Traffic Impact Assessment Senior Living Community – Wakefield, Massachusetts

To:

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FROM:

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DATE:

December 1, 2014

Tighe & Bond, Inc. (Tighe & Bond) has prepared this *Traffic Impact Assessment* for proposed senior living community to be located along the western side of Crescent Street between Main Street (Route 129) and Centre Street/Otis Street in Wakefield, Massachusetts. The site currently consists of two- and three-family residences located at 11, 15, 17, 19, 21, and 25 Crescent Street and an office building at 338 Main Street. As proposed, the existing structures would be razed and a 137 unit senior living community would be constructed. Access to the site is currently provided via five full access driveways on Crescent Street. As proposed, access would be provided via a full access driveway on Crescent Street for a parking garage, and a loop driveway that would provide one-way traffic flow for a drop-off area (an entrance only driveway and an exit only driveway).

The project site is bounded by Crescent Street to the north and east, residential uses to the south, and a mix of a church and residential, commercial, and office uses to the west. The site location in relation to the surrounding roadways is shown on Figure 1.

Based on coordination efforts with the Town of Wakefield's Peer Review Consultant (Mr. John Kennedy, P.E., PTOE of Vanasse Hangen Brustlin, Inc.), this study has been prepared to evaluate the traffic impacts and access requirements for the proposed redevelopment project.

1 Existing Conditions

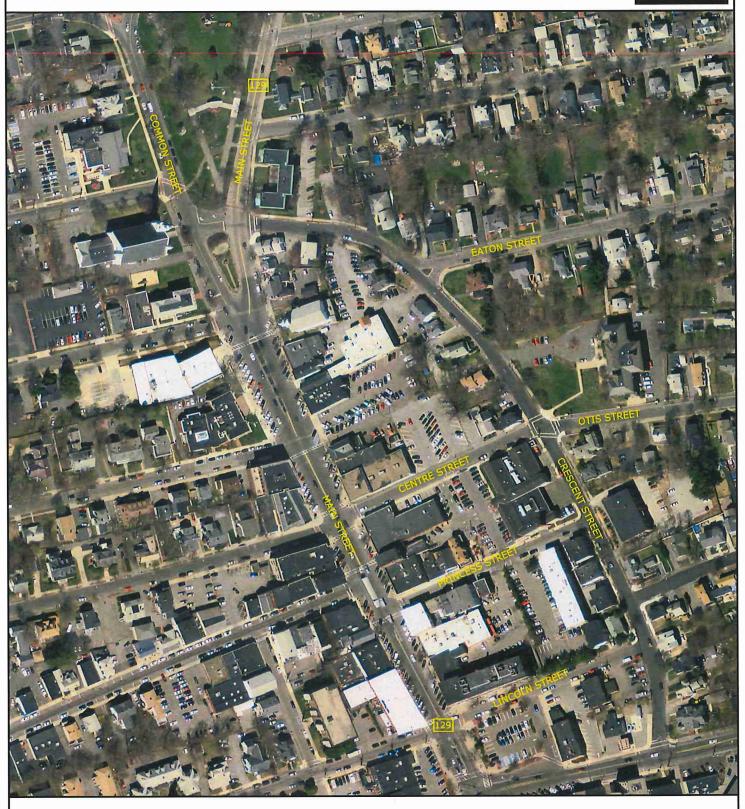
To evaluate the traffic impacts associated with the proposed redevelopment project, existing roadway and traffic conditions were first established. In preparing this study for the proposed project, the following intersections have been analyzed and evaluated:

- Crescent Street at Main Street
- Crescent Street at Centre Street and Otis Street

A description of the geometric and traffic control characteristics of the study area roadways and intersections is provided in the following along with quantification of existing traffic volumes.

TRAFFIC IMPACT ASSESSMENT

Tighe&Bond



NORTH



Site Location Map

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Figure 1

1.1 Study Area Roadways

The jurisdictional responsibility and classification of each roadway within the study area were researched. Within the study area, Crescent Street, Main Street, Centre Street, and Otis Street are under Town of Wakefield jurisdiction. As defined by the Massachusetts Department of Transportation (MassDOT), Crescent Street is functionally classified as an Urban Minor Arterial, Main Street as an Urban Principal Arterial, and Centre Street and Otis Street as Local Roads. The jurisdiction and classification of the roadways were obtained from the MassDOT Road Inventory Interactive Map website (http://services.massdot.state.ma.us/maptemplate/RoadInventory/).

1.2 Study Area Intersections

1.2.1 Crescent Street at Main Street

Crescent Street intersects Main Street from the east and west to form a four-way, unsignalized intersection. The Main Street northbound and southbound approaches each consist of a single general purpose travel lane with directional flow separated by a double yellow centerline. The Crescent Street eastbound and westbound approaches are under STOP-sign control consisting of a single general purpose travel lane. Directional flow along the Crescent Street west leg is separated by a single yellow centerline and there are no pavement marking to separate directional flow along the Crescent Street east leg. The Crescent Street departure on the west leg of the intersection provides right turns only onto Common Street northbound and has a "No Truck" signs posted.

Sidewalks are provided along both sides of Main Street, both sides of the Crescent Street east leg, and along the south side of the Crescent Street west leg of the intersection. Crosswalks are striped across the Crescent Street east leg and the Main Street north leg of the intersection that leads to a paved pedestrian walkway for Wakefield Upper Common. On the Crescent Street east leg of the intersection, "No Parking This Side of Street" signs are posted along the north side, a "No Parking Here to Corner" sign is posted near the intersection on the south side, and "Two Hour Parking" signs are posted along the south side to the east of the intersection.

The speed limit along Main Street is posted at 20 miles per hour (mph). Although there are no speed limit signs posted along Crescent Street within the study area, discussions with Police Department officials revealed that the enforced speed limit is 30 mph. Land use in the vicinity of the intersection consists of Wakefield Un-Common Antiques, Wakefield Upper Common, and residences.

1.2.2 Crescent Street at Centre Street and Otis Street

Centre Street and Otis Street intersect Crescent Street from the west and east, respectively, to form a four-way, unsignalized intersection with the Centre Street and Otis Street approaches under STOP-sign control. An overhead flashing beacon is present at the intersection to supplemental the traffic control (i.e., free flow along the Crescent Street approaches and STOP control along the Centre Street and Otis Street approaches).

Each approach to the intersection consists of a single general purpose travel lane. There are no pavement marking to separate directional flow along Crescent Street, Centre Street, or Otis Street. There are "No Truck" signs posted facing the intersection from Otis Street. Although there are no speed limit signs posted along Crescent Street, Centre Street, or Otis Street within the study area, Wakefield Police Department officials stated that the enforced speed limits are 30 mph.

Sidewalks are provided along both sides of Otis Street. Crosswalks are striped across all legs of the intersection. "No Parking This Side of Street" signs are posted along the east side of Crescent Street and along the south sides of Centre Street and Otis Street. "No Parking Here to Corner" signs are posted along the north sides of Centre Street and Otis Street. Land use in the vicinity of the intersection consists of the Wakefield Police and Fire Stations, Lincoln School retirement housing, and residences.

1.3 Traffic Volumes

Base traffic conditions within the study area were developed by conducting manual turning movement counts (TMCs) and vehicle classification counts in September 2014 when local schools were in regular session. The traffic counts were performed at the study area intersections during the weekday AM peak period (7:00 to 9:00 AM) and the weekday PM peak period (4:00 to 6:00 PM). In addition, automatic traffic recorder (ATR) counts were collected along Crescent Street adjacent to the site in September 2014. The traffic-count data are provided in the Appendix.

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. To determine if the traffic-count data needed to be adjusted to account for this fluctuation, seasonal traffic-volume data were reviewed from nearby MassDOT Permanent Count Stations.¹ This information revealed September traffic volumes are between 0.61 and 2.42 percent higher than annual average-month conditions. Therefore, the traffic counts were used as collected to provide a conservative analytical framework (higher than average). The MassDOT seasonal adjustment data are provided in the Appendix.

Figure 2 graphically depicts the 2014 Existing weekday AM and weekday PM peak-hour traffic flow networks. The existing traffic volumes along Crescent Street adjacent to the site are summarized in Table 1.

TABLE 1Existing Traffic-Volume Summary

Location/Time Period	Daily Volume ^a	Peak-Hour Volumes ^b	K Factors ^c	Directional Distribution ^d
Crescent St adjacent to the site: Weekday Daily Weekday AM Peak Hour Weekday PM Peak Hour	2,659	217 225	8.2 8.5	60% NB 56% SB

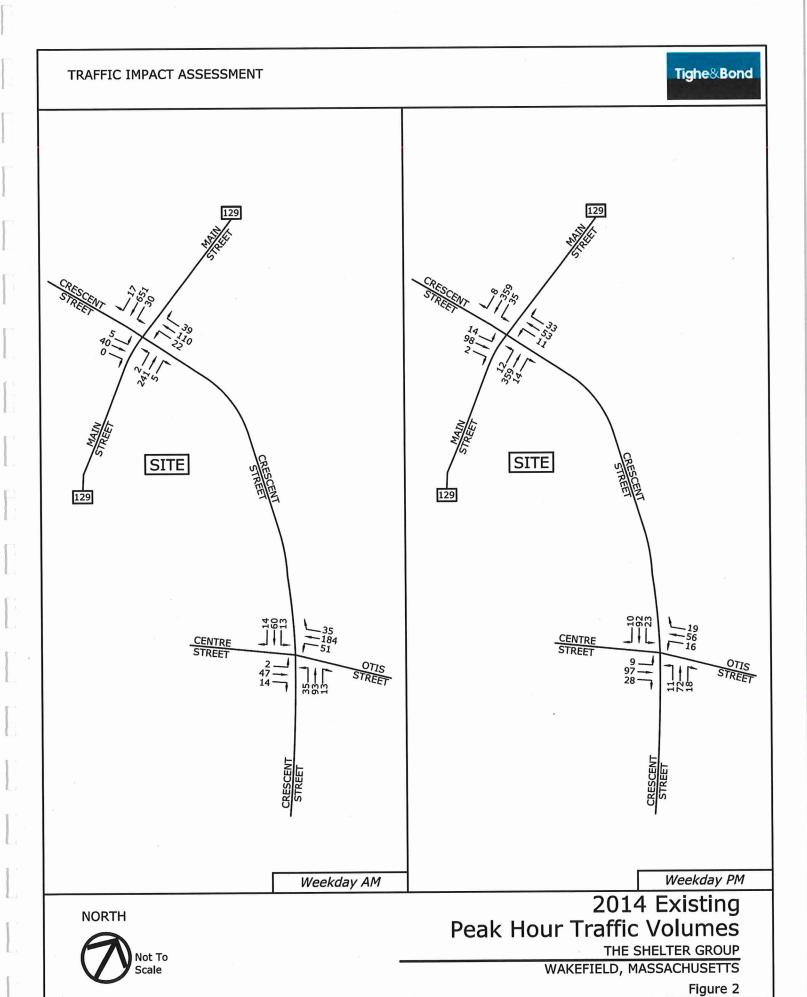
^a In vehicles per day.

^b In vehicles per hour.

^c Percent of average daily traffic occurring during the peak hour.

^d NB = northbound, SB = southbound.

MassDOT - Highway Division, Transportation Data Management System. "Station 4121 - Wakefield, Interstate 95/Route 128 north of Main Street (Lynnfield)." "Station 4137 - Wakefield, Interstate 95/Route 128 north of North Avenue." "Station 4423 - Wakefield, Interstate 95/Route 128 north of Route 129." Massachusetts Department of Transportation.



1.4 Vehicle Speeds

Speed measurements were conducted along Crescent Street south of Eaton Street adjacent to the site. The travel time was recorded using ATRs over a 24-hour period, thereby also recording travel speeds during non-peak hours when vehicle speeds are not affected by platooning. The speeds were determined by dividing the elapsed time by the measured distance between two checkpoints.

The average speeds along Crescent Street south of Eaton Street adjacent to the site were found to be between 24 and 26 mph with 85th percentile speeds between 28 and 29 mph for northbound and southbound travel. These speed measurements were observed to be generally lower than the enforced speed limit of 30 mph along Crescent Street, are not excessive, and are representative of the roadway classification and alignment.

Due to the horizontal curvature of Crescent Street between Main Street and Eaton Street, supplemental speed measurements were conducted along Crescent Street by utilizing a standard traffic engineering procedure called the "floating car method." In this method, speeds are recorded by a vehicle that is traveling consistent with the speed of traffic on the roadway. Based on several observations, the speeds along Crescent Street between Main Street and Eaton Street ranged between 20 and 24 mph.

1.5 Capacity and Queue Analyses

1.5.1 Capacity Analysis Methodology

Capacity analyses were performed for the study intersections with the 2014 Existing traffic volumes during the weekday AM and weekday PM peak hours based on the methodology and procedures set forth in the *Highway Capacity Manual* (HCM).²

The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. A definition of LOS is provided in the Appendix.

1.5.2 Queue Length Analysis Methodology

Vehicle queue analyses were computed for the study area intersections for the 2014 Existing traffic volumes during the weekday AM and weekday PM peak hours. For unsignalized intersections, the quantitative measure of vehicle queue length is defined as the 95th percentile queue. The 95th percentile queue at an unsignalized intersection represents a vehicular queue that would not be exceeded for 95 percent of the time period being evaluated (i.e., the queue would be exceeded only 5 percent of the time).

1.5.3 Capacity and Queue Length Analysis Results

The capacity and queue length analysis results are summarized in Table 2 for the 2014 Existing traffic-volume conditions. The computer-generated analysis reports are provided in the Appendix.

² HCM2010: Highway Capacity Manual. Washington, D.C.: Transportation Research Board, 2010.

TABLE 2Intersection Analysis Summary – Existing Conditions

Intersection/		2014	Existing	
Peak Hour/Critical Movement	V/C a	Del. b	LOS c	Queue d
Crescent St at Main St				
Weekday AM:				
Main St NB left turns	0.00	9.4	Α	0.0
Main St SB left turns	0.03	7.9	Α	0.1
Crescent St EB left/through/right	0.36	40.6	Е	1.5
Crescent Street WB left/through/right	0.87	81.7	F	6.8
Weekday PM:				
Main St NB left turns	0.01	8.1	Α	0.0
Main St SB left turns	0.04	8.3	Α	0.1
Crescent St EB left/through/right	0.64	45.7	E	3.9
Crescent Street WB left/through/right	0.44	28.7	D	2.1
Crescent St at Centre St and Otis St				
Weekday AM:				
Crescent St NB left turns	0.04	7.4	Α	0.1
Crescent St SB left turns	0.01	7.6	Α	0.0
Centre St EB left/through/right	0.16	13.6	В	0.6
Otis St WB left/through/right	0.52	17.6	С	3.0
Weekday PM:				
Crescent St NB left turns	0.01	7.4	Α	0.0
Crescent St SB left turns	0.02	7.6	Α	0.1
Centre St EB left/through/right	0.31	14.6	В	1.3
Otis St WB left/through/right	0.16	11.8	В	0.6

^a Volume-to-capacity ratio.

1.5.3.1 Crescent Street at Main Street

Under 2014 Existing traffic-volume conditions, the Main Street major street left turns at the unsignalized intersection with Crescent Street currently operate at optimal levels (LOS A) during the weekday AM and weekday PM peak hours. The Crescent Street minor street movements operate with long delays (LOS E/F), but with ample capacity available (volume-to-capacity [v/c] ratios <1.00) during the weekday peak hours.

1.5.3.2 Crescent Street at Centre Street and Otis Street

Under 2014 Existing traffic-volume conditions, the Crescent Street major street left turns at the unsignalized intersection with Centre Street and Otis Street currently operate at optimal levels (LOS A) during the weekday AM and weekday PM peak hours. The Centre Street and Otis Street minor street movements operate at desirable levels (LOS C or better) and with ample capacity available (v/c ratios <1.00) during the weekday peak hours.

2 Future No-Build Conditions

To estimate the impact of site-generated traffic within the study area, existing traffic volumes were projected to the year 2020 which represents a six-year design horizon. The proposed development is expected to be completed and operational before the 2020 design year. Traffic volumes on the roadway network will include existing traffic, new traffic due to normal traffic growth, and traffic related to significant development by others expected to be completed within the area by 2020. Consideration of these factors resulted in the

^b Average control delay in seconds per vehicle.

Level of service.

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

development of 2020 No-Build traffic volumes, which assume the proposed development is not built. The incremental impacts of the proposed development may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the No-Build conditions.

2.1 Traffic Growth

To develop the 2020 No-Build forecast volumes, two components of traffic growth were considered. First, an annual average traffic-growth percentage was determined based on MassDOT historical traffic-volume data from nearby MassDOT Permanent Count Stations.³ The MassDOT historical data revealed that traffic volumes have ranged from an annual decrease of 2.16 percent to an annual increase of 0.72 percent. Based on coordination efforts with the Wakefield's Peer Review Consultant, a 1.0 percent compounded annual growth rate was assumed to provide a conservative (worse than expected) scenario in accounting for general population growth and the traffic generated by any smaller area developments.

Second, traffic to be generated by planned developments estimated to add substantial volumes of traffic through the study area within the next six years was considered. Based on discussions with the Wakefield's Peer Review Consultant, there are no developments proposed or permitted that would significantly increase traffic volumes within the study area.

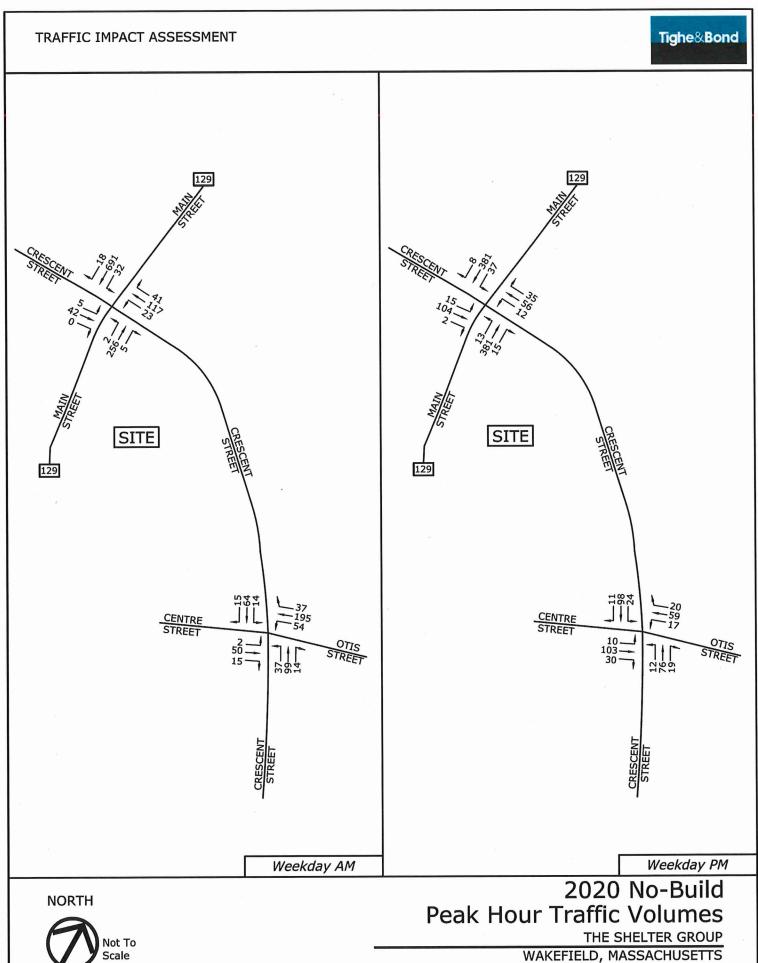
The 2020 No-Build peak-hour traffic volumes were accordingly developed by applying a 1.0 percent per year traffic growth rate (or 6.2 percent compounded over six years) to the 2014 Existing volumes. The 2020 No-Build traffic volumes are shown graphically for the study area intersections on Figure 3 for the weekday AM and weekday PM peak hours.

2.2 Planned Roadway Improvements

Based on discussions with the Wakefield's Peer Review Consultant, there are no planned roadway improvements contemplated in the surrounding area of the proposed project.

3 Future Build Conditions

The site currently consists of two- and three-family residences at 11, 15, 17, 19, 21, and 25 Crescent Street and a 25,737 square foot office building at 338 Main Street. As proposed, the existing structures would be razed and a 137 unit senior living community would be constructed.



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Figure 3

3.1 Trip Generation

Traffic to be generated by the proposed senior living community was forecast using the Institute of Transportation Engineers (ITE) *Trip Generation Manual.*⁴ Based on a review of ITE data, the description for Land Use Code 254 (Assisted Living) most closely represents the characteristics of the proposed development (i.e., independent living units and assisted living units). For trip-generation comparison purposes, estimates were calculated for the reoccupancy of the existing uses based on ITE trip data and information published by the Town of Wakefield's online property assessment data. The trip-generation calculations are provided in the Appendix. Table 3 summarizes a comparison of the trip-generation characteristics for the existing uses and the proposed senior living community.

TABLE 3Trip-Generation Comparison – Proposed vs. Existing Uses

Time Period/Direction	Existing	Proposed	Additional
	Uses ^a	Uses ^b	Trips ^c
Weekday Daily	620	376	(244)
Weekday AM: <i>Enter</i> <u>Exit</u> <i>Total</i>	60	17	(43)
	21	<u>8</u>	<u>(13)</u>
	81	25	(56)
Weekday PM: <i>Enter</i> <u>Exit</u> <i>Total</i>	30	20	(10)
	<u>96</u>	20	<u>(76)</u>
	126	40	(86)

^a ITE Land Use Code 221 (Low-Rise Apartment) for 23 dwelling units, and Land Use Code 710 (General Office Building) for 25,737 sf.

The ITE trip-generation comparison indicated that the proposed development is expected to generate significantly less trips on a weekday as well as during the weekday AM and weekday PM peak hours than the existing uses. This comparison suggests that the proposed use would not have as much of an impact along the adjacent roadway system than the existing uses, as the site would generate significantly less vehicle trips.

3.2 Arrival/Departure Distribution

After project-generated vehicle trips have been estimated, the next step in the traffic study is to determine the distribution of project traffic and assign these trips to the local roadway network. Due to the type of development proposed, the directional distribution of the estimated site traffic was developed upon evaluation of existing travel patterns and site access routes. Based on the traffic-generation and distribution estimates for the proposed project, the traffic volumes associated with the proposed senior living community (Table 3) were

b ITE Land Use Code 254 (Assisted Living) for 137 occupied beds.

^c Proposed Uses minus Existing Uses.

⁴ Trip Generation Manual, 9th ed. Washington, DC: Institute of Transportation Engineers, 2012.

assigned to the local roadway network and the traffic volumes associated with the existing uses were removed (Table 3).

The site-generated traffic volumes are shown on Figure 4 for the weekday AM and weekday PM peak hours. The site-generated traffic volumes were assigned to the roadway network and combined with the 2020 No-Build traffic volumes to develop the 2020 Build peak-hour traffic volume networks. The 2020 Build weekday AM and weekday PM peak-hour traffic volumes are illustrated on Figure 5.

3.3 Site Access and Internal Circulation

Access to the site is currently provided via four full access driveways on Crescent Street. As proposed, access would be provided via a full access driveway on Crescent Street for a garage at the northern end of the property and a drop off area on the eastern end of the property with an enter-only driveway and an exit-only driveway for one-way traffic circulation flow.

3.3.1 On-Site Circulation

The proposed Crescent Street full access driveway at the northern end of the site would provide access to a parking garage for the proposed senior living community. The full access driveway would also provide for a loading area.

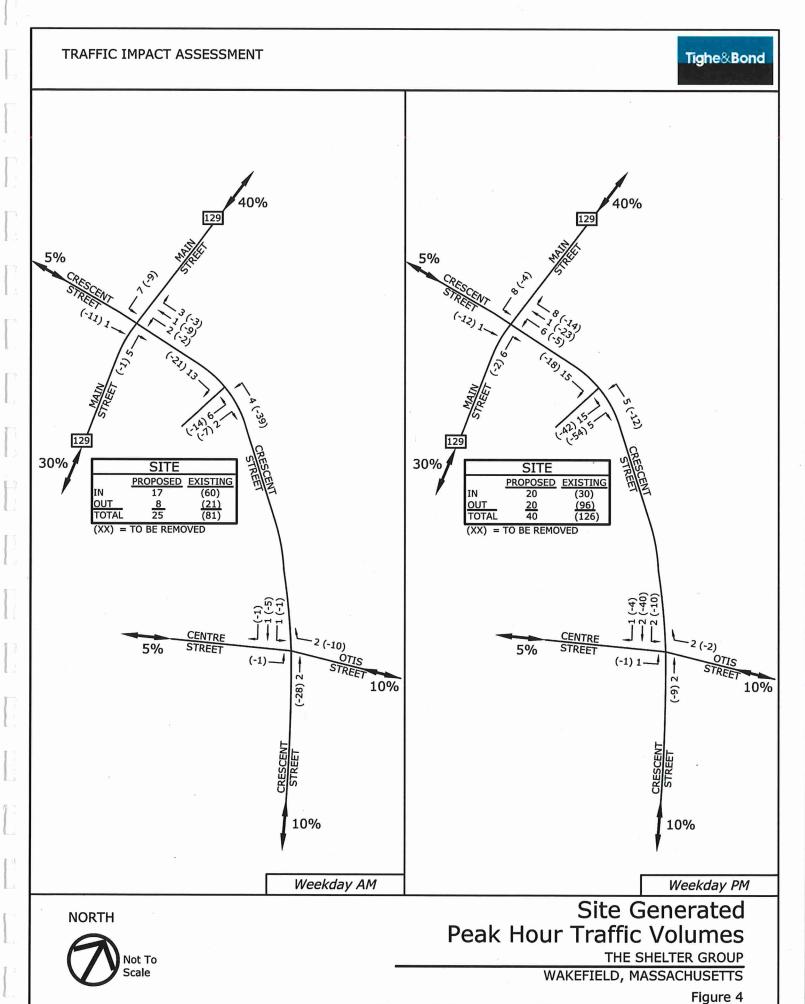
The proposed Crescent Street drop off area would accommodate a one-way circulation flow that enters to the north on the northeastern end of the site and exits to the southeast. One-way traffic circulation painted arrows are proposed to be located within the drop-off area driveway directing users of proper site circulation.

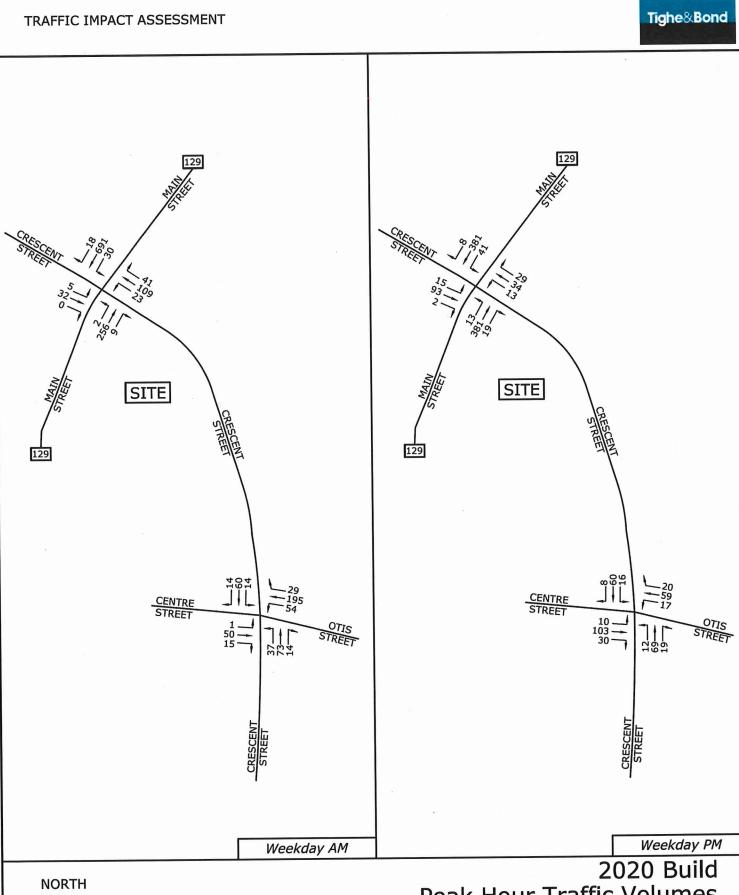
The site driveways have been designed in accordance with Access Management Principles and Designs by providing and managing access to the site while simultaneously preserving the flow of traffic on the surrounding roadway system in terms of safety and capacity.⁵ These goals have been met by reducing the number curb cuts and providing one-way traffic circulation flow through the drop-off area.

3.3.2 Pedestrian Accommodations

In the vicinity of and adjacent to the site, sidewalks are currently present along both sides of Crescent Street. At the intersection with Main Street, a crosswalk is striped across the Crescent Street east leg and across the Main Street north leg. On the northwest corner of the intersection, the Main Street crosswalk leads to a paved pedestrian walkway for Wakefield Upper Common. In addition, crosswalks are striped across all legs of the Crescent Street intersection with Centre Street and Otis Street.

⁵ Access Management Manual. Washington, DC: Transportation Research Board, 2003.







Peak Hour Traffic Volumes

THE SHELTER GROUP WAKEFIELD, MASSACHUSETTS Figure 5 Based on public comment from the October 8, 2014 Board of Appeals meeting, concerns were raised with pedestrian safety when crossing Main Street at the intersection with Crescent Street. Upon field reconnaissance, there are no pedestrian warning signs posted to bring attention to motorists of the crosswalks (e.g., Pedestrian Crossing [W11-2] warning sign with a diagonal downward pointing arrow [W16-7P] plaque, In-Street Pedestrian Crossing [R1-6] sign, etc.). In addition, there are no pedestrian warning signs posted at the Crescent Street intersection with Centre Street and Otis Street. It is recommended that the applicant coordinate with the Town of Wakefield on the feasibility and desire of installing pedestrian warning signs at these locations.

3.3.3 Parking Spaces

As proposed the site would provide a total of 74 parking spaces, of which 4 spaces would be handicapped accessible. The parking garage is proposed to accommodate 72 parking spaces, of which 2 spaces would be accessible spaces. The drop-off area would also provide for 2 accessible parking spaces at surface level.

Based on the Town of Wakefield's requirements these types of developments require 1.0 space per 2 employees in the maximum working shift, plus 1 space per 2 units. As proposed, the senior living community is projected to have 36 employees during the maximum working shift that would require 18 spaces (1 spaces/2 employees x 36 employees). In addition, the proposed 137 unit senior living community would require 69 parking spaces (1 space/2 units x 137 units). As such, the senior living community would require a total of 87 on-site parking spaces.

To determine the peak period parking demand anticipated to be generated by the proposed senior living community, ITE⁶ parking generation data were researched Land Use Code 254 (Assisted Living). The average peak period parking demand is 0.41 spaces per dwelling unit on a weekday. Applying this ratio, the proposed 137 unit senior living community would require an average of 56 parking spaces (0.41 spaces/1 dwelling unit x 137 units).

As proposed, the senior living community would provide 74 parking spaces which are below the Town's requirements (87 spaces) and exceed ITE's average peak parking demand (i.e., 56 spaces).

3.3.4 Sight Distances

To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed Crescent Street site driveways to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO)⁷.

⁶ Parking Generation. 4th ed. Washington, DC: Institute of Transportation Engineers, 2010.

⁷ A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials (AASHTO); 2004.

Sight distance is the length of roadway ahead visible to the driver. The Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling along the major roadway to safely stop before reaching a stationary object in its path. The Intersection Sight Distance (ISD) is provided on minor street approach to allow the motorists of stopped vehicles sufficient view of the major roadway to decide when to enter the major roadway.

The available SSD and ISD at the proposed site driveway locations were measured and compared to minimum requirements as established by AASHTO. Consistent with Town of Wakefield's guidelines, the sight lines were measured assuming the existing site structures were razed and vegetation along the site frontage was removed or lowered to a point 2-1/2 feet above street level. Based on the observed traveled speeds (Section 1.4) and the enforced speed limit (30 mph) along Crescent Street, the SSD and ISD requirements at the proposed site driveways were calculated. Since the enter-only driveway for the drop-off area would not provide exiting movements, sight lines at this driveway were only compared with the SSD requirements. As shown in Table 4, the required minimum sight distances for the observed speeds and the enforced speed limit are compared to the available distances.

As indicated in Table 4, available sight distances at the proposed site driveways would be expected to exceed the AASHTO requirements for safe operation. In accordance with Town of Wakefield's standards (Zoning Bylaw Article VI, Section 190-31.F), "Traffic visibility at driveways and corners. A fence, hedge, wall, sign or other structure or vegetation may be maintained on any lot, provided that in the front yard area no such structure or vegetation shall be over two and one-half (2 1/2) feet in height above the adjacent ground within five feet of the front lot line unless it can be shown that such vegetation or structure will not restrict visibility in such a way as to hinder the safe entry or exit of a vehicle from any driveway to the street or restrict visibility at a corner of two streets."

Sight Distance Summary **TABLE 4**

	Stopping	Stopping Sight Distance (feet)	ce (feet)	Intersection	Intersection Sight Distance (feet)	ance (feet)
Location/Direction	Measured	Minimum Required ^a	Desirable ^b	Measured	Minimum Required ^b	Desirable ^a
Crescent St at Full Access Site Driveway: East of intersection West of Intersection	340+	147 147	200	340+ 340+	200	231
Crescent St at Enter-Only Site Driveway: ° West of intersection South of intersection	300+ 300+	147	200	1.1		1.1
Crescent St at Exit-Only Site Driveway: North of intersection South of intersection	250 340+	147 191	200	250 340+	200	231 324

Values based on AASHTO requirements for the observed speeds along Crescent Street of: 24 mph east (westbound), west (eastbound), and north (southbound)
 of the site driveways, and 29 mph south of the drop-off area driveways (northbound).
 b Values based on AASHTO SSD requirements for the enforced speed limit of 30 mph along Crescent Street.
 c Only SSD measurements were evaluated as the Crescent Street enter-only driveway would not provide egress from the site.

4 Capacity and Queue Length Analyses

Capacity and queue analyses were performed for the study intersections with the 2020 No-Build and 2020 Build traffic volumes during the weekday AM and weekday PM peak hours. The capacity and queue length analysis results are summarized in Table 5 for the 2020 No-Build and 2020 Build traffic-volume conditions. The computer-generated analysis reports are provided in the Appendix.

4.1 Crescent Street at Main Street

Under 2020 No-Build future traffic-volume conditions, long delays (LOS E/F) are expected on the Crescent Street approaches to Main Street during the weekday AM and weekday PM peak hours, with capacity constraints (v/c ratios >1.00) on the Crescent Street westbound approach during the weekday PM peak hour. With the proposed development constructed and occupied, there is expected to be improved operations on the minor street movements during both the weekday AM and weekday PM peak hours.

4.2 Crescent Street at Centre Street and Otis Street

Under future traffic-volume conditions, the Crescent Street and Otis Street approaches to Crescent Street are anticipated to operate at desirable levels (LOS C or better) during the weekday AM and weekday PM peak hours. With the proposed development constructed and occupied, there is expected to be improved operations on the minor street approaches during both the weekday AM and weekday PM peak hours.

Intersection Analysis Summary - Future Conditions **TABLE 5**

Intersection/		2020 N	2020 No-Build			202	2020 Build	
Peak Hour/Critical Movement	N/Ca	Del. b	SOT	Onene d	V/C	Del.	SOT	Onene
Crescent St at Main St								
Weekday AM:		Ÿį						
Main St NB left turns	0.00	9.6	∢	0.0	0.00	9.6	۷	0.0
Main St SB left turns	0.03	7.9	∢	0.1	0.03	7.9	∢	0.0
Crescent St EB left/through/right	0.44	52.5	ш	2.0	0.35	46.8	ш	1.4
Crescent Street WB left/through/right	1.04	128.4	ш	8.9	96.0	105.5	ட	7.8
Weekday PM:								
Main St NB left turns	0.01	8.2	∢	0.0	0.01	8.2	⋖	0.0
Main St SB left turns	0.04	8.4	∢	0.1	0.04	8.5	∢	0.1
Crescent St EB left/through/right	0.76	62.6	L	5.1	0.69	54.2	ட	4.3
Crescent Street WB left/through/right	0.52	36.2	ш	2.8	0.40	31.0	۵	1.8
Crescent St at Centre St and Otis St								
Weekday AM:								
Crescent St NB left turns	0.04	7.5	∢	0.1	0.04	7.4	⋖	0.1
Crescent St SB left turns	0.01	7.6	∢	0.0	0.01	7.5	⋖	0.0
Centre St EB left/through/right	0.18	14.1	Ω	9.0	0.16	13.2	В	9.0
Otis St WB left/through/right	0.56	19.0	ပ	3.5	0.53	17.4	U	3.1
Weekday PM:								
Crescent St NB left turns	0.01	7.5	۷	0.0	0.01	7.4	⋖	0.0
Crescent St SB left turns	0.02	7.6	∢	0.1	0.01	7.5	4	0.0
Centre St EB left/through/right	0.34	15.4	U	1.5	0.30	13.6	В	1.3
Otis St WB left/through/right	0.18	12.2	ω	9.0	0.16	11.5	В	9.0

^a Volume-to-capacity ratio. ^b Average control delay in seconds per vehicle. ^c Level of service. ^d 95th percentile queue length in vehicles per lane (assuming 25 feet per vehicle).

5 Conclusions

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed senior living community. Conclusions of these efforts are summarized in the following:

- The site currently consists of two- and three-family residences at 11, 15, 17, 19, 21, and 25 Crescent Street and a 25,737 square foot office building at 338 Main Street.
 As proposed, the existing structures would be razed and a 137 unit senior living community would be constructed.
- Access to the site is currently provided via five full access driveways on Crescent Street. As proposed, access would be provided via a full access driveway on Crescent Street for a parking garage, and a loop driveway that would provide one-way traffic flow for a drop-off area (an entrance only driveway and an exit only driveway).
- The senior living community proposes to provide 74 parking spaces which are below the Town of Wakefield's requirement (i.e., 87 spaces) and exceed ITE's average peak parking demand (i.e., 56 spaces).
- With the proposed development constructed, sight distances at the site driveways are anticipated to exceed AASHTO guidelines. The available sight lines were measured assuming the existing site structures were razed and vegetation along the site frontage was removed or lowered to a point 2-1/2 feet above street level. In accordance with Town of Wakefield's standards, proposed plantings, vegetation, landscaping, and signing along the site frontage are recommended to be kept low to the ground (i.e., 2-1/2 feet above ground level) or set back sufficiently from the edge of the roadways so as not to inhibit the available sight lines in an effort to provide the safe and efficient flow of traffic to and from the site.
- The proposed senior living community is expected to generate 25 vehicle trips (17 entering and 8 exiting) during the weekday AM peak hour and 40 vehicle trips (20 entering and 209 exiting) during the weekday PM peak hour. The proposed development is anticipated to generate 244 less vehicle trips on a typical weekday, 56 less vehicle trips during the weekday AM peak hour, and 86 less vehicle trips during the weekday PM peak hour than the existing uses.
- Under 2020 No-Build future traffic-volume conditions, long delays (LOS E/F) are expected on the Crescent Street approaches to Main Street, with capacity constraints (v/c ratios >1.00) on the Crescent Street westbound approach during the weekday PM peak hour. With the proposed development constructed and occupied, there is expected to be improved operations on the minor street movements during both the weekday AM and weekday PM peak hours with the reduction of between 16 and 30 vehicles per hour.
- Under future traffic-volume conditions, the Crescent Street and Otis Street approaches
 to Crescent Street are anticipated to operate at desirable levels (LOS C or better)
 during the weekday AM and weekday PM peak hours. With the proposed development
 constructed and occupied, there is expected to be improved operations on the minor street
 approaches during both the weekday AM and weekday PM peak hours with the reduction
 of between 40 and 56 vehicles per hour.

APPENDIX

Traffic Counts

MassDOT Traffic Adjustment Data
Capacity Analysis Methodology
Analysis Worksheets: Existing
Trip-Generation Calculations
Analysis Worksheets: No-Build and Build

Traffic Counts

Tighe&Bond

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

Site Code: 16670001

1667VOL1

Start	04-Sep-14	N	IB .	Hour	Totals		B	Hour	Totals	Combine	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		Ŏ	21			0	29				
12:15		2	9			0	15				
12:30		1	15			0	24				
12:45		Ó	23	3	68	0	25	0	93	3	161
01:00		Ö	21			0	17				
01:15		Ö	28			0	14				
01:30		Ö	19			ī	20				
01:45		Ö	19	0	87	1	13	2	64	2	151
02:00		ŏ	32	•			16				
02:15		Ŏ	28		I	0	15				
02:30		Ö	31			Ō	17				
02:45		0	32	. 0	123	0 0	10	0	58	0	181
03:00		0	26	U	120	Ö	26	•			
03:00		0	32			ñ	19				
03:15		0	34			0 0	32				
03:30		1	37	1	129	Ö	23	0	100	1	229
03:45		.0	35	1	129	0	21	J	100	·	
04:00			17			1	30				
04:15		,1	54			1	25				
04:30		1	51		153	1	33	3	109	7	262
04:45		2 5	50	4	153	,	42	3	109	l '	202
05:00	•	5	26			2	42				
05:15		6	40				32				
05:30		4	25			3	33		400	30	24
05:45		7	25	22	116	3 2 1	25	8	132] 30	240
06:00		11	26				31				
06:15		7	23			7	19				
06:30		21	28			6	15				404
06:45		19	27	58	104	17	20	31	85	89	189
07:00		27	9			20	. 14				
07:15		32	9			18	15				
07:30		36	8			21	16				_
07:45		32	13	127	39	25	13	84	58	211	9
08:00		28	8			22	8				
08:15		22	16			14	. 9				
08:30		32	7			18	12	•			
08:45		23	2	105	33	19	7	73	36	178	6
09:00		24	12			15	7				
09:15		15	10			14	8	ļ ·			
09:30		22	3			16	5				
09:45		17	3	78	28	14	4	59	24	137	5
10:00		18	5	, ,		16	6				
10:00		19	4			15	10				
10:13		21	3		:	13	3			1	
10:30	•	15	0	73	12	21	9	65	21	138	3
11:00		29	. 0	1 ,3	12	19	2].		1	
11:00		29 19	3	1		17	4				
11:15		19	1			35	2				
11:30		17 22	0	87	4	19	0	90	. 10	177	1
11:45] 6/	4	415		1 90	10	973	168
Total		558	896							36.6%	63.49
Percent		38.4%	61.6%			34.4%	00.0%			30.070	00.4

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

Start	05-Sep-14		√B	Hour	Totals		SB		Totals		ed Totals
Time 12:00	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoor
12:15		2	14		I	0	22				
12,10		0	. 22			1	13				
12:30		0	20			1	19		i		
12:45		0	24	2	80	. 0	20	2	74	4	154
01:00		0	12			0	25				
01:15		0	22		j	0	23				
01:30		1	19		I	0	22				
01:45		0	16	1	69	0	17	. 0	87	1	150
02:00		0	16			0	18				
02:15		0	13			0	28				
02:30		0	29		1	0	12				
02:45		0	18	0	76	0 0	33	0	91	0	16
03:00		0	24			0	27				
03:15		0	29		i	, 0	17				
03:30		0	20			1	41		i		
03:45		0	26	0	99	0	33	1	118	1	217
04:00		0	26			0	30				
04:15		0	29		l	1	27				
04:30		1	32			0	17				
04:45		3	22	4	109	2	33	3	107	7	21
05:00		3	20			2	34			•	
05:15		7	17			2	29				
05:30		4	21			4	31				
05:45		7	32	21	90	4	23	12	117	33	207
06:00		6	25			0 2 2 2 4 4 2 9	25		'''	00	201
06:15		9	20			9	22				
06:30		14	22		į	8	15		į		
06:45		18	10	47	77	22	18	41	80	88	157
07:00		25	32	••		18	21	71	ا ۳۰	00	10.
07:15		23	12			17	20		1		
07:30		36	9			27	19				
07:45		34	18	118	71	27 12	8	74	68	192	139
08:00		33	9	110	′ '	21	9	17	00	192	138
08:15		20-	10			18	11				
08:30		23	9			15	7		l		
08:45		32	1	108	29	24	6	78	33	186	61
09:00		16	12	100	20	24 28	12	70	33	100	62
09:15		19	2			17	4				
09:30		11	2 7		1	16	7				
09:45		24	3	70	24	26	9 3	87	ام	457	-
10:00		19	5	70	24	15	2	07	28	157	52
10:15		17	. 5 . 7			10	5				
10:30		11	9			11	4				
10:35		25	1	72	20	15	6			400	
11:00		19		12	22	13	5	54	20	126	42
11:15		30	6		1	17	3				
11:30		14	6		l	26	5				
11:45		15	1	70	ا ء ا	31	2				
Total		15	2	78	15	24		98	11	176	26
Percent		521	761			450	834			971	1595
rercent		40.6%	59.4%			35.0%	65.0%			37.8%	62.2%

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

Start	06-San-1/	N	IB	Hour	Totals	S	В	Hour	Totals	Combine	ed Totals
Time	06-Sep-14 Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	<u></u>	0	15	Morning	7,1101110971	3	24				
12:15		Ö	15		I	1	16				
12:13		3	25		-	ż	11			•	
12:45		0	20	3	75	2 1	23	7	74	10	149
01:00		3	23	J	'*	1	18	•			
01:00		1	21		l		13				
01:13		0	28			0 2 1	20				
01:45		Ö	15	4	87	1	28	4	79	8	166
02:00		ő	20		٠. ا	1	14				
02:15		2	22			2	14				
02:30		1	20			2 0	24				
02:45		Ö	11	3	73	3	20	6	72	9	145
03:00		0	17	Ū	, ,	Õ	12				
03:00		ő	20			Õ	27				
03:30		. 0	13			Ō	18				
03:45		0	14	0	64	1	9	1	66	1	130
04:00		ő	18			1	12				
04:05		2	16			Ó	14				
04:13		Õ	16			Ō	9				
04:45		Ö	13	2	63	1	13	2	48	4	111
05:00		Ö	15	_		1	21				
05:15		2	22			0	13				
05:13		2	19			1	9				
05:45		0	20	4	76	Ó	13	2	56	6	132
06:00		4	10		. •	3	6				
06:15		3	9			0	4				
06:30		5	6			3	12				
06:45		5 2	11	14	36	4	9	10	31	24	67
07:00		3	6			6	8				
07:00		10	9			6 7	8				
07:30		7	7			6	12				
07:45		10	7 8	30	30	17	7	36	35	66	65
08:00		10 7	8			15	8				
08:15		12	8 7			15 7					
08:30		15	1			14	4 5 9	1			
08:45		15		49	25	11	9	47	26	96	51
09:00		17	Ř	'*		18	12				
09:00		22	. 3			13	4	ĺ			
09:10		21	2	1		18	2				
09:30		19	2	79	15	14	2	63	20	142	35
10:00		26	2			13	6				
10:00	•	32	9 8 3 2 2 2 2 4			21	2 2 6 5 2 2 4	[
10:13	, 1	19	4			17	2			1	
10:30		28	4	105	12	19	2	70	. 15	175	27
11:00	1	28	2			19	4				
11:15		22	2			24	3				
11:30	, 1	27	4			13	4				
11:45		20	0		8	30	1	86	12	183	20
						334	534			724	1098
Total		390	564			JJ4	61.5%			39.7%	60.3%

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

Start	07-Sep-14	ı	Afternoon Morning		Totals		SB	Hour	Totals	Combine	ed Totals
Time	Sun	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Mornina	Afternoon	Morning	Afternoon
12:00		0	36			1	15				7
12:15		2	14		İ	2	16				
12:30		1	36			2 1	21				
12:45		2	30	5	116	1	23	5	75	10	191
01:00		0	15			2	13			, ,	
01:15		0	22			1	14				
01:30		1	18			1	17				
01:45		0	10	1	65	1	12	5	56	6	121
02:00		0	18			1	16				
02:15		0	15			0	8		1		
02:30		0	25			0	14				
02:45		0	24	0	82	0	17	1	55	1	137
03:00		0	10			1	8		l		
03:15		0	8			0	11	-			
03:30		0	21			1	6				
03:45		0	20	0	59	0	5	2	30	2	89
04:00		0	25			1	9				
04:15		0	19			0	4				
04:30		0	17			0	9				
04:45		0	15	0	76	1	15	2	37	2	113
05:00		0	14			1	1.1				
05:15		1	19		l	0	15				
05:30		0	11			0 0	18				
05:45		1	11	2	55	0	13	1	57	3	112
06:00		2 3 3	15			1	14			-	
06:15		3	23			0	- 11				
06:30		3	12			2	10				
06:45		2	5	10	55	2	14	5	49	15	104
07:00		9	12		*	5	11				
07:15		12	9			3	15				
07:30		9	12			6	5		1		
07:45		10	8	40	41	9	5	23	36	63	77
08:00		13	6			3	4				
08:15		9	5			7	4				
08:30		10	3		I	2 2 5 3 6 9 3 7 3 9 9 8	6				
08:45		5	4	37	18	9	3	22	17	59	35
09:00		14	2 3		1	9	2				
09:15		4	3		l	8	2 5				
09:30		25	2			10	2				
09:45		10	1	53	8	13	2 3	40	12	93	20
10:00		12	1		l	5	2				
10:15		19	2		.	15	1				
10:30		24	1		1	15	2		1		
10:45		25	2	80	6	10	2	45	8	125	14
11:00		21	0		1	7	1	• -	*		
11:15		15	2			5	ó		1		
11:30		34	0		-	11	ō				
11:45		24	0	94	2	20	1	43	2	137	4
Total		322	583			194	434			516	1017
Percent		35.6%	64.4%			30.9%	69.1%			33.7%	66.3%
			- 11117			00.070	00.170			00.170	00.5%

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

ADT 2,214

ADT

AADT 2,214

CtoH	08-Sep-14	NE	3	Hour	Totals	SE	}	Hour	Totals	Combined	Totals
Start Time	Mon	Morning	<u>Afternoon</u>	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning A	Afternoon
	WOII	0	19	Morning	Alternoon	1	24		7		
12:00		0	22			i	29		1		
12:15		. 0	30			ò	15				
12:30		0	18	0	89	2	20	4	88	4	177
12:45			10	U	09	2 0	21	•		,	• • • •
01:00		2 0	10			1	22				
01:15			26 17			1	17		1		
01:30		0	17	•	62	1	13	3	73	5	136
01:45		0	10	2	63		20	3	13	3	100
02:00		2	31		l	0	15				
02:15		0	19			0 0	24				
02:30	Sp	0	14	•		Ü	24	0	83	2	170
02:45		0	23	2	87	0	24	U	63	2	170
03:00		0	25 37			0	28				
03:15		0	37			0	18				
03:30		0	22	_		1	18			4	178
03:45		0	11	0	95	0	19	1	83	1	1/0
04:00		2	15			0	27				
04:15		0	32		1	0	22				
04:30		2	29 23			0	38			_	047
04:45		3	23	7	99	1	31	. 1	118	8	217
05:00		6	28			3 2 3 1	27				
05:15		6	29			2	36				•
05:30		5	21			3	29				
05:45	•	10	14	27	92		34	9	126	36	218
06:00	1	14	15			4	28				
06:15	•	13	16			10	23 18				
06:30)	21	24			11	18				
06:45		16	7	. 64	62	20	18	45	87	109	149
07:00	1	30	16			20	9				
07:15		34	12			21	14				
07:30)	42	8			23 24	13				
07:45		26	12	132	48	24	8	88	44	220	92
07:45 08:00	,)	26	9			14	7				
08:15	(36	3			15	6				
08:30	,	24	5			20	. 5				
08:45	<u>, </u>	30	4	116	21	24	8	73	26	189	47
09:00	, 1	23	8	1.0		22	6				
09:15). 5	28	2			15	3				
09:10	, 1	8	4	•		14	3				
09:30	, :	13	3	72	17	45	3	96	15	168	32
10:00)	22	1	12	.,	20	4	•			
10:00	, -	31	1			16	2				
10.10		26	3			12	1				
10:30	, -	46	0	95	5	25	3	73	10	168	15
10:45		16 12		90	3	17	ŏ	, ,	,,	100	
11:00 11:15) -	12	2			21	1				
11:15	2	18 25	0			13	o l			1	
11:30) -			70	3	16	1	67	2	146	5
11:45		24	0	79	<u> </u>	460	755	01		1056	1436
Tota		596 46.7%	681			37.9%	62.1%			42.4%	57.6%
		46 7%	53.3%			J1.9%	02.170			74.470	07.070
Percent	t	40.770	00.070								
Percent Grand	d					1853	3347			4240	6832
Percent	d 	2387 40.7%	3485 59.3%							4240 38.3%	6832 61.7%

ocation : Crescent Street	South of Eaton Street	ity/State: Wakefield MA
Ξ.		-
ocation :	ocation:	lity/State:

erade	. W.	4	۰ ۳	00	1 —	۰	ı cc	22	5	22	62	28	79	62	72	69	78	75	8	61	49	28	21	16	თ	995		11:00	79	17:00	06
Week Av	av.	e:	00	1 ~	- c	۰ ۸	1 2	32	79	75	20	82	68	85	11	88	88	100	28	88	45	56	19	13	7	1147	2142	11:00	68	16:00	100
	S.	75	יני) -	- 0	1 0	-	. 10	8	2	40	45	43	75	56	32	30	37	25	49	36	17	12	80	7	628		10:00	45	12:00	75
Sun	E E	C.	· 	· c) C	0	0	10	40	37	53	80	94	116	65	82	29	92	55	55	41	18	ω	9	7	905	1533	11:00	94	12:00	116
	SB	7	. 4	· (c	· -	. 2	2	10	36	47	83	20	98	74	79	72	99	48	26	31	32	56	20	15	12	868		11:00	98	13:00	79
Sat	e R	3	4	· (*)	0	0	4	41	30	49	79	105	97	75	87	73	94	63	92	36	30	25	15	12	œ	954	1822	10:00	105	13:00	87
	SB	2	C	· C	, , -	m	12	41	74	78	87	54	86	74	87	91	118	107	117	80	89	33	28	50	11	1284		11:00	86	15:00	118
Fri	an N	2	-	· c	0	4	21	47	118	108	20	72	78	80	69	92	66	109	90	77	71	29	24	22	15	1282	2566	07:00	118	16:00	109
	SB	0	2	C	0	n	80	31	48	73	29	65	66	93	4	58	100	109	132	82	28	36	24	21	10	1205		11:00	90	17:00	132
Thu	NB	က	0	c	· -	4	22	58	127	105	78	73	87	89	87	123	129	153	116	401	39	33	28	12	4	1454	2659	00:20	127	16:00	153
	SB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0		1	•	ı	•
Wed	NB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0		1		1
	SB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	·	•	1		,
Tue	NB BB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	1	•	ı	
_	SB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0		,	•	,	1
01-Sep-14	NB	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	•	1	•	
Start		12:00 AM	01:00	05:00	03:00	04:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	12:00 PM	01:00	05:00	03:00	04:00	02:00	00:90	00:20	08:00	00:60	10:00	11:00	Lane	Day	AM Peak	Vol.	PM Peak	Voľ.

Site Code: 16670001 1667VOL1

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

verage	NB SB	4	· (r)	o c	> 4		-	ര	45	α	3 8	C/	6 (1	73	29	88	73	83	83	118	126	22.	44	26	15	200	2 0	1215		00.60	96	17.00	126	2	7637	t o
Week A	N N	c	, (1 C	7 (0	7	27	i 22	1,3	701	0 F	7)	92	79	8	83	87	95	66	8 8	? ?	48 48	7 5	17	: יני	ന	1777	2492	07.00	132	18:00	80.5	66		
_	SB	*	*	+	. ,	k	*	*	*	*		* +		*	*	*	*	*	*	*	*	*	*	*	*	*	*	c	>				1	•	602	250
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	a.	*	*	: 1	k	*	*	*	*	+		*	k	*	*	*	*	*	*	*	*	*	*	*	*	*	*		>			,	•		ç	1822
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	a	*	-,		*	*	*	*	*		*	*	*	*	*	*	*	*	*	+		. +	,	: +	: *	*	*		>		1	1	1			'O
ü	- 02	*	: 4	ĸ	*	*	*	*	•		*	*	*	*	*	*	*	*	*	•	. 4	· +	: 4	٠ 4	٠ +	. +			>			•	ı	3		2566
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1 - 144	Ned Vis	NP.	ŧ	*	*	*	*	•		*	*	*	*	*	*	*	*	: 1	k f	k	*	*	*	*	* :	k -	* +	*	0	0	1	1	1	t		J
		SB	*	*	*.	*	*	. +	×	*	*	*	*	*	*	•	. +		*	*	*	*	*	*	*	*	* -	*	0		1	1	1	1		
	en I	NB	*	*	*	*	*		*	*	*	*	*	*	*	,	. 4	k ·	*	*	*	*	*	*	*	*	*	*	0	0		-	•	,		0
		SB	4	<u>е</u>	C	, ~	- ,	_	<u>ი</u>	45	88	73	8	3 8	2,7	5 6	 8 i	73	83	83	118	126	87	44	56	15	9	2	1215		00:60	96	17:00	126		
	8-Sep-14	NB	0	2	۰ د	1 C	1 C	_	27	28	132	116	2	7 5	2 2	e i	တ္ဆ	g	87	92	66	35	62	48	21	17	ഹ	က		2492		132		66		2492
	Start	Time	12:00 AM	01-00	00:00	00.50	03:00	04:00	02:00	00:90	00-20	08.00	00:00	08:00	10:00	11:00	12:00 PM	04:00	05:00	03:00	94:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	Lane	Day	AM Peak	Vol.	PM Peak	Vol		Comb. Total

AADT 2,214

ADT 2,214

ADT

Accurate Counts 978-664-2565

Location : Crescent Street Location : South of Eaton Street City/State: Wakefield, MA Northbound

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56	9 6	3	· C	o c	o C	o c	o c	o c	0 0	o c	o c	0	0	o	0	C	0) C	0	0	0	0	0	0	0	0	%0.0					
51	Y	3	· c	o c	c) C	o C	o c	o C	o c	o C	0	0	0	0	0	0	· C	0	0	0	O	0	0	0	0	%0.0					
46	50	80	· c	o C	0	· C	· c) C) C) C		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					
41	45	0	· C	o c	0	0	· c	0) C) C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					
36	40	0	C	0	0	0	C	0	0	· "	0	0	0	0	0	က	0	0	0	0	0	0	0	0	0	9	0.4%	08:00	œ		14:00	ო
31	35	-	O	0	0	7	4	. 5	27	24	4	4	တ	က	9	11	7	9	9	9	7	_		Ψ-	0	152	10.5%	00:20	27		_	7
26	30	-	0	0	0	-	10	82	11	20	8	33	22	59	27	72	48	73	75	20	41	16	œ	22	2	637	43.8%	00:20	14		16:00	73
21	52	-	0	0	-	-	7	4	23	25	ಜ	78	4	28	46	45	99	2	48	37	20	16	9	9	_		37.8%	11:00	4	00 17	15:00	99
16	20	0	0	0	0	0	~	က	0	_	5	တ	9	9	9	10	9	∞	Ŋ	4	-	0	9	0	-	78	5.4%	10:00	o.	0077	14:00	10
-	15	0	0	0	0	0	0	0		7	7	Ψ-	က	7	7	ო	7	7	ო	က	7	0	က	0	0	31	2.1%	11:00	ო			ო
Start	Time	09/04/14	01:00	02:00	03:00	04:00	02:00	00:90	07:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00			Peak 1	Vol.			Vol.

Accurate Counts 978-664-2565

Location : Crescent Street Location : South of Eaton Street City/State: Wakefield, MA Northbound

4420	1100 1000 1000 1000 1000 1000 1000 100	Percent	23	29	*	*	29	33	33	3 2		29	33	33	32	8	3	33	8 8	8	3 8	30.	3 8	500	3 6	3 6								
1420	inco	Percent	53	59	*	*	59	31	. 55		5 g	3 8	53	73 73	60	78 28	5	60	3 %	3 6	3 8	3 6	3 %	3 6	2,00	2 %								
		Total	2	,	0	0	4	2	47	118	2 2	<u>8</u> E	2.2	2 2	2	8 6	76	0	100	8 6	2 2		- 6	3 6	† C	44 45	1282			02:00	118	16:00	109	
	9	666	0	0	0	0	o) C	o c	o c	> C	o c	o C	0		o c	· c	o c	>	0 0	> C	o c	> C	0 0	o.c	o c	c	7000	0.0%			,		
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	99	70	0	0	c) C	o C	o c	0 0	> 0	> C	> c	o c	o c	o c	> C	o c	0 0	>	> C	>	> C	> c	> 0	0 (> C		200	0.0%					
	61	65	0	0	c	· c	o c	o c	0 0	>	-	o c	0 0	o c	o c	> C	0 0	0 0	> 0	> 0	-	> (0	> (0 (-		200	0.0%					
	26	90	0	C	c		o c	o c	> 0	-)	> 0	.	> C	o (>	> c	> 0	-	-	0	0 (0	> (0 (>		0 00	0.0%					
	51	55	0	c		o c	o c	> C	> 0)	0	-	> C	> C	0	> C	> 0	-	o (> (0 (5 (0 (o (0 (0 0			0.0%					
	46	50	0	· C	o c	> C	o c	-)	o (0 (o (-	> c	> 0	> c	-	D (0 (-	0 ()	0 (0	0 1	0 0			0.0%					
	4	45	c	· C	o c	-	.	-) (0	0 (0 (0 (> c	> (0 0	-)	0 '	0	0	0	0	0	0	0 0	5	0	%0.0					
	36	40	c	· c	o c	> 0	> 0	0 (o (0	7	0	٥,	,)	0 0	o (، د	τ-		0	0	0	0	0	0 (اد		0.4%	00:20	7	15:00	*	_
	31	35	c	o c	.	5 (5 () (ဂ	თ	70	ω .	က	∞ ς	2	თ •	4 (ဖ	12	4	ည	2	4	7		0	- ;	116	%0.6	02:00	20	15:00		7.
	26	30	0	1 ~	- (0)	n I	_	20	65	26	g 9	62 9	£3	မ္တ မ	27	33	4	51	4	38	39	∞	o	16	2	614	47.9%	07:00	99	16:00		51
	21	52		0 0	> (0 (ο.	-	_	13	54	37	ಜ	8 8	20	33	33	53	3	46	98	22	54	7	7	9	7		34.6% 4	08:00	37	_		9
	16	2 0) (0 (0	0	2	ო	က	7	4	4	4	က	7	က	∞	7	7	4	4	2	ო	0	2		5.9% 3			15:00		∞
	-	<u>ب</u>	2	.	> (0	0	0	0	7	4	0	-	7	Ψ-	0	က	ო	ღ	0	-	2	0	ო	0	0	0	28	2.2%					2
Northbound	Start	Time	A 1 20,00	03/03/14	00:10	05:00	03:00	04:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total				PM		Vol.

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA Northbound

	95th	Percent	34	50	24	· * I	29	3	31	33	8	32	31	33	31	32	31	31	33	30	31	33	29	29	29	53							
	85th	Percent	32	29	3 8	*	28	27	29	29	31	29	29	29	28	59	29	29	59	59	29	59	28	78	27	28							
		Total	က	4	· 10	0	2	4	4	30	49	79	105	26	75	87	73	49	63	9/	36	30	52	15	12	ω	954		10:00	405	301	13:00	87
1	9/	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
	<u> </u>	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
3	9	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					
20	٥ ;	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
99	8	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
14	- I	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
31	ţ ;	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
74	- i	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
36	3 5	9	0	0	0	0	0	0	0	0	-	0	0	-	0	Ψ-	0	0	0	0	0	~	0	0	0	0	4	0.4%	08:00	-	13.00	3.00	~
34	כ	လ	-	0	0	0	0	0	-	4	∞ :		,	1	S.	ω :	2	ı,	o .	4	က	7	0	0	0	0	80	8.4%	11:00	=	18:00	20.00	ი
26	3 6	250	_	က	0	0	-	-	9	16	27	ξ ξ	47	44	ဓ္ဌ	ဓ္ဌ	96 96	37		41	19	15	9	မှ	4	8	458	48.0%	10:00	47	17.00	2	4
24	1 4	67	_	Ψ-	7	Ö	-	 ,	7	9	우 (: K3	4 :		£ ;	41	26	15	21	: 52	,	9	13		2	23	334	35.0%	10:00	4	13-00	2	4
16	2 6	707	0	0	-	0	0	 -	Ψ.	0	7 1	ا ب	~ (5 1 (ο I	~ (. m	4 (Ν (က	m ·	. 	7	7	0 (7	83	%9.9	11:00	6	12:00	2	ω
-	. 4	2	0	0	0	0	0	- (0 (0	τ- ,	 (o ,	- ,	- (o (o (n (> (ကပ	o •	, ,	0	0 (n	ا ا	15	1.6%	02:00	-	15.00		ო
Start	Timo	21111	09/06/14	01:00	05:00	03:00	04:00	05:00	00:90	00:70	08:00	08:00	10:00	00:11	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	lotal	Percent	Peak Peak	Vol.	PM	Peak	Vol.

Accurate Counts 978-664-2565

Location: Crescent Street
Location: South of Eaton Street
City/State: Wakefield, MA
Northbound

95th	Percent	000	0 0	87	*	*	*	24	33	33	30	31	33	32	32	34	33	3	33	32	34	29	3	5 6	24	29								
85th	Percent	100	0 6	67	*	*	*	23	31	60	29	29	59	59	53	30	29	60	62	50	28	28	8 8	2 %	3 6	1 %								
	Total	lola.	ი ·		0	0	0	7	5	40	37	53	8	94	116	65	8	ب ا و	26	, r.	2,5	4	ά	<u> </u>	o u		905			11:00	96	12:00	116	2
76	000	999	o (0	0	0	0	0	· c	o c	o C	o C	0	0	0	0) C	o c	o c	o c	o c	o c	o c	o c	o c	o c	C	/80	0.070					
71	- 4	0	o	0	0	0	0	0		> <	o C	o C	0	0	0	· c	o C	o c	o c	0 0	o c	0 0	0 0	> C	0 0	> C	٥	200	0.0%					
99	8 6	5	0	0	0	0	c	· c	o c	0 0	o	o c	· c	0	c	o C	o c	o c	o c	o c	0 0	0 0	0 0	O C	0	> C	0	200	0.0%					
2	- u	CQ	0	0	0	c	c) C	0 0	o c	o c	o c	o C	o C	· C	o c	0 0	o 0	-	0 0	o c	o c	o c	o 0	o 6	> C		200	0.0%					
25	8	00	0	0	0	c) C	o C	0 0	> 0	o c	o c	o c	o C	o C	o c	0 0	0	> (.	-	-	-	> 0	o (> C			0.0%					
72		55	0	0	0		o c	o c	0	-	-	-	o c	o C	o C	o c	o c	-	-	> 0	0 0	-	> (> (> (> 0			0.0%					
,	40	50	0	0	0	· c	o c	o c	> (O. C	> 0	5 C	> <	o c	o c	0 0	-)	0	-	-	> (o (0 (o (0 0			0.0%					
	41	45	0	0	c	o c	o c	o c) (۰ د	- (> 0	> C	> C	o c	-	-	o (0 ()	o ()	o (0 (۰ د	0 (9	-	0.1%	02:00	~			
	36	40	0	C	c	o c	.	o 0	o '	0	0 (-	> ₹	- c	.	> (٧,	- '	۰,		0 (0 (0	0	0	0 (اد	ဂ	%9.0	10:00	-	13:00	· '	7
	31	35	0	c	o C	o c	-	.	>	N ⁻	4 (4 c	» 5	2 \$	2 (o n (တ	က ု	9	တ ်	4	-	7	0	0	٥	36	%6.6	11:00	10	12:00		5
	56	ဓ	-	τ-	- c	0 0	0	5	>	7	56	5 7 8	7	5	ָ ני	ဂ	3.1	20	96 96	41	27	15	18	∞	4	0	-	462	51.0%	11:00	55	12:00	ì	22
	21	22	4	c	o c	o 6	-	> •	-	9	ω .	ဖ	88	8 6	Q ;	F 4 (21	20	15	20	17	27.	15	7	ო	7	-	293	32.4%	10:00	%	12.00	200	4
	16	20	c	· c	o c	-	o (> (0	0	-	က	7 .	 (71	,	7	7	0	4	က	တ	7	0		ო	0	47	5.2%	08:00	ď	78.00	9	თ
	γ	15	c) C	> C	> (0 (Ö,	_	0	0	0	0 ·		- 1	0	0	0	0	0	7	0	0	_	0		0	7	%8.0	02:00	-	17:00	99.	7
Northbound	Start	Time	09/07/14	0.50	00:00	02:00	03:00	04:00	02:00	00:90	02:20	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	AM	Peak	E A	Peak	Vol.

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA Northbound

95th	1000	· č	77	53	*	33	34	34	33	33	33	32	33	32	32	32	30	32	32	58	30	59	30	33	24										
85th	יום הפון	· 6	62	28	*	59	32	31	30	3	59	59	29	29	59	59	28	29	29	28	28	28	29	31	24										
Total	lolai	-	7	7	0	7	27	64	132	116	72	95	79	89	63	87	95	66	92	62	48	21	17	c)	3	1277		07:00	132	16:00	66	5872			
76	999)	> (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%		
77	2	> c	> (φ.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	:				0	. %0.0		
99		> c	> (0 (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%		
61	3	> c	> (0 (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	%0.0		
56	3	> c	> 0	0 (5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%		
51	3	> c	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	0.0%		
46	3	> C		0 (-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ı	0.0%					0	0.0%		
41	p	> C	0)	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					1	0.0%		
36 A		-	0	> ()	0	0	7	0	0	0	0	-	0	₩	0	0	-	0	0	0	0	0	0	0		0.4%	00:90	2	13:00	-	25	0.4%		
33	3	o c	0 0	-	o ·	,	7	9	20	78	6	7	o	œ	4	ω	5	თ	9	ო	က	_	-	Ψ,	0	148	11.6%	08:00	28	17:00	10	586	10.0%	21 MPH 25 MPH 29 MPH 32 MPH	
3 8		o c	•	- c	> (2	10	4	11	26	8	37	33	45	8	32	8	48	4	27	9	တ	∞	0	0	298	46.8%	00:20	11	16:00	48	2769	47.2%	 <u>o o o o</u>	
2 %	0	· -	٠.	c	۰ د	4	9	∞	30	27	56	40	23	78	19	36	39	35	30	5 6	20	2	ၑ	4	က	414	32.4%	10:00	40	15:00	39	2035	34.7%	15th Percentile: 50th Percentile: 85th Percentile: 95th Percentile:	
9 2	-	·	٠	o c		o	4	က	4	4	က	4	သ	φ,	တ	4	16	7	9	က	2	2	7	0 (0	6	7.0%	11:00	5	15:00	16	353	%0.9	15 50 85 95	
15	c	0 0	· c	0	0	o •	0	0	-	_	0	ო	7	0	0 ·	4	-	7	2	က	%	-	0	0 (0	22	1.7%	10:00	3	14:00	4	103	1.8%		
Start	09/08/14	01:00	00.00	02:00	03:00	04:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	AM Peak	Vol.	Peak Peak	Vol.	Grand Total	Percent		

4804 81.8% 3381 57.6% 26 MPH

Number in Pace:
Percent in Pace:
Number of Vehicles > 25 MPH:
Percent of Vehicles > 25 MPH:
Mean Speed(Average):

21-30 MPH

10 MPH Pace Speed:

Statistic

Accurate Counts 978-664-2565

Location : Crescent Street
Location : South of Eaton Street
City/State: Wakefield, MA
Southbound

95th	Percent	*	59	*	*	50	22	7 6	45	32	32	33	31	29	29	29	29	29	59	29	59	29	32	59	32	32								
85th	Percent	*	28	*	*	77	2 6	4 6	35	59	59	59	28	27	27	28	27	27	78	28	28	28	28	27	59	59								
	Total		0	C	c	, w) a	0 ;	33	84	73	29	65	06	93	64	28	100	109	132	85	28	36	24	21	10	1205		11.00	8.:	90	17:00	132	
76	666	C	0	c	o c	0 0	o c	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0						
7.1	. 22	c	· c	· c	o c	0	-	>	0	0	0	0	0	0	0	c	0	0	0	0	0	0	0	0	0	0	0	0.0%						
99	8 8	2	o C	· c	o c	o c	> (0	0	0	0	0	0	0	0	o C	c	· C	0	o C) C) C	o C) C	0	0	0	0.0%						
54	- K	3	o c	o c	o c	> 0	0	0	0	0	0	0	C	c) C	o C	o C) C	o C	o C	o C) C	o C	0 0	0	0	0	0.0%						
25	8 6	3	o C	0 0	> 0	0 (o (0	0	0	0	c	· C	o C	o C	o c	o c	o C	o C	o c	o c	o c	o c	o C	o C	· c	0	0.0%						
F 4	ב ע	S	.	0	0 (0 (0	0	0	0	c) C	· c	o C	o C	o c	o c	o c	o c	o c	o c	o c	o c	o c	o c	o C	0	%0.0						
94	4 t	200	o c	> 0)	0 (0	0	0	C	· C	o C	o c	o c	o c	0 0	o c	o c	> C	o c	0 0	0 0	0	0	o c	o c	c	%0.0						
77	- t	40	> (5 (0	0	0	0	0	-	· c	o c	o c	o c	o c	.	.	0	> <	o c	o c	0 0	o c	o c	.	o c	-	0.1%		02:00	-			
3	ಕ್ಕ	040	-	> (0	0	0	0	0	· C	~	• •	- ر	.	0	-	o c	> 0	> 0	-	o c	o 0	> 0	> 0	o c	-	0	0.2%		08:00	-			
3	بر ال	32	-	> •	0	0	0	0	00	7	. د	10	~ 4	n c	40	V (n (> (7 (~ "	۰ م	4 (۷,	4 (> (۷ ۳	3	5.3%	2000	00:90	80	17:00	Œ	,
	88	30	۰ د	_	0	0	_	•	. 5	2 \$	4 8	9 6	8 8	2 6	† t	77	3 6	7 6	₹ \$	5 5	4 4		<u>ה</u> י	1 വ	~ 0	10	418	34 5%	2/2:15	00:20	32	17:00	48	ç
	77	25	0 (0	0	0	7	c.	, C	2 7	\$ &	ī č	7 0	9	4 4	40	9 18	77	4 5	8 8	79	98	8 !	7,	<u>, 5</u>	<u>-</u> °	217	70 CV	75.1 /0	11:00	4	17:00	S	3
	9	20	0	-	0	0	0	-	۰,	4 5	1 2	~ 0	φ,	<u>5</u> į	<u>, , , , , , , , , , , , , , , , , , , </u>	æ :	. 13	0.5	<u>ه</u> ز	15	13	12	∞ ;	0 '	0 (-	717	14 40%	0/ †.	11:00	17	12:00	ģ	<u>o</u>
	-	15	0	0	0	0	0	•	- ~	- c	> 0	- (7 (7 (ימי	ဖ	0	0	o (7	က	0	, ,	0	4	o (0 2	700 c	6.070	11:00	က	15:00	c	ח
Southbound	Start	Time	09/04/14	04:00	05:00	03:00	04:00	05:00	00:90	00.00	00:70	00:80	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Leicell	AM Pook	Vol.	PM	Peak	VOÏ.

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street

Southbound

City/State: Wakefield, MA	Co. shipping

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	95th	Percent	29	í *	*	19	2.4	1 60	32	29	33	29	29	29	29	29	29	29	3	29	3 1	30	29	28	29	29						
	85th	Percent	28) * 	*	6	24	56	3 3 3	78	53	28	28	78	27	78	27	78	78	78	78	78	25	26	27	28						
		Total	2) C	o C	· 	· cc	12	4	74	78	87	5	86	74	87	9	118	107	117	8	89	33	78	2	7	1284		11:00	ő	15:00	118
	9/	666	0	c	o C	0	c	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	71	75	0	C	0	0	0	0	0	0	0	0	0	0	o	0	0	0	0	0	0	0	0	0	0	0	o	0.0%				
	99	20	0	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	56	09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	51	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	46	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	41	45	0	Ö	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0			,	
	36	40	0	0	0	0	0	0	0	_	0	0	0	0	0	0	0	0	0	₩	0	0	0	0	0	0	2	0.2%	00:20	_	17:00	-
	31	35	0	0	0	0	0	-	4	_	9	4	-	ო	7	4	ო	ო	7	ო	2	4	Ψ-	0	0	0	52	4.0%	08:00	9	16:00	7
	56	ဓ	-	0	0	0	0	9	20	73	ස	£3	20	32	20	24	56	25	29	49	27	ឌ	4	ဖ	ၑ	9	456	35.5%	00:60	43	15:00 1	52
	72	25	Ψ-	0	0	0	ო	က	9	78	83	೫	22	47	31	38	43	4	43	49	¥	22	15	18	9	3		40.6% 35	11:00 0	47	17:00 1	49
	16	20	0	0	0	-	0	7	9	œ	7	တ	ဖ	9	17	20	16	12	23	4	တ	12	7	ო	7			14.6% 40	11:00 1	10	16:00 17	23
	-	15	0	0		0	0	0	-	~	٠ -	- -	2	ი -	4	ო	က	=	2	—	5	4	7	_	7			5.1% 14	07:00 11	7	15:00 16	11
2000	t	o)	/14	<u>0</u>	00:	00:	00:	<u>0</u>	00	0:	9 :	8 9	00.	00:	M _C	00	8	00 ;	00	8	8	, 8	00	00	88	9			AM Peak 07	ō.		j j
	Start	Lime	09/05/14	2	8	8	8	. 05	8	07:00	8	60	2	11	12	13	4	15	16	17	€	19	20	21.	818	23:00	리	Percent	, _P	>	— <u>С</u>	. >

Accurate Counts 978-664-2565

Location: Crescent Street
Location: South of Eaton Street
City/State: Wakefield, MA
Southbound

85th	10000	Leicelli	35	27	27	24	9	28	28	28	30	28	27	27	; &	27	₩ ₩	8 8	3 %	8 8	67	4 C	9 5	7 6	8 8	2 6	17							
	F	Iorai	7	4	ဖ	-	7	7	10	36	47	63	2	98	74	ج د	2 :	7 9	3 8	1 1	5 6	- u	8 8	8 8	₹ 7	<u>.</u> 5	7 000	000		11:00	98	13:00	5	2
37	2 6	888	0	0	0	0	0	0	0	0	0	· c	· c	o c	o c	o c	0 0	0	> C	> C	> C	o 0	-	0	0 0	>	0		0.0%					
1.	- 1	3	0	0	0	0	0	0	0	0	· C) C	o c	o c	o c	o c	o c	o c	>	o c	> c	> 0	0 (> (-	> 0	0	0	0.0%					
5	0 i	9	0	0	0	0	0	0	C	· c	o C	o c	0 0	o c	o c	o c	-	> 0	> C	-	> 0	> (0 (0 (0	> (0	0	0.0%					
2	٥	65	0	0	0	0	0	0	c	o C	o C	o c	o c	> C	o c	> C	> 0	> 0	-)	0	o (0	0	0	0 (0	0	0.0%					
2	ရှင်	09	0	0	0	0	0	0	· c	· C	o c	o c	0	> 0	> (-	-	-	-	> (0 (o (0	0	0	0 '	0	0	0.0%					
	51	55	0	0	C	0	0	· C	o c	> C	o c	0 0	-	> (-	> (- (- ()	0	0 (>	0	0	0	0	0	0	%0.0					
	46	20	0	0	c	o C	C	o C	o c	o c	o c	> 0	-	> ()	-	o ()	0 (0	0	0	0	0	0	0	0	0	%0.0					
	4	45	0	0	· c	o C	o C	o c	o c	o c	> C	> ()	-	0 ()	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					
	36	40	0	c	o c	o c	o c	o C	0 0	-) c	4 ())	o (0 (0	0	0	0	0	0	0	0	0	0	0	2	0.2%	08:00	7			
	31	32	6	ıc	o c	o c	o c	0 0	o 0	> 4	(۱ ٥	٠	4 (თ .	4	က	7	ဖ	ω	9	0	7	-	7	-	0	65	7.5%	08:00	ဖ	14:00		=
	5 0	30	2	ı -	۰ ،	1 C	o c	۰ ح	- •	4 (5.5	47	9	16	21	23	20	27	21	15	19.	7	တ	9	9	7	3	276	31.8%	08:00	24	12:00		73
	21	52	2	1 ~	- ი	۷ ۲	- c	> 4	- ('nί	<u>5</u> ;	14	73	37	43	78	4	30	28	20	17	4	4	4	S	2	9	377	43.4%	11:00	43	13:00	2	4
	16	20	-	- +	- c	N C	> 4	- c	> 0	m (N ·	_	7	7	15	10	9	ო	7	4	10	9	ø	2	9	7	_	116	13.4%	11:00	ת	12:00	20.7	9
	-	75		· •	- c)	> 1	- c	> (o ·	-	0	ო	7	4	ო	7	-	4	_	4	0	7	0	-	0	7	32	3.7%	11:00	4	18.00	2.5	4
Southbound	Start	Time	7/30/00	4.00/00/	00:00	05:00	03:00	04:00	00:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	WA .	Leak ∕⊽	PM	Peak	Vol.

95th

85th

Total

Accurate Counts 978-664-2565

Location: Crescent Street
Location: South of Eaton Street
City/State: Wakefield, MA
Southbound

																															-	
	9/	666	0	0	0	0	0	c	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	99	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	56	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	51	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	46	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	4	45	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	1	0.2%			12:00	~
	36	40	0	0	0	0	0	0	0	-	~	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	4	%9.0	02:00	-	13:00	~
	31	32	0	0	0	0	-	0	0	2	7	2	7	ო	7	5	ო	7	4	Ŋ	2	0	0	-	7	0	49	7.8%	00:60	2	12:00	7
	56	30	2	_		0	0	0	7	11	6	4	24	18	32	78	29	18	13	73	19	1	ო	ო	ო	0	262	41.7%	10:00	24	12:00	32
	2	52	2	ო	0	0	0	0	7	တ	2	17	13	16	24	17	1	∞	16	23	18	23	13	9	7	-	228	36.3%	00:60	17	12:00	54
		50	0	-	0		-	0	-	0	4	က	5	7	∞	5	10	-	က	9	ა	ო	-	7	-		8	10.2%	10:00	5	14:00	10
	_	15	-	0	0	-	0	~	0	0	-	-	Ψ-	4	ო	0	-	-	~	7	7	0	0	0	0	0	20	3.2%	11:00	4	12:00	ო
Southbound	Start	Time	09/07/14	01:00	02:00	03:00	04:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	Peak Peak	Vol.	PM Peak	Vol.
Sou	<i>.,</i>		80												,- -									-	-			ፈ				

10:00

12:00

Accurate Counts 978-664-2565

Location : Crescent Street Location : South of Eaton Street City/State: Wakefield, MA Southbound

95th	Percent	59	34	*	4	24	28	33	32	31	31	59	29	31	59	31	31	30	59	30	31	32	59	32	24									
85th	Percent	27	33	*	12	24	56	53	53	53	58	78	78	78	28	28	78	78	78	78	78	53	27	53	24									
	Total	4	က	0	-	_	တ	45	88	73	96	73	29	88	73	83	83	118	126	87	4	56	15	9	2	1215		00:60	96	17:00	126	5200		
9/	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%	
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			,		0	0.0%	
99	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0	0	%0.0			,		0	%0.0	
56	9	0	0	0	0	0	0	0	0	0	0	0	0	0	c		c	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
51	22	c	0	0	0	C	0	0	o	· C	0	0	0	C	· C	· c) C	· C	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
46	20	c	0	0	0	c	0	0	c) C) C	0	c	· C	· c	o C	o C	o C	0	0	0	0	0	0	0	0	0.0%					0	0.0%	
41	45	c	0	0	0	· C	c	c	c	o C	o C	0	o C) C	o C	· -	. د	· -	· c	o C	0	0	0	0	0	2	0.2%			14:00	Ψ	4	0.1%	
36	8 6	c	o C	0	0	, c	o C	•	•	- c	o c	c	o C	· C	o c	o c	o c	o c	o C) C) C	0	0	0	0	2	0.2%	00:90	-			12	0.2%	
34	32	3	۰ ۵	ıc	o C) C	o C	4	. 2	٠ (^	- m	o er	~	۰, ۲۰	> <	r (4	ט ע) 4	י על	o et	om	0	· *-	0	73	6.0%	07:00	7	12:00	7	303	5.8%	18 MPH 23 MPH 28 MPH 30 MPH
90	2 E	-	٠,	• с	o C	o c	۰ ر	7 7	35	3 8	3 5	0,0	3 5	, F	3 2	ĭ 6	+ 4C	2 5	5 4	8 %	5 5 7	<u> </u>	, rc	4	c	415	34.2%	02:00	35	17:00	7,	1825	35.1%	
24	2 بر 1	3	10) C	o C	, ,	- 4	+ +	7.0	7 6	<u> </u>	8 8	2 6	ž	7 4	5 6	\$ 6	ž č	5 6	? ?	3 5	C	i rc	4	۰ ،	469	38.6%	00:60	78	16:00	ž	2109	40.6%	15th Percentile: 50th Percentile: 85th Percentile: 95th Percentile: 95th Percentile:
46	2 5	2	o c	o c	o c	o C	o "	۸ د	- 7	<u>† Ç</u>	<u>2</u> a	, 5	- 1	5 5	2 4	. ć		5 \$	7 -		5 0	1 4	- 4	. —	· c	178	14.7%	11:00	15	17:00	5	720	13.8%	25 25 25 25 25 25 25 25 25 25 25 25 25 2
	- <u>ተ</u>	2 ~	- c	o c	· -	- c	> C) +	- <	1 0	. "	5 ^	۷ ۲	- 4	- •	- •	- •	† <i>-</i>	1 1	- σ	יי ר) (٠ ٣-	· c	o c	76	6.3%	00:60	સ	18:00		227	4 4%	
continooning	Time	00,00	03,000	00:00	02:00	03:00	04:00	03:00	00:00	00.70	00.00	10:00	7.00	12 PM	N 7 7	13:00	14.00	13.00	12.00	12.00	16:00	00:02	21.00	22:02	8.5	Total	Percent	AM .	Zeak Vol	PM	Peak	Grand	lotal Percent	

21-30 MPH 10 MPH Pace Speed:

Statistic s

3934 75.7% 2144 41.2% 24 MPH

Number in Pace:
Percent in Pace:
Number of Vehicles > 25 MPH:
Percent of Vehicles > 25 MPH:
Mean Speed(Average):

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

95th Total 07:00 16:00 211 262 966 0.0% 555 07:00 08:00 07:00 18:00 07:00 16:00 1053 39.6% 109 11:00 15:00 1064 40.0% 110 11:00 12:00 252 9.5% 24 Northbound, Southbound Ţ 1 Time 09/04/14 09/04/14 01:00 02:00 03:00 04:00 07:00 06:00 07:00 06:00 07:00 11:00 Start

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA

95th Percent 85th 07:00 15:00 217 192 0.0% 0.0% 0.0% 15:00 0.3% 15:00 07:00 168 6.5% 7 15:00 07:00 8 96 11:00 16:00 8 67 08:00 16:00 14 Northbound, Southbound Start 15:00 07:00 Time 09/05/14 01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 17:00 18:00 20:00 22:00 22:00 22:00 23:00 23:00 AM Percent Vol. Peak Vol. Vol. Vol.

Accurate Counts 978-664-2565

Location: Crescent Street Location: South of Eaton Street City/State: Wakefield, MA Northbound, Southbound

	95th	Percent	34	29	28	24	59	59	53	31	34	32	31	32	30	31	32	32	33	31	59	32	59	30	29	59						
	85th	Percent	32	28	56	24	27	27	59	59	30	59	28	59	28	28	53	59	30	59	28	53	27	28	28	27						
		Total	10	∞	თ	_	4	9	24	99	96	142	175	183	149	166	145	130	111	132	29	65	51	35	27	20	1822		11:00	183	13:00	166
	9/	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	7	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	99	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	26	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	51	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	46	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
	4	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
	36	40	0	0	0	0	0	0	0	0	က	0	0	-	0	-	0	0	0	0	0	-	0	0	0	0	9	0.3%	08:00	m	13:00	-
	31	32	3	0	0	0	0	0	_	2	14	12	11	4	თ	7	16	#	17	9	ო	4		7	-	0	145	8.0%	08:00	4	16:00	17
	56	30	က	4	7	0	-	7	4	53	51	62	8	65	29	20	99	28	46	09	30	24	16	12	7	9	734	40.3%	11:00	65	14:00	99
	2	52	က	2	4	_		7	2	73	24	25	8	74	29	82	26	5	4	45	25	24	27	12	9	6	711	39.0%	10:00	8	13:00	82
	16	20	-	-	ო	0	-	Υ	4	7	ო	12	9	24	18	17	9	7	9	13	o	ာ	7	ω	7	က		9.8%	11:00	24	12:00	18
Sournound .	-	15	0	-	0	0	Ψ-	Ψ-	0	τ-	τ-	4	7	3	4	7	-	7		7	0	က	0	-	ო	2	47	2.6%	11:00	ις ·	15:00	7
2	Start	Time	09/06/14	01:00	05:00	03:00	04:00	02:00	00:90	02:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	AM 200	Vol.	PM Pood	Vol.

Accurate Counts 978-664-2565

Location: Crescent Street
Location: South of Eaton Street
City/State: Wakefield, MA
Northbound, Southbound

95th	Percent	29	29	53	19	34	24	33	34	32	35	32	32	32	33	32	31	33	35	32	29	30	30	33	29						
85th	Percent	27	27	59	18	33	22	59	59	59	59	59	59	59	59	59	59	59	59	59	58	28	28	59	27						
	Total	10	9	_	7	7	က	15	63	29	93	125	137	191	121	137	83	113	112	104	11	32	20	14	4	1533		11:00	137	12:00	191
76	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
99	20	0	0	0	0	0	0	.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
61	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
56	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%				
51	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	o	0	%0.0				
46	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0				
41	45	0	0	0	0	0	0	0	-	0	0	0	0	~	0	0	0	0	0	0	0	0	0	0	0	7	0.1%	00:20	-	12:00	~
36	40	0	0	0	0	0	0	0	-	-	0	-	0	0	က	7	0	-	0	0	0	0	0	0	0	6	%9.0	00:20	-	13:00	ო
34	32	0	0	0	0	τ-	0	7	9	4	o	7	13	20	14	12	7	4	11	6		7	~	7	0	139	9.1%	11:00	13	12:00	20
26	30	က	7	~	0	0	0	4	37	32	35	2	74	87	23	62	22	72	48	8	53	=	7	က	1	724	47.2%	11:00	74	12:00	87
21	52	9	က	0	0	0	-	ω	17	7	43	4	4	65	88	31	23	36	40	45	37	20	თ	4	2	521	34.0%	00:60	43	12:00	65
16	20	0	-	0	-	-	0	-	-	7	2	9	4	15	7	12	_	7	თ	4	9	-	ო	4	1	111	7.2%	08:00	7	12:00	15
1	15	-	0	0	-	0	7	0	0	_	-	7	5	ო	0	-	_	_	4	7	0	۳	0	-	0	27	1.8%	11:00	2	17:00	4
Start 1	Time	09/07/14	01:00	05:00	03:00	04:00	02:00	00:90	07:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	AM	. Vol.	PM Peak	Vol.

Accurate Counts 978-664-2565

Location : Crescent Street Location : South of Eaton Street City/State: Wakefield, MA Northbound, Southbound

	95th Percent	29	8	59	4	32	33	34	33	33	32	32	32	32	30	31	30	31	31	30	31	32	29	33	24									
	85th Percent	27	33	28	12	29	31	30	29	30	29	58	29	29	28	28	58	59	28	28	28	29	28	29	24									
	Total	4	ည	7	.	∞	36	109	220	189	168	168	146	171	136	170	178	217	218	149	92	47	32	15	5	2492		07:00	220	17:00	218	11072		
	9 <u>7</u> 986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%	
	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%					0	0.0%	
	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
	65 65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0	0	0	0	0	0	0	0.0%					0	%0:0	
	20 90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
	55 1-55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
	46 05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	%0.0					0	%0.0	
	4 15 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ψ-	0	_	0	0	0	0	0	0	0	2	0.1%			14:00	-	5	%0.0	
	36 40	c	0	0	0	0	0	က	-	0	0	0	-	0	τ.	0	0	~	0	0	0	0	0	0	0	7	0.3%	00:90	3	13:00	-	37	0.3%	
	9. 9.	C	7	0	0	_	7	14	27	34	16	4	12	15	7	12	7	4	4	∞	9	4	***	7	0	221	8.9%	08:00	发	12:00	15	889	8.0%	20 MPH 24 MPH 29 MPH 32 MPH
	% %		· •	_	0	7	12	8	112	88	55	99	9	75	09	29	8	88	83	55	33	17	13	4	0	1013	40.7%	00:20	112	17:00	88	4594	41.5%	 <u>a a a a</u>
	22 g	2	٠	-	0	S	10	19	22	46	72	89	20	89	26	2	9/	83	79	28	4	15	7	∞	5	883	35.4%	10:00	89	16:00	83	4144	37.4%	15th Percentile: 50th Percentile: 85th Percentile: 95th Percentile: 95th Percentile:
	6 6	c	, 	0	0	0	7	10	18	17	12	15	20	18	1	23	5 6	24	27	16	7	6	9	_	0	268	10.8%	11:00	8	17:00	27	1073	9.7%	15 50 85 85 85
Southbound	- र्	2	0	0	_	0	0	-	Ŋ	4	31	Ω	က	-	-	5	ည	ဖ	6	12	2	8	-	0	0	86	3.9%	00:60	31	18:00	12	330	3.0%	
Í	Start	09/08/14	01:00	02:00	03:00	04:00	02:00	00:90	07:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	Percent	AM Peak	Vol.	PM Jeog	Vol.	Grand Total	Percent	

8738 78.9% 5525 49.9% 25 MPH

Number in Pace:
Percent in Pace:
Number of Vehicles > 25 MPH:
Percent of Vehicles > 25 MPH:
Mean Speed(Average):

21-30 MPH

10 MPH Pace Speed:

Statistic s

Accurate Counts 978-664-2565

N/S Street: Main Street E/W Street : Crescent Street
City/State : Wakefield, MA
Weather : Clear

File Name: 16670001 Site Code: 16670001

Start Date : 9/9/2014

Page No : 1

Groups Printed- Cars - Trucks

					Oroups i	mileu- Ca	19 - HUCKS						
		Main St		Cı	escent St]	Main St		Cı	escent St		
		rom North		F	rom East		Fr	om South_		Fı	om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	3	133	6	2	20	11	0	48	1	0	14	0	238
07:15 AM	4	203	6	6	25	14	0	46	1	0	8	0	313
07:30 AM	7	151	3	5	29	10	1	69	1	1	11	0	288
07:45 AM	6	157	6	5	27	9	1	68	2	1	13	0	295
Total	20	644	21	18	101	44	2	231	5	2	46	0	1134
'	ı												
08:00 AM	13	140	2	6	29	6	0	58	1	3	8	0	266
08:15 AM	4	133	2	4	29	10	2	73	1	7	12	1	278
08;30 AM	3	127	4	9	28	11	4	56	2	3	16	0	263
08:45 AM	13	125	6	7	22	9	2	46	4	6	14	0	254
Total	33	525	14	26	108	36	8	233	8	19	50	1	1061
	'		•										
Grand Total	53	1169	35	44	209	80	10	464	13	21	96	1	2195
Apprch %	4.2	93	2.8	13.2	62.8	24	2.1	95.3	2.7	17.8	81.4	0.8	
Total %	2.4	53.3	1.6	2	9.5	3.6	0.5	21.1	0.6	1	4.4	0	
Cars	53	1142	35	43	209	79	10	444	13	20	96	1	2145
% Cars	100	97.7	100	97.7	100	98.8	100	95.7	100	95.2	100	100	97.7
Trucks	0	27	0	1	0	1	0	20	0	1	0	0	50
% Trucks	0	2.3	0	2.3	0	1.2	0	4.3	0	4.8	0	0	2.3

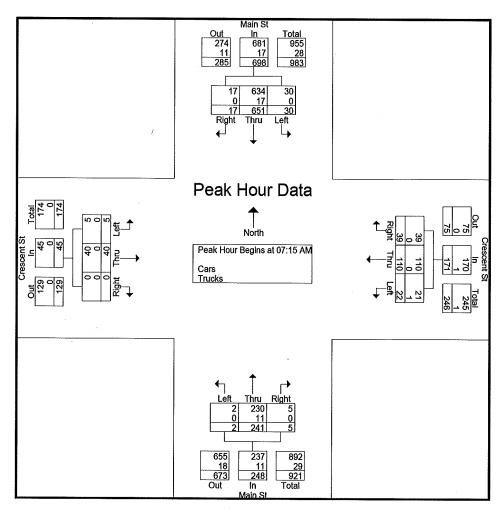
978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670001 Site Code : 16670001 Start Date : 9/9/2014
Page No : 2

		Mo	in St	I			4 04	т									1
							cent St				in St				cent St		
		From	North			Fron	n East			From	South			Fron	ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	7:00 AM	to 08:45	AM - Peal	c 1 of 1		•••										I
Peak Hour for E	ntire Inte	rsection	Begins	at 07:15	AM			,									
07:15 AM	4	203	6	213	6	25	14	45	0	46	1	47	0	8	0	8	313
07:30 AM	7	151	3	161	5	29	10	44	1	69	1	71	1	11	0	12	288
07:45 AM	6	157	6	169	5	27	9	41	1	68	2	71	1	13	0	14	295
MA 00:80	13	140	2	155	6	29	6	41	0	58	1	59	3	8	0	11	266
Total Volume	30	651	17	698	22	110	39	171	2	241	5	248	5	40	0	45	1162
% App. Total	4.3	93.3	2.4		12.9	64.3	22.8		8.0	97.2	2		11.1	88.9	0		
PHF	.577	.802	.708	.819	.917	.948	.696	.950	.500	.873	.625	.873	.417	.769	.000	.804	.928
Cars	30	634	17	681	21	110	39	170	2	230	5	237	5	40	0	45	1133
% Cars	100	97.4	100	97.6	95.5	100	100	99.4	100	95.4	100	95.6	100	100	0	100	97.5
Trucks	e 0	17	0	17	1	0	0	1	0	11	0	11	0	0	0	0	29
% Trucks	0	2.6	0	2.4	4.5	0	0	0.6	0	4.6	0	4.4	0	0	0	0	2.5



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA

Weather : Clear

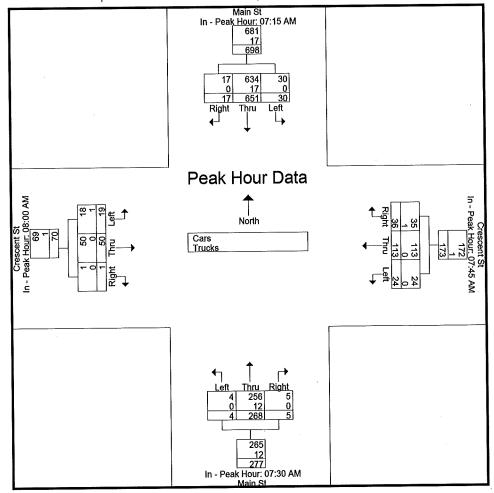
File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

Page No : 3

			Mai	in St			Cres	cent St			Ma	in St			Cres	cent St		
			From	North			Fron	n East			From	South			Fron	n West		
Start	Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

July 10 di 101 Z																
	07:15 AM				07:45 AM				07:30 AM				08:00 AM			
+0 mins.	4	203	6	213	5	27	9	41	1	69	1	71	3	8	0	11
+15 mins.	7	151	3	161	6	29	6	41	1	68	2	71	7	12	1	20
+30 mins.	6	157	6	169	4	29	10	43	0	58	1	59	3	16	0	19
+45 mins.	13	140	2	155	9	28	11	48	2	73	1	76	6	14	0	20
Total Volume	30	651	17	698	24	113	36	173	4	268	5	277	19	50	1	70
% App. Total	4.3	93.3	2.4		13.9	65.3	20.8		1.4	96.8	1.8		27.1	71.4	1.4	
PHF	.577	.802	.708	.819	.667	.974	.818	.901	.500	.918	.625	.911	.679	.781	.250	.875
Cars	30	634	17	681	24	113	35	172	4	256	5	265	18	50	1	69
% Cars	100	97.4	100	97.6	100	100	97.2	99.4	100	95.5	100	95.7	94.7	100	100	98.6
Trucks	0	17	0	17	0	0	1	1	0	12	0	12	1	0	0	1
% Trucks	0	2.6	0	2.4	0	0	2.8	0.6	0	4.5	0	4.3	5.3	0	0	1.4



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA Weather : Clear

File Name: 16670001 Site Code: 16670001

Start Date : 9/9/2014

	_				Gro	ups Printed-	Cars						
		Main St			rescent St]	Main St		Cı	rescent St		
		rom North			rom East		Fr	om South		Fı	om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	3	131	6	2	20	11	0	44	1	0	14	0	232
07:15 AM	4	198	6	5	25	14	0	45	1	0	8	0	306
07:30 AM	7	146	3	5	29	10	1	67	1	1	11	0	281
07:45 AM	6	152	6	5	27	9	1	66	2	1	13	0	288
Total	20	627	21	17	101	44	2	222	5	2	46	0	1107
00,00 444	1 40	400	- 1	_		- 1						,	
08:00 AM	13	138	2	. 6	29	6	0	52	1	3	8	0	258
08:15 AM	4	130	2	4	29	10	2	71	1	6	12	1	272
08:30 AM	3	125	4	9	28	10	-4	55	2	3	16	О	259
08:45 AM	13	122	6	7	22	9	2	44	4	6	14	0	249
Total	33	515	14	26	108	35	8	222	8	18	50	1	1038
Grand Total	53	1142	35	43	209	79	10	444	13	20	96		0445
Apprch %	4.3	92.8	2.8	13	63.1	į			i			1	2145
						23.9	2.1	95.1	2.8	17.1	82.1	0.9	
Total %	2.5	53.2	1.6	2	9.7	3.7	0.5	20.7	0.6	0.9	4.5	0	

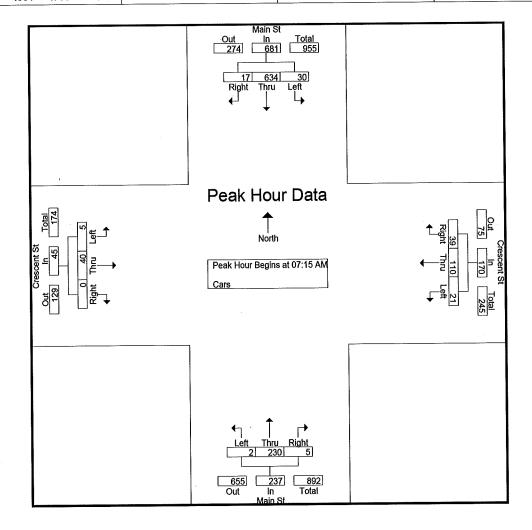
978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

File Name : 16670001 Site Code : 16670001 Start Date : 9/9/2014

		Mai	in St			Cresc	ent St			Ma	in St			Creso	ent St		
		From	North			Fron	ı East			From	South			From	West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
eak Hour Analysi	s From 0	7:00 AM	to 08:4:	5 AM - Peal	k 1 of 1												
eak Hour for Er	ntire Inte	rsection	Begin	s at 07:15	AM												ì
07:15 AM	4	198	6	208	5	25	14	44	0	45	1	46	0	8	0	8	306
07:30 AM	7	146	3	156	5	29	10	44	1	67	1	69	1	11	0	12	281
07:45 AM	6	152	6	164	5	27	9	41	1	66	2	69	1	13	0	14	288
08:00 AM	13	138	2	153	6	29	6	41	0	52	1	53	3	8	0	11	258
Total Volume	30	634	17	681	21	110	39	170	2	230	5	237	5	40	0	45	1133
% App. Total	4.4	93.1	2.5		12.4	64.7	22.9		0.8	97	2.1		11.1	88.9	0		
PHF	.577	.801	.708	.819	.875	.948	.696	.966	.500	.858	.625	.859	.417	.769	.000	.804	.926



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

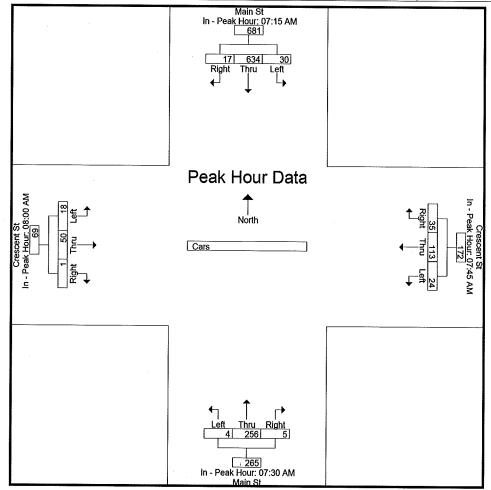
File Name: 16670001 Site Code: 16670001

Start Date : 9/9/2014
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	 Mai	n St			Cres	cent St			Ma	in St			Cres	cent St]
	From	North			From	n East			From	South			Fron	n West		
Start Time	 	Right	pp: z olar	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of

	07:15 AM				07:45 AM				07:30 AM	ı			08:00 AM			
+0 mins.	4	1 9 8	6	208	5	27	9	41	1	67	1	69	3	8	0	11
+15 mins.	7	146	3	156	6	29	6	41	1	66	2	69	6	12	1	19
+30 mins.	6	152	6	164	4	29	10	43	0	52	1	53	3	16	Ö	19
+45 mins.	13	138	2	153	9	28	10	47	2	71	1	74	6	14	0	20
Total Volume	30	634	17	681	24	113	35	172	4	256	5	265	18	50	1	69
% App. Total	4.4	93.1	2.5		14	65.7	20.3		1.5	96.6	1.9		26.1	72.5	1.4	
PHF	.577	.801	.708	.819	.667	.974	.875	.915	.500	.901	.625	.895	.750	.781	.250	.863



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670001

Site Code : 16670001 Start Date : 9/9/2014

Page No : 7

					Group	s Printed-							
		Main St	•		rescent St			Main St			rescent St		
	I	rom North		F	rom East			rom South			rom West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	2	0	0	0	0	0	4	. 0	0	0	0	6
07:15 AM	0	. 5	0	1	0	0	0	1	0	0	0	0	7
07:30 AM	0	5	0	0	0	0	0	2	0	0	0	0	7
07:45 AM	0	5	0	0	0	0	0	2	0	0	0	0	7
Total	0	17	0	1	0	0	0	9	0	0	0	0	27
'			•										
08:00 AM	0	2	0	0	0	0	0	6	0	, 0	0	0	8
08:15 AM	0	3	0	0	0	0	0	2	0	1	0	0	6
08:30 AM	0	2	О	0	0	. 1	0	1	0	0	0	0	4
08:45 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
Total	0	10	0	0	0	1	0	11	0	1	0	0	23
	•		•										
Grand Total	0	27	0	1	0	1	0	20	0	1	0	0	50
Apprch %	0	100	0	50	0	50	0	100	0	100	0	0	
Total %	0	54	0	2	0	2	0	40	0	2	0	0	

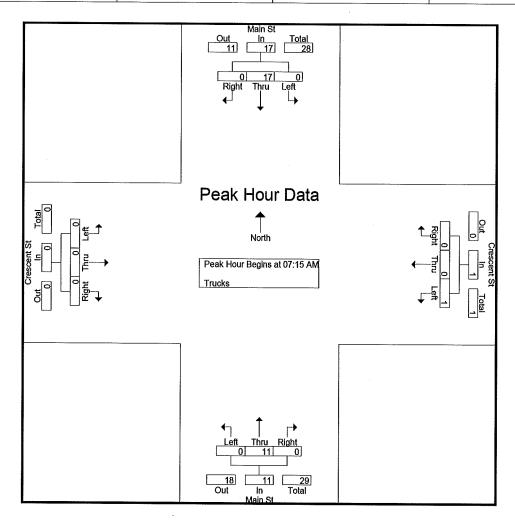
978-664-2565

N/S Street: Main Street E/W Street : Crescent Street City/State : Wakefield, MA

Weather : Clear

File Name : 16670001 Site Code : 16670001 Start Date : 9/9/2014 Page No : 8

		Ma	in St			Creso	ent St			Ma	in St			Creso	ent St	***************************************	
		From	North			Fron	n East			From	South			Fron	n West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Ann Total	Int. Total
Peak Hour Analys	is From 0	7:00 AM	to 08:45	AM - Peal	k 1 of 1											11997 1 0 1111	2211 2011
Peak Hour for E	ntire Inte	rsection	n Begins	s at 07:15	AM												
07:15 AM	0	5	0	5	1	0	0	1	0	1	0	1	0	0	0	0	7
07:30 AM	0	5	0	5	0	0	0	ò	0	2	0	2	0	0	0	0	7
07:45 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
08:00 AM	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
Total Volume	0	17	0	17	1	0	0	1	0	11	0	11	0	0	0	0	29
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.850	.000	.850	.250	.000	.000	.250	.000	.458	.000	.458	.000	.000	.000	.000	.906



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

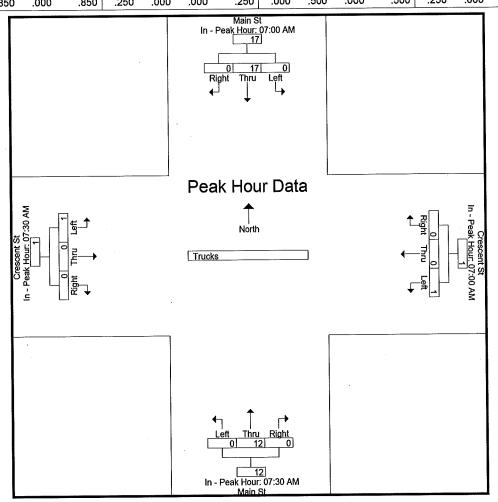
File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

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ſ			Ma	in St			Cres	ent St			Ma	in St			Cres	cent St	
			From	North	•		Fron	n East			From	South			Fron	n West	
Ī	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right App. Tota	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Cak Hour for L	aon Appi	oudin D	ognio at.													
	07:00 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	5	0	5	1	0	0	1	0	2	0	2	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0
+45 mins.	0	5	0	5	0	0	0	0	0	2	0	2	1	0	0	1
Total Volume	0	17	0	17	1	0	0	1	0	12	0	12	1	0	0	1
% App. Total	0	100	0		100	0	0		0	100	0		100	0	0	
PHF	.000	.850	.000	.850	.250	.000	.000	.250	.000	.500	.000	.500	.250	.000	.000	.250



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

Grand Total

Apprch %

Total %

File Name : 16670001 Site Code : 16670001

Start Date : 9/9/2014
Page No : 10

	r			~~~				Group	s Printed	- Bikes	Peds								
		_ Mai				Cresc				Mai	n St			Cresc	ent St				
		From	-			From	East			From	South			From	West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	2	0	0	0	. 2	0	0	0	0	0	0	0	0	4	0	4
07:15 AM	0	0	0	0	0	0	0	12	0	- 0	0	0	0	0	0	0	12	0	12
07:30 AM	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	5	0	5
07:45 AM	0	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	4	1	5
Total	0	0	0	4	0	1	0	21	0	0	0	0	0	0	0	0	25	1	26
08:00 AM	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
08:30 AM	0	0	0	2	0	0	0	4	0	1	0	1	0	0	0	0	7	1	8
08:45 AM	0	0	0	5	1	0	0	3	0	1	0	o	0	0	0	0	8	2	10
Total	0	0	0	7	1	0	0	7	0	2	0	1	. 0	0	0	0	15	3	18

90.9

9.1

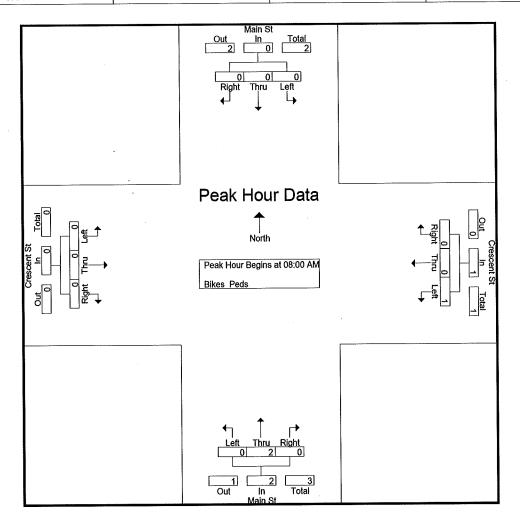
978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

File Name : 16670001 Site Code : 16670001 Start Date : 9/9/2014

		Ma	in St			Creso	ent St			Ma	in St			Creso	cent St		
		From	North			Fron	n East			From	South			Fron	1 West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	7:00 AM	to 08:4:	5 AM - Peal	k 1 of 1												
Peak Hour for E	ntire Inte	rsection	n Begin	s at 08:00	AM							1					
08:00 AM	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
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
Total Volume	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
% App. Total	0	0	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000	.375



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

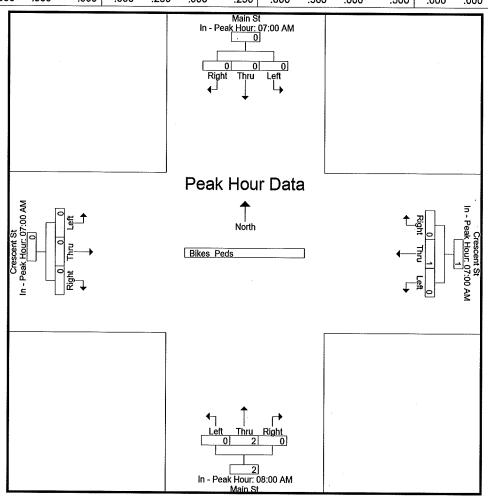
File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

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	Ma	in St		Cres	cent St			Ma	in St		Crescent St		
	From	n North		Fron	n East			From	South		From West		
Start Time	Left Thru	Right App. Total	Left	Thru	Right	App. Total	Left	Thru	Right App. Total	Left	Thru Right	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

	07:00 AM				07:00 AM				08:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	. 0	1	0	1	0	. 0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0	_
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA Weather : Clear

File Name: 16670001 Site Code: 16670001

Start Date : 9/9/2014

Page No : 1

Groups Printed- Cars - Trucks

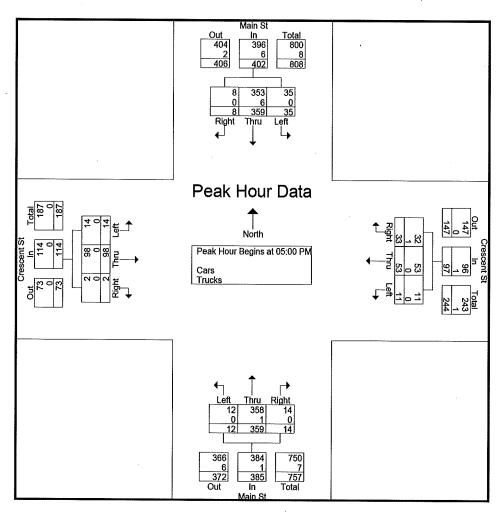
	Main St From North				escent St			Main St			rescent St		
	Fr	om North			rom East			rom South			om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	5	73	2	1	19	11	0	89	4	1	22	0	227
04:15 PM	6	74	2	4	17	6	1	101	3	7	22	0	243
04:30 PM	7	81	0	6	. 13	14	3	87	5	1	25	2	244
04:45 PM	9	67	2	7	13	13	4	90	4	1	25	0	235
Total	27	295	6	18	62	44	8	367	16	10	94	2	949
			1			ı			,			. 1	
05:00 PM	7	83	2	1	13	11	3	90	5	2	21	1	239
05:15 PM	9	89	1	3	12	11	4	79	0	4	28	0	240
05:30 PM	10	86	2	6	16	7	2	111	4	7	28	1	280
05:45 PM	9	101	3	1	12	4	. 3	79	5	1	21	0	239
Total	35	359	8	11	53	33	12	359	14	14	98	2	998
Grand Total	62	654	14	29	115	77	20	726	30	24	192	4	1947
Approh %	8.5	89.6	1.9	13.1	52	34.8	2.6	93.6	3.9	10.9	87.3	1.8	
Total %	3.2	33.6	0.7	1.5	5.9	4	1	37.3	1.5	1.2	9.9	0.2	
				29	115	76	20	723	30	24	192	4	1933
Cars	62	644	14									100	99.3
% Cars	100	98.5	100	100	100	98.7	100	99.6	100	100	100		
Trucks	0	10	0	, O	0	1	0	3	0	0	0	0	14
% Trucks	0	1.5	0	0	0	1.3	0	0.4	0	0	0	0	0.7

Accurate Counts 978-664-2565

N/S Street: Main Street E/W Street : Crescent Street City/State : Wakefield, MA Weather : Clear

File Name : 16670001 Site Code : 16670001 Start Date : 9/9/2014

		Ma	in St			Cres	cent St			Ma	in St			Cres	cent St]
		From	North			From	n East			From	South			Fron	ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM	to 05:45	PM - Peak	1 of 1								L			1.44	1 2211 2 0 141
Peak Hour for E	ntire Inte	rsection	Begins	at 05:00	PM												
05:00 PM	7	83	2	92	1	13	11	25	3	90	5	98	2	21	1	24	239
05:15 PM	9	89	1	99	3	12	11	26	4	79	Ō	83	4	28	Ö	32	240
05:30 PM	10	86	2	98	6	16	7	29	2	111	4	117	7	28	1	36	280
05:45 PM	9	101	3	113	1	12	4	17	3	79	5	87	1	21	0	22	239
Total Volume	35	359	8	402	11	53	33	97	12	359	14	385	14	98	2	114	998
% App. Total	8.7	89.3	2		11.3	54.6	34		3.1	93.2	3.6		12.3	86	1.8		
PHF	.875	.889	.667	.889	.458	.828	.750	.836	.750	.809	.700	.823	.500	.875	.500	.792	.891
Cars	35	353	8	396	11	53	32	96	12	358	14	384	14	98	2	114	990
% Cars	100	98.3	100	98.5	100	100	97.0	99.0	100	99.7	100	99.7	100	100	100	100	99.2
Trucks	0	6	0	6	0	0	1	1	0	1	0	1	0	0	0	0	8
% Trucks	0	1.7	0	1.5	0	0	3.0	1.0	0	0.3	0	0.3	0	0	0	0	0.8



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State: Wakefield, MA
Weather: Clear

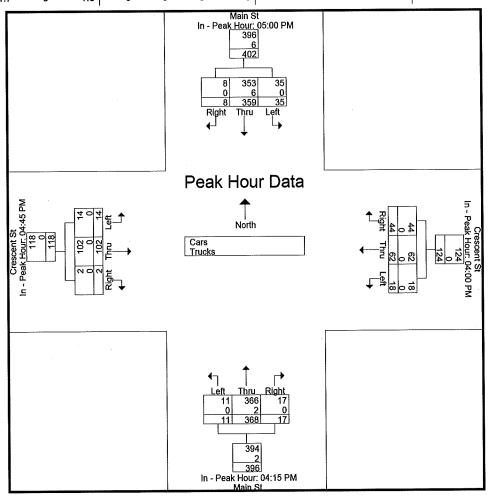
File Name: 16670001 Site Code : 16670001 Start Date : 9/9/2014

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	Main St	Crescent St	Main St	Crescent St	i
	From North	From East	From South	From West	
Start Time	Left Thru Right App. Total	Int. Total			

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

5:00 PM				04:00 PM				04:15 PM				04:45 PM			
7	83	2	92	1	19	11	31	1	101	3	105	1	25	0	26
9	89	1	99	4	17	6	27	3	87	5	95	2	21	1	24
10	86	2	98	6	13	14	33	4	90	4	98	4	28	0	32
9	101	3	113	7	13	13	33	3	90	5	98	7	28	1	36
35	359	8	402	18	62	44	124	11	368	17	396	14	102	2	118
8.7	89.3	2		14.5	50	35.5		2.8	92.9	4.3		11.9	86.4	1.7	
.875	.889	.667	.889	.643	.816	.786	.939	.688	.911	.850	.943	.500	.911	.500	.819
35	353	8	396	18	62	44	124	11	366	17	394	14	102	2	118
100	98.3	100	98.5	100	100	100	100	100	99.5	100	99.5	100	100	100	100
0	6	0	6	0	0	0	0	. 0	2	0	2	0	0	0	0
0	1.7	0	1.5	0	0	0	0	0	0.5	0	0.5	0	0	0	0
	7 9 10 9 35 8.7 .875 35 100	7 83 9 89 10 86 9 101 35 359 8.7 89.3 .875 .889 35 353 100 98.3 0 6	7 83 2 9 89 1 10 86 2 9 101 3 35 359 8 8.7 89.3 2 .875 .889 .667 35 353 8 100 98.3 100 0 6 0	7 83 2 92 9 89 1 99 10 86 2 98 9 101 3 113 35 359 8 402 8.7 89.3 2 8.75 .889 .667 .889 35 353 8 396 100 98.3 100 98.5 0 6 0 6	7 83 2 92 1 9 89 1 99 4 10 86 2 98 6 9 101 3 113 7 35 359 8 402 18 8.7 89.3 2 14.5 .875 .889 .667 .889 .643 35 353 8 396 18 100 98.3 100 98.5 100 0 6 0 6 0	7 83 2 92 1 19 9 89 1 99 4 17 10 86 2 98 6 13 9 101 3 113 7 13 35 359 8 402 18 62 8.7 89.3 2 14.5 50 .875 .889 .667 .889 .643 .816 35 353 8 396 18 62 100 98.3 100 98.5 100 100 0 6 0 6 0 0	7 83 2 92 1 19 11 9 89 1 99 4 17 6 10 86 2 98 6 13 14 9 101 3 113 7 13 13 35 359 8 402 18 62 44 8.7 89.3 2 14.5 50 35.5 .875 .889 .667 .889 .643 .816 .786 35 353 8 396 18 62 44 100 98.3 100 98.5 100 100 100 0 6 0 6 0 0 0	7 83 2 92 1 19 11 31 9 89 1 99 4 17 6 27 10 86 2 98 6 13 14 33 9 101 3 113 7 13 13 33 35 359 8 402 18 62 44 124 8.7 89.3 2 14.5 50 35.5 8 .875 .889 .667 .889 .643 .816 .786 .939 35 353 8 396 18 62 44 124 100 98.3 100 98.5 100 100 100 100 0 6 0 6 0 0 0 0	7 83 2 92 1 19 11 31 1 9 89 1 99 4 17 6 27 3 10 86 2 98 6 13 14 33 4 9 101 3 113 7 13 13 33 3 35 359 8 402 18 62 44 124 11 8.7 89.3 2 14.5 50 35.5 2.8 .875 .889 .667 .889 .643 .816 .786 .939 .688 35 353 8 396 18 62 44 124 11 100 98.3 100 98.5 100 100 100 100 100 0 6 0 6 0 0 0 0 0	7 83 2 92 1 19 11 31 1 101 9 89 1 99 4 17 6 27 3 87 10 86 2 98 6 13 14 33 4 90 9 101 3 113 7 13 13 33 3 90 35 359 8 402 18 62 44 124 11 368 8.7 89.3 2 14.5 50 35.5 2.8 92.9 .875 .889 .667 .889 .643 .816 .786 .939 .688 .911 35 353 8 396 18 62 44 124 11 366 100 98.3 100 98.5 100 100 100 100 99.5 0 6 0 6 0<	7 83 2 92 1 19 11 31 1 101 3 9 89 1 99 4 17 6 27 3 87 5 10 86 2 98 6 13 14 33 4 90 4 9 101 3 113 7 13 13 33 3 90 5 35 359 8 402 18 62 44 124 11 368 17 8.7 89.3 2 14.5 50 35.5 2.8 92.9 4.3 .875 .889 .667 .889 .643 .816 .786 .939 .688 .911 .850 35 353 8 396 18 62 44 124 11 366 17 100 98.3 100 98.5 100 100 10	7 83 2 92 1 19 11 31 1 101 3 105 95 95 10 86 2 98 6 13 14 33 4 90 4 98 9 101 3 113 7 13 13 33 3 90 5 98 92 98 14 13 14 33 4 90 4 98 99 98 99 98 99 98 99 99	7 83 2 92 1 19 11 31 1 101 3 105 1 9 89 1 99 4 17 6 27 3 87 5 95 2 10 86 2 98 6 13 14 33 4 90 4 98 4 9 101 3 113 7 13 13 33 3 90 5 98 7 35 359 8 402 18 62 44 124 11 368 17 396 14 8.7 89.3 2 14.5 50 35.5 2.8 92.9 4.3 11.9 .875 .889 .667 .889 .643 .816 .786 .939 .688 .911 .850 .943 .500 35 353 8 396 18 62	7 83 2 92 1 19 11 31 1 101 3 105 1 25 9 89 1 99 4 17 6 27 3 87 5 95 2 21 10 86 2 98 6 13 14 33 4 90 4 98 4 28 9 101 3 113 7 13 13 33 3 90 5 98 7 28 35 359 8 402 18 62 44 124 11 368 17 396 14 102 8.7 89.3 2 14.5 50 35.5 2.8 92.9 4.3 11.9 86.4 .875 .889 .667 .889 .643 .816 .786 .939 .688 .911 .850 .943 .500 .911	7 83 2 92 1 19 11 31 1 101 3 105 1 25 0 9 89 1 99 4 17 6 27 3 87 5 95 2 21 1 10 86 2 98 6 13 14 33 4 90 4 98 4 28 0 9 101 3 113 7 13 13 33 3 90 5 98 7 28 1 35 359 8 402 18 62 44 124 11 368 17 396 14 102 2 8.7 89.3 2 14.5 50 35.5 2.8 92.9 4.3 11.9 86.4 1.7 875 889 667 889 643 816 786 939 688 911 850 943 500 911 500 35 353 8 396 18 62 44 124 11 366 17 394 14 102 2 100 98.3 100 98.5 100 100 100 100 99.5 100 99.5 100 100 100 0 6 0 6 0 6 0 0 0 0 0 0 0 2 0 2 0 2 0 0 0



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State : Wakefield, MA Weather : Clear

File Name: 16670001

Site Code : 16670001 Start Date : 9/9/2014

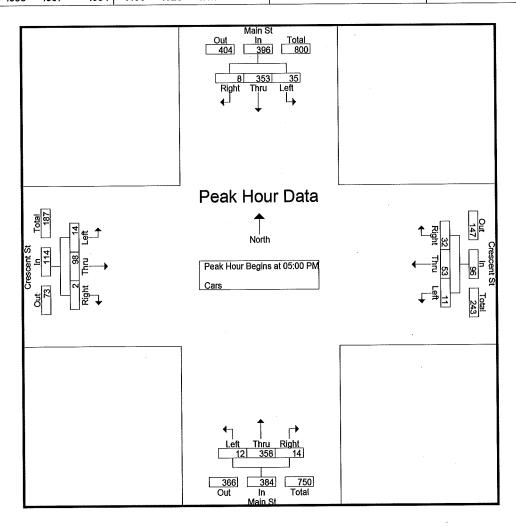
					Gro	ups Printed	- Cars						
		Main St			rescent St		l	√ain St		Cı	rescent St		
	·	om North			rom East		Fre	om South		Fı	om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	5	73	2	1	19	11	0	89	4	1	22	0	227
04:15 PM	6	73	2	4	17	6	1	101	3	7	22	0	242
04:30 PM	7	79	0	6	13	14	3	86	5	1	25	2	241
04:45 PM	9	66	2	7	13	13	4	89	4	1	25	О	233
Total	27	291	6	18	62	44	8	365	16	10	94	2	943
05:00 PM	7	81	2	1	13	10	3	90	5	2	21	1	236
05:15 PM	9	86	1	3	12	11	4	78	0	4	28	0	236
05:30 PM	10	86	2	6	16	7	2	111	4	7	28	1	280
05:45 PM	9	100	3	1	12	4	3	79	5	1	21	О	238
Total	35	353	8	11	53	32	12	358	14	14	98	2	990
Grand Total	62	644	14	29	115	76	20	723	30	24	192	4	1933
Apprch %	8.6	89.4	1.9	13.2	52.3	34.5	2.6	93.5	3.9	10.9	87.3	1.8	
Total %	3.2	33.3	0.7	1.5	5.9	3.9	1	37.4	1.6	1.2	9.9	0.2	

978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA Weather : Clear

File Name: 16670001 Site Code : 16670001 Start Date : 9/9/2014

		Mai	n St			Cres	ent St			Ma	in St			Creso	ent St		
		From	North			Fron	n East			From	South			From	West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM	to 05:45	PM - Peak	1 of 1		-										
Peak Hour for E	ntire Inte	rsection	Begin:	s at 05:00	PM												
05:00 PM	7	81	2	90	1	13	10	24	3	90	5	98	2	21	1	24	236
05:15 PM	9	86	1	96	3	12	11	26	4	78	0	82	4	28	0	32	236
05:30 PM	10	86	2	98	6	16	7	29	2	111	4	117	7	28	1	36	280
05:45 PM	9	100	3	112	1	12	4	17	3	79	5	87	1	21	0	22	238
Total Volume	35	353	8	396	11	53	32	96	12	358	14	384	14	98	2	114	990
% App. Total	8.8	89.1	2		11.5	55.2	33.3		3.1	93.2	3.6		12.3	86	1.8		
PHF	.875	.883	.667	.884	.458	.828	.727	.828	.750	.806	.700	.821	.500	.875	.500	.792	.884



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State: Wakefield, MA
Weather: Clear

File Name: 16670001

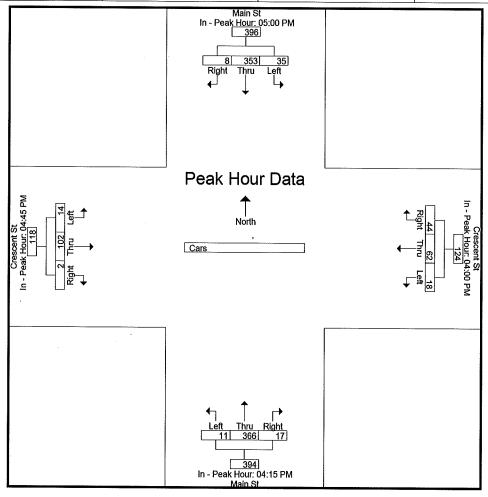
Site Code : 16670001 Start Date : 9/9/2014

Page No : 6

		Ma	in St			Cres	cent St			Ma	in St			Cres	cent St		
	From North					Fron	n East			From	South			Fron	n West		
Start Time	Left Thru Right App. Total			App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

	05:00 PM				04:00 PM				04:15 PM				04:45 PM			
+0 mins.	7	81	2	90	1	19	11	31	1	101	3	105	1	25	0	26
+15 mins.	9	86	1	96	4	17	6	27	3	86	5	94	2	21	1	24
+30 mins.	10	86	2	98	6	13	14	33	4	89	4	97	4	28	Ö	32
+45 mins.	9	100	3	112	7	13	13	33	3	90	5	98	7	28	1	36
Total Volume	35	353	8	396	18	62	44	124	11	366	17	394	14	102	2	118
% App. Total	8.8	89.1	2		14.5	50	35.5		2.8	92.9	4.3		11.9	86.4	1.7	,
PHF	.875	.883	.667	.884	.643	.816	.786	.939	.688	.906	.850	.938	.500	.911	.500	.819



Accurate Counts 978-664-2565

N/S Street: Main Street E/W Street : Crescent Street
City/State : Wakefield, MA
Weather : Clear File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

		Main St			escent St	s Printed-		Main St		C	escent St		
		rom North			rom East			om South			om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	. 0	1	О	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	2	0	0	0	0	0	1	0	0	0	0	3
04:45 PM	0	1	o	0	0	0	0	1	0	0	0	0	2
Total	0	4	0	0	0	0	0	2	0	0	0	0	6
'			,			·							
05:00 PM	0	2	0	0	0 -	1	0	0	0	0	0	0	3
05:15 PM	0	. 3	0	0	0	0	0	1	0	0	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	i	0	0	0	0	0	0	0	0	0	0	11
Total	0	6	0	0	0	1	0	1	0	0	0	0	8
!	•												
Grand Total	0	10	0	0	0	1	0	3	0	0	0	0	14
Apprch %	0	100	0	0	0	100	0	100	0	0	0	0	
Total %	0	71.4	0	0	0	7.1	0	21.4	0	. 0	0	0	

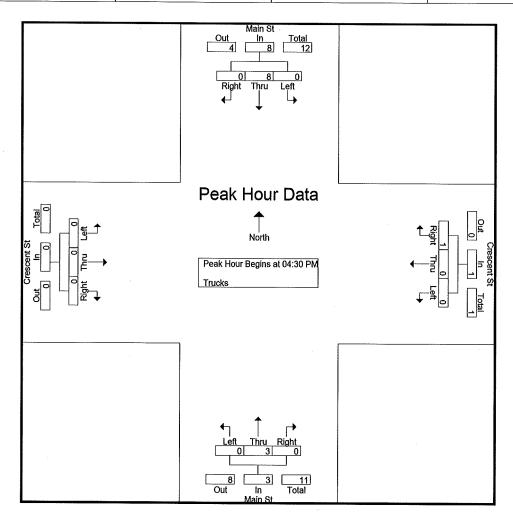
978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

		Ma	in St			Creso	ent St			Ma	in St			Creso	ent St		
		From	North			Fron	n East			From	South			From	ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM	to 05:45	PM - Peak	1 of 1												
Peak Hour for E	ntire Inte	ersection	n Begins	s at 04:30	PM												
04:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
05:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Total Volume	0	8	0	8	0	0	1	1	0	3	0	3	0	0	0	0	12
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.667	.000	.667	.000	.000	.250	.250	.000	.750	.000	.750	.000	.000	.000	.000	.750



978-664-2565

N/S Street: Main Street E/W Street: Crescent Street City/State: Wakefield, MA

Weather : Clear

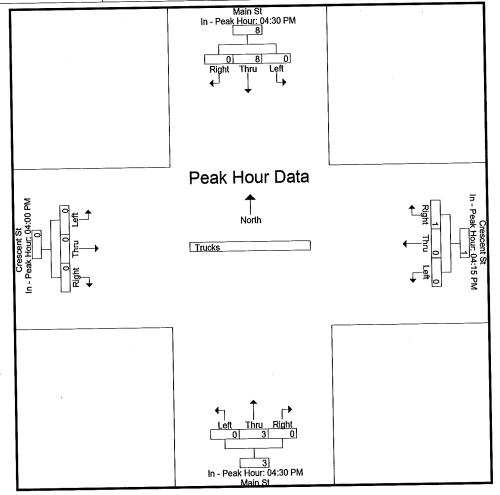
File Name: 16670001 Site Code: 16670001 Start Date: 9/9/2014

Page No : 9

1	Main St		Crescen	ıt St		Ma	in St		Cres	cent St		ì
	From North		From F	East		From	South			n West		
	Start Time Left Thru Righ	t App. Total	Left Thru I	Right App. Total	Left	Thru	Right App. Total	l Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for E	ach Appro	oach Be	egins at:				,						1			
	04:30 PM				04:15 PM				04:30 PM				04:00 PM			
	04.30 FW	2	Λ	2	0	0	0	0	0	1	. 0	1	0	0	0	0
+0 mins.	U		•	-	^	0	0	0	n	1	0	1	0	0	0	0
+15 mins.	0	1	U	1	U	-	0	_			0	^	0	n	Ω	0
+30 mins.	0	2	0	2	0	0	0	0	U	U	-			•	^	0
+45 mins.	0	3	0	3	0	0	1	1	0	11	0	1	0	U	0	
	0	8		8	0	0	1	1	0	3	0	3	0	0	. 0	0
Total Volume		400	•	·	0	0	100		0	100	0		0	0	0	
% App. Total	0	100	U						200			.750	.000	.000	.000	.000
PHF	.000	.667	.000	.667	.000	.000	.250	.250	.000	.750	.000	./50	.000	.000	.000	



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670001 Site Code: 16670001

Start Date : 9/9/2014

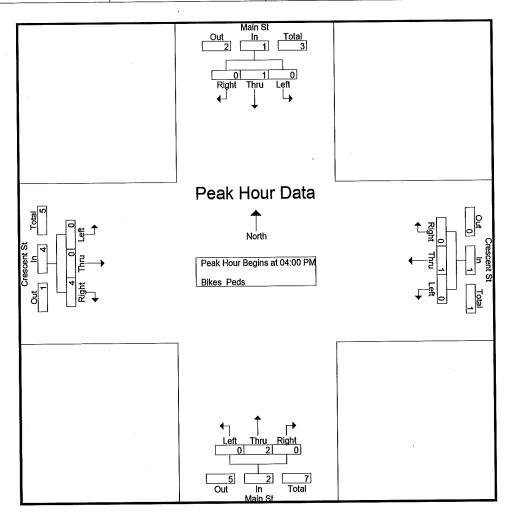
								Group	s Printe	d- Bikes	Peds									
		_ Mai		İ		Cresc	ent St			Mai	n St			Cresc	ent St		I			
		From				From	East			From	South				West					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru		Peds	Exclu. Total	Inclu. Total	Int Total	
04:00 PM	0	0	0	1	0	1	0	3	0	0	0	0	0	0	0	2	6	1	7 / 7	
04:15 PM	0	1	0	3	0	0	0	6	0	1	0	0	0	0	2	0	9	4	13	
04:30 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	1	0	5	1	6	
04:45 PM	0	0	0	2	0	0	0	4	0	1	0	0	0	0	1	0	6	2	8	
Total	0	1	0	6	0	1	0	18	0	2	0	0	0	0	4	2	26	8	34	
· ·				'				1				i			•	-	20	ŭ	04	
05:00 PM	0	0	0	4	0	0	0	10	0	0	0	0	0	0	0	ol	14	0	14	600
05:15 PM	0	0	0	1	0	0	0	2	0	2	0	0	1	0	0	.1	4	3	7	(Manufalliana)
05:30 PM	0	1	0	3	0	0	0	4	0	0	0	0	0	2	0	1	8	3	11	
05:45 PM	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	7	0	7	1
Total	0	1	0	9	0	0	0	22	0	2	0	0	1	2	0	2	33	6	39	one of the second
Grand Total	0	2	0	15	•				_			,				,				
	_	_	0	15	0	1	0	40	0	4	0	0	1	2	4	4	59	14	. 73	3
Apprch %	0	100	0		0	100	0		0	100	0		14.3	28.6	57.1					- Contraction
Total %	0	14.3	0		0	7.1	0		0	28.6	0		7.1	14.3	28.6		80.8	19.2		J

978-664-2565

N/S Street: Main Street E/W Street : Crescent Street City/State : Wakefield, MA Weather : Clear

File Name: 16670001 Site Code : 16670001 Start Date : 9/9/2014

		Mai	in St			Creso	cent St			Ma	in St			Cres	ent St		
		From	North			Fron	n East			From	South			Fron	ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM	to 05:45	5 PM - Peak	1 of 1												
Peak Hour for E	intire Inte	rsection	n Begin	s at 04:00	PM											_	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total Volume	0	1	0	1	0	1	0	1	0	2	0	2	0	0	4	4	8
% App. Total	0	100	. 0		0	100	0		0	100	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.500	.500	.500



978-664-2565

N/S Street : Main Street E/W Street : Crescent Street City/State : Wakefield, MA

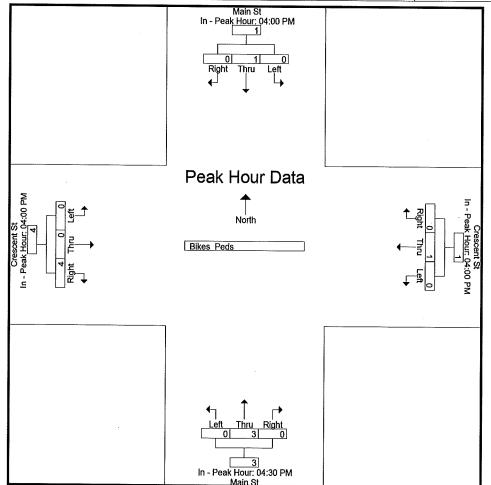
Weather : Clear

File Name: 16670001

Site Code : 16670001 Start Date : 9/9/2014 Page No : 12

		Ma	in St		Cres	ent St			Ma	in St		*****	Cres	cent St	1
		From	North		Fron	n East			From	South			Fron	n West	
Start Time	Left Thru Right App. Tota			Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM	to 05:45 PM - Peak	1 of 1											

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			fortune .
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	Ó	0	Ö	0	1	0	1	0	0	,	2
+30 mins.	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1
Total Volume	0	1	0	1	0	1	0	1	0	3	0	3	0	0	4	<u> </u>
% App. Total	0	100	0		0	100	0		0	100	0		0	0	100	7
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.500	.500



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State: Wakefield, MA
Weather: Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014

Page No : 1

Groups Printed- Cars - Trucks

	Cr	escent St		(Otis St		Cr	escent St		_	enter St		
		om North		Fr	om East		Fre	om South			om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	4	8	3	13	29	8	6	14	2	1	8	3	99
07:15 AM	2	14	3	16	37	11	7	23	3	0	12	4	132
07:30 AM	3	16	5	21	55	13	8	22	5	2	14	5	169
07:45 AM	5	13	3	8	45	6	11	25	3	0	9	3	131
Total	14	51	14	58	166	38	32	84	13	3	43	15	531
						1			. 1	•		ا م	129
08:00 AM	3	17	3	6	47	5	9	23	2	0	12	2	
08:15 AM	1	8	0	15	32	4	8	29	1	0	14	0	112
08:30 AM	6	11	3	7	48	12	4	29	4	4	7	2	137
08:45 AM	1	21	2	6	33	9	1	19	4	4	9	8	117
Total	11	57	8	34	160	30	22	100	11	8	42	12	495
·			ı			ا م		104	24 1	11	85	27	1026
Grand Total	25	108	22	92	326	68	54	184	24			22	1020
Apprch %	16.1	69.7	14.2	18.9	67.1	14	20.6	70.2	9.2	8.9	69.1	,	
Total %	2.4	10.5	2.1	9	31.8	6.6	5.3	17.9	2.3	1.1	8.3	2.6	
Cars	25	108	22	92	326	68	53	182	23	10	85	26	1020
% Cars	100	100	100	100	100	100	98.1	98.9	95.8	90.9	100	96.3	99.4
Trucks	0	0	0	, 0	0	0	1	2	1	1	0	1	6
% Trucks	0	0	0	0	0	0	1.9	1.1	4.2	9.1	0	3.7	0.6

978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

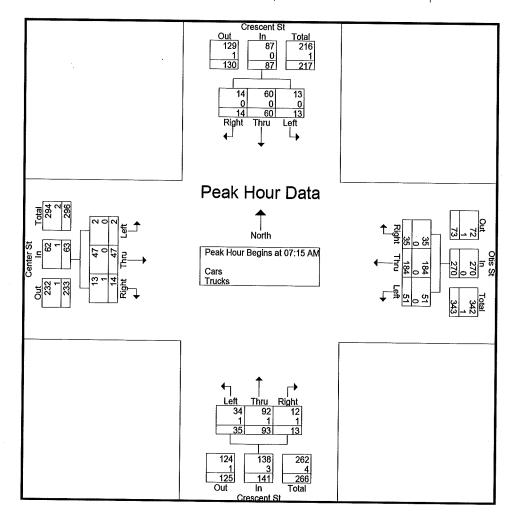
City/State : Wakefield, MA

Weather : Clear

File Name : 16670002 Site Code : 16670002

Start Date : 9/9/2014

1																	
			ent St			Ot	is St			Cres	cent St			Cen	ter St		
		From	North			Fron	n East			From	South						
Start Time	, Left	Thru		App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Tota
eak Hour Analys:	is From 0	7:00 AM	to 08:45	AM - Peal	c 1 of 1	·						ripp. rotti				App. rotai	111t. 10ta
eak Hour for Ent	ire Interse	ction Beg	gins at 07	:15 AM													
07:15 AM	2	14	3	19	16	37	11	64	7	23	3	33	0	12	4	16	132
07:30 AM	3	16	5	24	21	55	13	89	8	22	5	35	2	14	5		
07:45 AM	5	13	3	21	8	45	6	59	11	25	3	39	0	9	3	21 12	169 131
08:00 AM	3	17	3	23	6	47	5	58	9	23	2	34	0	12	2	14	129
Total Volume	13	60	14	87	51	184	35	270	35	93	13	141	2	47	14	63	56
% App. Total	14.9	69	16.1		18.9	68.1	13		24.8	66	9.2		3.2	74.6	22.2	O.S	50
PHF	.650	.882	.700	.906	.607	.836	.673	.758	.795	.930	.650	.904	.250	,839	.700	.750	.830
Cars	13	60	14	87	51	184	35	270	34	92	12	138	2	47	13	62	55
% Cars	100	100	100	100	100	100	100	100	97.1	98.9	92.3	97.9	100	100	92.9	98.4	99.3
Trucks	0	0	0	0	0	0	0	0	1	1	1	3	0	0	1	1	22.,
% Trucks	0	0	0	0	0	0	0	0	2.9	1.1	7.7	2.1	0	0	7.1	1.6	0.1



978-664-2565

N/S Street : Crescent Street

E/W Street: Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

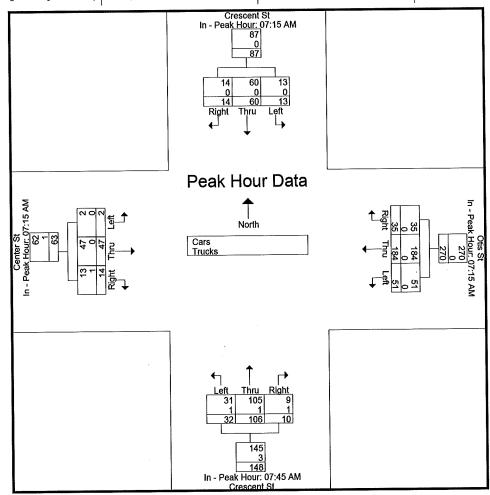
Start Date : 9/9/2014

Page No : 3

Γ			Creso	cent St			Ot	is St			Cres	cent St		.,,	Cen	iter St	
			From	North			Fron	n East			From	South			Fron	n West	
f	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Cuk Hour for Luc	m ripprous	T 7 6														
	07:15 AM				07:15 AM				07:45 AM				07:15 AM			
+0 mins.	2	14	3	. 19	16	37	11	64	11	25	3	39	0	12	4	16
+15 mins.	3	16	5	24	21	55	13	89	9	23	2	34	2	14	5	21
+30 mins.	5	13	3	21	8	45	6	59	8	29	1	38	0	9	3	12
+45 mins.	3	17	3	23	6	47	5	58	4	29	4	37	0	12	2	14
Total Volume	13	60	14	87	51	184	35	270	32	106	10	148	2	47	14	63
% App. Total	14.9	69	16.1		18.9	68.1	13		21.6	71.6	6.8		3.2	74.6	22.2	
PHF	.650	.882	.700	.906	.607	.836	.673	.758	.727	.914	.625	.949	.250	.839	.700	.750
Cars	13	60	14	87	51	184	35	270	31	105	9	145	2	47	13	62
% Cars	100	100	100	100	100	100	100	100	96.9	99.1	90	98	100	100	92.9	98.4
Trucks	0	0	0	0	0	0	0	0	1	, 1	1	3	0	0	1	1
% Trucks	0	0	0	0	0	0	0	0	3.1	0.9	10	2	0	0	7.1	1.6



978-664-2565

N/S Street: Crescent Street E/W Street: Otis Street / Center Street

City/State: Wakefield, MA
Weather: Clear

File Name: 16670002 Site Code: 16670002 Start Date: 9/9/2014

Page No : 4

							ips Printec	l- Cars							
			rescent St			Otis St			escent St		C	enter St			
			om North			rom East		Fr	om South		Fı	om West	- 1		
	tart Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total	
0	7:00 AM	· 4	8	3	13	29	8	6	14	2	1	8	3	99	
0	7:15 AM	2	14	3	16	37	11	7	23	3	0	12	4	132	
0	7:30 AM	3	16	5	21	55	13	8	21	5	2	14	4	167	
0	7:45 AM	5	13	3	8	45	6	10	25	3	0	9	3	130	
	Total	14	51	14	58	166	38	31	83	13	3	43	14	528	
0	8:00 AM	2	1.7	ا ء	_		- 1			i			1		
U	8:00 AM	3	17	3	6	47	5	9	23	1	0	12	2	128	
0	8:15 AM	1	8	0	15	32	4	. 8	29	1	0	14	0	112	
0	8:30 AM	6	11	3	7	48	12	4	28	4	3	7	2	135	
0	8:45 AM	1	21	2	6	33	9	1	19	4	4	9	8	117	
	Total	11	57	8	34	160	30	22	99	10	. 7	42	12	492	
Gra	and Total	25	108	22	92	326	68	53	182	23	10	85	26	1020	
Α	Appreh %	16.1	69.7	14.2	18.9	67.1	14	20.5	70.5	8.9	8.3	70.2	21.5	1020	
	Total %	2.5	10.6	2.2	9	32	6.7	5.2	17.8	2.3	1	8.3	2.5		

Accurate Counts 978-664-2565

N/S Street : Crescent Street

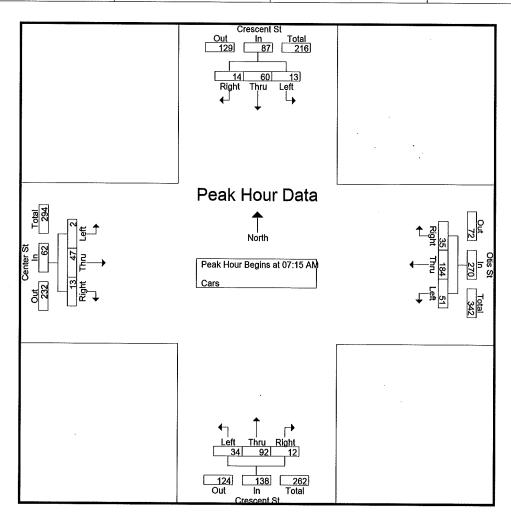
E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code : 16670002 Start Date : 9/9/2014
Page No : 5

		Cresc	ent St			Oti	is St			Cres	cent St	I		Cen	ter St		1
		From North From East					From South					From West					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	7:00 AM	to 08:4:	5 AM - Peal	1 of 1						-						
Peak Hour for Ent	ire Interse	ction Be	gins at 0	7:15 AM													
07:15 AM	2	14	3	19	16	37	11	64	7	23	3	33	0	12	4	16	132
07:30 AM	3	16	5	24	21	55	13	89	8	21	5	34	2	14	4	20	167
07:45 AM	5	13	3	21	8	45	6	59	10	25	3	38	0	9	3	12	130
08:00 AM	3	17	3	23	6	47	5	58	9	23	1	33	0	12	2	14	128
Total Volume	13	60	14	87	51	184	35	270	34	92	12	138	2	47	13	62	557
% App. Total	14.9	69	16.1		18.9	68.1	13		24.6	66.7	8.7		3.2	75.8	21		
PHF	.650	.882	.700	.906	.607	.836	.673	.758	.850	.920	.600	.908	.250	.839	.813	.775	.834



978-664-2565

N/S Street : Crescent Street

E/W Street: Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

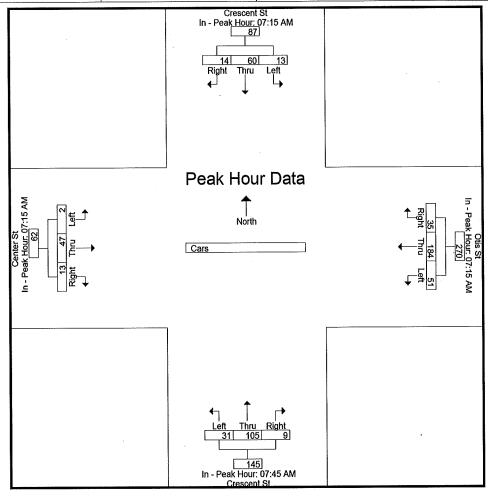
Page No : 6

		Cres	ent St			Ot	is St			Cres	cent St			Cen	ter St		
	From North					Fron	n East			From	South.			Fron	n West		
Start Time					Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

Cak Hour for Lav	on rippious	JII D 0 5 1111	,													
	07:15 AM				07:15 AM				07:45 AM				07:15 AM			
+0 mins.	2	14	3	19	16	37	11	64	10	25	3	38	0	12	4	16
+15 mins.	3	16	5	24	21	55	13	89	9	23	1	33	2	14	4	20
+30 mins.	5	13	3	21	8	45	6	59	8	29	1	. 38	0	9	3	12
+45 mins.	3	17	3	23	6	47	5	58	4	28	4	36	0	12	2	14
Total Volume	13	60	14	87	51	184	35	270	31	105	9	145	2	47	13	62
% App. Total	14.9	69	16.1		18.9	68.1	13		21.4	72.4	6.2		3.2	75.8	21	
PHF	.650	.882	.700	.906	.607	.836	.673	.758	.775	.905	.563	.954	.250	.839	.813	.775



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014

Page No : 7

Groups Printed- Trucks

	Cr	escent St			Otis St		Cr	escent St		C	enter St		
	Fre	om North		Fr	om East		\mathbf{Fr}	om South		Fr	om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	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	1	2
07:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	0	0	0	1	3
,												1	
08:00 AM	0	. 0	0	0	0	0	0	0	1	0	0	0	1
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	1	0	1	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1	1	0	0	3
Grand Total	0	0	0	0	0	0	1	2	1	1	0	1	6
Appreh %	0	0	0	0	0	0	25	50	25	50	0	50	
Total %	0	0	0	0	0	0	16.7	33.3	16.7	16.7	0	16.7	

978-664-2565

N/S Street: Crescent Street

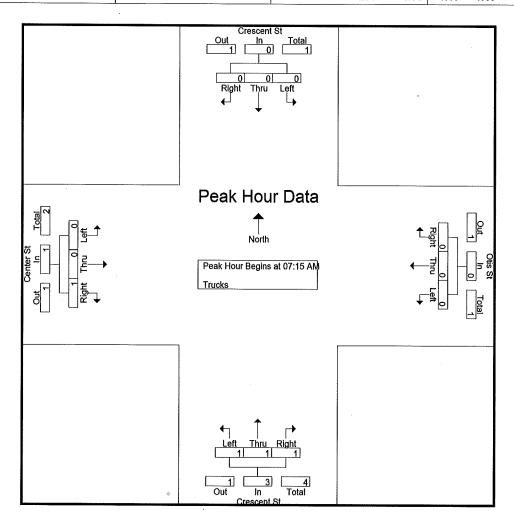
E/W Street : Otis Street / Center Street

City/State : Wakefield, MA Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

																		Office see
		Cresc	ent St			Oti	is St			Cres	cent St			Cen	ter St			
		From	North			Fron	n East			From	South			From	West			f
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	Minimized
Peak Hour Analys	is From 0	7:00 AM	to 08:4:	5 AM - Peal	clof1										1			· Control
Peak Hour for Ent	ire Interse	ection Be	gins at 0	7:15 AM														
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ó	0	0	8
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2	terrings/states
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	ō	Ô	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	0	0	1	1	1	3	0	0	1	1	4	- igrásostro.
% App. Total	0	0	0		0	0	0		33.3	33.3	33.3		0	0	100			CHECK THE COLUMN
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.750	.000	.000	.250	.250	.500	



978-664-2565

N/S Street: Crescent Street

E/W Street : Otis Street / Center Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code : 16670002

Start Date : 9/9/2014

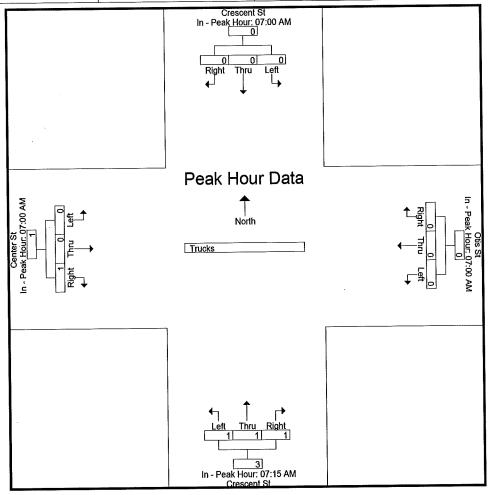
Page No : 9

	Crescent St	Otis St	Crescent St	Center St	
	From North	From East	From South	From West	
Start Tim	e Left Thru Right App. Total	Left Thru Right App. Total	Left Thru Right App. Total	Left Thru Right App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for	Each Approach Begins	at:

	TIOUI IOI Em	rpp.out	B														
		07:00 AM				07:00 AM	,			07:15 AM				07:00 AM			
	+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
	+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1
	+45 mins.	0	0	0	0	0	0.	0	0	0	0	1	1	0	0	0	0
	otal Volume	· ·	0	0	0	0	0	0	0	1	1	1	3	0	0	1	1
		l .	0	0	Ü	0	0	0		33.3	33.3	33.3		0	0	100	
				000	000	000	.000	.000	.000	.250	.250	.250	.750	.000	.000	.250	.250
9	6 App. Total PHF	.000	.000	.000	.000	.000	.000	.000	.000				.750	ļ	.000		



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA Weather : Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014

Page No : 10

76.2

23.8

	т							Group	s Printec	l- Bikes	Peds									Heron
		Cresc					s St			Cresc	ent St			Cent	er St					intionida
	r	From	- Y				East			From	South			From	West					7445000
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COURTE
07:15 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	electronau par
07:30 AM	0	0	0	1	0	. 0	0	0	2	0	0	0	0	0	0	0	1	2	3	15
07:45 AM	0	0	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3	2	5	2000000
Total	0	0	0	4	0	0	0	0	3	1	0	2	0	0	0	0	6	4	10	199000000000000000000000000000000000000
08:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	applico,
08:15 AM	0	0	, 0	1	0	0	0	1	0	0	0	2	0	0	0	2	6	0	6	Physicales
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	~
08:45 AM	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2	1	3	- LEISTAN BOOK
Total	0	0	0	3	0	0	0	3	0	1	0	2	0	0	0	2	10	1	11	PERSONAL PROPERTY.
Grand Total	0	0	0	7	0	0	0	ا د	2	•		. 1				. i				
		0	-		_	-		3	3	2	0	4	0	0	0	2	16	5	21	cienesse
Approh %	0	0	0		0	0	0	ĺ	60	40	0		0	0	0					NAMES AND ADDRESS OF THE PERSONS ASSESSMENT
Total %	0	0	0		0	0	0		60	40	0		0	0	0		76.2	23.8		(Approx

978-664-2565

N/S Street : Crescent Street

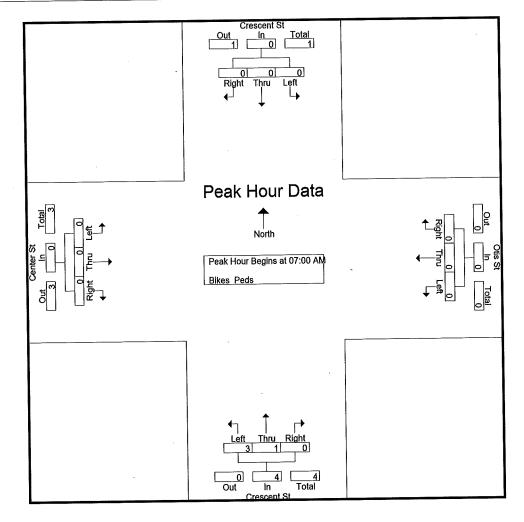
E/W Street : Otis Street / Center Street

City/State: Wakefield, MA

Weather : Clear

File Name : 16670002 Site Code : 16670002 Start Date : 9/9/2014

		Cresc	ent St			Off	is St			Creso	ent St				ter St		
		From	North			Fron	n East			From	South				1 West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	7:00 AM	to 08:45	AM - Peal	k 1 of 1												
Peak Hour for Ent	ire Interse	ction Beg	gins at 0	7:00 AM								_ 1			0	0	۱ ۵
07:00 AM	0	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	0
07:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	4
% App. Total	0	0	0		0	0	0		75	25	0		0	0	0		
PHF	,000	.000	.000	.000	.000	.000	.000	.000	.375	.250	.000	.500	.000	.000	.000	.000	,500



978-664-2565

N/S Street: Crescent Street

E/W Street: Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name : 16670002 Site Code : 16670002

Start Date : 9/9/2014

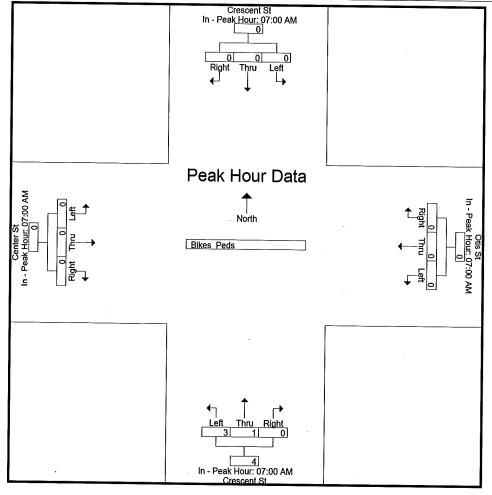
Page No : 12

	Crescent St	Otis St	Crescent St	Center St	
	From North	From East	From South	From West	
Start Time	Left Thru Right App. Total	Left Thru Right App. T	al Left Thru Right App. Total	Left Thru Right App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM	ſ			07:00 AM	-		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	,	0	0	2	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	3	1	0	4	0		0	
% App. Total	0	0	0		0	0	0		75	25	0	•	0	0	0	U
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.375	.250	.000	.500	.000	.000	.000	,000



Accurate Counts 978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State: Wakefield, MA
Weather: Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014
Page No : 1

Groups Printed- Cars - Trucks

	Cr	escent St			Otis St			escent St			enter St		
		om North			om East		Fre	m South			om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	5	22	4	. 1	11	8	0	17	3	4	19	6	100
04:15 PM	8	19	2	6	13	5	1	18	4	1	19	4	100
04:30 PM	10	20	3	6	12	8	1	18	2	2	24	5	111
04:45 PM	5	28	2	1	19	5	4	25	10	0	19	5	123
Total	28	89	11	14	55	26	6	78	19	7	81	20	434
0.5 00 73.6	-	22	2	7	15	2	1	16	4	. 2	27	8	113
05:00 PM	7		1				-		2	5	27	10	104
05:15 PM	1	22	3	2	10	4	5	13	2	3		1	
05:30 PM	7	28	2	1	13	3	4	10	4	3	28	4	107
05:45 PM	10	21	4	3	15	3	5	9	3	2	14	5	94
Total	25	93	11	13	53	12	15	48	13	12	96	27	418
m1	52	182	22	27	108	38	21	126	32	19	177	47	852
Grand Total	53		8.6	15.6	62.4	22	11.7	70.4	17.9	7.8	72.8	19.3	
Apprch %	20.6	70.8		!		4.5	2.5	14.8	3.8	2.2	20.8	5.5	
Total %	6.2	21.4	2.6	3,2	12.7				32	19	176	47	847
Cars	51	181	22	27	108	38	21	125				100	99.4
% Cars	96.2	99.5	100	100	100	100	100	99.2	100	100	99.4		
Trucks	2	1	0	0	0	0	0	1	0	0	1	0	5
% Trucks	3.8	0.5	0	0	0	0	0	0.8	0	0	0.6	0	0.6

978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

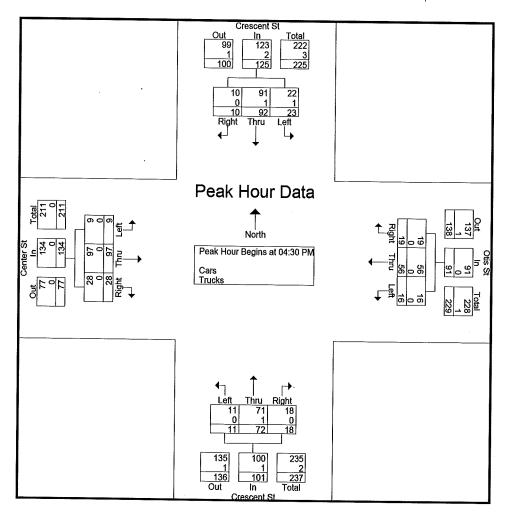
City/State: Wakefield, MA

Weather : Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014

		Cres	cent St			Ot	tis St	,		Cres	ent St			Cen	ter St		1
		From	North			Fron	n East			From	South				ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	A	T-4 T-4-1
Peak Hour Analys					1 of 1			(FF:)	·····			App. Iolai			atignt.	App. Total	Int. Total
Peak Hour for Enti	ire Interse	ction Be	gins at 04	4:30 PM									<i></i>				
04:30 PM	10	20	3	33	6	12	8	26	1	18	2	21	2	24	5	31	111
04:45 PM	5	28	2	35	1	19	5	25	4	25	10	39	0	19	5	24	
05:00 PM	7	22	2	31	7	15	2	24	1	16	4	21	2	27	8	37	123 113
05:15 PM	1	22	3	26	2	10	4	16	5	13	2	20	5	27 27	10		104
Total Volume	23	92	10	125	16	56	19	91	11	72	18	101	9	97	28	134	451
% App. Total	18.4	73.6	8		17.6	61.5	20.9		10.9	71.3	17.8		6.7	72.4	20.9	154	451
PHF	.575	.821	.833	.893	.571	.737	.594	.875	.550	.720	.450	.647	.450	.898	.700	.798	.917
Cars	22	91	10	123	16	56	19	91	11	71	18	100	9	97	28	134	448
% Cars	95.7	98.9	100	98.4	100	100	100	100	100	98.6	100	99.0	100	100	100	100	99.3
Trucks	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	99.3
% Trucks	4.3	1.1	0	1.6	0	0	0	0	0	1.4	0	1.0	0	0	0	0	0.7



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

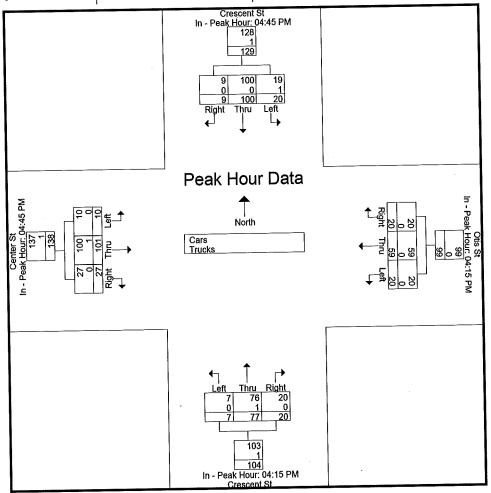
Page No : 3

1	Crescent St	Otis St	Crescent St	Center St	
	From North	From East	From South	From West	
	Start Time Left Thru Right App. Total	Left Thru Right App. Total	Left Thru Right App. Total	Left Thru Right App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour	for Ea	oh A	.pproact	В	legins	at:

Cak Hour for East	Mirbhione															ì
	04:45 PM				04:15 PM				04:15 PM				04:45 PM			
+0 mins.	5	28	2	35	6	13	5	24	1	18	4	23	0	19	5	24
			2	31	6	12	8	26	1	18	2	21	2	27	8	37
+15 mins.	7	22	2	-		12	0					20	_	27	10	42
+30 mins.	1	22	3	26	1	19	5	25	4	25	10	39	5			
+45 mins.	7	28	2 .	37	7	15	2	24	1	16	4	21	3	28	4	35
			9	129	20	59	20	99	7	77	20	104	10	101	27	138
Total Volume		100	9	129				•	6.7	74	19.2		7.2	73.2	19.6	
% App. Total	15.5	77.5	7		20.2	59.6	20.2								.675	.821
PHF		.893	.750	.872	.714	.776	.625	.952	.438	.770	.500	.667	.500	.902		
	 	100	9	128	20	59	20	99	7	76	20	103	10	100	27	137
Cars			-					100	100	98.7	100	99	100	99	100	99.3
% Cars	95	100	100	99.2	100	100	100			30.7		,		1	0	1
Trucks	1	0	0	1	0	0	0	0	0	1	0	1	0	1		1
	1	0	0	0.8	0	0	0	0	0	1.3	0	1	0	1	0	0.7
% Trucks)	U	U	0,6	1	v	•		i				1			



Accurate Counts 978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

		enter St	-		escent St		ps Printed-	Otis St			escent St	Cr	
		enter St om West			m South			om East			m North		
ht Int.	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
	6	19	4	3	17	0	8	11	1	4	22	4	04:00 PM
4	4	19	1	4	18	1	5	13	6	2	19	8	04:15 PM
5	5	24	2	2	18	1	8	12	6	3	19	. 10	04:30 PM
5	5	19	0	10	25	4	. 5	19	1	2	28	4	04:45 PM
0	20	81	7	19	78	6	26	55	14	11	88	26	Total
8	8	27	2	4	15	1	2	15	7	2	22	7	05:00 PM
	10	27	5	2	13	5	4	10	2	3	22	1	05:15 PM
	4	27	3	4	10	4	3	13	1	2	28	7	05:30 PM
5	5	14	2	3	9	5	3	15	3	4	21	10	05:45 PM
7	27	95	12	13	47	15	12	53	13	11	93	25	Total
7	47	176	19	32	125	21	38	108	27	22	181	51	Grand Total
	19.4	72.7	7.9	18	70.2	11.8	22	62.4	15.6	8.7	71.3	20.1	Appreh %
1	5.5	20.8	2.2	3.8	14.8	2.5	4.5	12.8	3.2	2.6	21.4	6	Total %

978-664-2565

N/S Street : Crescent Street

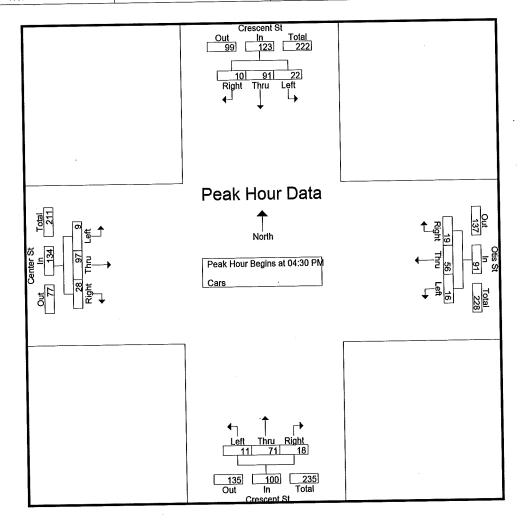
E/W Street : Otis Street / Center Street

City/State: Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002 Start Date: 9/9/2014

·		Cresc	ont St			Oti	s St			Creso	ent St			Cen	ter St		
		From				Fron	East			From	South			Fron	ı West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM			1 of 1												
Peak Hour for Enti	ire Interse	ction Be	gins at 0	4:30 PM							_	ا بم	•	24	-	31	110
04:30 PM	10	19	3	32	6	12	8	26	1	18	2	21	2	24	3		
04:45 PM	4	28	2	34	1	19	5	25	4	25	10	39	0	19	5 -		122
05:00 PM	7	22	2	31	7	15	2	24	1	15	4	20	2	27	8	37	112
05:15 PM	. 1	22	3	26	2	10	4	16	5	13	2	20	5	27	10	42	104
	22	91	10	123	16	56	19	91	11	71	18	100	9	97	28	134	448
Total Volume				123		61.5	20.9		11	71	18		6.7	72.4	20.9		
% App. Total	17.9	74	8.1		17.6			055			.450	.641	.450	.898	.700	.798	.918
PHF	.550	.813	.833	.904	.571	.737	.594	.875	.550	.710	.430	.041	,450	.370	.,,00		



978-664-2565

N/S Street: Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002

Site Code : 16670002 Start Date : 9/9/2014

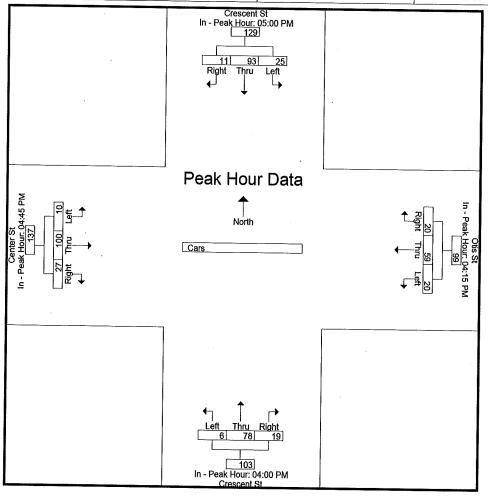
Page No : 6

	Crescent St	Otis St	Crescent St	Center St
	From North	From East	From South	From West
Start Time	Left Thru Right App. Total	Left Thru Right App. Total	Left Then Dight	Loft Then Dieta
Peak Hour Analy	sis From 04:00 PM to 05:45 PM Post		Left Till Right App. Total	Left Tifft Right App. Total Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	7	22	2	31	6	13	5	24	0	17	3	20	0	19	5	24
+15 mins.	1	22	3	26	6	12	8	26	1	18	4	23	2	27	8	37
+30 mins.	7	28	2	37	1	19	5	25	1	18	2	21	5	27		
+45 mins.	10	21	4	35	7	15	2	24	4	25	10	39	3	27	. 10	42 34
Total Volume	25	93	11	129	20	59	20	99	6	78	19	103	10	100	27	137
% App. Total	19.4	72.1	8.5		20.2	59.6	20.2		5.8	75.7	18.4	100	7.3	73	19.7	131
PHF	.625	.830	.688	.872	.714	.776	.625	.952	.375	.780	.475	.660	.500	.926	.675	.815



Accurate Counts 978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002 Start Date: 9/9/2014

Page No : 7

Groups Printed-Trucks

					Groups	: Printed_	Trucks						
	Cr	escent St		(Otis St			escent St			enter St		
		om North		Fr	om East			m South	- D. 1.		m West Thru	Right	Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left		0	1
04:00 PM	1	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
04:30 PM	0	1	o	0	0	0	0	0	0	0	0	0	ı
04:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	<u> </u>
Total	2	1	0	0	0	0	0	0	0	0	0	0	3
1									1			- 1	
05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	o	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	
Total	0	0	0	. 0	0	0	0	1	0	0	1	0	2
ı										•		0	5
Grand Total	2	1	0	0	0	0	0	1	0	0	100	0	3
Appreh %	66.7	33.3	0	. 0	0	0	0	100	0	0	100	•	
Total %	40	20	0	0	0	0	0	20	0	0	20	0	

978-664-2565

N/S Street: Crescent Street

E/W Street: Otis Street / Center Street

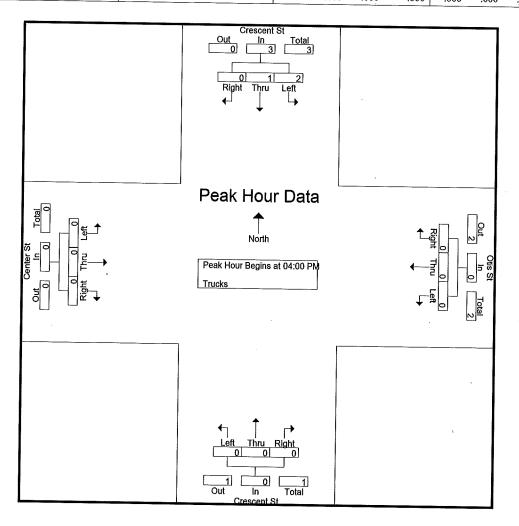
City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

			ent St North				tis St				ent St			Cen	ter St		
Gr. 1 mi						Froi	n East			From	South			From	West		
Start Time	Left	Thru	Right		Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		v . m . 4
ak Hour Analys	is From 0	4:00 PM	to 05:45	PM - Peak	1 of 1			11.				App. Total			Trigin	App. Total	Int. Total
eak Hour for Ent	ire Interse	ction Be	gins at 0	4:00 PM													
04:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	•	_		ı
04:15 PM	0	0	0	ô	0	0	0	0	0	•	-	-	0	0	0	0	1
04:30 PM	0		0	1	0	0	0	1	ŭ	0	0	0	0	0	0	0	0
04:45 PM	1	1	0			0	•	0	0	0	0	0	0	0	0	0	1
	1	0	U	1	0	0	0	0	0	0	0	0	0	0	0	0	ı
Total Volume	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	66.7	33.3	0		0	0	0		0	0	0	Ĭ	n	0	0	U	3
PHF	.500	.250	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	000	750



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code: 16670002

Start Date : 9/9/2014

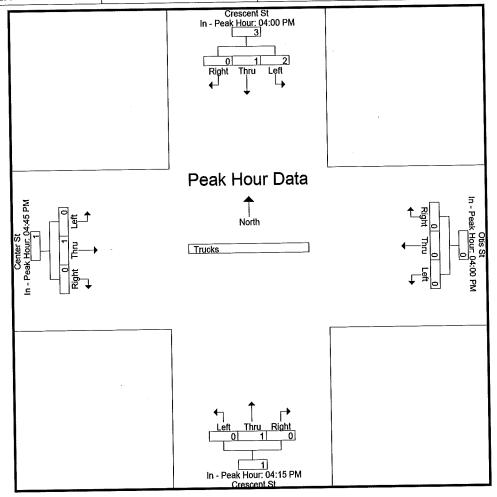
Page No : 9

ſ			Creso	ent St			Ot	is St			Cres	cent St			Cen	ter St		1
				North			Fror	n East			From	South				n West	1	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

Peak Hour for Eac	u vbbioge	n Degma														
	04:00 PM				04:00 PM			1	04:15 PM				04:45 PM			
	04,001111			- 1	0	۸	٥	ام	n	n	0	0	0	0	0	0
+0 mins.	1	0	U	1	U	U	U	۰	Ū	v	ŭ	[]	_			0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	U	0	١
	.	·		_	•				0	0	Λ	n	0	0	0	0
+30 mins.	0	1	0	1	0	U	Ü	0	U	U	U	•		·		
+45 mins.	1	Ô	0	1	0	0	0	0	0	1	0	1	0	1	0	1
745 IIIIIs.	1									1		1	0	1	0	1
Total Volume	2	1	0	3	0	0	0	0	U	1	U	1			v	- 1
		22.2	0		٥	٥	Λ		0	100	0		0	100	0	
% App. Total	66.7	33.3	U		U									250	000	.250
PHF	.500	.250	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.230



978-664-2565

N/S Street: Crescent Street
E/W Street: Otis Street / Center Street
City/State: Wakefield, MA
Weather: Clear

File Name: 16670002 Site Code: 16670002 Start Date: 9/9/2014

Page No : 10

Groups Printed- Bikes Peds

İ			Cresco				Otis	s St	_		Cresco	ent St			Cent	er St					OHI (Series
ļ		L	From				From	East			From :	South			From						10000
L	Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left			Peds	Left		Right	Peds	Exclu. Total	Inclu. Total	Int. Total	
	04:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	Bicia. Total	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S)
	04:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2	May with the same
	04:30 PM	0	0	0	3	0	0	0 .	0	0	0	0	1	0	0	0	0	4	. 0	4	į
_	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T-CONTRACTOR A
	Total	0	0	0	4	0	0	0	1	0	1	0	1	0	0	0	0	6	ı	7	Politice and an extension
	05:00 PM	0	0	0	2	ا م	•		- 1				,								
	ŀ				2	0	0	0	0	0	0	0	0	0	0	0	2	4	0	4	ingyésérek
	05:15 PM	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	1	3	4	U 90-DERECO (U
	05:30 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2	
_	05:45 PM	0	0	0	4	0	0	0	1	1	0	0	0	0	0	0	2	7	1	8	cyclambin
	Total	0	0	0	7	0	2	0	1	1	0	0	2	0	1	0	4	14	4	18	PROTOPORTOR IN
													'				ı				
	Grand Total	0	0	0	11	0	2	0	2	1	1	0	3	0	1	0	4	20	5	25	CONN. T
	Appreh %	0	0	0		0	100	0		50	50	0		0	100	0					The same of the sa
	Total %	0	0	0		0	40	0		20	20	0		0	20	0		80	20		Bono

Accurate Counts 978-664-2565

N/S Street : Crescent Street

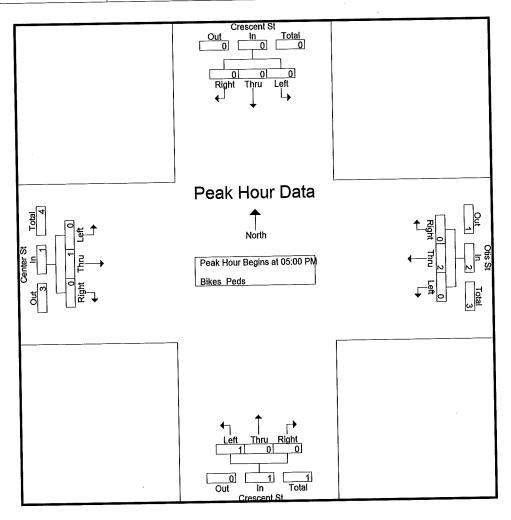
E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002 Site Code : 16670002 Start Date : 9/9/2014 Page No : 11

		Cresc	ont St			Off	s St			Creso	ent St			Cent	ter St		
		From		ļ			1 East			From	South			From	West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	is From 0	4:00 PM			1 of 1												
Peak Hour for Ent	ire Interse	ction Be	gins at 0	5:00 PM						_		ام	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	v	U	-		
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	. 2	1	0	0	1	0	1	0	ì	4
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	,000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.000	.250	.000	.250	.333



978-664-2565

N/S Street : Crescent Street

E/W Street : Otis Street / Center Street

City/State : Wakefield, MA

Weather : Clear

File Name: 16670002

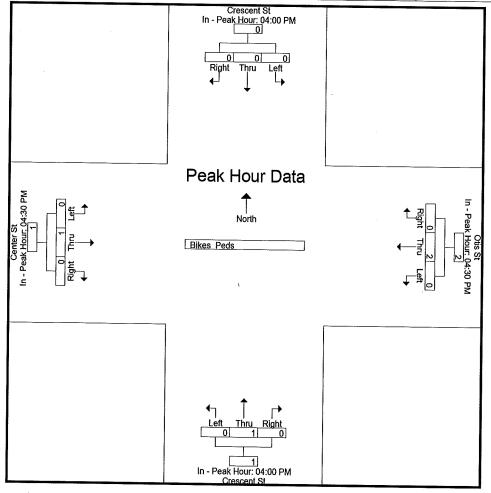
Site Code : 16670002 Start Date : 9/9/2014

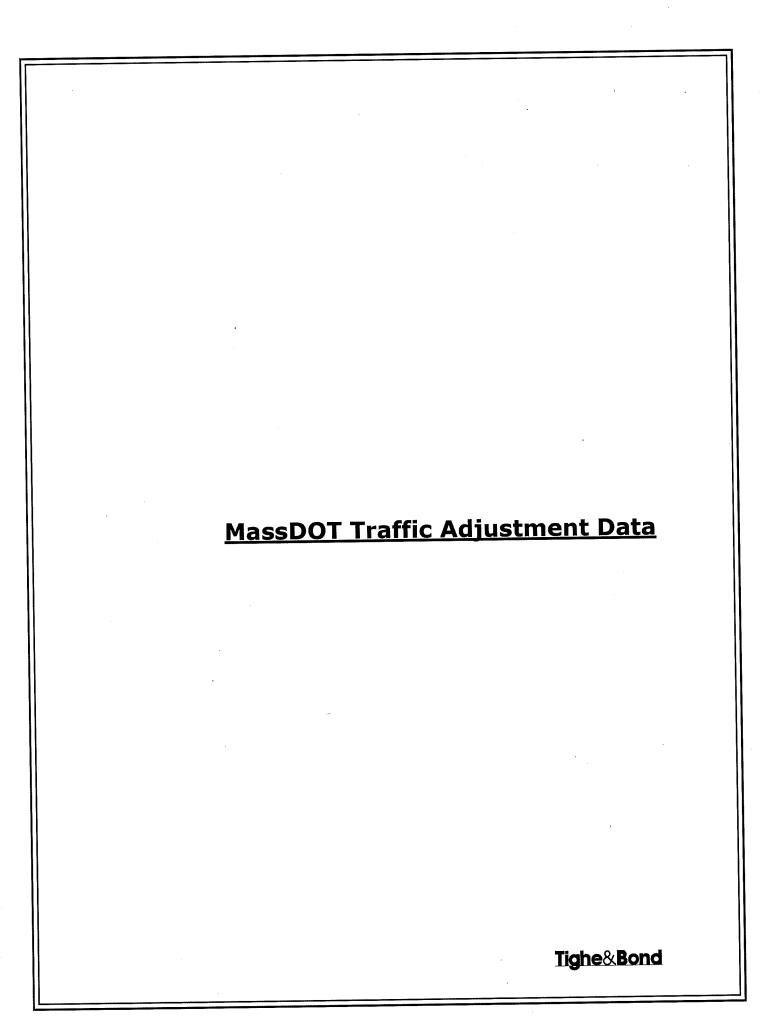
Page No : 12

	Crescent St	Otis St	Crescent St	Center St
	From North	From East	From South	From West
Start Time Peak Hour Analys	Left Thru Right App. Total is From 04:00 PM to 05:45 PM - Peak	Left Thru Right App. Total	Left Thru Right App. Total	Left Thru Right App. Total Int. Total

Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:30 PM		***************************************	
+0 mins.	0	0	0	0	0	0	0	0	0		0		0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	.0	0	0	0	•	0
+45 mins.	0	0	0	0	0	2	0	,	0	0	0	0	. 0		0	U
Total Volume	0	0	0	0		2		2	0		- 0		0	1		1
% App. Total	0	0	_	· · · · · ·	. 0	400		2	U	1	Ü	1	0	1	0	1
			0		0	100	0	1	0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250





MassDOT Traffic Volumes Wakefield, Massachusetts

		THITEDO	TATE OF	POUTE 13	R NORTH	OF MAIN	STREET	(LYNNFIE	LD)				
777712011	AKEFIELD			APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AADT *
YEAR	JAN	FEB	MAR			139,409	139,226	144,407	137,966	136,050	129,551	131,296	131,965
2006	119,403	120,940	129,021	122,679	133,627		0.11%	-0.49%	-1.01%	0.59%	-1.01%	-7.03%	0.24%
	3,30%	-0.11%	-0.92%	5.84%	3.46%	0.73%		143,695	136,569	136,857	128,238	122,071	132,276
2007	123,340	120,805	127,836	129,848	138,252	140,420	139,381		130,309	130,037	-3,86%	2,41%	-2.82%
	-2.93%	-0.92%	-3.15%	0.62%	-4.25%	-3.66%	-1.63%	-3.57%				125,007	128,551
2008	119,730	119,692	123,803	130,658	132,381	135,275	137,111	138,566			8.61%	8.34%	3,60%
2000	6.35%	5.96%	-1.06%	1.60%	1.14%	1.48%	1.13%	2.33%		100.004		135,433	
2000	127,331	126,821	122,496	132,743	133,896	137,271	138,667	141,798	135,415	132,381	133,893		0.01%
2009	127,331	-5.94%	2.74%	-0.45%	-0.02%	1.12%	1.28%	-0.95%	-1.32%	1.42%			
		119,285	125,852	132,146		138,813	140,441	140,445	133,628	134,256			133,192
2010			0.27%	-3.46%	-1.68%	-2.39%	-2.01%	-4,60%	-2.05%				-2.23%
	<u> </u>	-0.75%		127.575	131,618		137,618	133,986	130,888				130,220
2011		118,385	126,197		1.45%	0.33%	-1.25%	3.56%	-0.67%				3.53%
			-0.24%	0.80%			135,893	138,753	130,009	129,123	138,804	147,874	134,813
2012	138,535		125,892	128,596		135,937		3.49%	4.15%	6.85%	0.15%	0.36%	2.71%
	9.55%		-2.30%	2.40%	1.06%	1.04%	3.05%						138,471
2013	151,768	121,939	122,999	131,685	134,946	137,356	140,040	143,601	133,408	137,903	100,011	/	

0.82% -1.34% 0.00% -0.88% -3.39% -4.12% -5.56% -0.61% -0.34% 5.83% 2.58% Seasonal Adj. ^b 9.43% 2.45% 1.02% 1.41% 0.72% 0.10% -0.03% -0.22% 1.06% 1.05% -0.66% 0.17% -0.19% Annual Growth C 3.82% -0.05%

STATION 4137 - W	AKFETEL D	- INTERS	STATE 95	/ROUTE 1	28 NORT	H OF NOR	TH AVENU	JE				550	AADT *
		FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
YEAR	JAN						144,072	149,094	142,104	140,226	134,095	130,976	
2006	123,918	125,583	133,827				-0.14%	-0.20%	-0.53%	0.70%	-0.52%	-7.00%	-0.03%
	3.06%	-0.12%	-0.94%	0.39%	3.85%	1.01%			141,346	141,204	133,402	121,809	136,586
2007	127,716	125,438	132,569	134,713	142,910					141,204	-3.07%	0.11%	-1.93%
2007	-2.69%	-0.58%	-2.29%	1.34%	-2,44%	-2.33%	-0.65%	-2.21%	-2.82%				
2000	124,283	124,707	129,537	136,519	139,422	141,862	142,937	145,514					0.28%
2008	-6.83%	2,83%	-0.85%	1.36%	-0.01%	0.32%	0.08%	0.78%	1.94%		0.92%	-1.02%	
			128,435				143,057	146,645	140,018	138,317	130,495		
2009	115,795	128,241			-0.51%	0.61%	1.04%	-1.70%	-1.64%	-0.48%	0.22%	3.96%	-0.79%
	-9.94%	-2.76%	1.74%	-0.79%				144,151	137,724	137,650	130,776	125,476	133,260
2010	104,288	124,707	130,669	137,276	138,690								
	2.58%	-2.49%	0.11%	-3.58%		-24.76%				100,154	115 496	114,146	
2011	106,982	121,603	130,811	132,367		107,719		105,922	104,190		11.15%		4.44%
7011	-0.54%			-12.12%		-0.95%	12.65%		12.29%	14.33%	11.15%	121 120	
			116,011			106,694	121,067	127,308	116,991	114,506	128,374	131,120	110,309
2012	106,399		110,011	110,520	1 / 100	/							

-2.50% -2.75% -2.62% -4.28% -6.30% -1.44% 0.06% 0.50% 4.65% 0.00%
 Seasonal Adj. b
 12.00%
 5.04%
 0.51%
 -2.50%
 -2.75%
 -2.62%
 -4.28%
 -6.30%

 Annual Growth c
 -2.39%
 -0.62%
 -2.26%
 -2.23%
 -1.41%
 -4.35%
 -2.11%
 -1.61%
 0.31% -2.16% -0.50% -2.52% -2.74%

STATION 4423 - V	VAKEFIELD	- INTERS	STATE 95	ROUTE 1	28 NORT	H OF ROU	TE 129				11014	DEC	AADT *
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
			115,201	129,980	136,872	144,809	145,369		134,124	141,169	134,906	131,141	
2006	124,133			125,500	200/01=				-1.50%		-0.53%	-7.10%	-4.38%
	-8.77%	-11.00%	11.62%					148,603	132,116		134,191	121,835	
2007	113,249	111,931	128,584					-2.87%	3.74%		-3.97%	0.30%	5.75%
		12.44%	0.47%				140.647		137,056		128,865	122,197	134,528
2008		125,857	129,184	136,155	138,109		142,617	144,334			-0.24%	3.27%	0.01%
2000		-1.36%	-0.21%	0.64%	0.58%	1.45%	1.36%	0.71%	0.85%	407.064		130,311	134,543
2010	112,043	122,469	128,653	137,894	139,709	145,032	146,525	146,382	139,398	137,861	128,235		-1.69%
2010		-3.36%	1.92%	-3.57%	-1.59%	-2,40%	-2.12%	-4.46%	-2.05%	-2.60%	1.65%	-2.22%	
	1.68%				137,487	141,548	143,419	139,856	136,542	134,272		127,420	
2011	113,929	118,359			1.08%	-0.14%		4.73%	-0.87%	1.33%	1.24%	-2.19%	1.97%
	7.60%		0.10%	0.76%				146,470	135,352	136,058	131,974	124,624	134,886
2012	122,589		131,255		138,971			1.10%	3.24%	4.66%	-4.62%	-0.54%	-0.12%
	2.09%		-2.59%	1.96%	0.66%	0.73%	2.23%						134,725
2013	125,157	120,515	127,850	136,600	139,885	142,379	144,266	148,083	139,732	142,401	120,001	120,001	

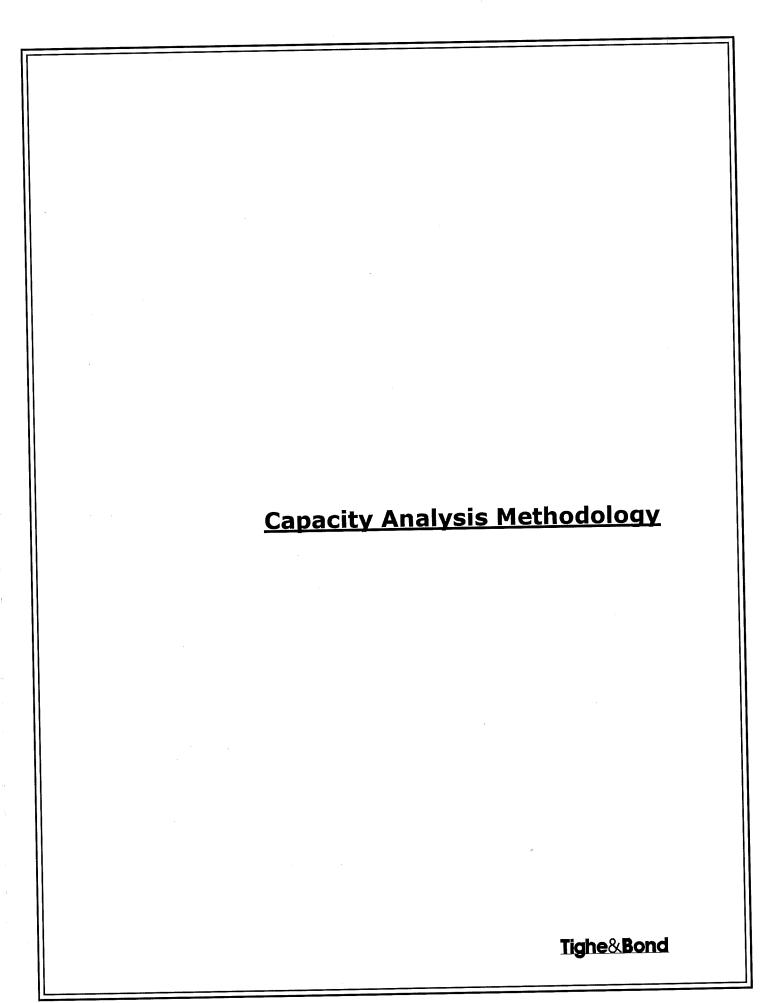
-0.44% -3.25% -6.08% -6.87% -8.65% -2.42% -3.22% 1.84% 5.64% 0.00% Seasonal Adj. b 12.04% 9.85% 0.43% 0.24% -0.34% -0.22% -0.16% 0.57% 0.70% -1.08% -1.41% 0.26% 4.41% Annual Growth 6 0.42% -0.47% 1.88%

Source: MassDOT Transportation Management System.

^a Average Annual Dally Traffic.

b Seasonal adjustment to yearly average.

Compounded Annual Growth Rate.



CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).¹ The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

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

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

Signalized Intersections

Levels of service for signalized intersections are also calculated using the operational analysis methodology of the HCM. The methodology for signalized intersections assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on average *control* delay. Control delay is used to establish the operating characteristics for an intersection or an approach to an intersection. Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a lane group's capacity at an intersection. A v/c ratio of ≥ 1.00 represents conditions when the traffic signal cycle capacity is fully utilized and indicates a capacity failure. The level-of-service criteria for signalized intersections are shown in Table A-1.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection

¹ HCM2010: Highway Capacity Manual. Washington, D.C.: Transportation Research Board, 2010.

control (STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay at an unsignalized intersection is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. This time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position.

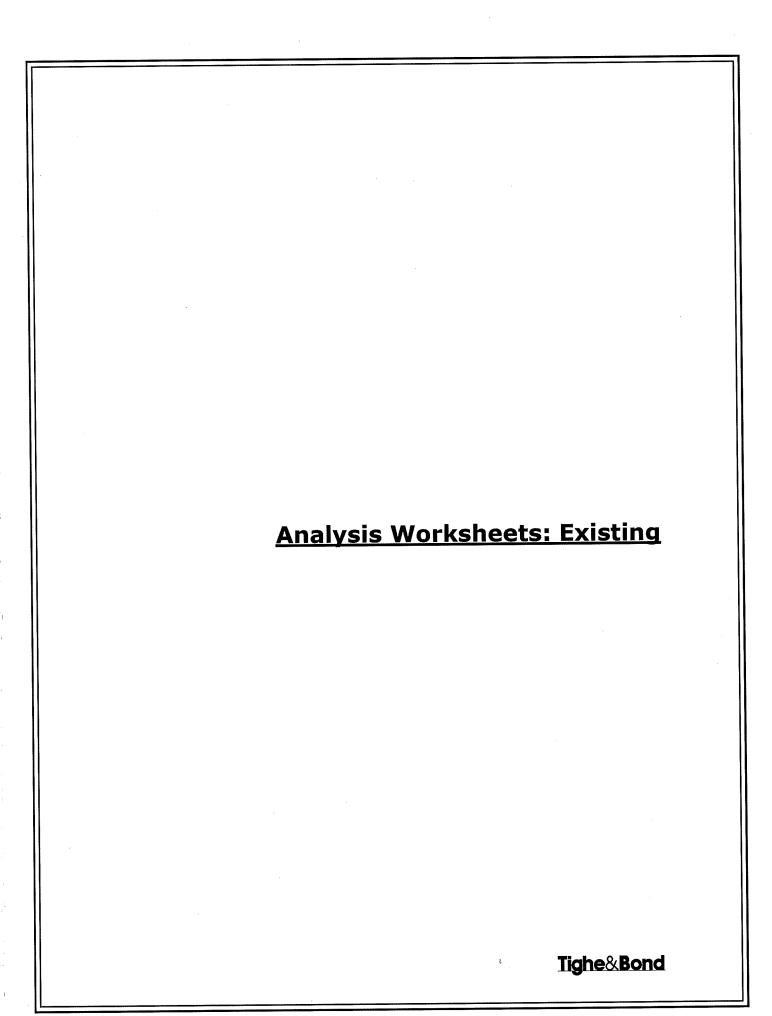
Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a movement's capacity at an intersection. A v/c ratio of ≥ 1.00 represents conditions when the movement is fully utilized and indicates a capacity failure. The capacity of the movements is based on the distribution of gaps in the major street traffic stream, the selection of gaps to complete the desired movement, and the follow-up headways for each driver in the queue. When an unsignalized intersection is located within 0.25 miles of a signalized intersection, traffic flows may not be random and some platoon structure may exist, thereby affecting the minor street operations. The level-of-service criteria for unsignalized intersections are shown in Table A-1.

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

Level of Service	Signalized Intersection Criteria Average Control Delay (Seconds per Vehicle)	Unsignalized Intersection Criteria Average Control Delay (Seconds per Vehicle)	V/C Ratio >1.00
Α	≤10	≤10	F
В	>10 and ≤20	>10 and ≤15	F
С	>20 and ≤35	>15 and ≤25	F
D	>35 and ≤55	>25 and ≤35	F
E	>55 and ≤80	>35 and ≤50	F
F	>80	>50	F¹

Source: *HCM2010: Highway Capacity Manual.* Washington, D.C.: Transportation Research Board, 2010. Pages 18-6 and 19-2.

For signalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to the entire intersection. For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups on the minor street approaches or to the left turns from the major street approaches.



1: Main Street & Crescent Street Lanes, Volumes, Timings

	٠	→	*	•	←	•	4	†	/	>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	5	40	0	22	110	39	2	241	5	30	651	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt					0.969			0.997			0.997	
Flt Protected		0.995			0.994						0.998	_
Satd. Flow (prot)	0	1890	0	0	1821	0	0	1807	0	0	1839	0
Flt Permitted		0.995			0.994						0.998	_
Satd. Flow (perm)	0	1890	0	0	1821	0	0	1807	0	0	1839	0
Link Speed (mph)		30			30			-30			30	
Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Peak Hour Factor	0.80	0.80	0.80	0.95	0.95	0.95	0.87	0.87	0.87	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	4%	0%	0%	0%	5%	0%	0%	3%	0%
Adj. Flow (vph)	6	50	0	23	116	41	2	277	6	37	794	21
Shared Lane Traffic (%)	-											
Lane Group Flow (vph)	0	56	0	0	180	0	0	285	0	0	852	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			. 0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	.•	Stop			Stop			Free			Free	
Sign Control Intersection Summary		Stop			оюр			1100				

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 73.1% Analysis Period (min) 15

ICU Level of Service D

Intersection											
Int Delay, s/veh	12.6						···				
	12.0										
Movement	EBL	EBT	EBR		WBL	WBT	WBR	N.	BL	NBT	MDD
Vol, veh/h	5	40	0		22	110	39	N.	2	241	NBR
Conflicting Peds, #/hr	0	0	0		0	0	0		0	241	5 0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop	E,	ee	Free	
RT Channelized	· _		None		- -	Otop	None	1.1	-	F100	Free None
Storage Length	_	_	-		_		None		-	-	None
Veh in Median Storage, #	_	0	_		_	0	_		-	0	-
Grade, %	-	0	_		_	0	_		-	0	-
Peak Hour Factor	80	80	80		95	95	95		87	87	87
Heavy Vehicles, %	0	0	0		4	0	0		0	.5	0
Mvmt Flow	6	50	0		23	116	41		2	277	6
									-		·
Major/Minor	Minor2				Minor1			Majo	r1		e
Conflicting Flow All	1240	1164	804		1186	1172	280		15	0	0
Stage 1	877	877	-		284	284			-	-	-
Stage 2	363	287	-		902	888	-		_	-	_
Critical Hdwy	7.1	6.5	6.2		7.14	6.5	6.2	4	.1	_	_
Critical Hdwy Stg 1	6.1	5.5	-		6.14	5.5	-	•	-	_	_
Critical Hdwy Stg 2	6.1	5.5	-		6.14	5.5	-		-	_	_
Follow-up Hdwy	3.5	4	3.3		3.536	4	3.3	2	.2	_	_
Pot Cap-1 Maneuver	153	196	386		164	194	764	82		_	-
Stage 1	346	369	-		719	680	_			_	_
Stage 2	660	678	-		330	365	-		-	_	_
Platoon blocked, %											_
Mov Cap-1 Maneuver	69	185	386		124	183	764	82	21	_	_
Mov Cap-2 Maneuver	69	185	_		124	183	-	-	_	_	_
Stage 1	345	349	-		717	678	-		_	_	_
Stage 2	516	676	-		268	346	-			-	_
Approach	EB				WB			N	В		
HCM Control Delay, s	40.6				81.7			0	.1		
HCM LOS	. Е	•			F						
Minor Lane/Major Mvmt	NBL	NBT	ממוא	EDI -4	WDI 4	ODI	007				
Capacity (veh/h)			NBR	EBLn1		SBL	SBT	SBR			
HCM Lane V/C Ratio	821	-	•	156	206	1291	-	•			
HCM Control Delay (s)	0.003	-	-	0.361	0.874	0.028	-	-			
HCM Lane LOS	9.4	0	-	40.6	81.7	7.9	0	-			
HCM 95th %tile Q(veh)	A	Α		E	F	A	Α	-			
TIOM COM MAIO CONTO	0	•	-	1.5	6.8	0.1	-	-			

Movement	ntersection nt Delay, s/veh							
Vol. Vol.								
Conflicting Peds, #/hr Sign Control Free Free RT Channelized - None Storage Length Veh in Median Storage, # - O Grade, % - O Peak Hour Factor R2 R2 R2 R2 R2 R4 Reavy Vehicles, % 0 3 0 Mwmt Flow R3 R3 R3 R4 R4 R4 R4 R5 R6 R6 R6 R6 R6 R6 R6 R6 R6 R6 R6 R6 R6	Movement	SBL			 	 	 	
Sign Control Free Free Free RT Channelized None Storage Length None Storage Length None Storage Length None Grade, % - 0	/ol, veh/h							
None Storage Length -	Conflicting Peds, #/hr	-		0				
RT Channelized Storage Length	Sign Control	Free	Free					
Veh in Median Storage, # - 0 - Grade, % - 0 - Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mvmt Flow 37 794 21 Major/Minor Major2 Conflicting Flow All 283 0 0 Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Stage 1 Stage 2 Stage 1 Stage 2 Critical Hdwy Stg 2 Stage 1 Stage 2		-	-	None				
Grade, % - 0 - Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mvmt Flow 37 794 21 Major/Minor Major2 Conflicting Flow All 283 0 0 Stage 1 Stage 2 Critical Hdwy Stg 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 2 Critical Hdwy Stg 2 Stage 1 Stage 1 Stage 1 Stage 2 Stage 1 Stage 2 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 2 Stage 2 Stage 1 Stage 2 Stage 2 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 2 Stage 1 Stage 1 Stage 2 Stage 1 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 4 Stage 4 Stage 5 Stage 5 Stage 5 Stage 5 Stage 6 Stage 7	Storage Length	-		-				
Grade, % - 0 - Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mvmt Flow 37 794 21 Major/Minor Major2 Conflicting Flow All 283 0 0 Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy 2 2 Follow-up Hdwy 2 2 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 2 Stage 1 Stage 2 Stage 1 Stage 2 Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuver 1291 - Mov Cap-2 Maneuver 1291 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 1 Stage 2 Approach SB HCM Control Delay, s		-	0	-				
Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mymt Flow 37 794 21 Major/Minor Major2 Major/Minor Major/Minor Major2 Conflicting Flow All Stage 1 - - Stage 2 - - Critical Hdwy 4.1 - Critical Hdwy Stg 1 - - Critical Hdwy Stg 2 - - Follow-up Hdwy 2.2 - Pot Cap-1 Maneuver 1291 - Stage 1 - - Stage 2 - - Platoon blocked, % - - Mov Cap-1 Maneuver 1291 - Stage 1 - - Stage 2 - - Approach SB HCM Control Delay, s 0.3		-						
Heavy Vehicles, % 0 3 0 0 0 0 0 0 0 0		82	82					
Major/Minor Major2 Conflicting Flow All 283 0 0 Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1291 - Stage 1 - - Stage 2 - - Mov Cap-2 Maneuver - - Stage 2 - - Approach SB HCM Control Delay, s 0.3								
Major/Minor Major2 Conflicting Flow All 283 0 0 Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1291 - Mov Cap-2 Maneuver - - Stage 1 - - Stage 2 - - Approach SB HCM Control Delay, s 0.3		37	794	21				
Conflicting Flow All 283 0 0 Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1291 - Mov Cap-2 Maneuver - - Stage 1 - - Stage 2 - - Approach SB HCM Control Delay, s 0.3								
Conflicting Flow All 283 0 0 Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Mov Cap-1 Maneuver 1291 - - Mov Cap-2 Maneuver - - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s 0.3	Maior/Minor	Major2				 		
Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1291 - - Mov Cap-2 Maneuver - - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s 0.3			0.	0				
Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1291 - - Mov Cap-2 Maneuver - - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s 0.3		-	-	-				
Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1291 - - Mov Cap-2 Maneuver - - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s O.3		-	-	-				
Critical Hdwy Stg 1		4.1	-	-				
Critical Hdwy Stg 2		-	-	-				
Follow-up Hdwy 2.2 Pot Cap-1 Maneuver 1291 Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver 1291 Mov Cap-2 Maneuver Stage 1 Stage 2 Approach SB HCM Control Delay, s 0.3		-	-	-				
Pot Cap-1 Maneuver		2.2	-	-				
Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1291 - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s 0.3		1291	-	.				
Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1291 - Mov Cap-2 Maneuver - - Stage 1 - - Stage 2 - - Approach SB HCM Control Delay, s 0.3		-	-	-				
Platoon blocked, % Mov Cap-1 Maneuver 1291 Mov Cap-2 Maneuver Stage 1 Stage 2 Approach SB HCM Control Delay, s 0.3		-	_	-				
Mov Cap-1 Maneuver 1291 - - Mov Cap-2 Maneuver - - - Stage 1 - - - Stage 2 - - - Approach SB HCM Control Delay, s 0.3			-	-				
Mov Cap-2 Maneuver		1291	-	-				
Stage 1 - - - Stage 2 - - - Approach SB - - HCM Control Delay, s 0.3 - -		-	-	-				
Stage 2		-	-	-				
Approach SB HCM Control Delay, s 0.3		-	-	-				
HCM Control Delay, s 0.3	• •						,	
HCM Control Delay, s 0.3	Approach	SB			 ,	 		
, rem e e m		0.3						
HCM LOS	HCM LOS							

2: Crescent Street & Centre Street/Otis Street Lanes, Volumes, Timings

2014 Existing Weekday AM

	٠	-	•	•	←	•	4	†	~	-	1	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	****		4			4			4	
Volume (vph)	2	47	14	51	184	35	35	93	13	13	60	14
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	
Lane Util. 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
Frt		0.969			0.982			0.988			0.978	
Flt Protected		0.999			0.991			0.988			0.992	
Satd. Flow (prot)	0	1766	0	0	1886	0	0	1843	0	0	1820	0
Fit Permitted		0.999			0.991			0.988			0.992	
Satd. Flow (perm)	0	1766	0	0	1886	0	0	1843	0	0	1820	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	3	59	18	58	209	40	54	143	20	15	67	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	307	0	0	217	0	0	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 40.4%
Analysis Period (min) 15

ICU Level of Service A

Intersection										
Int Delay, s/veh	9.8									
Movement	EBL	EBT	EBR		WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	2	47	14		51	184	35	35	93	13
Conflicting Peds, #/hr	0	0	0		0	0	0	0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None		-	-	None	-	-	None
Storage Length	-	_	-		-	-	-	-	-	
Veh in Median Storage, #	-	0	-		-	0	-	-	0	
Grade, %	-	8	-		-	-4	-	-	0	
Peak Hour Factor	80	80	80		88	88	88	65	65	65
Heavy Vehicles, %	0	0	0		0	0	0	0	1	(
Mvmt Flow	2	59	18		58	209	40	54	143	20
Major/Minor	Minor2				Minor1			Major1		
Conflicting Flow All	489	375	75		404	373	153	83	0	(
Stage 1	104	104	_		261	261	-	-	-	
Stage 2	385	271	-		143	112	-	-	-	
Critical Hdwy	8.7	8.1	7		6.3	5.7	5.8	4.1	-	
Critical Hdwy Stg 1	7.7	7.1	-		5.3	4.7	-	-	-	
Critical Hdwy Stg 2	7.7	7.1	-		5.3	4.7	-	-	-	
Follow-up Hdwy	3.5	4	3.3		3.5	4	3.3	2.2	-	
Pot Cap-1 Maneuver	396	473	976		613	609	914	1527	-	
Stage 1	866	776	-		793	737	-	-		
Stage 2	541	611	-		893	827	-	-	-	
Platoon blocked, %										
Mov Cap-1 Maneuver	263	450	976		522	579	914	1527	-	
Mov Cap-2 Maneuver	263	450	-		522	579	-		-	
Stage 1	832	767	-		762	708	-	-	-	4
Stage 2	350	587	-		801	818	-		-	
Approach	EB				WB			NB		
HCM Control Delay, s	13.6				17.3			1.8		
HCM LOS	В				С					
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1527	_	-	498	595	1404		•		
HCM Lane V/C Ratio	0.035	_	-	0.158	0.516	0.01	-	-		
HCM Control Delay (s)	7.4	0	-	13.6	17.3	7.6	0	<u>.</u> ·		
HCM Lane LOS	A	Ā	-	В	С	Α	Α	-		
HCM 95th %tile Q(veh)	0.1	-	_	0.6	3	0	**	-		

Int Delay, s/veh				 	 ·		
Movement	SBL	SBT	SBR				
Vol, veh/h	13	60	14	 	 		
Conflicting Peds, #/hr	0	0	0				
Sign Control	Free	Free	Free				
RT Channelized	- 100		None				
Storage Length	_	_	-				
Veh in Median Storage, #	_	0	_				
Grade, %	-	Ö	-				
Peak Hour Factor	89	89	89				
Heavy Vehicles, %	4	1	0				
Mvmt Flow	15	67	16				
	.5	٠,					
Major/Minor	Major2						
Conflicting Flow All	163	0	0	 	 		
Stage 1	-	-	-				
Stage 2	_		_				
Critical Hdwy	4.14	-	-				
Critical Hdwy Stg 1	-	_	_				
Critical Hdwy Stg 2	_	_	_				
Follow-up Hdwy	2.236		_				
Pot Cap-1 Maneuver	1404	_	_				
Stage 1	-		_				
Stage 2	•	-	_				
Platoon blocked, %		_	_				
Mov Cap-1 Maneuver	1404		-				
Mov Cap-2 Maneuver	-	_	_				
Stage 1	-	_	_				
Stage 2	-	_	_				
•						•	
Approach	SB						
HCM Control Delay, s	1.1				 		
· · · · · · · · · · · · · · · · · · ·							

1: Main Street & Crescent Street Lanes, Volumes, Timings

	٠	→	*	•	4	4	4	†	<i>></i>	>	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	14	98	2	11	53	33	12	359	14	35	359	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Ped Bike Factor												
Frt		0.997			0.954			0.995			0.997	
Fit Protected		0.994			0.994			0.998			0.996	
Satd. Flow (prot)	0	1883	0	0	1784	0	0	1887	0	0	1854	0
Flt Permitted		0.994			0.994			0.998			0.996	_
Satd. Flow (perm)	0	1883	0	0	1784	0	0	1887	0	0	1854	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Confl. Bikes (#/hr)									2		0.00	0.00
Peak Hour Factor	0.78	0.78	0.78	0.84	0.84	0.84	0.82	0.82	0.82	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	2%	0%
Adj. Flow (vph)	18	126	3	13	63	39	15	438	17	39	403	9
Shared Lane Traffic (%)				_		_	•	470	•	^	. 454	^
Lane Group Flow (vph)	0	147	0	. 0	115	.0	.0	470	.0	0	451	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0 16	
Crosswalk Width(ft)	,	16			16			16			10	
Two way Left Turn Lane				4.00	4.00	4.00	4.00	4.00	4.00	1.00	1.00	1.00
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 9	1.00	1.00	1.00
Turning Speed (mph)	15	01	9	15	04	9	15	Erec .	Э	10	Free	9
Sign Control		Stop			Stop			Free			LIGE	
Intersection Summary												

Area Type:

Control Type: Unsignalized Intersection Capacity Utilization 50.0% Analysis Period (min) 15

ICU Level of Service A

Intersection											
Int Delay, s/veh	8.8										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	14	98	2		11	53	33		12	359	14
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized	-	<u>.</u>	None			-	None		-	-	None
Storage Length	_	_	_		_	_	-		_	-	-
Veh in Median Storage, #	-	0	-		-	0			-	0	_
Grade, %	-	0	_		_	Ö				ő	_
Peak Hour Factor	78	78	78		84	84	84		82	82	82
Heavy Vehicles, %	0	0	0		0	0	3		0	0	0
Mvmt Flow	18	126	3		13	63	39		15	438	17
Major/Minor	Minor2				Minor1				Malaud		
Conflicting Flow All		074	400			007			Major1		
Stage 1	1014 487	971	408		1027	967	446		412	0	0
Stage 2		487	-		476	476	•		-	-	-
	527	484	-		551	491	-		-	-	-
Critical Hdwy Critical Hdwy Stg 1	7.1	6.5	6.2		7.1	6.5	6.23		4.1	-	-
Critical Hdwy Stg 2	6.1	5.5	-		6.1	5.5	-		-	-	-
Follow-up Hdwy	6.1	5.5	-		6.1	5.5	-		-	#	-
Pot Cap-1 Maneuver	3.5	4	3.3		3.5	4	3.327	4	2.2	-	-
Stage 1	219	255	648		215	256	610		1158	-	-
	566	554	-		574	560	-		-	-	-
Stage 2	538	555	-		522	552	-		-	-	-
Platoon blocked, %	450	000	0.40							-	-
Mov Cap-1 Maneuver	156	239	648		120	240	610		1158	-	-
Mov Cap-2 Maneuver	156	239	-		120	240	-			•	-
Stage 1	556	529	-		564	550	-			•	-
Stage 2	438	546	-		379	527	. •			-	-
Approach	EB				WB				NB		
HCM Control Delay, s	45.7				28.7				0.3		
HCM LOS	Е				D						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1158	1101	NDIX	227	265	1116		JDR			
HCM Lane V/C Ratio	0.013	-	-	0.644	0.436	0.035	-	-			
HCM Control Delay (s)	8.1	0	-	45.7	28.7		-	-			
HCM Lane LOS	0.1 A	A	-	45.7 E		8.3	0	-			
HCM 95th %tile Q(veh)	0	^	-	3.9	D 2.1	A 0.1	Α	-			
Tom con rolle a(ven)	U			ა.ყ	۷.۱	0.1	-	-			

1: Main Street & Crescent Street HCM 2010 TWSC

ntersection nt Delay, s/veh		•			 	
Movement	SBL	SBT	SBR			
/ol, veh/h	35	359	8	 		
Conflicting Peds, #/hr	0	0	0			
Sign Control	Free	Free	Free			
RT Channelized	-	-	None			
Storage Length	-	-	-			
Veh in Median Storage, #	-	0	-			
Grade, %	-	0	-			
Peak Hour Factor	89	89	89			
Heavy Vehicles, %	0	2	0			
Mvmt Flow	39	403	9			
Major/Minor	Major2					
Conflicting Flow All	455	0	0			
Stage 1	-	-	-			
Stage 2	-	-	-			
Critical Hdwy	4.1	-	-			
Critical Hdwy Stg 1	-	-	-			
Critical Hdwy Stg 2	-	-	-			
Follow-up Hdwy	2.2	-	-			
Pot Cap-1 Maneuver	1116	-	-			
Stage 1		-				
Stage 2	_	-	-			
Platoon blocked, %		-				
Mov Cap-1 Maneuver	1116	-	-			
Mov Cap-2 Maneuver	-	-	-			
Stage 1	-	-	-			
Stage 2	-	-	-			
Approach	SB					
HCM Control Delay, s	0.7					
HCM LOS						

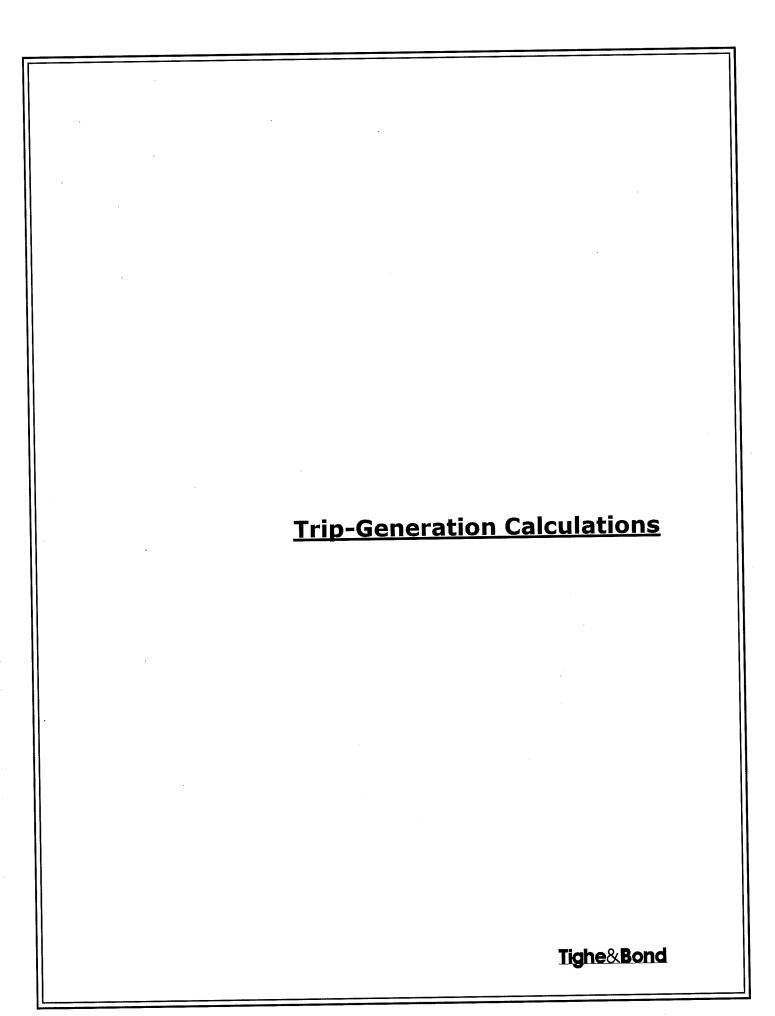
2014 Existing Weekday PM

	٨	-	•	•	←	•	•	†	~	/	+	- ✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	9	97	28	16	56	19	11	72	18	23	92	10
ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	
Lane Util. 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
Frt		0.972			0.971			0.976			0.989	
Flt Protected		0.997			0.991			0.995			0.991	
Satd. Flow (prot)	0	1768	0	0	1865	0	0	1832	0	0	1835	0
FIt Permitted		0.997			0.991			0.995		_	0.991	
Satd. Flow (perm)	0	1768	0	0	1865	0	0	1832	0	0	1835	0
Link Speed (mph)		30			30			30			30	-
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	11	121	35	18	64	22	17	111	28	26	103	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	104	0	0	156	0	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0	-		0	, •
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 26.8%
Analysis Period (min) 15

Intersection											
Int Delay, s/veh	. 7										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	9	97	28		16	56	19		11	72	18
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized		·-	None		-	-	None		-	-	None
Storage Length		-	-		-	-	-		-	-	-
Veh in Median Storage, #		0	-		- '	0	-			0	-
Grade, %	_	8	-		-	-4	-		-	0	
Peak Hour Factor	80	80	80		88	88	88		65	65	65
Heavy Vehicles, %	0	0	0		0	0	0		0	1	C
Mymt Flow	11	121	35		18	64	22		17	111	28
	Minaro				Minor1			N	Major1		
Major/Minor	Minor2	000	400		397	324	125		115	0	(
Conflicting Flow All	362	333	109		158	158	125		110	-	
Stage 1	161	161	-			166	•			_	
Stage 2	201	172	-		239	5.7	5.8		4.1	_	
Critical Hdwy	8.7	8.1	7		6.3		0.0		4.1	_	
Critical Hdwy Stg 1	7.7	7.1	-		5.3	4.7	-		-	_	
Critical Hdwy Stg 2	7.7	7.1	-		5.3	4.7	2.2		2.2	-	
Follow-up Hdwy	3.5	4	3.3		3.5	4	3.3		2.2 1487	-	
Pot Cap-1 Maneuver	509	509	927		619	642	944		1407	-	
Stage 1	787	715	-		879	798	-		-	-	
Stage 2	737	704	-		811	794	-		-	-	
Platoon blocked, %									4407	-	
Mov Cap-1 Maneuver	448	493	927		472	622	944		1487	-	
Mov Cap-2 Maneuver	448	493	-		472	622	-		-	-	
Stage 1	778	701	-		868	788	-		-	-	
Stage 2	654	696	-		633	779	-		-	-	
Approach	EB				WB				NB		
HCM Control Delay, s	14.6				11.8				0.8		
HCM LOS	В				В						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1487	-	_	542	632	1433	-	-			
HCM Lane V/C Ratio	0.011	_	-	0.309	0.164	0.018	-	-			
HCM Control Delay (s)	7.4	0	-	14.6	11.8	7.6	0	-			
HCM Lane LOS	Ä	Ă	-	В	В	Α	Α	-			
HCM 95th %tile Q(veh)	Ô	_	_	1.3	0.6	0.1	-	-			
LOM SOM WHE MAN	U	-		1.0	0.0	0,1					

1781				 	 	
Int Delay, s/veh						
Movement	SBL	SBT	SBR			
Vol, veh/h	23	92	10	 	 	
Conflicting Peds, #/hr	0	0	0			
Sign Control	Free	Free	Free			
RT Channelized	-		None			
Storage Length	-	_	-			
Veh in Median Storage, #	_	0	_			
Grade, %	_	Ö	_			
Peak Hour Factor	89	89	89			
Heavy Vehicles, %	4	1	0			
Mvmt Flow	26	103	11			
			• •			
Major/Minor	Major2					
Conflicting Flow All	138	0	0	 	 	
Stage 1	-	-	-			
Stage 2	_	_	_			
Critical Hdwy	4.14	~				
Critical Hdwy Stg 1	-		_			
Critical Hdwy Stg 2		_	_			
Follow-up Hdwy	2.236	_	_			
Pot Cap-1 Maneuver	1433	_	_			
Stage 1	-	_	_			
Stage 2	-	_				
Platoon blocked, %		_				
Mov Cap-1 Maneuver	1433		-			
Mov Cap-2 Maneuver	1400	_	_			
Stage 1	_	_	_			
Stage 2		_	-			
v			-			
Approach	SB					
JCM Control Delays	1.4				 	
HCM Control Delay, s						



Institute of Transportation Engineers (ITE) Land Use Code (LUC) 221 - Low-Rise Apartment

Average Vehicle Trips Ends vs: Dwelling Units Independent Variable (X): 23

AVERAGE WEEKDAY DAILY

T = 6.59 * (X)T = 6.59 * 23

T = 151.57

T = 152 vehicle trips

with 50% (76

vpd) entering and 50% (

76 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

Ln T = 0.82 Ln (X) + 0.23

Ln T = 0.82 Ln 23 + 0.23

Ln T = 2.80

T = 16.46

T = 16 vehicle trips

with 21% (3

vph) entering and 79% (

13 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

Ln T = 0.88 Ln (X) + 0.16

Ln T = 0.88 Ln 23 + 0.16

Ln T = 2.92

T = 18.53

T = 19 vehicle trips

with 65% (12 vph) entering and 35% (7 vph) exiting.

Institute of Transportation Engineers (ITE) Land Use Code (LUC) 710 - General Office Building

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area Independent Variable (X): 25.737

AVERAGE WEEKDAY DAILY

Ln T = 0.76 Ln (X) + 3.68Ln T = 0.77 Ln 25.737 + 3.68Ln T = 6.15

T = 467.98T = 468 vehicle trips with 50% (234

vph) entering and 50% (234 vph) exiting.

WEEKDAY MORNING PEAK HOUR OF GENERATOR

Ln T = 0.80 Ln (X) + 1.57

Ln T = 0.80 Ln 25.737 + 1.57

Ln T = 4.17T = 64.61

T = 65 vehicle trips

with 88% (57 vph) entering and 12% (8 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF GENERATOR

T = 1.12 * (X) + 78.45 T = 1.12 * 25.737

25.737 + 78.45

T = 107.28

T = 107 vehicle trips

with 17% (18 vph) entering and 83% (89 vph) exiting.

Institute of Transportation Engineers (ITE) Land Use Code (LUC) 254 - Assisted Living

Average Vehicle Trips Ends vs: Occupied Beds Independent Variable (X): 137

AVERAGE WEEKDAY DAILY

T = 2.74 * (X)T = 2.74 * 137

T = 375.38

T = 376 vehicle trips with 50% (188 vpd) entering and 50% (188 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.18 * (X)

T = 0.18 * 137

T = 24.66

T = 25 vehicle trips

with 68% (17 vph) entering and 32% (8 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.29 * (X)

T = 0.29 * 137

T = 39.73

T = 40 vehicle trips

with 50% (20 vph) entering and 50% (20 vph) exiting.

Institute of Transportation Engineers (ITE) Land Use Code (LUC) 220 - Apartment

Average Vehicle Trips Ends vs:

Dwelling Units

Independent Variable (X): 150

AVERAGE WEEKDAY DAILY

T = 6.06 * (X) + 123.56 T = 6.06 * 150 + 12

150 + 123.56

T = 1032.56

T = 1,032 vehicle trips

with 50% (516 vpd) entering and 50% (516 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.49 * (X) + 3.73 T = 0.49 * 150 +

150 + 3.73

T = 77.23

T = 77 vehicle trips

with 20% (15 vph) entering and 80% (

vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

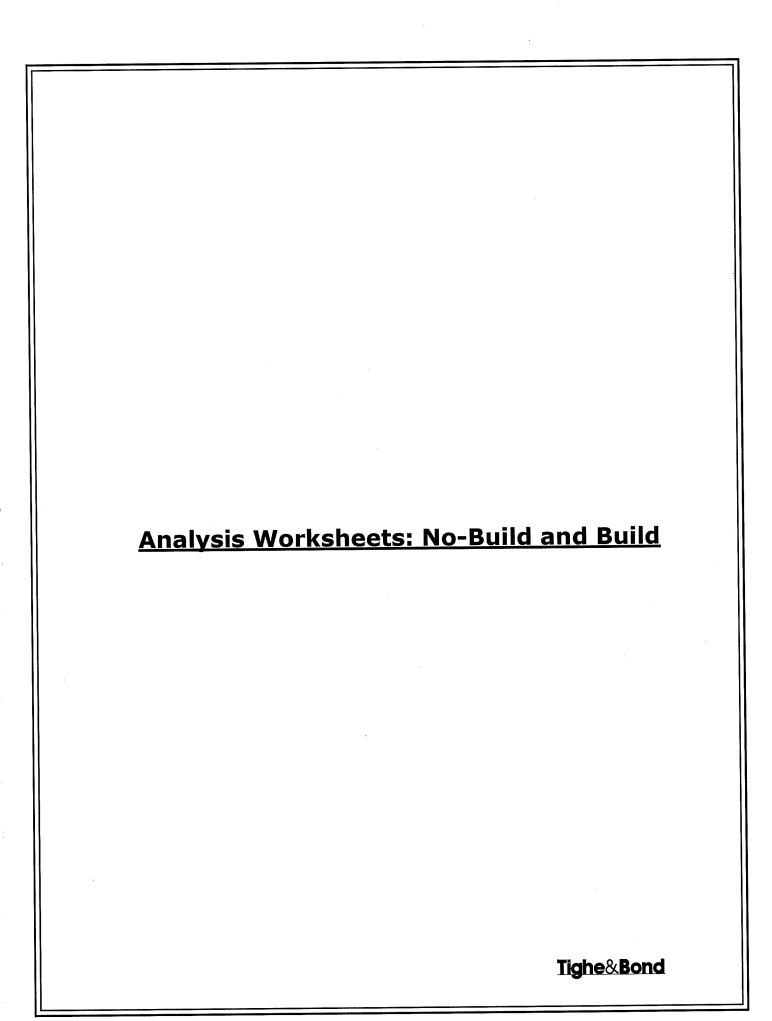
T = 0.55 * (X) + 17.65 T = 0.55 * 150 + 150

150 + 17.65

T = 100.15

T = 100 vehicle trips

with 65% (65 vph) entering and 35% (35 vph) exiting.



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1: Main Street & Crescent Street Lanes, Volumes, Timings

	٦	-	•	•	-	•	4	†	. /	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	5	42	0	23	117	41	2	256	5	32	691	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt					0.969			0.997			0.997	
Fit Protected		0.995			0.994						0.998	
Satd. Flow (prot)	0	1890	0	0	1821	0	0	1806	0	0	1839	0
Fit Permitted		0.995			0.994						0.998	_
Satd. Flow (perm)	0	1890	0	0	1821	0	0	1806	0	0	1839	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Peak Hour Factor	0.80	0.80	0.80	0.95	0.95	0.95	0.87	0.87	0.87	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	4%	0%	0%	0%	5%	0%	0%	3%	0%
Adj. Flow (vph)	6	53	0	24	123	43	2	294	6	39	843	22
Shared Lane Traffic (%)												_
Lane Group Flow (vph)	0	58	0	0	190	0	0	302	0	0	904	. 0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0	-		0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												4.00
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15	_	9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Control Type: Unsignalized

Other

Intersection Capacity Utilization 77.0%

Analysis Period (min) 15

Intersection										
Int Delay, s/veh	19.1									
-										
Movement	EBL	EBT	EBR		WBL	WBT	WBR	NB	L NBT	NBR
Vol, veh/h	5	42	0		23	117	41		2 256	5
Conflicting Peds, #/hr	0	0	0		. 0	0	0		0 0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop	Fre	-	Free
RT Channelized	· -	<u>.</u>	None		-	-	None	116		None
Storage Length	-	_	-		_	_	110110			NOHE
Veh in Median Storage, #	-	0	-		_	0	_		- 0	-
Grade, %	-	0	_		_	0	_		- 0	_
Peak Hour Factor	80	80	80		95	95	95	8		87
Heavy Vehicles, %	. 0	0	0		4	0	0		5	0
Mvmt Flow	6	52	0		24	123	43		2 294	6
					-,	120	10	•	2 204	U
Major/Minor	Minor2				Minor1			Major	1	
Conflicting Flow All	1317	1237	854		1260	1245	297			
Stage 1	932	932	-		302	302	231	00:	, ,	0
Stage 2	385	305	_		958	943	_			-
Critical Hdwy	7.1	6.5	6.2		7.14	6.5	6.2	4.	 1	-
Critical Hdwy Stg 1	6.1	5.5	-		6.14	5.5	0.2	4.	 -	-
Critical Hdwy Stg 2	6.1	5.5	_		6.14	5.5	_		· •	-
Follow-up Hdwy	3.5	4	3.3		3.536	4	3.3	2.2)	-
Pot Cap-1 Maneuver	136	177	361		146	176	747	787		-
Stage 1	322	348	-		703	668	-	101		-
Stage 2	642	666	_		307	344	-			-
Platoon blocked, %					00,	0-1-1		·	•	-
Mov Cap-1 Maneuver	48	166	361		105	165	747	787	, -	•
Mov Cap-2 Maneuver	48	166	-		105	165	, 4,	101		-
Stage 1	321	327	_		701	666	_		· -	-
Stage 2	492	664	-		243	324	_			-
						02,		·	-	-
Approach	EB				WB			NB		
HCM Control Delay, s	52.5				128.4			0.1		
HCM LOS	F				F			0.1		
					•					
Minor Lane/Major Mymt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	edd edd		
Capacity (veh/h)	787	-	- INDIX	132	184			SBR		
HCM Lane V/C Ratio	0.003	<u>-</u>	-	0.445	1.035	1273	-	-		
HCM Control Delay (s)	9.6	0	-	52.5	1.035	0.031		-		
HCM Lane LOS	3.0 A	A	-	52.5 F		7.9 ^	0	-		
HCM 95th %tile Q(veh)	Ô	_	-	2	F 8.9	A 0.1	Α	-		
3(101)	v	-	-	Z	0.9	0.1	-	-		

1: Main Street & Crescent Street HCM 2010 TWSC

Conflicting Peds, #/hr	nt Delay, s/veh						
Vol, veh/h 32 691 18 Conflicting Peds, #/hr 0 0 0 Sign Control Free Free Free RT Channelized - - None Storage Length - - - Veh in Median Storage, # - 0 - Grade, % - 0 - Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mymt Flow 39 843 22 Major/Minor Major2	Movement	SBL	SBT	SBR		 	
Conflicting Peds, #/hr		32	691	18			
Sign Control Free Free Free RT Channelized None Storage Length			0	0			
RT Channelized None Storage Length None Weh in Median Storage, # - 0			Free	Free			
Storage Length			-	None			
Veh in Median Storage, # - 0 - Grade, % - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -		-	-	-			
Grade, % Peak Hour Factor Reavy Vehicles, % Grade, % Peak Hour Factor Reavy Vehicles, % Reavy Vehicles		-	0	-			
Peak Hour Factor 82 82 82 Heavy Vehicles, % 0 3 0 Mvmt Flow 39 843 22 Major/Minor Major2 Conflicting Flow All 300 0 Stage 1 - - Stage 2 - - Critical Hdwy 4.1 - Critical Hdwy Stg 1 - - Critical Hdwy Stg 2 - - Follow-up Hdwy 2.2 - Pot Cap-1 Maneuver 1273 - Stage 1 - - Stage 2 - - Platoon blocked, % - - Mov Cap-1 Maneuver 1273 - Mov Cap-2 Maneuver - - Stage 1 - - Stage 1 - - - - - - - - - - - - - - - - - - - -		-	0	-			
Heavy Vehicles, % 0 3 0 0 0 0 0 0 0 0		82	82	82			
Mymt Flow 39 843 22 Major/Minor Major2 Conflicting Flow All 300 0 Stage 1 - - Stage 2 - - Critical Hdwy 4.1 - Critical Hdwy Stg 1 - - Critical Hdwy Stg 2 - - Follow-up Hdwy 2.2 - Pot Cap-1 Maneuver 1273 - Stage 1 - - Stage 2 - - Platoon blocked, % - - Mov Cap-1 Maneuver 1273 - Mov Cap-2 Maneuver - - Stage 1 - - - - -			3				
Major/Minor Major2 Conflicting Flow All 300 0 0 Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		39	843	22			
Conflicting Flow All 300 0 0 Stage 1							
Conflicting Flow All 300 0 0 Stage 1	Maior/Minor	Major2			 		
Stage 1 - - - Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -			0	0			
Stage 2 - - - Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		-	-	-			
Critical Hdwy 4.1 - - Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		-		-			
Critical Hdwy Stg 1 - - - Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		4.1	-	-			
Critical Hdwy Stg 2 - - - Follow-up Hdwy 2.2 - - Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -			-	•			
Follow-up Hdwy 2.2		-	-	-			
Pot Cap-1 Maneuver 1273 - - Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -			-	-			
Stage 1 - - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		1273	-	-			
Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -		-	-	-			
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver 1273 - - Mov Cap-2 Maneuver - - - Stage 1 - - -			-	-			
Mov Cap-2 Maneuver Stage 1		1273	-	-			
Stage 1		-	-	-			
Stage 2		-	-	-			
	Stage 2	-	-	-			
Approach SB	Annroach	SB					
HCM Control Delay, s 0.3			,			 	
HCM LOS		0.0					

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	2	50	15	54	195	37	37	99	14	14	64	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	,
Lane Util. 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
Frt		0.969			0.983			0.987			0.978	
Flt Protected		0.999			0.991			0.988			0.992	
Satd. Flow (prot)	0	1766	0	0	1888	0	0	1841	0	0	1820	0
Flt Permitted		0.999			0.991			0.988			0.992	
Satd. Flow (perm)	0	1766	0	0	1888	0	0	1841	0	0	1820	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	3	63	19	61	222	42	57	152	22	16	72	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	. 0	83	0	0	325	0	0	231	0	0	105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	4.05	4.05	4.05									
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	01	9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 42.0%
Analysis Period (min) 15

2: Crescent Street & Centre Street/Otis Street HCM 2010 TWSC

Intersection										
int Delay, s/veh	10.6									
Movement	EBL	EBT	EBR		WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	2	50	15		54	195	37	37	99	14
Conflicting Peds, #/hr	0	0	0		0	0	0	0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop	Free	Free	Free
RT Channelized		· <u>-</u>	None .		-		None	-	-	None
Storage Length	-	-	-		-	-	-	-	-	-
Veh in Median Storage, #	_	0	-		-	0	-	-	0	-
Grade, %	-	8	-		-	-4	-	-	0	•
Peak Hour Factor	80	80	80		88	88	88	65	65	65
Heavy Vehicles, %	0	0	0		0	0	0	0	1	0
Mvmt Flow	2	62	19		61	222	42	57	152	22
Major/Minor	Minor2				Minor1			Major1		
	521	400	80		429	397	163	89	0	(
Conflicting Flow All	112	112	-		277	277	-	-	-	
Stage 1	409	288	_		152	120	-		-	
Stage 2	8.7	8.1	7		6.3	5.7	5.8	4.1	-	
Critical Hdwy	7.7	7.1	'-		5.3	4.7	-	-	-	
Critical Holy Stg 1	7.7	7.1	_		5.3	4.7	-	-	-	
Critical Hdwy Stg 2	3.5	4	3.3		3.5	4	3.3	2.2	-	
Follow-up Hdwy	372	453	968		594	594	903	1519		
Pot Cap-1 Maneuver	854	767	-		780	728	-	-	-	
Stage 1	520	596	_		885	822	-	-	-	
Stage 2	320	330			000	011			-	
Platoon blocked, %	236	429	968		497	562	903	1519	_	
Mov Cap-1 Maneuver	236	429	300		497	562	-	-	_	
Mov Cap-2 Maneuver	818	758			747	697	_	_	-	
Stage 1 Stage 2	324	571	-		787	812	-	-	-	
	ЕВ				WB			NB		
Approach					19			1.8		
HCM Control Delay, s HCM LOS	14.1 B				C	•		1.0		
				ED: ,	WD! 4	OD!	ODT	CDD		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1		SBL	SBT	SBR		
Capacity (veh/h)	1519	-	-	477	576	1391	-	-		
HCM Lane V/C Ratio	0.037	-	-	0.176	0.564	0.011	-	-		
HCM Control Delay (s)	7.5	0	-	14.1	19	7.6	0	-		
HCM Lane LOS	Α	Α	-	В	C	A	Α	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.6	3.5	0	-	-		

Int Delay, s/veh					 	
Movement	SBL	SBT	SBR			
Vol, veh/h	14	64	15	 	 	
Conflicting Peds, #/hr	0	0	0			
Sign Control	Free	Free	Free			
RT Channelized	-		None			
Storage Length	-	_	-			
Veh in Median Storage, #	_	0	_			
Grade, %	_	Ö	_			
Peak Hour Factor	89	89	89			
Heavy Vehicles, %	4	1	0			
Mvmt Flow	16	72	17			
			• •			
Major/Minor	Major2					
Conflicting Flow All	174	0	0	 	 	
Stage 1	_	-	-			
Stage 2	_	-	-			
Critical Hdwy	4.14	_	-			
Critical Hdwy Stg 1	-	-	_			
Critical Hdwy Stg 2		_	_			
Follow-up Hdwy	2.236	-	_			
Pot Cap-1 Maneuver	1391	_	-			
Stage 1	-	_				
Stage 2	_	_				
Platoon blocked, %		-	_			
Mov Cap-1 Maneuver	1391	_	-			
Mov Cap-2 Maneuver			-			
Stage 1	_	_	_			
Stage 2	<u>.</u>	_	-			
v			-			
Approach	SB					
	1.1				 	
HCM Control Delay, s HCM LOS	1.1					

1: Main Street & Crescent Street Lanes, Volumes, Timings

	٦	→	*	1	←	4	•	†	/	>	1	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	15	104	2	12	56	35	13	381	15	37	381	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.997			0.954			0.995			0.997	
Flt Protected		0.994			0.994			0.998			0.996	
Satd. Flow (prot)	0	1883	0	0	1783	0	0	1887	0	0	1854	0
Fit Permitted		0.994			0.994			0.998			0.996	
Satd. Flow (perm)	0	1883	0	0	1783	0	0	1887	0	0	1854	0
Link Speed (mph)	-	30			30			30			30	
Link Opeda (mpn) Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Peak Hour Factor	0.78	0.78	0.78	0.84	0.84	0.84	0.82	0.82	0.82	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	2%	0%
Adj. Flow (vph)	19	133	3	14	67	42	16	465	18	42	428	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	123	0	0	499	0	0	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0	·		0			0			0	
Link Offset(ft)		0			0			0			- 0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	,,,,	9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.3% Analysis Period (min) 15

Intersection											
Int Delay, s/veh	11.7										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	15	104	2		12	56	35		13	381	15
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized	-		None		<u>.</u>		None		-	-	None
Storage Length	-	~	-		-	_			_	_	-
Veh in Median Storage, #	-	0	-		-	0			_	0	_
Grade, %	-	0	-		-	0	_		_	Ŏ	-
Peak Hour Factor	78	78	78		84	84	84		82	82	82
Heavy Vehicles, %	0	0	0		. 0	0	3		0	0	0
Mvmt Flow	19	133	3		14	67	42		16	465	18
Major/Minor	Minor2				Minor1				Major1		
Conflicting Flow All	1076	1031	433		1089	1025	474		437	0	0
Stage 1	516	516	. =		505	505	-		_	_	-
Stage 2	560	515	-		584	520	-		_	_	_
Critical Hdwy	7.1	6.5	6.2		7.1	6.5	6.23		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	3.327		2.2	_	-
Pot Cap-1 Maneuver	199	235	627		195	237	588		1134	-	_
Stage 1	546	538	-		553	544	_		-	-	_
Stage 2	516	538	-		501	535	_		-	-	_
Platoon blocked, %										_	_
Mov Cap-1 Maneuver	135	219	627		95	221	588		1134	-	_
Mov Cap-2 Maneuver	135	219	-		95	221	_		-	-	٠
Stage 1	536	511	-		542	534	-		-	-	_
Stage 2	412	528	-		350	508	-		-	-	-
Approach	ED.				14.00						
HCM Control Delay, s	EB				WB				NB		
HCM LOS	62.6				36.2				0.3		
TIOW LOS	F				Е						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	ODD.			
Capacity (veh/h)	1134	ND:	NDI	205	234		ODI	SBR			
HCM Lane V/C Ratio	0.014	-	-	0.757	234 0.524	1090	-	-			
HCM Control Delay (s)	8.2	0	-	62.6	36.2	0.038	-	-			
HCM Lane LOS	6.2 A	A	-			8.4	0	-			
HCM 95th %tile Q(veh)	Ô	-	-	F 5.1	E	A	Α	-			
voil voilo attain	, U	-	-	5.1	2.8	0.1	-	-			

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Int Delay, s/veh				
Manager	ODI	CDT	CDD	
Movement	SBL	SBT	SBR	
Vol, veh/h	37	381	8	
Conflicting Peds, #/hr	_ 0	_ 0	_ 0	
Sign Control	Free	Free	Free	
RT Channelized	-	-	None	
Storage Length	-	-	-	
Veh in Median Storage, #	-	0	-	
Grade, %	-	0	-	
Peak Hour Factor	89	89	89	
Heavy Vehicles, %	0	2	0	
Mvmt Flow	42	428	9	
Major/Minor	Major2			
Conflicting Flow All	483	0	0	
Stage 1		_	-	
Stage 2	-	_	-	
Critical Hdwy	4.1	-	_	
Critical Hdwy Stg 1		-	-	
Critical Hdwy Stg 2	_	_	_	
Follow-up Hdwy	2.2		-	
Pot Cap-1 Maneuver	1090	_		
Stage 1	1030	_		
	-	-	-	
Stage 2	-	-		
Platoon blocked, %	1090	-		
Mov Cap-1 Maneuver		-	-	
Mov Cap-2 Maneuver	-	-		
Stage 1	-	-	-	
Stage 2		-	-	
Approach	SB			
HCM Control Delay, s	0.7			
HCM LOS	J.,			

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		�	,,,		4			4		•	4	
Volume (vph)	10	103	30	17	59	20	12	76	19	24	98	11
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	
Lane Util. 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
Frt		0.971			0.972			0.976			0.989	
Fit Protected		0.997			0.991			0.995			0.991	
Satd. Flow (prot)	0	1766	0	0	1867	0	0	1832	0	0	1835	0
Flt Permitted		0.997			0.991			0.995			0.991	
Satd. Flow (perm)	0	1766	0	0	1867	0	0	1832	0	0	1835	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	13	129	38	19	67	23	18	117	29	27	110	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0,	109	0	0	164	0	0	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 27.7% Analysis Period (min) 15

Intersection											
Int Delay, s/veh	7.4										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	10	103	30		17	59	20		12	76	19
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized		-	None		-	-	None		-	-	None
Storage Length	-	-	-		-	-	<u>-</u>		-	-	-
Veh in Median Storage, #	-	0	-		-	0	-		-	0	-
Grade, %	-	8	-		-	-4	-		•	0	-
Peak Hour Factor	80	80	80		88	88	88		65	65	65
Heavy Vehicles, %	0	0	0		0	0	0		0	1	0
Mvmt Flow	12	129	38		19	67	23		18	117	29
Major/Minor	Minor2				Minor1				Major1		
Conflicting Flow All	383	353	116		421	344	132		122	0	0
Stage 1	170	170	-		168	168	-		-	-	
Stage 2	213	183	_		253	176	-		-	-	
Critical Hdwy	8.7	8.1	7		6.3	5.7	5.8		4.1	_	
Critical Hdwy Stg 1	7.7	7.1	· <u>-</u>		5.3	4.7	-			_	-
Critical Hdwy Stg 2	7.7	7.1	_		5.3	4.7				_	
Follow-up Hdwy	3.5	4	3.3		3.5	4	3.3		2.2	-	-
Pot Cap-1 Maneuver	488	492	918		600	628	936		1478	_	
Stage 1	776	706	-		871	792	-		-		
Stage 2	722	693	_		799	787	_		-		
Platoon blocked, %	724	000			, 00			,		-	
Mov Cap-1 Maneuver	425	476	918		444	607	936		1478	-	
Mov Cap-1 Maneuver	425	476	-		444	607	-		-		
Stage 1	766	692	_		860	782	_		_	_	
Stage 2	636	684	-		611	771	-		-	-	
Approach	EB				WB				NB		
	15.4				12.2				0.8		
HCM Control Delay, s HCM LOS	10.4 C				12.2 B				0.0		
AA1	NO	NDT	NDD	CD14	MDI »4	on:	CDT	ODD.			
Minor Lane/Major Mvmt	NBL	NBT	NBR		WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1478	-	-	525	612	1424	-	-			
HCM Lane V/C Ratio	0.012	_	-	0.34	0.178	0.019	-	-			
HCM Control Delay (s)	7.5	0	-	15.4	12.2	7.6	0	-			
HCM Lane LOS	A	Α	-	C	В	A	Α	-			
HCM 95th %tile Q(veh)	0	-	-	1.5	0.6	0.1	-	-			

Int Delay, s/veh				
Movement	SBL	SBT	SBR	
Vol, veh/h	24	98	11	
Conflicting Peds, #/hr	0	0	0	
Sign Control	Free	Free	Free	
RT Channelized	-	-	None	
Storage Length	_	_	-	
Veh in Median Storage, #	-	0	-	
Grade, %	-	0	-	
Peak Hour Factor	89	89	89	
Heavy Vehicles, %	4	1	0	
Mvmt Flow	27	110	12	
Major/Minor	Major2			
Conflicting Flow All	146	0	. 0	
Stage 1		-	-	
Stage 2	-	-	-	
Critical Hdwy	4.14	-	_	
Critical Hdwy Stg 1	-	-	-	
Critical Hdwy Stg 2	-	-	-	
Follow-up Hdwy	2.236	-	-	
Pot Cap-1 Maneuver	1424	-	-	
Stage 1	-	-	-	
Stage 2	-	-	-	
Platoon blocked, %		-		
Mov Cap-1 Maneuver	1424	-	-	
Mov Cap-2 Maneuver	-	-	-	
Stage 1	-	-	-	
Stage 2	-		-	
Approach	SB			
HCM Control Delay, s	1.4			
HCM LOS	11-7			

1: Main Street & Crescent Street Lanes, Volumes, Timings

	٠	→	*	1	←	•	4	†	1	>	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	5	32	0	23	109	41	2	256	9	30	691	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt					0.968			0.996			0.997	
Flt Protected		0.994			0.993						0.998	
Satd. Flow (prot)	0	1889	0	0	1817	0	0	1806	0	0	1839	0
FIt Permitted		0.994			0.993						0.998	
Satd. Flow (perm)	0	1889	0	0	1817	0	0	1806	0	0	1839	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Peak Hour Factor	0.80	0.80	0.80	0.95	0.95	0.95	0.87	0.87	0.87	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	4%	0%	0%	0%	5%	0%	0%	3%	0%
Adj. Flow (vph)	6	40	0	24	115	43	2	294	10	37	843	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	182	0	0	306	0	0	902	. 0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		. 9	15		9	15	_	9	15	_	9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 75.9%
Analysis Period (min) 15

Intersection										
Int Delay, s/veh	15.1									
Movement	EBL	EBT	EBR		WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	5	32	0		23	109	41	2	256	9
Conflicting Peds, #/hr	0	0	0		0	0	0	0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None		-	-	None	-	-	None
Storage Length	-	-	-		-	-	-	_	-	-
Veh in Median Storage, #	-	0	-		-	0	-	-	0	_
Grade, %	-	0	-		-	0	-	-	0	-
Peak Hour Factor	80	80	80		95	95	95	87	87	87
Heavy Vehicles, %	0	0	0		4	0	0	0	5	0
Mvmt Flow	6	40	0		24	115	43	2	294	10
Major/Minor	Minor2				Minor1			Majort		
Conflicting Flow All	1310	1236	854		1251	1242	299	Major1		
Stage 1	927	927	004		304	304		865	0	0
Stage 2	383	309	-		947	938	-	-	-	-
Critical Hdwy	7.1	6.5	6.2		7.14	930 6.5	6.2	-	-	-
Critical Hdwy Stg 1	6.1	5.5	0.2		6.14	5.5		4.1	-	-
Critical Hdwy Stg 2	6.1	5.5	_		6.14	5.5 5.5	-	-	-	-
Follow-up Hdwy	3.5	4	3.3		3.536	3.3 4	3.3	2.2	-	-
Pot Cap-1 Maneuver	137	178	361		148	176	745	787	-	-
Stage 1	324	350	-		701	667	. 740	101	-	-
Stage 2	644	663	_		311	346	_	-	-	-
Platoon blocked, %		-			011	040	-	-	-	-
Mov Cap-1 Maneuver	55	168	361		116	166	745	787	-	-
Mov Cap-2 Maneuver	55	168	-		116	166	140	101	-	-
Stage 1	323	330	_		699	665	_		-	-
Stage 2	501	661	-		258	327	-	-	-	-
Annragah	50									
Approach	EB				WB			NB		
HCM Control Delay, s HCM LOS	46.8				105.5			0.1		
HOW LOS	E				F					
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	787	_	-	131	190	1267	-			
HCM Lane V/C Ratio	0.003	_	-	0.353	0.958	0.029	-	-		
HCM Control Delay (s)	9.6	0		46.8	105.5	7.9	0	-		
HCM Lane LOS	Α	Α	_	E	F	A	Ă	-		
HCM 95th %tile Q(veh)	0	-	-	1.4	7.8	0.1	-	-		

1: Main Street & Crescent Street HCM 2010 TWSC

Int Delay, s/veh						
Movement	SBL	SBT	SBR			
Vol, veh/h	30	691	18			
Conflicting Peds, #/hr	0	0	0			
Sign Control	Free	Free	Free			
RT Channelized	-	-	None			
Storage Length	-	-	-			
Veh in Median Storage, #	-	0	-			
Grade, %	-	0	-			
Peak Hour Factor	82	82	82			
Heavy Vehicles, %	0	3	0			
Mvmt Flow	37	843	22			
Major/Minor	Major2					
Conflicting Flow All	305	0	0			
Stage 1	-	-	-			
Stage 2	-	_	-			
Critical Hdwy	4.1	-	-			
Critical Hdwy Stg 1	-	-	-			
Critical Hdwy Stg 2	-	-	-			
Follow-up Hdwy	2.2	-	-			
Pot Cap-1 Maneuver	1267	-	-			
Stage 1	-	-	-			
Stage 2		-	-			
Platoon blocked, %		_	-			
Mov Cap-1 Maneuver	1267	-	-			
Mov Cap-2 Maneuver	-	-	-			
Stage 1	-	-	-			
Stage 2	-	-	-			
	<i>y</i>					
Approach	SB					
HCM Control Delay, s	0.3					
HCM LOS						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	1	50	15	54	195	29	37	73	14	14	60	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	
Lane Util. 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
Frt		0.969			0.986			0.984			0.978	
Flt Protected		0.999			0.990			0.985			0.992	
Satd. Flow (prot)	0	1766	0	0	1892	0	0	1831	0	0	1819	0
FIt Permitted		0.999			0.990			0.985			0.992	
Satd. Flow (perm)	0	1766	0	0	1892	0	0	1831	0	0	1819	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	1	63	19	61	222	33	57	112	22	16	67	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	316	0	0	191	0	0	99	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 40.1% Analysis Period (min) 15

2: Crescent Street & Centre Street/Otis Street HCM 2010 TWSC

Intersection											
int Delay, s/veh	10.4										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL.	NBT	NBR
Vol, veh/h	1	50	15		54	195	29		37	73	14
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized	-	-	None		-	-	None		-	-	None
Storage Length	-	-	-		-	-	-		-	-	
Veh in Median Storage, #	-	0	-		-	0	-		-	0	-
Grade, %		8	-		-	-4	-		-	0	•
Peak Hour Factor	80	80	80		88	88	88		65	65	65
Heavy Vehicles, %	0	0	0		0	0	. 0		0	1	C
Mymt Flow	1	62	19		61	222	33		57	112	22
Major/Minor	Minor2			N	/linor1			Ma	ajor1		
Conflicting Flow All	471	355	75		384	352	123		83	0	(
Stage 1	107	107	-		237	237	-		-	-	,
Stage 2	364	248	-		147	115	-		-	-	
Critical Hdwy	8.7	8.1	7		6.3	5.7	5.8		4.1	-	
Critical Hdwy Stg 1	7.7	7.1	-		5.3	4.7	-		-		
Critical Hdwy Stg 2	7.7	7.1			5.3	4.7	-	,	-		
Follow-up Hdwy	3.5	4	3.3		3.5	4	3.3		2.2	-	
Pot Cap-1 Maneuver	411	490	976		629	623	946		1527	-	
Stage 1	861	773	-		812	751	-		-	-	
Stage 2	561	631	-		889	825	-		-	-	
Platoon blocked, %										-	
Mov Cap-1 Maneuver	271	465	976		532	591	946		1527	-	
Mov Cap-2 Maneuver	271	465	_		532	591	-		-	-	
Stage 1	827	764	-		780	721	-		-	-	
Stage 2	360	606	-		791	815			-	-	
Approach	EB				WB				NB		
HCM Control Delay, s	13.2				17.4				2.2		
HCM LOS	В				С						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1 \	VBI n1	SBL	SBT	SBR			
	1527	IAD1	NDIX	521	602	1438	-	-			
Capacity (veh/h) HCM Lane V/C Ratio	0.037	-	-	0.158	0.525	0.011	_				
	7.4	0	-	13.2	17.4	7.5	0				
HCM Control Delay (s)		A	-	13.2 B	17.4 C	7.5 A	A				
HCM 05th %tile O(yeh)	A 0.1	A -	-	0.6	3.1	0	_				
HCM 95th %tile Q(veh)	0.1	-	-	0.0	J. I	U	=				

Intersection				
Int Delay, s/veh				
Movement	SBL	SBT	SBR	
Vol, veh/h	14	60	14	
Conflicting Peds, #/hr	0	0	0	
Sign Control	Free	Free	Free	
RT Channelized	-	-	None	
Storage Length	-	-	-	
Veh in Median Storage, #	-	0	-	
Grade, %	-	0	-	
Peak Hour Factor	89	89	89	
Heavy Vehicles, %	4	1	0	
Mvmt Flow	16	67	16	
Major/Minor	Major2			
Conflicting Flow All	134	0	0	
Stage 1	-	-	-	
Stage 2	-		-	
Critical Hdwy	4.14		_	
Critical Hdwy Stg 1	-	-	_	
Critical Hdwy Stg 2		_	_	
Follow-up Hdwy	2.236	_	_	
Pot Cap-1 Maneuver	1438	_	_	
Stage 1	-	-		
Stage 2	_	-	-	
Platoon blocked, %		-		
Mov Cap-1 Maneuver	1438	_	-	•
Mov Cap-2 Maneuver	-	_	_	
Stage 1	_	_	_	
Stage 2	-	-	_	
. •				
Approach	SB			
HCM Control Delay, s	1.2			
HCM LOS	• • •			

1: Main Street & Crescent Street Lanes, Volumes, Timings

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			43-			4			4	
Volume (vph)	15	93	2	13	34	29	13	381	19	41	381	8
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.997			0.947	•		0.994			0.997	
Flt Protected		0.993			0.992			0.998			0.995	
Satd. Flow (prot)	0	1881	0	0	1764	0	0	1885	0	0	1852	0
Flt Permitted		0.993			0.992			0.998			0.995	
Satd. Flow (perm)	0	1881	0	0	1764	0	0	1885	0	0	1852	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		98			451			228			154	
Travel Time (s)		2.2			10.3			5.2			3.5	
Peak Hour Factor	0.78	0.78	0.78	0.84	0.84	0.84	0.82	0.82	0.82	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	2%	0%
Adj. Flow (vph)	19	119	3	15	40	35	16	465	23	46	428	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	0	90	0	0	504	0	0	483	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0	-		0	-
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.0%
Analysis Period (min) 15

Intersection											
Int Delay, s/veh	9										
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	15	93	2		13	34	29		13	381	19
Conflicting Peds, #/hr	0	0	0		0	0	0		. 0	0	0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized	· <u>-</u>	-	None		-	-	None		-	-	None
Storage Length	_	-	-		-	-	-		-	-	-
Veh in Median Storage, #	_	0	-		-	0	-		-	0	-
Grade, %	-	0	-		-	0	-		-	0	-
Peak Hour Factor	78	78	78		84	84	84		82	82	82
Heavy Vehicles, %	0	0	0		0	0	3		0	0	0
Mvmt Flow	19	119	3		15	40	35		16	465	23
Major/Minor	Minor2				Minor1				1ajor1		
Conflicting Flow All	1070	1045	433		1094	1037	476		437	0	0
Stage 1	525	525	-		508	508	-		-	-	-
Stage 2	545	520			586	529	-		-	-	<i>2</i> ′ .
Critical Hdwy	7.1	6.5	6.2		7.1	6.5	6.23		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	3.327		2.2	-	
Pot Cap-1 Maneuver	201	231	627		193	233	587		1134	-	
Stage 1	540	533	-		551	542	_		-	-	
Stage 2	526	535	-		500	530	-		-	-	
Platoon blocked, %										-	
Mov Cap-1 Maneuver	153	214	627		102	216	587		1134	_	
Mov Cap-2 Maneuver	153	214	-		102	216	-			-	
Stage 1	530	503	_		541	532	-		-	-	
Stage 2	449	525			359	500	-		-	-	
Approach	EB				WB				NB		
HCM Control Delay, s	54.2				31				0.3		
HCM LOS	F				D						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1		SBL	SBT	SBR			
Capacity (veh/h)	1134	-	-	205	227	1086	-	-			
HCM Lane V/C Ratio	0.014	-	-	0.688	0.399	0.042		-			
HCM Control Delay (s)	8.2	0	-	54.2	31	8.5	0				
HCM Lane LOS	Α	Α		F	D	Α	Α	-			
HCM 95th %tile Q(veh)	0	-	-	4.3	1.8	0.1	-	-			

ntersection Int Delay, s/veh						
Movement	SBL	SBT	SBR			
Vol, veh/h	41	381	8			
Conflicting Peds, #/hr	0	0	0			
Sign Control	Free	Free	Free			
RT Channelized		-	None			
Storage Length	_	_	-			
Veh in Median Storage, #	-	0	-			
Grade, %	-	Ō	-			
Peak Hour Factor	89	89	89			
Heavy Vehicles, %	0	2	0			
Mvmt Flow	46	428	9			
Major/Minor	Major2					
Conflicting Flow All	488	0	0			
Stage 1	-	-	-			
Stage 2	-	-	-			
Critical Hdwy	4.1		-			
Critical Hdwy Stg 1	-	-	-			
Critical Hdwy Stg 2	-	-	-			
Follow-up Hdwy	2.2	-	-			
Pot Cap-1 Maneuver	1086	-	-			
Stage 1	-	-	-			
Stage 2	-	-	-			
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1086	-	-			
Mov Cap-2 Maneuver	-	-	-			
Stage 1	-	-	-			
Stage 2	-	-	-			
Approach	SB		e			
HCM Control Delay, s	0.8					
HCM LOS	0.0					
I IOW LOG						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4		·	4	
Volume (vph)	10	103	30	17	59	20	12	69	19	16	60	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		8%			-4%			0%			0%	
Lane Util. 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
Frt		0.971			0.972			0.974			0.987	
Flt Protected		0.997			0.991			0.994			0.991	
Satd. Flow (prot)	0	1766	0	0	1867	0	0	1827	0	0	1831	0
FIt Permitted		0.997			0.991			0.994			0.991	
Satd. Flow (perm)	0	1766	0	0	1867	0	0	1827	0	0	1831	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			269			326			285	
Travel Time (s)		5.6			6.1			7.4			6.5	
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.65	0.65	0.65	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	1%	0%
Adj. Flow (vph)	13	129	38	19	67	23	18	106	29	18	67	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	109	0	0	153	0	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.05	1.05	1.05	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 23.5% Analysis Period (min) 15

2: Crescent Street & Centre Street/Otis Street HCM 2010 TWSC

Intersection											
nt Delay, s/veh	7.4										
Movement	EBL.	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR
Vol, veh/h	10	103	30		17	59	20		12	69	19
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	_ 0
Sign Control	Stop	Stop	Stop		Stop	Stop	Stop		Free	Free	Free
RT Channelized	<u>-</u>	-	None		-	-	None		-	-	None
Storage Length	-	-	-		-		-		-	-	
Veh in Median Storage, #	-	0	-		-	0	-		-	0	
Grade, %	-	8	-		-	-4	-		-	0	
Peak Hour Factor	80	80	80		88	88	88		65	65	65
Heavy Vehicles, %	0	0	0		0	0	0		0	1	. (
Mvmt Flow	12	129	38		19	67	23		18	106	29
Major/Minor	Minor2				Minor1			M	ajor1		
Conflicting Flow All	311	280	72		349	270	121		76	0	(
Stage 1	108	108	-		158	158	-		-	-	
Stage 2	203	172	_		191	112	-		-		
Critical Hdwy	8.7	8.1	7		6.3	5.7	5.8		4.1	-	
Critical Hdwy Stg 1	7.7	7.1			5.3	4.7	-		-	-	
Critical Hdwy Stg 2	7.7	7.1	-		5.3	4.7	-		-	-	
Follow-up Hdwy	3.5	4	3.3		3.5	4	3.3		2.2	-	
Pot Cap-1 Maneuver	562	558	980		659	679	948		1536	-	
Stage 1	860	772			879	798	-		-	-	
Stage 2	734	704			851	827	-			-	
Platoon blocked, %	701									-	
Mov Cap-1 Maneuver	496	544	980		508	661	948		1536	-	
Mov Cap-1 Maneuver	496	544	-		508	661			-	-	
Stage 1	849	762	_		868	788	-		-	-	
Stage 2	647	695	-		671	816	-			-	
Augussah	EB				WB				NB		
Approach	13.6				11.5				0.9		
HCM Control Delay, s HCM LOS	B				В						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1536	-	-	596	667	1437	-	-			
HCM Lane V/C Ratio	0.012	-	-	0.3	0.164	0.013	-	-			
HCM Control Delay (s)	7.4	0	-	13.6	11.5	7.5	0	-			
HCM Lane LOS	A	Ā	-	В	В	Α	Α	-			
HCM 95th %tile Q(veh)	0		-	1.3	0.6	0	-	-			

Int Delay, s/veh			
•			
Movement	SBL	SBT	SBR
Vol, veh/h	16	60	8
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	_	_	-
Veh in Median Storage, #	-	0	_
Grade, %	-	ŏ	_
Peak Hour Factor	89	89	89
Heavy Vehicles, %	4	1	0
Mvmt Flow	18	67	- 9
		Vi	3
Major/Minor	Major2		
Conflicting Flow All	135	0	0
Stage 1	,	-	-
Stage 2	· •	_	_
Critical Hdwy	4.14	_	-
Critical Hdwy Stg 1	-	_	-
Critical Hdwy Stg 2	-	_	_
Follow-up Hdwy	2.236	_	_
Pot Cap-1 Maneuver	1437	_	_
Stage 1	1707	_	<u>-</u>
Stage 2	_	_	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1437	-	-
Mov Cap-1 Maneuver	1437	-	•
Stage 1	-	-	-
Stage 2	-	-	•
J. 1090 Z	-	-	•
Approach	SB		
HCM Control Delay, s	1.4		
HCM LOS	•••		