TRAFFIC IMPACT AND ACCESS STUDY

PROPOSED OFFICE DEVELOPMENT
DANVERS, MASSACHUSETTS

Prepared for:

Beacon Properties, LP
Boston, Massachusetts

March 2004

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EXECUTIVE SUMMARY

PROJECT DESCRIPTION

Vanasse & Associates, Inc. (VAI) has conducted a Traffic Impact and Access Study (TIAS) for a renovation of an existing 44,000 square feet (sf) multi-story office building and a proposed new office building of 7,000 sf, as proposed by Beacon Properties, LP. (the "Proponent"). The office developments are located on Andover Street (Route 114) in Danvers, Massachusetts. This report documents existing operational and safety-related characteristics of roadways serving the development site, estimates future year operating characteristics of these roadways without the development, estimates development-related trip generation, and identifies incremental impacts of site-related traffic. The report also determines the access/egress requirements, and, where appropriate, identifies mitigating measures designed to minimize the traffic-related impacts created by the redevelopment.

BASELINE CONDITIONS

A comprehensive field inventory of existing traffic conditions on the study area roadways was conducted in August 2003. The inventory included collection of existing roadway geometrics, traffic volumes, and safety data for the following study area intersections:

- Route 114, Trailer Park Road, and Ira Toyota dealership driveway
- Route 114, Shopping Center driveway and 156 Andover Street Plaza driveway
- Route 114, Lowe's driveway, and Morton International driveway
- Route 114 and Garden Street

Baseline Traffic Volumes

In order to establish Baseline traffic-volume demands within the study area, manual turning movement counts (TMCs), and vehicle classification counts were completed in August 2003 during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods at the study area intersections. Automatic traffic recorder (ATR) counts were completed on Route 114, west of Trailer Park Road in order to record weekday daily traffic conditions in the vicinity of the project site. The August traffic volumes were found to be greater than average-month traffic conditions. On this basis, the observed volumes represent average-month

conditions and were not adjusted for this analysis. To develop 2004 Baseline conditions, the 2003 volumes were increased by 1.5 percent to reflect background traffic growth.

Under 2004 Baseline conditions, Route 114, west of Trailer Park Road was found to carry approximately 46,500 vehicles per day (vpd) on a typical weekday with 2,499 vehicles per hour (vph) during the morning peak hour and 3,630 vph during the evening peak hour.

A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 7:30 and 8:30 AM with the weekday evening peak hour observed to generally occur between 4:00 PM and 5:00 PM.

Motor Vehicle Crash Data

Motor vehicle crash information for the study area intersections was provided by the Massachusetts Highway Department (MassHighway) Safety Management/Traffic Operations Unit, for the most recent three-year period available (1999 to 2001) in order to examine motor vehicle crash trends occurring within the study area. The intersection of Route 114 with Garden Street was observed to have the highest number of accidents occurring over the three-year study period, with a total of 44 accidents or an average of approximately 15 accidents per year taking place at the intersection. The majority of these (39 of the 44, or 89 percent) were angle or rear-end-type accidents, which can be expected at a signalized intersection with a permissive left turn phase. The crash rate for this intersection is higher than the MassHighway District 4 average of 0.87 for signalized intersections. One accident over the three-year study period occurred at the two intersections that will be servicing the proposed project. No fatalities were observed at any of the study area intersections.

It should be noted that the study area intersections were recently upgraded for the Route 114 improvement project, with turning lanes added and new signal equipment installed. These improvements, which would be expected to increase safety at the intersections, were constructed in the midst of the three-year study period for accidents. It is reasonable to assume that safety conditions have been improved at the intersections, with the recent improvement project in place.

FUTURE CONDITIONS

Traffic volumes within the study area were projected to 2009, which reflects a five-year planning horizon, consistent with State and local traffic study guidelines. The future condition traffic-volume projections incorporate identified specific development by others expected to be completed by 2009, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated project-generated traffic superimposed upon these future conditions reflect 2009 Build conditions with the project.

Specific Development by Others

Officials from the Town of Danvers and Middleton and the City of Peabody were contacted to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, two projects were identified and are described below:

- ***Avalon Bay, Peabody/Danvers, Massachusetts.*** This proposed project involves the construction of a 395-unit residential apartment development. The proposed project is located on Andover Street in Peabody/Danvers. Traffic volumes expected to be generated by this project were developed by using the Environmental Notification Form[1] (ENF) prepared for the project.

- ***Brooksby Village, Peabody, Massachusetts.*** This proposed project involves the development of a 1,862-unit assisted-living complex with a component of elderly housing also provided. Approximately 600 units are currently build and occupied, with the remainder expected to be constructed prior to 2009. Traffic volumes expected to be generated by this project were taken from the traffic study[2] prepared for this development.

In addition to the above-mentioned projects, there are various residential projects that have been approved in the town of Middletown but are not expected to significantly impact traffic within the study area. These site specific developments are assumed to be included in the general background growth rate. There is also an existing 45,000 sf vacant warehouse on site. No tenant has been identified for this warehouse, nor does the current proposal include any retenanting. However, traffic volumes for the future occupancy of this warehouse were estimated and included in the No-Build and Build scenarios.

General Background Traffic Growth

After discussions with the Boston Metropolitan Planning Organization (MPO) Central Transportation Planning Staff (CTPS) and a review of MassHighway planning data, as well as a review or historical traffic counts in the vicinity of the site, an annual compounded growth rate of 1.0 percent per year can be expected resulting from regional growth. Although traffic growth is expected to remain at this level in the short term, a 1.5 percent rate was used to account for various residential projects identified by the town of Middletown. This is in addition to the background projects listed above, which, when combined, present a conservative estimate of future traffic conditions.

Roadway Improvement Projects

The Avalon Bay project has proposed improvements at the intersection of Route 114 and Trailer Park Road that include the construction of a Route 114 eastbound right-turn lane into Trailer Park Road and the addition of a second exiting lane on Trailer Park Road.

No other improvement projects are proposed for the five-year horizon period studied for the project impacts.

No-Build Traffic Volumes

The 2009 No-Build traffic-volume networks were developed by applying a 1.5 percent per year compounded growth factor to Baseline traffic volumes and adding the expected traffic volumes to be generated by the specific background developments identified.

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[1]Avalon Village, Environmental Notification Form; VAI July 2002.

[2]Brooksby Village, Traffic Study; Highway & Traffic Signal Design, Inc.; February 1998.

Site-Generated Traffic

The rate at which office uses generate vehicle trips depends largely on size, employee density, population densities of adjacent communities, travel time to these communities, transit availability, car/van pooling, and scheduled start-up and release times. Essentially, the working trip is somewhat inelastic and will be made independent of external factors. The trips generated for the existing building and the proposed building were developed using the ITE *Trip Generation*[3] manual and trip-generation equations for ITE Land Use Code (LUC) 710, General Office Building.

The small office building is expected to generate 11 vehicle trips (10 entering and 1 exiting) and 10 vehicle trips (2 entering and 8 exiting) during the respective weekday morning and evening peak hours, with 78 daily trips expected. The retenanting of the larger office building is expected to generate 69 vehicle trips (61 entering and 8 exiting) and 66 vehicle trips (11 entering and 55 exiting) during the weekday morning and evening peak hours respectively, with 486 daily trips expected. Together the retenanting of the existing office building and the occupancy of the small office building are expected to generate approximately 80 vehicle trips (71 vehicles entering and 9 vehicles exiting) and 76 vehicle trips (13 vehicles entering and 63 vehicles exiting) during the weekday morning and weekday evening peak-hour periods, respectively. During a typical weekday, the proposed project is expected to generate approximately 554 vehicle trips (277 vehicles entering and 277 vehicles exiting).

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of generated trips to and from the proposed office development was determined based on Journey-to-Work data from the most recent U.S. Census along with a review of existing travel patterns at study area intersections. Due to the site location, data from Danvers and Peabody were reviewed. In general, 21 percent and 38 percent of project-related traffic was assigned to/from the north and south respectively, on either I-95 or Route 1; 5 percent to/from the west on Andover Street; 32 percent assigned to/from the east on Andover Street; and 4 percent to/from the north on Garden Street.

TRAFFIC OPERATIONS ANALYSIS

Level-of-service analyses were conducted for 2004 Baseline, 2009 No-Build, and 2009 Build conditions for intersections within the study area. This analysis indicated that the proposed project would not result in the degradation of level-of-service at the study intersections from No-Build conditions. Improvements at the Trailer Park Road and Route 114 intersection constructed for the Avalon Bay project serve to meet demand from the proposed project. The proposed project was not shown to result in a significant increase in traffic volumes on the adjacent roadway network over future conditions without the project.

Transportation Demand Management Program

The following measures have been identified to mitigate the project's peak hour impacts and improve intersection operation. The project proponent is committed to working with the Town of Danvers to implement these measures.

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[3] *Trip Generation,* Seventh Edition; Institute of Transportation Engineers; Washington, DC; 2003.

TDM Promotion

In establishing a TDM program, an education process will be required. Initially, the project proponent promotional work will be significant in pointing out the benefits of a multi-element TDM program. Several other on-site elements of other successfully programs which will be promoted include the following trip reduction strategies:

- ***Flexible Work Hours*** - Flexible work hours will decrease peak-hour demand and, while not eliminating vehicle trips, is nevertheless effective to reduce impact.

- ***Staggered Work Hours*** - Staggered work hours, whereby as little as fifteen minute increments between employee group arrival and departure times, would also reduce the pronounced commuter peaks of a single work day schedule.

- ***Telecommuting*** - Telecommuting creates an opportunity to eliminate work trips entirely. While its general applicability is not expected, its use in combination with other measures is effective in reducing commuter traffic impacts.

- ***Preferred Parking*** - Preferred parking for carpoolers increases the attractiveness of on-site ridesharing.

CONCLUSION

The proposed retenanting of the existing 44,000 sf office building and the proposed new office building of 7,000 sf are together expected to result in a total increase of 80 morning peak-hour vehicle trips (71 entering and 9 exiting), 76 (13 entering and 63 exiting) evening peak-hour vehicle trips, and 554 daily vehicle trips (277 vehicles entering and 277 vehicles exiting).

Access for the retenanted office building will be provided by way of a single driveway onto Trailer Park Road and the existing access through the Morton International Driveway. The existing office building parking lot is adjacent to Trailer Park Road, therefore the office building trips are expected to primarily use the Trailer Park Road access. The small office building trips are expected to exclusively use the Morton International Driveway.

An analysis of traffic operations at the study area intersections indicates that the proposed project results in a minor decrease in level-of-service at one location (LOS B to LOS C) and no change at the other locations studied. The improvements at the Trailer Park Road and Route 114 intersection constructed for the Avalon Bay project serve to meet demand by the proposed project. Minor timing adjustments at this traffic signal can result in improved operation and reduced side street delays. In general, the majority of the intersection approaches were shown to operate at LOS D or better during the peak periods, with the exception of the intersection of Route 114 and Morton International driveway, which was shown to currently operate at a LOS F during both weekday morning and evening peak hours, independent of the proposed project. Due to the low traffic volume expected with the smaller office building, impacts on Route 114 traffic flow are expected to be minor, and similar to those of other existing driveways currently exiting onto the roadway.

The retenanting of the existing office building is expected to have minor impacts on Route 114 traffic flow, since the majority of project traffic will be oriented to/from Route 1 and I-95. With implementation of the TDM program to further reduce peak-hour impacts, the development can be accommodated with minimal impact on the surrounding roadway system.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has been retained to determine the traffic impacts associated with the propose renovation of an existing 44,000 sf multi-story office building and a proposed new office building of 7,000 sf. The office developments are located on Route 114 (Andover Street) in Danvers, in northeastern Massachusetts. This study identifies and analyzes existing and future traffic volumes, reviews the potential transportation impacts of the proposed development, and recommends mitigation measures necessary to accommodate redevelopment of the site.

PROJECT DESCRIPTION

The project, as currently planned, will consist of the retenanting of an existing 44,000 sf multi-story office building and a proposed new office building of 7,000 sf on the site of the former Morton International guardhouse. The existing office building has been vacant approximately four years. Access to the 44,000 sf office building development will be via a connection to an existing roadway to the west (Trailer Park Road) and access to the proposed 7,000 sf office development will be via the existing Morton International driveway. Figure 1 illustrates the location of the site in relation to the local roadway network.

STUDY METHODOLOGY

This study was conducted in three distinct stages. The first stage involved an assessment of existing traffic conditions in the study area and included an inventory of roadway geometrics, observations of traffic flow, and collection of daily and peak-period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the project were assessed along with future traffic demands due to expected traffic growth independent of the project. A five-year time horizon was selected for analyses consistent with state guidelines for the preparation of traffic studies. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity and/or traffic safety issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

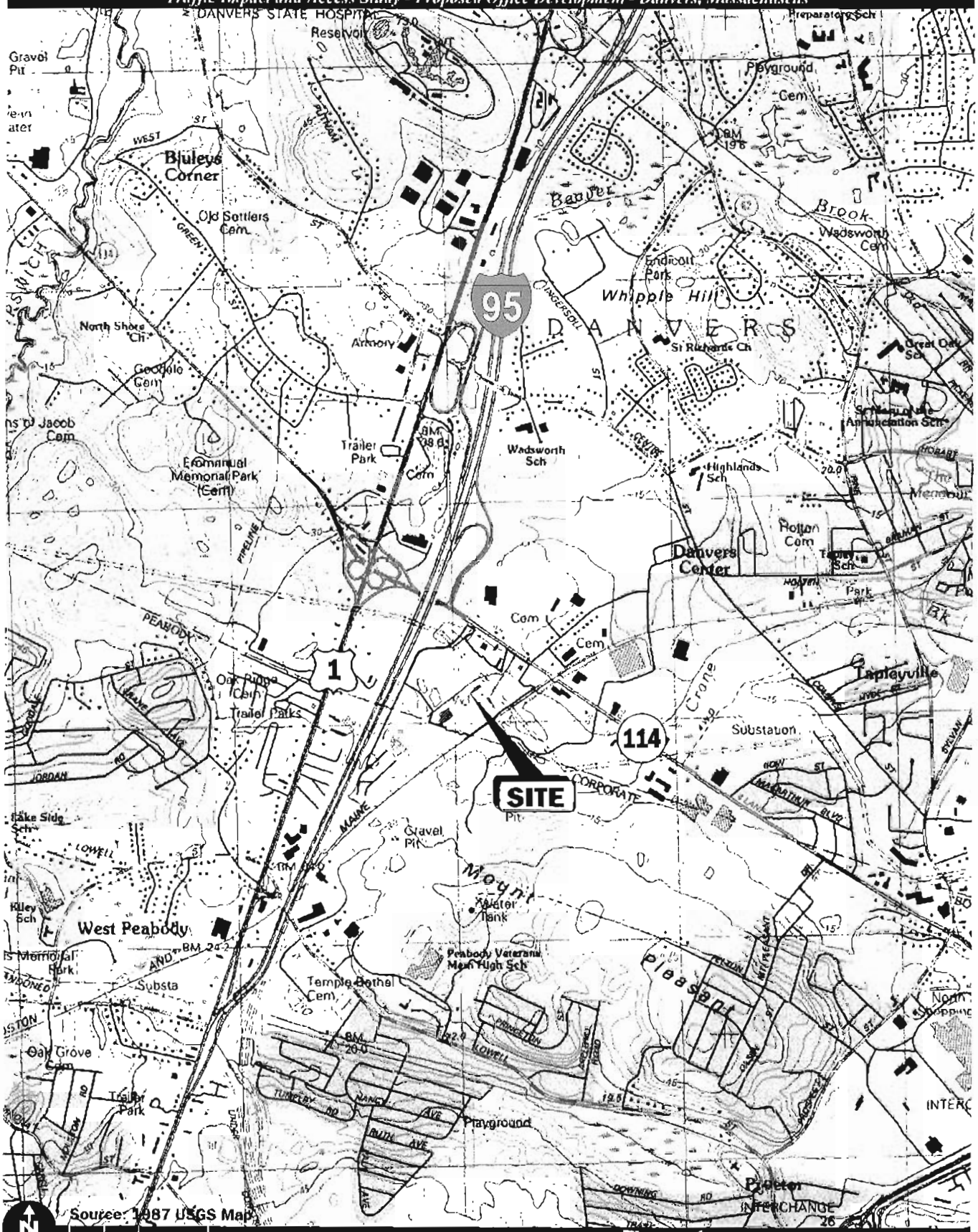

Figure 1

Vanasse & Associates, Inc.

Site Location Map

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BASELINE CONDITIONS

A comprehensive field inventory of traffic conditions on the study area facilities was conducted in August 2003. The field investigation consisted of an inventory of existing roadway geometrics, traffic volumes, and operating characteristics.

DESCRIPTION OF PROJECT STUDY AREA

The project study area was determined based upon a review of operating characteristics on Route 114 and expected impacts from the project. The study area is and listed below:

- Route 114, Trailer Park Road, and Ira Toyota dealership driveway
- Route 114, Shopping Center, and 156 Andover Street Plaza driveway
- Route 114, Lowe's driveway, and Morton International driveway
- Route 114 and Garden Street

Geometric and Traffic Control

Intersection geometry and lane usage was obtained from field inventory and roadway plans of the area.

Roadways

Route 114 (Andover Street)

Route 114 is a major east/west highway running from Lawrence through Danvers and terminating in Marblehead. The section of Route 114 within the study area functions as a suburban arterial roadway carrying two lanes of traffic per direction with exclusive left- and right-turn lanes at major intersections.

Route 114 was recently reconstructed between the I-95 interchange to just east of Garden Street. New traffic signal equipment was installed at several of the study area intersections and the Route 114 corridor was widened to three through lanes per direction westbound, with two through lanes eastbound. Turning lanes were incorporated at major intersections. Land use on the corridor is a mix of retail and commercial, with residential set back behind the frontage line of development. The speed limit for the roadway is posted at 40 miles per hour (mph).

Trailer Park Road

This local roadway provides access to a neighborhood of manufactured homes and new apartment buildings in Peabody and Danvers. The road extends south from Route 114 and terminates in the neighborhood of manufactured homes, approximately 0.5 mile from Route 114. The road is under town jurisdiction.

Intersections

Route 114, Trailer Park Road, and Ira Toyota Dealership Driveway

Trailer Park Road and Ira Toyota dealership driveway intersect Route 114 from the south and north, respectively, to form this four-legged, signalized intersection. The Route 114 eastbound approach consists of an 11-foot wide exclusive left-turn lane, an 11-foot wide through travel lane and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. The Route 114 westbound approach consists of an 11-foot wide exclusive left-turn lane, two 12-foot wide through travel lanes and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. Directional travel along Route 114 is separated by a double-yellow centerline. The Trailer Park Road approach consists of a general-purpose travel lane, with marked shoulder provided. The Ira Toyota dealership driveway approach consists of a 19-foot wide general-purpose travel lane, with marked shoulder provided. Land use in the vicinity of the intersection consists of the Ira Toyota dealership and the Exxon gas station.

Route 114, Shopping Center Driveway, and 156 Andover Street Plaza Driveway

The 156 Andover Street Plaza driveway and the Shopping Center driveway intersect Route 114 from the south and north, respectively, to form this four-legged, signalized intersection. The Route 114 eastbound approach consists of an 11-foot wide exclusive left-turn lane, an 12-foot wide through travel lane and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. The Route 114 westbound approach consists of an 11-foot wide exclusive left-turn lane, two 12-foot wide through travel lanes and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. Directional travel along Route 114 is separated by a double-yellow centerline. The 156 Andover Street Plaza driveway is approximately 35 feet wide with no pavement markings present. The Shopping Center driveway approach consists of one shared left-turn/through travel lane and an exclusive right-turn travel lane, with a marked shoulder provided. Land use in the vicinity of the intersection consists of commercial and retail land uses.

Route 114, Lowe's Driveway, and Morton International Driveway

The Morton International driveway and the Lowe's Driveway intersect Route 114 from the south and north to form this four-legged, unsignalized intersection under STOP control. The Route 114 eastbound approach consists of one 12-foot wide left-turn lane, one 12-foot wide through travel lane and one 12-foot wide through/right turn lane with a marked shoulder provided. The Route 114 westbound approach provides one 11-foot wide shared left-turn/through lane, one 12-foot wide through travel lane and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. Directional travel along Route 114 is separated by a double-yellow centerline. Morton International driveway consists of an exclusive left-turn lane and an exclusive right-turn lane. Vehicles exiting Morton International driveway are under STOP control. The Lowe's driveway approach is a

right-turn in only driveway. Land use in the vicinity of the intersection consists of office and commercial properties and the proposed site.

Route 114 and Garden Street

The Shopping Center driveway and Garden Street intersect Route 114 from the south and north, respectively, to form this four-legged, signalized intersection. The Route 114 eastbound approach consists of an 11-foot wide exclusive left-turn lane, an 12-foot wide through travel lane and a 12-foot wide shared right-turn/through travel lane, with marked shoulder provided. The Route 114 westbound approach consists of an 11-foot wide exclusive left-turn lane, an 11-foot wide through travel lanes and a 11-foot wide shared right-turn/through travel lane, with marked shoulder provided. Directional travel along Route 114 is separated by a double-yellow centerline. The Shopping Center driveway approach consists of shared left-turn/through travel lane and a shared right-turn/through travel lane. The Garden Street approach consists of a shared left-turn/through travel lane and an exclusive right-turn lane with marked shoulder provided. Land use in the vicinity of the intersection consists of commercial and retail uses.

TRAFFIC VOLUMES

To establish base traffic conditions within the study area, manual turning movement and vehicle classification counts were obtained for the intersections listed below. Peak-period turning movement counts were conducted during the weekday morning peak period (7:00 AM to 9:00 AM) and during the weekday evening peak period (4:00 to 6:00 PM) at the following locations:

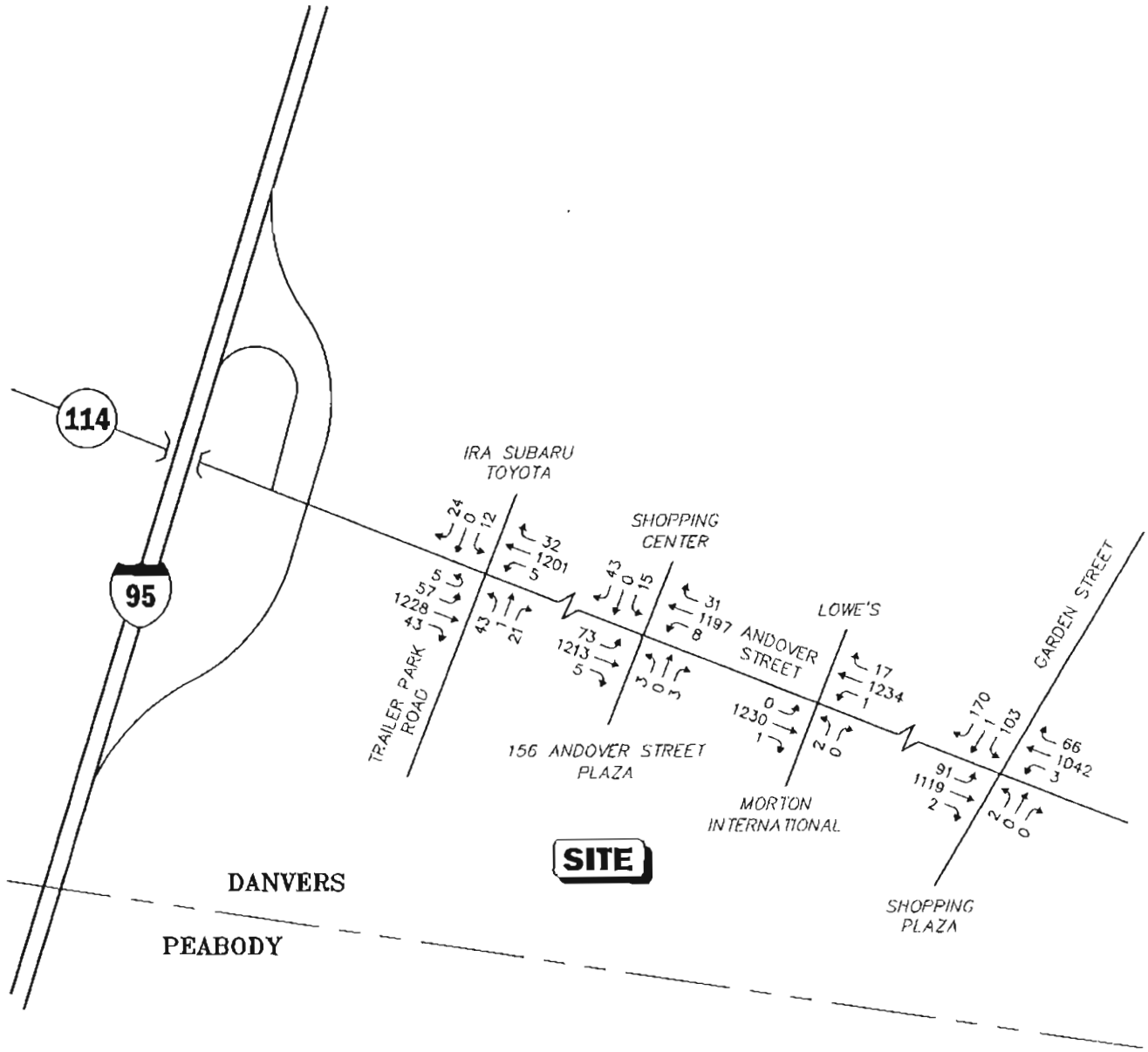
- Route 114, Trailer Park Road, and Ira Toyota dealership driveway
- Route 114 and Lowe's driveway
- Route 114 and Morton International (site) driveway
- Route 114 and Garden Street

Analysis of the peak-period traffic counts indicated that the weekday morning peak hour generally occurs between 7:30 and 8:30 AM and the weekday evening peak hour occurs between 4:00 PM and 5:00 PM. The individual intersection peak hours were used in the analysis to present a "worst case" condition. The traffic count worksheets are provided in the Appendix.

Seasonal Adjustments

To evaluate the potential for seasonal fluctuation of traffic volumes on Route 114, historical traffic data were reviewed for the nearest Massachusetts Highway Department (MassHighway) permanent count station located on Route 1 on the Danvers/Peabody line. Traffic volumes from the month of August at these locations for the past year have been greater than the average-month conditions, and therefore the traffic volumes collected for this study were not adjusted for seasonal variation.

To develop 2004 baseline conditions, the 2003 volumes were increased by a factor of 1.015 to represent annual growth occurring since the counts were conducted. Table 1 provides a summary of the baseline traffic-volume data. The 2004 baseline traffic-volume networks are shown in Figures 2 and 3 for the weekday morning and weekday evening peak-hour periods, respectively.



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 2

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2004 Baseline
Weekday Morning
Peak Hour Traffic Volumes

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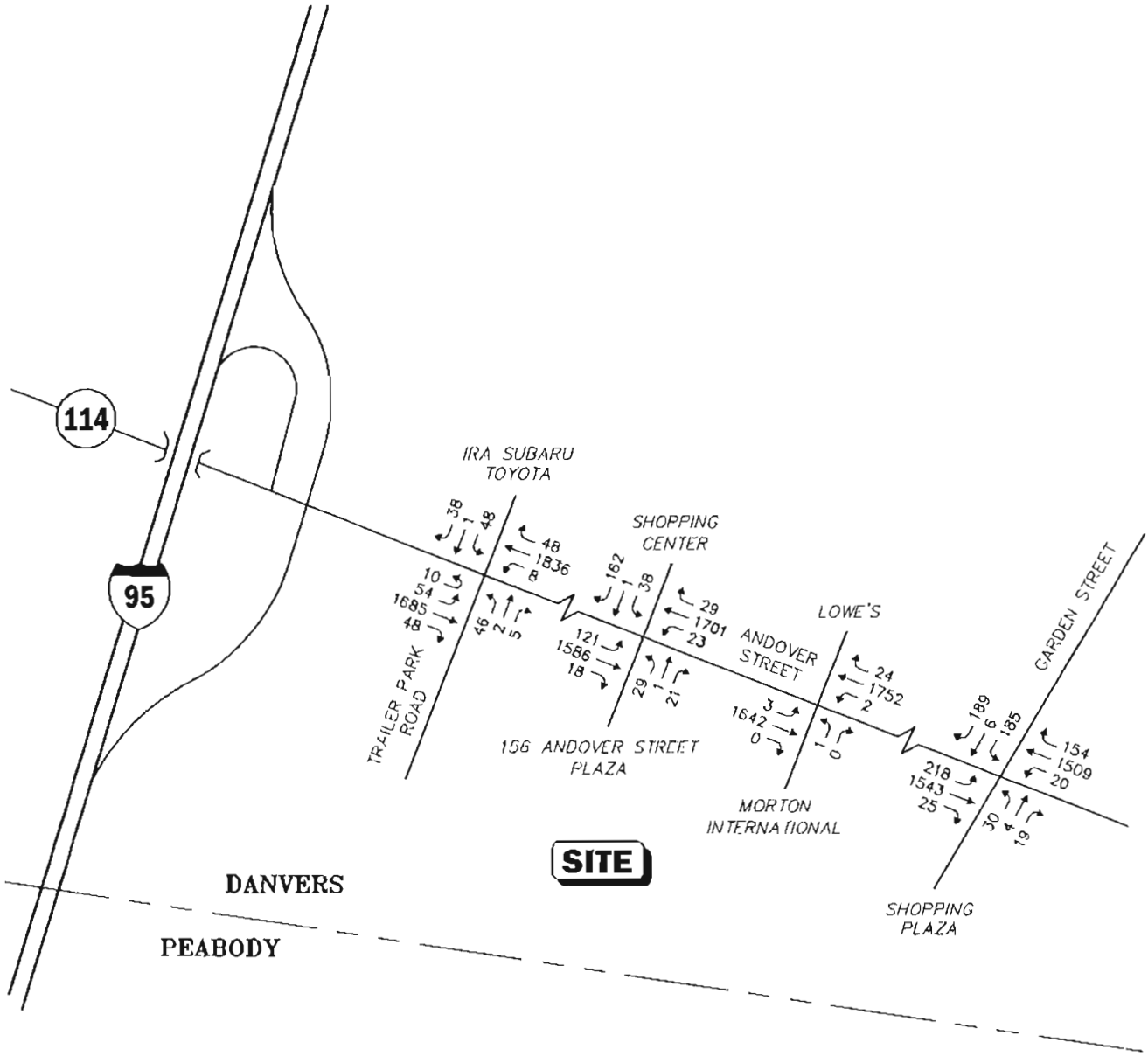

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2004 Baseline
Weekday Evening
Peak Hour Traffic Volumes

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Table 1
BASELINE TRAFFIC-VOLUME SUMMARY[a]

Location	Weekday	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Traffic Volume[b]	Traffic Volume[c]	K Factor[d]	Directional Distribution[e]	Traffic Volume	K Factor	Directional Distribution
Route 114, east of Trailer Park Road	46,500	2,499	5.4	50% EB	3,630	7.8	52% WB

Source: Traffic Count Data collected by VAI, August 2003.
[a]Two-way traffic volume.
[b]Daily traffic expressed in vehicles per day (vpd).
[c]Expressed in vehicles per hour (vph).
[d]Percent of daily traffic volumes which occurs during the peak hour.
[e]Percent of peak-hour volume in the predominant direction of travel, WB = Westbound; EB = eastbound.

Route 114, east of Trailer Park Road was observed to carry approximately 46,500 vpd. Weekday morning peak hour traffic on Route 114 was recorded as 2,499 vph, while 3,630 vph were recorded during the weekday evening peak hour.

ACCIDENT HISTORY

Accident data for the study area intersections was provided by the MassHighway. Data for the most recent three-year period were reviewed to determine accident trends occurring within the study area. Table 2 summarizes the reported accident data by intersection.

Table 2
ACCIDENT DATA SUMMARY[a]

	Route 114 Ira Toyota/ Trailer Park Road	Route 114/ Morton International	Route 114 Lowe's	Route 114/ Garden Street
Year:				
1999	1	0	0	22
2000	0	0	0	8
2001	0	0	0	14
Total	1	0	0	44
Average[b]	0.33	0.00	0.00	14.67
Crash Rate[c]	0.02	0	0	0.94
Significant[d]	No	No	No	Yes
Type:				
Angle	0	0	0	12
Rear-End	1	0	0	27
Head-On	0	0	0	2
Sideswipe	0	0	0	0
Run-Off-Road/Hit Fixed Object	0	0	0	0
Pedestrian	0	0	0	0
Unknown	0	0	0	3
Total	1	0	0	44
Time:				
Weekday 7:00 AM to 9:00 AM	0	0	0	6
Weekday 4:00 PM to 6:00 PM	0	0	0	4
Remainder of Day	1	0	0	34
Total	1	0	0	44
Pavement Conditions:				
Dry	1	0	0	22
Wet	0	0	0	18
Snow	0	0	0	0
Icy	0	0	0	2
Other	0	0	0	0
Unknown	0	0	0	2
Total	1	0	0	44
Day of Week:				
Monday through Friday	0	0	0	28
Saturday and Sunday	1	0	0	16
Total	1	0	0	44
Severity:				
Property Damage Only	0	0	0	25
Personal Injury	1	0	0	18
Fatal Accident	0	0	0	0
Hit and Run	0	0	0	1
Other	0	0	0	0
Total	1	0	0	44

[a]Source: MassHighway.
[b]Average Accident over three-year period.
[c]Crash rate per Million entering vehicles (mev).
[d]Yes if rate >0.87 for signalized intersections, >0.63 for unsignalized intersections.

As shown in Table 2, the intersection of Route 114 with Garden Street was observed to have the highest number of accidents occurring over the three-year study period, with a total of 44 accidents or an average of approximately 15 accidents per year taking place at the intersection. The majority of these (39 of the 44, or 89 percent) were angle or rear-end-type accidents, which can be expected at a signalized intersection with a permissive left turn phase. The crash rate for this intersection is higher than the MassHighway District 4 average of 0.87 for signalized intersections. One accident over the three-year study period occurred at the two intersections that will be servicing the proposed project. No fatalities were observed at any of the study area intersections.

It should be noted that the study area intersections were recently upgraded for the Route 114 improvement project, with turning lanes added and new signal equipment installed. These improvements, which would be expected to increase safety at the intersections, were constructed in the midst of the three-year study period for accidents. It is reasonable to assume that safety conditions have been improved at the intersections, with the recent improvement project in place.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2009, which reflects a five-year planning horizon. Independent of the proposed project, traffic volumes on the roadway network in the year 2009 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated site-generated traffic volumes superimposed upon this 2009 No-Build traffic network reflect the 2009 Build conditions with the project.

BACKGROUND TRAFFIC GROWTH

Officials from the Towns of Danvers and Middleton and the City of Peabody were contacted to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, two projects were identified and are described below:

- ***Avalon Bay, Peabody/Danvers, Massachusetts.*** This proposed project involves the construction of a 395-unit residential development. The proposed project is located on Trailer Park Road off of Route 114 in Peabody/Danvers. Traffic volumes expected to be generated by this project were developed by using the Environmental Notification Form[4] (ENF) prepared for the project.

- ***Brooksby Village, Peabody, Massachusetts.*** This proposed project involves the development of a 1,862-unit assisted-living complex with a component of elderly housing also provided. Approximately 600 units are currently built and occupied, with the remainder expected to be constructed prior to 2009. Traffic volumes expected to be generated by this project were taken from the traffic study[5] prepared for this development.

[4]Avalon Village, Environmental Notification Form; VAI July 2002.
[5]Brooksby Village, Traffic Study; Highway & Traffic Signal Design, Inc.; February 1998.

In addition to the above-mentioned projects, there are various residential projects that have been approved in the town of Middletown but are not expected to significantly impact traffic within the study area. These site specific developments are assumed to be included in the general background growth rate. There is also an existing 45,000 sf vacant warehouse on site. No tenant has been identified for this warehouse, nor does the current proposal include any retenanting. However, traffic volumes for the future occupancy of this warehouse were estimated and included in the No-Build and Build scenarios.

General Background Traffic Growth

After discussions with the Boston Metropolitan Planning Organization (MPO) Central Transportation Planning Staff (CTPS) and a review of MassHighway planning data, as well as a review or historical traffic counts in the vicinity of the site, an annual compounded growth rate of 1.0 percent per year can be expected resulting from regional growth. Although traffic growth is expected to remain at this level in the short term, a 1.5 percent rate was used to account for various residential projects identified by the town of Middletown. This is in addition to the background projects listed above, which, when combined, present a conservative estimate of future traffic conditions.

Roadway Improvement Projects

The Avalon Bay project has proposed improvements at the intersection of Route 114 and Trailer Park Road that include the construction of a Route 114 eastbound right-turn lane into Trailer Park Road and the addition of a second exiting lane on Trailer Park Road.

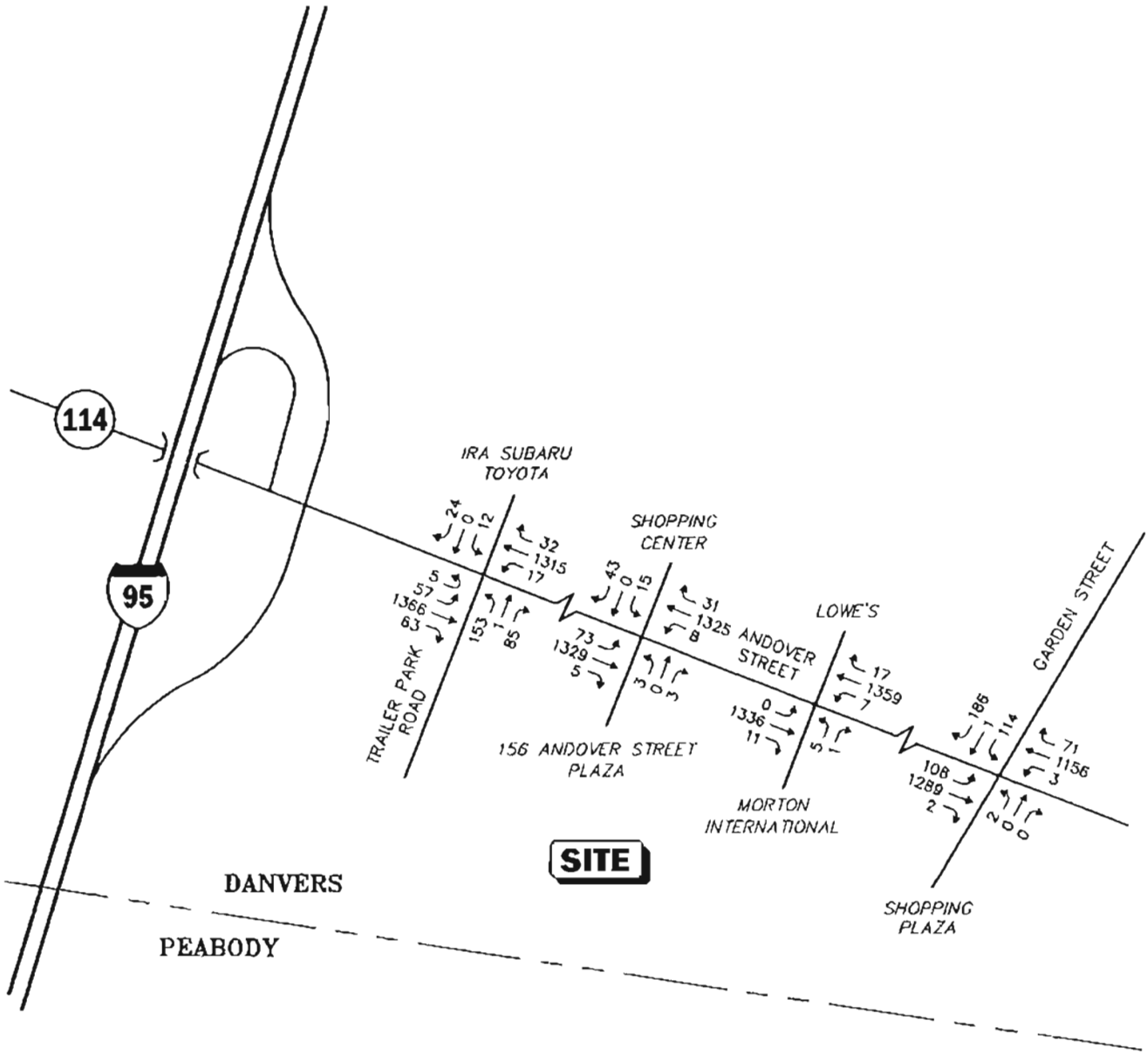
No other improvement projects are proposed for the five-year horizon period studied for the project impacts.

The 2009 No-Build peak-hour traffic-volume networks were developed by applying the 1.5 percent annual growth rate to the 2004 condition traffic volumes and adding the traffic projections from the identified background developments. These future No-Build traffic-volume networks are shown in Figures 4 and 5 for the weekday morning and weekday evening peak-hour periods, respectively.

SITE-GENERATED TRAFFIC

The rate at which office uses generate vehicle trips depends largely on size, employee density, population densities of adjacent communities, travel time through these communities, transit availability, car/van pooling, and scheduled start-up and release times. Essentially, the working trip is somewhat inelastic and will be made independent of external factors. The trips generated for the existing building and the proposed building were developed using the ITE *Trip Generation* manual[6] and trip-generation equations for ITE Land Use Code (LUC) 710, General Office Building. Table 3 summarizes the trips generated by the existing building and the proposed project.

[6] *Trip Generation*, Seventh Edition; Institute of Transportation Engineers; Washington, DC; 2003.



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 4

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2008 No-Build Weekday Morning Peak Hour Traffic Volumes

R:\3905\Feb\3905n115.dwg 2/18/2004 1:48:06 PM EST

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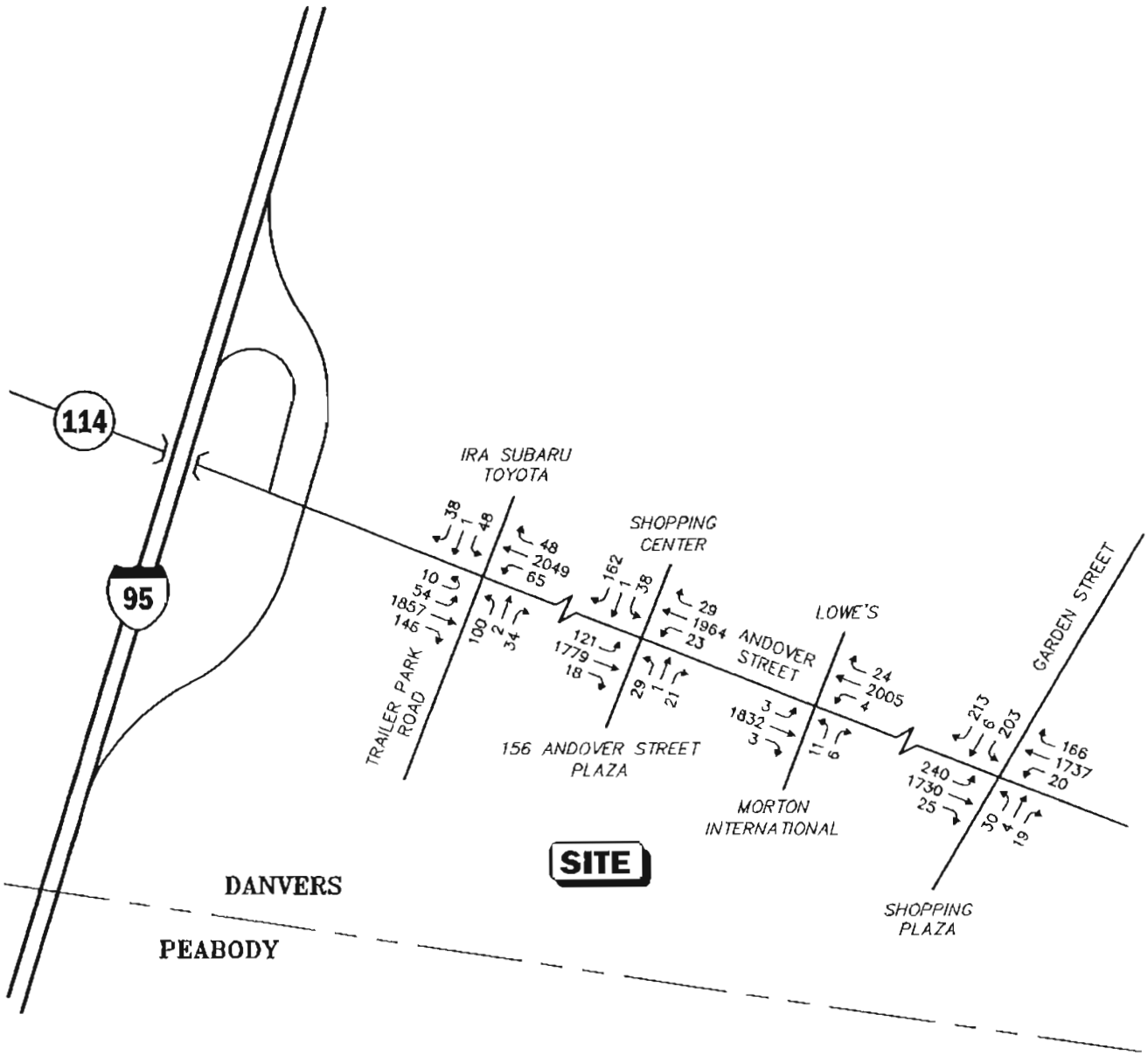

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 5

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2008 No-Build Weekday Evening Peak Hour Traffic Volumes

R:\3905\Feb\3905nf16.dwg 2/18/2004 1:24:10 PM EST

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Table 3
TRIP-GENERATION SUMMARY[a]

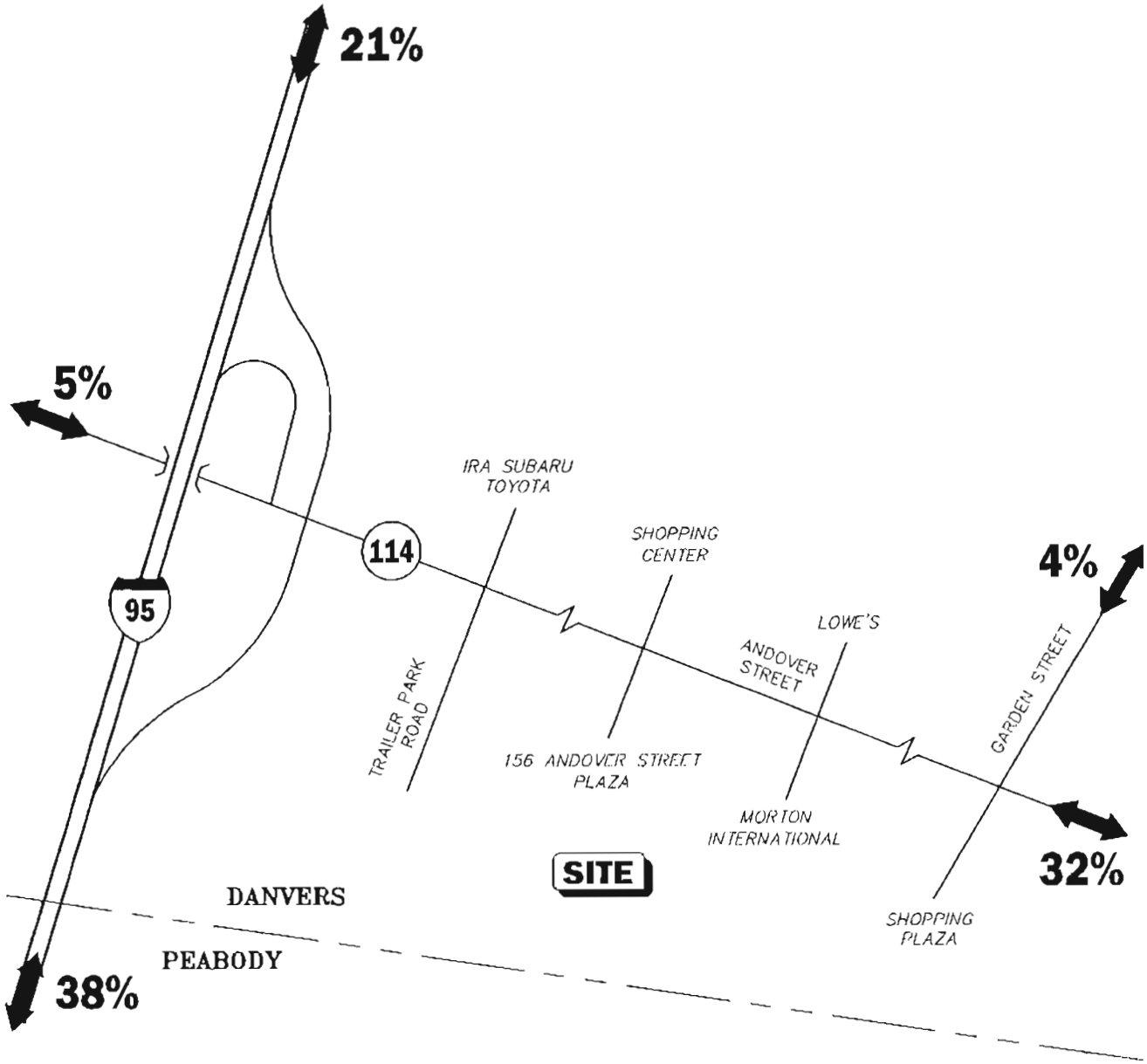
Time Period/ Direction of Travel	Retenanted Office Building Vehicle Trips[b]	Small Office Building Vehicle Trips[c]	Total Vehicle Trips
Weekday Morning:[d]			
Entering	61	10	71
Exiting	8	1	9
Total	69	11	80
Weekday Evening:[d]			
Entering	11	2	13
Exiting	55	8	63
Total	66	10	76
Weekday Daily Total:[e]			
Entering	243	34	277
Exiting	243	34	277
Total	486	78	554

[a]Based on ITE LUC 710, General Office Building.
[b]Based on 44,000 sf.
[c]Based on 7,000 sf.
[d]In vehicles per hour.
[e]In vehicles per day.

The small office building is expected to generate 11 vehicle trips (10 entering and 1 exiting) and 10 vehicle trips (2 entering and 8 exiting) during the respective weekday morning and evening peak hours, with 78 daily trips expected. The retenanting of the larger office building is expected to generate 69 vehicle trips (61 entering and 8 exiting) and 66 vehicle trips (11 entering and 55 exiting) during the weekday morning and evening peak hours respectively, with 486 daily trips expected. Together the retenanting of the existing office building and the occupancy of the small office building are expected to generate approximately 80 vehicle trips (71 vehicles entering and 9 vehicles exiting) and 76 vehicle trips (13 vehicles entering and 63 vehicles exiting) during the weekday morning and weekday evening peak-hour periods, respectively. During a typical weekday, the proposed project is expected to generate approximately 554 vehicle trips (277 vehicles entering and 277 vehicles exiting).

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of generated trips to and from the proposed Office development was determined based on Journey-to-Work data from the most recent U.S. Census along with a review of existing travel patterns at study area intersections. Due to the site location, data from Danvers and Peabody were reviewed. Based on this information, the new site-generated traffic volumes were distributed on the study area roadway network according to the distribution shown in Table 4 and graphically depicted on Figure 6. The site-generated traffic volumes for the weekday morning and weekday evening peak-hour periods are shown on Figures 7 and 8, respectively.



Not To Scale

Figure 6

Trip Distribution Map

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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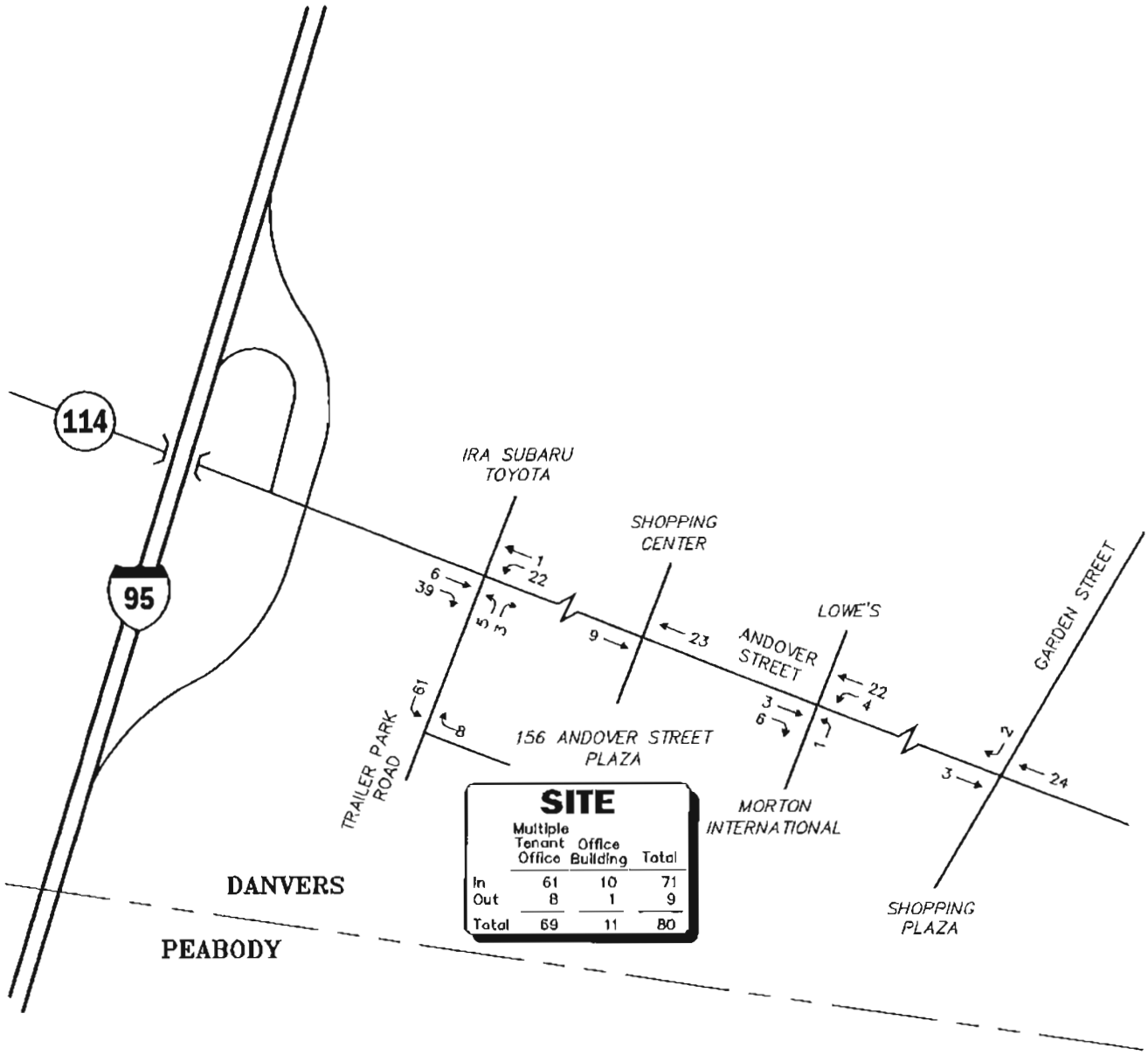

Not To Scale

Figure 7

Vanasse & Associates, Inc.
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Site Generation
Weekday Morning
Peak Hour Traffic Volumes

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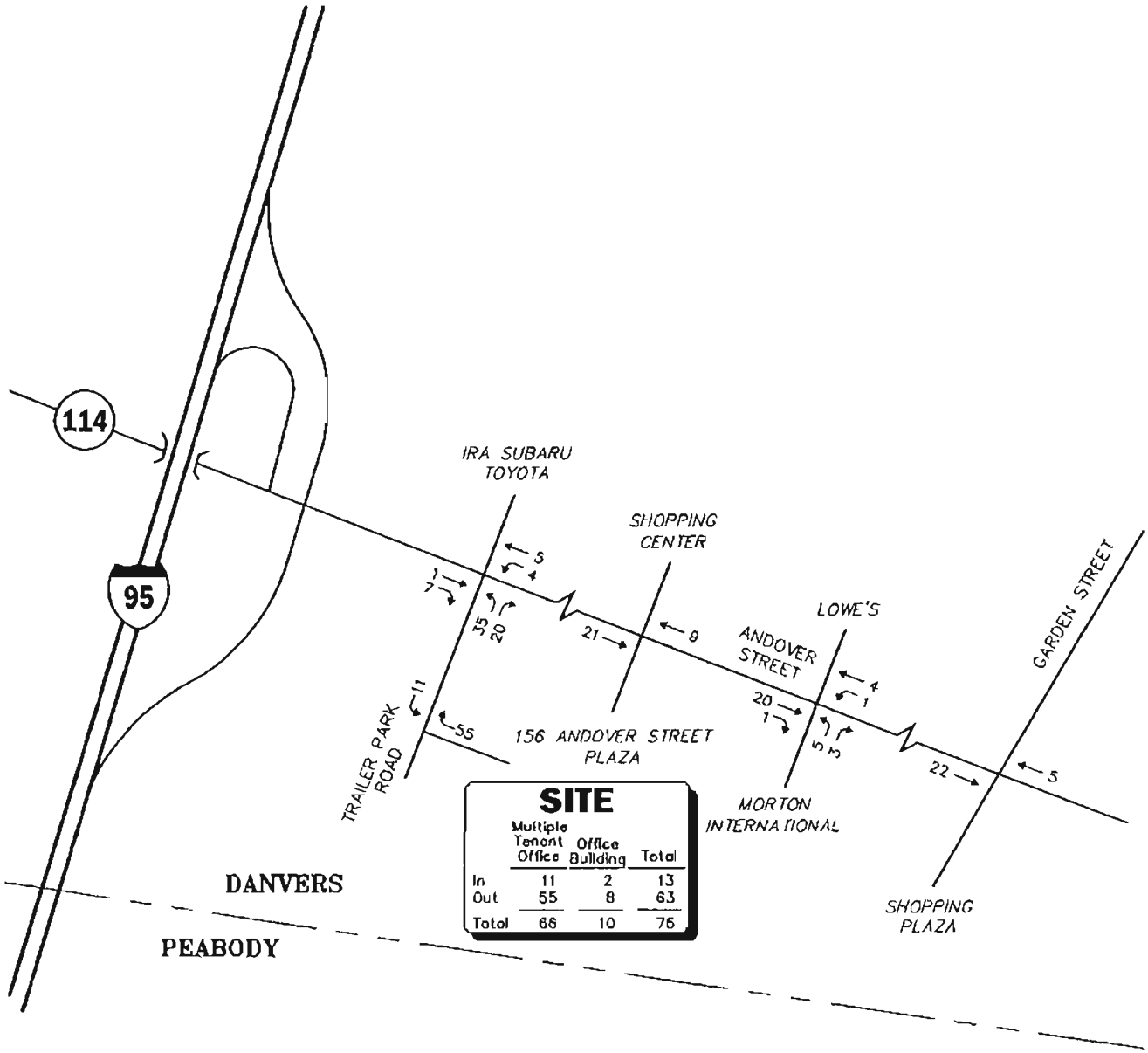

Not To Scale

Figure 8

Vanasse & Associates, Inc.
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Site Generation
Weekday Evening
Peak Hour Traffic Volumes

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Table 4
VEHICLE TRIP-DISTRIBUTION SUMMARY

Roadway	Direction (to/from)	Percent
Route 114	West	5
Route 114	East	32
Garden Street	North	4
I-95/Route 1	North	21
I-95/Route 1	South	38
TOTAL		100

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

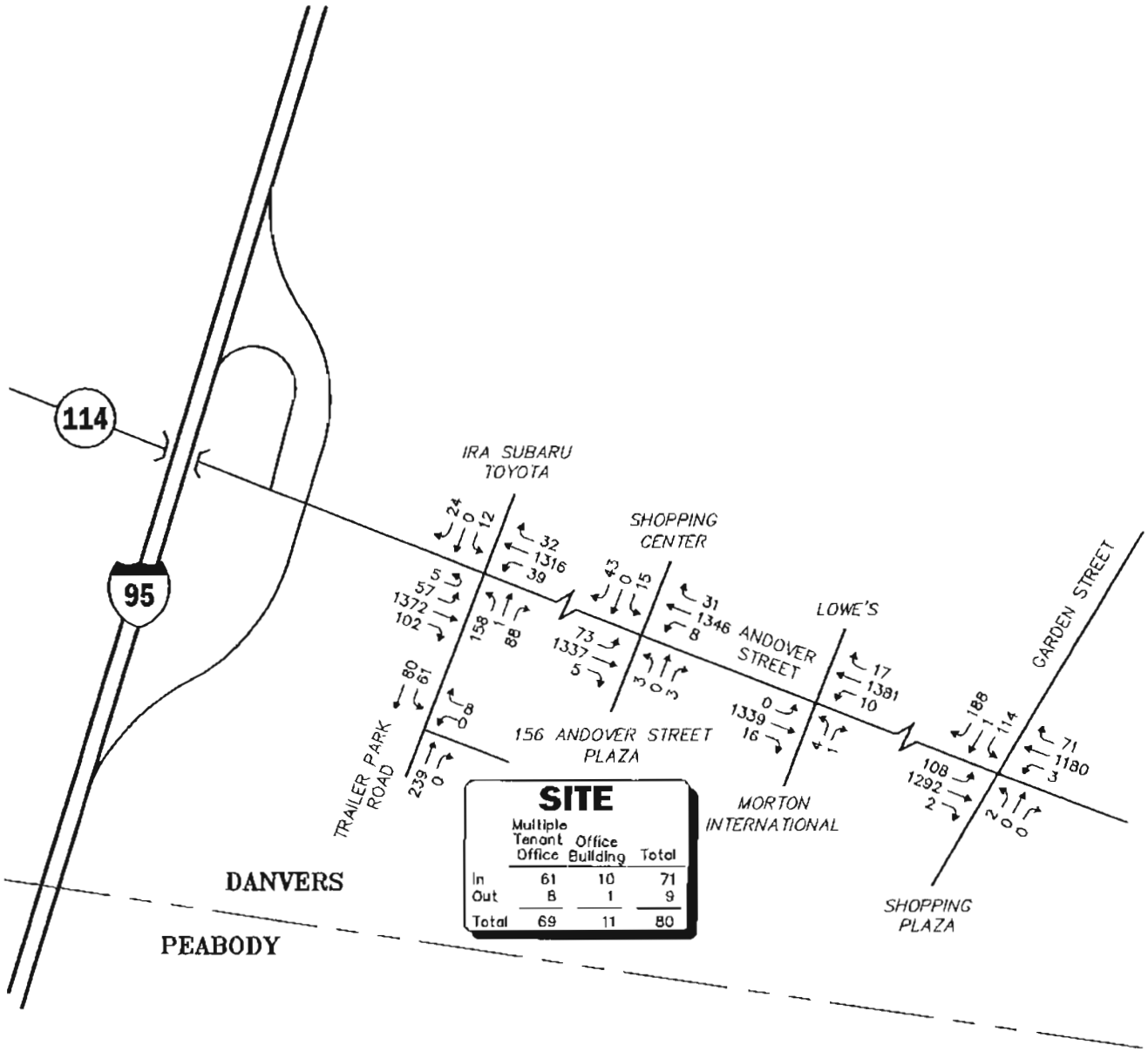
The 2009 Build condition networks consist of the 2009 No-Build traffic volumes with the anticipated site-generated traffic added to them. The 2009 Build weekday morning and weekday evening peak-hour traffic-volume networks are graphically depicted on Figures 9 and 10, respectively.

A summary of peak-hour projected traffic-volume changes in the site proximity is shown in Table 5. These volumes are based on the expected increases from the proposed development.

Table 5
TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2009 No-Build	2009 Build	Percent Increase over No-Build	Volume Increase over No-Build
Route 114, west of Trailer Park Road:				
Weekday Morning	2,988	3,039	1.7	51
Weekday Evening	4,264	4,312	1.1	48
Route 114, east of Garden Street:				
Weekday Morning	2,633	2,660	1.0	27
Weekday Evening	3,875	3,902	0.7	27

As shown in Table 5, project-related traffic-volume increases on Route 114 are anticipated to range between 0.7 and 1.7 percent during the peak hour time periods studied.



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 9

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2008 Build
Weekday Morning
Peak Hour Traffic Volumes

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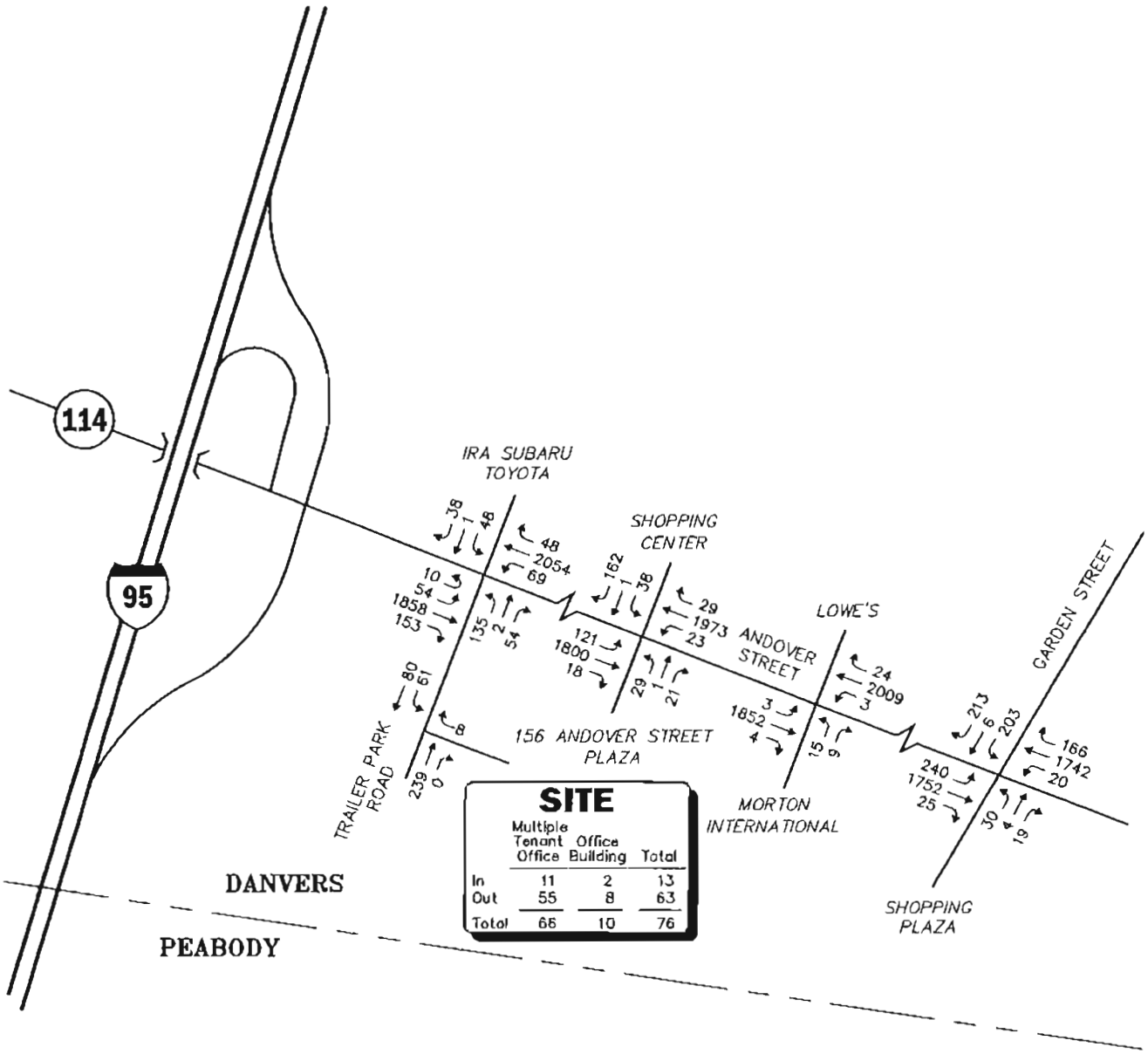

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 10

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2008 Build
Weekday Evening
Peak Hour Traffic Volumes

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TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity analyses were conducted under Baseline, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them.

METHODOLOGY

Level of Service

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing 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.

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the *Highway Capacity Manual 2000* (HCM).[7] Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the affects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the HCM 2000. Table 6 summarizes the relationship between level of service and average control delay.

Table 6
LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[a]

Level of Service	Average Control Delay (Seconds per Vehicle)
A	≤10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	>50.0

[a]Source: *Highway Capacity Manual 2000*; Transportation Research Board; Washington, DC; 2000; Exhibit 17-2.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than LOS A.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.

[7] *Highway Capacity Manual 2000*, Transportation Research Board; Washington, DC: 2000.

- *LOS F* describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections are calculated using the operational analysis methodology of the HCM 2000. This method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay. Level-of-service designations are based on the criterion of control or signal delay per vehicle. Control or signal delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. The tabulated control delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections. Table 7 summarizes the relationship between level of service and control delay.

Table 7
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS[a]

Level of Service	Control (Signal) Delay per Vehicle (Seconds)
A	≤10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

[a]Source: *Highway Capacity Manual 2000*; Transportation Research Board; Washington, DC; 2000; Exhibit 16-2.

ANALYSIS RESULTS

Level-of-service analyses were conducted for 2004 Baseline, 2009 No-Build, and 2009 Build conditions for intersections within the study area. 2009 No-Build and Build operations were conducted assuming mitigation improvements by others. The results of the intersection capacity analyses are summarized in Table 8.

Table 8
INTERSECTION CAPACITY ANALYSIS SUMMARY

	2004 Baseline			2009 No-Build			2009 Build		
Signalized Intersections/Peak Hour	V/C[b]	Delay[c]	LOS[d]	V/C	Delay	LOS	V/C	Delay	LOS
Route 114 and Trailer Park Road/IRA Toyota:[a]									
Weekday Morning	0.67	12.8	B	0.70	18.6	B	0.75	22.3	C
Weekday Evening	0.70	9.3	A	0.81	18.8	B	0.85	22.9	C
Route 114 and Shopping Center driveway/ 156 Andover Street Plaza driveway:									
Weekday Morning	0.47	6.5	A	0.51	10.3	B	0.49	12.3	B
Weekday Evening	0.65	17.3	B	0.71	17.5	B	0.72	18.7	B
Route 114 and Garden Street:									
Weekday Morning	0.58	14.2	B	0.74	24.0	C	0.74	25.9	C
Weekday Evening	1.01	38.1	D	1.05	46.5	D	1.06	46.8	D
Unsignalized Intersections/ Critical Movement/Peak Hour	Demand[e]	Delay	LOS	Demand	Delay	LOS	Demand	Delay	LOS
Route 114, Lowe's Driveway, and Morton International (Site) Driveway									
Left turns from driveway:									
Weekday Morning	2	>50.0	F	5	>50.0	F	4	>50.0	F
Weekday Evening	1	>50.0	F	11	>50.0	F	15	>50.0	F
Trailer Park Road and Multiple Tenant Office Driveway									
Right turn from multiple tenant office driveway:									
Weekday Morning	--	--	--	--	--	--	8	9.7	A
Weekday Evening	--	--	--	--	--	--	55	9.3	A

[a]Mitigation by others assumed for future No-Build and Build conditions
[b]Volume-to-capacity ratio.
[c]Delay in seconds per vehicle
[d]Level of service.
[e]Demand in vehicles per hour

Route 114 and Trailer Park Road/IRA Toyota

Under 2004 Baseline conditions, this signalized intersection presently operates at LOS B during the weekday morning peak hour and LOS A during the weekday evening peak hour. Under future 2009 No-Build conditions, without the project, this intersection is projected to operate at LOS B during the weekday morning peak hour and LOS B during the weekday evening peak hour. With the addition of site traffic, this intersection is projected to operate at LOS C during the weekday morning peak hour and at LOS C during the weekday evening peak.

Route 114 and Shopping Center/156 Andover Street Plaza Driveway

Under 2004 Baseline conditions, this signalized intersection presently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. Under future 2009 No-Build conditions, without the project, this intersection is projected to operate at LOS B during the weekday morning peak hour and LOS B during the weekday evening peak hour. With the addition of site traffic, this intersection is projected to operate at LOS B during the weekday morning peak hour and at LOS B during the weekday evening peak.

Route 114 and Garden Street

Under 2004 Baseline conditions, this signalized intersection presently operates at LOS B during the weekday morning peak hour and LOS D during the weekday evening peak hour. Under future 2009 No-Build conditions, without the project, this intersection is projected to operate at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour. With the addition of site traffic, this intersection is projected to operate at LOS C during the weekday morning peak hour and at LOS D during the weekday evening peak.

Route 114, Lowe's Driveway, and Morton International Driveway

The Critical movements (all movements from the Morton International Driveway) at this unsignalized intersection currently operate at LOS F during the weekday morning peak hour and LOS F during the weekday evening peak hour. Under future 2009 No-Build and 2009 build, conditions, without and with the project, this intersection is projected to operate at LOS F during the weekday morning peak hour and LOS F during the weekday evening peak hour.

Trailer Park Road and Multiple Tenant Office Driveway

Under future 2009 Build conditions, the critical movements (all movements from the multiple tenant office driveway) at this unsignalized intersection are projected to operate at LOS A during both the weekday morning and weekday evening peak hours.

RECOMMENDATIONS AND CONCLUSIONS

Transportation Demand Management Program

The following measures have been identified to mitigate the project's peak hour impacts and improve intersection operation. The project proponent is committed to working with the Town of Danvers to implement these measures.

In establishing a TDM program, an education process will be required. Initially, the project proponent promotional work will be significant in pointing out the benefits of a multi-element TDM program. Several other on-site elements of other successfully programs which will be promoted include the following trip reduction strategies:

- ***Flexible Work Hours*** - Flexible work hours will decrease peak-hour demand and, while not eliminating vehicle trips, is nevertheless effective to reduce impact.

- ***Staggered Work Hours*** - Staggered work hours, whereby as little as fifteen minute increments between employee group arrival and departure times, would also reduce the pronounced commuter peaks of a single work day schedule.

- ***Telecommuting*** - Telecommuting creates an opportunity to eliminate work trips entirely. While its general applicability is not expected, its use in combination with other measures is effective in reducing commuter traffic impacts.

- ***Preferred Parking*** - Preferred parking for carpoolers increases the attractiveness of on-site ridesharing.

CONCLUSION

The proposed retenanting of the existing 44,000 sf office building and the proposed new office building of 7,000 sf are together expected to result in a total increase of 80 morning peak-hour vehicle trips (71 entering and 9 exiting), 76 (13 entering and 63 exiting) evening peak-hour vehicle trips, and 554 daily vehicle trips (277 vehicles entering and 277 vehicles exiting).

Access for the retenanted office building will be provided by way of a single driveway onto Trailer Park Road and the existing access through the Morton International Driveway. The existing office building parking lot is adjacent to Trailer Park Road, therefore the office building trips are expected to primarily use the Trailer Park Road access. The small office building trips are expected to exclusively use the Morton International Driveway.

An analysis of traffic operations at the study area intersections indicates that the proposed project results in a minor decrease in level-of-service at one location (LOS B to LOS C) and no change at the other locations studied. The improvements at the Trailer Park Road and Route 114 intersection constructed for the Avalon Bay project serve to meet demand by the proposed project. Minor timing adjustments at this traffic signal can result in improved operation and reduced side street delays. In general, the majority of the intersection approaches were shown to operate at LOS D or better during the peak periods, with the exception of the intersection of Route 114 and Morton International driveway, which was shown to currently operate at a LOS F during both weekday morning and evening peak hours, independent of the proposed project. Due to the low traffic volume expected with the smaller office building, impacts on Route 114 traffic flow are expected to be minor, and similar to those of other existing driveways currently exiting onto the roadway.

The retenanting of the existing office building is expected to have minor impacts on Route 114 traffic flow, since the majority of project traffic will be oriented to/from Route 1 and I-95. With implementation of the TDM program to further reduce peak-hour impacts, the development can be accommodated with minimal impact on the surrounding roadway system.

Turning Movement Counts

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars - Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
07:00	1	0	6	0	4	203	8	0	8	0	2	0	16	249	12	0	509
07:15	5	0	7	0	9	181	10	0	5	0	5	0	18	285	14	2	541
07:30	0	0	5	0	1	310	5	0	15	0	8	0	12	285	14	1	656
07:45	7	0	7	0	0	291	9	0	13	0	4	0	18	325	10	2	686
Total	13	0	25	0	14	985	32	0	41	0	19	0	64	1144	50	5	2392
08:00	3	0	5	0	2	279	10	0	6	0	3	0	13	311	9	0	641
08:15	2	0	7	0	2	303	8	0	9	1	6	0	14	289	10	2	653
08:30	8	0	4	0	5	272	15	0	10	0	5	0	18	284	10	1	632
08:45	13	0	6	0	6	272	19	0	12	0	3	0	25	326	9	1	692
Total	26	0	22	0	15	1126	52	0	37	1	17	0	70	1210	38	4	2618
Grand Total	39	0	47	0	29	2111	84	0	78	1	36	0	134	2354	88	9	5010
Apprch %	45.3	0.0	54.7	0.0	1.3	94.9	3.8	0.0	67.8	0.9	31.3	0.0	5.2	91.1	3.4	0.3	
Total %	0.8	0.0	0.9	0.0	0.6	42.1	1.7	0.0	1.6	0.0	0.7	0.0	2.7	47.0	1.8	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07.30																				
Volume	12	0	24	0	36	5	1183	32	0	1220	43	1	21	0	65	57	1210	43	5	1315	2636
Percent	33.3	0.0	66.7	0.0		0.4	97.0	2.6	0.0		66.2	1.5	32.3	0.0		4.3	92.0	3.3	0.4		
Volume	12	0	24	0	36	5	1183	32	0	1220	43	1	21	0	65	57	1210	43	5	1315	2636
Volume	7	0	7	0	14	0	291	9	0	300	13	0	4	0	17	18	325	10	2	355	686
Peak Factor																					0.961
High Int.	07.45					07.30					07.30					07:45					
Volume	7	0	7	0	14	1	310	5	0	316	15	0	8	0	23	18	325	10	2	355	
Peak Factor					0.643					0.965					0.707					0.926	
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
By Approach	08:00					07:30					07:30					08:00					
Volume	26	0	22	0	48	5	1183	32	0	1220	43	1	21	0	65	70	1210	38	4	1322	
Percent	54.2	0.0	45.8	0.0		0.4	97.0	2.6	0.0		66.2	1.5	32.3	0.0		5.3	91.5	2.9	0.3		
High Int.	08:45					07:30					07:30					08:45					
Volume	13	0	6	0	19	1	310	5	0	316	15	0	8	0	23	25	326	9	1	361	
Peak Factor					0.632					0.965					0.707					0.916	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
07:00	1	0	6	0	0	195	8	0	7	0	1	0	16	237	7	0	478
07:15	5	0	7	0	2	174	10	0	4	0	2	0	18	275	9	2	508
07:30	0	0	5	0	1	288	5	0	8	0	2	0	12	269	8	1	599
07:45	7	0	7	0	0	267	9	0	8	0	2	0	18	315	6	2	641
Total	13	0	25	0	3	924	32	0	27	0	7	0	64	1096	30	5	2226
08:00	3	0	5	0	1	261	10	0	3	0	3	0	13	292	4	0	595
08:15	2	0	7	0	0	292	8	0	4	1	5	0	14	276	5	2	616
08:30	8	0	4	0	1	259	15	0	4	0	1	0	18	271	4	1	586
08:45	13	0	6	0	4	260	19	0	4	0	2	0	25	308	4	1	646
Total	26	0	22	0	6	1072	52	0	15	1	11	0	70	1147	17	4	2443
Grand Total	39	0	47	0	9	1996	84	0	42	1	18	0	134	2243	47	9	4669
Apprch %	45.3	0.0	54.7	0.0	0.4	95.5	4.0	0.0	68.9	1.6	29.5	0.0	5.5	92.2	1.9	0.4	
Total %	0.8	0.0	1.0	0.0	0.2	42.8	1.8	0.0	0.9	0.0	0.4	0.0	2.9	48.0	1.0	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07:30																				
Volume	12	0	24	0	36	2	1108	32	0	1142	23	1	12	0	36	57	1152	23	5	1237	2451
Percent	33.3	0.0	66.7	0.0		0.2	97.0	2.8	0.0		63.9	2.8	33.3	0.0		4.6	93.1	1.9	0.4		
Volume	12	0	24	0	36	2	1108	32	0	1142	23	1	12	0	36	57	1152	23	5	1237	2451
Volume Peak Factor	7	0	7	0	14	0	267	9	0	276	8	0	2	0	10	18	315	6	2	341	641 0.956
High Int.	07:45					08:15					07:30					07:45					
Volume	7	0	7	0	14	0	292	8	0	300	8	0	2	0	10	18	315	6	2	341	
Peak Factor					0.643					0.952					0.900					0.907	

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

By Approach	08:00					07:30					07:30					07:15					
Volume	26	0	22	0	48	2	1108	32	0	1142	23	1	12	0	36	61	1151	27	5	1244	
Percent	54.2	0.0	45.8	0.0		0.2	97.0	2.8	0.0		63.9	2.8	33.3	0.0		4.9	92.5	2.2	0.4		
High Int.	08:45					08:15					07:30					07:45					
Volume	13	0	6	0	19	0	292	8	0	300	8	0	2	0	10	18	315	6	2	341	
Peak Factor					0.632					0.952					0.900					0.912	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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Groups Printed- Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
07:00	0	0	0	0	4	8	0	0	1	0	1	0	0	12	5	0	31
07:15	0	0	0	0	7	7	0	0	1	0	3	0	0	10	5	0	33
07:30	0	0	0	0	0	22	0	0	7	0	6	0	0	16	6	0	57
07:45	0	0	0	0	0	24	0	0	5	0	2	0	0	10	4	0	45
Total	0	0	0	0	11	61	0	0	14	0	12	0	0	48	20	0	166
08:00	0	0	0	0	1	18	0	0	3	0	0	0	0	19	5	0	46
08:15	0	0	0	0	2	11	0	0	5	0	1	0	0	13	5	0	37
08:30	0	0	0	0	4	13	0	0	6	0	4	0	0	13	6	0	46
08:45	0	0	0	0	2	12	0	0	8	0	1	0	0	18	5	0	46
Total	0	0	0	0	9	54	0	0	22	0	6	0	0	63	21	0	175
Grand Total	0	0	0	0	20	115	0	0	36	0	18	0	0	111	41	0	341
Apprch %	0.0	0.0	0.0	0.0	14.8	85.2	0.0	0.0	66.7	0.0	33.3	0.0	0.0	73.0	27.0	0.0	
Total %	0.0	0.0	0.0	0.0	5.9	33.7	0.0	0.0	10.6	0.0	5.3	0.0	0.0	32.6	12.0	0.0	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07:30																				
Volume	0	0	0	0	0	3	75	0	0	78	20	0	9	0	29	0	58	20	0	78	185
Percent	0.0	0.0	0.0	0.0		3.8	96.2	0.0	0.0		69.0	0.0	31.0	0.0		0.0	74.4	25.6	0.0		
Volume	0	0	0	0	0	3	75	0	0	78	20	0	9	0	29	0	58	20	0	78	185
Volume	0	0	0	0	0	0	22	0	0	22	7	0	6	0	13	0	16	6	0	22	57
Peak Factor																					0.811
High Int.	6:45:00 AM					07:45					07:30					08:00					
Volume	0	0	0	0	0	0	24	0	0	24	7	0	6	0	13	0	19	5	0	24	
Peak Factor										0.812					0.558					0.812	

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

By Approach	07:00					07:15					07:30					08:00					
Volume	0	0	0	0	0	8	71	0	0	79	20	0	9	0	29	0	63	21	0	84	
Percent	-	-		-		10.1	89.9	0.0	0.0		69.0	0.0	31.0	0.0		0.0	75.0	25.0	0.0		
High Int.	-					07:45					07:30					08:00					
Volume	-	-	-	-	-	0	24	0	0	24	7	0	6	0	13	0	19	5	0	24	
Peak Factor					-					0.823					0.558					0.875	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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Site Code : 39050001
Start Date : 08/05/2003
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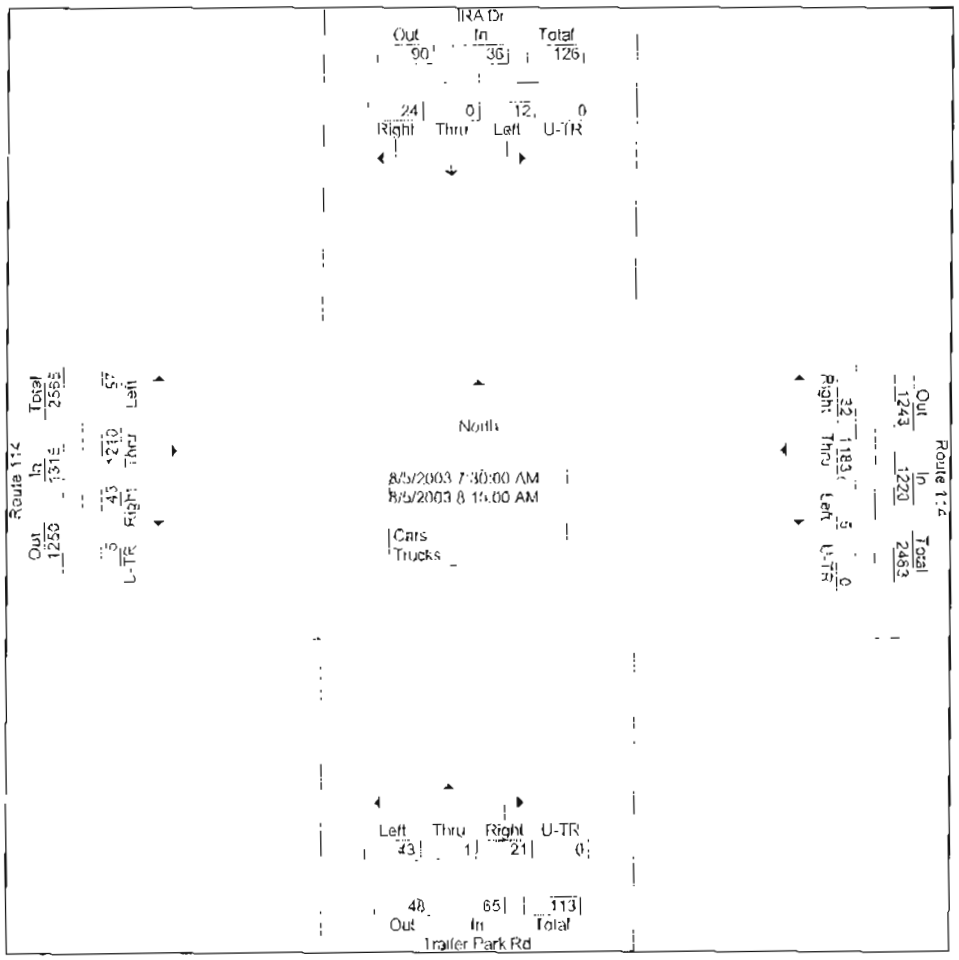
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07:30																				
Volume	12	0	24	0	36	5	1183	32	0	1220	43	1	21	0	65	57	1210	43	5	1315	2636
Percent	33.3	0.0	66.7	0.0		0.4	97.0	2.6	0.0		66.2	1.5	32.3	0.0		4.3	92.0	3.3	0.4		
Volume	12	0	24	0	36	5	1183	32	0	1220	43	1	21	0	65	57	1210	43	5	1315	2636
Volume	7	0	7	0	14	0	291	9	0	300	13	0	4	0	17	18	325	10	2	355	686
Peak Factor																					0.961
High Int.	07:45					07:30					07:30					07:45					
Volume	7	0	7	0	14	1	310	5	0	316	15	0	8	0	23	18	325	10	2	355	
Peak Factor					0.643					0.965					0.707					0.926	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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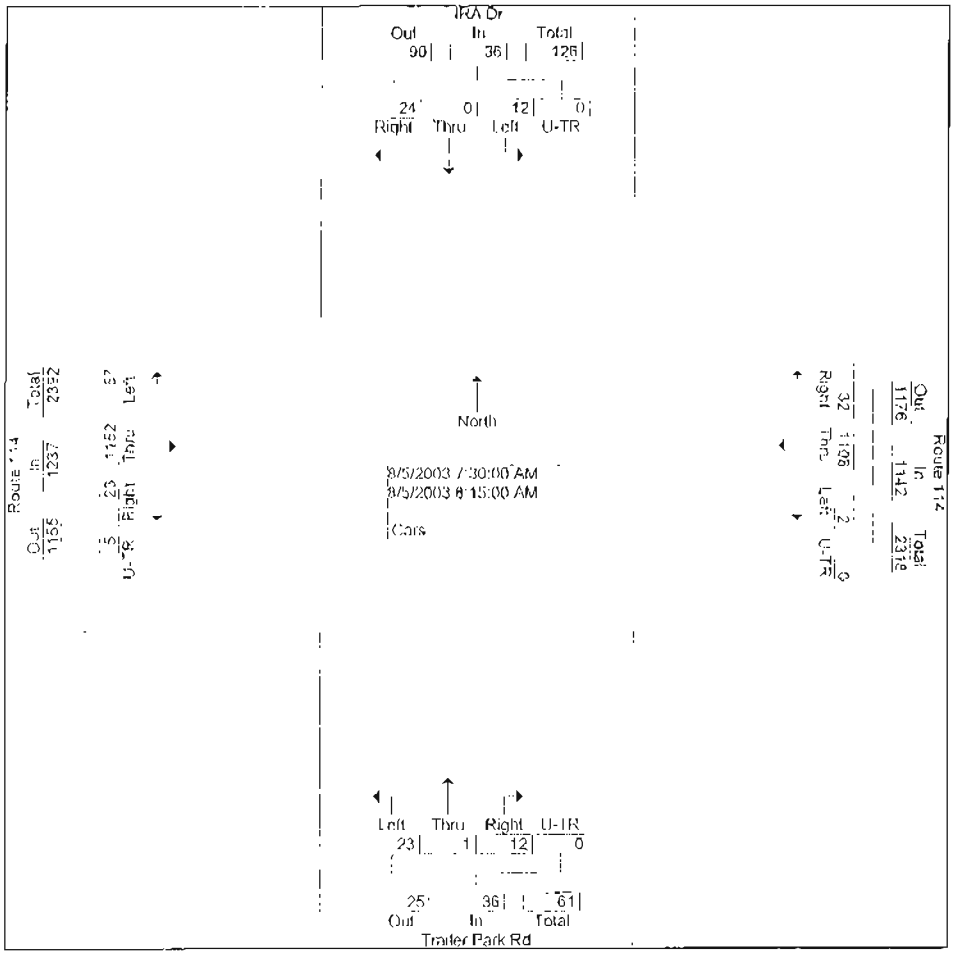
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07:30																				
Volume	12	0	24	0	36	2	1108	32	0	1142	23	1	12	0	36	57	1152	23	5	1237	2451
Percent	33.3	0.0	66.7	0.0		0.2	97.0	2.8	0.0		63.9	2.8	33.3	0.0		4.6	93.1	1.9	0.4		
Volume	12	0	24	0	36	2	1108	32	0	1142	23	1	12	0	36	57	1152	23	5	1237	2451
Volume	7	0	7	0	14	0	267	9	0	276	8	0	2	0	10	18	315	6	2	341	641
Peak Factor																					0.956
High Int.	07:45					08:15					07:30					07:45					
Volume	7	0	7	0	14	0	292	8	0	300	8	0	2	0	10	18	315	6	2	341	
Peak Factor					0.643					0.952					0.900					0.907	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

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File Name : 390500A1
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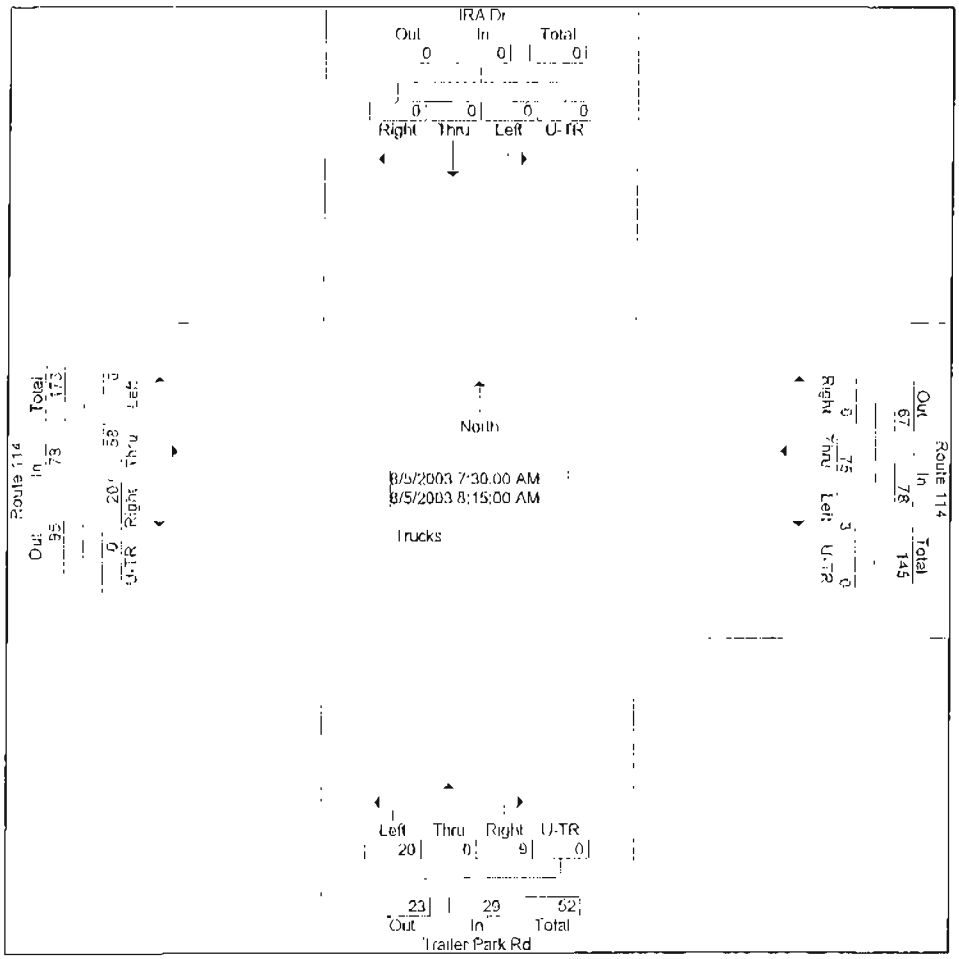
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07 30																				
Volume	0	0	0	0	0	3	75	0	0	78	20	0	9	0	29	0	58	20	0	78	185
Percent	0.0	0.0	0.0	0.0		3.8	96.2	0.0	0.0		69.0	0.0	31.0	0.0		0.0	74.4	25.6	0.0		
Volume	0	0	0	0	0	3	75	0	0	78	20	0	9	0	29	0	58	20	0	78	185
Volume	0	0	0	0	0	0	22	0	0	22	7	0	6	0	13	0	16	6	0	22	57
Peak Factor																					0.811
High Int	6.45:00 AM					07:45					07:30					08:00					
Volume	0	0	0	0	0	0	24	0	0	24	7	0	6	0	13	0	19	5	0	24	
Peak Factor										0.812					0.558					0.812	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A1
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Groups Printed- Cars

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
16:00	9	1	7	0	1	464	4	0	8	0	0	0	17	407	14	1	933
16:15	12	0	7	0	2	487	17	0	8	0	1	0	16	442	8	1	1001
16:30	17	0	12	0	3	417	14	0	13	2	2	0	6	381	12	2	881
16:45	8	0	12	0	1	414	11	0	13	0	0	0	15	413	11	6	904
Total	46	1	38	0	7	1782	46	0	42	2	3	0	54	1643	45	10	3719
17:00	16	0	30	0	1	407	3	0	9	0	2	0	9	407	24	2	910
17:15	10	0	18	0	2	397	12	0	17	0	6	0	13	384	7	2	868
17:30	12	0	25	0	4	449	9	0	8	0	2	0	10	426	14	2	961
17:45	13	0	14	0	2	422	9	0	18	0	1	0	11	428	8	0	926
Total	51	0	87	0	9	1675	33	0	52	0	11	0	43	1645	53	6	3665
Grand Total	97	1	125	0	16	3457	79	0	94	2	14	0	97	3288	98	16	7384
Apprch %	43.5	0.4	56.1	0.0	0.5	97.3	2.2	0.0	85.5	1.8	12.7	0.0	2.8	94.0	2.8	0.5	
Total %	1.3	0.0	1.7	0.0	0.2	46.8	1.1	0.0	1.3	0.0	0.2	0.0	1.3	44.5	1.3	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App Total	Left	Thru	Right	U-TR	App. Total	Int Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:00																				
Volume	46	1	38	0	85	7	1782	46	0	1835	42	2	3	0	47	54	1643	45	10	1752	3719
Percent	54.1	1.2	44.7	0.0		0.4	97.1	2.5	0.0		89.4	4.3	6.4	0.0		3.1	93.8	2.6	0.6		
Volume	46	1	38	0	85	7	1782	46	0	1835	42	2	3	0	47	54	1643	45	10	1752	3719
Volume	12	0	7	0	19	2	487	17	0	506	8	0	1	0	9	16	442	8	1	467	1001
Peak Factor																					0.929
High Int.	16:30					16:15					16:30					16:15					
Volume	17	0	12	0	29	2	487	17	0	506	13	2	2	0	17	16	442	8	1	467	
Peak Factor					0.733					0.907					0.691					0.938	

Peak Hour From 16:00 to 17:45 - Peak 1 of 1

By Approach	17:00					16:00					16:30					16:15					
Volume	51	0	87	0	138	7	1782	46	0	1835	52	2	10	0	64	46	1643	55	11	1755	
Percent	37.0	0.0	63.0	0.0		0.4	97.1	2.5	0.0		81.2	3.1	15.6	0.0		2.6	93.6	3.1	0.6		
High Int.	17:00					16:15					17:15					16:15					
Volume	16	0	30	0	46	2	487	17	0	506	17	0	6	0	23	16	442	8	1	467	
Peak Factor					0.750					0.907					0.696					0.940	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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Groups Printed- Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
16:00	0	0	0	0	0	12	1	0	2	0	1	0	0	5	3	0	24
16:15	1	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	8
16:30	1	0	0	0	0	6	1	0	2	0	0	0	0	6	0	0	16
16:45	0	0	0	0	1	5	0	0	0	0	1	0	0	3	0	0	10
Total	2	0	0	0	1	27	2	0	4	0	2	0	0	17	3	0	58
17:00	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	10
17:15	0	0	0	0	0	5	0	0	1	0	0	0	0	6	1	0	13
17:30	1	0	0	0	0	4	0	0	0	0	0	0	1	2	1	0	9
17:45	0	0	0	0	0	3	0	0	0	0	0	0	0	6	0	0	9
Total	1	0	0	0	0	14	0	0	1	0	0	0	1	22	2	0	41
Grand Total	3	0	0	0	1	41	2	0	5	0	2	0	1	39	5	0	99
Apprch %	100.0	0.0	0.0	0.0	2.3	93.2	4.5	0.0	71.4	0.0	28.6	0.0	2.2	86.7	11.1	0.0	
Total %	3.0	0.0	0.0	0.0	1.0	41.4	2.0	0.0	5.1	0.0	2.0	0.0	1.0	39.4	5.1	0.0	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:00																				
Volume	2	0	0	0	2	1	27	2	0	30	4	0	2	0	6	0	17	3	0	20	58
Percent	100.0	0.0	0.0	0.0		3.3	90.0	6.7	0.0		66.7	0.0	33.3	0.0		0.0	85.0	15.0	0.0		
Volume	2	0	0	0	2	1	27	2	0	30	4	0	2	0	6	0	17	3	0	20	58
Volume	0	0	0	0	0	0	12	1	0	13	2	0	1	0	3	0	5	3	0	8	24
Peak Factor																					0.604
High Int.	16:15					16:00					16:00					16:00					
Volume	1	0	0	0	1	0	12	1	0	13	2	0	1	0	3	0	5	3	0	8	
Peak Factor					0.500					0.577					0.500					0.625	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
By Approach	16:00					16:00					16:00					17:00					
Volume	2	0	0	0	2	1	27	2	0	30	4	0	2	0	6	1	22	2	0	25	
Percent	100.0	0.0	0.0	0.0		3.3	90.0	6.7	0.0		66.7	0.0	33.3	0.0		4.0	88.0	8.0	0.0		
High Int.	16:15					16:00					16:00					17:00					
Volume	1	0	0	0	1	0	12	1	0	13	2	0	1	0	3	0	8	0	0	8	
Peak Factor					0.500					0.577					0.500					0.781	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A1
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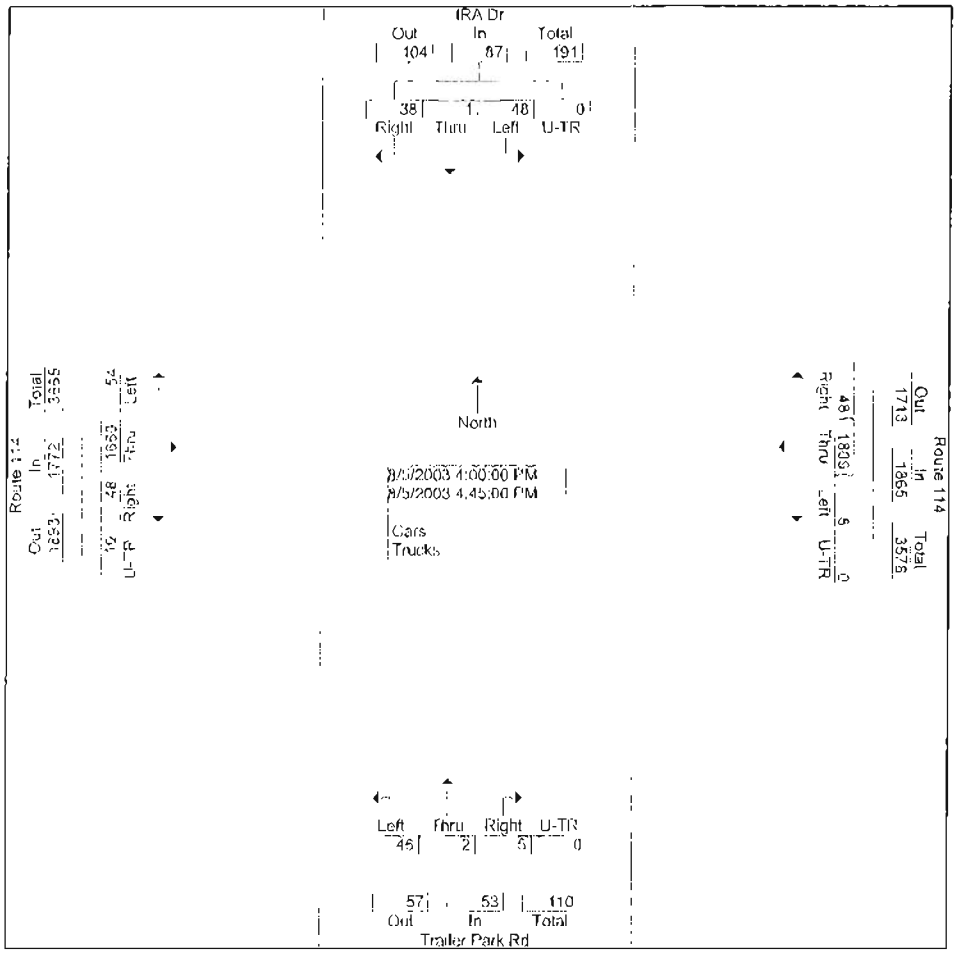
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:00																				
Volume	48	1	38	0	87	8	1809	48	0	1865	46	2	5	0	53	54	1660	48	10	1772	3777
Percent	55.2	1.1	43.7	0.0		0.4	97.0	2.6	0.0		86.8	3.8	9.4	0.0		3.0	93.7	2.7	0.6		
Volume	48	1	38	0	87	8	1809	48	0	1865	46	2	5	0	53	54	1660	48	10	1772	3777
Volume	13	0	7	0	20	2	491	17	0	510	8	0	1	0	9	16	445	8	1	470	1009
Peak Factor																					0.936
High Int.	16:30					16:15					16:30					16:15					
Volume	18	0	12	0	30	2	491	17	0	510	15	2	2	0	19	16	445	8	1	470	
Peak Factor					0.725					0.914					0.697					0.943	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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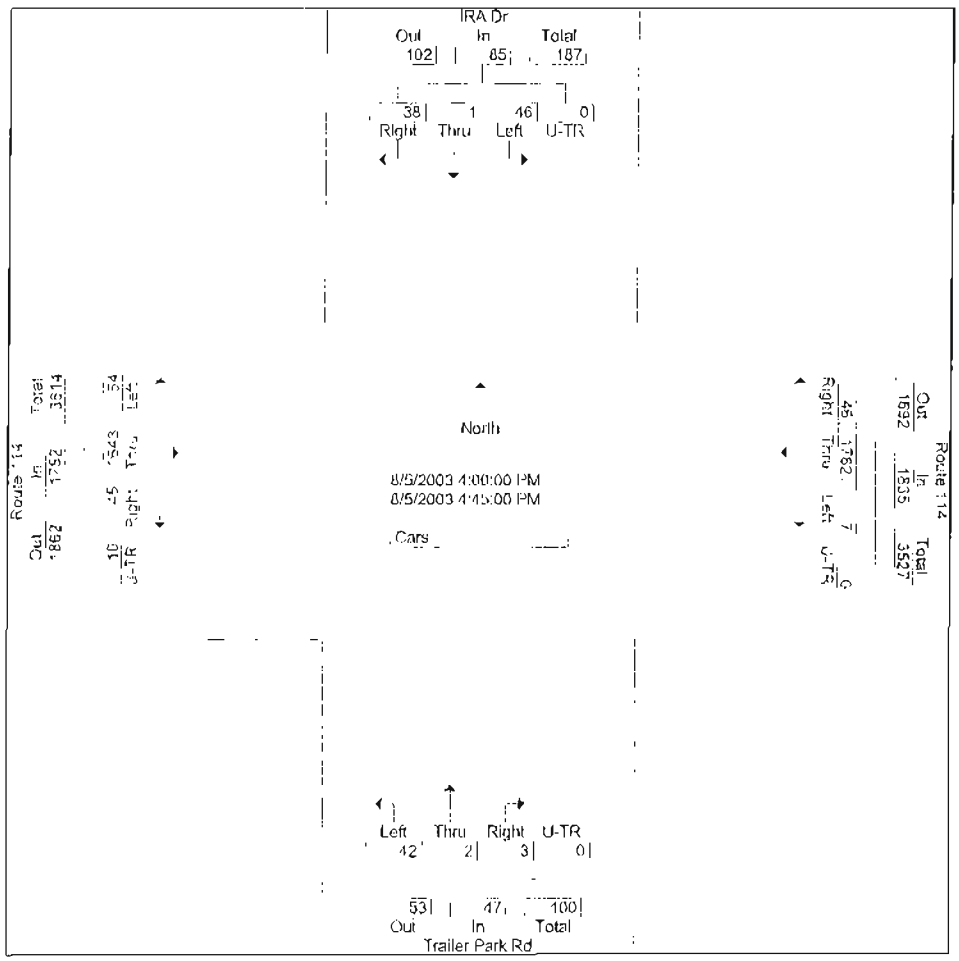
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16.00																				
Volume	46	1	38	0	85	7	1782	46	0	1835	42	2	3	0	47	54	1643	45	10	1752	3719
Percent	54.1	1.2	44.7	0.0		0.4	97.1	2.5	0.0		89.4	4.3	6.4	0.0		3.1	93.8	2.6	0.6		
Volume	46	1	38	0	85	7	1782	46	0	1835	42	2	3	0	47	54	1643	45	10	1752	3719
Volume Peak Factor	12	0	7	0	19	2	487	17	0	506	8	0	1	0	9	16	442	8	1	467	1001 0.929
High Int.	16:30					16:15					16:30					16:15					
Volume	17	0	12	0	29	2	487	17	0	506	13	2	2	0	17	16	442	8	1	467	
Peak Factor					0.733					0.907					0.691					0.938	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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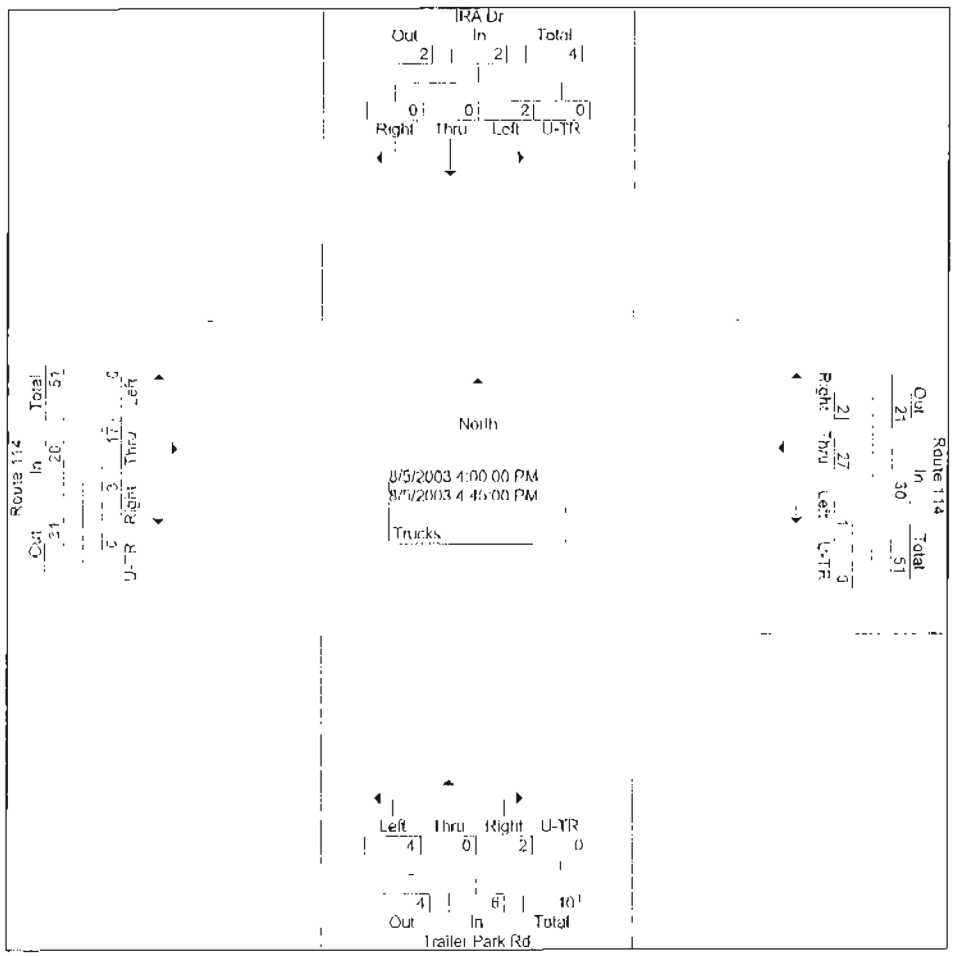
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:00																				
Volume	2	0	0	0	2	1	27	2	0	30	4	0	2	0	6	0	17	3	0	20	58
Percent	100.0	0.0	0.0	0.0		3.3	90.0	6.7	0.0		66.7	0.0	33.3	0.0		0.0	85.0	15.0	0.0		
Volume	2	0	0	0	2	1	27	2	0	30	4	0	2	0	6	0	17	3	0	20	58
Volume	0	0	0	0	0	0	12	1	0	13	2	0	1	0	3	0	5	3	0	8	24
Peak Factor																					0.604
High Int.	16:15					16:00					16:00					16:00					
Volume	1	0	0	0	1	0	12	1	0	13	2	0	1	0	3	0	5	3	0	8	
Peak Factor					0.500					0.577					0.500					0.625	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A1
Site Code : 39050001
Start Date : 08/05/2003
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Groups Printed- Cars - Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
16:00	9	1	7	0	1	476	5	0	10	0	1	0	17	412	17	1	957
16:15	13	0	7	0	2	491	17	0	8	0	1	0	16	445	8	1	1009
16:30	18	0	12	0	3	423	15	0	15	2	2	0	6	387	12	2	897
16:45	8	0	12	0	2	419	11	0	13	0	1	0	15	416	11	6	914
Total	48	1	38	0	8	1809	48	0	46	2	5	0	54	1660	48	10	3777
17:00	16	0	30	0	1	409	3	0	9	0	2	0	9	415	24	2	920
17:15	10	0	18	0	2	402	12	0	18	0	6	0	13	390	8	2	881
17:30	13	0	25	0	4	453	9	0	8	0	2	0	11	428	15	2	970
17:45	13	0	14	0	2	425	9	0	18	0	1	0	11	434	8	0	935
Total	52	0	87	0	9	1689	33	0	53	0	11	0	44	1667	55	6	3706
Grand Total	100	1	125	0	17	3498	81	0	99	2	16	0	98	3327	103	16	7483
Apprch %	44.2	0.4	55.3	0.0	0.5	97.3	2.3	0.0	84.6	1.7	13.7	0.0	2.8	93.9	2.9	0.5	
Total %	1.3	0.0	1.7	0.0	0.2	46.7	1.1	0.0	1.3	0.0	0.2	0.0	1.3	44.5	1.4	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:00																				
Volume	48	1	38	0	87	8	1809	48	0	1865	46	2	5	0	53	54	1660	48	10	1772	3777
Percent	55.2	1.1	43.7	0.0		0.4	97.0	2.6	0.0		86.8	3.8	9.4	0.0		3.0	93.7	2.7	0.6		
Volume	48	1	38	0	87	8	1809	48	0	1865	46	2	5	0	53	54	1660	48	10	1772	3777
Volume	13	0	7	0	20	2	491	17	0	510	8	0	1	0	9	16	445	8	1	470	1009
Peak Factor																					0.936
High Int.	16:30					16:15					16:30					16:15					
Volume	18	0	12	0	30	2	491	17	0	510	15	2	2	0	19	16	445	8	1	470	
Peak Factor					0.725					0.914					0.697					0.943	

Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
By Approach	17:00					16:00					16:30					16:15					
Volume	52	0	87	0	139	8	1809	48	0	1865	55	2	11	0	68	46	1663	55	11	1775	
Percent	37.4	0.0	62.6	0.0		0.4	97.0	2.6	0.0		80.9	2.9	16.2	0.0		2.6	93.7	3.1	0.6		
High Int.	17:00					16:15					17:15					16:15					
Volume	16	0	30	0	46	2	491	17	0	510	18	0	6	0	24	16	445	8	1	470	
Peak Factor					0.755					0.914					0.708					0.944	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050001
Site Code : 39050001
Start Date : 08/02/2003
Page No : 1

Groups Printed- Cars - Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Int. Total
11:00	12	1	15	0	1	376	10	1	12	0	4	0	14	451	12	3	912
11:15	18	0	10	0	4	370	11	0	8	1	5	0	9	434	9	1	880
11:30	11	0	11	0	2	399	11	0	12	0	4	0	12	436	10	0	908
11:45	10	1	12	0	4	367	7	0	13	0	9	0	10	450	15	1	899
Total	51	2	48	0	11	1512	39	1	45	1	22	0	45	1771	46	5	3599
12:00	12	0	15	0	6	397	11	1	10	0	3	0	14	465	12	4	950
12:15	5	0	17	0	4	416	9	0	10	0	5	0	16	489	16	1	988
12:30	17	0	14	0	4	424	12	0	10	0	3	0	11	463	11	5	974
12:45	8	0	10	0	2	418	9	0	7	0	4	0	13	455	10	1	937
Total	42	0	56	0	16	1655	41	1	37	0	15	0	54	1872	49	11	3849
13:00	9	1	9	0	4	394	13	0	13	0	1	0	11	454	16	1	926
13:15	9	1	19	0	5	452	8	0	12	0	5	0	14	472	11	1	1009
13:30	8	0	15	0	3	404	4	0	13	0	2	0	21	464	12	5	951
13:45	13	0	15	0	3	402	16	0	12	0	1	0	14	449	11	3	939
Total	39	2	58	0	15	1652	41	0	50	0	9	0	60	1839	50	10	3825
Grand Total	132	4	162	0	42	4819	121	2	132	1	46	0	159	5482	145	26	11273
Apprch %	44.3	1.3	54.4	0.0	0.8	96.7	2.4	0.0	73.7	0.6	25.7	0.0	2.7	94.3	2.5	0.4	
Total %	1.2	0.0	1.4	0.0	0.4	42.7	1.1	0.0	1.2	0.0	0.4	0.0	1.4	48.6	1.3	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	12:00																				
Volume	42	0	56	0	98	16	1655	41	1	1713	37	0	15	0	52	54	1872	49	11	1986	3849
Percent	42.9	0.0	57.1	0.0		0.9	96.6	2.4	0.1		71.2	0.0	28.8	0.0		2.7	94.3	2.5	0.6		
Volume	42	0	56	0	98	16	1655	41	1	1713	37	0	15	0	52	54	1872	49	11	1986	3849
Volume Peak Factor	5	0	17	0	22	4	416	9	0	429	10	0	5	0	15	16	489	16	1	522	988 0.974
High Int	12:30					12:30					12:15					12:15					
Volume Peak Factor	17	0	14	0	31 0.790	4	424	12	0	440 0.973	10	0	5	0	15 0.867	16	489	16	1	522 0.951	

Peak Hour From 11:00 to 13:45 - Peak 1 of 1

By Approach	11:45					12:30					11:00					12:00					
Volume	44	1	58	0	103	15	1688	42	0	1745	45	1	22	0	68	54	1872	49	11	1986	
Percent	42.7	1.0	56.3	0.0		0.9	96.7	2.4	0.0		66.2	1.5	32.4	0.0		2.7	94.3	2.5	0.6		
High Int.	12:30					13:15					11:45					12:15					
Volume Peak Factor	17	0	14	0	31 0.831	5	452	8	0	465 0.938	13	0	9	0	22 0.773	16	489	16	1	522 0.951	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050001
Site Code : 39050001
Start Date : 08/02/2003
Page No : 1

Groups Printed- Cars

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Int. Total
11:00	12	1	14	0	0	372	9	1	9	0	1	0	14	447	8	3	891
11:15	18	0	10	0	4	362	11	0	5	1	1	0	9	431	5	1	858
11:30	11	0	11	0	2	396	11	0	9	0	4	0	12	430	9	0	895
11:45	10	1	12	0	4	363	7	0	8	0	9	0	10	445	11	1	881
Total	51	2	47	0	10	1493	38	1	31	1	15	0	45	1753	33	5	3525
12:00	12	0	15	0	4	392	11	1	8	0	2	0	14	462	9	4	934
12:15	5	0	17	0	2	412	9	0	8	0	3	0	16	487	13	1	973
12:30	17	0	14	0	3	421	12	0	6	0	2	0	11	461	9	5	961
12:45	8	0	10	0	2	417	8	0	6	0	3	0	13	454	7	1	929
Total	42	0	56	0	11	1642	40	1	28	0	10	0	54	1864	38	11	3797
13:00	8	1	9	0	2	390	13	0	9	0	1	0	11	450	13	1	908
13:15	9	1	19	0	4	447	8	0	8	0	3	0	14	469	8	1	991
13:30	8	0	15	0	2	400	4	0	11	0	2	0	21	464	11	5	943
13:45	13	0	15	0	0	400	16	0	10	0	1	0	14	447	6	3	925
Total	38	2	58	0	8	1637	41	0	38	0	7	0	60	1830	38	10	3767
Grand Total	131	4	161	0	29	4772	119	2	97	1	32	0	159	5447	109	26	11089
Apprch %	44.3	1.4	54.4	0.0	0.6	97.0	2.4	0.0	74.6	0.8	24.6	0.0	2.8	94.9	1.9	0.5	
Total %	1.2	0.0	1.5	0.0	0.3	43.0	1.1	0.0	0.9	0.0	0.3	0.0	1.4	49.1	1.0	0.2	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	12:00																				
Volume	42	0	56	0	98	11	1642	40	1	1694	28	0	10	0	38	54	1864	38	11	1967	3797
Percent	42.9	0.0	57.1	0.0		0.6	96.9	2.4	0.1		73.7	0.0	26.3	0.0		2.7	94.8	1.9	0.6		
Volume	42	0	56	0	98	11	1642	40	1	1694	28	0	10	0	38	54	1864	38	11	1967	3797
Volume	5	0	17	0	22	2	412	9	0	423	8	0	3	0	11	16	487	13	1	517	973
Peak Factor																					0.976
High Int.	12:30					12:30					12:15					12:15					
Volume	17	0	14	0	31	3	421	12	0	436	8	0	3	0	11	16	487	13	1	517	
Peak Factor					0.790					0.971					0.864					0.951	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
By Approach	11:45					12:30					11:30					12:00					
Volume	44	1	58	0	103	11	1675	41	0	1727	33	0	18	0	51	54	1864	38	11	1967	
Percent	42.7	1.0	56.3	0.0		0.6	97.0	2.4	0.0		64.7	0.0	35.3	0.0		2.7	94.8	1.9	0.6		
High Int.	12:30					13:15					11:45					12:15					
Volume	17	0	14	0	31	4	447	8	0	459	8	0	9	0	17	16	487	13	1	517	
Peak Factor					0.831					0.941					0.750					0.951	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050001
Site Code : 39050001
Start Date : 08/02/2003
Page No : 1

Groups Printed- Trucks

	IRA Dr From North				Route 114 From East				Trailer Park Rd From South				Route 114 From West				
Start Time	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Left	Thru	Right	U-Trn	Int. Total
11:00	0	0	1	0	1	4	1	0	3	0	3	0	0	4	4	0	21
11:15	0	0	0	0	0	8	0	0	3	0	4	0	0	3	4	0	22
11:30	0	0	0	0	0	3	0	0	3	0	0	0	0	6	1	0	13
11:45	0	0	0	0	0	4	0	0	5	0	0	0	0	5	4	0	18
Total	0	0	1	0	1	19	1	0	14	0	7	0	0	18	13	0	74
12:00	0	0	0	0	2	5	0	0	2	0	1	0	0	3	3	0	16
12:15	0	0	0	0	2	4	0	0	2	0	2	0	0	2	3	0	15
12:30	0	0	0	0	1	3	0	0	4	0	1	0	0	2	2	0	13
12:45	0	0	0	0	0	1	1	0	1	0	1	0	0	1	3	0	8
Total	0	0	0	0	5	13	1	0	9	0	5	0	0	8	11	0	52
13:00	1	0	0	0	2	4	0	0	4	0	0	0	0	4	3	0	18
13:15	0	0	0	0	1	5	0	0	4	0	2	0	0	3	3	0	18
13:30	0	0	0	0	1	4	0	0	2	0	0	0	0	0	1	0	8
13:45	0	0	0	0	3	2	0	0	2	0	0	0	0	2	5	0	14
Total	1	0	0	0	7	15	0	0	12	0	2	0	0	9	12	0	58
Grand Total	1	0	1	0	13	47	2	0	35	0	14	0	0	35	36	0	184
Apprch %	50.0	0.0	50.0	0.0	21.0	75.8	3.2	0.0	71.4	0.0	28.6	0.0	0.0	49.3	50.7	0.0	
Total %	0.5	0.0	0.5	0.0	7.1	25.5	1.1	0.0	19.0	0.0	7.6	0.0	0.0	19.0	19.6	0.0	

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App Total	Left	Thru	Right	U-Trn	App Total	Left	Thru	Right	U-Trn	App Total	Int Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	11:00																				
Volume	0	0	1	0	1	1	19	1	0	21	14	0	7	0	21	0	18	13	0	31	74
Percent	0.0	0.0	100.0	0.0		4.8	90.5	4.8	0.0		66.7	0.0	33.3	0.0		0.0	58.1	41.9	0.0		
Volume	0	0	1	0	1	1	19	1	0	21	14	0	7	0	21	0	18	13	0	31	74
Volume	0	0	0	0	0	0	8	0	0	8	3	0	4	0	7	0	3	4	0	7	22
Peak Factor																					0.841
High Int.	11:00					11:15					11:15					11:45					
Volume	0	0	1	0	1	0	8	0	0	8	3	0	4	0	7	0	5	4	0	9	
Peak Factor					0.250					0.656					0.750					0.861	

Peak Hour From 11:00 to 13:45 - Peak 1 of 1

By Approach	11:00					11:15					11:00					11:00					
Volume	0	0	1	0	1	2	20	0	0	22	14	0	7	0	21	0	18	13	0	31	
Percent	0.0	0.0	100.0	0.0		9.1	90.9	0.0	0.0		66.7	0.0	33.3	0.0		0.0	58.1	41.9	0.0		
High Int.	11:00					11:15					11:15					11:45					
Volume	0	0	1	0	1	0	8	0	0	8	3	0	4	0	7	0	5	4	0	9	
Peak Factor					0.250					0.688					0.750					0.861	

N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050001
Site Code : 39050001
Start Date : 08/02/2003
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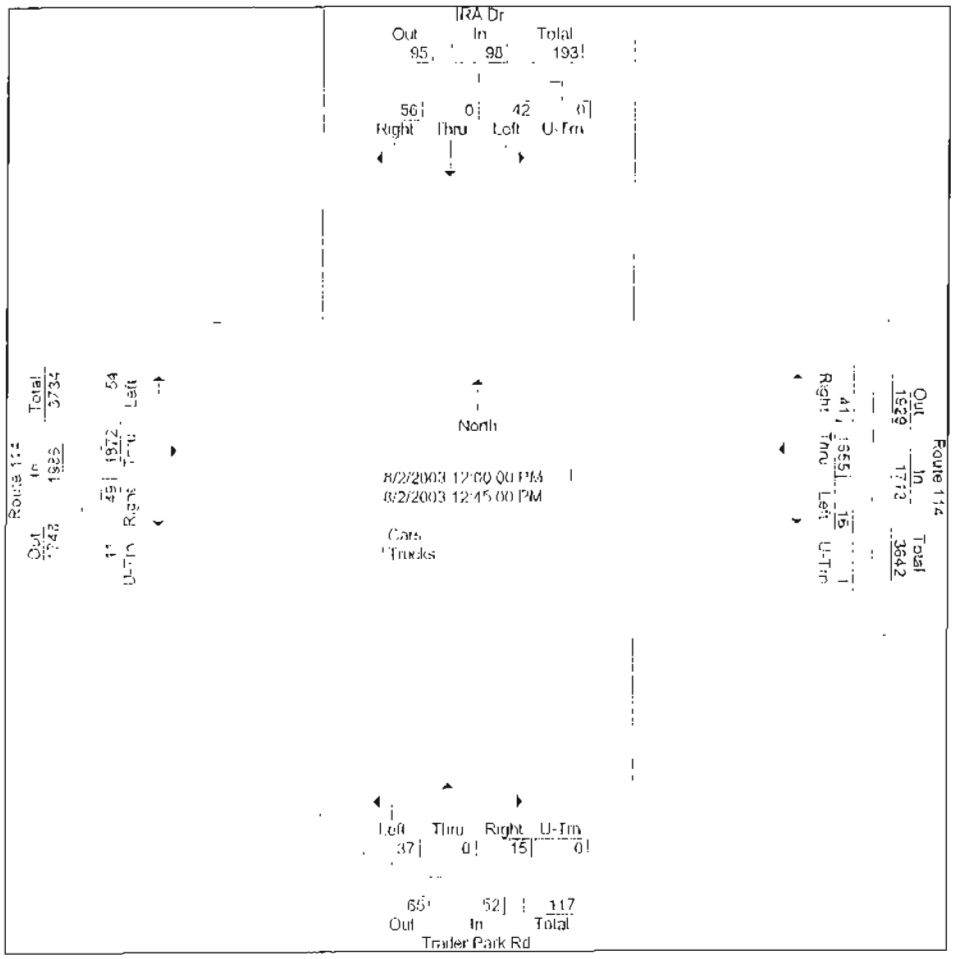
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	12:00																				
Volume	42	0	56	0	98	16	1655	41	1	1713	37	0	15	0	52	54	1872	49	11	1986	3849
Percent	42.9	0.0	57.1	0.0		0.9	96.6	2.4	0.1		71.2	0.0	28.8	0.0		2.7	94.3	2.5	0.6		
Volume	42	0	56	0	98	16	1655	41	1	1713	37	0	15	0	52	54	1872	49	11	1986	3849
Volume	5	0	17	0	22	4	416	9	0	429	10	0	5	0	15	16	489	16	1	522	988
Peak Factor																					0.974
High Int.	12:30					12:30					12:15					12:15					
Volume	17	0	14	0	31	4	424	12	0	440	10	0	5	0	15	16	489	16	1	522	
Peak Factor					0.790					0.973					0.867					0.951	



N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
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Accurate Counts
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File Name : 39050001
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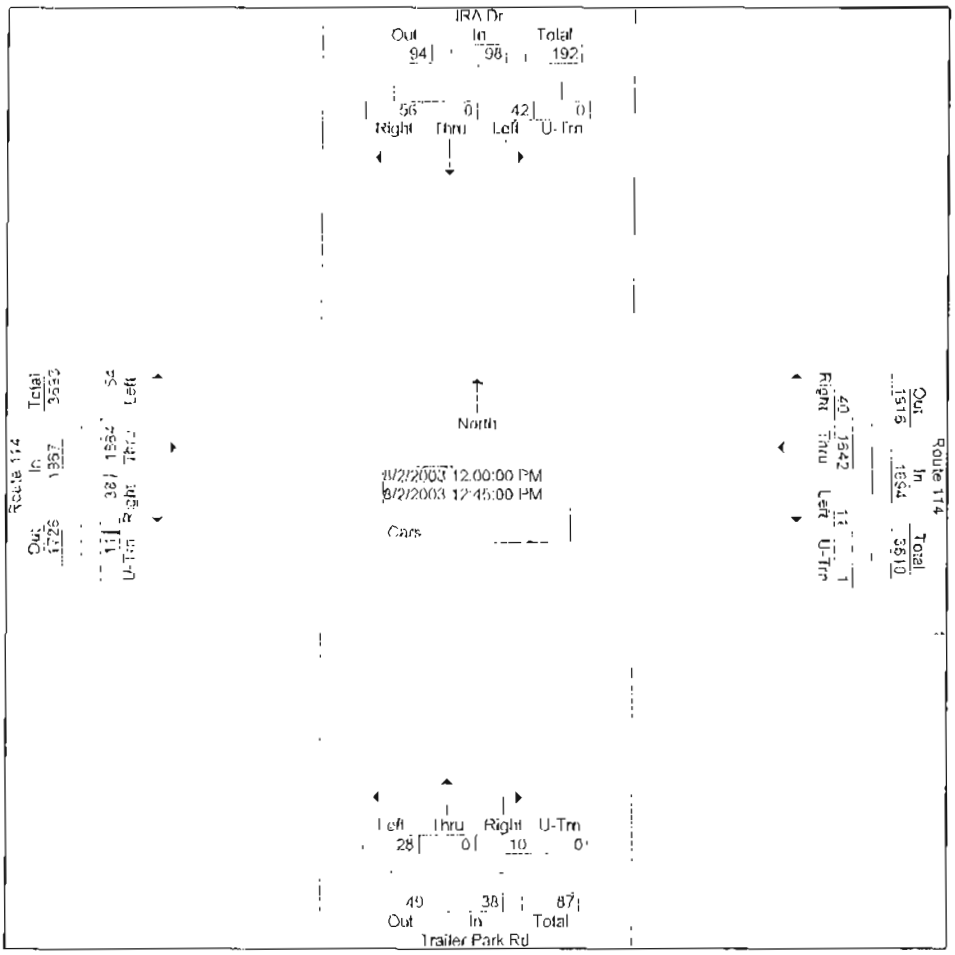
	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	12:00																				
Volume	42	0	56	0	98	11	1642	40	1	1694	28	0	10	0	38	54	1864	38	11	1967	3797
Percent	42.9	0.0	57.1	0.0		0.6	96.9	2.4	0.1		73.7	0.0	26.3	0.0		2.7	94.8	1.9	0.6		
Volume	42	0	56	0	98	11	1642	40	1	1694	28	0	10	0	38	54	1864	38	11	1967	3797
Volume	5	0	17	0	22	2	412	9	0	423	8	0	3	0	11	16	487	13	1	517	973
Peak Factor																					0.976
High Int.	12:30					12:30					12:15					12:15					
Volume	17	0	14	0	31	3	421	12	0	436	8	0	3	0	11	16	487	13	1	517	
Peak Factor					0.790					0.971					0.864					0.951	

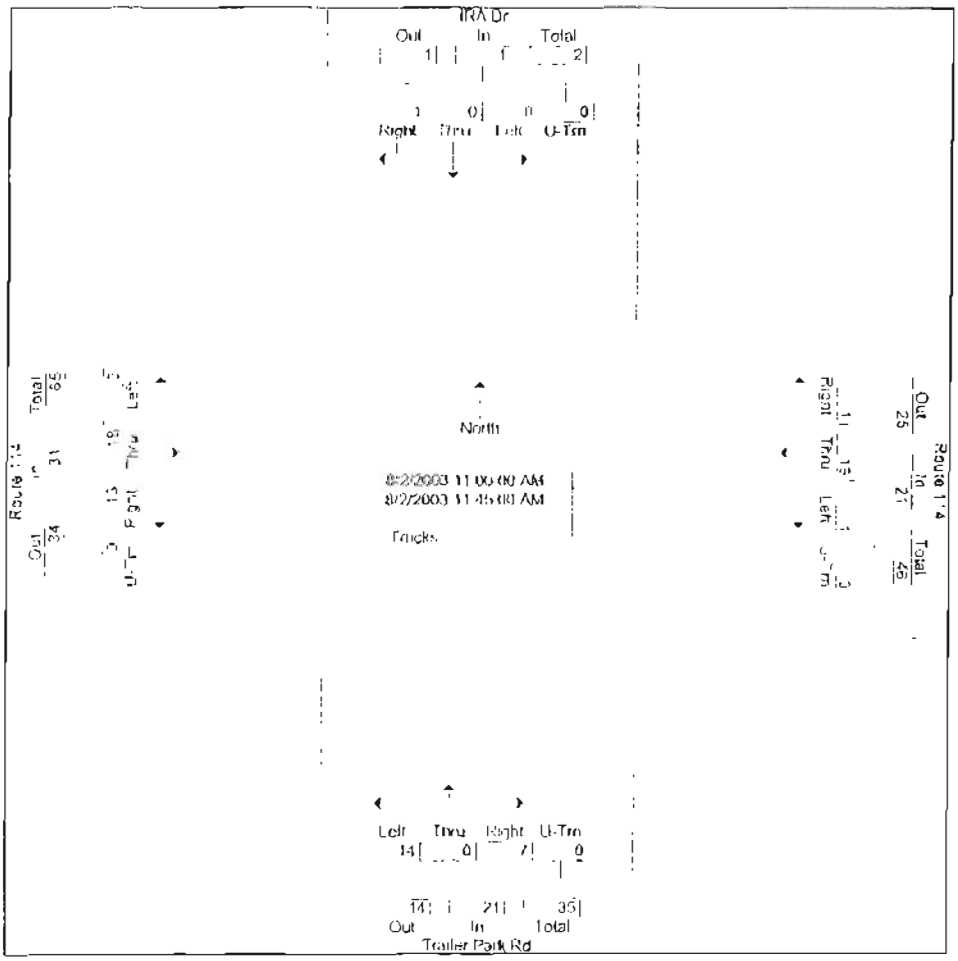


N/S Street : IRA Dr / Trailer Park Rd
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050001
Site Code : 39050001
Start Date : 08/02/2003
Page No : 1

	IRA Dr From North					Route 114 From East					Trailer Park Rd From South					Route 114 From West					
Start Time	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Left	Thru	Right	U-Trn	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	11:00																				
Volume	0	0	1	0	1	1	19	1	0	21	14	0	7	0	21	0	18	13	0	31	74
Percent	0.0	0.0	100.0	0.0		4.8	90.5	4.8	0.0		66.7	0.0	33.3	0.0		0.0	58.1	41.9	0.0		
Volume	0	0	1	0	1	1	19	1	0	21	14	0	7	0	21	0	18	13	0	31	74
Volume	0	0	0	0	0	0	8	0	0	8	3	0	4	0	7	0	3	4	0	7	22
Peak Factor																					0.841
High Int.	11:00					11:15					11:15					11:45					
Volume	0	0	1	0	1	0	8	0	0	8	3	0	4	0	7	0	5	4	0	9	
Peak Factor					0.250					0.656					0.750					0.861	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars - Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	0	0	10	0	200	1	0	0	1	13	214	1	440
07:15	4	0	9	1	213	8	0	0	0	8	305	4	552
07:30	2	0	5	1	309	10	1	0	0	14	283	0	625
07:45	4	0	11	3	308	9	1	0	0	28	313	1	678
Total	10	0	35	5	1030	28	2	0	1	63	1115	6	2295
08:00	7	0	11	3	267	10	0	0	1	11	310	2	622
08:15	2	0	16	1	295	2	1	0	2	20	289	2	630
08:30	3	0	15	5	243	4	1	0	2	11	269	1	554
08:45	6	0	18	2	289	4	0	0	2	14	341	3	679
Total	18	0	60	11	1094	20	2	0	7	56	1209	8	2485
Grand Total	28	0	95	16	2124	48	4	0	8	119	2324	14	4780
Apprch %	22.8	0.0	77.2	0.7	97.1	2.2	33.3	0.0	66.7	4.8	94.6	0.6	
Total %	0.6	0.0	2.0	0.3	44.4	1.0	0.1	0.0	0.2	2.5	48.6	0.3	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07.30																
Volume	15	0	43	58	8	1179	31	1218	3	0	3	6	73	1195	5	1273	2555
Percent	25.9	0.0	74.1		0.7	96.8	2.5		50.0	0.0	50.0		5.7	93.9	0.4		
Volume	15	0	43	58	8	1179	31	1218	3	0	3	6	73	1195	5	1273	2555
Volume	4	0	11	15	3	308	9	320	1	0	0	1	28	313	1	342	678
Peak Factor																	0.942
High Int.	08:00				07:30				08:15				07:45				
Volume	7	0	11	18	1	309	10	320	1	0	2	3	28	313	1	342	
Peak Factor				0.806				0.952				0.500				0.931	
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	08:00				07:30				08:00				07:15				
Volume	18	0	60	78	8	1179	31	1218	2	0	7	9	61	1211	7	1279	
Percent	23.1	0.0	76.9		0.7	96.8	2.5		22.2	0.0	77.8		4.8	94.7	0.5		
High Int	08.45				07.30				08:15				07:45				
Volume	6	0	18	24	1	309	10	320	1	0	2	3	28	313	1	342	
Peak Factor				0.812				0.952				0.750				0.935	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	0	0	9	0	185	0	0	0	1	11	202	1	409
07:15	4	0	7	1	198	8	0	0	0	8	284	4	514
07:30	2	0	4	1	283	10	1	0	0	13	271	0	585
07:45	4	0	10	3	288	9	1	0	0	26	297	1	639
Total	10	0	30	5	954	27	2	0	1	58	1054	6	2147
08:00	7	0	11	3	248	9	0	0	1	10	295	2	586
08:15	1	0	15	1	280	2	1	0	2	19	278	2	601
08:30	2	0	12	5	233	4	1	0	2	10	251	1	521
08:45	6	0	18	2	273	4	0	0	2	12	322	3	642
Total	16	0	56	11	1034	19	2	0	7	51	1146	8	2350
Grand Total	26	0	86	16	1988	46	4	0	8	109	2200	14	4497
Apprch %	23.2	0.0	76.8	0.8	97.0	2.2	33.3	0.0	66.7	4.7	94.7	0.6	
Total %	0.6	0.0	1.9	0.4	44.2	1.0	0.1	0.0	0.2	2.4	48.9	0.3	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	14	0	40	54	8	1099	30	1137	3	0	3	6	68	1141	5	1214	2411
Percent	25.9	0.0	74.1		0.7	96.7	2.6		50.0	0.0	50.0		5.6	94.0	0.4		
Volume	14	0	40	54	8	1099	30	1137	3	0	3	6	68	1141	5	1214	2411
Volume	4	0	10	14	3	288	9	300	1	0	0	1	26	297	1	324	639
Peak Factor																	0.943
High Int.	08:00				07:45				08:15				07:45				
Volume	7	0	11	18	3	288	9	300	1	0	2	3	26	297	1	324	
Peak Factor				0.750				0.948				0.500				0.937	
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	08:00				07:30				08:00				07:30				
Volume	16	0	56	72	8	1099	30	1137	2	0	7	9	68	1141	5	1214	
Percent	22.2	0.0	77.8		0.7	96.7	2.6		22.2	0.0	77.8		5.6	94.0	0.4		
High Int.	08:45				07:45				08:15				07:45				
Volume	6	0	18	24	3	288	9	300	1	0	2	3	26	297	1	324	
Peak Factor				0.750				0.948				0.750				0.937	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
Page No : 1

Groups Printed- Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	0	0	1	0	15	1	0	0	0	2	12	0	31
07:15	0	0	2	0	15	0	0	0	0	0	21	0	38
07:30	0	0	1	0	26	0	0	0	0	1	12	0	40
07:45	0	0	1	0	20	0	0	0	0	2	16	0	39
Total	0	0	5	0	76	1	0	0	0	5	61	0	148
08:00	0	0	0	0	19	1	0	0	0	1	15	0	36
08:15	1	0	1	0	15	0	0	0	0	1	11	0	29
08:30	1	0	3	0	10	0	0	0	0	1	18	0	33
08:45	0	0	0	0	16	0	0	0	0	2	19	0	37
Total	2	0	4	0	60	1	0	0	0	5	63	0	135
Grand Total	2	0	9	0	136	2	0	0	0	10	124	0	283
Apprch %	18.2	0.0	81.8	0.0	98.6	1.4	0.0	0.0	0.0	7.5	92.5	0.0	
Total %	0.7	0.0	3.2	0.0	48.1	0.7	0.0	0.0	0.0	3.5	43.8	0.0	

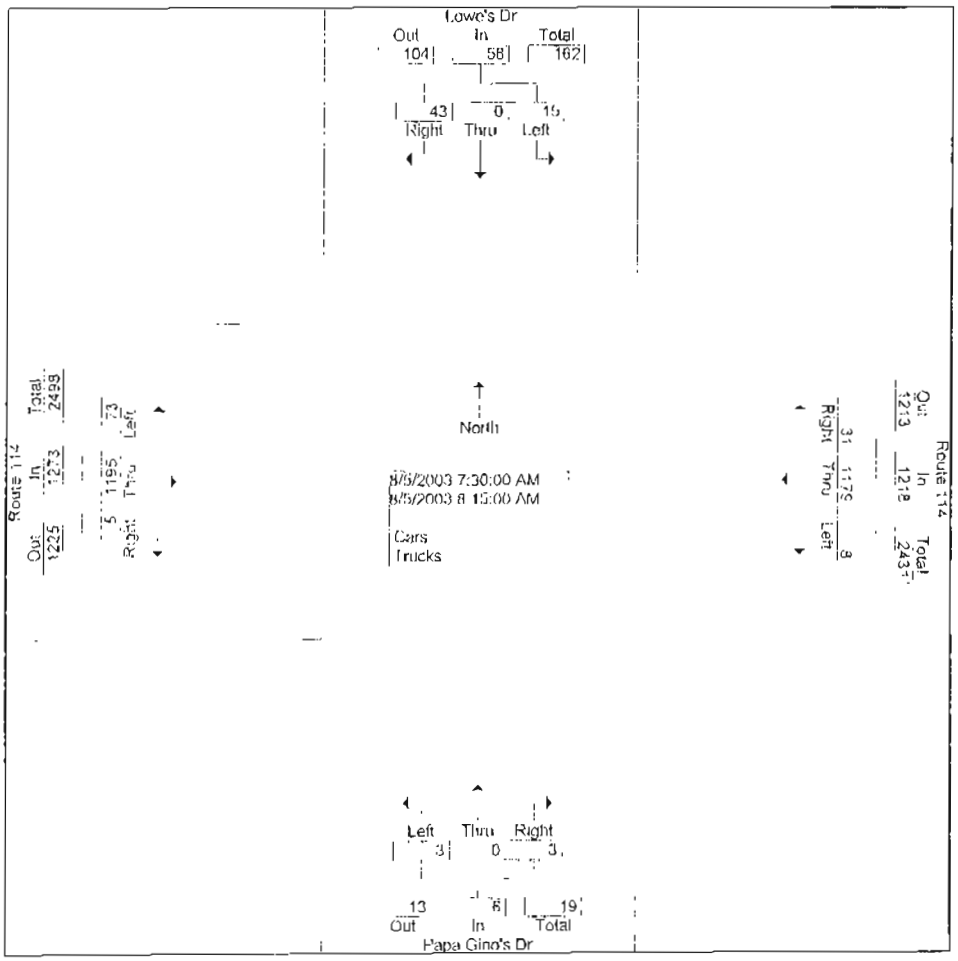
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:15																
Volume	0	0	4	4	0	80	1	81	0	0	0	0	4	64	0	68	153
Percent	0.0	0.0	100.0		0.0	98.8	1.2		0.0	0.0	0.0		5.9	94.1	0.0		
Volume	0	0	4	4	0	80	1	81	0	0	0	0	4	64	0	68	153
Volume	0	0	1	1	0	26	0	26	0	0	0	0	1	12	0	13	40
Peak Factor																	0.956
High Int.	07:15				07:30				6:45:00 AM				07:15				
Volume	0	0	2	2	0	26	0	26	0	0	0	0	0	21	0	21	
Peak Factor				0.500				0.779								0.810	
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	07:45				07:15				07:00				07:15				
Volume	2	0	5	7	0	80	1	81	0	0	0	0	4	64	0	68	
Percent	28.6	0.0	71.4		0.0	98.8	1.2		-	-	-		5.9	94.1	0.0		
High Int.	08:30				07:30				-				07:15				
Volume	1	0	3	4	0	26	0	26	-	-	-	-	0	21	0	21	
Peak Factor				0.438				0.779				-				0.810	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
Page No : 1

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	15	0	43	58	8	1179	31	1218	3	0	3	6	73	1195	5	1273	2555
Percent	25.9	0.0	74.1		0.7	96.8	2.5		50.0	0.0	50.0		5.7	93.9	0.4		
Volume	15	0	43	58	8	1179	31	1218	3	0	3	6	73	1195	5	1273	2555
Volume	4	0	11	15	3	308	9	320	1	0	0	1	28	313	1	342	678
Peak Factor																	0.942
High Int.	08:00				07:30				08:15				07:45				
Volume	7	0	11	18	1	309	10	320	1	0	2	3	28	313	1	342	
Peak Factor				0.806				0.952				0.500				0.931	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
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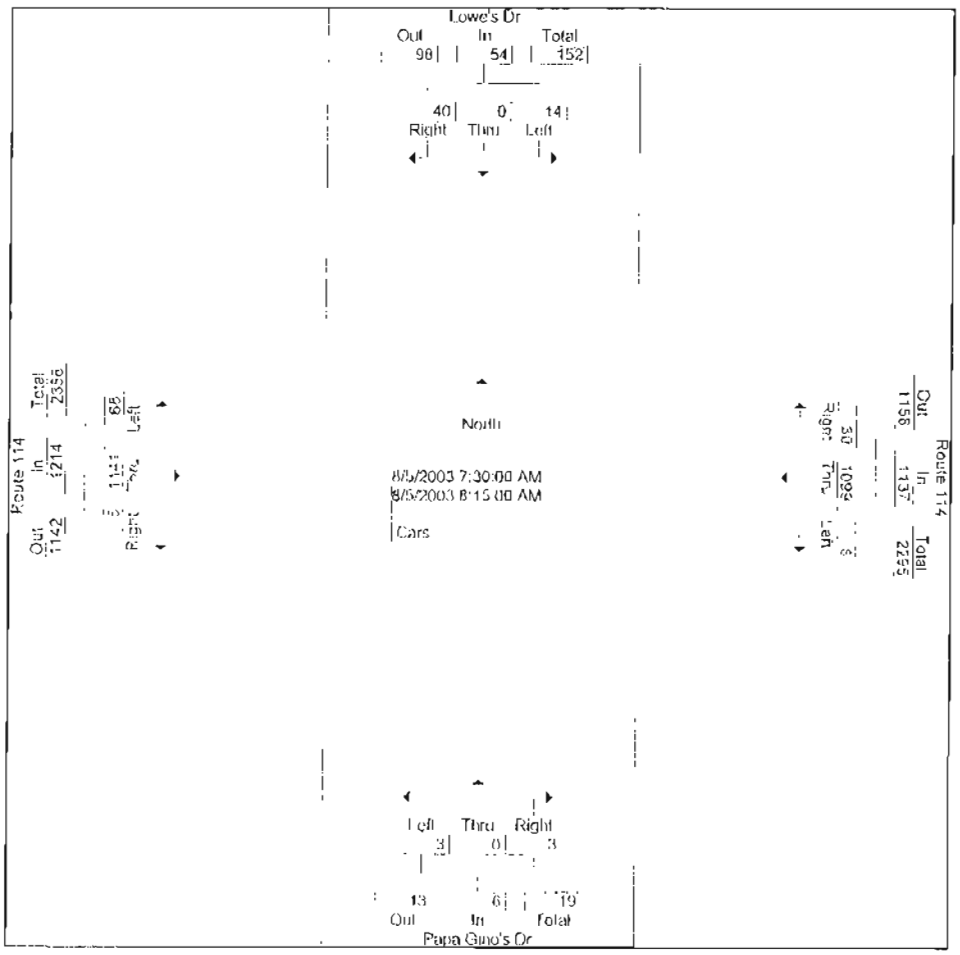
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	14	0	40	54	8	1099	30	1137	3	0	3	6	68	1141	5	1214	2411
Percent	25.9	0.0	74.1		0.7	96.7	2.6		50.0	0.0	50.0		5.6	94.0	0.4		
Volume	14	0	40	54	8	1099	30	1137	3	0	3	6	68	1141	5	1214	2411
Volume	4	0	10	14	3	288	9	300	1	0	0	1	26	297	1	324	639
Peak Factor																	0.943
High Int.	08:00				07:45				08:15				07:45				
Volume	7	0	11	18	3	288	9	300	1	0	2	3	26	297	1	324	
Peak Factor				0.750				0.948				0.500				0.937	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
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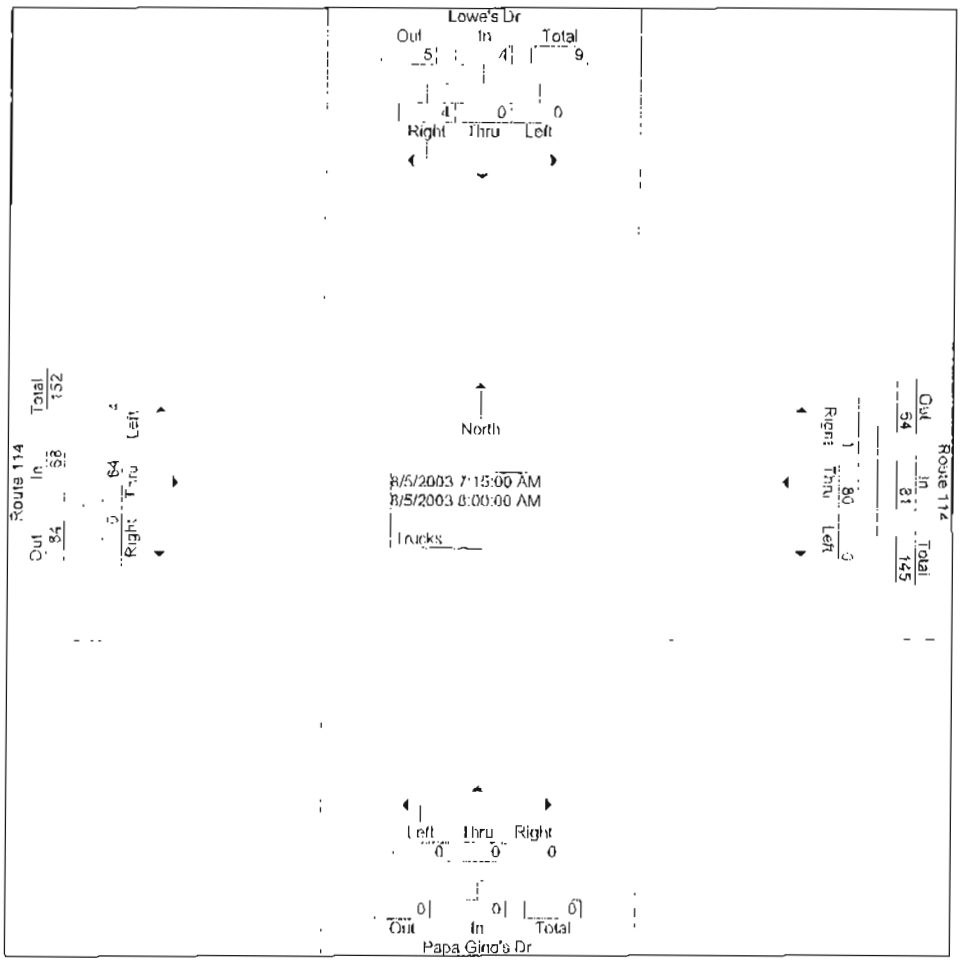
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:15																
Volume	0	0	4	4	0	80	1	81	0	0	0	0	4	64	0	68	153
Percent	0.0	0.0	100.0		0.0	98.8	1.2		0.0	0.0	0.0		5.9	94.1	0.0		
Volume	0	0	4	4	0	80	1	81	0	0	0	0	4	64	0	68	153
Volume	0	0	1	1	0	26	0	26	0	0	0	0	1	12	0	13	40
Peak Factor																	0.956
High Int	07:15				07:30				6:45:00 AM				07:15				
Volume	0	0	2	2	0	26	0	26	0	0	0	0	0	21	0	21	
Peak Factor				0.500				0.779								0.810	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
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Groups Printed- Cars - Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	7	1	47	6	462	7	8	0	3	30	398	5	974
16:15	14	0	44	8	417	13	10	0	6	34	395	8	949
16:30	7	0	24	3	436	3	5	1	10	26	376	1	892
16:45	10	0	47	6	359	6	6	0	2	31	392	4	863
Total	38	1	162	23	1674	29	29	1	21	121	1561	18	3678
17:00	14	4	29	6	395	2	8	0	9	24	412	5	908
17:15	11	0	27	6	432	5	7	0	4	29	428	9	958
17:30	12	0	36	7	420	9	8	3	8	22	405	4	934
17:45	7	1	33	8	358	2	8	1	4	20	375	7	824
Total	44	5	125	27	1605	18	31	4	25	95	1620	25	3624
Grand Total	82	6	287	50	3279	47	60	5	46	216	3181	43	7302
Apprch %	21.9	1.6	76.5	1.5	97.1	1.4	54.1	4.5	41.4	6.3	92.5	1.2	
Total %	1.1	0.1	3.9	0.7	44.9	0.6	0.8	0.1	0.6	3.0	43.6	0.6	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:00																
Volume	38	1	162	201	23	1674	29	1726	29	1	21	51	121	1561	18	1700	3678
Percent	18.9	0.5	80.6		1.3	97.0	1.7		56.9	2.0	41.2		7.1	91.8	1.1		
Volume	38	1	162	201	23	1674	29	1726	29	1	21	51	121	1561	18	1700	3678
Volume	7	1	47	55	6	462	7	475	8	0	3	11	30	398	5	433	974
Peak Factor																	0.944
High Int.	16:15				16:00				16:15				16:15				
Volume	14	0	44	58	6	462	7	475	10	0	6	16	34	395	8	437	
Peak Factor				0.866				0.908				0.797				0.973	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:00				16:00				17:00				16:45				
Volume	38	1	162	201	23	1674	29	1726	31	4	25	60	106	1637	22	1765	
Percent	18.9	0.5	80.6		1.3	97.0	1.7		51.7	6.7	41.7		6.0	92.7	1.2		
High Int.	16:15				16:00				17:30				17:15				
Volume	14	0	44	58	6	462	7	475	8	3	8	19	29	428	9	466	
Peak Factor				0.866				0.908				0.789				0.947	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
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Groups Printed- Cars

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	7	1	47	6	449	7	8	0	3	29	390	5	952
16:15	14	0	43	8	413	13	10	0	6	34	392	8	941
16:30	6	0	24	3	426	3	5	1	10	25	367	1	871
16:45	10	0	47	6	353	6	6	0	2	31	387	4	852
Total	37	1	161	23	1641	29	29	1	21	119	1536	18	3616
17:00	14	4	29	6	392	2	7	0	9	24	402	5	894
17:15	11	0	26	6	423	5	7	0	4	29	421	9	941
17:30	12	0	36	7	416	9	8	3	8	22	402	4	927
17:45	7	1	33	8	354	2	8	1	4	19	369	7	813
Total	44	5	124	27	1585	18	30	4	25	94	1594	25	3575
Grand Total	81	6	285	50	3226	47	59	5	46	213	3130	43	7191
Apprch %	21.8	1.6	76.6	1.5	97.1	1.4	53.6	4.5	41.8	6.3	92.4	1.3	
Total %	1.1	0.1	4.0	0.7	44.9	0.7	0.8	0.1	0.6	3.0	43.5	0.6	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:00																
Volume	37	1	161	199	23	1641	29	1693	29	1	21	51	119	1536	18	1673	3616
Percent	18.6	0.5	80.9		1.4	96.9	1.7		56.9	2.0	41.2		7.1	91.8	1.1		
Volume	37	1	161	199	23	1641	29	1693	29	1	21	51	119	1536	18	1673	3616
Volume	7	1	47	55	6	449	7	462	8	0	3	11	29	390	5	424	952
Peak Factor																	0.950
High Int.	16:15				16:00				16:15				16:15				
Volume	14	0	43	57	6	449	7	462	10	0	6	16	34	392	8	434	
Peak Factor				0.873				0.916				0.797				0.964	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:00				16:00				17:00				16:45				
Volume	37	1	161	199	23	1641	29	1693	30	4	25	59	106	1612	22	1740	
Percent	18.6	0.5	80.9		1.4	96.9	1.7		50.8	6.8	42.4		6.1	92.6	1.3		
High Int	16:15				16:00				17:30				17:15				
Volume	14	0	43	57	6	449	7	462	8	3	8	19	29	421	9	459	
Peak Factor				0.873				0.916				0.776				0.948	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A2
Site Code : 39050002
Start Date : 08/05/2003
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Groups Printed- Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	0	0	0	0	13	0	0	0	0	1	8	0	22
16:15	0	0	1	0	4	0	0	0	0	0	3	0	8
16:30	1	0	0	0	10	0	0	0	0	1	9	0	21
16:45	0	0	0	0	6	0	0	0	0	0	5	0	11
Total	1	0	1	0	33	0	0	0	0	2	25	0	62
17:00	0	0	0	0	3	0	1	0	0	0	10	0	14
17:15	0	0	1	0	9	0	0	0	0	0	7	0	17
17:30	0	0	0	0	4	0	0	0	0	0	3	0	7
17:45	0	0	0	0	4	0	0	0	0	1	6	0	11
Total	0	0	1	0	20	0	1	0	0	1	26	0	49
Grand Total	1	0	2	0	53	0	1	0	0	3	51	0	111
Apprch %	33.3	0.0	66.7	0.0	100.0	0.0	100.0	0.0	0.0	5.6	94.4	0.0	
Total %	0.9	0.0	1.8	0.0	47.7	0.0	0.9	0.0	0.0	2.7	45.9	0.0	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:30																
Volume	1	0	1	2	0	28	0	28	1	0	0	1	1	31	0	32	63
Percent	50.0	0.0	50.0		0.0	100.0	0.0		100.0	0.0	0.0		3.1	96.9	0.0		
Volume	1	0	1	2	0	28	0	28	1	0	0	1	1	31	0	32	63
Volume	1	0	0	1	0	10	0	10	0	0	0	0	1	0	0	10	21
Peak Factor																	0.750
High Int.	16:30				16:30				17:00				16:30				
Volume	1	0	0	1	0	10	0	10	1	0	0	1	1	9	0	10	
Peak Factor				0.500				0.700				0.250				0.800	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:00				16:00				16:15				16:30				
Volume	1	0	1	2	0	33	0	33	1	0	0	1	1	31	0	32	
Percent	50.0	0.0	50.0		0.0	100.0	0.0		100.0	0.0	0.0		3.1	96.9	0.0		
High Int.	16:15				16:00				17:00				16:30				
Volume	0	0	1	1	0	13	0	13	1	0	0	1	1	9	0	10	
Peak Factor				0.500				0.635				0.250				0.800	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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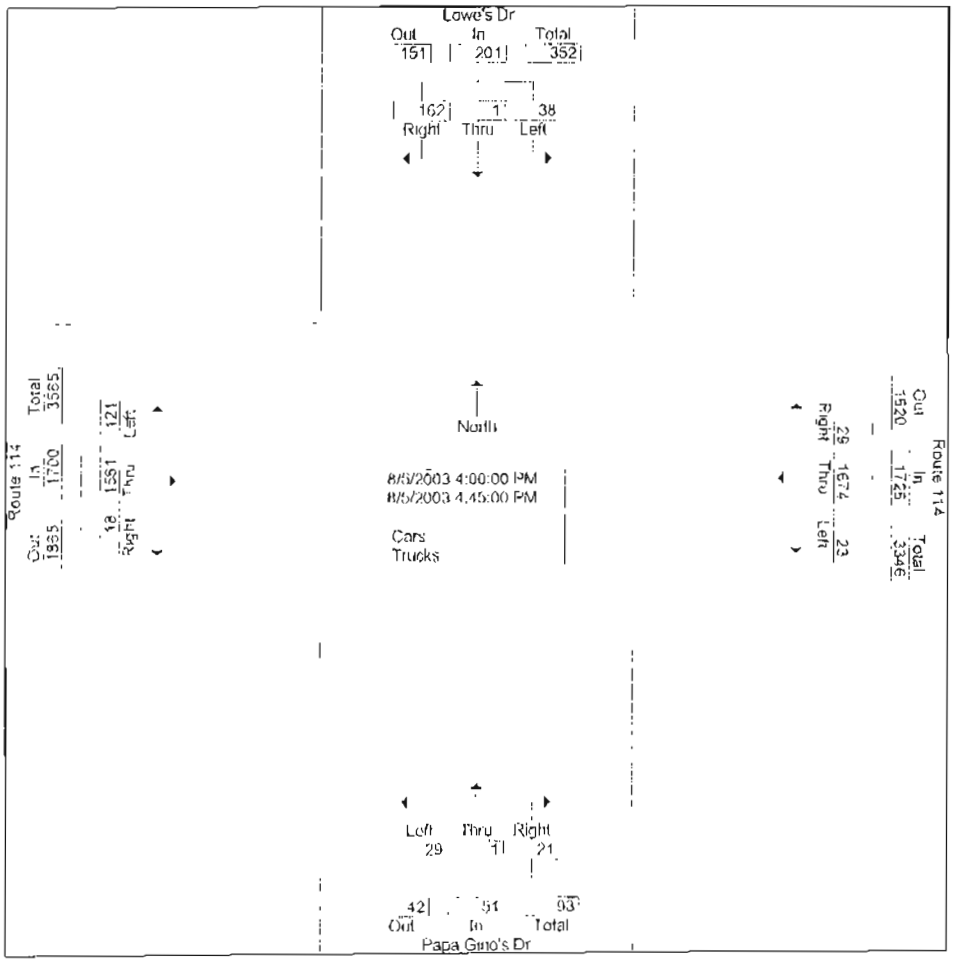
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:00																
Volume	38	1	162	201	23	1674	29	1726	29	1	21	51	121	1561	18	1700	3678
Percent	18.9	0.5	80.6		1.3	97.0	1.7		56.9	2.0	41.2		7.1	91.8	1.1		
Volume	38	1	162	201	23	1674	29	1726	29	1	21	51	121	1561	18	1700	3678
Volume	7	1	47	55	6	462	7	475	8	0	3	11	30	398	5	433	974
Peak Factor																	0.944
High Int.	16:15				16:00				16:15				16:15				
Volume	14	0	44	58	6	462	7	475	10	0	6	16	34	395	8	437	
Peak Factor				0.866				0.908				0.797				0.973	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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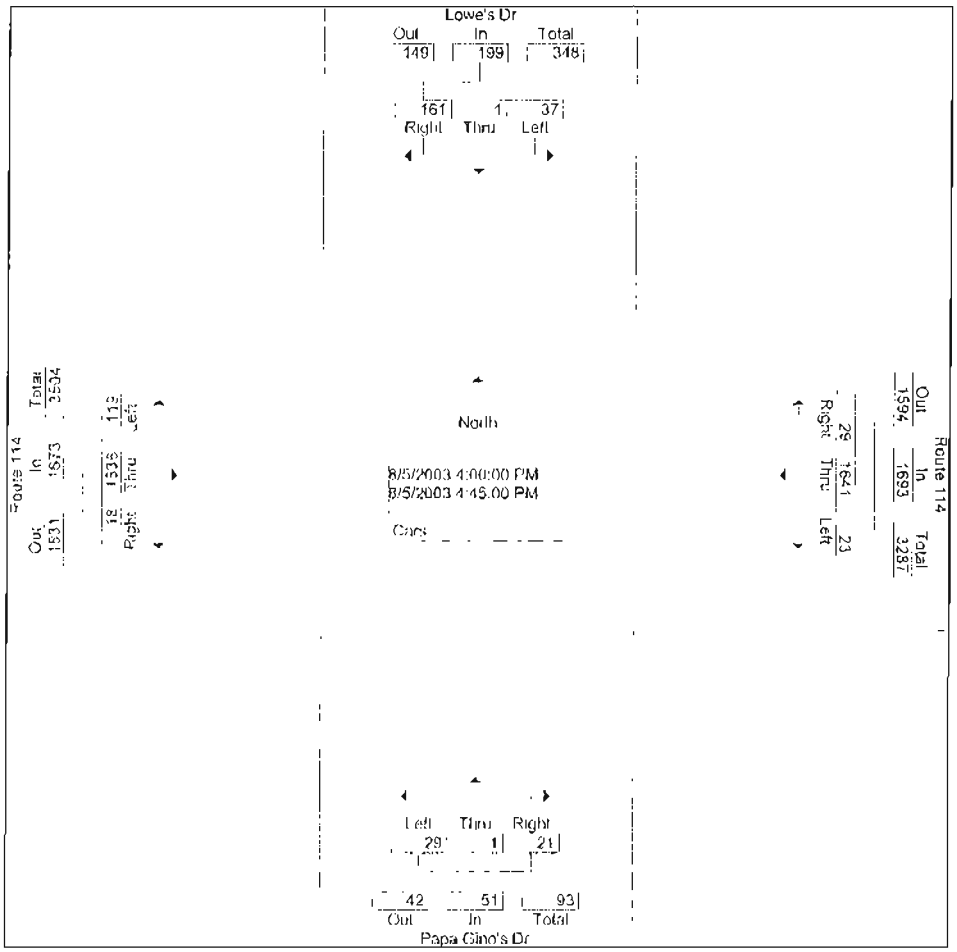
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:00																
Volume	37	1	161	199	23	1641	29	1693	29	1	21	51	119	1536	18	1673	3616
Percent	18.6	0.5	80.9		1.4	96.9	1.7		56.9	2.0	41.2		7.1	91.8	1.1		
Volume	37	1	161	199	23	1641	29	1693	29	1	21	51	119	1536	18	1673	3616
Volume	7	1	47	55	6	449	7	462	8	0	3	11	29	390	5	424	952
Peak Factor																	0.950
High Int.	16:15				16:00				16:15				16:15				
Volume	14	0	43	57	6	449	7	462	10	0	6	16	34	392	8	434	
Peak Factor				0.873				0.916				0.797				0.964	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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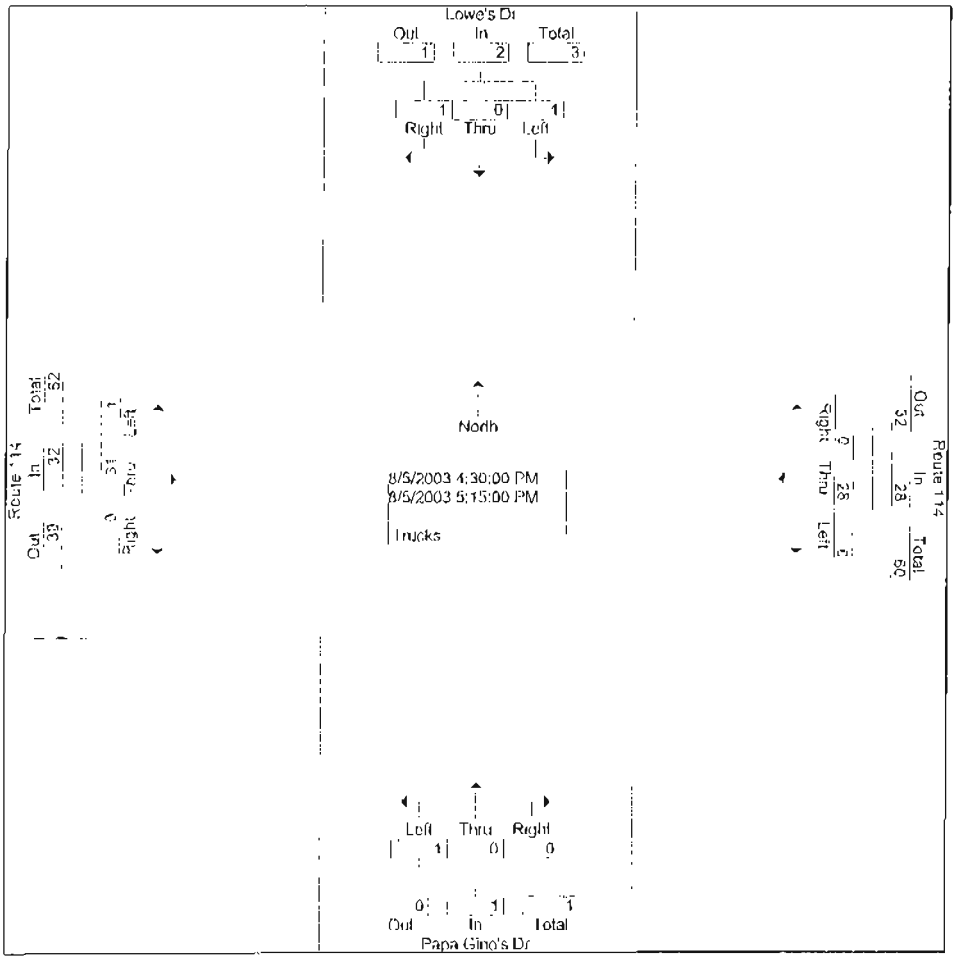
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	16:30																
Volume	1	0	1	2	0	28	0	28	1	0	0	1	1	31	0	32	63
Percent	50.0	0.0	50.0		0.0	100.0	0.0		100.0	0.0	0.0		3.1	96.9	0.0		
Volume	1	0	1	2	0	28	0	28	1	0	0	1	1	31	0	32	63
Volume	1	0	0	1	0	10	0	10	0	0	0	0	1	9	0	10	21
Peak Factor																	0.750
High Int.	16:30				16:30				17:00				16:30				
Volume	1	0	0	1	0	10	0	10	1	0	0	1	1	9	0	10	
Peak Factor				0.500				0.700				0.250				0.800	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
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Groups Printed- Cars - Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	9	0	39	4	336	8	2	0	7	42	420	1	868
11:15	10	1	20	3	361	7	2	0	2	58	394	3	861
11:30	6	0	26	5	380	8	4	1	4	29	405	2	870
11:45	18	0	14	2	357	6	0	1	12	29	450	2	891
Total	43	1	99	14	1434	29	8	2	25	158	1669	8	3490
12:00	6	1	34	8	379	7	1	0	8	33	444	1	922
12:15	10	0	48	10	370	5	11	0	5	44	469	6	978
12:30	13	0	41	4	376	6	10	0	6	43	429	1	929
12:45	11	0	39	11	393	11	6	0	7	35	409	2	924
Total	40	1	162	33	1518	29	28	0	26	155	1751	10	3753
13:00	9	0	35	10	372	4	6	2	8	33	425	9	913
13:15	11	2	52	5	399	5	8	0	7	54	436	1	980
13:30	9	1	35	13	371	13	8	0	9	41	417	1	918
13:45	9	0	32	3	379	4	8	1	9	34	417	1	897
Total	38	3	154	31	1521	26	30	3	33	162	1695	12	3708
Grand Total	121	5	415	78	4473	84	66	5	84	475	5115	30	10951
Apprch %	22.4	0.9	76.7	1.7	96.5	1.8	42.6	3.2	54.2	8.5	91.0	0.5	
Total %	1.1	0.0	3.8	0.7	40.8	0.8	0.6	0.0	0.8	4.3	46.7	0.3	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	40	1	162	203	33	1518	29	1580	28	0	26	54	155	1751	10	1916	3753
Percent	19.7	0.5	79.8		2.1	96.1	1.8		51.9	0.0	48.1		8.1	91.4	0.5		
Volume	40	1	162	203	33	1518	29	1580	28	0	26	54	155	1751	10	1916	3753
Volume	10	0	48	58	10	370	5	385	11	0	5	16	44	469	6	519	978
Peak Factor																	0.959
High Int.	12:15				12:45				12:15				12:15				
Volume	10	0	48	58	11	393	11	415	11	0	5	16	44	469	6	519	
Peak Factor				0.875				0.952				0.844				0.923	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	12:30				12:45				13:00				11:45				
Volume	44	2	167	213	39	1535	33	1607	30	3	33	66	149	1792	10	1951	
Percent	20.7	0.9	78.4		2.4	95.5	2.1		45.5	4.5	50.0		7.6	91.9	0.5		
High Int.	13:15				12:45				13:45				12:15				
Volume	11	2	52	65	11	393	11	415	8	1	9	18	44	469	6	519	
Peak Factor				0.819				0.968				0.917				0.940	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
Start Date : 08/02/2003
Page No : 1

Groups Printed- Cars

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	9	0	38	4	331	8	2	0	7	42	410	1	852
11:15	10	1	20	3	357	7	2	0	2	57	387	3	849
11:30	6	0	26	5	377	8	4	1	4	28	402	2	863
11:45	18	0	12	2	355	6	0	1	12	28	448	2	884
Total	43	1	96	14	1420	29	8	2	25	155	1647	8	3448
12:00	6	1	34	8	372	7	1	0	8	33	439	1	910
12:15	10	0	48	10	366	5	11	0	5	44	465	6	970
12:30	13	0	40	4	373	6	10	0	6	43	428	1	924
12:45	11	0	39	11	392	11	6	0	7	35	407	2	921
Total	40	1	161	33	1503	29	28	0	26	155	1739	10	3725
13:00	9	0	35	10	366	4	6	2	8	33	421	9	903
13:15	11	2	52	4	394	5	8	0	7	54	431	1	969
13:30	9	1	35	13	366	13	8	0	9	41	416	1	912
13:45	9	0	32	3	375	4	8	1	9	33	417	1	892
Total	38	3	154	30	1501	26	30	3	33	161	1685	12	3676
Grand Total	121	5	411	77	4424	84	66	5	84	471	5071	30	10849
Apprch %	22.5	0.9	76.5	1.7	96.5	1.8	42.6	3.2	54.2	8.5	91.0	0.5	
Total %	1.1	0.0	3.8	0.7	40.8	0.8	0.6	0.0	0.8	4.3	46.7	0.3	

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	40	1	161	202	33	1503	29	1565	28	0	26	54	155	1739	10	1904	3725
Percent	19.8	0.5	79.7		2.1	96.0	1.9		51.9	0.0	48.1		8.1	91.3	0.5		
Volume	40	1	161	202	33	1503	29	1565	28	0	26	54	155	1739	10	1904	3725
Volume	10	0	48	58	10	366	5	381	11	0	5	16	44	465	6	515	970
Peak Factor																	0.960
High Int.	12:15				12:45				12:15				12:15				
Volume	10	0	48	58	11	392	11	414	11	0	5	16	44	465	6	515	
Peak Factor				0.871				0.945				0.844				0.924	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	12:30				12:45				13:00				11:45				
Volume	44	2	166	212	38	1518	33	1589	30	3	33	66	148	1780	10	1938	
Percent	20.8	0.9	78.3		2.4	95.5	2.1		45.5	4.5	50.0		7.6	91.8	0.5		
High Int.	13:15				12:45				13:45				12:15				
Volume	11	2	52	65	11	392	11	414	8	1	9	18	44	465	6	515	
Peak Factor				0.815				0.960				0.917				0.941	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
Start Date : 08/02/2003
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Groups Printed- Trucks

	Lowe's Dr From North			Route 114 From East			Papa Gino's Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	0	0	1	0	5	0	0	0	0	0	10	0	16
11:15	0	0	0	0	4	0	0	0	0	1	7	0	12
11:30	0	0	0	0	3	0	0	0	0	1	3	0	7
11:45	0	0	2	0	2	0	0	0	0	1	2	0	7
Total	0	0	3	0	14	0	0	0	0	3	22	0	42
12:00	0	0	0	0	7	0	0	0	0	0	5	0	12
12:15	0	0	0	0	4	0	0	0	0	0	4	0	8
12:30	0	0	1	0	3	0	0	0	0	0	1	0	5
12:45	0	0	0	0	1	0	0	0	0	0	2	0	3
Total	0	0	1	0	15	0	0	0	0	0	12	0	28
13:00	0	0	0	0	6	0	0	0	0	0	4	0	10
13:15	0	0	0	1	5	0	0	0	0	0	5	0	11
13:30	0	0	0	0	5	0	0	0	0	0	1	0	6
13:45	0	0	0	0	4	0	0	0	0	1	0	0	5
Total	0	0	0	1	20	0	0	0	0	1	10	0	32
Grand Total	0	0	4	1	49	0	0	0	0	4	44	0	102
Apprch %	0.0	0.0	100.0	2.0	98.0	0.0	0.0	0.0	0.0	8.3	91.7	0.0	
Total %	0.0	0.0	3.9	1.0	48.0	0.0	0.0	0.0	0.0	3.9	43.1	0.0	

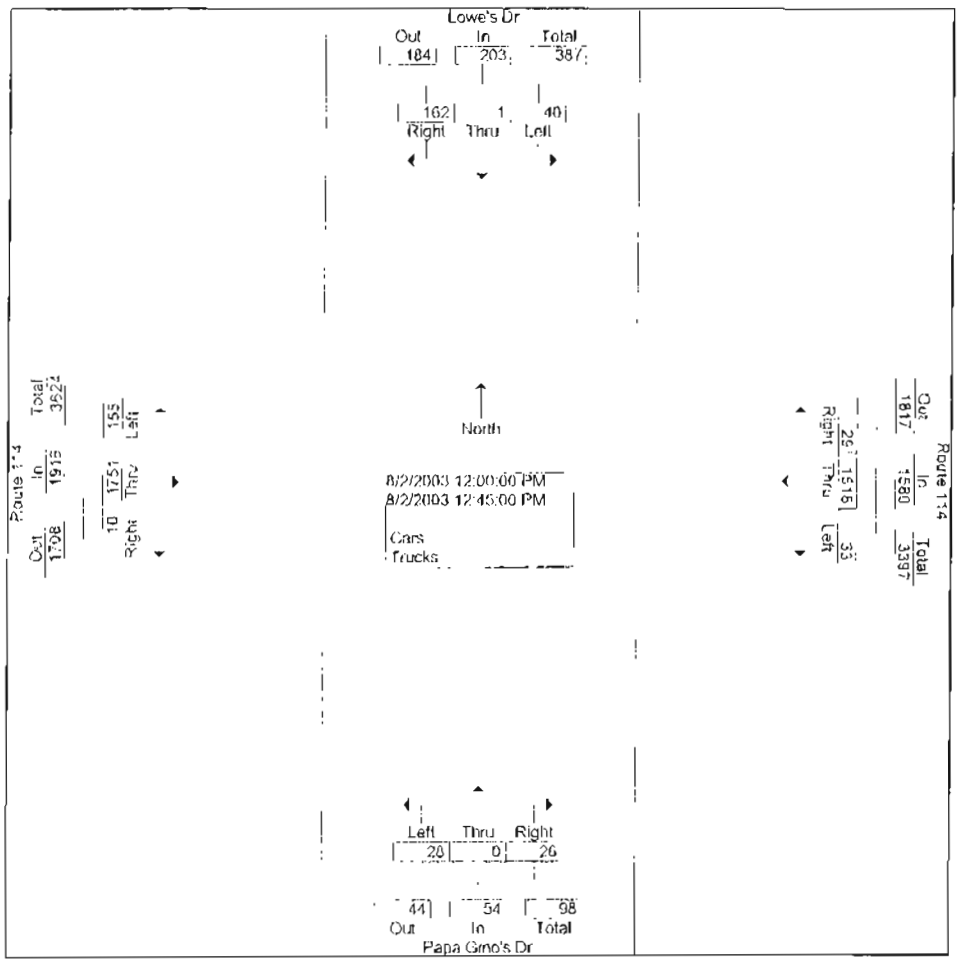
	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:00																
Volume	0	0	3	3	0	14	0	14	0	0	0	0	3	22	0	25	42
Percent	0.0	0.0	100.0		0.0	100.0	0.0		0.0	0.0	0.0		12.0	88.0	0.0		
Volume	0	0	3	3	0	14	0	14	0	0	0	0	3	22	0	25	42
Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	10	0	10	16
Peak Factor																	0.656
High Int.	11:45				11:00				10:45:00 AM				11:00				
Volume	0	0	2	2	0	5	0	5	0	0	0	0	0	10	0	10	
Peak Factor				0.375				0.700								0.625	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	11:00				13:00				11:00				11:00				
Volume	0	0	3	3	1	20	0	21	0	0	0	0	3	22	0	25	
Percent	0.0	0.0	100.0		4.8	95.2	0.0		-	-	-		12.0	88.0	0.0		
High Int.	11:45				13:00				-				11:00				
Volume	0	0	2	2	0	6	0	6	-	-	-	-	0	10	0	10	
Peak Factor				0.375				0.875				-				0.625	

N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
Start Date : 08/02/2003
Page No : 1

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	40	1	162	203	33	1518	29	1580	28	0	26	54	155	1751	10	1916	3753
Percent	19.7	0.5	79.8		2.1	96.1	1.8		51.9	0.0	48.1		8.1	91.4	0.5		
Volume	40	1	162	203	33	1518	29	1580	28	0	26	54	155	1751	10	1916	3753
Volume	10	0	48	58	10	370	5	385	11	0	5	16	44	469	6	519	978
Peak Factor																	0.959
High Int	12:15				12:45				12:15				12:15				
Volume	10	0	48	58	11	393	11	415	11	0	5	16	44	469	6	519	
Peak Factor				0.875				0.952				0.844				0.923	

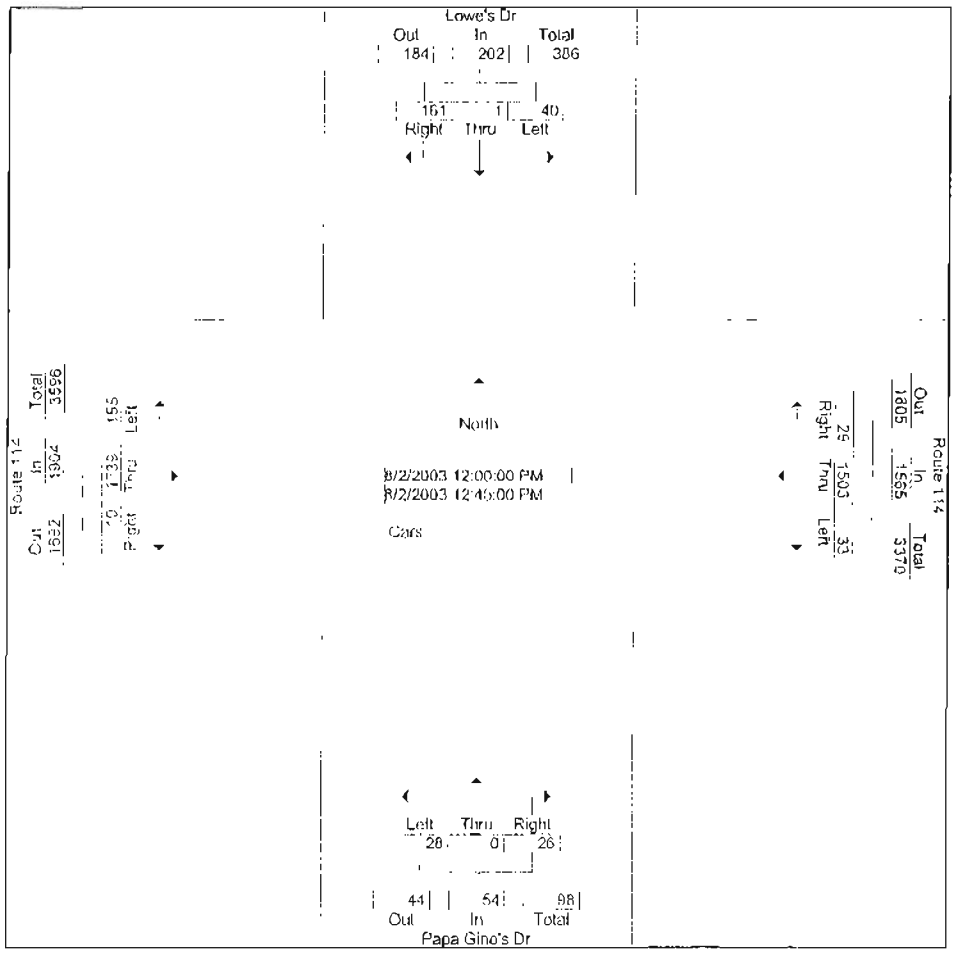


N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
Start Date : 08/02/2003
Page No : 1

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	40	1	161	202	33	1503	29	1565	28	0	26	54	155	1739	10	1904	3725
Percent	19.8	0.5	79.7		2.1	96.0	1.9		51.9	0.0	48.1		8.1	91.3	0.5		
Volume	40	1	161	202	33	1503	29	1565	28	0	26	54	155	1739	10	1904	3725
Volume	10	0	48	58	10	366	5	381	11	0	5	16	44	465	6	515	970
Peak Factor																	0.960
High Int.	12:15				12:45				12:15				12:15				
Volume	10	0	48	58	11	392	11	414	11	0	5	16	44	465	6	515	
Peak Factor				0.871				0.945				0.844				0.924	



N/S Street : Lowe's Drive
E/W Street : Route 114
City/State : Danvers, MA
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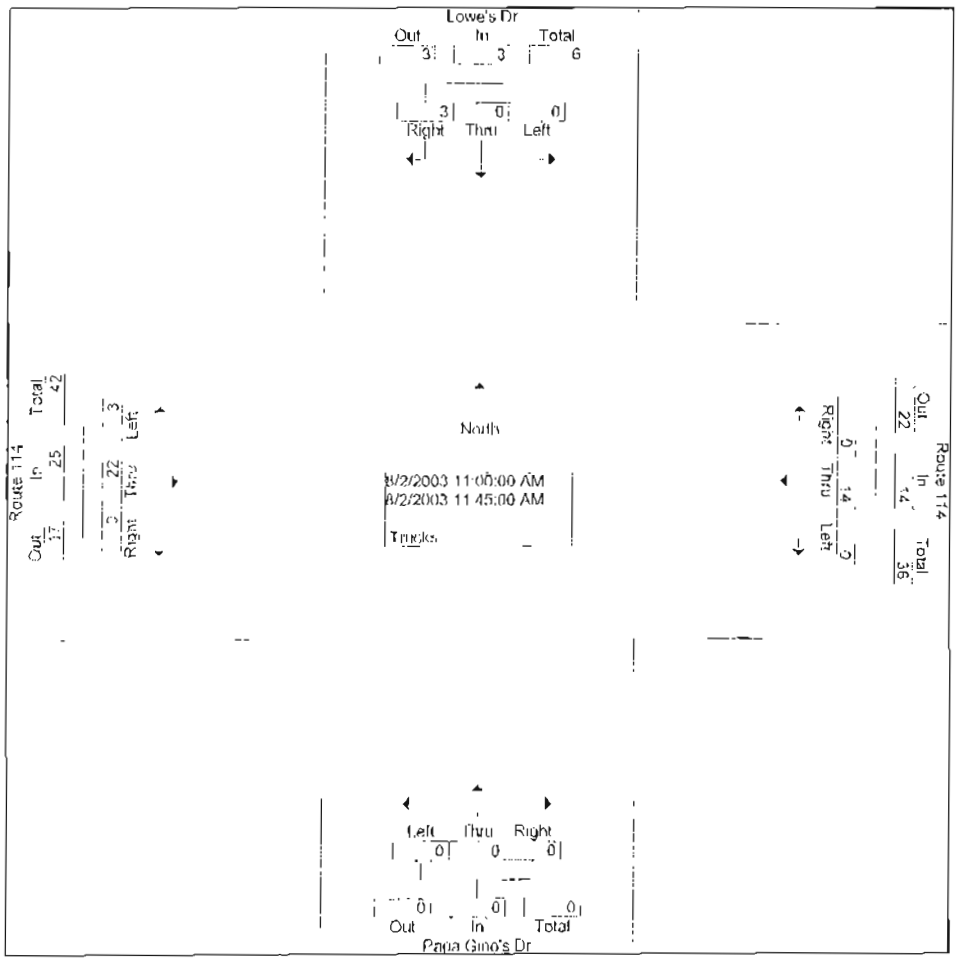
Accurate Counts
978-664-2565

File Name : 39050002
Site Code : 39050002
Start Date : 08/02/2003
Page No : 1

	Lowe's Dr From North				Route 114 From East				Papa Gino's Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection 11:00																	
Volume	0	0	3	3	0	14	0	14	0	0	0	0	3	22	0	25	42
Percent	0.0	0.0	100.0		0.0	100.0	0.0		0.0	0.0	0.0		12.0	88.0	0.0		
Volume	0	0	3	3	0	14	0	14	0	0	0	0	3	22	0	25	42
Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	10	0	10	16
Peak Factor																	0.656
High Int	11:45				11:00				10:45:00 AM				11:00				
Volume	0	0	2	2	0	5	0	5	0	0	0	0	0	10	0	10	
Peak Factor				0.375				0.700								0.625	



N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500a4
Site Code : 39050004
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars - Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	12	0	27	0	195	13	0	0	0	27	190	0	464
07:15	21	0	27	2	190	13	0	0	1	33	269	1	557
07:30	15	0	49	1	280	14	1	0	0	13	258	0	631
07:45	33	1	54	1	252	16	1	0	0	23	286	1	668
Total	81	1	157	4	917	56	2	0	1	96	1003	2	2320
08:00	24	0	27	0	255	16	0	0	0	31	286	0	639
08:15	29	0	37	1	240	19	0	0	0	23	272	1	622
08:30	25	1	34	1	255	28	0	1	0	21	249	3	618
08:45	25	0	35	1	240	19	1	0	0	41	306	2	670
Total	103	1	133	3	990	82	1	1	0	116	1113	6	2549
Grand Total	184	2	290	7	1907	138	3	1	1	212	2116	8	4869
Apprch %	38.7	0.4	60.9	0.3	92.9	6.7	60.0	20.0	20.0	9.1	90.6	0.3	
Total %	3.8	0.0	6.0	0.1	39.2	2.8	0.1	0.0	0.0	4.4	43.5	0.2	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	101	1	167	269	3	1027	65	1095	2	0	0	2	90	1102	2	1194	2560
Percent	37.5	0.4	62.1		0.3	93.8	5.9		100.0	0.0	0.0		7.5	92.3	0.2		
Volume	101	1	167	269	3	1027	65	1095	2	0	0	2	90	1102	2	1194	2560
Volume	33	1	54	88	1	252	16	269	1	0	0	1	23	286	1	310	668
Peak Factor																	0.958
High Int.	07:45				07:30				07:30				08:00				
Volume	33	1	54	88	1	280	14	295	1	0	0	1	31	286	0	317	
Peak Factor				0.764				0.928				0.500				0.942	

Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	07:30				07:30				07:00				08:00				
Volume	101	1	167	269	3	1027	65	1095	2	0	1	3	116	1113	6	1235	
Percent	37.5	0.4	62.1		0.3	93.8	5.9		66.7	0.0	33.3		9.4	90.1	0.5		
High Int.	07:45				07:30				07:15				08:45				
Volume	33	1	54	88	1	280	14	295	0	0	1	1	41	306	2	349	
Peak Factor				0.764				0.928				0.750				0.885	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500a4
Site Code : 39050004
Start Date : 08/05/2003
Page No : 1

Groups Printed- Cars

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	12	0	24	0	182	13	0	0	0	25	178	0	434
07:15	21	0	25	2	176	13	0	0	1	31	247	1	517
07:30	15	0	37	1	258	14	1	0	0	13	246	0	585
07:45	32	1	42	1	241	16	1	0	0	23	272	1	630
Total	80	1	128	4	857	56	2	0	1	92	943	2	2166
08:00	22	0	25	0	235	14	0	0	0	30	268	0	594
08:15	27	0	36	1	224	19	0	0	0	21	258	1	587
08:30	24	1	30	1	242	26	0	1	0	20	230	3	578
08:45	25	0	32	1	228	17	1	0	0	37	293	2	636
Total	98	1	123	3	929	76	1	1	0	108	1049	6	2395
Grand Total	178	2	251	7	1786	132	3	1	1	200	1992	8	4561
Apprch %	41.3	0.5	58.2	0.4	92.8	6.9	60.0	20.0	20.0	9.1	90.5	0.4	
Total %	3.9	0.0	5.5	0.2	39.2	2.9	0.1	0.0	0.0	4.4	43.7	0.2	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	96	1	140	237	3	958	63	1024	2	0	0	2	87	1044	2	1133	2396
Percent	40.5	0.4	59.1		0.3	93.6	6.2		100.0	0.0	0.0		7.7	92.1	0.2		
Volume	96	1	140	237	3	958	63	1024	2	0	0	2	87	1044	2	1133	2396
Volume	32	1	42	75	1	241	16	258	1	0	0	1	23	272	1	296	630
Peak Factor																	0.951
High Int.	07:45				07:30				07:30				08:00				
Volume	32	1	42	75	1	258	14	273	1	0	0	1	30	268	0	298	
Peak Factor				0.790				0.938				0.500				0.951	

Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	07:45				07:30				07:00				08:00				
Volume	105	2	133	240	3	958	63	1024	2	0	1	3	108	1049	6	1163	
Percent	43.8	0.8	55.4		0.3	93.6	6.2		66.7	0.0	33.3		9.3	90.2	0.5		
High Int.	07:45				07:30				07:15				08:45				
Volume	32	1	42	75	1	258	14	273	0	0	1	1	37	293	2	332	
Peak Factor				0.800				0.938				0.750				0.876	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500a4
Site Code : 39050004
Start Date : 08/05/2003
Page No : 1

Groups Printed- Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00	0	0	3	0	13	0	0	0	0	2	12	0	30
07:15	0	0	2	0	14	0	0	0	0	2	22	0	40
07:30	0	0	12	0	22	0	0	0	0	0	12	0	46
07:45	1	0	12	0	11	0	0	0	0	0	14	0	38
Total	1	0	29	0	60	0	0	0	0	4	60	0	154
08:00	2	0	2	0	20	2	0	0	0	1	18	0	45
08:15	2	0	1	0	16	0	0	0	0	2	14	0	35
08:30	1	0	4	0	13	2	0	0	0	1	19	0	40
08:45	0	0	3	0	12	2	0	0	0	4	13	0	34
Total	5	0	10	0	61	6	0	0	0	8	64	0	154
Grand Total	6	0	39	0	121	6	0	0	0	12	124	0	308
Apprch %	13.3	0.0	86.7	0.0	95.3	4.7	0.0	0.0	0.0	8.8	91.2	0.0	
Total %	1.9	0.0	12.7	0.0	39.3	1.9	0.0	0.0	0.0	3.9	40.3	0.0	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:15																
Volume	3	0	28	31	0	67	2	69	0	0	0	0	3	66	0	69	169
Percent	9.7	0.0	90.3		0.0	97.1	2.9		0.0	0.0	0.0		4.3	95.7	0.0		
Volume	3	0	28	31	0	67	2	69	0	0	0	0	3	66	0	69	169
Volume	0	0	12	12	0	22	0	22	0	0	0	0	0	12	0	12	46
Peak Factor																	0.918
High Int.	07:45				07:30				6:45:00 AM				07:15				
Volume	1	0	12	13	0	22	0	22	0	0	0	0	2	22	0	24	
Peak Factor				0.596				0.784								0.719	
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
By Approach	07:30				07:30				07:00				08:00				
Volume	5	0	27	32	0	69	2	71	0	0	0	0	8	64	0	72	
Percent	15.6	0.0	84.4		0.0	97.2	2.8		-	-	-		11.1	88.9	0.0		
High Int.	07:45				07:30								08:30				
Volume	1	0	12	13	0	22	0	22	-	-	-	-	1	19	0	20	
Peak Factor				0.615				0.807								0.900	

N/S Street : Garden Street
E/W Street : Route 114
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Accurate Counts
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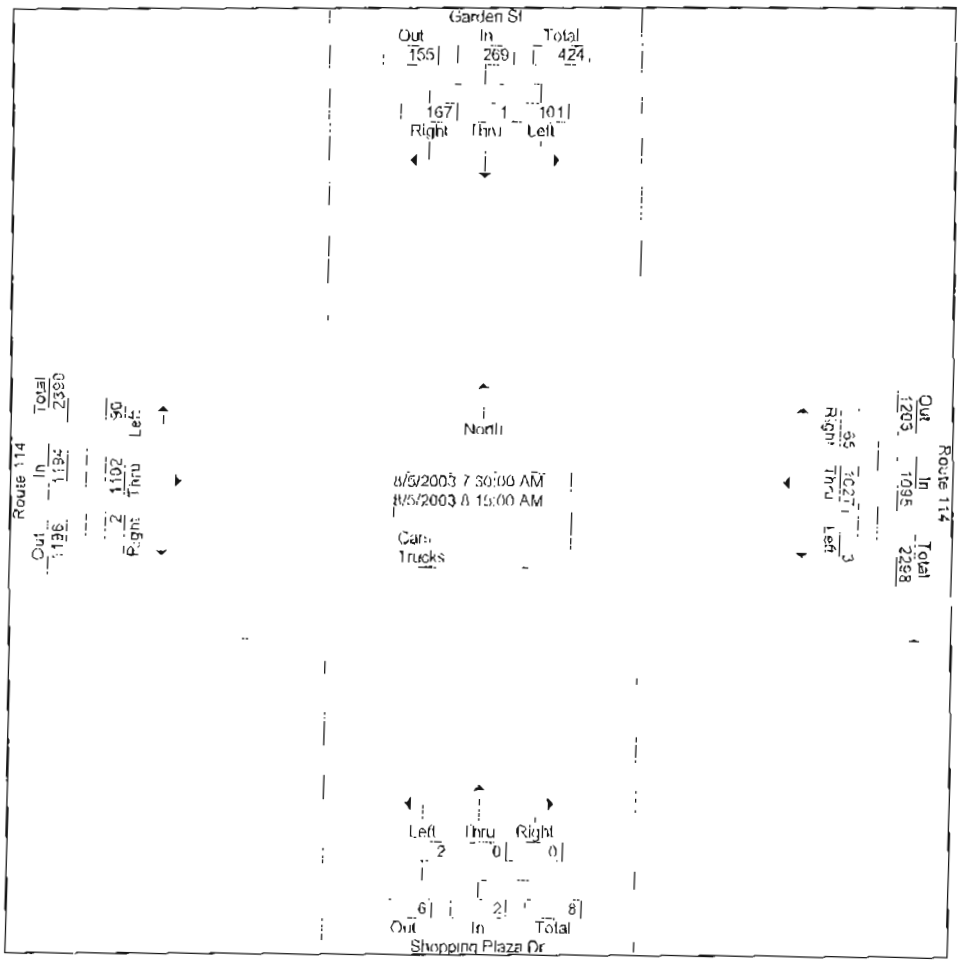
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	101	1	167	269	3	1027	65	1095	2	0	0	2	90	1102	2	1194	2560
Percent	37.5	0.4	62.1		0.3	93.8	5.9		100.0	0.0	0.0		7.5	92.3	0.2		
Volume	101	1	167	269	3	1027	65	1095	2	0	0	2	90	1102	2	1194	2560
Volume	33	1	54	88	1	252	16	269	1	0	0	1	23	286	1	310	668
Peak Factor																	0.958
High Int.	07:45				07:30				07:30				08:00				
Volume	33	1	54	88	1	280	14	295	1	0	0	1	31	286	0	317	
Peak Factor				0.764				0.928				0.500				0.942	



N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500a4
Site Code : 39050004
Start Date : 08/05/2003
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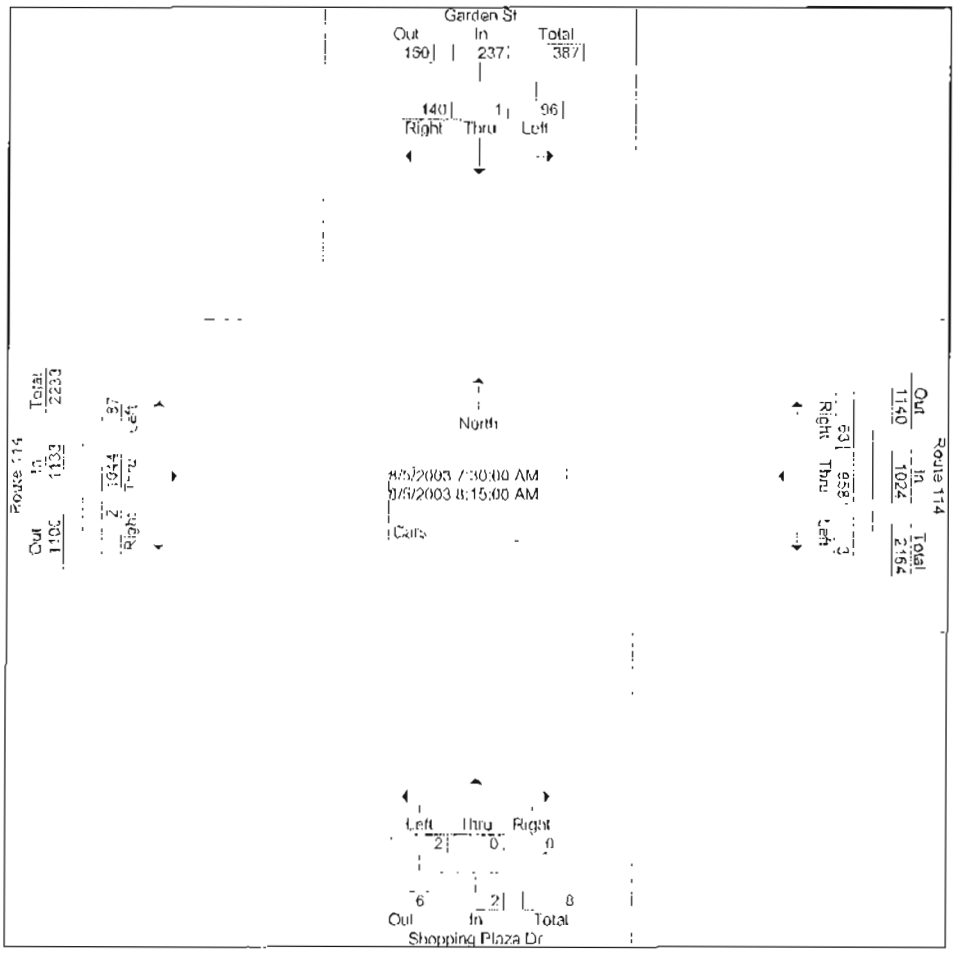
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07:30																
Volume	96	1	140	237	3	958	63	1024	2	0	0	2	87	1044	2	1133	2396
Percent	40.5	0.4	59.1		0.3	93.6	6.2		100.0	0.0	0.0		7.7	92.1	0.2		
Volume	96	1	140	237	3	958	63	1024	2	0	0	2	87	1044	2	1133	2396
Volume	32	1	42	75	1	241	16	258	1	0	0	1	23	272	1	296	630
Peak Factor																	0.951
High Int.	07:45				07:30				07:30				08.00				
Volume	32	1	42	75	1	258	14	273	1	0	0	1	30	268	0	298	
Peak Factor				0.790				0 938				0.500				0.951	



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File Name : 390500a4
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Start Date : 08/05/2003
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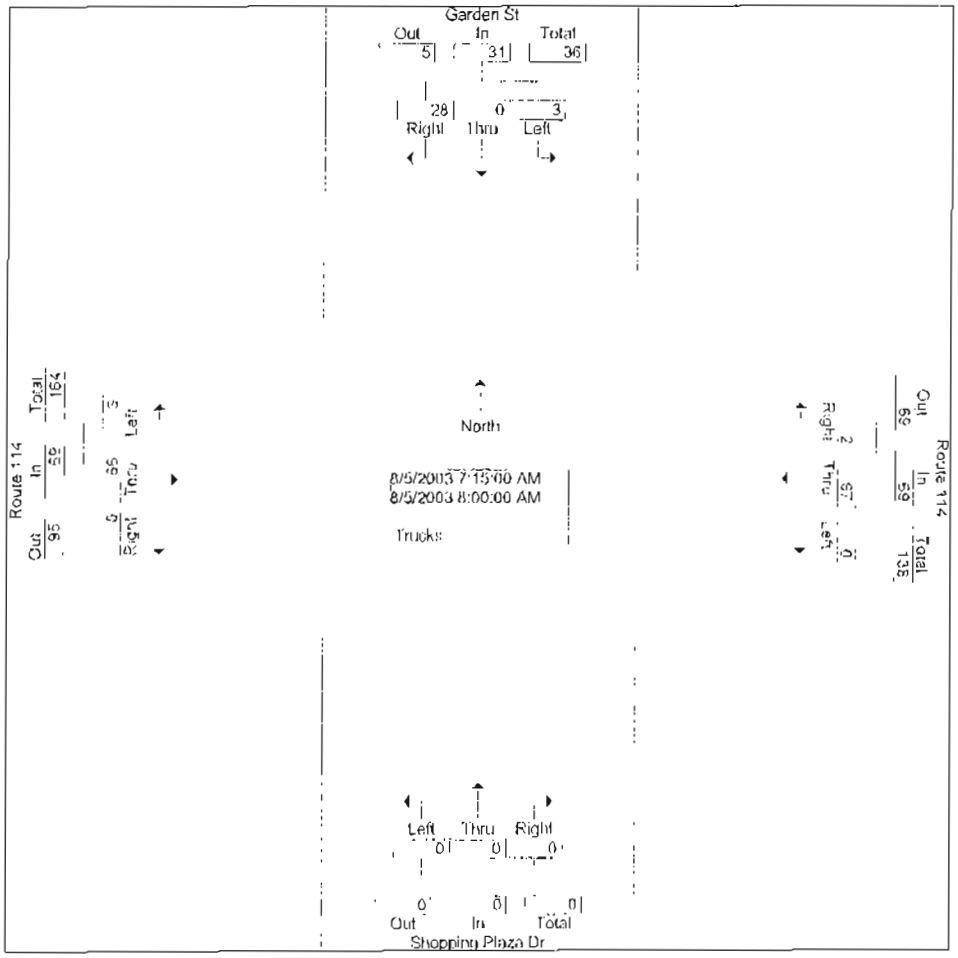
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																	
Intersection	07.15																
Volume	3	0	28	31	0	67	2	69	0	0	0	0	3	66	0	69	169
Percent	9.7	0.0	90.3		0.0	97.1	2.9		0.0	0.0	0.0		4.3	95.7	0.0		
Volume	3	0	28	31	0	67	2	69	0	0	0	0	3	66	0	69	169
Volume	0	0	12	12	0	22	0	22	0	0	0	0	0	12	0	12	46
Peak Factor																	0.918
High Int.	07:45				07:30				6:45:00 AM				07:15				
Volume	1	0	12	13	0	22	0	22	0	0	0	0	2	22	0	24	
Peak Factor				0.596				0.784								0.719	



N/S Street : Garden Street
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Accurate Counts
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File Name : 390500A4
Site Code : 39050004
Start Date : 08/05/2003
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Groups Printed- Cars - Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	42	0	56	6	429	39	2	1	5	46	369	6	1001
16:15	40	1	45	1	373	35	5	1	4	42	336	7	890
16:30	33	0	44	1	396	35	1	1	3	48	351	6	919
16:45	31	0	41	4	346	38	5	0	7	46	344	6	868
Total	146	1	186	12	1544	147	13	3	19	182	1400	25	3678
17:00	39	1	47	4	356	45	11	0	4	61	396	6	970
17:15	57	1	40	8	413	43	5	0	3	56	376	5	1007
17:30	50	2	67	6	372	28	7	2	6	46	350	9	945
17:45	36	2	32	2	344	36	7	2	6	52	398	5	922
Total	182	6	186	20	1485	152	30	4	19	215	1520	25	3844
Grand Total	328	7	372	32	3029	299	43	7	38	397	2920	50	7522
Apprch %	46.4	1.0	52.6	1.0	90.1	8.9	48.9	8.0	43.2	11.8	86.7	1.5	
Total %	4.4	0.1	4.9	0.4	40.3	4.0	0.6	0.1	0.5	5.3	38.8	0.7	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	182	6	186	374	20	1485	152	1657	30	4	19	53	215	1520	25	1760	3844
Percent	48.7	1.6	49.7		1.2	89.6	9.2		56.6	7.5	35.8		12.2	86.4	1.4		
Volume	182	6	186	374	20	1485	152	1657	30	4	19	53	215	1520	25	1760	3844
Volume	57	1	40	98	8	413	43	464	5	0	3	8	56	376	5	437	1007
Peak Factor																	0.954
High Int.	17:30				17:15				17:00				17:00				
Volume	50	2	67	119	8	413	43	464	11	0	4	15	61	396	6	463	
Peak Factor				0.786				0.893				0.883				0.950	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:45				16:00				17:00				17:00				
Volume	177	4	195	376	12	1544	147	1703	30	4	19	53	215	1520	25	1760	
Percent	47.1	1.1	51.9		0.7	90.7	8.6		56.6	7.5	35.8		12.2	86.4	1.4		
High Int	17:30				16:00				17:00				17:00				
Volume	50	2	67	119	6	429	39	474	11	0	4	15	61	396	6	463	
Peak Factor				0.790				0.898				0.883				0.950	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 390500A4
Site Code : 39050004
Start Date : 08/05/2003
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Groups Printed- Cars

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	42	0	55	5	421	39	2	1	5	44	364	6	984
16:15	39	1	43	1	371	35	5	1	4	42	335	7	884
16:30	33	0	41	1	393	35	0	1	3	45	346	6	904
16:45	31	0	39	4	343	38	5	0	7	45	343	6	861
Total	145	1	178	11	1528	147	12	3	19	176	1388	25	3633
17:00	38	1	47	4	353	44	11	0	4	60	390	6	958
17:15	57	1	39	8	409	43	5	0	3	55	371	5	996
17:30	49	2	67	6	368	28	7	2	6	45	349	9	938
17:45	36	2	32	2	340	36	7	2	6	52	393	5	913
Total	180	6	185	20	1470	151	30	4	19	212	1503	25	3805
Grand Total	325	7	363	31	2998	298	42	7	38	388	2891	50	7438
Apprch %	46.8	1.0	52.2	0.9	90.1	9.0	48.3	8.0	43.7	11.7	86.8	1.5	
Total %	4.4	0.1	4.9	0.4	40.3	4.0	0.6	0.1	0.5	5.2	38.9	0.7	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	180	6	185	371	20	1470	151	1641	30	4	19	53	212	1503	25	1740	3805
Percent	48.5	1.6	49.9		1.2	89.6	9.2		56.6	7.5	35.8		12.2	86.4	1.4		
Volume	180	6	185	371	20	1470	151	1641	30	4	19	53	212	1503	25	1740	3805
Volume	57	1	39	97	8	409	43	460	5	0	3	8	55	371	5	431	996
Peak Factor																	0.955
High Int.	17:30				17:15				17:00				17:00				
Volume	49	2	67	118	8	409	43	460	11	0	4	15	60	390	6	456	
Peak Factor				0.786				0.892				0.883				0.954	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:45				16:00				17:00				17:00				
Volume	175	4	192	371	11	1528	147	1686	30	4	19	53	212	1503	25	1740	
Percent	47.2	1.1	51.8		0.7	90.6	8.7		56.6	7.5	35.8		12.2	86.4	1.4		
High Int.	17:30				16:00				17:00				17:00				
Volume	49	2	67	118	5	421	39	465	11	0	4	15	60	390	6	456	
Peak Factor				0.786				0.906				0.883				0.954	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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Groups Printed- Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	0	0	1	1	8	0	0	0	0	2	5	0	17
16:15	1	0	2	0	2	0	0	0	0	0	1	0	6
16:30	0	0	3	0	3	0	1	0	0	3	5	0	15
16:45	0	0	2	0	3	0	0	0	0	1	1	0	7
Total	1	0	8	1	16	0	1	0	0	6	12	0	45
17:00	1	0	0	0	3	1	0	0	0	1	6	0	12
17:15	0	0	1	0	4	0	0	0	0	1	5	0	11
17:30	1	0	0	0	4	0	0	0	0	1	1	0	7
17:45	0	0	0	0	4	0	0	0	0	0	5	0	9
Total	2	0	1	0	15	1	0	0	0	3	17	0	39
Grand Total	3	0	9	1	31	1	1	0	0	9	29	0	84
Apprch %	25.0	0.0	75.0	3.0	93.9	3.0	100.0	0.0	0.0	23.7	76.3	0.0	
Total %	3.6	0.0	10.7	1.2	36.9	1.2	1.2	0.0	0.0	10.7	34.5	0.0	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 16.00 to 17:45 - Peak 1 of 1																	
Intersection	16:00																
Volume	1	0	8	9	1	16	0	17	1	0	0	1	6	12	0	18	45
Percent	11.1	0.0	88.9		5.9	94.1	0.0		100.0	0.0	0.0		33.3	66.7	0.0		
Volume	1	0	8	9	1	16	0	17	1	0	0	1	6	12	0	18	45
Volume	0	0	1	1	1	8	0	9	0	0	0	0	2	5	0	7	17
Peak Factor																	0.662
High Int	16:15				16:00				16:30				16:30				
Volume	1	0	2	3	1	8	0	9	1	0	0	1	3	5	0	8	
Peak Factor				0.750				0.472				0.250				0.562	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
By Approach	16:00				16:00				16:00				16:30				
Volume	1	0	8	9	1	16	0	17	1	0	0	1	6	17	0	23	
Percent	11.1	0.0	88.9		5.9	94.1	0.0		100.0	0.0	0.0		26.1	73.9	0.0		
High Int.	16:15				16:00				16:30				16:30				
Volume	1	0	2	3	1	8	0	9	1	0	0	1	3	5	0	8	
Peak Factor				0.750				0.472				0.250				0.719	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
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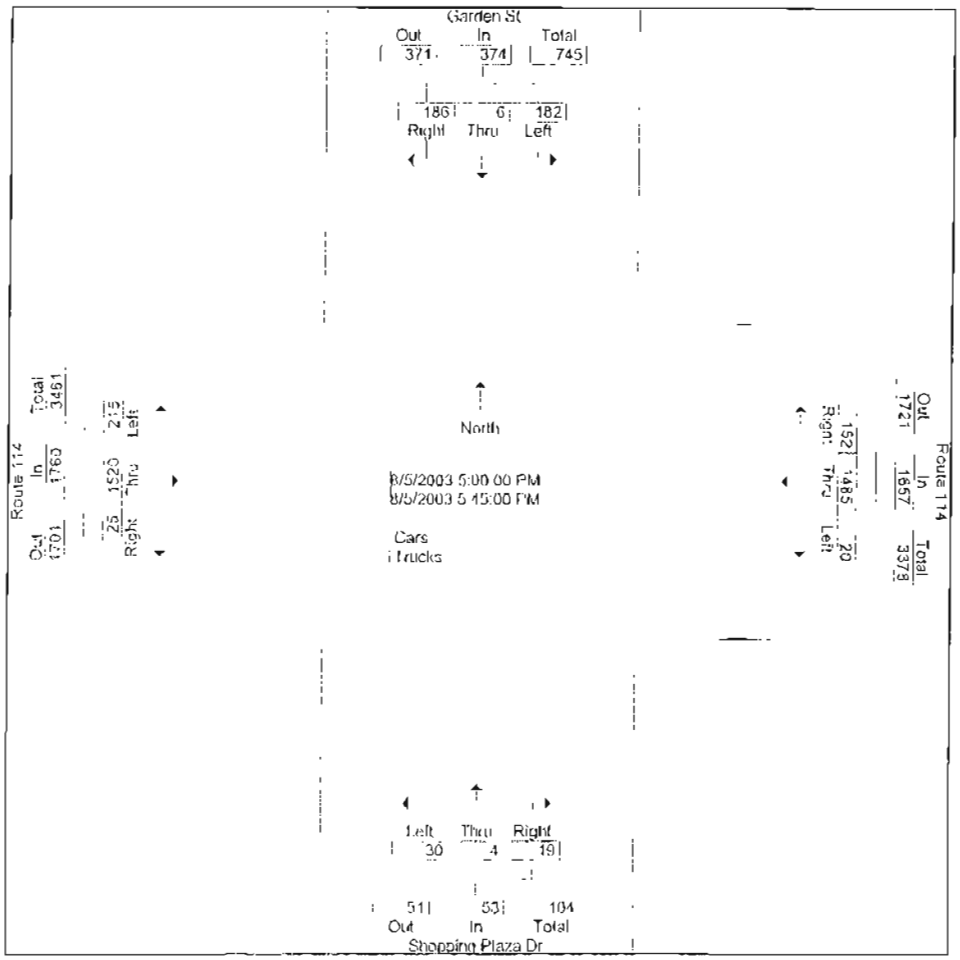
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	182	6	186	374	20	1485	152	1657	30	4	19	53	215	1520	25	1760	3844
Percent	48.7	1.6	49.7		1.2	89.6	9.2		56.6	7.5	35.8		12.2	86.4	1.4		
Volume	182	6	186	374	20	1485	152	1657	30	4	19	53	215	1520	25	1760	3844
Volume	57	1	40	98	8	413	43	464	5	0	3	8	56	376	5	437	1007
Peak Factor																	0.954
High Int.	17:30				17:15				17:00				17:00				
Volume	50	2	67	119	8	413	43	464	11	0	4	15	61	396	6	463	
Peak Factor				0.786				0.893				0.883				0.950	



N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

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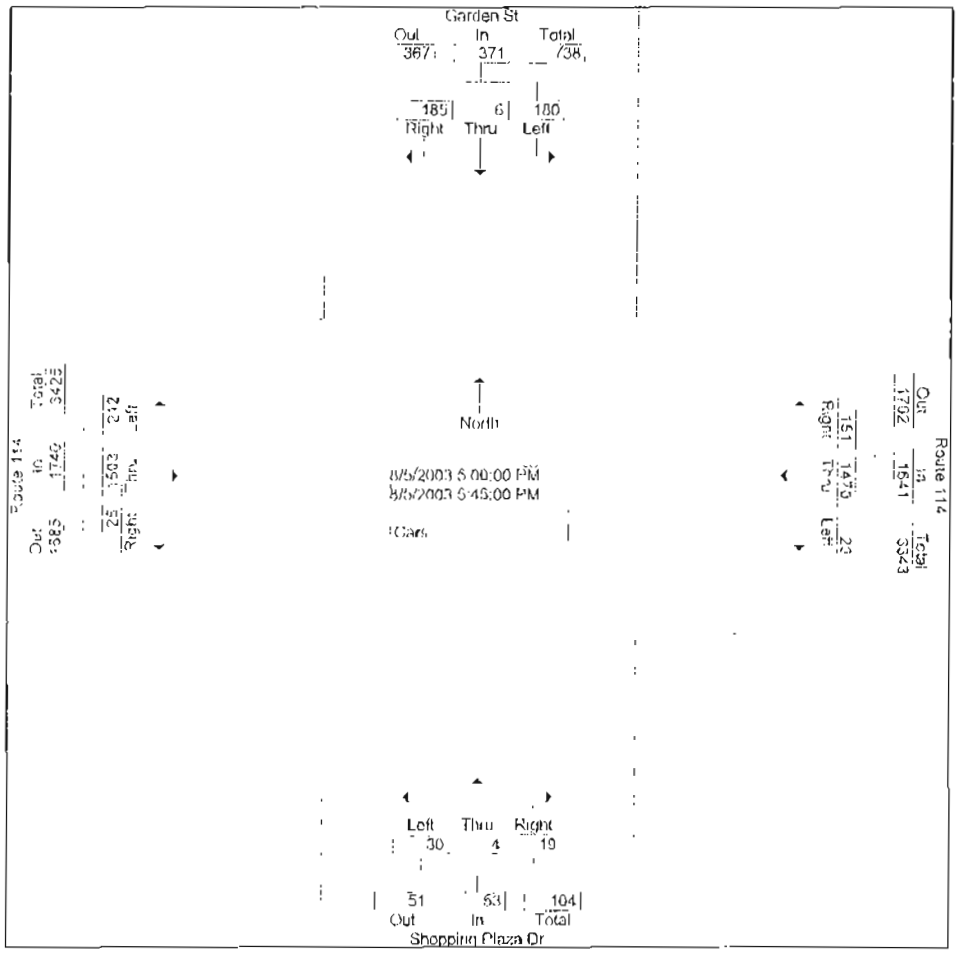
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	180	6	185	371	20	1470	151	1641	30	4	19	53	212	1503	25	1740	3805
Percent	48.5	1.6	49.9		1.2	89.6	9.2		56.6	7.5	35.8		12.2	86.4	1.4		
Volume	180	6	185	371	20	1470	151	1641	30	4	19	53	212	1503	25	1740	3805
Volume	57	1	39	97	8	409	43	460	5	0	3	8	55	371	5	431	996
Peak Factor																	0.955
High Int.	17:30				17:15				17:00				17:00				
Volume	49	2	67	118	8	409	43	460	11	0	4	15	60	390	6	456	
Peak Factor				0.786				0.892				0.883				0.954	



N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 390500A4
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Start Date : 08/05/2003
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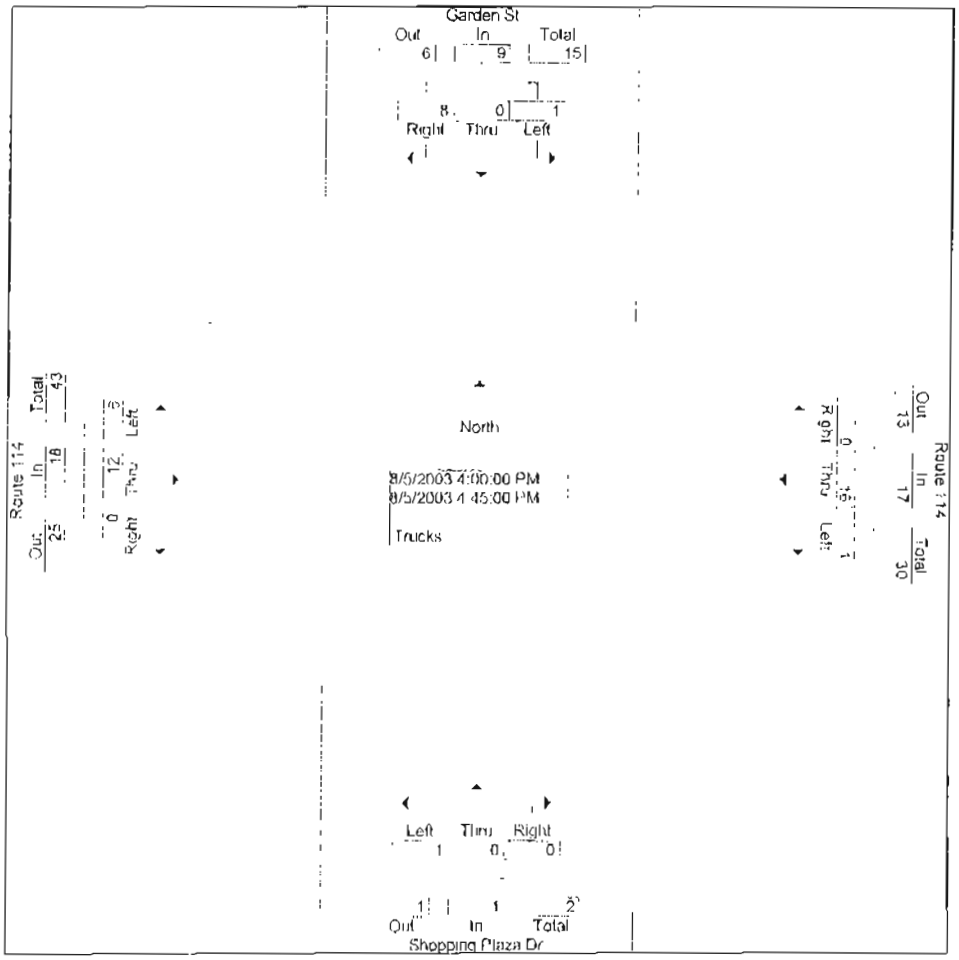
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection 16:00																	
Volume	1	0	8	9	1	16	0	17	1	0	0	1	6	12	0	18	45
Percent	11.1	0.0	88.9		5.9	94.1	0.0		100.0	0.0	0.0		33.3	66.7	0.0		
Volume	1	0	8	9	1	16	0	17	1	0	0	1	6	12	0	18	45
Volume	0	0	1	1	1	8	0	9	0	0	0	0	2	5	0	7	17
Peak Factor																	0.662
High Int.	16:15				16:00				16:30				16:30				
Volume	1	0	2	3	1	8	0	9	1	0	0	1	3	5	0	8	
Peak Factor				0.750				0.472				0.250				0.562	



N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
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Groups Printed- Cars - Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	42	2	47	3	323	36	4	2	4	31	387	5	886
11:15	46	1	39	4	326	38	4	1	5	40	354	10	868
11:30	61	0	59	2	329	32	4	1	4	43	365	3	903
11:45	60	2	54	4	302	51	5	4	4	53	417	9	965
Total	209	5	199	13	1280	157	17	8	17	167	1523	27	3622
12:00	44	3	57	1	343	48	3	4	5	50	409	6	973
12:15	51	1	59	3	336	50	6	3	3	47	404	6	969
12:30	60	2	60	3	337	41	4	0	3	36	418	5	969
12:45	49	1	59	7	343	42	5	1	5	47	387	4	950
Total	204	7	235	14	1359	181	18	8	16	180	1618	21	3861
13:00	61	2	66	6	315	35	3	2	11	50	386	10	947
13:15	49	1	56	5	338	43	5	3	5	43	390	6	944
13:30	64	2	52	7	342	38	4	0	2	51	417	3	982
13:45	61	2	57	8	328	55	3	3	7	40	394	7	965
Total	235	7	231	26	1323	171	15	8	25	184	1587	26	3838
Grand Total	648	19	665	53	3962	509	50	24	58	531	4728	74	11321
Apprch %	48.6	1.4	49.9	1.2	87.6	11.3	37.9	18.2	43.9	10.0	88.7	1.4	
Total %	5.7	0.2	5.9	0.5	35.0	4.5	0.4	0.2	0.5	4.7	41.8	0.7	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:45																
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Percent	47.5	1.8	50.8		0.7	86.8	12.5		40.9	25.0	34.1		10.0	88.6	1.4		
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Volume	44	3	57	104	1	343	48	392	3	4	5	12	50	409	6	465	973
Peak Factor																	0.996
High Int	12:30				12:00				11:45				11:45				
Volume	60	2	60	122	1	343	48	392	5	4	4	13	53	417	9	479	
Peak Factor				0.928				0.969				0.846				0.971	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	13:00				12:00				13:00				11:45				
Volume	235	7	231	473	14	1359	181	1554	15	8	25	48	186	1648	26	1860	
Percent	49.7	1.5	48.8		0.9	87.5	11.6		31.2	16.7	52.1		10.0	88.6	1.4		
High Int.	13:00				12:00				13:00				11:45				
Volume	61	2	66	129	1	343	48	392	3	2	11	16	53	417	9	479	
Peak Factor				0.917				0.991				0.750				0.971	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
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Groups Printed- Cars - Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	42	2	47	3	323	36	4	2	4	31	387	5	886
11:15	46	1	39	4	326	38	4	1	5	40	354	10	868
11:30	61	0	59	2	329	32	4	1	4	43	365	3	903
11:45	60	2	54	4	302	51	5	4	4	53	417	9	965
Total	209	5	199	13	1280	157	17	8	17	167	1523	27	3622
12:00	44	3	57	1	343	48	3	4	5	50	409	6	973
12:15	51	1	59	3	336	50	6	3	3	47	404	6	969
12:30	60	2	60	3	337	41	4	0	3	36	418	5	969
12:45	49	1	59	7	343	42	5	1	5	47	387	4	950
Total	204	7	235	14	1359	181	18	8	16	180	1618	21	3861
13:00	61	2	66	6	315	35	3	2	11	50	386	10	947
13:15	49	1	56	5	338	43	5	3	5	43	390	6	944
13:30	64	2	52	7	342	38	4	0	2	51	417	3	982
13:45	61	2	57	8	328	55	3	3	7	40	394	7	965
Total	235	7	231	26	1323	171	15	8	25	184	1587	26	3838
Grand Total	648	19	665	53	3962	509	50	24	58	531	4728	74	11321
Apprch %	48.6	1.4	49.9	1.2	87.6	11.3	37.9	18.2	43.9	10.0	88.7	1.4	
Total %	5.7	0.2	5.9	0.5	35.0	4.5	0.4	0.2	0.5	4.7	41.8	0.7	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:45																
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Percent	47.5	1.8	50.8		0.7	86.8	12.5		40.9	25.0	34.1		10.0	88.6	1.4		
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Volume	44	3	57	104	1	343	48	392	3	4	5	12	50	409	6	465	973
Peak Factor																	0.996
High Int.	12:30				12:00				11:45				11:45				
Volume	60	2	60	122	1	343	48	392	5	4	4	13	53	417	9	479	
Peak Factor				0.928				0.969				0.846				0.971	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	13:00				12:00				13:00				11:45				
Volume	235	7	231	473	14	1359	181	1554	15	8	25	48	186	1648	26	1860	
Percent	49.7	1.5	48.8		0.9	87.5	11.6		31.2	16.7	52.1		10.0	88.6	1.4		
High Int.	13:00				12:00				13:00				11:45				
Volume	61	2	66	129	1	343	48	392	3	2	11	16	53	417	9	479	
Peak Factor				0.917				0.991				0.750				0.971	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
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File Name : 39050004
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Groups Printed- Cars

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	42	2	47	3	320	36	4	2	4	29	382	5	876
11:15	46	1	39	4	321	37	4	1	5	40	350	10	858
11:30	61	0	59	2	329	32	4	0	4	43	362	2	898
11:45	59	2	54	4	300	51	5	3	4	52	416	9	959
Total	208	5	199	13	1270	156	17	6	17	164	1510	26	3591
12:00	44	3	56	1	340	48	3	4	5	50	405	6	965
12:15	51	1	59	3	333	50	6	3	3	47	401	6	963
12:30	60	2	60	3	335	41	4	0	3	36	417	5	966
12:45	49	1	59	7	341	41	5	1	5	47	386	4	946
Total	204	7	234	14	1349	180	18	8	15	180	1609	21	3840
13:00	61	2	66	6	310	35	3	2	11	50	384	10	940
13:15	49	1	56	5	334	43	5	3	5	42	387	6	936
13:30	64	2	52	7	339	38	4	0	2	51	417	3	979
13:45	61	2	57	8	325	55	3	3	7	40	394	7	962
Total	235	7	231	26	1308	171	15	8	25	183	1582	26	3817
Grand Total	647	19	664	53	3927	507	50	22	58	527	4701	73	11248
Apprch %	48.6	1.4	49.9	1.2	87.5	11.3	38.5	16.9	44.6	9.9	88.7	1.4	
Total %	5.8	0.2	5.9	0.5	34.9	4.5	0.4	0.2	0.5	4.7	41.8	0.6	

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:45																
Volume	214	8	229	451	11	1308	190	1509	18	10	15	43	185	1639	26	1850	3853
Percent	47.5	1.8	50.8		0.7	86.7	12.6		41.9	23.3	34.9		10.0	88.6	1.4		
Volume	214	8	229	451	11	1308	190	1509	18	10	15	43	185	1639	26	1850	3853
Volume	60	2	60	122	3	335	41	379	4	0	3	7	36	417	5	458	966
Peak Factor																	0.997
High Int.	12:30				12:00				11:45				11:45				
Volume	60	2	60	122	1	340	48	389	5	3	4	12	52	416	9	477	
Peak Factor				0.924				0.970				0.896				0.970	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	13:00				12:00				13:00				11:45				
Volume	235	7	231	473	14	1349	180	1543	15	8	25	48	185	1639	26	1850	
Percent	49.7	1.5	48.8		0.9	87.4	11.7		31.2	16.7	52.1		10.0	88.6	1.4		
High Int.	13:00				12:00				13:00				11:45				
Volume	61	2	66	129	1	340	48	389	3	2	11	16	52	416	9	477	
Peak Factor				0.917				0.992				0.750				0.970	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
Page No : 1

Groups Printed- Trucks

	Garden St From North			Route 114 From East			Shopping Plaza Dr From South			Route 114 From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	0	0	0	0	3	0	0	0	0	2	5	0	10
11:15	0	0	0	0	5	1	0	0	0	0	4	0	10
11:30	0	0	0	0	0	0	0	1	0	0	3	1	5
11:45	1	0	0	0	2	0	0	1	0	1	1	0	6
Total	1	0	0	0	10	1	0	2	0	3	13	1	31
12:00	0	0	1	0	3	0	0	0	0	0	4	0	8
12:15	0	0	0	0	3	0	0	0	0	0	3	0	6
12:30	0	0	0	0	2	0	0	0	0	0	1	0	3
12:45	0	0	0	0	2	1	0	0	0	0	1	0	4
Total	0	0	1	0	10	1	0	0	0	0	9	0	21
13:00	0	0	0	0	5	0	0	0	0	0	2	0	7
13:15	0	0	0	0	4	0	0	0	0	1	3	0	8
13:30	0	0	0	0	3	0	0	0	0	0	0	0	3
13:45	0	0	0	0	3	0	0	0	0	0	0	0	3
Total	0	0	0	0	15	0	0	0	0	1	5	0	21
Grand Total	1	0	1	0	35	2	0	2	0	4	27	1	73
Apprch %	50.0	0.0	50.0	0.0	94.6	5.4	0.0	100.0	0.0	12.5	84.4	3.1	
Total %	1.4	0.0	1.4	0.0	47.9	2.7	0.0	2.7	0.0	5.5	37.0	1.4	

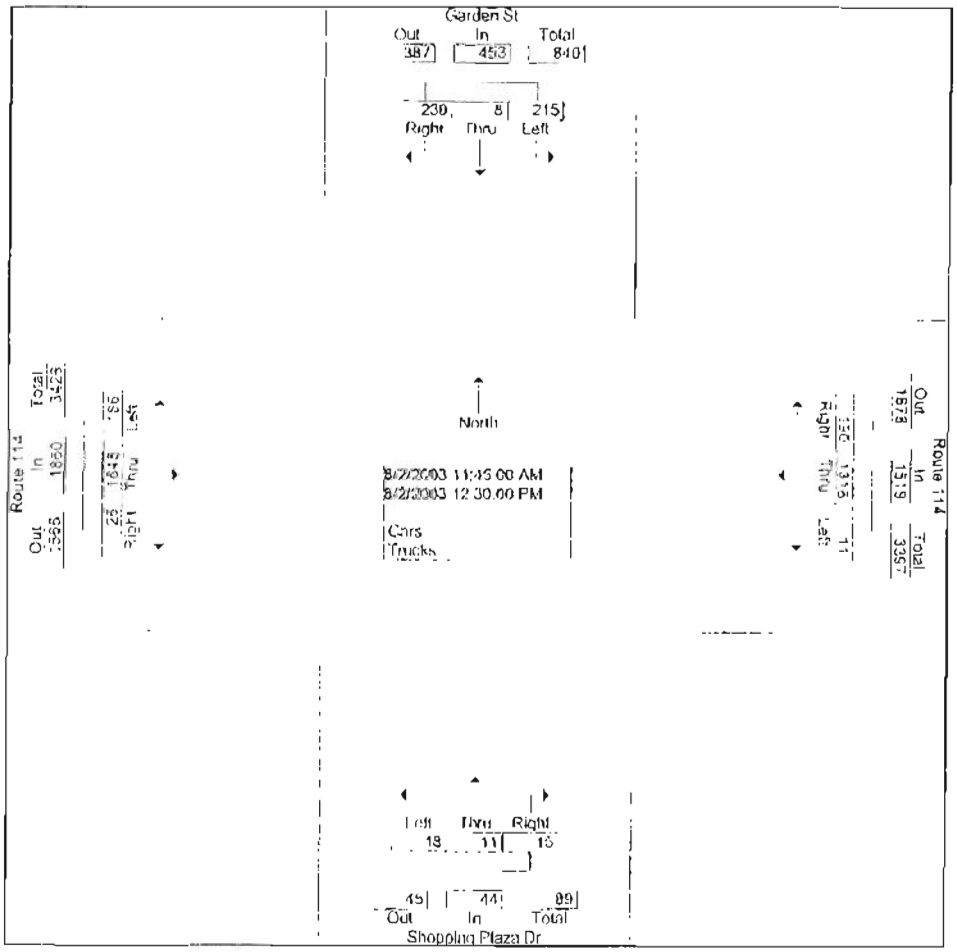
	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 From West				
Start Time	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:00																
Volume	1	0	0	1	0	10	1	11	0	2	0	2	3	13	1	17	31
Percent	100.0	0.0	0.0		0.0	90.9	9.1		0.0	100.0	0.0		17.6	76.5	5.9		
Volume	1	0	0	1	0	10	1	11	0	2	0	2	3	13	1	17	31
Volume	0	0	0	0	0	5	1	6	0	0	0	0	0	4	0	4	10
Peak Factor																	0.775
High Int.	11:45				11:15				11:30				11:00				
Volume	1	0	0	1	0	5	1	6	0	1	0	1	2	5	0	7	
Peak Factor				0.250				0.458				0.500				0.607	
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
By Approach	11:15				12:45				11:00				11:00				
Volume	1	0	1	2	0	14	1	15	0	2	0	2	3	13	1	17	
Percent	50.0	0.0	50.0		0.0	93.3	6.7		0.0	100.0	0.0		17.6	76.5	5.9		
High Int.	11:45				13:00				11:30				11:00				
Volume	1	0	0	1	0	5	0	5	0	1	0	1	2	5	0	7	
Peak Factor				0.500				0.750				0.500				0.607	

N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
Page No : 1

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:45																
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Percent	47.5	1.8	50.8		0.7	86.8	12.5		40.9	25.0	34.1		10.0	88.6	1.4		
Volume	215	8	230	453	11	1318	190	1519	18	11	15	44	186	1648	26	1860	3876
Volume	44	3	57	104	1	343	48	392	3	4	5	12	50	409	6	465	973
Peak Factor																	0.996
High Int	12:30				12:00				11:45				11:45				
Volume	60	2	60	122	1	343	48	392	5	4	4	13	53	417	9	479	
Peak Factor				0.928				0.969				0.846				0.971	

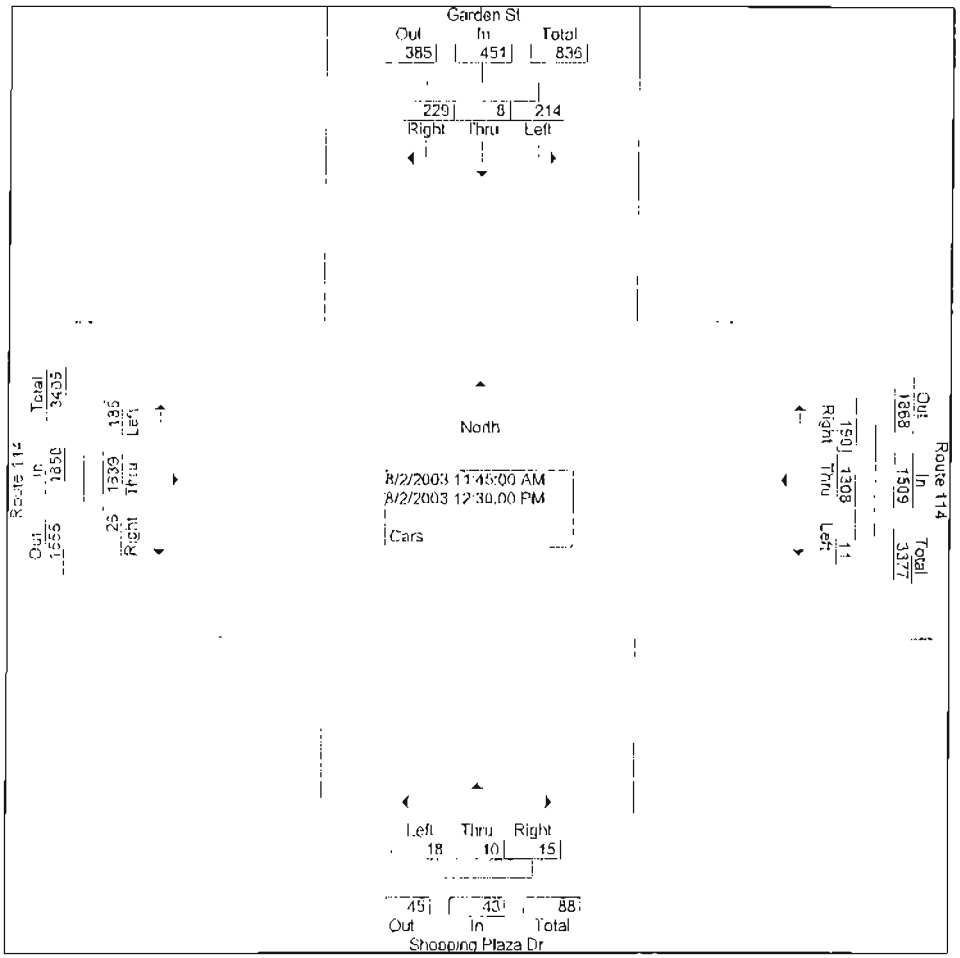


N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
Page No : 1

Start Time	Garden St From North Left	Thru	Right	App. Total	Route 114 From East Left	Thru	Right	App. Total	Shopping Plaza Dr From South Left	Thru	Right	App. Total	Route 114 From West Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
Intersection 11:45																	
Volume	214	8	229	451	11	1308	190	1509	18	10	15	43	185	1639	26	1850	3853
Percent	47.5	1.8	50.8		0.7	86.7	12.6		41.9	23.3	34.9		10.0	88.6	1.4		
Volume	214	8	229	451	11	1308	190	1509	18	10	15	43	185	1639	26	1850	3853
Volume	60	2	60	122	3	335	41	379	4	0	3	7	36	417	5	458	966
Peak Factor																	0.997
High Int.	12:30				12:00				11:45				11:45				
Volume	60	2	60	122	1	340	48	389	5	3	4	12	52	416	9	477	
Peak Factor				0.924				0.970				0.896				0.970	

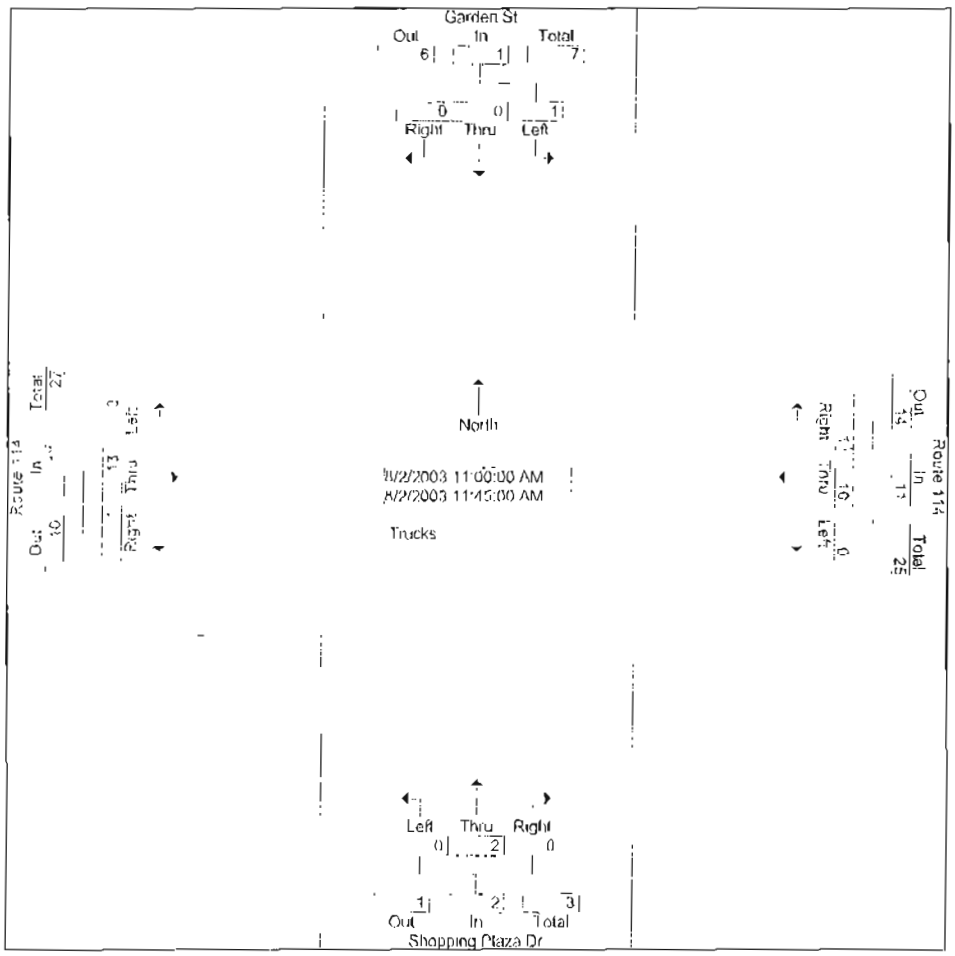


N/S Street : Garden Street
E/W Street : Route 114
City/State : Danvers, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 39050004
Site Code : 39050004
Start Date : 08/02/2003
Page No : 1

	Garden St From North				Route 114 From East				Shopping Plaza Dr From South				Route 114 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 From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	11:00																
Volume	1	0	0	1	0	10	1	11	0	2	0	2	3	13	1	17	31
Percent	100.0	0.0	0.0		0.0	90.9	9.1		0.0	100.0	0.0		17.6	76.5	5.9		
Volume	1	0	0	1	0	10	1	11	0	2	0	2	3	13	1	17	31
Volume	0	0	0	0	0	5	1	6	0	0	0	0	0	4	0	4	10
Peak Factor																	0.775
High Int.	11:45				11:15				11:30				11:00				
Volume	1	0	0	1	0	5	1	6	0	1	0	1	2	5	0	7	
Peak Factor				0.250				0.458				0.500				0.607	



Automatic Traffic Recorder Data

Accurate Counts
978-664-2565

Location : Trailer Park Road South of
Location : Route 114
City/State: Danvers, MA
Counter : 5842

39050002
Site Code: 39050002

Start	01-Aug-0	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	24			0	13				
12:15		3	21			0	37				
12:30		0	24			0	26				
12:45		0	5	3	74	0	17	0	93	3	167
01:00		1	13			0	13				
01:15		0	20			0	13				
01:30		0	21			0	18				
01:45		0	14	1	68	0	20	0	64	1	132
02:00		0	35			0	19				
02:15		0	26			0	19				
02:30		0	16			0	28				
02:45		0	9	0	86	0	17	0	83	0	169
03:00		0	9			1	14				
03:15		1	16			0	13				
03:30		0	12			1	12				
03:45		0	5	1	42	0	15	2	54	3	96
04:00		0	7			1	4				
04:15		0	5			0	5				
04:30		1	6			1	6				
04:45		0	4	1	22	0	3	2	18	3	40
05:00		0	5			0	7				
05:15		4	6			5	4				
05:30		0	4			3	3				
05:45		5	8	9	23	2	4	10	18	19	41
06:00		2	4			1	0				
06:15		8	3			5	4				
06:30		7	1			8	4				
06:45		11	2	28	10	11	0	25	8	53	18
07:00		12	5			20	5				
07:15		23	6			10	1				
07:30		23	2			36	0				
07:45		15	5	73	18	18	0	84	6	157	24
08:00		21	5			30	2				
08:15		22	1			13	0				
08:30		18	2			20	0				
08:45		22	1	83	9	24	1	87	3	170	12
09:00		12	1			22	0				
09:15		9	5			15	0				
09:30		20	1			33	1				
09:45		18	1	68	8	20	1	90	2	158	10
10:00		20	0			34	0				
10:15		14	1			18	0				
10:30		21	1			13	0				
10:45		23	1	78	3	29	0	94	0	172	3
11:00		17	0			23	0				
11:15		18	1			40	0				
11:30		13	2			18	0				
11:45		10	1	58	4	17	2	98	2	156	6
Total		403	367			492	351			895	718
Percent		52.3%	47.7%			58.4%	41.6%			55.5%	44.5%

Accurate Counts
978-664-2565

Location : Trailer Park Road South of
Location : Route 114
City/State: Danvers, MA
Counter : 5842

39050002
Site Code: 39050002

Start Time	02-Aug-0 Sat	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	20			0	18				
12:15		1	23			1	24				
12:30		1	16			0	13				
12:45		0	13	2	72	0	9	1	64	3	136
01:00		2	21			1	18				
01:15		0	15			0	16				
01:30		0	11			0	8				
01:45		0	21	2	68	0	16	1	58	3	126
02:00		0	10			0	25				
02:15		0	14			0	10				
02:30		0	9			0	14				
02:45		0	17	0	50	0	17	0	66	0	116
03:00		0	5			0	14				
03:15		0	4			0	4				
03:30		0	4			0	5				
03:45		2	5	2	18	0	1	0	24	2	42
04:00		0	4			1	3				
04:15		0	7			0	3				
04:30		0	4			0	2				
04:45		1	4	1	19	1	6	2	14	3	33
05:00		0	3			0	2				
05:15		1	4			1	4				
05:30		1	2			1	2				
05:45		2	4	4	13	0	1	2	9	6	22
06:00		2	4			0	7				
06:15		2	3			1	2				
06:30		2	4			1	1				
06:45		3	4	9	15	0	2	2	12	11	27
07:00		5	3			3	2				
07:15		14	6			7	3				
07:30		20	2			14	4				
07:45		22	3	61	14	20	0	44	9	105	23
08:00		12	4			24	2				
08:15		6	3			7	0				
08:30		9	2			14	2				
08:45		8	4	35	13	9	1	54	5	89	18
09:00		7	3			9	0				
09:15		22	2			8	1				
09:30		34	1			31	2				
09:45		11	1	74	7	18	3	66	6	140	13
10:00		9	3			6	1				
10:15		11	0			20	1				
10:30		15	1			14	2				
10:45		23	2	58	6	18	0	58	4	116	10
11:00		16	1			24	1				
11:15		13	0			20	0				
11:30		9	0			13	0				
11:45		14	0	52	1	17	0	74	1	126	2
Total		300	296			304	272			604	568
Percent		50.3%	49.7%			52.8%	47.2%			51.5%	48.5%
Grand Total		703	663			796	623			1499	1286
Percent		51.5%	48.5%			56.1%	43.9%			53.8%	46.2%

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Trailer Park Road South of
Location : Route 114
City/State: Danvers, MA
Counter : 5842

39050002
Site Code: 39050002

Start Time	28-Jul-03 SB	28-Jul-03 NB	Tue SB	Tue NB	Wed SB	Wed NB	Thu SB	Thu NB	Fri SB	Fri NB	Sat SB	Sat NB	Sun SB	Sun NB	Week Average SB	Week Average NB
12:00 AM	-	-	-	-	-	-	-	-	3	0	2	1	-	-	2	0
01:00	-	-	-	-	-	-	-	-	1	0	2	1	-	-	2	0
02:00	-	-	-	-	-	-	-	-	0	0	0	0	-	-	0	0
03:00	-	-	-	-	-	-	-	-	1	2	2	0	-	-	2	1
04:00	-	-	-	-	-	-	-	-	1	2	1	2	-	-	1	2
05:00	-	-	-	-	-	-	-	-	9	10	4	2	-	-	6	6
06:00	-	-	-	-	-	-	-	-	28	25	9	2	-	-	18	14
07:00	-	-	-	-	-	-	-	-	73	84	61	44	-	-	67	64
08:00	-	-	-	-	-	-	-	-	83	87	35	54	-	-	59	70
09:00	-	-	-	-	-	-	-	-	68	90	74	66	-	-	71	78
10:00	-	-	-	-	-	-	-	-	78	94	58	58	-	-	68	76
11:00	-	-	-	-	-	-	-	-	58	98	52	74	-	-	55	86
12:00 PM	-	-	-	-	-	-	-	-	74	93	72	64	-	-	[illegible]	78
01:00	-	-	-	-	-	-	-	-	63	64	68	58	-	-	68	61
02:00	-	-	-	-	-	-	-	-	86	83	50	66	-	-	68	74
03:00	-	-	-	-	-	-	-	-	42	54	18	24	-	-	30	39
04:00	-	-	-	-	-	-	-	-	22	18	19	14	-	-	20	16
05:00	-	-	-	-	-	-	-	-	23	18	13	9	-	-	18	14
06:00	-	-	-	-	-	-	-	-	10	8	15	12	-	-	12	10
07:00	-	-	-	-	-	-	-	-	18	6	14	9	-	-	16	8
08:00	-	-	-	-	-	-	-	-	9	3	13	5	-	-	11	4
09:00	-	-	-	-	-	-	-	-	8	2	7	8	-	-	8	4
10:00	-	-	-	-	-	-	-	-	3	0	6	4	-	-	4	2
11:00	-	-	-	-	-	-	-	-	4	2	1	1	-	-	2	2
Lane Day	0	0	0	0	0	0	0	0	770	843	595	576	0	0	681	709
	0		0		0		0		1613		1172		0		1390	
AM Peak Volume									08:00	11:00	09:00	11:00			09:00	11:00
									83	98	74	74			71	88
PM Peak Volume									14:00	12:00	12:00	14:00			12:00	12:00
									86	93	72	66			73	78
Comb. Total	0		0		0		0		1613		1172		0		1390	

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Route 114 WB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 2582

39050WB1
Site Code: 39050001

Start Time	Mon 28-Jul-03	Tue 29-Jul-03	Wed 30-Jul-03	Thu 31-Jul-03	Fri 01-Aug-03	Average Day	Sat 02-Aug-03	Sun 03-Aug-03	Week Average
12:00 AM	-	-	-	-	149	149	20	-	84
01:00	-	-	-	-	83	83	11	-	47
02:00	-	-	-	-	50	50	6	-	28
03:00	-	-	-	-	44	44	6	-	25
04:00	-	-	-	-	64	64	4	-	34
05:00	-	-	-	-	228	228	5	-	116
06:00	-	-	-	-	582	582	29	-	306
07:00	-	-	-	-	994	994	62	-	528
08:00	-	-	-	-	1200	1200	119	-	660
09:00	-	-	-	-	1071	1071	133	-	602
10:00	-	-	-	-	1186	1186	421	-	804
11:00	-	-	-	-	**1475**	**1475**	**1569**	-	**1522**
12:00 PM	-	-	-	-	1697	1697	1705	-	1701
01:00	-	-	-	-	1928	1928	**1744**	-	1836
02:00	-	-	-	-	1979	1979	1709	-	1844
03:00	-	-	-	-	**2040**	**2040**	1721	-	**1880**
04:00	-	-	-	-	1797	1797	1696	-	1746
05:00	-	-	-	-	1645	1645	1690	-	1668
06:00	-	-	-	-	1523	1523	1504	-	1514
07:00	-	-	-	-	244	244	1273	-	758
08:00	-	-	-	-	111	111	1062	-	586
09:00	-	-	-	-	102	102	932	-	517
10:00	-	-	-	-	66	66	620	-	343
11:00	-	-	-	-	26	26	326	-	176
Day Total	0	0	0	0	20284	20284	18367	0	19325
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg Week	0.0%	0.0%	0.0%	0.0%	105.0%	105.0%	95.0%	0.0%	
AM Peak					11:00	11:00	11:00		11:00
Volume					1475	1475	1569		1522
PM Peak					15:00	15:00	13:00		15:00
Volume					2040	2040	1744		1880
Grand Total	0	0	0	0	20284	20284	18367	0	19325

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Route 114 WB East of
Location : Trailer Park Road
City/State. Danvers, MA
Counter : 2751

3905AWB1
Site Code. 39050001

Start Time	Mon 04-Aug-03	Tue 05-Aug-03	Wed 06-Aug-03	Thu 07-Aug-03	Fri 08-Aug-03	Average Day	Sat 09-Aug-03	Sun 10-Aug-03	Week Average
12:00 AM	*	*	*	*	110	110	183	*	146
01:00	*	*	*	*	75	75	94	*	84
02:00	*	*	*	*	38	38	64	*	51
03:00	*	*	*	*	28	28	35	*	32
04:00	*	*	*	*	55	55	41	*	48
05:00	*	*	*	*	176	176	115	*	146
06:00	*	*	*	*	428	428	219	*	323
07:00	*	*	*	*	887	887	420	*	654
08:00	*	*	*	*	1068	1068	660	*	864
09:00	*	*	*	*	1037	1037	921	*	979
10:00	*	*	*	*	1237	1237	1215	*	1226
11:00	*	*	*	*	1433	1433	1411	*	1422
12:00 PM	*	*	*	*	1589	1589	1573	*	1581
01:00	*	*	*	*	1763	1763	1478	*	1620
02:00	*	*	*	*	1757	1757	1562	*	1660
03:00	*	*	*	*	1743	1743	1614	*	1678
04:00	*	*	*	*	1810	1810	1519	*	1664
05:00	*	*	*	*	1562	1562	1458	*	1510
06:00	*	*	*	*	1513	1513	1308	*	1410
07:00	*	*	*	*	1265	1265	1167	*	1216
08:00	*	*	*	*	1129	1129	980	*	1054
09:00	*	*	*	*	888	888	842	*	865
10:00	*	*	*	*	628	628	602	*	615
11:00	*	*	*	*	298	298	337	*	318
Day Total	0	0	0	0	22517	22517	19817	0	21166
% Avg WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	106.4%	106.4%	93.6%	0.0%	
AM Peak					11:00	11:00	11:00		11:00
Volume					1433	1433	1411		1422
PM Peak					16:00	16:00	15:00		15:00
Volume					1810	1810	1614		1678
Grand Total	0	0	0	0	22517	22517	19817	0	21166

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Route 114 WB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 2582

39050WB1
Site Code: 39050001

Start Time	Fri 01-Aug-03 A.M	P.M	Sat 02-Aug-03 A.M	P.M.	Sun 03-Aug-03 A.M.	P.M.	Daily Average A.M	P.M
12:00	41	405	8	417			24	411
12:15	40	419	1	431			20	425
12:30	36	426	7	435			22	430
12:45	32	447	4	422			18	434
01:00	36	484	4	428			20	456
01:15	24	497	2	475			13	486
01:30	12	488	3	416			8	452
01:45	11	459	2	425			6	442
02:00	16	469	3	404			10	436
02:15	10	486	2	423			6	454
02:30	17	498	1	432			9	465
02:45	7	526	0	450			4	488
03:00	13	517	4	423			8	470
03:15	10	478	0	450			5	464
03:30	12	507	1	429			6	468
03:45	9	538	1	419			5	478
04:00	10	481	0	413			5	447
04:15	9	457	1	464			5	460
04:30	24	440	0	406			12	423
04:45	21	419	3	413			12	416
05:00	42	418	0	442			21	430
05:15	40	391	1	431			20	411
05:30	69	431	1	400			35	416
05:45	77	405	3	417			40	411
06:00	86	405	8	395			47	400
06:15	107	399	6	399			56	399
06:30	194	408	10	355			102	382
06:45	195	311	5	355			100	333
07:00	186	171	10	327			98	249
07:15	254	34	9	348			132	191
07:30	254	19	17	308			136	164
07:45	300	20	26	290			163	155
08:00	302	33	24	270			163	152
08:15	281	28	36	271			158	150
08:30	306	21	26	243			166	132
08:45	311	29	33	278			172	154
09:00	234	25	38	276			136	150
09:15	277	28	32	255			154	142
09:30	278	20	30	228			154	124
09:45	282	25	33	173			158	101
10:00	258	26	41	238			150	132
10:15	318	22	45	147			182	84
10:30	291	8	61	112			176	60
10:45	319	10	274	123			296	66
11:00	337	6	379	123			358	64
11:15	360	5	380	89			370	47
11:30	375	8	416	63			396	36
11:45	403	7	394	51			398	29
Total	7126	13158	2385	13982	0	0	4755	14569
Combined Total	20284		18367		0		19324	
Peak	11:00	03:00	11:00	00:30			11:00	02:45
Volume	1475	2040	1569	1760			1522	1890
P.H.F.	0.915	0.948	0.943	0.926			0.956	0.968
ADT	Not Calculated							

Accurate Counts
978-664-2565

Location : Route 114 WB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 2751

3905AWB1
Site Code: 39050001

Start Time	Fri 08-Aug-03 A.M.	P.M	Sat 09-Aug-03 A.M	P.M.	Sun 10-Aug-03 A.M.	P.M	Daily Average A.M.	P.M.
12:00	38	370	45	387			42	378
12:15	26	392	51	397			38	394
12:30	20	388	44	364			32	376
12:45	26	439	43	425			34	432
01:00	25	456	32	372			28	414
01:15	18	435	30	412			24	424
01:30	15	426	22	361			18	394
01:45	17	445	10	333			14	389
02:00	13	404	21	345			17	374
02:15	8	460	13	418			10	439
02:30	9	433	13	413			11	423
02:45	8	460	17	386			12	423
03:00	5	427	8	384			6	406
03:15	8	440	10	436			9	438
03:30	6	454	10	428			8	441
03:45	9	422	7	366			8	394
04:00	13	463	2	356			8	410
04:15	6	451	11	435			8	443
04:30	21	485	12	390			16	438
04:45	15	411	15	338			16	374
05:00	27	405	17	346			22	376
05:15	37	370	23	405			30	388
05:30	46	390	28	357			37	374
05:45	66	397	47	350			56	374
06:00	57	386	38	364			48	375
06:15	91	391	50	372			70	382
06:30	148	375	61	284			104	330
06:45	132	361	69	288			100	324
07:00	184	323	79	313			132	318
07:15	210	291	101	302			156	296
07:30	205	340	111	297			158	318
07:45	288	311	129	255			208	283
08:00	255	306	139	231			197	268
08:15	263	294	159	250			211	272
08:30	295	259	163	253			229	256
08:45	255	270	199	246			227	258
09:00	261	273	206	259			234	266
09:15	263	241	207	207			235	224
09:30	256	206	241	200			248	203
09:45	257	168	267	176			262	172
10:00	294	242	268	194			281	218
10:15	304	147	285	139			294	143
10:30	290	148	329	128			310	138
10:45	349	91	333	141			341	116
11:00	344	91	324	107			334	99
11:15	364	71	379	83			372	77
11:30	343	86	358	77			350	82
11:45	382	50	350	70			366	60
Total	6572	15945	5377	14440	0	0	5971	15194
Combined Total	22517		19817		0		21165	
Peak	11:00	03:45	11:00	02:45			11:00	02:45
Volume	1433	1821	1411	1634			1422	1708
P.H.F.	0.938	0.939	0.931	0.937			0.956	0.964
ADT	Not Calculated							

Accurate Counts
978-664-2565

Location : Route 114 EB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 195

39050EB1
Site Code: 39050001

Start Time	Fri 01-Aug-03 A.M.	P.M.	Sat 02-Aug-03 A.M.	P.M.	Sun 03-Aug-03 A.M.	P.M.	Daily Average A.M.	P.M.
12:00	42	87	4	500			23	294
12:15	33	88	5	467			19	278
12:30	44	109	5	493			24	301
12:45	22	105	7	439			14	272
01:00	25	93	0	481			12	287
01:15	24	98	3	481			14	280
01:30	19	91	3	455			11	273
01:45	14	96	0	474			7	285
02:00	10	99	0	466			5	282
02:15	14	95	1	453			8	274
02:30	7	100	1	453			4	276
02:45	6	73	0	449			3	261
03:00	18	97	1	397			10	247
03:15	5	86	2	419			4	252
03:30	6	77	0	388			3	232
03:45	9	81	1	414			5	248
04:00	8	89	0	389			4	239
04:15	16	82	0	351			8	216
04:30	18	61	0	399			9	230
04:45	27	78	0	390			14	234
05:00	16	79	3	337			10	208
05:15	51	92	1	332			26	212
05:30	81	68	0	315			40	192
05:45	84	63	2	335			43	199
06:00	99	68	7	327			53	212
06:15	146	67	4	321			75	194
06:30	190	58	15	305			102	182
06:45	243	72	10	299			126	186
07:00	232	87	6	321			119	204
07:15	287	62	19	259			153	160
07:30	282	63	34	278			158	170
07:45	336	53	31	261			184	157
08:00	276	54	27	225			152	140
08:15	314	52	31	244			172	148
08:30	316	33	52	219			184	126
08:45	299	23	46	157			172	90
09:00	287	22	53	147			170	84
09:15	21	9	57	132			39	70
09:30	0	14	75	124			38	69
09:45	0	31	84	127			42	79
10:00	0	22	83	117			42	70
10:15	0	19	80	97			40	58
10:30	2	4	193	82			98	43
10:45	3	9	403	83			203	46
11:00	4	4	511	79			258	42
11:15	5	8	406	63			206	36
11:30	7	7	473	73			240	40
11:45	51	4	456	37			254	20
Total	3999	2962	3195	14434	0	0	3600	8698
Combined Total	6961		17629		0		12298	
Peak	07:45	00:30	11:00	12:00			11:00	12:00
Volume	1242	405	1846	1899			958	1145
P.H.F.	0.924	0.929	0.903	0.950			0.928	0.951
ADT	Not Calculated							

Accurate Counts
978-664-2565

Location : Route 114 EB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 195

39050EB1
Site Code: 39050001

Start Time	Mon 28-Jul-03	Tue 29-Jul-03	Wed 30-Jul-03	Thu 31-Jul-03	Fri 01-Aug-03	Average Day	Sat 02-Aug-03	Sun 03-Aug-03	Week Average
12:00 AM	-	-	-	-	141	141	21	-	81
01:00	-	-	-	-	82	82	6	-	44
02:00	-	-	-	-	37	37	2	-	20
03:00	-	-	-	-	38	38	4	-	21
04:00	-	-	-	-	69	69	0	-	34
05:00	-	-	-	-	232	232	6	-	119
06:00	-	-	-	-	678	678	35	-	357
07:00	-	-	-	-	1137	1137	90	-	614
08:00	-	-	-	-	1205	1205	156	-	680
09:00	-	-	-	-	308	308	269	-	288
10:00	-	-	-	-	5	5	759	-	382
11:00	-	-	-	-	67	67	1846	-	956
12:00 PM	-	-	-	-	389	389	1899	-	1144
01:00	-	-	-	-	378	378	1871	-	1124
02:00	-	-	-	-	367	367	1821	-	1094
03:00	-	-	-	-	341	341	1618	-	980
04:00	-	-	-	-	310	310	1529	-	920
05:00	-	-	-	-	302	302	1319	-	810
06:00	-	-	-	-	295	295	1252	-	774
07:00	-	-	-	-	265	265	1119	-	692
08:00	-	-	-	-	162	162	845	-	504
09:00	-	-	-	-	76	76	530	-	303
10:00	-	-	-	-	54	54	379	-	216
11:00	-	-	-	-	23	23	252	-	138
Day Total	0	0	0	0	6961	6961	17629	0	12295
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	56.6%	56.6%	143.4%	0.0%	
AM Peak					08:00	08:00	11:00		11:00
Volume					1205	1205	1846		956
PM Peak					12:00	12:00	12:00		12:00
Volume					389	389	1899		1144
Grand Total	0	0	0	0	6961	6961	17629	0	12295

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Route 114 EB East of
Location . Trailer Park Road
City/State Danvers, MA
Counter 232

3905AEB1
Site Code: 39050001

Start Time	Mon 04-Aug-03	Tue 05-Aug-03	Wed 06-Aug-03	Thu 07-Aug-03	Fri 08-Aug-03	Average Day	Sat 09-Aug-03	Sun 10-Aug-03	Week Average
12:00 AM	-	-	-	-	136	136	218	-	177
01:00	-	-	-	-	84	84	107	-	96
02:00	-	-	-	-	40	40	96	-	66
03:00	-	-	-	-	30	30	47	-	38
04:00	-	-	-	-	61	61	43	-	52
05:00	-	-	-	-	179	179	87	-	133
06:00	-	-	-	-	633	633	250	-	442
07:00	-	-	-	-	1156	1156	593	-	874
08:00	-	-	-	-	1231	1231	**872**	-	**1052**
09:00	-	-	-	-	1377	1377	606	-	992
10:00	-	-	-	-	1561	1561	0	-	780
11:00	-	-	-	-	**1726**	**1726**	0	-	863
12:00 PM	-	-	-	-	**1907**	**1907**	0	-	954
01:00	-	-	-	-	1837	1837	0	-	918
02:00	-	-	-	-	1695	1695	0	-	848
03:00	-	-	-	-	1636	1636	430	-	1033
04:00	-	-	-	-	1620	1620	**1497**	-	**1558**
05:00	-	-	-	-	1595	1595	1422	-	1508
06:00	-	-	-	-	1378	1378	1312	-	1345
07:00	-	-	-	-	1224	1224	1016	-	1120
08:00	-	-	-	-	951	951	809	-	880
09:00	-	-	-	-	565	565	559	-	562
10:00	-	-	-	-	422	422	417	-	420
11:00	-	-	-	-	257	257	285	-	271
Day Total	0	0	0	0	23301	23301	10666	0	16984
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	137.2%	137.2%	62.8%	0.0%	
AM Peak					11:00	11:00	08:00		08:00
Volume					1726	1726	872		1052
PM Peak					12:00	12:00	15:00		16:00
Volume					1907	1907	1497		1558
Grand Total	0	0	0	0	23301	23301	10666	0	16984

ADT Not Calculated

Accurate Counts
978-664-2565

Location : Route 114 EB East of
Location : Trailer Park Road
City/State: Danvers, MA
Counter : 232

3905AEB1
Site Code: 39050001

Start Time	Fri 08-Aug-03 A.M	P.M.	Sat 09-Aug-03 A.M.	P.M.	Sun 10-Aug-03 A.M.	P.M.	Daily Average A.M.	P.M.
12:00	44	493	72	0	*	*	58	246
12:15	37	473	58	0	*	*	48	236
12:30	30	460	44	0	*	*	37	230
12:45	25	481	44	0	*	*	34	240
01:00	29	464	27	0	*	*	28	232
01:15	16	483	32	0	*	*	24	242
01:30	21	433	25	0	*	*	23	216
01:45	18	457	23	0	*	*	20	228
02:00	12	419	33	0	*	*	22	210
02:15	10	413	19	0	*	*	14	206
02:30	12	429	20	0	*	*	16	214
02:45	6	434	24	0	*	*	15	217
03:00	16	411	15	0	*	*	16	206
03:15	4	394	12	0	*	*	8	197
03:30	4	421	12	39	*	*	8	230
03:45	6	410	8	391	*	*	7	400
04:00	16	419	8	384	*	*	12	402
04:15	9	417	14	415	*	*	12	416
04:30	15	403	11	357	*	*	13	380
04:45	21	381	10	341	*	*	16	361
05:00	24	424	10	344	*	*	17	384
05:15	36	417	19	379	*	*	28	398
05:30	51	391	23	372	*	*	37	382
05:45	68	363	35	327	*	*	52	345
06:00	91	334	35	373	*	*	63	354
06:15	117	331	47	335	*	*	82	333
06:30	176	342	67	311	*	*	122	326
06:45	249	371	101	293	*	*	175	332
07:00	229	321	94	288	*	*	162	304
07:15	295	346	158	271	*	*	226	308
07:30	303	284	156	242	*	*	230	263
07:45	329	273	185	215	*	*	257	244
08:00	282	252	180	224	*	*	231	238
08:15	329	248	204	205	*	*	266	226
08:30	322	264	235	195	*	*	278	230
08:45	298	187	253	185	*	*	276	186
09:00	302	171	224	151	*	*	263	161
09:15	314	134	288	144	*	*	301	139
09:30	366	128	94	152	*	*	230	140
09:45	395	132	0	112	*	*	198	122
10:00	370	124	0	112	*	*	185	118
10:15	360	115	0	114	*	*	180	114
10:30	394	95	0	95	*	*	197	95
10:45	437	88	0	96	*	*	218	92
11:00	405	79	0	101	*	*	202	90
11:15	426	68	0	79	*	*	213	74
11:30	417	53	0	55	*	*	208	54
11:45	478	57	0	50	*	*	239	54
Total	8214	15087	2919	7747	0	0	5567	11415
Combined Total	23301		10666		0		16982	
Peak	11:00	12:00	08:30	03:45			08:30	03:45
Volume	1726	1907	1000	1547			1118	1598
P.H.F.	0.903	0.967	0.868	0.932			0.929	0.960
ADT	Not Calculated							

MASSHIGHWAY CRASH RATE WORKSHEETS

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : *Danvers* COUNT DATE : 2/26/04 *MHD USE ONLY*

DISTRICT : 4 UNSIGNALIZED : SIGNALIZED : yes Source #

– INTERSECTION DATA –

MAJOR STREET : Andover Street ST #

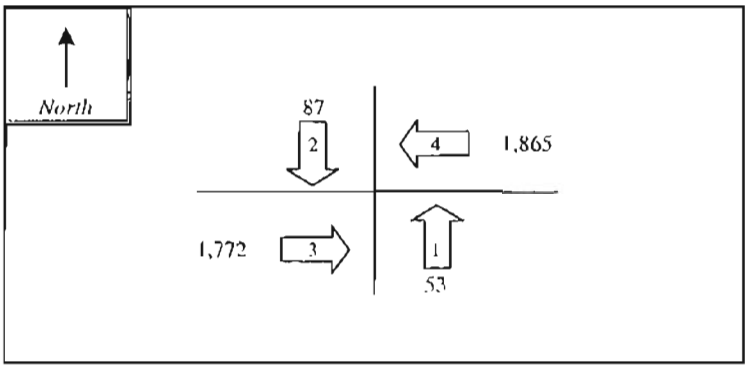
MINOR STREET(S) : IRA Toyota/Private Road ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM
(Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	53	87	1,772	1,865		3,777

" K " FACTOR : 0.090 APPROACH ADT : 41,967 ADT = TOTAL VOL/" K" FACT.

TOTAL # OF ACCIDENTS : 1.00 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 0.33

CRASH RATE CALCULATION : 0.02 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Calculated crash rate is below the 2003 District 4 average of 0.87 crashes per MEV for signalized intersections

Job # 3905

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : *Danvers* COUNT DATE : 2/26/04

MHD USE ONLY

DISTRICT : 4 UNSIGNALIZED : SIGNALIZED : yes

Source #

- INTERSECTION DATA -

MAJOR STREET : Andover Street ST #

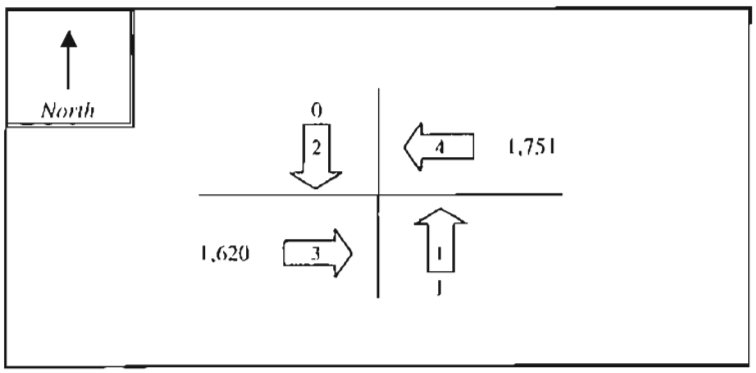
MINOR STREET(S) : Morton International ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM
(Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	1	0	1,620	1,751		3,372

" K " FACTOR . 0.090 APPROACH ADT : 37,467 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 0 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 0.00

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

Comments : Calculated crash rate is below the 2003 District 4 average of 0.87 crashes per MEV for signalized intersections

Job # 3905

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : *Danvers* COUNT DATE : 2/26/04

MHD USE ONLY

DISTRICT : 4 UNSIGNALIZED : SIGNALIZED : yes

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Andover Street ST #

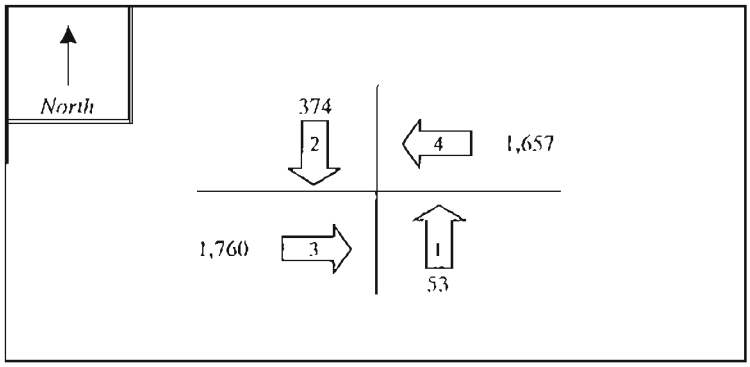
MINOR STREET(S) : Garden Street ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM
(Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	53	374	1,760	1,657		3,844

" K " FACTOR : 0.090 APPROACH ADT : 42,711 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 44 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 14.67

CRASH RATE CALCULATION : 0.94 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Calculated crash rate is below the 2003 District 4 average of 0.87 crashes per MEV for signalized intersections

Job # 3905

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : *Danvers* COUNT DATE : 2/26/04

MHD USE ONLY

DISTRICT : 4 UNSIGNALIZED : yes SIGNALIZED :

Source #

– INTERSECTION DATA –

MAJOR STREET : Andover Street

MINOR STREET(S) : Lowe's

ST #

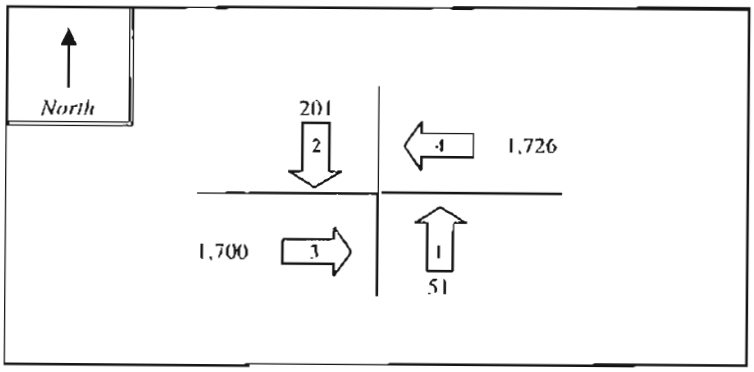
ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSECTION REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	51	201	1,700	1,726	0	3,678

" K " FACTOR : 0.090 APPROACH ADT : 40,867 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 10 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 3.33

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

Comments : Calculated crash rate is below the 2003 District 4 average of 0.63 crashes per MEV for unsignalized intersections

Job # 3905

CAPACITY ANALYSIS WORKSHEETS

Route 114 and Trailer Park Road/IRA Toyota
Route 114 and Shopping Center Driveway/156 Andover Street Plaza Driveway
Route 114 and Garden Street
Route 114,Lowe's Driveway, and Morton International (Site) Driveway
Trailer Park Road and Multiple Tenant Office Driveway

Route 114 and Trailer Park Road/IRA Toyota

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0			4.0
Lane Util. Factor		1.00	0.95		1.00	0.91			1.00			1.00
Frt		1.00	0.99		1.00	1.00			0.96			0.91
Flt Protected		0.95	1.00		0.95	1.00			0.97			0.98
Satd. Flow (prot)		1745	3263		1128	4881			1213			1927
Flt Permitted		0.16	1.00		0.95	1.00			0.80			0.87
Satd. Flow (perm)		301	3263		1128	4881			1006			1713
Volume (vph)	5	57	1228	43	5	1201	32	43	1	21	12	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.90	0.90	0.90	0.75	0.75
Adj. Flow (vph)	5	63	1349	47	5	1264	34	48	1	23	16	0
Lane Group Flow (vph)	0	68	1396	0	5	1298	0	0	72	0	0	48
Heavy Vehicles (%)	0%	0%	5%	47%	60%	6%	0%	47%	0%	43%	0%	0%
Turn Type	custom	Prot			Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5					4	4		7	7
Actuated Green, G (s)		24.4	97.2		0.8	74.6			7.0			7.0
Effective Green, g (s)		24.4	98.2		1.8	75.6			8.0			8.0
Actuated g/C Ratio		0.20	0.82		0.02	0.63			0.07			0.07
Clearance Time (s)		4.0	5.0		5.0	5.0			5.0			5.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0			3.0			3.0
Lane Grp Cap (vph)		61	2670		17	3075			67			114
v/s Ratio Prot			c0.43		0.00	c0.27						
v/s Ratio Perm		c0.23							c0.07			0.03
v/c Ratio		1.11	0.52		0.29	0.42			1.07			0.42
Uniform Delay, d1		47.8	3.5		58.5	11.2			56.0			53.8
Progression Factor		1.00	1.00		1.00	0.06			1.00			1.00
Incremental Delay, d2		150.2	0.7		7.8	0.1			132.0			2.5
Delay (s)		198.0	4.2		66.3	0.8			188.0			56.3
Level of Service		F	A		E	A			F			E
Approach Delay (s)			13.2			1.0			188.0			56.3
Approach LOS			B			A			F			E

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	A
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	24
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	32
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations										
Volume (vph)	5	57	1366	63	17	1315	153	1	12	0
Lane Group Flow (vph)	0	68	1501	69	18	1418	170	95	0	48
Turn Type	custom	Prot		Perm	Prot		custom		custom	
Protected Phases		1	5		6	2				
Permitted Phases	1		5	5			4	4	7	7
Detector Phases	1	1	5	5	6	2	4	4	7	7
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	5.0	5.0
Minimum Split (s)	10.0	10.0	11.0	11.0	9.0	11.0	11.0	11.0	10.0	10.0
Total Split (s)	9.0	9.0	91.0	91.0	10.0	92.0	19.0	19.0	19.0	19.0
Total Split (%)	8%	8%	76%	76%	8%	77%	16%	16%	16%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	Coord	Coord	Coord	Coord	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)		47	170	0	15	37	~146	1		11
Queue Length 95th (ft)		#157	329	12	m37	64	#288	53		36
Internal Link Dist (ft)			159			366		541		449
50th Up Block Time (%)			5%							
95th Up Block Time (%)		4%	16%							
Turn Bay Length (ft)		190								
50th Bay Block Time %			2%							
95th Bay Block Time %			14%							
Queuing Penalty (veh)			4							

Intersection Summary

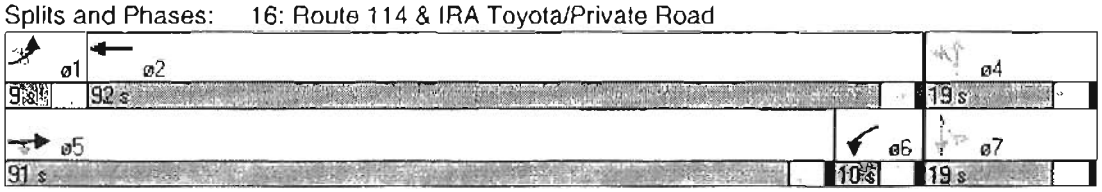
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 111 (93%), Referenced to phase 1:EBL and 5:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Route 114 & IRA Toyota/Private Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.91		1.00	1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00		1.00	0.85			0.91
Flt Protected		0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98
Satd. Flow (prot)		1745	3323	1223	1128	4882		1597	1135			1927
Flt Permitted		0.29	1.00	1.00	0.95	1.00		0.76	1.00			0.89
Satd. Flow (perm)		532	3323	1223	1128	4882		1278	1135			1744
Volume (vph)	5	57	1366	63	17	1315	32	153	1	85	12	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.90	0.90	0.90	0.75	0.75
Adj. Flow (vph)	5	63	1501	69	18	1384	34	170	1	94	16	0
Lane Group Flow (vph)	0	68	1501	69	18	1416	0	170	95	0	0	48
Heavy Vehicles (%)	0%	0%	5%	32%	60%	6%	0%	13%	0%	43%	0%	0%
Turn Type	custom	Prot		Perm	Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5	5				4	4		7	7
Actuated Green, G (s)		13.8	89.0	89.0	2.0	78.2		14.0	14.0			14.0
Effective Green, g (s)		13.8	90.0	90.0	3.0	79.2		15.0	15.0			15.0
Actuated g/C Ratio		0.12	0.75	0.75	0.02	0.66		0.12	0.12			0.12
Clearance Time (s)		4.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		61	2492	917	28	3222		159	142			218
v/s Ratio Prot			c0.45		0.02	c0.29						
v/s Ratio Perm		c0.13		0.06				c0.13	0.08			0.03
v/c Ratio		1.11	0.60	0.08	0.64	0.44		1.07	0.67			0.22
Uniform Delay, d1		53.1	6.8	4.0	58.0	9.8		52.5	50.1			47.2
Progression Factor		1.00	1.00	1.00	0.65	0.21		1.00	1.00			1.00
Incremental Delay, d2		150.2	1.1	0.2	39.1	0.1		91.0	11.3			0.5
Delay (s)		203.3	7.9	4.1	76.9	2.1		143.5	61.5			47.7
Level of Service		F	A	A	E	A		F	E			D
Approach Delay (s)			15.9			3.1			114.1			47.7
Approach LOS			B			A			F			D

Intersection Summary

HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C

c Critical Lane Group

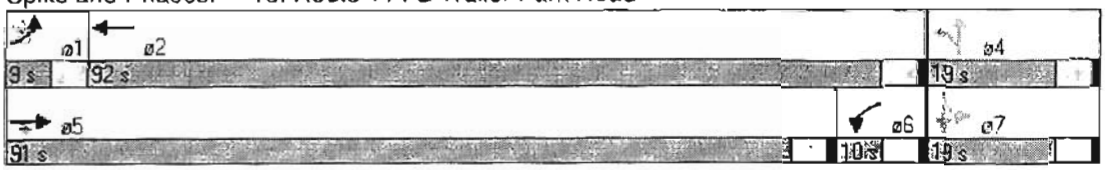
Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Flt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	24
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	32
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations										
Volume (vph)	5	57	1372	102	39	1316	158	1	12	0
Lane Group Flow (vph)	0	68	1508	112	41	1419	176	99	0	48
Turn Type	custom	Prot		Perm	Prot		custom		custom	
Protected Phases		1	5		6	2				
Permitted Phases	1		5	5			4	4	7	7
Detector Phases	1	1	5	5	6	2	4	4	7	7
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	5.0	5.0
Minimum Split (s)	10.0	10.0	11.0	11.0	9.0	11.0	11.0	11.0	10.0	10.0
Total Split (s)	9.0	9.0	91.0	91.0	10.0	92.0	19.0	19.0	19.0	19.0
Total Split (%)	8%	8%	76%	76%	8%	77%	16%	16%	16%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	Coord	Coord	Coord	Coord	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)		~60	273	0	34	20	~155	1		11
Queue Length 95th (ft)		#157	332	15	#93	82	#301	54		36
Internal Link Dist (ft)			159			366		391		449
50th Up Block Time (%)			14%							
95th Up Block Time (%)		4%	16%							
Turn Bay Length (ft)		190								
50th Bay Block Time %			11%							
95th Bay Block Time %			14%							
Queuing Penalty (veh)			8							

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 111 (93%), Referenced to phase 1:EBL and 5:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Route 114 & Trailer Park Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.91		1.00	1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00		1.00	0.85			0.91
Flt Protected		0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98
Satd. Flow (prot)		1745	3323	1346	1128	4876		1597	1135			1927
Flt Permitted		0.32	1.00	1.00	0.95	1.00		0.76	1.00			0.89
Satd. Flow (perm)		592	3323	1346	1128	4876		1273	1135			1741
Volume (vph)	5	57	1372	102	39	1316	32	158	1	88	12	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.90	0.90	0.90	0.75	0.75
Adj. Flow (vph)	5	63	1508	112	41	1385	34	176	1	98	16	0
Lane Group Flow (vph)	10	68	1508	112	41	1419	0	176	99	0	0	48
Heavy Vehicles (%)	0%	0%	5%	20%	60%	6%	6%	13%	0%	43%	0%	0%
Turn Type	custom	Prot		Perm	Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5	5				4	4		7	7
Actuated Green, G (s)		12.4	87.0	87.0	4.0	79.6		14.0	14.0			14.0
Effective Green, g (s)		12.4	88.0	88.0	5.0	80.6		15.0	15.0			15.0
Actuated g/C Ratio		0.10	0.73	0.73	0.04	0.67		0.12	0.12			0.12
Clearance Time (s)		4.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		61	2437	987	47	3275		159	142			218
v/s Ratio Prot			c0.45		c0.04	0.29						
v/s Ratio Perm		c0.11		0.08				c0.14	0.09			0.03
v/c Ratio		1.11	0.62	0.11	0.87	0.43		1.11	0.70			0.22
Uniform Delay, d1		53.8	7.8	4.7	57.2	9.1		52.5	50.3			47.2
Progression Factor		1.00	1.00	1.00	0.66	0.66		1.00	1.00			1.00
Incremental Delay, d2		150.2	1.2	0.2	81.3	0.1		102.9	13.9			0.5
Delay (s)		204.0	9.0	4.9	119.2	6.1		155.4	64.2			47.7
Level of Service		F	A	A	F	A		F	E			D
Approach Delay (s)			16.6			9.3			122.6			47.7
Approach LOS			B			A			F			D

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
c Critical Lane Group			

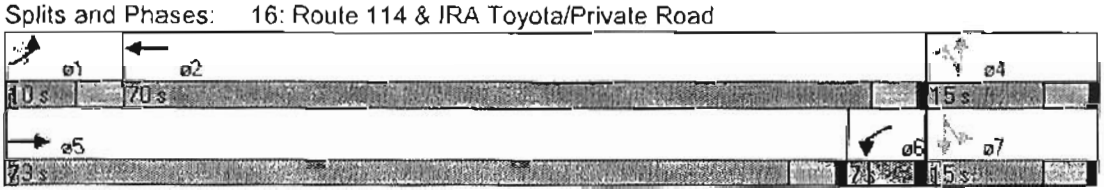
Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	24
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	32
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	10	54	1685	8	1836	46	2	48	1
Lane Group Flow (vph)	0	68	1844	9	2071	0	71	0	116
Turn Type	custom	Prot		Prot		custom		custom	
Protected Phases		1	5	6	2				
Permitted Phases	1		5			4	4	7	7
Detector Phases	1	1	5	6	2	4	4	7	7
Minimum Initial (s)	6.0	6.0	6.0	2.0	6.0	4.0	4.0	5.0	5.0
Minimum Split (s)	10.0	10.0	11.0	7.0	11.0	11.0	11.0	10.0	10.0
Total Split (s)	10.0	10.0	73.0	7.0	70.0	15.0	15.0	15.0	15.0
Total Split (%)	11%	11%	77%	7%	74%	16%	16%	16%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	Coord	Coord	Coord	None	Max	Min	Min	Min	Min
Queue Length 50th (ft)		42	289	6	12		38		47
Queue Length 95th (ft)		#124	370	m11	19		68		80
Internal Link Dist (ft)			159		366		541		449
50th Up Block Time (%)			15%						
95th Up Block Time (%)			18%						
Turn Bay Length (ft)		190							
50th Bay Block Time %			13%						
95th Bay Block Time %			16%						
Queuing Penalty (veh)			10						

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 68 (72%), Referenced to phase 1:EBL and 5:EBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Route 114 & IRA Toyota/Private Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0		4.0	4.0			4.0			4.0
Lane Util. Factor		1.00	0.95		1.00	0.91			1.00			1.00
Frt		1.00	1.00		1.00	1.00			0.99			0.94
Flt Protected		0.95	1.00		0.95	1.00			0.96			0.97
Satd. Flow (prot)		1745	3436		1597	5063			1610			1929
Flt Permitted		0.66	1.00		0.95	1.00			0.65			0.84
Satd. Flow (perm)		1204	3436		1597	5063			1092			1660
Volume (vph)	10	54	1685	48	8	1836	48	46	2	5	48	1
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.91	0.91	0.91	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	11	57	1793	51	9	2018	53	61	3	7	64	1
Lane Group Flow (vph)	0	68	1844	0	9	2071	0	0	71	0	0	116
Heavy Vehicles (%)	0%	0%	1%	6%	13%	2%	4%	9%	0%	40%	4%	0%
Turn Type	custom	Prot			Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5					4	4		7	7
Actuated Green, G (s)		6.1	69.5		1.6	66.0			8.9			8.9
Effective Green, g (s)		6.1	70.5		2.6	67.0			9.9			9.9
Actuated g/C Ratio		0.06	0.74		0.03	0.71			0.10			0.10
Clearance Time (s)		4.0	5.0		5.0	5.0			5.0			5.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0			3.0			3.0
Lane Grp Cap (vph)		77	2550		44	3571			114			173
v/s Ratio Prot			c0.54		0.01	c0.41						
v/s Ratio Perm		0.06							0.07			c0.07
v/c Ratio		0.88	0.72		0.20	0.58			0.62			0.67
Uniform Delay, d1		44.1	6.8		45.2	7.0			40.8			41.0
Progression Factor		1.00	1.00		0.81	0.26			1.00			1.00
Incremental Delay, d2		73.6	1.8		1.9	0.6			10.1			9.8
Delay (s)		117.7	8.6		38.4	2.4			50.9			50.8
Level of Service		F	A		D	A			D			D
Approach Delay (s)			12.5			2.6			50.9			50.8
Approach LOS			B			A			D			D

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	C
c Critical Lane Group			

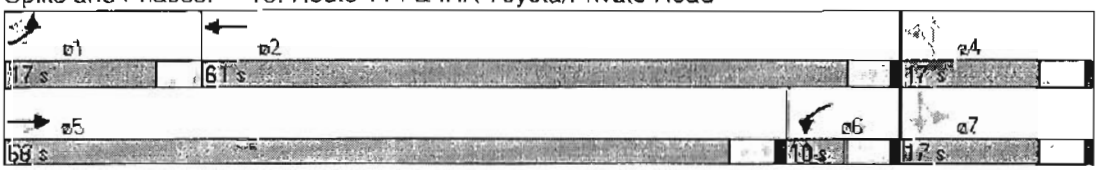
Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	38
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	51
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations										
Volume (vph)	10	54	1857	146	65	2049	100	2	48	1
Lane Group Flow (vph)	0	68	1976	155	71	2305	133	48	0	116
Turn Type	custom	Prot		Perm	Prot		custom		custom	
Protected Phases		1	5		6	2				
Permitted Phases	1		5	5			4	4	7	7
Detector Phases	1	1	5	5	6	2	4	4	7	7
Minimum Initial (s)	6.0	6.0	6.0	6.0	2.0	6.0	4.0	4.0	5.0	5.0
Minimum Split (s)	10.0	10.0	11.0	11.0	7.0	11.0	11.0	11.0	10.0	10.0
Total Split (s)	17.0	17.0	68.0	68.0	10.0	61.0	17.0	17.0	17.0	17.0
Total Split (%)	18%	18%	72%	72%	11%	64%	18%	18%	18%	18%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	Coord	Coord	Coord	Coord	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)		41	422	0	39	214	79	2		46
Queue Length 95th (ft)		#124	543	18	m#76	382	#135	24		78
Internal Link Dist (ft)			159			366		541		449
50th Up Block Time (%)			22%							
95th Up Block Time (%)			25%							
Turn Bay Length (ft)		190								
50th Bay Block Time %			20%							
95th Bay Block Time %			23%							
Queuing Penalty (veh)			15							

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 68 (72%), Referenced to phase 1:EBL and 5:EBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Route 114 & IRA Toyota/Private Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.91		1.00	1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97
Satd. Flow (prot)		1745	3455	1583	1597	5065		1786	1188			1929
Flt Permitted		0.33	1.00	1.00	0.95	1.00		0.65	1.00			0.80
Satd. Flow (perm)		597	3455	1583	1597	5065		1182	1188			1589
Volume (vph)	10	54	1857	146	65	2049	48	100	2	34	48	1
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.91	0.91	0.91	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	11	57	1976	155	71	2252	53	133	3	45	64	1
Lane Group Flow (vph)	0	68	1976	155	71	2305	0	133	48	0	0	116
Heavy Vehicles (%)	0%	0%	1%	2%	13%	2%	4%	4%	0%	40%	4%	0%
Turn Type	custom	Prot		Perm	Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5	5				4	4		7	7
Actuated Green, G (s)		12.3	64.3	64.3	4.0	57.0		11.7	11.7			11.7
Effective Green, g (s)		12.3	65.3	65.3	5.0	58.0		12.7	12.7			12.7
Actuated g/C Ratio		0.13	0.69	0.69	0.05	0.61		0.13	0.13			0.13
Clearance Time (s)		4.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		77	2375	1088	84	3092		158	159			212
v/s Ratio Prot			c0.57		0.04	c0.46						
v/s Ratio Perm		0.11		0.10				c0.11	0.04			0.07
v/c Ratio		0.88	0.83	0.14	0.85	0.75		0.84	0.30			0.55
Uniform Delay, d1		40.6	10.8	5.1	44.6	13.2		40.2	37.1			38.5
Progression Factor		1.00	1.00	1.00	0.94	1.00		1.00	1.00			1.00
Incremental Delay, d2		73.6	3.6	0.3	42.3	0.8		31.3	1.1			2.9
Delay (s)		114.3	14.4	5.4	84.1	14.0		71.5	38.2			41.3
Level of Service		F	B	A	F	B		E	D			D
Approach Delay (s)			16.9			16.1			62.7			41.3
Approach LOS			B			B			E			D

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	D

c Critical Lane Group

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	38
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	51
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations										
Volume (vph)	10	54	1858	153	69	2054	135	2	48	1
Lane Group Flow (vph)	0	68	1977	163	76	2310	180	75	0	116
Turn Type	custom	Prot		Perm	Prot		custom		custom	
Protected Phases		1	5		6	2				
Permitted Phases	1		5	5			4	4	7	7
Detector Phases	1	1	5	5	6	2	4	4	7	7
Minimum Initial (s)	6.0	6.0	6.0	6.0	2.0	6.0	4.0	4.0	5.0	5.0
Minimum Split (s)	10.0	10.0	11.0	11.0	7.0	11.0	11.0	11.0	10.0	10.0
Total Split (s)	17.0	17.0	68.0	68.0	10.0	61.0	17.0	17.0	17.0	17.0
Total Split (%)	18%	18%	72%	72%	11%	64%	18%	18%	18%	18%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	Coord	Coord	Coord	Coord	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)		41	423	0	40	233	~124	2		46
Queue Length 95th (ft)		#124	543	19	m#85	419	#196	28		78
Internal Link Dist (ft)			159			366		391		449
50th Up Block Time (%)			22%							
95th Up Block Time (%)			24%			23%				
Turn Bay Length (ft)		190								
50th Bay Block Time %			20%							
95th Bay Block Time %			23%							
Queuing Penalty (veh)			15			268				

Intersection Summary

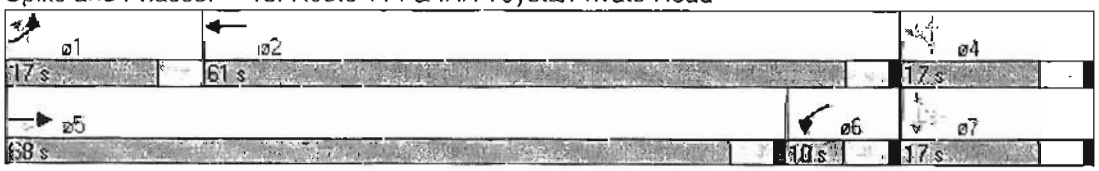
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 68 (72%), Referenced to phase 1:EBL and 5:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Route 114 & IRA Toyota/Private Road



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	12	12	16
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.91		1.00	1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97
Satd. Flow (prot)		1745	3455	1583	1597	5066		1752	1175			1929
Flt Permitted		0.33	1.00	1.00	0.95	1.00		0.65	1.00			0.79
Satd. Flow (perm)		612	3455	1583	1597	5066		1197	1175			1560
Volume (vph)	10	54	1858	153	69	2054	48	135	2	54	48	1
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.91	0.91	0.91	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	11	57	1977	163	76	2257	53	180	3	72	64	1
Lane Group Flow (vph)	0	68	1977	163	76	2310	0	180	75	0	0	116
Heavy Vehicles (%)	0%	0%	1%	2%	13%	2%	4%	3%	0%	40%	4%	0%
Turn Type	custom	Prot		Perm	Prot			custom			custom	
Protected Phases		1	5		6	2						
Permitted Phases	1		5	5				4	4		7	7
Actuated Green, G (s)		12.0	64.0	64.0	4.0	57.0		12.0	12.0			12.0
Effective Green, g (s)		12.0	65.0	65.0	5.0	58.0		13.0	13.0			13.0
Actuated g/C Ratio		0.13	0.68	0.68	0.05	0.61		0.14	0.14			0.14
Clearance Time (s)		4.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		77	2364	1083	84	3093		164	161			213
v/s Ratio Prot			c0.57		0.05	c0.46						
v/s Ratio Perm		0.11		0.10				c0.15	0.06			0.07
v/c Ratio		0.88	0.84	0.15	0.90	0.75		1.10	0.47			0.54
Uniform Delay, d1		40.8	11.1	5.3	44.8	13.2		41.0	37.8			38.2
Progression Factor		1.00	1.00	1.00	0.98	1.09		1.00	1.00			1.00
Incremental Delay, d2		73.6	3.7	0.3	57.1	0.8		98.8	2.1			2.8
Delay (s)		114.4	14.8	5.6	100.9	15.3		139.8	39.9			41.1
Level of Service		F	B	A	F	B		F	D			D
Approach Delay (s)			17.2			18.0			110.4			41.1
Approach LOS			B			B			F			D

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	D
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	38
Peak-hour factor, PHF	0.75
Adj. Flow (vph)	51
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

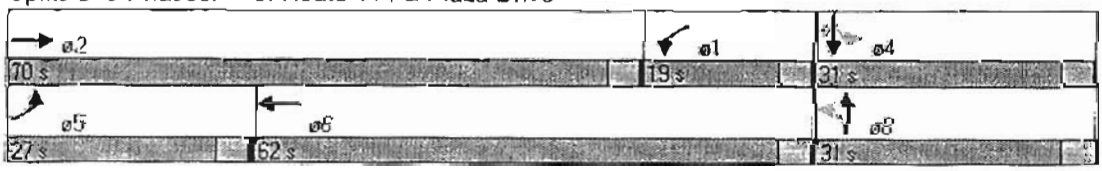
Route 114 and Shopping Center Driveway/156 Andover Street Plaza Driveway

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	73	1213	8	1197	3	0	15	0	43
Lane Group Flow (vph)	78	1309	8	1293	0	8	0	19	53
Turn Type	Prot		Prot		Perm		Perm		Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					8		4		4
Detector Phases	5	2	1	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	70.0	19.0	62.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	23%	58%	16%	52%	26%	26%	26%	26%	26%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Coord	None	Coord	Min	Min	Min	Min	Min
Queue Length 50th (ft)	52	10	6	52		3		14	0
Queue Length 95th (ft)	m117	201	m11	72		15		35	32
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)									
95th Up Block Time (%)									
Turn Bay Length (ft)			180						
50th Bay Block Time %									
95th Bay Block Time %									
Queuing Penalty (veh)									

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1631	3437		1745	4834			1729			1574	1459
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.75	1.00
Satd. Flow (perm)	1631	3437		1745	4834			1545			1247	1459
Volume (vph)	73	1213	5	8	1197	31	3	0	3	15	0	43
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.75	0.75	0.75	0.81	0.81	0.81
Adj. Flow (vph)	78	1304	5	8	1260	33	4	0	4	19	0	53
Lane Group Flow (vph)	78	1309	0	8	1293	0	0	8	0	0	19	53
Heavy Vehicles (%)	7%	5%	0%	0%	7%	3%	0%	0%	0%	7%	0%	7%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)	9.4	97.7		3.0	91.3			7.3			7.3	7.3
Effective Green, g (s)	9.4	97.7		3.0	91.3			7.3			7.3	7.3
Actuated g/C Ratio	0.08	0.81		0.02	0.76			0.06			0.06	0.06
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	128	2798		44	3678			94			76	89
v/s Ratio Prot	c0.05	c0.38		0.00	c0.27							
v/s Ratio Perm								0.01			0.02	c0.04
v/c Ratio	0.61	0.47		0.18	0.35			0.09			0.25	0.60
Uniform Delay, d1	53.5	3.3		57.3	4.7			53.2			53.7	54.9
Progression Factor	1.07	0.78		0.86	0.52			1.00			1.00	1.00
Incremental Delay, d2	7.0	0.5		1.7	0.2			0.4			1.7	10.3
Delay (s)	64.5	3.1		51.2	2.7			53.6			55.5	65.2
Level of Service	E	A		D	A			D			E	E
Approach Delay (s)		6.5			3.0			53.6			62.6	
Approach LOS		A			A			D			E	

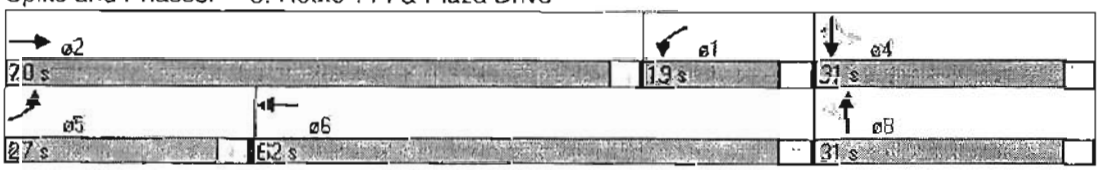
Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	73	1329	8	1325	3	0	15	0	43
Lane Group Flow (vph)	78	1434	8	1428	0	8	0	19	53
Turn Type	Prot		Prot		Perm		Perm		Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					8		4		4
Detector Phases	5	2	1	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	70.0	19.0	62.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	23%	58%	16%	52%	26%	26%	26%	26%	26%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Coord	None	Coord	Min	Min	Min	Min	Min
Queue Length 50th (ft)	59	211	6	345		3		14	0
Queue Length 95th (ft)	m92	425	m12	320		15		35	32
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)				11%					
95th Up Block Time (%)		6%		15%					
Turn Bay Length (ft)			180						
50th Bay Block Time %				12%					
95th Bay Block Time %				15%					
Queuing Penalty (veh)		42		188					

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 90 (75%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1631	3437		1745	4835			1729			1574	1459
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.75	1.00
Satd. Flow (perm)	1631	3437		1745	4835			1545			1247	1459
Volume (vph)	73	1329	5	8	1325	31	3	0	3	15	0	43
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.75	0.75	0.75	0.81	0.81	0.81
Adj. Flow (vph)	78	1429	5	8	1395	33	4	0	4	19	0	53
Lane Group Flow (vph)	78	1434	0	8	1428	0	0	8	0	0	19	53
Heavy Vehicles (%)	7%	5%	0%	0%	7%	3%	0%	0%	0%	7%	0%	7%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)	8.9	97.7		3.0	91.8			7.3			7.3	7.3
Effective Green, g (s)	8.9	97.7		3.0	91.8			7.3			7.3	7.3
Actuated g/C Ratio	0.07	0.81		0.02	0.76			0.06			0.06	0.06
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	121	2798		44	3699			94			76	89
v/s Ratio Prot	c0.05	c0.42		0.00	c0.30							
v/s Ratio Perm								0.01			0.02	c0.04
v/c Ratio	0.64	0.51		0.18	0.39			0.09			0.25	0.60
Uniform Delay, d1	54.0	3.6		57.3	4.7			53.2			53.7	54.9
Progression Factor	0.99	1.12		1.33	2.07			1.00			1.00	1.00
Incremental Delay, d2	9.4	0.6		1.7	0.3			0.4			1.7	10.3
Delay (s)	63.0	4.5		77.8	10.0			53.6			55.5	65.2
Level of Service	E	A		E	B			D			E	E
Approach Delay (s)		7.5			10.4			53.6			62.6	
Approach LOS		A			B			D			E	

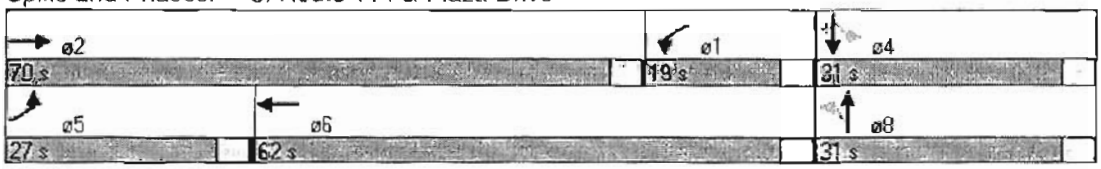
Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	A
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	73	1337	8	1346	3	0	15	0	43
Lane Group Flow (vph)	78	1443	8	1450	0	8	0	20	57
Turn Type	Prot		Prot		Perm		Perm		Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					8		4		4
Detector Phases	5	2	1	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	70.0	19.0	62.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	23%	58%	16%	52%	26%	26%	26%	26%	26%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Coord.	None	Coord.	Min	Min	Min	Min	Min
Queue Length 50th (ft)	60	174	4	245		3		15	0
Queue Length 95th (ft)	m97	615	m8	263		15		34	27
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)				16%					
95th Up Block Time (%)		23%		15%					
Turn Bay Length (ft)			180						
50th Bay Block Time %				17%					
95th Bay Block Time %				16%					
Queuing Penalty (veh)		168		231					

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 115 (96%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.95	1.00
Satd. Flow (prot)	1662	3608		1631	5022			1729			1574	1459
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.75	1.00
Satd. Flow (perm)	1662	3608		1631	5022			1546			1247	1459
Volume (vph)	73	1337	5	8	1346	31	3	0	3	15	0	43
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	78	1438	5	8	1417	33	4	0	4	20	0	57
Lane Group Flow (vph)	78	1443	0	8	1450	0	0	8	0	0	20	57
Heavy Vehicles (%)	5%	0%	0%	7%	3%	0%	0%	0%	0%	7%	0%	7%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		4
Actuated Green, G (s)	9.1	97.6		3.0	91.5			7.4			7.4	7.4
Effective Green, g (s)	9.1	97.6		3.0	91.5			7.4			7.4	7.4
Actuated g/C Ratio	0.08	0.81		0.02	0.76			0.06			0.06	0.06
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	126	2935		41	3829			95			77	90
v/s Ratio Prot	c0.05	c0.40		0.00	c0.29							
v/s Ratio Perm								0.01			0.02	c0.04
v/c Ratio	0.62	0.49		0.20	0.38			0.08			0.26	0.63
Uniform Delay, d1	53.8	3.5		57.3	4.8			53.1			53.7	55.0
Progression Factor	0.84	2.25		1.15	2.23			1.00			1.00	1.00
Incremental Delay, d2	7.1	0.5		1.9	0.2			0.4			1.8	13.7
Delay (s)	52.5	8.3		67.6	10.8			53.5			55.5	68.6
Level of Service	D	A		E	B			D			E	E
Approach Delay (s)		10.6			11.2			53.5			65.2	
Approach LOS		B			B			D			E	

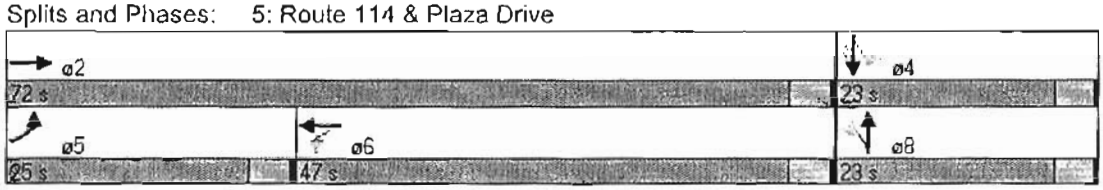
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	A
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	121	1586	23	1701	29	1	38	1	162
Lane Group Flow (vph)	127	1688	25	1901	0	63	0	45	186
Turn Type	Prot		Perm		Perm		Perm		Perm
Protected Phases	5	2		6		8		4	
Permitted Phases			6		8		4		4
Detector Phases	5	2	6	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	25.0	72.0	47.0	47.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	26%	76%	49%	49%	24%	24%	24%	24%	24%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	Coord	None	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)	80	116	4	138		21		26	0
Queue Length 95th (ft)	m116	141	m8	211		50		56	54
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)									
95th Up Block Time (%)				16%					
Turn Bay Length (ft)			180						
50th Bay Block Time %									
95th Bay Block Time %				17%					
Queuing Penalty (veh)				157					

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 25 (26%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Flt	1.00	1.00		1.00	1.00			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1711	3569		1745	5074			1744			1642	1561
Flt Permitted	0.95	1.00		0.14	1.00			0.80			0.74	1.00
Satd. Flow (perm)	1711	3569		263	5074			1432			1271	1561
Volume (vph)	121	1586	18	23	1701	29	29	1	21	38	1	162
Peak hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.80	0.80	0.80	0.87	0.87	0.87
Adj. Flow (vph)	127	1669	19	25	1869	32	36	1	26	44	1	186
Lane Group Flow (vph)	127	1688	0	25	1901	0	0	63	0	0	45	186
Heavy Vehicles (%)	2%	1%	0%	0%	2%	0%	0%	0%	0%	3%	0%	0%
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases				6			8			4		4
Actuated Green, G (s)	12.1	78.3		62.2	62.2			8.7			8.7	8.7
Effective Green, g (s)	12.1	78.3		62.2	62.2			8.7			8.7	8.7
Actuated g/C Ratio	0.13	0.82		0.65	0.65			0.09			0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	218	2942		172	3322			131			116	143
v/s Ratio Prot	0.07	c0.47			0.37							
v/s Ratio Perm				0.10				0.04			0.04	c0.12
v/c Ratio	0.58	0.57		0.15	0.57			0.48			0.39	1.30
Uniform Delay, d1	39.1	2.8		6.3	9.1			41.0			40.6	43.1
Progression Factor	1.07	0.79		0.95	0.79			1.00			1.00	1.00
Incremental Delay, d2	2.7	0.6		0.2	0.1			2.8			2.1	177.0
Delay (s)	44.5	2.8		6.2	7.3			43.8			42.8	220.1
Level of Service	D	A		A	A			D			D	F
Approach Delay (s)		5.7			7.3			43.8			185.6	
Approach LOS		A			A			D			F	

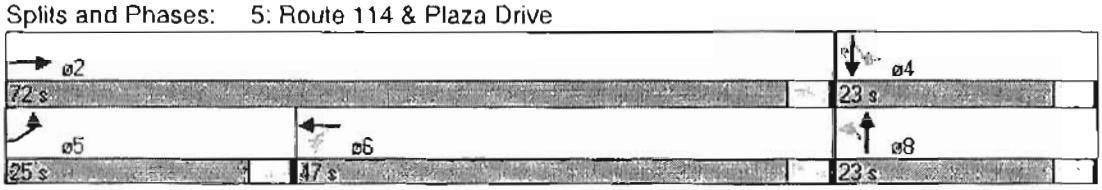
Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	B
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	121	1779	23	1964	29	1	38	1	162
Lane Group Flow (vph)	127	1892	25	2190	0	63	0	45	186
Turn Type	Prot		Perm		Perm		Perm		Perm
Protected Phases	5	2		6		8		4	
Permitted Phases			6		8		4		4
Detector Phases	5	2	6	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	25.0	72.0	47.0	47.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	26%	76%	49%	49%	24%	24%	24%	24%	24%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	Coord	None	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)	67	499	2	175		21		26	0
Queue Length 95th (ft)	m81	628	m7	m408		50		56	54
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)		8%		5%					
95th Up Block Time (%)		10%		17%					
Turn Bay Length (ft)			180						
50th Bay Block Time %				5%					
95th Bay Block Time %				17%					
Queuing Penalty (veh)		173		238					

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 60 (63%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1711	3569		1745	5076			1744			1642	1561
Flt Permitted	0.95	1.00		0.11	1.00			0.80			0.74	1.00
Satd. Flow (perm)	1711	3569		208	5076			1432			1271	1561
Volume (vph)	121	1779	18	23	1964	29	29	1	21	38	1	162
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.80	0.80	0.80	0.87	0.87	0.87
Adj. Flow (vph)	127	1873	19	25	2158	32	36	1	26	44	1	186
Lane Group Flow (vph)	127	1892	0	25	2190	0	0	63	0	0	45	186
Heavy Vehicles (%)	2%	1%	0%	0%	2%	0%	0%	0%	0%	3%	0%	0%
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases				6			8			4		4
Actuated Green, G (s)	11.2	78.3		63.1	63.1			8.7			8.7	8.7
Effective Green, g (s)	11.2	78.3		63.1	63.1			8.7			8.7	8.7
Actuated g/C Ratio	0.12	0.82		0.66	0.66			0.09			0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	202	2942		138	3372			131			116	143
v/s Ratio Prot	0.07	c0.53			0.43							
v/s Ratio Perm				0.12				0.04			0.04	c0.12
v/c Ratio	0.63	0.64		0.18	0.65			0.48			0.39	1.30
Uniform Delay, d1	39.9	3.1		6.1	9.4			41.0			40.6	43.2
Progression Factor	1.03	2.22		0.61	0.63			1.00			1.00	1.00
Incremental Delay, d2	3.5	0.6		0.3	0.2			2.8			2.1	177.0
Delay (s)	44.5	7.6		4.0	6.1			43.8			42.8	220.1
Level of Service	D	A		A	A			D			D	F
Approach Delay (s)		9.9			6.1			43.8			185.6	
Approach LOS		A			A			D			F	

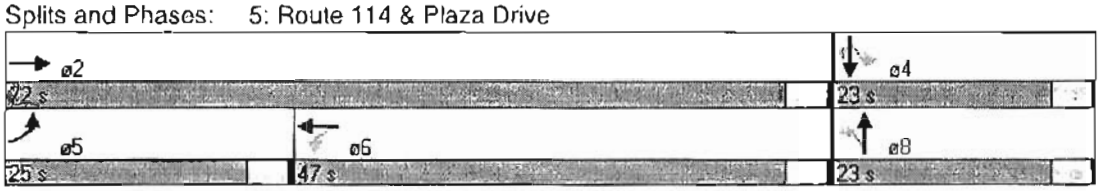
Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	B
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	121	1800	23	1973	29	1	38	1	162
Lane Group Flow (vph)	127	1914	25	2200	0	63	0	45	186
Turn Type	Prot		Perm		Perm		Perm		Perm
Protected Phases	5	2		6		8		4	
Permitted Phases			6		8		4		4
Detector Phases	5	2	6	6	8	8	4	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	25.0	72.0	47.0	47.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	26%	76%	49%	49%	24%	24%	24%	24%	24%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	Coord	None	None	Min	Min	Min	Min	Min
Queue Length 50th (ft)	67	548	3	210		21		26	0
Queue Length 95th (ft)	m81	700	m8	m453		50		56	54
Internal Link Dist (ft)		366		183		234		381	
50th Up Block Time (%)		12%		7%					
95th Up Block Time (%)		13%		19%					
Turn Bay Length (ft)			180						
50th Bay Block Time %				7%					
95th Bay Block Time %				19%					
Queuing Penalty (veh)		239		283					

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 63 (66%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Route 114 & Plaza Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	10	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1711	3569		1745	5076			1744			1642	1561
Flt Permitted	0.95	1.00		0.11	1.00			0.80			0.74	1.00
Satd. Flow (perm)	1711	3569		202	5076			1432			1271	1561
Volume (vph)	121	1800	18	23	1973	29	29	1	21	38	1	162
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.80	0.80	0.80	0.87	0.87	0.87
Adj. Flow (vph)	127	1895	19	25	2168	32	36	1	26	44	1	186
Lane Group Flow (vph)	127	1914	0	25	2200	0	0	63	0	0	45	186
Heavy Vehicles (%)	2%	1%	0%	0%	2%	0%	0%	0%	0%	3%	0%	0%
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases				6			8			4		4
Actuated Green, G (s)	11.2	78.3		63.1	63.1			8.7			8.7	8.7
Effective Green, g (s)	11.2	78.3		63.1	63.1			8.7			8.7	8.7
Actuated g/C Ratio	0.12	0.82		0.66	0.66			0.09			0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	202	2942		134	3372			131			116	143
v/s Ratio Prot	0.07	c0.54			0.43							
v/s Ratio Perm				0.12				0.04			0.04	c0.12
v/c Ratio	0.63	0.65		0.19	0.65			0.48			0.39	1.30
Uniform Delay, d1	39.9	3.2		6.1	9.5			41.0			40.6	43.2
Progression Factor	0.99	2.87		0.68	0.73			1.00			1.00	1.00
Incremental Delay, d2	3.5	0.7		0.3	0.2			2.8			2.1	177.0
Delay (s)	42.8	9.7		4.5	7.1			43.8			42.8	220.1
Level of Service	D	A		A	A			D			D	F
Approach Delay (s)		11.8			7.1			43.8			185.6	
Approach LOS		B			A			D			F	

Intersection Summary

HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C

c Critical Lane Group

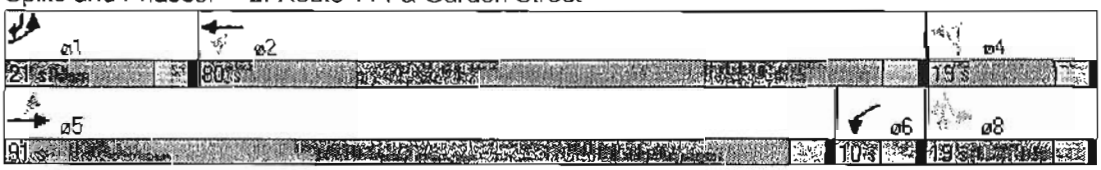
Route 114 and Garden Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	91	1119	3	1042	2	0	103	1	170
Lane Group Flow (vph)	97	1192	3	1191	0	3	0	138	227
Turn Type	pm+pt		pm+pt		custom		custom		custom
Protected Phases	1	5	6	2					1
Permitted Phases	5		2		4	4	8	8	8
Detector Phases	1	5	6	2	4	4	8	8	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	21.0	91.0	10.0	80.0	19.0	19.0	19.0	19.0	21.0
Total Split (%)	18%	76%	8%	67%	16%	16%	16%	16%	18%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	Coord	Coord	None	Max	None	None	None	None	Coord
Queue Length 50th (ft)	4	33	1	254		1		106	74
Queue Length 95th (ft)	18	168	5	312		5		#163	107
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)									
95th Up Block Time (%)									
Turn Bay Length (ft)			120						
50th Bay Block Time %				21%					
95th Bay Block Time %				24%					
Queuing Penalty (veh)				1					

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 97 (81%), Referenced to phase 1:EBL and 5:EBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
#: 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95			0.95	1.00
Satd. Flow (prot)	1694	3438		1805	3351			3430			1725	1392
Flt Permitted	0.17	1.00		0.24	1.00			0.45			0.73	1.00
Satd. Flow (perm)	307	3438		450	3351			1635			1315	1392
Volume (vph)	91	1119	2	3	1042	66	2	0	0	103	1	170
Peak-hour factor, PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	97	1190	2	3	1120	71	3	0	0	137	1	227
Lane Group Flow (vph)	97	1192	0	3	1191	0	0	3	0	0	138	227
Heavy Vehicles (%)	3%	5%	0%	0%	7%	3%	0%	0%	0%	5%	0%	16%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	90.3	90.3		79.0	79.0			13.7			13.7	26.0
Effective Green, g (s)	91.3	91.3		80.0	80.0			14.7			14.7	28.0
Actuated g/C Ratio	0.76	0.76		0.67	0.67			0.12			0.12	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	387	2616		323	2234			200			161	371
v/s Ratio Prot	0.03	0.35		0.00	c0.36							c0.07
v/s Ratio Perm	0.16			0.01				0.00			c0.10	0.10
v/c Ratio	0.25	0.46		0.01	0.53			0.01			0.86	0.61
Uniform Delay, d1	6.1	5.3		6.7	10.3			46.3			51.6	41.1
Progression Factor	0.64	0.64		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.4	0.5		0.0	0.9			0.0			33.5	3.0
Delay (s)	5.4	3.9		6.7	11.3			46.3			85.1	44.1
Level of Service	A	A		A	B			D			F	D
Approach Delay (s)		4.0			11.2			46.3			59.6	
Approach LOS		A			B			D			E	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
c Critical Lane Group			

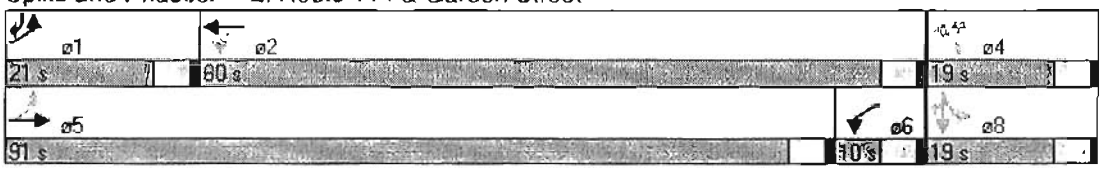
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL		
Lane Configurations									
Volume (vph)	108	1289	3	1156	2	0	114		
Lane Group Flow (vph)	115	1373	3	1319	0	3	0		
Turn Type	pm+pt		pm+pt		custom		custom		
Protected Phases	1	5	6	2					
Permitted Phases	5		2		4	4	8		
Detector Phases	1	5	6	2	4	4	8		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	21.0	91.0	10.0	80.0	19.0	19.0	19.0	19.0	21.0
Total Split (%)	18%	76%	8%	67%	16%	16%	16%	16%	18%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	Coord	Coord	None	Min	None	None	None	None	Coord
Queue Length 50th (ft)	24	182	1	481		1		119	74
Queue Length 95th (ft)	94	356	5	366		5		#187	142
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)									
95th Up Block Time (%)		17%							
Turn Bay Length (ft)			120						
50th Bay Block Time %				42%					
95th Bay Block Time %				26%					
Queuing Penalty (veh)		114		1					

Revised No-Build & Build with the 95K of warehouse as Background

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 97 (81%), Referenced to phase 1:EBL and 5:EBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95			0.95	1.00
Satd. Flow (prot)	1694	3438		1805	3352			3430			1724	1392
Flt Permitted	0.07	1.00		0.20	1.00			0.41			0.73	1.00
Satd. Flow (perm)	125	3438		375	3352			1468			1314	1392
Volume (vph)	108	1289	2	3	1156	71	2	0	0	114	1	186
Peak-hour factor, PHF	0.94	0.94	0.94	0.93	0.93	0.93	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	115	1371	2	3	1243	76	3	0	0	152	1	248
Lane Group Flow (vph)	115	1373	0	3	1319	0	0	3	0	0	153	248
Heavy Vehicles (%)	3%	5%	0%	0%	7%	3%	0%	0%	0%	5%	0%	16%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	90.0	90.0		58.2	58.2			14.0			14.0	46.8
Effective Green, g (s)	91.0	91.0		59.2	59.2			15.0			15.0	48.8
Actuated g/C Ratio	0.76	0.76		0.49	0.49			0.12			0.12	0.41
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	537	2607		209	1654			184			164	612
v/s Ratio Prot	0.06	c0.40		0.00	c0.39							0.11
v/s Ratio Perm	0.10			0.01				0.00			c0.12	0.06
v/c Ratio	0.21	0.53		0.01	0.80			0.02			0.93	0.41
Uniform Delay, d1	12.5	5.8		15.5	25.4			46.0			52.0	25.3
Progression Factor	2.98	1.56		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.8	0.7		0.0	2.8			0.0			50.6	0.4
Delay (s)	38.2	9.8		15.6	28.2			46.1			102.6	25.7
Level of Service	D	A		B	C			D			F	C
Approach Delay (s)		12.0			28.1			46.1			55.1	
Approach LOS		B			C			D			E	

Intersection Summary

HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	B

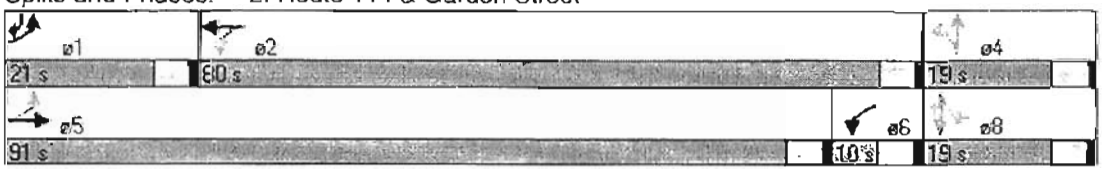
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	108	1292	3	1180	2	0	114	1	188
Lane Group Flow (vph)	115	1376	3	1345	0	3	0	153	251
Turn Type	pm+pt		pm+pt		custom		custom		custom
Protected Phases	1	5	6	2					1
Permitted Phases	5		2		4	4	8	8	8
Detector Phases	1	5	6	2	4	4	8	8	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	21.0	91.0	10.0	80.0	19.0	19.0	19.0	19.0	21.0
Total Split (%)	18%	76%	8%	67%	16%	16%	16%	16%	18%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	Coord	Coord	None	Min	None	None	None	None	Coord
Queue Length 50th (ft)	23	286	1	488		1		119	79
Queue Length 95th (ft)	99	630	5	378		5		#187	147
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)		5%							
95th Up Block Time (%)		26%							
Turn Bay Length (ft)			120						
50th Bay Block Time %				42%					
95th Bay Block Time %				26%					
Queuing Penalty (veh)		214		1					

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 97 (81%), Referenced to phase 1:EBL and 5:EBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95			0.95	1.00
Satd. Flow (prot)	1694	3438		1805	3352			3430			1724	1392
Flt Permitted	0.07	1.00		0.20	1.00			0.41			0.73	1.00
Satd. Flow (perm)	123	3438		374	3352			1468			1314	1392
Volume (vph)	108	1292	2	3	1180	71	2	0	0	114	1	188
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.93	0.93	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	115	1374	2	3	1269	76	3	0	0	152	1	251
Lane Group Flow (vph)	115	1376	0	3	1345	0	0	3	0	0	153	251
Heavy Vehicles (%)	3%	5%	0%	0%	7%	3%	0%	0%	0%	5%	0%	16%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	90.0	90.0		59.1	59.1			14.0			14.0	45.9
Effective Green, g (s)	91.0	91.0		60.1	60.1			15.0			15.0	47.9
Actuated g/C Ratio	0.76	0.76		0.50	0.50			0.12			0.12	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	524	2607		211	1679			184			164	602
v/s Ratio Prot	0.06	c0.40		0.00	c0.40							0.11
v/s Ratio Perm	0.11			0.01				0.00			c0.12	0.07
v/c Ratio	0.22	0.53		0.01	0.80			0.02			0.93	0.42
Uniform Delay, d1	12.9	5.8		15.1	25.0			46.0			52.0	26.0
Progression Factor	2.03	2.49		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.9	0.7		0.0	2.8			0.0			50.6	0.5
Delay (s)	27.0	15.2		15.1	27.8			46.1			102.6	26.5
Level of Service	C	B		B	C			D			F	C
Approach Delay (s)		16.1			27.8			46.1			55.3	
Approach LOS		B			C			D			E	

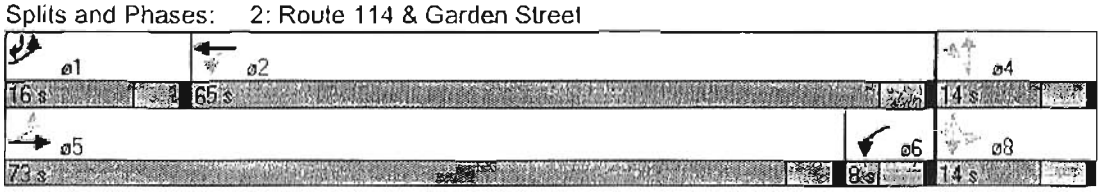
Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	B
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	218	1543	20	1509	30	4	185	6	189
Lane Group Flow (vph)	229	1650	22	1869	0	61	0	242	239
Turn Type	pm+pt		pm+pt		custom		custom		custom
Protected Phases	1	5	6	2					1
Permitted Phases	5		2		4	4	8	8	8
Detector Phases	1	5	6	2	4	4	8	8	1
Minimum Initial (s)	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	16.0	73.0	8.0	65.0	14.0	14.0	14.0	14.0	16.0
Total Split (%)	17%	77%	8%	68%	15%	15%	15%	15%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	Coord	Coord	None	Max	None	None	None	None	Coord
Queue Length 50th (ft)	77	61	4	401		11		~220	105
Queue Length 95th (ft)	#198	166	12	497		30		#314	152
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)									
95th Up Block Time (%)		2%							
Turn Bay Length (ft)			120						
50th Bay Block Time %				26%					
95th Bay Block Time %				28%					
Queuing Penalty (veh)				6					

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 61 (64%), Referenced to phase 1:EBL and 5:EBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1728	3566		1805	3525			3322			1795	1615
Flt Permitted	0.06	1.00		0.14	1.00			0.73			0.69	1.00
Satd. Flow (perm)	118	3566		257	3525			2491			1291	1615
Volume (vph)	218	1543	25	20	1509	154	30	4	19	185	6	189
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.88	0.88	0.88	0.79	0.79	0.79
Adj. Flow (vph)	229	1624	26	22	1696	173	34	5	22	234	8	239
Lane Group Flow (vph)	229	1650	0	22	1869	0	0	61	0	0	242	239
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	69.8	69.8		63.0	63.0			9.0			9.0	17.0
Effective Green, g (s)	70.8	70.8		64.0	64.0			10.0			10.0	19.0
Actuated g/C Ratio	0.75	0.75		0.67	0.67			0.11			0.11	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	240	2658		209	2375			262			136	391
v/s Ratio Prot	c0.09	0.46		0.00	c0.53							0.06
v/s Ratio Perm	c0.62			0.07				0.02			c0.19	0.03
v/c Ratio	0.95	0.62		0.11	0.79			0.23			1.78	0.61
Uniform Delay, d1	29.1	5.7		7.6	10.8			39.0			42.5	34.6
Progression Factor	1.15	0.68		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	43.6	1.0		0.2	2.7			0.5			378.7	2.8
Delay (s)	76.9	4.9		7.9	13.5			39.4			421.2	37.5
Level of Service	E	A		A	B			D			F	D
Approach Delay (s)		13.7			13.4			39.4			230.5	
Approach LOS		B			B			D			F	

Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	E
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	240	1730	20	1737	30	4	203	6	213
Lane Group Flow (vph)	253	1847	22	2139	0	61	0	265	270
Turn Type	pm+pt		pm+pt		custom		custom		custom
Protected Phases	1	5	6	2					1
Permitted Phases	5		2		4	4	8	8	8
Detector Phases	1	5	6	2	4	4	8	8	1
Minimum Initial (s)	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	16.0	73.0	8.0	65.0	14.0	14.0	14.0	14.0	16.0
Total Split (%)	17%	77%	8%	68%	15%	15%	15%	15%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	None	Coord	None	Min	None	None	None	None	None
Queue Length 50th (ft)	121	152	4	550		11		~249	132
Queue Length 95th (ft)	#248	400	12	#734		30		#344	181
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)									
95th Up Block Time (%)		24%							
Turn Bay Length (ft)			120						
50th Bay Block Time %				29%					
95th Bay Block Time %				31%					
Queuing Penalty (veh)		218		6					

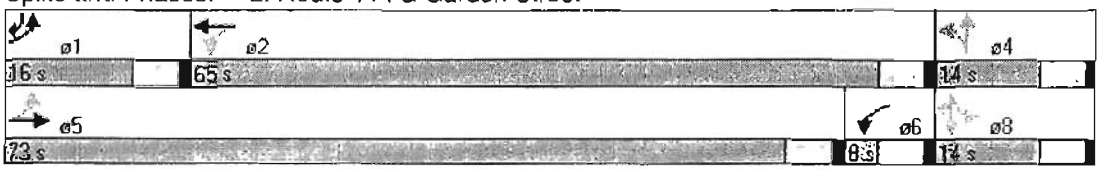
Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 23 (24%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1728	3567		1805	3527			3322			1795	1615
Flt Permitted	0.07	1.00		0.10	1.00			0.74			0.69	1.00
Satd. Flow (perm)	123	3567		197	3527			2534			1290	1615
Volume (vph)	240	1730	25	20	1737	166	30	4	19	203	6	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.88	0.88	0.88	0.79	0.79	0.79
Adj. Flow (vph)	253	1821	26	22	1952	187	34	5	22	257	8	270
Lane Group Flow (vph)	253	1847	0	22	2139	0	0	61	0	0	265	270
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	69.8	69.8		60.2	60.2			9.0			9.0	19.8
Effective Green, g (s)	70.8	70.8		61.2	61.2			10.0			10.0	21.8
Actuated g/C Ratio	0.75	0.75		0.64	0.64			0.11			0.11	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	291	2658		164	2272			267			136	439
v/s Ratio Prot	c0.11	0.52		0.00	c0.61							0.08
v/s Ratio Perm	0.54			0.08				0.02			c0.21	0.09
v/c Ratio	0.87	0.69		0.13	0.94			0.23			1.95	0.62
Uniform Delay, d1	31.4	6.4		10.5	15.3			39.0			42.5	32.8
Progression Factor	1.11	1.29		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	19.7	1.3		0.4	8.7			0.4			452.5	2.6
Delay (s)	54.4	9.5		10.8	23.9			39.4			495.0	35.4
Level of Service	D	A		B	C			D			F	D
Approach Delay (s)		14.9			23.8			39.4			263.0	
Approach LOS		B			C			D			F	

Intersection Summary

HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.2%	ICU Level of Service	F

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	240	1752	20	1742	30	4	203	6	213
Lane Group Flow (vph)	253	1870	22	2144	0	61	0	265	270
Turn Type	pm+pt		pm+pt		custom		custom		custom
Protected Phases	1	5	6	2					1
Permitted Phases	5		2		4	4	8	8	8
Detector Phases	1	5	6	2	4	4	8	8	1
Minimum Initial (s)	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	16.0	73.0	8.0	65.0	14.0	14.0	14.0	14.0	16.0
Total Split (%)	17%	77%	8%	68%	15%	15%	15%	15%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes
Recall Mode	None	Coord	None	Min	None	None	None	None	None
Queue Length 50th (ft)	122	193	4	553		11		~249	132
Queue Length 95th (ft)	#242	441	12	#790		30		#344	181
Internal Link Dist (ft)		267		1510		621		1545	
50th Up Block Time (%)									
95th Up Block Time (%)		24%							
Turn Bay Length (ft)			120						
50th Bay Block Time %				29%					
95th Bay Block Time %				31%					
Queuing Penalty (veh)		221		6					

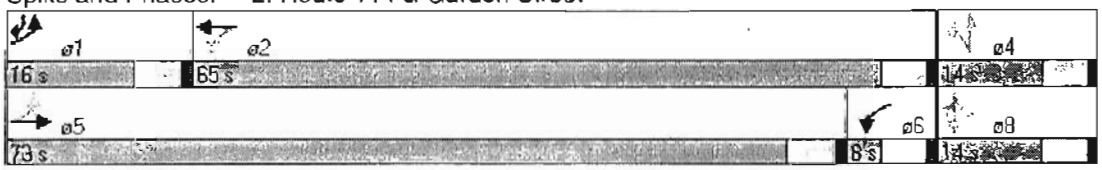
Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 23 (24%), Referenced to phase 5:EBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 114 & Garden Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1728	3567		1805	3527			3822			1795	1615
Flt Permitted	0.07	1.00		0.10	1.00			0.74			0.69	1.00
Satd. Flow (perm)	123	3567		190	3527			2534			1290	1615
Volume (vph)	240	1752	25	20	1742	166	30	4	19	203	6	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.88	0.88	0.88	0.79	0.79	0.79
Adj. Flow (vph)	253	1844	26	22	1957	187	34	5	22	257	8	270
Lane Group Flow (vph)	253	1870	0	22	2144	0	0	61	0	0	265	270
Heavy Vehicles (%)	1%	1%	0%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt			pm+pt			custom			custom		custom
Protected Phases	1	5		6	2							1
Permitted Phases	5			2			4	4		8	8	8
Actuated Green, G (s)	69.8	69.8		60.2	60.2			9.0			9.0	19.8
Effective Green, g (s)	70.8	70.8		61.2	61.2			10.0			10.0	21.8
Actuated g/C Ratio	0.75	0.75		0.64	0.64			0.11			0.11	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	291	2658		160	2272			267			136	439
v/s Ratio Prot	c0.11	0.52		0.00	c0.61							0.08
v/s Ratio Perm	0.54			0.09				0.02			c0.21	0.09
v/c Ratio	0.87	0.70		0.14	0.94			0.23			1.95	0.62
Uniform Delay, d1	31.5	6.5		10.9	15.3			39.0			42.5	32.8
Progression Factor	1.03	1.46		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	19.6	1.3		0.4	8.9			0.4			452.5	2.6
Delay (s)	51.9	10.7		11.3	24.2			39.4			495.0	35.4
Level of Service	D	B		B	C			D			F	D
Approach Delay (s)		15.6			24.1			39.4			263.0	
Approach LOS		B			C			D			F	

Intersection Summary			
HCM Average Control Delay	46.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	F
c Critical Lane Group			

Route 114, Lowe's Driveway, and Morton International (Site) Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1230	1	1	1234	17	2	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	1337	1	1	1341	18	3	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	1360			1338			1787	2699	669	2021	2691	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1163			1338			1641	2663	669	1904	2654	151
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			96	100	100	100	100	100
cM capacity (veh/h)	543			522			60	20	405	38	21	781

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	0	891	447	336	671	354	3	0
Volume Left	0	0	0	1	0	0	3	0
Volume Right	0	0	1	0	0	18	0	0
cSH	1700	1700	1700	522	1700	1700	60	1700
Volume to Capacity	0.00	0.52	0.26	0.00	0.39	0.21	0.04	0.00
Queue Length (ft)	0	0	0	0	0	0	3	0
Control Delay (s)	0.0	0.0	0.0	0.1	0.0	0.0	67.7	0.0
Lane LOS				A			F	A
Approach Delay (s)	0.0			0.0			67.7	
Approach LOS							F	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1836	11	7	1359	17	5	0	1	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	1452	12	8	1477	18	7	0	1	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.75						0.75	0.75		0.75	0.75	0.75
vC, conflicting volume	1496			1464			1966	2969	732	2229	2966	502
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	985			1464			1614	2958	732	1967	2954	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			87	100	100	100	100	100
cM capacity (veh/h)	530			467			52	11	368	28	11	814

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	0	968	496	377	739	388	7	1
Volume Left	0	0	0	8	0	0	7	0
Volume Right	0	0	12	0	0	18	0	1
cSH	1700	1700	1700	467	1700	1700	52	368
Volume to Capacity	0.00	0.57	0.29	0.02	0.43	0.23	0.13	0.00
Queue Length (ft)	0	0	0	1	0	0	10	0
Control Delay (s)	0.0	0.0	0.0	0.5	0.0	0.0	84.1	14.8
Lane LOS				A			F	B
Approach Delay (s)	0.0			0.1			-72.6	
Approach LOS							F	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1339	16	10	1381	17	4	0	1	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (veh/h)	0	1455	17	11	1501	18	5	0	1	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.74						0.74	0.74		0.74	0.74	0.74
vC, conflicting volume	1520			1473			1986	3005	736	2261	3005	510
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	999			1473			1630	3007	736	2002	3007	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			89	100	100	100	100	100
cM capacity (veh/h)	518			464			50	10	366	26	10	807

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	0	970	503	386	751	394	5	1
Volume Left	0	0	0	11	0	0	5	0
Volume Right	0	0	17	0	0	18	0	1
cSH	1700	1700	1700	464	1700	1700	50	366
Volume to Capacity	0.00	0.57	0.30	0.02	0.44	0.23	0.11	0.00
Queue Length (ft)	0	0	0	2	0	0	8	0
Control Delay (s)	0.0	0.0	0.0	0.7	0.0	0.0	85.5	14.9
Lane LOS				A			F	B
Approach Delay (s)	0.0			0.2			71.4	
Approach LOS							F	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	1642	0	2	1752	24	1	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Hourly flow rate (veh/h)	3	1785	0	2	1904	26	1	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.73						0.73	0.73		0.73	0.73	0.73
vC, conflicting volume	1930			1785			2430	3726	892	2821	3713	648
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1536			1785			2220	3994	892	2754	3976	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			92	100	100	100	100	100
cM capacity (veh/h)	321			352			18	2	289	7	2	797

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	3	1190	595	478	952	502	1	0
Volume Left	3	0	0	2	0	0	1	0
Volume Right	0	0	0	0	0	26	0	0
cSH	321	1700	1700	352	1700	1700	18	1700
Volume to Capacity	0.01	0.70	0.35	0.01	0.56	0.30	0.08	0.00
Queue Length (ft)	1	0	0	0	0	0	6	0
Control Delay (s)	16.3	0.0	0.0	0.2	0.0	0.0	223.8	0.0
Lane LOS	C			A			F	A
Approach Delay (s)	0.0			0.0			223.8	
Approach LOS							F	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	59.3%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	1832	3	4	2005	24	11	0	6	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Hourly flow rate (veh/h)	3	1991	3	4	2179	26	15	0	8	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.55						0.55	0.55		0.55	0.55	0.55
vC, conflicting volume	2205			1995			2735	4214	997	3211	4202	739
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1547			1995			2515	5219	997	3386	5198	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			0	100	97	100	100	100
cM capacity (veh/h)	238			292			8	0	246	2	0	597

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	3	1328	667	549	1090	571	15	8
Volume Left	3	0	0	4	0	0	15	0
Volume Right	0	0	3	0	0	26	0	8
cSH	238	1700	1700	292	1700	1700	8	246
Volume to Capacity	0.01	0.78	0.39	0.01	0.64	0.34	1.88	0.03
Queue Length (ft)	1	0	0	1	0	0	70	3
Control Delay (s)	20.4	0.0	0.0	0.5	0.0	0.0	1316.8	20.1
Lane LOS	C			A			F	C
Approach Delay (s)	0.0			0.1			859.1	
Approach LOS							F	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	65.1%	ICU Level of Service	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	1852	4	3	2009	24	15	0	9	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92
Hourly flow rate (veh/h)	3	2013	4	3	2184	26	20	0	12	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		263			347							
pX, platoon unblocked	0.54						0.54	0.54		0.54	0.54	0.54
vC, conflicting volume	2210			2017			2756	4238	1009	3228	4227	741
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1547			2017			2552	5277	1009	3420	5257	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			0	100	95	100	100	100
cM capacity (veh/h)	236			286			7	0	242	1	0	593

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	3	1342	675	549	1092	572	20	12
Volume Left	3	0	0	3	0	0	20	0
Volume Right	0	0	4	0	0	26	0	12
cSH	236	1700	1700	286	1700	1700	7	242
Volume to Capacity	0.01	0.79	0.40	0.01	0.64	0.34	2.74	0.05
Queue Length (ft)	1	0	0	1	0	0	91	4
Control Delay (s)	20.4	0.0	0.0	0.4	0.0	0.0	1762.7	20.7
Lane LOS	C			A			F	C
Approach Delay (s)	0.0			0.1			1109.5	
Approach LOS							F	

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	65.8%	ICU Level of Service	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	55	136	0	11	212
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	60	148	0	12	230
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						471
pX, platoon unblocked						
vC, conflicting volume	402	148			148	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	148			148	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	93			99	
cM capacity (veh/h)	599	899			1434	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	60	148	242
Volume Left	0	0	12
Volume Right	60	0	0
cSH	899	1700	1434
Volume to Capacity	0.07	0.09	0.01
Queue Length (ft)	5	0	1
Control Delay (s)	9.3	0.0	0.4
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	0.4
Approach LOS	A		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	25.5%	ICU Level of Service	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	8	239	0	61	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	0	9	260	0	66	87
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						471
pX, platoon unblocked						
vC, conflicting volume	479	260			260	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	479	260			260	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			95	
cM capacity (veh/h)	517	779			1305	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	260	153
Volume Left	0	0	66
Volume Right	9	0	0
cSH	779	1700	1305
Volume to Capacity	0.01	0.15	0.05
Queue Length (ft)	1	0	4
Control Delay (s)	9.7	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	9.7	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A

Trailer Park Road and Multiple Tenant Office Driveway