18) From North				Middle Street From East				Main Street (Route 18) From South				West Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	5	4	0	0	1	1	2	0	0	3	0	0	0	1	2	0	19
04:15 PM	2	5	2	0	3	5	2	0	0	3	0	0	0	0	1	0	23
04:30 PM	4	4	2	0	1	2	2	0	0	2	0	0	0	1	1	0	19
04:45 PM	1	6	4	0	3	1	2	0	0	7	0	0	0	2	1	0	27
Total	12	19	8	0	8	9	8	0	0	15	0	0	0	4	5	0	88
05:00 PM	4	3	1	0	0	0	0	0	2	5	0	0	0	1	1	0	17
05:15 PM	0	4	1	0	1	0	1	0	1	5	0	0	0	1	1	0	15
05:30 PM	3	8	1	0	0	1	1	0	1	3	0	0	0	0	0	0	18
05:45 PM	2	9	1	0	0	0	0	0	1	2	1	0	0	0	0	0	16
Total	9	24	4	0	1	1	2	0	5	15	1	0	0	2	2	0	66
Grand Total	21	43	12	0	9	10	10	0	5	30	1	0	0	6	7	0	154
Apprch %	27.6	56.6	15.8	0	31	34.5	34.5	0	13.9	83.3	2.8	0	0	46.2	53.8	0	
Total %	13.6	27.9	7.8	0	5.8	6.5	6.5	0	3.2	19.5	0.6	0	0	3.9	4.5	0	

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	**5**	4	0	0	9	1	1	**2**	0	4	0	3	0	0	3	0	1	**2**	0	**3**	19
04:15 PM	2	5	2	0	9	**3**	**5**	2	0	**10**	0	3	0	0	3	0	0	1	0	1	23
04:30 PM	4	4	2	0	10	1	2	2	0	5	0	2	0	0	2	0	1	1	0	2	19
04:45 PM	1	**6**	**4**	0	**11**	3	1	2	0	6	0	**7**	0	0	**7**	0	**2**	1	0	3	**27**
Total Volume	12	19	8	0	39	8	9	8	0	25	0	15	0	0	15	0	4	5	0	9	88
% App. Total	30.8	48.7	20.5	0		32	36	32	0		0	100	0	0		0	44.4	55.6	0		
PHF	.600	.792	.500	.000	.886	.667	.450	1.00	.000	.625	.000	.536	.000	.000	.536	.000	.500	.625	.000	.750	.815

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N/S: Main Street (Route 18)
E/W: Middle Street/ West Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 AA
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3
Grand Total	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	5
Apprch %	0	0	0	100	0	100	0	0	0	0	0	0	0	50	50	0	0	0	0	100	
Total %	0	0	0	20	0	20	0	0	0	0	0	0	0	20	20	0	0	0	0	20	

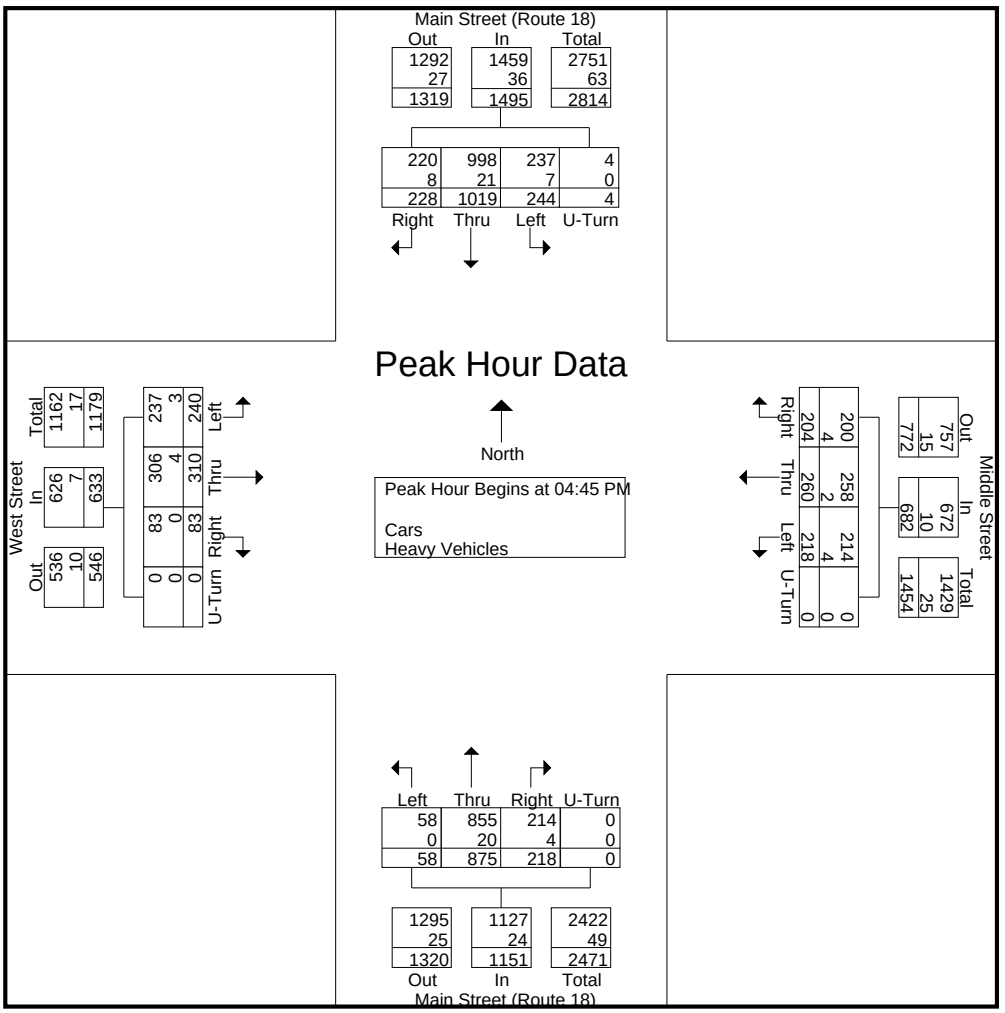
	Main Street (Route 18) From North						Middle Street From East						Main Street (Route 18) From South						West Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	**1**	**1**	**2**
Total Volume	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	4
% App. Total	0	0	0	100	0		0	0	0	0	0		0	0	0	50	50		0	0	0	0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.000	.000	.000	.000	.250	.250	.500

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N/S: Main Street (Route 18)
E/W: Middle Street/ West Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 AA
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Main Street (Route 18) From North					Middle Street From East					Main Street (Route 18) From South					West Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**67**	235	59	**4**	365	52	**75**	42	0	169	52	**227**	**26**	0	**305**	14	**82**	45	0	141	980
05:00 PM	61	256	59	0	376	53	51	60	0	164	50	223	11	0	284	**28**	75	**86**	0	**189**	**1013**
05:15 PM	43	255	**65**	0	363	**58**	75	**65**	0	**198**	54	202	10	0	266	26	76	59	0	161	988
05:30 PM	57	**273**	61	0	**391**	41	59	51	0	151	**62**	223	11	0	296	15	77	50	0	142	980
Total Volume	228	1019	244	4	1495	204	260	218	0	682	218	875	58	0	1151	83	310	240	0	633	3961
% App. Total	15.3	68.2	16.3	0.3		29.9	38.1	32	0		18.9	76	5	0		13.1	49	37.9	0		
PHF	.851	.933	.938	.250	.956	.879	.867	.838	.000	.861	.879	.964	.558	.000	.943	.741	.945	.698	.000	.837	.978
Cars	220	998	237	4	1459	200	258	214	0	672	214	855	58	0	1127	83	306	237	0	626	3884
% Cars	96.5	97.9	97.1	100	97.6	98.0	99.2	98.2	0	98.5	98.2	97.7	100	0	97.9	100	98.7	98.8	0	98.9	98.1
Heavy Vehicles	8	21	7	0	36	4	2	4	0	10	4	20	0	0	24	0	4	3	0	7	77
% Heavy Vehicles	3.5	2.1	2.9	0	2.4	2.0	0.8	1.8	0	1.5	1.8	2.3	0	0	2.1	0	1.3	1.3	0	1.1	1.9



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N/S: Pleasant Street
E: Pine Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 B
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	272	36	0	77	0	0	2	165	0	552
07:15 AM	227	34	0	103	0	0	3	238	0	605
07:30 AM	113	39	0	94	0	0	4	260	0	510
07:45 AM	125	65	0	111	0	0	6	246	0	553
Total	737	174	0	385	0	0	15	909	0	2220
08:00 AM	137	34	0	103	2	0	4	203	0	483
08:15 AM	141	40	0	99	3	0	2	154	0	439
08:30 AM	144	31	0	70	0	0	3	184	0	432
08:45 AM	121	44	0	68	0	0	3	180	0	416
Total	543	149	0	340	5	0	12	721	0	1770
Grand Total	1280	323	0	725	5	0	27	1630	0	3990
Apprch %	79.9	20.1	0	99.3	0.7	0	1.6	98.4	0	
Total %	32.1	8.1	0	18.2	0.1	0	0.7	40.9	0	
Cars	1195	315	0	714	5	0	27	1520	0	3776
% Cars	93.4	97.5	0	98.5	100	0	100	93.3	0	94.6
Heavy Vehicles	85	8	0	11	0	0	0	110	0	214
% Heavy Vehicles	6.6	2.5	0	1.5	0	0	0	6.7	0	5.4

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**272**	36	0	**308**	77	0	0	77	2	165	0	167	552
07:15 AM	227	34	0	261	103	0	0	103	3	238	0	241	**605**
07:30 AM	113	39	0	152	94	0	0	94	4	**260**	0	**264**	510
07:45 AM	125	**65**	0	190	**111**	0	0	**111**	**6**	246	0	252	553
Total Volume	737	174	0	911	385	0	0	385	15	909	0	924	2220
% App. Total	80.9	19.1	0		100	0	0		1.6	98.4	0		
PHF	.677	.669	.000	.739	.867	.000	.000	.867	.625	.874	.000	.875	.917
Cars	694	169	0	863	376	0	0	376	15	839	0	854	2093
% Cars	94.2	97.1	0	94.7	97.7	0	0	97.7	100	92.3	0	92.4	94.3
Heavy Vehicles	43	5	0	48	9	0	0	9	0	70	0	70	127
% Heavy Vehicles	5.8	2.9	0	5.3	2.3	0	0	2.3	0	7.7	0	7.6	5.7

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N/S: Pleasant Street
E: Pine Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 B
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	258	35	0	75	0	0	2	157	0	527
07:15 AM	217	31	0	100	0	0	3	218	0	569
07:30 AM	100	39	0	93	0	0	4	240	0	476
07:45 AM	119	64	0	108	0	0	6	224	0	521
Total	694	169	0	376	0	0	15	839	0	2093
08:00 AM	130	34	0	103	2	0	4	194	0	467
08:15 AM	131	39	0	99	3	0	2	145	0	419
08:30 AM	134	30	0	68	0	0	3	172	0	407
08:45 AM	106	43	0	68	0	0	3	170	0	390
Total	501	146	0	338	5	0	12	681	0	1683
Grand Total	1195	315	0	714	5	0	27	1520	0	3776
Apprch %	79.1	20.9	0	99.3	0.7	0	1.7	98.3	0	
Total %	31.6	8.3	0	18.9	0.1	0	0.7	40.3	0	

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**258**	35	0	**293**	75	0	0	75	2	157	0	159	527
07:15 AM	217	31	0	248	100	0	0	100	3	218	0	221	**569**
07:30 AM	100	39	0	139	93	0	0	93	4	**240**	0	**244**	476
07:45 AM	119	**64**	0	183	**108**	0	0	**108**	**6**	224	0	230	521
Total Volume	694	169	0	863	376	0	0	376	15	839	0	854	2093
% App. Total	80.4	19.6	0		100	0	0		1.8	98.2	0		
PHF	.672	.660	.000	.736	.870	.000	.000	.870	.625	.874	.000	.875	.920

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File Name : 154694 B
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	14	1	0	2	0	0	0	8	0	25
07:15 AM	10	3	0	3	0	0	0	20	0	36
07:30 AM	13	0	0	1	0	0	0	20	0	34
07:45 AM	6	1	0	3	0	0	0	22	0	32
Total	43	5	0	9	0	0	0	70	0	127
08:00 AM	7	0	0	0	0	0	0	9	0	16
08:15 AM	10	1	0	0	0	0	0	9	0	20
08:30 AM	10	1	0	2	0	0	0	12	0	25
08:45 AM	15	1	0	0	0	0	0	10	0	26
Total	42	3	0	2	0	0	0	40	0	87
Grand Total	85	8	0	11	0	0	0	110	0	214
Apprch %	91.4	8.6	0	100	0	0	0	100	0	
Total %	39.7	3.7	0	5.1	0	0	0	51.4	0	

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**14**	1	0	**15**	2	0	0	2	0	8	0	8	25
07:15 AM	10	**3**	0	13	**3**	0	0	**3**	0	20	0	20	**36**
07:30 AM	13	0	0	13	1	0	0	1	0	20	0	20	34
07:45 AM	6	1	0	7	3	0	0	3	0	**22**	0	**22**	32
Total Volume	43	5	0	48	9	0	0	9	0	70	0	70	127
% App. Total	89.6	10.4	0		100	0	0		0	100	0		
PHF	.768	.417	.000	.800	.750	.000	.000	.750	.000	.795	.000	.795	.882

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Groups Printed- Peds and Bicycles

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	0	0	0	1	0	0	0	0	2
Apprch %	100	0	0	0	0	0	0	100	0	0	0	0	
Total %	50	0	0	0	0	0	0	50	0	0	0	0	

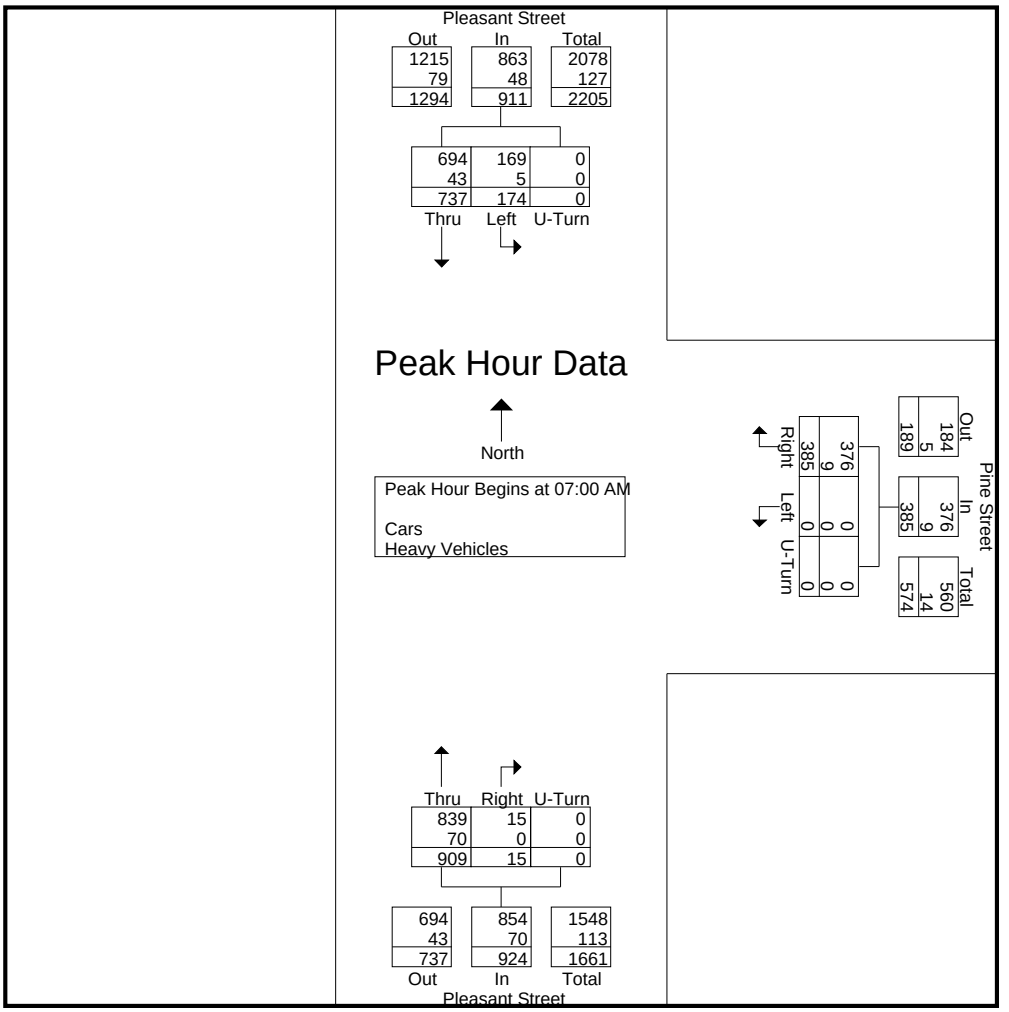
	Pleasant Street From North					Pine Street From East					Pleasant Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:00 AM																
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% App. Total	0	0	0	0		0	0	0	100		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250

N/S: Pleasant Street
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	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**272**	36	0	**308**	77	0	0	77	2	165	0	167	552
07:15 AM	227	34	0	261	103	0	0	103	3	238	0	241	**605**
07:30 AM	113	39	0	152	94	0	0	94	4	**260**	0	**264**	510
07:45 AM	125	**65**	0	190	**111**	0	0	**111**	**6**	246	0	252	553
Total Volume	737	174	0	911	385	0	0	385	15	909	0	924	2220
% App. Total	80.9	19.1	0		100	0	0		1.6	98.4	0		
PHF	.677	.669	.000	.739	.867	.000	.000	.867	.625	.874	.000	.875	.917
Cars	694	169	0	863	376	0	0	376	15	839	0	854	2093
% Cars	94.2	97.1	0	94.7	97.7	0	0	97.7	100	92.3	0	92.4	94.3
Heavy Vehicles	43	5	0	48	9	0	0	9	0	70	0	70	127
% Heavy Vehicles	5.8	2.9	0	5.3	2.3	0	0	2.3	0	7.7	0	7.6	5.7



N/S: Pleasant Street
E: Pine Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

PRECISION
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File Name : 154694 BB
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	214	81	0	57	0	0	4	181	0	537
04:15 PM	215	83	0	53	1	0	2	166	0	520
04:30 PM	203	89	0	54	0	0	1	160	0	507
04:45 PM	216	88	0	67	2	0	3	162	0	538
Total	848	341	0	231	3	0	10	669	0	2102
05:00 PM	263	90	0	62	1	0	1	199	0	616
05:15 PM	200	94	0	62	3	0	2	182	0	543
05:30 PM	186	92	0	55	1	0	3	166	0	503
05:45 PM	206	76	0	41	1	0	2	143	0	469
Total	855	352	0	220	6	0	8	690	0	2131
Grand Total	1703	693	0	451	9	0	18	1359	0	4233
Apprch %	71.1	28.9	0	98	2	0	1.3	98.7	0	
Total %	40.2	16.4	0	10.7	0.2	0	0.4	32.1	0	
Cars	1665	679	0	444	9	0	18	1323	0	4138
% Cars	97.8	98	0	98.4	100	0	100	97.4	0	97.8
Heavy Vehicles	38	14	0	7	0	0	0	36	0	95
% Heavy Vehicles	2.2	2	0	1.6	0	0	0	2.6	0	2.2

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	203	89	0	292	54	0	0	54	1	160	0	161	507
04:45 PM	216	88	0	304	**67**	2	0	**69**	**3**	162	0	165	538
05:00 PM	**263**	90	0	**353**	62	1	0	63	1	**199**	0	**200**	**616**
05:15 PM	200	**94**	0	294	62	**3**	0	65	2	182	0	184	543
Total Volume	882	361	0	1243	245	6	0	251	7	703	0	710	2204
% App. Total	71	29	0		97.6	2.4	0		1	99	0		
PHF	.838	.960	.000	.880	.914	.500	.000	.909	.583	.883	.000	.888	.894
Cars	863	356	0	1219	243	6	0	249	7	687	0	694	2162
% Cars	97.8	98.6	0	98.1	99.2	100	0	99.2	100	97.7	0	97.7	98.1
Heavy Vehicles	19	5	0	24	2	0	0	2	0	16	0	16	42
% Heavy Vehicles	2.2	1.4	0	1.9	0.8	0	0	0.8	0	2.3	0	2.3	1.9

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N/S: Pleasant Street
E: Pine Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 BB
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	209	78	0	54	0	0	4	172	0	517
04:15 PM	212	78	0	52	1	0	2	160	0	505
04:30 PM	201	89	0	53	0	0	1	150	0	494
04:45 PM	213	88	0	67	2	0	3	160	0	533
Total	835	333	0	226	3	0	10	642	0	2049
05:00 PM	252	87	0	62	1	0	1	197	0	600
05:15 PM	197	92	0	61	3	0	2	180	0	535
05:30 PM	184	91	0	54	1	0	3	162	0	495
05:45 PM	197	76	0	41	1	0	2	142	0	459
Total	830	346	0	218	6	0	8	681	0	2089
Grand Total	1665	679	0	444	9	0	18	1323	0	4138
Apprch %	71	29	0	98	2	0	1.3	98.7	0	
Total %	40.2	16.4	0	10.7	0.2	0	0.4	32	0	

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	213	88	0	301	**67**	2	0	**69**	**3**	160	0	163	533
05:00 PM	**252**	87	0	**339**	62	1	0	63	1	**197**	0	**198**	**600**
05:15 PM	197	**92**	0	289	61	**3**	0	64	2	180	0	182	535
05:30 PM	184	91	0	275	54	1	0	55	3	162	0	165	495
Total Volume	846	358	0	1204	244	7	0	251	9	699	0	708	2163
% App. Total	70.3	29.7	0		97.2	2.8	0		1.3	98.7	0		
PHF	.839	.973	.000	.888	.910	.583	.000	.909	.750	.887	.000	.894	.901

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E: Pine Street
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 BB
Site Code : 14342892
Start Date : 10/7/2015
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Groups Printed- Heavy Vehicles

	Pleasant Street From North			Pine Street From East			Pleasant Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	5	3	0	3	0	0	0	9	0	20
04:15 PM	3	5	0	1	0	0	0	6	0	15
04:30 PM	2	0	0	1	0	0	0	10	0	13
04:45 PM	3	0	0	0	0	0	0	2	0	5
Total	13	8	0	5	0	0	0	27	0	53
05:00 PM	11	3	0	0	0	0	0	2	0	16
05:15 PM	3	2	0	1	0	0	0	2	0	8
05:30 PM	2	1	0	1	0	0	0	4	0	8
05:45 PM	9	0	0	0	0	0	0	1	0	10
Total	25	6	0	2	0	0	0	9	0	42
Grand Total	38	14	0	7	0	0	0	36	0	95
Apprch %	73.1	26.9	0	100	0	0	0	100	0	
Total %	40	14.7	0	7.4	0	0	0	37.9	0	

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	**5**	3	0	**8**	**3**	0	0	**3**	0	9	0	9	**20**
04:15 PM	3	**5**	0	8	1	0	0	1	0	6	0	6	15
04:30 PM	2	0	0	2	1	0	0	1	0	**10**	0	**10**	13
04:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total Volume	13	8	0	21	5	0	0	5	0	27	0	27	53
% App. Total	61.9	38.1	0		100	0	0		0	100	0		
PHF	.650	.400	.000	.656	.417	.000	.000	.417	.000	.675	.000	.675	.663

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Groups Printed- Peds and Bicycles

	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
04:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	0	1	0	1	0	0	4
05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
Total	1	0	0	0	0	0	0	2	0	1	0	0	4
Grand Total	3	0	0	0	0	0	0	3	0	2	0	0	8
Apprch %	100	0	0	0	0	0	0	100	0	100	0	0	
Total %	37.5	0	0	0	0	0	0	37.5	0	25	0	0	

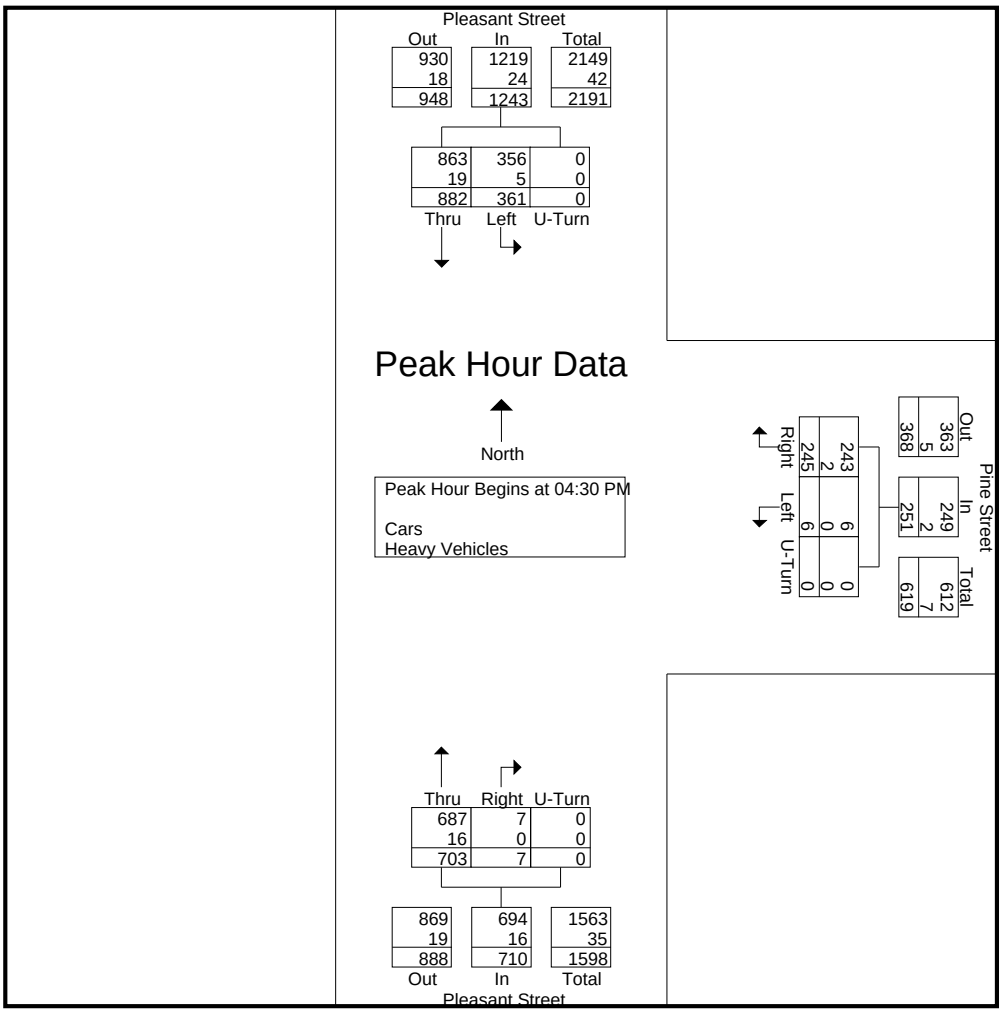
	Pleasant Street From North					Pine Street From East					Pleasant Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:00 PM																
04:00 PM	0	0	0	0	0	0	0	0	**1**	**1**	0	**1**	0	0	**1**	**2**
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	**2**	0	0	0	**2**	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	0	0	2	0	0	0	1	1	0	1	0	0	1	4
% App. Total	100	0	0	0		0	0	0	100		0	100	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.250	.250	.000	.250	.000	.000	.250	.500

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File Name : 154694 BB
Site Code : 14342892
Start Date : 10/7/2015
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	Pleasant Street From North				Pine Street From East				Pleasant Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	203	89	0	292	54	0	0	54	1	160	0	161	507
04:45 PM	216	88	0	304	**67**	2	0	**69**	**3**	162	0	165	538
05:00 PM	**263**	90	0	**353**	62	1	0	63	1	**199**	0	**200**	**616**
05:15 PM	200	**94**	0	294	62	**3**	0	65	2	182	0	184	543
Total Volume	882	361	0	1243	245	6	0	251	7	703	0	710	2204
% App. Total	71	29	0		97.6	2.4	0		1	99	0		
PHF	.838	.960	.000	.880	.914	.500	.000	.909	.583	.883	.000	.888	.894
Cars	863	356	0	1219	243	6	0	249	7	687	0	694	2162
% Cars	97.8	98.6	0	98.1	99.2	100	0	99.2	100	97.7	0	97.7	98.1
Heavy Vehicles	19	5	0	24	2	0	0	2	0	16	0	16	42
% Heavy Vehicles	2.2	1.4	0	1.9	0.8	0	0	0.8	0	2.3	0	2.3	1.9



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N: Performance Drive
E/W: Libbey Industrial Parkway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 D
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	1	1	0	12	50	0	57	10	0	131
07:15 AM	7	1	0	16	69	0	52	22	0	167
07:30 AM	5	2	0	17	73	0	43	12	0	152
07:45 AM	7	2	0	15	97	0	62	24	0	207
Total	20	6	0	60	289	0	214	68	0	657
08:00 AM	2	3	0	17	85	0	60	9	0	176
08:15 AM	7	4	0	16	93	0	68	24	0	212
08:30 AM	7	6	0	9	68	0	62	12	0	164
08:45 AM	12	3	0	18	60	0	78	27	0	198
Total	28	16	0	60	306	0	268	72	0	750
Grand Total	48	22	0	120	595	0	482	140	0	1407
Apprch %	68.6	31.4	0	16.8	83.2	0	77.5	22.5	0	
Total %	3.4	1.6	0	8.5	42.3	0	34.3	10	0	
Cars	47	21	0	120	564	0	455	139	0	1346
% Cars	97.9	95.5	0	100	94.8	0	94.4	99.3	0	95.7
Heavy Vehicles	1	1	0	0	31	0	27	1	0	61
% Heavy Vehicles	2.1	4.5	0	0	5.2	0	5.6	0.7	0	4.3

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**7**	2	0	9	15	**97**	0	**112**	62	**24**	0	86	207
08:00 AM	2	3	0	5	**17**	85	0	102	60	9	0	69	176
08:15 AM	7	4	0	11	16	93	0	109	**68**	24	0	**92**	**212**
08:30 AM	7	**6**	0	**13**	9	68	0	77	62	12	0	74	164
Total Volume	23	15	0	38	57	343	0	400	252	69	0	321	759
% App. Total	60.5	39.5	0		14.2	85.8	0		78.5	21.5	0		
PHF	.821	.625	.000	.731	.838	.884	.000	.893	.926	.719	.000	.872	.895
Cars	22	14	0	36	57	327	0	384	235	68	0	303	723
% Cars	95.7	93.3	0	94.7	100	95.3	0	96.0	93.3	98.6	0	94.4	95.3
Heavy Vehicles	1	1	0	2	0	16	0	16	17	1	0	18	36
% Heavy Vehicles	4.3	6.7	0	5.3	0	4.7	0	4.0	6.7	1.4	0	5.6	4.7

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E/W: Libbey Industrial Parkway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 D
Site Code : 14342892
Start Date : 10/7/2015
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Groups Printed- Cars

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	1	1	0	12	41	0	55	10	0	120
07:15 AM	7	1	0	16	67	0	51	22	0	164
07:30 AM	5	2	0	17	73	0	42	12	0	151
07:45 AM	7	1	0	15	95	0	58	24	0	200
Total	20	5	0	60	276	0	206	68	0	635
08:00 AM	2	3	0	17	82	0	58	9	0	171
08:15 AM	7	4	0	16	86	0	64	23	0	200
08:30 AM	6	6	0	9	64	0	55	12	0	152
08:45 AM	12	3	0	18	56	0	72	27	0	188
Total	27	16	0	60	288	0	249	71	0	711
Grand Total	47	21	0	120	564	0	455	139	0	1346
Apprch %	69.1	30.9	0	17.5	82.5	0	76.6	23.4	0	
Total %	3.5	1.6	0	8.9	41.9	0	33.8	10.3	0	

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**7**	1	0	8	15	**95**	0	**110**	58	**24**	0	82	**200**
08:00 AM	2	3	0	5	**17**	82	0	99	58	9	0	67	171
08:15 AM	7	4	0	11	16	86	0	102	**64**	23	0	**87**	200
08:30 AM	6	**6**	0	**12**	9	64	0	73	55	12	0	67	152
Total Volume	22	14	0	36	57	327	0	384	235	68	0	303	723
% App. Total	61.1	38.9	0		14.8	85.2	0		77.6	22.4	0		
PHF	.786	.583	.000	.750	.838	.861	.000	.873	.918	.708	.000	.871	.904

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E/W: Libbey Industrial Parkway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 D
Site Code : 14342892
Start Date : 10/7/2015
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Groups Printed- Heavy Vehicles

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	9	0	2	0	0	11
07:15 AM	0	0	0	0	2	0	1	0	0	3
07:30 AM	0	0	0	0	0	0	1	0	0	1
07:45 AM	0	1	0	0	2	0	4	0	0	7
Total	0	1	0	0	13	0	8	0	0	22
08:00 AM	0	0	0	0	3	0	2	0	0	5
08:15 AM	0	0	0	0	7	0	4	1	0	12
08:30 AM	1	0	0	0	4	0	7	0	0	12
08:45 AM	0	0	0	0	4	0	6	0	0	10
Total	1	0	0	0	18	0	19	1	0	39
Grand Total	1	1	0	0	31	0	27	1	0	61
Apprch %	50	50	0	0	100	0	96.4	3.6	0	
Total %	1.6	1.6	0	0	50.8	0	44.3	1.6	0	

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
08:15 AM	0	0	0	0	0	**7**	0	**7**	4	**1**	0	5	**12**
08:30 AM	**1**	0	0	**1**	0	4	0	4	**7**	0	0	**7**	12
08:45 AM	0	0	0	0	0	4	0	4	6	0	0	6	10
Total Volume	1	0	0	1	0	18	0	18	19	1	0	20	39
% App. Total	100	0	0		0	100	0		95	5	0		
PHF	.250	.000	.000	.250	.000	.643	.000	.643	.679	.250	.000	.714	.813

PRECISION
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N: Performance Drive
E/W: Libbey Industrial Parkway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 D
Site Code : 14342892
Start Date : 10/7/2015

Groups Printed- Peds and Bicycles

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	0	0	3	0	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	1	0	0	0	0	0	0	0	0	3
Grand Total	0	0	5	1	0	0	0	0	0	0	0	0	6
Apprch %	0	0	83.3	16.7	0	0	0	0	0	0	0	0	
Total %	0	0	83.3	16.7	0	0	0	0	0	0	0	0	

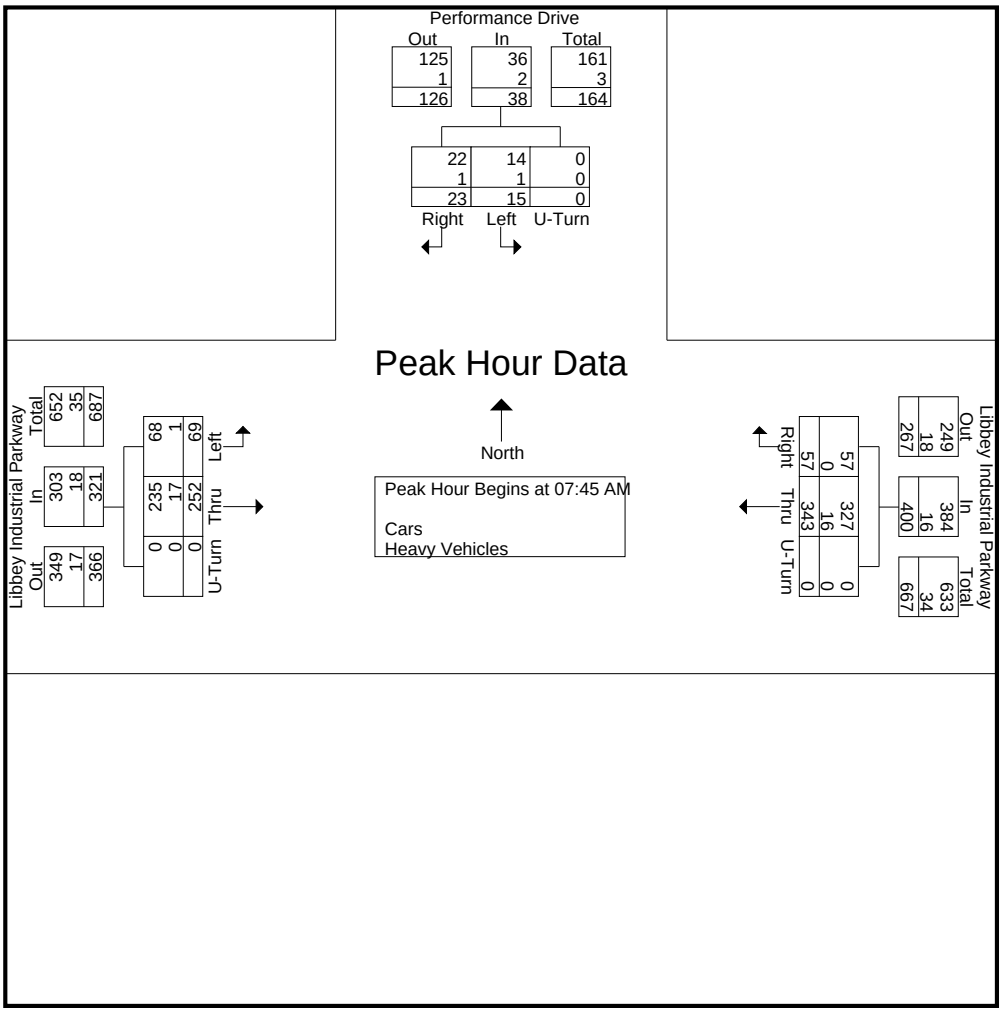
	Performance Drive From North					Libbey Industrial Parkway From East					Libbey Industrial Parkway From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:30 AM																
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	**2**
08:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	4
% App. Total	0	0	75	25		0	0	0	0		0	0	0	0		
PHF	.000	.000	.375	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 D
Site Code : 14342892
Start Date : 10/7/2015
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	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**7**	2	0	9	15	**97**	0	**112**	62	**24**	0	86	207
08:00 AM	2	3	0	5	**17**	85	0	102	60	9	0	69	176
08:15 AM	7	4	0	11	16	93	0	109	**68**	24	0	**92**	**212**
08:30 AM	7	**6**	0	**13**	9	68	0	77	62	12	0	74	164
Total Volume	23	15	0	38	57	343	0	400	252	69	0	321	759
% App. Total	60.5	39.5	0		14.2	85.8	0		78.5	21.5	0		
PHF	.821	.625	.000	.731	.838	.884	.000	.893	.926	.719	.000	.872	.895
Cars	22	14	0	36	57	327	0	384	235	68	0	303	723
% Cars	95.7	93.3	0	94.7	100	95.3	0	96.0	93.3	98.6	0	94.4	95.3
Heavy Vehicles	1	1	0	2	0	16	0	16	17	1	0	18	36
% Heavy Vehicles	4.3	6.7	0	5.3	0	4.7	0	4.0	6.7	1.4	0	5.6	4.7



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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 DD
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	24	18	0	4	75	0	78	11	0	210
04:15 PM	25	6	0	4	50	0	78	7	0	170
04:30 PM	26	14	0	8	52	0	57	5	0	162
04:45 PM	17	13	0	5	69	0	67	9	0	180
Total	92	51	0	21	246	0	280	32	0	722
05:00 PM	22	12	0	6	107	1	63	6	0	217
05:15 PM	19	15	0	2	63	0	54	9	0	162
05:30 PM	13	5	0	1	69	0	66	3	0	157
05:45 PM	13	7	0	8	53	0	78	11	0	170
Total	67	39	0	17	292	1	261	29	0	706
Grand Total	159	90	0	38	538	1	541	61	0	1428
Apprch %	63.9	36.1	0	6.6	93.2	0.2	89.9	10.1	0	
Total %	11.1	6.3	0	2.7	37.7	0.1	37.9	4.3	0	
Cars	159	88	0	37	527	1	527	60	0	1399
% Cars	100	97.8	0	97.4	98	100	97.4	98.4	0	98
Heavy Vehicles	0	2	0	1	11	0	14	1	0	29
% Heavy Vehicles	0	2.2	0	2.6	2	0	2.6	1.6	0	2

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	25	6	0	31	4	50	0	54	**78**	7	0	**85**	170
04:30 PM	**26**	**14**	0	**40**	**8**	52	0	60	57	5	0	62	162
04:45 PM	17	13	0	30	5	69	0	74	67	**9**	0	76	180
05:00 PM	22	12	0	34	6	**107**	**1**	**114**	63	6	0	69	**217**
Total Volume	90	45	0	135	23	278	1	302	265	27	0	292	729
% App. Total	66.7	33.3	0		7.6	92.1	0.3		90.8	9.2	0		
PHF	.865	.804	.000	.844	.719	.650	.250	.662	.849	.750	.000	.859	.840
Cars	90	44	0	134	22	271	1	294	257	26	0	283	711
% Cars	100	97.8	0	99.3	95.7	97.5	100	97.4	97.0	96.3	0	96.9	97.5
Heavy Vehicles	0	1	0	1	1	7	0	8	8	1	0	9	18
% Heavy Vehicles	0	2.2	0	0.7	4.3	2.5	0	2.6	3.0	3.7	0	3.1	2.5

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 DD
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	24	18	0	4	73	0	74	11	0	204
04:15 PM	25	6	0	4	47	0	76	7	0	165
04:30 PM	26	14	0	8	52	0	55	5	0	160
04:45 PM	17	13	0	4	67	0	64	9	0	174
Total	92	51	0	20	239	0	269	32	0	703
05:00 PM	22	11	0	6	105	1	62	5	0	212
05:15 PM	19	14	0	2	62	0	54	9	0	160
05:30 PM	13	5	0	1	69	0	65	3	0	156
05:45 PM	13	7	0	8	52	0	77	11	0	168
Total	67	37	0	17	288	1	258	28	0	696
Grand Total	159	88	0	37	527	1	527	60	0	1399
Apprch %	64.4	35.6	0	6.5	93.3	0.2	89.8	10.2	0	
Total %	11.4	6.3	0	2.6	37.7	0.1	37.7	4.3	0	

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	25	6	0	31	4	47	0	51	**76**	7	0	**83**	165
04:30 PM	**26**	**14**	0	**40**	**8**	52	0	60	55	5	0	60	160
04:45 PM	17	13	0	30	4	67	0	71	64	**9**	0	73	174
05:00 PM	22	11	0	33	6	**105**	**1**	**112**	62	5	0	67	**212**
Total Volume	90	44	0	134	22	271	1	294	257	26	0	283	711
% App. Total	67.2	32.8	0		7.5	92.2	0.3		90.8	9.2	0		
PHF	.865	.786	.000	.838	.688	.645	.250	.656	.845	.722	.000	.852	.838

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 DD
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Performance Drive From North			Libbey Industrial Parkway From East			Libbey Industrial Parkway From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	2	0	4	0	0	6
04:15 PM	0	0	0	0	3	0	2	0	0	5
04:30 PM	0	0	0	0	0	0	2	0	0	2
04:45 PM	0	0	0	1	2	0	3	0	0	6
Total	0	0	0	1	7	0	11	0	0	19
05:00 PM	0	1	0	0	2	0	1	1	0	5
05:15 PM	0	1	0	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	0	0	1
05:45 PM	0	0	0	0	1	0	1	0	0	2
Total	0	2	0	0	4	0	3	1	0	10
Grand Total	0	2	0	1	11	0	14	1	0	29
Apprch %	0	100	0	8.3	91.7	0	93.3	6.7	0	
Total %	0	6.9	0	3.4	37.9	0	48.3	3.4	0	

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	2	0	2	**4**	0	0	**4**	**6**
04:15 PM	0	0	0	0	0	**3**	0	**3**	2	0	0	2	5
04:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
04:45 PM	0	0	0	0	**1**	2	0	3	3	0	0	3	6
Total Volume	0	0	0	0	1	7	0	8	11	0	0	11	19
% App. Total	0	0	0		12.5	87.5	0		100	0	0		
PHF	.000	.000	.000	.000	.250	.583	.000	.667	.688	.000	.000	.688	.792

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 DD
Site Code : 14342892
Start Date : 10/7/2015

Groups Printed- Peds and Bicycles

	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	1	0	0	0	2
Grand Total	0	0	1	0	0	0	0	0	2	0	0	0	3
Apprch %	0	0	100	0	0	0	0	0	100	0	0	0	
Total %	0	0	33.3	0	0	0	0	0	66.7	0	0	0	

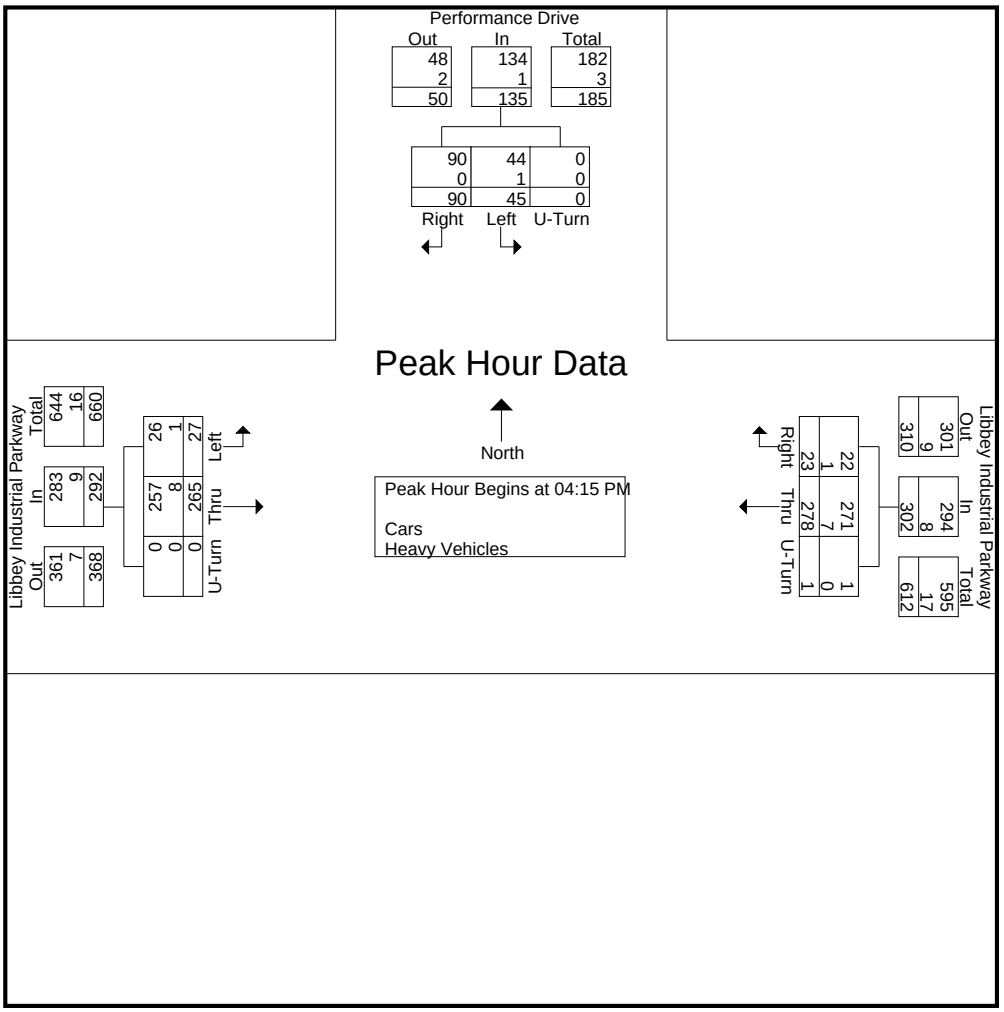
	Performance Drive From North					Libbey Industrial Parkway From East					Libbey Industrial Parkway From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	**1**	**1**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	2
% App. Total	0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.500

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 DD
Site Code : 14342892
Start Date : 10/7/2015
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	Performance Drive From North				Libbey Industrial Parkway From East				Libbey Industrial Parkway From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	25	6	0	31	4	50	0	54	**78**	7	0	**85**	170
04:30 PM	**26**	**14**	0	**40**	**8**	52	0	60	57	5	0	62	162
04:45 PM	17	13	0	30	5	69	0	74	67	**9**	0	76	180
05:00 PM	22	12	0	34	6	**107**	**1**	**114**	63	6	0	69	**217**
Total Volume	90	45	0	135	23	278	1	302	265	27	0	292	729
% App. Total	66.7	33.3	0		7.6	92.1	0.3		90.8	9.2	0		
PHF	.865	.804	.000	.844	.719	.650	.250	.662	.849	.750	.000	.859	.840
Cars	90	44	0	134	22	271	1	294	257	26	0	283	711
% Cars	100	97.8	0	99.3	95.7	97.5	100	97.4	97.0	96.3	0	96.9	97.5
Heavy Vehicles	0	1	0	1	1	7	0	8	8	1	0	9	18
% Heavy Vehicles	0	2.2	0	0.7	4.3	2.5	0	2.6	3.0	3.7	0	3.1	2.5



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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 F
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	0	2	0	17	3	0	0	0	0	22
07:15 AM	0	8	0	27	7	0	0	0	0	42
07:30 AM	0	5	0	23	8	0	1	0	0	37
07:45 AM	0	7	0	26	11	0	1	0	0	45
Total	0	22	0	93	29	0	2	0	0	146
08:00 AM	1	3	0	19	4	0	1	0	0	28
08:15 AM	0	9	0	34	5	1	1	0	0	50
08:30 AM	0	11	0	16	4	0	1	0	0	32
08:45 AM	1	12	0	39	3	0	3	0	0	58
Total	2	35	0	108	16	1	6	0	0	168
Grand Total	2	57	0	201	45	1	8	0	0	314
Apprch %	3.4	96.6	0	81.4	18.2	0.4	100	0	0	
Total %	0.6	18.2	0	64	14.3	0.3	2.5	0	0	
Cars	2	57	0	201	45	1	8	0	0	314
% Cars	100	100	0	100	100	100	100	0	0	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	**1**	3	0	4	19	4	0	23	1	0	0	1	28
08:15 AM	0	9	0	9	34	**5**	**1**	40	1	0	0	1	50
08:30 AM	0	11	0	11	16	4	0	20	1	0	0	1	32
08:45 AM	1	**12**	0	**13**	**39**	3	0	**42**	**3**	0	0	**3**	**58**
Total Volume	2	35	0	37	108	16	1	125	6	0	0	6	168
% App. Total	5.4	94.6	0		86.4	12.8	0.8		100	0	0		
PHF	.500	.729	.000	.712	.692	.800	.250	.744	.500	.000	.000	.500	.724
Cars	2	35	0	37	108	16	1	125	6	0	0	6	168
% Cars	100	100	0	100	100	100	100	100	100	0	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0

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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 F
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	0	2	0	17	3	0	0	0	0	22
07:15 AM	0	8	0	27	7	0	0	0	0	42
07:30 AM	0	5	0	23	8	0	1	0	0	37
07:45 AM	0	7	0	26	11	0	1	0	0	45
Total	0	22	0	93	29	0	2	0	0	146
08:00 AM	1	3	0	19	4	0	1	0	0	28
08:15 AM	0	9	0	34	5	1	1	0	0	50
08:30 AM	0	11	0	16	4	0	1	0	0	32
08:45 AM	1	12	0	39	3	0	3	0	0	58
Total	2	35	0	108	16	1	6	0	0	168
Grand Total	2	57	0	201	45	1	8	0	0	314
Apprch %	3.4	96.6	0	81.4	18.2	0.4	100	0	0	
Total %	0.6	18.2	0	64	14.3	0.3	2.5	0	0	

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	**1**	3	0	4	19	4	0	23	1	0	0	1	28
08:15 AM	0	9	0	9	34	**5**	**1**	40	1	0	0	1	50
08:30 AM	0	11	0	11	16	4	0	20	1	0	0	1	32
08:45 AM	1	**12**	0	**13**	**39**	3	0	**42**	**3**	0	0	**3**	**58**
Total Volume	2	35	0	37	108	16	1	125	6	0	0	6	168
% App. Total	5.4	94.6	0		86.4	12.8	0.8		100	0	0		
PHF	.500	.729	.000	.712	.692	.800	.250	.744	.500	.000	.000	.500	.724

PRECISION
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N/S: Performance Drive
W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 F
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	
Total %										

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 F
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	
Total %													

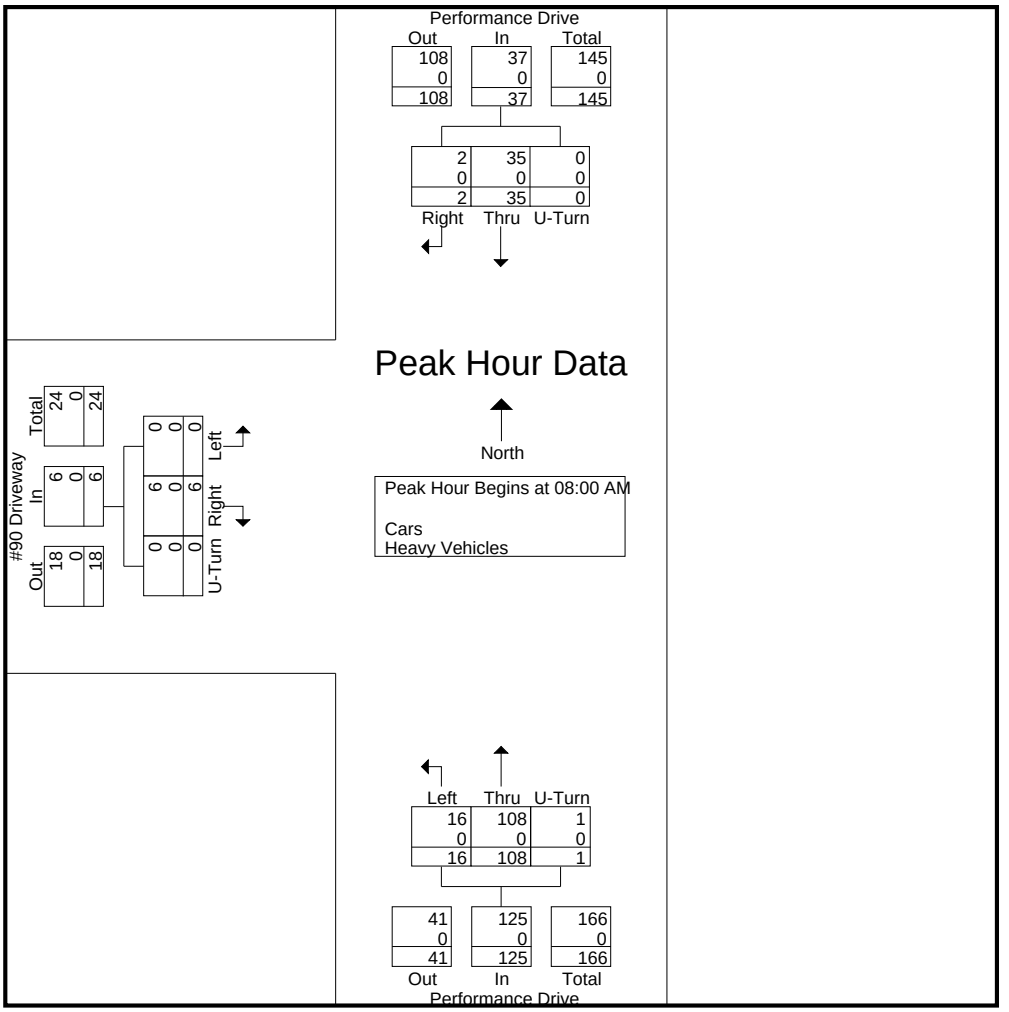
	Performance Drive From North					Performance Drive From South					#90 Driveway From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:00 AM																
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 F
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	**1**	3	0	4	19	4	0	23	1	0	0	1	28
08:15 AM	0	9	0	9	34	**5**	**1**	40	1	0	0	1	50
08:30 AM	0	11	0	11	16	4	0	20	1	0	0	1	32
08:45 AM	1	**12**	0	**13**	**39**	3	0	**42**	**3**	0	0	**3**	**58**
Total Volume	2	35	0	37	108	16	1	125	6	0	0	6	168
% App. Total	5.4	94.6	0		86.4	12.8	0.8		100	0	0		
PHF	.500	.729	.000	.712	.692	.800	.250	.744	.500	.000	.000	.500	.724
Cars	2	35	0	37	108	16	1	125	6	0	0	6	168
% Cars	100	100	0	100	100	100	100	100	100	0	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0



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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 FF
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	35	0	15	1	0	7	0	0	58
04:15 PM	0	24	0	10	1	0	6	0	0	41
04:30 PM	0	33	0	12	0	0	6	1	0	52
04:45 PM	0	26	0	14	0	0	3	1	0	44
Total	0	118	0	51	2	0	22	2	0	195
05:00 PM	0	29	0	9	0	0	2	0	0	40
05:15 PM	0	28	0	11	0	0	3	0	0	42
05:30 PM	0	13	0	3	0	0	4	0	0	20
05:45 PM	0	16	0	17	0	0	2	0	0	35
Total	0	86	0	40	0	0	11	0	0	137
Grand Total	0	204	0	91	2	0	33	2	0	332
Apprch %	0	100	0	97.8	2.2	0	94.3	5.7	0	
Total %	0	61.4	0	27.4	0.6	0	9.9	0.6	0	
Cars	0	202	0	89	2	0	33	2	0	328
% Cars	0	99	0	97.8	100	0	100	100	0	98.8
Heavy Vehicles	0	2	0	2	0	0	0	0	0	4
% Heavy Vehicles	0	1	0	2.2	0	0	0	0	0	1.2

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	**35**	0	**35**	**15**	**1**	0	**16**	**7**	0	0	**7**	**58**
04:15 PM	0	24	0	24	10	1	0	11	6	0	0	6	41
04:30 PM	0	33	0	33	12	0	0	12	6	**1**	0	7	52
04:45 PM	0	26	0	26	14	0	0	14	3	1	0	4	44
Total Volume	0	118	0	118	51	2	0	53	22	2	0	24	195
% App. Total	0	100	0		96.2	3.8	0		91.7	8.3	0		
PHF	.000	.843	.000	.843	.850	.500	.000	.828	.786	.500	.000	.857	.841
Cars	0	118	0	118	50	2	0	52	22	2	0	24	194
% Cars	0	100	0	100	98.0	100	0	98.1	100	100	0	100	99.5
Heavy Vehicles	0	0	0	0	1	0	0	1	0	0	0	0	1
% Heavy Vehicles	0	0	0	0	2.0	0	0	1.9	0	0	0	0	0.5

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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 FF
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	35	0	15	1	0	7	0	0	58
04:15 PM	0	24	0	10	1	0	6	0	0	41
04:30 PM	0	33	0	12	0	0	6	1	0	52
04:45 PM	0	26	0	13	0	0	3	1	0	43
Total	0	118	0	50	2	0	22	2	0	194
05:00 PM	0	28	0	8	0	0	2	0	0	38
05:15 PM	0	27	0	11	0	0	3	0	0	41
05:30 PM	0	13	0	3	0	0	4	0	0	20
05:45 PM	0	16	0	17	0	0	2	0	0	35
Total	0	84	0	39	0	0	11	0	0	134
Grand Total	0	202	0	89	2	0	33	2	0	328
Apprch %	0	100	0	97.8	2.2	0	94.3	5.7	0	
Total %	0	61.6	0	27.1	0.6	0	10.1	0.6	0	

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	**35**	0	**35**	**15**	**1**	0	**16**	**7**	0	0	**7**	**58**
04:15 PM	0	24	0	24	10	1	0	11	6	0	0	6	41
04:30 PM	0	33	0	33	12	0	0	12	6	**1**	0	7	52
04:45 PM	0	26	0	26	13	0	0	13	3	1	0	4	43
Total Volume	0	118	0	118	50	2	0	52	22	2	0	24	194
% App. Total	0	100	0		96.2	3.8	0		91.7	8.3	0		
PHF	.000	.843	.000	.843	.833	.500	.000	.813	.786	.500	.000	.857	.836

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N/S: Performance Drive
W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 FF
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Performance Drive From North			Performance Drive From South			#90 Driveway From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	1	0	0	0	0	0	1
05:00 PM	0	1	0	1	0	0	0	0	0	2
05:15 PM	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	1	0	0	0	0	0	3
Grand Total	0	2	0	2	0	0	0	0	0	4
Apprch %	0	100	0	100	0	0	0	0	0	
Total %	0	50	0	50	0	0	0	0	0	

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
05:00 PM	0	**1**	0	**1**	1	0	0	1	0	0	0	0	**2**
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	2	0	0	2	0	0	0	0	4
% App. Total	0	100	0		100	0	0		0	0	0		
PHF	.000	.500	.000	.500	.500	.000	.000	.500	.000	.000	.000	.000	.500

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N/S: Performance Drive
W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 FF
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	100	0	0	0	0	0	0	0	0	
Total %	0	0	0	100	0	0	0	0	0	0	0	0	

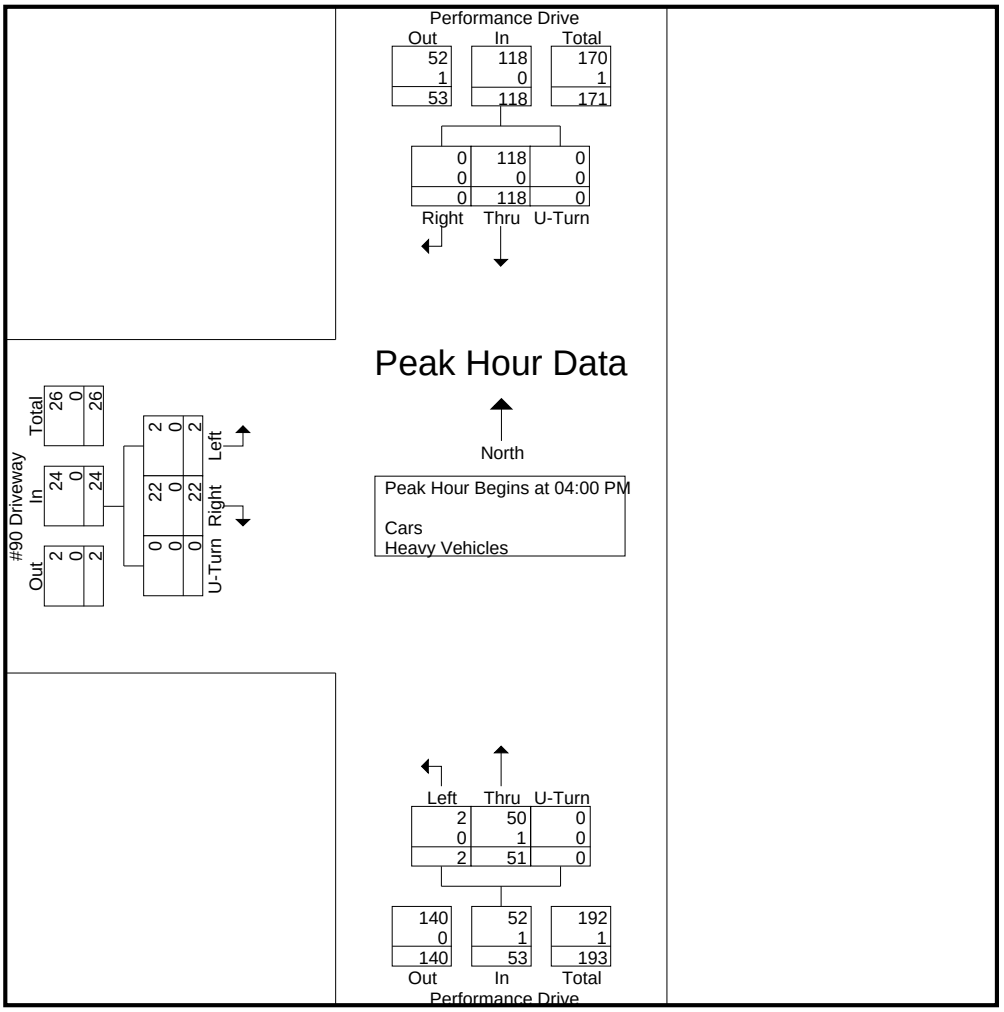
	Performance Drive From North					Performance Drive From South					#90 Driveway From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	100		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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W: #90 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 FF
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Performance Drive From North				Performance Drive From South				#90 Driveway From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	**35**	0	**35**	**15**	**1**	0	**16**	**7**	0	0	**7**	**58**
04:15 PM	0	24	0	24	10	1	0	11	6	0	0	6	41
04:30 PM	0	33	0	33	12	0	0	12	6	**1**	0	7	52
04:45 PM	0	26	0	26	14	0	0	14	3	1	0	4	44
Total Volume	0	118	0	118	51	2	0	53	22	2	0	24	195
% App. Total	0	100	0		96.2	3.8	0		91.7	8.3	0		
PHF	.000	.843	.000	.843	.850	.500	.000	.828	.786	.500	.000	.857	.841
Cars	0	118	0	118	50	2	0	52	22	2	0	24	194
% Cars	0	100	0	100	98.0	100	0	98.1	100	100	0	100	99.5
Heavy Vehicles	0	0	0	0	1	0	0	1	0	0	0	0	1
% Heavy Vehicles	0	0	0	0	2.0	0	0	1.9	0	0	0	0	0.5



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E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 G
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	1	0	0	0	0	0	2	15	0	18
07:15 AM	6	0	0	0	3	0	9	18	0	36
07:30 AM	3	0	0	0	2	0	11	12	0	28
07:45 AM	2	0	0	0	5	0	13	13	0	33
Total	12	0	0	0	10	0	35	58	0	115
08:00 AM	2	0	0	0	2	0	5	14	0	23
08:15 AM	6	0	0	0	3	0	17	16	0	42
08:30 AM	5	0	0	0	6	0	6	11	0	28
08:45 AM	8	0	0	0	5	0	10	28	0	51
Total	21	0	0	0	16	0	38	69	0	144
Grand Total	33	0	0	0	26	0	73	127	0	259
Apprch %	100	0	0	0	100	0	36.5	63.5	0	
Total %	12.7	0	0	0	10	0	28.2	49	0	
Cars	33	0	0	0	26	0	73	127	0	259
% Cars	100	0	0	0	100	0	100	100	0	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	2	0	0	2	0	2	0	2	5	14	0	19	23
08:15 AM	6	0	0	6	0	3	0	3	**17**	16	0	33	42
08:30 AM	5	0	0	5	0	**6**	0	**6**	6	11	0	17	28
08:45 AM	**8**	0	0	**8**	0	5	0	5	10	**28**	0	**38**	**51**
Total Volume	21	0	0	21	0	16	0	16	38	69	0	107	144
% App. Total	100	0	0		0	100	0		35.5	64.5	0		
PHF	.656	.000	.000	.656	.000	.667	.000	.667	.559	.616	.000	.704	.706
Cars	21	0	0	21	0	16	0	16	38	69	0	107	144
% Cars	100	0	0	100	0	100	0	100	100	100	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0

PRECISION
D A T A
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P.O. Box 301 Berlin, MA 01503
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Email: datarequests@pdillc.com

N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 G
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	1	0	0	0	0	0	2	15	0	18
07:15 AM	6	0	0	0	3	0	9	18	0	36
07:30 AM	3	0	0	0	2	0	11	12	0	28
07:45 AM	2	0	0	0	5	0	13	13	0	33
Total	12	0	0	0	10	0	35	58	0	115
08:00 AM	2	0	0	0	2	0	5	14	0	23
08:15 AM	6	0	0	0	3	0	17	16	0	42
08:30 AM	5	0	0	0	6	0	6	11	0	28
08:45 AM	8	0	0	0	5	0	10	28	0	51
Total	21	0	0	0	16	0	38	69	0	144
Grand Total	33	0	0	0	26	0	73	127	0	259
Apprch %	100	0	0	0	100	0	36.5	63.5	0	
Total %	12.7	0	0	0	10	0	28.2	49	0	

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	2	0	0	2	0	2	0	2	5	14	0	19	23
08:15 AM	6	0	0	6	0	3	0	3	**17**	16	0	33	42
08:30 AM	5	0	0	5	0	**6**	0	**6**	6	11	0	17	28
08:45 AM	**8**	0	0	**8**	0	5	0	5	10	**28**	0	**38**	**51**
Total Volume	21	0	0	21	0	16	0	16	38	69	0	107	144
% App. Total	100	0	0		0	100	0		35.5	64.5	0		
PHF	.656	.000	.000	.656	.000	.667	.000	.667	.559	.616	.000	.704	.706

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 G
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	
Total %										

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 G
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	
Total %													

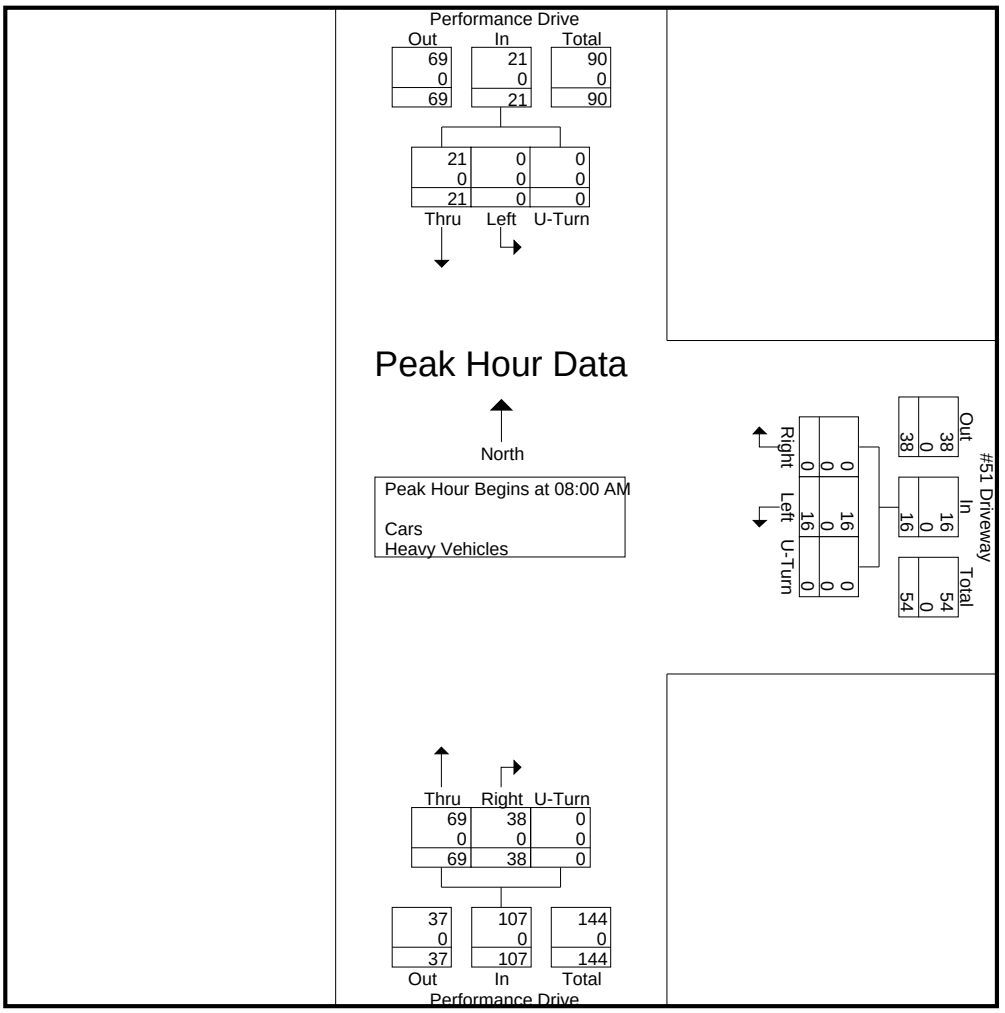
	Performance Drive From North					#51 Driveway From East					Performance Drive From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:00 AM																
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 G
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	2	0	0	2	0	2	0	2	5	14	0	19	23
08:15 AM	6	0	0	6	0	3	0	3	**17**	16	0	33	42
08:30 AM	5	0	0	5	0	**6**	0	**6**	6	11	0	17	28
08:45 AM	**8**	0	0	**8**	0	5	0	5	10	**28**	0	**38**	**51**
Total Volume	21	0	0	21	0	16	0	16	38	69	0	107	144
% App. Total	100	0	0		0	100	0		35.5	64.5	0		
PHF	.656	.000	.000	.656	.000	.667	.000	.667	.559	.616	.000	.704	.706
Cars	21	0	0	21	0	16	0	16	38	69	0	107	144
% Cars	100	0	0	100	0	100	0	100	100	100	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0



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City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 GG
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	21	0	0	0	14	0	8	7	0	50
04:15 PM	15	0	0	0	8	0	5	5	0	33
04:30 PM	18	0	0	0	16	0	7	6	0	47
04:45 PM	14	0	0	0	11	0	3	12	0	40
Total	68	0	0	0	49	0	23	30	0	170
05:00 PM	19	0	0	0	12	0	3	6	0	40
05:15 PM	17	0	0	1	10	0	6	5	0	39
05:30 PM	10	0	0	0	3	0	2	1	0	16
05:45 PM	11	0	0	0	5	0	4	13	0	33
Total	57	0	0	1	30	0	15	25	0	128
Grand Total	125	0	0	1	79	0	38	55	0	298
Apprch %	100	0	0	1.2	98.8	0	40.9	59.1	0	
Total %	41.9	0	0	0.3	26.5	0	12.8	18.5	0	
Cars	123	0	0	1	78	0	37	54	0	293
% Cars	98.4	0	0	100	98.7	0	97.4	98.2	0	98.3
Heavy Vehicles	2	0	0	0	1	0	1	1	0	5
% Heavy Vehicles	1.6	0	0	0	1.3	0	2.6	1.8	0	1.7

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	**21**	0	0	**21**	0	14	0	14	**8**	7	0	**15**	**50**
04:15 PM	15	0	0	15	0	8	0	8	5	5	0	10	33
04:30 PM	18	0	0	18	0	**16**	0	**16**	7	6	0	13	47
04:45 PM	14	0	0	14	0	11	0	11	3	**12**	0	15	40
Total Volume	68	0	0	68	0	49	0	49	23	30	0	53	170
% App. Total	100	0	0		0	100	0		43.4	56.6	0		
PHF	.810	.000	.000	.810	.000	.766	.000	.766	.719	.625	.000	.883	.850
Cars	68	0	0	68	0	49	0	49	23	29	0	52	169
% Cars	100	0	0	100	0	100	0	100	100	96.7	0	98.1	99.4
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	3.3	0	1.9	0.6

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 GG
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Cars

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	21	0	0	0	14	0	8	7	0	50
04:15 PM	15	0	0	0	8	0	5	5	0	33
04:30 PM	18	0	0	0	16	0	7	6	0	47
04:45 PM	14	0	0	0	11	0	3	11	0	39
Total	68	0	0	0	49	0	23	29	0	169
05:00 PM	18	0	0	0	12	0	2	6	0	38
05:15 PM	17	0	0	1	9	0	6	5	0	38
05:30 PM	9	0	0	0	3	0	2	1	0	15
05:45 PM	11	0	0	0	5	0	4	13	0	33
Total	55	0	0	1	29	0	14	25	0	124
Grand Total	123	0	0	1	78	0	37	54	0	293
Apprch %	100	0	0	1.3	98.7	0	40.7	59.3	0	
Total %	42	0	0	0.3	26.6	0	12.6	18.4	0	

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	**21**	0	0	**21**	0	14	0	14	**8**	7	0	**15**	**50**
04:15 PM	15	0	0	15	0	8	0	8	5	5	0	10	33
04:30 PM	18	0	0	18	0	**16**	0	**16**	7	6	0	13	47
04:45 PM	14	0	0	14	0	11	0	11	3	**11**	0	14	39
Total Volume	68	0	0	68	0	49	0	49	23	29	0	52	169
% App. Total	100	0	0		0	100	0		44.2	55.8	0		
PHF	.810	.000	.000	.810	.000	.766	.000	.766	.719	.659	.000	.867	.845

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 GG
Site Code : 14342892
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Page No : 1

Groups Printed- Heavy Vehicles

	Performance Drive From North			#51 Driveway From East			Performance Drive From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	1	0	1
05:00 PM	1	0	0	0	0	0	1	0	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	1
05:30 PM	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	1	0	1	0	0	4
Grand Total	2	0	0	0	1	0	1	1	0	5
Apprch %	100	0	0	0	100	0	50	50	0	
Total %	40	0	0	0	20	0	20	20	0	

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
05:00 PM	**1**	0	0	**1**	0	0	0	0	**1**	0	0	1	**2**
05:15 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	2	0	1	0	1	1	1	0	2	5
% App. Total	100	0	0		0	100	0		50	50	0		
PHF	.500	.000	.000	.500	.000	.250	.000	.250	.250	.250	.000	.500	.625

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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 GG
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	
Total %													

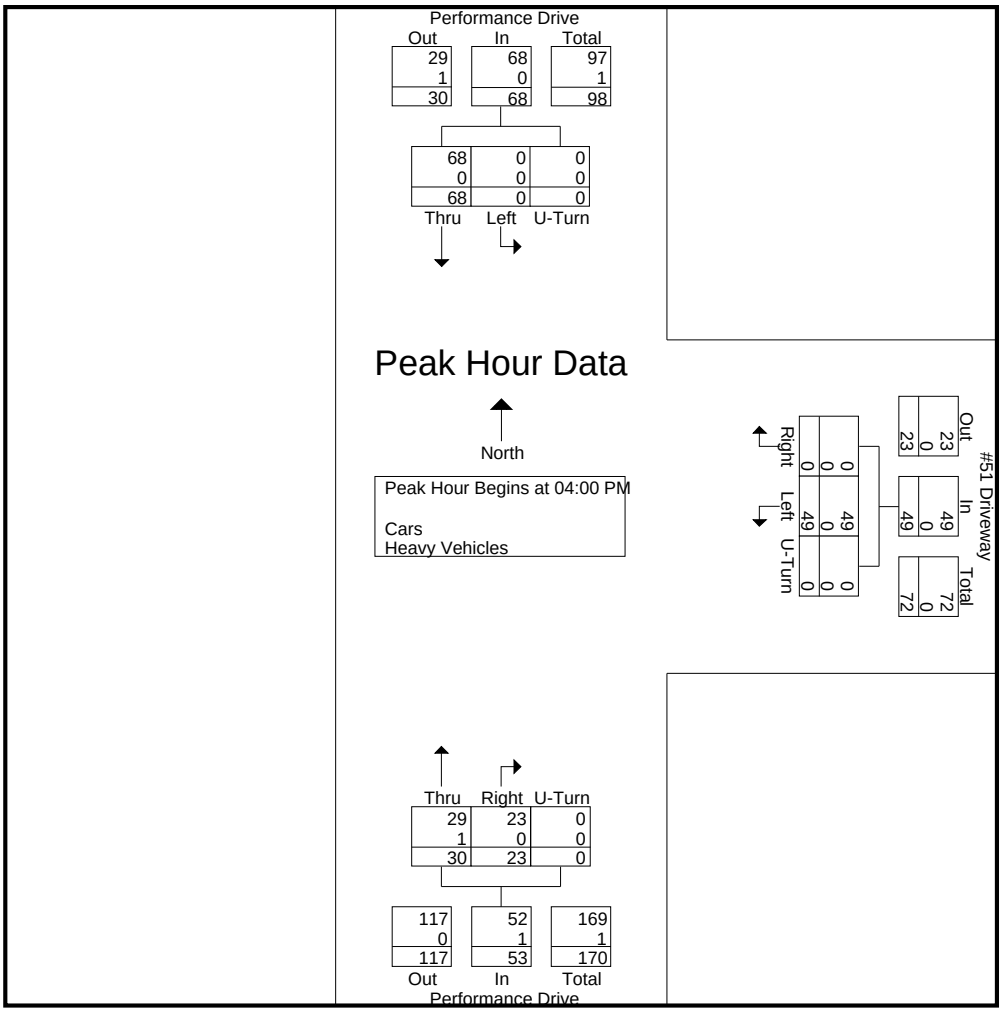
	Performance Drive From North					#51 Driveway From East					Performance Drive From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:00 PM																
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PRECISION
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N/S: Performance Drive
E: #51 Driveway
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154694 GG
Site Code : 14342892
Start Date : 10/7/2015
Page No : 1

	Performance Drive From North				#51 Driveway From East				Performance Drive From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	**21**	0	0	**21**	0	14	0	14	**8**	7	0	**15**	**50**
04:15 PM	15	0	0	15	0	8	0	8	5	5	0	10	33
04:30 PM	18	0	0	18	0	**16**	0	**16**	7	6	0	13	47
04:45 PM	14	0	0	14	0	11	0	11	3	**12**	0	15	40
Total Volume	68	0	0	68	0	49	0	49	23	30	0	53	170
% App. Total	100	0	0		0	100	0		43.4	56.6	0		
PHF	.810	.000	.000	.810	.000	.766	.000	.766	.719	.625	.000	.883	.850
Cars	68	0	0	68	0	49	0	49	23	29	0	52	169
% Cars	100	0	0	100	0	100	0	100	100	96.7	0	98.1	99.4
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	3.3	0	1.9	0.6



N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

PRECISION DATA INDUSTRIES, LLC
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File Name : 143698 A
Site Code : TBA
Start Date : 11/6/2014
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	3	196	22	0	36	100	20	0	13	114	8	0	20	55	7	0	594
07:15 AM	3	137	26	0	38	139	17	0	18	183	15	0	13	43	4	0	636
07:30 AM	6	97	28	0	38	152	16	0	20	178	12	0	10	64	8	0	629
07:45 AM	2	131	40	0	44	121	30	0	20	151	6	0	3	61	5	0	614
Total	14	561	116	0	156	512	83	0	71	626	41	0	46	223	24	0	2473
08:00 AM	6	103	36	0	38	156	19	0	21	152	21	0	7	50	12	0	621
08:15 AM	6	108	37	0	53	119	33	0	23	132	10	0	10	60	4	0	595
08:30 AM	8	131	43	0	36	112	33	0	20	107	16	0	6	49	5	0	566
08:45 AM	9	97	37	0	39	117	38	0	17	109	11	0	6	51	4	0	535
Total	29	439	153	0	166	504	123	0	81	500	58	0	29	210	25	0	2317
09:00 AM	6	77	31	0	30	93	19	0	17	80	9	0	10	39	10	0	421
09:15 AM	6	96	29	0	35	76	25	0	19	92	15	0	7	41	9	0	450
09:30 AM	2	88	33	0	27	53	16	0	16	92	11	0	8	62	8	0	416
09:45 AM	6	91	31	0	29	54	18	0	22	77	7	0	4	57	7	0	403
Total	20	352	124	0	121	276	78	0	74	341	42	0	29	199	34	0	1690
10:00 AM	5	67	27	0	28	61	17	0	21	82	10	0	7	59	8	0	392
10:15 AM	3	76	32	0	23	50	22	0	16	70	10	0	8	69	9	0	388
10:30 AM	6	77	36	0	35	55	25	0	20	81	12	0	10	64	6	0	427
10:45 AM	7	84	36	0	28	50	22	0	30	69	6	0	6	61	5	0	404
Total	21	304	131	0	114	216	86	0	87	302	38	0	31	253	28	0	1611
Grand Total	84	1656	524	0	557	1508	370	0	313	1769	179	0	135	885	111	0	8091
Apprch %	3.7	73.1	23.1	0	22.9	61.9	15.2	0	13.8	78.2	7.9	0	11.9	78.2	9.8	0	
Total %	1	20.5	6.5	0	6.9	18.6	4.6	0	3.9	21.9	2.2	0	1.7	10.9	1.4	0	
Cars	79	1582	513	0	522	1447	349	0	289	1676	147	0	119	849	92	0	7664
% Cars	94	95.5	97.9	0	93.7	96	94.3	0	92.3	94.7	82.1	0	88.1	95.9	82.9	0	94.7
Heavy Vehicles	5	74	11	0	35	61	21	0	24	93	32	0	16	36	19	0	427
% Heavy Vehicles	6	4.5	2.1	0	6.3	4	5.7	0	7.7	5.3	17.9	0	11.9	4.1	17.1	0	5.3

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	137	26	0	166	38	139	17	0	194	18	183	15	0	216	13	43	4	0	60	636
07:30 AM	6	97	28	0	131	38	152	16	0	206	20	178	12	0	210	10	64	8	0	82	629
07:45 AM	2	131	40	0	173	44	121	30	0	195	20	151	6	0	177	3	61	5	0	69	614
08:00 AM	6	103	36	0	145	38	156	19	0	213	21	152	21	0	194	7	50	12	0	69	621
Total Volume	17	468	130	0	615	158	568	82	0	808	79	664	54	0	797	33	218	29	0	280	2500
% App. Total	2.8	76.1	21.1	0		19.6	70.3	10.1	0		9.9	83.3	6.8	0		11.8	77.9	10.4	0		
PHF	.708	.854	.813	.000	.889	.898	.910	.683	.000	.948	.940	.907	.643	.000	.922	.635	.852	.604	.000	.854	.983
Cars	16	454	128	0	598	147	538	76	0	761	71	632	41	0	744	31	207	22	0	260	2363
% Cars	94.1	97.0	98.5	0	97.2	93.0	94.7	92.7	0	94.2	89.9	95.2	75.9	0	93.4	93.9	95.0	75.9	0	92.9	94.5
Heavy Vehicles	1	14	2	0	17	11	30	6	0	47	8	32	13	0	53	2	11	7	0	20	137
% Heavy Vehicles	5.9	3.0	1.5	0	2.8	7.0	5.3	7.3	0	5.8	10.1	4.8	24.1	0	6.6	6.1	5.0	24.1	0	7.1	5.5

N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

PRECISION
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File Name : 143698 A
Site Code : TBA
Start Date : 11/6/2014
Page No : 1

Groups Printed- Cars

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	2	190	22	0	35	100	19	0	13	105	5	0	20	54	6	0	571
07:15 AM	3	137	25	0	35	130	16	0	16	179	8	0	12	41	1	0	603
07:30 AM	5	93	27	0	38	148	15	0	18	171	10	0	9	61	7	0	602
07:45 AM	2	127	40	0	41	113	26	0	18	140	3	0	3	57	4	0	574
Total	12	547	114	0	149	491	76	0	65	595	26	0	44	213	18	0	2350
08:00 AM	6	97	36	0	33	147	19	0	19	142	20	0	7	48	10	0	584
08:15 AM	6	105	35	0	51	115	33	0	21	127	9	0	7	58	4	0	571
08:30 AM	8	125	43	0	35	109	32	0	17	99	11	0	5	49	4	0	537
08:45 AM	9	90	37	0	37	110	38	0	15	102	10	0	3	47	3	0	501
Total	29	417	151	0	156	481	122	0	72	470	50	0	22	202	21	0	2193
09:00 AM	6	72	30	0	27	91	16	0	15	77	8	0	8	38	8	0	396
09:15 AM	4	88	29	0	32	72	24	0	18	90	13	0	5	39	8	0	422
09:30 AM	2	85	32	0	26	52	14	0	14	83	8	0	7	56	5	0	384
09:45 AM	6	89	30	0	25	52	18	0	21	76	6	0	3	54	6	0	386
Total	18	334	121	0	110	267	72	0	68	326	35	0	23	187	27	0	1588
10:00 AM	5	60	25	0	27	58	16	0	20	77	10	0	7	57	7	0	369
10:15 AM	3	69	32	0	21	48	21	0	16	67	10	0	8	68	9	0	372
10:30 AM	6	75	36	0	32	53	21	0	20	76	11	0	9	62	5	0	406
10:45 AM	6	80	34	0	27	49	21	0	28	65	5	0	6	60	5	0	386
Total	20	284	127	0	107	208	79	0	84	285	36	0	30	247	26	0	1533
Grand Total	79	1582	513	0	522	1447	349	0	289	1676	147	0	119	849	92	0	7664
Apprch %	3.6	72.8	23.6	0	22.5	62.4	15.1	0	13.7	79.4	7	0	11.2	80.1	8.7	0	
Total %	1	20.6	6.7	0	6.8	18.9	4.6	0	3.8	21.9	1.9	0	1.6	11.1	1.2	0	

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	137	25	0	165	35	130	16	0	181	16	179	8	0	203	12	41	1	0	54	603
07:30 AM	5	93	27	0	125	38	148	15	0	201	18	171	10	0	199	9	61	7	0	77	602
07:45 AM	2	127	40	0	169	41	113	26	0	180	18	140	3	0	161	3	57	4	0	64	574
08:00 AM	6	97	36	0	139	33	147	19	0	199	19	142	20	0	181	7	48	10	0	65	584
Total Volume	16	454	128	0	598	147	538	76	0	761	71	632	41	0	744	31	207	22	0	260	2363
% App. Total	2.7	75.9	21.4	0		19.3	70.7	10	0		9.5	84.9	5.5	0		11.9	79.6	8.5	0		
PHF	.667	.828	.800	.000	.885	.896	.909	.731	.000	.947	.934	.883	.513	.000	.916	.646	.848	.550	.000	.844	.980

N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

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File Name : 143698 A
Site Code : TBA
Start Date : 11/6/2014
Page No : 1

Groups Printed- Heavy Vehicles

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	6	0	0	1	0	1	0	0	9	3	0	0	1	1	0	23
07:15 AM	0	0	1	0	3	9	1	0	2	4	7	0	1	2	3	0	33
07:30 AM	1	4	1	0	0	4	1	0	2	7	2	0	1	3	1	0	27
07:45 AM	0	4	0	0	3	8	4	0	2	11	3	0	0	4	1	0	40
Total	2	14	2	0	7	21	7	0	6	31	15	0	2	10	6	0	123
08:00 AM	0	6	0	0	5	9	0	0	2	10	1	0	0	2	2	0	37
08:15 AM	0	3	2	0	2	4	0	0	2	5	1	0	3	2	0	0	24
08:30 AM	0	6	0	0	1	3	1	0	3	8	5	0	1	0	1	0	29
08:45 AM	0	7	0	0	2	7	0	0	2	7	1	0	3	4	1	0	34
Total	0	22	2	0	10	23	1	0	9	30	8	0	7	8	4	0	124
09:00 AM	0	5	1	0	3	2	3	0	2	3	1	0	2	1	2	0	25
09:15 AM	2	8	0	0	3	4	1	0	1	2	2	0	2	2	1	0	28
09:30 AM	0	3	1	0	1	1	2	0	2	9	3	0	1	6	3	0	32
09:45 AM	0	2	1	0	4	2	0	0	1	1	1	0	1	3	1	0	17
Total	2	18	3	0	11	9	6	0	6	15	7	0	6	12	7	0	102
10:00 AM	0	7	2	0	1	3	1	0	1	5	0	0	0	2	1	0	23
10:15 AM	0	7	0	0	2	2	1	0	0	3	0	0	0	1	0	0	16
10:30 AM	0	2	0	0	3	2	4	0	0	5	1	0	1	2	1	0	21
10:45 AM	1	4	2	0	1	1	1	0	2	4	1	0	0	1	0	0	18
Total	1	20	4	0	7	8	7	0	3	17	2	0	1	6	2	0	78
Grand Total	5	74	11	0	35	61	21	0	24	93	32	0	16	36	19	0	427
Apprch %	5.6	82.2	12.2	0	29.9	52.1	17.9	0	16.1	62.4	21.5	0	22.5	50.7	26.8	0	
Total %	1.2	17.3	2.6	0	8.2	14.3	4.9	0	5.6	21.8	7.5	0	3.7	8.4	4.4	0	

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	1	0	1	3	9	1	0	13	2	4	7	0	13	1	2	3	0	6	33
07:30 AM	1	4	1	0	6	0	4	1	0	5	2	7	2	0	11	1	3	1	0	5	27
07:45 AM	0	4	0	0	4	3	8	4	0	15	2	11	3	0	16	0	4	1	0	5	40
08:00 AM	0	6	0	0	6	5	9	0	0	14	2	10	1	0	13	0	2	2	0	4	37
Total Volume	1	14	2	0	17	11	30	6	0	47	8	32	13	0	53	2	11	7	0	20	137
% App. Total	5.9	82.4	11.8	0		23.4	63.8	12.8	0		15.1	60.4	24.5	0		10	55	35	0		
PHF	.250	.583	.500	.000	.708	.550	.833	.375	.000	.783	1.00	.727	.464	.000	.828	.500	.688	.583	.000	.833	.856

N/S: Pleasant Street
E/W: Washington Street (Route 53)
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Groups Printed- Peds and Bikes

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	3
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	3	3	0	0	0	0	0	0	0	0	0	1	8
08:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	3
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
10:45 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2	0	0	0	0	5
Total	0	0	0	0	1	0	0	1	2	0	0	0	1	0	1	3	1	0	0	0	10
Grand Total	0	0	0	0	1	0	1	1	6	5	0	0	1	0	2	3	2	0	0	1	23
Apprch %	0	0	0	0	100	0	7.7	7.7	46.2	38.5	0	0	33.3	0	66.7	50	33.3	0	0	16.7	
Total %	0	0	0	0	4.3	0	4.3	4.3	26.1	21.7	0	0	4.3	0	8.7	13	8.7	0	0	4.3	

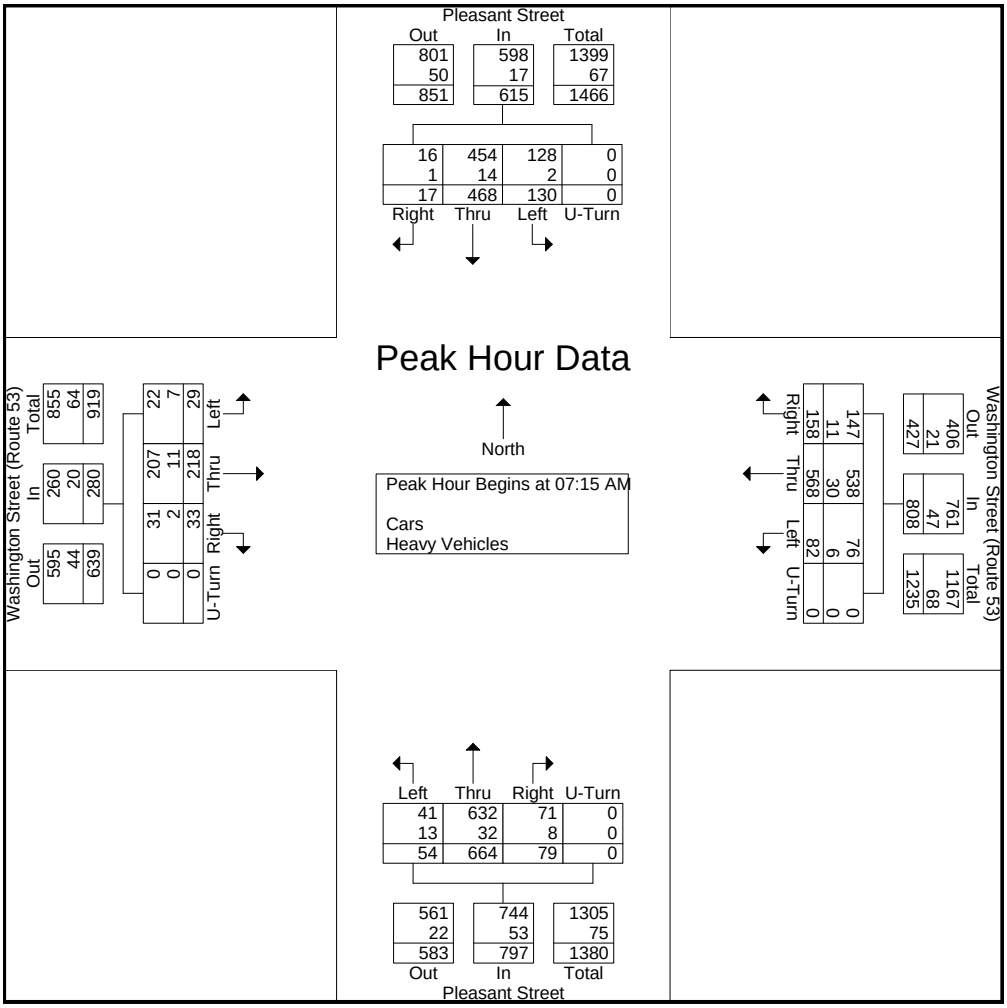
	Pleasant Street From North						Washington Street (Route 53) From East						Pleasant Street From South						Washington Street (Route 53) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	1	0	1	2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	3	3	7	0	0	0	0	0	0	0	0	0	0	1	1	8
% App. Total	0	0	0	0	0		0	14.3	0	42.9	42.9		0	0	0	0	0		0	0	0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.000	.750	.375	.438	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

PRECISION D A T A INDUSTRIES, LLC
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Site Code : TBA
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Page No : 1

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	137	26	0	166	38	139	17	0	194	18	183	15	0	216	13	43	4	0	60	636
07:30 AM	6	97	28	0	131	38	152	16	0	206	20	178	12	0	210	10	64	8	0	82	629
07:45 AM	2	131	40	0	173	44	121	30	0	195	20	151	6	0	177	3	61	5	0	69	614
08:00 AM	6	103	36	0	145	38	156	19	0	213	21	152	21	0	194	7	50	12	0	69	621
Total Volume	17	468	130	0	615	158	568	82	0	808	79	664	54	0	797	33	218	29	0	280	2500
% App. Total	2.8	76.1	21.1	0		19.6	70.3	10.1	0		9.9	83.3	6.8	0		11.8	77.9	10.4	0		
PHF	.708	.854	.813	.000	.889	.898	.910	.683	.000	.948	.940	.907	.643	.000	.922	.635	.852	.604	.000	.854	.983
Cars	16	454	128	0	598	147	538	76	0	761	71	632	41	0	744	31	207	22	0	260	2363
% Cars	94.1	97.0	98.5	0	97.2	93.0	94.7	92.7	0	94.2	89.9	95.2	75.9	0	93.4	93.9	95.0	75.9	0	92.9	94.5
Heavy Vehicles	1	14	2	0	17	11	30	6	0	47	8	32	13	0	53	2	11	7	0	20	137
% Heavy Vehicles	5.9	3.0	1.5	0	2.8	7.0	5.3	7.3	0	5.8	10.1	4.8	24.1	0	6.6	6.1	5.0	24.1	0	7.1	5.5



N/S: Pleasant Street
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
03:00 PM	7	140	32	0	35	73	22	0	19	121	15	0	9	88	16	0	577
03:15 PM	1	111	37	0	40	64	27	0	21	117	15	0	7	95	13	0	548
03:30 PM	5	133	32	0	41	65	31	0	30	136	23	0	10	99	7	0	612
03:45 PM	5	124	49	0	54	75	31	0	18	139	17	0	12	109	17	0	650
Total	18	508	150	0	170	277	111	0	88	513	70	0	38	391	53	0	2387
04:00 PM	5	135	34	0	68	61	30	0	29	121	9	0	10	85	16	0	603
04:15 PM	4	116	32	0	52	59	20	0	20	115	11	0	13	89	16	0	547
04:30 PM	5	138	37	0	50	55	14	0	25	129	15	0	10	93	12	0	583
04:45 PM	7	135	44	0	54	79	15	0	30	134	7	0	15	93	8	0	621
Total	21	524	147	0	224	254	79	0	104	499	42	0	48	360	52	0	2354
05:00 PM	5	103	24	0	57	80	29	0	28	144	8	0	7	92	15	0	592
05:15 PM	1	73	31	0	59	95	25	0	14	201	14	0	14	86	17	0	630
05:30 PM	7	152	30	0	40	63	16	0	19	120	14	0	17	111	8	0	597
05:45 PM	7	150	36	0	35	54	13	0	17	152	8	0	11	105	10	0	598
Total	20	478	121	0	191	292	83	0	78	617	44	0	49	394	50	0	2417
06:00 PM	4	101	32	0	35	58	19	0	12	110	9	0	9	79	21	0	489
06:15 PM	6	114	34	0	35	52	9	0	11	86	4	0	5	68	15	0	439
06:30 PM	7	73	35	0	28	48	12	0	15	85	7	0	8	67	7	0	392
06:45 PM	8	88	32	0	32	29	11	0	16	81	4	0	5	63	15	0	384
Total	25	376	133	0	130	187	51	0	54	362	24	0	27	277	58	0	1704
Grand Total	84	1886	551	0	715	1010	324	0	324	1991	180	0	162	1422	213	0	8862
Apprch %	3.3	74.8	21.9	0	34.9	49.3	15.8	0	13	79.8	7.2	0	9	79.1	11.9	0	
Total %	0.9	21.3	6.2	0	8.1	11.4	3.7	0	3.7	22.5	2	0	1.8	16	2.4	0	
Cars	82	1841	542	0	706	996	317	0	315	1968	172	0	154	1401	202	0	8696
% Cars	97.6	97.6	98.4	0	98.7	98.6	97.8	0	97.2	98.8	95.6	0	95.1	98.5	94.8	0	98.1
Heavy Vehicles	2	45	9	0	9	14	7	0	9	23	8	0	8	21	11	0	166
% Heavy Vehicles	2.4	2.4	1.6	0	1.3	1.4	2.2	0	2.8	1.2	4.4	0	4.9	1.5	5.2	0	1.9

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:15 PM																					
03:15 PM	1	111	37	0	149	40	64	27	0	131	21	117	15	0	153	7	95	13	0	115	548
03:30 PM	5	133	32	0	170	41	65	31	0	137	30	136	23	0	189	10	99	7	0	116	612
03:45 PM	5	124	49	0	178	54	75	31	0	160	18	139	17	0	174	12	109	17	0	138	650
04:00 PM	5	135	34	0	174	68	61	30	0	159	29	121	9	0	159	10	85	16	0	111	603
Total Volume	16	503	152	0	671	203	265	119	0	587	98	513	64	0	675	39	388	53	0	480	2413
% App. Total	2.4	75	22.7	0		34.6	45.1	20.3	0		14.5	76	9.5	0		8.1	80.8	11	0		
PHF	.800	.931	.776	.000	.942	.746	.883	.960	.000	.917	.817	.923	.696	.000	.893	.813	.890	.779	.000	.870	.928
Cars	16	478	148	0	642	198	257	116	0	571	93	501	59	0	653	35	377	49	0	461	2327
% Cars	100	95.0	97.4	0	95.7	97.5	97.0	97.5	0	97.3	94.9	97.7	92.2	0	96.7	89.7	97.2	92.5	0	96.0	96.4
Heavy Vehicles	0	25	4	0	29	5	8	3	0	16	5	12	5	0	22	4	11	4	0	19	86
% Heavy Vehicles	0	5.0	2.6	0	4.3	2.5	3.0	2.5	0	2.7	5.1	2.3	7.8	0	3.3	10.3	2.8	7.5	0	4.0	3.6

N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

PRECISION
D A T A
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File Name : 143698 AA
Site Code : TBA
Start Date : 11/6/2014
Page No : 1

Groups Printed- Cars

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
03:00 PM	5	133	31	0	33	70	21	0	19	114	14	0	9	88	14	0	551
03:15 PM	1	106	37	0	40	58	26	0	18	112	13	0	7	92	12	0	522
03:30 PM	5	123	29	0	40	64	31	0	28	135	20	0	7	92	6	0	580
03:45 PM	5	120	48	0	51	75	30	0	18	136	17	0	11	108	17	0	636
Total	16	482	145	0	164	267	108	0	83	497	64	0	34	380	49	0	2289
04:00 PM	5	129	34	0	67	60	29	0	29	118	9	0	10	85	14	0	589
04:15 PM	4	114	31	0	52	59	20	0	19	115	10	0	11	87	15	0	537
04:30 PM	5	136	37	0	49	55	14	0	24	128	15	0	10	92	12	0	577
04:45 PM	7	133	42	0	54	78	15	0	29	134	7	0	15	92	8	0	614
Total	21	512	144	0	222	252	78	0	101	495	41	0	46	356	49	0	2317
05:00 PM	5	101	23	0	57	79	28	0	27	144	8	0	7	92	14	0	585
05:15 PM	1	72	31	0	59	95	24	0	14	201	14	0	13	85	17	0	626
05:30 PM	7	152	30	0	39	62	15	0	19	120	14	0	17	110	7	0	592
05:45 PM	7	148	36	0	35	54	13	0	17	151	8	0	11	105	10	0	595
Total	20	473	120	0	190	290	80	0	77	616	44	0	48	392	48	0	2398
06:00 PM	4	100	32	0	35	58	19	0	12	110	9	0	9	78	21	0	487
06:15 PM	6	114	34	0	35	52	9	0	11	86	3	0	5	67	14	0	436
06:30 PM	7	72	35	0	28	48	12	0	15	84	7	0	7	65	7	0	387
06:45 PM	8	88	32	0	32	29	11	0	16	80	4	0	5	63	14	0	382
Total	25	374	133	0	130	187	51	0	54	360	23	0	26	273	56	0	1692
Grand Total	82	1841	542	0	706	996	317	0	315	1968	172	0	154	1401	202	0	8696
Apprch %	3.3	74.7	22	0	35	49.3	15.7	0	12.8	80.2	7	0	8.8	79.7	11.5	0	
Total %	0.9	21.2	6.2	0	8.1	11.5	3.6	0	3.6	22.6	2	0	1.8	16.1	2.3	0	

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:30 PM																					
03:30 PM	5	123	29	0	157	40	64	31	0	135	28	135	20	0	183	7	92	6	0	105	580
03:45 PM	5	120	48	0	173	51	75	30	0	156	18	136	17	0	171	11	108	17	0	136	636
04:00 PM	5	129	34	0	168	67	60	29	0	156	29	118	9	0	156	10	85	14	0	109	589
04:15 PM	4	114	31	0	149	52	59	20	0	131	19	115	10	0	144	11	87	15	0	113	537
Total Volume	19	486	142	0	647	210	258	110	0	578	94	504	56	0	654	39	372	52	0	463	2342
% App. Total	2.9	75.1	21.9	0		36.3	44.6	19	0		14.4	77.1	8.6	0		8.4	80.3	11.2	0		
PHF	.950	.942	.740	.000	.935	.784	.860	.887	.000	.926	.810	.926	.700	.000	.893	.886	.861	.765	.000	.851	.921

N/S: Pleasant Street
E/W: Washington Street (Route 53)
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Page No : 1

Groups Printed- Heavy Vehicles

	Pleasant Street From North				Washington Street (Route 53) From East				Pleasant Street From South				Washington Street (Route 53) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
03:00 PM	2	7	1	0	2	3	1	0	0	7	1	0	0	0	2	0	26
03:15 PM	0	5	0	0	0	6	1	0	3	5	2	0	0	3	1	0	26
03:30 PM	0	10	3	0	1	1	0	0	2	1	3	0	3	7	1	0	32
03:45 PM	0	4	1	0	3	0	1	0	0	3	0	0	1	1	0	0	14
Total	2	26	5	0	6	10	3	0	5	16	6	0	4	11	4	0	98
04:00 PM	0	6	0	0	1	1	1	0	0	3	0	0	0	0	2	0	14
04:15 PM	0	2	1	0	0	0	0	0	1	0	1	0	2	2	1	0	10
04:30 PM	0	2	0	0	1	0	0	0	1	1	0	0	0	1	0	0	6
04:45 PM	0	2	2	0	0	1	0	0	1	0	0	0	0	1	0	0	7
Total	0	12	3	0	2	2	1	0	3	4	1	0	2	4	3	0	37
05:00 PM	0	2	1	0	0	1	1	0	1	0	0	0	0	0	1	0	7
05:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	4
05:30 PM	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	5
05:45 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Total	0	5	1	0	1	2	3	0	1	1	0	0	1	2	2	0	19
06:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
06:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3
06:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	1	2	0	0	5
06:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
Total	0	2	0	0	0	0	0	0	0	2	1	0	1	4	2	0	12
Grand Total	2	45	9	0	9	14	7	0	9	23	8	0	8	21	11	0	166
Apprch %	3.6	80.4	16.1	0	30	46.7	23.3	0	22.5	57.5	20	0	20	52.5	27.5	0	
Total %	1.2	27.1	5.4	0	5.4	8.4	4.2	0	5.4	13.9	4.8	0	4.8	12.7	6.6	0	

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	2	7	1	0	10	2	3	1	0	6	0	7	1	0	8	0	0	2	0	2	26
03:15 PM	0	5	0	0	5	0	6	1	0	7	3	5	2	0	10	0	3	1	0	4	26
03:30 PM	0	10	3	0	13	1	1	0	0	2	2	1	3	0	6	3	7	1	0	11	32
03:45 PM	0	4	1	0	5	3	0	1	0	4	0	3	0	0	3	1	1	0	0	2	14
Total Volume	2	26	5	0	33	6	10	3	0	19	5	16	6	0	27	4	11	4	0	19	98
% App. Total	6.1	78.8	15.2	0		31.6	52.6	15.8	0		18.5	59.3	22.2	0		21.1	57.9	21.1	0		
PHF	.250	.650	.417	.000	.635	.500	.417	.750	.000	.679	.417	.571	.500	.000	.675	.333	.393	.500	.000	.432	.766

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Groups Printed- Peds and Bikes

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	1	3	1	0	0	0	1	0	0	0	0	0	6
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
04:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	2	1	0	0	0	2	4	1	0	0	0	3	0	0	0	0	0	13
Apprch %	0	0	0	66.7	33.3	0	0	0	33.3	66.7	25	0	0	0	75	0	0	0	0	0	
Total %	0	0	0	15.4	7.7	0	0	0	15.4	30.8	7.7	0	0	0	23.1	0	0	0	0	0	

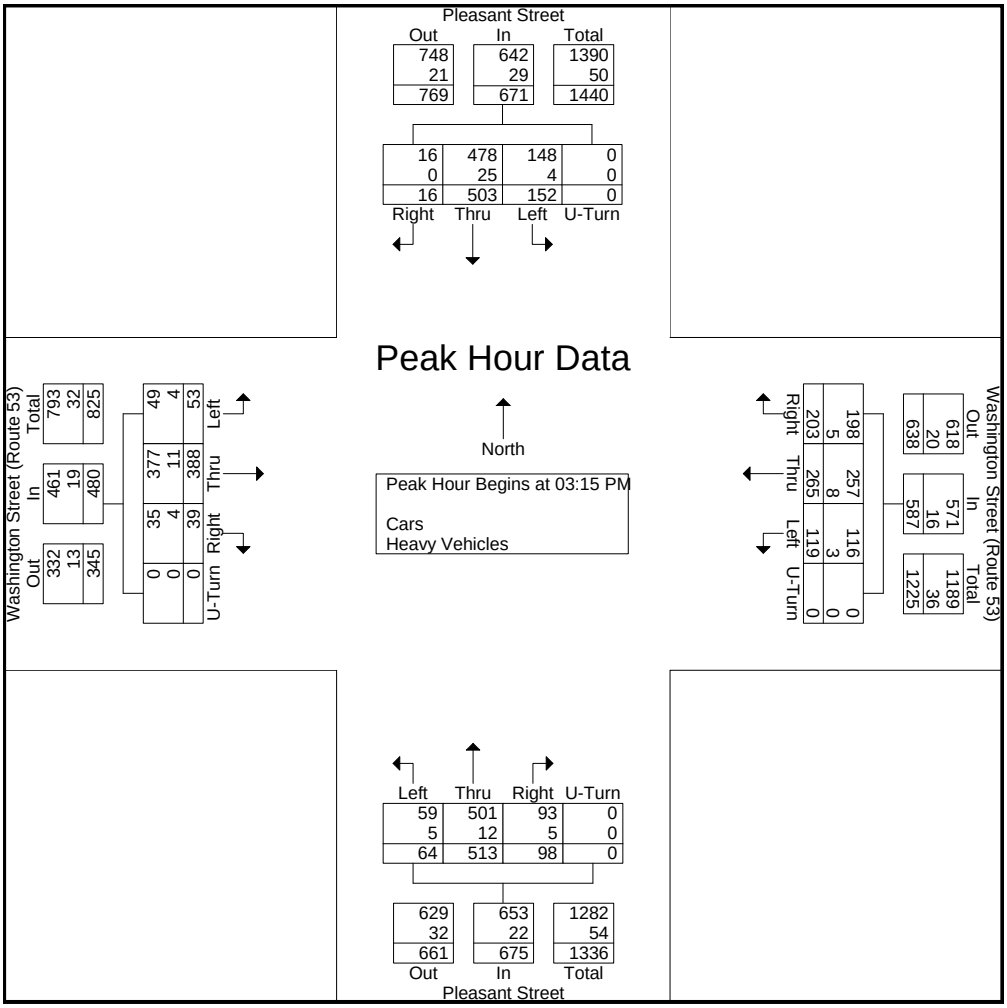
	Pleasant Street From North						Washington Street (Route 53) From East						Pleasant Street From South						Washington Street (Route 53) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 03:45 PM																									
03:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
04:30 PM	0	0	0	1	1	2	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	2	1	3	0	0	0	1	2	3	1	0	0	0	1	2	0	0	0	0	0	0	8
% App. Total	0	0	0	66.7	33.3		0	0	0	33.3	66.7		50	0	0	0	50		0	0	0	0	0		
PHF	.000	.000	.000	.500	.250	.375	.000	.000	.000	.250	.500	.375	.250	.000	.000	.000	.250	.500	.000	.000	.000	.000	.000	.000	.500

N/S: Pleasant Street
E/W: Washington Street (Route 53)
City, State: Weymouth, MA
Client: Nitsch/ F. Husseini

PRECISION
D A T A
INDUSTRIES, LLC
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File Name : 143698 AA
Site Code : TBA
Start Date : 11/6/2014
Page No : 1

	Pleasant Street From North					Washington Street (Route 53) From East					Pleasant Street From South					Washington Street (Route 53) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:15 PM																					
03:15 PM	1	111	37	0	149	40	64	27	0	131	21	117	15	0	153	7	95	13	0	115	548
03:30 PM	5	133	32	0	170	41	65	31	0	137	30	136	23	0	189	10	99	7	0	116	612
03:45 PM	5	124	49	0	178	54	75	31	0	160	18	139	17	0	174	12	109	17	0	138	650
04:00 PM	5	135	34	0	174	68	61	30	0	159	29	121	9	0	159	10	85	16	0	111	603
Total Volume	16	503	152	0	671	203	265	119	0	587	98	513	64	0	675	39	388	53	0	480	2413
% App. Total	2.4	75	22.7	0		34.6	45.1	20.3	0		14.5	76	9.5	0		8.1	80.8	11	0		
PHF	.800	.931	.776	.000	.942	.746	.883	.960	.000	.917	.817	.923	.696	.000	.893	.813	.890	.779	.000	.870	.928
Cars	16	478	148	0	642	198	257	116	0	571	93	501	59	0	653	35	377	49	0	461	2327
% Cars	100	95.0	97.4	0	95.7	97.5	97.0	97.5	0	97.3	94.9	97.7	92.2	0	96.7	89.7	97.2	92.5	0	96.0	96.4
Heavy Vehicles	0	25	4	0	29	5	8	3	0	16	5	12	5	0	22	4	11	4	0	19	86
% Heavy Vehicles	0	5.0	2.6	0	4.3	2.5	3.0	2.5	0	2.7	5.1	2.3	7.8	0	3.3	10.3	2.8	7.5	0	4.0	3.6



PRECISION
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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 A
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	5	154	58	0	80	93	17	0	11	281	32	0	7	99	29	0	866
07:15 AM	17	180	55	0	109	98	20	0	10	302	29	0	14	82	34	0	950
07:30 AM	16	127	26	0	103	117	24	0	13	253	27	0	18	57	34	0	815
07:45 AM	8	181	26	0	53	103	12	0	11	323	27	0	11	55	33	0	843
Total	46	642	165	0	345	411	73	0	45	1159	115	0	50	293	130	0	3474
08:00 AM	7	145	26	0	64	84	14	0	4	293	37	0	16	47	40	0	777
08:15 AM	11	143	20	0	67	95	14	0	9	208	31	0	13	49	38	0	698
08:30 AM	10	179	30	0	64	109	12	0	11	288	42	0	13	70	33	0	861
08:45 AM	12	188	44	0	66	68	25	0	6	243	32	0	21	70	34	0	809
Total	40	655	120	0	261	356	65	0	30	1032	142	0	63	236	145	0	3145
Grand Total	86	1297	285	0	606	767	138	0	75	2191	257	0	113	529	275	0	6619
Apprch %	5.2	77.8	17.1	0	40.1	50.8	9.1	0	3	86.8	10.2	0	12.3	57.7	30	0	
Total %	1.3	19.6	4.3	0	9.2	11.6	2.1	0	1.1	33.1	3.9	0	1.7	8	4.2	0	
Cars	80	1226	274	0	596	741	131	0	65	2100	243	0	105	506	266	0	6333
% Cars	93	94.5	96.1	0	98.3	96.6	94.9	0	86.7	95.8	94.6	0	92.9	95.7	96.7	0	95.7
Heavy Vehicles	6	71	11	0	10	26	7	0	10	91	14	0	8	23	9	0	286
% Heavy Vehicles	7	5.5	3.9	0	1.7	3.4	5.1	0	13.3	4.2	5.4	0	7.1	4.3	3.3	0	4.3

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	5	154	**58**	0	217	80	93	17	0	190	11	281	**32**	0	324	7	**99**	29	0	**135**	866
07:15 AM	**17**	180	55	0	**252**	**109**	98	20	0	227	10	302	29	0	341	14	82	**34**	0	130	**950**
07:30 AM	16	127	26	0	169	103	**117**	**24**	0	**244**	**13**	253	27	0	293	**18**	57	34	0	109	815
07:45 AM	8	**181**	26	0	215	53	103	12	0	168	11	**323**	27	0	**361**	11	55	33	0	99	843
Total Volume	46	642	165	0	853	345	411	73	0	829	45	1159	115	0	1319	50	293	130	0	473	3474
% App. Total	5.4	75.3	19.3	0		41.6	49.6	8.8	0		3.4	87.9	8.7	0		10.6	61.9	27.5	0		
PHF	.676	.887	.711	.000	.846	.791	.878	.760	.000	.849	.865	.897	.898	.000	.913	.694	.740	.956	.000	.876	.914
Cars	43	619	158	0	820	339	397	69	0	805	42	1106	108	0	1256	46	281	127	0	454	3335
% Cars	93.5	96.4	95.8	0	96.1	98.3	96.6	94.5	0	97.1	93.3	95.4	93.9	0	95.2	92.0	95.9	97.7	0	96.0	96.0
Heavy Vehicles	3	23	7	0	33	6	14	4	0	24	3	53	7	0	63	4	12	3	0	19	139
% Heavy Vehicles	6.5	3.6	4.2	0	3.9	1.7	3.4	5.5	0	2.9	6.7	4.6	6.1	0	4.8	8.0	4.1	2.3	0	4.0	4.0

PRECISION
D A T A
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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 A
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Cars

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	4	148	54	0	77	91	17	0	11	274	31	0	7	96	28	0	838
07:15 AM	16	174	54	0	107	95	18	0	9	287	27	0	13	80	34	0	914
07:30 AM	15	124	25	0	102	114	22	0	12	238	24	0	15	51	34	0	776
07:45 AM	8	173	25	0	53	97	12	0	10	307	26	0	11	54	31	0	807
Total	43	619	158	0	339	397	69	0	42	1106	108	0	46	281	127	0	3335
08:00 AM	7	138	25	0	63	78	13	0	3	285	36	0	14	45	37	0	744
08:15 AM	10	133	19	0	67	92	14	0	7	202	29	0	12	46	38	0	669
08:30 AM	9	169	29	0	62	107	12	0	9	279	38	0	13	68	31	0	826
08:45 AM	11	167	43	0	65	67	23	0	4	228	32	0	20	66	33	0	759
Total	37	607	116	0	257	344	62	0	23	994	135	0	59	225	139	0	2998
Grand Total	80	1226	274	0	596	741	131	0	65	2100	243	0	105	506	266	0	6333
Apprch %	5.1	77.6	17.3	0	40.6	50.5	8.9	0	2.7	87.2	10.1	0	12	57.7	30.3	0	
Total %	1.3	19.4	4.3	0	9.4	11.7	2.1	0	1	33.2	3.8	0	1.7	8	4.2	0	

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	4	148	**54**	0	206	77	91	17	0	185	11	274	**31**	0	316	7	**96**	28	0	**131**	838
07:15 AM	**16**	**174**	54	0	**244**	**107**	95	18	0	220	9	287	27	0	323	13	80	**34**	0	127	**914**
07:30 AM	15	124	25	0	164	102	**114**	**22**	0	**238**	**12**	238	24	0	274	**15**	51	34	0	100	776
07:45 AM	8	173	25	0	206	53	97	12	0	162	10	**307**	26	0	**343**	11	54	31	0	96	807
Total Volume	43	619	158	0	820	339	397	69	0	805	42	1106	108	0	1256	46	281	127	0	454	3335
% App. Total	5.2	75.5	19.3	0		42.1	49.3	8.6	0		3.3	88.1	8.6	0		10.1	61.9	28	0		
PHF	.672	.889	.731	.000	.840	.792	.871	.784	.000	.846	.875	.901	.871	.000	.915	.767	.732	.934	.000	.866	.912

PRECISION
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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 A
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:00 AM	1	6	4	0	3	2	0	0	0	7	1	0	0	3	1	0	28
07:15 AM	1	6	1	0	2	3	2	0	1	15	2	0	1	2	0	0	36
07:30 AM	1	3	1	0	1	3	2	0	1	15	3	0	3	6	0	0	39
07:45 AM	0	8	1	0	0	6	0	0	1	16	1	0	0	1	2	0	36
Total	3	23	7	0	6	14	4	0	3	53	7	0	4	12	3	0	139
08:00 AM	0	7	1	0	1	6	1	0	1	8	1	0	2	2	3	0	33
08:15 AM	1	10	1	0	0	3	0	0	2	6	2	0	1	3	0	0	29
08:30 AM	1	10	1	0	2	2	0	0	2	9	4	0	0	2	2	0	35
08:45 AM	1	21	1	0	1	1	2	0	2	15	0	0	1	4	1	0	50
Total	3	48	4	0	4	12	3	0	7	38	7	0	4	11	6	0	147
Grand Total	6	71	11	0	10	26	7	0	10	91	14	0	8	23	9	0	286
Apprch %	6.8	80.7	12.5	0	23.3	60.5	16.3	0	8.7	79.1	12.2	0	20	57.5	22.5	0	
Total %	2.1	24.8	3.8	0	3.5	9.1	2.4	0	3.5	31.8	4.9	0	2.8	8	3.1	0	

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	7	**1**	0	8	1	**6**	1	0	**8**	1	8	1	0	10	**2**	2	**3**	0	**7**	33
08:15 AM	**1**	10	1	0	12	0	3	0	0	3	**2**	6	2	0	10	1	3	0	0	4	29
08:30 AM	1	10	1	0	12	**2**	2	0	0	4	2	9	**4**	0	15	0	2	2	0	4	35
08:45 AM	1	**21**	1	0	**23**	1	1	**2**	0	4	2	**15**	0	0	**17**	1	**4**	1	0	6	**50**
Total Volume	3	48	4	0	55	4	12	3	0	19	7	38	7	0	52	4	11	6	0	21	147
% App. Total	5.5	87.3	7.3	0		21.1	63.2	15.8	0		13.5	73.1	13.5	0		19	52.4	28.6	0		
PHF	.750	.571	1.00	.000	.598	.500	.500	.375	.000	.594	.875	.633	.438	.000	.765	.500	.688	.500	.000	.750	.735

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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 A
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3
07:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	3	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	7
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	1	0	4	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	10
Apprch %	0	14.3	0	57.1	28.6	0	0	0	100	0	0	0	0	0	100	0	0	0	0	100	
Total %	0	10	0	40	20	0	0	0	10	0	0	0	0	0	10	0	0	0	0	10	

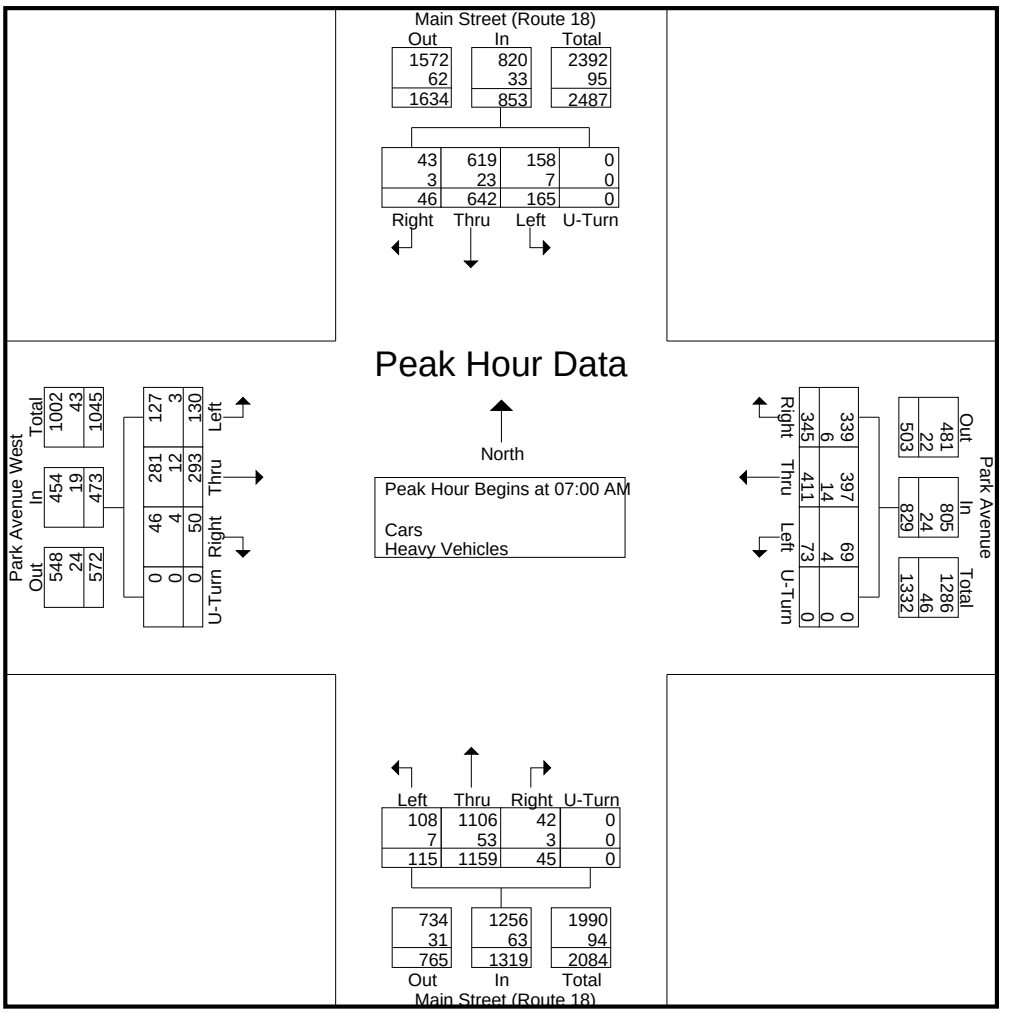
	Main Street (Route 18) From North						Park Avenue From East						Main Street (Route 18) From South						Park Avenue West From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:00 AM																									
07:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**1**	**1**	**3**
07:15 AM	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	3	1	4	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	1	1	7
% App. Total	0	0	0	75	25		0	0	0	100	0		0	0	0	0	100		0	0	0	0	100		
PHF	.000	.000	.000	.375	.250	.500	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.583

PRECISION
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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 A
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	5	154	**58**	0	217	80	93	17	0	190	11	281	**32**	0	324	7	**99**	29	0	**135**	866
07:15 AM	**17**	180	55	0	**252**	**109**	98	20	0	227	10	302	29	0	341	14	82	**34**	0	130	**950**
07:30 AM	16	127	26	0	169	103	**117**	**24**	0	**244**	**13**	253	27	0	293	**18**	57	34	0	109	815
07:45 AM	8	**181**	26	0	215	53	103	12	0	168	11	**323**	27	0	**361**	11	55	33	0	99	843
Total Volume	46	642	165	0	853	345	411	73	0	829	45	1159	115	0	1319	50	293	130	0	473	3474
% App. Total	5.4	75.3	19.3	0		41.6	49.6	8.8	0		3.4	87.9	8.7	0		10.6	61.9	27.5	0		
PHF	.676	.887	.711	.000	.846	.791	.878	.760	.000	.849	.865	.897	.898	.000	.913	.694	.740	.956	.000	.876	.914
Cars	43	619	158	0	820	339	397	69	0	805	42	1106	108	0	1256	46	281	127	0	454	3335
% Cars	93.5	96.4	95.8	0	96.1	98.3	96.6	94.5	0	97.1	93.3	95.4	93.9	0	95.2	92.0	95.9	97.7	0	96.0	96.0
Heavy Vehicles	3	23	7	0	33	6	14	4	0	24	3	53	7	0	63	4	12	3	0	19	139
% Heavy Vehicles	6.5	3.6	4.2	0	3.9	1.7	3.4	5.5	0	2.9	6.7	4.6	6.1	0	4.8	8.0	4.1	2.3	0	4.0	4.0



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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 AA
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	7	322	51	0	38	57	13	0	18	230	11	0	12	89	20	0	868
04:15 PM	13	316	60	0	55	64	22	0	18	230	11	0	8	100	25	0	922
04:30 PM	15	270	56	0	35	57	23	0	28	210	9	0	8	86	25	0	822
04:45 PM	15	270	58	0	43	54	22	0	29	218	10	0	12	79	29	0	839
Total	50	1178	225	0	171	232	80	0	93	888	41	0	40	354	99	0	3451
05:00 PM	16	298	54	0	40	60	22	0	14	252	8	0	5	87	32	0	888
05:15 PM	12	275	49	0	49	59	25	0	16	230	11	0	12	88	14	0	840
05:30 PM	11	272	57	0	44	53	21	0	16	240	14	0	8	86	26	0	848
05:45 PM	17	261	61	0	55	51	16	0	13	180	9	0	9	87	27	0	786
Total	56	1106	221	0	188	223	84	0	59	902	42	0	34	348	99	0	3362
Grand Total	106	2284	446	0	359	455	164	0	152	1790	83	0	74	702	198	0	6813
Apprch %	3.7	80.5	15.7	0	36.7	46.5	16.8	0	7.5	88.4	4.1	0	7.6	72.1	20.3	0	
Total %	1.6	33.5	6.5	0	5.3	6.7	2.4	0	2.2	26.3	1.2	0	1.1	10.3	2.9	0	
Cars	102	2226	440	0	351	449	159	0	151	1749	79	0	69	695	197	0	6667
% Cars	96.2	97.5	98.7	0	97.8	98.7	97	0	99.3	97.7	95.2	0	93.2	99	99.5	0	97.9
Heavy Vehicles	4	58	6	0	8	6	5	0	1	41	4	0	5	7	1	0	146
% Heavy Vehicles	3.8	2.5	1.3	0	2.2	1.3	3	0	0.7	2.3	4.8	0	6.8	1	0.5	0	2.1

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	13	**316**	**60**	0	**389**	**55**	**64**	22	0	**141**	18	230	**11**	0	259	8	**100**	25	0	**133**	**922**
04:30 PM	15	270	56	0	341	35	57	**23**	0	115	28	210	9	0	247	8	86	25	0	119	822
04:45 PM	15	270	58	0	343	43	54	22	0	119	**29**	218	10	0	257	**12**	79	29	0	120	839
05:00 PM	**16**	298	54	0	368	40	60	22	0	122	14	**252**	8	0	**274**	5	87	**32**	0	124	888
Total Volume	59	1154	228	0	1441	173	235	89	0	497	89	910	38	0	1037	33	352	111	0	496	3471
% App. Total	4.1	80.1	15.8	0		34.8	47.3	17.9	0		8.6	87.8	3.7	0		6.7	71	22.4	0		
PHF	.922	.913	.950	.000	.926	.786	.918	.967	.000	.881	.767	.903	.864	.000	.946	.688	.880	.867	.000	.932	.941
Cars	55	1117	223	0	1395	169	231	87	0	487	88	898	37	0	1023	28	348	110	0	486	3391
% Cars	93.2	96.8	97.8	0	96.8	97.7	98.3	97.8	0	98.0	98.9	98.7	97.4	0	98.6	84.8	98.9	99.1	0	98.0	97.7
Heavy Vehicles	4	37	5	0	46	4	4	2	0	10	1	12	1	0	14	5	4	1	0	10	80
% Heavy Vehicles	6.8	3.2	2.2	0	3.2	2.3	1.7	2.2	0	2.0	1.1	1.3	2.6	0	1.4	15.2	1.1	0.9	0	2.0	2.3

PRECISION
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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 AA
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Cars

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	7	312	50	0	37	55	11	0	18	218	10	0	12	86	20	0	836
04:15 PM	10	305	59	0	55	63	20	0	18	226	10	0	5	97	25	0	893
04:30 PM	15	263	55	0	34	56	23	0	28	208	9	0	8	86	25	0	810
04:45 PM	15	260	55	0	43	52	22	0	29	215	10	0	10	79	29	0	819
Total	47	1140	219	0	169	226	76	0	93	867	39	0	35	348	99	0	3358
05:00 PM	15	289	54	0	37	60	22	0	13	249	8	0	5	86	31	0	869
05:15 PM	12	268	49	0	46	59	25	0	16	225	10	0	12	88	14	0	824
05:30 PM	11	270	57	0	44	53	21	0	16	234	13	0	8	86	26	0	839
05:45 PM	17	259	61	0	55	51	15	0	13	174	9	0	9	87	27	0	777
Total	55	1086	221	0	182	223	83	0	58	882	40	0	34	347	98	0	3309
Grand Total	102	2226	440	0	351	449	159	0	151	1749	79	0	69	695	197	0	6667
Apprch %	3.7	80.4	15.9	0	36.6	46.8	16.6	0	7.6	88.4	4	0	7.2	72.3	20.5	0	
Total %	1.5	33.4	6.6	0	5.3	6.7	2.4	0	2.3	26.2	1.2	0	1	10.4	3	0	

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	10	**305**	**59**	0	**374**	**55**	**63**	20	0	**138**	18	226	**10**	0	254	5	**97**	25	0	**127**	**893**
04:30 PM	**15**	263	55	0	333	34	56	**23**	0	113	28	208	9	0	245	8	86	25	0	119	810
04:45 PM	15	260	55	0	330	43	52	22	0	117	**29**	215	10	0	254	**10**	79	29	0	118	819
05:00 PM	15	289	54	0	358	37	60	22	0	119	13	**249**	8	0	**270**	5	86	**31**	0	122	869
Total Volume	55	1117	223	0	1395	169	231	87	0	487	88	898	37	0	1023	28	348	110	0	486	3391
% App. Total	3.9	80.1	16	0		34.7	47.4	17.9	0		8.6	87.8	3.6	0		5.8	71.6	22.6	0		
PHF	.917	.916	.945	.000	.932	.768	.917	.946	.000	.882	.759	.902	.925	.000	.947	.700	.897	.887	.000	.957	.949

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N/S: Main Street (Route 18)
E/W: Park Avenue/ Park Avenue West
City, State: Weymouth, MA
Client: Tetra Tech/ C. Jones

File Name : 154745 AA
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Main Street (Route 18) From North				Park Avenue From East				Main Street (Route 18) From South				Park Avenue West From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	10	1	0	1	2	2	0	0	12	1	0	0	3	0	0	32
04:15 PM	3	11	1	0	0	1	2	0	0	4	1	0	3	3	0	0	29
04:30 PM	0	7	1	0	1	1	0	0	0	2	0	0	0	0	0	0	12
04:45 PM	0	10	3	0	0	2	0	0	0	3	0	0	2	0	0	0	20
Total	3	38	6	0	2	6	4	0	0	21	2	0	5	6	0	0	93
05:00 PM	1	9	0	0	3	0	0	0	1	3	0	0	0	1	1	0	19
05:15 PM	0	7	0	0	3	0	0	0	0	5	1	0	0	0	0	0	16
05:30 PM	0	2	0	0	0	0	0	0	0	6	1	0	0	0	0	0	9
05:45 PM	0	2	0	0	0	0	1	0	0	6	0	0	0	0	0	0	9
Total	1	20	0	0	6	0	1	0	1	20	2	0	0	1	1	0	53
Grand Total	4	58	6	0	8	6	5	0	1	41	4	0	5	7	1	0	146
Apprch %	5.9	85.3	8.8	0	42.1	31.6	26.3	0	2.2	89.1	8.7	0	38.5	53.8	7.7	0	
Total %	2.7	39.7	4.1	0	5.5	4.1	3.4	0	0.7	28.1	2.7	0	3.4	4.8	0.7	0	

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	10	1	0	11	**1**	**2**	**2**	0	**5**	0	**12**	**1**	0	**13**	0	**3**	0	0	3	**32**
04:15 PM	**3**	**11**	1	0	**15**	0	1	2	0	3	0	4	1	0	5	**3**	3	0	0	**6**	29
04:30 PM	0	7	1	0	8	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	12
04:45 PM	0	10	**3**	0	13	0	2	0	0	2	0	3	0	0	3	2	0	0	0	2	20
Total Volume	3	38	6	0	47	2	6	4	0	12	0	21	2	0	23	5	6	0	0	11	93
% App. Total	6.4	80.9	12.8	0		16.7	50	33.3	0		0	91.3	8.7	0		45.5	54.5	0	0		
PHF	.250	.864	.500	.000	.783	.500	.750	.500	.000	.600	.000	.438	.500	.000	.442	.417	.500	.000	.000	.458	.727

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Client: Tetra Tech/ C. Jones

File Name : 154745 AA
Site Code : 14342892
Start Date : 10/27/2015
Page No : 1

Groups Printed- Peds and Bicycles

	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	5	3	12
04:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	3
Total	0	0	0	2	2	0	0	0	1	2	0	0	0	1	0	0	0	0	8	3	19
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3
Total	0	0	0	1	0	0	0	0	0	2	0	0	0	0	2	0	1	0	1	0	7
Grand Total	0	0	0	3	2	0	0	0	1	4	0	0	0	1	2	0	1	0	9	3	26
Apprch %	0	0	0	60	40	0	0	0	20	80	0	0	0	33.3	66.7	0	7.7	0	69.2	23.1	
Total %	0	0	0	11.5	7.7	0	0	0	3.8	15.4	0	0	0	3.8	7.7	0	3.8	0	34.6	11.5	

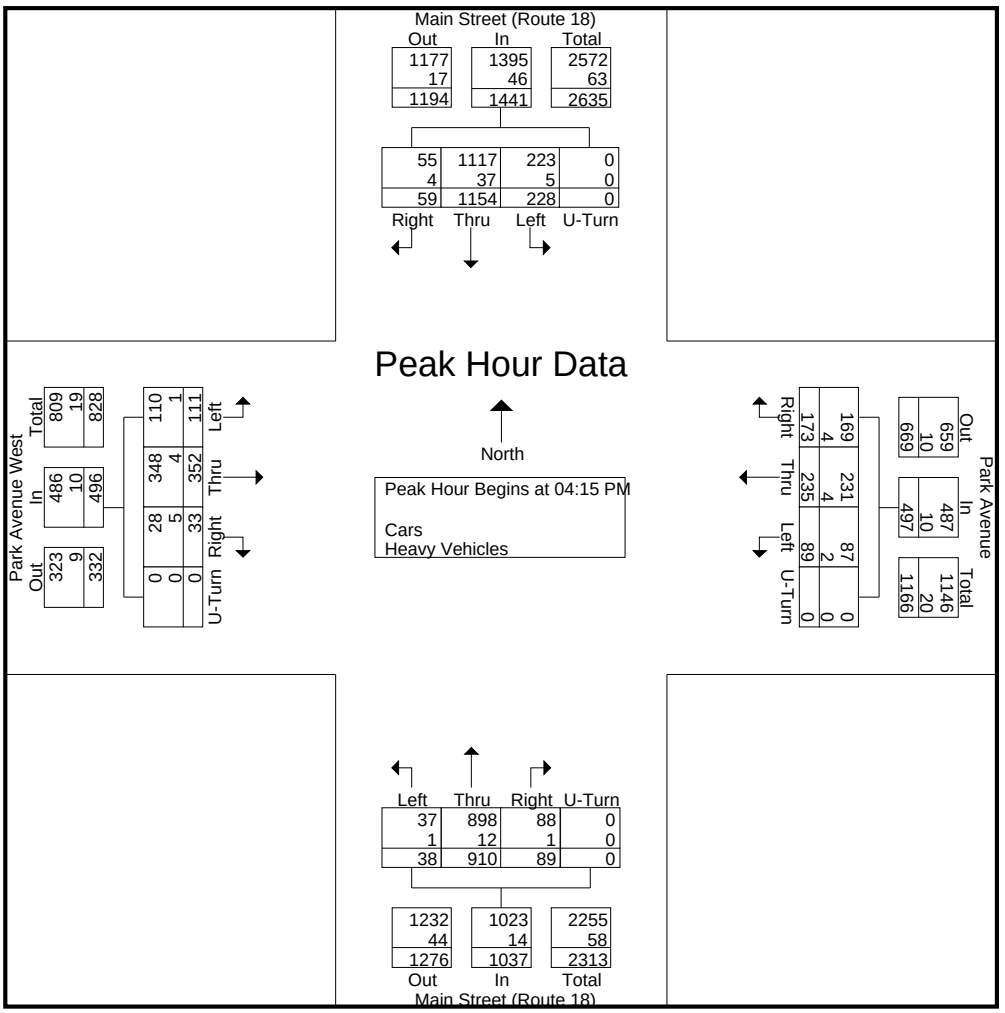
	Main Street (Route 18) From North						Park Avenue From East						Main Street (Route 18) From South						Park Avenue West From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	0	**1**	**1**	**2**	0	0	0	0	**1**	**1**	0	0	0	**1**	0	**1**	0	0	0	**5**	**3**	**8**	**12**
04:15 PM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total Volume	0	0	0	2	2	4	0	0	0	1	2	3	0	0	0	1	0	1	0	0	0	8	3	11	19
% App. Total	0	0	0	50	50		0	0	0	33.3	66.7		0	0	0	100	0		0	0	0	72.7	27.3		
PHF	.000	.000	.000	.500	.500	.500	.000	.000	.000	.250	.500	.750	.000	.000	.000	.250	.000	.250	.000	.000	.000	.400	.250	.344	.396

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	Main Street (Route 18) From North					Park Avenue From East					Main Street (Route 18) From South					Park Avenue West From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	13	**316**	**60**	0	**389**	**55**	**64**	22	0	**141**	18	230	**11**	0	259	8	**100**	25	0	**133**	**922**
04:30 PM	15	270	56	0	341	35	57	**23**	0	115	28	210	9	0	247	8	86	25	0	119	822
04:45 PM	15	270	58	0	343	43	54	22	0	119	**29**	218	10	0	257	**12**	79	29	0	120	839
05:00 PM	**16**	298	54	0	368	40	60	22	0	122	14	**252**	8	0	**274**	5	87	**32**	0	124	888
Total Volume	59	1154	228	0	1441	173	235	89	0	497	89	910	38	0	1037	33	352	111	0	496	3471
% App. Total	4.1	80.1	15.8	0		34.8	47.3	17.9	0		8.6	87.8	3.7	0		6.7	71	22.4	0		
PHF	.922	.913	.950	.000	.926	.786	.918	.967	.000	.881	.767	.903	.864	.000	.946	.688	.880	.867	.000	.932	.941
Cars	55	1117	223	0	1395	169	231	87	0	487	88	898	37	0	1023	28	348	110	0	486	3391
% Cars	93.2	96.8	97.8	0	96.8	97.7	98.3	97.8	0	98.0	98.9	98.7	97.4	0	98.6	84.8	98.9	99.1	0	98.0	97.7
Heavy Vehicles	4	37	5	0	46	4	4	2	0	10	1	12	1	0	14	5	4	1	0	10	80
% Heavy Vehicles	6.8	3.2	2.2	0	3.2	2.3	1.7	2.2	0	2.0	1.1	1.3	2.6	0	1.4	15.2	1.1	0.9	0	2.0	2.3



Seasonal Adjustment Factors

SEASONAL ADJUSTMENT CALCULATIONS

Libbey Industrial Parkway - Weymouth, MA

			June		October		November	
Count Station	Year	AADT	MADT	Seasonal Adjustment Factor[1]	MADT	Seasonal Adjustment Factor[1]	MADT	Seasonal Adjustment Factor[1]
Sta. 36	2009	71,450	78,666	0.91	69,339	1.03	67,960	1.05
Sta. 36	2010	71,958	79,375	0.91	72,400	0.99	69,866	1.03
Sta. 36	2011	70,771	78,661	0.90	70,592	1.00	69,119	1.02
Sta. 36	2013	72,915	78,668	0.93	73,668	0.99	69,725	1.05
Sta. 6255	2010	134,418	141,391	0.95	134,401	1.00	138,298	0.97
Sta. 6255	2012	134,078	140,597	0.95	131,385	1.02	130,800	1.03
Sta. 6255	2013	131,271	139,739	0.94	128,927	1.02	130,817	1.00
			Average	**0.93**		**1.01**		**1.02**

Based on MassDOT continuous count station data obtained from http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

[1]Seasonal adjustment factor = AADT/MADT

GENERAL BACKGROUND GROWTH RATE CALCULATIONS

Count Station	Year	AADT	Growth Rate
Sta. 36	2009	71,450	-
Sta. 36	2010	71,958	0.71%
Sta. 36	2011	70,771	-1.65%
Sta. 36	2013	72,915	1.51%
Sta. 6255	2010	134,418	-
Sta. 6255	2012	134,078	-0.13%
Sta. 6255	2013	131,271	-2.09%
		Average	**-0.33%**

Massachusetts Highway Department
36: Monthly Hourly Volume for June 2009

Location ID: 36
County: PLYMOUTH
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1																										Monday
2	496	257	169	175	445	2040	4161	4854	4781	4406	4229	3891	3999	4143	4810	5362	5525	5977	4930	3947	2895	2232	1753	919	76396	Tuesday
3	587	242	163	189	453	1921	4067	4800	4824	4333	4157	4205	4199	4225	4852	5310	5650	5835	5148	3970	2905	2344	1652	994	77025	Wednesday
4	560	263	182	203	449	1863	4018	4703	4748	4469	4458	4372	4403	4531	4887	5775	5632	5898	5037	4417	3270	2562	2006	1344	80050	Thursday
5	726	346	197	219	434	1778	3766	4745	4648	4475	4614	4796	5054	5294	5682	5860	5984	5624	5106	4291	3813	2598	2052	1681	83783	Friday
6	949	564	288	249	255	645	1409	2419	3510	4267	4901	5544	5359	5602	5675	5690	5520	5435	4608	3804	3340	3018	2498	1800	77349	Saturday
7	1024	645	392	262	250	407	927	1277	1938	2991	4315	5516	5578	5255	5085	5391	5235	5389	5073	4523	4134	2964	1898	1013	71482	Sunday
8	498	269	210	190	529	2063	4288	4926	4650	4330	4398	4272	4204	4367	4841	5347	5762	5954	5155	3676	2756	2329	1551	980	77545	Monday
9	489	225	171	194	473	2006	4087	4841	4728	4321	4189	4066	4236	4313	4875	5489	5908	6092	4808	3826	2479	2133	1589	1272	76810	Tuesday
10	764	280	177	205	437	1947	3963	4771	4644	4314	4243	4455	4231	4288	4901	5491	6075	6285	5211	3762	2705	2109	1682	1425	78365	Wednesday
11	921	400	199	214	445	1834	3952	4718	4741	4655	4329	4583	4417	4456	5077	5659	5930	6237	5249	4239	3140	2569	1895	1332	81191	Thursday
12	900	396	239	222	417	1708	3558	4454	4485	4395	4590	4824	5255	5297	5836	5634	5792	6024	5099	4478	3843	2762	2136	1604	83948	Friday
13	1025	633	349	288	309	773	1559	2455	3511	4386	4964	5479	5454	5361	5397	5423	5328	5331	4778	3893	3439	3035	2393	1947	77510	Saturday
14	1052	708	371	254	229	354	848	1276	1860	2513	3788	5179	5611	5562	5538	5777	5663	5184	4799	3971	3476	2609	1658	982	69262	Sunday
15	522	233	190	193	517	2077	4206	4833	4594	4262	4532	4491	4230	4327	4833	5457	5624	5899	5074	3703	2885	2359	1477	915	77433	Monday
16	496	240	166	165	502	1952	4028	4799	4736	4492	4374	4428	4237	4405	4912	5749	5988	6276	5033	3999	3011	2444	1775	1401	79608	Tuesday
17	851	348	178	198	433	1981	4074	4718	4882	4652	4798	4679	4507	4614	5098	5670	6153	6292	5353	4057	3184	2528	1994	1363	82605	Wednesday
18	852	333	211	201	469	1912	3951	4738	4800	4652	4519	4567	4629	4869	5221	5557	5798	6042	5155	4203	3341	2501	2040	1303	81864	Thursday
19	733	396	239	217	414	1634	3466	4339	4364	4398	4480	4783	5007	5409	5885	6089	6019	5884	5166	4272	3627	3047	2267	1774	83909	Friday
20	1093	620	338	260	291	640	1444	2289	3588	4286	4935	5357	5668	5681	5764	5786	5779	5425	4848	3850	3250	2889	2553	2002	78636	Saturday
21	1211	762	351	243	182	336	760	1115	1784	2674	3954	5363	5816	5489	5270	4917	5049	5001	4605	4464	3570	2603	1608	871	67998	Sunday
22	492	251	191	199	483	1955	3873	4424	4394	4067	4253	4320	4372	4475	4711	5035	5551	5690	4641	3669	2486	1939	1382	842	73695	Monday
23	481	267	190	179	452	1862	3881	4510	4608	4410	4344	4358	4282	4598	4855	5326	5469	5819	5066	4092	3316	2319	1618	983	77285	Tuesday
24	578	266	181	239	466	1881	3836	4302	4444	4251	4362	4515	4802	4354	4930	5563	5568	6034	5168	4432	3196	2527	2021	1396	79312	Wednesday
25	710	375	206	205	472	1884	3909	4528	4653	4687	4923	4991	4915	4938	5252	5657	5938	6296	5266	4568	3874	2882	2388	1445	84962	Thursday
26	842	553	274	281	464	1784	3505	4330	4692	4528	4923	5318	5092	5815	5838	6230	6025	5896	5454	4991	4081	3233	2325	1655	88129	Friday
27	988	636	288	293	315	681	1635	2673	3841	4520	5285	5840	5916	5736	5785	5693	5594	5343	4397	4294	3501	3104	2614	1900	80872	Saturday
28	1207	658	353	271	211	460	1008	1338	1841	2873	4160	5364	5893	6094	5476	5546	5842	5304	4884	4267	3694	3049	2008	1272	73073	Sunday
29	631	298	219	218	447	2036	3988	4377	3565	4419	4587	4907	4956	4936	5262	5456	5724	5794	5130	3963	2997	2327	1681	974	78892	Monday
30	621	282	193	186	445	2003	3937	4580	4714	4671	4603	4620	4778	4550	4862	5481	6132	6364	5409	4583	3399	2713	1818	1153	82097	Tuesday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	78592
Sun. Ave.	70454
Mon. Ave.	76891
Tues. Ave.	78439
Wed. Ave.	79327
Thurs. Ave.	82017
Fri. Ave.	84942
Monthy Ave.	**78666**

AADT MassDOT	**71450**

Seasonal Adj. = 0.91

Massachusetts Highway Department

36: Monthly Hourly Volume for October 2009

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	**543**	**264**	**186**	**200**	**469**	**1953**	**4011**	**4693**	**4627**	**3992**	**4059**	**3997**	**3955**	**4020**	**4484**	**5450**	**5598**	6026	5011	3731	2730	2168	1799	1289	75255	Thursday
2																										Friday
3	992	572	268	251	218	593	1203	1923	2794	3387	3511	4540	4558	4567	4577	4680	4740	4415	3808	2801	2341	2040	1853	1567	62199	Saturday
4	922	513	293	233	171	372	858	1358	2129	2838	3821	4738	5413	4831	4567	4392	4267	4921	4329	3584	2566	1780	1098	721	60715	Sunday
5	375	212	156	176	509	2023	4147	4596	4489	4050	3873	3815	3680	3771	4312	4975	5439	5357	4808	3371	2397	1824	1254	750	70359	Monday
6	498	211	164	182	469	2033	4052	4648	4606	4049	3976	3856	3780	3915	4504	5184	5457	5708	4891	3781	2478	2000	1303	880	72625	Tuesday
7	503	238	150	197	485	1810	3901	4396	4212	3899	3637	3755	3824	3925	4448	4939	5265	5559	4267	3814	2512	1983	1477	852	70048	Wednesday
8	495	267	167	189	512	1922	4019	4666	4551	4139	4136	4104	3923	3993	4222	5711	5399	5665	5004	3975	2783	2345	1642	1212	75041	Thursday
9	648	311	199	191	471	1773	3620	4485	4588	4128	4249	4374	4458	4910	5172	5521	5613	5624	5060	4163	3398	2438	1896	1333	78623	Friday
10	841	543	274	200	269	588	1272	2201	3181	4080	4915	5295	5481	5121	5157	5007	5250	4796	4397	3472	2600	2529	2115	1498	71082	Saturday
11	858	607	309	216	172	380	835	1261	1883	3064	4261	4994	5140	5031	4783	4875	4864	4453	3972	3130	3219	2336	1421	1008	63072	Sunday
12	524	317	190	176	356	975	2062	2778	3188	3364	4254	4847	4960	4854	5152	5537	5739	5680	4613	3654	2574	1965	1282	703	69744	Monday
13	400	192	156	143	469	1931	4000	4562	4325	3976	3937	3710	3748	3791	4463	5115	5391	5619	4716	3452	2386	1843	1300	780	70405	Tuesday
14	471	196	135	183	447	1926	4118	4659	4437	4074	3950	3962	3789	3996	4595	5326	5534	5756	4844	3597	2463	1999	1523	872	72852	Wednesday
15	525	265	161	167	449	1929	4030	4581	4307	4246	4039	4027	4044	4117	4776	5426	5642	5738	4803	3781	2692	2124	1622	900	74391	Thursday
16	543	318	188	194	445	1623	3560	4207	4195	3947	3698	3816	4203	4436	5047	5411	5679	5774	4939	3523	2432	2107	1698	1282	73265	Friday
17	872	534	274	186	246	566	1218	2207	3154	3853	4469	4916	5207	5151	5060	5118	4843	4684	4173	3392	2820	2296	1999	1433	68671	Saturday
18	964	620	317	212	183	287	669	1033	1473	2189	2895	3485	4118	4152	4182	4002	3879	3339	2967	2525	2258	1504	988	543	48784	Sunday
19	351	192	110	161	483	1927	4123	4432	4176	3944	3768	3783	3652	4005	4442	4966	5235	5506	4724	3431	2221	1772	1221	672	69297	Monday
20	404	218	140	159	496	1948	4013	4576	4485	4263	3952	3804	3752	3852	4530	5104	5606	5709	4887	3569	2551	1914	1381	858	72171	Tuesday
21	482	266	168	157	478	1976	4087	4528	4549	4145	3988	3735	3798	3866	4601	5288	5614	5793	5064	3702	2576	2092	1598	1023	73574	Wednesday
22	519	249	165	184	496	1870	4081	4572	4465	4233	4097	4113	4066	4122	4654	5308	5778	5838	4957	3836	2720	2104	1709	1052	75188	Thursday
23	599	305	190	197	457	1800	3681	4383	4531	4121	4154	4188	4260	4536	5115	5727	5765	5818	5105	4046	2580	2203	1784	1270	76815	Friday
24	910	591	272	204	220	509	1127	1876	2900	3464	3970	4436	4841	4723	4937	4822	4856	4457	3968	3115	2333	2082	1838	1307	63758	Saturday
25	936	602	304	231	168	304	783	1162	1821	2715	3632	4415	4867	4712	4401	4375	4422	4618	4036	3438	2949	2182	1118	629	58820	Sunday
26	387	221	163	168	479	2036	4045	4392	4343	4013	3712	3518	3351	3441	4857	4934	5080	5578	4865	3317	2199	1706	1228	740	68773	Monday
27	590	249	146	189	447	1972	4085	4454	4432	4134	3700	3637	3643	3683	4328	5059	5401	5650	4599	3308	2204	1920	1414	829	70073	Tuesday
28	525	206	161	172	422	1800	3910	4273	4278	3919	3637	3610	3645	3759	4247	4841	5118	5410	4541	3517	2345	1914	1422	929	68601	Wednesday
29	546	256	164	169	476	1856	3880	4025	4428	4066	3980	3773	3749	3911	4454	5213	5582	5683	4981	3839	2555	2129	1746	1136	72597	Thursday
30	666	353	184	204	415	1750	3668	4194	4490	4007	3917	3908	4241	4207	4941	5511	5758	5894	5009	3815	2569	2209	1721	1339	74970	Friday
31	992	624	357	235	253	537	1244	1929	2989	3515	4049	4469	4584	4618	4350	4842	4679	3848	2708	2065	2127	1844	1358	985	59201	Saturday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	64982
Sun. Ave.	57848
Mon. Ave.	69543
Tues. Ave.	71319
Wed. Ave.	71269
Thurs. Ave.	74494
Fri. Ave.	75918
Monthy Ave.	**69339**

AADT MassDOT	**71450**

Seasonal Adj. = 1.03

Massachusetts Highway Department
36: Monthly Hourly Volume for November 2009

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	**734**	**568**	**344**	**229**	**160**	**156**	**330**	**843**	**1158**	**1872**	**2686**	**3444**	**4185**	**4324**	**4584**	**4574**	**4366**	4454	4269	3528	2695	2095	1384	952	53934	Sunday
2																										Monday
3	391	202	148	172	467	2004	4148	4453	4394	4043	3636	3673	3581	3454	4162	5129	5363	5488	4566	3171	2132	1717	1267	784	68545	Tuesday
4	460	182	136	159	464	1963	4102	4508	4424	3955	3826	3594	3653	3710	4381	5081	5389	5654	4638	3231	2294	1968	1387	894	70053	Wednesday
5	504	250	147	152	462	1832	3925	4382	4426	4048	3723	3723	3611	3981	4379	5045	5503	5717	4719	3447	2365	2090	1541	1142	71114	Thursday
6	578	291	170	167	448	1717	3684	4350	4542	3941	3869	4029	4056	4125	5149	5134	5714	5856	5087	3929	2605	2070	1806	1376	74693	Friday
7	907	464	254	201	262	632	1355	2191	2997	3926	4399	4700	4948	4909	4942	4962	5199	5022	4261	3094	2410	2076	1932	1483	67526	Saturday
8	992	595	321	224	169	312	813	1228	2081	2847	3617	4301	4793	4455	4180	4224	4464	4740	3965	3198	2421	1481	924	588	56933	Sunday
9	320	199	139	192	483	1994	4026	4415	4392	3850	3745	3679	3497	3664	4254	4977	5455	5652	4668	2877	1913	1592	1242	860	68085	Monday
10	468	191	135	158	456	1949	3994	4632	4602	4185	3937	3749	3753	3986	4451	5132	5514	5863	4707	3460	2302	2078	1496	954	72152	Tuesday
11	625	263	154	169	358	1207	2777	3659	4079	4075	4272	4443	4336	4251	4727	5071	5292	5387	4322	3020	2178	1691	1327	895	68578	Wednesday
12	463	231	145	155	454	1914	3985	4600	4646	4095	3932	3628	3931	4006	4559	4909	5506	5675	4684	3438	2465	1986	1658	1098	72163	Thursday
13	567	295	187	167	429	1739	3590	4329	4558	4044	3871	3876	4202	4322	5000	5322	5590	5745	4984	3543	2383	1940	1657	1382	73722	Friday
14	848	523	282	206	226	521	1141	1879	2720	3234	3711	4346	4467	4376	4493	4564	4398	4209	3792	2758	2011	1890	1827	1472	59894	Saturday
15	978	610	332	209	156	288	737	1144	1773	2503	3265	4170	4768	4804	4856	4590	4678	4404	3614	2804	2109	1224	945	582	55543	Sunday
16	517	238	139	155	466	1916	4020	4502	4521	3836	3673	3591	3543	3756	4226	4988	5253	5554	4501	2992	2011	1589	1362	765	68114	Monday
17	413	203	137	148	476	1948	3955	4463	3884	4517	3836	3574	3752	4004	4546	5145	5507	5654	4774	3446	2382	1976	1359	867	70966	Tuesday
18	472	227	139	155	440	1856	3914	4648	4558	4149	3784	3853	3889	3826	4538	5116	5428	5730	4826	3342	2463	2044	1484	917	71798	Wednesday
19	531	238	151	194	506	1857	3960	4631	4867	4185	3737	4235	3907	4011	4671	5100	5075	5584	4900	3850	2828	2244	1683	993	73938	Thursday
20	606	332	232	171	267	992	2347	4105	4241	3945	3878	3810	4271	4404	4923	5144	5561	5768	5012	3776	2485	2003	1781	1349	71403	Friday
21	886	517	282	203	263	571	1306	2276	3397	4146	4680	4628	4607	4739	4947	5210	5170	5060	4151	3054	2387	2040	1746	1375	67641	Saturday
22	905	539	317	207	162	285	785	1094	1825	2562	3489	4193	4651	4689	4697	4656	4366	3776	2974	2251	2453	1632	1025	634	54167	Sunday
23	368	186	151	163	438	2004	3999	4572	4494	4144	3866	3687	3848	3974	4486	4925	5183	5298	4537	3348	2152	1650	1230	684	69387	Monday
24	449	212	145	150	443	1811	3842	4458	4599	4183	4110	4020	4176	4302	4651	5162	5416	5457	4730	3711	3303	2177	1603	1123	74233	Tuesday
25	675	302	198	177	473	1669	3369	4099	4412	4073	4270	4596	5092	5089	5286	5474	5141	4772	3882	2812	2467	1870	1520	1240	72958	Wednesday
26	834	555	273	192	156	264	625	912	1457	2602	4103	5842	6190	6074	4631	2723	2968	4137	5234	5498	4901	3295	1993	1056	66515	Thursday
27	494	265	214	252	492	1077	1802	2521	3087	3401	4387	4865	4424	4940	4813	5312	5187	4762	3602	2867	2147	1868	1573	1179	65531	Friday
28	803	500	286	198	243	446	1023	1543	2275	3036	4059	4798	5354	5360	5244	5216	5152	4920	4003	3080	2424	2084	1884	1337	65268	Saturday
29	911	628	320	228	198	361	777	1127	1614	2436	3444	4418	4726	4779	4945	5094	4815	4354	3378	2641	2098	1365	918	592	56167	Sunday
30	345	168	143	178	529	2030	4035	4487	4467	3946	3711	3592	3739	3869	4276	4748	5135	5156	4358	3321	2127	1377	1039	670	67446	Monday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	65020
Sun. Ave.	55144
Mon. Ave.	68258
Tues. Ave.	71474
Wed. Ave.	70143
Thurs. Ave.	72405
Fri. Ave.	73273
Monthy Ave.	**67960**

AADT MassDOT	**71450**

Seasonal Adj. = 1.05

Massachusetts Highway Department
36: Monthly Hourly Volume for June 2010

Location ID: 36
County: PLYMOUTH
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1																										Tuesday
2	579	225	147	210	537	2230	4509	4825	4759	4563	4366	4344	4383	4382	5021	5408	5387	6106	4133	4445	2797	2315	1586	1200	78457	Wednesday
3	659	300	199	206	495	2127	4325	4842	4771	4480	4637	4478	4604	4589	5225	5582	5573	6132	5071	4062	3035	2310	1675	1171	80548	Thursday
4	700	344	192	197	510	1962	3992	4759	4694	4470	4705	4955	4883	5167	5590	5834	5841	5710	5062	4107	3362	2614	1945	1470	83065	Friday
5	832	503	282	181	304	678	1606	2537	3444	3924	4483	5260	5392	5282	5228	5409	5134	4752	4496	3423	2974	2835	2105	1674	72738	Saturday
6	1039	648	341	194	246	431	987	1302	1847	2808	3921	4638	5281	5262	5314	5156	4970	4759	3997	3373	2698	1838	1303	876	63229	Sunday
7	475	251	166	190	573	2349	4573	4845	4687	4407	4478	4285	4069	4460	4867	5433	5693	5892	4785	3613	2730	2061	1490	922	77294	Monday
8	468	238	158	187	536	2327	4330	4882	4676	4399	4455	4271	4269	4459	4911	5730	5814	5888	4928	3792	2755	2114	1496	919	78002	Tuesday
9	710	354	162	199	499	2151	4346	4842	4760	4523	4444	4412	4411	4660	5099	5580	5795	5952	4668	3974	2933	2168	1518	890	79050	Wednesday
10	483	230	141	188	468	1969	4014	4466	4525	4512	4392	4574	4435	4649	5119	5699	5915	5852	5100	3936	3074	2442	1644	1039	78866	Thursday
11	873	477	195	211	528	1963	4046	4720	4889	4697	4920	5084	5245	5248	5826	6054	6068	6035	5132	4373	3583	2889	2242	1605	86903	Friday
12	961	533	264	249	330	798	1796	2657	3719	4430	4781	5227	5171	5409	5830	5413	5036	5067	4409	3641	2982	2520	1944	1470	74637	Saturday
13	935	536	292	242	230	393	932	1359	2105	2924	4165	5333	4794	5659	5113	5266	5450	5059	4632	3898	2934	2018	1213	1101	66583	Sunday
14	571	259	160	186	569	2342	4454	4741	4647	4367	4454	4365	4441	4340	4930	5321	5751	5608	4705	3417	2945	2127	1406	449	76555	Monday
15	158	65	69	99	407	2202	4360	4282	4802	4451	4628	4300	4354	4367	4981	5601	5786	5737	5008	4051	3131	2398	871	335	76443	Tuesday
16	181	115	78	108	481	2232	4286	4864	4691	4490	4395	4208	4429	4658	5082	5663	6012	6139	5200	3962	2858	2224	688	320	77364	Wednesday
17	148	97	74	104	512	2069	4131	4755	4896	4725	4783	4744	3879	5053	5386	5887	6060	6081	5045	4049	3476	2667	1779	856	81256	Thursday
18	881	403	197	206	486	1963	3873	4585	4822	5090	5376	5475	5435	5657	5502	6079	6078	5329	5108	4291	4042	3187	2402	1793	88260	Friday
19	1096	559	286	246	364	855	1898	3249	4481	4976	5527	5779	5639	5582	5922	5746	5853	5687	4926	4113	3908	3471	2699	2072	84934	Saturday
20	1193	652	348	209	233	472	1039	1491	2417	3537	4994	5838	6100	5854	5650	4771	4863	4467	3937	4058	3991	3829	2240	1401	73584	Sunday
21	758	267	202	199	566	2393	4469	4651	4652	4588	5222	4927	4630	4765	5124	5703	5766	5800	5070	3735	3074	2489	1591	896	81537	Monday
22	504	220	140	200	540	2274	4279	4759	4677	4608	4676	4938	4607	4488	4965	5688	5733	6012	4892	4164	3126	2468	1555	968	80481	Tuesday
23	461	259	186	195	484	2141	4005	4621	4615	4593	4756	4642	4821	4701	5087	5627	5716	6176	5020	4109	3316	2638	1879	1070	81118	Wednesday
24	566	287	207	227	531	2219	4194	4629	4675	4832	5150	5028	5152	4988	5240	5727	5923	6013	4799	4301	3610	3207	2109	1328	84942	Thursday
25	680	373	221	226	505	2059	3867	4524	4774	5149	5608	5673	5825	5711	5815	6226	6097	5863	5307	4559	4090	3358	2374	1658	90542	Friday
26	987	579	330	275	326	878	1915	3005	4306	5088	5352	5547	5722	5560	5678	5551	5363	5035	4656	3957	3636	3117	2474	1757	81094	Saturday
27	1019	588	346	243	291	504	1157	1664	2350	3636	4994	5762	6018	5748	5715	5190	4872	3743	4468	4743	4154	3486	2152	1168	74011	Sunday
28	514	285	176	203	572	2399	4508	4607	4644	4707	4895	5412	4806	4862	5216	5678	5793	5768	4944	3503	2961	2195	1568	897	81113	Monday
29	432	257	144	177	541	2196	4282	4683	4781	4674	4875	5013	4897	4799	5162	5834	6165	6350	4938	4217	3418	2620	1907	1433	83795	Tuesday
30	663	272	251	224	495	2201	4101	4640	4852	4803	5129	4983	5058	5025	5341	5907	6170	6303	5273	4335	3966	2993	2135	1502	86622	Wednesday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	78351
Sun. Ave.	69352
Mon. Ave.	79125
Tues. Ave.	79680
Wed. Ave.	80522
Thurs. Ave.	81403
Fri. Ave.	87193
Monthy Ave.	**79375**

AADT MassDOT	**71958**

Seasonal Adj. = 0.91

Massachusetts Highway Department

36: Monthly Hourly Volume for October 2010

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	**674**	**343**	**195**	**208**	**445**	**1873**	**3565**	**4325**	**4423**	**4083**	**4305**	**4205**	**4587**	**4463**	**4700**	**5335**	**5388**	5657	4838	3723	2811	2074	1732	1453	75405	Friday
2	993	470	261	215	276	682	1467	2433	3634	4447	5022	5342	5645	5429	5342	5253	5345	5117	4422	3767	2769	2406	2177	1574	74488	Saturday
3	1194	689	391	208	218	393	1039	1365	2177	2972	4140	5117	5455	5265	5184	5181	5433	5011	4434	3616	2790	1849	1079	843	66043	Sunday
4																										Monday
5	522	229	125	165	479	2055	3902	4326	4709	4075	4192	3780	3884	3930	4391	4970	5243	5639	4552	3678	2686	2000	1236	748	71516	Tuesday
6	457	232	143	178	450	1994	3857	4408	4429	3931	3646	3585	3596	3855	4071	4685	5229	5489	4504	3551	2511	1951	1306	864	68922	Wednesday
7	542	260	184	191	502	2061	4012	4554	4653	4251	4154	4066	4284	4310	4862	5253	5634	5883	5054	4002	2786	2286	1679	1006	76469	Thursday
8	548	310	199	213	472	1953	3650	4450	4599	4406	4510	4816	4912	5034	5646	5941	5972	5844	5421	4504	3738	2824	1977	1375	83314	Friday
9	854	574	282	214	281	700	1407	2442	3595	4153	5140	5844	5489	5487	5353	5179	5393	5005	4600	3784	2754	2322	1973	1462	74287	Saturday
10	886	518	286	218	195	408	893	1320	1986	2982	4215	5292	5240	5199	5089	5128	5196	4804	4635	3770	3118	2307	1550	1035	66270	Sunday
11	638	315	177	169	368	1009	2131	2770	3243	3578	4274	4848	4916	5073	5376	5605	5740	5795	4712	3855	3058	2010	1242	805	71707	Monday
12	447	229	156	184	520	2283	4249	4560	4676	4133	4117	4084	4131	4319	4646	5304	5702	5943	4868	3637	2503	1861	1277	805	74634	Tuesday
13	443	193	134	164	487	2167	3995	4539	4681	4266	4103	4184	4067	4043	4627	5129	5600	5885	4999	3887	2722	2127	1493	912	74847	Wednesday
14	466	243	140	206	471	2095	3838	4401	4298	3848	3728	4471	4185	4328	4944	5496	5731	5977	4960	3807	2912	2173	1548	1062	75328	Thursday
15	561	305	168	179	449	1882	3361	4121	4322	4093	3924	4238	4417	4662	5136	5342	5660	5907	5094	3989	2760	2089	1775	1261	75695	Friday
16	758	460	239	175	278	596	1429	2241	3410	4081	4842	5179	5083	5557	5119	5115	5072	4834	4342	3410	2593	2112	2008	1484	70417	Saturday
17	988	551	291	196	187	340	869	1240	2080	3075	3936	5013	5508	5065	4518	4502	4694	5022	4650	3543	2722	1768	1124	671	62553	Sunday
18	362	205	133	165	519	2208	4014	4446	4580	4010	4031	3946	3888	3779	4698	5220	5452	5827	4577	3749	2339	1676	1254	735	71813	Monday
19	404	193	134	174	474	2230	4028	4478	4664	4037	3917	3911	3874	3971	4568	5340	5581	5996	4828	3700	2447	2067	1314	759	73089	Tuesday
20	469	242	152	173	469	2163	3899	4441	4627	4218	3951	3908	3646	4021	4678	5380	5778	5900	5116	3658	2664	2089	1444	946	74032	Wednesday
21	494	250	166	152	467	2116	3904	4543	4609	4368	4090	3978	4013	4202	4853	5330	5611	5762	4898	3761	2732	2248	1608	1105	75260	Thursday
22	557	313	189	196	461	1899	3674	4366	4615	4267	4238	4448	4423	4778	5267	5875	6024	6010	5413	4099	2937	2381	1821	1287	79538	Friday
23	860	489	276	196	272	637	1390	2394	3406	4126	4856	5347	5341	5089	5414	5485	5372	5226	4727	3489	2650	2272	2090	1560	72964	Saturday
24	1008	629	332	208	206	381	827	1147	1826	2706	3746	4701	5261	5343	5317	5452	5171	4250	3534	3001	2707	1604	1000	665	61022	Sunday
25	380	211	136	185	518	2223	4030	4119	4484	4055	3794	3757	3724	3877	4385	5183	5473	5711	4671	3169	2161	1745	1162	753	69906	Monday
26	487	235	144	168	458	2197	4090	4569	4641	4159	3889	3871	3840	3911	4567	5140	5414	6067	4806	3454	2379	1869	1274	990	72619	Tuesday
27	484	218	184	168	469	2143	3929	4504	4464	4062	3856	3790	3832	3991	4544	5194	5481	5777	4743	3314	2483	1990	1427	828	71875	Wednesday
28	440	246	176	167	448	2178	3950	4536	4762	4203	4169	4047	4004	4202	4632	5397	5568	5688	4919	4078	2920	2267	1753	1111	75861	Thursday
29	633	309	190	222	456	1905	3673	4488	4615	4177	4239	4084	4381	4606	5339	5717	5773	6106	5475	4035	2735	2292	1886	1420	78756	Friday
30	807	502	271	202	267	566	1316	2060	3182	3927	4465	4872	5131	4728	5131	5238	5191	5004	4064	3297	2541	2047	1866	1342	68017	Saturday
31	952	639	373	234	188	335	831	1052	1617	2399	3190	4117	4593	4526	4862	5167	4404	3035	2280	1950	2610	1836	1036	590	52816	Sunday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	72035
Sun. Ave.	63972
Mon. Ave.	71142
Tues. Ave.	72965
Wed. Ave.	72419
Thurs. Ave.	75730
Fri. Ave.	78542
Monthy Ave.	**72400**

AADT MassDOT	**71958**

Seasonal Adj. = 0.99

Massachusetts Highway Department
36: Monthly Hourly Volume for November 2010

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	404	246	156	177	518	2203	3856	4423	4597	3916	3863	3727	3675	3815	4383	5132	5466	5687	4724	3039	2221	1702	1173	715	69818	Monday
2	425	207	124	166	430	2086	3882	4436	4729	4169	4005	3892	3913	4057	4642	5241	5492	5820	4964	3658	2354	1800	1260	802	72554	Tuesday
3	472	226	132	159	473	2037	3998	4616	4764	4126	3937	3745	3886	3904	4447	5104	5051	6252	4985	3499	2453	2086	1418	865	72635	Wednesday
4	597	253	169	166	479	2022	3859	4502	4653	4123	3889	3690	3709	3937	4287	4834	5226	5498	4514	3544	2811	2035	1571	951	71319	Thursday
5	524	293	168	161	442	1839	3578	4238	4536	4059	3931	4048	4317	4539	5031	5457	5903	5909	5179	3800	2691	2195	1707	1297	75842	Friday
6	905	490	262	208	259	637	1391	2081	2977	3767	4312	4948	4977	4874	5075	5049	5243	5073	4399	3139	2443	2174	1848	1479	68010	Saturday
7	959	546	324	194	128	156	342	884	1315	1982	2829	3622	4502	5300	4897	4377	4316	4787	4394	3326	2536	1973	1328	831	55848	Sunday
8																										Monday
9																										Tuesday
10	506	229	145	156	467	1977	3829	4288	4432	4167	3901	3750	3811	3861	4472	5338	5561	5680	4838	3630	2557	2067	1499	912	72073	Wednesday
11	674	313	183	168	404	1352	2941	3678	4206	4234	4551	4525	4498	4364	4813	5229	5683	5838	4523	3367	2422	2036	1445	951	72398	Thursday
12	604	281	148	177	446	1775	3589	4422	4579	4396	4207	4254	4235	4578	5111	5638	5793	6041	5140	3946	2588	2176	1776	1264	77164	Friday
13	810	469	241	188	258	589	1404	2205	3477	4092	4763	5092	5231	5112	5107	5426	5418	5139	4133	3114	2296	1974	1782	1502	69822	Saturday
14	904	618	276	208	190	291	779	1199	1877	2692	3600	4567	5164	5331	4989	5076	5215	4629	3727	2784	2107	1331	933	676	59163	Sunday
15	498	242	124	154	481	2134	4107	4534	4587	4003	3724	3773	3627	3663	4397	4957	5374	5461	4409	2861	2189	1578	1355	801	69033	Monday
16	438	180	122	177	459	1977	4058	4516	4562	4091	3795	3733	3626	3659	4263	5075	5579	5867	4631	3499	2423	1960	1320	943	70953	Tuesday
17	444	221	154	138	438	1884	3810	4320	4416	3982	3904	3791	3705	3801	4392	5123	5507	5756	4678	3259	2462	1963	1468	1027	70643	Wednesday
18	520	262	165	176	428	1956	3995	4627	4715	4130	3998	3962	4002	4035	4692	5312	5668	5553	4984	3679	2761	2179	1627	1165	74591	Thursday
19	581	419	240	254	437	1766	3669	4280	4692	4083	4029	4075	4339	4504	5119	5549	5675	5956	5092	3904	2770	1917	1828	1433	76611	Friday
20	1001	539	305	182	252	625	1314	2255	3512	4307	4687	4707	4786	4788	4832	5348	5345	5125	4330	3093	2253	1947	1822	1536	68891	Saturday
21	937	572	291	215	173	328	761	1083	1789	2517	3448	4262	4768	4679	4444	4896	4277	3783	2763	2376	2365	1635	1037	628	54027	Sunday
22	382	214	138	153	469	2097	3981	4579	4776	4136	3943	3825	3811	4031	4356	5314	5369	5653	4627	3299	2270	1683	1258	805	71169	Monday
23	459	233	138	195	468	2051	3937	4650	4874	4228	4194	4150	4177	4498	4953	5480	5688	5835	4937	3931	3197	2031	1681	1090	77075	Tuesday
24	677	285	175	202	437	1785	3417	4136	4463	4050	4214	4608	5099	5286	5377	5633	5425	5278	3971	2953	2458	1968	1496	1197	74590	Wednesday
25	751	487	231	140	155	256	619	1022	1551	2666	4393	6275	6819	5556	4345	2309	3000	4144	5098	5569	4777	3562	2024	1037	66786	Thursday
26	609	308	240	286	490	1156	1927	2408	3064	3324	4459	5192	5358	5145	5530	5342	5361	4732	3868	2962	2224	1929	1587	1246	68747	Friday
27	731	502	267	189	246	479	1130	1618	2354	3194	4271	5163	5308	5244	5161	5254	5386	5040	4102	3179	2473	2119	1755	1320	66485	Saturday
28	984	564	291	176	223	350	776	1088	1597	2434	3433	4572	5025	4999	5012	5095	4910	4222	3629	2742	2219	1389	914	580	57224	Sunday
29	321	161	118	167	503	2137	4003	4410	4605	3968	3694	3818	3700	3788	4332	4904	5388	5506	4697	3057	2067	1549	1097	697	68687	Monday
30	390	175	133	166	481	2067	3959	4529	4706	4129	3919	3704	3741	3812	4302	4938	5488	5394	4666	4036	2776	1898	1335	844	71588	Tuesday

Source http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	68908
Sun. Ave.	56346
Mon. Ave.	69677
Tues. Ave.	73043
Wed. Ave.	71784
Thurs. Ave.	72769
Fri. Ave.	76539
Monthy Ave.	**69866**

AADT MassDOT	**71958**

Seasonal Adj. = 1.03

Massachusetts Highway Department
36: Monthly Hourly Volume for June 2011

Location ID: 36
County: PLYMOUTH
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1																										Wednesday
2	628	316	182	202	461	2031	4091	4795	4764	4430	4420	4267	4204	4357	4966	5520	5307	4927	4938	4416	3398	2611	1790	1200	78221	Thursday
3	602	359	196	179	448	1932	3840	4707	4889	4526	4628	4675	4879	5038	5427	5839	5773	5811	5069	4270	3532	2701	2121	1591	83032	Friday
4	1079	515	286	217	314	780	1573	2804	4114	4700	5146	5460	5522	5462	5337	5464	5347	5150	4922	4207	3314	2567	1936	1619	77835	Saturday
5	1061	560	333	196	239	439	986	1351	2268	3037	4105	5216	5518	5258	5184	4986	4956	4878	4718	3937	3328	2497	1580	923	67554	Sunday
6	496	224	176	172	552	2280	4334	4900	4871	4255	4388	4115	3925	4358	4607	5123	5439	5778	4834	3881	2612	1923	1397	1007	75647	Monday
7	714	283	168	170	484	2141	4228	5006	4810	4387	4186	4335	4234	4276	4728	5272	5655	5656	4897	4185	3187	2536	1655	1074	78267	Tuesday
8	599	283	187	173	471	2121	4285	4809	4663	4430	4492	4570	4299	4319	5008	5538	5856	5983	4952	4015	2824	2192	1546	1202	78817	Wednesday
9	833	385	318	293	518	2034	4051	4603	4656	4306	4431	4518	4594	4531	4841	5521	5772	6050	4781	3787	3249	2359	1633	1080	79144	Thursday
10	698	374	229	190	476	2017	3792	4663	4801	4575	4754	4991	5053	5178	5578	5894	5928	5945	5295	4429	3278	2526	1948	1530	84142	Friday
11	1006	493	303	250	323	706	1527	2449	3488	3993	4589	5184	5079	5239	5455	5377	5203	4788	4276	3390	2852	2338	1980	1582	71870	Saturday
12	1183	598	329	218	193	345	819	1204	1920	2717	3893	4934	5044	5043	4900	4808	4864	4817	4233	3547	2845	2133	1475	828	62890	Sunday
13	478	240	177	171	579	2251	4195	4581	4717	4237	4200	4135	4304	4206	4726	5366	5563	5864	4960	3631	2638	1808	1221	917	75165	Monday
14	800	302	172	184	467	2111	4065	4731	4716	4327	4105	4169	4276	4375	4797	5335	5714	6049	5083	3668	2820	2366	1782	1025	77439	Tuesday
15	565	271	195	162	473	2184	4114	4779	4608	4492	4456	4302	4392	4338	5014	5526	5856	5909	5081	4475	2998	1971	1239	1103	78503	Wednesday
16	784	438	287	215	492	2041	3934	4728	4881	4746	4855	4752	4510	4676	4868	4871	5720	5896	5091	4257	3651	2753	1967	1355	81768	Thursday
17	717	405	207	235	443	1923	3666	4596	4753	4499	4592	4922	5104	5443	5582	6018	6137	6010	5205	4165	3599	2733	2201	1668	84823	Friday
18	968	529	289	221	332	674	1634	3042	4413	4851	4784	5170	5244	5165	5386	5538	5596	5398	4755	3721	3170	2992	2680	2028	78580	Saturday
19	1303	634	368	225	240	466	995	1480	2338	3511	5194	6126	6195	5941	5638	5476	5326	5190	4393	4588	4172	3689	2743	1050	77281	Sunday
20	522	242	198	174	546	2340	4308	4795	4750	4572	4548	4842	4421	4441	5067	5560	6041	6122	5087	3865	2967	2241	1693	1160	80502	Monday
21	628	274	181	197	489	2174	4178	4664	4690	4504	4551	4512	4381	4448	4728	5456	5920	6200	4965	4172	3246	2588	1849	1221	80216	Tuesday
22	821	316	181	189	516	2211	4035	4536	4775	4327	4544	4724	4649	4652	4726	5432	5570	5636	5031	4034	3490	2674	1710	1041	79820	Wednesday
23	594	283	182	209	462	2037	3837	4398	4418	4328	4636	4706	4884	4904	5274	5441	5659	5811	5013	4374	3693	2609	1800	1285	80837	Thursday
24	730	375	217	181	469	1921	3539	4230	4431	4333	4579	5041	5328	5567	5659	5944	5839	5965	5055	4434	4072	2766	2219	1618	84512	Friday
25	1104	613	279	247	308	715	1515	2382	3332	4101	4617	5531	5724	5456	5634	5465	5372	5080	4607	3708	3202	2805	2265	1784	75846	Saturday
26	1243	720	388	252	259	453	1143	1462	2082	3128	4686	5533	6026	5755	5392	5304	5119	5062	4663	4638	4040	3424	2118	1172	74062	Sunday
27	841	348	220	188	526	2476	4375	4678	4832	4683	5076	4755	4940	4684	4841	5684	5849	6015	5066	4222	3343	2467	1577	962	82648	Monday
28	569	268	203	181	471	2245	4165	4547	4839	4592	4862	4852	4738	4597	5020	5579	5776	6226	5328	4415	3422	2589	1806	1138	82428	Tuesday
29	612	302	179	200	490	2167	3874	4470	4902	4481	4789	4930	5065	4906	4879	5690	5760	6030	5094	4376	3736	2930	2105	1213	83180	Wednesday
30	639	339	209	202	502	2133	3867	4592	4956	4828	5133	5273	5113	5199	5340	5929	6023	6028	5039	4776	4601	4201	2781	1630	89333	Thursday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	76033
Sun. Ave.	70447
Mon. Ave.	78491
Tues. Ave.	79588
Wed. Ave.	80080
Thurs. Ave.	81861
Fri. Ave.	84127
Monthy Ave.	**78661**

AADT MassDOT	**70771**

Seasonal Adj. = 0.90

Massachusetts Highway Department

36: Monthly Hourly Volume for October 2011

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	881	560	271	207	260	628	1399	2164	3341	3930	4488	5168	5304	5303	5100	5046	4787	4656	4628	3517	2564	2300	1951	1434	69887	Saturday
2	827	485	263	204	204	357	961	1445	2105	2937	3852	4886	5304	5297	5140	5604	5191	4376	3849	3254	2932	1810	1120	693	63096	Sunday
3																										Monday
4	403	195	133	151	463	2197	3850	4613	4771	4137	3857	3757	3787	3915	4420	5161	5300	5563	4579	3577	2436	1876	1272	751	71164	Tuesday
5	442	250	138	167	470	2228	3943	4657	4663	4181	3837	3990	3857	3878	4698	5099	5470	5897	4826	3689	2633	1960	1439	884	73296	Wednesday
6	475	265	163	184	492	2113	3991	4583	4698	4174	4079	4125	4078	4240	4600	5517	5625	5972	4987	4076	2981	2391	1729	1147	76685	Thursday
7	567	287	176	202	471	1956	3539	4455	4703	4427	4557	4630	4773	5043	5475	5921	5786	5945	5258	4402	3862	2834	1993	1199	82461	Friday
8	811	473	266	226	290	681	1460	2358	3533	4600	5335	5651	5783	5449	5272	5049	5265	5137	4575	3680	2885	2368	2021	1456	74624	Saturday
9	885	521	277	170	200	402	928	1369	2199	3439	4722	5656	5357	5424	5169	5256	5015	4429	4234	3566	3721	2698	1825	948	68410	Sunday
10	525	288	185	148	372	1070	2082	2862	3388	3728	4547	5042	5047	5004	5116	5523	5628	5545	5059	4043	3376	2239	1312	767	72896	Monday
11	408	200	130	176	491	2363	4060	4764	4668	4257	4182	4024	4033	4214	4574	5263	5374	5844	4719	3758	2587	1974	1227	741	74031	Tuesday
12	390	236	133	165	491	2243	3815	4691	4715	4137	3951	3935	3927	4050	4605	5195	5577	5764	4821	3500	2483	1950	1317	730	72821	Wednesday
13	502	218	150	167	456	1982	3818	4219	4414	3943	3663	3914	3917	3965	4448	5041	5178	5584	4703	3822	2879	2177	1498	987	71645	Thursday
14	538	307	189	179	452	1936	3541	4309	4568	4155	4006	4215	4513	4529	4876	5323	5483	5573	4799	4005	3526	2256	1823	1351	76452	Friday
15	844	470	266	206	261	613	1345	2401	3650	4327	5100	5402	5405	4947	5138	5181	5203	4905	4280	3401	2674	2203	1969	1447	71638	Saturday
16	917	513	299	200	190	407	831	1241	1982	2902	4006	5099	5398	5312	5352	5234	5489	4546	3650	2985	3045	2039	1151	613	63401	Sunday
17	376	196	124	166	492	2317	4017	4565	4685	4014	3757	3940	4057	3930	4466	5081	5465	5613	4743	3522	2325	1698	1175	679	71403	Monday
18	417	204	116	158	518	2312	4067	4696	4555	4269	3910	3875	3719	3707	4541	5251	5240	5853	4875	3648	2412	1909	1527	883	72662	Tuesday
19	497	210	143	156	444	2185	3907	4408	4444	3953	3611	3671	3660	3731	4176	4554	4813	5087	4231	3246	2494	1852	1280	725	67478	Wednesday
20	461	243	141	163	460	2101	3823	4389	4607	4213	3948	3953	4019	4160	4725	5193	5477	5870	4831	3799	2598	2185	1705	991	74055	Thursday
21	579	321	175	192	455	2002	3635	4521	4643	4204	4056	4103	4484	4343	5102	5691	5695	5905	5148	4323	2830	2242	1769	1315	77733	Friday
22	778	508	264	199	275	635	1423	2277	3467	3996	4749	4962	5111	4939	5016	5236	5283	5064	4491	3288	2558	2169	2188	1552	70428	Saturday
23	942	501	279	200	193	354	858	1212	1843	2808	3786	4948	5149	5235	4922	5270	5219	4933	4354	3438	2572	1673	973	618	62280	Sunday
24	360	191	128	151	510	2315	4018	4563	4543	3977	3782	3595	3536	3649	4348	4883	5663	5747	4664	3174	2071	1628	1139	665	69300	Monday
25	419	202	138	151	480	2248	3997	4561	4616	4169	3847	3939	3686	3649	4452	5354	5328	5683	4787	3534	2474	1911	1314	736	71675	Tuesday
26	458	188	134	158	465	2168	3981	4528	4279	3984	3726	3705	3721	3895	4499	5081	5288	5716	4591	3415	2380	1963	1317	819	70459	Wednesday
27	452	222	143	180	446	2101	3747	4139	4373	3964	3767	3746	3738	3853	4187	4820	5156	5371	4373	3320	2604	1979	1541	965	69187	Thursday
28	561	314	170	162	438	1912	3566	4292	4657	4046	3936	4136	4357	4545	4005	5530	5583	5943	5163	3974	2770	2035	1682	1175	74952	Friday
29	791	488	273	184	265	617	1282	1966	3071	3512	4108	4588	4763	4740	4727	4461	4369	3705	2993	2160	1697	1377	1190	856	58183	Saturday
30	651	430	231	178	174	264	631	758	1272	1683	2601	3698	4114	4349	4440	4638	4006	3232	2839	2226	2307	1424	946	568	47660	Sunday
31	361	185	142	147	513	2182	3874	4429	4522	3936	3686	3602	3630	3805	4310	5084	5499	5467	3804	2222	1977	1550	1058	555	66540	Monday

October MADT	
Sat Ave.	68952
Sun. Ave.	60969
Mon. Ave.	70035
Tues. Ave.	72383
Wed. Ave.	71014
Thurs. Ave.	72893
Fri. Ave.	77900
Monthy Ave.	**70592**

AADT MassDOT	**70771**

Seasonal Adj. = 1.00

Massachusetts Highway Department

36: Monthly Hourly Volume for November 2011

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	**378**	**211**	**144**	**164**	**513**	**2265**	**4046**	**4594**	**4691**	**4084**	**3718**	**3683**	**3665**	**3697**	**4382**	**5088**	**5392**	5742	4699	3364	2083	1836	1430	825	70694	Tuesday
2	457	202	162	176	475	2228	3929	4508	4637	4183	3851	3720	3669	3954	4339	5048	5317	5680	4828	3570	2452	1773	1474	790	71422	Wednesday
3	439	232	163	174	470	2147	3875	4447	4639	4212	3964	3772	3840	3924	4539	5211	5445	5998	4933	3577	2577	1786	1504	1227	73095	Thursday
4	632	319	170	163	432	1986	3562	4396	4708	4214	3969	4130	4276	4591	4962	5417	5643	5831	5018	4100	2841	2189	1679	1241	76469	Friday
5	758	453	229	199	228	566	1413	2145	3218	3735	4175	4982	5013	4764	4875	5231	5166	4841	4354	3247	2446	1962	1760	1305	67065	Saturday
6	843	493	266	163	104	178	372	916	1430	2190	3078	3928	4720	5051	4917	4696	5264	4887	4006	3106	2181	2670	1529	1023	58011	Sunday
7																										Monday
8	416	182	122	173	470	2282	4074	4351	4189	4092	3847	3685	3583	3783	4420	5014	5427	5663	4427	3372	2211	1668	1308	729	69488	Tuesday
9	400	197	142	166	431	2268	4062	4496	4632	3946	3669	3857	3690	3820	4474	5027	5465	5719	4697	3244	2342	1806	1461	736	70747	Wednesday
10	437	224	137	170	486	2202	3876	4359	4614	3943	3999	3832	3940	4110	4497	4957	5338	5445	4624	3624	3034	2435	1750	1135	73168	Thursday
11	664	312	194	175	418	1317	2636	3595	4037	4180	4765	5007	4859	4969	5315	5569	5515	5781	4643	3331	2679	1995	1722	1230	74908	Friday
12	736	465	283	180	244	533	1261	2133	3268	3761	4586	5146	5241	4856	4932	4996	5312	4971	4168	3066	2237	1910	1809	1390	67484	Saturday
13	871	567	304	191	201	305	781	1207	1923	2827	3782	4730	5164	4970	5163	5291	5281	4792	3624	2795	2109	1219	862	529	59488	Sunday
14	414	216	118	171	549	2293	4023	4450	4355	3952	3749	3626	3642	3744	4170	5016	5293	5390	4446	3049	2104	1505	1066	641	67982	Monday
15	474	211	125	150	468	2254	3959	4589	4556	4095	3742	3678	3627	3692	4535	5005	5405	5679	4516	3161	2358	1770	1442	801	70292	Tuesday
16	446	194	160	136	461	2200	3872	4346	4421	3909	3656	3643	3648	3788	4381	4806	5073	5254	4268	3302	2585	1840	1400	804	68593	Wednesday
17	536	317	151	158	464	2092	3894	4657	4608	4208	3973	3880	3936	4208	4623	4726	5350	5492	4208	3431	2836	2124	1692	993	72557	Thursday
18	565	299	246	175	449	1885	3554	4404	4622	4200	3922	4084	4277	4593	4779	5438	5594	5762	4782	3917	2883	2059	1720	1235	75444	Friday
19	771	493	258	201	239	604	1413	2375	3440	4220	4604	4543	4625	4843	5055	5219	4991	4880	4009	2937	2164	1957	1722	1401	66964	Saturday
20	915	521	293	190	188	317	766	1228	1905	2648	3476	4343	4589	4622	4693	4687	4793	4350	3288	2576	2047	1355	884	574	55248	Sunday
21	360	195	136	169	492	2208	3969	4633	4661	4125	3850	3801	3874	3808	4573	5033	5302	5593	4520	3400	2372	1625	1106	748	70553	Monday
22	627	344	204	168	433	2117	3762	4599	4758	4328	4009	4087	4262	4558	4691	5490	5707	5879	4812	3926	3316	2399	1588	1068	77132	Tuesday
23	622	306	164	170	389	1749	3071	3908	4299	3826	3700	4284	4765	5039	5217	5264	5098	4745	3672	2789	2161	1816	1361	995	69410	Wednesday
24	677	426	239	138	161	289	650	998	1566	2696	4213	5593	6263	6150	4603	2991	3042	4044	5057	5331	5075	3269	2102	1151	66724	Thursday
25	668	344	243	296	470	1176	1925	2649	3310	3783	4628	5465	5568	5375	5262	5353	5195	4927	3892	2958	2400	1910	1530	945	70272	Friday
26	686	459	258	173	230	484	1165	1731	2441	3323	4393	5126	5057	5188	5234	5300	5522	4929	3880	3089	2503	1984	1702	1267	66124	Saturday
27	809	506	258	170	223	365	791	1083	1718	2515	3630	4576	4826	5008	5011	5296	4783	3790	2945	2371	2351	1483	939	557	56004	Sunday
28	350	171	120	146	590	2354	3984	4488	4561	3948	3835	3662	3652	3731	4325	5033	5186	5445	4379	2968	1934	1453	1028	592	67935	Monday
29	395	206	129	156	454	2268	3932	4486	4619	4145	3748	3567	3607	3723	4426	5062	5364	5678	4447	3460	2438	1777	1184	685	69956	Tuesday
30	505	202	151	169	437	2139	3793	4401	4447	4129	3842	3619	3713	3847	4372	4949	5259	5655	4531	3449	2429	1824	1328	829	70019	Wednesday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	67171
Sun. Ave.	57582
Mon. Ave.	68823
Tues. Ave.	71512
Wed. Ave.	70195
Thurs. Ave.	72940
Fri. Ave.	75607
Monthy Ave.	**69119**

AADT MassDOT	**70771**

Seasonal Adj. = 1.02

Massachusetts Highway Department
36: Monthly Hourly Volume for June 2013

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1	726	451	274	250	409	1050	2147	3390	4433	4914	5264	5441	5364	5071	5136	5485	5524	5103	4392	3919	3226	2607	1978	1566	78120	Saturday
2	830	452	279	197	287	573	1154	1795	2719	3789	4918	5548	5562	4614	4662	4732	4591	4695	4521	3957	3483	2368	1285	859	67870	Sunday
3	466	270	178	222	778	3104	4080	4566	4481	4167	3682	4580	4165	4364	4995	5330	5284	5668	4397	3156	2279	1623	1144	845	73824	Monday
4																										Tuesday
5	437	246	158	237	796	3336	4152	4916	4776	4191	4368	3727	3561	3628	4587	5562	5858	6051	4660	3602	2742	2026	1464	1110	76191	Wednesday
6	701	532	192	245	768	3139	4221	4924	4793	4477	4425	4496	4344	4608	5198	5190	6234	5709	5049	4063	2968	2270	1714	1080	81340	Thursday
7	600	307	198	241	713	2688	3726	4804	4394	4127	4475	4785	4644	4836	5042	5596	5559	5360	4513	3611	2693	1856	1429	1345	77542	Friday
8	713	424	253	196	284	757	1432	2342	3505	4158	5086	5633	5550	5526	5432	5249	5099	4888	4204	3359	2922	2530	1956	1578	73076	Saturday
9	965	556	286	237	350	602	1203	1863	2609	3674	4818	5723	5602	5392	5365	5358	5194	4818	4468	4158	3685	2626	1464	799	71815	Sunday
10	390	225	170	265	874	3416	4219	4854	4722	4294	4532	4416	4275	4450	5008	5137	5428	5335	4329	3602	2758	1750	1141	663	76253	Monday
11	346	196	164	214	734	3091	3795	4535	4415	4115	4086	4249	4118	4260	4845	5287	5603	5703	4457	3621	2610	2049	1226	776	74495	Tuesday
12	452	241	151	219	777	3298	3928	4808	4714	4239	4419	4300	4210	4638	5129	5579	5737	5619	4600	3881	2538	1870	1302	857	77506	Wednesday
13	604	391	178	244	798	3172	4070	4949	4685	4469	4481	4599	4544	4502	4955	5578	5714	5788	4518	3786	3127	2318	1437	864	79771	Thursday
14	463	266	186	231	659	2610	3561	4454	4354	4308	4757	5052	5275	5532	5737	5773	5658	5217	4303	4289	3963	2815	2067	1332	82862	Friday
15	884	526	316	247	447	991	2159	3611	4772	5226	5633	5730	5967	5868	5763	5732	5549	5269	4782	3974	3187	2524	2107	1481	82745	Saturday
16	1017	523	356	229	291	550	1101	1706	2854	3883	5092	6031	6200	5666	5552	5419	5204	4976	4622	4449	3843	3595	1540	749	75448	Sunday
17	442	236	162	240	854	3470	4268	4820	4745	4418	4680	4613	4551	4633	4239	5633	5812	5792	4416	3717	2529	1673	1121	1038	78102	Monday
18	506	238	182	249	784	3275	4140	4776	4676	4392	4546	4341	4312	4559	5009	5519	5350	5567	4360	3980	2959	2095	1328	992	78135	Tuesday
19	495	246	178	239	781	3279	4213	4700	4842	4435	4602	4654	4442	4670	5120	5807	5886	5739	4702	4013	2897	2167	1435	1072	80614	Wednesday
20	870	358	175	248	788	3102	4101	4893	4879	4661	4749	4806	4794	4978	5113	5897	5921	6053	4615	4190	3781	2835	1900	1012	84719	Thursday
21	561	315	228	267	736	2893	3804	4756	4741	4732	5122	5215	5477	5555	5719	5953	5705	4975	4809	4491	3764	3015	2209	1424	86466	Friday
22	824	507	324	229	367	999	2043	3344	4512	5100	5531	5596	5520	5501	5437	5157	5657	5166	4532	3924	3051	2305	1898	1589	79113	Saturday
23	831	508	304	234	274	590	1212	1777	2741	4086	5329	5886	5705	5588	5251	5402	5164	4962	4486	4481	4270	3688	2105	965	75839	Sunday
24	478	262	191	265	936	3563	4225	4839	4585	4578	5027	4893	4687	4793	5209	5606	5777	5700	4619	3854	2820	1906	1202	1040	81055	Monday
25	541	261	189	266	813	3229	4084	4774	4771	4541	4921	4904	4625	4877	4924	5456	5975	5311	3754	4462	3887	2543	1577	1162	81847	Tuesday
26	635	248	226	254	820	3251	4038	4824	4801	4180	4108	4677	4145	5045	5123	5744	5811	5364	4852	4099	3407	2471	1660	1155	80938	Wednesday
27	500	318	205	262	772	3216	3854	4594	4814	4521	4765	5167	5019	5164	5534	5703	5931	5882	4858	4235	3769	2564	1942	1120	84709	Thursday
28	605	315	246	273	693	2682	3502	4315	4510	4381	5047	5302	5659	5763	5726	5946	5709	5550	4814	4356	3684	2764	2123	1579	85544	Friday
29	930	516	343	268	342	922	1898	3038	4046	4494	4737	5297	6047	5674	5645	5324	5227	4943	4306	3615	3100	2705	2187	1635	77239	Saturday
30	890	556	302	219	269	532	1101	1631	2327	3689	4884	5923	5603	5701	5579	5271	4902	4753	4434	4139	3609	3027	1778	894	72013	Sunday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	78059
Sun. Ave.	72597
Mon. Ave.	77309
Tues. Ave.	78159
Wed. Ave.	78812
Thurs. Ave.	82635
Fri. Ave.	83104
Monthy Ave.	**78668**

AADT MassDOT	**72915**

Seasonal Adj. = 0.93

Massachusetts Highway Department

36: Monthly Hourly Volume for October 2013

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1																										Tuesday
2	559	296	242	295	926	3448	4600	4897	4756	4207	4134	4206	4044	4215	4703	5373	5514	4947	3144	3700	2798	2268	1717	1045	76034	Wednesday
3	603	284	222	296	905	3440	4564	4972	4730	4166	4233	4147	4112	4329	4921	5625	5693	5319	2977	3701	3033	2321	1849	1563	78005	Thursday
4	719	413	294	323	909	3124	4236	4876	4165	4101	4241	3885	4943	5169	5381	4424	5186	6001	5352	4528	3542	2790	2081	1458	82141	Friday
5	913	614	358	269	449	1022	1829	3049	3815	3272	4891	5392	5335	5332	5207	4229	4643	5359	4983	3694	3137	2900	2842	1780	75314	Saturday
6	1105	677	405	260	311	671	1215	2085	2871	3769	4907	5730	4947	4508	5016	5196	5616	5411	4476	3627	2793	1888	1160	897	69541	Sunday
7	481	242	171	273	1027	3501	4499	5223	4997	4133	4020	3669	3708	3561	3959	2816	3674	6013	5277	3743	2685	1967	1434	925	71998	Monday
8	525	291	190	284	933	3487	4676	5180	4459	3991	3783	3780	3732	4005	4724	4163	3265	5346	5198	4196	3058	2373	1658	976	74273	Tuesday
9	660	320	225	315	975	3493	4597	5220	4261	4079	3896	3795	3924	4183	4844	5278	3055	5524	5436	4416	3271	2547	1674	1201	77189	Wednesday
10	678	364	234	305	962	3428	4646	5132	4529	3984	3783	4308	4015	4096	5269	4730	3806	6128	5650	4553	3507	2885	2119	1362	80473	Thursday
11	776	438	268	317	895	3045	4244	5124	4608	4206	4596	4755	5051	5215	5602	4809	3514	5992	6023	5119	4014	2999	2403	1606	85619	Friday
12	1169	676	389	309	425	1014	2107	3109	2805	3573	5034	3120	4230	5800	6175	6282	6322	5856	5118	3998	3135	2638	2319	1773	77376	Saturday
13	1260	1047	403	266	313	635	1261	1867	1702	2451	4311	5295	5276	5181	5083	4366	4017	4729	4407	3659	3614	2517	1777	1161	66598	Sunday
14	1026	616	219	296	633	1759	2790	3480	3400	3564	4589	5101	5055	4942	5385	4452	3796	4817	5102	4375	3215	2218	1430	1029	73289	Monday
15	573	311	246	304	1037	3566	4669	5211	4538	4065	4124	4047	4179	4125	4855	5541	4368	4288	4737	3947	3242	2347	1506	989	76815	Tuesday
16	558	290	270	263	945	3359	4728	5582	5361	4163	3690	3968	3213	2642	2892	5479	6558	6707	5464	4238	3185	2396	1675	1084	78710	Wednesday
17	696	309	253	309	951	3317	4071	5471	5253	3977	3976	4047	3336	4118	4348	3297	5165	6229	5829	4701	3440	2913	1929	1225	79160	Thursday
18	907	461	269	323	925	3033	4289	5175	4286	4236	4366	4464	4501	4804	4295	3354	4274	5978	5992	5102	3886	2963	2390	1683	81956	Friday
19	1031	633	374	245	437	1108	2072	3561	3810	4233	4777	5228	5547	5040	5125	5119	3774	5323	5049	4063	3035	2570	2644	1835	76633	Saturday
20	1365	1181	590	288	318	639	1167	2136	2360	3248	4451	5388	5407	4821	4915	3712	4559	5784	4772	4220	2837	2005	1270	887	68320	Sunday
21	504	287	215	330	1002	3606	4659	5330	4563	3950	3830	3680	3768	4024	4569	2919	4485	5838	5475	4074	2723	2149	1411	887	74278	Monday
22	511	277	200	297	976	3629	4639	5523	4726	3726	3695	3656	3711	4020	4457	3708	4354	5900	5137	4452	2993	2272	1784	1892	76535	Tuesday
23	604	271	238	302	926	3431	4711	5492	4642	3797	3682	3295	3854	2747	2826	5701	6790	6713	5468	4139	3120	2627	1824	1329	78529	Wednesday
24	1164	487	301	320	931	3363	4749	5511	4733	3851	3908	3934	3956	4167	4704	4170	4786	6400	5497	4473	3101	2601	2057	1412	80576	Thursday
25	1190	834	302	321	906	3022	4292	5419	4613	4018	4195	4326	4351	4733	5311	3579	4514	6535	5858	4714	3493	2879	2233	1635	83273	Friday
26	951	622	388	246	373	1023	1955	3185	3414	3965	4824	5126	5210	4993	5089	4017	4992	5442	4669	3809	3067	2551	2232	1786	73929	Saturday
27	1344	765	414	268	264	615	1190	1935	2489	3040	4132	4766	5084	4865	4461	4138	3856	5165	4529	3577	2626	1719	1200	761	63203	Sunday
28	547	267	198	286	999	3346	4008	5302	4661	3861	3700	3558	3668	3597	4631	4486	3577	5984	5074	3685	2646	1970	1337	1093	72481	Monday
29	519	219	222	294	868	3408	4573	5542	4912	3903	3349	3325	3432	3403	4753	4906	3988	6119	5405	4259	3103	2413	1582	1046	75543	Tuesday
30	511	302	212	280	924	3386	4566	5441	5253	4688	4404	4702	4717	4978	5826	6244	6577	6665	5559	4121	2999	2111	1443	1002	86911	Wednesday
31	1071	966	520	363	839	3094	4450	5531	5249	4483	4568	4170	4059	5073	5794	6537	5361	4737	5074	4046	2692	2114	1512	1038	83341	Thursday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	75813
Sun. Ave.	66916
Mon. Ave.	73012
Tues. Ave.	56906
Wed. Ave.	79475
Thurs. Ave.	80311
Fri. Ave.	83247
Monthy Ave.	**73668**

AADT MassDOT	**72915**

Seasonal Adj. = 0.99

Massachusetts Highway Department

36: Monthly Hourly Volume for November 2013

Location ID:	**36**	**Seasonal Factor Group:**	**U2**
County:	**PLYMOUTH**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	677	343	300	306	848	3056	4180	5254	5227	4686	4757	4620	4912	5100	6156	5943	6283	6730	5659	4161	3226	2783	2181	1631	89019	Friday
2	928	552	336	289	423	1121	2324	3754	4547	4735	4413	3855	4787	4186	3366	4649	6008	5706	4874	3686	2911	2522	2271	1740	73983	Saturday
3	1058	638	345	218	183	231	643	1227	2066	2928	3773	5001	5685	5759	5728	5825	5792	5425	4442	3471	2859	2777	1809	1186	69069	Sunday
4																										Monday
5	314	180	117	196	796	3187	4042	4676	3993	4139	3754	3552	3655	3961	4423	5043	5625	5543	4224	3047	2102	1566	1190	728	70053	Tuesday
6	346	173	144	205	761	3096	4027	4733	4481	3937	3694	3661	3690	3954	4653	5161	5502	5544	4272	3262	2294	1802	1292	715	71399	Wednesday
7	377	198	148	240	764	2949	4000	4667	4438	3990	3804	3829	3770	4159	4571	5115	5215	5244	4212	3243	2429	1942	1422	962	71688	Thursday
8	465	240	144	217	747	2736	3823	4618	4241	4045	4149	4234	4319	4673	5178	5578	5695	5670	4658	3426	2725	1989	1514	1067	76151	Friday
9	594	349	202	169	309	779	1510	2585	3529	4243	4843	5204	5216	5040	5081	5218	5147	4722	3782	2524	2100	1853	1746	1190	67935	Saturday
10	669	403	218	156	179	378	891	1389	2096	2955	4093	4899	5230	5067	5008	5014	4891	4226	3243	2547	1936	1394	918	595	58395	Sunday
11	367	164	133	188	577	1898	2877	3885	4066	3916	4114	4434	4428	4526	4890	5341	5435	5243	3929	2953	1912	1423	967	567	68233	Monday
12	333	161	148	212	784	3089	3948	4523	4440	3770	3549	3612	3547	3865	4405	5058	5323	5460	4137	2854	2068	1627	1043	744	68700	Tuesday
13	355	189	127	205	740	3126	3889	4617	4327	3848	3646	3576	3774	3817	4500	4872	5418	5488	4300	3235	2181	1832	1246	731	70039	Wednesday
14	377	206	135	212	772	3091	3948	4760	4546	3864	3814	3711	3830	4076	4859	5125	5481	5525	4206	3339	2590	1945	1424	807	72643	Thursday
15	486	251	173	238	715	2778	3670	4653	4632	4063	3996	3984	4154	4482	5044	5040	5606	5675	4487	3388	2291	1901	1620	1032	74359	Friday
16	646	373	224	174	344	828	1539	2447	3395	3934	4526	4869	4734	4732	4746	5116	5159	4686	3832	2621	2122	1886	1640	1150	65723	Saturday
17	745	429	219	172	175	436	972	1410	2062	2785	3525	4218	4703	4619	4738	4823	4267	3794	3168	2247	1944	1139	809	618	54017	Sunday
18	325	186	160	212	868	3086	3925	4402	4239	3541	3516	3466	3440	3783	4418	4832	4962	5216	4013	2808	1941	1284	860	558	66041	Monday
19	370	183	145	186	740	3095	3999	4890	4508	3837	3695	3617	3736	3899	4661	5117	5352	5491	4079	2979	2286	1651	1030	652	70198	Tuesday
20	378	174	130	183	731	3051	3903	4551	4570	3926	3862	3643	3950	4006	4507	5213	5561	5439	4235	3174	2442	1726	1170	671	71196	Wednesday
21	388	201	144	197	769	3058	3917	4716	4464	3807	3801	3779	4049	3973	4776	5346	5464	5654	4268	3240	2443	2036	1480	907	72877	Thursday
22	500	248	186	218	722	2737	3619	4402	4364	4032	4022	4045	4185	4375	5040	5367	5594	5497	4543	3279	2315	1853	1621	1115	73879	Friday
23	704	356	204	165	295	825	1509	2480	3536	4169	4444	4549	4725	4784	5057	5127	5296	4564	3751	2702	2023	1912	1642	1213	66032	Saturday
24	746	397	200	159	164	404	801	1219	1879	2621	3483	4207	4584	4641	4441	4333	4251	3624	2869	2254	1650	983	744	555	51209	Sunday
25	486	336	221	224	750	2999	3866	4514	4433	3958	3826	3873	3905	4156	4662	5053	5374	5381	4280	3034	2088	1550	1290	716	70975	Monday
26	382	167	144	191	773	3016	3854	4685	4692	4127	4164	4316	4304	4643	5187	5587	5498	4861	4677	3536	3252	2267	1517	947	76787	Tuesday
27	529	244	162	229	660	2395	3084	4028	3758	3367	3400	3968	4234	4446	4621	4892	4601	4389	2913	2528	1985	1589	1280	898	64200	Wednesday
28	611	311	191	121	158	362	785	1052	1754	3034	4695	5914	6357	5647	4153	2727	3162	4259	5267	5190	4445	2891	1530	1022	65638	Thursday
29	581	269	285	363	648	1470	2003	2756	3166	3941	4916	5510	5080	5267	5313	5541	5206	4536	3629	2792	2148	1683	1489	930	69522	Friday
30	598	378	232	193	300	631	1123	1937	2758	3567	4473	5165	5236	5353	5189	5396	5207	4560	3608	2829	2131	1819	1742	1098	65523	Saturday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	68418
Sun. Ave.	58173
Mon. Ave.	68416
Tues. Ave.	71435
Wed. Ave.	70878
Thurs. Ave.	72403
Fri. Ave.	78352
Monthy Ave.	**69725**

AADT MassDOT	**72915**

Seasonal Adj. = 1.05

Massachusetts Highway Department
6255: Monthly Hourly Volume for June 2010

Location ID: 6255
County: NORFOLK
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1																										Tuesday
2	1251	556	389	445	1199	5133	7637	8357	8973	8192	7784	7935	8006	8274	9335	10136	9661	9830	9073	7481	5758	4613	3369	2524	145911	Wednesday
3	1528	693	409	447	1203	4996	7461	8762	8775	8036	8122	7987	8462	8539	9383	9927	9979	10137	8863	7910	6137	4563	3541	2521	148381	Thursday
4	1652	835	488	489	1166	4607	7785	9068	8459	8198	8058	8573	8711	9280	9001	10140	9803	9848	9378	7381	5921	4972	4065	3069	150947	Friday
5	1985	1194	711	502	700	1502	2892	4281	5606	6627	7609	8762	9307	9205	9124	9023	8669	8207	7820	6132	5417	5038	4191	3441	127945	Saturday
6	2313	1604	856	478	536	870	1779	2340	3225	4672	6447	7837	8979	8965	8815	8881	8521	7738	6605	5789	4673	3396	2386	1896	109601	Sunday
7	1069	571	387	442	1298	5180	7451	8145	8357	8184	7777	7509	7580	8085	9035	9808	9711	10374	9166	6999	5208	4101	3012	2049	141498	Monday
8	1196	609	384	442	1241	5225	7396	8338	8683	8080	7871	7625	7578	7668	9047	10102	10043	10193	9316	7646	5739	4260	3195	2172	144049	Tuesday
9	1642	951	422	451	1185	5067	7735	8601	8227	8391	7940	7879	8097	8294	9431	9743	10008	10026	8690	7596	5522	4375	3167	1974	145414	Wednesday
10	1112	579	374	430	1143	4643	7115	8123	8284	7947	7718	7735	7955	8512	8925	10380	10270	10193	9041	7856	5972	4830	3483	2272	144892	Thursday
11	1942	1081	533	529	1193	4636	7603	8777	8688	8205	8254	8751	8922	9596	9686	9796	10088	10187	8895	7638	6209	5256	4337	3320	154122	Friday
12	2180	1247	711	577	718	1649	3100	4665	6322	7497	8312	9052	8516	9353	9589	9493	8795	8262	8115	6528	5362	4533	3828	3033	131437	Saturday
13	2110	1288	755	534	476	890	1730	2339	3521	4997	6710	8704	8903	9421	9238	9243	8951	8932	7783	6560	4993	3501	2254	2184	116017	Sunday
14	1264	618	406	457	1278	5171	7552	8770	8568	7637	7859	7578	7776	8115	9040	9729	10094	10170	8894	6971	5500	4249	3010	1812	142518	Monday
15	1048	576	362	419	1299	5087	6976	7202	7562	8488	8348	7585	7920	8083	9111	9863	10036	9249	8632	7859	5974	4663	3271	2561	142174	Tuesday
16	1606	732	455	444	1209	4997	7854	8685	8533	8214	7607	7487	7735	8406	9552	9971	10466	10486	9596	7575	5811	4721	3807	2639	148588	Wednesday
17	1381	638	391	454	1255	4723	7621	8652	8776	7960	8276	8416	8209	8706	9510	10071	10422	10705	9340	7673	6560	5141	3762	1982	150624	Thursday
18	2073	1055	553	493	1146	4626	7455	8656	8498	8585	8807	9141	9059	8774	8524	8726	9720	9735	9021	7450	6653	5484	4412	3666	152312	Friday
19	2305	1219	754	572	722	1739	3150	5053	6921	8384	8845	8746	8796	9170	9274	9277	9172	8757	8286	7335	6736	5736	4849	3888	139686	Saturday
20	2399	1308	780	521	497	906	1831	2513	3898	5675	7917	9209	9399	9512	9331	8151	8432	7365	7530	7114	6566	5920	3650	2459	122883	Sunday
21	1566	613	421	467	1302	4999	7363	8007	8420	8501	7980	7914	8320	8341	8811	9898	9690	9662	8852	7198	5763	4683	3144	1930	143845	Monday
22	1127	615	378	479	1269	5104	7059	8318	8729	8024	7689	8327	8232	8392	9218	10062	9924	10582	9165	7901	5878	4742	3255	2037	146506	Tuesday
23	1135	651	470	454	1192	4963	7135	8408	8373	8066	8091	8053	8679	8655	9396	9558	9941	10293	9154	7872	6106	5060	3864	2197	147766	Wednesday
24	1323	693	457	515	1277	5099	6258	7892	8358	8713	8412	8583	8831	8788	9367	9676	9573	10102	8671	8029	6235	5666	4327	2791	149636	Thursday
25	1489	867	540	569	1234	4804	7222	8497	8608	8385	9359	8918	8778	8761	9000	9594	9505	9539	9042	7719	6642	5574	4411	3151	152208	Friday
26	2057	1276	756	586	725	1752	3204	4813	6608	8227	8999	8860	9436	9218	9466	9126	8573	8619	8064	6931	6148	5401	4384	3434	136663	Saturday
27	2106	1231	798	576	608	1030	2080	2872	4035	5601	7619	9048	9310	9267	8971	8528	8265	7446	7650	7421	6481	5301	3597	2162	122003	Sunday
28	1066	662	439	501	1331	5252	7204	8278	8567	8017	8364	8417	8474	8416	9197	9646	9995	10429	8998	6777	5489	4197	3022	1871	144609	Monday
29	1109	605	363	422	1266	5157	7561	8732	8682	8300	8217	8199	8663	8456	9192	10202	10361	10452	9268	7707	6238	4898	3811	2860	150721	Tuesday
30	1528	708	587	529	1217	5033	7477	8340	8996	8492	8418	8384	8822	8753	9348	10024	10294	10499	9272	8370	6823	5390	4113	2989	154406	Wednesday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	133933
Sun. Ave.	117626
Mon. Ave.	143118
Tues. Ave.	145863
Wed. Ave.	148417
Thurs. Ave.	148383
Fri. Ave.	152397
Monthy Ave.	**141391**

AADT MassDOT	**134418**

Seasonal Adj. = 0.95

Massachusetts Highway Department

6255: Monthly Hourly Volume for October 2010

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	1384	815	480	449	939	3586	7122	8950	8498	7695	7532	7769	8194	8189	8757	9236	9322	9219	8775	6827	5128	4028	3596	3141	139631	Friday
2	2086	1104	725	524	583	1316	2696	4457	6190	7612	8640	9096	9694	9463	9122	9402	9263	8840	8352	7096	5317	4452	4404	3408	133842	Saturday
3	2747	1489	970	532	420	754	1784	2644	3788	5230	7028	8519	9346	9208	9049	9137	9218	8588	7823	6264	4931	3402	2381	1845	117097	Sunday
4																										Monday
5	1192	494	341	350	904	3803	6738	7339	8939	7807	7212	7047	7309	7475	8514	9279	9169	9843	8870	7265	5287	4142	2832	1899	134050	Tuesday
6	1017	554	366	395	849	3574	6791	7195	8029	7587	6900	6822	6994	7302	7955	8826	8971	9707	8738	6892	5157	4233	2896	1982	129732	Wednesday
7	1230	540	356	430	973	3830	7250	8837	8400	8170	7744	7488	7876	8063	9460	9401	9967	10229	9724	7920	5558	4672	3591	2246	143955	Thursday
8	1243	654	492	512	962	3630	7326	8909	8618	7960	7876	8526	8782	9199	9658	10199	9764	9742	9439	7947	6758	4902	3913	3028	150039	Friday
9	1846	1192	741	494	654	1327	2721	4354	5975	6537	8649	9367	9070	9448	8685	8934	8992	8657	7969	6695	5083	4374	3857	3156	128777	Saturday
10	1957	1204	776	532	393	794	1553	2477	3420	5036	6921	8550	8711	8972	8895	8821	8732	8077	7907	6561	5397	4367	3183	2244	115480	Sunday
11	1381	649	396	415	722	1906	4216	5438	5951	6295	7197	8318	8549	8790	9277	9726	9771	9829	8667	6999	5434	3814	2644	1779	128163	Monday
12	929	520	336	414	934	4075	7314	8263	8994	7681	7531	7444	7620	8046	9155	10044	10311	10476	9517	7135	5131	3952	2825	1881	140528	Tuesday
13	968	484	344	389	940	3851	7319	8510	8858	8265	7530	7546	7805	8024	9003	9810	9780	10265	9570	7953	5280	4549	3210	2075	142328	Wednesday
14	1074	518	367	422	952	3838	7418	7777	6929	6815	6074	7009	7284	8095	9143	10191	10275	10952	9641	7463	5708	4508	3435	2411	138299	Thursday
15	1217	693	440	441	846	3481	6601	7844	8319	7590	7307	7759	8233	8708	9241	9603	9722	10366	9253	7418	5219	4183	3962	2876	141322	Friday
16	1806	1087	657	465	566	1228	2644	4062	5957	7154	8394	9006	9331	9490	9201	9331	9379	8743	8289	6526	4985	4265	4019	3263	129848	Saturday
17	2121	1316	815	515	418	697	1662	2430	3717	5215	6795	8450	9401	8975	8010	7940	7927	8566	8115	6399	4915	3393	2301	1527	111620	Sunday
18	886	457	290	365	993	3285	7112	8285	8876	7763	7073	7102	7208	7508	8580	9886	9757	10425	9251	6908	4787	3646	2714	1735	134892	Monday
19	938	480	341	369	943	4010	7098	8437	9172	7671	7193	7169	7212	7645	8738	10126	10010	10653	9438	7295	5100	4448	2912	1815	139213	Tuesday
20	1054	545	359	391	892	3771	7046	8077	9193	8165	7472	7430	7580	7833	9085	10216	10140	10512	9686	7305	5261	4470	3280	2111	141874	Wednesday
21	1141	554	371	400	902	3874	7540	8730	8378	8456	7239	7542	7552	8142	9158	9982	9926	10518	9439	7476	5562	4598	3662	2572	143714	Thursday
22	1322	707	458	495	961	3521	7588	8631	8733	7888	7699	8158	8300	8845	9778	10440	10351	10399	9841	7793	5511	4557	4039	2976	148991	Friday
23	1956	1202	734	509	567	1300	2666	4224	5823	7046	8424	9257	9194	9308	9430	9447	9160	9350	8355	6797	5151	4345	4289	3378	131912	Saturday
24	2235	1452	850	550	459	756	1615	2296	3429	4741	6471	8202	9212	9140	8928	9575	8851	7387	6374	5540	5092	3299	2205	1529	110188	Sunday
25	913	448	314	400	996	4025	7339	8446	8543	7693	6993	6949	7146	7542	8433	9974	9874	10397	9272	6346	4566	3658	2607	1785	134659	Monday
26	1138	495	342	403	920	3888	7356	8415	8753	7924	7390	7170	7492	7749	8743	9890	10085	10810	9520	7061	4935	3905	3044	2291	139719	Tuesday
27	1089	558	412	418	912	3892	7352	8030	8418	7792	7180	7236	7496	7711	8917	10073	9896	10487	9273	6858	5180	4242	3120	1985	138527	Wednesday
28	1087	588	392	411	922	3794	7398	8424	8819	8125	7896	7590	7915	8102	8865	9798	9980	10424	9087	8034	5647	4704	3838	2419	144259	Thursday
29	1372	731	457	527	900	3623	7531	8966	8734	7885	7675	7805	8113	8693	9662	10335	10071	10378	10024	7403	5442	4511	3914	3225	147977	Friday
30	1914	1276	768	579	584	1189	2462	4026	5493	6842	7844	8421	8930	8744	9234	9485	9231	8866	7710	6254	5037	4111	3685	2932	125617	Saturday
31	2046	1473	991	623	470	684	1506	2066	2953	4333	5821	7445	8427	7743	8545	8965	7842	5452	4353	3826	4895	3774	2318	1391	97942	Sunday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	129999
Sun. Ave.	113596
Mon. Ave.	132571
Tues. Ave.	138378
Wed. Ave.	138115
Thurs. Ave.	142557
Fri. Ave.	145592
Monthy Ave.	**134401**

AADT MassDOT	**134418**

Seasonal Adj. = 1.00

Massachusetts Highway Department

6255: Monthly Hourly Volume for November 2010

Location ID: 6255
County: NORFOLK
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	885	541	344	413	988	3957	7442	8097	8507	7515	7031	7006	7032	7518	8515	9945	9955	10307	9176	6135	4801	3508	2621	1675	133914	Monday
2	990	488	291	379	920	3799	7377	8446	9140	7801	7412	7228	7395	7797	8940	9948	9721	10468	9725	7373	4744	3728	2825	1879	138814	Tuesday
3	1103	510	336	364	874	3696	7487	8460	9185	8011	7298	7089	7349	7631	8612	9750	9691	10322	9732	7203	5100	4135	3074	2104	139116	Wednesday
4	1285	569	362	414	907	3750	7580	8534	8521	7866	7063	7259	7151	7540	8006	8559	8957	9670	8893	7390	5337	4263	3314	2183	135373	Thursday
5	1240	695	414	421	890	3384	6527	7884	8889	7668	7232	7705	8187	8711	9746	10066	10428	10462	9654	7252	5021	4345	3596	2950	143367	Friday
6	1922	1138	724	486	576	1282	2681	3972	5444	6677	7592	8539	8993	8974	9047	9477	9292	9113	8058	6046	4678	4082	4008	3278	126079	Saturday
7	2099	1339	785	506	330	331	668	1742	2529	3598	5094	6499	8277	9254	8957	8091	7971	8392	7869	6066	4893	3794	2690	1881	103655	Sunday
8																										Monday
9	991	476	361	350	880	6205	10271	8085	8856	7600	7182	6930	7178	7358	8243	9342	9622	9835	8736	7117	4908	4010	2858	1819	139213	Tuesday
10	1173	555	338	1693	4081	4704	8039	8333	7483	8370	7327	7230	7421	7865	8973	9957	10034	10432	9535	7290	5083	4387	3304	2100	145707	Wednesday
11	3213	3971	2262	1609	2281	4259	7367	8083	7818	7681	8320	8325	8228	8373	9174	9812	9927	10537	8974	6678	4799	4037	3383	2051	151162	Thursday
12	1250	1058	2902	3683	3891	4971	9563	8757	8703	7979	7568	7881	8197	8511	9488	10188	9964	10557	9270	7298	4875	4204	3807	2890	157455	Friday
13	1808	1172	2893	3002	2861	2340	3601	5146	6057	7409	8313	8995	9508	9204	9322	9284	9274	8990	7883	6259	4597	3931	3838	3225	138912	Saturday
14	2207	3586	2981	2897	1481	1028	2353	2832	3373	4720	6244	7885	9089	8946	8853	8950	8904	8163	6725	5260	4064	2569	2131	1491	116732	Sunday
15	1064	496	292	1847	3453	6318	11377	9839	8410	7456	6866	6929	6465	7722	8475	9769	9613	10151	8329	6276	4585	3518	2942	1765	143957	Monday
16	2318	2740	3281	6205	6163	9264	11211	9709	7176	8106	7271	7032	7287	6892	8204	9798	9781	10449	9176	7124	4878	4213	2953	2120	163351	Tuesday
17	1018	540	359	350	845	4586	8280	7893	8009	7824	7350	7409	7309	7768	8617	9907	9988	10426	9294	6717	5036	4173	3225	2339	139262	Wednesday
18	1197	578	379	429	1742	5915	9814	8196	7544	8104	7899	7464	7685	8029	9192	9819	10323	9818	9483	7484	5428	4479	3586	2380	146967	Thursday
19	1439	905	555	581	3208	5207	8570	8525	8062	7959	7510	7812	8450	8398	9743	10231	9849	10600	9425	7547	5087	3928	3710	3188	150489	Friday
20	2132	1289	2378	2335	1055	2074	3662	4827	6095	7356	8110	8598	9075	8964	8809	9069	9365	9285	8156	6183	4346	4102	4036	3340	134641	Saturday
21	2222	1377	1428	3321	2023	3263	2920	2810	3067	4449	5944	7560	8790	8532	7799	8835	7844	6370	5245	4853	4723	3239	2292	1494	110400	Sunday
22	877	615	3120	2066	2327	6739	9991	9504	8965	7698	7429	7345	7423	7672	8582	9889	9977	10422	9062	6643	4724	3650	2622	1845	149187	Monday
23	994	592	3984	2987	3226	6600	13208	11884	9042	8048	7976	7958	8259	8575	9347	10106	10125	10375	9023	8172	5924	4231	3579	2660	166875	Tuesday
24	1410	795	2497	2940	3395	7114	9791	9223	8091	7679	7850	8669	9897	9596	9320	9413	9249	9107	6934	5471	4695	3499	3236	2775	152646	Wednesday
25	3872	3349	1615	992	783	980	1840	2401	2777	4745	7060	9921	9849	9071	6983	4246	5258	6946	8332	8912	8346	6619	3816	2250	120963	Thursday
26	1151	1820	3401	2426	4429	3894	5280	5860	5827	5820	7620	8599	9084	8965	9362	9520	9019	8177	6975	5544	4328	3666	3451	2609	136827	Friday
27	1904	3421	2117	1063	965	1615	3116	4316	4001	5613	7248	8649	9120	9118	8814	8706	8900	8735	7224	5931	4611	3924	3602	2930	125643	Saturday
28	2695	3553	1732	1152	819	1009	1528	2200	3319	4318	5886	7935	8669	8231	8775	8816	8282	7319	6806	5181	4226	2772	2286	2837	110346	Sunday
29	1543	572	247	330	853	3596	6326	6644	7903	7397	7100	7047	7321	7409	8464	9767	9599	10012	9072	6152	4321	3392	2470	1595	129132	Monday
30	1051	2009	554	410	918	3701	7410	8448	9076	7815	7415	7265	7266	7652	8416	9025	9118	8647	9010	7880	5444	4250	3320	1963	138063	Tuesday

Source http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	8711
Sun. Ave.	7315
Mon. Ave.	7082
Tues. Ave.	7283
Wed. Ave.	7243
Thurs. Ave.	7683
Fri. Ave.	7799
Monthy Ave.	**7588**

AADT MassDOT	**134418**

Seasonal Adj. = 17.72

November MADT (without Thanksgiving Week)	
Sat Ave.	133211
Sun. Ave.	110262
Mon. Ave.	139048
Tues. Ave.	149263
Wed. Ave.	141362
Thurs. Ave.	144501
Fri. Ave.	150437
Monthy Ave.	**138298**

AADT MassDOT	**134418**

Seasonal Adj. = 0.97

Massachusetts Highway Department

6255: Monthly Hourly Volume for June 2012

Location ID: 6255
County: NORFOLK
Funcationl Class 2
Location: PILGRIM HIGHWAY

Seasonal Factor Group: U2
Daily Factor Group:
Axle Factor Group: U2
Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1																										Friday
2	2046	1163	719	539	711	1581	3018	4349	5257	5974	7121	8220	8481	8606	8699	8696	8300	7700	6929	5580	4512	3989	3670	2900	118760	Saturday
3	1715	1133	603	438	471	935	1977	2668	3784	5180	6958	8546	9218	8718	8732	8891	8637	7892	7004	5869	4500	3241	2361	1487	110958	Sunday
4	1301	569	368	405	1344	5347	6943	7934	8129	7623	7128	7072	7366	7441	8386	9222	8999	9251	8290	6249	4492	3460	2568	1574	131461	Monday
5	834	438	347	433	1237	5079	7168	8267	8164	8055	7426	7437	7864	8043	9119	10046	10030	10608	8612	6786	5098	4017	2786	2082	139976	Tuesday
6	1257	628	385	422	1293	5499	8346	8964	8599	7894	7738	7873	7824	8250	9138	9811	10296	10826	9140	6951	5665	4403	3545	2255	147002	Wednesday
7	1269	677	391	484	1306	5405	8356	8860	7166	8430	7557	8523	8056	8549	8419	9060	10103	10150	9252	7492	6410	4620	3524	2864	146923	Thursday
8	1560	774	501	535	1247	5146	7924	9308	8739	7874	8427	8682	8976	9100	9620	9970	9774	9491	8686	7227	5772	4718	4336	3155	151542	Friday
9	1666	1153	615	482	775	1746	3490	5341	7263	8030	8699	9440	9311	9266	9197	9109	8853	8391	7669	6634	6030	4878	3791	3238	135067	Saturday
10	2039	1272	687	470	557	928	2042	3053	4351	5958	7950	9473	9646	9046	9022	8919	8707	8310	7836	6744	6029	4588	2928	1761	122316	Sunday
11	865	522	360	463	1478	5733	8002	8529	8734	7972	7819	7851	7820	8125	9166	9983	9887	9985	8999	6428	5218	4103	2666	1722	142430	Monday
12	898	461	391	456	1350	5586	7947	8792	8820	8139	7479	8151	8171	8155	9180	10022	9979	10625	9080	6989	5615	4322	3026	1804	145438	Tuesday
13	1052	533	355	402	1186	5219	7092	7733	7857	7999	7357	7745	7902	8107	8870	9420	9896	9728	8650	7123	5429	4286	3243	1990	139174	Wednesday
14	1017	561	409	476	1284	5400	8171	9084	8687	8252	7970	8315	8491	8781	9219	9992	9799	10167	9099	7820	6440	5144	3633	2269	150480	Thursday
15	1308	688	500	524	1311	5215	7846	8924	8551	8147	8465	8646	9043	8847	9319	9918	9815	9566	8853	7671	6442	4808	4073	3029	151509	Friday
16	1777	1122	740	520	804	1797	3551	5219	7080	8036	8930	9511	9183	9302	9561	9328	9256	9065	7859	6260	5357	4688	4123	3004	136073	Saturday
17	1885	1151	664	446	462	850	1853	2797	3983	5799	7664	9461	9834	9179	9157	8880	8649	8229	7810	6988	6475	5510	3047	1783	122556	Sunday
18	1007	576	354	481	1385	5603	7906	8196	8804	8194	8222	8288	8151	8230	9202	9622	9846	10186	9059	6931	5416	4133	2769	1781	144342	Monday
19	924	479	348	488	1384	5611	7626	8236	8510	8426	8221	7971	8047	8377	9383	9985	10359	10702	9091	7335	5630	4621	3530	2313	147597	Tuesday
20	1157	599	409	476	1372	5753	7818	8492	9021	8603	8679	8547	8463	8359	9371	7660	10012	9772	9179	7990	5920	4967	3830	2469	148918	Wednesday
21	1335	605	392	577	1385	5492	7826	8530	8890	8648	8459	8819	8504	8637	9354	10035	9993	10137	9159	7974	6311	5432	4134	2925	153553	Thursday
22	1379	705	507	502	1321	5144	7790	8991	8756	8520	8884	9112	9049	8147	7850	9436	9561	9744	8378	7030	5758	4571	3816	3059	148010	Friday
23	1828	1173	739	516	773	1748	3334	4813	5861	7006	8602	9240	9460	8509	9238	8990	8689	7977	7410	6428	5441	4844	4491	3771	130881	Saturday
24	2166	1245	735	519	521	1154	2373	3026	4287	6519	8615	9388	9508	9014	8805	8623	8377	8187	7678	7054	6475	5911	3969	2060	126209	Sunday
25	1014	535	391	517	1399	5594	7674	8436	8757	7401	6936	7159	7746	8006	9041	9727	9760	10373	8364	6033	4990	3815	2790	1905	138363	Monday
26	1010	538	391	455	1348	5613	7669	8622	8326	8194	7813	7864	8297	8426	8841	9482	10010	10692	9228	7468	5605	4313	3319	2594	146118	Tuesday
27	1211	583	385	450	1304	5506	7968	8632	8936	8269	8156	8589	8723	8508	9533	10136	10345	10104	9440	7862	5737	4822	3508	2155	150862	Wednesday
28	1144	661	410	535	1374	5547	7913	8772	9007	8481	8558	8940	8887	8846	9549	9933	9988	10152	9116	8026	6899	5019	4078	2785	154620	Thursday
29	1360	789	504	556	1298	5093	7657	8694	8631	8138	8329	9075	8943	8724	8885	9346	9303	9388	8487	7782	6889	5738	4286	3232	151127	Friday
30	1892	1222	811	584	762	1951	3947	5961	7618	8579	8504	8769	8660	8647	8757	8707	8275	7722	7935	6757	5714	5328	4882	3779	135763	Saturday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	131309
Sun. Ave.	120510
Mon. Ave.	139149
Tues. Ave.	144782
Wed. Ave.	146489
Thurs. Ave.	151394
Fri. Ave.	150547
Monthy Ave.	**140597**

AADT MassDOT	**134078**

Seasonal Adj. = 0.95

Massachusetts Highway Department

6255: Monthly Hourly Volume for October 2012

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	735	410	322	422	1480	5706	7230	8455	8532	7344	7150	7202	7419	7570	8966	9784	9782	10243	8633	6032	4619	3387	2351	1545	135319	Monday
2	837	403	329	478	1411	5732	7620	8851	8632	7507	7147	6892	7382	7745	8742	9386	9161	9601	8623	6626	5305	3683	2467	1570	136130	Tuesday
3																										Wednesday
4	881	477	353	445	1310	5274	7110	8337	8397	7739	7365	7322	7823	7838	8934	9655	9651	9861	8720	6945	5380	4178	3034	1971	139000	Thursday
5	1169	609	431	452	1283	5162	7540	9020	8440	7942	7941	8460	9032	9088	9671	9835	9389	9803	8851	7934	5913	4229	3498	2636	148328	Friday
6	1607	1025	649	466	667	1607	3063	4841	6238	7397	8433	9066	8857	8708	8715	8559	8307	8268	7205	6213	4531	3992	3429	2654	124497	Saturday
7	1770	1054	640	442	459	798	1982	2580	3470	5208	6797	8497	8930	8425	8144	8118	7832	6432	5387	4806	4970	3523	2570	1680	104514	Sunday
8	954	574	301	375	893	2562	4555	5926	6104	6428	7549	8327	8390	8474	8806	9339	9275	8968	7703	6206	4519	3320	2264	1465	123277	Monday
9	744	385	306	421	1386	5494	6962	7982	8459	7767	7318	7313	7463	7589	8720	9249	9060	9594	8280	6324	4839	4102	2440	1514	133711	Tuesday
10	830	432	294	448	1283	5316	6957	8261	7930	7835	7130	7370	7114	7613	8485	9186	8819	9385	8349	6495	5202	3888	2519	1740	132881	Wednesday
11	957	487	335	484	1288	5436	7200	8560	8536	7991	6988	7856	7690	8104	9092	9827	9562	9961	8831	7274	5166	4175	2969	1766	140535	Thursday
12	1051	567	386	499	1226	5266	7756	9097	8418	7635	7531	7863	8213	8522	9671	9922	9651	9641	8539	7226	5204	4337	3608	2568	144397	Friday
13	1497	967	565	452	673	1689	3058	4536	6536	7683	8614	9157	9091	9312	8971	8494	9111	8831	7894	6141	4839	4242	3804	2939	129096	Saturday
14	1691	1127	612	390	466	832	1824	2811	3658	4885	6617	8483	8943	9141	9285	9253	8255	6801	5863	5482	4541	2973	1975	1312	107220	Sunday
15	680	452	288	460	1382	5580	7154	8606	8531	7242	7233	7088	7221	7580	8817	9505	9331	9875	8683	6187	4362	3284	2358	1467	133366	Monday
16	851	408	315	444	1330	5299	7032	8347	8476	7647	7016	7184	7374	7680	9068	9764	9341	9698	9129	6927	4852	3621	2581	1739	136123	Tuesday
17	868	421	331	455	1247	5497	7211	8689	8393	7618	7283	7546	7563	7825	9142	9722	9855	10167	9090	6017	5164	4185	3303	1840	139432	Wednesday
18	951	516	352	499	1329	5575	7112	8163	8593	7900	7540	7389	7662	7717	9336	8783	9502	9982	8978	7485	5341	4329	3163	1957	140154	Thursday
19	1189	596	408	528	1254	5063	7216	8982	8266	7467	7573	7874	8277	8607	9088	9609	8978	9355	8014	7058	4935	4074	3525	2747	140683	Friday
20	1673	979	612	475	694	1583	2740	4541	6245	7122	8414	9113	9456	9274	9354	9012	9069	8586	7864	6397	4741	4301	3983	3286	129514	Saturday
21	2094	1161	702	446	471	873	1865	2879	4007	5633	7449	9137	9533	9122	9148	9169	8620	7150	6207	4955	5475	3639	2444	1450	113629	Sunday
22	755	427	313	464	1362	5604	7120	8258	8440	7530	7104	7011	7241	7571	9029	9754	9661	10068	8696	5799	4363	3123	2061	1526	133280	Monday
23	842	425	326	441	1373	5481	6870	8295	8635	7725	7203	6938	7125	7529	8845	9676	10148	10338	8967	6241	4644	3643	2575	1717	136002	Tuesday
24	889	426	333	446	1238	5342	6248	8703	8594	7187	7056	7340	7505	8000	9000	9978	10170	10211	8896	6425	5068	4043	2831	1975	137904	Wednesday
25	939	498	328	494	1321	5539	7325	8802	8628	7731	7171	7515	7525	7715	9375	9798	9689	10163	9113	7367	5540	4455	2988	2020	142039	Thursday
26	1122	630	443	495	1251	5301	7243	8430	8742	7823	7866	8212	8339	8939	9354	9872	9667	10075	9177	6866	4828	4545	3379	2693	145292	Friday
27	1618	1072	630	522	711	1565	3174	4789	6210	7656	8624	9175	9335	9288	9483	9656	9483	9207	8105	6252	4890	4353	3805	2984	132587	Saturday
28	1982	1321	798	596	503	857	1920	2804	4164	5595	7092	8796	8850	7975	8046	7726	7742	7176	6037	4752	3455	2354	1719	1188	103448	Sunday
~~29~~	~~683~~	~~390~~	~~290~~	~~370~~	~~1003~~	~~3523~~	~~4342~~	~~4812~~	~~4365~~	~~3757~~	~~3735~~	~~4140~~	~~5102~~	~~4582~~	~~4497~~	~~3272~~	~~1973~~	~~1406~~	~~1017~~	~~883~~	~~682~~	~~658~~	~~805~~	~~684~~	~~56971~~	Monday
30	389	215	190	255	864	4151	5643	7382	7418	6720	6243	6326	6288	6568	7899	8710	9322	9287	7662	5381	3901	3047	2368	1553	117782	Tuesday
31	874	436	336	439	1225	5250	6151	8449	8888	7513	7044	7035	7116	7745	8983	10078	9849	9707	7513	4590	4118	3320	2317	1616	130592	Wednesday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	128924
Sun. Ave.	107203
Mon. Ave.	131311
Tues. Ave.	131950
Wed. Ave.	135202
Thurs. Ave.	140432
Fri. Ave.	144675
Monthy Ave.	**131385**

AADT MassDOT	**134078**

Seasonal Adj. = 1.02

Massachusetts Highway Department

6255: Monthly Hourly Volume for November 2012

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	932	568	427	535	1425	5599	7275	8643	8715	7645	7334	7382	7445	7770	9030	9988	10467	10484	9183	6766	4926	4085	2885	2068	141577	Thursday
2	1109	614	431	516	1343	5273	7553	9039	8822	7789	7339	7930	8330	8791	9813	10015	9834	10194	9076	7002	5154	4223	3546	2642	146378	Friday
3	1626	1052	567	457	706	1764	3283	4758	6242	7181	8287	8824	9114	9302	9379	9562	9186	8882	7616	5637	4652	3926	3361	2947	128311	Saturday
4	1941	1139	672	466	292	413	981	2047	2995	4250	5938	7270	8609	9147	8881	8920	9119	8800	7938	6240	4992	3714	2497	1741	109002	Sunday
5																										Monday
6	856	437	293	446	1364	5650	7380	8715	8431	8096	7422	7704	7888	8311	9314	9812	9855	9885	8918	6326	4302	3411	2291	1667	138774	Tuesday
7	948	489	372	453	1333	5394	6790	8373	6888	8246	6790	6777	7108	7300	8173	8603	8343	8344	7310	5218	3708	2783	2290	1537	123570	Wednesday
8	875	426	297	421	1247	4819	6703	7782	7765	7089	6197	6463	6513	6942	8332	8304	8879	9339	8106	6045	4540	3943	2840	1955	125822	Thursday
9	1064	609	404	469	1366	5410	7418	9028	8445	7763	7695	8038	8355	8511	9477	9546	9794	10279	8620	6618	4942	4281	3875	2592	144599	Friday
10	1727	1073	606	473	771	1720	3283	4937	6297	7326	8279	8945	9453	9261	9308	9446	9328	8945	7010	5631	4437	3838	3460	2975	128529	Saturday
11	2243	1224	638	406	429	824	1819	2805	3858	5345	6989	8379	9275	8391	7663	7492	7995	7693	6433	5034	3846	2834	2086	1498	105199	Sunday
12	839	487	345	418	1133	3594	5915	7935	7576	7202	7628	7884	7958	8209	9078	9532	9766	9835	7891	5645	4085	3112	2186	1580	129833	Monday
13	911	423	307	437	1446	5343	7057	8337	7929	7597	6962	7189	7155	7265	8394	8965	8778	8941	8347	6677	4558	3716	2411	1566	130711	Tuesday
14	835	443	326	435	1302	5600	7292	8752	8352	7526	7000	7451	7304	7891	9015	9130	9118	10082	8679	6653	5163	4063	2866	1902	137180	Wednesday
15	949	491	341	459	1415	5590	7302	8773	8554	7946	7364	7440	7763	7910	9253	9919	9667	10172	8620	6378	5138	4202	2975	2018	140639	Thursday
16	1190	587	429	485	1348	5292	7448	8905	8586	7401	7409	7782	8064	8693	9608	9655	9965	10139	8773	6530	4807	4097	3426	2793	143412	Friday
17	1754	1104	606	506	705	1780	3225	5076	6700	7663	8291	8985	9082	9179	9282	9228	9416	8849	7473	5600	4448	3985	3515	2840	129292	Saturday
18	1751	1183	678	448	423	759	1840	2610	3655	5205	6666	7924	8696	8378	8467	8682	7882	6237	5031	4588	4280	3052	2044	1448	101927	Sunday
19	716	402	284	423	1387	5672	7125	8675	8823	7548	7230	7252	7360	7787	9101	9707	9675	9712	8663	6422	4616	3549	2475	1548	136152	Monday
20	843	421	327	457	1324	5595	7232	8757	8624	7779	7547	7149	8153	8562	9754	10216	9743	9701	8781	7403	5504	4267	3072	2148	143359	Tuesday
21	1091	633	367	468	1292	5324	7070	8494	8086	7577	7735	9108	9735	9331	8972	9096	8900	8582	6049	5252	4205	3504	3158	2135	136164	Wednesday
22	1414	951	500	356	395	683	1463	2178	3213	5212	7449	9527	9141	9041	7120	4656	5444	7471	8386	9197	7909	4460	3384	2477	112027	Thursday
23	1630	804	895	814	1250	3023	4134	5248	5899	6906	8365	8984	9256	9335	9634	9521	9238	7883	6981	5161	4013	3526	3135	2285	127920	Friday
24	1300	942	604	434	608	1308	2440	3657	4553	6246	7755	8863	9136	9016	9111	8863	8722	8053	6584	5427	4277	3621	3315	2421	117256	Saturday
25	1659	1065	607	437	507	849	1774	2246	3244	4985	6613	8375	8687	8719	8850	8774	7988	6852	5719	4527	3552	2332	1721	1187	101269	Sunday
26	571	357	270	473	1540	5690	7202	8595	8421	7286	6906	6892	7168	7626	8674	9538	9503	9926	8499	5747	4114	3056	2215	1576	131845	Monday
27	867	457	318	440	1366	5632	7209	8380	8684	7364	6884	6811	7047	7211	8389	8846	8584	8814	7797	6563	4382	3340	2527	1656	129568	Tuesday
28	838	403	300	442	1237	5396	7258	8764	8452	7444	7056	7134	7102	7683	9046	9690	9866	10002	8604	5932	4620	3723	2733	1872	135597	Wednesday
29	887	473	379	458	1255	5489	7504	8628	8461	7407	7389	7431	7501	7959	9172	9750	9718	10097	8827	6503	4915	3916	2924	1918	138961	Thursday
30	1047	513	400	487	1272	5380	7328	9248	8386	7697	7596	7610	8180	8261	9920	10125	9696	10125	8781	6429	4552	3908	3713	2683	143337	Friday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	128711
Sun. Ave.	105376
Mon. Ave.	132610
Tues. Ave.	135603
Wed. Ave.	132116
Thurs. Ave.	136750
Fri. Ave.	144432
Monthy Ave.	**130800**

AADT MassDOT	**134078**

Seasonal Adj. = 1.03

Massachusetts Highway Department

6255: Monthly Hourly Volume for June 2013

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	Day of Week
1	**1637**	**1030**	**688**	**552**	**788**	**2050**	**3855**	**5959**	**7245**	**8326**	**8927**	**9075**	**9271**	**9010**	**9014**	**9219**	**8964**	8180	7927	6747	5534	4657	3800	3487	135942	Saturday
2	1854	1152	661	453	528	1042	2081	3305	4628	6152	8098	9279	9356	8791	8236	8376	8069	8042	7627	6923	5749	4202	2724	1925	119253	Sunday
3	1152	548	392	449	1410	5784	6998	7772	8011	7801	7011	7245	7693	8045	9398	9932	9786	10174	8516	6110	4610	3306	2561	2055	136759	Monday
4																										Tuesday
5	966	563	350	486	1383	6164	7456	8915	8266	7721	7835	7675	8077	8299	9391	10254	10159	10674	9110	6978	5422	4273	3323	2438	146178	Wednesday
6	1596	1083	451	489	1376	6057	7581	8214	7564	8311	8299	8120	8157	8696	9807	10131	10269	10498	9273	7555	5672	4837	3641	2488	150165	Thursday
7	1298	701	460	517	1295	5394	7134	8496	8197	7326	7875	8288	8644	8184	8155	8698	8859	8903	7757	6938	4531	3406	2920	3173	137149	Friday
8	1682	968	612	456	610	1523	2923	4291	5856	7379	8502	9703	9832	9344	9416	8757	9130	8756	7946	6359	5192	4719	4272	3430	131658	Saturday
9	2088	1266	755	554	590	1112	2165	3263	4601	6356	7779	9343	9418	9565	9387	8901	8557	8327	7825	6972	5912	4505	2874	1723	123838	Sunday
10	919	502	349	521	1479	6047	7280	8502	8487	7686	7759	7970	7847	8237	9190	9375	9578	9283	7576	7339	5091	3723	2412	1565	138717	Monday
11	837	453	349	423	1319	4545	6885	7990	7907	8141	7613	7736	7832	8089	9357	9305	9752	9964	8417	6634	5140	4074	2778	1780	137320	Tuesday
12	966	518	371	462	1455	5769	6805	8610	8043	8274	7798	8010	7951	8584	9584	8874	8811	10031	9348	7305	5306	4034	2803	2042	141754	Wednesday
13	1378	868	426	514	1459	6027	7737	8612	8736	8035	8032	8269	8158	7695	8871	9035	9195	9634	8333	7348	5736	4485	3071	2057	143711	Thursday
14	1124	595	456	467	1244	5301	6793	8122	7787	7539	8180	8878	9469	9326	9456	9119	9375	9600	8529	7755	6461	5032	4148	2902	147658	Friday
15	1943	1147	720	508	811	1954	3802	5946	7543	8469	8781	9164	9083	9307	9361	9190	8955	8800	8089	7196	5800	4888	3957	3159	138573	Saturday
16	2331	1180	734	468	501	937	2026	2981	4543	6291	8298	9703	9812	9137	8980	8973	8515	8349	7798	7409	6343	5770	3199	1687	125965	Sunday
17	997	472	331	497	1496	6024	7308	8155	8623	7911	8086	8174	7848	8340	9215	10056	10008	10190	7841	6603	4645	3377	2356	2445	140998	Monday
18	1072	526	390	502	1399	5839	7673	8065	8635	8113	7809	7790	8080	8290	9418	9234	8548	9166	8233	7567	5223	4032	2911	2112	140627	Tuesday
19	1141	533	386	489	1390	6274	7309	8465	8984	8044	8076	8160	8328	8406	9615	10079	9942	10265	8847	7680	5648	4304	3075	2366	147806	Wednesday
20	1982	740	404	531	1383	6100	7782	8579	8855	8140	8365	8444	8543	8905	9525	9796	9827	9935	8500	7977	6370	5228	3790	2238	151939	Thursday
21	1276	683	547	555	1368	5841	7520	8567	8354	8206	8719	9064	8861	8891	9182	9898	9444	9540	8471	7404	6300	5126	4199	2982	150998	Friday
22	1765	1099	706	507	713	2023	3723	5470	7095	8139	9030	9014	9180	9198	8936	9322	8849	8339	7881	6908	5480	4303	3594	3497	134771	Saturday
23	1862	1145	714	475	470	1029	2185	3150	4347	6367	8564	9425	9082	8935	8698	8824	8434	7828	7571	7089	6394	5783	3705	2031	124107	Sunday
24	978	582	371	556	1585	6133	7097	8237	8556	8182	8286	8260	8151	8244	9490	9780	9930	9746	8737	6837	5426	3552	2371	2466	143553	Monday
25	1209	543	398	497	1438	5903	7801	8965	8545	8054	8314	8364	8301	8813	9439	9389	9847	7314	4406	7135	6299	4797	3326	2354	141451	Tuesday
26	1160	539	405	535	1390	5845	7600	8939	8597	8115	7774	8958	8129	8662	9308	9814	9845	9582	8974	7669	5989	4723	3459	2439	148450	Wednesday
27	1137	752	432	503	1377	5736	7039	8170	8863	8314	8405	8960	8766	9053	9443	9751	9695	9780	8653	7896	6374	5008	3943	2461	150511	Thursday
28	1310	708	534	552	1285	5366	7063	8124	7936	7869	8463	9266	9439	8241	8848	9617	9141	9345	8357	7535	6252	4887	3997	3266	147401	Friday
29	1807	1109	807	551	740	1865	3511	5047	6462	7489	8577	9194	9450	9521	9466	8960	8770	8215	7359	6439	5618	4950	4314	3480	133701	Saturday
30	2034	1197	745	476	529	1071	2025	2776	3886	5841	7700	9329	9365	9077	8906	8518	8191	7846	7449	6680	5771	4789	3294	1876	119371	Sunday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

June MADT	
Sat Ave.	134929
Sun. Ave.	122507
Mon. Ave.	140007
Tues. Ave.	139799
Wed. Ave.	146047
Thurs. Ave.	149082
Fri. Ave.	145802
Monthy Ave.	**139739**

AADT MassDOT	**131271**

Seasonal Adj. = 0.94

Massachusetts Highway Department

6255: Monthly Hourly Volume for October 2013

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1																										Tuesday
2	902	448	331	480	1465	6004	7615	8291	8707	7887	7451	7693	7652	8179	9311	9717	9600	9971	8995	6806	4847	3918	2822	1743	140835	Wednesday
3	934	443	380	460	1446	6011	7605	8739	8698	7749	7640	7864	7787	8329	9608	9815	9974	9976	8862	6876	5092	3760	3213	2387	143648	Thursday
4	1079	598	441	516	1422	5581	7200	9140	8407	7581	7841	7959	8575	8451	9060	9771	9736	9641	8689	7276	5531	4363	3514	2535	144907	Friday
5	1483	880	611	458	661	1707	3132	5055	6616	7709	8500	9335	9335	9383	9413	9371	9366	8670	7737	5716	4759	4561	4477	2807	131742	Saturday
6	1702	1103	591	446	477	949	2065	3058	4183	5494	6984	8347	9107	8432	7899	8091	7971	8070	6702	5380	4007	2779	1912	1372	107121	Sunday
7	671	350	278	419	1519	5672	7075	8279	7594	6003	7536	7168	7292	7527	8614	9614	9628	9797	8375	5730	4221	3197	2290	1457	130306	Monday
8	808	388	301	438	1471	5944	7424	8575	8085	7411	6810	7373	7280	7643	9128	9540	9617	9995	8796	6598	4816	3832	2512	1668	136453	Tuesday
9	960	488	372	474	1510	6042	7544	8729	8404	7386	7400	7442	7394	8091	9565	9766	9646	10105	8992	6812	5033	3907	2641	1802	140505	Wednesday
10	952	459	369	510	1468	5984	7269	7953	8976	8026	7553	7701	7951	8257	9847	10282	10544	10256	8853	6808	5143	4152	3302	2109	144724	Thursday
11	1094	576	438	512	1498	5566	7425	8786	8171	7728	8292	8563	8993	9155	9777	9886	9549	9665	8567	7310	5496	4381	3578	2583	147589	Friday
12	1624	955	625	485	731	1712	3141	5077	6548	7962	9064	9481	9380	9126	9293	8325	8811	8354	7463	5981	4430	3910	3716	2882	129076	Saturday
13	2043	1529	680	464	459	944	2046	2913	3997	5971	7699	9120	9316	8988	9241	8737	8431	7206	6388	5479	5215	3772	2792	1847	115277	Sunday
14	1461	722	431	416	948	2767	4610	5809	6230	6713	7881	8469	8623	8515	8838	9273	9644	9483	7865	6662	4578	3272	2281	1468	126959	Monday
15	839	409	332	488	1589	5967	6722	8652	8647	7738	7560	7447	7743	8050	9490	10149	10061	9986	8604	6052	4768	3675	2394	1546	138908	Tuesday
16	857	456	389	463	1457	5897	7472	8649	8577	7629	7422	7546	7726	8084	9215	10030	10084	9956	8848	6464	4788	3891	2730	1768	140398	Wednesday
17	966	446	374	510	1498	5885	7492	8854	8678	7949	7541	7685	7925	8325	9486	9677	9354	9722	8887	7170	4893	4278	2897	1836	142328	Thursday
18	1274	587	409	554	1388	5544	6387	8215	8045	8107	7856	8308	8471	9069	9436	9530	9500	9595	9084	7596	5195	4427	3946	2619	145142	Friday
19	1521	957	622	424	718	1748	3207	5164	6590	7483	8433	8939	9800	9146	9415	9437	9286	8830	8282	6479	4565	4198	3957	2901	132102	Saturday
20	2179	1865	874	480	478	975	1918	3089	4369	5815	7759	9320	9591	8899	8715	8379	8268	8277	6940	6598	4217	3071	2088	1331	115495	Sunday
21	746	437	343	521	1562	5987	7170	8248	7440	6693	7426	7011	7382	7571	9137	9266	9569	9676	8706	6182	4488	3252	2241	1432	132486	Monday
22	815	428	316	498	1516	5964	7259	8460	8368	7395	7195	7127	7208	7715	8945	9844	9962	9754	8551	6721	4650	3695	2668	1554	136608	Tuesday
23	836	412	346	487	1432	5860	7133	8137	8144	7512	7141	6694	7597	8057	9345	10189	10245	9986	8585	6295	4659	3568	2596	2025	137281	Wednesday
24	1608	586	436	504	1499	5874	7642	8566	8409	7676	7421	7538	7666	8216	9442	10004	10201	10233	8924	6985	5035	3945	3065	2188	143663	Thursday
25	1838	728	466	478	1443	5462	7401	8789	8312	7483	7741	8120	8290	9005	9810	10121	9584	9700	9037	7180	4928	4404	3613	2689	146622	Friday
26	1607	955	637	451	666	1724	3072	4671	6039	7060	8518	9259	9383	9369	9522	9470	9368	8693	7776	6302	4820	3948	3759	2861	129930	Saturday
27	2247	1275	726	487	431	889	1813	2838	4031	5829	7571	7823	9031	8945	8490	8239	8497	8042	7116	5637	3907	2779	1930	1289	109862	Sunday
28	839	435	342	455	1505	5601	7332	7363	8231	7467	6855	6785	7056	7356	8929	9867	9934	10107	8342	5825	4277	3009	2177	1679	131768	Monday
29	888	403	368	462	1370	5746	7494	8775	8326	7459	6819	6881	6838	6851	8125	9602	9501	9674	8570	6993	4750	3917	2516	1652	133980	Tuesday
30	869	488	323	460	1396	5795	7620	8395	7900	7403	7028	7442	7352	8020	9505	10106	9996	9967	8833	6250	4424	3068	2159	1621	136420	Wednesday
31	1630	1339	728	535	1348	5346	7729	9023	8270	7514	7164	7313	7488	8111	9061	9870	9638	7337	5617	5661	4174	3272	2392	1637	132197	Thursday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

October MADT	
Sat Ave.	130713
Sun. Ave.	111939
Mon. Ave.	130380
Tues. Ave.	102992
Wed. Ave.	139088
Thurs. Ave.	141312
Fri. Ave.	146065
Monthy Ave.	**128927**

AADT MassDOT	**131271**

Seasonal Adj. = 1.02

Massachusetts Highway Department

6255: Monthly Hourly Volume for November 2013

Location ID:	**6255**	**Seasonal Factor Group:**	**U2**
County:	**NORFOLK**	**Daily Factor Group:**	
Funcationl Class	**2**	**Axle Factor Group:**	**U2**
Location:	**PILGRIM HIGHWAY**	**Growth Factor Group:**	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	924	545	462	543	1384	5437	7319	8604	8181	7333	7411	7595	7648	8433	9410	9342	9130	10014	8959	6186	4813	4172	3641	2613	140099	Friday
2	1482	928	573	471	761	1929	3477	5630	7196	7371	7888	8352	9041	8941	9217	9478	8915	8503	7418	5634	4488	4029	3678	2868	128268	Saturday
3	1731	1093	643	384	295	386	980	1989	3010	4209	5665	7322	8489	8886	8836	9086	8878	8053	6628	5322	4438	4171	3000	1954	105448	Sunday
4																										Monday
5	758	370	289	450	1411	5914	7656	8817	8242	7242	7344	6980	7304	7503	8855	9343	9850	9975	8447	6317	4447	3453	2740	1701	135408	Tuesday
6	838	430	342	448	1446	5682	7591	8749	8607	7584	7255	7041	7186	7873	9089	9409	9598	9954	8527	6546	4769	3887	2778	1760	137389	Wednesday
7	860	437	340	497	1390	5842	7474	8694	8195	7824	7364	7412	7452	7850	8651	9364	9165	9191	8428	6760	4900	4144	3199	2095	137528	Thursday
8	1082	539	411	487	1412	5712	7652	8990	7797	7732	7795	7931	8215	8773	9475	10094	9799	9950	8686	6579	5181	4085	3448	2555	144380	Friday
9	1430	838	558	438	679	1663	3122	4843	6486	7782	8735	9567	9631	9311	9466	9226	9355	8619	7442	5138	4251	3747	3687	2871	128885	Saturday
10	1610	1063	545	393	409	813	1886	2619	3835	5432	7169	8666	9470	9059	9181	9015	8519	7844	5965	5010	3843	2874	2107	1519	108846	Sunday
11	798	417	331	406	1107	3666	5961	7714	7532	7376	7766	8374	8191	8449	8949	9756	9945	9834	7755	5737	3957	2953	2247	1406	130627	Monday
12	745	375	312	412	1457	5642	6246	6912	7753	7767	6985	6957	6984	7602	8952	9768	9339	9830	8250	5901	4400	3615	2256	1801	130261	Tuesday
13	874	405	309	435	1334	5631	7209	7570	8650	7537	6990	7203	7345	7696	9068	8956	9518	9950	8558	6444	4765	3807	2779	1756	134789	Wednesday
14	836	478	326	429	1409	6012	7619	8528	8473	7488	7445	7291	7398	7957	9317	9484	9419	9708	8304	6825	5437	4187	3153	1860	139383	Thursday
15	1074	528	412	513	1322	5638	7533	9085	8512	7551	7601	7707	8004	8224	9681	10299	9372	9653	8442	6563	4522	3923	3693	2538	142390	Friday
16	1581	976	565	405	721	1803	3206	4687	6210	7385	8495	8927	8968	8805	8933	9247	9167	8750	7488	5409	4353	3755	3462	2782	126080	Saturday
17	1743	1096	619	466	404	855	1896	2621	3651	4999	6507	7727	8388	8512	8383	8360	8098	6782	5938	4471	3684	2419	1832	1344	100795	Sunday
18	702	407	339	445	1502	5587	6286	6590	7551	7407	6920	6814	6964	7534	8736	9158	8880	9481	8223	5884	4308	2899	2087	1417	126121	Monday
19	943	394	335	438	1359	5841	7497	8616	8525	7314	7100	7083	7365	7646	9166	9387	9574	9951	8238	6109	4685	3594	2394	1555	135109	Tuesday
20	862	395	327	438	1345	5945	7507	6936	8593	7875	7187	6763	7902	7858	9159	9630	9606	9716	8549	6390	5192	3987	2698	1653	136513	Wednesday
21	857	485	340	437	1402	5856	7458	8660	8188	7765	7278	7497	7509	7876	9289	9538	9727	9994	8595	6563	5055	4264	3491	2028	140152	Thursday
22	1125	638	450	488	1339	5441	7356	7739	8180	7569	7437	7639	8182	7777	9023	9582	9356	9576	8647	6406	4688	4056	3706	2592	138992	Friday
23	1520	925	620	456	698	1696	3205	4664	6267	7514	8289	8516	9123	9015	9174	9366	9333	8685	7324	5657	4218	4143	3744	2698	126850	Saturday
24	1646	1073	674	436	391	788	1690	2340	3280	4715	6373	7663	8237	8492	8156	8060	7720	6679	5731	4407	3308	2212	1831	1357	97259	Sunday
25	1064	856	600	689	1791	6789	8009	9259	8315	7553	7155	7270	7325	8039	9116	9413	9564	9639	8380	6163	4407	3337	2795	1566	139094	Monday
26	836	412	351	445	1375	6015	7443	8884	8477	7805	7790	8105	8278	8717	9823	10177	9737	9419	7928	7310	6093	4274	3201	2130	145025	Tuesday
27	1151	619	385	475	1260	4150	5153	7427	6624	6441	6675	7302	8048	7564	8132	8014	7853	7244	5403	4697	3833	3163	2796	2021	116430	Wednesday
28	1285	779	498	342	384	669	1563	2136	2967	5073	7607	9508	9203	9040	7093	4877	5712	7326	8557	8437	7843	5812	3323	2256	112290	Thursday
29	1404	772	810	877	1309	3170	3934	5006	5658	6822	8372	9045	8521	9246	9362	9354	9100	7875	6887	5364	4268	3516	3355	2216	126243	Friday
30	1356	973	759	635	946	1829	3087	4452	4835	6493	7835	8540	9220	9249	9273	9246	8831	8140	6740	5468	4201	3700	3653	2526	121987	Saturday

Source: http://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=tcds

November MADT (without Thanksgiving Week)	
Sat Ave.	127521
Sun. Ave.	103087
Mon. Ave.	131947
Tues. Ave.	136451
Wed. Ave.	136230
Thurs. Ave.	139021
Fri. Ave.	141465
Monthy Ave.	**130817**

AADT MassDOT	**131271**

Seasonal Adj. = 1.00

Appendix D

Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : WEYMOUTH COUNT DATE : 10/27/2015

DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [X]

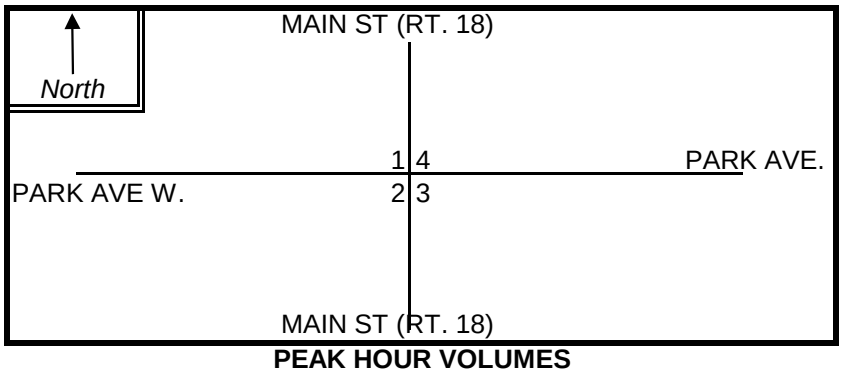
~ INTERSECTION DATA ~

MAJOR STREET : MAIN STREET (ROUTE 18)

MINOR STREET(S) : PARK AVENUE

PARK AVENUE WEST

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4		Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	NB	WB		
PEAK HOURLY VOLUMES (PM) :	1,456	501	1,047	502		**3,506**

" K " FACTOR : **0.09**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **38,956**

TOTAL # OF CRASHES : 86

OF YEARS : 3

AVERAGE # OF CRASHES PER YEAR (**A**) : **28.67**

CRASH RATE CALCULATION : **2.02**

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

Comments :

Project Title & Date: LIBBEY INDUSTRIAL PARKWAY

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : WEYMOUTH COUNT DATE : 10/7/2015

DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [X]

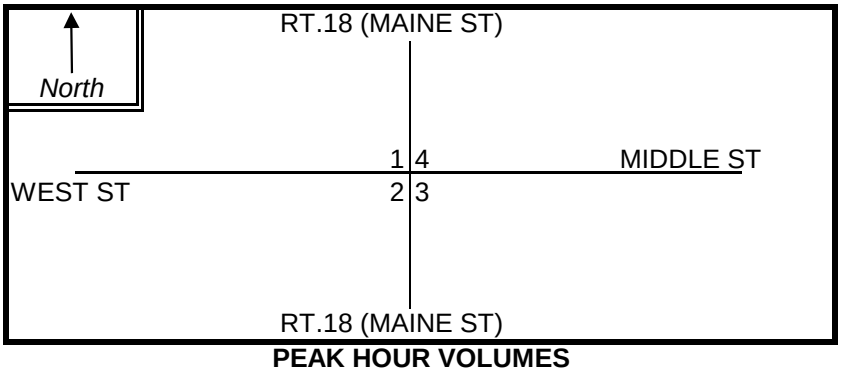
~ INTERSECTION DATA ~

MAJOR STREET : MAIN STREET (ROUTE 18)

MINOR STREET(S) : WEST STREET

MIDDLE STREET

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4		Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	NB	WB		
PEAK HOURLY VOLUMES (PM) :	1,509	639	1,163	689		**4,000**

" K " FACTOR : **0.09** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **44,444**

TOTAL # OF CRASHES : 86 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **28.67**

CRASH RATE CALCULATION : **1.77** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments :

Project Title & Date: LIBBEY INDUSTRIAL PARKWAY

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : WEYMOUTH COUNT DATE : 10/7/2015

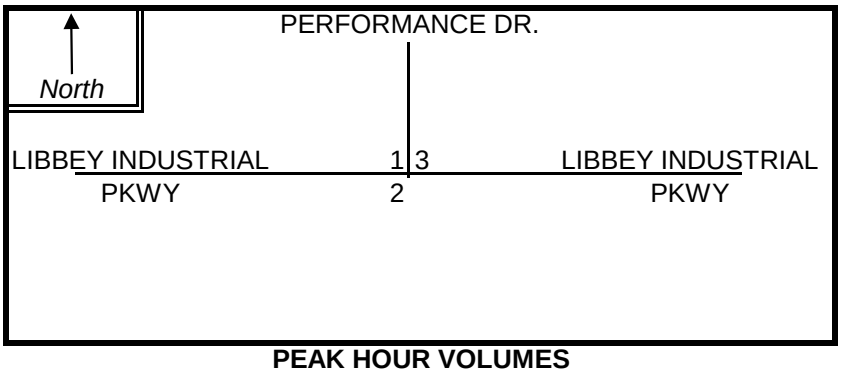
DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : LIBBEY INDUSTRIAL PARKWAY

MINOR STREET(S) : PERFORMANCE DRIVE

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3			Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (PM) :	139	307	290			**736**

" K " FACTOR : **0.09** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **8,178**

TOTAL # OF CRASHES : 2 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.67**

CRASH RATE CALCULATION : **0.22** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments :

Project Title & Date: LIBBEY INDUSTRIAL PARKWAY

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : WEYMOUTH COUNT DATE : 11/6/2014

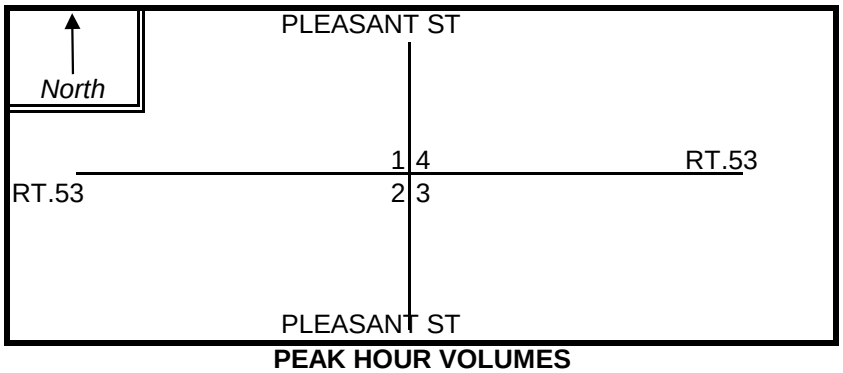
DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : WASHINGTON STREET (ROUTE 53)

MINOR STREET(S) : PLEASANT STREET

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4		Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	NB	WB		
PEAK HOURLY VOLUMES (PM) :	628	495	751	627		**2,501**

" K " FACTOR : **0.09** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **27,789**

TOTAL # OF CRASHES : 61 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **20.33**

CRASH RATE CALCULATION : **2.00** $RATE = \frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments :

Project Title & Date: LIBBEY INDUSTRIAL PARKWAY

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : WEYMOUTH COUNT DATE : 10/7/2015

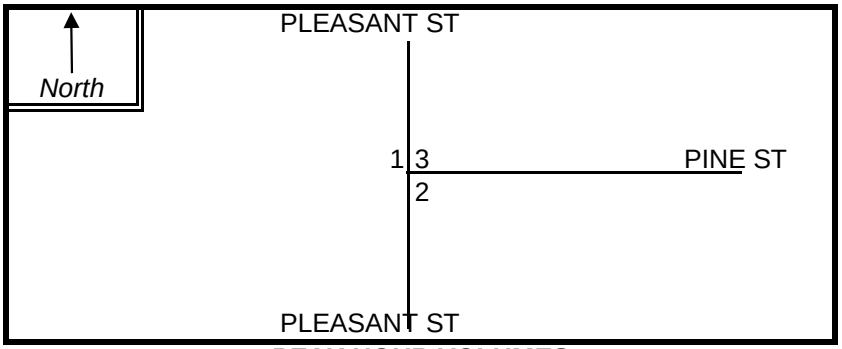
DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : PLEASANT STREET

MINOR STREET(S) : PINE STREET

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3			Total Peak Hourly Approach Volume
DIRECTION :	SB	NB	WB			
PEAK HOURLY VOLUMES (PM) :	1,256	717	253			**2,226**

" K " FACTOR : **0.09**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **24,733**

TOTAL # OF CRASHES : 7

OF YEARS : 3

AVERAGE # OF CRASHES PER YEAR (**A**) : **2.33**

CRASH RATE CALCULATION : **0.26**

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

Comments :

Project Title & Date: LIBBEY INDUSTRIAL PARKWAY

Accident Data			ROUTE 18 (MAIN STREET) @ PARK AVENUE / PARK AVENUE WEST										Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambiemt Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
3352124	WEYMOUTH	28-Jan-13	5:11 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Snow	Dark - lighted roadway	Snow	PARK AVE	MAIN ST						
3374981	WEYMOUTH	12-Feb-13	10:04 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Other	V1:Southbound	V1: Collision with other fixed object (wall, building, tunnel, etc.)	V1: Unknown heavy truck, cannot classify	Dry	Daylight	Clear				MAIN STREET			GULF GAS STATION	
3374357	WEYMOUTH	14-Feb-13	2:51 PM	Property damage only (none injured)	3	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:Southbound / V2:Southbound / V3:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V3:Passenger car	Dry	Daylight	Clear				100 feet N from Intersection MAIN STREET / 760 PARK AVENUE				
3374361	WEYMOUTH	18-Feb-13	7:46 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Sand, mud, dirt, oil, gravel	Daylight	Clear	MAIN STREET	PARK AVENUE WEST						
3381149	WEYMOUTH	7-Mar-13	10:45 AM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain/Snow				MAIN STREET				
3381166	WEYMOUTH	11-Mar-13	8:18 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Cloudy				MAIN STREET / 755 PARK AVENUE			DUNKIN DONUTS WEST AVENUE	
3381180	WEYMOUTH	16-Mar-13	2:38 PM	Non-fatal injury	2	1	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
3381202	WEYMOUTH	22-Mar-13	8:39 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PARK AVENUE WEST			DUNKIN DONUTS	
3414141	WEYMOUTH	16-Apr-13	5:23 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dawn	Clear				MAIN STREET				
3413895	WEYMOUTH	17-Apr-13	6:27 PM	Non-fatal injury	2	2	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	MAIN ST	PARK AVE						
3413912	WEYMOUTH	30-Apr-13	10:27 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Tractor/semi-trailer	Dry	Daylight	Clear	MAIN ST Rte 18 S	PARK AVE						
3498497	WEYMOUTH	27-Jun-13	2:32 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear				PARK AVE				
3548231	WEYMOUTH	1-Jul-13	1:08 PM	Property damage only (none injured)	3	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Slowing or stopped in traffic	V1:Southbound / V2:Eastbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Other / V2:Passenger car / V3:Passenger car	Dry	Daylight	Clear	PARK AVENUE	MAIN STREET						
3547793	WEYMOUTH	26-Jul-13	9:06 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	PARK AVE	MAIN ST						
3547800	WEYMOUTH	28-Jul-13	11:13 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy				MAIN ST Rte 18 N				
3546418	WEYMOUTH	29-Jul-13	9:48 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	PARK AVENUE WEST	MAIN STREET						
3583957	WEYMOUTH	20-Aug-13	11:37 AM	Property damage only (none injured)	3	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:Northbound / V2:Northbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Dry	Daylight	Clear				MAIN ST				
3583910	WEYMOUTH	27-Aug-13	10:52 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	MAIN ST	PARK AVE						
3603186	WEYMOUTH	27-Sep-13	10:57 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN ST				
3603193	WEYMOUTH	30-Sep-13	9:25 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN ST Rte 18				
3651251	WEYMOUTH	10-Oct-13	4:41 PM	Non-fatal injury	2	1	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PARK AVE				
3651253	WEYMOUTH	11-Oct-13	4:12 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
3718068	WEYMOUTH	2-Dec-13	7:48 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Cloudy				MAIN ST				
3718144	WEYMOUTH	21-Dec-13	10:17 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Clear				500 feet W from Intersection PARK AVE WEST AVE / 27 MAIN STREET				
2713184	WEYMOUTH	4-Jan-11	5:58 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear				MAIN STREET				

Accident Data			ROUTE 18 (MAIN STREET) @ PARK AVENUE / PARK AVENUE WEST										Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambiemt Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2715084	WEYMOUTH	3-Feb-11	2:43 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Turning left	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Ice	Daylight	Clear				MAIN ST				
2715098	WEYMOUTH	7-Feb-11	1:21 PM	Property damage only (none injured)	2	0	0	Angle	V1: Entering traffic lane / V2:Slowing or stopped in traffic	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN ST			DUNKIN DONUTS	
2721718	WEYMOUTH	5-Mar-11	10:47 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Westbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear				50 feet W from Intersection MAIN ST / 755 MAIN STREET Rte 18				
2721778	WEYMOUTH	12-Apr-11	3:33 PM	Non-fatal injury	1	1	0	Angle	V1: Entering traffic lane	V1:Westbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Passenger car	Dry	Daylight	Cloudy				MAIN ST				P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)
2721786	WEYMOUTH	19-Apr-11	9:27 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Travelling straight ahead	V1:Northbound	V1: Collision with pedestrian	V1: Passenger car	Wet	Dark - lighted roadway	Rain				MAIN ST				P2:Pedestrian
2737234	WEYMOUTH	27-Apr-11	1:36 AM	Property damage only (none injured)	2	0	0	Rear-to-rear	V1: Turning left / V2:Backing	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear				MAIN ST				
2737237	WEYMOUTH	28-Apr-11	3:09 PM	Property damage only (none injured)	3	0	0	Rear-end	V1: Turning left / V2:Travelling straight ahead / V3:Turning right	V1:Eastbound / V2:Eastbound / V3:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Wet	Daylight	Cloudy				PARK AVE				
2737647	WEYMOUTH	16-May-11	5:33 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Changing lanes / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain				MAIN STREET				
2737653	WEYMOUTH	17-May-11	4:34 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain				MAIN STREET				
2739051	WEYMOUTH	7-Jun-11	10:55 AM	Property damage only (none injured)	3	0	0	Angle	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:Northbound / V2:Northbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Dry	Daylight	Clear				PARK AVE				
2739210	WEYMOUTH	18-Jun-11	5:33 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	MAIN STREET Rte 18 S	PARK AVENUE						
2739213	WEYMOUTH	20-Jun-11	2:53 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Other	Dry	Daylight	Clear				MAIN STREET				
2739078	WEYMOUTH	21-Jun-11	9:10 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PARK AVE			DUNKIN DONUTS	
2750534	WEYMOUTH	11-Jul-11	12:48 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Turning right / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear				PARK AVENUE WEST				
2759598	WEYMOUTH	9-Aug-11	11:13 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
2759446	WEYMOUTH	16-Aug-11	10:43 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	MAIN ST	PARK AVE						
2784237	WEYMOUTH	2-Sep-11	7:37 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Entering traffic lane	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	PARK AVENUE WEST	Rte 18 E						
2784400	WEYMOUTH	9-Sep-11	7:13 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PARK AVENUE	MAIN STREET						
2784399	WEYMOUTH	9-Sep-11	2:53 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
2784371	WEYMOUTH	26-Sep-11	5:24 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Changing lanes	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear				MAIN STREET				
2784234	WEYMOUTH	30-Sep-11	9:50 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Dark - lighted roadway	Clear				MAIN STREET Rte 18			BLOCKBUSTER VIDEO	
2793259	WEYMOUTH	7-Oct-11	9:48 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PARK AVE				
2793298	WEYMOUTH	26-Oct-11	3:09 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				

Accident Data			ROUTE 18 (MAIN STREET) @ PARK AVENUE / PARK AVENUE WEST										Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambiemt Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2826642	WEYMOUTH	9-Nov-11	6:18 PM	Non-fatal injury	2	2	0	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear				50 feet N from Intersection MAIN STREET / 755 PARK AVENUE			DUNKIN DONUT DRIVEWAY	
2826652	WEYMOUTH	18-Nov-11	4:38 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear				MAIN STREET				
2828257	WEYMOUTH	28-Nov-11	7:11 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Dark - lighted roadway	Clear				MAIN STREET				
2828258	WEYMOUTH	29-Nov-11	10:35 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Cloudy	PARK AVENUE	MAIN STREET Rte 18 N						
2870985	WEYMOUTH	20-Dec-11	9:01 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Dark - lighted roadway	Clear				MAIN STREET				
2941694	WEYMOUTH	22-Jan-12	10:49 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Changing lanes	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Clear	PARK AVENUE WEST	MAIN STREET						
2941711	WEYMOUTH	26-Jan-12	9:14 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:Westbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PARK AVENUE WEST	MAIN STREET Rte 18 S						
2966841	WEYMOUTH	11-Feb-12	6:29 PM	Property damage only (none injured)	1	0	0	Angle	V1: Turning right	V1:Westbound	V1: Collision with motor vehicle in traffic	V1: Passenger car	Wet	Dark - lighted roadway	Cloudy	PARK AVE	MAIN ST						
3135544	WEYMOUTH	14-Mar-12	1:52 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Motorcycle / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Cloudy	PARK AVENUE WEST	MAIN STREET Rte 18 S				GULF GAS	
3123222	WEYMOUTH	5-Apr-12	7:24 AM	Property damage only (none injured)	2	0	0	Angle	V1: Slowing or stopped in traffic / V2:Other	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN ST				
3123244	WEYMOUTH	14-Apr-12	1:05 PM	Non-fatal injury	1	1	0	Angle	V1: Turning left	V1:Westbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Passenger car	Dry	Daylight	Clear	MAIN ST	PARK AVE						P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)
3122674	WEYMOUTH	14-Apr-12	3:44 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Travelling straight ahead	V1:Southbound	V1: Collision with fence	V1: Passenger car	Dry	Daylight	Clear				ADAMS PL				
3122693	WEYMOUTH	30-Apr-12	2:17 PM	Non-fatal injury	2	1	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	MAIN ST Rte 18	PARK AVE						
3132416	WEYMOUTH	4-May-12	3:49 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Wet	Daylight	Clear	PARK AVE	MAIN ST						
3133543	WEYMOUTH	7-May-12	9:59 AM	Property damage only (none injured)	2	0	0	Angle	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	MAIN ST	PARK AVE						
3134131	WEYMOUTH	9-May-12	5:47 PM	Property damage only (none injured)	2	0	0	Angle	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain				MAIN STREET			GULF SERVICE STATION	
3132426	WEYMOUTH	9-May-12	7:01 PM	Property damage only (none injured)	2	0	0	Angle	V1: Entering traffic lane / V2:Travelling straight ahead	V1:Westbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dusk	Cloudy/Rain				MAIN STREET				
3133553	WEYMOUTH	12-May-12	10:07 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
3133556	WEYMOUTH	13-May-12	8:17 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PARK AVE				
3133576	WEYMOUTH	22-May-12	12:04 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain/Cloudy	MAIN ST	PARK AVE						
3195441	WEYMOUTH	8-Jun-12	10:47 AM	Property damage only (none injured)	3	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	V1:Southbound / V2:Southbound / V3:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Wet	Daylight	Cloudy/Rain				MAIN ST				
3237267	WEYMOUTH	29-Jul-12	1:38 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PARK AVE	MAIN ST						
3249818	WEYMOUTH	26-Aug-12	12:45 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1:Westbound	V1: Collision with overhead sign support	V1: Passenger car	Dry	Daylight	Clear				MAIN STREET				
3249857	WEYMOUTH	28-Aug-12	12:00 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	MAIN ST Rte 18 W	PARK AVE						

Accident Data			ROUTE 18 (MAIN STREET) @ PARK AVENUE / PARK AVENUE WEST											Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambiemt Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
3275759	WEYMOUTH	3-Sep-12	5:06 PM	Non-fatal injury	1	1	0	Angle	V1: Turning right	V1:Northbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	MAIN ST Rte 18	PARK AVE						P2:Pedalcyclist (bicycle, tricycle, unicycle, pedal car)
3276838	WEYMOUTH	4-Sep-12	2:34 PM	Non-fatal injury	2	1	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Unknown heavy truck, cannot classify / V2:Passenger car	Wet	Daylight	Rain	MAIN STREET Rte 18 N	PARK AVENUE						
3275779	WEYMOUTH	8-Sep-12	10:32 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Turning right / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear				MAIN STREET			GULF GAS STATION	
3275808	WEYMOUTH	19-Sep-12	1:13 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				MAIN STREET				
3293835	WEYMOUTH	10-Oct-12	7:06 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Unknown / V2:Slowing or stopped in traffic	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Cloudy	PARK AVE	MAIN ST Rte 18						
3293837	WEYMOUTH	11-Oct-12	9:55 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	MAIN ST	PARK AVE						
3294202	WEYMOUTH	16-Oct-12	3:50 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Slowing or stopped in traffic / V2:Making U-turn	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Clear	MAIN STREET	PARK AVENUE						
3293783	WEYMOUTH	27-Oct-12	9:35 AM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy				MAIN STREET				
3305556	WEYMOUTH	16-Nov-12	4:45 PM	Non-fatal injury	4	1	0	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead / V4:Travelling straight ahead	V1:Northbound / V2:Northbound / V3:Northbound / V4:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic / V4: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car / V4:Passenger car	Dry	Dusk	Clear				MAIN STREET				
3334540	WEYMOUTH	1-Dec-12	11:30 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Snow				MAIN ST				
3334553	WEYMOUTH	8-Dec-12	12:00 AM	Non-fatal injury	2	2	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Wet	Dark - lighted roadway	Rain	MAIN ST	PARK AVE						
3334562	WEYMOUTH	10-Dec-12	4:12 PM	Property damage only (none injured)	3	0	0	Sideswipe, same direction	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1:Westbound / V2:Westbound / V3:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car / V3:Passenger car	Wet	Dusk	Cloudy	PARK AVENUE WEST	MAIN STREET						
3334678	WEYMOUTH	17-Dec-12	5:15 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Entering traffic lane	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain				PARK AVE				
3334718	WEYMOUTH	28-Dec-12	2:30 PM	Property damage only (none injured)	2	0	0	Angle	V1: Entering traffic lane / V2:Slowing or stopped in traffic	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PARK AVE	MAIN ST						

massDOT **MassDOT Crash Report for WEYMOUTH for the year 2011-2013**

Route 18/Middle Street

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Travel Directions	Vehicle Action Prior to Crash	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2715700	WEYMOUTH	1-Feb-11	3:11 PM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Southbound	V1: Travelling straight ahead / V2:Turning left	Snow	Daylight	Snow	MAIN STREET / MIDDLE STREET					
2715703	WEYMOUTH	2-Feb-11	4:22 PM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Southbound	V1: Turning right / V2:Turning right	Wet	Daylight	Cloudy		MAIN STREET				
2715082	WEYMOUTH	3-Feb-11	11:48 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Westbound / V2:Westbound	V1: Slowing or stopped in traffic / V2:Entering traffic lane	Ice	Daylight	Clear	MAIN STREET / MIDDLE STREET					
2715085	WEYMOUTH	3-Feb-11	3:46 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Eastbound / V2:Eastbound	V1: Travelling straight ahead / V2:Travelling straight ahead	Ice	Daylight	Clear	MIDDLE ST / MAIN ST					
2715705	WEYMOUTH	4-Feb-11	12:20 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Southbound / V2:Southbound	V1: Travelling straight ahead / V2:Travelling straight ahead	Dry	Daylight	Clear		200 feet S from Intersection MAIN STREET / MIDDLE STREET				
2715109	WEYMOUTH	10-Feb-11	6:57 PM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Eastbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	Dry	Dark - lighted roadway	Clear		MAIN ST				
2715723	WEYMOUTH	19-Feb-11	4:55 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Turning right / V2:Travelling straight ahead	Dry	Daylight	Clear		MAIN STREET				
2721949	WEYMOUTH	1-Mar-11	4:02 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Eastbound / V2:Eastbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Daylight	Clear		MAIN STREET				
2721763	WEYMOUTH	28-Mar-11	12:17 PM	Property damage only (none injured)	2	0	0	Rear-to-rear	V1:Southbound / V2:Southbound	V1: Backing / V2:Slowing or stopped in traffic	Dry	Daylight	Clear		40 feet N from Intersection LIBERTY SQ / 5 WEST STREET				
2721856	WEYMOUTH	1-Apr-11	6:01 AM	Non-fatal injury	2	1	0	Angle	V1:Northbound / V2:Eastbound	V1: Travelling straight ahead / V2:Turning left	Snow	Dark - roadway not lighted	Rain	MAIN ST / MIDDLE ST / WEST ST					
2722025	WEYMOUTH	1-Apr-11	3:14 PM	Non-fatal injury	3	1	0	Rear-end	V1:Northbound / V2:Northbound / V3:Northbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	Wet	Daylight	Cloudy/Rain		MAIN STREET				
2721772	WEYMOUTH	8-Apr-11	1:42 AM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Southbound	V1: Travelling straight ahead / V2:Backing	Dry	Dark - lighted roadway	Clear		LIBERTY SQ				
2737022	WEYMOUTH	30-May-11	2:22 PM	Property damage only (none injured)	3	0	0	Rear-end	V1:Northbound / V2:Northbound / V3:Northbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	Dry	Daylight	Clear	MAIN ST / MIDDLE ST					
2739063	WEYMOUTH	12-Jun-11	12:00 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1:Northbound	V1: Other	Wet	Other	Clear		MAIN ST			2 feet W from MOBIL GAS STATION	
2739195	WEYMOUTH	14-Jun-11	1:38 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Wet	Daylight	Cloudy		MAIN STREET			MAIN STREET MOBILE	
2739200	WEYMOUTH	16-Jun-11	8:12 AM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Southbound	V1: Overtaking/passing / V2:Entering traffic lane	Dry	Daylight	Clear		MAIN STREET				
2750542	WEYMOUTH	13-Jul-11	7:15 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Westbound / V2:Westbound	V1: Travelling straight ahead / V2:Changing lanes	Dry	Daylight	Clear	MIDDLE STREET / MAIN STREET Rte 18 S					
2749147	WEYMOUTH	13-Jul-11	7:28 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Southbound / V2:Southbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Daylight	Clear		50 feet N from Intersection MAIN STREET / 511 WEST STREET				
2748996	WEYMOUTH	21-Jul-11	11:40 PM	Non-fatal injury	1	1	0	Unknown	V1:Northbound	V1: Travelling straight ahead	Dry	Dark - lighted roadway	Clear		MAIN STREET Rte 18 N				P2:Pedestrian
2748998	WEYMOUTH	23-Jul-11	2:58 PM	Property damage only (none injured)	1	0	0	Rear-end	V1:Eastbound	V1: Slowing or stopped in traffic	Dry	Daylight	Clear	WEST ST / MAIN ST					
2759430	WEYMOUTH	8-Aug-11	2:06 PM	Property damage	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic	Dry	Daylight	Clear		MAIN ST				
2759445	WEYMOUTH	15-Aug-11	8:31 PM	Property damage only (none injured)	3	0	0	Rear-end	V1:Northbound / V2:Northbound / V3:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead / V3:Slowing or stopped in traffic	Wet	Dark - lighted roadway	Rain		MAIN ST				
2759641	WEYMOUTH	27-Aug-11	1:37 PM	Non-fatal injury	2	4	0	Angle	V1:Northbound / V2:Eastbound	V1: Travelling straight ahead / V2:Turning left	Wet	Daylight	Rain	MAIN STREET / MIDDLE STREET					
2784236	WEYMOUTH	2-Sep-11	6:40 AM	Non-fatal injury	1	1	0	Rear-end	V1:Southbound	V1: Backing	Dry	Daylight	Clear		LIBERTY SQ			CUMBERLAND FARMS	P2:Pedestrian
2784398	WEYMOUTH	7-Sep-11	6:52 PM	Non-fatal injury	2	1	0	Angle	V1:Southbound / V2:Northbound	V1: Turning left / V2:Travelling straight ahead	Wet	Dusk	Cloudy/Rain	MAIN STREET / MIDDLE STREET					
2784162	WEYMOUTH	17-Sep-11	6:46 PM	Non-fatal injury	2	1	0	Head-on	V1:Southbound / V2:Northbound	V1: Turning left / V2:Travelling straight ahead	Dry	Dusk	Clear	MAIN ST / MIDDLE ST					
2784370	WEYMOUTH	26-Sep-11	5:06 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Southbound / V2:Southbound	V1: Travelling straight ahead / V2:Changing lanes	Dry	Daylight	Clear		MAIN STREET				
2793246	WEYMOUTH	2-Oct-11	6:46 PM	Non-fatal injury	2	2	0	Rear-end	V1:Southbound / V2:Southbound	V1: Travelling straight ahead / V2:Turning right	Dry	Dark - lighted roadway	Clear		MAIN STREET				
2793262	WEYMOUTH	7-Oct-11	6:35 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Eastbound / V2:Eastbound	V1: Slowing or stopped in traffic / V2:Entering traffic lane	Dry	Dusk	Clear	WEST ST / MAIN ST					
2793645	WEYMOUTH	12-Oct-11	11:04 PM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Eastbound	V1: Turning left / V2:Travelling straight ahead	Wet	Dark - lighted roadway	Rain/Cloudy		MAIN STREET				
2793274	WEYMOUTH	14-Oct-11	3:27 PM	Non-fatal injury	2	3	0	Angle	V1:Northbound / V2:Eastbound	V1: Travelling straight ahead / V2:Entering traffic lane	Wet	Daylight	Cloudy/Rain		MAIN STREET				
2793275	WEYMOUTH	14-Oct-11	7:36 PM	Non-fatal injury	2	1	0	Angle	V1:Northbound / V2:Westbound	V1: Slowing or stopped in traffic / V2:Backing	Wet	Dark - lighted roadway	Rain		LIBERTY SQ				
2826917	WEYMOUTH	5-Nov-11	1:05 AM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Southbound	V1: Making U-turn / V2:Travelling straight ahead	Dry	Dark - lighted roadway	Clear		MAIN STREET				

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Travel Directions	Vehicle Action Prior to Crash	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2826918	WEYMOUTH	6-Nov-11	8:40 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Dark - lighted roadway	Clear		MAIN STREET				
2828232	WEYMOUTH	12-Nov-11	3:21 PM	Property damage only (none injured)	2	0	0	Angle	V1:Westbound / V2:Southbound	V1: Travelling straight ahead / V2:Travelling straight ahead	Dry	Daylight	Clear		MIDDLE STREET				
2828252	WEYMOUTH	23-Nov-11	12:16 PM	Property damage only (none injured)	2	0	0	Head-on	V1:Southbound / V2:Eastbound	V1: Turning left / V2:Travelling straight ahead	Wet	Daylight	Cloudy	MAIN STREET / MIDDLE STREET					
2828254	WEYMOUTH	24-Nov-11	8:10 PM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Northbound	V1: Travelling straight ahead / V2:Turning left	Dry	Dark - lighted roadway	Clear		MAIN STREET				
2873270	WEYMOUTH	8-Dec-11	8:46 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Eastbound / V2:Westbound	V1: Turning right / V2:Travelling straight ahead	Dry	Daylight	Clear	WEST STREET / MAIN STREET					
2941680	WEYMOUTH	4-Jan-12	9:57 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Southbound / V2:Southbound	V1: Turning right / V2:Turning right	Dry	Daylight	Clear	WEST ST / MAIN ST					
2966872	WEYMOUTH	29-Feb-12	6:00 PM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Eastbound	V1: Travelling straight ahead / V2:Turning left	Wet	Dark - lighted roadway	Snow		MAIN ST Rte 18 N				
2978733	WEYMOUTH	18-Mar-12	4:26 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Southbound / V2:Southbound	V1: Travelling straight ahead / V2:Changing lanes	Dry	Daylight	Clear		MAIN ST				
3123165	WEYMOUTH	18-Mar-12	8:50 PM	Property damage only (none injured)	2	0	0	Rear-to-rear	V1:Southbound / V2:Southbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Dark - lighted roadway	Clear		MAIN ST				
3135546	WEYMOUTH	27-Mar-12	11:57 AM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Westbound	V1: Entering traffic lane / V2:Slowing or stopped in traffic	Dry	Daylight	Clear		1147 MIDDLE STREET / Rte 18			MOBIL STATION	
3123225	WEYMOUTH	6-Apr-12	7:52 AM	Non-fatal injury	2	1	0	Head-on	V1:Northbound / V2:Northbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear		MAIN ST / 520 MIDDLE STREET				
3122685	WEYMOUTH	24-Apr-12	9:16 PM	Non-fatal injury	2	2	0	Head-on	V1:Northbound / V2:Southbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	Dry	Dark - lighted roadway	Clear	MAIN ST / MIDDLE ST / WEST ST					
3133631	WEYMOUTH	12-May-12	9:28 AM	Non-fatal injury	2	1	0	Angle	V1:Northbound / V2:Southbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear	MAIN ST / MIDDLE ST					
3133647	WEYMOUTH	19-May-12	7:44 PM	Non-fatal injury	2	1	0	Angle	V1:Southbound / V2:Northbound	V1: Turning right / V2:Turning left	Dry	Daylight	Clear	MAIN ST Rte 18 / WEST ST					
3195380	WEYMOUTH	28-Jun-12	2:41 PM	Property damage only (none injured)	3	0	0	Rear-end	V1:Northbound / V2:Northbound / V3:Northbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	Dry	Daylight	Clear		MAIN ST				
3236614	WEYMOUTH	17-Jul-12	2:31 AM	Non-fatal injury		1	0	Single vehicle crash			Dry	Dark - lighted roadway	Clear	MAIN STREET Rte 18 / WEST STREET					P1:Pedestrian
3237263	WEYMOUTH	25-Jul-12	9:53 AM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Northbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear		MAIN STREET				
3237343	WEYMOUTH	28-Jul-12	2:32 AM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Westbound	V1: Turning left / V2:Turning right	Dry	Dark - lighted roadway	Clear		MAIN ST			20 feet S from MOBIL GAS STATION	
3237269	WEYMOUTH	30-Jul-12	8:00 AM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Southbound	V1: Travelling straight ahead / V2:Travelling straight ahead	Dry	Daylight	Clear	MAIN ST / MIDDLE ST					
3249774	WEYMOUTH	1-Aug-12	12:43 PM	Non-fatal injury	3	1	0	Head-on	V1:Northbound / V2:Eastbound / V3:Eastbound	V1: Travelling straight ahead / V2:Turning left / V3:Turning left	Dry	Daylight	Clear	MAIN ST / MIDDLE ST					
3275796	WEYMOUTH	16-Sep-12	2:24 PM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Northbound	V1: Turning right / V2:Backing	Dry	Daylight	Clear		MAIN STREET				
3302107	WEYMOUTH	1-Nov-12	12:49 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	Dry	Daylight	Clear		MAIN STREET				
3302124	WEYMOUTH	8-Nov-12	8:24 PM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Northbound	V1: Backing / V2:Slowing or stopped in traffic	Wet	Dark - lighted roadway	Rain/Cloudy		LIBERTY SQ				
3305554	WEYMOUTH	16-Nov-12	1:25 PM	Property damage only (none injured)	2	0	0	Angle	V1:Northbound / V2:Eastbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear	MAIN ST / MIDDLE ST					
3334676	WEYMOUTH	17-Dec-12	8:09 AM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Eastbound	V1: Turning left / V2:Travelling straight ahead	Wet	Daylight	Rain/Cloudy	MAIN ST / MIDDLE ST					
3334707	WEYMOUTH	24-Dec-12	7:29 PM	Non-fatal injury	2	2	0	Head-on	V1:Northbound /	V1: Turning left / V2:Travelling	Dry	Dark - lighted	Clear	MAIN ST / WEST ST					
3352085	WEYMOUTH	15-Jan-13	6:17 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Southbound / V2:Southbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	Dry	Dark - lighted roadway	Clear		MAIN STREET				
3352118	WEYMOUTH	26-Jan-13	9:34 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Slush	Daylight	Clear		MAIN STREET / 512 MAIN STREET Rte 18			MOBILE GAS STATION	
3351862	WEYMOUTH	26-Jan-13	12:03 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Wet	Daylight	Clear	MAIN ST / MIDDLE ST					
3374354	WEYMOUTH	13-Feb-13	3:55 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Eastbound / V2:Eastbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear		2 WEST STREET			CUMBERLAND FARMS	
3381150	WEYMOUTH	7-Mar-13	2:27 PM	Non-fatal injury	2	1	0	Angle	V1:Southbound / V2:Northbound	V1: Travelling straight ahead / V2:Turning left	Wet	Daylight	Rain/Snow	MAIN ST / WEST ST					
3414131	WEYMOUTH	1-Apr-13	2:53 PM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Eastbound	V1: Travelling straight ahead / V2:Changing lanes	Dry	Daylight	Clear	WEST ST / MAIN ST Rte 18 S					
3430147	WEYMOUTH	24-Apr-13	10:32 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Travelling straight ahead / V2:Travelling straight ahead	Dry	Daylight	Clear		MAIN STREET				
3498315	WEYMOUTH	2-Jun-13	3:03 PM	Non-fatal injury	2	2	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Daylight	Clear	MAIN ST Rte 18 E / MIDDLE ST					

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Travel Directions	Vehicle Action Prior to Crash	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
3498455	WEYMOUTH	14-Jun-13	2:15 PM	Property damage only (none injured)	2	0	0	Angle	V1:Westbound / V2:Westbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear/Cloudy		MIDDLE ST				
3498462	WEYMOUTH	15-Jun-13	9:50 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Westbound / V2:Westbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	Dry	Daylight	Clear	MIDDLE ST / MAIN ST Rte 18 N					
3498477	WEYMOUTH	19-Jun-13	6:18 PM	Property damage only (none injured)	2	0	0	Angle	V1:Eastbound / V2:Southbound	V1: Travelling straight ahead / V2:Turning left	Dry	Daylight	Clear	WEST ST / MAIN ST Rte 18 S					
3547737	WEYMOUTH	2-Jul-13	8:00 PM	Non-fatal injury	3	1	0	Angle	V1:Southbound / V2:Southbound / V3:Northbound	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Turning left	Dry	Dusk	Clear		MAIN ST				
3547784	WEYMOUTH	23-Jul-13	6:49 PM	Non-fatal injury	2	1	0	Rear-end	V1:Westbound / V2:Westbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	Wet	Daylight	Cloudy/Rain	MIDDLE ST / MAIN ST					
3583952	WEYMOUTH	16-Aug-13	5:32 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Eastbound / V2:Eastbound	V1: Slowing or stopped in traffic / V2:Changing lanes	Dry	Daylight	Clear	WEST ST / FRONT ST					
3603029	WEYMOUTH	3-Sep-13	7:49 PM	Non-fatal injury	3	1	0	Rear-end	V1:Southbound / V2:Southbound / V3:Southbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	Dry	Dark - lighted roadway	Clear	MIDDLE ST / MAIN ST / WEST ST					
3651236	WEYMOUTH	3-Oct-13	1:58 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	Dry	Daylight	Clear		MAIN STREET				
3651356	WEYMOUTH	18-Oct-13	5:12 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Eastbound / V2:Eastbound	V1: Changing lanes / V2:Travelling straight ahead	Dry	Daylight	Clear	WEST ST / MAIN ST Rte 18 S					
3651265	WEYMOUTH	24-Oct-13	6:08 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1:Westbound / V2:Eastbound	V1: Turning left / V2:Travelling straight ahead	Dry	Dark - lighted roadway	Clear	MAIN ST / MIDDLE ST					
3651382	WEYMOUTH	30-Oct-13	12:22 PM	Non-fatal injury	2	1	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	Wet	Daylight	Rain		MAIN STREET				
3669708	WEYMOUTH	6-Nov-13	1:26 PM	Non-fatal injury	2	4	0	Angle	V1:Eastbound / V2:Southbound	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	Dry	Daylight	Clear	MAIN STREET / WEST STREET					
3669180	WEYMOUTH	10-Nov-13	6:07 PM	Property damage only (none injured)	2	0	0	Angle	V1:Southbound / V2:Northbound	V1: Travelling straight ahead / V2:Turning left	Dry	Dark - lighted roadway	Clear		MAIN ST				
3668311	WEYMOUTH	11-Nov-13	12:17 PM	Non-fatal injury	3	2	0	Rear-end	V1:Northbound / V2:Northbound / V3:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead / V3:Travelling straight ahead	Dry	Daylight	Clear		MAIN ST				
3669136	WEYMOUTH	14-Nov-13	5:17 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Westbound / V2:Westbound	V1: Changing lanes / V2:Travelling straight ahead	Dry	Dark - roadway not lighted	Clear	WEST ST / FRONT ST					
3717628	WEYMOUTH	1-Dec-13	4:17 PM	Property damage only (none injured)	3	0	0	Rear-end	V1:Southbound / V2:Southbound / V3:Southbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	Wet	Dark - lighted roadway	Rain		MAIN ST				
3718084	WEYMOUTH	9-Dec-13	2:50 PM	Property damage only (none injured)	1	0	0	Rear-end	V1:Eastbound	V1: Travelling straight ahead	Wet	Daylight	Cloudy		MAIN ST				
3718090	WEYMOUTH	11-Dec-13	9:42 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Eastbound / V2:Eastbound	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	Ice	Daylight	Snow/Other	MIDDLE ST / MAIN ST					
3718124	WEYMOUTH	20-Dec-13	6:15 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Wet	Dark - lighted roadway	Clear		MAIN ST				

Accident Data			LIBBEY INDUSTRIAL PARKWAY @ PERFORMANCE DRIVE										Source										
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambiemt Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2739052	WEYMOUTH	8-Jun-11	12:28 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear				PERFORMANCE DR				
2750798	WEYMOUTH	31-Jul-11	7:58 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dusk	Clear				LIBBEY INDUSTRIAL PARKWAY				

Accident Data | WASHINGTON STREET (ROUTE 53) @ PLEASANT STREET | Source: massDOT

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
3374449	WEYMOUTH	23-Feb-13	8:45 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain/Sleet, hail (freezing rain or drizzle)	WASHINGTON ST	PLEASANT ST						
3374455	WEYMOUTH	26-Feb-13	6:31 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Cloudy	WASHINGTON ST	PLEASANT ST						
3381162	WEYMOUTH	10-Mar-13	4:44 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3381164	WEYMOUTH	11-Mar-13	9:25 AM	Property damage only (none injured)	2	0	0	Angle	V1: Slowing or stopped in traffic / V2:Turning left	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3498265	WEYMOUTH	16-May-13	8:12 AM	Property damage only (none injured)	2	0	0	Angle	V1: Backing / V2:Travelling straight ahead	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear			WASHINGTON ST					
3498302	WEYMOUTH	26-May-13	6:19 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Westbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST Rte 53 S	PLEASANT ST						
3498449	WEYMOUTH	13-Jun-13	1:11 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain	PLEASANT ST	WASHINGTON ST						
3498459	WEYMOUTH	15-Jun-13	9:18 AM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT ST	WASHINGTON ST						
3498478	WEYMOUTH	20-Jun-13	3:08 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3547770	WEYMOUTH	16-Jul-13	8:14 PM	Property damage only (none injured)	2	0	0	Head-on	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dusk	Snow	WASHINGTON ST	PLEASANT ST						
3547781	WEYMOUTH	23-Jul-13	3:18 PM	Non-fatal injury	2	1	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3583886	WEYMOUTH	7-Aug-13	6:03 PM	Property damage only (none injured)	3	0	0	Angle	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or stopped in traffic	V1:Northbound / V2:Northbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V3:Passenger car	Dry	Daylight	Clear	WASHINGTON ST Rte 53 N	PLEASANT ST						
3603025	WEYMOUTH	2-Sep-13	3:07 PM	Non-fatal injury	2	6	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain	WASHINGTON ST	PLEASANT ST						
3603147	WEYMOUTH	11-Sep-13	11:56 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3603187	WEYMOUTH	28-Sep-13	10:19 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Changing lanes	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST Rte 53 S	PLEASANT ST						
3668278	WEYMOUTH	20-Nov-13	2:56 PM	Property damage only (none injured)	1	0	0	Sideswipe, same direction	V1: Slowing or stopped in traffic	V1:Southbound	V1: Collision with motor vehicle in traffic	V1: Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
3668284	WEYMOUTH	23-Nov-13	5:22 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	WASHINGTON ST	PLEASANT ST						
3718232	WEYMOUTH	27-Dec-13	2:37 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Slowing or stopped in traffic	V1:Westbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT ST	WASHINGTON ST						
2713203	WEYMOUTH	19-Jan-11	10:36 AM	Non-fatal injury	3	1	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:Eastbound / V2:Southbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Wet	Daylight	Cloudy/Rain	WASHINGTON STREET	PLEASANT STREET						
2715846	WEYMOUTH	25-Feb-11	12:00 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain	WASHINGTON STREET Rte 53 N	PLEASANT STREET						
2721993	WEYMOUTH	17-Mar-11	3:37 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Other / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON STREET	PLEASANT STREET						
2722015	WEYMOUTH	27-Mar-11	10:15 AM	Non-fatal injury	2	1	0	Rear-end	V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	WASHINGTON STREET Rte 53 S	PLEASANT STREET						
2722034	WEYMOUTH	6-Apr-11	1:34 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT STREET	WASHINGTON STREET						

Accident Data		WASHINGTON STREET (ROUTE 53) @ PLEASANT STREET											Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2721773	WEYMOUTH	8-Apr-11	10:38 AM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Turning right	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Tractor/semi-trailer	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST						
2737499	WEYMOUTH	4-May-11	4:46 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Entering traffic lane / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Wet	Daylight	Cloudy/Rain	WASHINGTON STREET	PLEASANT STREET						
2737630	WEYMOUTH	12-May-11	5:44 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT STREET	WASHINGTON STREET						
2737000	WEYMOUTH	22-May-11	6:12 PM	Non-fatal injury	2	2	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	PLEASANT ST	WASHINGTON ST Rte 53						
2739211	WEYMOUTH	19-Jun-11	12:02 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Eastbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT STREET	WASHINGTON STREET						
2750417	WEYMOUTH	6-Jul-11	7:44 PM	Non-fatal injury	2	2	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Dusk	Clear	WASHINGTON STREET Rte 53 S	PLEASANT STREET						
2750551	WEYMOUTH	16-Jul-11	4:20 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning right	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	WASHINGTON STREET	PLEASANT STREET						
2793243	WEYMOUTH	1-Oct-11	12:00 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Westbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain	WASHINGTON ST	PLEASANT ST						
2793282	WEYMOUTH	19-Oct-11	4:24 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dusk	Rain			PLEASANT STREET / 830 WASHINGTON STREET Rte 53					
2793686	WEYMOUTH	27-Oct-11	9:00 AM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Turning left	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain	WASHINGTON STREET	PLEASANT STREET						
2826732	WEYMOUTH	4-Nov-11	8:26 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Turning left	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	PLEASANT ST	WASHINGTON ST						
2826733	WEYMOUTH	6-Nov-11	12:07 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	PLEASANT ST	WASHINGTON ST						
2828247	WEYMOUTH	21-Nov-11	5:05 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dusk	Clear			WASHINGTON STREET					
2826761	WEYMOUTH	24-Nov-11	2:46 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Backing	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear			WASHINGTON STREET					
2826770	WEYMOUTH	29-Nov-11	6:36 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Wet	Dark - lighted roadway	Cloudy/Rain	PLEASANT ST	WASHINGTON ST Rte 53						
2942679	WEYMOUTH	13-Jan-12	9:37 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Wet	Daylight	Cloudy	PLEASANT ST	WASHINGTON ST Rte 53						
2966279	WEYMOUTH	11-Feb-12	2:19 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Snow	PLEASANT ST	WASHINGTON ST						
3123189	WEYMOUTH	24-Mar-12	7:47 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	WASHINGTON ST	PLEASANT ST						
3123193	WEYMOUTH	26-Mar-12	5:59 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear	PLEASANT ST	WASHINGTON ST						
3123224	WEYMOUTH	5-Apr-12	10:11 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Southbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	PLEASANT ST	WASHINGTON ST						
3122673	WEYMOUTH	14-Apr-12	1:11 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1:Southbound	V1: Collision with other fixed object (wall, building, tunnel, etc.)	V1: Passenger car	Dry	Daylight	Clear			WASHINGTON ST			MARY LOU'S COFFEE	
3122691	WEYMOUTH	29-Apr-12	12:06 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Travelling straight ahead	V1:Southbound	V1: Collision with animal - other	V1: Motorcycle	Dry	Daylight	Clear			WASHINGTON ST					
3133607	WEYMOUTH	30-May-12	1:27 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Changing lanes	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear			WASHINGTON STREET					

Accident Data		WASHINGTON STREET (ROUTE 53) @ PLEASANT STREET											Source	massDOT									
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection			Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
3195431	WEYMOUTH	1-Jun-12	3:33 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear	PLEASANT ST	WASHINGTON ST						
3195449	WEYMOUTH	14-Jun-12	8:21 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dusk	Clear	PLEASANT ST	WASHINGTON ST						
3236587	WEYMOUTH	6-Jul-12	1:44 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear			40 feet E from Intersection PLEASANT STREET / 856 WASHINGTON STREET Rte 53				
3237266	WEYMOUTH	28-Jul-12	3:17 PM	Non-fatal injury	2	1	0	Head-on	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST					
3249776	WEYMOUTH	2-Aug-12	3:17 AM	Property damage only (none injured)	1	0	0	Angle	V1: Travelling straight ahead	V1:Southbound	V1: Collision with motor vehicle in traffic	V1: Passenger car	Dry	Dark - lighted roadway	Clear	PLEASANT ST	WASHINGTON ST						
3249787	WEYMOUTH	6-Aug-12	8:27 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Turning right / V2:Slowing or stopped in traffic	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dusk	Clear			PLEASANT ST / WASHINGTON STREET				
3249796	WEYMOUTH	14-Aug-12	5:10 AM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Backing	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Dusk	Clear			WASHINGTON STREET / 1235 PLEASANT STREET				
3275781	WEYMOUTH	8-Sep-12	10:45 PM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Cloudy/Rain			WASHINGTON STREET / 1225 PLEASANT STREET				
3275787	WEYMOUTH	12-Sep-12	12:10 PM	Non-fatal injury	2	1	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	WASHINGTON ST	PLEASANT ST					
3275812	WEYMOUTH	19-Sep-12	8:15 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear			WASHINGTON STREET / 1225 PLEASANT STREET				
3275933	WEYMOUTH	25-Sep-12	3:47 PM	Property damage only (none injured)	2	0	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear			WASHINGTON STREET / PLEASANT STREET			STOP AND SHOP	
3302120	WEYMOUTH	7-Nov-12	10:23 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Northbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	WASHINGTON ST	PLEASANT ST					
3302128	WEYMOUTH	9-Nov-12	1:49 PM	Property damage only (none injured)	3	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:Southbound / V2:Westbound / V3:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	WASHINGTON ST Rte 53 S	PLEASANT ST					
3305573	WEYMOUTH	24-Nov-12	11:21 PM	Unknown	2	0	0	Head-on	V1: Travelling straight ahead / V2:Turning right	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear			WASHINGTON STREET / 1212 PLEASANT STREET				
3334713	WEYMOUTH	27-Dec-12	6:16 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Turning left / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain			WASHINGTON ST				

massDOT **MassDOT Crash Report for WEYMOUTH for the year 2011-2013**

Pleasant Street/Pine Street

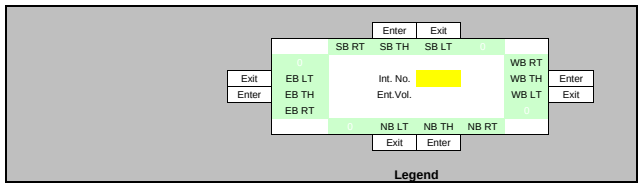
Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Travel Directions	Vehicle Action Prior to Crash	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection	Distance from Nearest Milemarker	Distance from Nearest Exit	Distance from Nearest Landmark	Non Motorist Type
2750552	WEYMOUTH	17-Jul-11	1:22 AM	Non-fatal injury	1	1	0	Single vehicle crash	V1:Southbound	V1: Travelling straight ahead	Dry	Dark - lighted roadway	Clear		MAIN STREET				
2827736	WEYMOUTH	10-Nov-11	3:01 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Northbound / V2:Northbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Wet	Daylight	Rain		50 feet S from Intersection PLEASANT STREET / PINE STREET				
2826532	WEYMOUTH	16-Nov-11	6:17 PM	Property damage only (none injured)	3	0	0	Rear-end	V1:Southbound / V2:Southbound / V3:Southbound	V1: Turning left / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	Wet	Dark - lighted roadway	Rain	PLEASANT ST / PINE ST					
2966846	WEYMOUTH	16-Feb-12	8:23 AM	Property damage only (none injured)	2	0	0	Rear-end	V1:Westbound / V2:Westbound	V1: Slowing or stopped in traffic / V2:Entering traffic lane	Dry	Daylight	Clear	PINE ST / PLEASANT ST					
3498261	WEYMOUTH	13-May-13	3:27 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Southbound / V2:Southbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Daylight	Clear	PLEASANT ST / PINE ST					
3498475	WEYMOUTH	19-Jun-13	3:17 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1:Westbound / V2:Westbound	V1: Slowing or stopped in traffic / V2:Overtaking/passing	Dry	Daylight	Clear	PINE ST / PLEASANT ST					
3651235	WEYMOUTH	2-Oct-13	2:35 PM	Property damage only (none injured)	2	0	0	Rear-end	V1:Eastbound / V2:Eastbound	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	Dry	Daylight	Clear	PLEASANT ST / PINE ST					

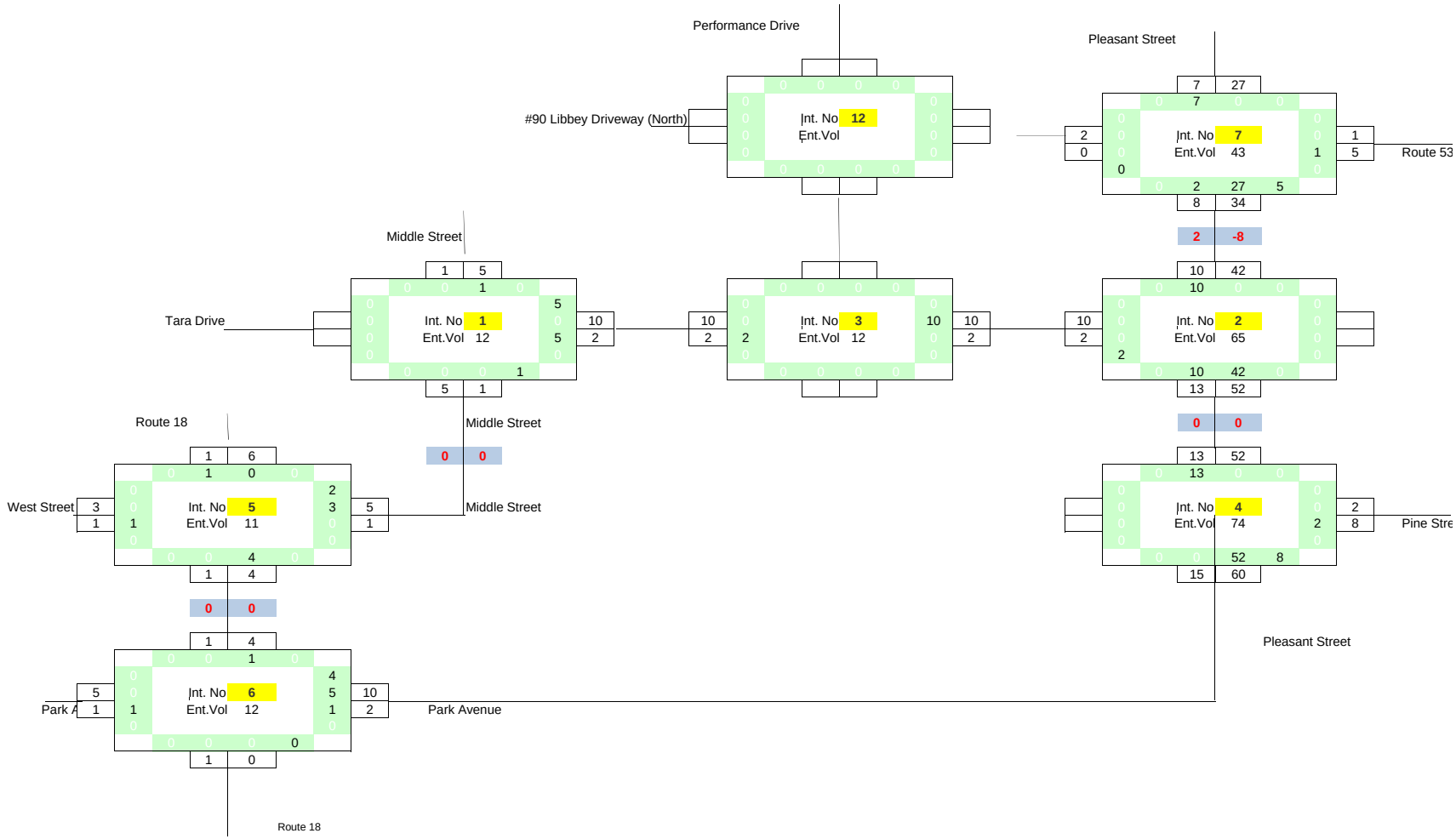
Appendix E

No-Build Volume Data

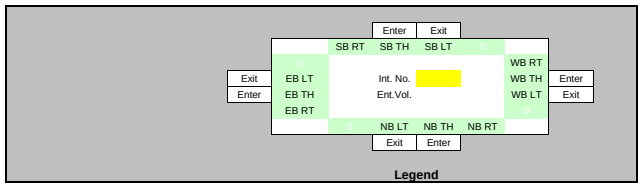
Alexan at Arbor Hills

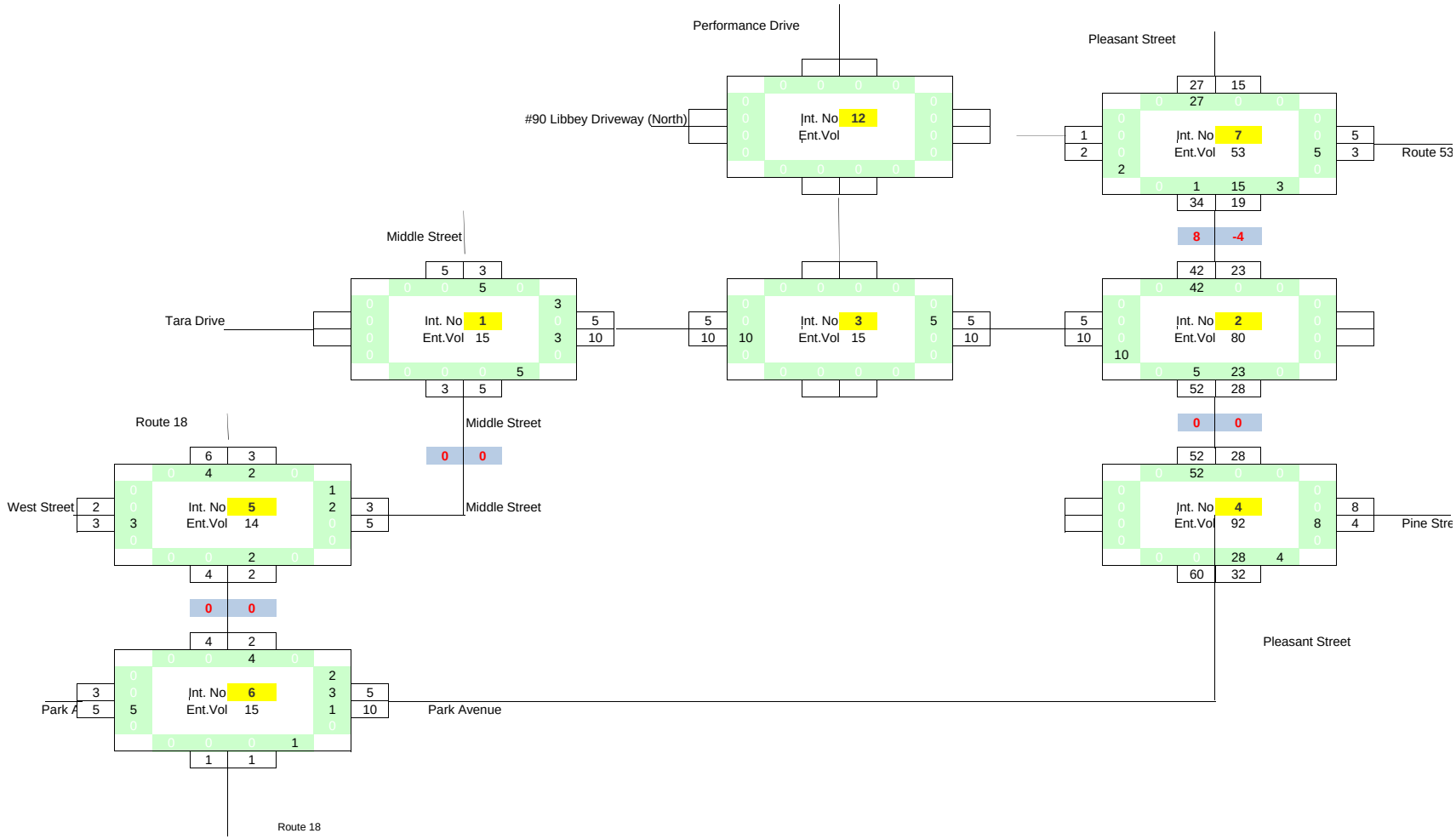
13 Alexan AM Trips



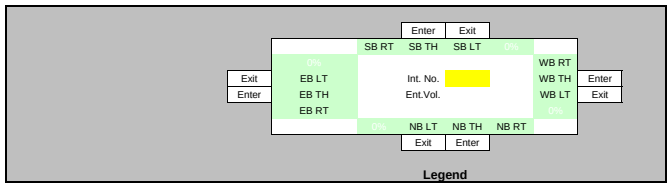


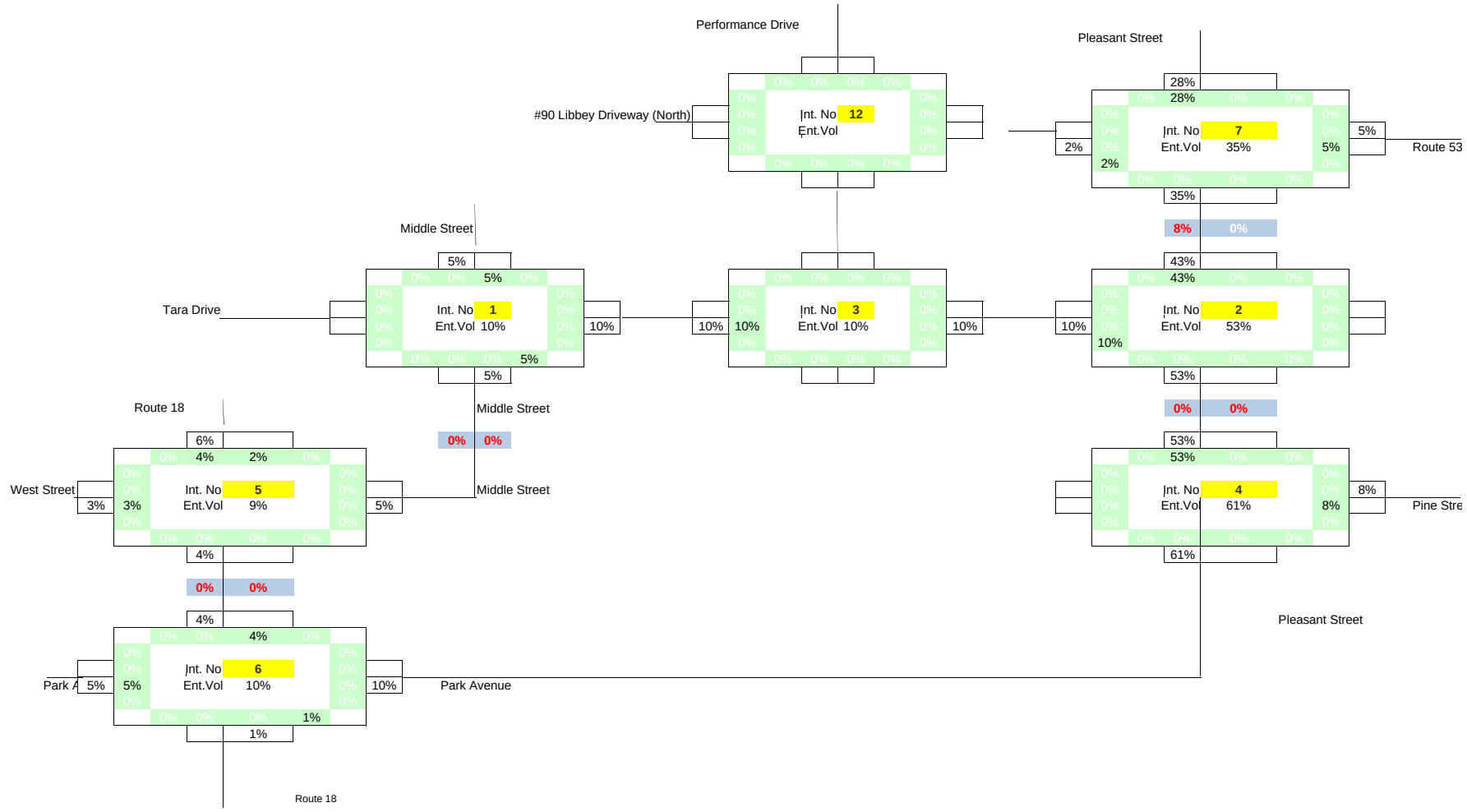
41 Alexan PM Trips



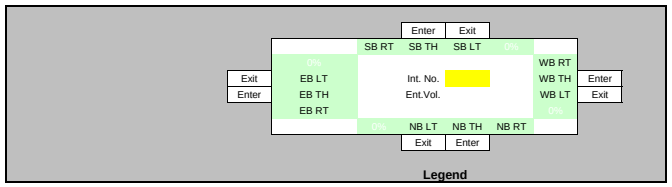


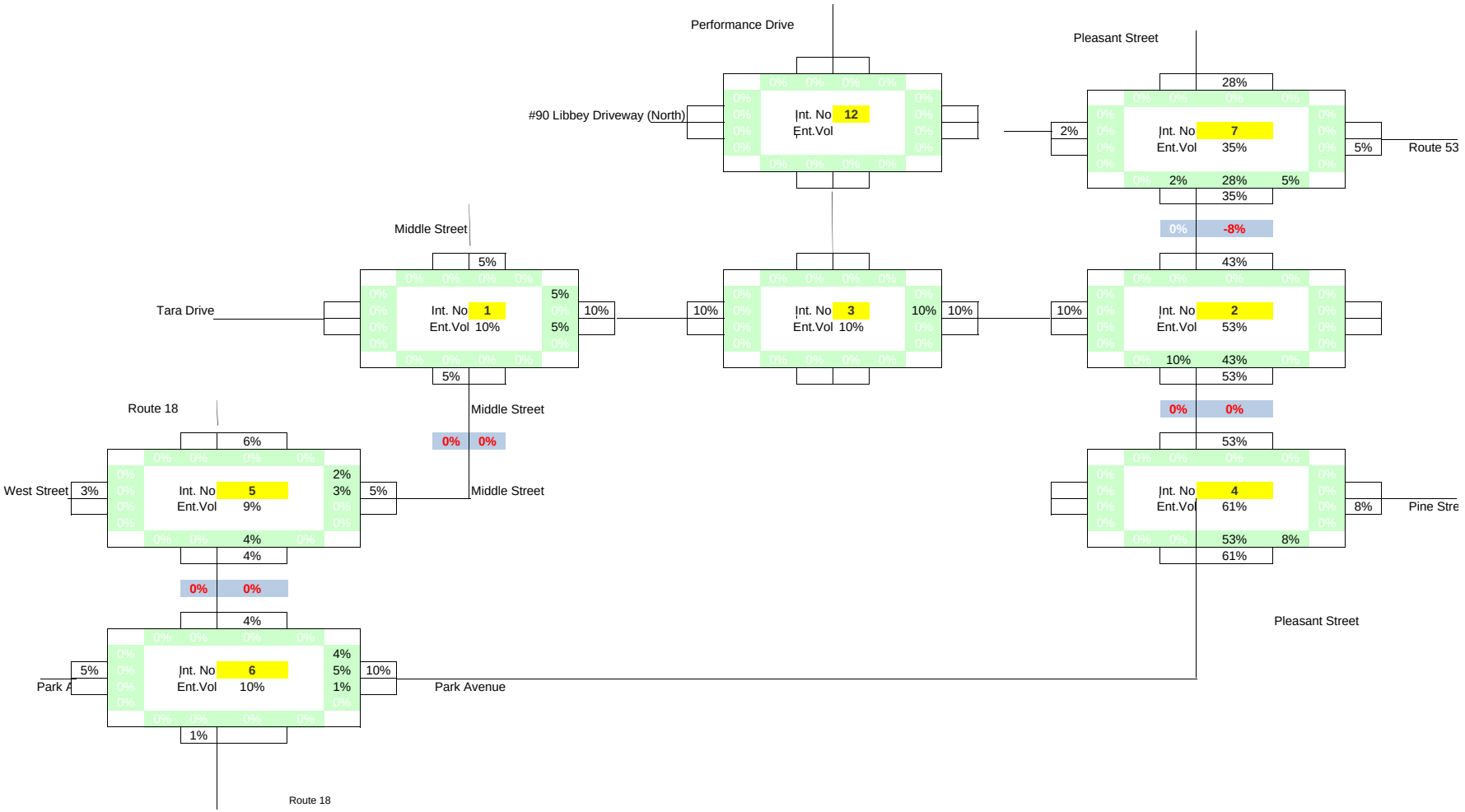
11 Alexan Entering Distribution





12 Alexan Exiting Distribution





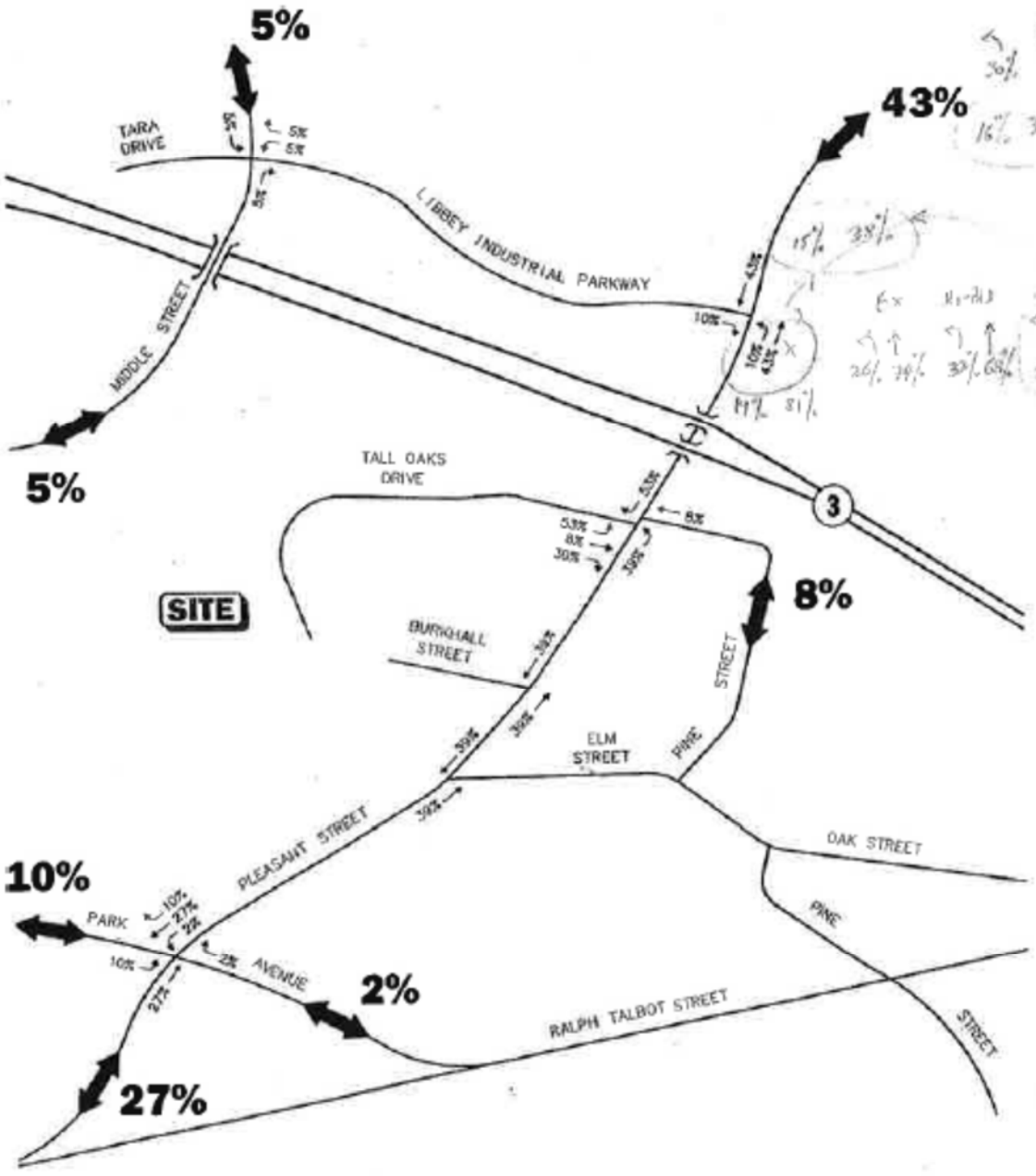
ALEXAN AT ARBOR HILL

Land Use Code 220 - Apartment						Size:	242	DWELLING UNITS		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total	Equation	Rate
Weekday Daily	0.87	Equation	T=6.06(x)+123.56	6.65	50%	795	795	1590	1590.00	1609.00
AM Street Peak Hour	0.83	Equation	T=.49(x)+3.73	0.51	20%	24	98	122	122.00	123.00
PM Street Peak Hour	0.77	Equation	T=.55(x)+17.65	0.62	65%	98	53	151	151.00	150.00
Saturday Daily	0.85	Equation	T=7.85(x)-256.19	6.39	50%	822	822	1644	1644.00	1546.00
Saturday Peak Hour of Generator	0.56	Rate	T=.41(x)+19.23	0.52	54%	68	58	126	118.00	126.00
Sunday Daily	0.82	Equation	T=6.42(x)-101.12	5.86	50%	727	726	1453	1453.00	1418.00
Sunday Peak Hour of Generator		Rate		0.51	49%	60	63	123		123.00

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.

Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

Note: Entering distribution for Saturday Peak Hour of Generator and Sunday Peak Hour of Generator are not given for LUC 220; taken from LUC 230 - Condos/Townhomes



Not To Scale

Figure 6

Trip Distribution Map

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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Alexan at Arbor Hills Trip Distribution
Weymouth, MA

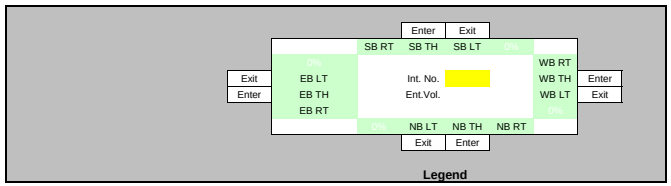
Existing Travel Patterns:

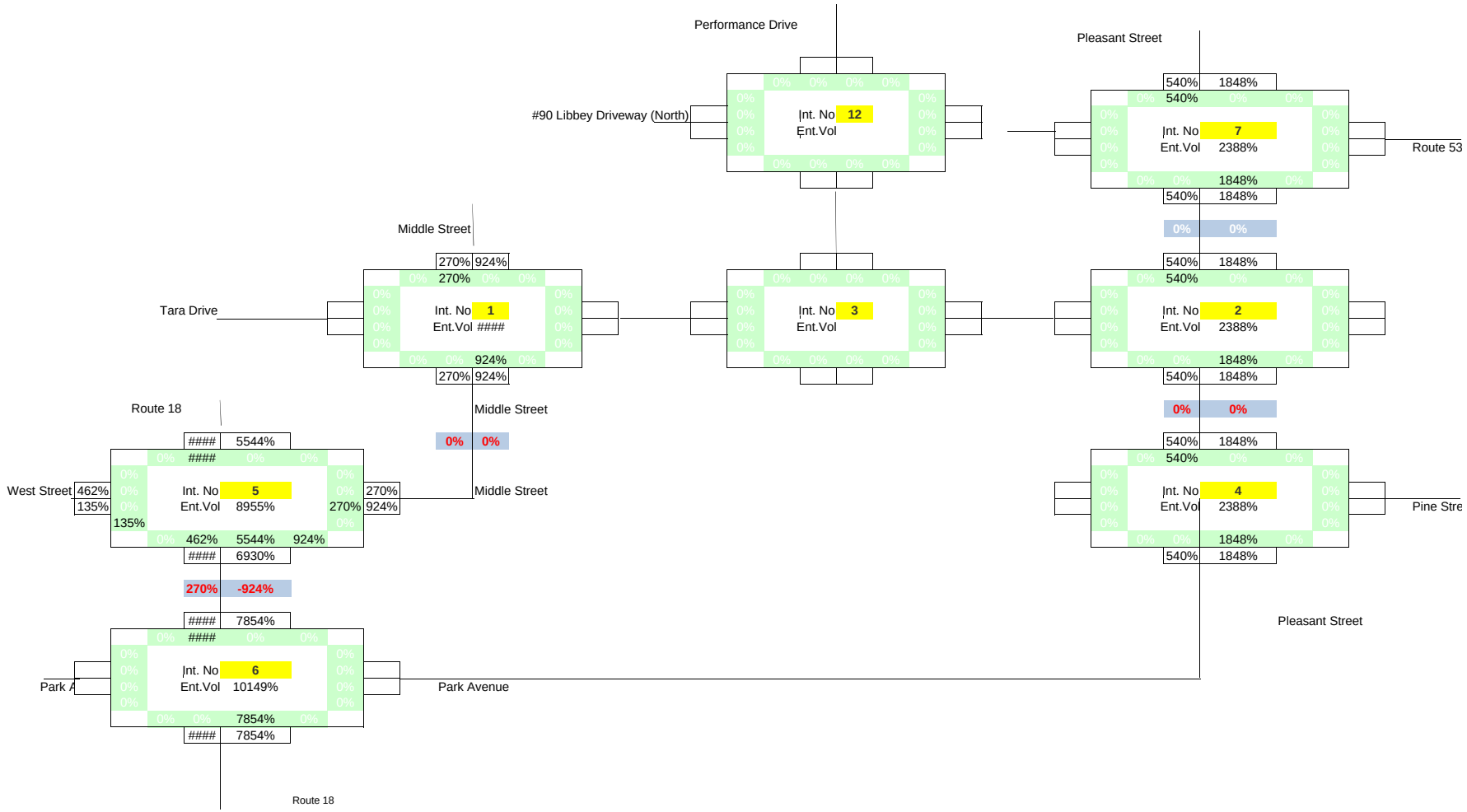
Movement	% from Traffic Study	XAM Volume (exiting)	%	XPM Volume (entering)	%	Avg
Route 18/Middle Street	**5%**	**531**	**5%**	**563**	**5%**	**5%**
Rt 18 to/from North		246	2%	250	2%	**2%**
West to/from West		285	3%	313	3%	**3%**
Route 53	**43%**	**986**	**43%**	**773**	**43%**	**43%**
Rt 53 to/from northwest via Mutton Lane		169	7%	157	9%	**8%**
Rt 53 to/from northwest via Pleasant St		55	2%	54	3%	**3%**
Pleasant St to/from north		681	30%	475	26%	**28%**
Rt 53 to/from southeast		81	4%	87	5%	**5%**
Route 18/Park Ave	**10%**	**837**	**10%**	**676**	**10%**	**10%**
Rt 18 to/from north		**348**	**4%**	**230**	**3%**	**4%**
Park Ave W to/from west		**415**	**5%**	**356**	**5%**	**5%**
Rt 18 to/from south		**74**	**1%**	**90**	**2%**	**2%**

Route 53/Mutton Lane	2014 Raw Data	2015 Existing Conditions
AM Peak Hour - NBL	160	169
PM Peak Hour - SWBR	149	157
Seasonal Adj =	1.02	
2014 to 2015 Growth Factor =	1.0355	

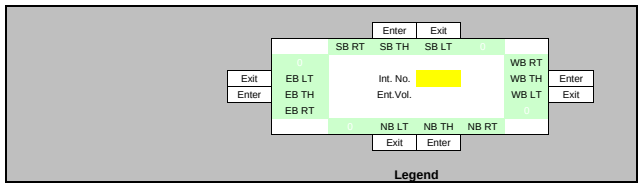
South Weymouth Naval Air Station Redevelopment

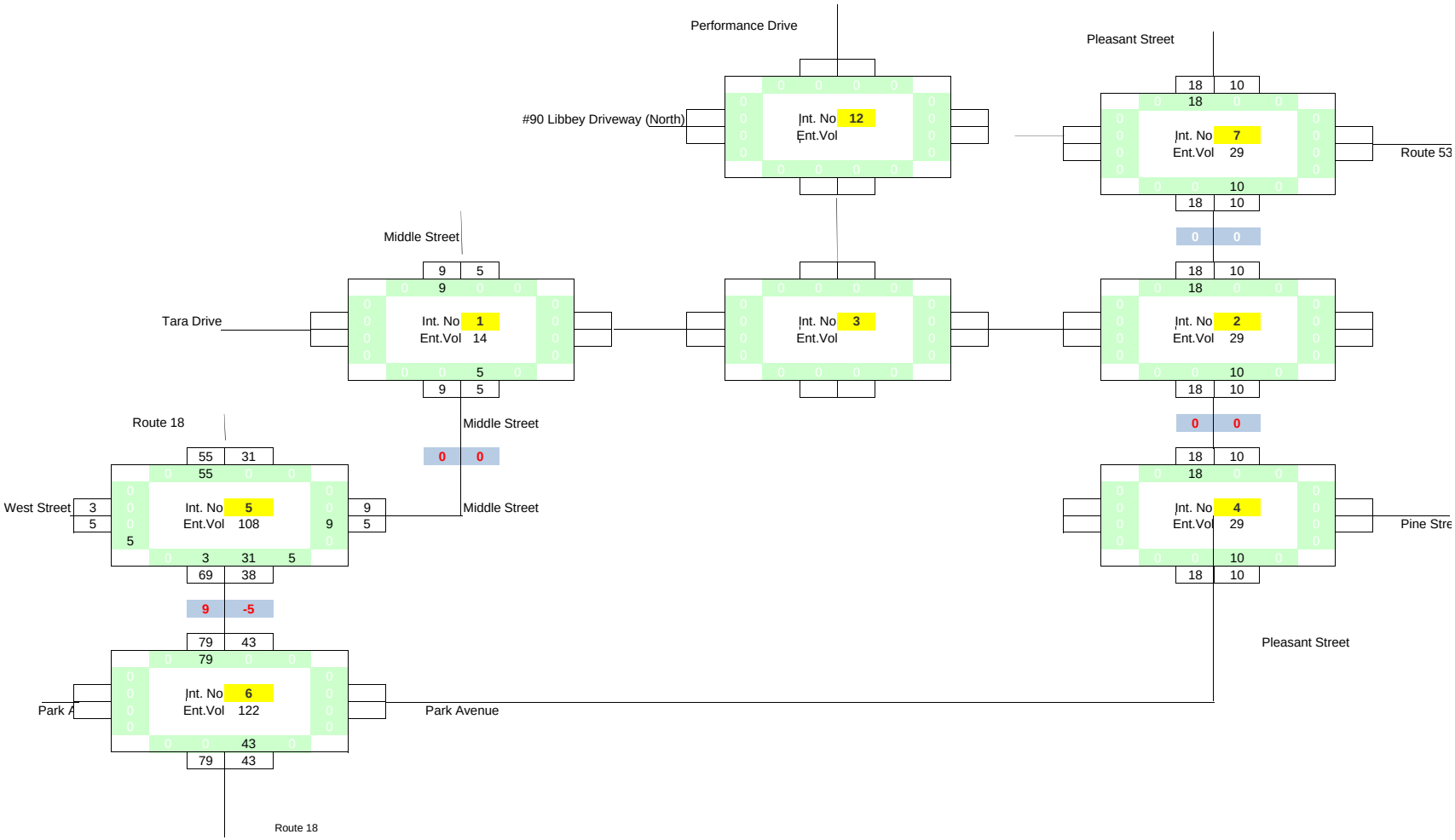
10 Southfield AM Trips



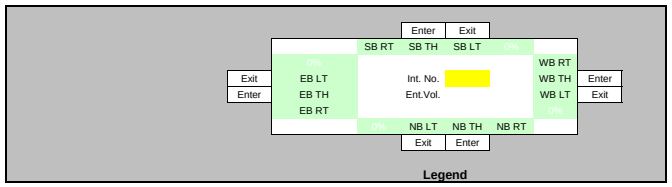


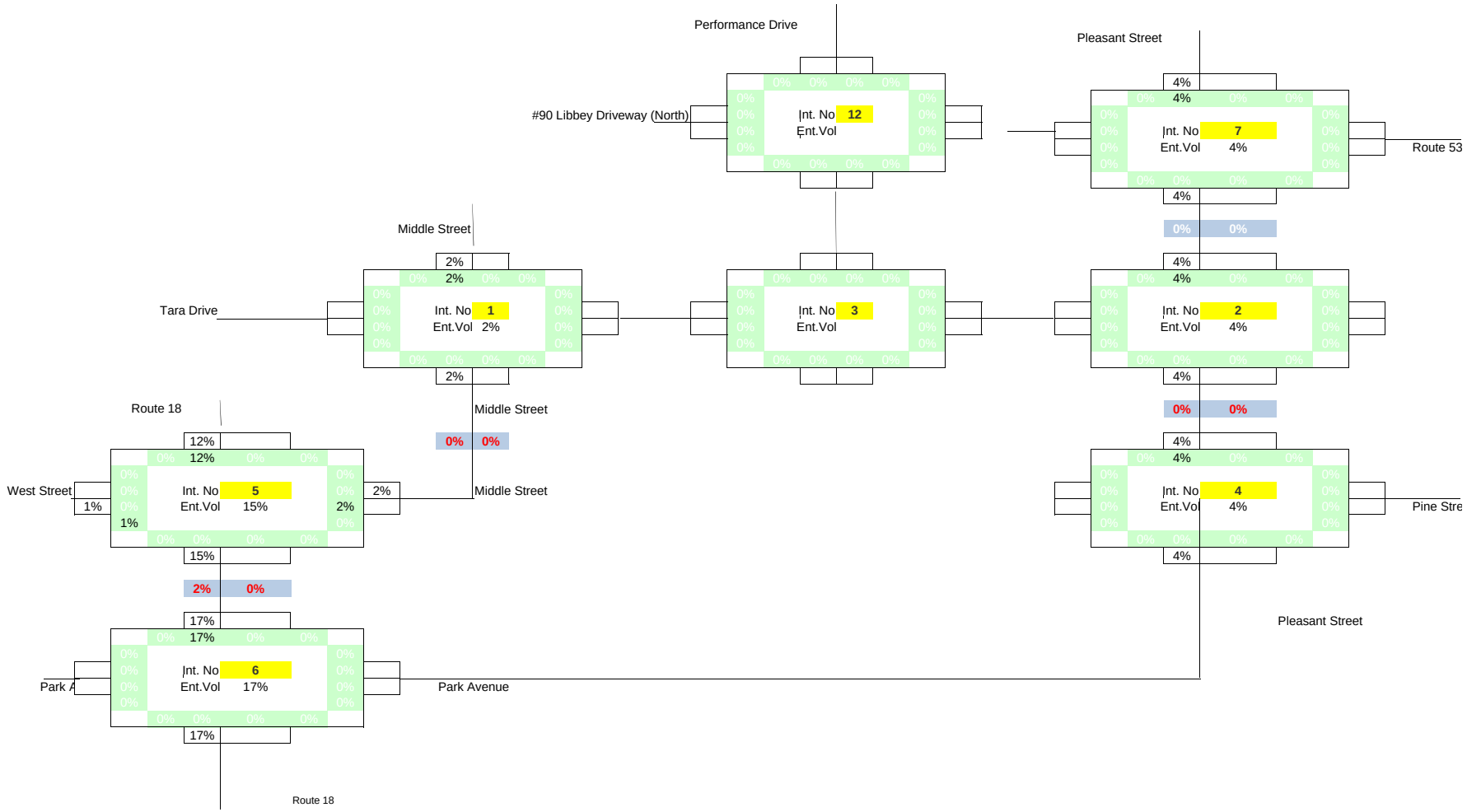
38 Southfield PM Trips



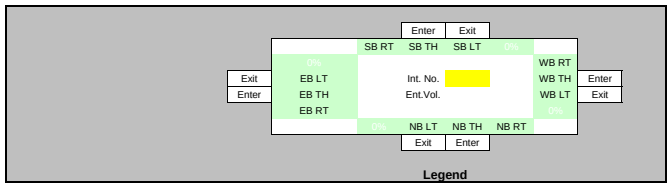


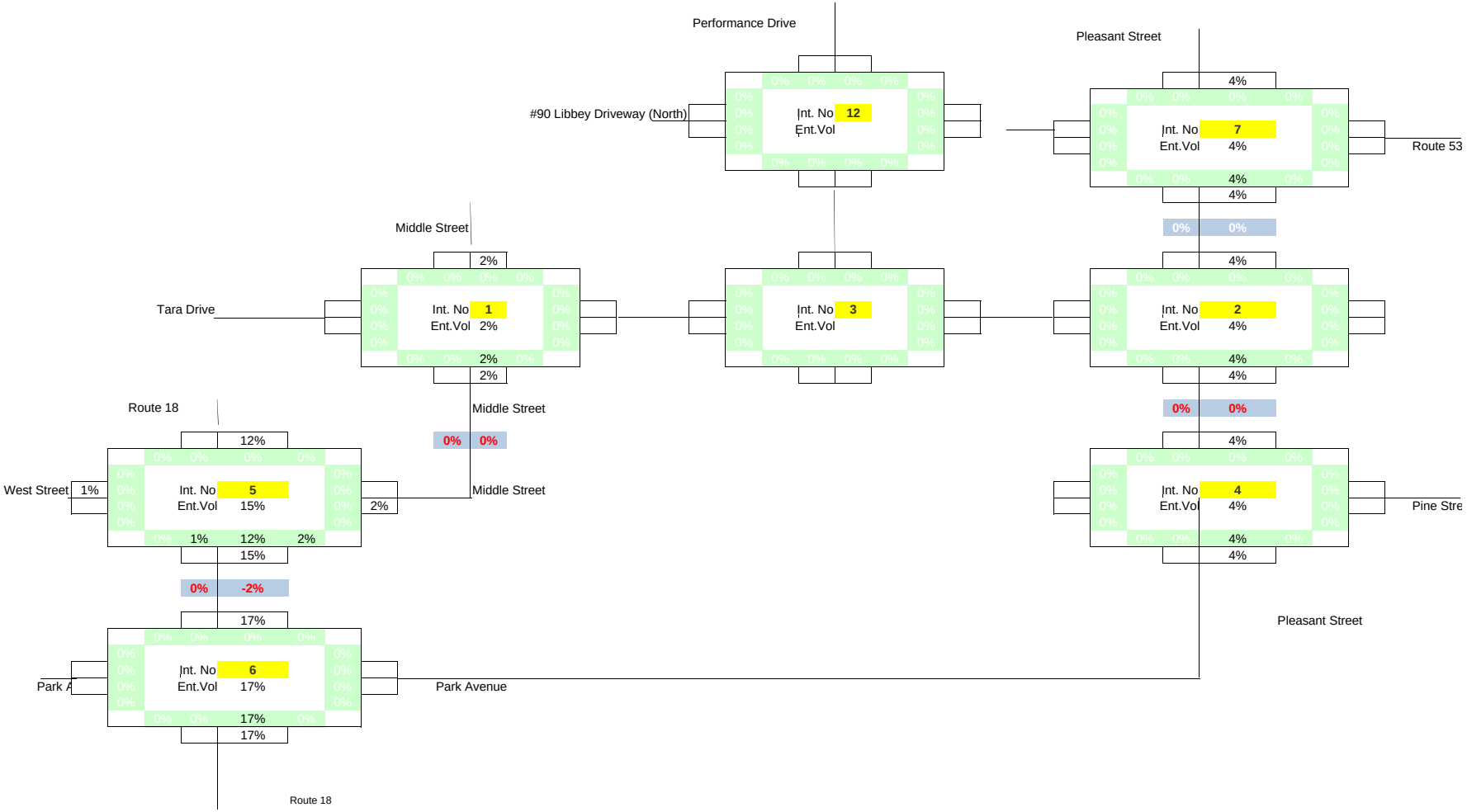
8 Southfield Entering Distribution





9 Southfield Exiting Distribution





Naval Base Redevelopment Project Trips

Traffic through the study area based on: *Naval Air Station Development Project, Final Environmental Impact Report,* prepared by Epsilon Associates, Inc., May 31, 2007.

Weekday Morning Peak Hour:	**ITE**			
	689 Apts	**600 Senior 55+**	**300 Townhomes**	**Total**
Enter	68	21	46	**135**
Exit	273	103	86	**462**
Total	341	124	132	**597**
Weekday Afternoon Peak Hour:				
Enter	258	99	105	**462**
Exit	139	49	67	**255**
Total	397	148	172	**717**

Land Use Code 220 - Apartment						**Size:**	**689**	**DWELLING UNITS**		
Time Period	**R^2 Value**	**Use Equation or Rate?**	**Equation**	**Rate**	**Percent Enter**	**In**	**Out**	**Total**	**Equation**	**Rate**
Weekday Daily	0.87	Equation	T=6.06(x)+123.56	6.65	50%	2150	2149	4299	4299.00	4582.00
AM Street Peak Hour	0.83	Equation	T=.49(x)+3.73	0.51	20%	68	273	341	341.00	351.00
PM Street Peak Hour	0.77	Equation	T=.55(x)+17.65	0.62	65%	258	139	397	397.00	427.00
Saturday Daily	0.85	Equation	T=7.85(x)-256.19	6.39	50%	2576	2576	5152	5152.00	4403.00
Saturday Peak Hour of Generator	0.56	Rate	T=.41(x)+19.23	0.52	54%	193	165	358	302.00	358.00
Sunday Daily	0.82	Equation	T=6.42(x)-101.12	5.86	50%	2161	2161	4322	4322.00	4038.00
Sunday Peak Hour of Generator		Rate		0.51	50%	176	175	351		351.00

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation*, *Ninth Edition*, (Institute of Transportation Engineers, 2012).

Land Use Code 230 - Residential Condominium/Townhouse						**Size:**	**300**	**DWELLINGS**		
Time Period	**R^2 Value**	**Use Equation or Rate?**	**Equation**	**Rate**	**Percent Enter**	**In**	**Out**	**Total**	**Equation**	**Rate**
Weekday Daily	0.80	Equation	Ln(T)=.87Ln(X)+2.46	5.81	50%	837	836	1673	1673.00	1743.00
AM Street Peak Hour	0.76	Equation	Ln(T)=.80Ln(X)+.26	0.44	17%	21	103	124	124.00	132.00
PM Street Peak Hour	0.80	Equation	Ln(T)=.82Ln(x)+0.32	0.52	67%	99	49	148	148.00	156.00
Saturday Daily	0.84	Equation	T=3.62(x)+427.93	5.67	50%	757	757	1514	1514.00	1701.00
Saturday Peak Hour	0.84	Equation	T=.29(x)+42.63	0.47	54%	70	60	130	130.00	141.00

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation*, *Ninth Edition*, (Institute of Transportation Engineers, 2012).

Land Use Code 251- Senior Adult Housing - Detached						**Size:**	**600**	**DWELLINGS**		
Time Period	**R^2 Value**	**Use Equation or Rate?**	**Equation**	**Rate**	**Percent Enter**	**In**	**Out**	**Total**	**Equation**	**Rate**
Weekday Daily	0.96	Equation	Ln(T)=.89Ln(x)+2.06	3.68	50%	1165	1164	2329	2329.00	2208.00
AM Street Peak Hour	0.93	Equation	T=0.17(x)+29.95	0.22	35%	46	86	132	132.00	132.00
PM Street Peak Hour	0.89	Equation	Ln(T)=.75Ln(x)+0.35	0.27	61%	105	67	172	172.00	162.00
Saturday Daily		Rate		2.73	50%	819	819	1638		1638.00
Saturday Peak Hour		Rate		0.23	48%	66	72	138		138.00

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation*, *Ninth Edition*, (Institute of Transportation Engineers, 2012).

Southfield Naval Air Station Redevelopment
Weymouth, MA

TRIP DISTRIBUTION

Based on the Phase I trip assignment distribution patterns from the FEIR prepared for the development (exiting in the AM peak hour and entering in the PM peak hour since Phase I is primarily residential)

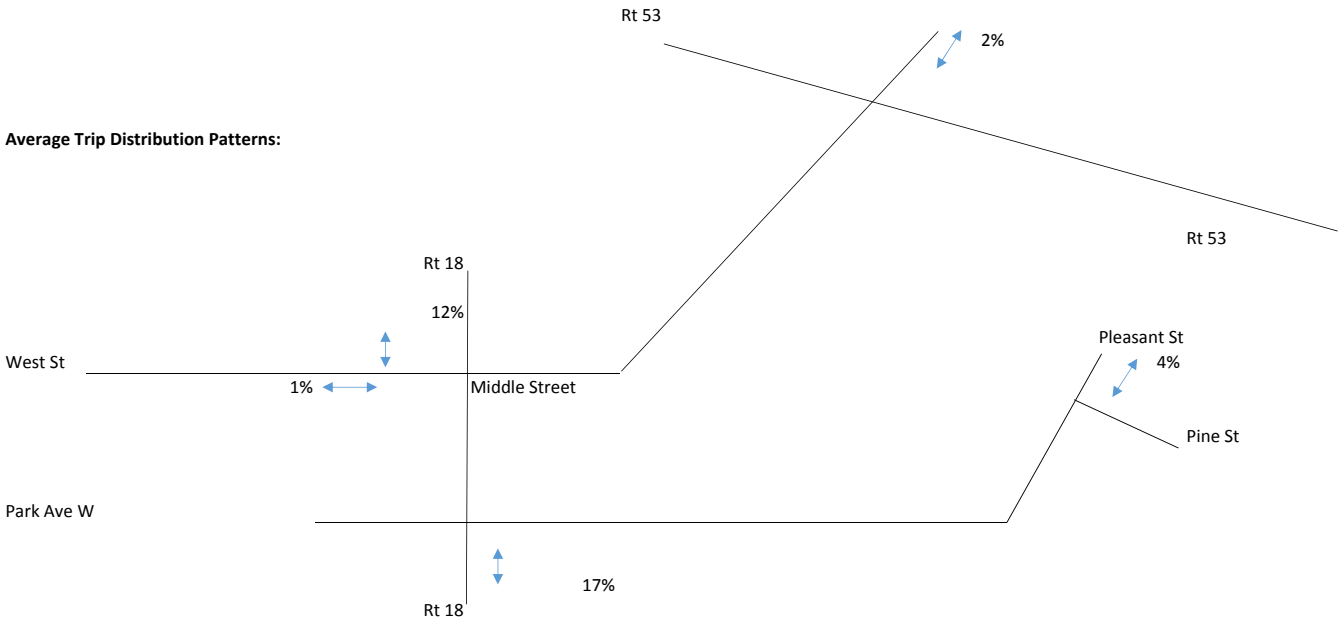
Trip Generation - Phase I (Phase IA and Phase IB)

	AM Peak Hour	PM Peak Hour
Enter	495	714
Exit	419	783
Total	914	1497

	Phase I Trip Assignment				
	AM Peak Hour		PM Peak Hour		
Intersection/Approach	**Volume**	**% Distribution**	**Volume**	**% Distribution**	**Average**
Rt 18/Middle Street					
Rt 18 - to/from north	51	12%	90	13%	**12%**
West St - to/from west	5	1%	9	1%	**1%**
Middle St - to/from east	12	3%	15	2%	**2%**
Rt 18/Park Ave					
Rt 18 - to/from north	72	17%	120	17%	**17%**
Park Ave W - to/from west	0	0%	0	0%	**0%**
Park Ave - to/from east	0	0%	0	0%	**0%**
Rt 53/Middle St					
Middle St - to/from south	10	2%	8	1%	**2%**
Rt 53 - to/from west	0	0%	3	0%	**0%**
Rt 53 - to/from east	0	0%	0	0%	**0%**
Pleasant/Pine					
Pleasant St - to/from north	15	4%	27	4%	**4%**
Pine St - to/from east	0	0%	0	0%	**0%**

Source: *Naval Air Station Development Project, Final Environmental Impact Report,* prepared by Epsilon Associates, Inc., May 31, 2007.

Average Trip Distribution Patterns:

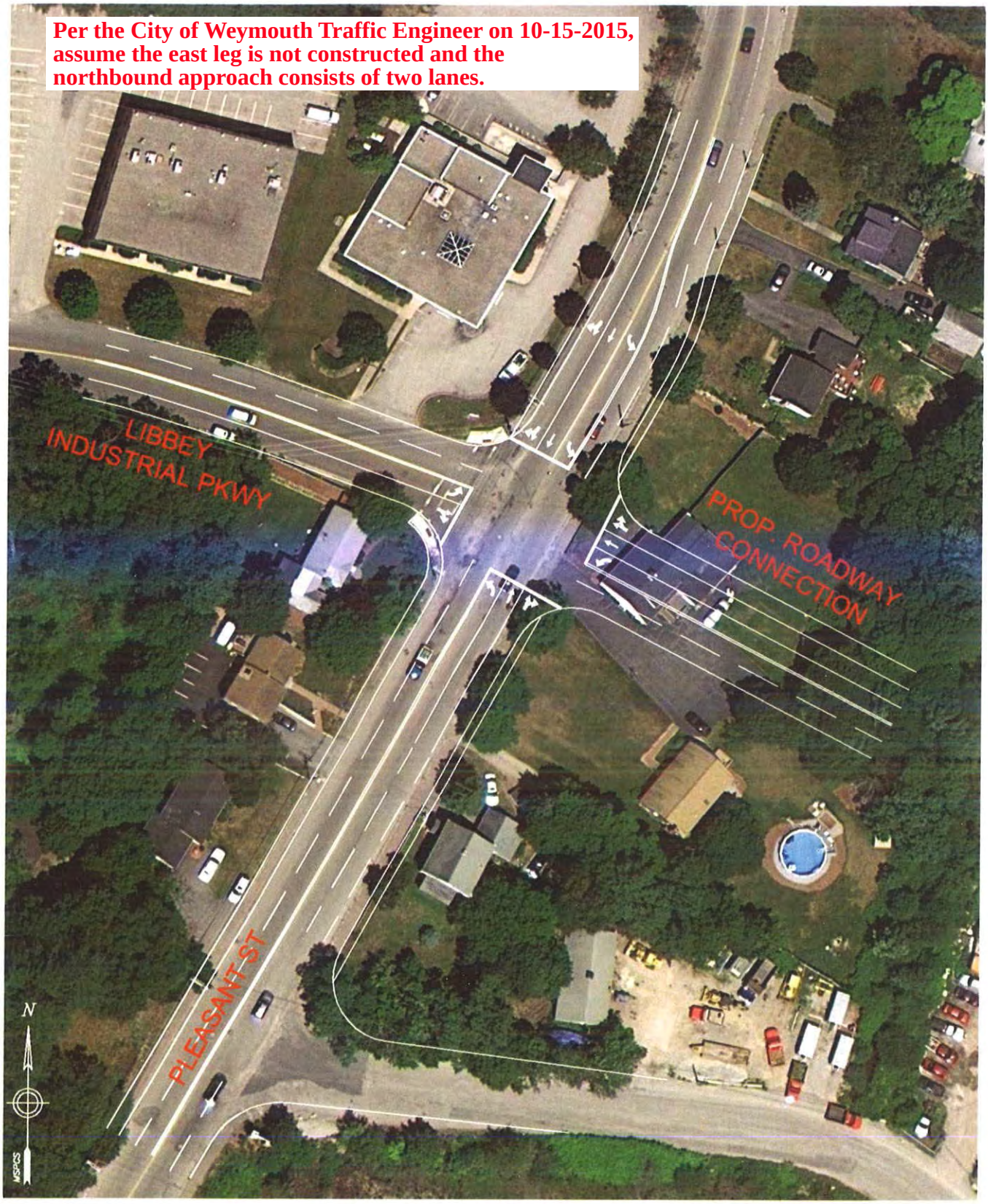


Appendix F

Roadway Improvement Plans

Pleasant Street/Libbey Industrial Parkway

Per the City of Weymouth Traffic Engineer on 10-15-2015, assume the east leg is not constructed and the northbound approach consists of two lanes.



COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS
781-982-5400
Fax: 781-982-5490
101 Accord Park Drive
Norwell, MA 02061-1685

TITLE:
LIBBEY INDUSTRIAL PKWY WITH PLEASANT ST INTERSECTION IMPROVEMENT EXHIBIT

BRISTOL BROTHERS DEVELOPMENT

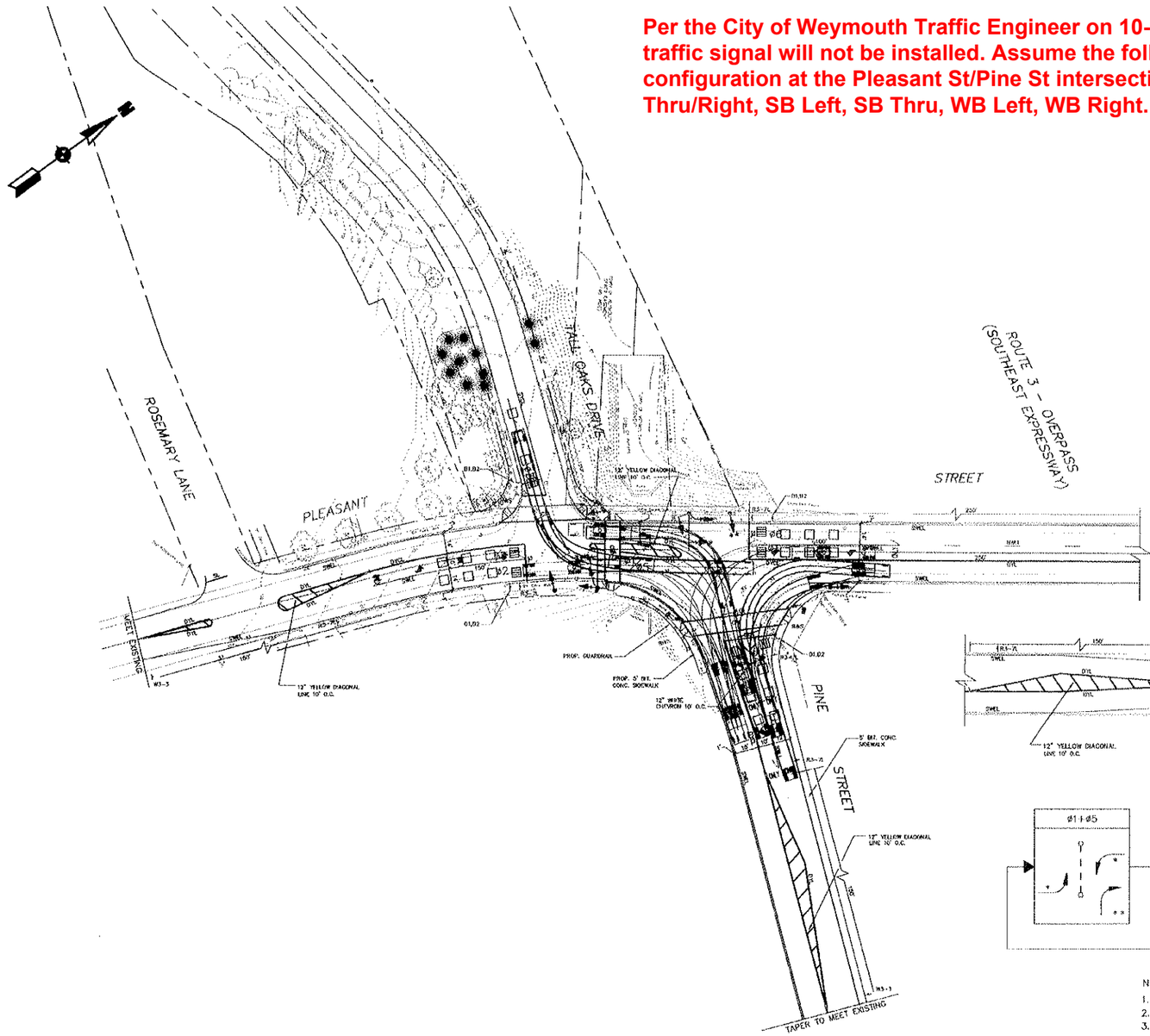
DATE: 08 10 2012	I-2
DRAWN: SZA	
CHECK: GC	
SCALE: 1"=80'	
JOB NO.: 25-214	

40 20 0 40 80

G:\Civil\25-214 Derby St Hingham\Major overlay plan\, CP-6 CONCEPT PLAN SUBDIVISION 8.06.12.dwg, INTERSECTION EXHIBIT, Aug 13, 2012 13:02

Pleasant Street/Pine Street

Per the City of Weymouth Traffic Engineer on 10-15-2015, a traffic signal will not be installed. Assume the following lane configuration at the Pleasant St/Pine St intersection: NB Thru/Right, SB Left, SB Thru, WB Left, WB Right.



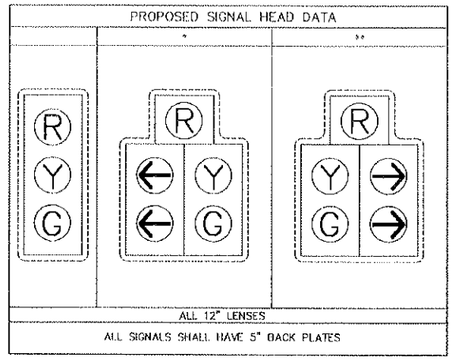
SIGN LEGEND

R3-1		R3-2	BICYCLE STOP ON LINE FOR GREEN
R3-7L	LEFT LANE MUST TURN LEFT	W3-3	

STRIPING LEGEND

DYCL	DOUBLE YELLOW CENTER LINE
DYL	DOUBLE YELLOW LINE
SWEL	SOLID WHITE EDGE LINE
SYEL	SOLID YELLOW EDGE LINE
SWLL	SOLID WHITE LANE LINE
SL	STOP LINE
CW	CROSS WALK

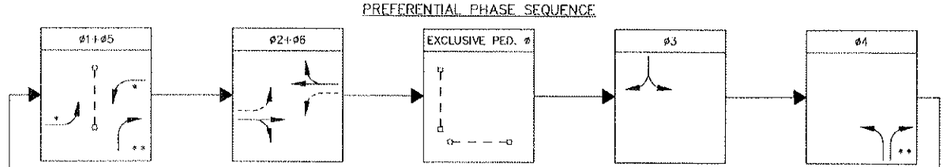
PROPOSED SIGNAL HEAD DATA



ALL 12" LENSES

ALL SIGNALS SHALL HAVE 5" BACK PLATES

PREFERENTIAL PHASE SEQUENCE



NOTES:

1. IF VEHICLE ø1+ø5 ARE CALLED, PLEASANT STREET PEDESTRIAN CROSSING WILL OCCUR AND BE TIMED.
2. IF EITHER ø1 OR ø5 IS NOT CALLED, PLEASANT STREET PEDESTRIAN CROSSING WILL OCCUR AS AN EXCLUSIVE PED. ø.
3. PHASES 3 AND 4 CAN BE REVERSED (i.e. ø4 PRECEDES ø3).

NOTES:

1. THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION.
2. BASE PLAN INFORMATION OBTAINED FROM GALE ASSOCIATES, INC.

GALE

Gale Associates, Inc.
Engineers Architects Planners

163 Libby Parkway | Weymouth, MA 02189-0004
P 781.335.6465 F 781.335.6467 www.galeic.com

Boston Baltimore Orlando San Francisco

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PROJECT: ALEXAN BURKHALL STREET WEYMOUTH, MA 02189

OWNER: TRAMMEL CROW RESIDENTIAL COMMUNITY FAIRFIELD, CT 06430

REVISIONS

NO.	DATE	DESCRIPTION
1	8-29-00	INCREASED THROUGH TRAVEL WIDTHS ON PLEASANT STREET TO ACCOMODATE BICYCLES, ADDED BICYCLE DETENTION TO TRAFFIC SIGNAL.
2	5-25-01	GENERAL REVISIONS

CADD FILE	C-29
DESIGNED BY	DKH
DRAWN BY	WAH
CHECKED BY	WJS
DATE	1/17/03
DRAWING SCALE	1"=40'

GRAPHIC SCALE

0 20' 40' 80'

SHEET TITLE

CONCEPTUAL IMPROVEMENT PLAN PLEASANT STREET AT TALL OAKS DRIVE AND PINE STREET

DRAWING NO.

C-29

PROJECT NO. 705792

Appendix G

Project Traffic

Trip Generation

90 Libbey Industrial Parkway

Proposed

Land Use Code 720 - Medical Office Building						Size: 107.9 KSF		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.90	Equation	T=40.89(x)-214.97	36.13	50%	2099	2098	4197
AM Street Peak Hour		Rate		2.39	79%	204	54	258
PM Street Peak Hour	0.77	Equation	ln(T)=0.90*ln(x)+1.53	3.57	28%	87	225	312
Saturday Daily		Rate		8.96	50%	484	483	967
Saturday Peak Hour		Rate		3.63	57%	223	169	392

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

Existing

Land Use Code 720 - Medical Office Building						Size: 81.9 KSF		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.90	Equation	T=40.89(x)-214.97	36.13	50%	1567	1567	3134
AM Street Peak Hour		Rate		2.39	79%	155	41	196
PM Street Peak Hour	0.77	Equation	ln(T)=0.90*ln(x)+1.53	3.57	28%	68	175	243
Saturday Daily		Rate		8.96	50%	367	367	734
Saturday Peak Hour		Rate		3.63	57%	169	128	297

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

7 Performance Drive

Proposed

Land Use Code 720 - Medical Office Building						Size: 80 KSF		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.90	Equation	T=40.89(x)-214.97	36.13	50%	1528	1528	3056
AM Street Peak Hour		Rate		2.39	79%	151	40	191
PM Street Peak Hour	0.77	Equation	ln(T)=0.90*ln(x)+1.53	3.57	28%	67	171	238
Saturday Daily		Rate		8.96	50%	359	358	717
Saturday Peak Hour		Rate		3.63	57%	165	125	290

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

200 Libbey Industrial Parkway

Proposed

Land Use Code 720 - Medical Office Building						Size: 120 KSF		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.90	Equation	T=40.89(x)-214.97	36.13	50%	2346	2346	4692
AM Street Peak Hour		Rate		2.39	79%	227	60	287
PM Street Peak Hour	0.77	Equation	ln(T)=0.90*ln(x)+1.53	3.57	28%	96	247	343
Saturday Daily		Rate		8.96	50%	538	537	1075
Saturday Peak Hour		Rate		3.63	57%	249	187	436

Note: If R^2 is greater than or equal to 0.75 the equation is used to calculate trips, otherwise the rate is used.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

Existing

Land Use Code 110 - General Light Industry						Size: 8 Employees		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.98	Equation	T = 2.95(x)+30.57	3.02	50%	12	12	24
AM Street Peak Hour	0.76	Equation	T = 0.27(x)+70.47	0.44	83%	3	1	4
PM Street Peak Hour	0.85	Equation	T=0.29*(x)+58.03	0.42	21%	1	2	3
Saturday Daily	0.90	Equation	T=0.38*(x)+98.6	0.48	50%	2	2	4
Saturday Peak Hour of Generator	0.62	Rate	T=0.02*(x)+39.29	0.05	47%	0	0	0

Note: Rate used due to small building size.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

Existing

Land Use Code 710 - General Office Building						Size: 4 KSF		
Time Period	R^2 Value	Use Equation or Rate?	Equation	Rate	Percent Enter	In	Out	Total
Weekday Daily	0.88	Rate	Ln(T) = 0.84*Ln(x)+2.23	3.32	50%	7	6	13
AM Street Peak Hour	0.83	Rate	Ln(T) = 0.86*Ln(x)+0.24	0.48	88%	2	0	2
PM Street Peak Hour	0.82	Rate	T=0.37(X)+60.08	0.46	17%	0	2	2
Saturday Daily	0.64	Rate	T=0.46*(x)+27.20	0.54	50%	1	1	2
Saturday Peak Hour of Generator		Rate	Ln(T) = 0.99 Ln(x)-2.37	0.09	54%	0	0	0

Note: Rate used due to small building size.
Source: *Trip Generation* , *Ninth Edition* , (Institute of Transportation Engineers, 2012).

Trip Distribution

LIBBEY INDUSTRIAL PARKWAY - WEYMOUTH, MA
MEDICAL OFFICE GRAVITY MODEL FOR TRIP DISTRIBUTION

Job. No. 143-42892-15007

								Northern Communities		Southern Communities					Eastern Communities			Western Communities				Weymouth								
City/Town	COUNTY	STATE	Total Population	Area Adjustment Factor	Competing Factor	Total Adjusted Population	Portion	Route 3 (From North)	Route 53 (From North)	Route 3 (From South)	Route 53 (From South)	Route 18 (From South)	Park Street (From West)	Pine Street (From South)	Route 53 (From South)	Middle Street (From North)	Pleasant Street (From North)	Route 3 (From North)	Route 53 (From North)	West Street (From West)	Route 18 (From West)	Route 18 (From South)	West Street (From West)	Pine Street (From South)	Park Ave (From West)	Union Street (From South)	Route 53 (From North)	Middle Street (From North)	Pleasant Street (From North)	TOTAL
Weymouth	Norfolk	MA	54,366	0.90	1.00	48,929	10.36%															15%	5%	5%		15%	15%	30%	15%	100%
Quincy	Norfolk	MA	92,595	1.00	0.70	64,817	13.72%	75%	25%																					100%
Milton	Norfolk	MA	27,094	1.00	0.70	18,966	4.02%	100%																						100%
Boston[1]	Suffolk	MA	629,182																											
Dorchester	Suffolk	MA	113,253	0.70	0.50	39,638	8.39%	100%																						100%
Hyde Park	Suffolk	MA	31,459	0.40	0.50	6,292	1.33%	100%																						100%
Mattapan	Suffolk	MA	25,167	0.90	0.50	11,325	2.40%	100%																						100%
Roxbury	Suffolk	MA	50,335	0.06	0.50	1,510	0.32%	100%																						100%
Abington	Plymouth	MA	16,009	1.00	0.70	11,206	2.37%					100%																		100%
Brockton	Plymouth	MA	93,911	0.90	0.70	59,164	12.53%					60%	40%																	100%
East Bridgewater	Plymouth	MA	13,894	0.20	0.70	1,945	0.41%					100%																		100%
Whitman	Plymouth	MA	14,567	1.00	0.70	10,197	2.16%					100%																		100%
Rockland	Plymouth	MA	17,546	1.00	1.00	17,546	3.71%			25%		25%		50%																100%
Pembroke	Plymouth	MA	17,916	0.05	1.00	896	0.19%			100%																				100%
Hanson	Plymouth	MA	10,250	0.50	1.00	5,125	1.09%							100%																100%
Hanover	Plymouth	MA	14,027	1.00	1.00	14,027	2.97%			80%				20%																100%
Norwell	Plymouth	MA	10,560	1.00	1.00	10,560	2.24%			50%	50%																			100%
Marshfield	Plymouth	MA	25,307	0.05	1.00	1,265	0.27%			100%																				100%
Hingham	Plymouth	MA	22,330	1.00	1.00	22,330	4.73%								40%		60%													100%
Cohasset	Norfolk	MA	7,935	1.00	1.00	7,935	1.68%								50%		50%													100%
Scituate	Plymouth	MA	18,181	0.75	1.00	13,636	2.89%								60%		40%													100%
Hull	Plymouth	MA	10,319	1.00	1.00	10,319	2.18%								50%		50%													100%
Avon	Norfolk	MA	4,400	1.00	0.70	3,080	0.65%													50%	50%									100%
Holbrook	Norfolk	MA	10,857	1.00	0.90	9,771	2.07%													50%	50%									100%
Randolph	Norfolk	MA	32,762	1.00	0.70	22,933	4.86%											10%		70%	20%									100%
Braintree	Norfolk	MA	36,051	1.00	0.90	32,446	6.87%											40%	30%	30%										100%
Canton	Norfolk	MA	21,781	0.85	0.70	12,960	2.74%											100%												100%
Stoughton	Norfolk	MA	27,522	0.70	0.70	13,486	2.86%											100%												100%
TOTAL			**820,394**			**472,305**	**100%**	**26.8%**	**3.4%**	**4.9%**	**1.1%**	**13.4%**	**5.0%**	**3.5%**	**5.6%**		**5.9%**	**8.8%**	**2.1%**	**6.8%**	**2.3%**	**1.6%**	**0.5%**	**0.5%**		**1.6%**	**1.6%**	**3.1%**	**1.6%**	**100%**
									30.2%					**27.9%**			**11.5%**				**20.0%**								**10.4%**	**100%**

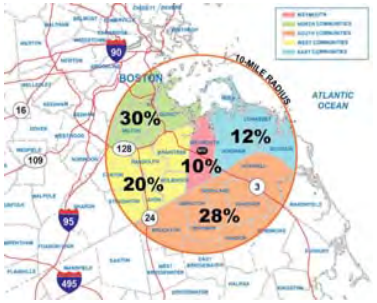
Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

[1]The 2013 populations for Dorchester, Hyde Park, Mattapan and Roxbury were estimated by applying their individual proportions relative to the entire Boston population for 2010 (obtained from *Neighborhood Profiles, City of Boston, 2010 Census and the 2007-2011 American Community Survey*, Boston Redevelopment Authority, December 2014) to the 2009-2013 ACS population for Boston.

Summary (Regional Distribution)

City/Town	COUNTY	STATE	Route 3 (From North)	Route 3 (From South)	Route 53 (From North)	Route 53 (From South)	Route 18 (From South)	Middle Street (From North)	West Street (From West)	Pleasant Street (From North)	Pine Street (From South)	Park Ave (From West)	Union Street (From South)	TOTAL
Weymouth	Norfolk	MA			15%		15%	30%	5%	15%	5%		15%	100%
Quincy	Norfolk	MA	75%		25%									100%
Milton	Norfolk	MA	100%											100%
Boston[1]	Suffolk	MA												
Dorchester	Suffolk	MA	100%											100%
Hyde Park	Suffolk	MA	100%											100%
Mattapan	Suffolk	MA	100%											100%
Roxbury	Suffolk	MA	100%											100%
Abington	Plymouth	MA					100%							100%
Brockton	Plymouth	MA					60%					40%		100%
East Bridgewater	Plymouth	MA					100%							100%
Whitman	Plymouth	MA					100%							100%
Rockland	Plymouth	MA		25%			25%				50%			100%
Pembroke	Plymouth	MA		100%										100%
Hanson	Plymouth	MA									100%			100%
Hanover	Plymouth	MA		80%							20%			100%
Norwell	Plymouth	MA		50%		50%								100%
Marshfield	Plymouth	MA		100%										100%
Hingham	Plymouth	MA				40%				60%				100%
Cohasset	Norfolk	MA				50%				50%				100%
Scituate	Plymouth	MA				60%				40%				100%
Hull	Plymouth	MA				50%				50%				100%
Avon	Norfolk	MA					50%		50%					100%
Holbrook	Norfolk	MA					50%		50%					100%
Randolph	Norfolk	MA	10%				20%		70%					100%
Braintree	Norfolk	MA	40%		30%				30%					100%
Canton	Norfolk	MA	100%											100%
Stoughton	Norfolk	MA	100%											100%
		TOTAL	35.6%	4.9%	7.0%	6.7%	17.3%	3.1%	7.3%	7.5%	4.1%	5.0%	1.6%	100%
		SAY	**36%**	**5%**	**7%**	**7%**	**17%**	**3%**	**7%**	**8%**	**4%**	**5%**	**1%**	**100%**

Regional Origin/Destination	Regional Assignment	Local Route Assignment					Local Trip Distribution					
		Middle Street (From North)	Middle Street (From South)	Pleasant Street (From North)	Pleasant Street (From South)	Pine Street (From South)	Total	Middle Street (From North)	Middle Street (From South)	Pleasant Street (From North)	Pleasant Street (From South)	Pine Street (From South)	Total
Route 3 (From North)	35.6%		100%				100%		36%				**36%**
Route 3 (From South)	4.9%		20%			80%	100%		1%			4%	**5%**
Route 53 (From North)	7.0%	75%	25%				100%	5%	2%				**7%**
Route 53 (From South)	6.7%			75%		25%	100%			5%		2%	**7%**
Route 18 (From South)	17.3%		60%		40%		100%		10%		7%		**17%**
Middle Street (From North)	3.1%	100%					100%	3%					**3%**
West Street (From West)	7.3%		100%				100%		7%				**7%**
Pleasant Street (From North)	7.5%			100%			100%			7%			**7%**
Pine Street (From South)	4.1%					100%	100%					4%	**4%**
Park Avenue (From West)	5.0%		75%		25%		100%		4%		1%		**5%**
Union Street (From South)	1.6%		25%		75%		100%		0%		1%		**2%**
Total	**100.0%**							**8.4%**	**60.2%**	**12.5%**	**9.3%**	**9.6%**	**100%**
							SAY	**8%**	**60%**	**13%**	**9%**	**10%**	**100%**

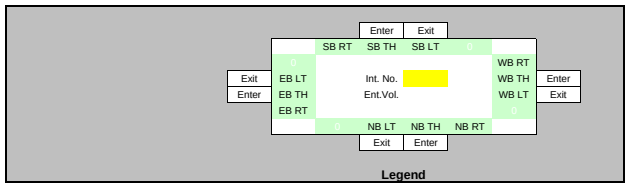


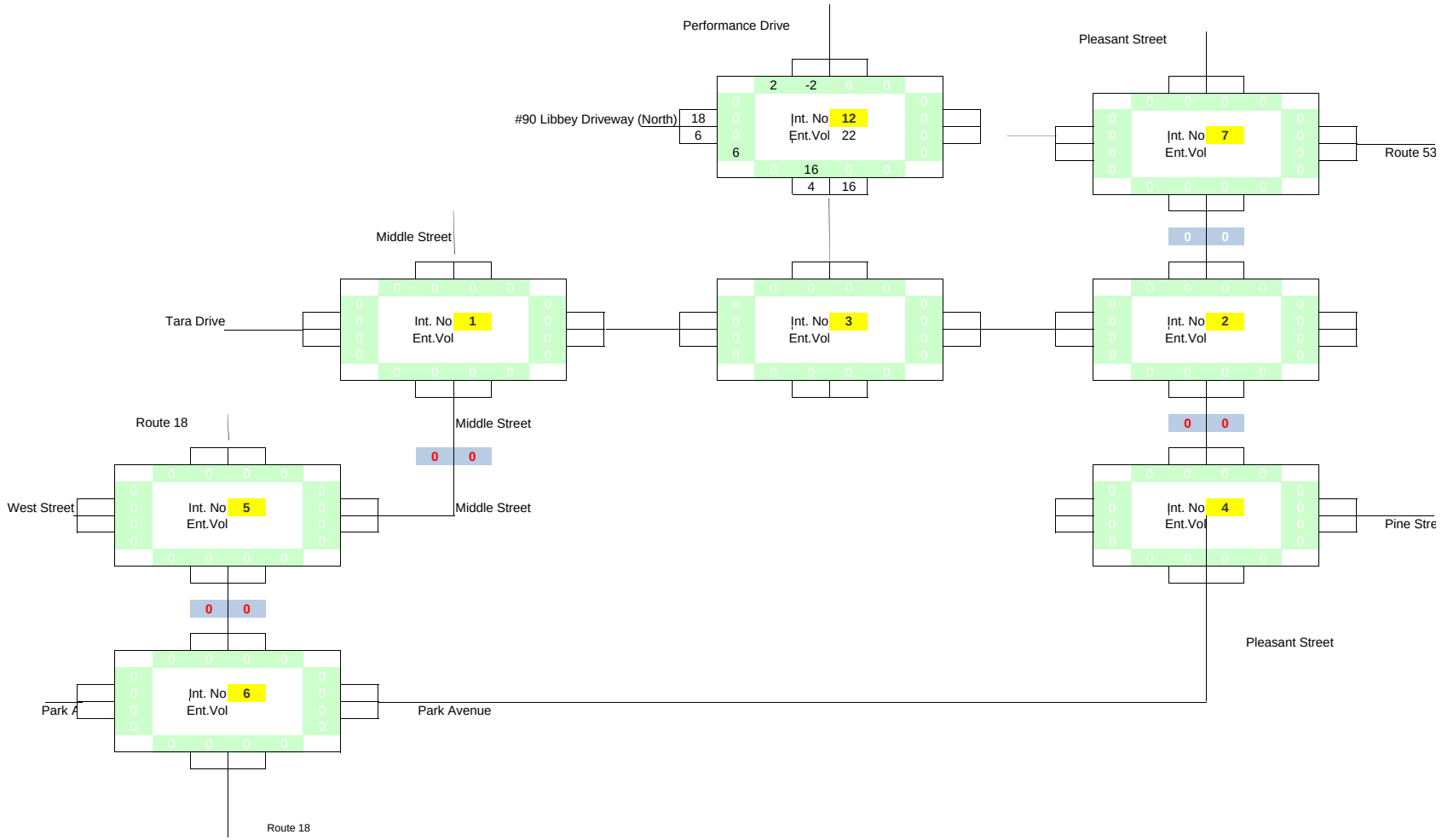
Travel Time Runs
Weymouth, MA
Tuesday, September 29, 2015

Local Roads Route	***Start Time***	***End Time***	***Travel Time***	
(Rt 3 NB via Exit 15 - Derby Street and Pine Street)				
Run #1	6:58:55 AM	7:04:48 AM	0:05:53	
Run #2	7:15:27 AM	7:22:30 AM	0:07:03	
Run #3	7:30:27 AM	7:39:16 AM	0:08:49	
Run #4	7:47:11 AM	7:53:50 AM	0:06:39	
Run #5	8:04:53 AM	8:10:59 AM	0:06:06	
Run #6	8:18:23 AM	8:24:35 AM	0:06:12	
Run #7	8:31:51 AM	8:37:26 AM	0:05:35	Average
Run #8	8:46:03 AM	8:52:27 AM	0:06:24	0:06:35
Highway Route	***Start Time***	***End Time***	***Travel Time***	
(Rt 3 NB via Exit 16 - Route 18 and Middle Street)				
Run #1	7:00:00 AM	7:13:53 AM	0:13:53	
Run #2	7:22:02 AM	7:36:00 AM	0:13:58	
Run #3	7:45:00 AM	8:00:17 AM	0:15:17	
Run #4	8:08:00 AM	8:22:50 AM	0:14:50	
Run #5	8:29:00 AM	8:44:44 AM	0:15:44	Average
Run #6	8:51:00 AM	8:59:11 AM	0:08:11	0:13:39

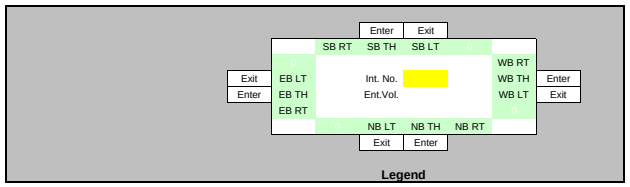
Reassignment of Existing Site Trips at #90 Libbey Industrial Parkway

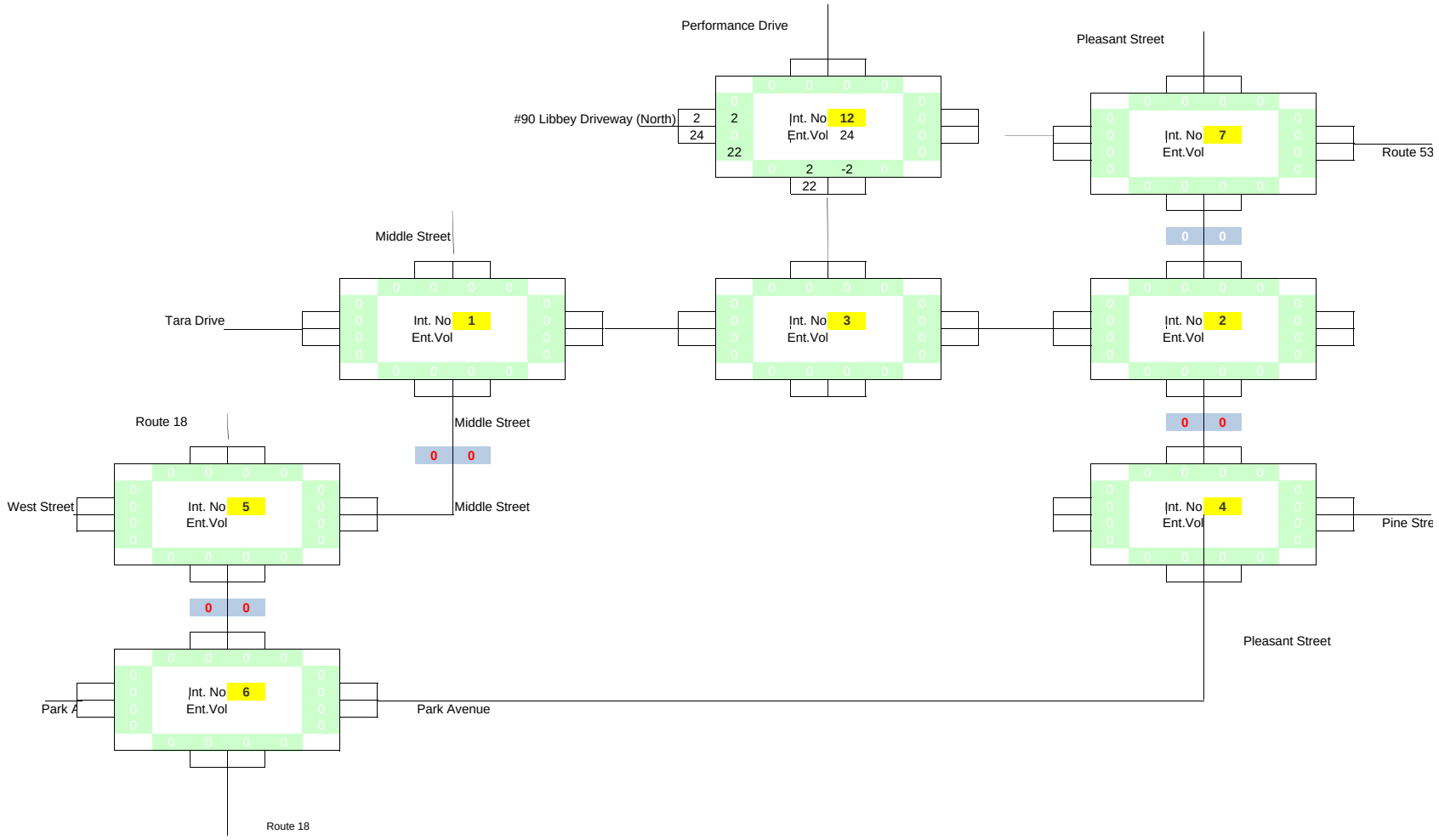
18 **Reassignment of Existing #90 Libbey AM Trips**





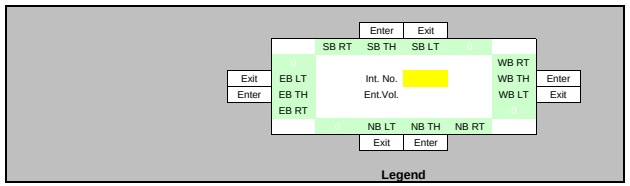
46 **Reassignment of Existing #90 Libbey PM Trips**

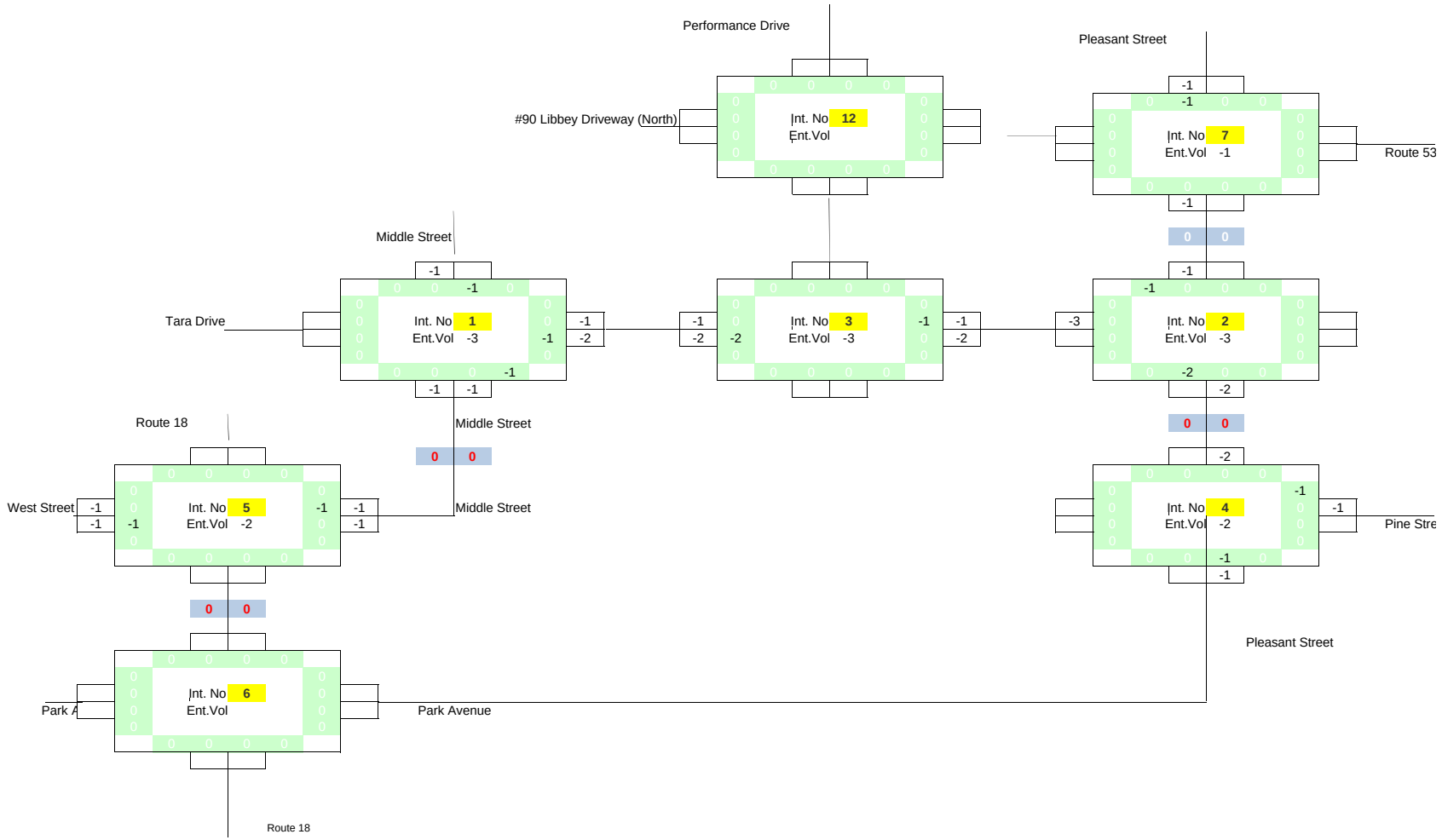




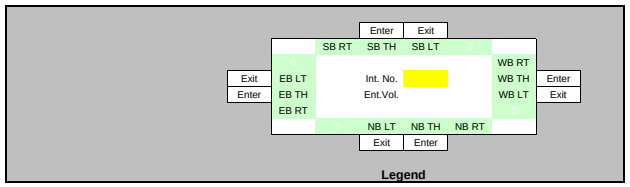
Removal of Existing Site Trips at #200 Libbey Industrial Parkway

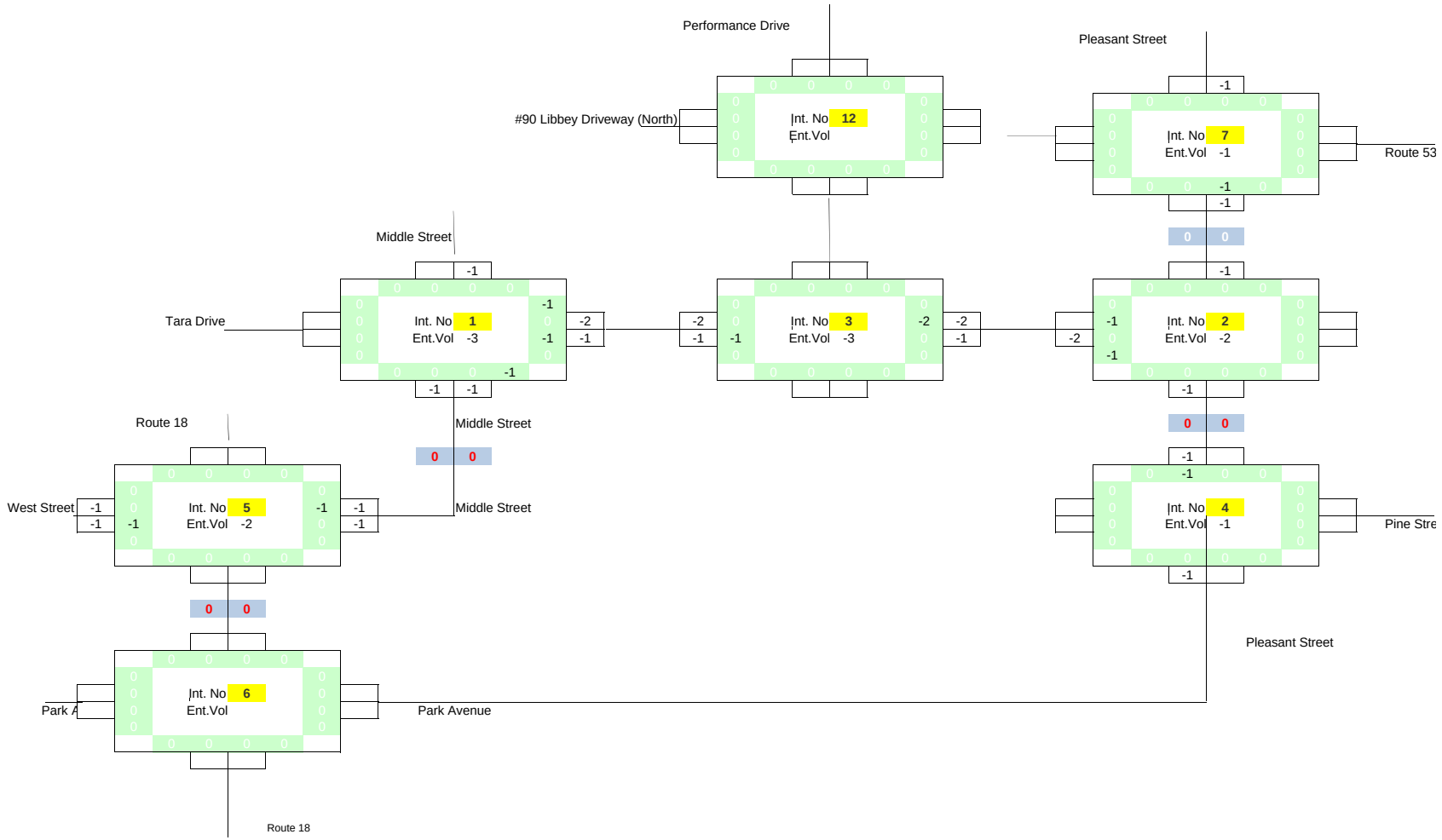
27 **Removal of Existing AM Trips - 200 Libbey Industrial Pkwy**





55 **Removal of Existing PM Trips - 200 Libbey Industrial Pkwy**





Appendix H

Intersection Capacity Analyses

Intersection	
Int Delay, s/veh	61.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	2	11	165	0	125	6	293	240	138	363	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	5	5	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	9	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	94	94	94	84	84	84	77	77	77
Heavy Vehicles, %	0	0	0	10	0	6	0	3	7	2	4	0
Mvmt Flow	6	3	15	176	0	133	7	349	286	179	471	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1337	1480	478	1346	1338	497	474	0	0	635	0	0
Stage 1	831	831	-	506	506	-	-	-	-	-	-	-
Stage 2	506	649	-	840	832	-	-	-	-	-	-	-
Critical Hdwy	8.9	8.3	7.1	7.2	6.5	6.26	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	7.9	7.3	-	6.2	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.9	7.3	-	6.2	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.59	4	3.354	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	67	60	525	~ 123	154	565	1099	-	-	948	-	-
Stage 1	242	256	-	534	543	-	-	-	-	-	-	-
Stage 2	429	339	-	348	387	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	40	44	523	~ 90	113	562	1094	-	-	944	-	-
Mov Cap-2 Maneuver	40	44	-	~ 90	113	-	-	-	-	-	-	-
Stage 1	240	190	-	529	538	-	-	-	-	-	-	-
Stage 2	323	336	-	246	287	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	50.8	$ 314.8	0.1	2.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	102	90	562	944	-	-
HCM Lane V/C Ratio	0.007	-	-	0.235	1.95	0.237	0.19	-	-
HCM Control Delay (s)	8.3	0	-	50.8	$ 543.1	13.4	9.7	0	-
HCM Lane LOS	A	A	-	F	F	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	15.1	0.9	0.7	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	42

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	35	123	306	949	756	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	88	88	86	86
Heavy Vehicles, %	11	6	6	6	6	3
Mvmt Flow	44	156	348	1078	879	144

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2725	951	1023	0	-	0
Stage 1	951	-	-	-	-	-
Stage 2	1774	-	-	-	-	-
Critical Hdwy	6.51	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	~ 21	310	663	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 10	310	663	-	-	-
Mov Cap-2 Maneuver	~ 10	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	67	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 527.3	4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	663	-	10	310	-	-
HCM Lane V/C Ratio	0.524	-	4.43	0.502	-	-
HCM Control Delay (s)	16.3	-	$ 2282.9	27.8	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	3.1	-	6.7	2.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	70	255	343	58	16	24
Conflicting Peds, #/hr	4	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	87	87	89	89	73	73
Heavy Vehicles, %	1	7	5	0	7	4
Mvmt Flow	80	293	385	65	22	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	451	0	-	0	872	422
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	4.11	-	-	-	6.47	6.24
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.336
Pot Cap-1 Maneuver	1115	-	-	-	315	627
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1110	-	-	-	288	624
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1110	-	-	-	288	624
HCM Lane V/C Ratio	0.072	-	-	-	0.076	0.053
HCM Control Delay (s)	8.5	0	-	-	18.5	11.1
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	54.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	389	918	15	176	744
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	88	88	74	74
Heavy Vehicles, %	0	2	8	0	3	6
Mvmt Flow	0	447	1043	17	238	1005

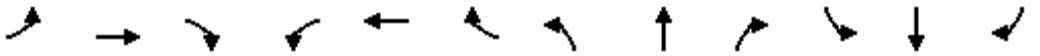
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2533	1053	0	0	1060	0
Stage 1	1052	-	-	-	-	-
Stage 2	1481	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	31	~ 275	-	-	653	-
Stage 1	339	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	20	~ 275	-	-	653	-
Mov Cap-2 Maneuver	20	-	-	-	-	-
Stage 1	339	-	-	-	-	-
Stage 2	133	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 330.4	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 275	653	-
HCM Lane V/C Ratio	-	- 1.626	0.364	-
HCM Control Delay (s)	-	-$ 330.4	13.6	-
HCM Lane LOS	-	- F	B	-
HCM 95th %tile Q(veh)	-	- 27.6	1.7	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	214	60	184	285	246	99	1083	197	212	651	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.280			0.608			0.397			0.084		
Satd. Flow (perm)	490	3355	1459	1044	3388	1459	701	3389	1474	136	3115	1380
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	168	230	65	207	320	276	115	1259	229	219	671	246
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	7	4		3	8	8 1		2	2 3	1	6	6 7
Permitted Phases	4		4	8			2			6		
Total Split (s)	17.0	22.0	22.0	11.0	16.0		57.0	57.0		10.0	67.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		4.0	7.0	
Act Effct Green (s)	27.8	15.0	15.0	19.5	10.3	19.6	44.1	44.1	55.4	57.4	54.3	70.4
Actuated g/C Ratio	0.28	0.15	0.15	0.20	0.10	0.20	0.45	0.45	0.56	0.58	0.55	0.72
v/c Ratio	0.60	0.45	0.29	0.83	0.91	0.95	0.37	0.83	0.28	1.31	0.39	0.25
Control Delay	41.5	43.8	45.7	62.8	75.4	81.2	24.5	30.7	14.0	198.3	14.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	43.8	45.7	62.8	75.4	81.2	24.5	30.7	14.0	198.3	14.7	7.0
LOS	D	D	D	E	E	F	C	C	B	F	B	A
Approach Delay		43.2			74.2			27.8			48.4	
Approach LOS		D			E			C			D	
Queue Length 50th (ft)	79	66	35	100	103	165	42	322	62	~121	106	35
Queue Length 95th (ft)	#215	140	98	#349	#264	#463	121	#623	166	#376	246	144
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	300	560	243	250	353	290	365	1768	846	167	1951	1001
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.41	0.27	0.83	0.91	0.95	0.32	0.71	0.27	1.31	0.34	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 128			
Actuated Cycle Length: 98.3			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay: 44.7		Intersection LOS: D	
Intersection Capacity Utilization 75.7%		ICU Level of Service D	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

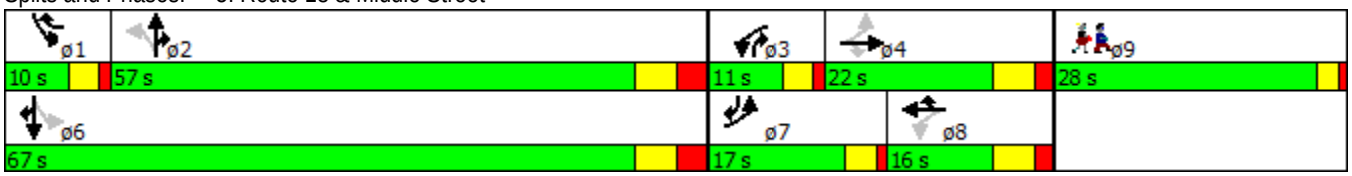
Intersection Summary

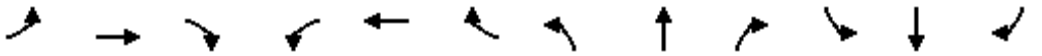
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

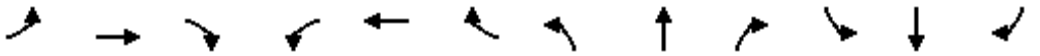




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	214	60	184	285	246	99	1083	197	212	651	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.28	1.00	1.00	0.61	1.00	1.00	0.40	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	489	3355	1459	1044	3388	1459	701	3389	1474	137	3115	1380
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.97	0.97	0.97
Adj. Flow (vph)	168	230	65	207	320	276	115	1259	229	219	671	246
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	230	65	207	320	276	115	1259	229	219	671	246
Heavy Vehicles (%)	5%	4%	7%	7%	3%	7%	5%	4%	7%	8%	7%	8%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	7	4		3	8	8 1		2	2 3	1	6	6 7
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	26.3	15.1	15.1	17.5	10.3	16.5	44.2	44.2	58.4	54.4	54.4	73.4
Effective Green, g (s)	26.3	15.1	15.1	17.5	10.3	16.5	44.2	44.2	58.4	54.4	54.4	73.4
Actuated g/C Ratio	0.26	0.15	0.15	0.17	0.10	0.16	0.44	0.44	0.58	0.54	0.54	0.73
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		4.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	268	504	219	223	347	239	308	1490	856	160	1686	1007
v/s Ratio Prot	c0.07	0.07		c0.07	0.09	c0.19		0.37	0.16	c0.08	0.22	0.18
v/s Ratio Perm	0.09		0.04	0.09			0.16			c0.65		
v/c Ratio	0.63	0.46	0.30	0.93	0.92	1.15	0.37	0.84	0.27	1.37	0.40	0.24
Uniform Delay, d1	30.8	39.0	38.0	39.8	44.7	42.0	18.9	25.1	10.4	23.1	13.5	4.4
Progression 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
Incremental Delay, d2	3.3	0.2	0.3	40.0	28.9	106.4	0.3	4.4	0.1	200.5	0.1	0.0
Delay (s)	34.1	39.2	38.3	79.8	73.6	148.4	19.1	29.5	10.5	223.6	13.5	4.5
Level of Service	C	D	D	E	E	F	B	C	B	F	B	A
Approach Delay (s)		37.2			100.9			26.0			52.1	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	296	51	74	415	348	116	1171	45	167	648	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3263	0	1646	1783	1531	1646	3288	0	1686	3319	0
Flt Permitted	0.222			0.412			0.344			0.122		
Satd. Flow (perm)	414	3263	0	714	1783	1531	596	3288	0	217	3319	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	149	394	0	87	488	409	127	1336	0	196	816	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	10.0	22.0		10.0	22.0		9.0	35.0		9.0	35.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	24.8	18.0		23.8	16.0	40.1	41.2	31.9		58.4	45.8	
Actuated g/C Ratio	0.25	0.18		0.24	0.16	0.40	0.41	0.32		0.58	0.46	
v/c Ratio	0.81	0.67		0.39	1.71	0.67	0.39	1.28		0.45	0.54	
Control Delay	63.8	45.6		33.4	363.9	33.4	17.9	162.7		21.7	23.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	63.8	45.6		33.4	363.9	33.4	17.9	162.7		21.7	23.1	
LOS	E	D		C	F	C	B	F		C	C	
Approach Delay		50.6			197.3			150.1			22.8	
Approach LOS		D			F			F			C	
Queue Length 50th (ft)	75	127		42	~461	198	29	~534		46	176	
Queue Length 95th (ft)	#144	175		77	#610	#457	92	#737		#235	308	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	183	587		227	285	614	323	1047		439	1520	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.81	0.67		0.38	1.71	0.67	0.39	1.28		0.45	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.71			
Intersection Signal Delay: 116.0		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

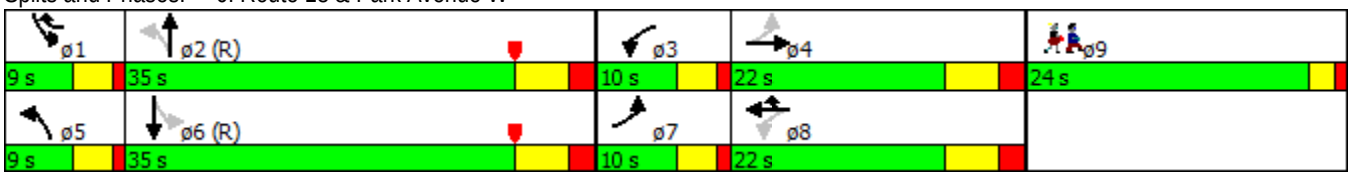
Intersection Capacity Utilization 88.8% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

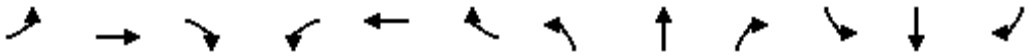
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Route 18 & Park Avenue W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	296	51	74	415	348	116	1171	45	167	648	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3263		1646	1783	1531	1646	3290		1686	3319	
Flt Permitted	0.22	1.00		0.41	1.00	1.00	0.34	1.00		0.12	1.00	
Satd. Flow (perm)	414	3263		714	1783	1531	596	3290		217	3319	
Peak-hour factor, PHF	0.88	0.88	0.88	0.85	0.85	0.85	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	149	336	58	87	488	409	127	1287	49	196	762	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	149	394	0	87	488	409	127	1336	0	196	816	0
Heavy Vehicles (%)	2%	4%	8%	6%	3%	2%	6%	5%	7%	4%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	2
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	18.0		21.6	16.8	38.1	36.1	28.7		54.0	42.6	
Effective Green, g (s)	24.0	18.0		21.6	16.8	38.1	36.1	28.7		54.0	42.6	
Actuated g/C Ratio	0.24	0.18		0.22	0.17	0.38	0.36	0.29		0.54	0.43	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	180	587		198	299	583	292	944		430	1413	
v/s Ratio Prot	c0.05	0.12		0.02	c0.27	c0.27	0.03	c0.41		0.10	0.25	
v/s Ratio Perm	0.15			0.07			0.12			0.15		
v/c Ratio	0.83	0.67		0.44	1.63	0.70	0.43	1.42		0.46	0.58	
Uniform Delay, d1	34.2	38.2		32.5	41.6	26.1	22.1	35.6		16.6	21.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.7	2.4		0.6	299.2	3.1	0.4	193.2		0.3	1.7	
Delay (s)	58.9	40.6		33.1	340.8	29.3	22.5	228.8		16.9	23.6	
Level of Service	E	D		C	F	C	C	F		B	C	
Approach Delay (s)		45.6			184.1			210.9			22.3	
Approach LOS		D			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	134.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	223	34	84	582	162	55	681	81	133	480	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	0		0	200		0	120		0	175		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3216	0	0	3153	0	0	3209	0	0	3262	0
Flt Permitted		0.808			0.865			0.835			0.556	
Satd. Flow (perm)	0	2611	0	0	2741	0	0	2688	0	0	1832	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			34			13			3	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	337	0	0	872	0	0	888	0	0	707	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Act Effct Green (s)		29.6			29.6			30.4			30.4	
Actuated g/C Ratio		0.40			0.40			0.41			0.41	
v/c Ratio		0.32			0.78			0.79			1.00dl	
Control Delay		16.7			26.0			27.2			44.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.7			26.0			27.2			44.0	
LOS		B			C			C			D	
Approach Delay		16.7			26.0			27.2			44.0	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)		45			151			162			142	
Queue Length 95th (ft)		105			#380			#407			#372	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)												
Base Capacity (vph)		1087			1151			1117			757	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.76			0.79			0.93	

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 73.7			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 91.0%		ICU Level of Service F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

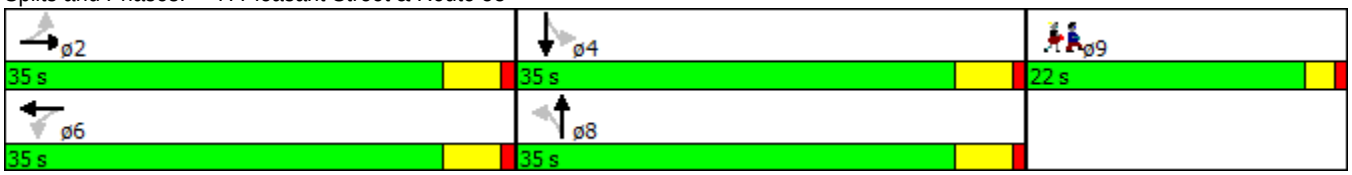
Intersection Summary

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 7: Pleasant Street & Route 53



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	223	34	84	582	162	55	681	81	133	480	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.99			1.00	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		3216			3152			3209			3260	
Flt Permitted		0.81			0.86			0.84			0.56	
Satd. Flow (perm)		2613			2740			2690			1831	
Peak-hour factor, PHF	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	35	262	40	88	613	171	60	740	88	149	539	19
RTOR Reduction (vph)	0	10	0	0	21	0	0	8	0	0	2	0
Lane Group Flow (vph)	0	327	0	0	851	0	0	880	0	0	705	0
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	24%	5%	6%	7%	5%	7%	24%	5%	10%	2%	3%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		29.6			29.6			30.4			30.4	
Effective Green, g (s)		29.6			29.6			30.4			30.4	
Actuated g/C Ratio		0.39			0.39			0.40			0.40	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		1017			1067			1076			732	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.31			0.33			c0.39	
v/c Ratio		0.32			0.80			0.82			1.00dl	
Uniform Delay, d1		16.2			20.5			20.3			22.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			4.5			5.2			24.5	
Delay (s)		16.4			25.0			25.5			46.8	
Level of Service		B			C			C			D	
Approach Delay (s)		16.4			25.0			25.5			46.8	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Intersection	
Int Delay, s/veh	141.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	6	206	0	210	10	484	207	125	429	5
Conflicting Peds, #/hr	0	0	0	0	0	0	3	0	0	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	175	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	9	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	67	67	75	75	75	86	86	86	96	96	96
Heavy Vehicles, %	0	0	0	1	0	0	0	1	6	2	2	0
Mvmt Flow	3	0	9	275	0	280	12	563	241	130	447	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1416	1537	452	1420	1419	686	452	0	0	803	0	0
Stage 1	710	710	-	706	706	-	-	-	-	-	-	-
Stage 2	706	827	-	714	713	-	-	-	-	-	-	-
Critical Hdwy	8.9	8.3	7.1	7.11	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	7.9	7.3	-	6.11	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.9	7.3	-	6.11	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	57	54	546	~ 115	138	451	1119	-	-	821	-	-
Stage 1	300	308	-	428	442	-	-	-	-	-	-	-
Stage 2	302	257	-	424	438	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	18	42	545	~ 93	107	450	1116	-	-	819	-	-
Mov Cap-2 Maneuver	18	42	-	~ 93	107	-	-	-	-	-	-	-
Stage 1	294	243	-	419	433	-	-	-	-	-	-	-
Stage 2	112	252	-	328	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	71.2	$ 497	0.1	2.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1116	-	-	66	93	450	819	-	-
HCM Lane V/C Ratio	0.01	-	-	0.181	2.953	0.622	0.159	-	-
HCM Control Delay (s)	8.3	0	-	71.2	$ 977.8	25.3	10.2	0	-
HCM Lane LOS	A	A	-	F	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	26.6	4.1	0.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	90

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	117	350	127	789	911	67
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	96	96	94	94
Heavy Vehicles, %	4	3	0	1	4	2
Mvmt Flow	133	398	132	822	969	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2091	1006	1040	0	-	0
Stage 1	1005	-	-	-	-	-
Stage 2	1086	-	-	-	-	-
Critical Hdwy	6.44	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	~ 57	~ 291	676	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 46	~ 291	675	-	-	-
Mov Cap-2 Maneuver	~ 46	-	-	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	258	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 425.5	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	675	-	46	291	-	-
HCM Lane V/C Ratio	0.196	-	2.89	1.367	-	-
HCM Control Delay (s)	11.6	-	$ 1040.3	220	-	-
HCM Lane LOS	B	-	F	F	-	-
HCM 95th %tile Q(veh)	0.7	-	14.3	20.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	28	279	266	24	45	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	86	86	66	66	84	84
Heavy Vehicles, %	4	3	3	4	2	0
Mvmt Flow	33	324	403	36	54	112

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	439	0	-	0	811	421
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	4.14	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1110	-	-	-	349	637
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1110	-	-	-	336	637
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1110	-	-	-	336	637
HCM Lane V/C Ratio	0.029	-	-	-	0.159	0.176
HCM Control Delay (s)	8.3	0	-	-	17.7	11.9
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6	0.6

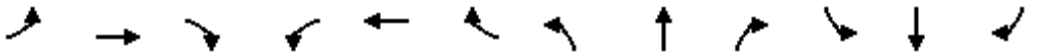
Intersection	
Int Delay, s/veh	21.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	6	247	710	7	365	891
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	89	89	88	88
Heavy Vehicles, %	0	1	2	0	1	2
Mvmt Flow	7	271	798	8	415	1012

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2644	803	0	0	806	0
Stage 1	802	-	-	-	-	-
Stage 2	1842	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	26	385	-	-	823	-
Stage 1	445	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	13	385	-	-	822	-
Mov Cap-2 Maneuver	13	-	-	-	-	-
Stage 1	445	-	-	-	-	-
Stage 2	69	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	173.3	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	229	822	-
HCM Lane V/C Ratio	-	-	1.214	0.505	-
HCM Control Delay (s)	-	-	173.3	13.8	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	13.7	2.9	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	313	84	220	263	206	59	884	220	250	1029	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.302			0.530			0.257			0.113		
Satd. Flow (perm)	549	3455	1561	954	3455	1531	477	3455	1546	192	3267	1434
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	288	373	100	256	306	240	63	940	234	260	1072	240
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	7	4		3	8	8 1		2	2 3	1	6	6 7
Permitted Phases	4		4	8			2			6		
Total Split (s)	21.0	28.0	28.0	7.0	16.0		51.0	51.0		15.0	66.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		4.0	7.0	
Act Effct Green (s)	33.9	24.7	24.7	15.4	10.3	24.8	31.5	31.5	31.5	50.0	46.9	68.5
Actuated g/C Ratio	0.35	0.26	0.26	0.16	0.11	0.26	0.33	0.33	0.33	0.52	0.49	0.71
v/c Ratio	0.71	0.42	0.25	1.45	0.83	0.61	0.40	0.83	0.46	0.97	0.67	0.24
Control Delay	38.9	34.7	35.5	260.4	63.7	39.5	36.1	38.0	30.1	73.7	22.4	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	34.7	35.5	260.4	63.7	39.5	36.1	38.0	30.1	73.7	22.4	6.9
LOS	D	C	D	F	E	D	D	D	C	E	C	A
Approach Delay		36.4			119.2			36.4			28.5	
Approach LOS		D			F			D			C	
Queue Length 50th (ft)	121	91	44	~151	90	115	27	250	102	96	221	34
Queue Length 95th (ft)	#326	193	122	#487	#242	#275	88	467	235	#384	469	138
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	407	885	400	177	368	394	224	1623	726	267	2058	1023
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.42	0.25	1.45	0.83	0.61	0.28	0.58	0.32	0.97	0.52	0.23

Intersection Summary			
Area Type:	Other		
Cycle Length: 131			
Actuated Cycle Length: 96.3			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.45			
Intersection Signal Delay: 48.7		Intersection LOS: D	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

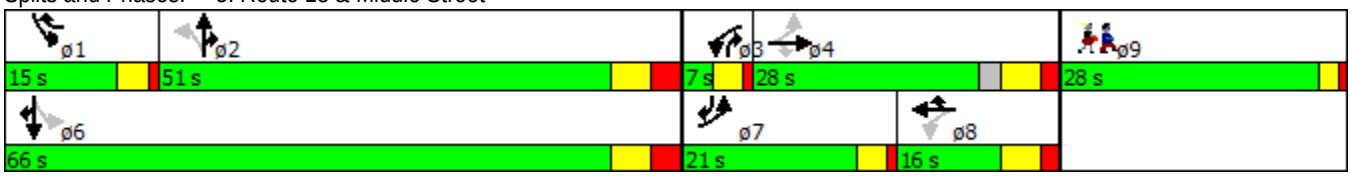
Intersection Summary

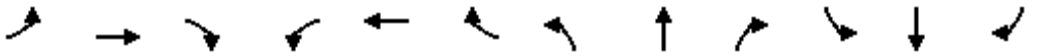
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

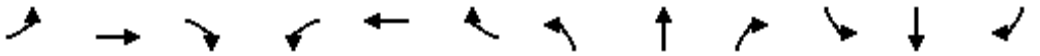




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	313	84	220	263	206	59	884	220	250	1029	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.30	1.00	1.00	0.53	1.00	1.00	0.26	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	550	3455	1561	954	3455	1531	476	3455	1546	193	3267	1434
Peak-hour factor, PHF	0.84	0.84	0.84	0.86	0.86	0.86	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	288	373	100	256	306	240	63	940	234	260	1072	240
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	288	373	100	256	306	240	63	940	234	260	1072	240
Heavy Vehicles (%)	1%	1%	0%	2%	1%	2%	0%	2%	2%	3%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	pt+ov
Protected Phases	7	4		3	8	8 1		2	2 3	1	6	6 7
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	31.8	24.7	24.7	13.4	10.3	21.6	31.6	31.6	41.7	46.9	46.9	71.4
Effective Green, g (s)	31.8	24.7	24.7	13.4	10.3	21.6	31.6	31.6	41.7	46.9	46.9	71.4
Actuated g/C Ratio	0.32	0.25	0.25	0.14	0.10	0.22	0.32	0.32	0.42	0.48	0.48	0.73
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		4.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	387	867	391	153	361	336	152	1109	655	255	1557	1040
v/s Ratio Prot	c0.13	0.11		c0.05	0.09	0.16		0.27	0.15	c0.12	0.33	0.17
v/s Ratio Perm	0.11		0.06	c0.17			0.13			c0.37		
v/c Ratio	0.74	0.43	0.26	1.67	0.85	0.71	0.41	0.85	0.36	1.02	0.69	0.23
Uniform Delay, d1	27.4	30.9	29.5	41.7	43.3	35.5	26.2	31.2	19.3	26.0	20.1	4.4
Progression 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
Incremental Delay, d2	6.7	0.1	0.1	329.8	16.0	5.9	0.7	5.9	0.1	61.5	1.0	0.0
Delay (s)	34.0	31.1	29.6	371.5	59.3	41.4	26.8	37.1	19.4	87.5	21.1	4.5
Level of Service	C	C	C	F	E	D	C	D	B	F	C	A
Approach Delay (s)		32.0			153.6			33.2			29.5	
Approach LOS		C			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	24.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	356	33	90	237	175	38	919	90	230	1166	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3371	0	1711	1801	1531	1694	3403	0	1719	3368	0
Flt Permitted	0.292			0.391			0.126			0.112		
Satd. Flow (perm)	549	3371	0	704	1801	1531	225	3403	0	203	3368	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	120	418	0	102	269	199	40	1062	0	247	1319	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	10.0	24.0		10.0	24.0		12.0	30.0		12.0	30.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Act Effct Green (s)	25.8	19.0		24.9	17.0	37.0	42.7	35.0		57.4	50.0	
Actuated g/C Ratio	0.26	0.19		0.25	0.17	0.37	0.43	0.35		0.57	0.50	
v/c Ratio	0.56	0.65		0.44	0.88	0.35	0.22	0.89		0.66	0.78	
Control Delay	38.1	43.4		33.1	69.4	22.7	16.8	42.6		30.0	27.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.1	43.4		33.1	69.4	22.7	16.8	42.6		30.0	27.9	
LOS	D	D		C	E	C	B	D		C	C	
Approach Delay		42.2			46.6			41.6			28.2	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	57	132		48	167	85	9	317		80	344	
Queue Length 95th (ft)	103	185		88	#289	114	38	#587		#324	#774	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	216	643		236	324	544	219	1191		376	1683	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.56	0.65		0.43	0.83	0.37	0.18	0.89		0.66	0.78	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 36.9		Intersection LOS: D	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

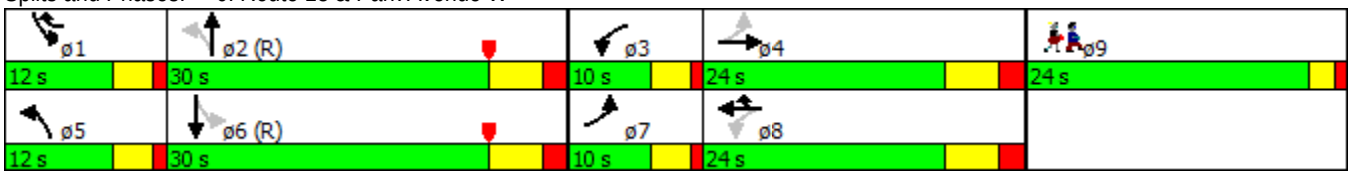
Intersection Summary

Intersection Capacity Utilization 76.4% ICU Level of Service D

Analysis Period (min) 15

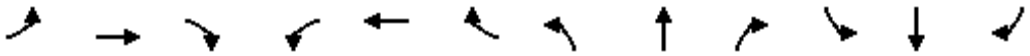
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Route 18 & Park Avenue W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	356	33	90	237	175	38	919	90	230	1166	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3373		1711	1801	1531	1694	3402		1719	3367	
Flt Permitted	0.29	1.00		0.39	1.00	1.00	0.13	1.00		0.11	1.00	
Satd. Flow (perm)	550	3373		704	1801	1531	224	3402		202	3367	
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	120	383	35	102	269	199	40	967	95	247	1254	65
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	418	0	102	269	199	40	1062	0	247	1319	0
Heavy Vehicles (%)	1%	1%	15%	2%	2%	2%	3%	1%	1%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	1
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	19.0		22.6	17.8	35.0	35.6	31.8		53.0	45.2	
Effective Green, g (s)	25.0	19.0		22.6	17.8	35.0	35.6	31.8		53.0	45.2	
Actuated g/C Ratio	0.25	0.19		0.23	0.18	0.35	0.36	0.32		0.53	0.45	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	211	640		207	320	535	135	1081		367	1521	
v/s Ratio Prot	c0.03	0.12		0.02	c0.15	0.13	0.01	c0.31		c0.12	c0.39	
v/s Ratio Perm	0.11			0.09			0.09			0.24		
v/c Ratio	0.57	0.65		0.49	0.84	0.37	0.30	0.98		0.67	0.87	
Uniform Delay, d1	30.7	37.5		32.0	39.7	24.3	22.5	33.8		21.9	24.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	1.8		0.7	17.1	0.2	0.4	23.5		3.8	6.9	
Delay (s)	32.8	39.3		32.7	56.8	24.4	22.9	57.3		25.7	31.6	
Level of Service	C	D		C	E	C	C	E		C	C	
Approach Delay (s)		37.8			41.2			56.0			30.7	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	392	54	87	325	215	44	614	93	132	475	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	0		0	200		0	120		0	175		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3403	0	0	3221	0	0	3405	0	0	3313	0
Flt Permitted		0.790			0.744			0.842			0.546	
Satd. Flow (perm)	0	2702	0	0	2413	0	0	2875	0	0	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			109			18			4	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	556	0	0	737	0	0	939	0	0	775	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Act Effct Green (s)		27.8			27.8			30.6			30.6	
Actuated g/C Ratio		0.39			0.39			0.42			0.42	
v/c Ratio		0.53			0.74			0.76			1.15dl	
Control Delay		19.8			22.7			25.0			56.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.8			22.7			25.0			56.5	
LOS		B			C			C			E	
Approach Delay		19.8			22.7			25.0			56.5	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)		84			108			169			166	
Queue Length 95th (ft)		193			#238			#336			#363	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)												
Base Capacity (vph)		1155			1086			1230			777	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.48			0.68			0.76			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 92			
Actuated Cycle Length: 72			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 31.6		Intersection LOS: C	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

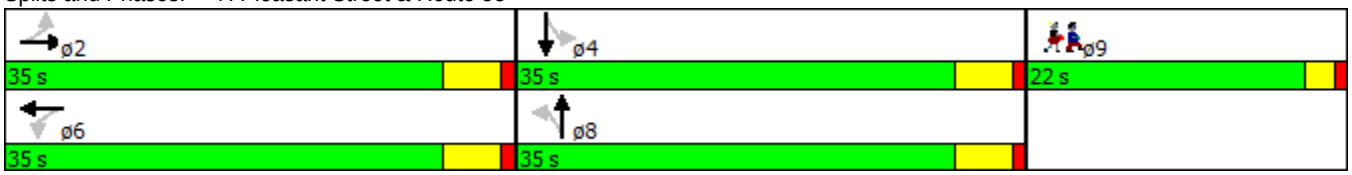
Intersection Summary

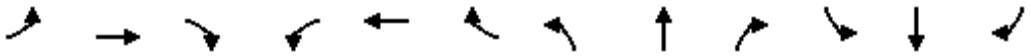
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 7: Pleasant Street & Route 53



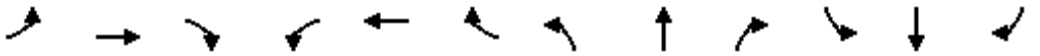


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	392	54	87	325	215	44	614	93	132	475	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.98			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		3402			3220			3407			3312	
Flt Permitted		0.79			0.74			0.84			0.55	
Satd. Flow (perm)		2699			2412			2877			1828	
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.80	0.80	0.80	0.81	0.81	0.81
Adj. Flow (vph)	55	440	61	102	382	253	55	768	116	163	586	26
RTOR Reduction (vph)	0	9	0	0	68	0	0	11	0	0	2	0
Lane Group Flow (vph)	0	547	0	0	669	0	0	928	0	0	773	0
Heavy Vehicles (%)	4%	1%	2%	4%	1%	0%	0%	0%	2%	2%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		27.8			27.8			30.6			30.6	
Effective Green, g (s)		27.8			27.8			30.6			30.6	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		1008			901			1183			751	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.28			0.32			c0.42	
v/c Ratio		0.54			0.74			0.78			1.15dl	
Uniform Delay, d1		18.3			20.2			19.0			21.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			3.5			3.7			40.4	
Delay (s)		19.1			23.7			22.7			62.3	
Level of Service		B			C			C			E	
Approach Delay (s)		19.1			23.7			22.7			62.3	
Approach LOS		B			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	176	0	134	6	313	250	144	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1767	0	0	1532	1473	0	1699	0	1711	1765	0
Flt Permitted		0.989			0.950			0.995		0.262		
Satd. Flow (perm)	0	1767	0	0	1532	1473	0	1692	0	472	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				146		37				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	18	0	0	191	146	0	619	0	157	414	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		19.0	19.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.6			16.2	26.8		35.0		49.0	46.8	
Actuated g/C Ratio		0.09			0.20	0.33		0.43		0.60	0.58	
v/c Ratio		0.10			0.63	0.25		0.83		0.39	0.41	
Control Delay		31.1			46.1	4.8		31.8		13.4	13.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		31.1			46.1	4.8		31.8		13.4	13.5	
LOS		C			D	A		C		B	B	
Approach Delay		31.1			28.2			31.8			13.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		2			72	0		189		20	72	
Queue Length 95th (ft)		30			#320	31		#686		113	320	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		175			305	584		1093		400	1381	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.10			0.63	0.25		0.57		0.39	0.30	

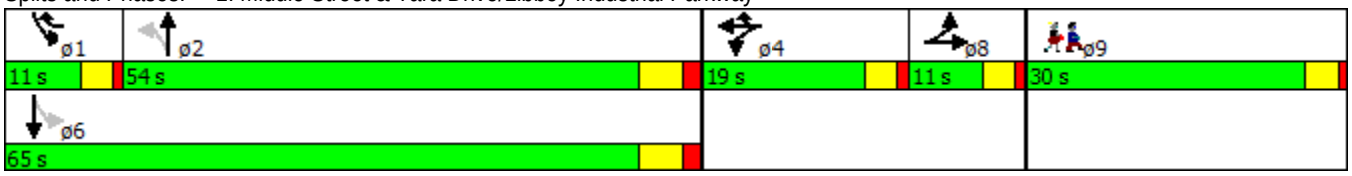
Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 81.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 81.9%		ICU Level of Service D	
Analysis Period (min) 15			

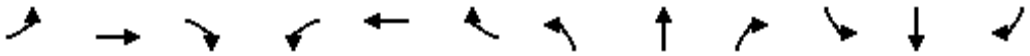
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway

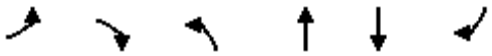




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	176	0	134	6	313	250	144	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.91			1.00	0.85		0.94		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1767			1532	1473		1699		1711	1765	
Flt Permitted		0.99			0.95	1.00		0.99		0.26	1.00	
Satd. Flow (perm)		1767			1532	1473		1691		471	1765	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	2	12	191	0	146	7	340	272	157	412	2
RTOR Reduction (vph)	0	12	0	0	0	106	0	22	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	191	40	0	597	0	157	414	0
Heavy Vehicles (%)	0%	0%	0%	10%	0%	6%	0%	3%	7%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		2.2			16.2	23.8		35.2		46.8	46.8	
Effective Green, g (s)		2.2			16.2	23.8		35.2		46.8	46.8	
Actuated g/C Ratio		0.03			0.19	0.27		0.41		0.54	0.54	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		44			286	404		687		363	953	
v/s Ratio Prot		c0.00			c0.12	0.03				0.04	c0.23	
v/s Ratio Perm								c0.35		0.20		
v/c Ratio		0.14			0.67	0.10		0.87		0.43	0.43	
Uniform Delay, d1		41.3			32.7	23.4		23.6		12.9	12.0	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		1.2			5.3	0.1		11.2		0.6	0.2	
Delay (s)		42.5			38.0	23.5		34.8		13.5	12.2	
Level of Service		D			D	C		C		B	B	
Approach Delay (s)		42.5			31.7			34.8			12.6	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	22.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

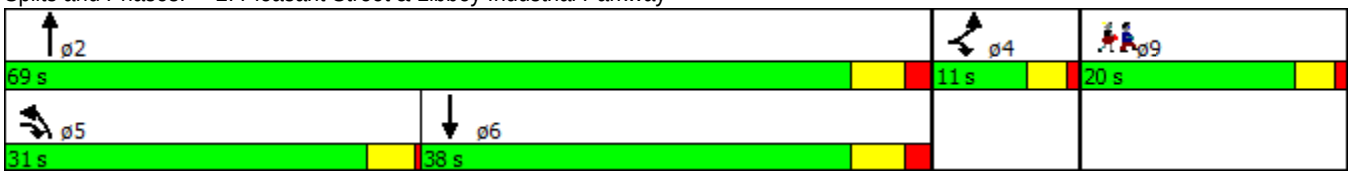


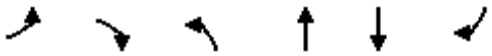
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	36	130	327	1044	799	128	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1572	1524	1646	1733	3226	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1572	1524	1646	1733	3226	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		141			19		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	39	141	355	1135	1007	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	11.0		31.0	69.0	38.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	7.1	32.3	21.8	63.5	37.6		
Actuated g/C Ratio	0.08	0.38	0.26	0.76	0.45		
v/c Ratio	0.30	0.21	0.83	0.87	0.69		
Control Delay	44.9	3.1	47.2	18.5	23.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	44.9	3.1	47.2	18.5	23.9		
LOS	D	A	D	B	C		
Approach Delay	12.1			25.3	23.9		
Approach LOS	B			C	C		
Queue Length 50th (ft)	19	0	164	253	192		
Queue Length 95th (ft)	58	24	#353	#1034	#464		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	132	760	533	1309	1455		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.30	0.19	0.67	0.87	0.69		

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 84			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 23.9		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	36	130	327	1044	799	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1572	1524	1646	1733	3227	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1572	1524	1646	1733	3227	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	141	355	1135	868	139
RTOR Reduction (vph)	0	94	0	0	11	0
Lane Group Flow (vph)	39	47	355	1135	996	0
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	11%	6%	6%	6%	6%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.1	28.9	21.8	63.5	37.7	
Effective Green, g (s)	7.1	28.9	21.8	63.5	37.7	
Actuated g/C Ratio	0.08	0.33	0.25	0.73	0.43	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	127	504	411	1260	1393	
v/s Ratio Prot	c0.02	0.03	0.22	c0.66	0.31	
v/s Ratio Perm						
v/c Ratio	0.31	0.09	0.86	0.90	0.72	
Uniform Delay, d1	37.8	20.2	31.3	9.4	20.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	0.1	16.9	9.1	1.8	
Delay (s)	39.2	20.2	48.2	18.5	22.2	
Level of Service	D	C	D	B	C	
Approach Delay (s)	24.3			25.6	22.2	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	72	266	366	60	17	25
Conflicting Peds, #/hr	4	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	5	0	7	4
Mvmt Flow	78	289	398	65	18	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	463	0	-	0	876	434
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	446	-
Critical Hdwy	4.11	-	-	-	6.47	6.24
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.336
Pot Cap-1 Maneuver	1104	-	-	-	313	618
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	286	615
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	581	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1099	-	-	-	286	615
HCM Lane V/C Ratio	0.071	-	-	-	0.065	0.044
HCM Control Delay (s)	8.5	0	-	-	18.5	11.1
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	65.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	403	1022	24	182	789
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	8	0	3	6
Mvmt Flow	2	438	1111	26	198	858

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2377	1125	0	0	1137	0
Stage 1	1124	-	-	-	-	-
Stage 2	1253	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	39	~ 250	-	-	611	-
Stage 1	313	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	26	~ 250	-	-	610	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	313	-	-	-	-	-
Stage 2	184	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 386.9	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	117	250	610	-
HCM Lane V/C Ratio	-	-	0.019	1.752	0.324	-
HCM Control Delay (s)	-	-	36.4	$ 388.6	13.7	-
HCM Lane LOS	-	-	E	F	B	-
HCM 95th %tile Q(veh)	-	-	0.1	29.1	1.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	223	63	193	298	257	107	1181	213	220	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	175	242	68	210	324	279	116	1284	232	239	752	270
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	12.0	14.0		17.0	19.0		22.0	64.5		27.0	69.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	5.0	7.1	26.2	10.1	12.1	38.2	13.2	57.5	74.7	20.2	64.5	76.6
Actuated g/C Ratio	0.04	0.05	0.20	0.08	0.09	0.30	0.10	0.45	0.58	0.16	0.50	0.59
v/c Ratio	2.73	1.32	0.23	1.65	1.02	0.65	0.68	0.85	0.27	1.00	0.48	0.33
Control Delay	840.9	223.6	40.9	361.2	113.1	46.2	76.9	39.4	16.7	110.9	24.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	840.9	223.6	40.9	361.2	113.1	46.2	76.9	39.4	16.7	110.9	24.7	17.1
LOS	F	F	D	F	F	D	E	D	B	F	C	B
Approach Delay		420.7			154.2			38.8			39.4	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~232	~126	44	~236	136	186	89	450	81	189	194	97
Queue Length 95th (ft)	#474	#281	79	#506	#319	#361	#211	#875	213	#475	387	255
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	64	183	317	127	317	431	196	1509	852	240	1556	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.73	1.32	0.21	1.65	1.02	0.65	0.59	0.85	0.27	1.00	0.48	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 155.5			
Actuated Cycle Length: 129.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.73			
Intersection Signal Delay: 105.6		Intersection LOS: F	
Intersection Capacity Utilization 85.7%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

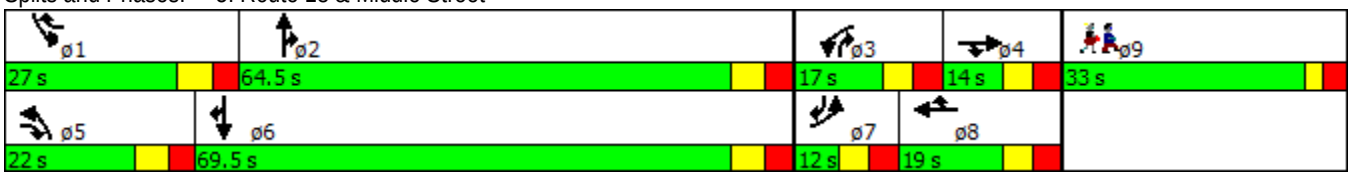
Intersection Summary

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

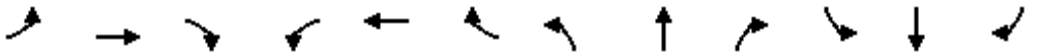
Splits and Phases: 5: Route 18 & Middle Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	223	63	193	298	257	107	1181	213	220	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	242	68	210	324	279	116	1284	232	239	752	270
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	175	242	68	210	324	279	116	1284	232	239	752	270
Heavy Vehicles (%)	5%	4%	7%	7%	3%	7%	5%	4%	7%	8%	7%	8%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Effective Green, g (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Actuated g/C Ratio	0.04	0.05	0.15	0.08	0.09	0.24	0.10	0.43	0.56	0.15	0.48	0.58
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	62	179	222	123	310	355	166	1465	832	234	1510	798
v/s Ratio Prot	0.11	0.07	0.05	c0.13	c0.10	0.19	0.07	c0.38	0.16	c0.15	c0.24	0.20
v/s Ratio Perm												
v/c Ratio	2.82	1.35	0.31	1.71	1.05	0.79	0.70	0.88	0.28	1.02	0.50	0.34
Uniform Delay, d1	64.0	63.0	50.1	61.5	60.4	47.1	58.0	34.5	15.0	56.4	23.3	14.7
Progression 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
Incremental Delay, d2	862.9	190.5	0.3	350.4	63.4	10.1	12.1	6.0	0.1	64.5	0.1	0.1
Delay (s)	926.9	253.4	50.4	411.8	123.8	57.2	70.1	40.5	15.0	120.9	23.4	14.8
Level of Service	F	F	D	F	F	E	E	D	B	F	C	B
Approach Delay (s)		468.0			175.3			39.0			40.0	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	115.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	33.5
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	308	52	77	435	365	120	1291	47	174	695	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3263	0	1646	1783	1531	1646	3291	0	1686	3319	0
Flt Permitted	0.280			0.380			0.347			0.144		
Satd. Flow (perm)	522	3263	0	658	1783	1531	601	3291	0	256	3319	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	148	392	0	84	473	397	130	1454	0	189	807	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	18.5		11.5	18.5		12.0	30.0		12.0	30.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	18.3	14.3		17.0	12.0	42.0	34.1	26.1		56.0	42.4	
Actuated g/C Ratio	0.18	0.14		0.17	0.12	0.42	0.34	0.26		0.56	0.42	
v/c Ratio	0.94	0.84		0.52	2.22	0.62	0.45	1.69		0.39	0.57	
Control Delay	95.3	60.7		44.6	588.0	30.0	22.9	344.2		21.2	26.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	95.3	60.7		44.6	588.0	30.0	22.9	344.2		21.2	26.5	
LOS	F	E		D	F	C	C	F		C	C	
Approach Delay		70.1			308.0			317.8			25.5	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)	79	~133		43	~488	180	30	~681		46	184	
Queue Length 95th (ft)	#177	#233		85	#683	#466	103	#890		#259	#418	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	158	466		161	213	642	289	859		490	1406	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.94	0.84		0.52	2.22	0.62	0.45	1.69		0.39	0.57	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.22	
Intersection Signal Delay: 211.2	Intersection LOS: F

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

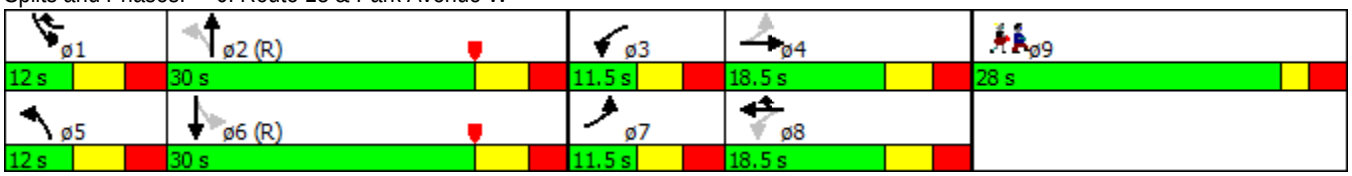
Intersection Capacity Utilization 99.8% ICU Level of Service F

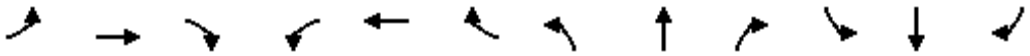
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

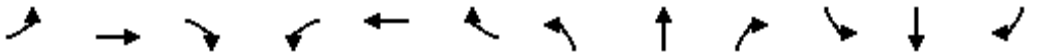
Splits and Phases: 6: Route 18 & Park Avenue W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	308	52	77	435	365	120	1291	47	174	695	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3264		1646	1783	1531	1646	3291		1686	3320	
Flt Permitted	0.28	1.00		0.38	1.00	1.00	0.35	1.00		0.14	1.00	
Satd. Flow (perm)	521	3264		658	1783	1531	601	3291		255	3320	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	335	57	84	473	397	130	1403	51	189	755	52
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	148	392	0	84	473	397	130	1454	0	189	807	0
Heavy Vehicles (%)	2%	4%	8%	6%	3%	2%	6%	5%	7%	4%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	2
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Effective Green, g (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Actuated g/C Ratio	0.19	0.14		0.17	0.13	0.38	0.29	0.21		0.52	0.37	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	163	466		153	237	575	256	684		480	1231	
v/s Ratio Prot	c0.05	0.12		0.02	c0.27	c0.26	0.04	c0.44		0.10	c0.24	
v/s Ratio Perm	0.13			0.07			0.11			0.11		
v/c Ratio	0.91	0.84		0.55	2.00	0.69	0.51	2.13		0.39	0.66	
Uniform Delay, d1	39.0	41.7		36.5	43.4	26.3	27.5	39.6		16.1	26.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	43.5	12.4		2.2	462.8	2.9	0.6	511.5		0.2	2.7	
Delay (s)	82.5	54.2		38.6	506.2	29.2	28.1	551.1		16.3	28.9	
Level of Service	F	D		D	F	C	C	F		B	C	
Approach Delay (s)		61.9			266.5			508.2			26.5	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	274.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	88	603	168	59	751	89	138	509	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3215	0	1614	1663	0	0	3211	0	1668	1728	0
Flt Permitted		0.575		0.950				0.779		0.950		
Satd. Flow (perm)	0	1858	0	1614	1663	0	0	2509	0	1668	1728	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			12			9			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	325	0	96	838	0	0	977	0	150	573	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	37.0	37.0		15.0	52.0		42.0	42.0		14.0	56.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		32.5		9.7	47.3			37.2		9.0	51.3	
Actuated g/C Ratio		0.29		0.09	0.42			0.33		0.08	0.46	
v/c Ratio		0.60		0.69	1.19			1.17		1.12	0.73	
Control Delay		39.9		76.1	129.0			123.3		160.5	32.6	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		39.9		76.1	129.0			123.3		160.5	32.6	
LOS		D		E	F			F		F	C	
Approach Delay		39.9			123.6			123.3			59.2	
Approach LOS		D			F			F			E	
Queue Length 50th (ft)		96		65	~681			~413		~116	303	
Queue Length 95th (ft)		184		#177	#1186			#705		#302	#634	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		545		144	706			836		134	789	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.60		0.67	1.19			1.17		1.12	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 98.5		Intersection LOS: F	
Intersection Capacity Utilization 121.8%		ICU Level of Service H	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

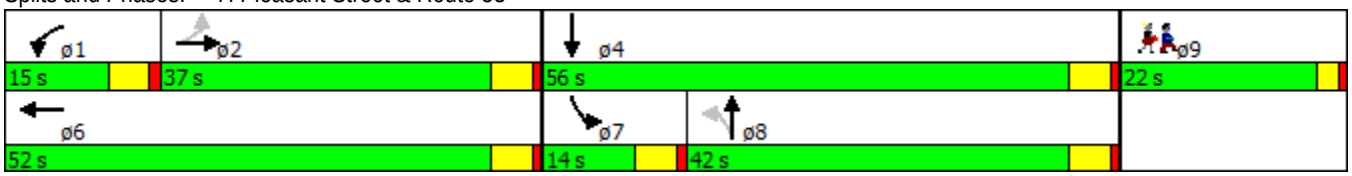
Intersection Summary

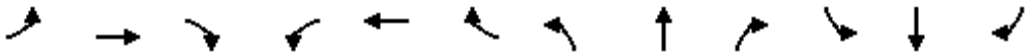
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

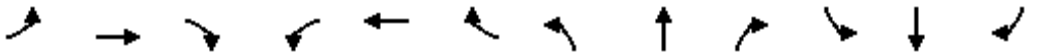
Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	88	603	168	59	751	89	138	509	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.97			0.99		1.00	0.99	
Flt Protected		0.99		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3215		1614	1663			3210		1668	1728	
Flt Permitted		0.57		0.95	1.00			0.78		0.95	1.00	
Satd. Flow (perm)		1857		1614	1663			2509		1668	1728	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	252	39	96	655	183	64	816	97	150	553	20
RTOR Reduction (vph)	0	8	0	0	7	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	317	0	96	831	0	0	971	0	150	572	0
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	24%	5%	6%	7%	5%	7%	24%	5%	10%	2%	3%	6%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		32.6		9.7	47.3			37.3		9.0	51.3	
Effective Green, g (s)		32.6		9.7	47.3			37.3		9.0	51.3	
Actuated g/C Ratio		0.28		0.08	0.41			0.32		0.08	0.45	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		526		136	684			814		130	771	
v/s Ratio Prot				0.06	c0.50					c0.09	0.33	
v/s Ratio Perm		0.17						c0.39				
v/c Ratio		0.60		0.71	1.21			1.19		1.15	0.74	
Uniform Delay, d1		35.6		51.2	33.8			38.8		53.0	26.3	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.3		15.4	109.8			98.8		126.2	4.1	
Delay (s)		37.8		66.6	143.6			137.6		179.1	30.4	
Level of Service		D		E	F			F		F	C	
Approach Delay (s)		37.8			135.7			137.6			61.3	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	107.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	114.9	Sum of lost time (s)	23.0
Intersection Capacity Utilization	121.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	216	0	220	10	507	219	134	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1738	0	0	1668	1561	0	1771	0	1711	1797	0
Flt Permitted		0.989			0.950			0.992		0.244		
Satd. Flow (perm)	0	1738	0	0	1668	1561	0	1759	0	439	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130				239		20			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	9	0	0	235	239	0	800	0	146	498	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		20.0	20.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			16.4	27.1		49.2		62.5	60.5	
Actuated g/C Ratio		0.08			0.18	0.29		0.53		0.67	0.65	
v/c Ratio		0.04			0.80	0.38		0.85		0.37	0.43	
Control Delay		0.2			60.0	4.8		31.3		11.9	12.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		0.2			60.0	4.8		31.3		11.9	12.5	
LOS		A			E	A		C		B	B	
Approach Delay		0.3			32.2			31.3			12.4	
Approach LOS		A			C			C			B	
Queue Length 50th (ft)		0			120	0		307		20	96	
Queue Length 95th (ft)		0			#385	38		#1018		107	405	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		253			293	622		938		392	1166	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.04			0.80	0.38		0.85		0.37	0.43	

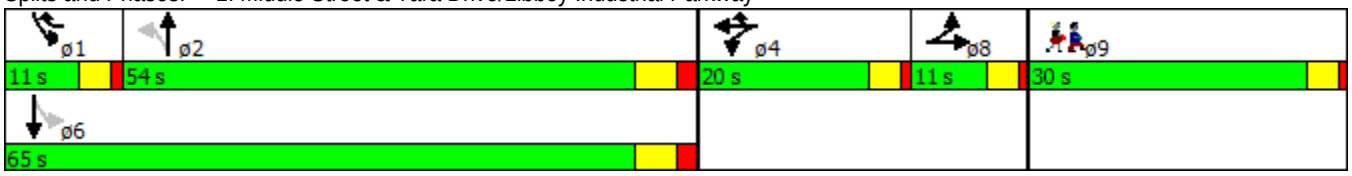
Intersection Summary			
Area Type:	Other		
Cycle Length: 126			
Actuated Cycle Length: 93.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 25.1		Intersection LOS: C	
Intersection Capacity Utilization 96.7%		ICU Level of Service F	
Analysis Period (min) 15			

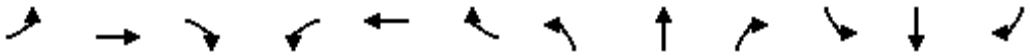
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway

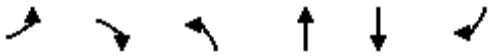




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	216	0	220	10	507	219	134	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.90			1.00	0.85		0.96		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1738			1668	1561		1771		1711	1798	
Flt Permitted		0.99			0.95	1.00		0.99		0.24	1.00	
Satd. Flow (perm)		1738			1668	1561		1758		440	1798	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	0	7	235	0	239	11	551	238	146	493	5
RTOR Reduction (vph)	0	9	0	0	0	182	0	10	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	235	57	0	790	0	146	498	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	6%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Effective Green, g (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Actuated g/C Ratio		0.01			0.16	0.24		0.49		0.61	0.61	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		17			274	369		869		358	1091	
v/s Ratio Prot		c0.00			c0.14	0.04				0.03	c0.28	
v/s Ratio Perm								c0.45		0.22		
v/c Ratio		0.01			0.86	0.15		0.91		0.41	0.46	
Uniform Delay, d1		48.9			40.5	30.1		23.1		11.8	10.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.1			22.1	0.2		13.2		0.6	0.2	
Delay (s)		49.0			62.6	30.3		36.3		12.4	10.9	
Level of Service		D			E	C		D		B	B	
Approach Delay (s)		49.0			46.3			36.3			11.2	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

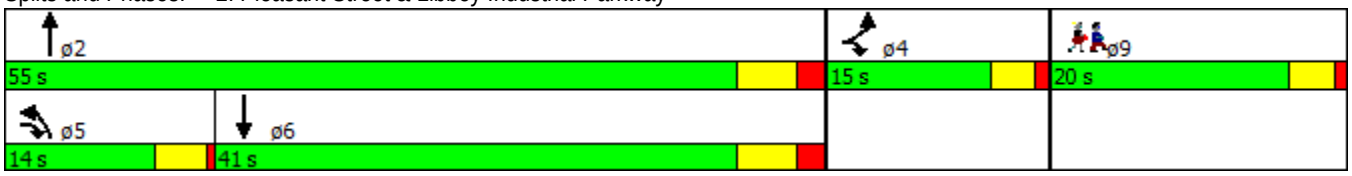


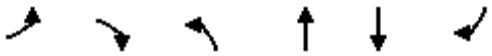
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	121	372	137	850	1004	69	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1678	1568	1745	1818	3321	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1678	1568	1743	1818	3321	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		359			9		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	132	404	149	924	1166	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	15.0		14.0	55.0	41.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	10.0	23.3	9.8	45.0	31.1		
Actuated g/C Ratio	0.15	0.34	0.14	0.66	0.45		
v/c Ratio	0.54	0.52	0.60	0.77	0.77		
Control Delay	40.0	5.7	43.0	16.3	21.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	40.0	5.7	43.0	16.3	21.3		
LOS	D	A	D	B	C		
Approach Delay	14.1			20.0	21.3		
Approach LOS	B			B	C		
Queue Length 50th (ft)	51	12	59	196	188		
Queue Length 95th (ft)	#149	60	#181	#742	#452		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	278	770	263	1346	1760		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.47	0.52	0.57	0.69	0.66		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 68.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 61.3%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	121	372	137	850	1004	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1678	1568	1745	1818	3323	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1678	1568	1745	1818	3323	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	404	149	924	1091	75
RTOR Reduction (vph)	0	260	0	0	5	0
Lane Group Flow (vph)	132	144	149	924	1161	0
Confl. Peds. (#/hr)			1			1
Heavy Vehicles (%)	4%	3%	0%	1%	4%	2%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	10.0	19.8	9.8	45.1	31.3	
Effective Green, g (s)	10.0	19.8	9.8	45.1	31.3	
Actuated g/C Ratio	0.14	0.28	0.14	0.63	0.44	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	234	434	239	1146	1454	
v/s Ratio Prot	c0.08	0.09	0.09	c0.51	0.35	
v/s Ratio Perm						
v/c Ratio	0.56	0.33	0.62	0.81	0.80	
Uniform Delay, d1	28.7	20.6	29.1	9.9	17.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	0.5	5.0	4.2	3.2	
Delay (s)	31.8	21.0	34.1	14.2	20.5	
Level of Service	C	C	C	B	C	
Approach Delay (s)	23.7			16.9	20.5	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	29	298	281	25	47	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	3	4	2	0
Mvmt Flow	32	324	305	27	51	105

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	333	0	-	0	706	319
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	387	-
Critical Hdwy	4.14	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1215	-	-	-	402	726
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	686	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1215	-	-	-	389	726
Mov Cap-2 Maneuver	-	-	-	-	389	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	664	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1215	-	-	-	389	726
HCM Lane V/C Ratio	0.026	-	-	-	0.131	0.145
HCM Control Delay (s)	8	0	-	-	15.6	10.8
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.5

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	14	256	774	12	378	993
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	2	0	1	2
Mvmt Flow	15	278	841	13	411	1079

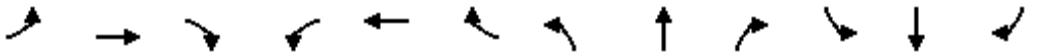
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2749	849	0	0	854	0
Stage 1	848	-	-	-	-	-
Stage 2	1901	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	22	362	-	-	790	-
Stage 1	423	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 11	362	-	-	789	-
Mov Cap-2 Maneuver	51	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	62	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	44.5	0	4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	51	362	789	-
HCM Lane V/C Ratio	-	-	0.298	0.769	0.521	-
HCM Control Delay (s)	-	-	103.2	41.3	14.4	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	1	6.2	3.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	327	91	237	274	215	63	948	233	261	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	273	355	99	258	298	234	68	1030	253	284	1224	260
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	13.0	15.0		13.0	15.0		15.0	41.5		25.0	51.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	6.1	8.1	21.9	6.1	8.1	32.4	7.8	34.5	47.7	18.3	45.0	58.2
Actuated g/C Ratio	0.06	0.08	0.22	0.06	0.08	0.32	0.08	0.34	0.47	0.18	0.45	0.58
v/c Ratio	2.65	1.28	0.29	2.53	1.08	0.48	0.50	0.87	0.35	0.97	0.84	0.32
Control Delay	785.9	190.4	31.9	733.5	120.9	31.7	61.1	41.9	21.0	89.2	33.0	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	785.9	190.4	31.9	733.5	120.9	31.7	61.1	41.9	21.0	89.2	33.0	14.9
LOS	F	F	C	F	F	C	E	D	C	F	C	B
Approach Delay		392.5			294.5			38.9			39.4	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~274	~138	48	~256	~97	106	40	292	87	169	318	70
Queue Length 95th (ft)	#574	#324	85	#545	#266	#209	#121	#649	237	#470	#734	216
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	103	277	342	102	277	490	141	1179	728	292	1454	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.65	1.28	0.29	2.53	1.08	0.48	0.48	0.87	0.35	0.97	0.84	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 127.5			
Actuated Cycle Length: 101.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.65			
Intersection Signal Delay: 138.1		Intersection LOS: F	
Intersection Capacity Utilization 86.6%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

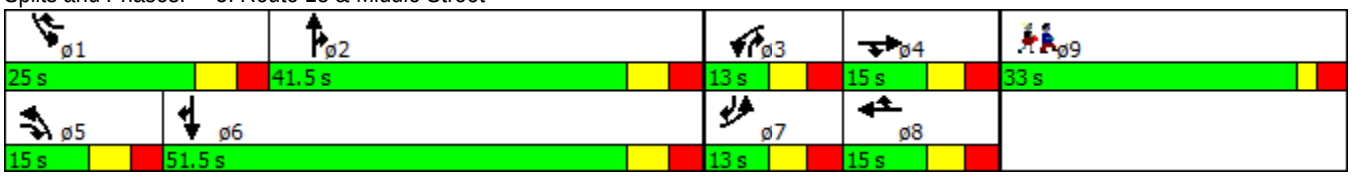
Intersection Summary

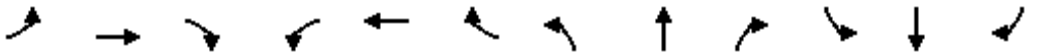
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

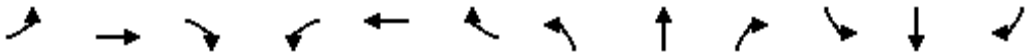




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	327	91	237	274	215	63	948	233	261	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	355	99	258	298	234	68	1030	253	284	1224	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	273	355	99	258	298	234	68	1030	253	284	1224	260
Heavy Vehicles (%)	1%	1%	0%	2%	1%	2%	0%	2%	2%	3%	2%	4%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Effective Green, g (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Actuated g/C Ratio	0.06	0.08	0.15	0.06	0.08	0.25	0.07	0.33	0.46	0.17	0.43	0.56
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	100	266	236	99	266	385	131	1136	708	282	1401	801
v/s Ratio Prot	c0.16	c0.10	0.06	0.15	0.09	0.15	0.04	0.30	0.16	c0.18	c0.37	0.18
v/s Ratio Perm												
v/c Ratio	2.73	1.33	0.42	2.61	1.12	0.61	0.52	0.91	0.36	1.01	0.87	0.32
Uniform Delay, d1	49.4	48.4	40.3	49.4	48.4	34.7	46.7	33.7	18.4	43.3	27.4	12.5
Progression 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
Incremental Delay, d2	805.9	173.9	0.4	751.1	91.4	1.9	3.4	10.2	0.1	55.4	6.1	0.1
Delay (s)	855.3	222.3	40.8	800.5	139.8	36.5	50.2	43.8	18.5	98.7	33.5	12.6
Level of Service	F	F	D	F	F	D	D	D	B	F	C	B
Approach Delay (s)		435.3			325.0			39.4			40.9	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	150.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	33.5
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	373	35	94	249	183	40	996	94	242	1286	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3370	0	1711	1801	1531	1694	3403	0	1719	3368	0
Flt Permitted	0.400			0.400			0.148			0.118		
Satd. Flow (perm)	752	3370	0	720	1801	1531	264	3403	0	214	3368	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	126	443	0	102	271	199	43	1185	0	263	1465	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	16.5		11.5	16.5		12.0	32.0		12.0	32.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	15.0	10.0		15.0	10.0	37.1	36.1	31.0		58.0	52.0	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.37	0.36	0.31		0.58	0.52	
v/c Ratio	0.77	1.31		0.65	1.51	0.35	0.26	1.12		0.59	0.84	
Control Delay	66.0	198.3		55.0	287.6	25.7	18.2	101.3		27.8	28.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	66.0	198.3		55.0	287.6	25.7	18.2	101.3		27.8	28.8	
LOS	E	F		E	F	C	B	F		C	C	
Approach Delay		169.0			155.0			98.4			28.6	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)	68	~192		55	~241	87	9	386		80	392	
Queue Length 95th (ft)	#123	#293		#120	#400	#186	41	#665		#385	#869	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	164	337		157	180	568	170	1054		446	1750	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.77	1.31		0.65	1.51	0.35	0.25	1.12		0.59	0.84	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.51			
Intersection Signal Delay: 86.7		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

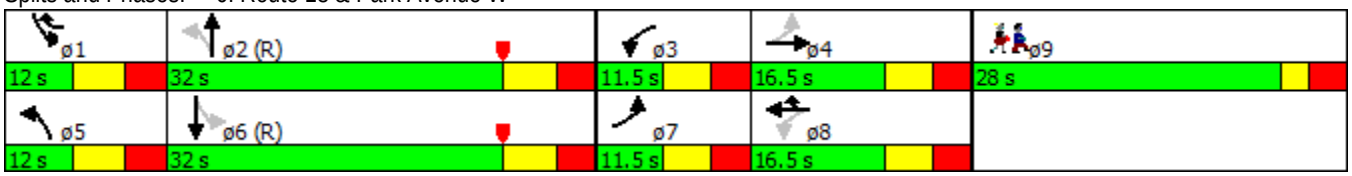
Intersection Capacity Utilization 86.0% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

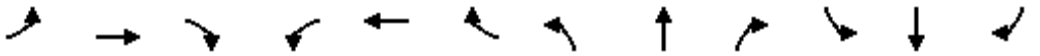
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Route 18 & Park Avenue W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	373	35	94	249	183	40	996	94	242	1286	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3371		1711	1801	1531	1694	3404		1719	3369	
Flt Permitted	0.40	1.00		0.40	1.00	1.00	0.15	1.00		0.12	1.00	
Satd. Flow (perm)	752	3371		720	1801	1531	264	3404		213	3369	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	405	38	102	271	199	43	1083	102	263	1398	67
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	126	443	0	102	271	199	43	1185	0	263	1465	0
Heavy Vehicles (%)	1%	1%	15%	2%	2%	2%	3%	1%	1%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	1
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Effective Green, g (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.31	0.30	0.27		0.55	0.45	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	337		157	180	480	125	919		440	1522	
v/s Ratio Prot	c0.04	0.13		0.03	c0.15	0.13	0.01	c0.35		c0.13	c0.43	
v/s Ratio Perm	0.08			0.06			0.09			0.20		
v/c Ratio	0.77	1.31		0.65	1.51	0.41	0.34	1.29		0.60	0.96	
Uniform Delay, d1	40.3	45.0		39.0	45.0	27.1	26.3	36.5		20.4	26.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.5	161.1		6.8	254.2	0.2	0.6	138.5		1.5	15.7	
Delay (s)	57.7	206.1		45.8	299.2	27.3	26.9	175.0		21.9	42.3	
Level of Service	E	F		D	F	C	C	F		C	D	
Approach Delay (s)		173.3			159.4			169.8			39.2	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	113.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	95	337	223	47	661	99	137	538	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3399	0	1661	1699	0	0	3408	0	1668	1763	0
Flt Permitted		0.649		0.950				0.837		0.950		
Satd. Flow (perm)	0	2217	0	1661	1699	0	0	2861	0	1668	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			28			12			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	559	0	103	608	0	0	877	0	149	608	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	35.0	35.0		14.0	49.0		42.0	42.0		17.0	59.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.27		0.08	0.39			0.33		0.11	0.48	
v/c Ratio		0.93		0.77	0.89			0.92		0.83	0.71	
Control Delay		63.1		86.8	47.6			51.6		85.3	30.0	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		63.1		86.8	47.6			51.6		85.3	30.0	
LOS		E		F	D			D		F	C	
Approach Delay		63.1			53.2			51.6			40.9	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)		193		71	362			296		102	309	
Queue Length 95th (ft)		#393		#200	#762			#559		#268	#626	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		602		133	685			955		179	852	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.93		0.77	0.89			0.92		0.83	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 51.4		Intersection LOS: D	
Intersection Capacity Utilization 114.9%		ICU Level of Service H	

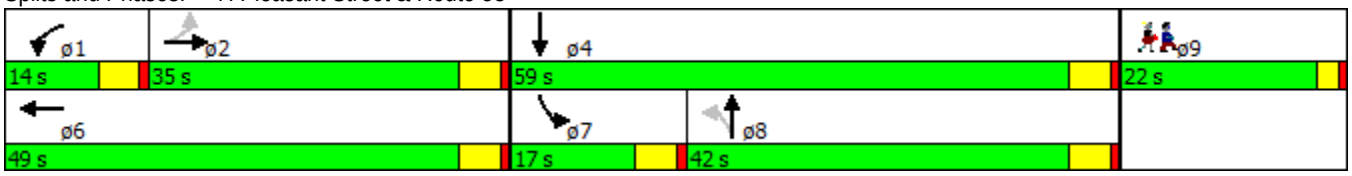
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

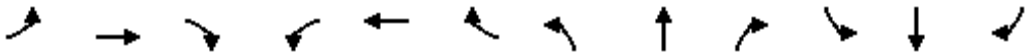
Intersection Summary

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53

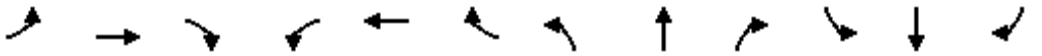




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	95	337	223	47	661	99	137	538	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frt		0.98		1.00	0.94			0.98		1.00	0.99	
Flt Protected		1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3400		1661	1700			3407		1668	1764	
Flt Permitted		0.65		0.95	1.00			0.84		0.95	1.00	
Satd. Flow (perm)		2218		1661	1700			2859		1668	1764	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	441	63	103	366	242	51	718	108	149	585	23
RTOR Reduction (vph)	0	7	0	0	17	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	552	0	103	591	0	0	869	0	149	607	0
Heavy Vehicles (%)	4%	1%	2%	4%	1%	0%	0%	0%	2%	2%	1%	0%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Effective Green, g (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.26		0.08	0.39			0.32		0.11	0.47	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		583		130	654			926		175	834	
v/s Ratio Prot				0.06	c0.35					0.09	c0.34	
v/s Ratio Perm		0.25						c0.30				
v/c Ratio		0.95		0.79	0.90			0.94		0.85	0.73	
Uniform Delay, d1		41.5		52.0	33.3			37.7		50.5	24.3	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		24.6		27.2	16.1			16.7		30.7	3.4	
Delay (s)		66.1		79.2	49.4			54.4		81.2	27.7	
Level of Service		E		E	D			D		F	C	
Approach Delay (s)		66.1			53.7			54.4			38.2	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	52.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	114.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	184	0	135	6	313	279	148	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1767	0	0	1532	1473	0	1690	0	1711	1765	0
Flt Permitted		0.989			0.950			0.995		0.270		
Satd. Flow (perm)	0	1767	0	0	1532	1473	0	1683	0	486	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				147		41				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	18	0	0	200	147	0	650	0	161	414	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		19.0	19.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.4			15.9	26.2		39.8		53.5	51.4	
Actuated g/C Ratio		0.09			0.19	0.31		0.47		0.63	0.60	
v/c Ratio		0.11			0.70	0.27		0.81		0.39	0.39	
Control Delay		31.5			52.3	5.0		29.9		13.1	13.0	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		31.5			52.3	5.0		29.9		13.1	13.0	
LOS		C			D	A		C		B	B	
Approach Delay		31.5			32.3			29.9			13.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		3			83	0		204		21	72	
Queue Length 95th (ft)		30			#338	31		#742		116	320	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		164			284	554		1016		410	1289	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.11			0.70	0.27		0.64		0.39	0.32	

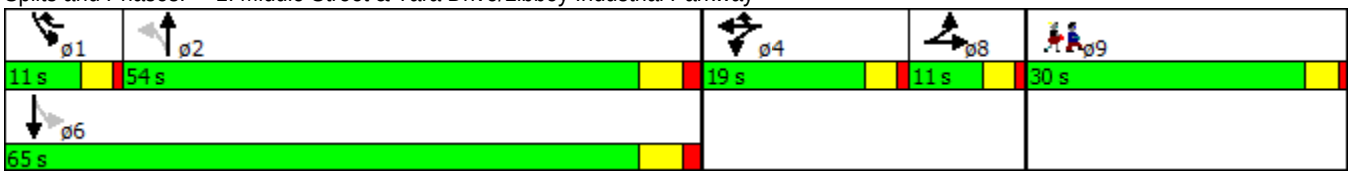
Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 85.5			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

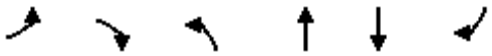
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	184	0	135	6	313	279	148	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.91			1.00	0.85		0.94		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1767			1532	1473		1691		1711	1765	
Flt Permitted		0.99			0.95	1.00		1.00		0.27	1.00	
Satd. Flow (perm)		1767			1532	1473		1684		487	1765	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	2	12	200	0	147	7	340	303	161	412	2
RTOR Reduction (vph)	0	12	0	0	0	109	0	23	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	200	38	0	627	0	161	414	0
Heavy Vehicles (%)	0%	0%	0%	10%	0%	6%	0%	3%	7%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		2.2			15.9	23.3		40.1		51.5	51.5	
Effective Green, g (s)		2.2			15.9	23.3		40.1		51.5	51.5	
Actuated g/C Ratio		0.02			0.17	0.26		0.44		0.56	0.56	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		42			267	376		740		374	996	
v/s Ratio Prot		c0.00			c0.13	0.03				0.03	c0.23	
v/s Ratio Perm								c0.37		0.21		
v/c Ratio		0.15			0.75	0.10		0.85		0.43	0.42	
Uniform Delay, d1		43.6			35.8	25.9		22.8		12.4	11.3	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		1.3			10.5	0.1		8.8		0.6	0.2	
Delay (s)		44.9			46.3	26.0		31.6		13.0	11.5	
Level of Service		D			D	C		C		B	B	
Approach Delay (s)		44.9			37.7			31.6			11.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	22.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

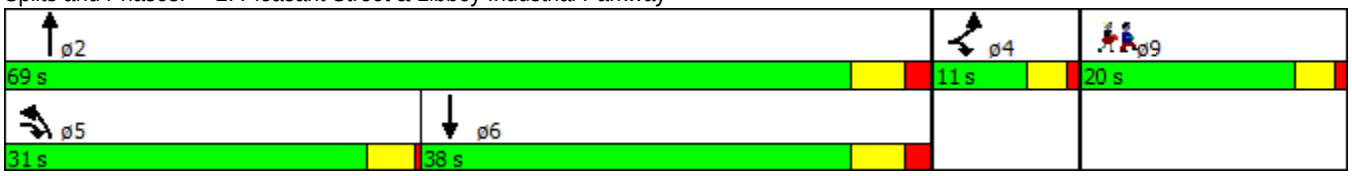


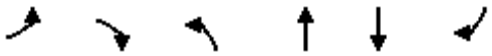
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	38	132	336	1044	799	135	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1572	1524	1646	1733	3223	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1572	1524	1646	1733	3223	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		143			20		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	41	143	365	1135	1015	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	11.0		31.0	69.0	38.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	7.1	32.9	22.4	63.5	37.0		
Actuated g/C Ratio	0.08	0.39	0.27	0.76	0.44		
v/c Ratio	0.31	0.21	0.83	0.87	0.71		
Control Delay	45.3	3.0	46.6	18.5	24.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	45.3	3.0	46.6	18.5	24.7		
LOS	D	A	D	B	C		
Approach Delay	12.5			25.4	24.7		
Approach LOS	B			C	C		
Queue Length 50th (ft)	20	0	167	253	199		
Queue Length 95th (ft)	60	24	#369	#1034	#470		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	132	761	533	1309	1431		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.31	0.19	0.68	0.87	0.71		

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 84			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 24.2		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	38	132	336	1044	799	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1572	1524	1646	1733	3224	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1572	1524	1646	1733	3224	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	143	365	1135	868	147
RTOR Reduction (vph)	0	95	0	0	12	0
Lane Group Flow (vph)	41	48	365	1135	1003	0
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	11%	6%	6%	6%	6%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.1	29.5	22.4	63.5	37.1	
Effective Green, g (s)	7.1	29.5	22.4	63.5	37.1	
Actuated g/C Ratio	0.08	0.34	0.26	0.73	0.42	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	127	514	422	1260	1370	
v/s Ratio Prot	c0.03	0.03	0.22	c0.66	0.31	
v/s Ratio Perm						
v/c Ratio	0.32	0.09	0.86	0.90	0.73	
Uniform Delay, d1	37.8	19.8	31.0	9.4	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.5	0.1	16.6	9.1	2.1	
Delay (s)	39.3	19.8	47.6	18.5	23.0	
Level of Service	D	B	D	B	C	
Approach Delay (s)	24.2			25.6	23.0	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	100	267	369	73	20	33
Conflicting Peds, #/hr	4	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	5	0	7	4
Mvmt Flow	109	290	401	79	22	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	480	0	-	0	949	445
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	508	-
Critical Hdwy	4.11	-	-	-	6.47	6.24
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.336
Pot Cap-1 Maneuver	1088	-	-	-	283	609
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	594	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1083	-	-	-	249	606
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	523	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1083	-	-	-	249	606
HCM Lane V/C Ratio	0.1	-	-	-	0.087	0.059
HCM Control Delay (s)	8.7	0	-	-	20.8	11.3
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3	0.2

Intersection	
Int Delay, s/veh	68.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	408	1026	24	183	790
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	8	0	3	6
Mvmt Flow	2	443	1115	26	199	859

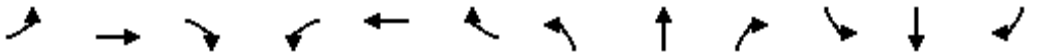
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2385	1129	0	0	1141	0
Stage 1	1128	-	-	-	-	-
Stage 2	1257	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	38	~ 248	-	-	609	-
Stage 1	312	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	26	~ 248	-	-	608	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	181	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 402.8	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	115	248	608	-
HCM Lane V/C Ratio	-	-	0.019	1.788	0.327	-
HCM Control Delay (s)	-	-	36.9	$ 404.6	13.8	-
HCM Lane LOS	-	-	E	F	B	-
HCM 95th %tile Q(veh)	-	-	0.1	30	1.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	226	63	195	299	262	107	1181	220	239	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	175	246	68	212	325	285	116	1284	239	260	752	270
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	12.0	14.0		17.0	19.0		22.0	64.5		27.0	69.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	5.0	7.1	26.2	10.1	12.1	38.2	13.2	57.5	74.7	20.2	64.5	76.6
Actuated g/C Ratio	0.04	0.05	0.20	0.08	0.09	0.30	0.10	0.45	0.58	0.16	0.50	0.59
v/c Ratio	2.73	1.34	0.23	1.67	1.03	0.66	0.68	0.85	0.28	1.08	0.48	0.33
Control Delay	840.9	231.6	40.9	367.6	113.8	46.8	76.9	39.4	16.8	131.9	24.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	840.9	231.6	40.9	367.6	113.8	46.8	76.9	39.4	16.8	131.9	24.7	17.1
LOS	F	F	D	F	F	D	E	D	B	F	C	B
Approach Delay		423.1			156.0			38.7			44.8	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~232	~130	44	~240	137	191	89	450	84	~221	194	97
Queue Length 95th (ft)	#474	#285	79	#508	#321	#378	#211	#875	219	#526	387	255
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	64	183	317	127	317	431	196	1509	852	240	1556	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.73	1.34	0.21	1.67	1.03	0.66	0.59	0.85	0.28	1.08	0.48	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 155.5			
Actuated Cycle Length: 129.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.73			
Intersection Signal Delay: 107.8		Intersection LOS: F	
Intersection Capacity Utilization 86.8%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

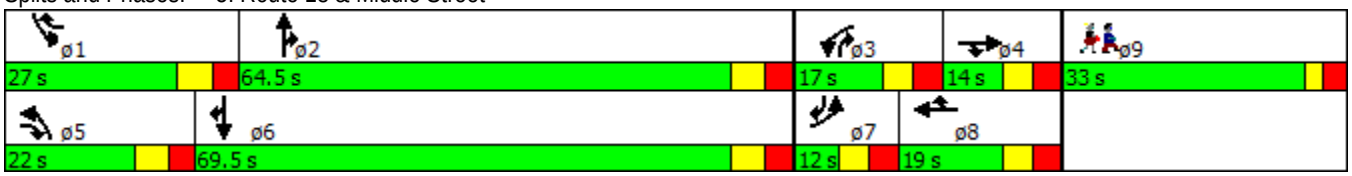
Intersection Summary

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	226	63	195	299	262	107	1181	220	239	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	246	68	212	325	285	116	1284	239	260	752	270
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	175	246	68	212	325	285	116	1284	239	260	752	270
Heavy Vehicles (%)	5%	4%	7%	7%	3%	7%	5%	4%	7%	8%	7%	8%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Effective Green, g (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Actuated g/C Ratio	0.04	0.05	0.15	0.08	0.09	0.24	0.10	0.43	0.56	0.15	0.48	0.58
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	62	179	222	123	310	355	166	1465	832	234	1510	798
v/s Ratio Prot	0.11	0.07	0.05	c0.13	c0.10	0.20	0.07	c0.38	0.16	c0.17	c0.24	0.20
v/s Ratio Perm												
v/c Ratio	2.82	1.37	0.31	1.72	1.05	0.80	0.70	0.88	0.29	1.11	0.50	0.34
Uniform Delay, d1	64.0	63.0	50.1	61.5	60.4	47.3	58.0	34.5	15.0	56.4	23.3	14.7
Progression 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
Incremental Delay, d2	862.9	199.6	0.3	357.4	64.3	11.7	12.1	6.0	0.1	91.9	0.1	0.1
Delay (s)	926.9	262.5	50.4	418.8	124.7	59.0	70.1	40.5	15.1	148.3	23.4	14.8
Level of Service	F	F	D	F	F	E	E	D	B	F	C	B
Approach Delay (s)		470.8			177.8			38.9			46.9	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	118.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	33.5
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	308	52	77	435	365	120	1296	47	174	696	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3263	0	1646	1783	1531	1646	3291	0	1686	3319	0
Flt Permitted	0.280			0.380			0.346			0.144		
Satd. Flow (perm)	522	3263	0	658	1783	1531	600	3291	0	256	3319	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	150	392	0	84	473	397	130	1460	0	189	810	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	18.5		11.5	18.5		12.0	30.0		12.0	30.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	18.3	14.3		17.0	12.0	42.0	34.1	26.1		56.0	42.4	
Actuated g/C Ratio	0.18	0.14		0.17	0.12	0.42	0.34	0.26		0.56	0.42	
v/c Ratio	0.95	0.84		0.52	2.22	0.62	0.45	1.70		0.39	0.58	
Control Delay	98.2	60.7		44.6	588.0	30.0	22.9	347.2		21.2	26.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	98.2	60.7		44.6	588.0	30.0	22.9	347.2		21.2	26.6	
LOS	F	E		D	F	C	C	F		C	C	
Approach Delay		71.1			308.0			320.7			25.5	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)	80	~133		43	~488	180	30	~685		46	185	
Queue Length 95th (ft)	#181	#233		85	#683	#466	103	#894		#259	#421	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	158	466		161	213	642	288	859		490	1406	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.95	0.84		0.52	2.22	0.62	0.45	1.70		0.39	0.58	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.22	
Intersection Signal Delay: 212.4	Intersection LOS: F

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

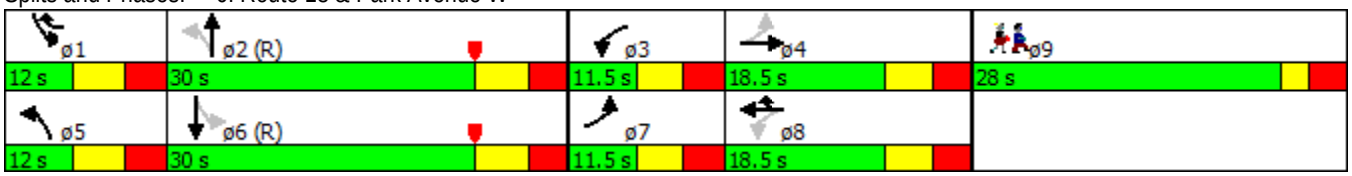
Intersection Capacity Utilization 100.0% ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

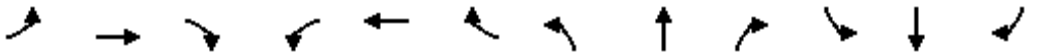
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Route 18 & Park Avenue W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	308	52	77	435	365	120	1296	47	174	696	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3264		1646	1783	1531	1646	3291		1686	3320	
Flt Permitted	0.28	1.00		0.38	1.00	1.00	0.35	1.00		0.14	1.00	
Satd. Flow (perm)	521	3264		658	1783	1531	599	3291		255	3320	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	335	57	84	473	397	130	1409	51	189	757	53
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	150	392	0	84	473	397	130	1460	0	189	810	0
Heavy Vehicles (%)	2%	4%	8%	6%	3%	2%	6%	5%	7%	4%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	2
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Effective Green, g (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Actuated g/C Ratio	0.19	0.14		0.17	0.13	0.38	0.29	0.21		0.52	0.37	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	163	466		153	237	575	256	684		480	1231	
v/s Ratio Prot	c0.05	0.12		0.02	c0.27	c0.26	0.04	c0.44		0.10	c0.24	
v/s Ratio Perm	0.13			0.07			0.11			0.11		
v/c Ratio	0.92	0.84		0.55	2.00	0.69	0.51	2.13		0.39	0.66	
Uniform Delay, d1	39.1	41.7		36.5	43.4	26.3	27.5	39.6		16.1	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	47.1	12.4		2.2	462.8	2.9	0.6	515.4		0.2	2.8	
Delay (s)	86.3	54.2		38.6	506.2	29.2	28.1	555.0		16.3	28.9	
Level of Service	F	D		D	F	C	C	F		B	C	
Approach Delay (s)		63.0			266.5			511.9			26.5	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	276.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	91	603	168	59	752	90	138	513	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3215	0	1614	1663	0	0	3211	0	1668	1728	0
Flt Permitted		0.574		0.950				0.774		0.950		
Satd. Flow (perm)	0	1855	0	1614	1663	0	0	2492	0	1668	1728	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			12			9			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	325	0	99	838	0	0	979	0	150	578	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	37.0	37.0		15.0	52.0		42.0	42.0		14.0	56.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		32.4		9.8	47.3			37.2		9.0	51.3	
Actuated g/C Ratio		0.29		0.09	0.42			0.33		0.08	0.46	
v/c Ratio		0.60		0.71	1.19			1.18		1.12	0.73	
Control Delay		40.0		77.5	129.0			127.4		160.5	32.9	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		40.0		77.5	129.0			127.4		160.5	32.9	
LOS		D		E	F			F		F	C	
Approach Delay		40.0			123.6			127.4			59.2	
Approach LOS		D			F			F			E	
Queue Length 50th (ft)		96		67	~681			~417		~116	306	
Queue Length 95th (ft)		184		#184	#1186			#709		#302	#643	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		543		144	706			830		134	789	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.60		0.69	1.19			1.18		1.12	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 99.9		Intersection LOS: F	
Intersection Capacity Utilization 122.1%		ICU Level of Service H	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

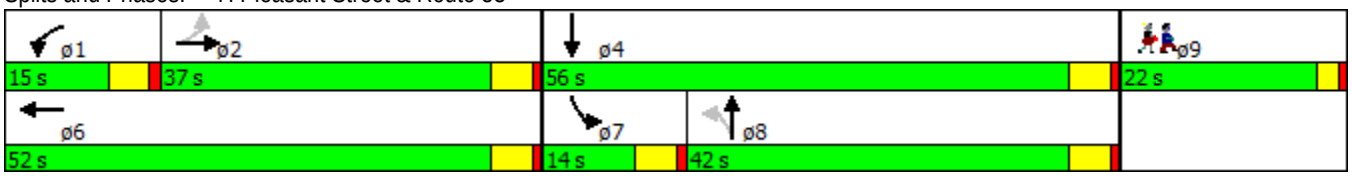
Intersection Summary

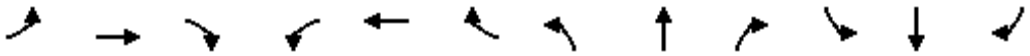
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	91	603	168	59	752	90	138	513	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.97			0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3215		1614	1663			3210		1668	1728	
Flt Permitted		0.57		0.95	1.00			0.77		0.95	1.00	
Satd. Flow (perm)		1856		1614	1663			2493		1668	1728	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	252	39	99	655	183	64	817	98	150	558	20
RTOR Reduction (vph)	0	8	0	0	7	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	317	0	99	831	0	0	973	0	150	577	0
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	24%	5%	6%	7%	5%	7%	24%	5%	10%	2%	3%	6%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		32.5		9.8	47.3			37.3		9.0	51.3	
Effective Green, g (s)		32.5		9.8	47.3			37.3		9.0	51.3	
Actuated g/C Ratio		0.28		0.09	0.41			0.32		0.08	0.45	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		524		137	684			809		130	771	
v/s Ratio Prot				0.06	c0.50					c0.09	0.33	
v/s Ratio Perm		0.17						c0.39				
v/c Ratio		0.61		0.72	1.21			1.20		1.15	0.75	
Uniform Delay, d1		35.6		51.2	33.8			38.8		53.0	26.4	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.3		17.1	109.8			102.9		126.2	4.3	
Delay (s)		37.9		68.3	143.6			141.7		179.1	30.7	
Level of Service		D		E	F			F		F	C	
Approach Delay (s)		37.9			135.6			141.7			61.3	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	108.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	114.9	Sum of lost time (s)	23.0
Intersection Capacity Utilization	122.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

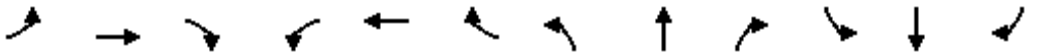
Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	16	16	0	0	55	78	38	0	20	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	17	17	0	0	60	85	41	0	22	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	248	269	23	257	249	105	24	0	0	126	0	0
Stage 1	23	23	-	225	225	-	-	-	-	-	-	-
Stage 2	225	246	-	32	24	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	710	641	1060	700	657	955	1604	-	-	1473	-	-
Stage 1	1000	880	-	782	721	-	-	-	-	-	-	-
Stage 2	782	706	-	990	879	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	688	615	1060	667	631	955	1604	-	-	1473	-	-
Mov Cap-2 Maneuver	688	615	-	667	631	-	-	-	-	-	-	-
Stage 1	960	880	-	751	692	-	-	-	-	-	-	-
Stage 2	751	678	-	974	879	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	10.5	2.4	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1604	-	-	1060	667	1473	-	-
HCM Lane V/C Ratio	0.037	-	-	0.016	0.026	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	246	0	224	10	507	230	136	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1738	0	0	1668	1561	0	1766	0	1711	1797	0
Flt Permitted		0.989			0.950			0.992		0.240		
Satd. Flow (perm)	0	1738	0	0	1668	1561	0	1754	0	432	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130				243		21			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	9	0	0	267	243	0	812	0	148	498	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		20.0	20.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			16.4	27.1		49.2		62.5	60.5	
Actuated g/C Ratio		0.08			0.18	0.29		0.53		0.67	0.65	
v/c Ratio		0.04			0.91	0.39		0.87		0.38	0.43	
Control Delay		0.2			74.5	4.8		32.5		12.1	12.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		0.2			74.5	4.8		32.5		12.1	12.5	
LOS		A			E	A		C		B	B	
Approach Delay		0.3			41.3			32.5			12.4	
Approach LOS		A			D			C			B	
Queue Length 50th (ft)		0			139	0		316		20	96	
Queue Length 95th (ft)		0			#448	38		#1041		109	405	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		253			293	625		935		388	1166	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.04			0.91	0.39		0.87		0.38	0.43	

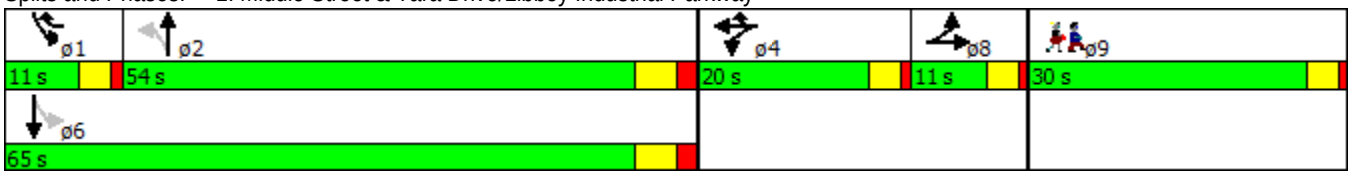
Intersection Summary			
Area Type:	Other		
Cycle Length: 126			
Actuated Cycle Length: 93.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 28.1		Intersection LOS: C	
Intersection Capacity Utilization 99.1%		ICU Level of Service F	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

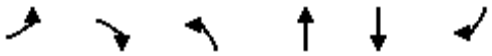
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	246	0	224	10	507	230	136	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.90			1.00	0.85		0.96		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1738			1668	1561		1768		1711	1798	
Flt Permitted		0.99			0.95	1.00		0.99		0.24	1.00	
Satd. Flow (perm)		1738			1668	1561		1755		432	1798	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	0	7	267	0	243	11	551	250	148	493	5
RTOR Reduction (vph)	0	9	0	0	0	185	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	267	58	0	801	0	148	498	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	6%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Effective Green, g (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Actuated g/C Ratio		0.01			0.16	0.24		0.49		0.61	0.61	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		17			274	369		867		354	1091	
v/s Ratio Prot		c0.00			c0.16	0.04				0.03	c0.28	
v/s Ratio Perm								c0.46		0.22		
v/c Ratio		0.01			0.97	0.16		0.92		0.42	0.46	
Uniform Delay, d1		48.9			41.4	30.2		23.5		11.9	10.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.1			46.9	0.2		15.3		0.6	0.2	
Delay (s)		49.0			88.4	30.3		38.7		12.5	10.9	
Level of Service		D			F	C		D		B	B	
Approach Delay (s)		49.0			60.7			38.7			11.3	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

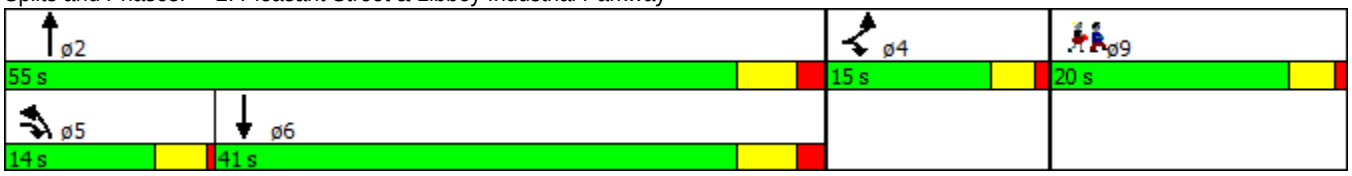


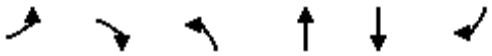
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	127	382	141	850	1004	71	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1678	1568	1745	1818	3321	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1678	1568	1743	1818	3321	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		359			9		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	138	415	153	924	1168	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	15.0		14.0	55.0	41.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	10.1	23.5	9.9	45.2	31.3		
Actuated g/C Ratio	0.15	0.34	0.14	0.66	0.46		
v/c Ratio	0.56	0.54	0.61	0.77	0.77		
Control Delay	40.7	6.1	43.7	16.3	21.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	40.7	6.1	43.7	16.3	21.4		
LOS	D	A	D	B	C		
Approach Delay	14.7			20.2	21.4		
Approach LOS	B			C	C		
Queue Length 50th (ft)	54	15	61	196	189		
Queue Length 95th (ft)	#157	64	#188	#742	#454		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	277	768	262	1337	1750		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.50	0.54	0.58	0.69	0.67		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 68.7			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	127	382	141	850	1004	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1678	1568	1745	1818	3322	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1678	1568	1745	1818	3322	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	415	153	924	1091	77
RTOR Reduction (vph)	0	259	0	0	5	0
Lane Group Flow (vph)	138	156	153	924	1163	0
Confl. Peds. (#/hr)			1			1
Heavy Vehicles (%)	4%	3%	0%	1%	4%	2%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	10.1	20.0	9.9	45.3	31.4	
Effective Green, g (s)	10.1	20.0	9.9	45.3	31.4	
Actuated g/C Ratio	0.14	0.28	0.14	0.63	0.44	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	236	436	240	1147	1452	
v/s Ratio Prot	c0.08	0.10	0.09	c0.51	0.35	
v/s Ratio Perm						
v/c Ratio	0.58	0.36	0.64	0.81	0.80	
Uniform Delay, d1	28.9	20.8	29.3	9.9	17.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	0.5	5.5	4.2	3.3	
Delay (s)	32.6	21.3	34.7	14.2	20.8	
Level of Service	C	C	C	B	C	
Approach Delay (s)	24.1			17.1	20.8	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	40	300	282	30	61	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	3	4	2	0
Mvmt Flow	43	326	307	33	66	137

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	339	0	-	0	736	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	4.14	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1209	-	-	-	386	723
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1209	-	-	-	369	723
Mov Cap-2 Maneuver	-	-	-	-	369	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1209	-	-	-	369	723
HCM Lane V/C Ratio	0.036	-	-	-	0.18	0.189
HCM Control Delay (s)	8.1	0	-	-	16.9	11.1
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6	0.7

Intersection	
Int Delay, s/veh	7.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	14	258	776	12	383	998
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	2	0	1	2
Mvmt Flow	15	280	843	13	416	1085

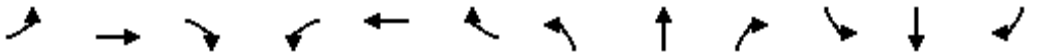
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2767	851	0	0	857	0
Stage 1	850	-	-	-	-	-
Stage 2	1917	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	22	361	-	-	788	-
Stage 1	422	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 10	361	-	-	787	-
Mov Cap-2 Maneuver	50	-	-	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	60	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.6	0	4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	50	361	787	-
HCM Lane V/C Ratio	-	-	0.304	0.777	0.529	-
HCM Control Delay (s)	-	-	105.8	42.3	14.6	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	1.1	6.4	3.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	328	91	244	277	235	63	948	236	268	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	273	357	99	265	301	255	68	1030	257	291	1224	260
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	13.0	15.0		13.0	15.0		15.0	41.5		25.0	51.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	6.1	8.1	21.9	6.1	8.1	32.4	7.8	34.5	47.7	18.3	45.0	58.2
Actuated g/C Ratio	0.06	0.08	0.22	0.06	0.08	0.32	0.08	0.34	0.47	0.18	0.45	0.58
v/c Ratio	2.65	1.29	0.29	2.60	1.09	0.52	0.50	0.87	0.35	1.00	0.84	0.32
Control Delay	785.9	193.2	31.9	763.3	124.0	32.9	61.1	41.9	21.0	95.1	33.0	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	785.9	193.2	31.9	763.3	124.0	32.9	61.1	41.9	21.0	95.1	33.0	14.9
LOS	F	F	C	F	F	C	E	D	C	F	C	B
Approach Delay		393.3			302.0			38.9			40.5	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~274	~139	48	~265	~102	118	40	292	89	174	318	70
Queue Length 95th (ft)	#574	#326	85	#559	#270	#251	#121	#649	240	#484	#734	216
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	103	277	342	102	277	490	141	1179	728	292	1454	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.65	1.29	0.29	2.60	1.09	0.52	0.48	0.87	0.35	1.00	0.84	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 127.5			
Actuated Cycle Length: 101.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.65			
Intersection Signal Delay: 140.9		Intersection LOS: F	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

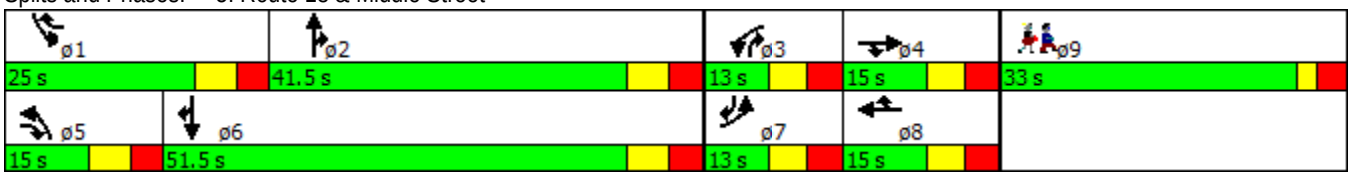
Intersection Summary

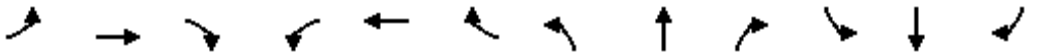
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

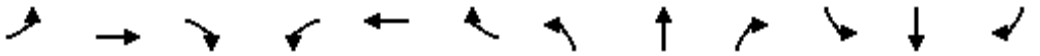




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	328	91	244	277	235	63	948	236	268	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	357	99	265	301	255	68	1030	257	291	1224	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	273	357	99	265	301	255	68	1030	257	291	1224	260
Heavy Vehicles (%)	1%	1%	0%	2%	1%	2%	0%	2%	2%	3%	2%	4%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Effective Green, g (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Actuated g/C Ratio	0.06	0.08	0.15	0.06	0.08	0.25	0.07	0.33	0.46	0.17	0.43	0.56
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	100	266	236	99	266	385	131	1136	708	282	1401	801
v/s Ratio Prot	c0.16	c0.10	0.06	0.15	0.09	0.17	0.04	0.30	0.17	c0.18	c0.37	0.18
v/s Ratio Perm												
v/c Ratio	2.73	1.34	0.42	2.68	1.13	0.66	0.52	0.91	0.36	1.03	0.87	0.32
Uniform Delay, d1	49.4	48.4	40.3	49.4	48.4	35.2	46.7	33.7	18.4	43.3	27.4	12.5
Progression 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
Incremental Delay, d2	805.9	177.0	0.4	782.5	95.3	3.3	3.4	10.2	0.1	62.1	6.1	0.1
Delay (s)	855.3	225.4	40.8	831.9	143.7	38.6	50.2	43.8	18.6	105.4	33.5	12.6
Level of Service	F	F	D	F	F	D	D	D	B	F	C	B
Approach Delay (s)		436.2			333.2			39.4			42.2	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	153.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	33.5
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	373	35	94	250	183	40	998	94	242	1291	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3370	0	1711	1801	1531	1694	3403	0	1719	3368	0
Flt Permitted	0.400			0.400			0.148			0.118		
Satd. Flow (perm)	752	3370	0	720	1801	1531	264	3403	0	214	3368	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	127	443	0	102	272	199	43	1187	0	263	1473	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	16.5		11.5	16.5		12.0	32.0		12.0	32.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	15.0	10.0		15.0	10.0	37.1	36.1	31.0		58.0	52.0	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.37	0.36	0.31		0.58	0.52	
v/c Ratio	0.77	1.31		0.65	1.51	0.35	0.26	1.13		0.59	0.84	
Control Delay	66.8	198.3		55.0	289.8	25.7	18.2	102.0		27.8	29.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	66.8	198.3		55.0	289.8	25.7	18.2	102.0		27.8	29.0	
LOS	E	F		E	F	C	B	F		C	C	
Approach Delay		169.0			156.3			99.0			28.8	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)	69	~192		55	~243	87	9	387		80	396	
Queue Length 95th (ft)	#125	#293		#120	#403	#186	41	#666		#385	#874	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	164	337		157	180	568	170	1054		446	1750	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.77	1.31		0.65	1.51	0.35	0.25	1.13		0.59	0.84	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 87.1	Intersection LOS: F

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

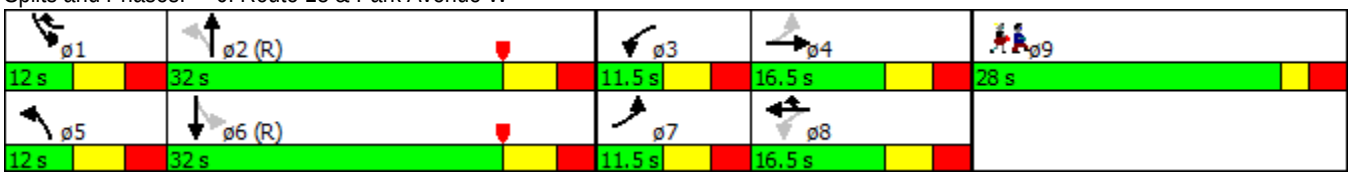
Intersection Capacity Utilization 86.1% ICU Level of Service E

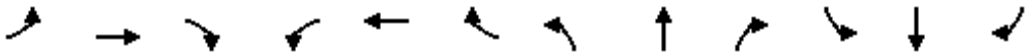
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

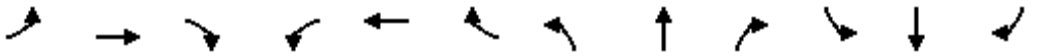
Splits and Phases: 6: Route 18 & Park Avenue W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	373	35	94	250	183	40	998	94	242	1291	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3371		1711	1801	1531	1694	3404		1719	3368	
Flt Permitted	0.40	1.00		0.40	1.00	1.00	0.15	1.00		0.12	1.00	
Satd. Flow (perm)	752	3371		720	1801	1531	264	3404		213	3368	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	127	405	38	102	272	199	43	1085	102	263	1403	70
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	127	443	0	102	272	199	43	1187	0	263	1473	0
Heavy Vehicles (%)	1%	1%	15%	2%	2%	2%	3%	1%	1%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	1
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Effective Green, g (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.31	0.30	0.27		0.55	0.45	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	337		157	180	480	125	919		440	1522	
v/s Ratio Prot	c0.04	0.13		0.03	c0.15	0.13	0.01	c0.35		c0.13	c0.44	
v/s Ratio Perm	0.08			0.06			0.09			0.20		
v/c Ratio	0.77	1.31		0.65	1.51	0.41	0.34	1.29		0.60	0.97	
Uniform Delay, d1	40.3	45.0		39.0	45.0	27.1	26.4	36.5		20.4	26.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.5	161.1		6.8	256.5	0.2	0.6	139.4		1.5	16.6	
Delay (s)	58.8	206.1		45.8	301.5	27.3	27.0	175.9		21.9	43.3	
Level of Service	E	F		D	F	C	C	F		C	D	
Approach Delay (s)		173.3			160.7			170.7			40.0	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	114.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	96	337	223	47	665	101	137	539	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3399	0	1661	1699	0	0	3405	0	1668	1763	0
Flt Permitted		0.649		0.950				0.836		0.950		
Satd. Flow (perm)	0	2217	0	1661	1699	0	0	2855	0	1668	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			28			12			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	559	0	104	608	0	0	884	0	149	609	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	35.0	35.0		14.0	49.0		42.0	42.0		17.0	59.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.27		0.08	0.39			0.33		0.11	0.48	
v/c Ratio		0.93		0.78	0.89			0.93		0.83	0.71	
Control Delay		63.1		87.8	47.6			53.0		85.3	30.1	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		63.1		87.8	47.6			53.0		85.3	30.1	
LOS		E		F	D			D		F	C	
Approach Delay		63.1			53.4			53.0			40.9	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)		193		72	362			300		102	309	
Queue Length 95th (ft)		#393		#202	#762			#566		#268	#632	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		602		133	685			952		179	852	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.93		0.78	0.89			0.93		0.83	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 51.9		Intersection LOS: D	
Intersection Capacity Utilization 115.2%		ICU Level of Service H	

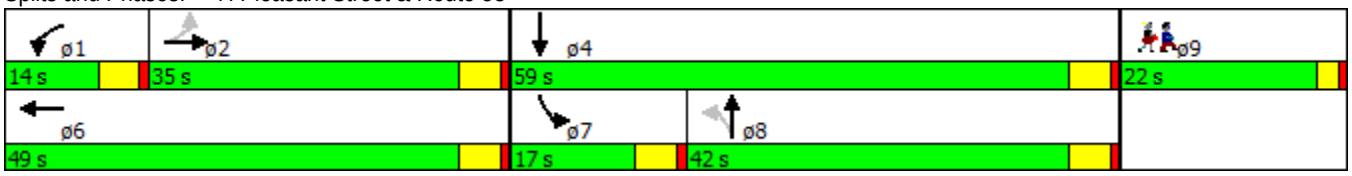
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

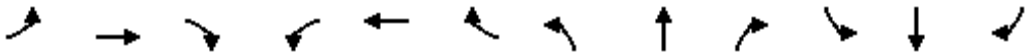
Intersection Summary

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	96	337	223	47	665	101	137	539	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frt		0.98		1.00	0.94			0.98		1.00	0.99	
Flt Protected		1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3400		1661	1700			3406		1668	1764	
Flt Permitted		0.65		0.95	1.00			0.84		0.95	1.00	
Satd. Flow (perm)		2218		1661	1700			2856		1668	1764	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	441	63	104	366	242	51	723	110	149	586	23
RTOR Reduction (vph)	0	7	0	0	17	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	552	0	104	591	0	0	876	0	149	608	0
Heavy Vehicles (%)	4%	1%	2%	4%	1%	0%	0%	0%	2%	2%	1%	0%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Effective Green, g (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.26		0.08	0.39			0.32		0.11	0.47	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		583		130	654			925		175	834	
v/s Ratio Prot				0.06	c0.35					0.09	c0.34	
v/s Ratio Perm		0.25						c0.31				
v/c Ratio		0.95		0.80	0.90			0.95		0.85	0.73	
Uniform Delay, d1		41.5		52.0	33.3			37.8		50.5	24.3	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		24.6		28.6	16.1			18.1		30.7	3.4	
Delay (s)		66.1		80.6	49.4			55.9		81.2	27.8	
Level of Service		E		F	D			E		F	C	
Approach Delay (s)		66.1			54.0			55.9			38.3	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	52.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	114.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

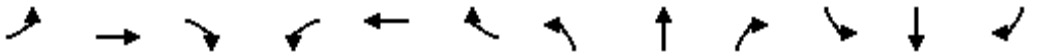
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	62	49	0	0	17	29	23	0	73	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	0	0
Mvmt Flow	2	0	67	53	0	0	18	32	25	0	79	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	160	172	79	194	160	44	79	0	0	57	0	0
Stage 1	79	79	-	81	81	-	-	-	-	-	-	-
Stage 2	81	93	-	113	79	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	810	725	987	770	736	1032	1532	-	-	1560	-	-
Stage 1	935	833	-	932	832	-	-	-	-	-	-	-
Stage 2	932	822	-	897	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	803	716	987	711	727	1032	1532	-	-	1560	-	-
Mov Cap-2 Maneuver	803	716	-	711	727	-	-	-	-	-	-	-
Stage 1	924	833	-	921	822	-	-	-	-	-	-	-
Stage 2	921	812	-	836	833	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.5	1.8	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1532	-	-	980	711	1560	-	-
HCM Lane V/C Ratio	0.012	-	-	0.071	0.075	-	-	-
HCM Control Delay (s)	7.4	0	-	9	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	208	0	138	6	313	370	160	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1767	0	0	1532	1473	0	1671	0	1711	1765	0
Flt Permitted		0.989			0.950			0.996		0.260		
Satd. Flow (perm)	0	1767	0	0	1532	1473	0	1664	0	468	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				150		54				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	18	0	0	226	150	0	749	0	174	414	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		19.0	19.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			15.4	25.2		49.2		62.5	60.4	
Actuated g/C Ratio		0.08			0.16	0.27		0.52		0.66	0.64	
v/c Ratio		0.12			0.91	0.30		0.84		0.43	0.37	
Control Delay		32.0			79.9	5.2		30.8		13.6	12.3	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		32.0			79.9	5.2		30.8		13.6	12.3	
LOS		C			E	A		C		B	B	
Approach Delay		32.0			50.1			30.8			12.7	
Approach LOS		C			D			C			B	
Queue Length 50th (ft)		3			116	0		259		23	72	
Queue Length 95th (ft)		30			#389	31		#912		124	320	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		145			249	503		892		404	1129	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.12			0.91	0.30		0.84		0.43	0.37	

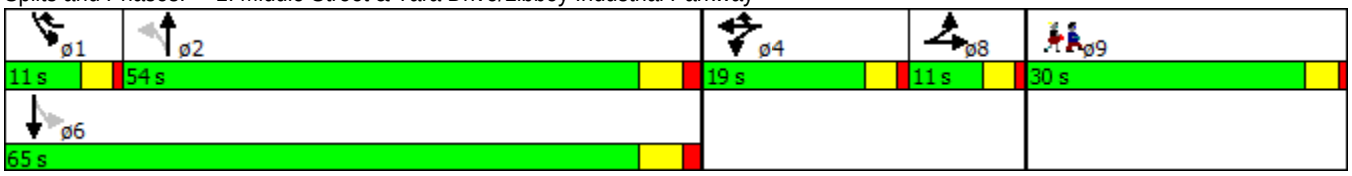
Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 94.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 28.8		Intersection LOS: C	
Intersection Capacity Utilization 91.0%		ICU Level of Service F	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

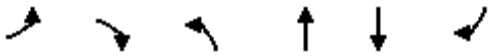
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	208	0	138	6	313	370	160	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.91			1.00	0.85		0.93		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1767			1532	1473		1669		1711	1765	
Flt Permitted		0.99			0.95	1.00		1.00		0.26	1.00	
Satd. Flow (perm)		1767			1532	1473		1663		468	1765	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	2	12	226	0	150	7	340	402	174	412	2
RTOR Reduction (vph)	0	12	0	0	0	116	0	27	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	226	34	0	722	0	174	414	0
Heavy Vehicles (%)	0%	0%	0%	10%	0%	6%	0%	3%	7%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		2.4			15.4	22.6		49.2		60.4	60.4	
Effective Green, g (s)		2.4			15.4	22.6		49.2		60.4	60.4	
Actuated g/C Ratio		0.02			0.15	0.23		0.49		0.60	0.60	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		42			235	332		817		371	1064	
v/s Ratio Prot		c0.00			c0.15	0.02				c0.03	0.23	
v/s Ratio Perm								c0.43		0.25		
v/c Ratio		0.15			0.96	0.10		0.88		0.47	0.39	
Uniform Delay, d1		47.9			42.1	30.7		22.9		12.0	10.3	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		1.3			47.7	0.1		11.1		0.7	0.2	
Delay (s)		49.1			89.8	30.8		33.9		12.7	10.5	
Level of Service		D			F	C		C		B	B	
Approach Delay (s)		49.1			66.3			33.9			11.1	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.1	Sum of lost time (s)	22.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

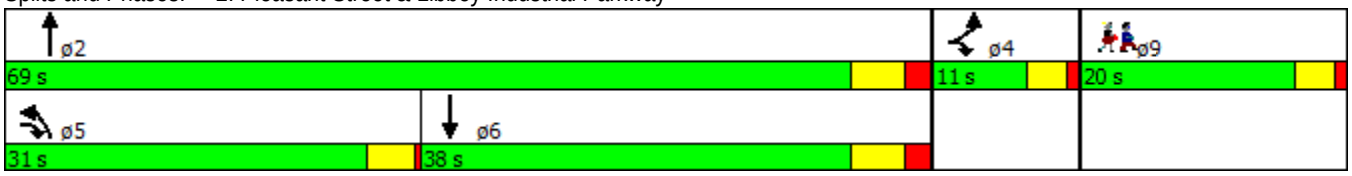


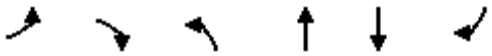
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	43	140	364	1044	799	155	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1572	1524	1646	1733	3217	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1572	1524	1646	1733	3217	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		152			24		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	47	152	396	1135	1036	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	11.0		31.0	69.0	38.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	7.1	34.8	24.4	63.5	35.0		
Actuated g/C Ratio	0.08	0.41	0.29	0.76	0.42		
v/c Ratio	0.36	0.21	0.83	0.87	0.76		
Control Delay	46.7	2.9	44.6	18.5	27.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	46.7	2.9	44.6	18.5	27.2		
LOS	D	A	D	B	C		
Approach Delay	13.3			25.3	27.2		
Approach LOS	B			C	C		
Queue Length 50th (ft)	23	0	173	253	224		
Queue Length 95th (ft)	67	25	#415	#1034	#485		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	132	766	533	1309	1356		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.36	0.20	0.74	0.87	0.76		

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 84			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 25.1		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	43	140	364	1044	799	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1572	1524	1646	1733	3216	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1572	1524	1646	1733	3216	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	152	396	1135	868	168
RTOR Reduction (vph)	0	97	0	0	14	0
Lane Group Flow (vph)	47	55	396	1135	1022	0
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	11%	6%	6%	6%	6%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.1	31.5	24.4	63.5	35.1	
Effective Green, g (s)	7.1	31.5	24.4	63.5	35.1	
Actuated g/C Ratio	0.08	0.36	0.28	0.73	0.40	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	127	549	460	1260	1293	
v/s Ratio Prot	c0.03	0.04	0.24	c0.66	0.32	
v/s Ratio Perm						
v/c Ratio	0.37	0.10	0.86	0.90	0.79	
Uniform Delay, d1	38.0	18.5	29.8	9.4	22.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.8	0.1	15.1	9.1	3.4	
Delay (s)	39.8	18.6	45.0	18.5	26.2	
Level of Service	D	B	D	B	C	
Approach Delay (s)	23.6			25.3	26.2	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	126	344	369	85	33	60
Conflicting Peds, #/hr	4	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	5	0	7	4
Mvmt Flow	137	374	401	92	36	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	493	0	-	0	1095	451
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	648	-
Critical Hdwy	4.11	-	-	-	6.47	6.24
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.336
Pot Cap-1 Maneuver	1076	-	-	-	231	604
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1071	-	-	-	194	601
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	429	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1071	-	-	-	194	601
HCM Lane V/C Ratio	0.128	-	-	-	0.185	0.109
HCM Control Delay (s)	8.9	0	-	-	27.7	11.7
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	0.4

Intersection	
Int Delay, s/veh	77.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	423	1039	24	187	794
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	8	0	3	6
Mvmt Flow	2	460	1129	26	203	863

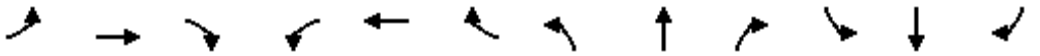
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2412	1143	0	0	1155	0
Stage 1	1142	-	-	-	-	-
Stage 2	1270	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	37	~ 244	-	-	601	-
Stage 1	307	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	~ 244	-	-	600	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	177	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 445.1	0	2.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	113	244	600	-
HCM Lane V/C Ratio	-	-	0.019	1.884	0.339	-
HCM Control Delay (s)	-	-	37.5	$ 447	14	-
HCM Lane LOS	-	-	E	F	B	-
HCM 95th %tile Q(veh)	-	-	0.1	32.3	1.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	237	63	201	302	277	107	1181	241	298	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	175	258	68	218	328	301	116	1284	262	324	752	270
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	12.0	14.0		17.0	19.0		22.0	64.5		27.0	69.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	5.0	7.1	26.2	10.1	12.1	38.2	13.2	57.5	74.7	20.2	64.5	76.6
Actuated g/C Ratio	0.04	0.05	0.20	0.08	0.09	0.30	0.10	0.45	0.58	0.16	0.50	0.59
v/c Ratio	2.73	1.41	0.23	1.72	1.03	0.70	0.68	0.85	0.31	1.35	0.48	0.33
Control Delay	840.9	256.4	40.9	386.8	116.0	48.5	76.9	39.4	17.2	222.7	24.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	840.9	256.4	40.9	386.8	116.0	48.5	76.9	39.4	17.2	222.7	24.7	17.1
LOS	F	F	D	F	F	D	E	D	B	F	C	B
Approach Delay		431.3			161.7			38.5			70.8	
Approach LOS		F			F			D			E	
Queue Length 50th (ft)	~232	~140	44	~249	138	204	89	450	94	~326	194	97
Queue Length 95th (ft)	#474	#300	79	#525	#324	#420	#211	#875	241	#673	387	255
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	64	183	317	127	317	431	196	1509	852	240	1556	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.73	1.41	0.21	1.72	1.03	0.70	0.59	0.85	0.31	1.35	0.48	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 155.5			
Actuated Cycle Length: 129.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.73			
Intersection Signal Delay: 117.6		Intersection LOS: F	
Intersection Capacity Utilization 90.6%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

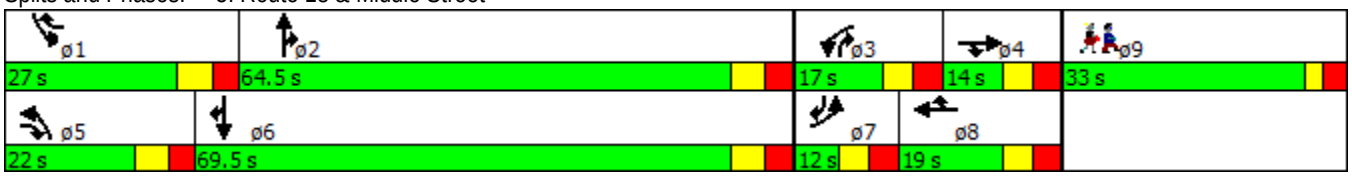
Intersection Summary

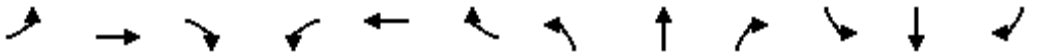
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

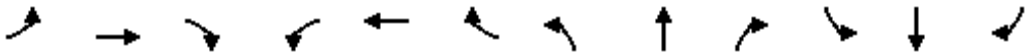




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	237	63	201	302	277	107	1181	241	298	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	258	68	218	328	301	116	1284	262	324	752	270
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	175	258	68	218	328	301	116	1284	262	324	752	270
Heavy Vehicles (%)	5%	4%	7%	7%	3%	7%	5%	4%	7%	8%	7%	8%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Effective Green, g (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Actuated g/C Ratio	0.04	0.05	0.15	0.08	0.09	0.24	0.10	0.43	0.56	0.15	0.48	0.58
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	62	179	222	123	310	355	166	1465	832	234	1510	798
v/s Ratio Prot	0.11	c0.08	0.05	c0.13	c0.10	0.21	0.07	c0.38	0.18	c0.21	c0.24	0.20
v/s Ratio Perm												
v/c Ratio	2.82	1.44	0.31	1.77	1.06	0.85	0.70	0.88	0.31	1.38	0.50	0.34
Uniform Delay, d1	64.0	63.0	50.1	61.5	60.4	48.0	58.0	34.5	15.3	56.4	23.3	14.7
Progression 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
Incremental Delay, d2	862.9	227.3	0.3	378.4	67.2	16.3	12.1	6.0	0.1	197.4	0.1	0.1
Delay (s)	926.9	290.2	50.4	439.9	127.6	64.2	70.1	40.5	15.4	253.8	23.4	14.8
Level of Service	F	F	D	F	F	E	E	D	B	F	C	B
Approach Delay (s)		480.1			185.5			38.6			77.1	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	129.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	33.5
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	310	52	77	435	365	120	1311	47	174	700	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3263	0	1646	1783	1531	1646	3291	0	1686	3319	0
Flt Permitted	0.280			0.377			0.344			0.144		
Satd. Flow (perm)	522	3263	0	653	1783	1531	596	3291	0	256	3319	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	157	394	0	84	473	397	130	1476	0	189	816	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	18.5		11.5	18.5		12.0	30.0		12.0	30.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	18.3	14.3		17.0	12.0	42.0	34.1	26.1		56.0	42.4	
Actuated g/C Ratio	0.18	0.14		0.17	0.12	0.42	0.34	0.26		0.56	0.42	
v/c Ratio	0.99	0.85		0.53	2.22	0.62	0.45	1.72		0.39	0.58	
Control Delay	109.5	61.1		44.8	588.0	30.0	23.0	355.3		21.2	26.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	109.5	61.1		44.8	588.0	30.0	23.0	355.3		21.2	26.6	
LOS	F	E		D	F	C	C	F		C	C	
Approach Delay		74.9			308.0			328.4			25.6	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)	~89	~135		43	~488	180	30	~696		46	187	
Queue Length 95th (ft)	#193	#235		85	#683	#466	103	#906		#259	#425	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	158	466		160	213	642	287	859		490	1406	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.99	0.85		0.53	2.22	0.62	0.45	1.72		0.39	0.58	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.22			
Intersection Signal Delay: 215.8		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

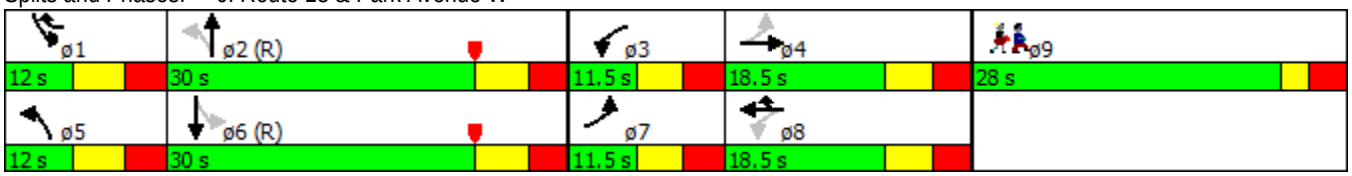
Intersection Capacity Utilization 100.7% ICU Level of Service G

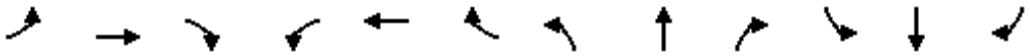
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

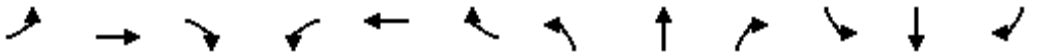
Splits and Phases: 6: Route 18 & Park Avenue W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	310	52	77	435	365	120	1311	47	174	700	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3264		1646	1783	1531	1646	3291		1686	3318	
Flt Permitted	0.28	1.00		0.38	1.00	1.00	0.34	1.00		0.14	1.00	
Satd. Flow (perm)	521	3264		652	1783	1531	596	3291		255	3318	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	157	337	57	84	473	397	130	1425	51	189	761	55
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	157	394	0	84	473	397	130	1476	0	189	816	0
Heavy Vehicles (%)	2%	4%	8%	6%	3%	2%	6%	5%	7%	4%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	2
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Effective Green, g (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Actuated g/C Ratio	0.19	0.14		0.17	0.13	0.38	0.29	0.21		0.52	0.37	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	163	466		152	237	575	255	684		480	1230	
v/s Ratio Prot	c0.05	0.12		0.02	c0.27	c0.26	0.04	c0.45		0.10	c0.25	
v/s Ratio Perm	0.14			0.07			0.11			0.11		
v/c Ratio	0.96	0.85		0.55	2.00	0.69	0.51	2.16		0.39	0.66	
Uniform Delay, d1	39.6	41.8		36.5	43.4	26.3	27.5	39.6		16.1	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	58.9	12.7		2.5	462.8	2.9	0.6	525.9		0.2	2.8	
Delay (s)	98.5	54.5		38.9	506.2	29.2	28.1	565.5		16.3	29.1	
Level of Service	F	D		D	F	C	C	F		B	C	
Approach Delay (s)		67.0			266.5			522.0			26.7	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	280.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	99	603	168	59	755	92	138	525	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3215	0	1614	1663	0	0	3211	0	1668	1729	0
Flt Permitted		0.574		0.950				0.762		0.950		
Satd. Flow (perm)	0	1855	0	1614	1663	0	0	2454	0	1668	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			12			9			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	325	0	108	838	0	0	985	0	150	591	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	37.0	37.0		15.0	52.0		42.0	42.0		14.0	56.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		32.2		10.1	47.3			37.2		9.0	51.3	
Actuated g/C Ratio		0.29		0.09	0.42			0.33		0.08	0.46	
v/c Ratio		0.60		0.75	1.19			1.20		1.12	0.75	
Control Delay		40.2		81.4	129.0			137.6		160.5	33.6	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		40.2		81.4	129.0			137.6		160.5	33.6	
LOS		D		F	F			F		F	C	
Approach Delay		40.2			123.6			137.6			59.3	
Approach LOS		D			F			F			E	
Queue Length 50th (ft)		96		74	~681			~426		~116	317	
Queue Length 95th (ft)		184		#203	#1186			#720		#302	#668	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		538		144	706			818		134	789	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.60		0.75	1.19			1.20		1.12	0.75	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 103.3		Intersection LOS: F	
Intersection Capacity Utilization 122.9%		ICU Level of Service H	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

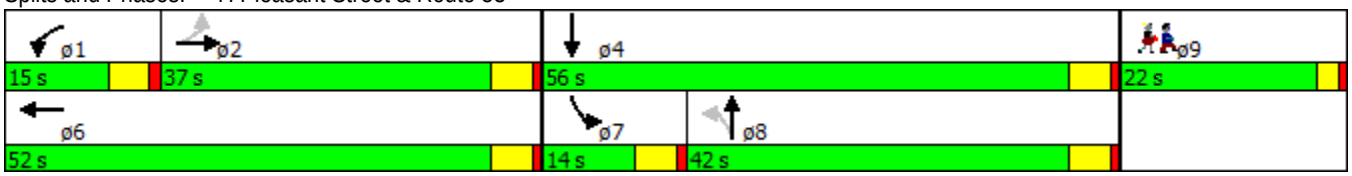
Intersection Summary

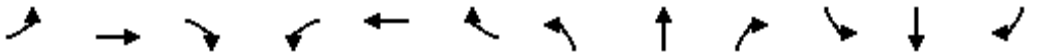
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	99	603	168	59	755	92	138	525	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.97			0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3215		1614	1663			3209		1668	1728	
Flt Permitted		0.57		0.95	1.00			0.76		0.95	1.00	
Satd. Flow (perm)		1854		1614	1663			2453		1668	1728	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	252	39	108	655	183	64	821	100	150	571	20
RTOR Reduction (vph)	0	8	0	0	7	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	317	0	108	831	0	0	979	0	150	590	0
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	24%	5%	6%	7%	5%	7%	24%	5%	10%	2%	3%	6%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		32.2		10.1	47.3			37.3		9.0	51.3	
Effective Green, g (s)		32.2		10.1	47.3			37.3		9.0	51.3	
Actuated g/C Ratio		0.28		0.09	0.41			0.32		0.08	0.45	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		519		141	684			796		130	771	
v/s Ratio Prot				0.07	c0.50					c0.09	0.34	
v/s Ratio Perm		0.17						c0.40				
v/c Ratio		0.61		0.77	1.21			1.23		1.15	0.77	
Uniform Delay, d1		35.9		51.2	33.8			38.8		53.0	26.7	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.4		21.6	109.8			114.4		126.2	4.8	
Delay (s)		38.3		72.9	143.6			153.2		179.1	31.6	
Level of Service		D		E	F			F		F	C	
Approach Delay (s)		38.3			135.5			153.2			61.4	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	112.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	114.9	Sum of lost time (s)	23.0
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

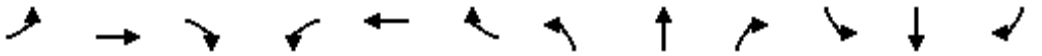
Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	16	16	0	0	55	78	38	0	20	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	17	17	0	0	60	85	41	0	22	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	248	269	23	257	249	105	24	0	0	126	0	0
Stage 1	23	23	-	225	225	-	-	-	-	-	-	-
Stage 2	225	246	-	32	24	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	710	641	1060	700	657	955	1604	-	-	1473	-	-
Stage 1	1000	880	-	782	721	-	-	-	-	-	-	-
Stage 2	782	706	-	990	879	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	688	615	1060	667	631	955	1604	-	-	1473	-	-
Mov Cap-2 Maneuver	688	615	-	667	631	-	-	-	-	-	-	-
Stage 1	960	880	-	751	692	-	-	-	-	-	-	-
Stage 2	751	678	-	974	879	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	10.5	2.4	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1604	-	-	1060	667	1473	-	-
HCM Lane V/C Ratio	0.037	-	-	0.016	0.026	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	349	0	237	10	507	271	141	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1738	0	0	1668	1561	0	1756	0	1711	1797	0
Flt Permitted		0.989			0.950			0.993		0.225		
Satd. Flow (perm)	0	1738	0	0	1668	1561	0	1745	0	405	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130				190		24			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	9	0	0	379	258	0	857	0	153	498	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		20.0	20.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			16.4	27.1		49.2		62.5	60.5	
Actuated g/C Ratio		0.08			0.18	0.29		0.53		0.67	0.65	
v/c Ratio		0.04			1.29	0.44		0.92		0.41	0.43	
Control Delay		0.2			189.3	9.3		37.9		12.8	12.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		0.2			189.3	9.3		37.9		12.8	12.5	
LOS		A			F	A		D		B	B	
Approach Delay		0.3			116.4			37.9			12.6	
Approach LOS		A			F			D			B	
Queue Length 50th (ft)		0			~250	26		351		21	96	
Queue Length 95th (ft)		0			#660	69		#1120		112	405	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		253			293	588		932		372	1166	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.04			1.29	0.44		0.92		0.41	0.43	

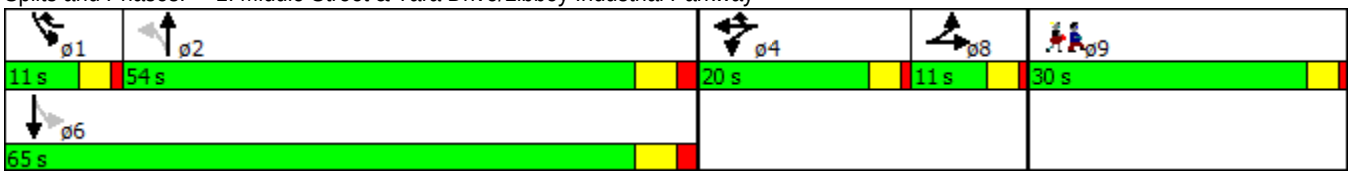
Intersection Summary			
Area Type:	Other		
Cycle Length: 126			
Actuated Cycle Length: 93.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay: 53.3		Intersection LOS: D	
Intersection Capacity Utilization 107.3%		ICU Level of Service G	
Analysis Period (min) 15			

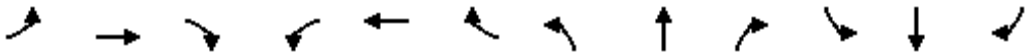
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway

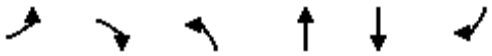




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	349	0	237	10	507	271	141	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.90			1.00	0.85		0.95		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1738			1668	1561		1756		1711	1798	
Flt Permitted		0.99			0.95	1.00		0.99		0.22	1.00	
Satd. Flow (perm)		1738			1668	1561		1744		405	1798	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	0	7	379	0	258	11	551	295	153	493	5
RTOR Reduction (vph)	0	9	0	0	0	145	0	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	379	113	0	845	0	153	498	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	6%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Effective Green, g (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Actuated g/C Ratio		0.01			0.16	0.24		0.49		0.61	0.61	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		17			274	369		862		340	1091	
v/s Ratio Prot		c0.00			c0.23	0.07				0.03	c0.28	
v/s Ratio Perm								c0.48		0.24		
v/c Ratio		0.01			1.38	0.31		0.98		0.45	0.46	
Uniform Delay, d1		48.9			41.7	31.3		24.7		12.3	10.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.1			193.6	0.4		25.7		0.7	0.2	
Delay (s)		49.0			235.2	31.7		50.4		13.1	10.9	
Level of Service		D			F	C		D		B	B	
Approach Delay (s)		49.0			152.8			50.4			11.4	
Approach LOS		D			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	68.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

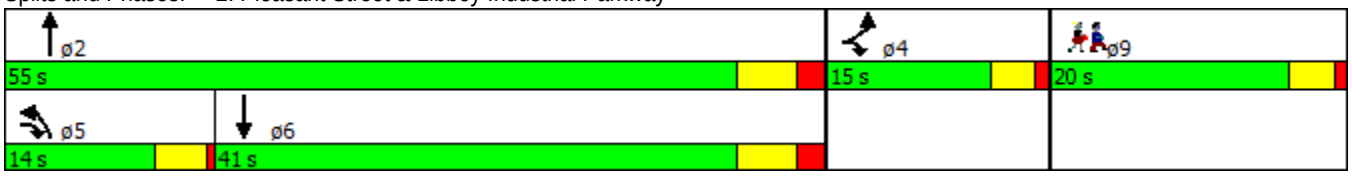


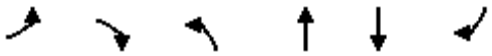
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	150	414	154	850	1004	79	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1678	1568	1745	1818	3318	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1678	1568	1743	1818	3318	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		359			11		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	163	450	167	924	1177	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	15.0		14.0	55.0	41.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	10.7	24.3	10.1	46.4	32.2		
Actuated g/C Ratio	0.15	0.35	0.14	0.66	0.46		
v/c Ratio	0.64	0.58	0.67	0.77	0.77		
Control Delay	44.4	7.6	46.9	16.4	21.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	44.4	7.6	46.9	16.4	21.7		
LOS	D	A	D	B	C		
Approach Delay	17.4			21.1	21.7		
Approach LOS	B			C	C		
Queue Length 50th (ft)	67	26	69	196	191		
Queue Length 95th (ft)	#195	84	#208	#742	#460		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	268	770	253	1294	1693		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.61	0.58	0.66	0.71	0.70		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 64.2%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	150	414	154	850	1004	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1678	1568	1745	1818	3318	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1678	1568	1745	1818	3318	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	450	167	924	1091	86
RTOR Reduction (vph)	0	257	0	0	6	0
Lane Group Flow (vph)	163	193	167	924	1171	0
Confl. Peds. (#/hr)			1			1
Heavy Vehicles (%)	4%	3%	0%	1%	4%	2%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	10.7	20.8	10.1	46.3	32.2	
Effective Green, g (s)	10.7	20.8	10.1	46.3	32.2	
Actuated g/C Ratio	0.15	0.28	0.14	0.63	0.44	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	244	443	239	1145	1453	
v/s Ratio Prot	c0.10	0.12	0.10	c0.51	0.35	
v/s Ratio Perm						
v/c Ratio	0.67	0.43	0.70	0.81	0.81	
Uniform Delay, d1	29.7	21.5	30.2	10.2	17.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.8	0.7	8.6	4.3	3.4	
Delay (s)	36.5	22.2	38.9	14.5	21.3	
Level of Service	D	C	D	B	C	
Approach Delay (s)	26.0			18.2	21.3	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	52	334	282	35	116	242
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	3	4	2	0
Mvmt Flow	57	363	307	38	126	263

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	345	0	-	0	802	326
Stage 1	-	-	-	-	326	-
Stage 2	-	-	-	-	476	-
Critical Hdwy	4.14	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1203	-	-	-	353	720
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1203	-	-	-	332	720
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1203	-	-	-	332	720
HCM Lane V/C Ratio	0.047	-	-	-	0.38	0.365
HCM Control Delay (s)	8.1	0	-	-	22.3	12.9
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.7	1.7

Intersection	
Int Delay, s/veh	8

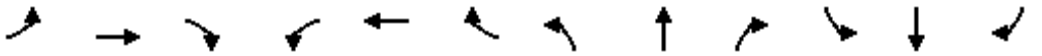
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	14	265	782	12	400	1013
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	2	0	1	2
Mvmt Flow	15	288	850	13	435	1101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2828	858	0	0	863	0
Stage 1	857	-	-	-	-	-
Stage 2	1971	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	20	358	-	-	784	-
Stage 1	419	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 9	358	-	-	783	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	53	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	49.7	0	4.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	44	358	783	-
HCM Lane V/C Ratio	-	-	0.346	0.805	0.555	-
HCM Control Delay (s)	-	-	125.1	45.7	15.2	-
HCM Lane LOS	-	-	F	E	C	-
HCM 95th %tile Q(veh)	-	-	1.2	6.9	3.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	333	91	268	289	302	63	948	246	294	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	273	362	99	291	314	328	68	1030	267	320	1224	260
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	13.0	15.0		13.0	15.0		15.0	41.5		25.0	51.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	6.1	8.1	21.9	6.1	8.1	32.4	7.8	34.5	47.7	18.3	45.0	58.2
Actuated g/C Ratio	0.06	0.08	0.22	0.06	0.08	0.32	0.08	0.34	0.47	0.18	0.45	0.58
v/c Ratio	2.65	1.31	0.29	2.85	1.13	0.67	0.50	0.87	0.37	1.10	0.84	0.32
Control Delay	785.9	200.1	31.9	874.6	138.3	37.8	61.1	41.9	21.3	121.0	33.0	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	785.9	200.1	31.9	874.6	138.3	37.8	61.1	41.9	21.3	121.0	33.0	14.9
LOS	F	F	C	F	F	D	E	D	C	F	C	B
Approach Delay		395.3			332.6			38.8			46.0	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~274	~142	48	~298	~111	161	40	292	93	~209	318	70
Queue Length 95th (ft)	#574	#331	85	#610	#283	#384	#121	#649	251	#539	#734	216
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	103	277	342	102	277	490	141	1179	728	292	1454	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.65	1.31	0.29	2.85	1.13	0.67	0.48	0.87	0.37	1.10	0.84	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 127.5			
Actuated Cycle Length: 101.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.85			
Intersection Signal Delay: 152.3		Intersection LOS: F	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

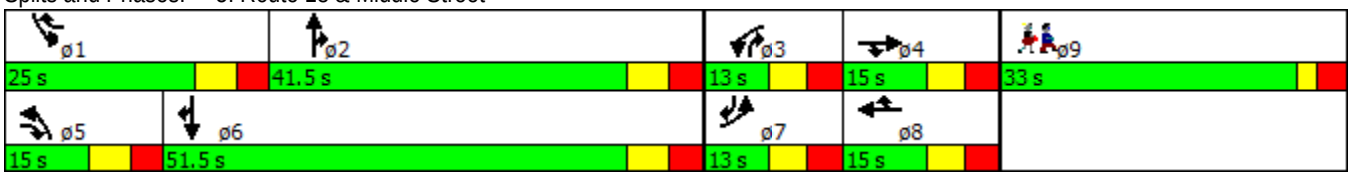
Intersection Summary

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

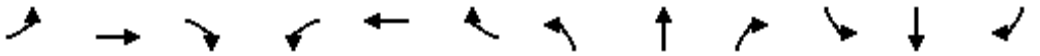
Splits and Phases: 5: Route 18 & Middle Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	333	91	268	289	302	63	948	246	294	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	362	99	291	314	328	68	1030	267	320	1224	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	273	362	99	291	314	328	68	1030	267	320	1224	260
Heavy Vehicles (%)	1%	1%	0%	2%	1%	2%	0%	2%	2%	3%	2%	4%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Effective Green, g (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Actuated g/C Ratio	0.06	0.08	0.15	0.06	0.08	0.25	0.07	0.33	0.46	0.17	0.43	0.56
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	100	266	236	99	266	385	131	1136	708	282	1401	801
v/s Ratio Prot	0.16	c0.10	0.06	c0.17	0.09	0.21	0.04	0.30	0.17	c0.20	c0.37	0.18
v/s Ratio Perm												
v/c Ratio	2.73	1.36	0.42	2.94	1.18	0.85	0.52	0.91	0.38	1.13	0.87	0.32
Uniform Delay, d1	49.4	48.4	40.3	49.4	48.4	37.4	46.7	33.7	18.6	43.3	27.4	12.5
Progression 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
Incremental Delay, d2	805.9	184.8	0.4	899.5	113.0	15.9	3.4	10.2	0.1	95.0	6.1	0.1
Delay (s)	855.3	233.2	40.8	948.9	161.4	53.3	50.2	43.8	18.7	138.3	33.5	12.6
Level of Service	F	F	D	F	F	D	D	D	B	F	C	B
Approach Delay (s)		438.7			369.0			39.2			49.1	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	167.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	33.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	374	35	94	252	183	40	1005	94	242	1308	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3370	0	1711	1801	1531	1694	3403	0	1719	3364	0
Flt Permitted	0.400			0.400			0.148			0.118		
Satd. Flow (perm)	752	3370	0	720	1801	1531	264	3403	0	214	3364	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	130	445	0	102	274	199	43	1194	0	263	1499	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	16.5		11.5	16.5		12.0	32.0		12.0	32.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	15.0	10.0		15.0	10.0	37.1	36.1	31.0		58.0	52.0	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.37	0.36	0.31		0.58	0.52	
v/c Ratio	0.79	1.32		0.65	1.52	0.35	0.26	1.13		0.59	0.86	
Control Delay	69.2	200.6		55.0	294.3	25.7	18.2	104.5		27.8	29.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.2	200.6		55.0	294.3	25.7	18.2	104.5		27.8	29.8	
LOS	E	F		E	F	C	B	F		C	C	
Approach Delay		170.9			158.9			101.5			29.5	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)	71	~194		55	~245	87	9	391		80	409	
Queue Length 95th (ft)	#131	#294		#120	#404	#186	41	#671		#385	#893	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	164	337		157	180	568	170	1054		446	1748	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.79	1.32		0.65	1.52	0.35	0.25	1.13		0.59	0.86	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.52			
Intersection Signal Delay: 88.5		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

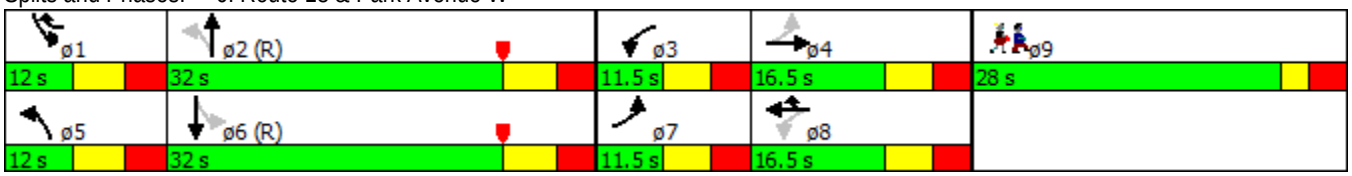
Intersection Capacity Utilization 86.6% ICU Level of Service E

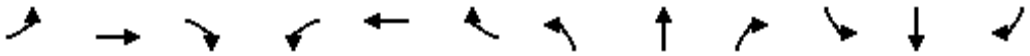
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

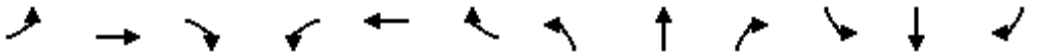
Splits and Phases: 6: Route 18 & Park Avenue W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	374	35	94	252	183	40	1005	94	242	1308	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3371		1711	1801	1531	1694	3404		1719	3365	
Flt Permitted	0.40	1.00		0.40	1.00	1.00	0.15	1.00		0.12	1.00	
Satd. Flow (perm)	752	3371		720	1801	1531	264	3404		213	3365	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	407	38	102	274	199	43	1092	102	263	1422	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	130	445	0	102	274	199	43	1194	0	263	1499	0
Heavy Vehicles (%)	1%	1%	15%	2%	2%	2%	3%	1%	1%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	1
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Effective Green, g (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.31	0.30	0.27		0.55	0.45	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	337		157	180	480	125	919		440	1520	
v/s Ratio Prot	c0.04	0.13		0.03	c0.15	0.13	0.01	c0.35		c0.13	c0.45	
v/s Ratio Perm	0.08			0.06			0.09			0.20		
v/c Ratio	0.79	1.32		0.65	1.52	0.41	0.34	1.30		0.60	0.99	
Uniform Delay, d1	40.5	45.0		39.0	45.0	27.1	26.6	36.5		20.4	27.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.2	163.6		6.8	261.2	0.2	0.6	142.7		1.5	20.0	
Delay (s)	61.7	208.6		45.8	306.2	27.3	27.2	179.2		21.9	47.1	
Level of Service	E	F		D	F	C	C	F		C	D	
Approach Delay (s)		175.4			163.5			173.9			43.3	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	117.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	99	337	223	47	679	110	137	544	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3399	0	1661	1699	0	0	3401	0	1668	1763	0
Flt Permitted		0.649		0.950				0.833		0.950		
Satd. Flow (perm)	0	2217	0	1661	1699	0	0	2841	0	1668	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			28			13			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	559	0	108	608	0	0	909	0	149	614	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	35.0	35.0		14.0	49.0		42.0	42.0		17.0	59.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.27		0.08	0.39			0.33		0.11	0.48	
v/c Ratio		0.93		0.81	0.89			0.96		0.83	0.72	
Control Delay		63.1		92.0	47.6			57.9		85.3	30.3	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		63.1		92.0	47.6			57.9		85.3	30.3	
LOS		E		F	D			E		F	C	
Approach Delay		63.1			54.3			57.9			41.0	
Approach LOS		E			D			E			D	
Queue Length 50th (ft)		193		75	362			312		102	313	
Queue Length 95th (ft)		#393		#211	#762			#592		#268	#663	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		602		133	685			948		179	852	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.93		0.81	0.89			0.96		0.83	0.72	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 53.6		Intersection LOS: D	
Intersection Capacity Utilization 116.1%		ICU Level of Service H	

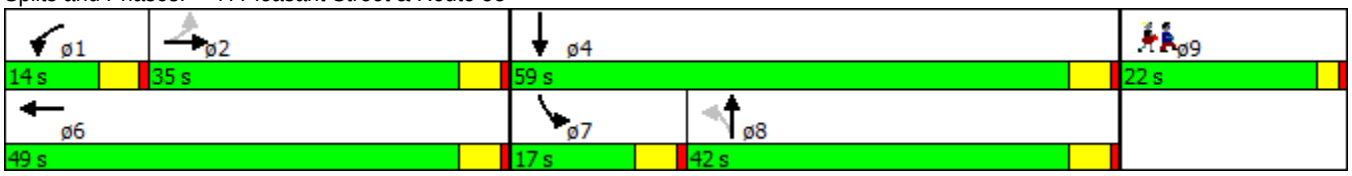
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

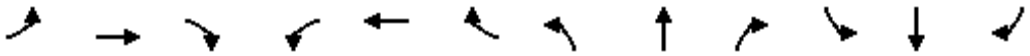
Intersection Summary

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	99	337	223	47	679	110	137	544	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frt		0.98		1.00	0.94			0.98		1.00	0.99	
Flt Protected		1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3400		1661	1700			3402		1668	1764	
Flt Permitted		0.65		0.95	1.00			0.83		0.95	1.00	
Satd. Flow (perm)		2218		1661	1700			2841		1668	1764	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	441	63	108	366	242	51	738	120	149	591	23
RTOR Reduction (vph)	0	7	0	0	17	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	552	0	108	591	0	0	900	0	149	613	0
Heavy Vehicles (%)	4%	1%	2%	4%	1%	0%	0%	0%	2%	2%	1%	0%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Effective Green, g (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.26		0.08	0.39			0.32		0.11	0.47	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		583		130	654			920		175	834	
v/s Ratio Prot				0.07	c0.35					0.09	c0.35	
v/s Ratio Perm		0.25						c0.32				
v/c Ratio		0.95		0.83	0.90			0.98		0.85	0.73	
Uniform Delay, d1		41.5		52.1	33.3			38.4		50.5	24.4	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		24.6		34.2	16.1			24.3		30.7	3.6	
Delay (s)		66.1		86.3	49.4			62.7		81.2	28.0	
Level of Service		E		F	D			E		F	C	
Approach Delay (s)		66.1			55.0			62.7			38.4	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	114.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

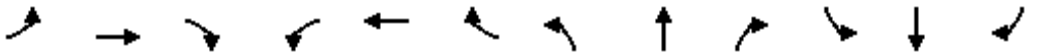
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	62	49	0	0	17	29	23	0	73	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	0	0
Mvmt Flow	2	0	67	53	0	0	18	32	25	0	79	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	160	172	79	194	160	44	79	0	0	57	0	0
Stage 1	79	79	-	81	81	-	-	-	-	-	-	-
Stage 2	81	93	-	113	79	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	810	725	987	770	736	1032	1532	-	-	1560	-	-
Stage 1	935	833	-	932	832	-	-	-	-	-	-	-
Stage 2	932	822	-	897	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	803	716	987	711	727	1032	1532	-	-	1560	-	-
Mov Cap-2 Maneuver	803	716	-	711	727	-	-	-	-	-	-	-
Stage 1	924	833	-	921	822	-	-	-	-	-	-	-
Stage 2	921	812	-	836	833	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.5	1.8	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1532	-	-	980	711	1560	-	-
HCM Lane V/C Ratio	0.012	-	-	0.071	0.075	-	-	-
HCM Control Delay (s)	7.4	0	-	9	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	244	0	143	6	313	506	178	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1767	0	0	1532	1473	0	1646	0	1711	1765	0
Flt Permitted		0.989			0.950			0.997		0.209		
Satd. Flow (perm)	0	1767	0	0	1532	1473	0	1641	0	376	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				155		74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	18	0	0	265	155	0	897	0	193	414	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		19.0	19.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			15.4	25.2		49.2		62.5	60.4	
Actuated g/C Ratio		0.08			0.16	0.27		0.52		0.66	0.64	
v/c Ratio		0.12			1.06	0.31		1.01		0.55	0.37	
Control Delay		32.0			116.0	5.2		55.9		18.0	12.3	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		32.0			116.0	5.2		55.9		18.0	12.3	
LOS		C			F	A		E		B	B	
Approach Delay		32.0			75.1			55.9			14.1	
Approach LOS		C			E			E			B	
Queue Length 50th (ft)		3			140	0		372		26	72	
Queue Length 95th (ft)		30			#464	32		#1159		#161	320	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		145			249	506		889		350	1129	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.12			1.06	0.31		1.01		0.55	0.37	

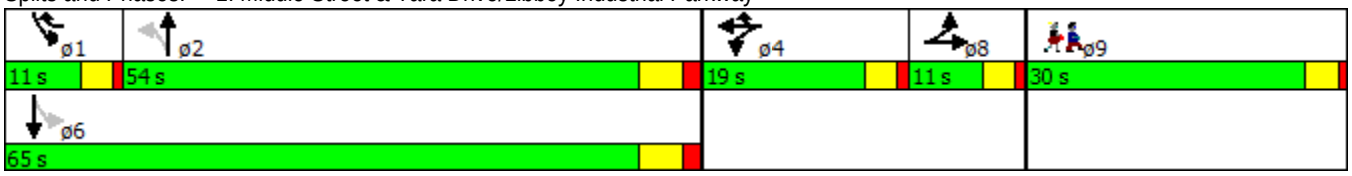
Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 94.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 46.8		Intersection LOS: D	
Intersection Capacity Utilization 101.4%		ICU Level of Service G	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

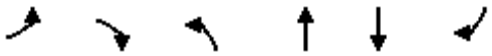
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	244	0	143	6	313	506	178	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.91			1.00	0.85		0.92		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1767			1532	1473		1646		1711	1765	
Flt Permitted		0.99			0.95	1.00		1.00		0.21	1.00	
Satd. Flow (perm)		1767			1532	1473		1641		377	1765	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	2	12	265	0	155	7	340	550	193	412	2
RTOR Reduction (vph)	0	12	0	0	0	120	0	38	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	265	35	0	859	0	193	414	0
Heavy Vehicles (%)	0%	0%	0%	10%	0%	6%	0%	3%	7%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		2.4			15.4	22.6		49.2		60.4	60.4	
Effective Green, g (s)		2.4			15.4	22.6		49.2		60.4	60.4	
Actuated g/C Ratio		0.02			0.15	0.23		0.49		0.60	0.60	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		42			235	332		806		323	1064	
v/s Ratio Prot		c0.00			c0.17	0.02				c0.04	0.23	
v/s Ratio Perm								c0.52		0.32		
v/c Ratio		0.15			1.13	0.11		1.07		0.60	0.39	
Uniform Delay, d1		47.9			42.3	30.7		25.4		13.4	10.3	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		1.3			97.4	0.1		50.9		2.6	0.2	
Delay (s)		49.1			139.7	30.8		76.3		16.0	10.5	
Level of Service		D			F	C		E		B	B	
Approach Delay (s)		49.1			99.5			76.3			12.2	
Approach LOS		D			F			E			B	

Intersection Summary			
HCM 2000 Control Delay	61.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.1	Sum of lost time (s)	22.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

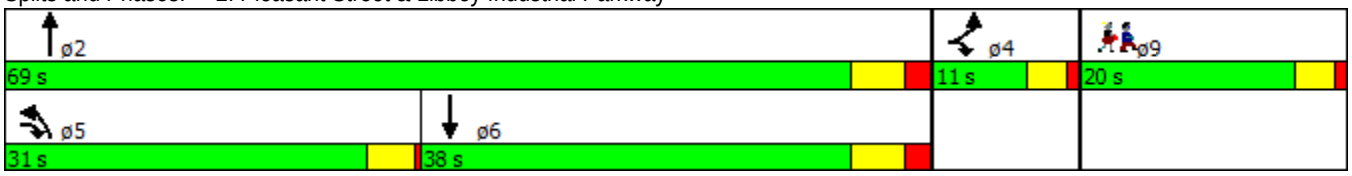


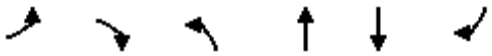
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	51	151	407	1044	799	185	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1572	1524	1646	1733	3204	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1572	1524	1646	1733	3204	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		164			29		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	55	164	442	1135	1069	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	11.0		31.0	69.0	38.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	7.1	37.6	27.2	63.5	32.3		
Actuated g/C Ratio	0.08	0.45	0.32	0.76	0.38		
v/c Ratio	0.42	0.21	0.83	0.87	0.86		
Control Delay	49.0	2.8	42.8	18.5	32.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	49.0	2.8	42.8	18.5	32.6		
LOS	D	A	D	B	C		
Approach Delay	14.4			25.3	32.6		
Approach LOS	B			C	C		
Queue Length 50th (ft)	27	0	197	253	238		
Queue Length 95th (ft)	#80	26	#484	#1034	#508		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	132	773	533	1309	1248		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.42	0.21	0.83	0.87	0.86		

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 84			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	151	407	1044	799	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1572	1524	1646	1733	3204	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1572	1524	1646	1733	3204	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	164	442	1135	868	201
RTOR Reduction (vph)	0	100	0	0	18	0
Lane Group Flow (vph)	55	64	442	1135	1051	0
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	11%	6%	6%	6%	6%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.1	34.3	27.2	63.5	32.3	
Effective Green, g (s)	7.1	34.3	27.2	63.5	32.3	
Actuated g/C Ratio	0.08	0.39	0.31	0.73	0.37	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	127	598	512	1260	1185	
v/s Ratio Prot	c0.03	0.04	0.27	c0.66	0.33	
v/s Ratio Perm						
v/c Ratio	0.43	0.11	0.86	0.90	0.89	
Uniform Delay, d1	38.2	16.8	28.3	9.4	25.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.4	0.1	14.0	9.1	8.3	
Delay (s)	40.5	16.9	42.3	18.5	34.0	
Level of Service	D	B	D	B	C	
Approach Delay (s)	22.8			25.2	34.0	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	126	498	410	85	33	60
Conflicting Peds, #/hr	4	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	5	0	7	4
Mvmt Flow	137	541	446	92	36	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	538	0	-	0	1307	496
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	4.11	-	-	-	6.47	6.24
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.336
Pot Cap-1 Maneuver	1035	-	-	-	172	570
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1030	-	-	-	139	567
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	346	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1030	-	-	-	139	567
HCM Lane V/C Ratio	0.133	-	-	-	0.258	0.115
HCM Control Delay (s)	9	0	-	-	39.7	12.2
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1	0.4

Intersection	
Int Delay, s/veh	93.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	446	1059	24	193	799
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	8	0	3	6
Mvmt Flow	2	485	1151	26	210	868

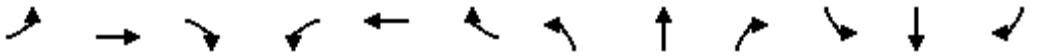
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2452	1165	0	0	1177	0
Stage 1	1164	-	-	-	-	-
Stage 2	1288	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	35	~ 236	-	-	590	-
Stage 1	300	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	23	~ 236	-	-	589	-
Mov Cap-2 Maneuver	108	-	-	-	-	-
Stage 1	300	-	-	-	-	-
Stage 2	168	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 520.5	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	108	236	589	-
HCM Lane V/C Ratio	-	-	0.02	2.054	0.356	-
HCM Control Delay (s)	-	-	39	$ 522.7	14.5	-
HCM Lane LOS	-	-	E	F	B	-
HCM 95th %tile Q(veh)	-	-	0.1	36.1	1.6	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	253	63	209	306	301	107	1181	273	386	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	175	275	68	227	333	327	116	1284	297	420	752	270
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	12.0	14.0		17.0	19.0		22.0	64.5		27.0	69.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	5.0	7.1	26.2	10.1	12.1	38.2	13.2	57.5	74.7	20.2	64.5	76.6
Actuated g/C Ratio	0.04	0.05	0.20	0.08	0.09	0.30	0.10	0.45	0.58	0.16	0.50	0.59
v/c Ratio	2.73	1.50	0.23	1.79	1.05	0.76	0.68	0.85	0.35	1.75	0.48	0.33
Control Delay	840.9	292.7	40.9	416.0	119.7	52.0	76.9	39.4	17.8	385.2	24.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	840.9	292.7	40.9	416.0	119.7	52.0	76.9	39.4	17.8	385.2	24.7	17.1
LOS	F	F	D	F	F	D	E	D	B	F	C	B
Approach Delay		444.8			170.6			38.2			128.3	
Approach LOS		F			F			D			F	
Queue Length 50th (ft)	~232	~155	44	~264	~141	227	89	450	110	~484	194	97
Queue Length 95th (ft)	#474	#320	79	#544	#330	#494	#211	#875	278	#894	387	255
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	64	183	317	127	317	431	196	1509	852	240	1556	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.73	1.50	0.21	1.79	1.05	0.76	0.59	0.85	0.35	1.75	0.48	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 155.5			
Actuated Cycle Length: 129.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.73			
Intersection Signal Delay: 139.0		Intersection LOS: F	
Intersection Capacity Utilization 96.4%		ICU Level of Service F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

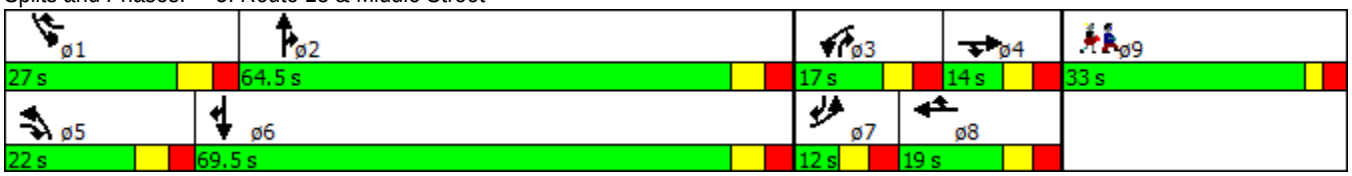
Intersection Summary

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

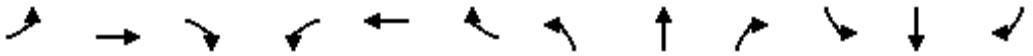
Splits and Phases: 5: Route 18 & Middle Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	253	63	209	306	301	107	1181	273	386	692	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1662	3355	1459	1631	3388	1459	1678	3389	1474	1543	3115	1380
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	275	68	227	333	327	116	1284	297	420	752	270
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	175	275	68	227	333	327	116	1284	297	420	752	270
Heavy Vehicles (%)	5%	4%	7%	7%	3%	7%	5%	4%	7%	8%	7%	8%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Effective Green, g (s)	5.0	7.1	20.3	10.1	12.2	32.4	13.2	57.5	75.1	20.2	64.5	77.0
Actuated g/C Ratio	0.04	0.05	0.15	0.08	0.09	0.24	0.10	0.43	0.56	0.15	0.48	0.58
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	62	179	222	123	310	355	166	1465	832	234	1510	798
v/s Ratio Prot	0.11	c0.08	0.05	c0.14	c0.10	0.22	0.07	c0.38	0.20	c0.27	c0.24	0.20
v/s Ratio Perm												
v/c Ratio	2.82	1.54	0.31	1.85	1.07	0.92	0.70	0.88	0.36	1.79	0.50	0.34
Uniform Delay, d1	64.0	63.0	50.1	61.5	60.4	49.1	58.0	34.5	15.8	56.4	23.3	14.7
Progression 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
Incremental Delay, d2	862.9	267.3	0.3	410.1	72.2	28.2	12.1	6.0	0.1	374.3	0.1	0.1
Delay (s)	926.9	330.3	50.4	471.6	132.6	77.3	70.1	40.5	15.9	430.7	23.4	14.8
Level of Service	F	F	D	F	F	E	E	D	B	F	C	B
Approach Delay (s)		495.1			199.0			38.2			140.4	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	154.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	33.5
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	312	52	77	436	365	120	1334	47	174	706	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3264	0	1646	1783	1531	1646	3292	0	1686	3315	0
Flt Permitted	0.280			0.373			0.341			0.144		
Satd. Flow (perm)	522	3264	0	646	1783	1531	591	3292	0	256	3315	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	166	396	0	84	474	397	130	1501	0	189	825	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	18.5		11.5	18.5		12.0	30.0		12.0	30.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	18.3	14.3		17.0	12.0	42.0	34.1	26.1		56.0	42.4	
Actuated g/C Ratio	0.18	0.14		0.17	0.12	0.42	0.34	0.26		0.56	0.42	
v/c Ratio	1.05	0.85		0.53	2.23	0.62	0.45	1.75		0.39	0.59	
Control Delay	124.1	61.5		45.0	590.1	30.0	23.1	367.3		21.2	26.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	124.1	61.5		45.0	590.1	30.0	23.1	367.3		21.2	26.8	
LOS	F	E		D	F	C	C	F		C	C	
Approach Delay		80.0			309.3			339.9			25.7	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)	~100	~136		43	~490	180	30	~714		46	190	
Queue Length 95th (ft)	#208	#236		85	#684	#466	#104	#924		#259	#432	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	158	466		159	213	642	286	860		490	1404	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	1.05	0.85		0.53	2.23	0.62	0.45	1.75		0.39	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.23			
Intersection Signal Delay: 221.2		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

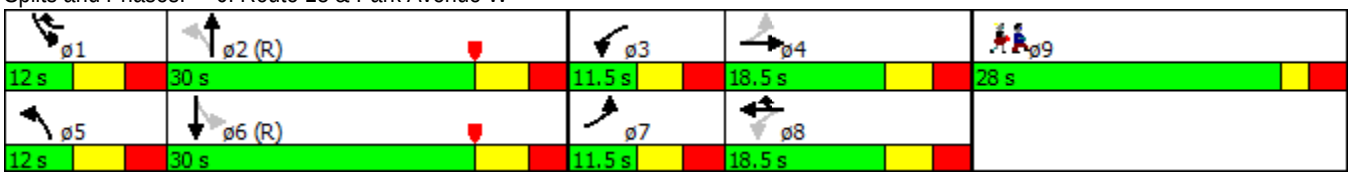
Intersection Capacity Utilization 101.9% ICU Level of Service G

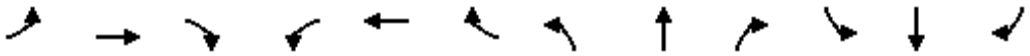
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

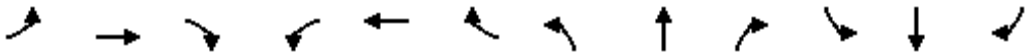
Splits and Phases: 6: Route 18 & Park Avenue W





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	312	52	77	436	365	120	1334	47	174	706	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3265		1646	1783	1531	1646	3291		1686	3317	
Flt Permitted	0.28	1.00		0.37	1.00	1.00	0.34	1.00		0.14	1.00	
Satd. Flow (perm)	521	3265		647	1783	1531	591	3291		255	3317	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	339	57	84	474	397	130	1450	51	189	767	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	166	396	0	84	474	397	130	1501	0	189	825	0
Heavy Vehicles (%)	2%	4%	8%	6%	3%	2%	6%	5%	7%	4%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	2
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Effective Green, g (s)	19.3	14.3		17.3	13.3	37.6	28.8	20.8		52.1	37.1	
Actuated g/C Ratio	0.19	0.14		0.17	0.13	0.38	0.29	0.21		0.52	0.37	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	163	466		151	237	575	254	684		480	1230	
v/s Ratio Prot	c0.05	0.12		0.02	c0.27	c0.26	0.04	c0.46		0.10	c0.25	
v/s Ratio Perm	0.15			0.07			0.11			0.11		
v/c Ratio	1.02	0.85		0.56	2.00	0.69	0.51	2.19		0.39	0.67	
Uniform Delay, d1	40.0	41.8		36.5	43.4	26.3	27.5	39.6		16.1	26.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	75.4	13.0		2.5	464.7	2.9	0.7	542.3		0.2	2.9	
Delay (s)	115.4	54.8		39.0	508.1	29.2	28.2	581.9		16.3	29.3	
Level of Service	F	D		D	F	C	C	F		B	C	
Approach Delay (s)		72.7			267.7			537.8			26.8	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	288.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	111	603	168	59	760	95	138	543	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3215	0	1614	1663	0	0	3207	0	1668	1729	0
Flt Permitted		0.574		0.950				0.743		0.950		
Satd. Flow (perm)	0	1855	0	1614	1663	0	0	2390	0	1668	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			12			9			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	325	0	121	838	0	0	993	0	150	610	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	37.0	37.0		15.0	52.0		42.0	42.0		14.0	56.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		32.2		10.1	47.3			37.2		9.0	51.3	
Actuated g/C Ratio		0.29		0.09	0.42			0.33		0.08	0.46	
v/c Ratio		0.60		0.84	1.19			1.25		1.12	0.77	
Control Delay		40.2		93.6	129.0			154.8		160.5	34.8	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		40.2		93.6	129.0			154.8		160.5	34.8	
LOS		D		F	F			F		F	C	
Approach Delay		40.2			124.5			154.8			59.7	
Approach LOS		D			F			F			E	
Queue Length 50th (ft)		96		84	~681			~441		~116	333	
Queue Length 95th (ft)		184		#231	#1186			#736		#302	#705	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		538		144	706			796		134	789	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.60		0.84	1.19			1.25		1.12	0.77	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 109.2		Intersection LOS: F	
Intersection Capacity Utilization 124.0%		ICU Level of Service H	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

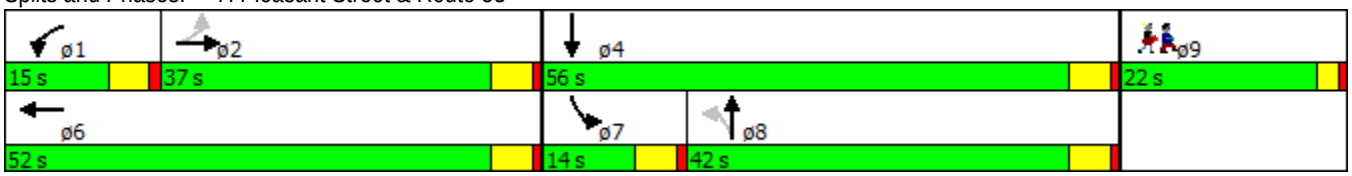
Intersection Summary

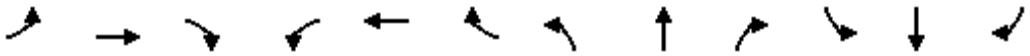
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	232	36	111	603	168	59	760	95	138	543	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.97			0.98		1.00	1.00	
Flt Protected		0.99		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3215		1614	1663			3208		1668	1729	
Flt Permitted		0.57		0.95	1.00			0.74		0.95	1.00	
Satd. Flow (perm)		1854		1614	1663			2392		1668	1729	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	252	39	121	655	183	64	826	103	150	590	20
RTOR Reduction (vph)	0	8	0	0	7	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	317	0	121	831	0	0	987	0	150	609	0
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	24%	5%	6%	7%	5%	7%	24%	5%	10%	2%	3%	6%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		32.2		10.1	47.3			37.3		9.0	51.3	
Effective Green, g (s)		32.2		10.1	47.3			37.3		9.0	51.3	
Actuated g/C Ratio		0.28		0.09	0.41			0.32		0.08	0.45	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		519		141	684			776		130	771	
v/s Ratio Prot				0.07	c0.50					c0.09	0.35	
v/s Ratio Perm		0.17						c0.41				
v/c Ratio		0.61		0.86	1.21			1.27		1.15	0.79	
Uniform Delay, d1		35.9		51.7	33.8			38.8		53.0	27.2	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.4		37.1	109.8			132.3		126.2	5.7	
Delay (s)		38.3		88.8	143.6			171.1		179.1	32.9	
Level of Service		D		F	F			F		F	C	
Approach Delay (s)		38.3			136.7			171.1			61.8	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	118.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	114.9	Sum of lost time (s)	23.0
Intersection Capacity Utilization	124.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

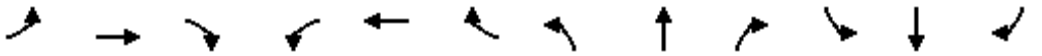
Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	16	16	0	0	55	78	38	0	20	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	17	17	0	0	60	85	41	0	22	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	248	269	23	257	249	105	24	0	0	126	0	0
Stage 1	23	23	-	225	225	-	-	-	-	-	-	-
Stage 2	225	246	-	32	24	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	710	641	1060	700	657	955	1604	-	-	1473	-	-
Stage 1	1000	880	-	782	721	-	-	-	-	-	-	-
Stage 2	782	706	-	990	879	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	688	615	1060	667	631	955	1604	-	-	1473	-	-
Mov Cap-2 Maneuver	688	615	-	667	631	-	-	-	-	-	-	-
Stage 1	960	880	-	751	692	-	-	-	-	-	-	-
Stage 2	751	678	-	974	879	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	10.5	2.4	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1604	-	-	1060	667	1473	-	-
HCM Lane V/C Ratio	0.037	-	-	0.016	0.026	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	497	0	257	10	507	328	149	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		0	200		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1738	0	0	1668	1561	0	1741	0	1711	1797	0
Flt Permitted		0.989			0.950			0.993		0.205		
Satd. Flow (perm)	0	1738	0	0	1668	1561	0	1731	0	369	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130				144		29			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	9	0	0	540	279	0	919	0	162	498	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		20.0	20.0		54.0	54.0		11.0	65.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			16.4	27.1		49.2		62.5	60.5	
Actuated g/C Ratio		0.08			0.18	0.29		0.53		0.67	0.65	
v/c Ratio		0.04			1.84	0.50		0.99		0.46	0.43	
Control Delay		0.2			419.3	15.7		51.0		14.4	12.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		0.2			419.3	15.7		51.0		14.4	12.5	
LOS		A			F	B		D		B	B	
Approach Delay		0.3			281.8			51.0			13.0	
Approach LOS		A			F			D			B	
Queue Length 50th (ft)		0			~431	53		406		22	96	
Queue Length 95th (ft)		0			#956	130		#1230		118	405	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175				200		
Base Capacity (vph)		253			293	556		927		351	1166	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.04			1.84	0.50		0.99		0.46	0.43	

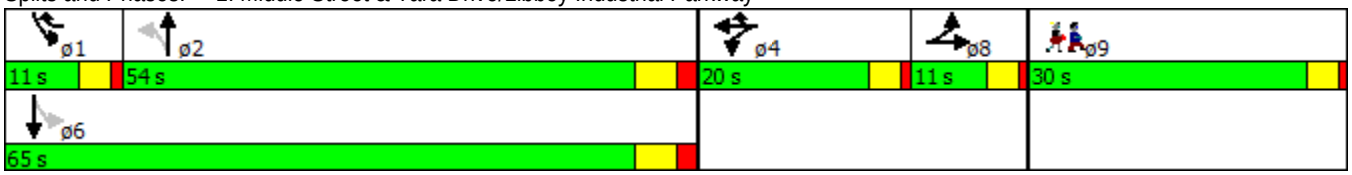
Intersection Summary			
Area Type:	Other		
Cycle Length: 126			
Actuated Cycle Length: 93.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.84			
Intersection Signal Delay: 118.9		Intersection LOS: F	
Intersection Capacity Utilization 119.0%		ICU Level of Service H	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

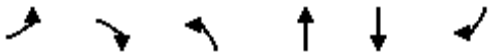
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	497	0	257	10	507	328	149	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0		4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.90			1.00	0.85		0.95		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1738			1668	1561		1741		1711	1798	
Flt Permitted		0.99			0.95	1.00		0.99		0.21	1.00	
Satd. Flow (perm)		1738			1668	1561		1730		370	1798	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	0	7	540	0	279	11	551	357	162	493	5
RTOR Reduction (vph)	0	9	0	0	0	110	0	15	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	540	169	0	904	0	162	498	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	6%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA		pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Effective Green, g (s)		1.0			16.4	23.6		49.3		60.5	60.5	
Actuated g/C Ratio		0.01			0.16	0.24		0.49		0.61	0.61	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		17			274	369		855		321	1091	
v/s Ratio Prot		c0.00			c0.32	0.11				0.04	c0.28	
v/s Ratio Perm								c0.52		0.27		
v/c Ratio		0.01			1.97	0.46		1.06		0.50	0.46	
Uniform Delay, d1		48.9			41.7	32.6		25.2		13.0	10.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.1			449.8	0.7		47.2		1.0	0.2	
Delay (s)		49.0			491.5	33.3		72.4		13.9	10.9	
Level of Service		D			F	C		E		B	B	
Approach Delay (s)		49.0			335.4			72.4			11.6	
Approach LOS		D			F			E			B	

Intersection Summary			
HCM 2000 Control Delay	145.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	119.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

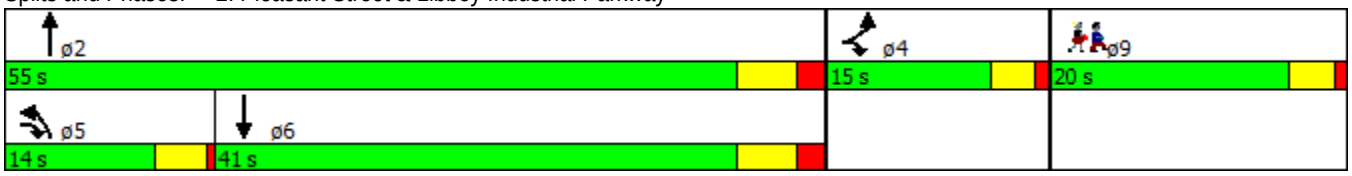


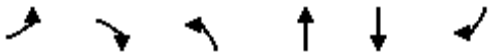
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø9
Lane Configurations							
Volume (vph)	182	461	172	850	1004	92	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	11	11	11	11	
Storage Length (ft)	200	0	350			225	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		25				
Satd. Flow (prot)	1678	1568	1745	1818	3311	0	
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1678	1568	1743	1818	3311	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		359			12		
Link Speed (mph)	30			30	30		
Link Distance (ft)	2742			951	1222		
Travel Time (s)	62.3			21.6	27.8		
Lane Group Flow (vph)	198	501	187	924	1191	0	
Turn Type	Prot	pt+ov	Prot	NA	NA		
Protected Phases	4	4 5	5	2	6		9
Permitted Phases							
Total Split (s)	15.0		14.0	55.0	41.0		20.0
Total Lost Time (s)	4.0		4.0	6.0	6.0		
Act Effct Green (s)	11.2	24.8	10.2	46.8	32.5		
Actuated g/C Ratio	0.16	0.35	0.14	0.66	0.46		
v/c Ratio	0.75	0.64	0.75	0.78	0.79		
Control Delay	51.5	10.4	53.0	16.6	22.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	51.5	10.4	53.0	16.6	22.2		
LOS	D	B	D	B	C		
Approach Delay	22.1			22.7	22.2		
Approach LOS	C			C	C		
Queue Length 50th (ft)	83	42	79	196	195		
Queue Length 95th (ft)	#248	#137	#238	#742	#469		
Internal Link Dist (ft)	2662			871	1142		
Turn Bay Length (ft)	200		350				
Base Capacity (vph)	263	779	248	1270	1658		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.75	0.64	0.75	0.73	0.72		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 71.3			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 22.4		Intersection LOS: C	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Pleasant Street & Libbey Industrial Parkway





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	182	461	172	850	1004	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1678	1568	1745	1818	3313	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1678	1568	1745	1818	3313	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	501	187	924	1091	100
RTOR Reduction (vph)	0	256	0	0	7	0
Lane Group Flow (vph)	198	245	187	924	1184	0
Confl. Peds. (#/hr)			1			1
Heavy Vehicles (%)	4%	3%	0%	1%	4%	2%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	4	4 5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	11.2	21.4	10.2	46.8	32.6	
Effective Green, g (s)	11.2	21.4	10.2	46.8	32.6	
Actuated g/C Ratio	0.15	0.29	0.14	0.63	0.44	
Clearance Time (s)	4.0		4.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	252	450	238	1142	1449	
v/s Ratio Prot	c0.12	0.16	0.11	c0.51	0.36	
v/s Ratio Perm						
v/c Ratio	0.79	0.54	0.79	0.81	0.82	
Uniform Delay, d1	30.5	22.4	31.1	10.5	18.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.8	1.4	15.6	4.3	3.7	
Delay (s)	45.3	23.8	46.7	14.8	22.0	
Level of Service	D	C	D	B	C	
Approach Delay (s)	29.9			20.2	22.0	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	52	399	450	35	116	242
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	25
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	3	4	2	0
Mvmt Flow	57	434	489	38	126	263

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	527	0	-	0	1055	508
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	547	-
Critical Hdwy	4.14	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1030	-	-	-	250	569
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1030	-	-	-	232	569
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	538	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1030	-	-	-	232	569
HCM Lane V/C Ratio	0.055	-	-	-	0.543	0.462
HCM Control Delay (s)	8.7	0	-	-	37.6	16.6
HCM Lane LOS	A	A	-	-	E	C
HCM 95th %tile Q(veh)	0.2	-	-	-	2.9	2.4

Intersection	
Int Delay, s/veh	9.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	14	275	790	12	425	1035
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	2	0	1	2
Mvmt Flow	15	299	859	13	462	1125

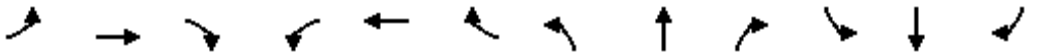
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2914	866	0	0	872	0
Stage 1	865	-	-	-	-	-
Stage 2	2049	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	17	354	-	-	778	-
Stage 1	416	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 7	354	-	-	777	-
Mov Cap-2 Maneuver	38	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	45	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	56.4	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	38	354	777	-
HCM Lane V/C Ratio	-	-	0.4	0.844	0.595	-
HCM Control Delay (s)	-	-	152.6	51.5	16.2	-
HCM Lane LOS	-	-	F	F	C	-
HCM 95th %tile Q(veh)	-	-	1.4	7.7	4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	340	91	303	305	397	63	948	258	331	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Storage Length (ft)	125		50	90		275	75		75	315		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			75			25			25		
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		247			351			697			1908	
Travel Time (s)		5.6			8.0			13.6			37.2	
Lane Group Flow (vph)	273	370	99	329	332	432	68	1030	280	360	1224	260
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Total Split (s)	13.0	15.0		13.0	15.0		15.0	41.5		25.0	51.5	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Act Effct Green (s)	6.1	8.1	21.9	6.1	8.1	32.4	7.8	34.5	47.7	18.3	45.0	58.2
Actuated g/C Ratio	0.06	0.08	0.22	0.06	0.08	0.32	0.08	0.34	0.47	0.18	0.45	0.58
v/c Ratio	2.65	1.34	0.29	3.23	1.20	0.88	0.50	0.87	0.38	1.23	0.84	0.32
Control Delay	785.9	211.3	31.9	1038.1	160.1	53.0	61.1	41.9	21.6	167.6	33.0	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	785.9	211.3	31.9	1038.1	160.1	53.0	61.1	41.9	21.6	167.6	33.0	14.9
LOS	F	F	C	F	F	D	E	D	C	F	C	B
Approach Delay		398.8			382.1			38.7			56.7	
Approach LOS		F			F			D			E	
Queue Length 50th (ft)	~274	~147	48	~346	~123	232	40	292	99	~259	318	70
Queue Length 95th (ft)	#574	#339	85	#684	#301	#636	#121	#649	264	#616	#734	216
Internal Link Dist (ft)		167			271			617			1828	
Turn Bay Length (ft)	125		50	90		275	75		75	315		90
Base Capacity (vph)	103	277	342	102	277	490	141	1179	728	292	1454	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.65	1.34	0.29	3.23	1.20	0.88	0.48	0.87	0.38	1.23	0.84	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 127.5			
Actuated Cycle Length: 101.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 3.23			
Intersection Signal Delay: 172.3		Intersection LOS: F	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	33.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

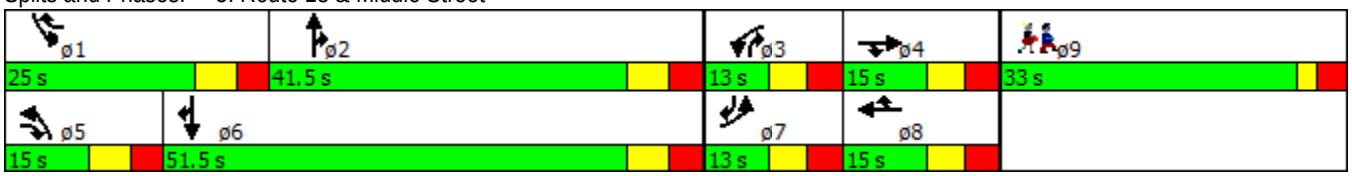
Intersection Summary

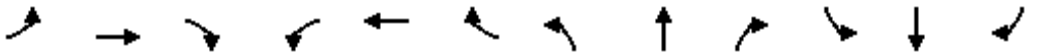
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 18 & Middle Street

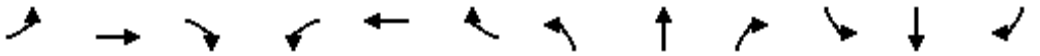




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	340	91	303	305	397	63	948	258	331	1126	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			-2%			9%	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.5	7.5	7.0	7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1728	3455	1561	1711	3455	1531	1762	3455	1546	1618	3267	1434
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	370	99	329	332	432	68	1030	280	360	1224	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	273	370	99	329	332	432	68	1030	280	360	1224	260
Heavy Vehicles (%)	1%	1%	0%	2%	1%	2%	0%	2%	2%	3%	2%	4%
Turn Type	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov	Prot	NA	pt+ov
Protected Phases	7	4	4 5	3	8	8 1	5	2	2 3	1	6	6 7
Permitted Phases												
Actuated Green, G (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Effective Green, g (s)	6.1	8.1	15.9	6.1	8.1	26.4	7.8	34.5	48.1	18.3	45.0	58.6
Actuated g/C Ratio	0.06	0.08	0.15	0.06	0.08	0.25	0.07	0.33	0.46	0.17	0.43	0.56
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.5		7.0	7.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	100	266	236	99	266	385	131	1136	708	282	1401	801
v/s Ratio Prot	0.16	c0.11	0.06	c0.19	0.10	0.28	0.04	0.30	0.18	c0.22	c0.37	0.18
v/s Ratio Perm												
v/c Ratio	2.73	1.39	0.42	3.32	1.25	1.12	0.52	0.91	0.40	1.28	0.87	0.32
Uniform Delay, d1	49.4	48.4	40.3	49.4	48.4	39.2	46.7	33.7	18.8	43.3	27.4	12.5
Progression 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
Incremental Delay, d2	805.9	197.4	0.4	1070.8	139.0	83.3	3.4	10.2	0.1	149.1	6.1	0.1
Delay (s)	855.3	245.8	40.8	1120.2	187.4	122.5	50.2	43.8	18.9	192.4	33.5	12.6
Level of Service	F	F	D	F	F	F	D	D	B	F	C	B
Approach Delay (s)		442.7			442.6			39.1			61.6	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	193.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	33.5
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	375	35	94	254	183	40	1014	94	242	1333	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	145		250	75		300	150		0	325		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1787	3370	0	1711	1801	1531	1694	3403	0	1719	3360	0
Flt Permitted	0.400			0.400			0.148			0.118		
Satd. Flow (perm)	752	3370	0	720	1801	1531	264	3403	0	214	3360	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1978			184			1102			815	
Travel Time (s)		45.0			4.2			21.5			15.9	
Lane Group Flow (vph)	135	446	0	102	276	199	43	1204	0	263	1537	0
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	11.5	16.5		11.5	16.5		12.0	32.0		12.0	32.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Act Effct Green (s)	15.0	10.0		15.0	10.0	37.1	36.1	31.0		58.0	52.0	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.37	0.36	0.31		0.58	0.52	
v/c Ratio	0.82	1.32		0.65	1.53	0.35	0.26	1.14		0.59	0.88	
Control Delay	73.5	201.8		55.0	298.8	25.7	18.2	108.1		27.8	31.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	73.5	201.8		55.0	298.8	25.7	18.2	108.1		27.8	31.2	
LOS	E	F		E	F	C	B	F		C	C	
Approach Delay		172.0			161.5			105.0			30.7	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)	74	~194		55	~248	87	9	395		80	428	
Queue Length 95th (ft)	#139	#295		#120	#408	#186	41	#677		#385	#921	
Internal Link Dist (ft)		1898			104			1022			735	
Turn Bay Length (ft)	145			75		300	150			325		
Base Capacity (vph)	164	337		157	180	568	170	1054		446	1746	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.82	1.32		0.65	1.53	0.35	0.25	1.14		0.59	0.88	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.53			
Intersection Signal Delay: 90.2		Intersection LOS: F	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	28.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

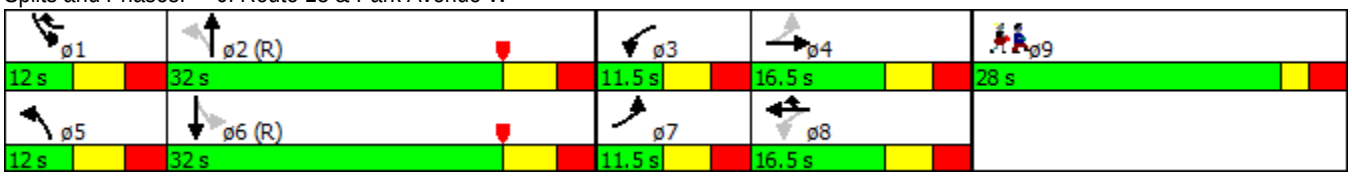
Intersection Capacity Utilization 87.2% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

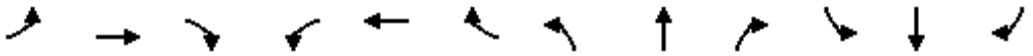
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Route 18 & Park Avenue W



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	375	35	94	254	183	40	1014	94	242	1333	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	11	11	11	11	11	15	11	11	15
Grade (%)		0%			0%			0%			-1%	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3371		1711	1801	1531	1694	3404		1719	3361	
Flt Permitted	0.40	1.00		0.40	1.00	1.00	0.15	1.00		0.12	1.00	
Satd. Flow (perm)	752	3371		720	1801	1531	264	3404		213	3361	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	408	38	102	276	199	43	1102	102	263	1449	88
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	135	446	0	102	276	199	43	1204	0	263	1537	0
Heavy Vehicles (%)	1%	1%	15%	2%	2%	2%	3%	1%	1%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	1
Turn Type	pm+pt	NA		pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Effective Green, g (s)	15.0	10.0		15.0	10.0	31.4	30.2	27.0		55.4	45.2	
Actuated g/C Ratio	0.15	0.10		0.15	0.10	0.31	0.30	0.27		0.55	0.45	
Clearance Time (s)	6.5	6.5		6.5	6.5		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	337		157	180	480	125	919		440	1519	
v/s Ratio Prot	c0.04	0.13		0.03	c0.15	0.13	0.01	c0.35		c0.13	c0.46	
v/s Ratio Perm	0.08			0.06			0.09			0.20		
v/c Ratio	0.82	1.32		0.65	1.53	0.41	0.34	1.31		0.60	1.01	
Uniform Delay, d1	40.8	45.0		39.0	45.0	27.1	27.0	36.5		20.4	27.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	26.0	164.8		6.8	265.9	0.2	0.6	147.4		1.5	26.0	
Delay (s)	66.8	209.8		45.8	310.9	27.3	27.6	183.9		21.9	53.4	
Level of Service	E	F		D	F	C	C	F		C	D	
Approach Delay (s)		176.6			166.2			178.5			48.8	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	121.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	104	337	223	47	699	122	137	552	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Storage Length (ft)	400		0	200		0	120		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3399	0	1661	1699	0	0	3397	0	1668	1763	0
Flt Permitted		0.649		0.950				0.826		0.950		
Satd. Flow (perm)	0	2217	0	1661	1699	0	0	2814	0	1668	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			28			14			2	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		1517			179			121			183	
Travel Time (s)		29.6			4.1			2.8			4.2	
Lane Group Flow (vph)	0	559	0	113	608	0	0	944	0	149	623	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Total Split (s)	35.0	35.0		14.0	49.0		42.0	42.0		17.0	59.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Act Effct Green (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.27		0.08	0.39			0.33		0.11	0.48	
v/c Ratio		0.93		0.85	0.89			1.00		0.83	0.73	
Control Delay		63.1		98.0	47.6			67.9		85.3	30.7	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		63.1		98.0	47.6			67.9		85.3	30.7	
LOS		E		F	D			E		F	C	
Approach Delay		63.1			55.5			67.9			41.3	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)		193		78	362			332		102	320	
Queue Length 95th (ft)		#393		#223	#762			#628		#268	#679	
Internal Link Dist (ft)		1437			99			41			103	
Turn Bay Length (ft)				200						175		
Base Capacity (vph)		602		133	685			940		179	852	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.93		0.85	0.89			1.00		0.83	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 57.1		Intersection LOS: E	
Intersection Capacity Utilization 117.5%		ICU Level of Service H	

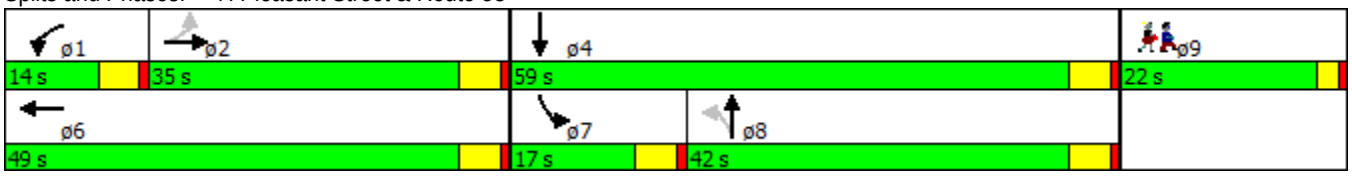
Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	22.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

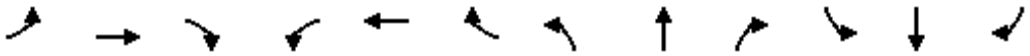
Intersection Summary

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Pleasant Street & Route 53





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	406	58	104	337	223	47	699	122	137	552	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	11	11	12	10	10	10
Grade (%)		-2%			2%			0%			-2%	
Total Lost time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		1.00	1.00	
Frt		0.98		1.00	0.94			0.98		1.00	0.99	
Flt Protected		1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3400		1661	1700			3397		1668	1764	
Flt Permitted		0.65		0.95	1.00			0.83		0.95	1.00	
Satd. Flow (perm)		2218		1661	1700			2813		1668	1764	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	441	63	113	366	242	51	760	133	149	600	23
RTOR Reduction (vph)	0	7	0	0	17	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	552	0	113	591	0	0	935	0	149	622	0
Heavy Vehicles (%)	4%	1%	2%	4%	1%	0%	0%	0%	2%	2%	1%	0%
Turn Type	Perm	NA		Prot	NA		Perm	NA		Prot	NA	
Protected Phases		2		1	6			8		7	4	
Permitted Phases	2						8					
Actuated Green, G (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Effective Green, g (s)		30.2		9.0	44.2			37.2		12.1	54.3	
Actuated g/C Ratio		0.26		0.08	0.39			0.32		0.11	0.47	
Clearance Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)		4.0		3.0	4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		583		130	654			911		175	834	
v/s Ratio Prot				0.07	c0.35					0.09	c0.35	
v/s Ratio Perm		0.25						c0.33				
v/c Ratio		0.95		0.87	0.90			1.03		0.85	0.75	
Uniform Delay, d1		41.5		52.3	33.3			38.8		50.5	24.6	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		24.6		41.8	16.1			36.6		30.7	3.9	
Delay (s)		66.1		94.1	49.4			75.4		81.2	28.5	
Level of Service		E		F	D			E		F	C	
Approach Delay (s)		66.1			56.4			75.4			38.7	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	114.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

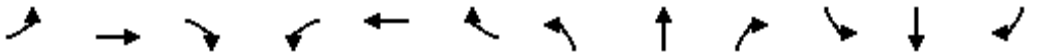
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	62	49	0	0	17	29	23	0	73	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	0	0
Mvmt Flow	2	0	67	53	0	0	18	32	25	0	79	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	160	172	79	194	160	44	79	0	0	57	0	0
Stage 1	79	79	-	81	81	-	-	-	-	-	-	-
Stage 2	81	93	-	113	79	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	810	725	987	770	736	1032	1532	-	-	1560	-	-
Stage 1	935	833	-	932	832	-	-	-	-	-	-	-
Stage 2	932	822	-	897	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	803	716	987	711	727	1032	1532	-	-	1560	-	-
Mov Cap-2 Maneuver	803	716	-	711	727	-	-	-	-	-	-	-
Stage 1	924	833	-	921	822	-	-	-	-	-	-	-
Stage 2	921	812	-	836	833	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.5	1.8	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1532	-	-	980	711	1560	-	-
HCM Lane V/C Ratio	0.012	-	-	0.071	0.075	-	-	-
HCM Control Delay (s)	7.4	0	-	9	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	244	0	143	6	313	506	178	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		100	200		0
Storage Lanes	0		0	0		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1767	0	0	1532	1473	0	1837	1503	1711	1765	0
Flt Permitted		0.989			0.950			0.988		0.317		
Satd. Flow (perm)	0	1767	0	0	1532	1473	0	1816	1503	571	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				155			492			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	18	0	0	265	155	0	347	550	193	414	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2	2 4	1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		16.0	16.0		22.0	22.0		11.0	33.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.4			12.7	23.9		17.0	34.0	30.8	28.6	
Actuated g/C Ratio		0.13			0.22	0.42		0.30	0.59	0.54	0.50	
v/c Ratio		0.08			0.78	0.22		0.64	0.50	0.43	0.47	
Control Delay		20.5			42.8	3.5		28.8	4.2	16.1	16.1	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		20.5			42.8	3.5		28.8	4.2	16.1	16.1	
LOS		C			D	A		C	A	B	B	
Approach Delay		20.5			28.3			13.7			16.1	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		2			69	0		80	5	21	60	
Queue Length 95th (ft)		24			#345	30		#389	115	#163	#356	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175			100	200		
Base Capacity (vph)		239			341	705		538	1092	454	883	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.08			0.78	0.22		0.64	0.50	0.43	0.47	

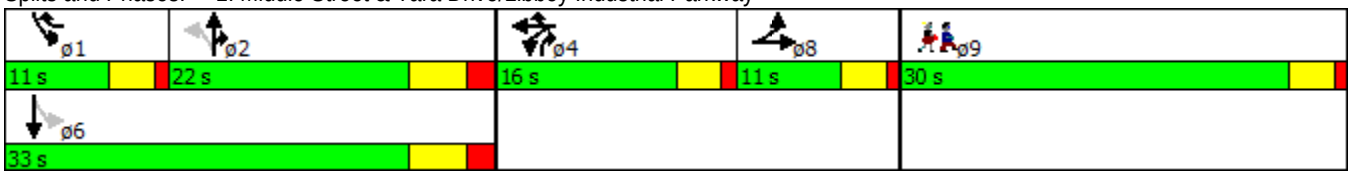
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 57.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

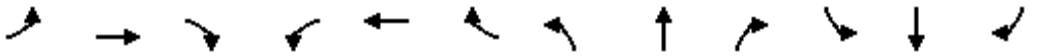
Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	2	11	244	0	143	6	313	506	178	379	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0	6.0	4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.91			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1767			1532	1473		1837	1503	1711	1765	
Flt Permitted		0.99			0.95	1.00		0.99	1.00	0.32	1.00	
Satd. Flow (perm)		1767			1532	1473		1816	1503	570	1765	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	2	12	265	0	155	7	340	550	193	412	2
RTOR Reduction (vph)	0	12	0	0	0	106	0	0	214	0	0	0
Lane Group Flow (vph)	0	6	0	0	265	49	0	347	336	193	414	0
Heavy Vehicles (%)	0%	0%	0%	10%	0%	6%	0%	3%	7%	2%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2	2 4	1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		0.9			12.7	20.1		17.2	35.9	28.6	28.6	
Effective Green, g (s)		0.9			12.7	20.1		17.2	35.9	28.6	28.6	
Actuated g/C Ratio		0.01			0.20	0.32		0.27	0.57	0.45	0.45	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		25			306	466		491	849	389	794	
v/s Ratio Prot		c0.00			c0.17	0.03			0.22	0.06	c0.23	
v/s Ratio Perm								c0.19		0.17		
v/c Ratio		0.25			0.87	0.11		0.71	0.40	0.50	0.52	
Uniform Delay, d1		31.0			24.6	15.3		20.9	7.7	11.6	12.5	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.0			21.6	0.1		4.3	0.2	0.8	0.5	
Delay (s)		35.0			46.1	15.4		25.2	8.0	12.4	13.0	
Level of Service		C			D	B		C	A	B	B	
Approach Delay (s)		35.0			34.8			14.6			12.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	22.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	497	0	257	10	507	328	149	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	10	10	11	12	12	12	11	11	11
Storage Length (ft)	0		0	0		175	0		100	200		0
Storage Lanes	0		0	0		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1738	0	0	1668	1561	0	1872	1517	1711	1797	0
Flt Permitted		0.989			0.950			0.987		0.111		
Satd. Flow (perm)	0	1738	0	0	1668	1561	0	1850	1517	200	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		126				167			197			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		443			989			2236			699	
Travel Time (s)		10.1			22.5			50.8			15.9	
Lane Group Flow (vph)	0	9	0	0	540	279	0	562	357	162	498	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2	2 4	1	6	
Permitted Phases							2			6		
Total Split (s)	11.0	11.0		38.0	38.0		40.0	40.0		11.0	51.0	
Total Lost Time (s)		4.0			4.0			6.0		4.0	6.0	
Act Effct Green (s)		7.2			34.8	45.4		34.8	73.7	48.1	46.0	
Actuated g/C Ratio		0.07			0.36	0.47		0.36	0.76	0.49	0.47	
v/c Ratio		0.04			0.90	0.34		0.85	0.30	0.77	0.59	
Control Delay		0.2			51.6	7.6		44.2	3.9	44.4	25.2	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		0.2			51.6	7.6		44.2	3.9	44.4	25.2	
LOS		A			D	A		D	A	D	C	
Approach Delay		0.3			36.6			28.5			29.9	
Approach LOS		A			D			C			C	
Queue Length 50th (ft)		0			272	32		275	14	45	182	
Queue Length 95th (ft)		0			#786	79		#785	130	#241	522	
Internal Link Dist (ft)		363			909			2156			619	
Turn Bay Length (ft)						175			100	200		
Base Capacity (vph)		244			597	818		661	1197	210	851	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.04			0.90	0.34		0.85	0.30	0.77	0.59	

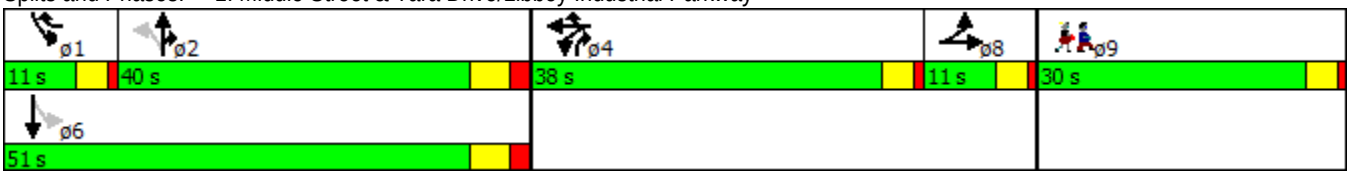
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 97.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 31.6		Intersection LOS: C	
Intersection Capacity Utilization 99.0%		ICU Level of Service F	
Analysis Period (min) 15			

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Middle Street & Tara Drive/Libbey Industrial Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	497	0	257	10	507	328	149	454	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	10	10	11	12	12	12	11	11	11
Total Lost time (s)		4.0			4.0	4.0		6.0	6.0	4.0	6.0	
Lane Util. Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.90			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1738			1668	1561		1872	1517	1711	1798	
Flt Permitted		0.99			0.95	1.00		0.99	1.00	0.11	1.00	
Satd. Flow (perm)		1738			1668	1561		1850	1517	200	1798	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	0	7	540	0	279	11	551	357	162	493	5
RTOR Reduction (vph)	0	9	0	0	0	99	0	0	53	0	0	0
Lane Group Flow (vph)	0	0	0	0	540	180	0	562	304	162	498	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	6%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	1	1	1	0	0	0
Turn Type	Split	NA		Split	NA	pt+ov	Perm	NA	pt+ov	pm+pt	NA	
Protected Phases	8	8		4	4	4 1		2	2 4	1	6	
Permitted Phases							2			6		
Actuated Green, G (s)		1.0			34.8	42.0		34.8	75.6	46.0	46.0	
Effective Green, g (s)		1.0			34.8	42.0		34.8	75.6	46.0	46.0	
Actuated g/C Ratio		0.01			0.34	0.41		0.34	0.73	0.44	0.44	
Clearance Time (s)		4.0			4.0			6.0		4.0	6.0	
Vehicle Extension (s)		2.6			2.6			2.6		2.6	2.6	
Lane Grp Cap (vph)		16			559	632		620	1105	193	797	
v/s Ratio Prot		c0.00			c0.32	0.12			0.20	c0.06	0.28	
v/s Ratio Perm								c0.30		0.31		
v/c Ratio		0.01			0.97	0.28		0.91	0.27	0.84	0.62	
Uniform Delay, d1		50.9			33.9	20.7		32.9	4.8	22.9	22.2	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1			29.3	0.2		16.9	0.1	25.8	1.4	
Delay (s)		51.0			63.2	20.9		49.8	4.9	48.6	23.6	
Level of Service		D			E	C		D	A	D	C	
Approach Delay (s)		51.0			48.8			32.3			29.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	103.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Pleasant Street/Pine Street
Delay Observations

Travel Time Runs
Weymouth, MA
Tuesday, September 29, 2015

Local Roads Route	***Start Time***	***End Time***	***Travel Time***
(from 2nd house south of intersection heading NB to Rte 3 SB overpass, see aerial)			
Run #1	7:02:11 AM	7:02:45 AM	0:00:34
Run #2	7:18:37 AM	7:19:23 AM	0:00:46
Run #3	7:33:36 AM	7:37:19 AM	0:03:43
Run #4	7:50:42 AM	7:51:27 AM	0:00:45
Run #5	8:07:57 AM	8:08:49 AM	0:00:52
Run #6	8:21:51 AM	8:22:24 AM	0:00:33
Run #7	8:35:06 AM	8:35:41 AM	0:00:35
Run #8	8:49:43 AM	8:50:34 AM	0:00:51



NOTE: *Whenever GPS coordinate did not fall directly on one of the landmarks mentioned above,*
*Route shown is approximately 720 feet, or 0.14 miles

Appendix I

Sight Line Analyses

Location: Proposed #90 driveway @ Libbey Industrial Parkway (Phase I)

STOPPING SIGHT DISTANCE FROM THE WEST

Inputs

V=speed, mph	V=	33	**(85th percentile speed)**
G=percent of grade/100	G=	-2	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	121 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	110.7 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**232 feet**	**>500**

STOPPING SIGHT DISTANCE FROM THE EAST

Inputs

V=speed, mph	V=	32	**(85th percentile speed)**
G=percent of grade/100	G=	3	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	118 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	90.3 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**208 feet**	**425**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the West

Inputs

V= design speed, mph	V=	33	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**364 feet**	**Right 460**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the East

Inputs

V= design speed, mph	V=	32	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**353 feet**	**Left 430**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.

Location: Proposed #90 south driveway @ Performance Drive (Phase I)

STOPPING SIGHT DISTANCE FROM THE NORTH

Inputs

V=speed, mph	V=	27	**(85th percentile speed)**
G=percent of grade/100	G=	-1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	99 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	71.9 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**171 feet**	**400**

STOPPING SIGHT DISTANCE FROM THE SOUTH

Inputs

V=speed, mph	V=	28	**(85th percentile speed)**
G=percent of grade/100	G=	1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	103 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	73.0 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**176 feet**	**350**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the North

Inputs

V= design speed, mph	V=	27	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**298 feet**	**Left 400**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the South

Inputs

V= design speed, mph	V=	28	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**309 feet**	**Right 350**

(with on-site vegetation removal)

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.

Location: Proposed #90 north driveway @ Performance Drive (Phase I)

STOPPING SIGHT DISTANCE FROM THE NORTH

Inputs

V=speed, mph	V=	27	**(85th percentile speed)**
G=percent of grade/100	G=	-1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	99 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	71.9 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**171 feet**	**270**

STOPPING SIGHT DISTANCE FROM THE SOUTH

Inputs

V=speed, mph	V=	28	**(85th percentile speed)**
G=percent of grade/100	G=	1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	103 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	73.0 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**176 feet**	**480**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the North

Inputs

V= design speed, mph	V=	27	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**298 feet**	**Measured** **Left 270**

(with on-site vegetation removal)

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the South

Inputs

V= design speed, mph	V=	28	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**309 feet**	**Measured** **Right 480**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.

Location: Proposed #7 driveway @ Libbey Industrial Parkway (Phase II)

STOPPING SIGHT DISTANCE FROM THE WEST

Inputs

V=speed, mph	V=	33	**(85th percentile speed)**
G=percent of grade/100	G=	-4	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	121 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	117.9 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**239 feet**	**280**

Location: Proposed #7 north driveway @ Performance Drive (Phase II)

STOPPING SIGHT DISTANCE FROM THE NORTH

Inputs

V=speed, mph	V=	27	**(85th percentile speed)**
G=percent of grade/100	G=	-1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	99 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	71.9 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**171 feet**	**400**

STOPPING SIGHT DISTANCE FROM THE SOUTH

Inputs

V=speed, mph	V=	28	**(85th percentile speed)**
G=percent of grade/100	G=	1	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	103 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	73.0 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**176 feet**	**270**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the North

Inputs

V= design speed, mph	V=	27	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**298 feet**	**Right 335**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the South

Inputs

V= design speed, mph	V=	28	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

			Measured
Int. Sight Distance =	1.47Vt	**309 feet**	**Left 270**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.

Location: Proposed #200 west driveway @ Libbey Industrial Parkway (Phase III)

STOPPING SIGHT DISTANCE FROM THE WEST

Inputs

V=speed, mph	V=	41	**(85th percentile speed)**
G=percent of grade/100	G=	0	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	151 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	161.1 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**312 feet**	**>500**

STOPPING SIGHT DISTANCE FROM THE EAST

Inputs

V=speed, mph	V=	42	**(85th percentile speed)**
G=percent of grade/100	G=	-3	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	154 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	185.0 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**339 feet**	**>500**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the West

Inputs

V= design speed, mph	V=	41	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**452 feet**	**Measured** **Right >500** (with vegetation removal)

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the East

Inputs

V= design speed, mph	V=	42	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**463 feet**	**Measured** **Left >500**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.

Location: Proposed #200 east driveway @ Libbey Industrial Parkway (Phase III)

STOPPING SIGHT DISTANCE FROM THE WEST

Inputs

V=speed, mph	V=	41	**(85th percentile speed)**
G=percent of grade/100	G=	0	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	151 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	161.1 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**312 feet**	**>500**

STOPPING SIGHT DISTANCE FROM THE EAST

Inputs

V=speed, mph	V=	42	**(85th percentile speed)**
G=percent of grade/100	G=	-3	**(whole number)**
t=brake reaction time (2.5 sec)	t=	2.5	
a=deceleration rate, ft/sec^2	a=	11.2	

Calculations

Break Reaction Distance	1.47Vt	154 feet	
Breaking Distance	$V^2/30((a/32.2)+G)$	185.0 feet	**Measured**
Stopping Sight Distance =	$1.47Vt + V^2/30[(a/32.2)+G]$	**339 feet**	**450**

Source: *A Policy on Geometric Design of Highways and Streets, 2011, Sixth Edition,* prepared by AASHTO, p. 3-4 to 3-5.

INTERSECTION SIGHT DISTANCE - RIGHT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the West

Inputs

V= design speed, mph	V=	41	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**452 feet**	**Measured Right >500**

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

INTERSECTION SIGHT DISTANCE - LEFT FROM PROPOSED DRIVEWAY (MINOR APPROACH) - To the East

Inputs

V= design speed, mph	V=	42	**(85th percentile speed)**
t=time gap for minor road vehicle to enter the major road	t=	7.50	**(assumes passenger car)**

Calculations

Int. Sight Distance =	1.47Vt	**463 feet**	**Measured Left 375** (with vegetation removal)

Design Vehicle	Time Gap[1], t (sec) for Grades </=3%	Grade of Minor Approach	Number of Additional Lanes to Cross	Adjusted Time Gap, t (sec)
passenger car	7.5	0%	0	7.50
single-unit truck	9.5	0%	0	9.50
combination truck	11.5	0%	0	11.50

Notes:

1.Time Gap values are applicable for major roads with grades 3 percent or less and no median and a minor street approach with a grade of 3 percent or less. Otherwise, the table values should be adjusted as follo

*If the minor street has an upward grade of more than 3 percent than add 0.2 sec. to t for each percent grade.

**Increase t by .5 seconds (for passenger cars) or 0.7 seconds (for trucks) for every additional lane from the left, in excess of one, to be crossed by the turning vehicle.

***If the major approach is a divided highway with a median not wide enough to store the design vehicle, then the median width should be converted to equivalent lanes.