Exit 18 Rezone Study

Town of Queensbury

Warren County, New York

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Prepared for:
Adirondack / Glens Falls Transportation Council

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1.0 INTRODUCTION

A. Study Background, Overview, and Purpose

The Adirondack/Glens Falls Transportation Council (A/GFTC) initiated this study to provide a technical analysis of the transportation system impacts associated with proposed changes in commercial zoning in the area of the I-87 (Adirondack Northway) Interchange 18 in the Town of Queensbury, Warren County, New York. The Commercial Intensive Exit 18 (CI-18) District proposed by the Town of Queensbury is intended to provide for flexible development opportunities on key sites, creating economic development while encouraging the overall improvement and appearance of these areas, including attractive building designs and enhanced pedestrian access.

The Corinth Road/Main Street corridor, which is the primary east-west arterial route serving the study area, was reconstructed in 2011 (PIN 1753.80). This reconstruction involved capacity and safety enhancements including construction of a two-way center left-turn lane, intersection improvements, pedestrian/bicycle accommodations and new traffic signal systems. The basis of design for this road reconstruction included projections of traffic growth associated with a land development scenario within the study area that considered more than 1.6 million square feet of new commercial and industrial uses and approximately 1,200 new residential units. The timeline for that projected growth was 2015. The basis of the roadway design for the reconstruction also considered additional traffic growth to a 2025 planning horizon.

This *Exit 18 Rezone Study* identifies the changes in traffic that has occurred over the past 10 years since the original design studies were conducted, including documentation of traffic volumes, turning patterns, and pedestrian/bicycle activity in the corridor, and provides analysis of traffic operations to identify the transportation improvements recommended to support anticipated development under the proposed CI-18 zoning.

The study includes the following:

- Land use and development assessment of properties within the rezone area
- Documentation of existing traffic volumes and transportation system operations
- Projections of future travel demand generated by development under the proposed rezone
- Identification of traffic impacts of the potential development
- Identification of mitigation alternatives and implementation strategies

B. Study Area

The project study area is located in the vicinity of the I-87 Interchange 18 with Corinth Road/Main Street (Warren County Route 28), in the southern part of the Town (See Figure 1). The proposed CI-18 District comprises approximately 65 acres of land around the interchange, extending north and south of Corinth Road/Main Street from Big Bay Road (west of I-87) to Big Boom Road (east of I-87), as shown in Figure 2.

The limits of the study of the transportation system extend further east to the municipal boundary of the City of Glens Falls, and includes the following intersections (see also Figure 3):

- Corinth Road (CR28) and Big Bay Road
- Corinth Road (CR 28) and I-87 Exit 18 Southbound ramps
- Corinth Road (CR 28) and I-87 Exit 18 Northbound ramps
- Main Street (CR 28) and Big Boom Road/Media Drive
- Main Street (CR 28) and Pine Street
- Main Street (CR 28) and Richardson Street

Figure 1: Study Location Map

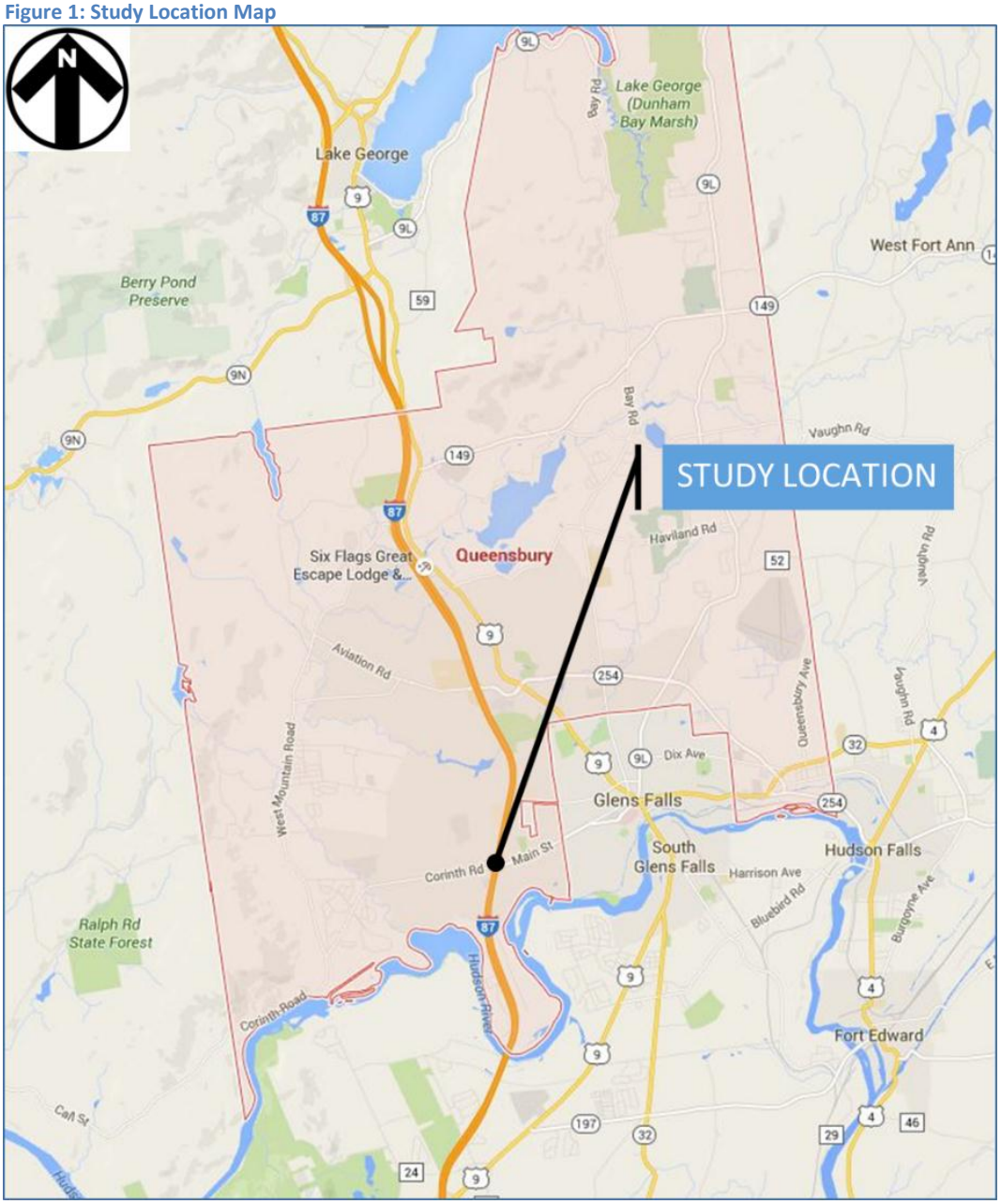
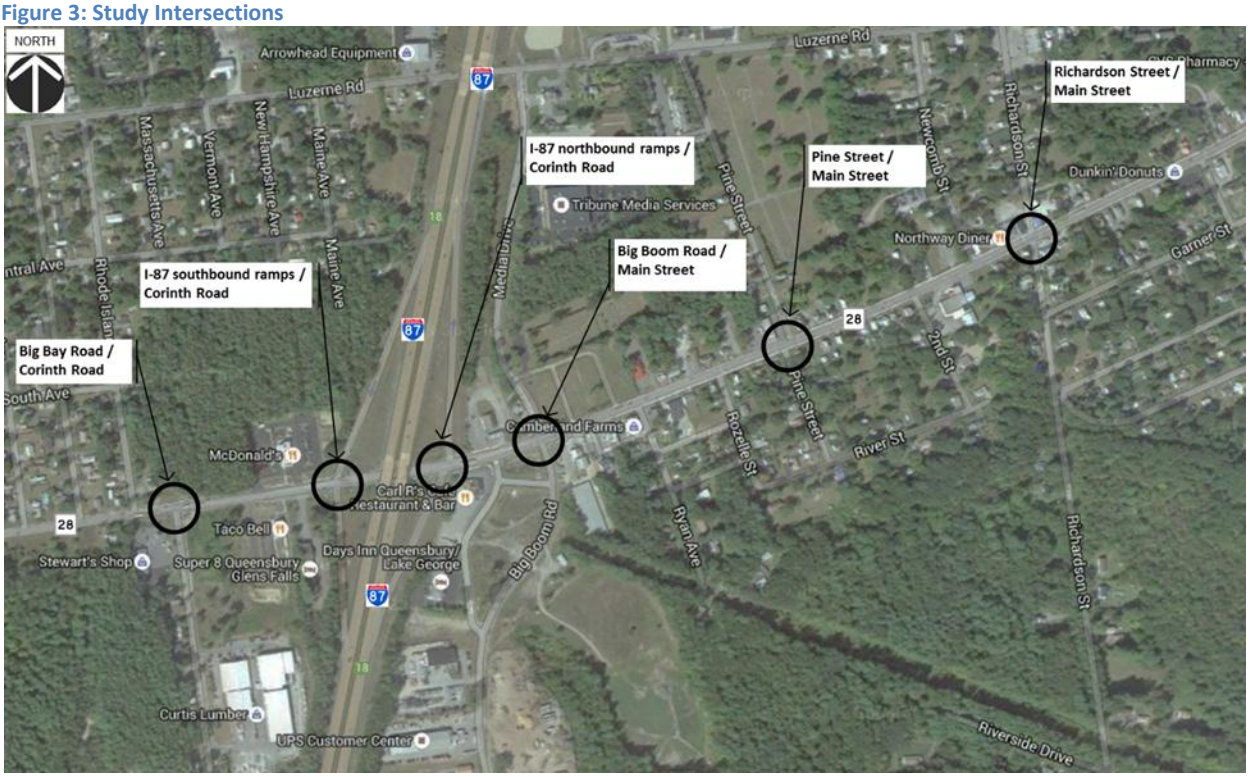


Figure 2: Exit 18 Rezone Area

Figure 3: Study Intersections



Aerial Image Source: Google Maps

C. Study Objectives

The objectives identified for this study are to:

- Quantify the estimated traffic impacts resulting from development allowable under the proposed zoning changes on the function and capacity of the transportation system, including considerations of motorized and non-motorized traffic.
- Recommend modifications to the proposed zoning changes that would allow for the preservation of surface transportation capacity while still fostering the Town of Queensbury's goals to encourage desirable new development.
- Recommend conceptual transportation system improvements that would be required to maintain acceptable transportation system operations with the forecasted development conditions.
- Identify alternative funding mechanisms that are permissible under State and local regulations that could be used to leverage transportation system improvements.

D. Study Approach

The study approach employed to complete this technical study consisted of:

- Inventory of existing transportation and land use conditions, and environmental constraints.
- Development of future land use and transportation conditions, considering planned/approved projects and local development trends.
- Assessment of impacts to the transportation system, and evaluation of mitigation strategies including transportation system management, capacity enhancements, and land use alternatives.
- Assessment of potential funding and implementation strategies.
- Town, A/GFTC and agency coordination.

This technical study is consistent with the foundational aspect of A/GFTC's Planning Principles for planning and program development by providing a coordinated assessment of land use and transportation. The alternatives for mitigation strategies were similarly developed in accordance with these principles to maximize utilization of available system capacity, and to consider mobility, access and safety for all modes and users.

2.0 EXISTING AREA CONDITIONS

A. Roadway Network

County Route 28 is an Urban Principal Arterial and is owned and maintained by Warren County. West of the Exit 18 interchange this road is named Corinth Road, and east of the interchange it is named Main Street. As mentioned previously, this roadway was recently reconstructed to improve mobility and safety for motorized and active transportation. The segment of the corridor (Corinth Road) between Big Bay Road and the I-87 southbound ramps has a basic typical section of one 12-foot travel lane for each direction, with a 5-ft. sidewalk on the north side of the road. The segment of the corridor through the interchange consists of two lanes in each direction (a through travel lane and a left-turn lane in each direction), and sidewalks on both sides of the street. East of the interchange, Main Street transitions from the four-lane section to a three-lane section comprised of a single 14-foot shared travel lane in each direction and a center two-way left turn lane (TWLTL). At the signalized intersections of Main Street at Big Boom Road, Pine Street and Richardson Street, the TWLTL becomes a dedicated directional left-turn lane. Five-foot sidewalks are provided on both sides of Main Street from the I-87 interchange to beyond the Richardson Street limits of the study area. The posted speed limit along CR 28 throughout the study area is 35 mph.

Main Street from I-87 to its termination at US 9 in Glens Falls is part of the National Highway System and is a Designated Truck Access Highway in New York State. The corridor is a mix of commercial and residential uses. With the exception of the interchange area, access to the corridor is uncontrolled, meaning that driveway access to abutting properties is permitted.

Study Area Intersections

All six of the study area intersections are controlled by multi-phased, traffic-actuated traffic signals. The NYSDOT owns and maintains the coordinated signals at the I-87 Exit 18 northbound and southbound ramps and at the adjacent intersection of Main Street, Big Boom Road and Media Drive. The current signal timing and phasing plans for these intersections were obtained from NYSDOT. Although Warren County owns and maintains the roadway infrastructure for the remaining segments of the study corridor, the traffic signals at the three other study intersections are locally managed through an agreement between the Town and the City of Glens Falls. The traffic signal timing and phasing data for these three locally-managed signals was obtained by field observations. The reconstruction of the corridor included provision for the interchange ramp signals to also operate in coordination with the signal at Big Boom Road, but currently they do not operate in this coordinated mode.

The geometry of the intersections are as follows:

- Big Bay Road / Corinth Road – This is a "T" intersection controlled with a traffic signal. The Corinth Road eastbound approach consists of a shared through /right-turn lane while the westbound approach provides an exclusive left turn lane and an exclusive through lane. The Big Bay Road northbound approach provides a shared left / right turn lane. A crosswalk with pedestrian accommodations exists on the west leg of the intersection. The traffic signal is fully-actuated and operates in a 3-phase sequence, including permitted/protected turn movements.

- I-87 Exit 18 Southbound (SB) Ramp / Corinth Road – This is a four-way intersection operating under traffic signal control. The Corinth Road eastbound approach provides two exclusive through lanes and an exclusive right turn lane while the Corinth Road westbound approach provides an exclusive left turn lane and an exclusive through lane. I-87 Exit 18 SB Ramp approach (north leg) provides two lanes; a shared left-turn / through lane and an exclusive right turn lane for southbound vehicles exiting I-87 while the south leg provides a single, one-way travel lane for vehicles to access I-87 southbound. Crosswalks and pedestrian accommodations exist on the north and east legs of this intersection. This signal is owned and maintained by the NYSDOT and is coordinated with the I-87 Exit 18 Northbound Ramp / Corinth Road intersection using a single controller to mutually operate both ramp intersections.

- I-87 Exit 18 Northbound Ramp/ Corinth Road – This is a four-way intersection operating under traffic signal control. The Corinth Road eastbound approach provides an exclusive left-turn lane and an exclusive through lane while the Corinth Road westbound approach provides an exclusive through lane and a shared through / right turn lane. The I-87 Exit 18 northbound approach provides an exclusive left turn lane, a shared through / right-turn lane and an exclusive right turn lane while the north leg provides a single, one-way travel lane for vehicles to access I-87 northbound. Crosswalks and pedestrian accommodations are provided on both the I-87 on and off ramps. This signal is owned and maintained by the NYSDOT and is coordinated with the I-87 Exit 18 Southbound Ramp / Corinth Road intersection using a single controller to mutually operate both ramp intersections.

- Big Boom Road / Media Drive / Main Street – This is a signalized four-way intersection. The Main Street eastbound approach provides an exclusive left-turn lane, an exclusive through lane and a shared through / right-turn lane. The Main Street westbound approach provides an exclusive left-turn lane and a shared through / right-turn lane. The Big Boom northbound approach provides a

shared left-turn / through / right-turn lane while the Media Drive southbound approach provides an exclusive left-turn lane and a shared through / right-turn lane. Crosswalks and pedestrian accommodations exist on the north, east, and west legs of this intersection. The traffic signal is fully-actuated and operates in a 4-phase sequence, including permitted/protected turn movements.

- Pine Street / Main Street - This is a signalized four-way intersection. The Main Street eastbound and westbound approaches provide an exclusive left-turn lane and a shared through / right-turn lane. The Pine Street northbound and southbound approaches each consists of a shared left-turn / through / right-turn lane. The north leg (southbound approach) is offset to the east from the south leg (northbound approach) and therefore, has split phasing for the northbound and southbound approaches. The Speedway (formerly Hess) gas station driveway exists opposite the Pine Street northbound approach. Crosswalks and pedestrian accommodations exist on the north and south legs of this intersection.

- Richardson Street / Main Street - This is a signalized four-way intersection. The Main Street eastbound and westbound approaches provide an exclusive left-turn lane and a shared through / right-turn lane. The Richardson Street northbound and southbound approaches each consists of a shared left-turn / through / right-turn lane. Crosswalks and pedestrian accommodations exist on all four legs of this intersection. The traffic signal is fully-actuated and operates in an 8-phase sequence, including permitted/protected turn movements.

B. Traffic Volumes

Traffic volume data compiled from the New York State Department of Transportation (NYSDOT) Traffic Data Viewer provides the Average Daily Traffic (ADT) on Corinth Road / Main Street as shown in Table 1:

Table 1: NYSDOT AADT volumes

Location	From	To	Existing (2011) (vehicles per day)	Existing (2011) Peak Hour Volume (vehicles)		Forecasted (2013) (vehicles per day)
				AM	PM	
Corinth Rd.	Pinewood Rd.	I-87	8,020	664	711	8,011
Main St.	I-87	Richardson St.	Not provided	NA	NA	21,347
Main St.	Richardson St.	City Line	13,753	1,037	1,107	13,727
I-87	Southbound off ramp	Corinth Rd	6,500 (2009)	493	611	Not provided
I-87	Northbound off ramp	Corinth Road	5,021 (2009)	430	543	Not provided

Traffic volumes were counted at the six study intersections to document the current volumes and patterns of traffic movement during peak-hour conditions. These counts were conducted on Wednesday, May 20, 2015 and Thursday, May 21, 2015 for the weekday AM peak period (7 am to 9 am) and weekday PM peak period (4 pm to 6 pm). The existing traffic volumes were summarized and a monthly seasonal adjustment factor applied, based upon NYSDOT published factors, to reflect peak design conditions. The 2015 Existing Design Hour Volumes (DHV) are shown on Figure 4 (next page). The two-way traffic volumes on the study area roadways are shown on Table 2.

Table 2: 2015 Two-Way Design Hour Volumes

Segment		Two-Way Peak Hour Volume (vehicles)	
		AM	PM
West of Big Bay Rd. / Corinth Rd.	-	1,050	1,025
Big Bay Rd. / Corinth Rd.	Exit 18 SB ramps	1,345	1,330
Exit 18 SB ramps	Exit 18 NB ramps	1,535	1,625
Exit 18 NB ramps	Big Boom Rd. / Media Dr. / Main St.	1,880	1,940
Big Boom Rd. / Media Dr. / Main St.	Pine St. / Main St.	1,570	1,620
Pine St. / Main St.	Richardson St. / Main St.	1,545	1,500
East of Richardson St. / Main St.	-	1,235	1,280

Trucks and other heavy vehicles comprise 4-7% of the total traffic volumes on Corinth Road / Main Street during the AM peak hour and 3-5% during the PM peak hour. This count data is provided in Appendix A.

LEGEND
XX – AM PEAK HOUR
(XX) – PM PEAK HOUR

MAP IMAGE SOURCE: GOOGLE MAP

NOTE: NOT TO SCALE

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WEEKDAY PEAK HOUR TRAFFIC VOLUMES
2015 – EXISTING CONDITIONS

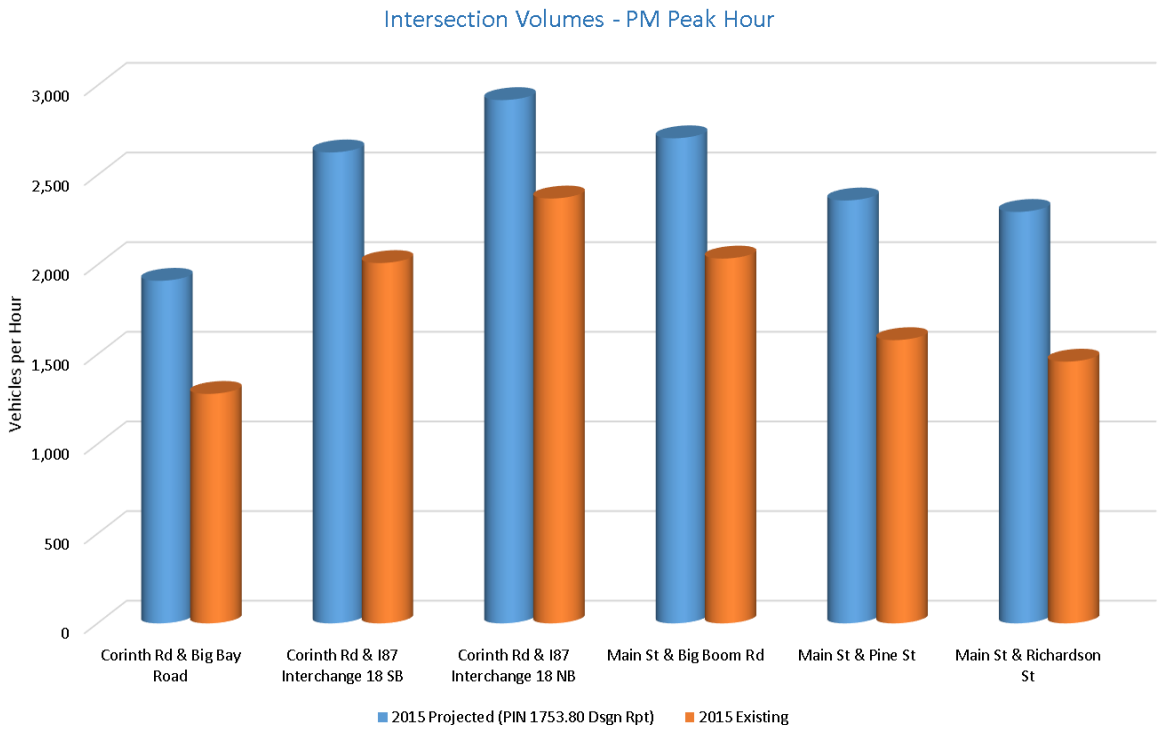
EXIT 18 REZONE STUDY
QUEENSBURY, NY

FIGURE
4

DATE: 7/15

The current 2015 DHV intersection volumes in the study area were compared to the forecasted 2015 Design Volumes that had been developed as the basis of design for the Corinth Road Reconstruction project. The data shows that the actual volumes are lower than the volumes that were used as the design condition for the reconstruction project. A comparison of volumes for the PM peak hour is provided in Figure 5.

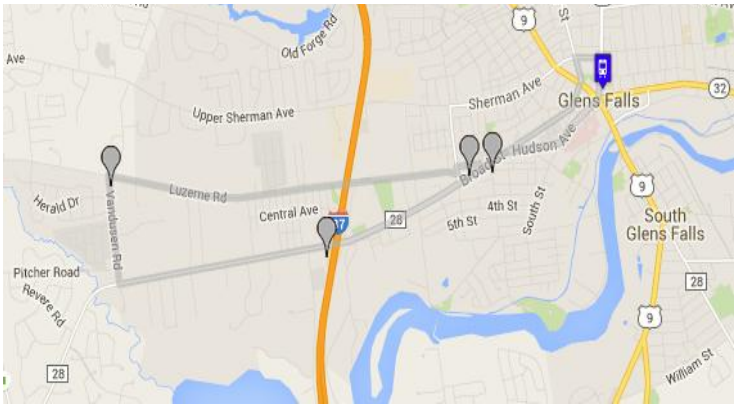
Figure 5: 2015 Intersection Volume Comparison



C. Transit Service

Greater Glens Falls Transit (GGFT) currently operates transit service in the study area via Bus Route 7 (West Glens Falls). The service operates weekdays from 7:00 a.m. to 5:05 p.m. and on Saturdays from 9:00 am to 5:10 pm, with average service headways of approximately 2 hours. A bus stop is located at the McDonald's on Corinth Road, just west of the I-87 southbound ramps, although there is no shelter or bus turn-out.

Figure 6: GGFT Bus Route 7



D. Pedestrians and Bicyclists

A sidewalk is provided along the north side of Corinth Road/Main Street throughout the limits of the study area. A sidewalk is also provided on the south side of the street from the I-87 southbound ramps to beyond the eastern limits of the study area. Crosswalks and pedestrian signals are provided at all of the signalized intersections, as noted in the intersection descriptions above. Pedestrian crossings of Main Street are also provided at two non-signalized intersections: at Ryan Avenue and at Rozelle Street.

Bicycles are accommodated in the shared 14-ft wide travel lanes on Main Street east of Big Boom Road. Because of the constraints of the interchange bridge structure, bicyclists either share the travel lanes or utilize the sidewalk to move through the interchange area. The facility was intentionally designed for this level of accommodation.

Unsignalized pedestrian crossing at intersection of Main Street and Rozelle Street

Counts of pedestrians and bicyclists were recorded at each study intersection during the weekday AM and PM study periods concurrently with the vehicle traffic counts in May 2015. The pedestrian/bicyclist volumes occurring during the AM and PM peak hours are shown in Table 3. The total number of pedestrians shown in the table includes the total number across all legs of the intersection. This summary shows there was minimal pedestrian and bicycle movements at the time of the counts. This is not to imply that the infrastructure supporting these transportation modes is not vital to the corridor, but these volumes provide a basis for understanding the effect of pedestrian and bicycle activity in the analysis of vehicle traffic operations.

Table 3: 2015 Peak Hour Pedestrian and Bicycle Volumes

Intersection	Pedestrians		Bicyclists	
	AM	PM	AM	PM
Big Bay Rd. / Corinth Rd.	0	0	0	0
Exit 18 SB ramps	2	1	0	0
Exit 18 NB ramps	1	1	2	2
Big Boom Rd. / Media Dr. / Main St.	0	1	0	1
Pine St. / Main St.	0	1	0	0
Richardson St. / Main St.	0	1	0	1

3.0 NO-BUILD TRAFFIC VOLUMES

In order to assess the traffic impacts associated with rezoning within the project area, it is first necessary to estimate the traffic volumes on the adjacent roadways for the future condition without the project (No-Build Condition) and then apply the traffic generated from the proposed project to obtain the future conditions with the project (Build Condition).

The Final Design Report (FDR) for the Corinth Road/Main Street Reconstruction project (PIN 1753.80), was reviewed to obtain historic baseline intersection traffic volumes for the project area. Comparison of the 2015 Existing Design Hour volumes and the 2004 traffic volumes contained in the FDR indicates that the traffic volumes within the project area have generally been relatively stable with 0% to 2% per year growth, depending on location. Intersections at the westerly project limits have experienced more growth than the intersections at the easterly project limit. For the purposes of this study, an annual growth rate of 1% was applied to adjust the 2015 Design Hour volumes to the 5-year 2020 planning horizon established for the study.

The Town Planning Department identified three approved development projects that would add future traffic volume to the study area:

- Parillo Mixed Use: 2,832 s.f. Fast Food and 20,000 s.f. of office/retail
- 30,300 s.f. expansion of existing 30,502 s.f. warehouse (approved 12/2013).
- Four (4) 200’ x 30’ self-storage buildings and associated site work (approved 4/15).

Based on the traffic projections developed for each of these projects, it is estimated they will add a combined 28 vehicle trips during the weekday AM peak hour and 39 vehicle trips during the weekday PM peak hour through the I-87 Exit 18 interchange.

The traffic generated by these developments were combined with the general background growth to represent the future No-Build volumes, which will be the basis for evaluating the impact of the projected development under the proposed CI-18 zoning. The resulting 2020 No-Build traffic volumes are shown on Figure 7 (next page). The No-Build intersection volumes for the PM peak hour are shown in comparison to the volumes that were used as the design condition for the Reconstruction project and the 2015 current volumes on Figure 8 (page 14).

LEGEND
XX – AM PEAK HOUR
(XX) – PM PEAK HOUR

MAP IMAGE SOURCE: GOOGLE MAP

NOTE: NOT TO SCALE

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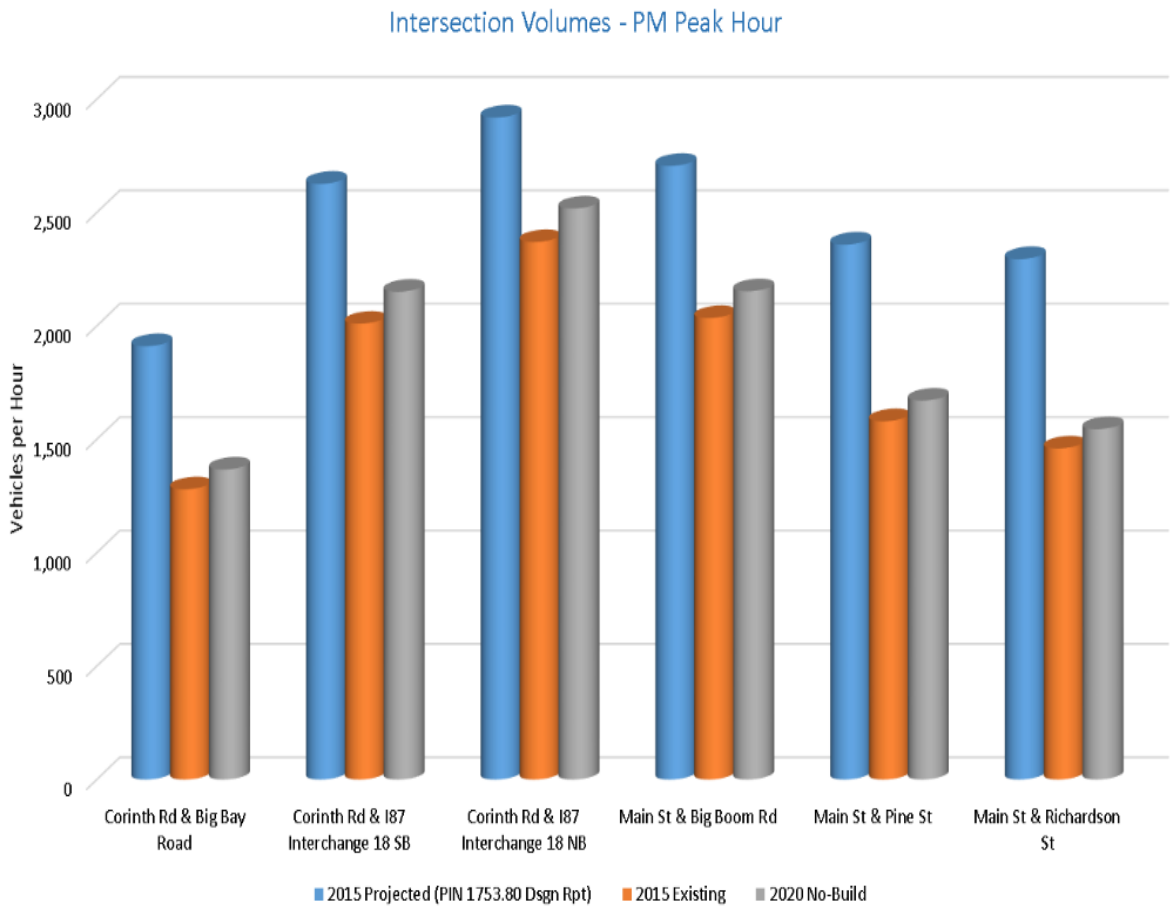
WEEKDAY PEAK HOUR TRAFFIC VOLUMES
2020 – NO BUILD CONDITIONS

EXIT 18 REZONE STUDY
QUEENSBURY, NY

FIGURE 7

DATE: 7/15

Figure 8: Intersection Volume Comparison - Existing/No-Build



4.0 LAND USE

The proposed CI-18 rezone area is approximately 65.5 acres. Land use within the boundaries of the proposed CI-18 zone includes undeveloped parcels and a variety of small-scale commercial and service uses, as follows:

Restaurants
Carl R's Café, Restaurant & Bar
McDonalds
Subway
Taco Bell

General Commercial
U-Haul Moving and Storage

Convenience/Fuel Services
Capital Food and Fuel
Cumberland Farms

Lodging
Days Inn Queensbury/Lake George
Super 8 Queensbury

The current zoning of the proposed CI-18 district includes Commercial Intensive (CI), Commercial Light Industrial (CLI) and Main Street (MS) zones. The land area associated with each of the current zones is shown in Table 4:

Table 4: Existing Zoning

Zone	Size (acres)
Commercial Intensive (CI)	28.93
Commercial Light Industrial (CLI)	7.14
Main Street (MS)	29.43
Total	65.5

The statement of intent for the proposed CI-18 zone is to take advantage of an area of Queensbury that already has intense commercial development proximate to the Exit 18 Interchange with US Interstate 87 (Adirondack Northway) by allowing for flexible development opportunities on key sites, creating economic development while encouraging the overall improvement and appearance of these areas, including attractive building designs and enhanced pedestrian access

The CI and MS zones allow many of the same uses. One difference is the listing of Enclosed Shopping Center as an allowable use in the proposed CI-18 zone; a use that is not allowed in the existing zones in the study area. The second "new" use is Amusement Center which is allowed in the proposed CI-18 zone,

the existing CL but not in the CLI or MS zone. Many of the most intensive uses allowable only under the existing CLI zone are not included in the proposed CI-18 zone.

The proposed CI-18 zone also will allow buildings up to 70 feet depending on the building setback. Existing zoning allows for a maximum height of 40 in the CI and MS zone and 60 in the CLI zone. Finally to further encourage well planned and attractive projects, language to be included in 179-7-050 Design Districts has been developed for the proposed zone. This will address issues such as facades, rooflines entrance design and location, building materials within the context of overall site planning.

The development potential of the CI-18 zone was evaluated based on considerations of existing physical constraints (such as wetlands, steep slopes and floodplains) and the proposed zoning criteria. The evaluation also incorporated approved projects not yet built in the Study Area. A review of National Wetlands Inventory (NWI) wetlands mapping, U.S. Department of Agriculture (USDA) soils mapping and Federal Emergency Management Agency (FEMA) floodplain mapping did not identify resources that would constrain development within the proposed CI-18 zone.

The proposed CI-18 zone consists of approximately 20 separate parcels varying in size from approximately 1 acre to over 17 acres. The buildable acreage of the proposed CI-18 zone was determined by deducting land necessary to accommodate the infrastructure for roads (access and traffic circulation) and utilities, and considering the adjustments for zoning requirements related to lot coverage, landscaping/greenspace, and permeable surfaces. Typically the road and utility infrastructure for development will comprise 15-20% of a site. For the purposes of this analysis, 15% was used to provide a higher estimate of the development potential of the area.

The Town of Queensbury zoning code requires site development to provide a minimum of 30% landscaping/30% permeable surfaces. In addition, the use of permeable pavement earns a 50% bonus that is used to meet the landscaping/permeable pavement requirements. It is assumed that over the entire study area approximately 20% of parcels will utilize permeable pavement, reducing the required landscaping/permeable pavement requirements.

Based on these considerations of infrastructure and zoning criteria, it is estimated that the CI-18 rezone area will support approximately 38 buildable acres.

Available acreage calculation	**65.5 acres total**
Subtract roads, utilities (15%)	9.83
Subtract constraints (wetlands/steep slopes/floodplains)	0
Subtract landscaping/permeable surfaces requirements [1]	17.69
Approximate acreage available for development	**37.98**

[1] It is assumed that over the entire study area approximately 20% of parcels will utilize permeable pavement

A land use scenario for this buildable area was developed for a 2020 planning horizon for the purpose of the transportation analysis. Prior to identifying conceptual land uses for this development scenario, parcels within the study area were consolidated to ensure that parcels meet the acreage requirements of the proposed zoning and thus will be developable. This parcel consolidation concept is shown on Figure 9. It is noted that the geographic location of Parcel F (Capital Food and Fuel) does not allow it to be

combined with any other parcel. Because of this, Parcel F was considered to remain an undersized lot with a non-conforming use (convenience/fuel services) under the proposed zoning.

Gas stations are not identified as an allowable use in the proposed zoning language resulting in a second non-conforming use on the south side of Main Street (Parcel K). Again, for the purpose of this analysis, two undersized adjoining parcels are proposed to be combined. The undersized lots are not adjacent to any other parcels in the study area.

The Parcel Consolidation and Concept Development Table (Table 5) identifies the estimated maximum build-out focused on high traffic generators. Alternative uses have been identified for some parcels, which were also considered for the purpose of identifying a development scenario for the transportation analysis.

Figure 9: Parcel Consolidation Concept

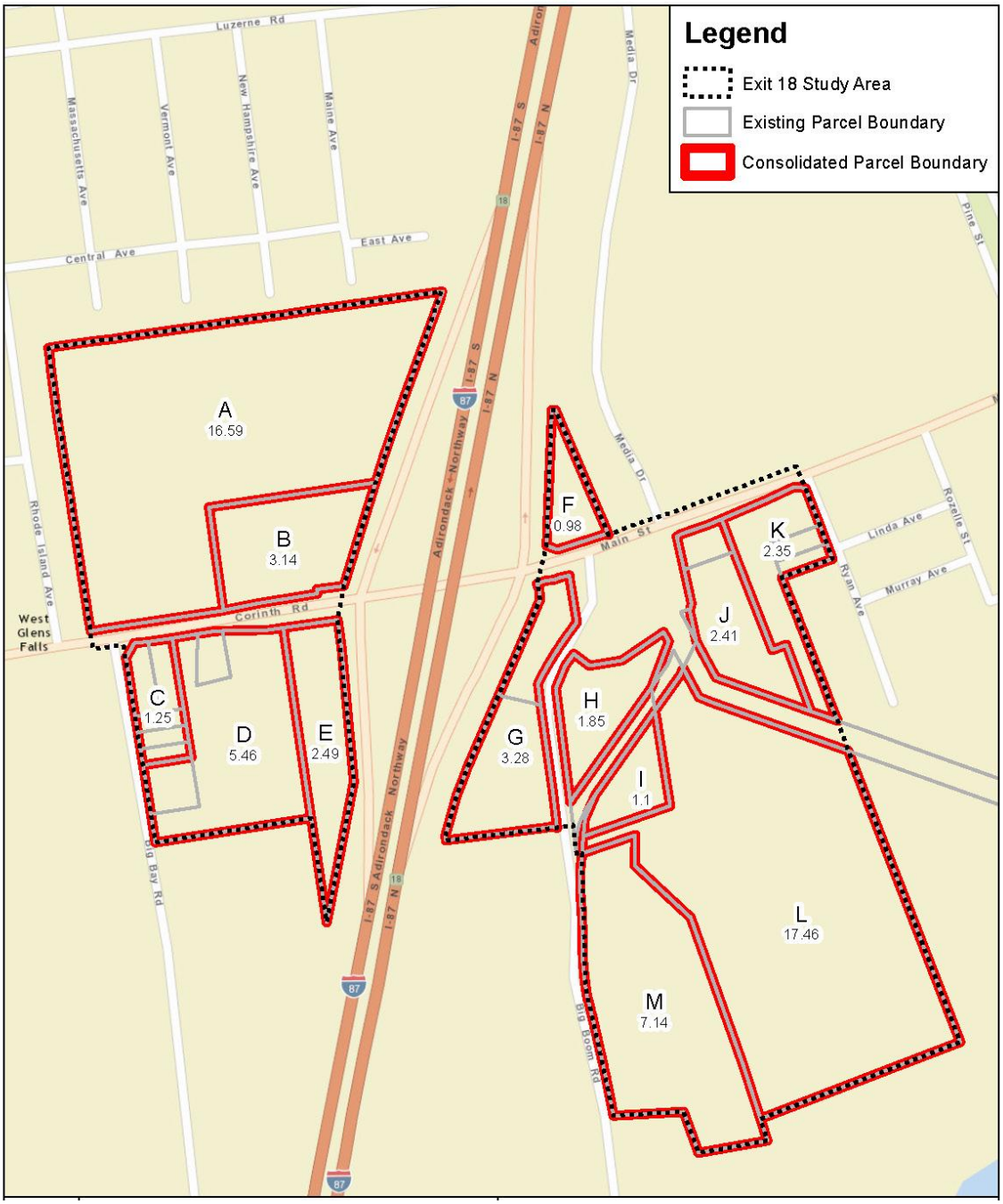


Table 5: Parcel Consolidation and Development Concept

Parcel	Size (Acres)	Existing Zoning	Proposed Zoning	Estimated Buildable Area (Acres)	Estimated Build-out Land Use
A	16.59	CI	CI-18	9.62	Hotel with meeting rooms: 170 rooms Office: 60,000 sq. ft. Bank or other service use with drive-thru: 7,000 sq. ft.
B	3.14	CI	CI-18	1.82	Maintain existing use - fast food with drive thru: 4,000 sq. ft. [1]
C	1.25	CI	CI-18	0.73	Business commercial (service)/small retail/food strip: 12,000 sq. ft.
D	5.46	CI	CI-18	3.16	Commercial office: 50,000 sq. ft.
E	2.49	CI	CI-18	1.44	Expansion of existing Hotel: 110 added rooms
F	0.98	MS	CI-18	0.57	Existing use to remain
G	3.28	MS	CI-18	1.91	Expansion of existing Hotel: 120 rooms
H[2]	1.85	MS	CI-18	1.07	Commercial Office: 11,000 sq. ft.
I[2]	1.10	MS	CI-18	0.64	Commercial Office: 7,000 sq. ft.
J	2.41	MS	CI-18	1.40	Retail/fast food: 9,000 sq. ft.
K	2.35	MS	CI-18	1.36	Existing use to remain; redevelop as expanded convenience/fuel services or similar use & include adjoining non-conforming parcels[3]
L	17.46	MS	CI-18	10.12	Hotel w/meeting rooms & restaurant: 200 rooms Commercial office: 80,000 sq. ft. [4]
M	7.14	MS	CI-18	4.14	Retail Shopping Mall/Plaza: 80,000 sq. ft.
	65.5			**37.98**	

[1]Site currently does not meet proposed landscape or percent permeable requirements; site redevelopment to meet these requirements.
[2]H and I represent one parcel divided by Big Boom Road.
[3]Gas stations are not an allowable use in the proposed CI-18 zone; redevelopment/expansion of this use will require a variance. The 2 adjacent parcels do not meet minimum lot size in the CI-18 zone and therefore were combined and included in Parcel K.
[4]Alternate concept- possible 100,000 GLFA SF shopping mall/plaza with outparcel, 500-550 parking spaces.

5.0 BUILD TRAFFIC VOLUMES

A. Trip Generation

The transportation impacts associated with development of the proposed CI-18 zone was based on a development scenario for the 2020 planning horizon established in coordination with the Town and A/GFTC. This Build development scenario consists of the following uses:

Land Use	Size
Hotel	294 rooms*
Office	128,000 sq. ft.
Bank with Drive-thru service	7,000 sq. ft.
Fast food Restaurant with Drive-thru service	4,000 sq. ft.
Specialty/Neighborhood Retail	17,000 sq. ft.
Shopping Center Retail	180,000 sq. ft.

**this is in addition to the 106 existing hotel rooms in the zone*

The Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th edition, is the industry standard for determining trip generation for various land uses and is based on data collected at case study sites throughout the United States. The applicable ITE Land Use Codes (LUC) corresponding to the land uses for the Build scenario are as follows:

- ITE LUC 310: Hotels
- ITE LUC 710: General Office
- ITE LUC 912: Bank with Drive-Thru
- ITE LUC 820: Retail
- ITE LUC 934: Fast Food Restaurant w/ Drive-Thru

The traffic generated by the development with the CI-18 zone will be composed of the following basic trip categories; primary trips and pass-by trips. **Primary trips** represent motorists whose primary destination is within the zone and travel along the adjacent road is not linked to additional purposes. **Pass-by trips** are secondary trips that are attracted from traffic passing the individual development sites on an adjacent street that offers direct access to the generator.

The ITE *Trip Generation Handbook, 3rd Edition,* which provides pass-by trip rates for the various land uses, was used to assess the number of new trips that would be associated with each of the proposed developments as pass-by trips. The following pass-by trip rates were estimated for the development, based on the ITE information and engineering experience/judgement:

- Bank with Drive-Thru: 30% pass-by trips
- Shopping Center retail: 35% pass-by trips
- Fast-food and smaller retail sites: 50% pass-by trips
- Hotels and offices: are not uses that would include pass-by trips.

Internal capture is another trip generation concept, which is related to travel between parcels within the CI-18 zone. ITE has limited information pertaining to this effect, but what information does exist shows that the interaction between the proposed uses would not be significant. In the case of the CI-18 zone, many of these trips would also still involve travel on the public street network. Consequently, the trip

generation estimates for the Build condition did not consider a trip reduction for these types of trips between parcels.

Based on the ITE information, it is estimated that the Build development scenario will generate 1,048 vehicle trips during the AM peak hour and 2,123 trips during the PM peak hour. Of these trips, 794 trips are estimated to be new to the network during the AM peak hour and 1,503 trips will be new during the PM peak hour. Although transit service is provided in the corridor, existing ridership characteristics discussed with GGFT suggest that transit will not significantly influence the trip generation characteristics of travel to the study area, so the trip generation estimates were not reduced for transit use for the purpose of this study.

Table 6 summarizes the estimated site traffic generated by the Build scenario, grouped by land use. Appendix B provides the detailed trip generation and distribution estimates for each parcel within the CI-18 zone.

Table 6: CI-18 Development Trip Generation

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
SUMMARY OF BUILD OUT USES													
A, E, G, L	Hotel	310	294 rooms	Total	1,202	1,200	2,402	92	64	156	91	85	176
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	1,202	1,200	2,402	92	64	156	91	85	176
A, D, H, I	General Office	710	128,000 s.f.	Total	933	930	1,863	234	31	265	53	253	306
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	933	930	1,863	234	31	265	53	253	306
A	Bank w/ Drive-Thru	912	7,000 s.f.	Total	519	518	1,037	48	37	85	85	85	170
				Pass-By (30%)	155	156	311	13	13	26	25	26	51
				Primary	364	362	726	35	24	59	60	59	119
B, J	Fast Food Restaurant w/ Drive-Thru	934	4,000 s.f.	Total	992	992	1,984	93	89	182	68	63	131
				Pass-By (50%)	496	496	992	45	46	91	33	33	66
				Primary	496	496	992	48	43	91	35	30	65
C, J	Retail	820	17,000 s.f.	Total	1,341	1,341	2,682	42	26	68	108	117	225
				Pass-By (50%)	670	670	1,340	17	17	34	56	56	112
				Primary	671	671	1,342	25	9	34	52	61	113
L, M	Shopping Center	820	180,000 s.f.	Total	6,333	6,332	12,665	181	111	292	536	579	1,115
				Pass-By (35%)	2,216	2,217	4,433	51	52	103	195	196	391
				Primary	4,117	4,115	8,232	130	59	189	341	383	724
TRIP GENERATION SUMMARY													
Total of All Parcels				**Total**	**11,320**	**11,313**	**22,633**	**690**	**358**	**1,048**	**941**	**1,182**	**2,123**
				Pass-By	**3,537**	**3,539**	**7,076**	**126**	**128**	**254**	**309**	**311**	**620**
				Primary	**7,783**	**7,774**	**15,557**	**564**	**230**	**794**	**632**	**871**	**1,503**

B. Site Trip Distribution

The traffic generated by the Build scenario was distributed to the network based on the overall traffic flow patterns in the study area and considering the type of use, and proximity of the site to other regional activity centers and residential populations. The trips were distributed to the network for each of the parcels. The overall distribution for all new primary trips resulted in the following general distribution:

To/From:	Main Street East	23%
	Corinth Road West:	23%
	I-87 North:	20%
	I-87 South:	20%
	Media Drive North:	13%
	Big Bay Rd South:	1%
	TOTAL	100%

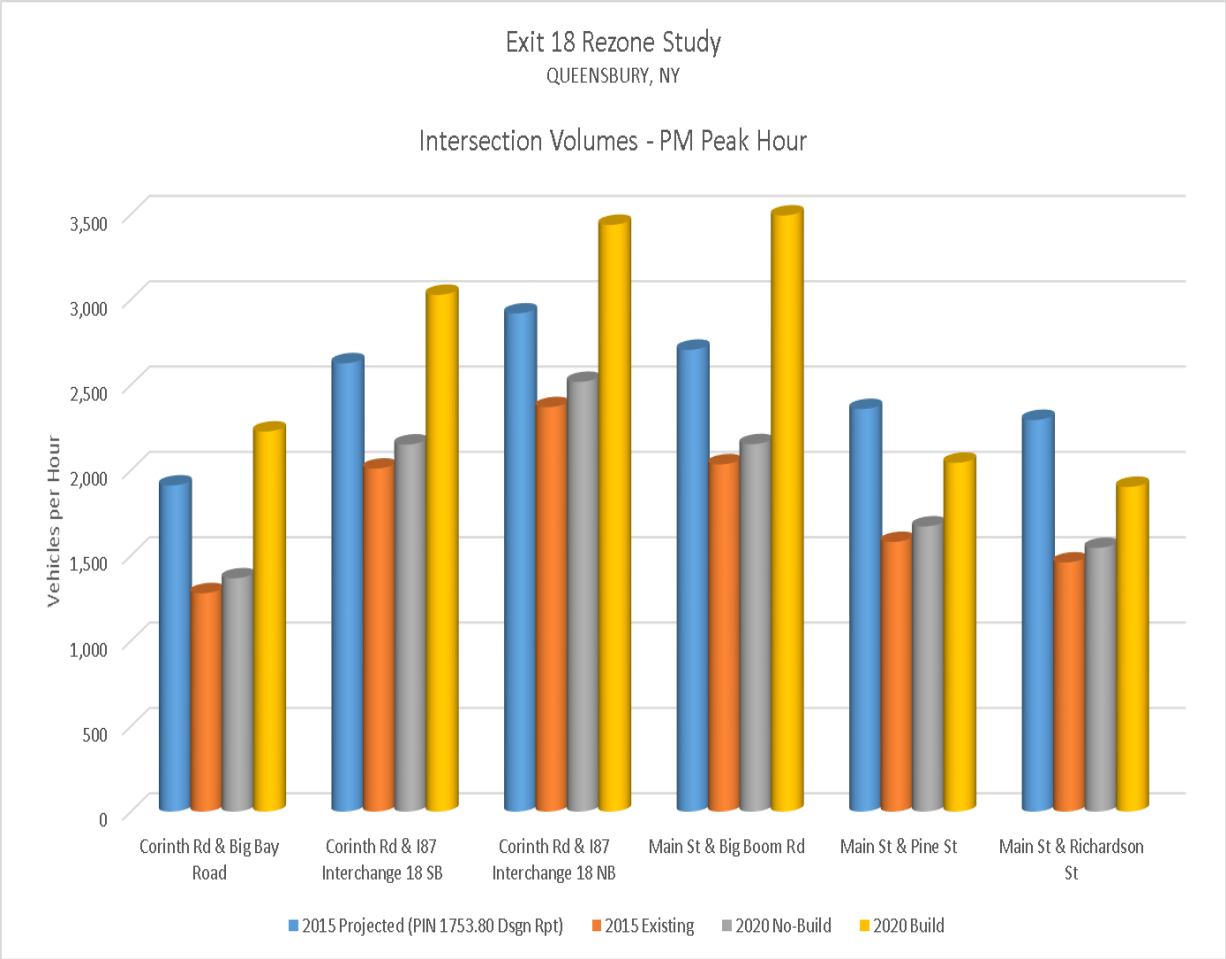
The distribution and turning movement assignments of site traffic to the study area roadways for pass-by and primary trips is provided in Appendix B.

C. Future Build Volumes

The site generated traffic was combined with the 2020 No-Build volumes to represent the estimated future volume conditions for the project area with the rezone development. The future 2020 Build volumes are shown on Figure 11 (next page).

A comparison of the intersection volumes for the 2020 Build Condition to the 2015 Design Volumes that had been developed for the Corinth Road Reconstruction project (FDR, 2004) are shown in Figure 10. This data shows that the 2020 Build volumes for the four intersections between Big Bay Road and Big Boom Road are substantially higher (15%-30%) than the volumes that were used as the design condition for the Reconstruction project. The Build volumes for the intersections east of Big Boom Road are projected to be lower than the design volumes used as the basis of the reconstruction project design.

Figure 10: Intersection Volume Comparison – Existing/No-Build/Build



LEGEND
XX – AM PEAK HOUR
(XX) – PM PEAK HOUR

MAP IMAGE SOURCE: GOOGLE MAP

NOTE: NOT TO SCALE

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WEEKDAY PEAK HOUR TRAFFIC VOLUMES
2020 – BUILD CONDITIONS

EXIT 18 REZONE STUDY
QUEENSBURY, NY

FIGURE
11

DATE: 7/15

6.0 CAPACITY ANALYSIS

The operating conditions of transportation facilities are evaluated based on the relationship of existing or projected traffic volumes to the theoretical capacity of the highway. Various factors affect highway capacity, including traffic volume, speed, roadway geometry, grade, number and width of travel lanes and intersection control. The current standards for evaluating capacity and operating conditions are contained in the Highway Capacity Manual 2010 (HCM 2010), published by the Transportation Research Board (TRB). The procedures describe operating conditions in terms of Level of Service (LOS). In general, LOS "A" represents the best operating conditions and LOS "F" represents the worst.

Level of Service (LOS) criteria are equated to average delay per vehicle (seconds), and range from LOS A to LOS F. An overall intersection LOS of D or better is generally considered to be acceptable during peak periods for signalized intersections. A LOS F represents levels of congestion that are generally considered to be unacceptable at any intersection; however, again, other metrics should also be considered in determining a need for improvements. Table 5 below presents the level of service thresholds for signalized intersections.

Table 7: HCM Intersection LOS

LOS	Control Delay per Vehicle (Seconds)
A	10 or less
B	10-20
C	20-35
D	35-55
E	55-80
F	greater than 80

Capacity analyses were performed for the following conditions using SYNCHRO 8 software:

- 2015 Existing
- 2020 No-Build
- 2020 Build

These analyses were completed using the HCM 2010 guidance on recommended practices for treatment of various data inputs to develop the models, such as considerations of peak hour factor adjustments, and heavy vehicle factors. However, the operational analysis models that were used to produce the level-of – service results used the computational methods from the earlier HCM 2000 version because of limitations in the HCM 2010 methodology for analyzing the signal phasing at some of the study area intersections, such as the clustered signal operations of the interchange.

Table 8 and Table 9 at the end of this Section summarize the LOS and delay results for each of the intersections for the weekday AM and PM peak periods, respectively. Summary reports of these analyses are provided in Appendix C.

A. Existing Traffic Operations

The capacity analyses show that the overall intersection operations in the corridor are acceptable, with weekday AM and PM peak periods at all intersections operating at LOS D or better. In fact, the overall intersection levels of service for much of the study area is LOS B. Similarly, all approaches and lane groups operate at LOS D or better during peak hours, except at the Big Boom Road/Media Drive/ Main Street intersection where the northbound approach (Big Boom Road) operates at LOS F during both peak periods. The LOS F condition for this approach is not because of a high volume demand (55 veh/hr in the AM peak and 80 veh/hr in the PM peak), but is a result of the interaction of this traffic with the conflicting traffic entering the intersection at the same time from Media Drive.

Traffic moves along the corridor in long groups, or platoons, during the peak hours. Queue conditions that sometimes extend beyond the designated storage areas within the lanes and/or extend to an adjacent intersection can reduce the effective operations in the corridor. These factors will periodically produce congestion in the corridor that is not reflected by the intersection level of service results. The queue conditions in the corridor are discussed in Section 7.0 of this report.

It is noted that the Corinth Road Reconstruction project included the capability for the signal at the Big Boom Road/Media Drive/Main Street intersection to be operated in coordination with the signals at the I-87 Exit 18 interchange. However, the existing signal timing plans for these signals shows that this coordination is not currently being deployed by NYSDOT. NYSDOT has indicated that they will be making minor adjustments to some timing inputs to improve the efficiency of the signal operations, but they consider that the coordination would not have an overall benefit to corridor operations at this time.

The field observations of conditions at the Main Street/Richardson Street intersection indicate that the northbound approach of Richardson Street is operating in a 'Vehicle Recall' mode, which means that green time is allocated for this approach even when there are no vehicles present on Richardson Street to be served. In contrast, the southbound approach operates in a 'Vehicle Actuation' mode, so that a call for GREEN is not placed for this approach unless a vehicle is present. This current recall mode of operation for the northbound approach reduces the efficiency of traffic operations because of the unnecessary traffic stops on Main Street. The signal was designed so that both the northbound and southbound approaches would operate in 'Vehicle-actuation' mode.

Another characteristic of the signal operations at the Main Street/Richardson Street intersection is that the Richardson Street phases of the signal do not appear to be programmed for northbound and southbound approaches of Richardson Street to both receive a GREEN signal at the same time regardless of which direction activated the call (known as 'Dual Entry'). Instead, the current operations have the signals facing southbound traffic remain RED if there is no vehicle call on this approach even when the northbound approach is GREEN. This is not a common phasing treatment, and is not how the signal was designed to operate. While this does not negatively impact delays at the intersection, it may cause confusion for pedestrians. This is because the pedestrian signals to cross Main Street on the east side of the intersection are associated with the northbound traffic phase while the pedestrian signals to cross Main Street on the west side of the intersection are associated with the southbound traffic phase. Because the signal is not using the Dual Entry function, the pedestrian signals will display WALK for the east side crossing at the same time that the signals display DON'T WALK for the west side crossing.

B. No-Build Traffic Operations

The No-Build capacity analysis identifies the traffic operations for the 2020 planning horizon considering status quo development and socio-economic trends for the area. This analysis provides the context for evaluating the impact of the development in the CI-18 zone. The analyses assumes the existing geometrics and signal phasing configurations, but with optimized signal cycle and green time allocations.

The analyses show similar operations as the Existing conditions, with all intersections operating at an overall LOS D or better during the weekday AM and PM peak periods. All approaches to each of the intersections continue to operate at acceptable LOS (LOS D or better) except for the Big Boom Road northbound approach (AM and PM periods) and the Main Street eastbound approach at Richardson Street (AM period). As with the Existing Conditions, the Big Boom northbound approach continues to experience long delays with unacceptable LOS (LOS F). The increase in traffic associated with background growth results in additional delay (16.3 seconds) to the Main Street eastbound approach at Richardson Street during the weekday AM peak period, such that the LOS deteriorates from LOS D to LOS E. This level of service also reflects the inefficiency created by the current recall mode operation of the Richardson Street approach.

C. Build Traffic Operations

The analysis of the Build condition operations considered these operations in the context of the existing geometry and traffic control. However, for the purpose of analysis, it is assumed that the access to Parcel A will be provided from Corinth Road opposite Big Bay Road, which is the preferred access location. The initial base assumptions for the geometry needed at this intersection to support the access to Parcel A used in the Build analysis are as follows:

- Big Bay Road/Corinth Road –
    - Site access to Corinth Road opposite Big Bay Road, modifying this from a "T" intersection to a 4-way intersection.
    - Provide a single lane on the new southbound approach from Parcel A to provide a shared left-turn/through/right-turn lane.
    - Provide a separate left-turn lane on Corinth Road eastbound approach (for traffic entering Parcel A)

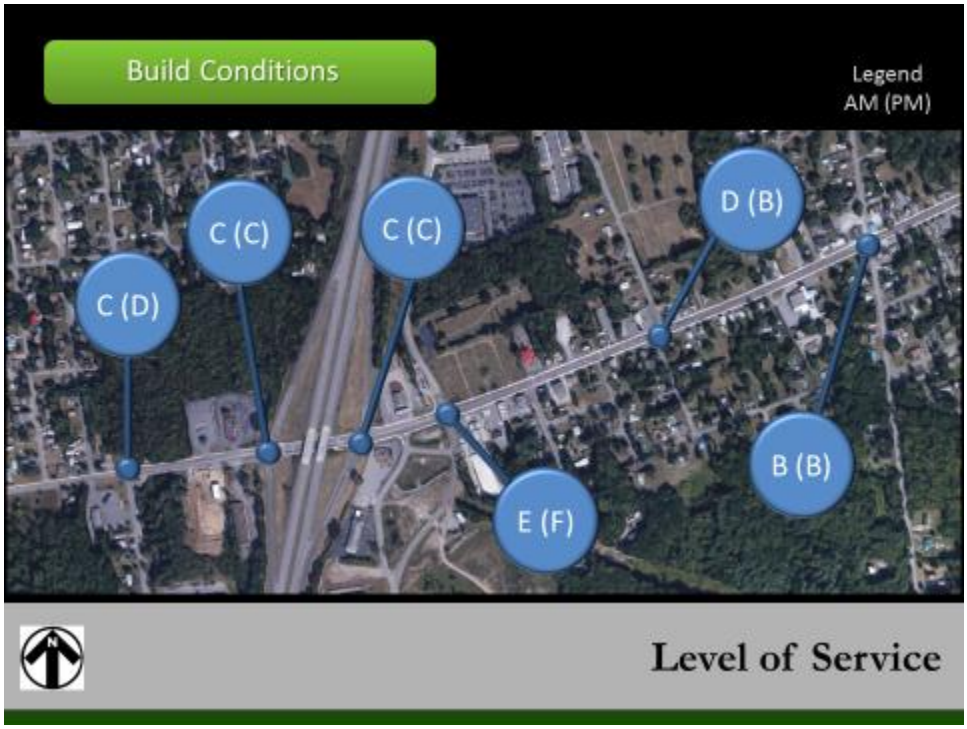
In addition to these geometric modifications, the Build capacity analyses assumes modified signal phasing to accommodate the new fourth leg of the Big Bay Road/Corinth Road intersection. The geometry and signal phasing at the other study intersections are the same as existing for this analysis.

The results of the capacity analyses show that the overall level of service for all the study intersections except Big Boom Road/Media Drive/Main Street will operate at LOS D or better. The intersection of Big Boom Road/Media Drive/Main Street will be LOS E in the AM peak hour and LOS F in the PM peak hour.

The Build analysis also shows LOS E/F operations at the following intersection approaches, even though the overall intersection operations are LOS D or better:

- Big Bay Road/Corinth Road: SB approach (AM & PM)
- Pine Street/Main Street: EB approach (AM)
  NB & SB approaches (PM)

It is noted that the analysis of the intersection of Main Street/Richardson Street shows an improvement in LOS from the No-Build condition to the Build condition. This is because the Build analysis is based on signal operations with both the northbound and southbound approaches operating in 'Vehicle Actuation' mode, and with associated signal timing re-optimization.



These analyses show that specific areas of the transportation system, particularly in the area of the Big Boom Road/Media Drive/Main Street intersection, will require improvements to accommodate the traffic increases associated with projected CI-18 rezone development. Consideration of these mitigation improvements are discussed in Section 8.0.

Table 8: Level of Service Summary - AM Peak Hour

Intersection	Street	Approach	Lane Group	2015 Existing		2020 No-Build		2020 Build	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn					A	8.3
			Through/Right-turn	B	13.3	B	14.9	C	21.1
			Overall Approach	B	13.3	B	14.9	C	20.3
		WB	Left-turn	A	7.2	A	8.5	C	26.1
			Through	A	3.2	A	3.2		
			Through/Right-turn					B	13.9
			Overall Approach	A	4.3	A	4.7	B	17.5
	Big Bay Rd	NB	Left-turn/Right-turn	C	23.1	C	23.5		
			Left-turn/Through/Right-turn					C	31.5
			Overall Approach	C	23.1	C	23.5	C	31.5
		SB	Left-turn/Through/Right-turn					F	83.5
			Overall Approach					F	83.5
	Overall Intersection			**B**	**11.7**	**B**	**12.7**	**C**	**23.5**
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	B	15.9	B	17.2	C	27.9
			Right-turn	B	13.5	B	14.4	C	20.6
			Overall Approach	B	15.2	B	16.4	B	26.0
		WB	Left-turn	B	19.2	B	23.9	B	22.1
			Through	A	2.7	A	2.9	A	3.2
			Overall Approach	B	11.5	B	13.9	B	11.3
	Exit 18-SB Off Ramp	SB	Left-turn/Through	D	33.9	D	36.8	D	39.8
			Right-turn	C	27.3	C	28.8	C	29.5
			Overall Approach	C	30.8	C	33.0	C	34.4
	Overall Intersection			**B**	**16.8**	**B**	**18.6**	**C**	**22.0**
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn	B	18.3	C	20.5	C	30.1
			Through	A	3.7	A	4.1	A	7.3
			Overall Approach	A	8.1	A	9.1	B	13.8
		WB	Through/Right-turn	B	16.3	B	18.5	B	24.5
			Overall Approach	B	16.3	B	18.5	C	24.5
	Exit 18-NB Off Ramp	NB	Left-turn	C	29.9	C	32.4	D	40.0
			Through/Right-turn	C	27.8	C	29.2	C	31.7
			Overall Approach	C	28.2	C	29.9	C	34.0
	Overall Intersection			**B**	**16.9**	**B**	**18.5**	**C**	**23.5**

Table 8: Level of Service Summary - AM Peak Hour (continued)

Intersection	Street	Approach	Lane Group	2015 Existing		2020 No-Build		2020 Build	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn	B	18.4	C	20.2	F	107.3
			Through/Right-turn	A	8.9	B	10.6	D	43.7
			Overall Approach	B	10.3	B	12.0	D	52.1
		WB	Left-turn	B	16.7	B	15.2	D	41.7
			Through/Right-turn	C	26.2	C	24.1	E	63.5
			Overall Approach	C	26.0	C	23.9	E	60.6
	Big Boom Rd	NB	Left-turn/Through/Right-turn	F	106.9	F	163.5	F	104.7
			Overall Approach	F	106.9	F	163.5	F	104.7
	Media Dr	SB	Left-turn	C	31.8	D	35.3	D	36.2
			Through/Right-turn	C	31.4	C	34.4	C	28.4
			Overall Approach	C	31.4	C	34.5	C	28.8
	Overall Intersection			**C**	**20.1**	**C**	**22.3**	**E**	**58.0**
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn	B	13.4	B	15.0	C	20.4
			Through/Right-turn	C	29.0	D	43.4	E	62.6
			Overall Approach	C	28.5	D	42.4	E	61.2
		WB	Left-turn	C	23.9	C	26.6	C	26.5
			Through/Right-turn	B	12.7	B	14.0	B	19.9
			Overall Approach	B	12.7	B	14.1	B	19.9
	Pine St	NB	Left-turn/Through/Right-turn	C	29.6	C	29.3	C	29.2
			Overall Approach	C	29.6	C	29.3	C	29.2
		SB	Left-turn/Through/Right-turn	C	26.8	C	26.4	C	26.3
			Overall Approach	C	26.8	C	26.4	C	26.3
	Overall Intersection			**C**	**22.2**	**C**	**30.7**	**D**	**42.8**
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn	B	11.0	B	11.3	A	6.3
			Through/Right-turn	D	53.0	E	69.5	B	16.7
			Overall Approach	D	52.4	E	68.7	B	16.6
		WB	Left-turn	B	16.1	B	16.1	B	10.3
			Through/Right-turn	B	16.8	B	17.8	A	9.5
			Overall Approach	B	16.8	B	17.8	A	9.5
	Richardson St	NB	Left-turn/Through/Right-turn	C	20.8	C	21.2	D	35.5
			Overall Approach	C	20.8	C	21.2	D	35.5
		SB	Left-turn/Through/Right-turn	B	18.0	B	18.0	C	29.5
			Overall Approach	B	18.0	B	18.0	C	29.5
	Overall Intersection			**D**	**36.5**	**D**	**45.7**	**B**	**15.9**

Table 9: Level of Service Summary - PM Peak Hour

Intersection	Street	Approach	Lane Group	2015 Existing		2020 No-Build		2020 Build	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn					C	25.9
			Through/Right-turn	B	11.9	B	12.2	D	39.8
			Overall Approach	B	11.9	B	12.2	D	39.0
		WB	Left-turn	A	4.9	A	5.3	C	25.2
			Through	A	4.0	A	4.1		
			Through/Right-turn					C	31.9
			Overall Approach	A	4.2	A	4.3	C	30.4
	Big Bay Rd	NB	Left-turn/Right-turn	B	17.7	B	18.6		
			Left-turn/Through/Right-turn					C	30.2
			Overall Approach	B	17.7	B	18.6	C	30.2
		SB	Left-turn/Through/Right-turn					F	81.7
			Overall Approach					F	81.7
	Overall Intersection			**A**	**9.4**	**A**	**9.7**	**D**	**39.0**
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	B	17.7	B	18.0	D	37.2
			Right-turn	B	15.3	B	15.5	C	21.6
			Overall Approach	B	17.1	B	17.4	C	33.5
		WB	Left-turn	B	13.2	B	18.4	D	46.5
			Through	A	2.2	A	2.5	A	2.6
			Overall Approach	A	8.2	B	11.1	C	23.2
	Exit 18-SB Off Ramp	SB	Left-turn/Through	C	32.5	C	33.9	D	37.5
			Right-turn	C	27.4	C	28.4	C	27.5
			Overall Approach	C	29.8	C	30.9	C	32.3
	Overall Intersection			**B**	**15.7**	**B**	**17.4**	**C**	**28.9**
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn	C	20.4	C	23.2	D	39.2
			Through	A	3.4	A	3.7	A	6.8
			Overall Approach	A	8.8	A	10.0	B	16.5
		WB	Through/Right-turn	B	16.3	B	18.4	D	38.6
			Overall Approach	B	16.3	B	18.4	D	38.6
	Exit 18-NB Off Ramp	NB	Left-turn	C	32.5	C	34.4	C	34.6
			Through/Right-turn	C	27.6	C	28.6	C	29.2
			Overall Approach	C	29.0	C	30.3	C	30.8
	Overall Intersection			**B**	**17.8**	**B**	**19.3**	**C**	**29.0**

Table 9: Level of Service Summary - PM Peak Hour (continued)

Intersection	Street	Approach	Lane Group	2015 Existing		2020 No-Build		2020 Build	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn	B	19.1	C	21.6	F	325.4
			Through/Right-turn	B	11.3	B	11.3	F	183.6
			Overall Approach	B	12.2	B	12.6	F	199.8
		WB	Left-turn	B	13.4	B	14.0	F	377.3
			Through/Right-turn	C	23.5	C	24.1	F	210.3
			Overall Approach	C	23.2	C	23.8	F	250.7
	Big Boom Rd	NB	Left-turn/Through/Right-turn	F	216.0	F	278.5	F	319.6
			Overall Approach	F	216.0	F	278.5	F	319.6
	Media Dr	SB	Left-turn	C	32.5	D	35.2	C	29.7
			Through/Right-turn	C	31.1	C	33.3	B	17.5
			Overall Approach	C	31.2	C	33.5	B	18.1
	Overall Intersection			**C**	**26.3**	**C**	**29.3**	**F**	**222.9**
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn	B	12.3	B	13.9	C	20.9
			Through/Right-turn	B	14.5	B	16.9	B	13.4
			Overall Approach	B	14.3	B	16.7	B	13.9
		WB	Left-turn	C	20.2	C	22.6	C	31.7
			Through/Right-turn	B	17.6	B	19.9	B	19.5
			Overall Approach	B	17.6	B	19.9	B	19.5
	Pine St	NB	Left-turn/Through/Right-turn	C	30.3	C	30.2	E	56.3
			Overall Approach	C	30.3	C	30.2	E	56.3
		SB	Left-turn/Through/Right-turn	C	29.5	C	29.6	E	55.7
			Overall Approach	C	29.5	C	29.6	E	55.7
	Overall Intersection			**B**	**16.1**	**B**	**18.4**	**B**	**17.2**
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn	B	11.8	B	12.0	A	5.7
			Through/Right-turn	C	32.1	D	38.9	B	13.2
			Overall Approach	C	31.6	D	38.1	B	12.9
		WB	Left-turn	B	14.4	B	15.6	A	8.9
			Through/Right-turn	B	19.1	C	22.2	A	9.5
			Overall Approach	B	19.0	C	22.1	A	9.5
	Richardson St	NB	Left-turn/Through/Right-turn	B	18.9	B	19.6	D	36.5
			Overall Approach	B	18.9	B	19.6	D	36.5
		SB	Left-turn/Through/Right-turn	B	17.6	B	18.1	C	32.7
			Overall Approach	B	17.6	B	18.1	C	32.7
	Overall Intersection			**C**	**25.6**	**C**	**30.3**	**B**	**13.0**

7.0 QUEUE ANALYSIS

Vehicle queue conditions are a factor in the quality of performance of the transportation system, where queues extend beyond the storage lengths of the turn lanes or where queues extend to the adjacent upstream intersection. In both these cases, the queue spillback can affect traffic mobility by impairing access to adjacent travel lanes. The queue analysis is presented in Table 10 for the AM peak hour and in Table 11 for the PM peak hour. These tables show the 50th percentile and 95th percentile queue lengths for each peak hour. The 95th percentile queue is defined to be the queue length that has only a 5-percent probability of being exceeded during the analysis time period. It is typically used in design to identify the appropriate length of turn-lanes, but it is not typical of what an average driver would experience. The 50th percentile queue length is a better characterization of the driver experiences. Queues that exceed the lane storage capacity are highlighted in red.

As shown in these tables, the 95th percentile queue nominally exceeds the available storage at the following locations in the 2015 existing condition:

I-87 Exit 18 NB Ramps:	NB left-turn (PM peak hour)
	EB through (AM peak hour)
	WB through (PM peak hour)
Big Boom Road/Media Drive:	EB through (AM and PM peak hour)

These queue conditions will periodically impede progression of traffic through these two intersections during the peak hours, adding to vehicle delay which is not reflected in the level of service analysis discussed in Section 6.0. It is noted that while the NB ramp approach to Main Street is shown to exceed the formally designated storage lane capacity, the queue is contained within the length of the ramp. The 50th percentile peak hour queues are shorter than the available storage capacity at the locations noted above. This indicates that the queue-related congestion that does occur at these intersections is of relatively short duration within the peak hours and does not significantly affect corridor mobility.

The analysis of future No-Build conditions shows that the 95th percentile queue will exceed the available storage at the following additional locations:

I-87 Exit 18 SB Ramps:	WB left-turn (PM peak hour)
Pine Street:	EB through (AM peak hour)

The 50th percentile queue conditions in the 2020 No-Build condition are shorter than the available storage capacity, indicating that the queue-related congestion will continue to be contained to short durations within the peak hours and that these conditions will not significantly affect mobility in the corridor.

The analysis of the 2020 Build condition shows that the queue demand at these intersections will increase substantially as a result of the projected development within the CI-18 zone. These changes are consistent with the changes in level of service noted in Section 6.0. Consideration of mitigation improvements are discussed in Section 8.0.

Table 10: Queue Summary - AM Peak Hour

Intersection	Street	Approach	Lane Group	Link Distance (ft)	Turn Bay Length (ft)	2015 Existing		2020 No-Build		2020 Build	
						50th	95th	50th	95th	50th	95th
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn		100					12	36
			Through/Right-turn	800	-	173	568	193	617	353	730
		WB	Left-turn		247	9	45	10	47	83	222
			Through	650	-	26	110	29	118		
			Through/Right-turn	650	-					229	462
	Big Bay Rd	NB	Left-turn/Right-turn	200	-	13	62	14	65		
			Left-turn/Through/Right-turn	200	-					30	100
		SB	Left-turn/Through/Right-turn	200	-					40	109
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	650	-	121	218	146	233	232	331
			Right-turn		235	0	46	0	48	0	57
		WB	Left-turn		330	102	253	140	308	216	337
			Through	330	-	44	72	52	79	100	136
	Exit 18-SB Off Ramp	SB	Left-turn/Through	400	-	109	188	123	198	151	240
			Right-turn		260	0	53	0	55	0	65
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn		330	53	159	83	186	147	241
			Through	330	-	84	460	95	494	486	665
		WB	Through/Right-turn	315	-	158	284	196	309	289	415
	Exit 18-NB Off Ramp	NB	Left-turn		160	79	144	92	155	145	232
			Through/Right-turn		200	0	43	0	67	50	147
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn		115	16	86	18	91	94	254
			Through/Right-turn	325	-	60	383	68	413	427	570
		WB	Left-turn		100	3	14	4	14	39	101
			Through/Right-turn	1100	-	215	686	247	757	542	873
	Big Boom Rd	NB	Left-turn/Through/Right-turn	500	-	20	72	24	79	227	450
	Media Dr	SB	Left-turn		100	7	26	8	27	9	26
			Through/Right-turn	500	-	3	57	3	58	63	139
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn		150	1	33	1	34	1	34
			Through/Right-turn	1100	-	132	1097	148	1163	169	1239
		WB	Left-turn		50	0	4	0	4	0	4
			Through/Right-turn	1100	-	73	791	80	846	105	993
	Pine St	NB	Left-turn/Through/Right-turn	500		2	14	2	14	2	14
		SB	Left-turn/Through/Right-turn	500		3	32	3	34	3	35
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn		50	2	8	2	9	1	8
			Through/Right-turn	1100	-	302	688	335	741	232	819
		WB	Left-turn		65	0	2	0	2	0	2
			Through/Right-turn	775	-	146	322	159	350	127	425
	Richardson St	NB	Left-turn/Through/Right-turn	500	-	33	86	35	91	52	117
		SB	Left-turn/Through/Right-turn	500	-	14	46	15	48	20	59

Table 11: Queue Summary - PM Peak Hour

Intersection	Street	Approach	Lane Group	Link Distance (ft)	Turn Bay Length (ft)	2015 Existing		2020 No-Build		2020 Build	
						50th	95th	50th	95th	50th	95th
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn		100					15	40
			Through/Right-turn	800	-	103	307	117	355	365	655
		WB	Left-turn		247	8	39	8	41	78	154
			Through	650	-	38	154	43	167		
			Through/Right-turn	650	-					383	686
	Big Bay Rd	NB	Left-turn/Right-turn	200	-	10	61	12	65		
			Left-turn/Through/Right-turn	200	-					132	268
		SB	Left-turn/Through/Right-turn	200	-					142	329
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	650	-	99	174	119	190	237	395
			Right-turn		235	0	39	0	41	0	58
		WB	Left-turn		330	117	290	165	357	301	*
			Through	330	-	55	88	63	94	81	99
	Exit 18-SB Off Ramp	SB	Left-turn/Through	400	-	98	173	111	182	134	214
			Right-turn		260	0	57	0	59	16	81
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn		330	47	148	82	177	159	251
			Through	330	-	75	118	84	122	109	594
		WB	Through/Right-turn	315	-	182	322	225	347	342	566
	Exit 18-NB Off Ramp	NB	Left-turn		160	103	181	119	193	127	205
			Through/Right-turn		200	0	0	0	7	55	143
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn		115	14	65	16	69	160	314
			Through/Right-turn	325	-	62	326	71	356	778	920
		WB	Left-turn		100	5	18	5	19	277	458
			Through/Right-turn	1100	-	227	726	259	802	921	1174
	Big Boom Rd	NB	Left-turn/Through/Right-turn	500	-	33	120	42	136	1180	1441
	Media Dr	SB	Left-turn		100	6	25	7	26	7	19
			Through/Right-turn	500	-	5	64	6	67	127	196
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn		150	0	49	0	52	6	51
			Through/Right-turn	1100	-	0	983	0	1047	195	1474
		WB	Left-turn		50	0	4	0	4	0	3
			Through/Right-turn	1100	-	79	853	86	906	294	1209
	Pine St	NB	Left-turn/Through/Right-turn	500		1	12	1	12	1	17
		SB	Left-turn/Through/Right-turn	500		3	28	3	29	7	48
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn		50	4	13	4	13	3	16
			Through/Right-turn	1100	-	255	604	283	657	219	882
		WB	Left-turn		65	1	5	1	5	1	5
			Through/Right-turn	775	-	175	427	189	467	137	630
	Richardson St	NB	Left-turn/Through/Right-turn	500	-	21	59	22	61	35	80
		SB	Left-turn/Through/Right-turn	500	-	7	31	8	32	11	40

* queue is metered by upstream signal

8.0 MITIGATION IMPROVEMENTS

The capacity and queue analyses of the 2020 Build condition shows that the CI-18 zone development will require new transportation system improvements at the following locations to support the projected traffic demand:

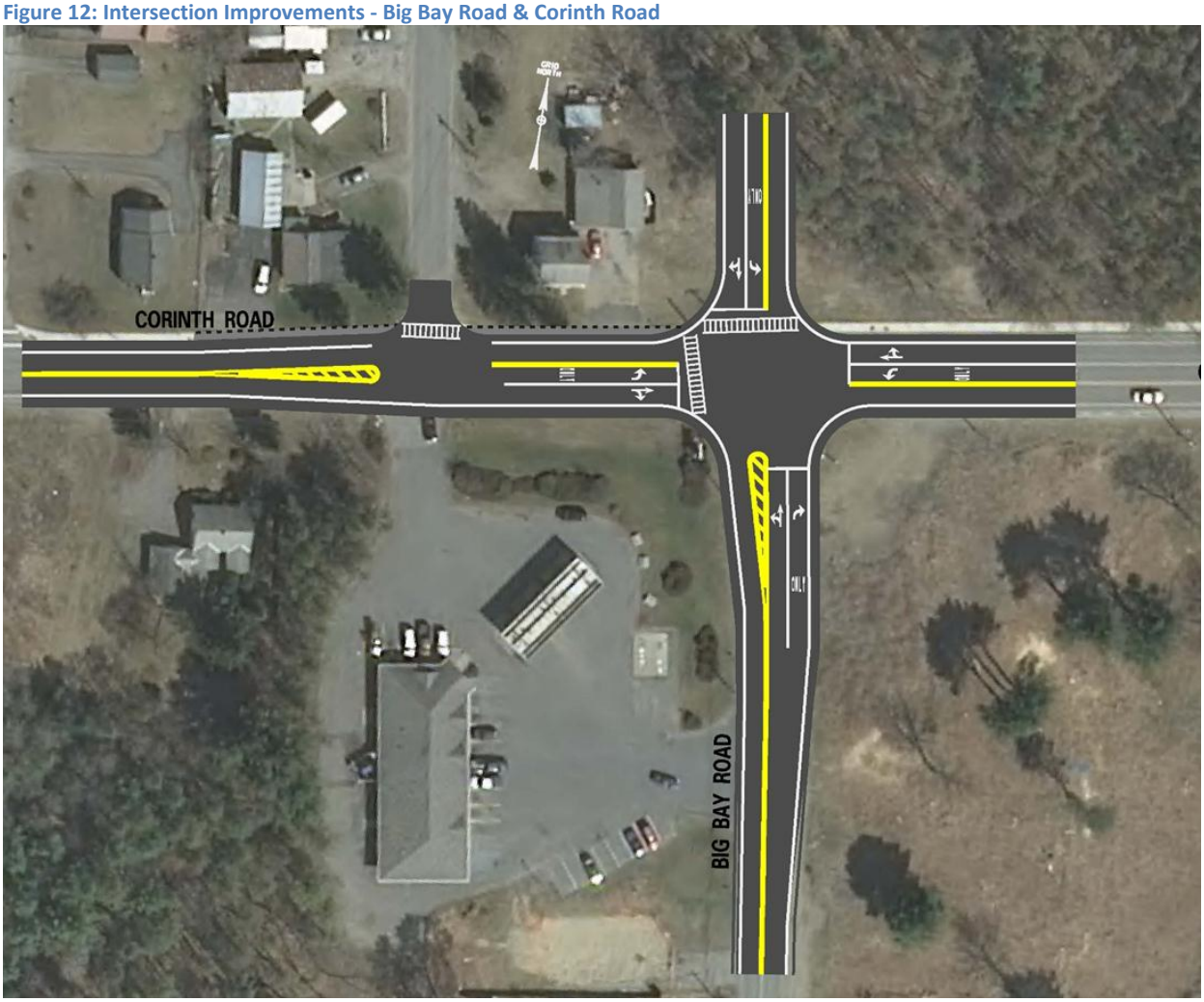
Big Bay Road/Corinth Road intersection
Big Boom Road/Media Drive/Main Street intersection
I-87 Exit 18 NB Ramp/Main Street intersection

Big Bay Road/Corinth Road Intersection

The improvements at this intersection are primarily associated with providing access to the Parcel A development in the northwest quadrant of the CI-18 zone. The recommended access configuration is to provide one lane for traffic entering the parcel and two lanes for exiting traffic. An eastbound left-turn lane on Corinth Road is also recommended.

The additional geometric improvement to address the cumulative development of Parcels A, C and D is to provide a separate right-turn lane on the northbound approach of Big Bay Road. Traffic signal improvements and/or replacement will also be required to accommodate the new geometry and signal phasing. Other improvements may also be needed at the intersection to address sidewalk, drainage and other ancillary roadway features that may be impacted by the design of the roadway improvements. Figure 12 shows a concept of these improvements.

Figure 12: Intersection Improvements - Big Bay Road & Corinth Road



Big Boom Road/Media Drive/Main Street intersection

The following geometric improvements have been identified for this intersection:

Big Boom Road northbound approach:	Provide two left-turn lanes Provide a separate right-turn lane Maintain a single through lane
Media Drive southbound approach:	Provide a median to align lanes with northbound approach Provide a separate right-turn lane Maintain a single through lane
Main Street westbound approach:	Provide an additional westbound travel lane Extend length of the left-turn lane

Figure 13 depicts these geometric improvements. The traffic signal equipment at this intersection will also need to be replaced to accommodate these geometric changes and the attendant changes to signal phasing. Other ancillary improvements will also be needed to relocate existing sidewalks, drainage and other roadway features to accommodate the widening needed for these roadway improvements. It is noted that the southbound left-turn movement will operate at LOS F in this condition because of the long cycle length; however, this involves a low volume of traffic and is not considered to be an unacceptable operating condition in this context.

I-87 Exit 18 NB Ramps/Main Street Intersection

The following geometric improvements have been identified for this intersection:

Main Street westbound approach:	Provide two through lanes for entire connecting link between this intersection and Media Drive Provide a separate right-turn lane

These geometric improvements are also depicted on Figure 13. The traffic signal equipment at this intersection will also need to be modified/replaced to accommodate these geometric changes and the attendant changes to signal phasing. Other ancillary improvements will also be needed to relocate existing sidewalks, drainage and other roadway features to accommodate the widening needed for these roadway improvements.

Table 12 summarizes the results of the capacity analysis for the 2020 Build Condition with this mitigation improvements.

The extent of improvements required to accommodate the projected development scenario under the CI-18 zoning is significant in the area of the Big Boom Road/Media Drive/Main Street area, including potential impact to the West Glens Falls Cemetery located along the north side of Main Street east of Media Drive. Because of these impacts, a sensitivity analysis was conducted to identify a threshold of development in the CI-18 zone that could be supported with a smaller package of mitigation improvements, which is discussed in Section 9.0.

Figure 13: Intersection Improvements - Big Boom Road/Media Drive/Main Street

Table 12: LOS Summary Build with Improvements

Intersection	Street	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn	A	6.0	A	8.7
			Through/Right-turn	B	19.2	C	22.6
			Overall Approach	B	18.4	C	21.8
		WB	Left-turn	C	20.5	B	13.2
			Through/Right-turn	A	6.1	B	10.5
			Overall Approach	B	10.4	B	11.1
		NB	Left-turn/Through	C	33.3	C	23.0
			Right-turn	C	24.6	B	17.2
			Overall Approach	C	26.6	B	18.7
		SB	Left-turn	C	34.9	C	31.6
			Through/Right-turn	C	30.7	C	20.6
			Overall Approach	C	33.9	C	28.6
	Overall Intersection			**B**	**17.0**	**B**	**17.9**
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	C	28.7	D	37.2
			Right-turn	B	20.0	C	21.6
			Overall Approach	C	26.5	C	33.5
		WB	Left-turn	C	20.6	D	50.3
			Through	A	7.0	A	6.7
			Overall Approach	B	12.8	C	27.2
	Exit 18-SB Off Ramp	SB	Left-turn/Through	C	34.1	D	37.5
			Right-turn	C	26.5	C	27.4
			Overall Approach	C	30.1	C	32.3
	Overall Intersection			**C**	**21.9**	**C**	**30.6**
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn	B	10.8	C	28.9
			Through	A	2.4	A	2.0
			Overall Approach	A	4.8	B	10.1
		WB	Through/Right-turn	C	20.7	C	22.9
			Right-turn	B	16.5	B	16.7
			Overall Approach	B	19.7	C	21.3
	Exit 18-NB Off Ramp	NB	Left-turn	C	34.2	C	34.6
			Through/Right-turn	C	29.4	C	29.2
			Overall Approach	C	30.8	C	30.8
	Overall Intersection			**B**	**17.6**	**B**	**19.9**

Table 12: LOS Summary Build with Improvements (continued)

Intersection	Street	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn	B	12.1	B	16.0
			Through/Right-turn	C	28.0	D	39.4
			Overall Approach	C	25.9	D	36.8
		WB	Left-turn	B	14.9	D	51.4
			Through/Right-turn	B	19.5	C	22.8
			Overall Approach	B	18.9	C	29.7
		NB	Left-turn	C	29.0	E	65.5
			Through	C	21.3	C	28.2
			Right-turn	B	17.3	C	20.2
			Overall Approach	C	23.9	D	45.6
	Media Dr	SB	Left-turn	F	93.0	D	50.4
			Through	C	28.6	D	39.1
			Right-turn	C	24.5	C	33.8
			Overall Approach	C	29.5	D	36.3
	Overall Intersection			**C**	**23.9**	**D**	**36.9**
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn	B	14.9	C	21.3
			Through/Right-turn	B	17.3	B	18.2
			Overall Approach	B	17.2	B	18.4
		WB	Left-turn	C	28.8	C	33.6
			Through/Right-turn	B	15.0	C	22.2
			Overall Approach	B	15.0	C	22.2
	Pine St	NB	Left-turn/Through/Right-turn	D	46.1	D	43.7
			Overall Approach	D	46.1	D	43.7
		SB	Left-turn/Through/Right-turn	D	42.2	D	41.6
			Overall Approach	D	42.2	D	41.6
	Overall Intersection			**B**	**17.1**	**C**	**20.6**
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn	A	6.3	A	5.7
			Through/Right-turn	B	16.7	B	13.2
			Overall Approach	B	16.6	B	12.9
		WB	Left-turn	B	10.3	A	8.9
			Through/Right-turn	A	9.5	A	9.5
			Overall Approach	A	9.5	A	9.5
	Richardson St	NB	Left-turn/Through/Right-turn	D	35.5	D	36.5
			Overall Approach	D	35.5	D	36.5
		SB	Left-turn/Through/Right-turn	C	29.5	C	32.7
			Overall Approach	C	29.5	C	32.7
	Overall Intersection			**B**	**15.9**	**B**	**13.0**

9.0 SENSITIVITY ANALYSIS

A sensitivity analysis was conducted to identify the threshold of reduced development in the CI-18 zone that would not require the extent of improvements that were identified for the development based on the proposed rezoning. In particular, the focus of this sensitivity analysis considered a reduced retail development scenario for parcels L and M. Based on the proposed zoning and the size of these parcels, it is estimated that 180,000 sq. ft. could be physically built on these two parcels (combined). The process used for this sensitivity analysis was to conduct capacity analysis of iteratively-reduced trip generation of these two parcels to identify the amount of traffic that could be supported by the following set of improvements, and then to correlate that level of traffic to the size of development:

Big Bay Road/Corinth Road intersection

Same as recommended for Full-Build scenario (see Section 8.0)

Big Boom Road/Media Drive intersection

- Northbound: Provide a separate left-turn lane
- Southbound: Convert the lane designations
  - from separate left-turn lane and shared through/right-turn lane
  - to shared left-turn/through lane and separate right-turn lane
- Eastbound: no changes from existing
- Westbound: no changes from existing

The improvement concept for the Big Boom Road/Media Drive/Main Street intersection is shown on Figure 14. These improvements will also require modification/replacement of the traffic signal at this intersection, and minor relocation/modification of other ancillary roadside elements such as sidewalks and drainage. There are no other improvements considered for the study area for this reduced development scenario.

Figure 14: Reduced Development Improvement Concept - Big Boom Road

The iterative capacity analysis identified that this improvement concept would support the traffic generated by the CI-18 rezone development with a 40% reduction of the number of primary and pass-by trips generated by parcels L and M. Because the traffic generation of retail uses is exponentially related to the size of the building, this equates generally to a combined size of approximately 85,000 square feet of retail building area on these properties.

The primary trips generated by each parcel within the CI-18 zone are shown in Table 13 for the original Build scenario and for the Reduced Build scenario for comparison.

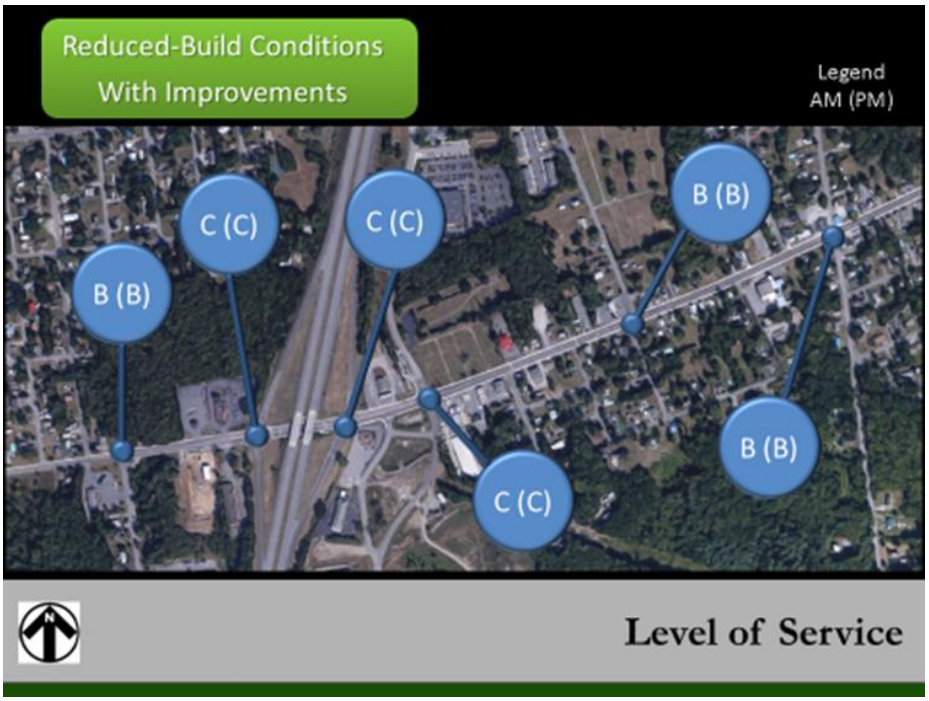
Table 13: Trip Generation Scenario Comparison

AM Peak Hour

Parcel	Original Build Scenario			Reduced Build Scenario		
	Enter	Exit	Total	Enter	Exit	Total
A	200	76	276	200	76	276
B	-	-	-	-	-	-
C	16	5	21	16	5	21
D	97	13	110	97	13	110
E	15	11	26	15	11	26
F	-	-	-	-	-	-
G	24	16	40	24	16	40
H	15	2	17	15	2	17
I	10	1	11	10	1	11
J	57	47	104	57	47	104
K	-	-	-	-	-	-
L	70	31	101	**42**	**19**	**61**
M	60	28	88	**35**	**17**	**52**
Total	564	230	794	511	207	718

PM Peak Hour

Parcel	Original Build Scenario			Reduced Build Scenario		
	Enter	Exit	Total	Enter	Exit	Total
A	137	230	367	137	230	367
B	-	-	-	-	-	-
C	34	39	73	34	39	73
D	23	111	134	23	111	134
E	16	14	30	16	14	30
F	-	-	-	-	-	-
G	23	21	44	23	21	44
H	3	13	16	3	13	16
I	2	8	10	2	8	10
J	53	52	105	53	52	105
K	-	-	-	-	-	-
L	183	206	389	**110**	**124**	**234**
M	158	177	335	**94**	**108**	**202**
Total	632	871	1503	495	720	1215



The capacity analysis of the 2020 Reduced Build scenario shows that the overall level of service for each study intersection will be LOS C or better during AM and PM peak hours in the 2020 Reduced Build scenario. Queue management will continue to be a factor that will contribute to periodic short-term congestion that is not reflected by the LOS analysis.

Table 14: LOS Summary - Reduced Build Scenario

Intersection	Street	Approach	Lane Group	AM Peak Hour		PM Peak Hour	
				LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Corinth Rd (CR 28) & Big Bay Rd	Corinth Rd (Rte 28)	EB	Left-turn	A	6.3	B	10.2
			Through/Right-turn	B	19.6	C	22.1
			Overall Approach	B	18.8	C	21.4
		WB	Left-turn	B	18.7	B	10.8
			Through/Right-turn	A	7.6	B	14.5
			Overall Approach	B	10.9	B	13.7
		NB	Left-turn/Through	C	33.4	C	25.3
			Right-turn	C	24.0	B	17.6
			Overall Approach	C	26.1	B	19.6
		SB	Left-turn	C	35.0	C	34.7
			Through/Right-turn	C	30.8	C	22.7
			Overall Approach	C	34.1	C	31.5
	Overall Intersection			**B**	**17.4**	**B**	**19.3**
Corinth Rd (CR 28) & Exit 18-SB Ramps	Corinth Rd (Rte 28)	EB	Through	C	22.3	C	34.3
			Right-turn	B	16.4	C	21.6
			Overall Approach	C	20.8	C	31.2
		WB	Left-turn	D	44.3	C	33.9
			Through	A	4.8	A	2.5
			Overall Approach	C	21.8	B	17.5
	Exit 18-SB Off Ramp	SB	Left-turn/Through	C	27.6	C	34.3
			Right-turn	C	23.4	C	27.1
			Overall Approach	C	25.4	C	30.4
	Overall Intersection			**C**	**22.1**	**C**	**25.3**
Main St (CR 28) & Exit 18-NB Ramps	Main St (Rte 28)	EB	Left-turn	C	21.9	C	33.7
			Through	A	5.6	A	5.8
			Overall Approach	B	10.3	B	14.6
		WB	Through/Right-turn	C	28.9	C	34.0
			Overall Approach	C	28.9	C	34.0
	Exit 18-NB Off Ramp	NB	Left-turn	C	28.4	C	34.9
			Through/Right-turn	C	24.7	C	28.4
			Overall Approach	C	25.8	C	30.4
	Overall Intersection			**C**	**21.5**	**C**	**26.3**

Table 14: LOS Summary - Reduced Build Scenario (continued)

Intersection	Street	Approach	Lane Group	AM Peak Hour LOS	AM Peak Hour Delay (sec/veh)	PM Peak Hour LOS	PM Peak Hour Delay (sec/veh)
Main St (CR 28) & Big Boom Rd/Media Dr	Main St (Rte 28)	EB	Left-turn	C	22.0	C	28.4
			Through/Right-turn	B	18.1	C	25.7
			Overall Approach	B	18.6	C	26.0
		WB	Left-turn	B	13.0	B	15.9
			Through/Right-turn	C	32.0	D	43.1
			Overall Approach	C	29.8	D	38.2
		NB	Left-turn	C	33.2	D	42.2
			Through/Right-turn	C	30.5	C	20.6
			Overall Approach	C	31.9	C	31.6
	Media Dr	SB	Left-turn/Through	D	47.5	C	31.3
			Right-turn	D	36.8	C	26.8
			Overall Approach	D	39.2	C	28.2
	Overall Intersection			**C**	**25.4**	**C**	**30.8**
Main St (CR 28) & Pine St	Main St (Rte 28)	EB	Left-turn	B	14.4	B	19.2
			Through/Right-turn	B	17.1	B	16.4
			Overall Approach	B	17.0	B	16.6
		WB	Left-turn	C	28.0	C	30.5
			Through/Right-turn	B	14.1	C	20.3
			Overall Approach	B	14.1	C	20.3
	Pine St	NB	Left-turn/Through/Right-turn	D	45.9	D	43.4
			Overall Approach	D	45.9	D	43.4
		SB	Left-turn/Through/Right-turn	D	42.0	D	41.3
			Overall Approach	D	42.0	D	41.3
	Overall Intersection			**B**	**16.6**	**B**	**18.7**
Main St (CR 28) & Richardson St	Main St (Rte 28)	EB	Left-turn	A	6.1	A	5.4
			Through/Right-turn	B	16.3	B	12.0
			Overall Approach	B	16.2	B	11.8
		WB	Left-turn	A	10.0	A	8.0
			Through/Right-turn	A	9.3	A	9.1
			Overall Approach	A	9.3	A	9.1
	Richardson St	NB	Left-turn/Through/Right-turn	C	34.9	D	35.2
			Overall Approach	C	34.9	D	35.2
		SB	Left-turn/Through/Right-turn	C	29.4	C	31.9
			Overall Approach	C	29.4	C	31.9
	Overall Intersection			**B**	**15.5**	**B**	**12.2**

10.0 PEDESTRIAN & BICYCLE CONSIDERATIONS

Although the documentation of existing conditions indicated relatively low pedestrian and bicycle activity in the corridor during periods of peak vehicular traffic volumes, the infrastructure supporting these transportation modes is vital for providing a sustainable multimodal corridor that is accessible to all users. The development within the CI-18 zone is also anticipated and encouraged to create uses that foster increased pedestrian and bicycle activity within the zone.

The impact of development within the CI-18 zone on the public transportation accommodations for pedestrian and bike activity were considered in the context of these factors:

- Impact of expanded roadway infrastructure on mobility and safety for pedestrians and bicyclists
- Connectivity for active transportation users generated by new development within the zone to existing pedestrian and bicycle facilities and destinations in the area.

Impact of expanded roadway infrastructure
Section 8.0 – Mitigation Improvements described the roadway improvements identified to provide the additional capacity to accommodate the vehicular traffic generated by the projected Build condition. At the intersection of Corinth Road and Big Bay Road, these capacity enhancements are primarily associated with providing access to the development site at the northwest quadrant of Corinth Road and I-87 Interchange 18 (Parcel A). The extent of these improvements are relatively modest and do not substantially change the character of the intersection. These improvements will not significantly increase the walking distance for pedestrians to cross Corinth Road. While the construction of the access to Parcel A will create a new point of interaction of pedestrians/bicyclists with turning vehicular traffic, this interaction will be typical of other intersections in the corridor, and is not anticipated to have a significant impact to pedestrian/bicycle mobility or safety. Pedestrian signals should be provided for the crossing of the new Parcel A driveway as part of the signal improvements to accommodate this new access.

The vehicular capacity improvements identified at the Main Street/Big Boom Road/Media Drive intersection to accommodate the projected Build condition include the addition of multiple turn lanes and an additional through lane on Main Street (westbound). The large size of the intersection created by these improvements will increase the time required for pedestrians and bicyclists to cross the intersection. This added crossing distance, along with the added complexities of driver operations also increases safety risk for pedestrians and bicyclists crossing at the intersection and interacting with turning traffic from multiple lanes. This is not to say that the larger intersection would be unsafe for pedestrians and bicyclists, but it would change the character and complexity of navigation by these users. The more complex signal phasing associated with the geometry of this intersection would also increase the delay time for pedestrians waiting to cross the street.

The Reduced Build scenario for development within the CI-18 zone correspondingly reduces the extent of improvements for the Main Street/Big Boom Road/Media Drive intersection. In this scenario, the improvements consist of widening to provide a new left-turn lane on Big Boom Road (northbound). The southbound approach of Media Drive may also need to be widened (as shown on Figure 14 in Section 9.0) to properly align the northbound and southbound travel lanes, but the extent of this widening would be subject to detailed design. In any case, these improvements would add about 12-14 feet of additional crossing distance. The distance to cross Main Street would be the same as existing. This geometry is much

less complex than for the full Build scenario and is consistent with typical crossing situations on urban arterials.

Connectivity
The increased pedestrian and bicycle activity generated by the new development within the CI-18 District will create new demand for infrastructure to support their mobility and access. The proposed zoning is designed to provide on-site amenities to support pedestrian and bicycle accommodation. Consideration should also be given in the site planning processes to provide for active transportation connections between parcels and to create spaces for public gathering.

A stated goal of the proposed CI-18 zone is to provide pedestrian connectivity to the Main Street District. Sidewalks and bicycle accommodations should also be provided along Big Boom Road and Big Bay Road through the CI-18 zone to connect the active transportation infrastructure at each site to the existing pedestrian and bike facilities along Corinth Road and Main Street. These accommodations along Big Boom Road would also facilitate bike connection to the Hudson River waterfront recreation area at the end of Big Boom Road.

11.0 ZONING CONSIDERATIONS

The Town's proposed CI-18 zoning was reviewed to identify recommended modifications to meet the objectives of the zone and to maintain transportation mobility along the Corinth Road/Main Street corridor. This essentially involved considerations to reduce the density for larger retail uses within the zone. To achieve this result, it is recommended that a density requirement be incorporated into § 179-3-040, Section 8.B(b), as follows:

[12] Density Requirements CI-18

(a) Buildings, or portions thereof, that are located greater than 400 feet from the centerline of County Route 28 (Corinth Road/Main Street), shall be limited in size to conform with the following maximum development densities, based on the parcel's area greater than 400 feet from the centerline of Corinth Road:

- Retail (LUC 820): 4,000 square feet gross floor area per acre
- Fast Food/Convenience/Gas (LUC 934): 500 square feet gross floor area per acre
- Restaurant (LUC 932): 1,000 square feet gross floor area per acre
- General Office (LUC 710): 8,000 square feet gross floor area per acre
- Hotel (LUC 310): 20 rooms/acre

Land uses not listed above shall have a density limitation based on the most applicable ITE Land Use Code as equated to General Office (LUC 710).

Other recommended changes to the zoning code for the CI-18 district are as follows:

- Remove 'Enclosed Shopping Center' as an allowed use within the zone (Town of Queensbury Table 3, Summary of Allowed Uses on Commercial Districts).
- Recommend that parcels adjacent to residential uses be required to have a minimum 50' side yard and rear yard setback with 25' vegetated buffer.
- § 179-7-050. (A) Design Districts: remove reference to 'large retail' and replace with "supporting retail".

The Town is also considering options to establish Special Use Permit criteria for the CI-18 District, and to establish certain uses as requiring a Special Use Permit. These requirements include provisions for additional traffic impact analysis, requirements for consistency with the findings and recommendations of this Exit 18 Rezone Study, and provision for the Town to utilize a Developer's Agreement to memorialize the conditions of approval.

12.0 IMPLEMENTATION STRATEGIES

The recent Corinth Road/Main Street reconstruction project was a publicly financed project (80% Federal, 15% State and 5% County financing) which increased capacity in the corridor through geometric enhancements, multimodal accommodations and improved traffic system management technologies. The planning and design of these improvements included considerations for future growth of travel in the corridor associated with general socio-economic conditions in the region and with new development. The analysis of traffic operations shows that current and future No-Build levels of service in the corridor are comparable to or better than the level of service objectives established for the design of the reconstruction project.

The preceding analyses of the traffic impacts associated with development potential in the proposed CI-18 zone show that additional improvements will be required to the transportation system to accommodate the additional traffic generated by that development. Some of these improvements are directly related to providing site access to Parcel A. These improvements involve the construction of the site access road opposite Big Bay Road, construction of an eastbound left-turn lane (for traffic entering the site), modification/replacement of signal equipment, and other ancillary reconstruction/relocation of roadway elements (sidewalk, drainage) as may be affected by the design detail for providing the site access. These improvements are considered to be the responsible of that developer to fund and implement.

The other identified transportation improvements have similar correlation to specific groups of parcels. In identifying strategies to fund these improvements, the costs for these improvements are considered to be private-sector funded in light of the recent public investment in the corridor, considering the limited scope of additional improvements that are required, and the nexus of these improvements to specific groups of parcels in the zone.

The Generic Environmental Impact Statement (GEIS) process is the broadest and most comprehensive approach to provide a mechanism to fund the improvements and to equitably distribute these costs to all involved parties. The GEIS process also allows the community to look at the cumulative impacts of a variety of environmental and community issues in addition to transportation. The GEIS process is most

effective when it is used to study the implications of development over large land areas and where there are issues of public/private cost-sharing for the mitigation improvements. For example, the Town of Halfmoon's (Saratoga County) GEIS for the northern part of the Town encompassed almost 9,000 acres, and the Town of Colonie (Albany County) has prepared GEIS's for three areas of the Town totaling 15,000 acres. The larger the study area the more equitable and effective the process is in terms of the allocation of mitigation costs and the Town's administration of the program. The timeframe to complete the GEIS process and to implement a mitigation fee structure can take several years depending on the size of the study area and the complexity of issues. For the CI-18 rezone area it is expected that the process would take 9-12 months. There would also be an on-going commitment of Town resources to manage the mitigation fee program through the full development of the CI-18 zone.

The use of the GEIS process does not guarantee that the necessary funds will be available at the time that specific transportation improvements are needed. In these cases, or in cases where the required improvement is greater than a developers calculated share, the Town would need to either front the difference and be reimbursed by future mitigation fees or to negotiate with that developer to fund the improvement so the project can move ahead, with later reimbursement of the difference to the developer once funds are collected from other projects in the GEIS study. The risk associated with this issue is that there is no guarantee of the timeline for recovery of these up-fronted costs (either to the Town or the developer) because that is tied to the pace and types of development that occurs.

The GEIS may not be a cost-effective or efficient mechanism to fund the transportation improvements for the CI-18 Rezone area because of the following considerations:

- The relatively small size of the study area (65 acres).
- The mitigation improvements identified to address the transportation impacts are focused on two locations in the corridor.
- The mitigation improvements are primarily associated with providing site access.
- There is no expected public participation requirement in the funding of the improvements.

Other broadly-based funding mechanisms like Tax Increment Financing (TIF) or Transportation Improvement Districts/Transportation Development Districts (TID/TDD) are similarly not considered to be applicable or feasible for the CI-18 rezone area due to the relatively small size of the zone and the limited transportation improvements required. These types of funding strategies are also more commonly used to stimulate investment for redevelopment in economically depressed areas.

In a traditional Direct Landowner Negotiation, each development undergoes a separate SEQR review as the project is submitted. If the project results in the need for the improvement, the developer can either pay for the improvement to address the identified impact or not receive the required approval. The advantage of this approach is that it is the simplest to administer by the Town; however the disadvantage is that there is not a formal mechanism to distribute the mitigation improvement costs to the involved developers. This typically leads to a scenario where either the first or last development finances a disproportionate share of the transportation mitigation cost relative to the traffic generated by their project. One way to address this would be for the Town to facilitate collective negotiations with the developers/property owners in the zone to establish a funding agreement. This strategy is most effective if the involved owners are actively pursuing a development approval/action. If this approach is not

successful or feasible due to local circumstances, then the recommended approach would be to engage the GEIS process.

13.0 CONCLUSION

The Exit 18 Rezone Study was prepared to identify the transportation impacts associated with the Town's proposal to rezone a 65-acre +/- area around I-87 Interchange 18 to a Commercial Intensive Exit 18 (CI-18) District to provide for flexible development opportunities on key sites, creating economic development while encouraging the overall improvement and appearance of these areas, including attractive building designs and enhanced pedestrian access.

This technical study involved an inventory of existing transportation and land use conditions, and environmental constraints; projections of future land use and transportation conditions; assessment of transportation impacts mitigation strategies; and, a review of potential funding and implementation strategies.

The study considered the transportation impacts associated with the projected CI-18 zone development Build scenario and a Reduced Build scenario. The Reduced Build scenario was established from a sensitivity analysis considering reduced retail development along Big Boom Road.

Build Scenario Improvements

The study identified that the following transportation system improvements to support the projected traffic demand of CI-18 zone development in the Build scenario:

Big Bay Road/Corinth Road Intersection

Parcel A southbound approach:	Provide new site access opposite Big Bay Road with two lanes for existing traffic
Big Bay Road northbound approach:	Provide a separate right-turn lane
Corinth Road eastbound approach:	Provide a separate left-turn lane

Modify/replace the traffic signal equipment to accommodate new geometry and signal phasing
Modify/replace other ancillary roadway features as necessary to accommodate the new lane geometry

Big Boom Road/Media Drive/Main Street intersection

Big Boom Road northbound approach:	Provide two left-turn lanes
	Provide a separate right-turn lane
	Maintain a single through lane
Media Drive southbound approach:	Provide a median to align lanes with northbound approach
	Provide a separate right-turn lane
	Maintain a single through lane
Main Street westbound approach:	Provide an additional westbound travel lane
	Extend length of the left-turn lane

Modify/replace the traffic signal equipment to accommodate new geometry and signal phasing
Modify/replace other ancillary roadway features as necessary to accommodate the new lane geometry

I-87 Exit 18 NB Ramps/Main Street Intersection

Main Street westbound approach:	Provide two through lanes for entire connecting link between this intersection and Media Drive
	Provide a separate right-turn lane

Modify/replace the traffic signal equipment to accommodate new geometry and signal phasing
Modify/replace other ancillary roadway features as necessary to accommodate the new lane geometry

Reduced Build Scenario Improvements

The study identified that the following transportation system improvements to support the projected traffic demand of CI-18 zone development in the Reduced Build scenario:

Big Bay Road/Corinth Road Intersection

Same improvements as identified for the Build scenario

Big Boom Road/Media Drive/Main Street intersection

Big Boom Road northbound approach:	Provide one separate left-turn lane
	Maintain a single through/right-turn lane
Media Drive southbound approach:	Convert lane-use designations
	From - separate left-turn lane & shared through/right-turn lane
	To- shared left-turn/through lane and separate right-turn lane
Main Street westbound approach:	No changes from existing
Main Street eastbound approach:	No changes from existing

Modify/replace the traffic signal equipment to accommodate new geometry and signal phasing
Modify/replace other ancillary roadway features as necessary to accommodate the new lane geometry

The increased pedestrian and bicycle activity generated by the new development within the CI-18 zone will create new demand for infrastructure to support their mobility and access. Sidewalks and bicycle accommodations are recommended to be provided along Big Boom Road and Big Bay Road through the CI-18 zone to connect the active transportation infrastructure at each site to the existing pedestrian and bike facilities along Corinth Road and Main Street.

The Town's proposed CI-18 zoning was reviewed to identify recommended modifications to meet the transportation and land use objectives of the zone for the Reduced Build scenario. The primary recommendation from this review is to include a density requirement into § 179-3-040, Section 8.B(b) to limit the size of development based on maximum densities for development that is located greater than 400 feet from the centerline of County Route 28 (Corinth Road/Main Street). The Town is also considering options to establish Special Use Permit criteria for the CI-18 District, and to establish certain uses as requiring a Special Use Permit. These requirements include provisions for additional traffic impact analysis, requirements for consistency with the findings and recommendations of this Exit 18 Rezone

Study, and provision for the Town to utilize a Developer's Agreement to memorialize the conditions of approval.

The recent Corinth Road/Main Street reconstruction project was a publicly financed project which increased capacity in the corridor through geometric enhancements, multimodal accommodations and improved traffic system management technologies. In consideration of this public investment and the types of improvements recommended to accommodate the future development with the CI-18 zone, the costs for these improvements are considered to be a private-sector responsibility for funding.

To provide a means to equitably allocate the costs for funding these improvements, the Town could facilitate collective negotiations with the developers/property owners in the zone to establish a funding agreement. This strategy is most effective if the involved owners are actively pursuing a development approval/action. If this approach is not successful or feasible due to local circumstances, then the recommended approach would be to engage in a formal Generic Environmental Impact Statement (GEIS) process.

Appendix A

Traffic Volume Data

CHA Consulting, Inc.
3 Winners Circle
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Corinth Rd & Big Bay Rd
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Corinth-Big Bay AM
Site Code : 00000001
Start Date : 5/20/2015
Page No : 1

Groups Printed- Passenger Cars - SU Trucks - MU Trucks

	From North					Corinth Rd From East					Big Bay Rd From South					Corinth Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	60	25	0	85	35	0	8	0	43	3	158	0	0	161	289
07:15 AM	0	0	0	0	0	0	72	35	0	107	46	0	11	0	57	4	156	0	0	160	324
07:30 AM	0	0	0	0	0	0	80	29	0	109	39	0	12	0	51	4	180	0	0	184	344
07:45 AM	0	0	0	0	0	0	97	35	0	132	28	0	7	0	35	5	172	0	0	177	344
Total	0	0	0	0	0	0	309	124	0	433	148	0	38	0	186	16	666	0	0	682	1301
08:00 AM	0	0	0	0	0	0	76	31	0	107	30	0	7	1	38	2	124	0	0	126	271
08:15 AM	0	0	0	0	0	0	73	30	0	103	50	0	10	0	60	4	125	0	0	129	292
08:30 AM	0	0	0	0	0	0	57	26	0	83	39	0	14	0	53	3	123	0	0	126	262
08:45 AM	0	0	0	0	0	0	74	23	0	97	27	0	8	0	35	3	132	0	0	135	267
Total	0	0	0	0	0	0	280	110	0	390	146	0	39	1	186	12	504	0	0	516	1092
Grand Total	0	0	0	0	0	0	589	234	0	823	294	0	77	1	372	28	1170	0	0	1198	2393
Apprch %	0	0	0	0		0	71.6	28.4	0		79	0	20.7	0.3		2.3	97.7	0	0		
Total %	0	0	0	0	0	0	24.6	9.8	0	34.4	12.3	0	3.2	0	15.5	1.2	48.9	0	0	50.1	
Passenger Cars	0	0	0	0	0	0	556	215	0	771	268	0	67	0	335	26	1132	0	0	1158	2264
% Passenger Cars	0	0	0	0	0	0	94.4	91.9	0	93.7	91.2	0	87	0	90.1	92.9	96.8	0	0	96.7	94.6
SU Trucks	0	0	0	0	0	0	15	14	0	29	19	0	5	1	25	2	24	0	0	26	80
% SU Trucks	0	0	0	0	0	0	2.5	6	0	3.5	6.5	0	6.5	100	6.7	7.1	2.1	0	0	2.2	3.3
MU Trucks	0	0	0	0	0	0	18	5	0	23	7	0	5	0	12	0	14	0	0	14	49
% MU Trucks	0	0	0	0	0	0	3.1	2.1	0	2.8	2.4	0	6.5	0	3.2	0	1.2	0	0	1.2	2

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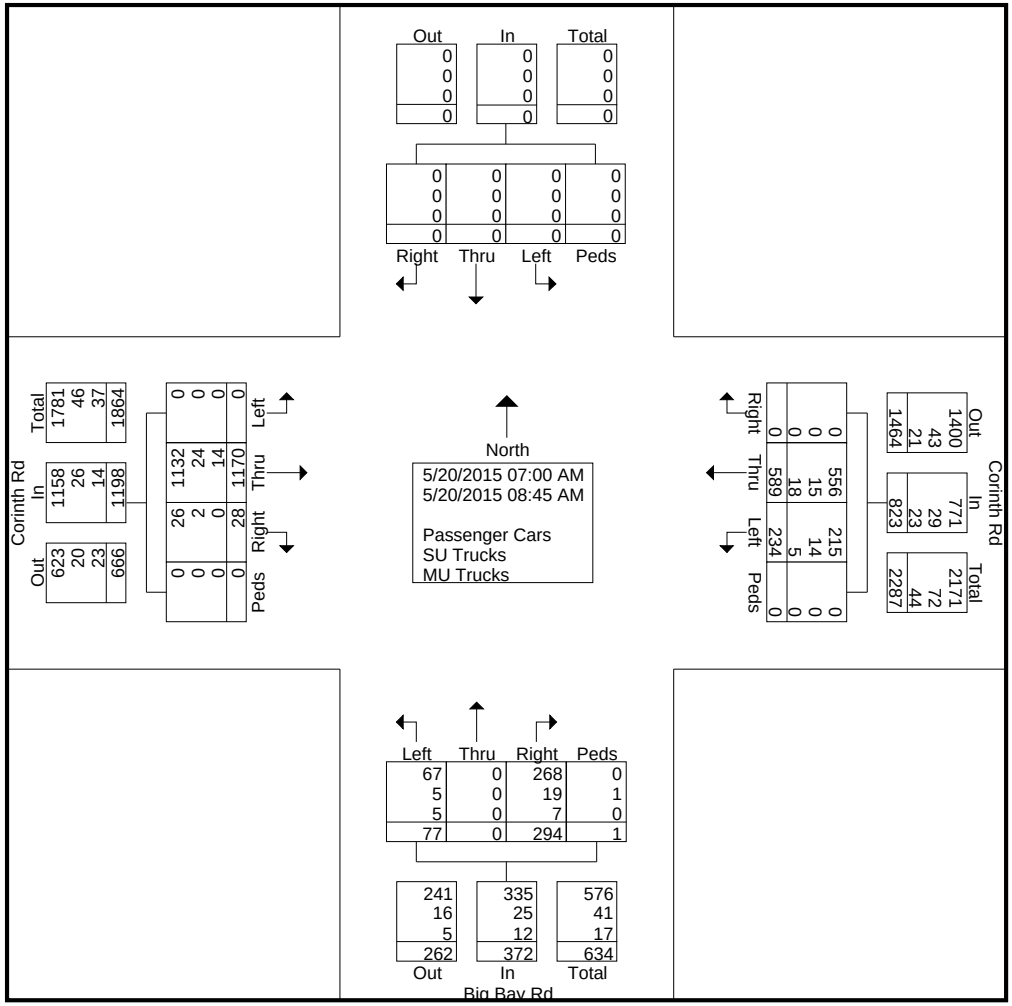

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	From North					Corinth Rd From East					Big Bay Rd From South					Corinth Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	60	25	0	85	35	0	8	0	43	3	158	0	0	161	289
07:15 AM	0	0	0	0	0	0	72	**35**	0	107	**46**	0	11	0	**57**	4	156	0	0	160	324
07:30 AM	0	0	0	0	0	0	80	29	0	109	39	0	**12**	0	51	4	**180**	0	0	**184**	**344**
07:45 AM	0	0	0	0	0	0	**97**	35	0	**132**	28	0	7	0	35	**5**	172	0	0	177	344
Total Volume	0	0	0	0	0	0	309	124	0	433	148	0	38	0	186	16	666	0	0	682	1301
% App. Total	0	0	0	0		0	71.4	28.6	0		79.6	0	20.4	0		2.3	97.7	0	0		
PHF	.000	.000	.000	.000	.000	.000	.796	.886	.000	.820	.804	.000	.792	.000	.816	.800	.925	.000	.000	.927	.945
Passenger Cars	0	0	0	0	0	0	290	118	0	408	136	0	37	0	173	15	649	0	0	664	1245
% Passenger Cars	0	0	0	0	0	0	93.9	95.2	0	94.2	91.9	0	97.4	0	93.0	93.8	97.4	0	0	97.4	95.7
SU Trucks	0	0	0	0	0	0	8	3	0	11	12	0	0	0	12	1	12	0	0	13	36
% SU Trucks	0	0	0	0	0	0	2.6	2.4	0	2.5	8.1	0	0	0	6.5	6.3	1.8	0	0	1.9	2.8
MU Trucks	0	0	0	0	0	0	11	3	0	14	0	0	1	0	1	0	5	0	0	5	20
% MU Trucks	0	0	0	0	0	0	3.6	2.4	0	3.2	0	0	2.6	0	0.5	0	0.8	0	0	0.7	1.5

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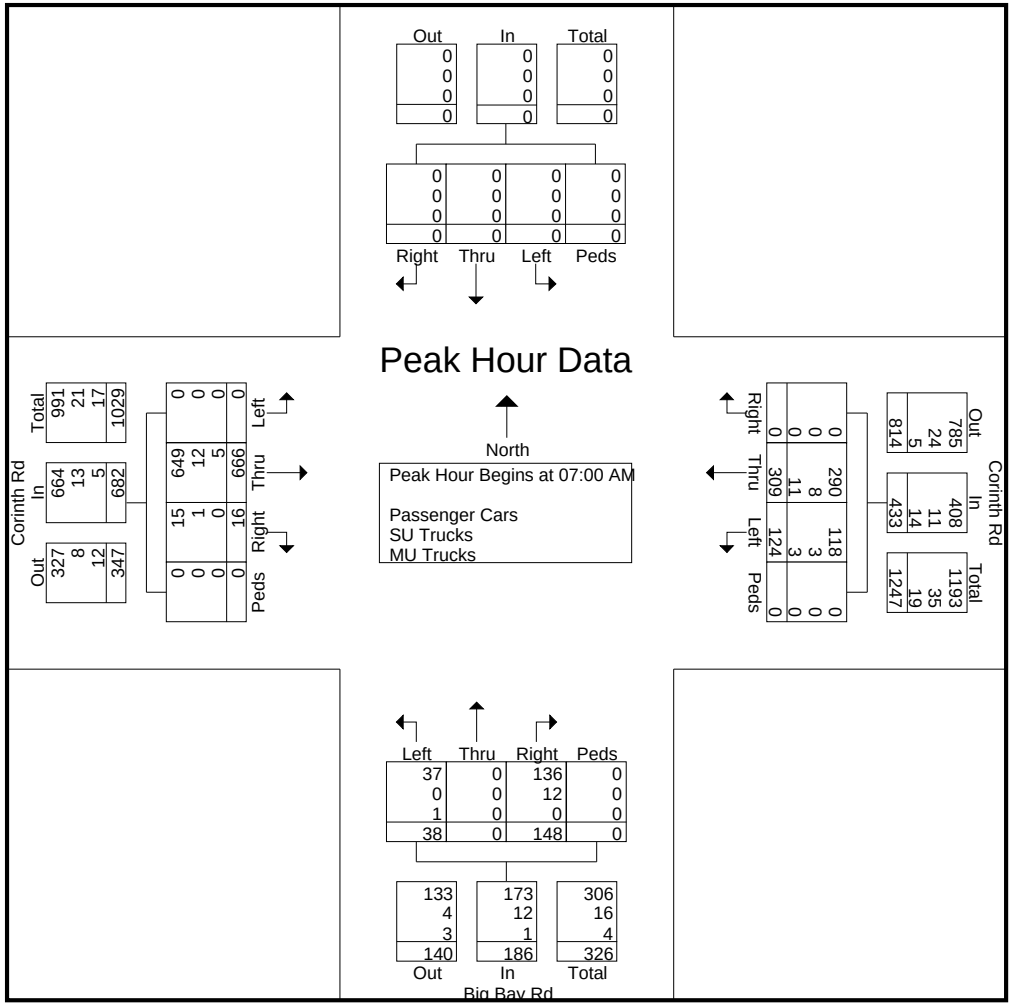

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	From North					Corinth Rd From East					Big Bay Rd From South					Corinth Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00 AM					07:15 AM					07:00 AM					07:00 AM					
+0 mins.	0	0	0	0	0	0	72	**35**	0	107	35	0	8	0	43	3	158	0	0	161	
+15 mins.	0	0	0	0	0	0	80	29	0	109	**46**	0	11	0	**57**	4	156	0	0	160	
+30 mins.	0	0	0	0	0	0	**97**	35	0	**132**	39	0	**12**	0	51	4	**180**	0	0	**184**	
+45 mins.	0	0	0	0	0	0	76	31	0	107	28	0	7	0	35	**5**	172	0	0	177	
Total Volume	0	0	0	0	0	0	325	130	0	455	148	0	38	0	186	16	666	0	0	682	
% App. Total	0	0	0	0		0	71.4	28.6	0		79.6	0	20.4	0		2.3	97.7	0	0		
PHF	.000	.000	.000	.000	.000	.000	.838	.929	.000	.862	.804	.000	.792	.000	.816	.800	.925	.000	.000	.927	
Passenger Cars	0	0	0	0	0	0	305	124	0	429	136	0	37	0	173	15	649	0	0	664	
% Passenger Cars	0	0	0	0	0	0	93.8	95.4	0	94.3	91.9	0	97.4	0	93	93.8	97.4	0	0	97.4	
SU Trucks	0	0	0	0	0	0	10	4	0	14	12	0	0	0	12	1	12	0	0	13	
% SU Trucks	0	0	0	0	0	0	3.1	3.1	0	3.1	8.1	0	0	0	6.5	6.2	1.8	0	0	1.9	
MU Trucks	0	0	0	0	0	0	10	2	0	12	0	0	1	0	1	0	5	0	0	5	
% MU Trucks	0	0	0	0	0	0	3.1	1.5	0	2.6	0	0	2.6	0	0.5	0	0.8	0	0	0.7	

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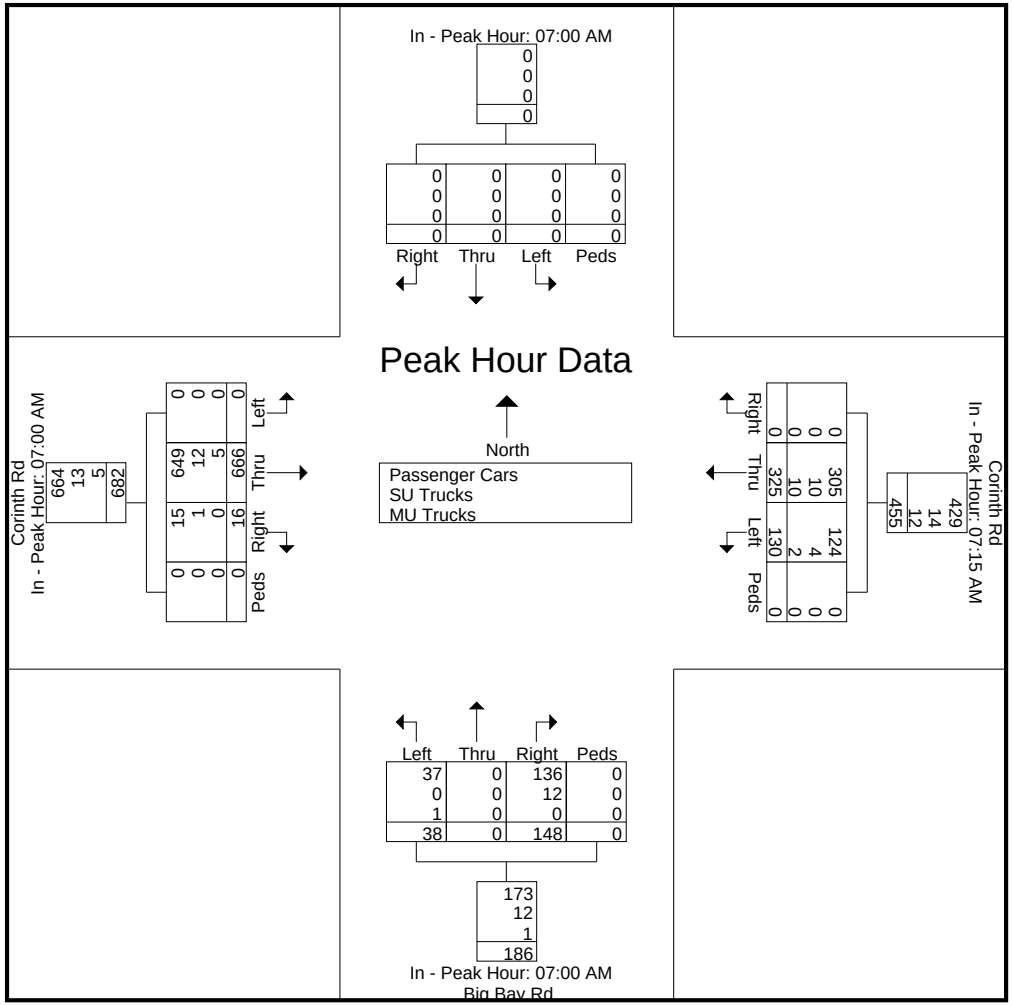

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Site Code : 00000002
Start Date : 5/20/2015
Page No : 1

Groups Printed- Passenger Cars - SU Trucks - MU Trucks

	From North					Corinth Road From East					Big Bay Road From South					Corinth Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	107	24	0	131	34	0	12	0	46	6	95	0	0	101	278
04:15 PM	0	0	0	0	0	0	118	29	0	147	32	0	14	0	46	5	121	0	0	126	319
04:30 PM	0	0	0	0	0	0	101	28	0	129	35	0	9	0	44	4	139	0	0	143	316
04:45 PM	0	0	0	0	0	0	109	29	0	138	41	0	13	0	54	6	118	0	0	124	316
Total	0	0	0	0	0	0	435	110	0	545	142	0	48	0	190	21	473	0	0	494	1229
05:00 PM	0	0	0	0	0	0	111	23	0	134	34	0	9	0	43	5	121	0	0	126	303
05:15 PM	0	0	0	0	0	0	124	17	0	141	31	0	11	0	42	4	105	0	0	109	292
05:30 PM	0	0	0	0	0	0	90	26	0	116	18	0	8	0	26	5	115	0	0	120	262
05:45 PM	0	0	0	0	0	0	83	15	0	98	22	0	8	0	30	4	89	0	0	93	221
Total	0	0	0	0	0	0	408	81	0	489	105	0	36	0	141	18	430	0	0	448	1078
Grand Total	0	0	0	0	0	0	843	191	0	1034	247	0	84	0	331	39	903	0	0	942	2307
Apprch %	0	0	0	0		0	81.5	18.5	0		74.6	0	25.4	0		4.1	95.9	0	0		
Total %	0	0	0	0	0	0	36.5	8.3	0	44.8	10.7	0	3.6	0	14.3	1.7	39.1	0	0	40.8	
Passenger Cars	0	0	0	0	0	0	830	182	0	1012	241	0	83	0	324	35	879	0	0	914	2250
% Passenger Cars	0	0	0	0	0	0	98.5	95.3	0	97.9	97.6	0	98.8	0	97.9	89.7	97.3	0	0	97	97.5
SU Trucks	0	0	0	0	0	0	5	2	0	7	3	0	0	0	3	4	14	0	0	18	28
% SU Trucks	0	0	0	0	0	0	0.6	1	0	0.7	1.2	0	0	0	0.9	10.3	1.6	0	0	1.9	1.2
MU Trucks	0	0	0	0	0	0	8	7	0	15	3	0	1	0	4	0	10	0	0	10	29
% MU Trucks	0	0	0	0	0	0	0.9	3.7	0	1.5	1.2	0	1.2	0	1.2	0	1.1	0	0	1.1	1.3

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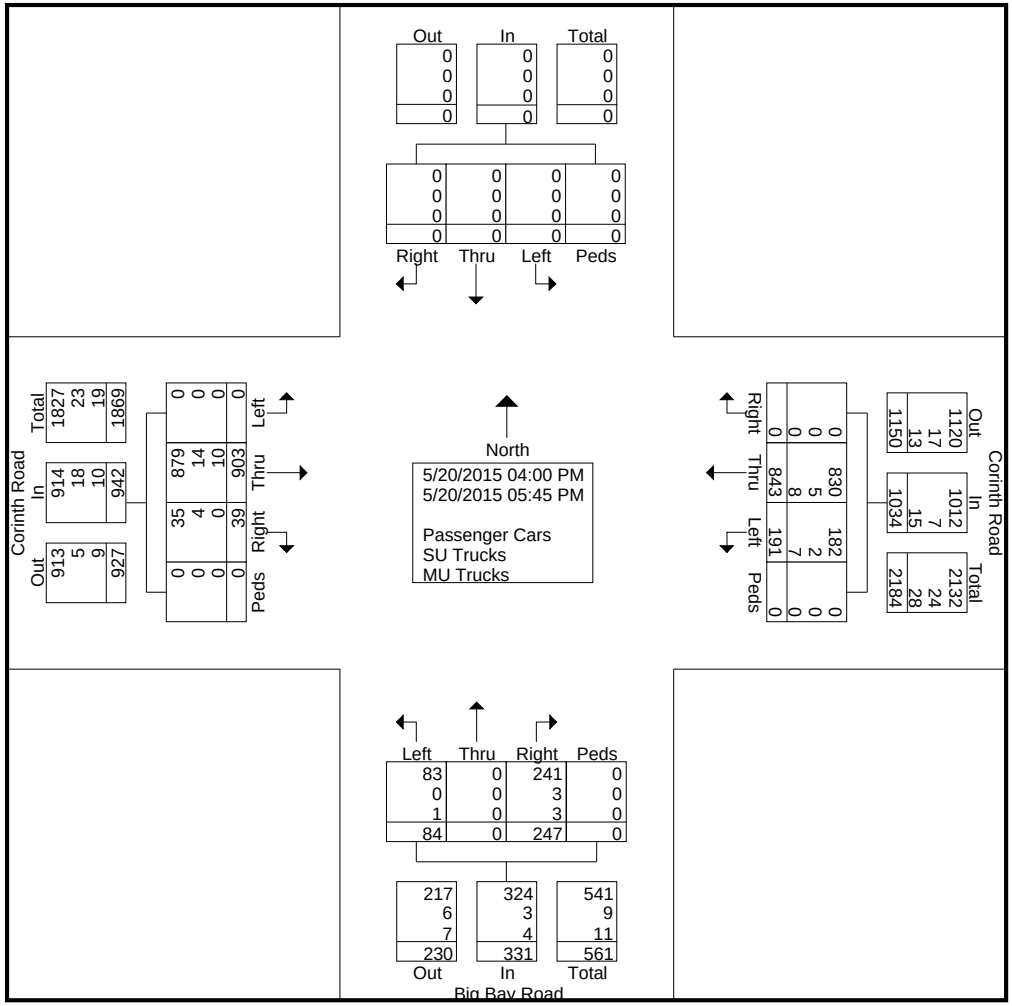
Corinth Road & Big Bay Rd
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Corinth-Big Bay PM
Site Code : 00000002
Start Date : 5/20/2015
Page No : 2



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Corinth Road & Big Bay Rd
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Corinth-Big Bay PM
Site Code : 00000002
Start Date : 5/20/2015

	From North					Corinth Road From East					Big Bay Road From South					Corinth Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	0	0	0	0	**118**	**29**	0	**147**	32	0	**14**	0	46	5	121	0	0	126	**319**
04:30 PM	0	0	0	0	0	0	101	28	0	129	35	0	9	0	44	4	**139**	0	0	**143**	316
04:45 PM	0	0	0	0	0	0	109	29	0	138	**41**	0	13	0	**54**	**6**	118	0	0	124	316
05:00 PM	0	0	0	0	0	0	111	23	0	134	34	0	9	0	43	5	121	0	0	126	303
Total Volume	0	0	0	0	0	0	439	109	0	548	142	0	45	0	187	20	499	0	0	519	1254
% App. Total	0	0	0	0		0	80.1	19.9	0		75.9	0	24.1	0		3.9	96.1	0	0		
PHF	.000	.000	.000	.000	.000	.000	.930	.940	.000	.932	.866	.000	.804	.000	.866	.833	.897	.000	.000	.907	.983
Passenger Cars	0	0	0	0	0	0	433	104	0	537	136	0	45	0	181	16	483	0	0	499	1217
% Passenger Cars	0	0	0	0	0	0	98.6	95.4	0	98.0	95.8	0	100	0	96.8	80.0	96.8	0	0	96.1	97.0
SU Trucks	0	0	0	0	0	0	4	1	0	5	3	0	0	0	3	4	9	0	0	13	21
% SU Trucks	0	0	0	0	0	0	0.9	0.9	0	0.9	2.1	0	0	0	1.6	20.0	1.8	0	0	2.5	1.7
MU Trucks	0	0	0	0	0	0	2	4	0	6	3	0	0	0	3	0	7	0	0	7	16
% MU Trucks	0	0	0	0	0	0	0.5	3.7	0	1.1	2.1	0	0	0	1.6	0	1.4	0	0	1.3	1.3

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Corinth Road & Big Bay Rd
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File Name : Corinth-Big Bay PM
Site Code : 00000002
Start Date : 5/20/2015
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Corinth Road & Big Bay Rd
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Corinth-Big Bay PM
Site Code : 00000002
Start Date : 5/20/2015

	From North					Corinth Road From East					Big Bay Road From South					Corinth Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:00 PM					04:15 PM					04:00 PM					04:15 PM					
+0 mins.	0	0	0	0	0	0	**118**	**29**	0	**147**	34	0	12	0	46	5	121	0	0	126	
+15 mins.	0	0	0	0	0	0	101	28	0	129	32	0	**14**	0	46	4	**139**	0	0	**143**	
+30 mins.	0	0	0	0	0	0	109	29	0	138	35	0	9	0	44	**6**	118	0	0	124	
+45 mins.	0	0	0	0	0	0	111	23	0	134	**41**	0	13	0	**54**	5	121	0	0	126	
Total Volume	0	0	0	0	0	0	439	109	0	548	142	0	48	0	190	20	499	0	0	519	
% App. Total	0	0	0	0		0	80.1	19.9	0		74.7	0	25.3	0		3.9	96.1	0	0		
PHF	.000	.000	.000	.000	.000	.000	.930	.940	.000	.932	.866	.000	.857	.000	.880	.833	.897	.000	.000	.907	
Passenger Cars	0	0	0	0	0	0	433	104	0	537	136	0	48	0	184	16	483	0	0	499	
% Passenger Cars	0	0	0	0	0	0	98.6	95.4	0	98	95.8	0	100	0	96.8	80	96.8	0	0	96.1	
SU Trucks	0	0	0	0	0	0	4	1	0	5	3	0	0	0	3	4	9	0	0	13	
% SU Trucks	0	0	0	0	0	0	0.9	0.9	0	0.9	2.1	0	0	0	1.6	20	1.8	0	0	2.5	
MU Trucks	0	0	0	0	0	0	2	4	0	6	3	0	0	0	3	0	7	0	0	7	
% MU Trucks	0	0	0	0	0	0	0.5	3.7	0	1.1	2.1	0	0	0	1.6	0	1.4	0	0	1.3	

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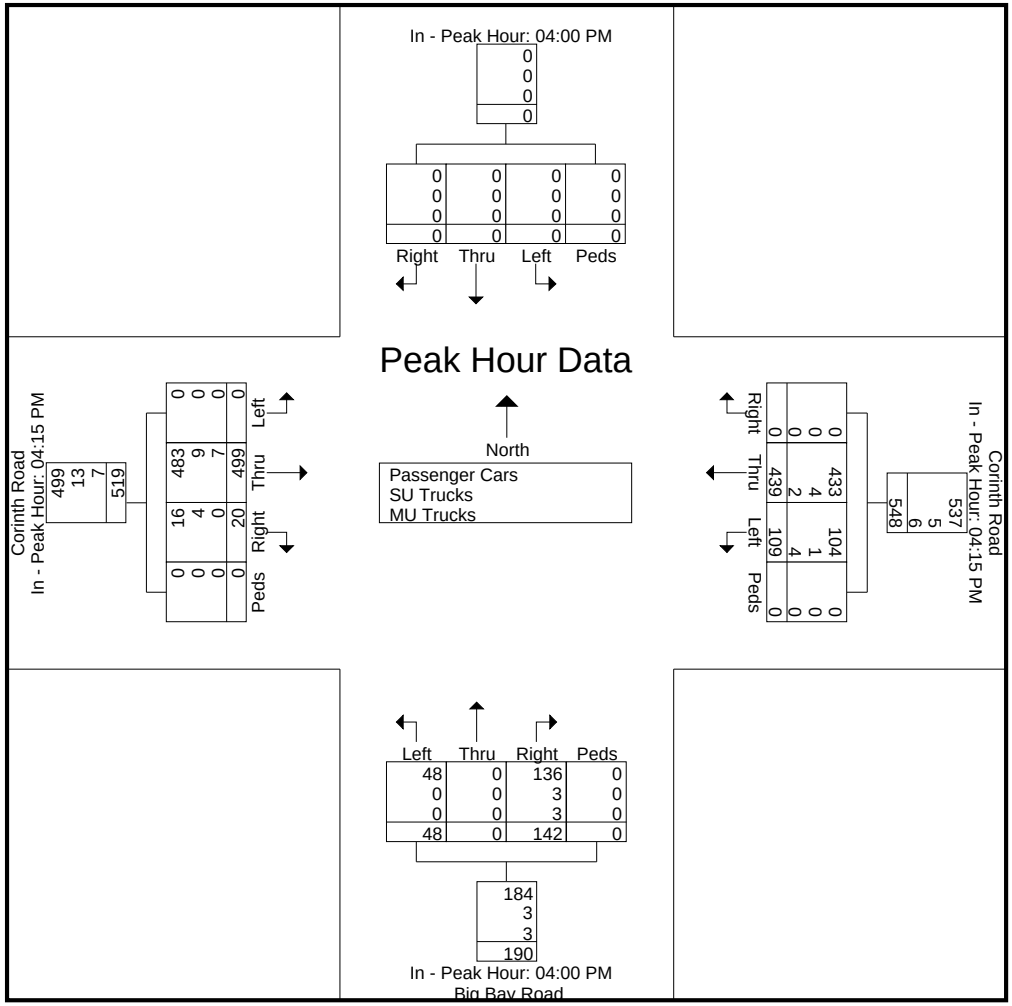
File Name : Corinth-Big Bay PM
Site Code : 00000002
Start Date : 5/20/2015
Page No : 6



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Count Name: Main St & I87 Exit 18 SB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Data

Start Time	I87 X18 SB Off Ramp Southbound					Main St WB Westbound					I87 X18 SB On Ramp Northbound		Corinth Rd EB Eastbound					
	Right	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	24	0	34	0	58	65	102	0	0	167	0	0	65	133	0	0	198	423
7:15 AM	33	0	41	1	74	80	109	0	0	189	0	0	58	142	0	0	200	463
7:30 AM	46	0	49	0	95	81	114	0	0	195	0	0	66	158	0	0	224	514
7:45 AM	45	0	43	0	88	93	78	0	0	171	0	0	47	175	0	0	222	481
Hourly Total	148	0	167	1	315	319	403	0	0	722	0	0	236	608	0	0	844	1881
8:00 AM	42	0	58	1	100	76	83	0	0	159	0	0	47	127	0	0	174	433
8:15 AM	39	0	42	0	81	83	106	0	0	189	0	0	30	141	0	0	171	441
8:30 AM	30	0	41	0	71	79	94	0	0	173	0	0	43	161	0	0	204	448
8:45 AM	33	0	71	0	104	90	68	0	0	158	0	0	32	155	0	0	187	449
Hourly Total	144	0	212	1	356	328	351	0	0	679	0	0	152	584	0	0	736	1771
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	68	0	51	2	119	85	93	0	0	178	0	0	34	125	0	0	159	456
4:15 PM	50	0	46	0	96	103	116	0	0	219	0	0	47	103	0	0	150	465
4:30 PM	61	0	41	0	102	90	99	0	0	189	0	0	40	141	0	0	181	472
4:45 PM	51	0	51	0	102	103	115	0	0	218	1	0	46	138	0	0	184	504
Hourly Total	230	0	189	2	419	381	423	0	0	804	1	0	167	507	0	0	674	1897
5:00 PM	48	1	49	0	98	101	134	0	0	235	0	0	46	121	0	0	167	500
5:15 PM	55	0	51	0	106	100	121	0	0	221	0	0	29	135	0	0	164	491
5:30 PM	48	0	39	0	87	98	119	0	0	217	0	0	46	109	0	0	155	459
5:45 PM	34	0	39	0	73	85	101	0	0	186	2	0	26	117	0	0	143	402
Hourly Total	185	1	178	0	364	384	475	0	0	859	2	0	147	482	0	0	629	1852
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	707	1	746	4	1454	1412	1652	0	0	3064	3	0	702	2181	0	0	2883	7401
Approach %	48.6	0.1	51.3	-	-	46.1	53.9	0.0	-	-	-	-	24.3	75.7	0.0	-	-	-
Total %	9.6	0.0	10.1	-	19.6	19.1	22.3	0.0	-	41.4	-	0.0	9.5	29.5	0.0	-	39.0	-
Lights	672	0	706	-	1378	1329	1588	0	-	2917	-	0	677	2068	0	-	2745	7040
% Lights	95.0	0.0	94.6	-	94.8	94.1	96.1	-	-	95.2	-	-	96.4	94.8	-	-	95.2	95.1
Mediums	28	0	29	-	57	66	51	0	-	117	-	0	21	93	0	-	114	288
% Mediums	4.0	0.0	3.9	-	3.9	4.7	3.1	-	-	3.8	-	-	3.0	4.3	-	-	4.0	3.9
Articulated Trucks	7	1	11	-	19	17	13	0	-	30	-	0	4	18	0	-	22	71
% Articulated Trucks	1.0	100.0	1.5	-	1.3	1.2	0.8	-	-	1.0	-	-	0.6	0.8	-	-	0.8	1.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	-	0	0	2	0	-	2	2
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.1	-	-	0.1	0.0
Pedestrians	-	-	-	4	-	-	-	-	0	-	3	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

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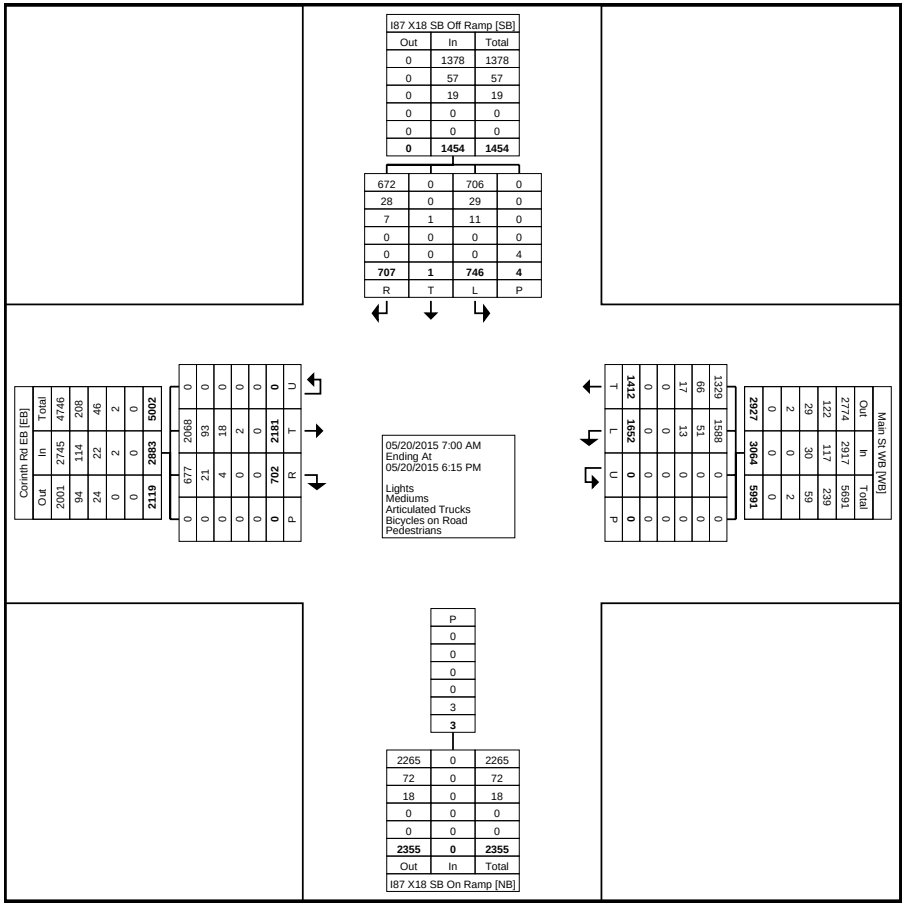
Count Name: Main St & I87 Exit 18 SB Ramps
Site Code:
Start Date: 05/20/2015



Turning Movement Data Plot

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518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & I87 Exit 18 SB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Peak Hour Data (7:15 AM)

Start Time	I87 X18 SB Off Ramp Southbound					Main St WB Westbound					I87 X18 SB On Ramp Northbound		Corinth Rd EB Eastbound					
	Right	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:15 AM	33	0	41	1	74	80	109	0	0	189	0	0	58	142	0	0	200	463
7:30 AM	46	0	49	0	95	81	114	0	0	195	0	0	66	158	0	0	224	514
7:45 AM	45	0	43	0	88	93	78	0	0	171	0	0	47	175	0	0	222	481
8:00 AM	42	0	58	1	100	76	83	0	0	159	0	0	47	127	0	0	174	433
Total	166	0	191	2	357	330	384	0	0	714	0	0	218	602	0	0	820	1891
Approach %	46.5	0.0	53.5	-	-	46.2	53.8	0.0	-	-	-	-	26.6	73.4	0.0	-	-	-
Total %	8.8	0.0	10.1	-	18.9	17.5	20.3	0.0	-	37.8	-	0.0	11.5	31.8	0.0	-	43.4	-
PHF	0.902	0.000	0.823	-	0.893	0.887	0.842	0.000	-	0.915	-	0.000	0.826	0.860	0.000	-	0.915	0.920
Lights	153	0	183	-	336	302	361	0	-	663	-	0	214	560	0	-	774	1773
% Lights	92.2	-	95.8	-	94.1	91.5	94.0	-	-	92.9	-	-	98.2	93.0	-	-	94.4	93.8
Mediums	10	0	6	-	16	26	22	0	-	48	-	0	4	37	0	-	41	105
% Mediums	6.0	-	3.1	-	4.5	7.9	5.7	-	-	6.7	-	-	1.8	6.1	-	-	5.0	5.6
Articulated Trucks	3	0	2	-	5	2	1	0	-	3	-	0	0	5	0	-	5	13
% Articulated Trucks	1.8	-	1.0	-	1.4	0.6	0.3	-	-	0.4	-	-	0.0	0.8	-	-	0.6	0.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	2	-	-	-	-	0	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Main St & I87 Exit 18 SB Ramps
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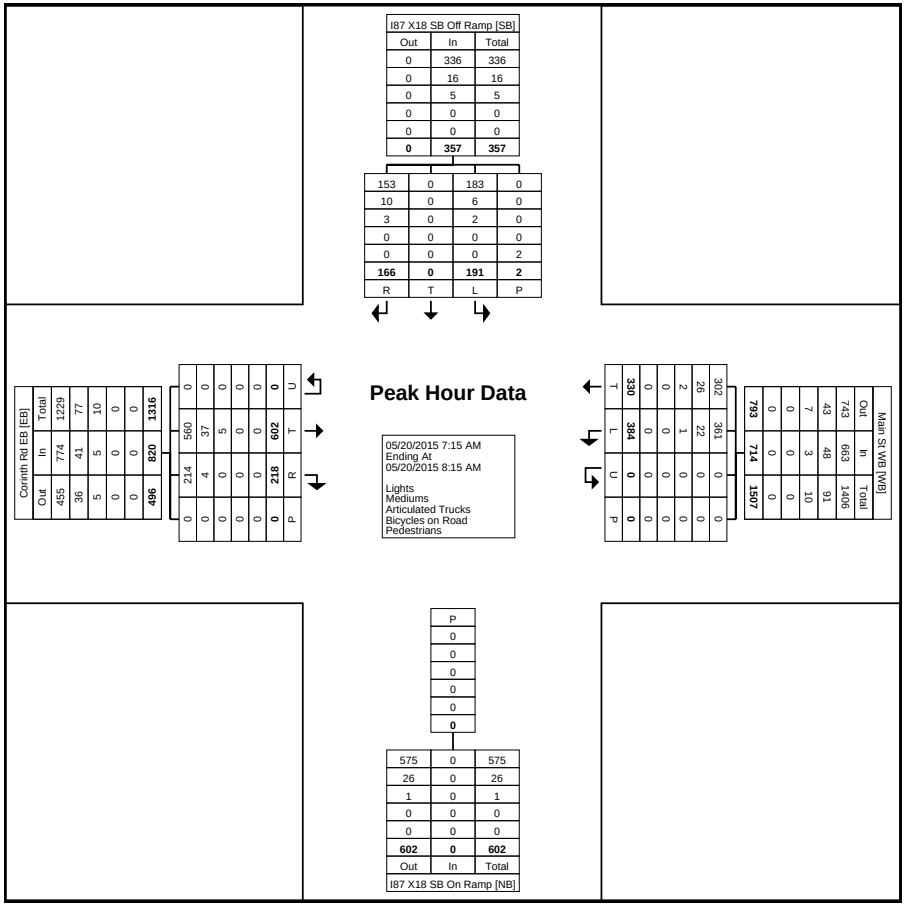
Start Date: 05/20/2015



Turning Movement Peak Hour Data Plot (7:15 AM)

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Count Name: Main St & I87 Exit 18 SB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Peak Hour Data (4:30 PM)

Start Time	I87 X18 SB Off Ramp Southbound					Main St WB Westbound					I87 X18 SB On Ramp Northbound		Corinth Rd EB Eastbound					
	Right	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
4:30 PM	61	0	41	0	102	90	99	0	0	189	0	0	40	141	0	0	181	472
4:45 PM	51	0	51	0	102	103	115	0	0	218	1	0	46	138	0	0	184	504
5:00 PM	48	1	49	0	98	101	134	0	0	235	0	0	46	121	0	0	167	500
5:15 PM	55	0	51	0	106	100	121	0	0	221	0	0	29	135	0	0	164	491
Total	215	1	192	0	408	394	469	0	0	863	1	0	161	535	0	0	696	1967
Approach %	52.7	0.2	47.1	-	-	45.7	54.3	0.0	-	-	-	-	23.1	76.9	0.0	-	-	-
Total %	10.9	0.1	9.8	-	20.7	20.0	23.8	0.0	-	43.9	-	0.0	8.2	27.2	0.0	-	35.4	-
PHF	0.881	0.250	0.941	-	0.962	0.956	0.875	0.000	-	0.918	-	0.000	0.875	0.949	0.000	-	0.946	0.976
Lights	209	0	180	-	389	382	460	0	-	842	-	0	159	513	0	-	672	1903
% Lights	97.2	0.0	93.8	-	95.3	97.0	98.1	-	-	97.6	-	-	98.8	95.9	-	-	96.6	96.7
Mediums	4	0	9	-	13	9	4	0	-	13	-	0	1	16	0	-	17	43
% Mediums	1.9	0.0	4.7	-	3.2	2.3	0.9	-	-	1.5	-	-	0.6	3.0	-	-	2.4	2.2
Articulated Trucks	2	1	3	-	6	3	5	0	-	8	-	0	1	6	0	-	7	21
% Articulated Trucks	0.9	100.0	1.6	-	1.5	0.8	1.1	-	-	0.9	-	-	0.6	1.1	-	-	1.0	1.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

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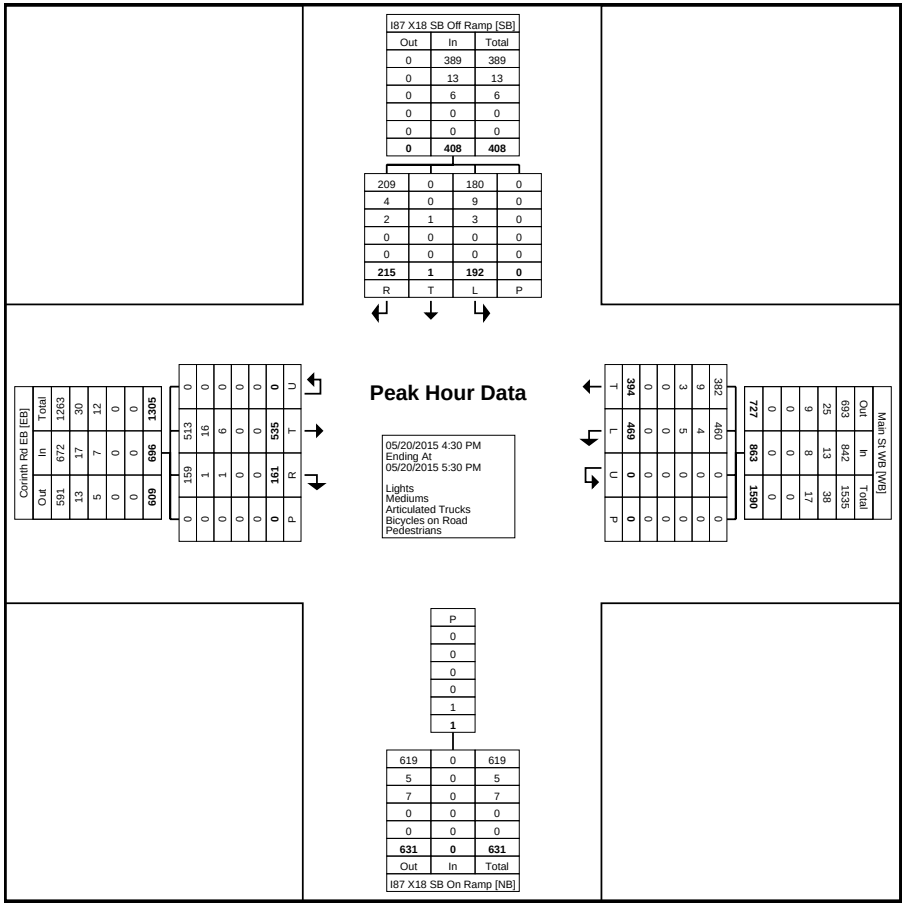
Site Code:
Start Date: 05/20/2015



Turning Movement Peak Hour Data Plot (4:30 PM)

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & I87 Exit 18 SB Ramps
Site Code:
Start Date: 05/20/2015

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main Street & I87 Exit 18 NB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Data

Start Time	I87 X18 NB On-Ramp Southbound		Main St WB Westbound						I87 X18 NB Off-Ramp Northbound						Main St EB Eastbound					
	Peds	App. Total	Right	Right on Red	Thru	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	47	3	149	0	0	199	19	45	0	20	0	84	93	70	0	0	163	446
7:15 AM	1	0	51	5	168	0	0	224	58	39	0	31	0	128	120	52	0	0	172	524
7:30 AM	0	0	53	0	150	0	0	203	93	46	0	36	0	175	137	67	0	0	204	582
7:45 AM	0	0	48	7	131	0	0	186	91	69	0	43	0	203	140	71	0	0	211	600
Hourly Total	1	0	199	15	598	0	0	812	261	199	0	130	0	590	490	260	0	0	750	2152
8:00 AM	0	0	44	1	123	0	0	168	17	93	0	30	0	140	149	49	0	0	198	506
8:15 AM	0	0	40	0	165	0	0	205	25	69	0	23	0	117	117	62	0	0	179	501
8:30 AM	0	0	59	0	151	0	0	210	36	70	0	20	0	126	120	79	0	0	199	535
8:45 AM	0	0	54	0	139	0	0	193	20	56	0	21	0	97	171	57	0	0	228	518
Hourly Total	0	0	197	1	578	0	0	776	98	288	0	94	0	480	557	247	0	0	804	2060
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	0	57	15	138	0	0	210	79	60	0	41	0	180	127	50	0	0	177	567
4:15 PM	0	0	54	6	166	0	0	226	86	60	0	52	0	198	92	53	0	0	145	569
4:30 PM	0	0	62	1	157	0	0	220	62	47	0	43	0	152	127	54	0	0	181	553
4:45 PM	0	0	61	1	155	0	0	217	88	42	0	56	0	186	118	64	0	0	182	585
Hourly Total	2	0	234	23	616	0	0	873	315	209	0	192	0	716	464	221	0	0	685	2274
5:00 PM	0	0	68	3	195	0	1	266	65	53	0	45	0	163	119	57	0	0	176	605
5:15 PM	0	0	61	0	182	0	0	243	48	63	0	50	0	161	139	51	0	0	190	594
5:30 PM	0	0	62	1	195	0	0	258	62	68	0	39	0	169	102	50	0	0	152	579
5:45 PM	0	0	47	1	162	0	0	210	55	44	0	37	2	136	103	53	0	0	156	502
Hourly Total	0	0	238	5	734	0	1	977	230	228	0	171	2	629	463	211	0	0	674	2280
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	3	0	868	44	2526	0	1	3438	904	924	0	587	2	2415	1974	939	0	0	2913	8766
Approach %	-	-	25.2	1.3	73.5	0.0	-	-	37.4	38.3	0.0	24.3	-	-	67.8	32.2	0.0	-	-	-
Total %	-	0.0	9.9	0.5	28.8	0.0	-	39.2	10.3	10.5	0.0	6.7	-	27.5	22.5	10.7	0.0	-	33.2	-
Lights	-	0	819	43	2428	0	-	3290	868	893	0	555	-	2316	1889	896	0	-	2785	8391
% Lights	-	-	94.4	97.7	96.1	-	-	95.7	96.0	96.6	-	94.5	-	95.9	95.7	95.4	-	-	95.6	95.7
Mediums	-	0	35	1	72	0	-	108	26	25	0	26	-	77	56	39	0	-	95	280
% Mediums	-	-	4.0	2.3	2.9	-	-	3.1	2.9	2.7	-	4.4	-	3.2	2.8	4.2	-	-	3.3	3.2
Articulated Trucks	-	0	13	0	25	0	-	38	10	6	0	6	-	22	23	4	0	-	27	87
% Articulated Trucks	-	-	1.5	0.0	1.0	-	-	1.1	1.1	0.6	-	1.0	-	0.9	1.2	0.4	-	-	0.9	1.0
Bicycles on Road	-	0	1	0	1	0	-	2	0	0	0	0	-	0	6	0	0	-	6	8
% Bicycles on Road	-	-	0.1	0.0	0.0	-	-	0.1	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	-	0.2	0.1
Pedestrians	3	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

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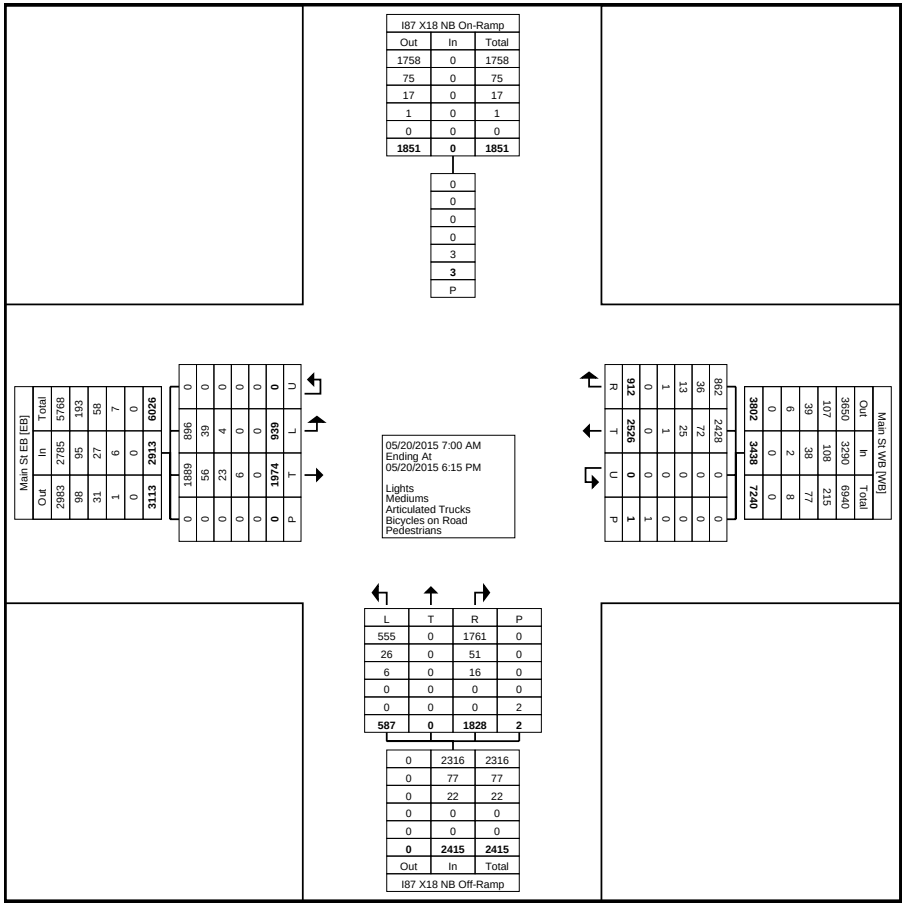
Count Name: Main Street & I87 Exit 18 NB Ramps
Site Code:
Start Date: 05/20/2015



Turning Movement Data Plot

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518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main Street & I87 Exit 18 NB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Peak Hour Data (7:15 AM)

Start Time	I87 X18 NB On-Ramp Southbound		Main St WB Westbound						I87 X18 NB Off-Ramp Northbound						Main St EB Eastbound					
	Peds	App. Total	Right	Right on Red	Thru	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:15 AM	1	0	51	5	168	0	0	224	58	39	0	31	0	128	120	52	0	0	172	524
7:30 AM	0	0	53	0	150	0	0	203	93	46	0	36	0	175	137	67	0	0	204	582
7:45 AM	0	0	48	7	131	0	0	186	91	69	0	43	0	203	140	71	0	0	211	600
8:00 AM	0	0	44	1	123	0	0	168	17	93	0	30	0	140	149	49	0	0	198	506
Total	1	0	196	13	572	0	0	781	259	247	0	140	0	646	546	239	0	0	785	2212
Approach %	-	-	25.1	1.7	73.2	0.0	-	-	40.1	38.2	0.0	21.7	-	-	69.6	30.4	0.0	-	-	-
Total %	-	0.0	8.9	0.6	25.9	0.0	-	35.3	11.7	11.2	0.0	6.3	-	29.2	24.7	10.8	0.0	-	35.5	-
PHF	-	0.000	0.925	0.464	0.851	0.000	-	0.872	0.696	0.664	0.000	0.814	-	0.796	0.916	0.842	0.000	-	0.930	0.922
Lights	-	0	176	12	544	0	-	732	247	240	0	127	-	614	522	224	0	-	746	2092
% Lights	-	-	89.8	92.3	95.1	-	-	93.7	95.4	97.2	-	90.7	-	95.0	95.6	93.7	-	-	95.0	94.6
Mediums	-	0	16	1	24	0	-	41	10	6	0	13	-	29	17	14	0	-	31	101
% Mediums	-	-	8.2	7.7	4.2	-	-	5.2	3.9	2.4	-	9.3	-	4.5	3.1	5.9	-	-	3.9	4.6
Articulated Trucks	-	0	4	0	4	0	-	8	2	1	0	0	-	3	5	1	0	-	6	17
% Articulated Trucks	-	-	2.0	0.0	0.7	-	-	1.0	0.8	0.4	-	0.0	-	0.5	0.9	0.4	-	-	0.8	0.8
Bicycles on Road	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2	0	0	-	2	2
% Bicycles on Road	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	-	0.3	0.1
Pedestrians	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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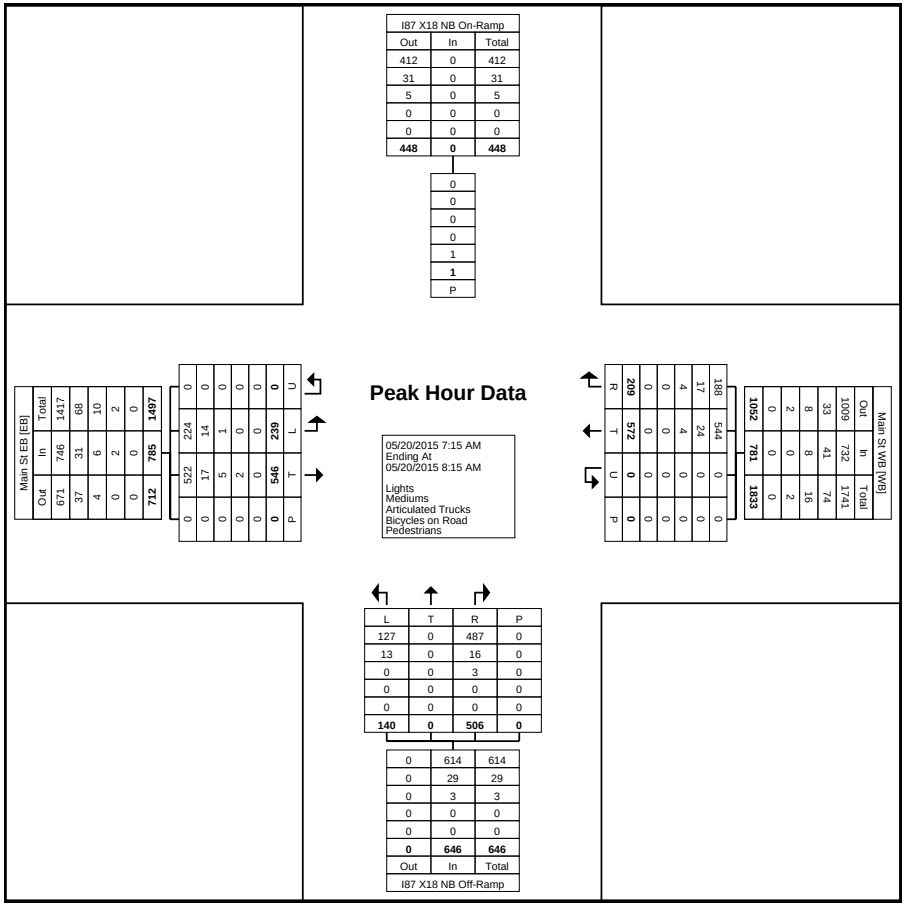
Count Name: Main Street & I87 Exit 18 NB Ramps
Site Code:
Start Date: 05/20/2015



Turning Movement Peak Hour Data Plot (7:15 AM)

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518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main Street & I87 Exit 18 NB Ramps
Site Code:
Start Date: 05/20/2015

Turning Movement Peak Hour Data (4:45 PM)

Start Time	I87 X18 NB On-Ramp Southbound		Main St WB Westbound						I87 X18 NB Off-Ramp Northbound						Main St EB Eastbound					
	Peds	App. Total	Right	Right on Red	Thru	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:45 PM	0	0	61	1	155	0	0	217	88	42	0	56	0	186	118	64	0	0	182	585
5:00 PM	0	0	68	3	195	0	1	266	65	53	0	45	0	163	119	57	0	0	176	605
5:15 PM	0	0	61	0	182	0	0	243	48	63	0	50	0	161	139	51	0	0	190	594
5:30 PM	0	0	62	1	195	0	0	258	62	68	0	39	0	169	102	50	0	0	152	579
Total	0	0	252	5	727	0	1	984	263	226	0	190	0	679	478	222	0	0	700	2363
Approach %	-	-	25.6	0.5	73.9	0.0	-	-	38.7	33.3	0.0	28.0	-	-	68.3	31.7	0.0	-	-	-
Total %	-	0.0	10.7	0.2	30.8	0.0	-	41.6	11.1	9.6	0.0	8.0	-	28.7	20.2	9.4	0.0	-	29.6	-
PHF	-	0.000	0.926	0.417	0.932	0.000	-	0.925	0.747	0.831	0.000	0.848	-	0.913	0.860	0.867	0.000	-	0.921	0.976
Lights	-	0	244	5	716	0	-	965	254	222	0	186	-	662	457	216	0	-	673	2300
% Lights	-	-	96.8	100.0	98.5	-	-	98.1	96.6	98.2	-	97.9	-	97.5	95.6	97.3	-	-	96.1	97.3
Mediums	-	0	5	0	6	0	-	11	6	3	0	2	-	11	16	4	0	-	20	42
% Mediums	-	-	2.0	0.0	0.8	-	-	1.1	2.3	1.3	-	1.1	-	1.6	3.3	1.8	-	-	2.9	1.8
Articulated Trucks	-	0	2	0	5	0	-	7	3	1	0	2	-	6	4	2	0	-	6	19
% Articulated Trucks	-	-	0.8	0.0	0.7	-	-	0.7	1.1	0.4	-	1.1	-	0.9	0.8	0.9	-	-	0.9	0.8
Bicycles on Road	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1	0	0	-	1	2
% Bicycles on Road	-	-	0.4	0.0	0.0	-	-	0.1	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	-	0.1	0.1
Pedestrians	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-

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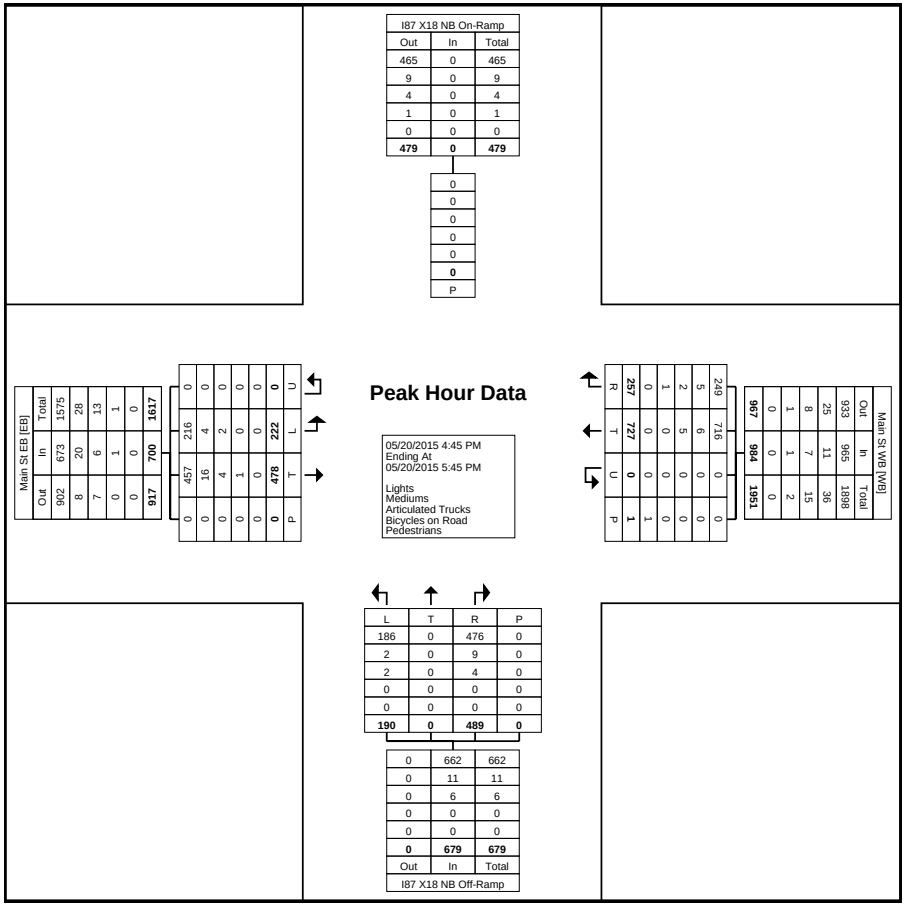

Turning Movement Peak Hour Data Plot (4:45 PM)

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Site Code:
Start Date: 05/20/2015

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Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Big Boom Rd
Site Code:
Start Date: 05/21/2015

Turning Movement Data

Start Time	Media Drive SB Southbound						Main Street WB Westbound						Big Boom Road NB Northbound						Main Street EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	41	0	2	0	0	43	1	141	3	0	0	145	5	1	6	0	0	12	3	139	14	0	0	156	356
7:15 AM	51	1	2	0	1	54	4	155	11	0	0	170	1	1	11	0	0	13	1	145	12	0	0	158	395
7:30 AM	57	3	5	0	0	65	3	138	2	0	0	143	8	1	4	0	0	13	2	208	31	0	0	241	462
7:45 AM	38	0	6	0	0	44	7	160	4	0	0	171	6	2	11	0	0	19	3	221	50	0	0	274	508
Hourly Total	187	4	15	0	1	206	15	594	20	0	0	629	20	5	32	0	0	57	9	713	107	0	0	829	1721
8:00 AM	33	3	0	0	0	36	1	137	6	0	0	144	3	1	9	0	0	13	3	184	36	0	0	223	416
8:15 AM	35	1	3	0	0	39	3	148	5	0	0	156	4	1	7	0	0	12	6	192	25	0	0	223	430
8:30 AM	40	0	4	0	0	44	4	134	5	0	0	143	6	1	9	0	0	16	1	191	26	0	0	218	421
8:45 AM	29	8	5	0	0	42	6	144	9	0	0	159	6	0	10	0	0	16	4	197	36	0	0	237	454
Hourly Total	137	12	12	0	0	161	14	563	25	0	0	602	19	3	35	0	0	57	14	764	123	0	0	901	1721
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	56	6	6	0	0	68	4	157	4	0	0	165	4	0	6	0	0	10	1	164	34	0	0	199	442
4:15 PM	46	5	4	0	1	55	3	169	5	0	0	177	9	1	10	0	0	20	3	225	28	0	0	256	508
4:30 PM	66	3	3	0	0	72	3	169	4	0	0	176	6	1	10	0	0	17	2	197	27	0	0	226	491
4:45 PM	52	2	4	0	0	58	1	165	9	0	0	175	9	2	10	0	0	21	2	172	25	0	0	199	453
Hourly Total	220	16	17	0	1	253	11	660	22	0	0	693	28	4	36	0	0	68	8	758	114	0	0	880	1894
5:00 PM	52	2	3	0	0	57	1	169	6	0	0	176	5	1	16	0	0	22	3	194	35	0	0	232	487
5:15 PM	57	2	2	1	0	62	4	155	7	0	1	166	3	1	5	0	3	9	1	204	53	1	0	259	496
5:30 PM	45	4	6	0	0	55	5	170	9	0	0	184	7	5	13	0	0	25	1	204	34	0	0	239	503
5:45 PM	30	2	8	0	1	40	4	128	8	0	0	140	10	0	9	0	0	19	3	196	36	0	0	235	434
Hourly Total	184	10	19	1	1	214	14	622	30	0	1	666	25	7	43	0	3	75	8	798	158	1	0	965	1920
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	728	42	63	1	3	834	54	2439	97	0	1	2590	92	19	146	0	3	257	39	3033	502	1	0	3575	7256
Approach %	87.3	5.0	7.6	0.1	-	-	2.1	94.2	3.7	0.0	-	-	35.8	7.4	56.8	0.0	-	-	1.1	84.8	14.0	0.0	-	-	-
Total %	10.0	0.6	0.9	0.0	-	11.5	0.7	33.6	1.3	0.0	-	35.7	1.3	0.3	2.0	0.0	-	3.5	0.5	41.8	6.9	0.0	-	49.3	-
Lights	710	40	62	1	-	813	52	2317	86	0	-	2455	81	18	116	0	-	215	31	2935	496	1	-	3463	6946
% Lights	97.5	95.2	98.4	100.0	-	97.5	96.3	95.0	88.7	-	-	94.8	88.0	94.7	79.5	-	-	83.7	79.5	96.8	98.8	100.0	-	96.9	95.7
Mediums	17	2	1	0	-	20	2	90	11	0	-	103	11	1	27	0	-	39	7	76	6	0	-	89	251
% Mediums	2.3	4.8	1.6	0.0	-	2.4	3.7	3.7	11.3	-	-	4.0	12.0	5.3	18.5	-	-	15.2	17.9	2.5	1.2	0.0	-	2.5	3.5
Articulated Trucks	1	0	0	0	-	1	0	32	0	0	-	32	0	0	3	0	-	3	1	21	0	0	-	22	58
% Articulated Trucks	0.1	0.0	0.0	0.0	-	0.1	0.0	1.3	0.0	-	-	1.2	0.0	0.0	2.1	-	-	1.2	2.6	0.7	0.0	0.0	-	0.6	0.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	-	-

% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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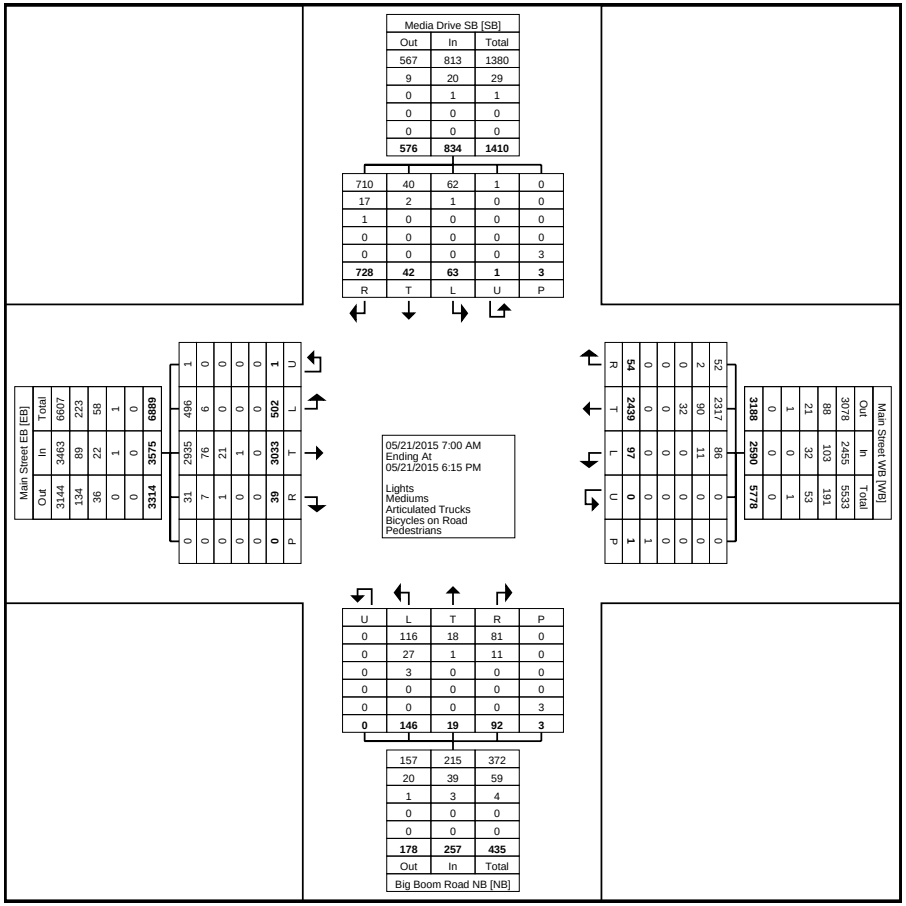
Count Name: Main St & Big Boom Rd
Site Code:
Start Date: 05/21/2015



Turning Movement Data Plot

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Big Boom Rd
Site Code:
Start Date: 05/21/2015

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Media Drive SB Southbound						Main Street WB Westbound						Big Boom Road NB Northbound						Main Street EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	57	3	5	0	0	65	3	138	2	0	0	143	8	1	4	0	0	13	2	208	31	0	0	241	462
7:45 AM	38	0	6	0	0	44	7	160	4	0	0	171	6	2	11	0	0	19	3	221	50	0	0	274	508
8:00 AM	33	3	0	0	0	36	1	137	6	0	0	144	3	1	9	0	0	13	3	184	36	0	0	223	416
8:15 AM	35	1	3	0	0	39	3	148	5	0	0	156	4	1	7	0	0	12	6	192	25	0	0	223	430
Total	163	7	14	0	0	184	14	583	17	0	0	614	21	5	31	0	0	57	14	805	142	0	0	961	1816
Approach %	88.6	3.8	7.6	0.0	-	-	2.3	95.0	2.8	0.0	-	-	36.8	8.8	54.4	0.0	-	-	1.5	83.8	14.8	0.0	-	-	-
Total %	9.0	0.4	0.8	0.0	-	10.1	0.8	32.1	0.9	0.0	-	33.8	1.2	0.3	1.7	0.0	-	3.1	0.8	44.3	7.8	0.0	-	52.9	-
PHF	0.715	0.583	0.583	0.000	-	0.708	0.500	0.911	0.708	0.000	-	0.898	0.656	0.625	0.705	0.000	-	0.750	0.583	0.911	0.710	0.000	-	0.877	0.894
Lights	158	7	14	0	-	179	14	542	15	0	-	571	18	5	23	0	-	46	12	781	137	0	-	930	1726
% Lights	96.9	100.0	100.0	-	-	97.3	100.0	93.0	88.2	-	-	93.0	85.7	100.0	74.2	-	-	80.7	85.7	97.0	96.5	-	-	96.8	95.0
Mediums	5	0	0	0	-	5	0	36	2	0	-	38	3	0	6	0	-	9	2	18	5	0	-	25	77
% Mediums	3.1	0.0	0.0	-	-	2.7	0.0	6.2	11.8	-	-	6.2	14.3	0.0	19.4	-	-	15.8	14.3	2.2	3.5	-	-	2.6	4.2
Articulated Trucks	0	0	0	0	-	0	0	5	0	0	-	5	0	0	2	0	-	2	0	6	0	0	-	6	13
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.9	0.0	-	-	0.8	0.0	0.0	6.5	-	-	3.5	0.0	0.7	0.0	-	-	0.6	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

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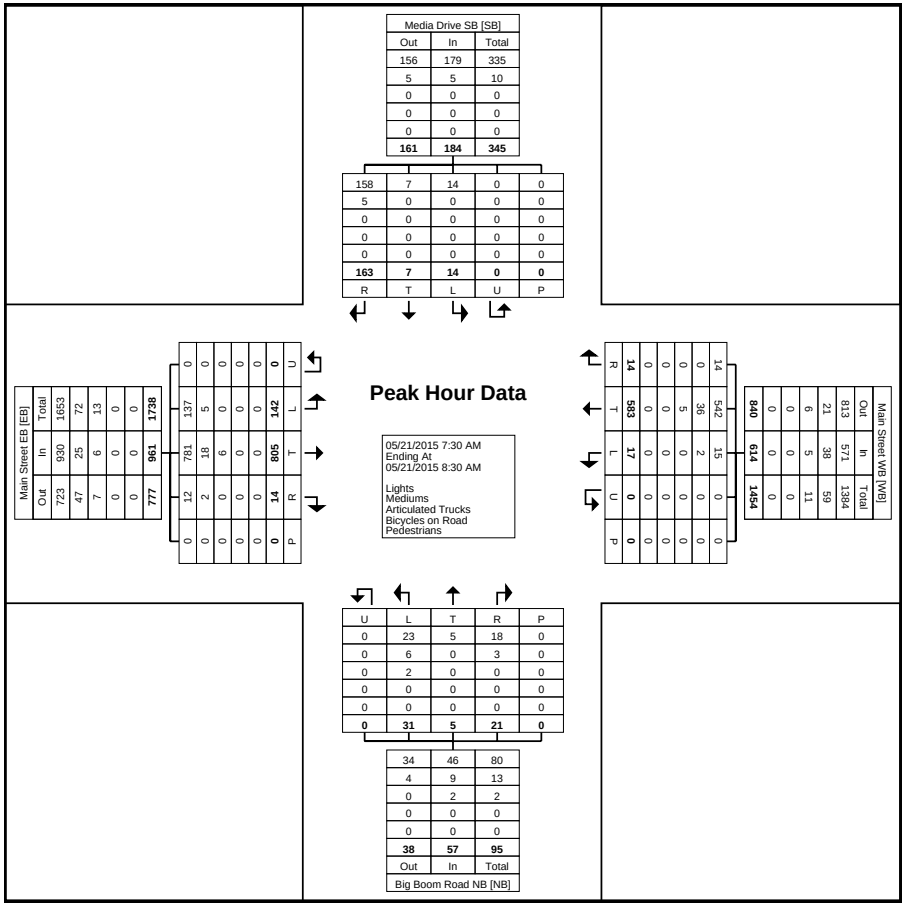
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Big Boom Rd
Site Code:
Start Date: 05/21/2015



Turning Movement Peak Hour Data Plot (7:30 AM)

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3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Big Boom Rd
Site Code:
Start Date: 05/21/2015

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Media Drive SB Southbound						Main Street WB Westbound						Big Boom Road NB Northbound						Main Street EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:15 PM	46	5	4	0	1	55	3	169	5	0	0	177	9	1	10	0	0	20	3	225	28	0	0	256	508
4:30 PM	66	3	3	0	0	72	3	169	4	0	0	176	6	1	10	0	0	17	2	197	27	0	0	226	491
4:45 PM	52	2	4	0	0	58	1	165	9	0	0	175	9	2	10	0	0	21	2	172	25	0	0	199	453
5:00 PM	52	2	3	0	0	57	1	169	6	0	0	176	5	1	16	0	0	22	3	194	35	0	0	232	487
Total	216	12	14	0	1	242	8	672	24	0	0	704	29	5	46	0	0	80	10	788	115	0	0	913	1939
Approach %	89.3	5.0	5.8	0.0	-	-	1.1	95.5	3.4	0.0	-	-	36.3	6.3	57.5	0.0	-	-	1.1	86.3	12.6	0.0	-	-	-
Total %	11.1	0.6	0.7	0.0	-	12.5	0.4	34.7	1.2	0.0	-	36.3	1.5	0.3	2.4	0.0	-	4.1	0.5	40.6	5.9	0.0	-	47.1	-
PHF	0.818	0.600	0.875	0.000	-	0.840	0.667	0.994	0.667	0.000	-	0.994	0.806	0.625	0.719	0.000	-	0.909	0.833	0.876	0.821	0.000	-	0.892	0.954
Lights	211	11	14	0	-	236	8	648	22	0	-	678	28	4	39	0	-	71	7	765	114	0	-	886	1871
% Lights	97.7	91.7	100.0	-	-	97.5	100.0	96.4	91.7	-	-	96.3	96.6	80.0	84.8	-	-	88.8	70.0	97.1	99.1	-	-	97.0	96.5
Mediums	4	1	0	0	-	5	0	19	2	0	-	21	1	1	7	0	-	9	3	18	1	0	-	22	57
% Mediums	1.9	8.3	0.0	-	-	2.1	0.0	2.8	8.3	-	-	3.0	3.4	20.0	15.2	-	-	11.3	30.0	2.3	0.9	-	-	2.4	2.9
Articulated Trucks	1	0	0	0	-	1	0	5	0	0	-	5	0	0	0	0	-	0	0	4	0	0	-	4	10
% Articulated Trucks	0.5	0.0	0.0	-	-	0.4	0.0	0.7	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	0.4	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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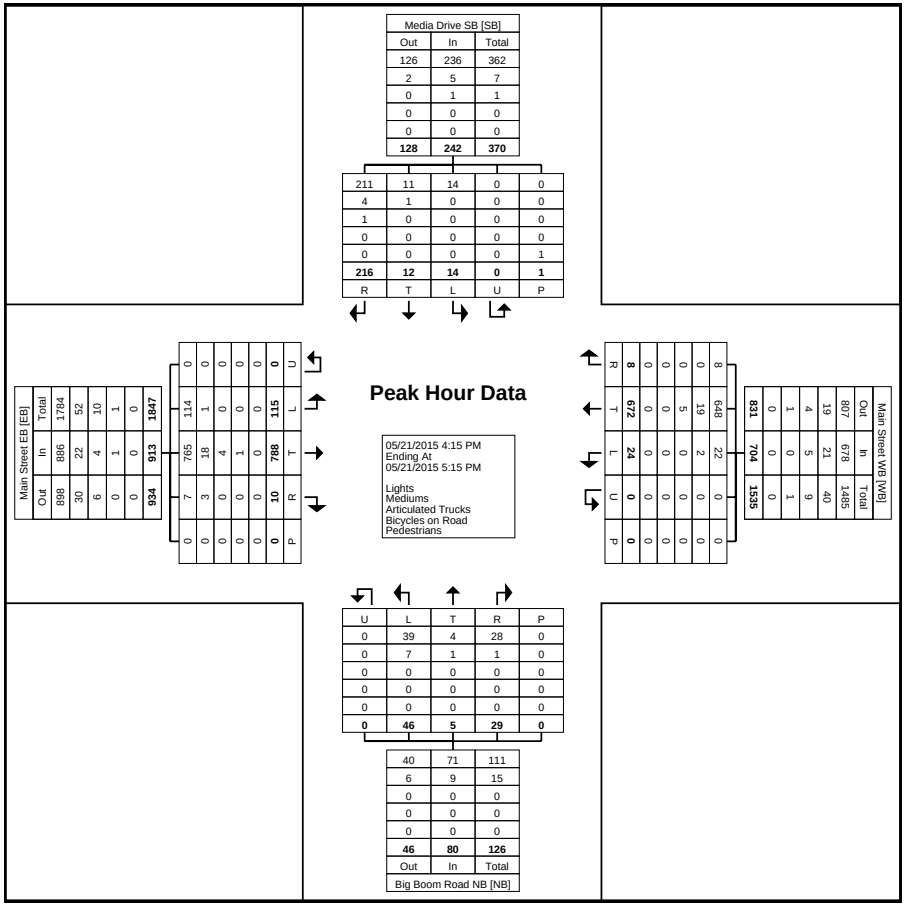
Site Code:
Start Date: 05/21/2015



Turning Movement Peak Hour Data Plot (4:15 PM)

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Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015
Page No : 1

Groups Printed- Passenger Cars - SU Trucks - MU Trucks

	Pine Street From North					Main Street From East					Pine Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	9
07:15 AM	10	0	2	0	12	1	0	1	0	2	0	0	0	0	0	0	0	3	0	3	17
07:30 AM	12	0	4	0	16	2	0	0	0	2	1	0	2	0	3	0	0	6	0	6	27
07:45 AM	5	0	2	0	7	4	0	0	0	4	0	0	0	0	0	0	0	11	0	11	22
Total	32	0	8	0	40	7	0	1	0	8	1	0	2	0	3	0	0	24	0	24	75
08:00 AM	5	0	1	0	6	1	0	0	0	1	0	0	1	0	1	0	0	7	0	7	15
08:15 AM	6	0	2	0	8	2	0	0	0	2	0	0	1	0	1	1	0	6	0	7	18
08:30 AM	9	0	1	0	10	1	0	0	0	1	0	0	1	0	1	0	0	7	0	7	19
08:45 AM	4	0	5	0	9	4	0	0	0	4	0	0	0	0	0	0	0	4	0	4	17
Total	24	0	9	0	33	8	0	0	0	8	0	0	3	0	3	1	0	24	0	25	69
Grand Total	56	0	17	0	73	15	0	1	0	16	1	0	5	0	6	1	0	48	0	49	144
Apprch %	76.7	0	23.3	0		93.8	0	6.2	0		16.7	0	83.3	0		2	0	98	0		
Total %	38.9	0	11.8	0	50.7	10.4	0	0.7	0	11.1	0.7	0	3.5	0	4.2	0.7	0	33.3	0	34	
Passenger Cars	51	0	16	0	67	14	0	1	0	15	1	0	5	0	6	1	0	44	0	45	133
% Passenger Cars	91.1	0	94.1	0	91.8	93.3	0	100	0	93.8	100	0	100	0	100	100	0	91.7	0	91.8	92.4
SU Trucks	3	0	1	0	4	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2	7
% SU Trucks	5.4	0	5.9	0	5.5	6.7	0	0	0	6.2	0	0	0	0	0	0	0	4.2	0	4.1	4.9
MU Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
% MU Trucks	3.6	0	0	0	2.7	0	0	0	0	0	0	0	0	0	0	0	0	4.2	0	4.1	2.8

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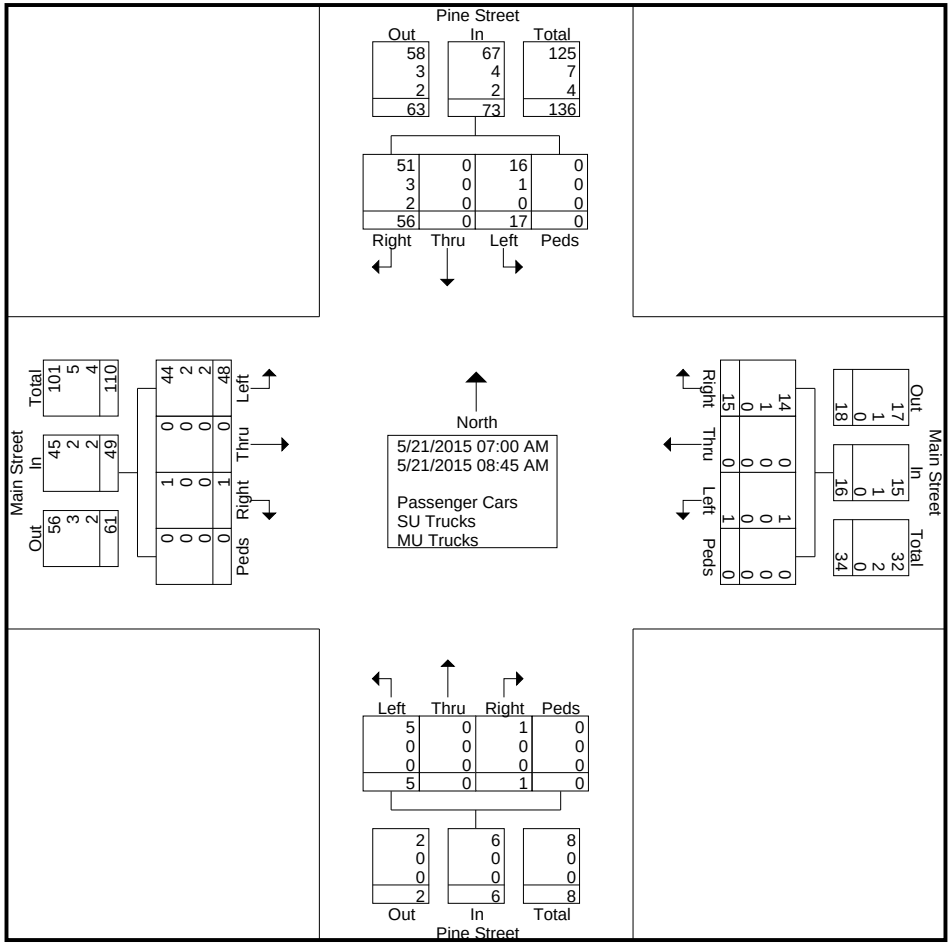
Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015
Page No : 2



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Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015

	Pine Street From North					Main Street From East					Pine Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**12**	0	**4**	0	**16**	2	0	0	0	2	**1**	0	**2**	0	**3**	0	0	6	0	6	**27**
07:45 AM	5	0	2	0	7	**4**	0	0	0	**4**	0	0	0	0	0	0	0	**11**	0	**11**	22
08:00 AM	5	0	1	0	6	1	0	0	0	1	0	0	1	0	1	0	0	7	0	7	15
08:15 AM	6	0	2	0	8	2	0	0	0	2	0	0	1	0	1	**1**	0	6	0	7	18
Total Volume	28	0	9	0	37	9	0	0	0	9	1	0	4	0	5	1	0	30	0	31	82
% App. Total	75.7	0	24.3	0		100	0	0	0		20	0	80	0		3.2	0	96.8	0		
PHF	.583	.000	.563	.000	.578	.563	.000	.000	.000	.563	.250	.000	.500	.000	.417	.250	.000	.682	.000	.705	.759
Passenger Cars	24	0	9	0	33	8	0	0	0	8	1	0	4	0	5	1	0	29	0	30	76
% Passenger Cars	85.7	0	100	0	89.2	88.9	0	0	0	88.9	100	0	100	0	100	100	0	96.7	0	96.8	92.7
SU Trucks	3	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
% SU Trucks	10.7	0	0	0	8.1	11.1	0	0	0	11.1	0	0	0	0	0	0	0	0	0	0	4.9
MU Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
% MU Trucks	3.6	0	0	0	2.7	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	3.2	2.4

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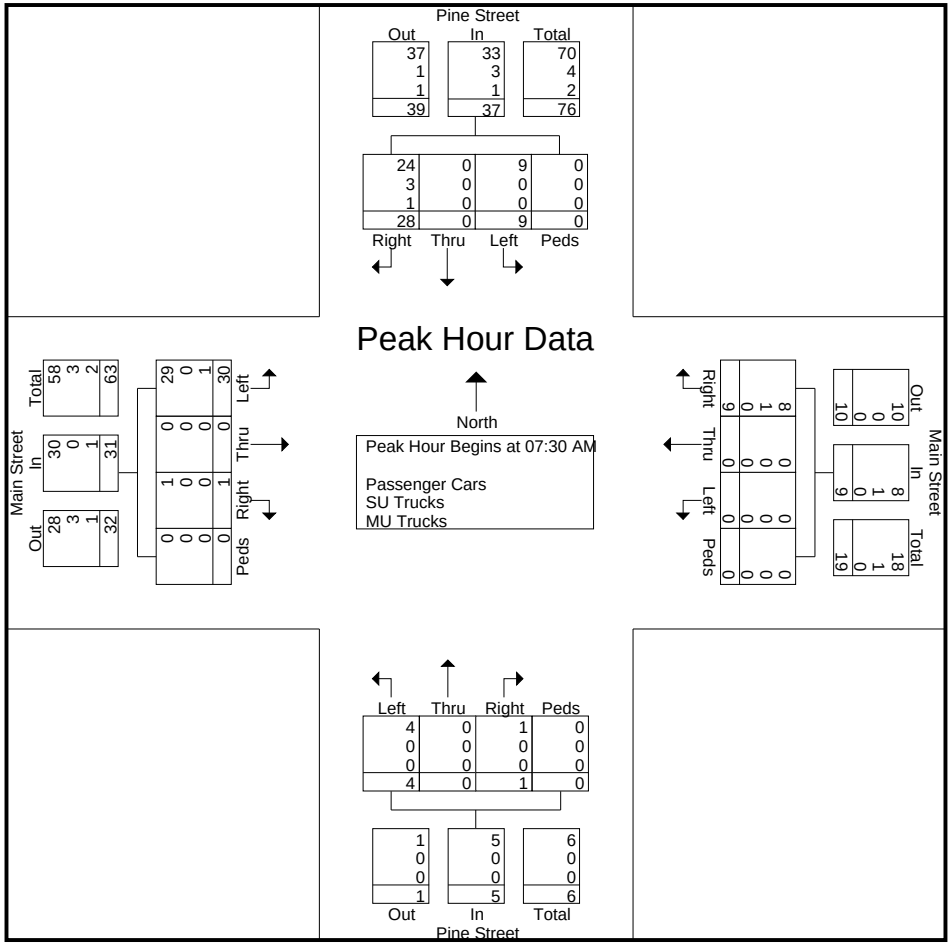
Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015
Page No : 4



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Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015
Page No : 5

	Pine Street From North					Main Street From East					Pine Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:15 AM					07:15 AM					07:30 AM					07:45 AM					
+0 mins.	10	0	2	0	12	1	0	**1**	0	2	**1**	0	**2**	0	**3**	0	0	**11**	0	**11**	
+15 mins.	**12**	0	**4**	0	**16**	2	0	0	0	2	0	0	0	0	0	0	0	7	0	7	
+30 mins.	5	0	2	0	7	**4**	0	0	0	**4**	0	0	1	0	1	**1**	0	6	0	7	
+45 mins.	5	0	1	0	6	1	0	0	0	1	0	0	1	0	1	0	0	7	0	7	
Total Volume	32	0	9	0	41	8	0	1	0	9	1	0	4	0	5	1	0	31	0	32	
% App. Total	78	0	22	0		88.9	0	11.1	0		20	0	80	0		3.1	0	96.9	0		
PHF	.667	.000	.563	.000	.641	.500	.000	.250	.000	.563	.250	.000	.500	.000	.417	.250	.000	.705	.000	.727	
Passenger Cars	27	0	9	0	36	7	0	1	0	8	1	0	4	0	5	1	0	28	0	29	
% Passenger Cars	84.4	0	100	0	87.8	87.5	0	100	0	88.9	100	0	100	0	100	100	0	90.3	0	90.6	
SU Trucks	3	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2	
% SU Trucks	9.4	0	0	0	7.3	12.5	0	0	0	11.1	0	0	0	0	0	0	0	6.5	0	6.2	
MU Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
% MU Trucks	6.2	0	0	0	4.9	0	0	0	0	0	0	0	0	0	0	0	0	3.2	0	3.1	

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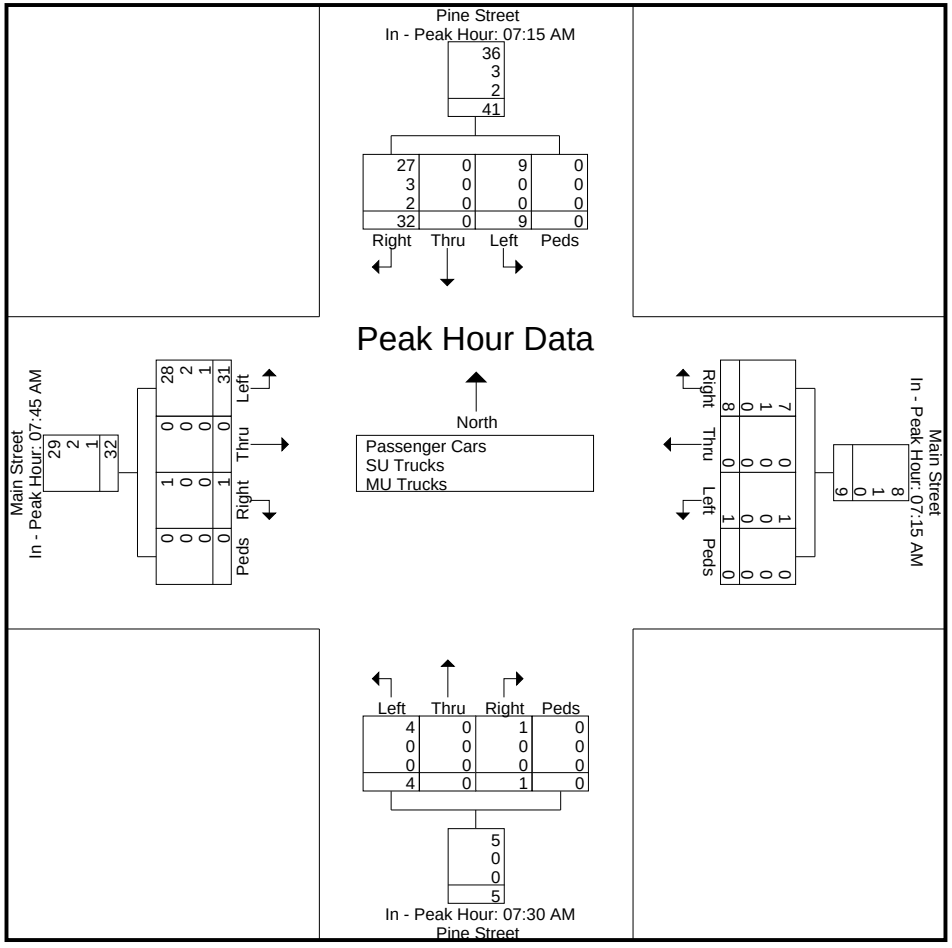
Main Street & Pine Street
Town of Queensbury, Warren County, NY
CHA File 30230

File Name : Main-Pine AM
Site Code : 00000003
Start Date : 5/21/2015
Page No : 6



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Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015
Page No : 1

Groups Printed- Passenger Cars - SU Trucks - MU Trucks

	Pine St From North					Main St From East					Pine St From South					Main St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	5	0	1	0	6	2	0	0	0	2	0	0	1	1	2	1	0	11	0	12	22
04:45 PM	5	0	1	0	6	3	0	0	0	3	1	0	0	0	1	0	0	11	0	11	21
Total	10	0	2	0	12	5	0	0	0	5	1	0	1	1	3	1	0	22	0	23	43
05:00 PM	4	0	3	0	7	4	0	0	0	4	1	0	1	0	2	0	0	15	0	15	28
05:15 PM	6	0	1	0	7	6	0	0	0	6	0	0	0	0	0	0	0	15	0	15	28
05:30 PM	6	0	3	0	9	4	0	0	0	4	1	1	1	0	3	3	0	12	0	15	31
05:45 PM	10	0	2	0	12	1	0	1	0	2	0	1	0	0	1	0	0	4	0	4	19
Total	26	0	9	0	35	15	0	1	0	16	2	2	2	0	6	3	0	46	0	49	106
Grand Total	36	0	11	0	47	20	0	1	0	21	3	2	3	1	9	4	0	68	0	72	149
Apprch %	76.6	0	23.4	0		95.2	0	4.8	0		33.3	22.2	33.3	11.1		5.6	0	94.4	0		
Total %	24.2	0	7.4	0	31.5	13.4	0	0.7	0	14.1	2	1.3	2	0.7	6	2.7	0	45.6	0	48.3	
Passenger Cars	36	0	8	0	44	19	0	1	0	20	3	2	3	1	9	4	0	66	0	70	143
% Passenger Cars	100	0	72.7	0	93.6	95	0	100	0	95.2	100	100	100	100	100	100	0	97.1	0	97.2	96
SU Trucks	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
% SU Trucks	0	0	27.3	0	6.4	0	0	0	0	0	0	0	0	0	0	0	0	2.9	0	2.8	3.4
MU Trucks	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% MU Trucks	0	0	0	0	0	5	0	0	0	4.8	0	0	0	0	0	0	0	0	0	0	0.7

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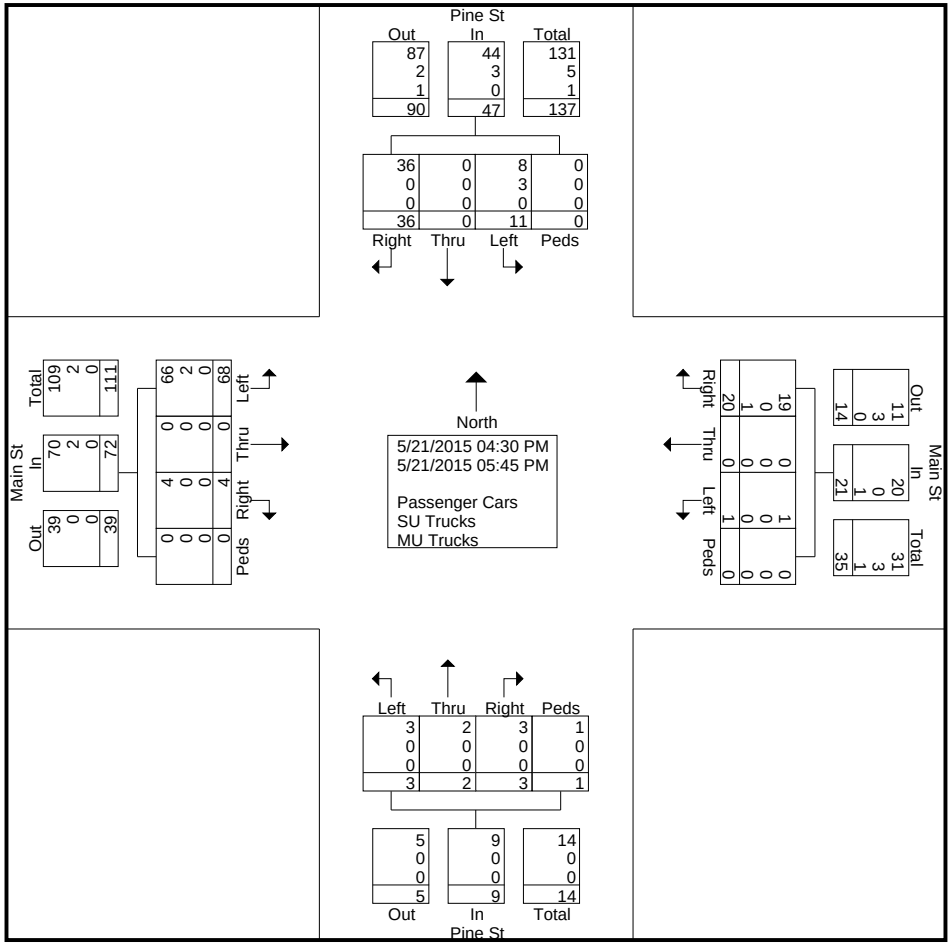
Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015
Page No : 2



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Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015

	Pine St From North					Main St From East					Pine St From South					Main St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	5	0	1	0	6	3	0	0	0	3	**1**	0	0	0	1	0	0	11	0	11	21
05:00 PM	4	0	**3**	0	7	4	0	0	0	4	1	0	**1**	0	2	0	0	**15**	0	**15**	28
05:15 PM	**6**	0	1	0	7	**6**	0	0	0	**6**	0	0	0	0	0	0	0	15	0	15	28
05:30 PM	6	0	3	0	**9**	4	0	0	0	4	1	**1**	1	0	**3**	**3**	0	12	0	15	**31**
Total Volume	21	0	8	0	29	17	0	0	0	17	3	1	2	0	6	3	0	53	0	56	108
% App. Total	72.4	0	27.6	0		100	0	0	0		50	16.7	33.3	0		5.4	0	94.6	0		
PHF	.875	.000	.667	.000	.806	.708	.000	.000	.000	.708	.750	.250	.500	.000	.500	.250	.000	.883	.000	.933	.871
Passenger Cars	21	0	6	0	27	16	0	0	0	16	3	1	2	0	6	3	0	51	0	54	103
% Passenger Cars	100	0	75.0	0	93.1	94.1	0	0	0	94.1	100	100	100	0	100	100	0	96.2	0	96.4	95.4
SU Trucks	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
% SU Trucks	0	0	25.0	0	6.9	0	0	0	0	0	0	0	0	0	0	0	0	3.8	0	3.6	3.7
MU Trucks	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% MU Trucks	0	0	0	0	0	5.9	0	0	0	5.9	0	0	0	0	0	0	0	0	0	0	0.9

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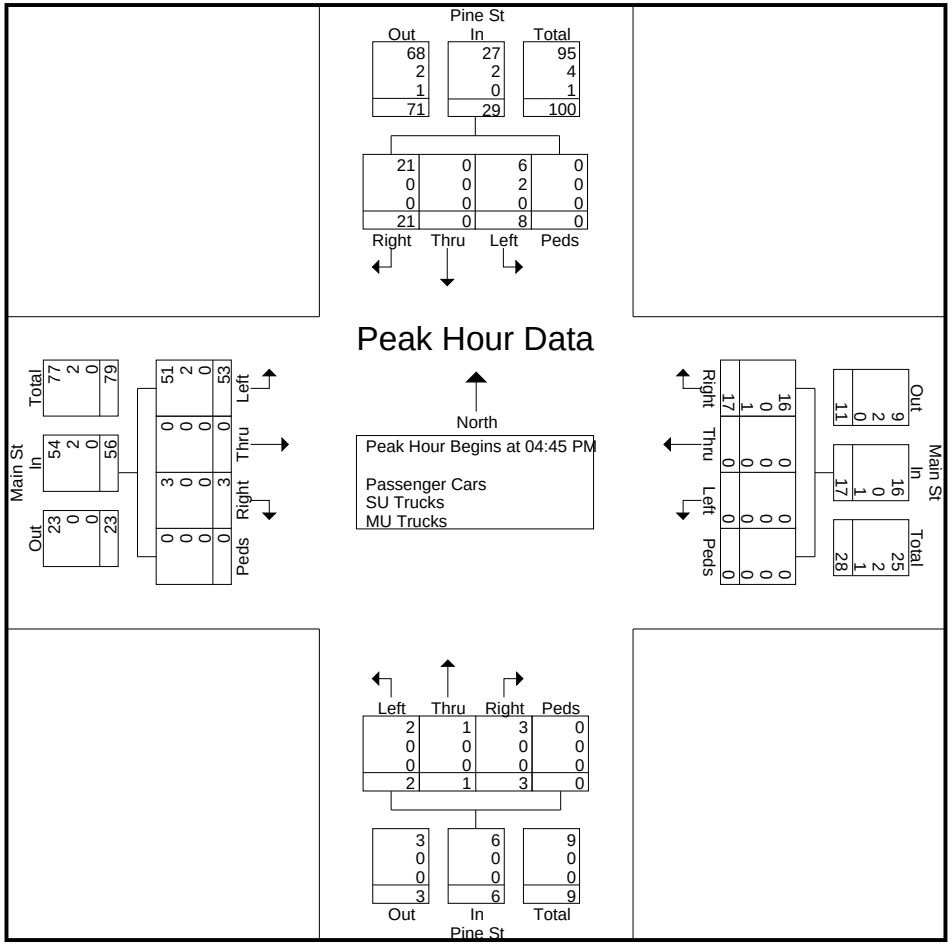
Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015
Page No : 4



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Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015
Page No : 5

	Pine St From North					Main St From East					Pine St From South					Main St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	05:00 PM					04:45 PM					04:45 PM					04:45 PM					
+0 mins.	4	0	**3**	0	7	3	0	0	0	3	**1**	0	0	0	1	0	0	11	0	11	
+15 mins.	6	0	1	0	7	4	0	0	0	4	1	0	**1**	0	2	0	0	**15**	0	**15**	
+30 mins.	6	0	3	0	9	**6**	0	0	0	**6**	0	0	0	0	0	0	0	15	0	15	
+45 mins.	**10**	0	2	0	**12**	4	0	0	0	4	1	**1**	1	0	**3**	**3**	0	12	0	15	
Total Volume	26	0	9	0	35	17	0	0	0	17	3	1	2	0	6	3	0	53	0	56	
% App. Total	74.3	0	25.7	0		100	0	0	0		50	16.7	33.3	0		5.4	0	94.6	0		
PHF	.650	.000	.750	.000	.729	.708	.000	.000	.000	.708	.750	.250	.500	.000	.500	.250	.000	.883	.000	.933	
Passenger Cars	26	0	7	0	33	16	0	0	0	16	3	1	2	0	6	3	0	51	0	54	
% Passenger Cars	100	0	77.8	0	94.3	94.1	0	0	0	94.1	100	100	100	0	100	100	0	96.2	0	96.4	
SU Trucks	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
% SU Trucks	0	0	22.2	0	5.7	0	0	0	0	0	0	0	0	0	0	0	0	3.8	0	3.6	
MU Trucks	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
% MU Trucks	0	0	0	0	0	5.9	0	0	0	5.9	0	0	0	0	0	0	0	0	0	0	

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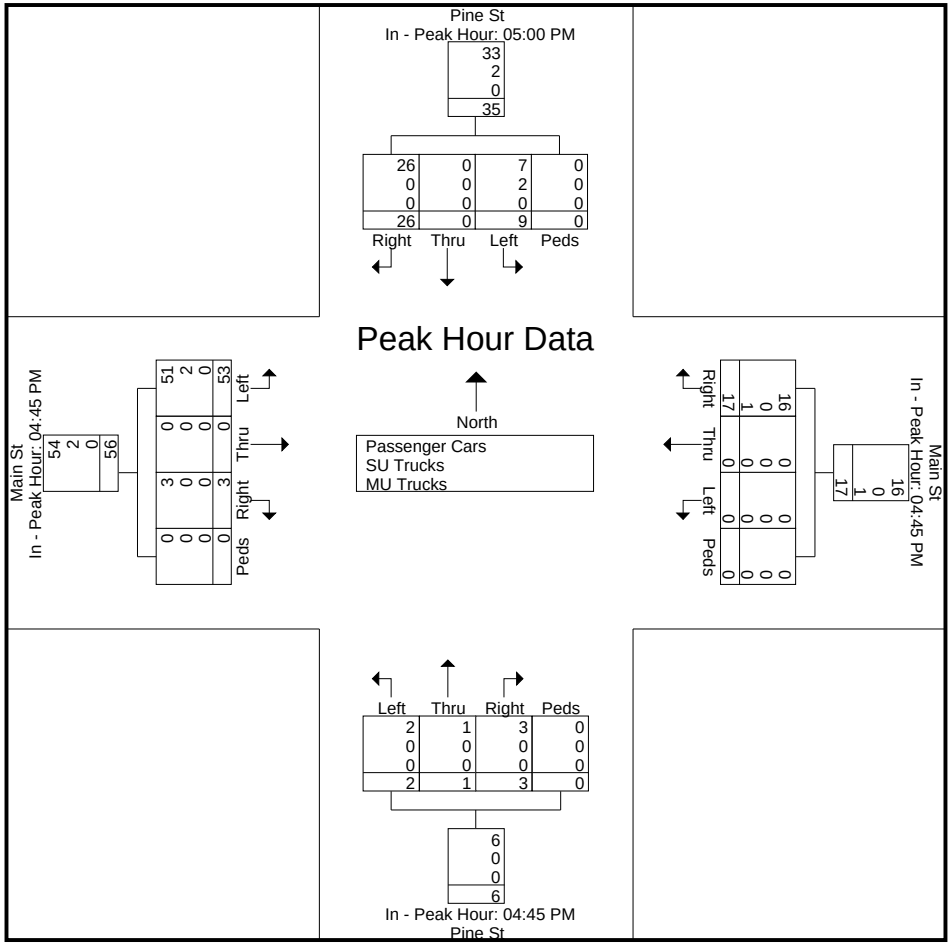
Main Street and Pine Street
Town of Queensbury, Warren County, NY
CHA File: 30230

File Name : Main-Pine PM
Site Code : 00000004
Start Date : 5/21/2015
Page No : 6



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518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015

Turning Movement Data

Start Time	Richardson St SB Southbound						Main St WB Westbound						Richardson NB Northbound						Main St EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	2	1	6	0	0	9	0	101	0	0	0	101	0	2	19	0	0	21	8	119	3	0	0	130	261
7:15 AM	2	1	5	0	1	8	2	115	0	0	0	117	0	1	20	0	0	21	2	130	1	0	0	133	279
7:30 AM	3	4	5	0	0	12	1	112	0	0	0	113	1	4	30	0	0	35	17	174	3	0	0	194	354
7:45 AM	1	2	8	0	0	11	4	125	0	0	0	129	2	3	19	0	0	24	25	196	2	0	0	223	387
Hourly Total	8	8	24	0	1	40	7	453	0	0	0	460	3	10	88	0	0	101	52	619	9	0	0	680	1281
8:00 AM	4	5	7	0	0	16	0	123	0	0	0	123	2	2	23	0	0	27	10	159	3	0	0	172	338
8:15 AM	3	4	8	0	0	15	2	115	0	0	0	117	1	3	15	0	0	19	7	165	2	0	0	174	325
8:30 AM	1	1	6	0	0	8	1	132	0	0	0	133	1	3	14	0	0	18	8	174	1	0	0	183	342
8:45 AM	7	2	3	0	0	12	1	106	0	0	0	107	1	0	17	0	0	18	9	173	4	0	0	186	323
Hourly Total	15	12	24	0	0	51	4	476	0	0	0	480	5	8	69	0	0	82	34	671	10	0	0	715	1328
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:00 PM	2	2	3	0	0	7	4	147	1	0	0	152	0	6	20	0	0	26	10	150	2	0	0	162	347
4:15 PM	3	3	1	0	1	7	4	142	1	0	0	147	0	2	18	0	0	20	20	180	5	0	0	205	379
4:30 PM	3	0	4	0	0	7	2	145	2	0	0	149	1	4	16	0	0	21	15	178	8	0	0	201	378
4:45 PM	1	6	2	0	0	9	0	136	2	0	0	138	1	2	7	0	0	10	13	157	3	0	0	173	330
Hourly Total	9	11	10	0	1	30	10	570	6	0	0	586	2	14	61	0	0	77	58	665	18	0	0	741	1434
5:00 PM	2	7	5	0	0	14	3	142	1	0	0	146	0	6	14	0	0	20	14	151	3	0	0	168	348
5:15 PM	2	4	2	0	0	8	4	142	0	0	0	146	1	3	19	0	1	23	26	163	4	0	0	193	370
5:30 PM	6	5	1	0	0	12	1	129	2	0	0	132	1	2	14	0	1	17	20	171	2	0	0	193	354
5:45 PM	3	4	5	0	1	12	1	106	1	0	0	108	0	1	9	0	0	10	13	179	6	0	1	198	328
Hourly Total	13	20	13	0	1	46	9	519	4	0	0	532	2	12	56	0	2	70	73	664	15	0	1	752	1400
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	45	51	71	0	3	167	30	2018	10	0	0	2058	12	44	274	0	2	330	217	2620	52	0	1	2889	5444
Approach %	26.9	30.5	42.5	0.0	-	-	1.5	98.1	0.5	0.0	-	-	3.6	13.3	83.0	0.0	-	-	7.5	90.7	1.8	0.0	-	-	-
Total %	0.8	0.9	1.3	0.0	-	3.1	0.6	37.1	0.2	0.0	-	37.8	0.2	0.8	5.0	0.0	-	6.1	4.0	48.1	1.0	0.0	-	53.1	-
Lights	40	51	68	0	-	159	30	1920	10	0	-	1960	12	41	267	0	-	320	211	2538	50	0	-	2799	5238
% Lights	88.9	100.0	95.8	-	-	95.2	100.0	95.1	100.0	-	-	95.2	100.0	93.2	97.4	-	-	97.0	97.2	96.9	96.2	-	-	96.9	96.2
Mediums	5	0	3	0	-	8	0	70	0	0	-	70	0	3	7	0	-	10	6	60	2	0	-	68	156
% Mediums	11.1	0.0	4.2	-	-	4.8	0.0	3.5	0.0	-	-	3.4	0.0	6.8	2.6	-	-	3.0	2.8	2.3	3.8	-	-	2.4	2.9
Articulated Trucks	0	0	0	0	-	0	0	28	0	0	-	28	0	0	0	0	-	0	0	21	0	0	-	21	49
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	1.4	0.0	0.0	0.0	-	-	0.0	0.0	0.8	0.0	-	-	0.7	0.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-

% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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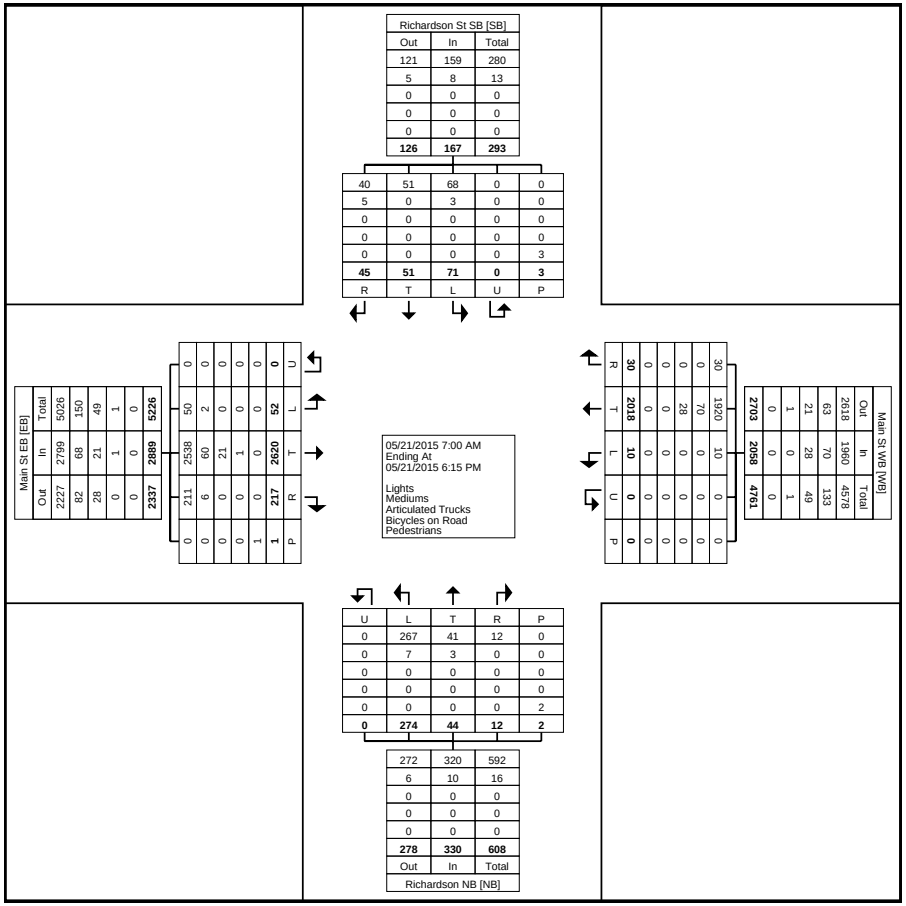
Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015



Turning Movement Data Plot

CHA Consulting, Inc.
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518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Richardson St SB Southbound						Main St WB Westbound						Richardson NB Northbound						Main St EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	3	4	5	0	0	12	1	112	0	0	0	113	1	4	30	0	0	35	17	174	3	0	0	194	354
7:45 AM	1	2	8	0	0	11	4	125	0	0	0	129	2	3	19	0	0	24	25	196	2	0	0	223	387
8:00 AM	4	5	7	0	0	16	0	123	0	0	0	123	2	2	23	0	0	27	10	159	3	0	0	172	338
8:15 AM	3	4	8	0	0	15	2	115	0	0	0	117	1	3	15	0	0	19	7	165	2	0	0	174	325
Total	11	15	28	0	0	54	7	475	0	0	0	482	6	12	87	0	0	105	59	694	10	0	0	763	1404
Approach %	20.4	27.8	51.9	0.0	-	-	1.5	98.5	0.0	0.0	-	-	5.7	11.4	82.9	0.0	-	-	7.7	91.0	1.3	0.0	-	-	-
Total %	0.8	1.1	2.0	0.0	-	3.8	0.5	33.8	0.0	0.0	-	34.3	0.4	0.9	6.2	0.0	-	7.5	4.2	49.4	0.7	0.0	-	54.3	-
PHF	0.688	0.750	0.875	0.000	-	0.844	0.438	0.950	0.000	0.000	-	0.934	0.750	0.750	0.725	0.000	-	0.750	0.590	0.885	0.833	0.000	-	0.855	0.907
Lights	9	15	26	0	-	50	7	450	0	0	-	457	6	11	81	0	-	98	56	675	9	0	-	740	1345
% Lights	81.8	100.0	92.9	-	-	92.6	100.0	94.7	-	-	-	94.8	100.0	91.7	93.1	-	-	93.3	94.9	97.3	90.0	-	-	97.0	95.8
Mediums	2	0	2	0	-	4	0	21	0	0	-	21	0	1	6	0	-	7	3	13	1	0	-	17	49
% Mediums	18.2	0.0	7.1	-	-	7.4	0.0	4.4	-	-	-	4.4	0.0	8.3	6.9	-	-	6.7	5.1	1.9	10.0	-	-	2.2	3.5
Articulated Trucks	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	6	0	0	-	6	10
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.8	-	-	-	0.8	0.0	0.0	0.0	-	-	0.0	0.0	0.9	0.0	-	-	0.8	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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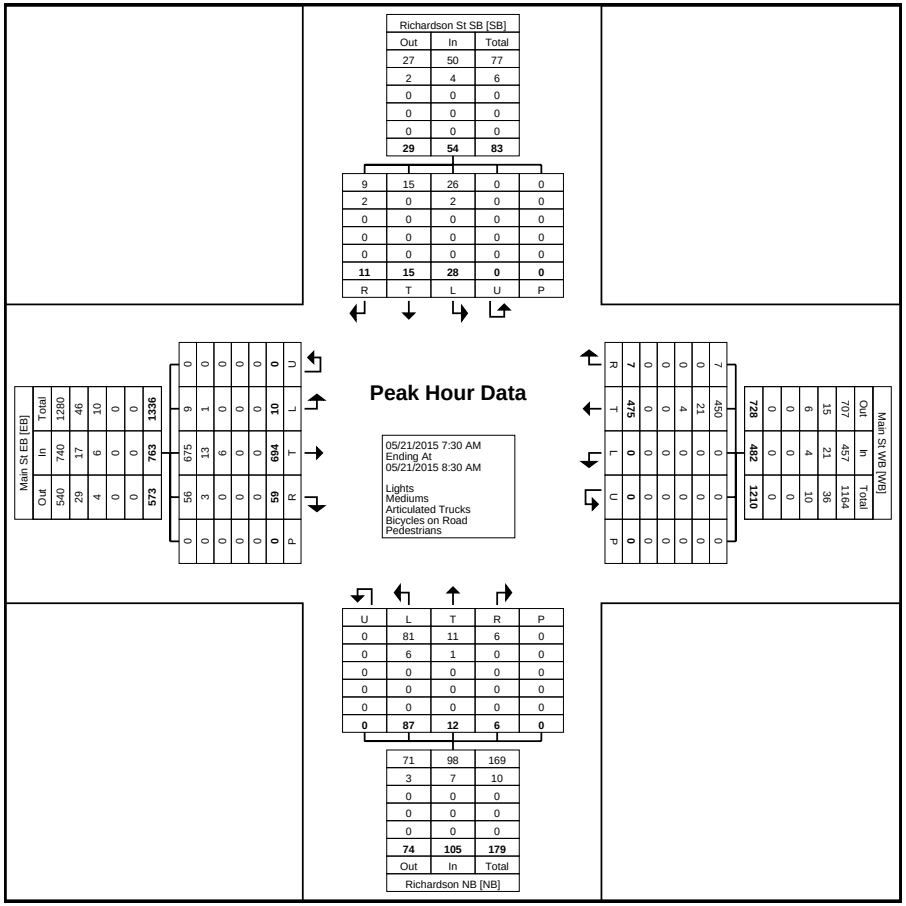
Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015



Turning Movement Peak Hour Data Plot (7:30 AM)

CHA Consulting, Inc.
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Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015

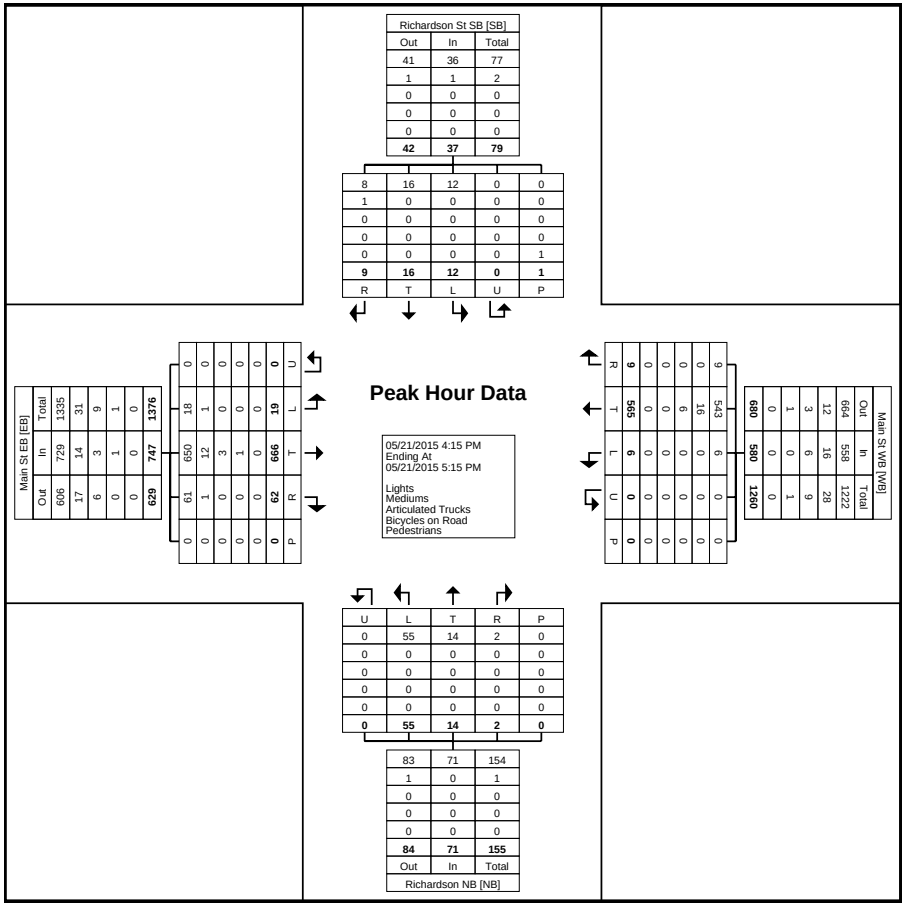
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Richardson St SB Southbound						Main St WB Westbound						Richardson NB Northbound						Main St EB Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:15 PM	3	3	1	0	1	7	4	142	1	0	0	147	0	2	18	0	0	20	20	180	5	0	0	205	379
4:30 PM	3	0	4	0	0	7	2	145	2	0	0	149	1	4	16	0	0	21	15	178	8	0	0	201	378
4:45 PM	1	6	2	0	0	9	0	136	2	0	0	138	1	2	7	0	0	10	13	157	3	0	0	173	330
5:00 PM	2	7	5	0	0	14	3	142	1	0	0	146	0	6	14	0	0	20	14	151	3	0	0	168	348
Total	9	16	12	0	1	37	9	565	6	0	0	580	2	14	55	0	0	71	62	666	19	0	0	747	1435
Approach %	24.3	43.2	32.4	0.0	-	-	1.6	97.4	1.0	0.0	-	-	2.8	19.7	77.5	0.0	-	-	8.3	89.2	2.5	0.0	-	-	-
Total %	0.6	1.1	0.8	0.0	-	2.6	0.6	39.4	0.4	0.0	-	40.4	0.1	1.0	3.8	0.0	-	4.9	4.3	46.4	1.3	0.0	-	52.1	-
PHF	0.750	0.571	0.600	0.000	-	0.661	0.563	0.974	0.750	0.000	-	0.973	0.500	0.583	0.764	0.000	-	0.845	0.775	0.925	0.594	0.000	-	0.911	0.947
Lights	8	16	12	0	-	36	9	543	6	0	-	558	2	14	55	0	-	71	61	650	18	0	-	729	1394
% Lights	88.9	100.0	100.0	-	-	97.3	100.0	96.1	100.0	-	-	96.2	100.0	100.0	100.0	-	-	100.0	98.4	97.6	94.7	-	-	97.6	97.1
Mediums	1	0	0	0	-	1	0	16	0	0	-	16	0	0	0	0	-	0	1	12	1	0	-	14	31
% Mediums	11.1	0.0	0.0	-	-	2.7	0.0	2.8	0.0	-	-	2.8	0.0	0.0	0.0	-	-	0.0	1.6	1.8	5.3	-	-	1.9	2.2
Articulated Trucks	0	0	0	0	-	0	0	6	0	0	-	6	0	0	0	0	-	0	0	3	0	0	-	3	9
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	1.1	0.0	-	-	1.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	0.4	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.1	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015



Turning Movement Peak Hour Data Plot (4:15 PM)

CHA Consulting, Inc.
3 Winners Circle P.O. Box 5269

Albany, New York, United States 12205
518 453 3983 dkahlbaugh@chacompanies.com

Count Name: Main St & Richardson St
Site Code:
Start Date: 05/21/2015

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD** FROM: **I 87** TO: **CITY LINE** COUNTY: **Warren**
DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: 1393 FUNC. CLASS: 14 TOWN: **QUEENSBURY**
STATE DIR CODE: 1 WK OF YR: 45 PLACEMENT: Corinth Road NHS: no BIN:
DATE OF COUNT: 11/03/2004 @ REF MARKER: JURIS: County RR CROSSING:
NOTES LANE 1: Week 45-Eb ADDL DATA: CC Stn: HPMS SAMPLE:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01ww45b
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: R01 INITIALS: jjc

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	M																											
2	T																											
3	W														**319**	**307**	**335**	**438**	**326**	**233**	**176**	**149**	**108**	**79**	**45**			
4	T	**20**	**6**	**11**	**26**	**20**	**92**	**341**	**537**	**428**	**322**	**299**	**249**	**314**	**299**	**311**	**342**	**375**	**322**	**248**	**156**	**114**	**107**	**72**	**46**	5057	537	7
5	F	**16**	**13**	**16**	**21**	**27**	**106**	**322**	**543**	**381**	**349**	**335**	**296**	**308**	**308**	**344**	**352**	**394**	**383**	**345**	**196**	**145**	**120**	**92**	**81**	5493	543	7
6	S	**39**	**16**	**9**	**15**	**32**	**67**	**119**	**200**	**255**	**298**	**304**	**318**	**353**	**310**	**304**	**329**	**296**	**286**	**258**	**189**	**130**	**101**	**91**	**60**	4379	353	12
7	S	**27**	**20**	**15**	**14**	**22**	**39**	**88**	**92**	**176**	**244**	**263**	**294**	**316**	**349**	**252**	**247**	**275**	**235**	**166**	**147**	**102**	**75**	**61**	**27**	3546	349	13
8	M	**19**	**9**	**19**	**14**	**29**	**85**	**305**	**527**	**419**	**307**	**298**	**266**	**346**	**324**	**317**	**349**	**322**	**311**	**250**	**167**	**111**	**95**	**58**	**59**	5006	527	7
9	T	**23**	**12**	**20**	**11**	**30**	**99**	**338**	**530**	**394**	**308**	**288**	**276**	**337**														
10	W																											
11	T																											
12	F																											
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
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24	W																											
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26	F																											
27	S																											
28	S																											
29	M																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
19	**10**	**15**	**18**	**25**	**95**	**312**	**512**	**389**	**308**	**292**	**261**	**318**	**301**	**299**	**328**	**362**	**307**	**234**	**159**	**120**	**99**	**67**	**48**	**4898**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	144	4	78	534	10%	0.958	0.977

ESTIMATED (one way)

AADT

5013

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD** FROM: **I 87** TO: **CITY LINE** COUNTY: **Warren**
DIRECTION: Westbound FACTOR GROUP: 30 REC. SERIAL #: 1393 FUNC. CLASS: 14 TOWN: **QUEENSBURY**
STATE DIR CODE: 2 WK OF YR: 45 PLACEMENT: Corinth Road NHS: no BIN:
DATE OF COUNT: 11/03/2004 @ REF MARKER: JURIS: County RR CROSSING:
NOTES LANE 1: Week 45-Wb ADDL DATA: CC Stn: HPMS SAMPLE:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01ww45b
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: R01 INITIALS: jjc

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	M																											
2	T																											
3	W														**299**	**326**	**363**	**374**	**388**	**315**	**245**	**208**	**174**	**113**	**66**			
4	T	**29**	**18**	**12**	**12**	**17**	**39**	**121**	**230**	**221**	**230**	**231**	**229**	**293**	**270**	**326**	**394**	**351**	**420**	**343**	**247**	**195**	**137**	**95**	**64**	4524	420	17
5	F	**34**	**18**	**14**	**25**	**26**	**38**	**146**	**229**	**236**	**225**	**227**	**238**	**328**	**344**	**348**	**358**	**401**	**395**	**308**	**237**	**184**	**182**	**208**	**115**	4864	401	16
6	S	**56**	**31**	**24**	**22**	**17**	**30**	**51**	**135**	**146**	**202**	**209**	**256**	**299**	**290**	**297**	**293**	**300**	**278**	**235**	**205**	**174**	**154**	**159**	**99**	3962	300	16
7	S	**58**	**33**	**29**	**24**	**13**	**26**	**42**	**79**	**120**	**208**	**167**	**222**	**278**	**265**	**268**	**262**	**262**	**258**	**220**	**181**	**145**	**75**	**75**	**52**	3362	278	12
8	M	**23**	**12**	**14**	**7**	**17**	**35**	**130**	**201**	**243**	**246**	**231**	**257**	**299**	**289**	**312**	**348**	**396**	**370**	**288**	**228**	**197**	**152**	**95**	**75**	4465	396	16
9	T	**32**	**24**	**11**	**12**	**15**	**38**	**130**	**239**	**238**	**233**	**178**	**240**	**330**														
10	W																											
11	T																											
12	F																											
13	S																											
14	S																											
15	M																											
16	T																											
17	W																											
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20	S																											
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24	W																											
25	T																											
26	F																											
27	S																											
28	S																											
29	M																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
31	**19**	**11**	**15**	**18**	**36**	**126**	**216**	**224**	**224**	**208**	**231**	**294**	**274**	**308**	**353**	**358**	**376**	**302**	**230**	**192**	**148**	**97**	**65**	**4356**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	144	4	78	393	9%	0.958	0.977

ESTIMATED (one way)

AADT
4459

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD** FROM: **I 87** TO: **CITY LINE** COUNTY: **Warren**
DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: 7242 FUNC. CLASS: 14 TOWN: **QUEENSBURY**
STATE DIR CODE: 1 WK OF YR: 43 PLACEMENT: Corinth Road NHS: no BIN:
DATE OF COUNT: 10/20/2004 @ REF MARKER: JURIS: County RR CROSSING:
NOTES LANE 1: Week 43-Eb ADDL DATA: CC Stn: HPMS SAMPLE:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01ww43c
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: R01 INITIALS: jjc

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	F																											
2	S																											
3	S																											
4	M																											
5	T																											
6	W																											
7	T																											
8	F																											
9	S																											
10	S																											
11	M																											
12	T																											
13	W																											
14	T																											
15	F																											
16	S																											
17	S																											
18	M																											
19	T																											
20	W												**243**	**258**	**205**	**247**	**276**	**267**	**273**	**238**	**134**	**128**	**69**	**43**	**23**			
21	T	**18**	**12**	**8**	**12**	**25**	**102**	**316**	**467**	**342**	**252**	**228**	**228**	**252**	**228**	**252**	**249**	**272**	**268**	**200**	**145**	**118**	**89**	**51**	**29**	4163	467	7
22	F	**13**	**13**	**15**	**19**	**32**	**95**	**311**	**475**	**353**	**240**	**256**	**242**	**266**	**225**	**237**												
23	S																											
24	S																											
25	M																											
26	T																											
27	W																											
28	T																											
29	F																											
30	S																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
15	**11**	**11**	**15**	**27**	**94**	**301**	**451**	**333**	**236**	**232**	**228**	**244**	**207**	**239**	**251**	**259**	**259**	**210**	**134**	**118**	**76**	**45**	**25**	**4021**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
3	52	3	49	471	11%	0.958	1.029

ESTIMATED (one way)

AADT
3908

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD** FROM: **I 87** TO: **CITY LINE** COUNTY: **Warren**
DIRECTION: Westbound FACTOR GROUP: 30 REC. SERIAL #: 7242 FUNC. CLASS: 14 TOWN: **QUEENSBURY**
STATE DIR CODE: 2 WK OF YR: 43 PLACEMENT: Corinth Road NHS: no BIN:
DATE OF COUNT: 10/20/2004 @ REF MARKER: JURIS: County RR CROSSING:
NOTES LANE 1: Week 43-Wb ADDL DATA: CC Stn: HPMS SAMPLE:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01ww43c
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: R01 INITIALS: jjc

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	F																											
2	S																											
3	S																											
4	M																											
5	T																											
6	W																											
7	T																											
8	F																											
9	S																											
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11	M																											
12	T																											
13	W																											
14	T																											
15	F																											
16	S																											
17	S																											
18	M																											
19	T																											
20	W													219	246	226	284	343	361	404	319	264	218	143	89	66			
21	T	41	12	13	13	14	29	115	164	198	185	205		206	281	243	261	352	413	366	331	289	215	142	88	73	4249	413	16
22	F	24	16	19	14	17	31	104	177	205	210	166		241	297	237	251												
23	S																											
24	S																											
25	M																											
26	T																											
27	W																											
28	T																											
29	F																											
30	S																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
31	**13**	**15**	**13**	**15**	**29**	**105**	**163**	**194**	**190**	**178**	**213**	**253**	**224**	**261**	**333**	**371**	**369**	**311**	**264**	**207**	**136**	**84**	**67**	**4039**	

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED (one way)
3	52	3	49	387	9%	0.958	1.029	**AADT 3925**

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-87 EXIT 18**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 44
DATE OF COUNT: 10/26/2009
NOTES LANE 1: NORTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **I-87 NB (OFF)**
REC. SERIAL #: 1115
PLACEMENT: I 87 NB OFF RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: jl

TO: **CR28 CORINTH RD**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW43

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
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22	T																											
23	F																											
24	S																											
25	S																											
26	M		**24**	**22**	**10**	**46**	**52**	**188**	**462**	**421**	**354**	**298**	**245**	**329**	**321**	**392**	**458**	**583**	**642**	**440**	**237**	**180**	**175**	**114**	**70**			
27	T	**47**	**28**	**12**	**20**	**26**	**68**	**181**	**500**	**465**	**336**	**318**	**293**	**298**	**344**	**379**	**454**	**603**	**638**	**414**	**231**	**220**	**156**	**132**	**82**	6245	638	17
28	W	**46**	**36**	**38**	**13**	**33**	**52**	**182**	**486**	**421**	**329**	**293**	**279**	**331**	**342**	**336**	**443**	**549**	**577**	**424**	**237**	**204**	**183**	**127**	**96**	6057	577	17
29	T	**43**	**26**	**49**	**14**	**35**	**68**	**172**	**511**	**439**	**331**	**291**	**304**															
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
40	**26**	**29**	**14**	**27**	**55**	**159**	**430**	**383**	**297**	**263**	**246**	**280**	**295**	**324**	**397**	**507**	**543**	**374**	**206**	**176**	**150**	**109**	**73**	**5403**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	83	3	78	543	10%	0.878	1.076

ESTIMATED

AADT
5021

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-87 EXIT 18**
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 44
DATE OF COUNT: 10/26/2009
NOTES LANE 1: NORTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **CR28 CORINTH RD**
REC. SERIAL #: 1316
PLACEMENT: I 87 ON RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: jl

TO: **I-87 NB (ON)**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW43

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
9	F																											
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19	M																											
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21	W																											
22	T																											
23	F																											
24	S																											
25	S																											
26	M		**12**	**24**	**13**	**25**	**63**	**171**	**369**	**372**	**297**	**314**	**355**	**379**	**364**	**341**	**415**	**359**	**323**	**314**	**171**	**140**	**80**	**64**	**55**			
27	T	**27**	**7**	**11**	**17**	**30**	**64**	**190**	**411**	**394**	**320**	**340**	**284**	**327**	**339**	**333**	**355**	**449**	**360**	**251**	**187**	**146**	**125**	**74**	**52**	5093	449	16
28	W	**18**	**14**	**10**	**20**	**28**	**43**	**187**	**407**	**411**	**291**	**316**	**307**	**345**	**312**	**337**	**367**	**392**	**393**	**292**	**175**	**121**	**98**	**73**	**70**	5027	411	8
29	T	**28**	**16**	**14**	**19**	**26**	**53**	**193**	**394**	**346**	**348**	**359**	**342**	**401**														
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
21	**11**	**11**	**17**	**25**	**47**	**162**	**347**	**335**	**276**	**291**	**283**	**319**	**297**	**296**	**333**	**351**	**315**	**251**	**156**	**119**	**89**	**61**	**52**	**4465**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	84	3	79	351	8%	0.878	1.076

ESTIMATED

AADT
4150

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-87 EXIT 18**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 44
DATE OF COUNT: 10/26/2009
NOTES LANE 1: SOUTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **I-87 SB (OFF)**
REC. SERIAL #: 2137
PLACEMENT: I 87 OFF RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: jl

TO: **CR28 CORINTH RD**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW43

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
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16	F																											
17	S																											
18	S																											
19	M																											
20	T																											
21	W																											
22	T																											
23	F																											
24	S																											
25	S																											
26	M		15	15	15	61	97	282	492	554	528	449	473	632	586	621	701	623	606	391	266	221	138	105	47			
27	T	39	19	10	19	31	102	283	494	575	550	460	471	571	563	642	754	732	661	383	255	208	169	87	58	8136	754	15
28	W	31	18	21	24	41	108	254	553	522	526	478	499	517	569	542	632	631	616	367	274	199	138	89	61	7710	632	15
29	T	39	14	14	17	31	112	283	534	598	500	506	532	578														
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
32	15	13	18	30	94	242	455	493	462	415	434	504	503	529	611	581	551	334	233	184	130	83	48	6994

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	84	3	79	611	9%	0.878	1.076

ESTIMATED

AADT

6500

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **RAMP** ROAD NAME: **I-87 EXIT 18**
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 3 WK OF YR: 44
DATE OF COUNT: 10/26/2009
NOTES LANE 1: SOUTH

COUNT TAKEN BY: ORG CODE: DOT INITIALS: DS

FROM: **CR28 CORINTH RD**
REC. SERIAL #: 0325
PLACEMENT: I 87 ON RAMP
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: DOT INITIALS: jl

TO: **I-87 SB (ON)**
FUNC. CLASS: 11
NHS: no
JURIS: NYSDOT
CC Stn:
BATCH ID: DOT-WW43

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
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16	F																											
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20	T																											
21	W																											
22	T																											
23	F																											
24	S																											
25	S																											
26	M		17	20	41	110	297	721	874	629	528	453	479	543	465	583	671	614	702	460	249	234	167	106	67			
27	T	38	29	37	49	84	303	771	865	680	502	461	510	492	438	575	599	661	736	347	285	248	198	132	73	9113	865	7
28	W	47	28	20	39	65	277	670	779	689	505	485	504	511	492	470	517	685	650	395	266	187	134	124	72	8611	779	7
29	T	41	33	44	33	71	266	747	817	720	521	460	464	501														
30	F																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
37	**26**	**30**	**35**	**64**	**248**	**638**	**732**	**597**	**451**	**408**	**429**	**450**	**408**	**477**	**523**	**573**	**611**	**352**	**234**	**196**	**146**	**106**	**62**	**7833**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
4	84	3	79	732	9%	0.878	1.076

ESTIMATED

AADT

7280

American Traffic Information

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD**
DIRECTION: Eastbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 37
DATE OF COUNT: 09/15/2011
NOTES LANE 1: eb travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BJF

FROM: **PINEWOOD ROAD** TO: **87 I**
REC. SERIAL #: 2573 FUNC. CLASS: 16
PLACEMENT: 198ft west of merrit rd NHS: no
@ REF MARKER: JURIS: County
ADDL DATA: CC Stn:
COUNT TYPE: VEHICLES BATCH ID: ATI-R01WW38A_1

PROCESSED BY: ORG CODE: ATI INITIALS: MLA

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
9	F																											
10	S																											
11	S																											
12	M																											
13	T																											
14	W																											
15	T								**457**	**378**	**260**	**243**	**228**	**265**	**255**	**253**	**291**	**307**	**271**	**243**	**154**	**102**	**68**	**51**	**37**			
16	F	**18**	**8**	**11**	**12**	**48**	**114**	**296**	**535**	**356**	**320**	**266**	**263**	**255**	**246**	**299**	**324**	**332**	**317**	**316**	**214**	**128**	**109**	**102**	**64**	4953	535	7
17	S	**27**	**17**	**16**	**10**	**21**	**54**	**107**	**184**	**254**	**335**	**343**	**346**	**313**	**302**	**299**	**308**	**249**	**218**	**219**	**164**	**132**	**89**	**74**	**61**	4142	346	11
18	S	**43**	**21**	**8**	**8**	**15**	**42**	**105**	**122**	**216**	**226**	**270**	**275**	**309**	**297**	**262**	**260**	**247**	**232**	**220**	**175**	**115**	**64**	**43**	**26**	3601	309	12
19	M	**13**	**6**	**10**	**19**	**41**	**121**	**310**	**508**	**378**	**275**	**248**	**259**	**273**	**252**	**248**	**303**	**354**	**269**	**250**	**184**	**106**	**66**	**46**	**36**	4575	508	7
20	T	**21**	**6**	**10**	**17**	**44**	**125**	**295**	**508**	**356**	**262**	**249**	**236**	**265**	**239**	**263**	**313**	**312**	**295**	**241**	**176**	**105**	**73**	**41**	**40**	4492	508	7
21	W	**12**	**2**	**11**	**20**	**34**	**120**	**315**	**530**	**390**	**276**																	
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
27	T																											
28	W																											
29	T																											
30	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
17	**5**	**11**	**16**	**42**	**120**	**304**	**508**	**372**	**279**	**252**	**246**	**268**	**249**	**255**	**302**	**324**	**278**	**245**	**171**	**104**	**69**	**46**	**38**	4521

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	147	4	81	508	11%	1.000	1.068

ESTIMATED (one way)

AADT
4233

American Traffic Information

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 37
DATE OF COUNT: 09/15/2011
NOTES LANE 1: wb travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BJF

FROM: **PINEWOOD ROAD** TO: **87 I**
REC. SERIAL #: 2573 FUNC. CLASS: 16
PLACEMENT: 198ft west of merrit rd NHS: no
@ REF MARKER: JURIS: County
ADDL DATA: CC Stn:
COUNT TYPE: VEHICLES BATCH ID: ATI-R01WW38A_1

PROCESSED BY: ORG CODE: ATI INITIALS: MLA

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
9	F																											
10	S																											
11	S																											
12	M																											
13	T																											
14	W																											
15	T								134	147	159	187	204	200	215	234	307	382	359	287	272	221	163	87	66			
16	F	34	14	11	18	8	48	110	167	171	179	202	259	239	239	307	386	412	397	336	292	228	217	155	100	4529	412	16
17	S	59	36	23	16	16	22	47	89	146	205	221	249	290	253	278	272	259	264	216	262	188	153	148	90	3802	290	12
18	S	49	29	21	14	11	9	33	77	101	144	174	203	252	293	277	278	264	272	241	222	163	109	60	47	3343	293	13
19	M	22	17	5	6	9	39	95	162	176	156	213	208	247	233	295	335	372	383	310	300	202	135	71	48	4039	383	17
20	T	26	15	9	9	14	45	94	149	160	180	167	207	252	218	276	356	406	409	310	265	193	180	72	65	4077	409	17
21	W	30	14	15	10	13	42	113	167	176	192																	
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
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28	W																											
29	T																											
30	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
30	**14**	**12**	**12**	**12**	**45**	**103**	**156**	**166**	**173**	**192**	**220**	**233**	**222**	**268**	**333**	**387**	**384**	**302**	**279**	**205**	**159**	**77**	**60**	**4044**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	147	4	81	387	10%	1.000	1.068

ESTIMATED (one way)

AADT
3787

American Traffic Information

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD**
DIRECTION: Eastbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 37
DATE OF COUNT: 09/15/2011
NOTES LANE 1: eb travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BJF

FROM: **RICHARDSON STREET** TO: **CITY LINE**
REC. SERIAL #: 0027 FUNC. CLASS: 14
PLACEMENT: 432ft East of Richardson St NHS: yes
@ REF MARKER: JURIS: County
ADDL DATA: CC Stn:
COUNT TYPE: AXLE PAIRS BATCH ID: ATI-R01WW38A_1
PROCESSED BY: ORG CODE: ATI INITIALS: MLA

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
9	F																											
10	S																											
11	S																											
12	M																											
13	T																											
14	W																											
15	T													594	547	552	590	530	556	446	277	219	187	152	82			
16	F	**53**	**32**	**26**	**30**	**55**	**142**	**331**	**635**	**634**	**624**	**531**	**552**	**630**	**608**	**597**	**629**	**671**	**613**	**474**	**430**	**276**	**203**	**223**	**174**	9173	671	16
17	S	**101**	**56**	**56**	**34**	**32**	**72**	**190**	**261**	**332**	**468**	**506**	**486**	**429**	**468**	**406**	**376**	**408**	**396**	**364**	**290**	**252**	**198**	**175**	**112**	6468	506	10
18	S	**85**	**50**	**34**	**21**	**39**	**49**	**142**	**136**	**199**	**255**	**328**	**392**	**429**	**390**	**347**	**371**	**350**	**329**	**342**	**245**	**195**	**146**	**87**	**61**	5022	429	12
19	M	**45**	**27**	**13**	**22**	**51**	**168**	**387**	**661**	**590**	**525**	**498**	**509**	**567**	**530**	**509**	**563**	**632**	**534**	**440**	**294**	**199**	**164**	**117**	**73**	8118	661	7
20	T	**39**	**25**	**27**	**22**	**72**	**153**	**403**	**712**	**705**	**644**	**568**	**541**	**548**	**524**	**561**	**529**	**578**	**522**	**415**	**327**	**189**	**155**	**124**	**79**	8462	712	7
21	W	**39**	**18**	**36**	**34**	**62**	**144**	**434**	**778**	**695**	**545**																	
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
27	T																											
28	W																											
29	T																											
30	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
43	**24**	**29**	**28**	**61**	**142**	**378**	**677**	**638**	**568**	**518**	**520**	**555**	**520**	**526**	**546**	**564**	**523**	**422**	**291**	**197**	**164**	**127**	**76**	**8137**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	142	4	76	677	8%	0.973	1.068

ESTIMATED (one way)

AADT
7619

American Traffic Information

Traffic Count Hourly Report

ROAD #: **CR 0280** ROAD NAME: **CORINTH RD**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 37
DATE OF COUNT: 09/15/2011
NOTES LANE 1: wb travel lane

COUNT TAKEN BY: ORG CODE: TST INITIALS: BJF

FROM: **RICHARDSON STREET**
REC. SERIAL #: 0027
PLACEMENT: 432 ft east of Richardson St
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS

PROCESSED BY: ORG CODE: ATI INITIALS: MLA

TO: **CITY LINE**
FUNC. CLASS: 14
NHS: yes
JURIS: County
CC Stn:
BATCH ID: ATI-R01WW38A_1

COUNTY: **Warren**
TOWN: **QUEENSBURY**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T																											
2	F																											
3	S																											
4	S																											
5	M																											
6	T																											
7	W																											
8	T																											
9	F																											
10	S																											
11	S																											
12	M																											
13	T																											
14	W																											
15	T													430	418	458	568	555	533	370	283	218	153	93	80			
16	F	32	26	31	24	51	86	239	350	391	383	465	504	489	513	587	585	616	576	420	351	246	217	153	123	7458	616	16
17	S	75	61	44	42	46	75	125	201	249	309	382	408	450	404	385	395	301	296	283	275	201	168	182	110	5467	450	12
18	S	69	55	42	41	35	44	71	154	168	227	255	315	338	309	307	343	283	308	264	246	158	102	56	63	4253	343	15
19	M	30	20	24	17	54	108	238	341	387	347	432	451	411	410	499	538	533	508	396	325	174	122	71	84	6520	538	15
20	T	27	31	19	22	52	102	254	329	451	396	506	465	481	430	509	536	587	513	383	335	178	161	84	65	6916	587	16
21	W	31	27	36	28	47	108	226	349	410	376																	
22	T																											
23	F																											
24	S																											
25	S																											
26	M																											
27	T																											
28	W																											
29	T																											
30	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
29	27	28	24	49	96	233	333	399	366	455	460	429	408	476	532	543	504	373	306	185	141	81	74	6551

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	142	4	76	543	8%	0.973	1.068

ESTIMATED (one way)

AADT

6134

Appendix B

Trip Generation & Distribution

EXIT 18 REZONE STUDY
Town of Queensbury, Warren County, NY
CHA: 30230

TRIP GENERATION - NO-BUILD

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
1	Expansion of Warehouse	150	30,000 s.f	Total	54	54	108	7	2	9	3	7	10
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	54	54	108	7	2	9	3	7	10
Total of Parcel 1				Total	54	54	108	7	2	9	3	7	10
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	54	54	108	7	2	9	3	7	10

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
2	Self Storage Unit	151	4 units	Total	1	1	2	1	0	1	0	1	1
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	1	1	2	1	0	1	0	1	1
Total of Parcel 2				Total	1	1	2	1	0	1	0	1	1
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	1	1	2	1	0	1	0	1	1

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour *		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
3	Fast Food with Drive Thru	934	2832 s.f.	Total									
				Pass-By (50%)	EXISTING			EXISTING			EXISTING		
				Primary									
	General Office	710	10,000 s.f.	Total	55	55	110	14	2	16	3	12	15
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	55	55	110	14	2	16	3	12	15
	Specialty Retail	826	10,000 s.f.	Total	232	233	465	9	5	14	20	25	45
				Pass-By (30%)	70	70	140	2	2	4	7	7	14
				Primary	162	163	325	7	3	10	13	18	31
Total of Parcel 3				Total	287	288	575	23	7	30	23	37	60
				Pass-By	70	70	140	2	2	4	7	7	14
				Primary	217	218	435	21	5	26	16	30	46

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
TRIP GENERATION SUMMARY													
Total of All Parcels				Total	342	343	685	31	9	40	26	45	71
				Pass-By	70	70	140	2	2	4	7	7	14
				Primary	272	273	545	29	7	36	19	38	57

* PM Peak Hour trip generation for this parcel obtained from Parillo Access Feasibility Study (May 27, 2011)

TRIP GENERATION

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
A	Hotel	310	170 rooms	Total	695	694	1,389	53	37	90	52	50	102
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	695	694	1,389	53	37	90	52	50	102
	General Office	710	60,000 s.f.	Total	445	445	890	112	15	127	25	121	146
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	445	445	890	112	15	127	25	121	146
	Bank w/ Drive-Thru	912	7000 s.f.	Total	519	518	1,037	48	37	85	85	85	170
				Pass-By (30%)	155	156	311	13	13	26	25	26	51
				Primary	364	362	726	35	24	59	60	59	119
Total of Parcel A				Total	1,659	1,657	3,316	213	89	302	162	256	418
				Pass-By	155	156	311	13	13	26	25	26	51
				Primary	1,504	1,501	3,005	200	76	276	137	230	367

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
B	Fast Food Restaurant w/ Drive-Thru	assumed that existing use will not change		Total	0	0	0	0	0	0	0	0	0
				Pass-By (xx%)									
				Primary	0	0	0	0	0	0	0	0	0
Total of Parcel B				Total	0	0	0	0	0	0	0	0	0
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	0	0	0	0	0	0	0	0	0

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
C	Retail	820	12,000 s.f.	Total	856	856	1,712	27	16	43	70	75	145
				Pass-By (50%)	428	428	856	11	11	22	36	36	72
				Primary	428	428	856	16	5	21	34	39	73
Total of Parcel C				Total	856	856	1,712	27	16	43	70	75	145
				Pass-By	428	428	856	11	11	22	36	36	72
				Primary	428	428	856	16	5	21	34	39	73

TRIP GENERATION

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
D	General Office	710	50,000 s.f.	Total	388	387	775	97	13	110	23	111	134
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	388	387	775	97	13	110	23	111	134
Total of Parcel D				Total	388	387	775	97	13	110	23	111	134
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	388	387	775	97	13	110	23	111	134

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
E	Hotel (Build)	310	50	Total	205	204	409	15	11	26	16	14	30
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	205	204	409	15	11	26	16	14	30
Total of Parcel E				Total	205	204	409	15	11	26	16	14	30
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	205	204	409	15	11	26	16	14	30

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
G	Hotel (Build)	310	74 rooms	Total	302	302	604	24	16	40	23	21	44
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	302	302	604	24	16	40	23	21	44
Total of Parcel G				Total	302	302	604	24	16	40	23	21	44
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	302	302	604	24	16	40	23	21	44

TRIP GENERATION

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
H	General Office	710	11,000 s.f.	Total	61	60	121	15	2	17	3	13	16
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	61	60	121	15	2	17	3	13	16
Total of Parcel H				Total	61	60	121	15	2	17	3	13	16
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	61	60	121	15	2	17	3	13	16

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
I	General Office	710	7,000 s.f.	Total	39	38	77	10	1	11	2	8	10
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	39	38	77	10	1	11	2	8	10
Total of Parcel I				Total	39	38	77	10	1	11	2	8	10
				Pass-By	0	0	0	0	0	0	0	0	0
				Primary	39	38	77	10	1	11	2	8	10

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
J	Retail	820	5,000 s.f.	Total	485	485	970	15	10	25	38	42	80
				Pass-By (50%)	242	242	484	6	6	12	20	20	40
				Primary	243	243	486	9	4	13	18	22	40
	Fast Food Restaurant w/ Drive-Thru	934	4,000 s.f.	Total	992	992	1,984	93	89	182	68	63	131
				Pass-By (50%)	496	496	992	45	46	91	33	33	66
				Primary	496	496	992	48	43	91	35	30	65
Total of Parcel J				Total	1,477	1,477	2,954	108	99	207	106	105	211
				Pass-By	738	738	1,476	51	52	103	53	53	106
				Primary	739	739	1,478	57	47	104	53	52	105

TRIP GENERATION

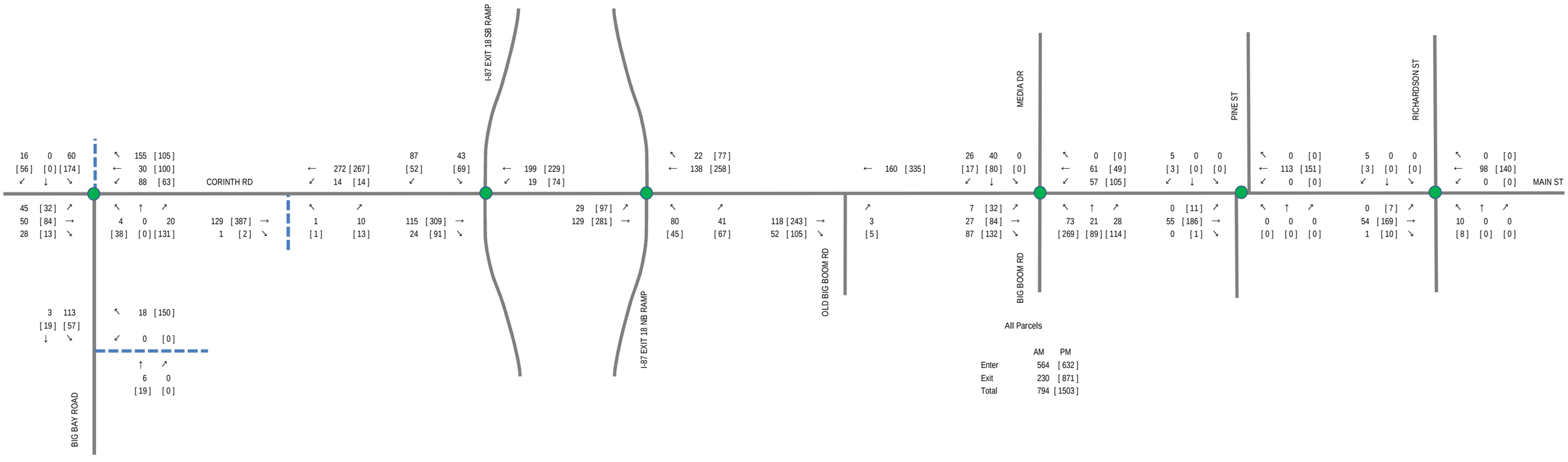
Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Proposed Use													
L	Shopping Center	820	100,000 s.f.	Total	3,396	3,395	6,791	97	59	156	288	311	599
				Pass-By (35%)	1,188	1,189	2,377	27	28	55	105	105	210
				Primary	2,208	2,206	4,414	70	31	101	183	206	389
Total of Parcel L				Total	3,396	3,395	6,791	97	59	156	288	311	599
				Pass-By	1,188	1,189	2,377	27	28	55	105	105	210
				Primary	2,208	2,206	4,414	70	31	101	183	206	389

Parcel	Build Use	LUC	Size	Trip Type	Weekday			AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
M	Shopping Center	820	80,000 s.f.	Total	2,937	2,937	5,874	84	52	136	248	268	516
				Pass-By (35%)	1,028	1,028	2,056	24	24	48	90	91	181
				Primary	1,909	1,909	3,818	60	28	88	158	177	335
Total of Parcel M				Total	2,937	2,937	5,874	84	52	136	248	268	516
				Pass-By	1,028	1,028	2,056	24	24	48	90	91	181
				Primary	1,909	1,909	3,818	60	28	88	158	177	335
Total of All Parcels				Total	11,320	11,313	22,633	690	358	1,048	941	1,182	2,123
				Pass-By	3,537	3,539	7,076	126	128	254	309	311	620
				Primary	7,783	7,774	15,557	564	230	794	632	871	1,503

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
COMBINED ALL PARCELS

OCTOBER 27, 2015



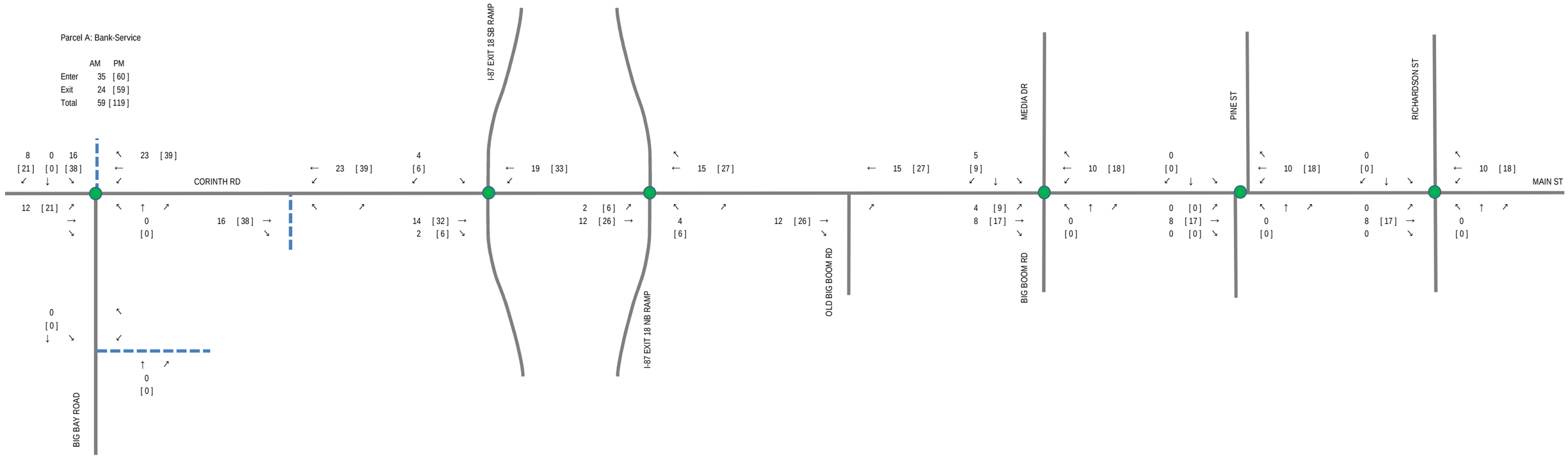
All Parcels

	AM	PM
Enter	564	[632]
Exit	230	[871]
Total	794	[1503]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL A - Bank/Service Trips

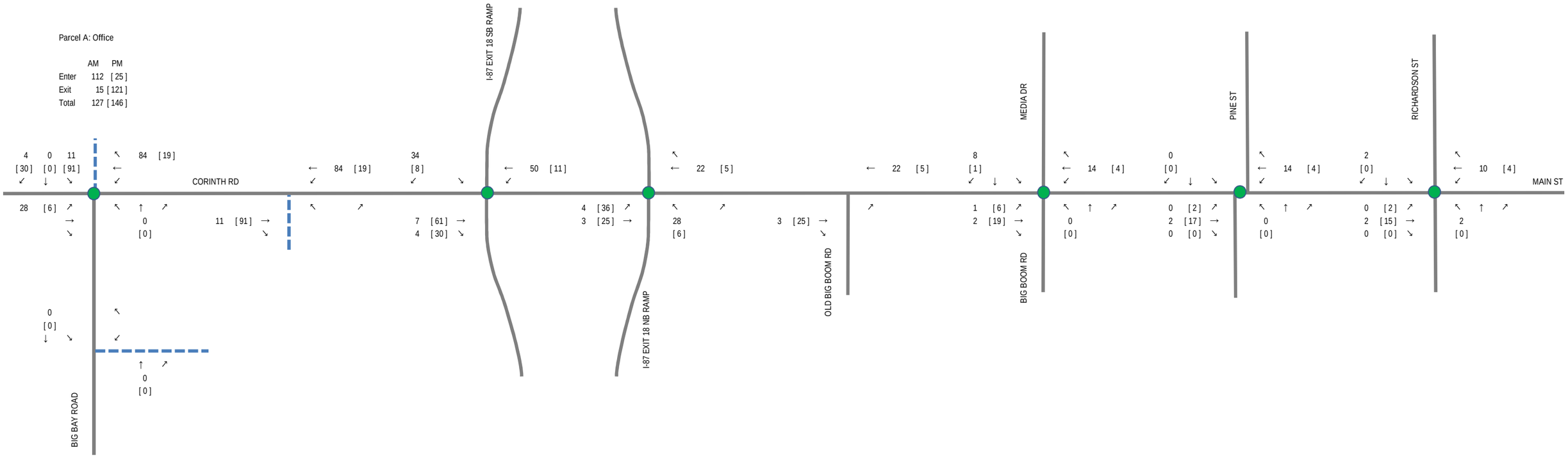
OCTOBER 27, 2015



EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL A - Office Trips

OCTOBER 27, 2015

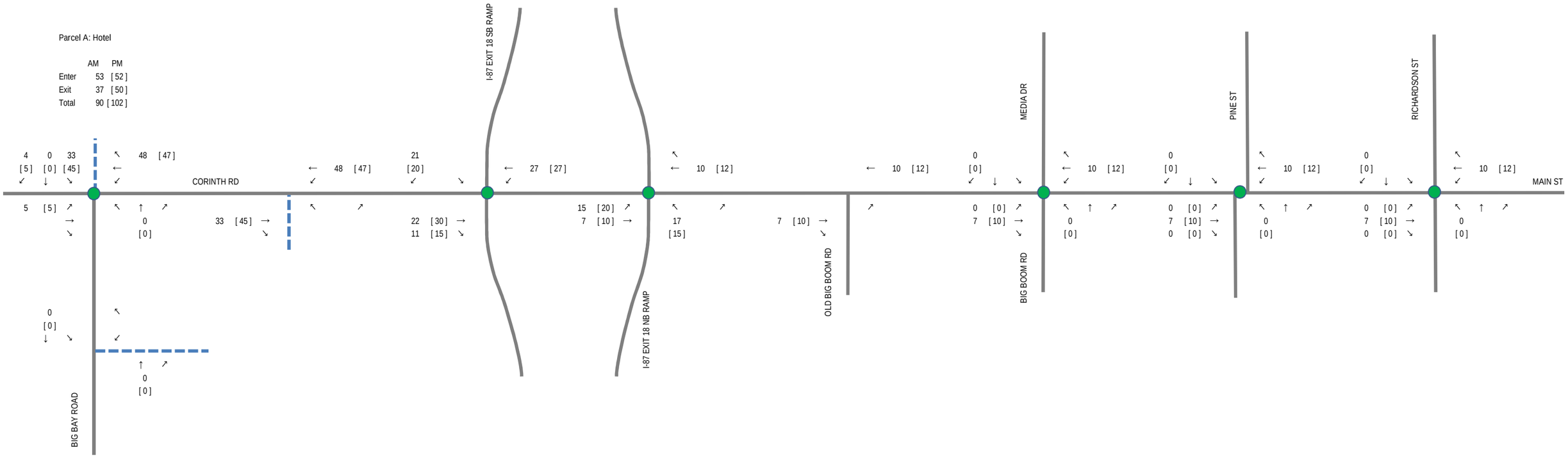


CHA

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL A - Hotel Trips

OCTOBER 27, 2015



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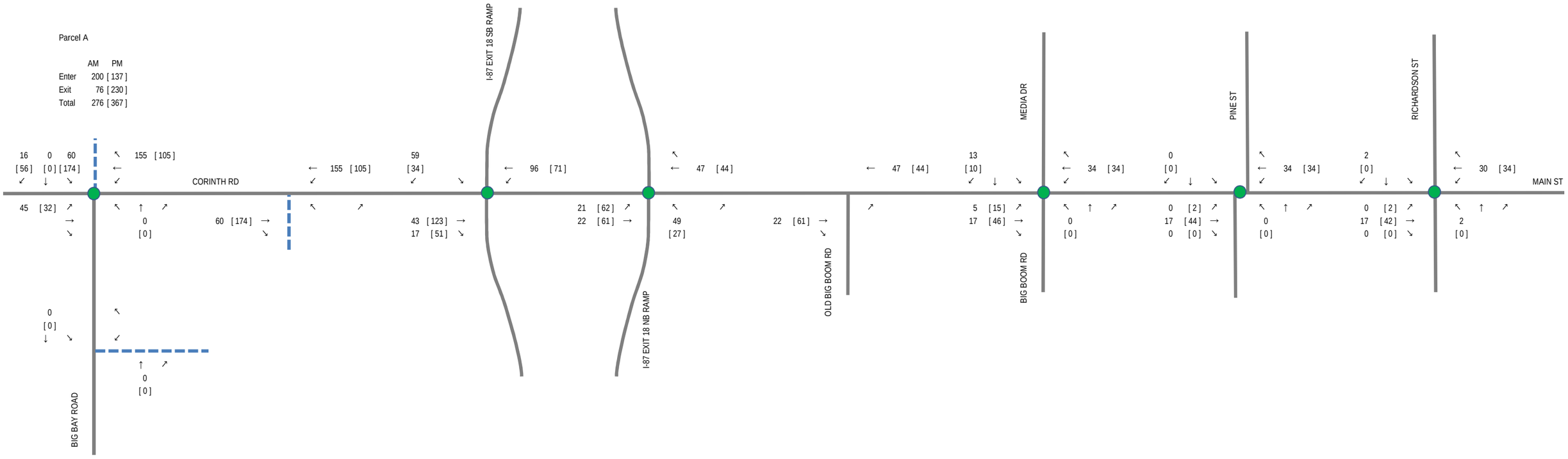
EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL A - ALL TRIPS

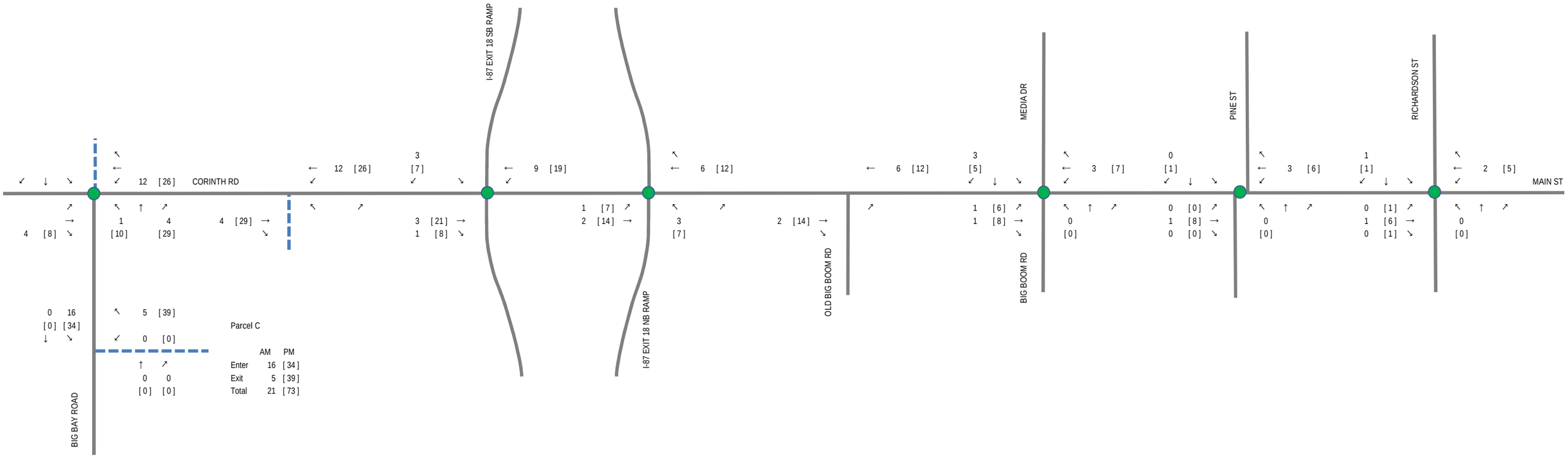
OCTOBER 27, 2015



EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL C

OCTOBER 27, 2015



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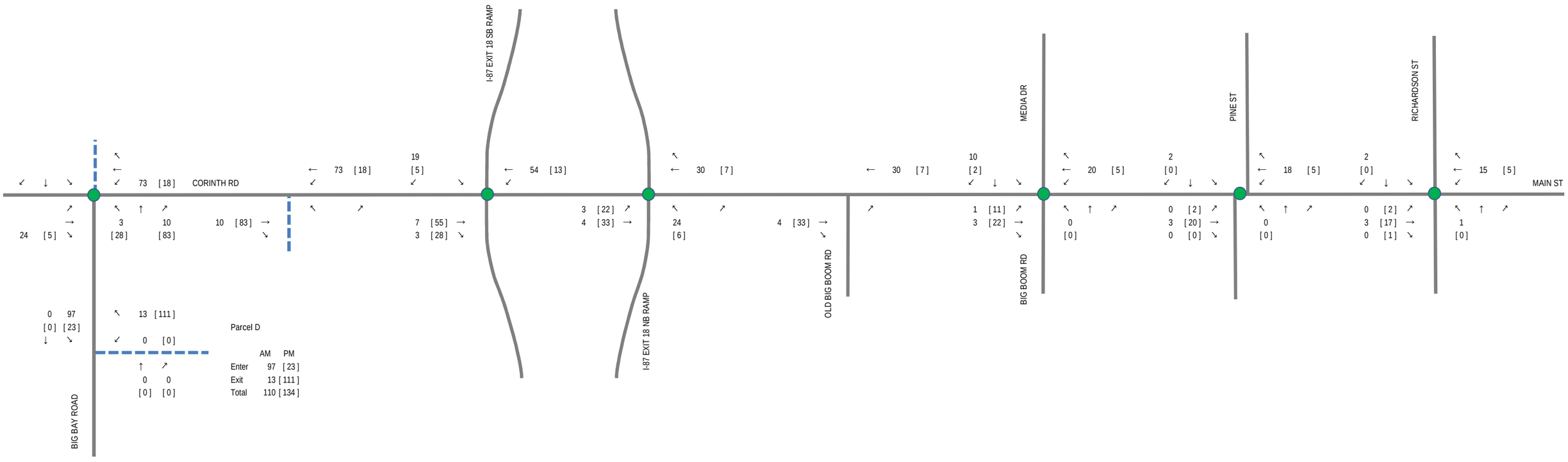
EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL D

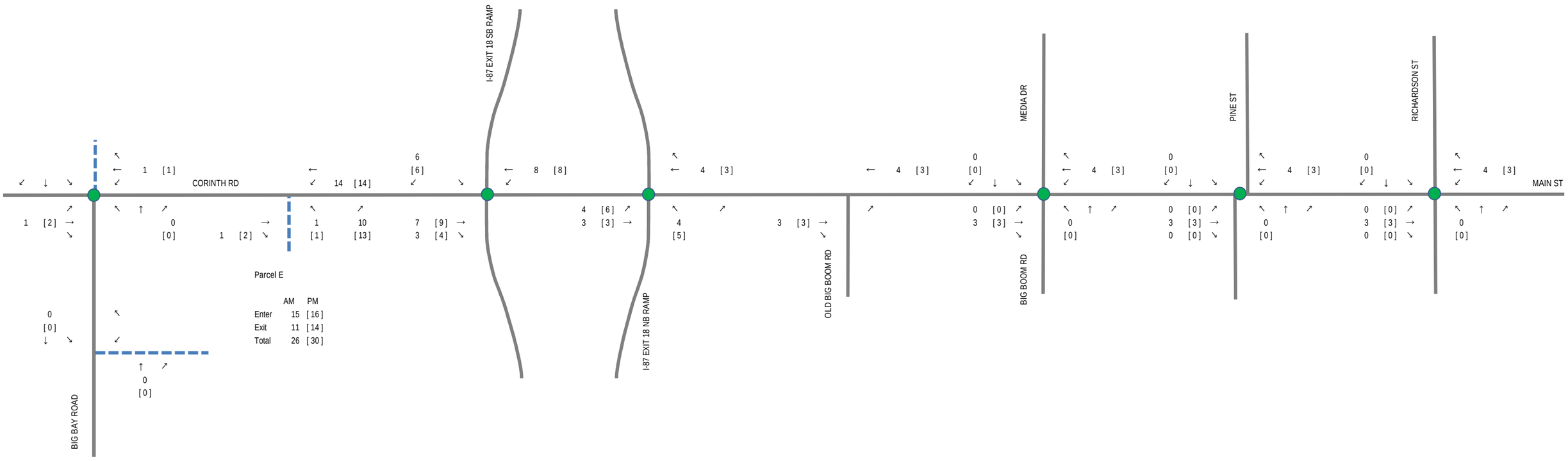
OCTOBER 27, 2015



EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL E

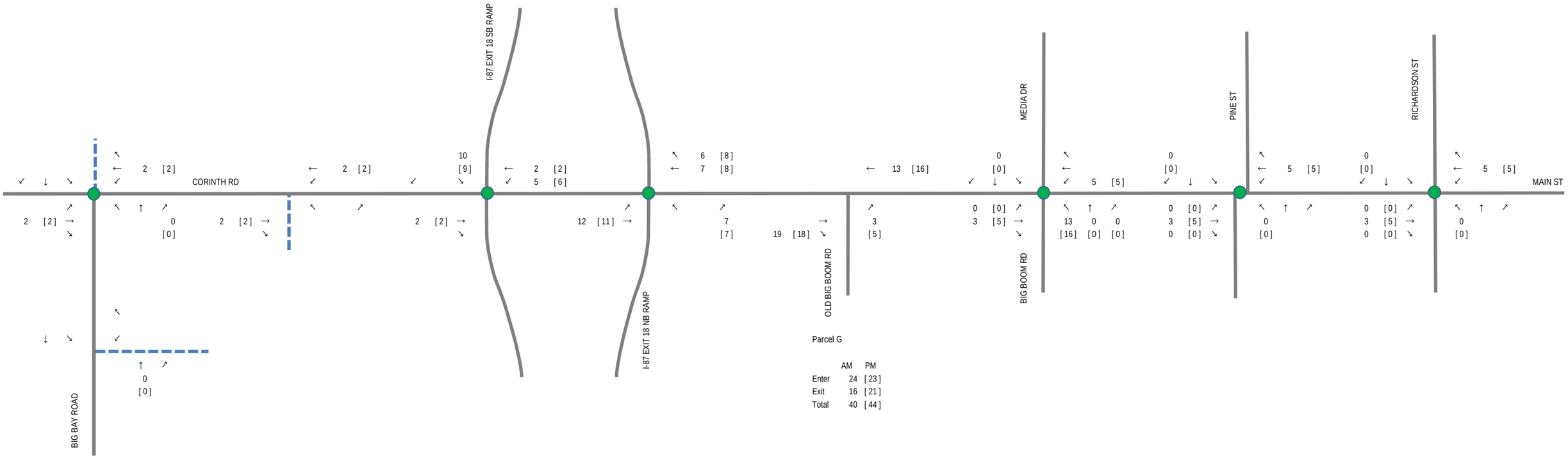
OCTOBER 27, 2015



EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL G

OCTOBER 27, 2015



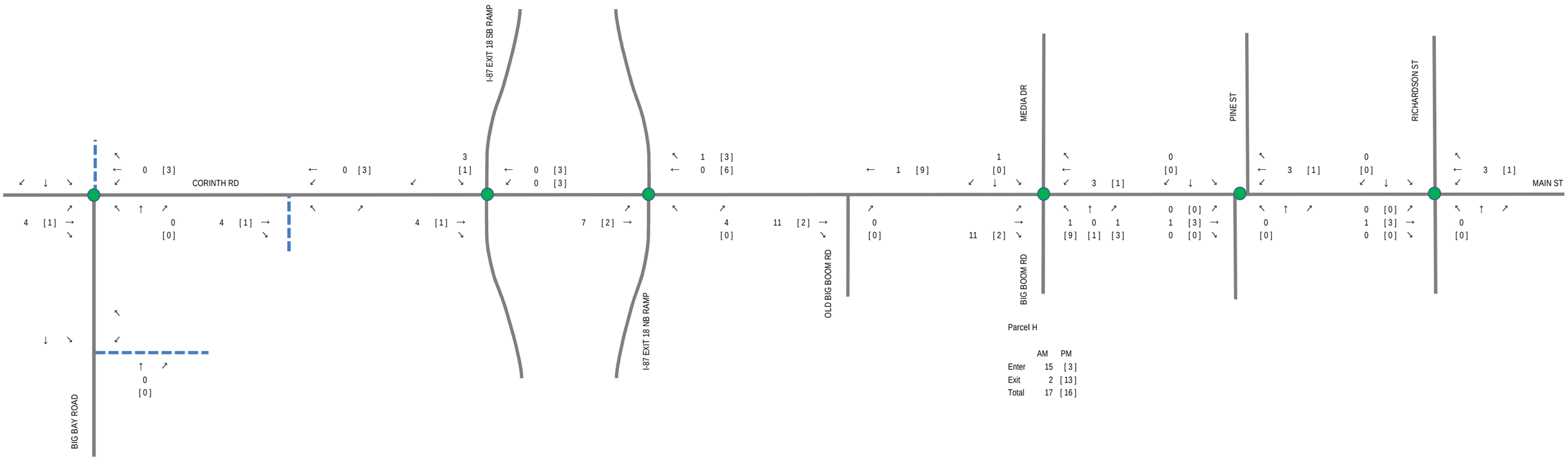
Parcel G

	AM	PM
Enter	24	[23]
Exit	16	[21]
Total	40	[44]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL H

OCTOBER 27, 2015



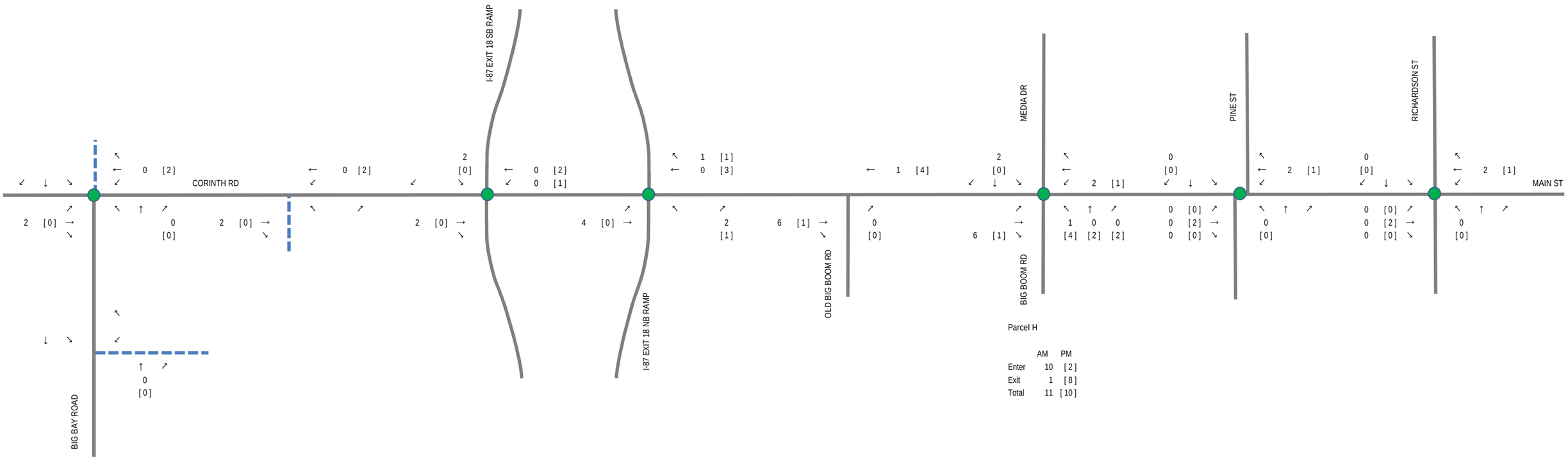
Parcel H

	AM	PM
Enter	15	[3]
Exit	2	[13]
Total	17	[16]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL I

OCTOBER 27, 2015



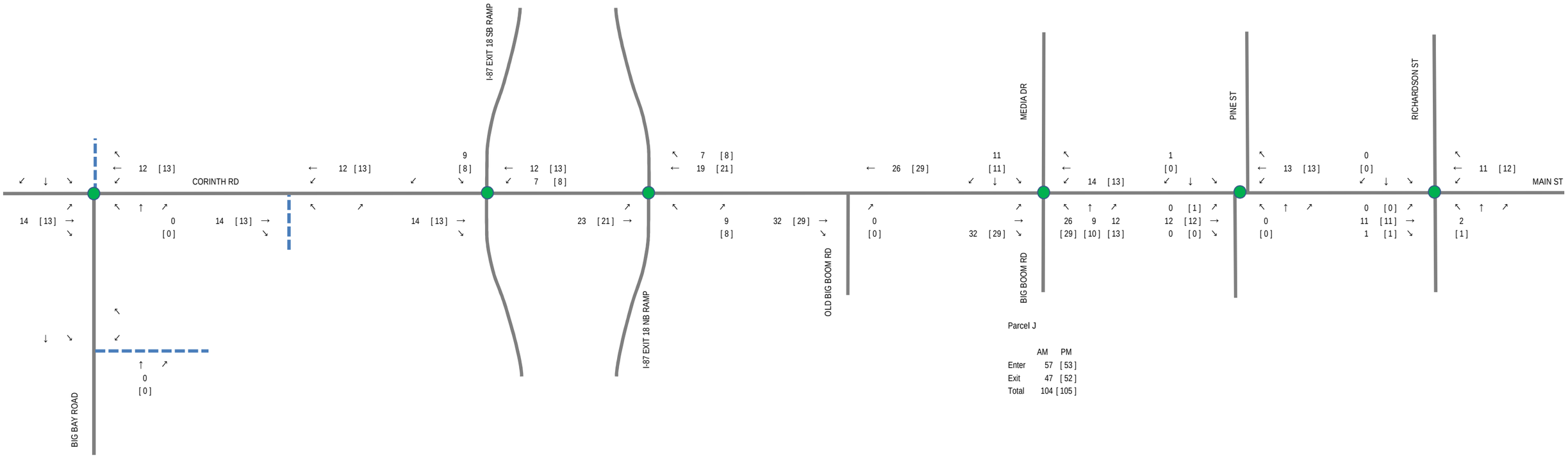
Parcel H

	AM	PM
Enter	10	[2]
Exit	1	[8]
Total	11	[10]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL J

OCTOBER 27, 2015



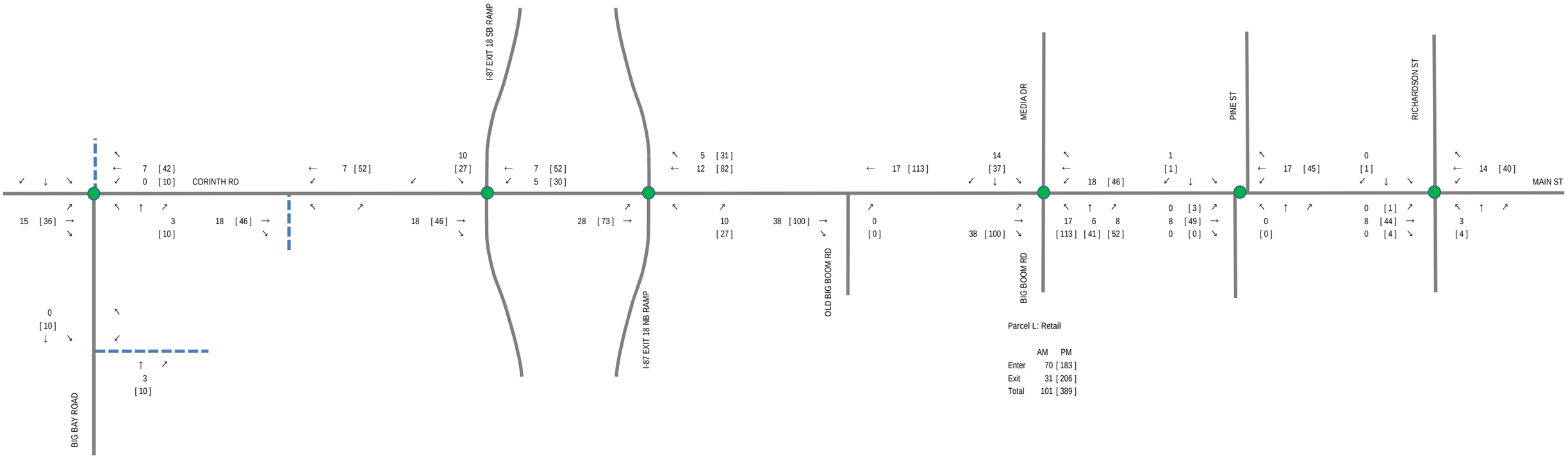
Parcel J

	AM	PM
Enter	57	[53]
Exit	47	[52]
Total	104	[105]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL L - Retail Trips

OCTOBER 27, 2015



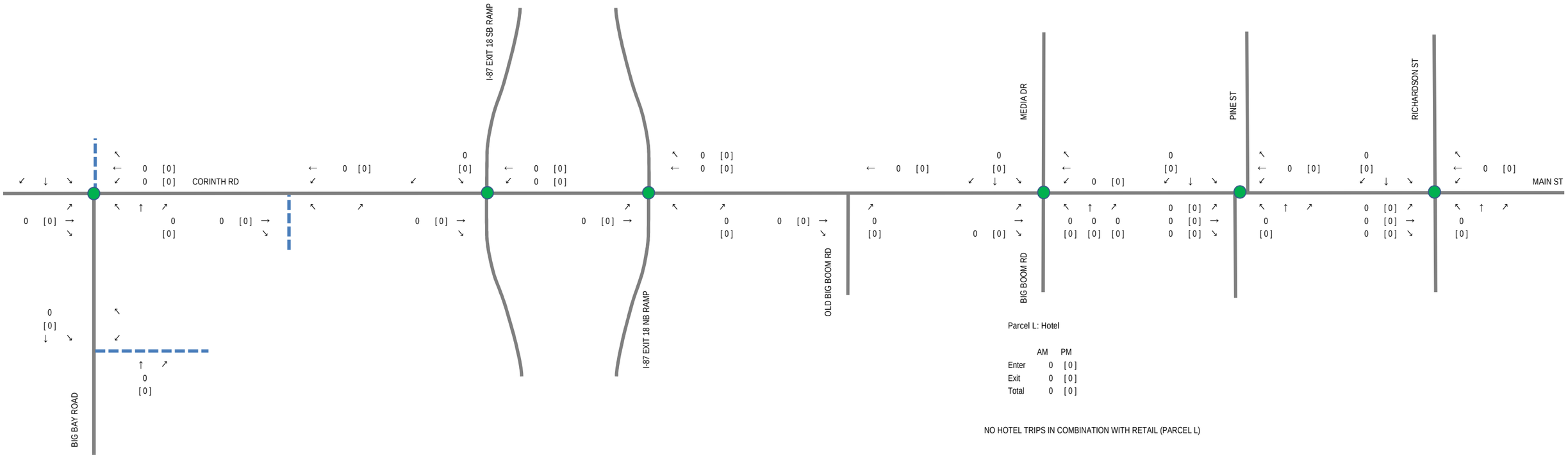
Parcel L: Retail

	AM	PM
Enter	70	[183]
Exit	31	[206]
Total	101	[389]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL L - Hotel Trips

OCTOBER 27, 2015



Parcel L: Hotel

	AM	PM
Enter	0	[0]
Exit	0	[0]
Total	0	[0]

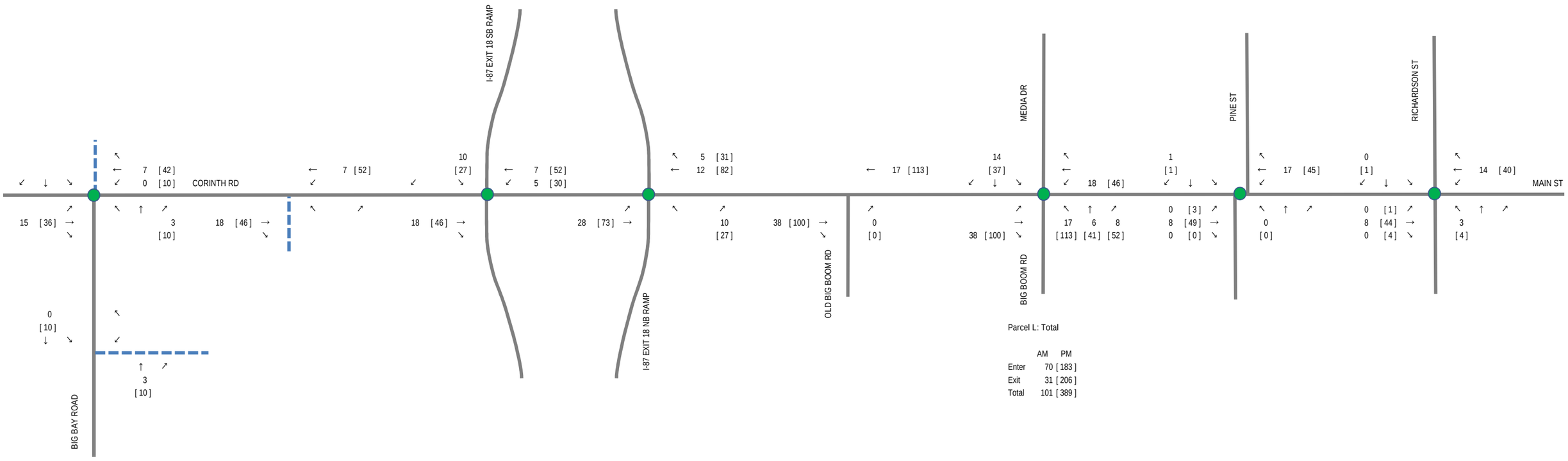
NO HOTEL TRIPS IN COMBINATION WITH RETAIL (PARCEL L)

CHA

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL L ALL

OCTOBER 27, 2015



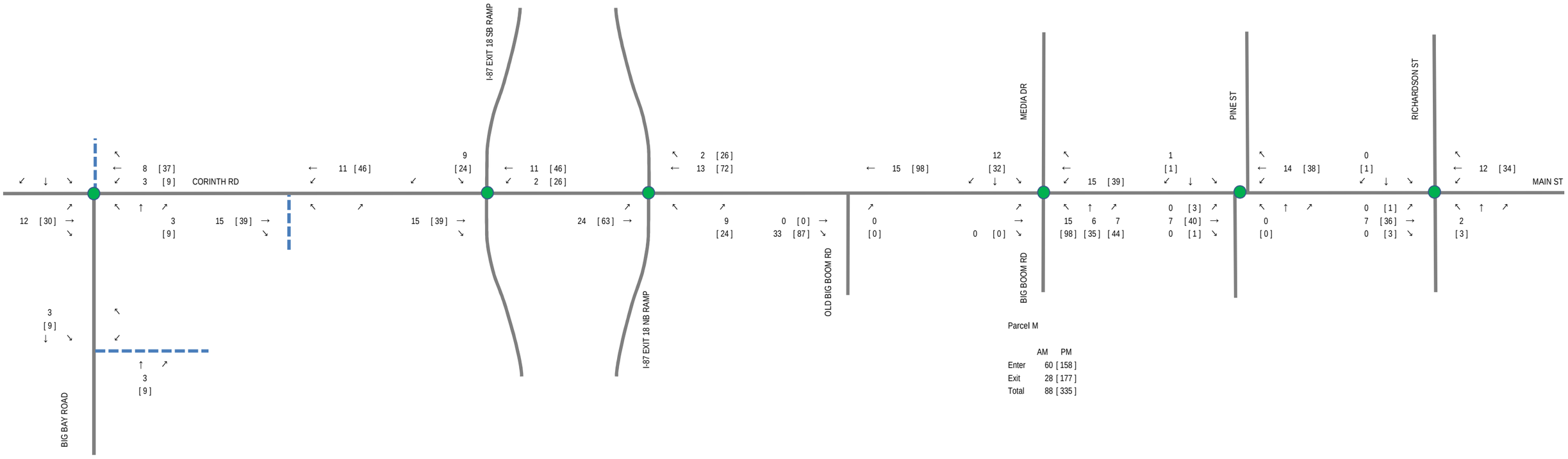
Parcel L: Total

	AM	PM
Enter	70	[183]
Exit	31	[206]
Total	101	[389]

EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PRIMARY TRIPS
PARCEL M

OCTOBER 27, 2015



EXIT 18 REZONE STUDY
TOWN OF QUEENSBURY, NY

TRIP ROUTE ASSIGNMENT
PASS-BY TRIPS
COMBINED ALL PARCELS

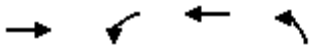
OCTOBER 27. 2015

All Parcels

	AM	PM
Enter	126	[309]
Exit	128	[311]
Total	254	[620]

Appendix C

Capacity Analysis Worksheets



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	747	134	339	204
v/c Ratio	0.73	0.34	0.27	0.54
Control Delay	19.6	6.3	4.7	12.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.6	6.3	4.7	12.4
Queue Length 50th (ft)	173	9	26	13
Queue Length 95th (ft)	#568	45	110	62
Internal Link Dist (ft)	589		656	426
Turn Bay Length (ft)		247		
Base Capacity (vph)	1025	476	1380	691
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.28	0.25	0.30

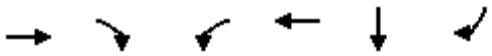
Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	680	15	125	315	40	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1855		1662	1792	1571	
Flt Permitted	1.00		0.18	1.00	0.99	
Satd. Flow (perm)	1855		315	1792	1571	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	731	16	134	339	43	161
RTOR Reduction (vph)	1	0	0	0	136	0
Lane Group Flow (vph)	746	0	134	339	68	0
Confl. Peds. (#/hr)		5	5		5	
Heavy Vehicles (%)	2%	6%	5%	6%	3%	8%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	1		2	5	3	
Permitted Phases			5			
Actuated Green, G (s)	32.7		42.8	42.8	9.2	
Effective Green, g (s)	32.7		42.8	42.8	9.2	
Actuated g/C Ratio	0.55		0.71	0.71	0.15	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1010		361	1278	240	
v/s Ratio Prot	c0.40		c0.04	0.19	c0.04	
v/s Ratio Perm			0.23			
v/c Ratio	0.74		0.37	0.27	0.28	
Uniform Delay, d1	10.4		6.6	3.0	22.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.9		0.6	0.1	0.6	
Delay (s)	13.3		7.2	3.2	23.1	
Level of Service	B		A	A	C	
Approach Delay (s)	13.3			4.3	23.1	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

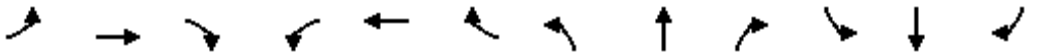
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	663	245	424	370	212	185
v/c Ratio	0.46	0.30	0.78	0.33	0.66	0.44
Control Delay	18.5	3.7	25.2	2.9	42.9	8.6
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	18.5	3.7	25.3	2.9	42.9	8.6
Queue Length 50th (ft)	121	0	102	44	109	0
Queue Length 95th (ft)	218	46	#253	72	188	53
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1686	912	669	1294	561	594
Starvation Cap Reductn	0	0	9	0	0	0
Spillback Cap Reductn	33	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.27	0.64	0.29	0.38	0.31

Intersection Summary

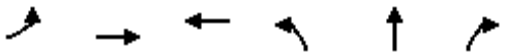
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	610	225	390	340	0	0	0	0	195	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3261	1539	1588	1701						1736	1454
Flt Permitted		1.00	1.00	0.34	1.00						0.95	1.00
Satd. Flow (perm)		3261	1539	565	1701						1736	1454
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	663	245	424	370	0	0	0	0	212	0	185
RTOR Reduction (vph)	0	0	136	0	0	0	0	0	0	0	0	150
Lane Group Flow (vph)	0	663	109	424	370	0	0	0	0	0	212	35
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	7%	2%	6%	8%	0%	0%	0%	0%	4%	0%	8%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		35.9	35.9	51.8	51.8						15.1	15.1
Effective Green, g (s)		35.9	35.9	51.8	51.8						15.1	15.1
Actuated g/C Ratio		0.45	0.45	0.64	0.64						0.19	0.19
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1452	685	548	1093						325	272
v/s Ratio Prot		0.20		c0.14	0.22							
v/s Ratio Perm			0.07	c0.36							0.12	0.02
v/c Ratio		0.46	0.16	0.77	0.34						0.65	0.13
Uniform Delay, d1		15.6	13.3	15.0	6.6						30.3	27.3
Progression Factor		1.00	1.00	0.92	0.38						1.00	1.00
Incremental Delay, d2		0.3	0.1	5.5	0.2						3.6	0.1
Delay (s)		15.9	13.5	19.2	2.7						33.9	27.3
Level of Service		B	B	B	A						C	C
Approach Delay (s)		15.2			11.5			0.0			30.8	
Approach LOS		B			B			A			C	

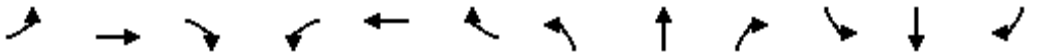
Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	266	609	870	158	283	282
v/c Ratio	0.60	0.50	0.57	0.51	0.53	0.53
Control Delay	20.7	5.3	18.4	38.1	6.1	6.1
Queue Delay	0.0	0.3	0.1	0.0	0.0	0.0
Total Delay	20.7	5.5	18.6	38.1	6.1	6.1
Queue Length 50th (ft)	53	84	158	79	0	0
Queue Length 95th (ft)	159	460	284	144	43	43
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	594	1358	1702	535	686	686
Starvation Cap Reductn	0	239	168	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.54	0.57	0.30	0.41	0.41

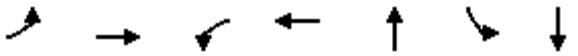
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	245	560	0	0	585	215	145	0	520	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1589	1766			3233		1656	1446	1446			
Flt Permitted	0.24	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	401	1766			3233		1656	1446	1446			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	266	609	0	0	636	234	158	0	565	0	0	0
RTOR Reduction (vph)	0	0	0	0	34	0	0	230	229	0	0	0
Lane Group Flow (vph)	266	609	0	0	836	0	158	53	53	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	6%	4%	0%	0%	5%	10%	9%	0%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	50.5	55.5			37.2		15.1	15.1	15.1			
Effective Green, g (s)	50.5	55.5			37.2		15.1	15.1	15.1			
Actuated g/C Ratio	0.63	0.69			0.46		0.19	0.19	0.19			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	447	1216			1492		310	270	270			
v/s Ratio Prot	0.10	c0.34			0.26			0.04				
v/s Ratio Perm	c0.27						c0.10		0.04			
v/c Ratio	0.60	0.50			0.56		0.51	0.20	0.20			
Uniform Delay, d1	17.0	6.0			15.8		29.4	27.6	27.6			
Progression Factor	1.00	0.56			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.3	0.4			0.6		0.5	0.1	0.1			
Delay (s)	18.3	3.7			16.3		29.9	27.8	27.8			
Level of Service	B	A			B		C	C	C			
Approach Delay (s)		8.1			16.3			28.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

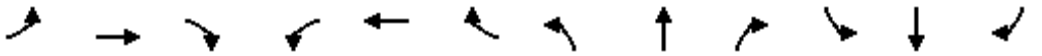
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	178	1023	17	684	61	17	195
v/c Ratio	0.41	0.43	0.06	0.74	0.73	0.06	0.50
Control Delay	15.8	10.4	10.3	24.6	74.6	29.4	10.0
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	10.7	10.3	24.6	74.6	29.4	10.0
Queue Length 50th (ft)	16	60	3	215	20	7	3
Queue Length 95th (ft)	86	383	14	#686	72	26	57
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	533	2497	471	1138	196	524	964
Starvation Cap Reductn	0	746	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.58	0.04	0.60	0.31	0.03	0.20

Intersection Summary

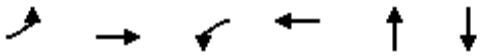
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	905	15	15	600	15	30	5	20	15	5	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			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)	1678	3488		1612	1771			1475		1805	1534	
Flt Permitted	0.21	1.00		0.22	1.00			0.38		0.79	1.00	
Satd. Flow (perm)	363	3488		375	1771			569		1492	1534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	178	1006	17	17	667	17	33	6	22	17	6	189
RTOR Reduction (vph)	0	1	0	0	1	0	0	18	0	0	156	0
Lane Group Flow (vph)	178	1022	0	17	683	0	0	43	0	17	39	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	3%	14%	12%	7%	0%	25%	0%	14%	0%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	64.0	56.8		45.3	43.1			8.2		15.9	15.9	
Effective Green, g (s)	64.0	56.8		45.3	43.1			8.2		15.9	15.9	
Actuated g/C Ratio	0.71	0.63		0.50	0.48			0.09		0.18	0.18	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	490	2203		219	849			51		273	271	
v/s Ratio Prot	c0.06	c0.29		0.00	c0.39					0.00	c0.03	
v/s Ratio Perm	0.19			0.04				c0.08		0.01		
v/c Ratio	0.36	0.46		0.08	0.81			0.84		0.06	0.15	
Uniform Delay, d1	18.2	8.6		16.6	19.8			40.2		31.7	31.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.1	6.4			66.7		0.0	0.1	
Delay (s)	18.4	8.9		16.7	26.2			106.9		31.8	31.4	
Level of Service	B	A		B	C			F		C	C	
Approach Delay (s)		10.3			26.0			106.9			31.4	
Approach LOS		B			C			F			C	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

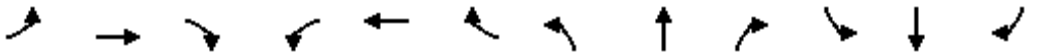
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	33	940	1	667	8	45
v/c Ratio	0.07	0.73	0.00	0.53	0.03	0.17
Control Delay	11.1	20.0	12.0	17.3	20.3	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	20.0	12.0	17.3	20.3	12.8
Queue Length 50th (ft)	1	132	0	73	2	3
Queue Length 95th (ft)	33	#1097	4	#791	14	32
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	534	1291	313	1254	802	688
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.73	0.00	0.53	0.01	0.07

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	845	1	1	590	10	5	1	1	10	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1694	1844		1745	1802			1735			1453	
Flt Permitted	0.27	1.00		0.12	1.00			0.96			0.99	
Satd. Flow (perm)	474	1844		217	1802			1735			1453	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	939	1	1	656	11	6	1	1	11	1	33
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	30	0
Lane Group Flow (vph)	33	940	0	1	667	0	0	7	0	0	15	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	3%	0%	0%	5%	11%	0%	0%	0%	0%	0%	14%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	35.0	34.1		34.4	33.8			2.6			5.5	
Effective Green, g (s)	35.0	34.1		34.4	33.8			2.6			5.5	
Actuated g/C Ratio	0.56	0.54		0.55	0.54			0.04			0.09	
Clearance Time (s)	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	
Lane Grp Cap (vph)	281	1001		133	969			71			127	
v/s Ratio Prot	c0.00	c0.51		0.00	0.37			c0.00			c0.01	
v/s Ratio Perm	0.06			0.00								
v/c Ratio	0.12	0.94		0.01	0.69			0.10			0.12	
Uniform Delay, d1	13.3	13.4		23.9	10.6			29.0			26.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	15.7		0.0	2.0			0.6			0.4	
Delay (s)	13.4	29.0		23.9	12.7			29.6			26.8	
Level of Service	B	C		C	B			C			C	
Approach Delay (s)		28.5			12.7			29.6			26.8	
Approach LOS		C			B			C			C	

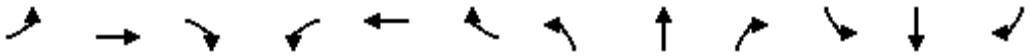
Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	856	1	545	117	61
v/c Ratio	0.03	0.95	0.00	0.61	0.28	0.13
Control Delay	7.9	40.3	8.0	17.4	19.8	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	40.3	8.0	17.4	19.8	15.8
Queue Length 50th (ft)	2	302	0	146	33	14
Queue Length 95th (ft)	8	#688	2	322	86	46
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	702	898	529	888	415	472
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.95	0.00	0.61	0.28	0.13

Intersection Summary

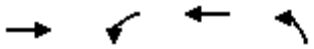
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	710	60	1	485	5	90	10	5	30	15	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1745	1816		1805	1807			1636			1622	
Flt Permitted	0.30	1.00		0.12	1.00			0.73			0.84	
Satd. Flow (perm)	545	1816		224	1807			1241			1394	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	789	67	1	539	6	100	11	6	33	17	11
RTOR Reduction (vph)	0	3	0	0	1	0	0	2	0	0	8	0
Lane Group Flow (vph)	11	853	0	1	544	0	0	115	0	0	53	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	0%	3%	5%	0%	5%	0%	7%	8%	0%	7%	0%	18%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	35.2	34.1		35.0	34.0			23.1			23.1	
Effective Green, g (s)	35.2	34.1		35.0	34.0			23.1			23.1	
Actuated g/C Ratio	0.48	0.47		0.48	0.46			0.32			0.32	
Clearance Time (s)	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	
Lane Grp Cap (vph)	280	845		128	839			391			439	
v/s Ratio Prot	c0.00	c0.47		0.00	0.30							
v/s Ratio Perm	0.02			0.00				c0.09			0.04	
v/c Ratio	0.04	1.01		0.01	0.65			0.29			0.12	
Uniform Delay, d1	10.9	19.6		16.1	15.0			18.9			17.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	33.4		0.0	1.7			1.9			0.1	
Delay (s)	11.0	53.0		16.1	16.8			20.8			18.0	
Level of Service	B	D		B	B			C			B	
Approach Delay (s)		52.4			16.8			20.8			18.0	
Approach LOS		D			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



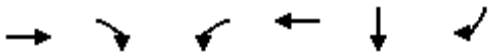
Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	540	112	459	194
v/c Ratio	0.64	0.24	0.38	0.46
Control Delay	16.6	5.5	5.9	10.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	5.5	5.9	10.5
Queue Length 50th (ft)	103	8	38	10
Queue Length 95th (ft)	307	39	154	61
Internal Link Dist (ft)	589		656	426
Turn Bay Length (ft)		247		
Base Capacity (vph)	1187	583	1689	857
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.19	0.27	0.23

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	510	20	110	450	45	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1823		1661	1881	1634	
Flt Permitted	1.00		0.26	1.00	0.99	
Satd. Flow (perm)	1823		462	1881	1634	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	520	20	112	459	46	148
RTOR Reduction (vph)	2	0	0	0	121	0
Lane Group Flow (vph)	538	0	112	459	73	0
Confl. Peds. (#/hr)		5	5		5	
Heavy Vehicles (%)	3%	20%	5%	1%	0%	4%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	1		2	5	3	
Permitted Phases			5			
Actuated Green, G (s)	22.6		32.3	32.3	8.9	
Effective Green, g (s)	22.6		32.3	32.3	8.9	
Actuated g/C Ratio	0.46		0.66	0.66	0.18	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	837		442	1234	295	
v/s Ratio Prot	c0.30		0.03	c0.24	c0.04	
v/s Ratio Perm			0.14			
v/c Ratio	0.64		0.25	0.37	0.25	
Uniform Delay, d1	10.2		4.6	3.8	17.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.7		0.3	0.2	0.4	
Delay (s)	11.9		4.9	4.0	17.7	
Level of Service	B		A	A	B	
Approach Delay (s)	11.9			4.2	17.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

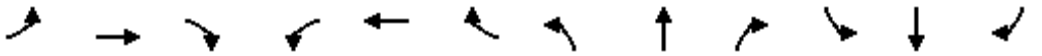
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	546	168	500	418	194	224
v/c Ratio	0.41	0.24	0.75	0.35	0.62	0.48
Control Delay	19.3	4.0	21.4	3.0	41.1	8.3
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	19.3	4.0	21.4	3.1	41.1	8.3
Queue Length 50th (ft)	99	0	117	55	98	0
Queue Length 95th (ft)	174	39	#290	88	173	57
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1733	882	723	1267	549	642
Starvation Cap Reductn	0	0	0	159	0	0
Spillback Cap Reductn	18	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.19	0.69	0.38	0.35	0.35

Intersection Summary

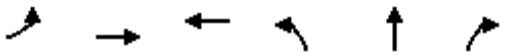
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	535	165	490	410	0	0	0	0	190	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3355	1554	1650	1783						1703	1524
Flt Permitted		1.00	1.00	0.40	1.00						0.95	1.00
Satd. Flow (perm)		3355	1554	690	1783						1703	1524
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	546	168	500	418	0	0	0	0	194	0	224
RTOR Reduction (vph)	0	0	101	0	0	0	0	0	0	0	0	182
Lane Group Flow (vph)	0	546	67	500	418	0	0	0	0	0	194	42
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	4%	1%	2%	3%	0%	0%	0%	0%	6%	0%	3%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		32.0	32.0	55.4	55.4						15.0	15.0
Effective Green, g (s)		32.0	32.0	55.4	55.4						15.0	15.0
Actuated g/C Ratio		0.40	0.40	0.69	0.69						0.19	0.19
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1335	618	695	1228						317	284
v/s Ratio Prot		0.16		c0.16	0.23							
v/s Ratio Perm			0.04	c0.33							0.11	0.03
v/c Ratio		0.41	0.11	0.72	0.34						0.61	0.15
Uniform Delay, d1		17.4	15.2	11.8	5.1						30.0	27.4
Progression Factor		1.00	1.00	0.90	0.39						1.00	1.00
Incremental Delay, d2		0.3	0.1	2.6	0.2						2.5	0.1
Delay (s)		17.7	15.3	13.2	2.2						32.5	27.4
Level of Service		B	B	B	A						C	C
Approach Delay (s)		17.1			8.2			0.0			29.8	
Approach LOS		B			A			A			C	

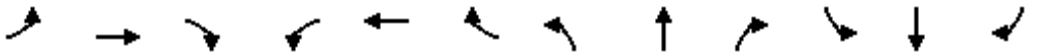
Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	235	505	964	204	255	255
v/c Ratio	0.56	0.42	0.60	0.62	0.43	0.43
Control Delay	22.1	4.7	19.0	41.0	2.2	2.2
Queue Delay	0.0	0.2	0.2	0.0	0.0	0.0
Total Delay	22.1	4.9	19.2	41.0	2.2	2.2
Queue Length 50th (ft)	47	75	182	103	0	0
Queue Length 95th (ft)	148	118	322	181	0	0
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	586	1393	1767	571	743	743
Starvation Cap Reductn	0	271	205	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.45	0.62	0.36	0.34	0.34

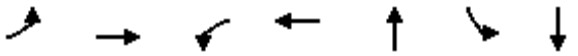
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	495	0	0	700	245	200	0	500	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1635	1766			3368		1770	1460	1460			
Flt Permitted	0.20	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	353	1766			3368		1770	1460	1460			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	235	505	0	0	714	250	204	0	510	0	0	0
RTOR Reduction (vph)	0	0	0	0	31	0	0	207	207	0	0	0
Lane Group Flow (vph)	235	505	0	0	933	0	204	48	48	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	3%	4%	0%	0%	2%	3%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	50.4	55.4			37.8		15.0	15.0	15.0			
Effective Green, g (s)	50.4	55.4			37.8		15.0	15.0	15.0			
Actuated g/C Ratio	0.63	0.69			0.47		0.19	0.19	0.19			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	422	1216			1583		330	272	272			
v/s Ratio Prot	c0.09	c0.29			c0.28			0.03				
v/s Ratio Perm	0.26						c0.12		0.03			
v/c Ratio	0.56	0.42			0.59		0.62	0.17	0.17			
Uniform Delay, d1	17.9	5.4			15.6		30.1	27.5	27.5			
Progression Factor	1.09	0.57			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.3			0.7		2.4	0.1	0.1			
Delay (s)	20.4	3.4			16.3		32.5	27.6	27.6			
Level of Service	C	A			B		C	C	C			
Approach Delay (s)		8.8			16.3			29.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

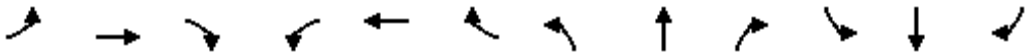


Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	132	916	26	727	84	16	243
v/c Ratio	0.35	0.42	0.07	0.73	0.99	0.06	0.54
Control Delay	14.5	14.4	8.6	23.6	127.4	28.1	9.6
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	14.8	8.6	23.6	127.4	28.1	9.6
Queue Length 50th (ft)	14	62	5	227	~33	6	5
Queue Length 95th (ft)	65	326	18	#726	#120	25	64
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	519	2270	516	1119	171	518	956
Starvation Cap Reductn	0	751	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.60	0.05	0.65	0.49	0.03	0.25

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	860	10	25	680	10	45	5	30	15	10	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1728	3486		1671	1823			1573		1805	1548	
Flt Permitted	0.20	1.00		0.25	1.00			0.32		0.72	1.00	
Satd. Flow (perm)	357	3486		441	1823			509		1376	1548	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	905	11	26	716	11	47	5	32	16	11	232
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	187	0
Lane Group Flow (vph)	132	916	0	26	727	0	0	64	0	16	56	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	1%	3%	30%	8%	4%	0%	15%	20%	3%	0%	8%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	63.9	53.1		52.3	46.5			9.9		17.6	17.6	
Effective Green, g (s)	63.9	53.1		52.3	46.5			9.9		17.6	17.6	
Actuated g/C Ratio	0.70	0.58		0.57	0.51			0.11		0.19	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	435	2023		330	926			55		277	297	
v/s Ratio Prot	c0.04	c0.26		0.00	c0.40					0.00	c0.04	
v/s Ratio Perm	0.17			0.04				c0.13		0.01		
v/c Ratio	0.30	0.45		0.08	0.78			1.17		0.06	0.19	
Uniform Delay, d1	18.9	10.9		13.4	18.4			40.8		32.5	31.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3		0.0	5.1			175.2		0.0	0.1	
Delay (s)	19.1	11.3		13.4	23.5			216.0		32.5	31.1	
Level of Service	B	B		B	C			F		C	C	
Approach Delay (s)		12.2			23.2			216.0			31.2	
Approach LOS		B			C			F			C	

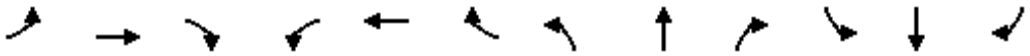
Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	91.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	58	852	1	716	7	33
v/c Ratio	0.13	0.59	0.00	0.59	0.03	0.13
Control Delay	13.4	16.4	13.0	20.9	16.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	16.4	13.0	20.9	16.6	15.1
Queue Length 50th (ft)	0	0	0	79	1	3
Queue Length 95th (ft)	49	#983	4	#853	12	28
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	479	1443	322	1204	725	681
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.59	0.00	0.59	0.01	0.05

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	805	5	1	665	15	1	1	5	10	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.90			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1678	1861		1745	1819			1616			1498	
Flt Permitted	0.22	1.00		0.14	1.00			0.99			0.98	
Satd. Flow (perm)	394	1861		257	1819			1616			1498	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	847	5	1	700	16	1	1	5	11	1	21
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	20	0
Lane Group Flow (vph)	58	852	0	1	716	0	0	2	0	0	13	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	2%	0%	0%	4%	6%	0%	0%	0%	25%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	43.4	37.8		33.4	32.8			2.6			4.1	
Effective Green, g (s)	43.4	37.8		33.4	32.8			2.6			4.1	
Actuated g/C Ratio	0.67	0.58		0.51	0.50			0.04			0.06	
Clearance Time (s)	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	
Lane Grp Cap (vph)	373	1080		145	916			64			94	
v/s Ratio Prot	c0.01	c0.46		0.00	0.39			c0.00			c0.01	
v/s Ratio Perm	0.09			0.00								
v/c Ratio	0.16	0.79		0.01	0.78			0.03			0.14	
Uniform Delay, d1	12.1	10.6		20.2	13.2			30.0			28.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	3.9		0.0	4.4			0.2			0.7	
Delay (s)	12.3	14.5		20.2	17.6			30.3			29.5	
Level of Service	B	B		C	B			C			C	
Approach Delay (s)		14.3			17.6			30.3			29.5	
Approach LOS		B			B			C			C	

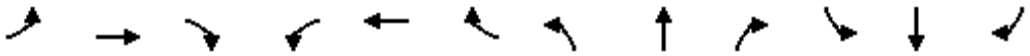
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	21	784	5	616	75	38
v/c Ratio	0.07	0.86	0.02	0.69	0.15	0.07
Control Delay	8.2	28.8	7.8	19.7	18.3	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	28.8	7.8	19.7	18.3	14.1
Queue Length 50th (ft)	4	255	1	175	21	7
Queue Length 95th (ft)	13	#604	5	#427	59	31
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	649	907	529	896	484	538
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.86	0.01	0.69	0.15	0.07

Intersection Summary

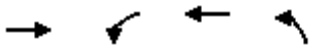
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	680	65	5	575	10	55	15	1	10	15	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1662	1834		1805	1822			1764			1672	
Flt Permitted	0.23	1.00		0.12	1.00			0.79			0.94	
Satd. Flow (perm)	409	1834		224	1822			1451			1591	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	716	68	5	605	11	58	16	1	11	16	11
RTOR Reduction (vph)	0	3	0	0	1	0	0	1	0	0	8	0
Lane Group Flow (vph)	21	781	0	5	615	0	0	74	0	0	30	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	2%	2%	0%	4%	0%	0%	0%	0%	0%	0%	11%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	35.4	34.2		35.0	34.0			23.1			23.1	
Effective Green, g (s)	35.4	34.2		35.0	34.0			23.1			23.1	
Actuated g/C Ratio	0.48	0.47		0.48	0.46			0.32			0.32	
Clearance Time (s)	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	
Lane Grp Cap (vph)	218	855		128	845			457			501	
v/s Ratio Prot	c0.00	c0.43		0.00	0.34							
v/s Ratio Perm	0.04			0.02				c0.05			0.02	
v/c Ratio	0.10	0.91		0.04	0.73			0.16			0.06	
Uniform Delay, d1	11.6	18.2		14.3	15.9			18.1			17.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	14.0		0.1	3.2			0.8			0.1	
Delay (s)	11.8	32.1		14.4	19.1			18.9			17.6	
Level of Service	B	C		B	B			B			B	
Approach Delay (s)		31.6			19.0			18.9			17.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	73.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	793	142	362	216
v/c Ratio	0.77	0.39	0.28	0.56
Control Delay	21.5	7.1	4.8	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.5	7.1	4.8	12.6
Queue Length 50th (ft)	193	10	29	14
Queue Length 95th (ft)	#617	47	118	65
Internal Link Dist (ft)	589		656	426
Turn Bay Length (ft)		247		
Base Capacity (vph)	1025	449	1367	692
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.77	0.32	0.26	0.31

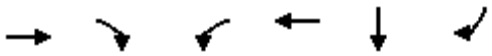
Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	720	18	132	337	43	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1854		1662	1792	1571	
Flt Permitted	1.00		0.15	1.00	0.99	
Satd. Flow (perm)	1854		267	1792	1571	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	774	19	142	362	46	170
RTOR Reduction (vph)	1	0	0	0	144	0
Lane Group Flow (vph)	792	0	142	362	72	0
Confl. Peds. (#/hr)		5	5		5	
Heavy Vehicles (%)	2%	6%	5%	6%	3%	8%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	1		2	5	3	
Permitted Phases			5			
Actuated Green, G (s)	33.0		43.2	43.2	9.2	
Effective Green, g (s)	33.0		43.2	43.2	9.2	
Actuated g/C Ratio	0.55		0.72	0.72	0.15	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1012		334	1281	239	
v/s Ratio Prot	c0.43		c0.04	0.20	c0.05	
v/s Ratio Perm			0.26			
v/c Ratio	0.78		0.43	0.28	0.30	
Uniform Delay, d1	10.9		7.6	3.1	22.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.0		0.9	0.1	0.7	
Delay (s)	14.9		8.5	3.2	23.5	
Level of Service	B		A	A	C	
Approach Delay (s)	14.9			4.7	23.5	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

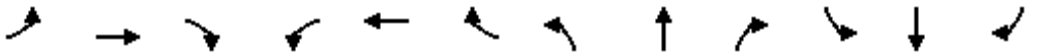
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	702	258	446	404	223	202
v/c Ratio	0.49	0.32	0.83	0.35	0.69	0.47
Control Delay	19.8	3.7	30.6	3.0	45.7	8.5
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	19.8	3.7	30.6	3.3	45.7	8.5
Queue Length 50th (ft)	146	0	140	52	123	0
Queue Length 95th (ft)	233	48	#308	79	198	55
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1593	882	620	1265	530	583
Starvation Cap Reductn	0	0	0	363	0	0
Spillback Cap Reductn	35	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.29	0.72	0.45	0.42	0.35

Intersection Summary

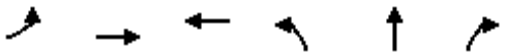
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	646	237	410	372	0	0	0	0	205	0	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3261	1539	1588	1701						1736	1453
Flt Permitted		1.00	1.00	0.31	1.00						0.95	1.00
Satd. Flow (perm)		3261	1539	521	1701						1736	1453
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	702	258	446	404	0	0	0	0	223	0	202
RTOR Reduction (vph)	0	0	144	0	0	0	0	0	0	0	0	164
Lane Group Flow (vph)	0	702	114	446	404	0	0	0	0	0	223	38
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	7%	2%	6%	8%	0%	0%	0%	0%	4%	0%	8%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		37.3	37.3	54.4	54.4						15.8	15.8
Effective Green, g (s)		37.3	37.3	54.4	54.4						15.8	15.8
Actuated g/C Ratio		0.44	0.44	0.64	0.64						0.19	0.19
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1439	679	542	1095						324	271
v/s Ratio Prot		0.22		c0.16	0.24							
v/s Ratio Perm			0.07	c0.37							0.13	0.03
v/c Ratio		0.49	0.17	0.82	0.37						0.69	0.14
Uniform Delay, d1		16.8	14.2	16.5	7.0						32.1	28.7
Progression Factor		1.00	1.00	0.96	0.38						1.00	1.00
Incremental Delay, d2		0.4	0.2	8.0	0.2						4.8	0.1
Delay (s)		17.2	14.4	23.9	2.9						36.8	28.8
Level of Service		B	B	C	A						D	C
Approach Delay (s)		16.4			13.9			0.0			33.0	
Approach LOS		B			B			A			C	

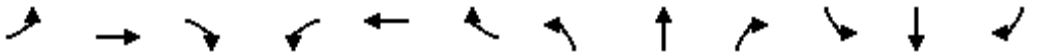
Intersection Summary					
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.80				
Actuated Cycle Length (s)	84.5	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	66.3%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	280	645	924	172	298	297
v/c Ratio	0.62	0.53	0.62	0.56	0.58	0.58
Control Delay	24.1	5.8	20.6	40.4	8.8	8.7
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0
Total Delay	24.1	6.2	20.8	40.4	8.8	8.7
Queue Length 50th (ft)	83	95	196	92	0	0
Queue Length 95th (ft)	186	494	309	155	67	67
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	545	1329	1611	505	650	650
Starvation Cap Reductn	0	286	157	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.62	0.64	0.34	0.46	0.46

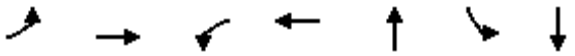
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	258	593	0	0	624	226	158	0	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1589	1766			3235		1656	1446	1446			
Flt Permitted	0.21	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	351	1766			3235		1656	1446	1446			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	280	645	0	0	678	246	172	0	595	0	0	0
RTOR Reduction (vph)	0	0	0	0	34	0	0	242	241	0	0	0
Lane Group Flow (vph)	280	645	0	0	890	0	172	56	56	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	6%	4%	0%	0%	5%	10%	9%	0%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	53.7	58.7			38.0		15.8	15.8	15.8			
Effective Green, g (s)	53.7	58.7			38.0		15.8	15.8	15.8			
Actuated g/C Ratio	0.64	0.69			0.45		0.19	0.19	0.19			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	453	1226			1454		309	270	270			
v/s Ratio Prot	c0.11	c0.37			0.28			0.04				
v/s Ratio Perm	c0.28						c0.10		0.04			
v/c Ratio	0.62	0.53			0.61		0.56	0.21	0.21			
Uniform Delay, d1	18.2	6.2			17.7		31.2	29.0	29.0			
Progression Factor	1.04	0.59			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.6	0.5			0.9		1.2	0.1	0.1			
Delay (s)	20.5	4.1			18.5		32.4	29.2	29.2			
Level of Service	C	A			B		C	C	C			
Approach Delay (s)		9.1			18.5			29.9			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	84.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	187	1079	18	727	65	18	207
v/c Ratio	0.44	0.47	0.05	0.74	0.87	0.07	0.52
Control Delay	16.7	13.6	8.3	24.5	103.1	30.1	10.1
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	14.3	8.3	24.5	103.1	30.1	10.1
Queue Length 50th (ft)	18	68	4	247	24	8	3
Queue Length 95th (ft)	91	413	14	#757	79	27	58
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	495	2326	430	996	161	475	872
Starvation Cap Reductn	0	798	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.71	0.04	0.73	0.40	0.04	0.24

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	955	16	16	638	16	32	5	21	16	5	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			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)	1678	3488		1612	1771			1473		1805	1532	
Flt Permitted	0.20	1.00		0.20	1.00			0.35		0.76	1.00	
Satd. Flow (perm)	360	3488		342	1771			523		1443	1532	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	187	1061	18	18	709	18	36	6	23	18	6	201
RTOR Reduction (vph)	0	1	0	0	0	0	0	18	0	0	167	0
Lane Group Flow (vph)	187	1078	0	18	727	0	0	47	0	18	40	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	3%	14%	12%	7%	0%	25%	0%	14%	0%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	70.5	60.1		56.0	50.6			9.0		16.6	16.6	
Effective Green, g (s)	70.5	60.1		56.0	50.6			9.0		16.6	16.6	
Actuated g/C Ratio	0.73	0.62		0.58	0.52			0.09		0.17	0.17	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	463	2158		267	922			48		256	261	
v/s Ratio Prot	c0.06	c0.31		0.00	c0.41					0.00	c0.03	
v/s Ratio Perm	0.23			0.03				c0.09		0.01		
v/c Ratio	0.40	0.50		0.07	0.79			0.98		0.07	0.15	
Uniform Delay, d1	20.0	10.2		15.2	18.9			43.9		35.3	34.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.4		0.0	5.2			119.6		0.0	0.1	
Delay (s)	20.2	10.6		15.2	24.1			163.5		35.3	34.4	
Level of Service	C	B		B	C			F		D	C	
Approach Delay (s)		12.0			23.9			163.5			34.5	
Approach LOS		B			C			F			C	

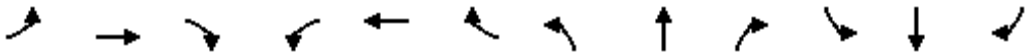
Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	97.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	36	992	1	708	8	50
v/c Ratio	0.08	0.78	0.00	0.57	0.03	0.19
Control Delay	11.6	22.1	12.0	17.8	20.0	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	22.1	12.0	17.8	20.0	12.4
Queue Length 50th (ft)	1	148	0	80	2	3
Queue Length 95th (ft)	34	#1163	4	#846	14	34
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	500	1280	317	1242	815	699
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.78	0.00	0.57	0.01	0.07

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	892	1	1	626	11	5	1	1	11	1	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1694	1844		1745	1802			1735			1451	
Flt Permitted	0.23	1.00		0.12	1.00			0.96			0.99	
Satd. Flow (perm)	415	1844		222	1802			1735			1451	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	991	1	1	696	12	6	1	1	12	1	37
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	34	0
Lane Group Flow (vph)	36	992	0	1	708	0	0	7	0	0	16	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	3%	0%	0%	5%	11%	0%	0%	0%	0%	0%	14%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	34.1	33.3		33.7	33.1			2.5			5.6	
Effective Green, g (s)	34.1	33.3		33.7	33.1			2.5			5.6	
Actuated g/C Ratio	0.55	0.54		0.54	0.53			0.04			0.09	
Clearance Time (s)	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	
Lane Grp Cap (vph)	244	990		135	962			69			131	
v/s Ratio Prot	c0.00	c0.54		0.00	0.39			c0.00			c0.01	
v/s Ratio Perm	0.08			0.00								
v/c Ratio	0.15	1.00		0.01	0.74			0.10			0.12	
Uniform Delay, d1	14.7	14.4		26.6	11.1			28.7			25.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	29.1		0.0	3.0			0.7			0.4	
Delay (s)	15.0	43.4		26.6	14.0			29.3			26.4	
Level of Service	B	D		C	B			C			C	
Approach Delay (s)		42.4			14.1			29.3			26.4	
Approach LOS		D			B			C			C	

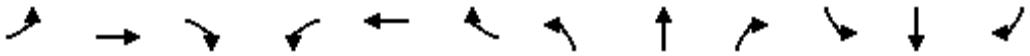
Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	12	903	1	578	124	67
v/c Ratio	0.03	1.01	0.00	0.65	0.30	0.14
Control Delay	7.9	52.1	8.0	18.4	20.2	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	52.1	8.0	18.4	20.2	15.7
Queue Length 50th (ft)	2	335	0	159	35	15
Queue Length 95th (ft)	9	#741	2	350	91	48
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	692	898	529	888	411	468
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	1.01	0.00	0.65	0.30	0.14

Intersection Summary

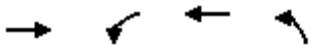
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	750	63	1	515	5	95	11	5	32	16	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.97	
Satd. Flow (prot)	1745	1816		1805	1807			1637			1615	
Flt Permitted	0.27	1.00		0.12	1.00			0.72			0.83	
Satd. Flow (perm)	492	1816		224	1807			1228			1378	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	833	70	1	572	6	106	12	6	36	18	13
RTOR Reduction (vph)	0	3	0	0	1	0	0	2	0	0	9	0
Lane Group Flow (vph)	12	900	0	1	577	0	0	122	0	0	58	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	0%	3%	5%	0%	5%	0%	7%	8%	0%	7%	0%	18%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	35.2	34.1		35.0	34.0			23.1			23.1	
Effective Green, g (s)	35.2	34.1		35.0	34.0			23.1			23.1	
Actuated g/C Ratio	0.48	0.47		0.48	0.46			0.32			0.32	
Clearance Time (s)	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	
Lane Grp Cap (vph)	255	845		128	839			387			434	
v/s Ratio Prot	c0.00	c0.50		0.00	0.32							
v/s Ratio Perm	0.02			0.00				c0.10			0.04	
v/c Ratio	0.05	1.07		0.01	0.69			0.32			0.13	
Uniform Delay, d1	11.2	19.6		16.1	15.4			19.0			17.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	49.9		0.0	2.4			2.1			0.1	
Delay (s)	11.3	69.5		16.1	17.8			21.2			18.0	
Level of Service	B	E		B	B			C			B	
Approach Delay (s)		68.7			17.8			21.2			18.0	
Approach LOS		E			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	45.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	578	119	489	208
v/c Ratio	0.66	0.26	0.40	0.49
Control Delay	17.4	5.7	6.0	11.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.4	5.7	6.0	11.2
Queue Length 50th (ft)	117	8	43	12
Queue Length 95th (ft)	#355	41	167	65
Internal Link Dist (ft)	589		656	426
Turn Bay Length (ft)		247		
Base Capacity (vph)	1140	564	1653	834
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.21	0.30	0.25

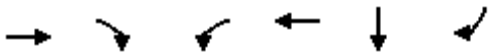
Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	544	23	117	479	50	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1821		1661	1881	1636	
Flt Permitted	1.00		0.25	1.00	0.99	
Satd. Flow (perm)	1821		431	1881	1636	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	555	23	119	489	51	157
RTOR Reduction (vph)	2	0	0	0	129	0
Lane Group Flow (vph)	576	0	119	489	79	0
Confl. Peds. (#/hr)		5	5		5	
Heavy Vehicles (%)	3%	20%	5%	1%	0%	4%
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	1		2	5	3	
Permitted Phases			5			
Actuated Green, G (s)	24.3		34.0	34.0	9.1	
Effective Green, g (s)	24.3		34.0	34.0	9.1	
Actuated g/C Ratio	0.48		0.67	0.67	0.18	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	865		423	1251	291	
v/s Ratio Prot	c0.32		0.03	c0.26	c0.05	
v/s Ratio Perm			0.16			
v/c Ratio	0.67		0.28	0.39	0.27	
Uniform Delay, d1	10.3		4.9	3.9	18.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		0.4	0.2	0.5	
Delay (s)	12.2		5.3	4.1	18.6	
Level of Service	B		A	A	B	
Approach Delay (s)	12.2			4.3	18.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

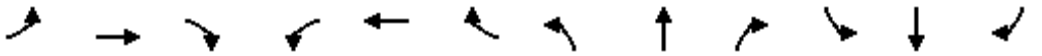
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	593	187	526	445	204	241
v/c Ratio	0.43	0.25	0.82	0.36	0.63	0.50
Control Delay	19.8	3.9	27.7	3.2	42.1	8.1
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	19.8	3.9	27.7	3.6	42.1	8.1
Queue Length 50th (ft)	119	0	165	63	111	0
Queue Length 95th (ft)	190	41	#357	94	182	59
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1650	857	685	1275	523	634
Starvation Cap Reductn	0	0	0	397	0	0
Spillback Cap Reductn	32	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.22	0.77	0.51	0.39	0.38

Intersection Summary

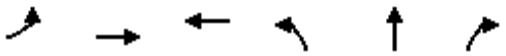
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	581	183	515	436	0	0	0	0	200	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3355	1554	1650	1783						1703	1524
Flt Permitted		1.00	1.00	0.37	1.00						0.95	1.00
Satd. Flow (perm)		3355	1554	639	1783						1703	1524
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	593	187	526	445	0	0	0	0	204	0	241
RTOR Reduction (vph)	0	0	110	0	0	0	0	0	0	0	0	195
Lane Group Flow (vph)	0	593	77	526	445	0	0	0	0	0	204	46
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	4%	1%	2%	3%	0%	0%	0%	0%	6%	0%	3%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		34.5	34.5	56.9	56.9						16.1	16.1
Effective Green, g (s)		34.5	34.5	56.9	56.9						16.1	16.1
Actuated g/C Ratio		0.41	0.41	0.68	0.68						0.19	0.19
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1377	638	654	1207						326	292
v/s Ratio Prot		0.18		c0.18	0.25							
v/s Ratio Perm			0.05	c0.37							0.12	0.03
v/c Ratio		0.43	0.12	0.80	0.37						0.63	0.16
Uniform Delay, d1		17.7	15.3	13.9	5.8						31.2	28.3
Progression Factor		1.00	1.00	0.93	0.39						1.00	1.00
Incremental Delay, d2		0.3	0.1	5.6	0.2						2.7	0.1
Delay (s)		18.0	15.5	18.4	2.5						33.9	28.4
Level of Service		B	B	B	A						C	C
Approach Delay (s)		17.4			11.1			0.0			30.9	
Approach LOS		B			B			A			C	

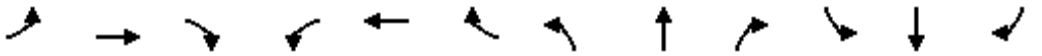
Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	257	540	1017	218	269	268
v/c Ratio	0.62	0.45	0.65	0.65	0.46	0.46
Control Delay	27.0	5.1	21.0	42.4	3.1	3.1
Queue Delay	0.0	0.3	0.3	0.0	0.0	0.0
Total Delay	27.0	5.3	21.3	42.4	3.1	3.1
Queue Length 50th (ft)	82	84	225	119	0	0
Queue Length 95th (ft)	177	122	347	193	7	7
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	540	1346	1685	544	708	708
Starvation Cap Reductn	0	285	190	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.51	0.68	0.40	0.38	0.38

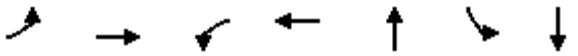
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	529	0	0	740	257	214	0	526	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1635	1766			3369		1770	1460	1460			
Flt Permitted	0.18	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	305	1766			3369		1770	1460	1460			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	257	540	0	0	755	262	218	0	537	0	0	0
RTOR Reduction (vph)	0	0	0	0	31	0	0	217	217	0	0	0
Lane Group Flow (vph)	257	540	0	0	986	0	218	52	51	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	3%	4%	0%	0%	2%	3%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	52.9	57.9			38.5		16.1	16.1	16.1			
Effective Green, g (s)	52.9	57.9			38.5		16.1	16.1	16.1			
Actuated g/C Ratio	0.63	0.69			0.46		0.19	0.19	0.19			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	420	1217			1544		339	279	279			
v/s Ratio Prot	c0.10	c0.31			c0.29			0.04				
v/s Ratio Perm	0.28						c0.12		0.04			
v/c Ratio	0.61	0.44			0.64		0.64	0.18	0.18			
Uniform Delay, d1	19.6	5.8			17.4		31.3	28.5	28.4			
Progression Factor	1.09	0.58			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.8	0.3			1.0		3.1	0.1	0.1			
Delay (s)	23.2	3.7			18.4		34.4	28.6	28.6			
Level of Service	C	A			B		C	C	C			
Approach Delay (s)		10.0			18.4			30.3			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

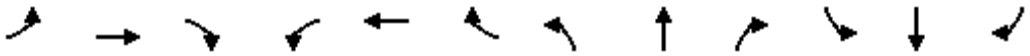


Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	140	971	27	768	88	17	256
v/c Ratio	0.38	0.44	0.07	0.75	1.10	0.06	0.56
Control Delay	16.2	14.3	8.7	24.5	160.4	28.6	9.8
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	14.8	8.7	24.5	160.4	28.6	9.8
Queue Length 50th (ft)	16	71	5	259	~42	7	6
Queue Length 95th (ft)	69	356	19	#802	#136	26	67
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	483	2285	482	1028	148	489	903
Starvation Cap Reductn	0	775	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.64	0.06	0.75	0.59	0.03	0.28

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	911	11	26	718	11	47	5	32	16	11	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1728	3486		1671	1823			1573		1805	1547	
Flt Permitted	0.18	1.00		0.23	1.00			0.29		0.71	1.00	
Satd. Flow (perm)	328	3486		412	1823			470		1346	1547	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	959	12	27	756	12	49	5	34	17	12	244
RTOR Reduction (vph)	0	0	0	0	0	0	0	20	0	0	198	0
Lane Group Flow (vph)	140	971	0	27	768	0	0	68	0	17	58	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	1%	3%	30%	8%	4%	0%	15%	20%	3%	0%	8%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	68.8	58.0		57.0	51.2			10.7		18.3	18.3	
Effective Green, g (s)	68.8	58.0		57.0	51.2			10.7		18.3	18.3	
Actuated g/C Ratio	0.71	0.60		0.59	0.53			0.11		0.19	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	414	2082		317	961			51		265	291	
v/s Ratio Prot	c0.04	c0.28		0.01	c0.42					0.00	c0.04	
v/s Ratio Perm	0.20			0.04				c0.14		0.01		
v/c Ratio	0.34	0.47		0.09	0.80			1.32		0.06	0.20	
Uniform Delay, d1	21.4	10.9		13.9	18.7			43.2		35.2	33.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.0	5.4			235.3		0.0	0.1	
Delay (s)	21.6	11.3		14.0	24.1			278.5		35.2	33.3	
Level of Service	C	B		B	C			F		D	C	
Approach Delay (s)		12.6			23.8			278.5			33.5	
Approach LOS		B			C			F			C	

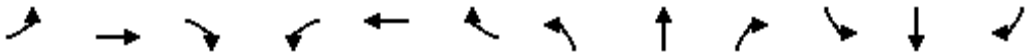
Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	97.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	62	902	1	756	7	35
v/c Ratio	0.15	0.63	0.00	0.63	0.03	0.14
Control Delay	14.4	16.8	13.0	21.7	16.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	16.8	13.0	21.7	16.6	15.1
Queue Length 50th (ft)	0	0	0	86	1	3
Queue Length 95th (ft)	52	#1047	4	#906	12	29
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	448	1443	304	1203	726	682
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.63	0.00	0.63	0.01	0.05

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	852	5	1	702	16	1	1	5	11	1	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.90			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1678	1861		1745	1819			1616			1496	
Flt Permitted	0.19	1.00		0.12	1.00			0.99			0.98	
Satd. Flow (perm)	343	1861		225	1819			1616			1496	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	897	5	1	739	17	1	1	5	12	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	21	0
Lane Group Flow (vph)	62	902	0	1	756	0	0	2	0	0	14	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	2%	0%	0%	4%	6%	0%	0%	0%	25%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	43.3	37.7		33.3	32.7			2.6			4.1	
Effective Green, g (s)	43.3	37.7		33.3	32.7			2.6			4.1	
Actuated g/C Ratio	0.67	0.58		0.51	0.50			0.04			0.06	
Clearance Time (s)	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	
Lane Grp Cap (vph)	343	1079		129	915			64			94	
v/s Ratio Prot	c0.02	c0.48		0.00	0.42			c0.00			c0.01	
v/s Ratio Perm	0.10			0.00								
v/c Ratio	0.18	0.84		0.01	0.83			0.03			0.15	
Uniform Delay, d1	13.6	11.1		22.6	13.7			30.0			28.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	5.7		0.0	6.2			0.2			0.8	
Delay (s)	13.9	16.9		22.6	19.9			30.2			29.6	
Level of Service	B	B		C	B			C			C	
Approach Delay (s)		16.7			19.9			30.2			29.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	23	830	5	650	79	42
v/c Ratio	0.08	0.90	0.02	0.76	0.17	0.08
Control Delay	8.2	32.3	7.8	25.0	19.2	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	32.3	7.8	25.0	19.2	14.4
Queue Length 50th (ft)	4	283	1	189	22	8
Queue Length 95th (ft)	13	#657	5	#467	61	32
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	630	920	524	851	473	527
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.90	0.01	0.76	0.17	0.08

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	720	68	5	606	11	58	16	1	11	16	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			1.00			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1662	1834		1805	1822			1765			1663	
Flt Permitted	0.19	1.00		0.12	1.00			0.79			0.94	
Satd. Flow (perm)	329	1834		225	1822			1440			1579	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	758	72	5	638	12	61	17	1	12	17	13
RTOR Reduction (vph)	0	3	0	0	1	0	0	1	0	0	9	0
Lane Group Flow (vph)	23	827	0	5	649	0	0	78	0	0	33	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	2%	2%	0%	4%	0%	0%	0%	0%	0%	0%	11%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	37.7	35.2		34.9	33.8			23.1			23.1	
Effective Green, g (s)	37.7	35.2		34.9	33.8			23.1			23.1	
Actuated g/C Ratio	0.51	0.47		0.47	0.45			0.31			0.31	
Clearance Time (s)	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	
Lane Grp Cap (vph)	211	867		128	827			447			490	
v/s Ratio Prot	c0.00	c0.45		0.00	0.36							
v/s Ratio Perm	0.05			0.02				c0.05			0.02	
v/c Ratio	0.11	0.95		0.04	0.79			0.18			0.07	
Uniform Delay, d1	11.8	18.8		15.5	17.2			18.7			18.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	20.0		0.1	4.9			0.9			0.1	
Delay (s)	12.0	38.9		15.6	22.2			19.6			18.1	
Level of Service	B	D		B	C			B			B	
Approach Delay (s)		38.1			22.1			19.6			18.1	
Approach LOS		D			C			B			B	

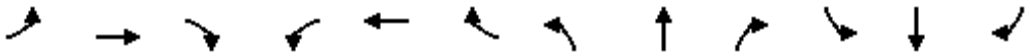
Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	56	870	239	559	252	95
v/c Ratio	0.09	0.86	0.74	0.59	0.65	0.86
Control Delay	11.5	28.2	33.4	21.3	18.1	85.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	28.2	33.4	21.3	18.1	85.2
Queue Length 50th (ft)	12	353	83	229	30	40
Queue Length 95th (ft)	36	#730	#222	#462	100	#109
Internal Link Dist (ft)		589		656	426	50
Turn Bay Length (ft)	100		247			
Base Capacity (vph)	720	1044	371	945	559	192
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.83	0.64	0.59	0.45	0.49

Intersection Summary

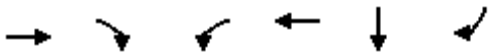
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	757	52	222	361	159	50	2	182	69	1	19
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	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.95			0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	
Satd. Flow (prot)	1711	1840		1678	1714			1586			1673	
Flt Permitted	0.45	1.00		0.13	1.00			0.92			0.36	
Satd. Flow (perm)	819	1840		227	1714			1478			631	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	56	814	56	239	388	171	54	2	196	74	1	20
RTOR Reduction (vph)	0	2	0	0	13	0	0	157	0	0	12	0
Lane Group Flow (vph)	56	868	0	239	546	0	0	95	0	0	83	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	2%	3%	4%	6%	2%	2%	2%	7%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	44.0	44.0		41.8	41.8			12.1			12.1	
Effective Green, g (s)	44.0	44.0		41.8	41.8			12.1			12.1	
Actuated g/C Ratio	0.56	0.56		0.53	0.53			0.15			0.15	
Clearance Time (s)	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	
Lane Grp Cap (vph)	603	1027		317	909			226			96	
v/s Ratio Prot	0.02	c0.47		c0.10	0.32							
v/s Ratio Perm	0.04			0.30				0.06			c0.13	
v/c Ratio	0.09	0.84		0.75	0.60			0.42			0.87	
Uniform Delay, d1	8.2	14.5		16.4	12.7			30.2			32.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	6.5		9.8	1.1			1.3			51.0	
Delay (s)	8.3	21.1		26.1	13.9			31.5			83.5	
Level of Service	A	C		C	B			C			F	
Approach Delay (s)		20.3			17.5			31.5			83.5	
Approach LOS		C			B			C			F	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	78.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

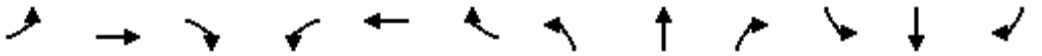
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	827	284	466	621	270	297
v/c Ratio	0.72	0.39	0.80	0.53	0.74	0.55
Control Delay	32.0	5.0	28.9	4.4	46.6	7.9
Queue Delay	0.9	0.0	0.2	0.8	0.0	0.0
Total Delay	32.9	5.0	29.0	5.2	46.6	7.9
Queue Length 50th (ft)	232	0	216	100	151	0
Queue Length 95th (ft)	331	57	m#337	136	240	65
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1146	720	660	1265	492	628
Starvation Cap Reductn	0	0	12	339	0	0
Spillback Cap Reductn	121	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.39	0.72	0.67	0.55	0.47

Intersection Summary

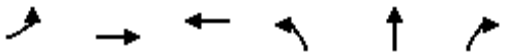
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	761	261	429	571	0	0	0	0	248	0	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3292	1538	1589	1733						1752	1480
Flt Permitted		1.00	1.00	0.21	1.00						0.95	1.00
Satd. Flow (perm)		3292	1538	355	1733						1752	1480
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	827	284	466	621	0	0	0	0	270	0	297
RTOR Reduction (vph)	0	0	185	0	0	0	0	0	0	0	0	235
Lane Group Flow (vph)	0	827	99	466	621	0	0	0	0	0	270	62
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	6%	2%	6%	6%	0%	0%	0%	0%	3%	0%	6%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		31.5	31.5	61.3	61.3						18.9	18.9
Effective Green, g (s)		31.5	31.5	61.3	61.3						18.9	18.9
Actuated g/C Ratio		0.35	0.35	0.68	0.68						0.21	0.21
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1149	537	580	1177						367	310
v/s Ratio Prot		0.25		c0.22	0.36							
v/s Ratio Perm			0.06	c0.32							0.15	0.04
v/c Ratio		0.72	0.18	0.80	0.53						0.74	0.20
Uniform Delay, d1		25.5	20.4	18.8	7.2						33.3	29.4
Progression Factor		1.00	1.00	0.90	0.39						1.00	1.00
Incremental Delay, d2		2.3	0.2	5.1	0.4						6.5	0.1
Delay (s)		27.9	20.6	22.1	3.2						39.8	29.5
Level of Service		C	C	C	A						D	C
Approach Delay (s)		26.0			11.3			0.0			34.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

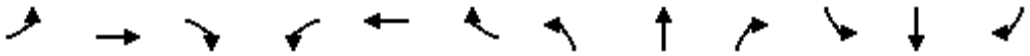
c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	312	785	1098	259	320	319
v/c Ratio	0.77	0.66	0.77	0.74	0.67	0.66
Control Delay	35.9	9.4	27.6	46.9	17.9	17.7
Queue Delay	0.0	5.3	0.8	0.0	0.0	0.0
Total Delay	35.9	14.7	28.3	46.9	17.9	17.7
Queue Length 50th (ft)	147	486	289	145	50	50
Queue Length 95th (ft)	m241	665	#415	232	147	146
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	489	1289	1428	473	568	568
Starvation Cap Reductn	0	432	111	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.92	0.83	0.55	0.56	0.56

Intersection Summary

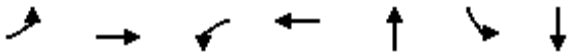
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	722	0	0	762	248	238	0	588	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1604	1766			3281		1687	1447	1447			
Flt Permitted	0.13	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	218	1766			3281		1687	1447	1447			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	785	0	0	828	270	259	0	639	0	0	0
RTOR Reduction (vph)	0	0	0	0	29	0	0	178	178	0	0	0
Lane Group Flow (vph)	312	785	0	0	1069	0	259	142	141	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	5%	4%	0%	0%	4%	9%	7%	0%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	56.3	61.3			38.6		18.9	18.9	18.9			
Effective Green, g (s)	56.3	61.3			38.6		18.9	18.9	18.9			
Actuated g/C Ratio	0.62	0.68			0.43		0.21	0.21	0.21			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	408	1200			1404		353	303	303			
v/s Ratio Prot	c0.15	c0.44			0.33			0.10				
v/s Ratio Perm	c0.33						c0.15		0.10			
v/c Ratio	0.76	0.65			0.76		0.73	0.47	0.47			
Uniform Delay, d1	24.3	8.3			21.9		33.3	31.3	31.2			
Progression Factor	1.01	0.75			1.00		1.00	1.00	1.00			
Incremental Delay, d2	5.5	1.0			2.6		6.7	0.4	0.4			
Delay (s)	30.1	7.3			24.5		40.0	31.7	31.6			
Level of Service	C	A			C		D	C	C			
Approach Delay (s)		13.8			24.5			34.0			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

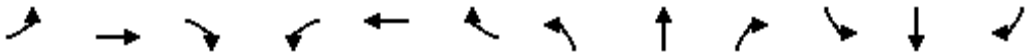
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	186	1215	119	757	316	18	280
v/c Ratio	0.95	0.87	0.43	0.96	1.01	0.05	0.42
Control Delay	96.0	41.0	40.5	57.4	91.8	25.4	13.9
Queue Delay	0.0	47.7	0.0	0.0	0.0	0.0	0.0
Total Delay	96.0	88.7	40.5	57.4	91.8	25.4	13.9
Queue Length 50th (ft)	94	427	39	542	227	9	63
Queue Length 95th (ft)	#254	570	101	#873	#450	26	139
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	196	1416	274	788	313	379	705
Starvation Cap Reductn	0	320	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	1.11	0.43	0.96	1.01	0.05	0.40

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	932	161	107	665	16	149	36	99	16	55	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00			0.95		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1678	3411		1752	1771			1672		1805	1591	
Flt Permitted	0.08	1.00		0.07	1.00			0.53		0.55	1.00	
Satd. Flow (perm)	144	3411		138	1771			905		1054	1591	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	1036	179	119	739	18	166	40	110	18	61	219
RTOR Reduction (vph)	0	11	0	0	1	0	0	16	0	0	104	0
Lane Group Flow (vph)	186	1204	0	119	756	0	0	300	0	18	176	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	3%	3%	3%	7%	0%	6%	2%	4%	0%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	59.3	49.2		68.9	54.0			40.0		45.4	45.4	
Effective Green, g (s)	59.3	49.2		68.9	54.0			40.0		45.4	45.4	
Actuated g/C Ratio	0.48	0.40		0.55	0.43			0.32		0.36	0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	193	1347		269	768			290		386	580	
v/s Ratio Prot	c0.08	0.35		c0.05	c0.43					0.00	c0.11	
v/s Ratio Perm	0.38			0.19				c0.33		0.02		
v/c Ratio	0.96	0.89		0.44	0.98			1.04		0.05	0.30	
Uniform Delay, d1	53.7	35.2		41.2	34.8			42.2		36.2	28.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	53.6	8.5		0.4	28.7			62.4		0.0	0.1	
Delay (s)	107.3	43.7		41.7	63.5			104.7		36.2	28.4	
Level of Service	F	D		D	E			F		D	C	
Approach Delay (s)		52.1			60.6			104.7			28.8	
Approach LOS		D			E			F			C	

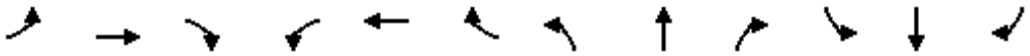
Intersection Summary			
HCM 2000 Control Delay	58.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	124.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	36	1053	1	833	8	55
v/c Ratio	0.10	0.82	0.00	0.66	0.03	0.20
Control Delay	14.0	24.3	12.0	18.9	19.9	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.0	24.3	12.0	18.9	19.9	12.0
Queue Length 50th (ft)	1	169	0	105	2	3
Queue Length 95th (ft)	34	#1239	4	#993	14	35
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	367	1277	318	1257	819	705
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.82	0.00	0.66	0.01	0.08

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	947	1	1	739	11	5	1	1	11	1	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1694	1844		1745	1821			1735			1452	
Flt Permitted	0.14	1.00		0.12	1.00			0.96			0.99	
Satd. Flow (perm)	252	1844		223	1821			1735			1452	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	1052	1	1	821	12	6	1	1	12	1	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	38	0
Lane Group Flow (vph)	36	1053	0	1	833	0	0	7	0	0	17	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	3%	0%	0%	4%	9%	0%	0%	0%	0%	0%	13%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	33.8	33.1		33.6	33.0			2.5			5.6	
Effective Green, g (s)	33.8	33.1		33.6	33.0			2.5			5.6	
Actuated g/C Ratio	0.55	0.54		0.54	0.53			0.04			0.09	
Clearance Time (s)	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	
Lane Grp Cap (vph)	154	987		136	972			70			131	
v/s Ratio Prot	c0.00	c0.57		0.00	0.46			c0.00			c0.01	
v/s Ratio Perm	0.12			0.00								
v/c Ratio	0.23	1.07		0.01	0.86			0.10			0.13	
Uniform Delay, d1	19.6	14.3		26.5	12.4			28.6			25.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.8	48.2		0.0	7.5			0.6			0.4	
Delay (s)	20.4	62.6		26.5	19.9			29.2			26.3	
Level of Service	C	E		C	B			C			C	
Approach Delay (s)		61.2			19.9			29.2			26.3	
Approach LOS		E			B			C			C	

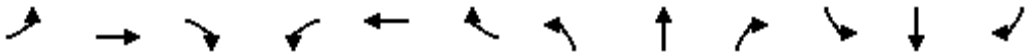
Intersection Summary			
HCM 2000 Control Delay	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	12	964	1	687	135	73
v/c Ratio	0.03	0.79	0.00	0.57	0.58	0.28
Control Delay	5.4	18.2	5.0	11.3	37.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	18.2	5.0	11.3	37.7	23.0
Queue Length 50th (ft)	1	232	0	127	52	20
Queue Length 95th (ft)	8	#819	2	425	117	59
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	453	1216	276	1208	399	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.79	0.00	0.57	0.34	0.17

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	804	64	1	613	5	105	11	5	32	16	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1745	1818		1805	1807			1635			1618	
Flt Permitted	0.30	1.00		0.14	1.00			0.77			0.84	
Satd. Flow (perm)	550	1818		257	1807			1310			1390	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	893	71	1	681	6	117	12	6	36	18	19
RTOR Reduction (vph)	0	3	0	0	0	0	0	2	0	0	16	0
Lane Group Flow (vph)	12	961	0	1	687	0	0	133	0	0	57	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	0%	3%	5%	0%	5%	0%	7%	9%	0%	6%	0%	12%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	51.8	51.0		51.8	51.0			13.6			13.6	
Effective Green, g (s)	51.8	51.0		51.8	51.0			13.6			13.6	
Actuated g/C Ratio	0.64	0.63		0.64	0.63			0.17			0.17	
Clearance Time (s)	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	
Lane Grp Cap (vph)	366	1153		180	1146			221			235	
v/s Ratio Prot	c0.00	c0.53		0.00	0.38							
v/s Ratio Perm	0.02			0.00				c0.10			0.04	
v/c Ratio	0.03	0.83		0.01	0.60			0.60			0.24	
Uniform Delay, d1	6.2	11.4		10.3	8.7			30.9			28.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	5.3		0.0	0.9			4.6			0.5	
Delay (s)	6.3	16.7		10.3	9.5			35.5			29.5	
Level of Service	A	B		B	A			D			C	
Approach Delay (s)		16.6			9.5			35.5			29.5	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	43	667	195	686	408	261
v/c Ratio	0.13	0.92	0.64	0.83	0.70	0.97
Control Delay	22.6	47.6	29.9	36.2	25.1	78.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	47.6	29.9	36.2	25.1	78.9
Queue Length 50th (ft)	15	365	78	383	132	142
Queue Length 95th (ft)	40	#655	154	#686	268	#329
Internal Link Dist (ft)		589		656	426	34
Turn Bay Length (ft)	100		247			
Base Capacity (vph)	494	724	418	822	581	270
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.92	0.47	0.83	0.70	0.97

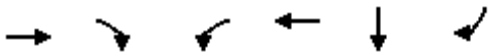
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	604	50	191	557	116	100	4	296	187	2	67
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	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.90			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	
Satd. Flow (prot)	1711	1808		1678	1819			1646			1662	
Flt Permitted	0.24	1.00		0.14	1.00			0.87			0.45	
Satd. Flow (perm)	431	1808		244	1819			1442			774	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	616	51	195	568	118	102	4	302	191	2	68
RTOR Reduction (vph)	0	3	0	0	7	0	0	100	0	0	12	0
Lane Group Flow (vph)	43	664	0	195	679	0	0	308	0	0	249	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	3%	11%	4%	1%	2%	1%	2%	3%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	38.7	38.7		41.7	41.7			31.1			31.1	
Effective Green, g (s)	38.7	38.7		41.7	41.7			31.1			31.1	
Actuated g/C Ratio	0.41	0.41		0.44	0.44			0.33			0.33	
Clearance Time (s)	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	
Lane Grp Cap (vph)	308	739		301	801			474			254	
v/s Ratio Prot	0.01	c0.37		0.09	c0.37							
v/s Ratio Perm	0.04			0.20				0.21			c0.32	
v/c Ratio	0.14	0.90		0.65	0.85			0.65			0.98	
Uniform Delay, d1	25.7	26.1		20.4	23.6			27.1			31.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	13.7		4.7	8.3			3.1			50.2	
Delay (s)	25.9	39.8		25.2	31.9			30.2			81.7	
Level of Service	C	D		C	C			C			F	
Approach Delay (s)		39.0			30.4			30.2			81.7	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



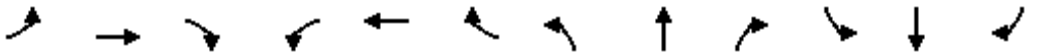
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	908	280	601	679	274	294
v/c Ratio	0.89	0.42	1.02	0.57	0.74	0.56
Control Delay	41.0	5.5	52.7	3.6	43.1	9.9
Queue Delay	3.8	0.0	0.0	1.2	0.0	0.0
Total Delay	44.8	5.5	52.7	4.8	43.1	9.9
Queue Length 50th (ft)	237	0	~301	81	134	16
Queue Length 95th (ft)	#395	58	m#161	m99	214	81
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1023	664	592	1185	519	638
Starvation Cap Reductn	0	0	0	286	0	0
Spillback Cap Reductn	65	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.42	1.02	0.76	0.53	0.46

Intersection Summary

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

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

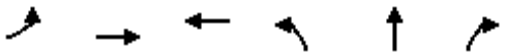
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	890	274	589	665	0	0	0	0	269	0	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3388	1554	1651	1783						1719	1524
Flt Permitted		1.00	1.00	0.15	1.00						0.95	1.00
Satd. Flow (perm)		3388	1554	257	1783						1719	1524
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	908	280	601	679	0	0	0	0	274	0	294
RTOR Reduction (vph)	0	0	195	0	0	0	0	0	0	0	0	201
Lane Group Flow (vph)	0	908	85	601	679	0	0	0	0	0	274	93
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	3%	1%	2%	3%	0%	0%	0%	0%	5%	0%	3%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		25.1	25.1	55.2	55.2						17.8	17.8
Effective Green, g (s)		25.1	25.1	55.2	55.2						17.8	17.8
Actuated g/C Ratio		0.30	0.30	0.67	0.67						0.21	0.21
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1024	469	592	1185						368	326
v/s Ratio Prot		0.27		c0.31	0.38							
v/s Ratio Perm			0.05	c0.37							0.16	0.06
v/c Ratio		0.89	0.18	1.02	0.57						0.74	0.28
Uniform Delay, d1		27.6	21.4	22.1	7.5						30.5	27.3
Progression Factor		1.00	1.00	0.78	0.30						1.00	1.00
Incremental Delay, d2		9.6	0.3	29.3	0.4						7.0	0.2
Delay (s)		37.2	21.6	46.5	2.6						37.5	27.5
Level of Service		D	C	D	A						D	C
Approach Delay (s)		33.5			23.2			0.0			32.3	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	83.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

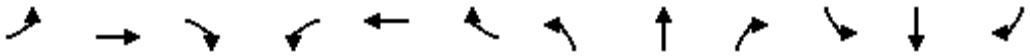
c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	356	827	1359	264	303	302
v/c Ratio	0.89	0.70	0.96	0.70	0.66	0.66
Control Delay	43.6	8.9	40.6	40.1	18.9	18.8
Queue Delay	0.0	43.7	4.3	0.0	0.0	0.0
Total Delay	43.6	52.6	44.9	40.1	18.9	18.8
Queue Length 50th (ft)	159	109	342	127	55	54
Queue Length 95th (ft)	m#251	m594	#566	205	143	142
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	398	1185	1420	534	571	571
Starvation Cap Reductn	0	421	44	0	0	0
Spillback Cap Reductn	0	0	4	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	1.08	0.99	0.49	0.53	0.53

Intersection Summary

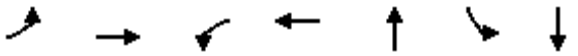
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	349	810	0	0	998	334	259	0	593	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1636	1783			3374		1770	1461	1461			
Flt Permitted	0.12	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	202	1783			3374		1770	1461	1461			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	356	827	0	0	1018	341	264	0	605	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	145	145	0	0	0
Lane Group Flow (vph)	356	827	0	0	1324	0	264	158	157	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	50.2	55.2			34.1		17.8	17.8	17.8			
Effective Green, g (s)	50.2	55.2			34.1		17.8	17.8	17.8			
Actuated g/C Ratio	0.60	0.67			0.41		0.21	0.21	0.21			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	400	1185			1386		379	313	313			
v/s Ratio Prot	c0.17	c0.46			c0.39			0.11				
v/s Ratio Perm	0.37						c0.15		0.11			
v/c Ratio	0.89	0.70			0.96		0.70	0.50	0.50			
Uniform Delay, d1	28.0	8.7			23.7		30.1	28.7	28.7			
Progression Factor	0.93	0.65			1.00		1.00	1.00	1.00			
Incremental Delay, d2	13.0	1.1			14.9		4.5	0.5	0.5			
Delay (s)	39.2	6.8			38.6		34.6	29.2	29.1			
Level of Service	D	A			D		C	C	C			
Approach Delay (s)		16.5			38.6			30.8			0.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	83.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

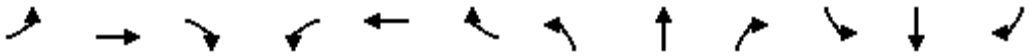


Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	156	1215	232	726	848	17	358
v/c Ratio	1.44	1.25	1.61	1.31	1.58	0.04	0.37
Control Delay	286.2	162.6	340.0	190.8	296.0	14.7	13.4
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Total Delay	286.2	163.4	340.0	190.8	296.0	14.7	13.4
Queue Length 50th (ft)	~160	~778	~277	~921	~1180	7	127
Queue Length 95th (ft)	#314	#920	#458	#1174	#1441	19	196
Internal Link Dist (ft)		376		131	742		425
Turn Bay Length (ft)	115		60			100	
Base Capacity (vph)	108	974	144	556	537	447	987
Starvation Cap Reductn	0	135	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.44	1.45	1.61	1.31	1.58	0.04	0.36

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	880	275	220	678	11	432	112	261	16	118	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	8	12	8	12	12	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00			0.96		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1728	3352		1752	1823			1712		1805	1636	
Flt Permitted	0.10	1.00		0.09	1.00			0.56		0.41	1.00	
Satd. Flow (perm)	173	3352		164	1823			984		783	1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	926	289	232	714	12	455	118	275	17	124	234
RTOR Reduction (vph)	0	20	0	0	1	0	0	11	0	0	46	0
Lane Group Flow (vph)	156	1195	0	232	725	0	0	837	0	17	312	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	1%	3%	3%	3%	4%	0%	3%	3%	2%	0%	3%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	6	1		2	5			3		4	7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	47.0	42.0		53.0	45.0			79.0		84.6	84.6	
Effective Green, g (s)	47.0	42.0		53.0	45.0			79.0		84.6	84.6	
Actuated g/C Ratio	0.31	0.28		0.35	0.30			0.53		0.57	0.57	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	2.0	5.0		2.0	5.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	106	941		143	548			519		446	925	
v/s Ratio Prot	0.05	0.36		c0.09	0.40					0.00	c0.19	
v/s Ratio Perm	0.41			c0.49				c0.85		0.02		
v/c Ratio	1.47	1.27		1.62	1.32			1.61		0.04	0.34	
Uniform Delay, d1	69.2	53.8		67.5	52.3			35.3		29.7	17.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	256.2	129.8		309.7	158.0			284.3		0.0	0.1	
Delay (s)	325.4	183.6		377.3	210.3			319.6		29.7	17.5	
Level of Service	F	F		F	F			F		C	B	
Approach Delay (s)		199.8			250.7			319.6			18.1	
Approach LOS		F			F			F			B	

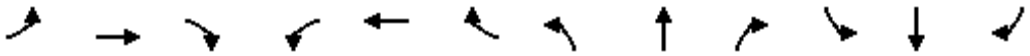
Intersection Summary			
HCM 2000 Control Delay	222.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	149.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	128.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	74	1099	1	915	7	38
v/c Ratio	0.19	0.72	0.00	0.72	0.06	0.27
Control Delay	10.4	15.6	9.0	20.8	36.7	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	15.6	9.0	20.8	36.7	31.2
Queue Length 50th (ft)	6	195	0	294	1	7
Queue Length 95th (ft)	51	#1474	3	#1209	17	48
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	427	1566	224	1348	332	322
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.70	0.00	0.68	0.02	0.12

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	1038	6	1	853	16	1	1	5	11	1	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.90			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1694	1861		1745	1820			1608			1485	
Flt Permitted	0.17	1.00		0.12	1.00			0.99			0.98	
Satd. Flow (perm)	297	1861		213	1820			1608			1485	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	1093	6	1	898	17	1	1	5	12	1	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	24	0
Lane Group Flow (vph)	74	1099	0	1	915	0	0	2	0	0	14	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	2%	0%	0%	4%	6%	0%	0%	0%	27%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	94.7	89.0		77.6	76.9			4.4			6.4	
Effective Green, g (s)	94.7	89.0		77.6	76.9			4.4			6.4	
Actuated g/C Ratio	0.79	0.74		0.64	0.64			0.04			0.05	
Clearance Time (s)	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	
Lane Grp Cap (vph)	381	1374		146	1161			58			78	
v/s Ratio Prot	c0.02	c0.59		0.00	0.50			c0.00			c0.01	
v/s Ratio Perm	0.13			0.00								
v/c Ratio	0.19	0.80		0.01	0.79			0.04			0.18	
Uniform Delay, d1	20.6	10.1		31.7	15.9			56.0			54.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	3.4		0.0	3.6			0.3			1.1	
Delay (s)	20.9	13.4		31.7	19.5			56.3			55.7	
Level of Service	C	B		C	B			E			E	
Approach Delay (s)		13.9			19.5			56.3			55.7	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	31	1018	5	797	87	45
v/c Ratio	0.07	0.74	0.02	0.61	0.43	0.19
Control Delay	4.8	15.2	5.0	13.9	35.8	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	15.2	5.0	13.9	35.8	21.6
Queue Length 50th (ft)	3	219	1	137	35	11
Queue Length 95th (ft)	16	#882	5	#630	80	40
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	453	1371	303	1298	409	476
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.74	0.02	0.61	0.21	0.09

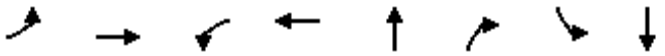
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	889	78	5	746	11	66	16	1	11	16	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1678	1836		1805	1823			1763			1666	
Flt Permitted	0.24	1.00		0.15	1.00			0.74			0.92	
Satd. Flow (perm)	432	1836		282	1823			1357			1546	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	936	82	5	785	12	69	17	1	12	17	16
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	14	0
Lane Group Flow (vph)	31	1016	0	5	797	0	0	86	0	0	31	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	2%	2%	0%	4%	0%	0%	0%	0%	0%	0%	7%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	58.8	56.3		55.6	54.7			10.1			10.1	
Effective Green, g (s)	58.8	56.3		55.6	54.7			10.1			10.1	
Actuated g/C Ratio	0.71	0.68		0.68	0.66			0.12			0.12	
Clearance Time (s)	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	
Lane Grp Cap (vph)	346	1255		207	1211			166			189	
v/s Ratio Prot	c0.00	c0.55		0.00	0.44							
v/s Ratio Perm	0.06			0.02				c0.06			0.02	
v/c Ratio	0.09	0.81		0.02	0.66			0.52			0.16	
Uniform Delay, d1	5.6	9.2		8.9	8.2			33.8			32.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	4.0		0.0	1.3			2.7			0.4	
Delay (s)	5.7	13.2		8.9	9.5			36.5			32.7	
Level of Service	A	B		A	A			D			C	
Approach Delay (s)		12.9			9.5			36.5			32.7	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	56	870	239	559	56	196	74	21
v/c Ratio	0.09	0.84	0.68	0.25	0.30	0.38	0.40	0.09
Control Delay	4.9	26.0	22.0	7.0	33.9	11.4	36.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	26.0	22.0	7.0	33.9	11.4	36.9	13.8
Queue Length 50th (ft)	6	326	36	52	25	31	33	0
Queue Length 95th (ft)	23	#755	#159	113	58	77	73	19
Internal Link Dist (ft)		589		656	426			50
Turn Bay Length (ft)	100		247			200		
Base Capacity (vph)	1027	1052	404	2267	379	560	370	447
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.83	0.59	0.25	0.15	0.35	0.20	0.05

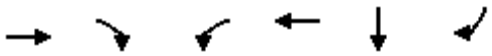
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	757	52	222	361	159	50	2	182	69	1	19
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	11	11	11	11
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.95			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1711	1840		1678	3256			1768	1459	1711	1518	
Flt Permitted	0.44	1.00		0.12	1.00			0.72	1.00	0.72	1.00	
Satd. Flow (perm)	797	1840		220	3256			1331	1459	1297	1518	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	56	814	56	239	388	171	54	2	196	74	1	20
RTOR Reduction (vph)	0	2	0	0	25	0	0	0	80	0	18	0
Lane Group Flow (vph)	56	868	0	239	534	0	0	56	116	74	3	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	2%	3%	4%	6%	2%	2%	2%	7%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	6	1		2	5			3	2		7	
Permitted Phases	1			5			3		3	7		
Actuated Green, G (s)	48.7	44.9		59.4	50.6			9.3	18.8	9.3	9.3	
Effective Green, g (s)	48.7	44.9		59.4	50.6			9.3	18.8	9.3	9.3	
Actuated g/C Ratio	0.62	0.57		0.75	0.64			0.12	0.24	0.12	0.12	
Clearance Time (s)	5.0	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)	537	1049		342	2093			157	441	153	179	
v/s Ratio Prot	0.01	c0.47		c0.08	0.16				0.03		0.00	
v/s Ratio Perm	0.06			0.44				0.04	0.05	c0.06		
v/c Ratio	0.10	0.83		0.70	0.25			0.36	0.26	0.48	0.02	
Uniform Delay, d1	5.9	13.7		14.4	6.0			31.9	24.3	32.5	30.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	5.5		6.1	0.1			1.4	0.3	2.4	0.0	
Delay (s)	6.0	19.2		20.5	6.1			33.3	24.6	34.9	30.7	
Level of Service	A	B		C	A			C	C	C	C	
Approach Delay (s)		18.4			10.4			26.6			33.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	78.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

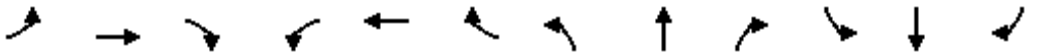
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	827	284	466	621	270	297
v/c Ratio	0.78	0.41	0.83	0.29	0.70	0.55
Control Delay	32.9	5.3	28.9	8.1	40.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	5.3	28.9	8.1	40.0	9.2
Queue Length 50th (ft)	208	0	87	58	131	12
Queue Length 95th (ft)	#337	57	#262	136	211	76
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1063	689	601	2216	543	650
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.41	0.78	0.28	0.50	0.46

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	761	261	429	571	0	0	0	0	248	0	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3292	1539	1589	3292						1752	1498
Flt Permitted		1.00	1.00	0.20	1.00						0.95	1.00
Satd. Flow (perm)		3292	1539	341	3292						1752	1498
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	827	284	466	621	0	0	0	0	270	0	297
RTOR Reduction (vph)	0	0	192	0	0	0	0	0	0	0	0	210
Lane Group Flow (vph)	0	827	92	466	621	0	0	0	0	0	270	87
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	6%	2%	6%	6%	0%	0%	0%	0%	3%	0%	6%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		26.3	26.3	53.5	53.5						17.8	17.8
Effective Green, g (s)		26.3	26.3	53.5	53.5						17.8	17.8
Actuated g/C Ratio		0.32	0.32	0.66	0.66						0.22	0.22
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1064	497	565	2166						383	327
v/s Ratio Prot		0.25		c0.23	0.19							
v/s Ratio Perm			0.06	c0.32							0.15	0.06
v/c Ratio		0.78	0.18	0.82	0.29						0.70	0.27
Uniform Delay, d1		24.9	19.8	18.1	5.9						29.3	26.3
Progression Factor		1.00	1.00	0.72	1.18						1.00	1.00
Incremental Delay, d2		3.9	0.2	7.5	0.1						4.8	0.2
Delay (s)		28.7	20.0	20.6	7.0						34.1	26.5
Level of Service		C	C	C	A						C	C
Approach Delay (s)		26.5			12.8			0.0			30.1	
Approach LOS		C			B			A			C	

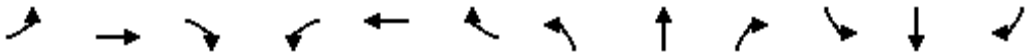
Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	312	785	828	270	259	320	319
v/c Ratio	0.66	0.36	0.61	0.38	0.70	0.70	0.69
Control Delay	15.1	2.9	25.1	5.1	40.3	21.1	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	2.9	25.1	5.1	40.3	21.1	20.9
Queue Length 50th (ft)	47	54	175	0	125	65	64
Queue Length 95th (ft)	m84	74	#308	56	203	158	158
Internal Link Dist (ft)		424	376			672	
Turn Bay Length (ft)				200	290		380
Base Capacity (vph)	592	2170	1353	706	523	577	577
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.36	0.61	0.38	0.50	0.55	0.55

Intersection Summary

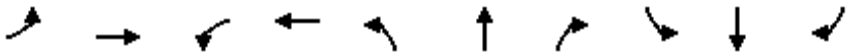
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	722	0	0	762	248	238	0	588	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1604	3355			3471	1392	1687	1448	1448			
Flt Permitted	0.19	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	327	3355			3471	1392	1687	1448	1448			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	785	0	0	828	270	259	0	639	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	164	0	144	144	0	0	0
Lane Group Flow (vph)	312	785	0	0	828	106	259	176	175	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	5%	4%	0%	0%	4%	9%	7%	0%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6					5	7		7			
Actuated Green, G (s)	53.5	53.5			31.8	31.8	17.8	17.8	17.8			
Effective Green, g (s)	53.5	53.5			31.8	31.8	17.8	17.8	17.8			
Actuated g/C Ratio	0.66	0.66			0.39	0.39	0.22	0.22	0.22			
Clearance Time (s)	5.0				5.0	5.0	5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0	4.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	477	2207			1357	544	369	317	317			
v/s Ratio Prot	c0.13	0.23			0.24			0.12				
v/s Ratio Perm	c0.30					0.08	c0.15		0.12			
v/c Ratio	0.65	0.36			0.61	0.19	0.70	0.56	0.55			
Uniform Delay, d1	9.3	6.2			19.8	16.3	29.3	28.2	28.2			
Progression Factor	0.98	0.37			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.7	0.1			0.9	0.2	4.9	1.2	1.2			
Delay (s)	10.8	2.4			20.7	16.5	34.2	29.4	29.4			
Level of Service	B	A			C	B	C	C	C			
Approach Delay (s)		4.8			19.7			30.8			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

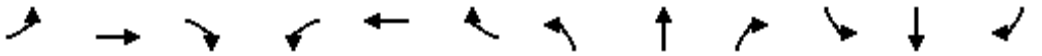
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	186	1215	119	757	166	40	110	18	61	219
v/c Ratio	0.52	0.85	0.49	0.58	0.38	0.09	0.20	0.12	0.24	0.71
Control Delay	18.8	27.7	21.2	21.5	31.7	18.9	3.9	36.1	28.8	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	27.7	21.2	21.5	31.7	18.9	3.9	36.1	28.8	34.9
Queue Length 50th (ft)	36	232	22	129	32	12	0	7	24	76
Queue Length 95th (ft)	#120	#564	#95	#280	75	37	28	31	56	140
Internal Link Dist (ft)		376		131		742			425	
Turn Bay Length (ft)	115		200		200		200	100		100
Base Capacity (vph)	356	1436	245	1300	888	719	554	502	720	308
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.85	0.49	0.58	0.19	0.06	0.20	0.04	0.08	0.71

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	932	161	107	665	16	149	36	99	16	55	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	11	11	11	12	12	11
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1678	3414		1752	3365		3193	1801	1483	1805	1863	1503
Flt Permitted	0.24	1.00		0.15	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	421	3414		284	3365		3193	1801	1483	1805	1863	1503
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	1036	179	119	739	18	166	40	110	18	61	219
RTOR Reduction (vph)	0	13	0	0	1	0	0	0	76	0	0	0
Lane Group Flow (vph)	186	1202	0	119	756	0	166	40	34	18	61	219
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	3%	3%	3%	7%	0%	6%	2%	4%	0%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	6	1		2	5		8	3	2	4	7	6
Permitted Phases	1			5					3			7
Actuated Green, G (s)	35.2	28.0		31.2	26.0		9.1	16.5	21.7	1.0	8.4	15.6
Effective Green, g (s)	35.2	28.0		31.2	26.0		9.1	16.5	21.7	1.0	8.4	15.6
Actuated g/C Ratio	0.50	0.40		0.44	0.37		0.13	0.23	0.31	0.01	0.12	0.22
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	337	1352		233	1237		410	420	560	25	221	437
v/s Ratio Prot	0.06	c0.35		0.04	0.22		c0.05	0.02	0.00	0.01	0.03	c0.05
v/s Ratio Perm	0.22			0.19					0.02			0.09
v/c Ratio	0.55	0.89		0.51	0.61		0.40	0.10	0.06	0.72	0.28	0.50
Uniform Delay, d1	11.0	19.9		14.1	18.2		28.3	21.2	17.3	34.7	28.4	24.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	8.1		0.8	1.3		0.7	0.0	0.0	58.2	0.2	0.3
Delay (s)	12.1	28.0		14.9	19.5		29.0	21.3	17.3	93.0	28.6	24.5
Level of Service	B	C		B	B		C	C	B	F	C	C
Approach Delay (s)		25.9			18.9			23.9			29.5	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	36	1053	1	833	8	55
v/c Ratio	0.09	0.75	0.00	0.65	0.05	0.30
Control Delay	9.2	17.1	10.0	17.6	36.0	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	17.1	10.0	17.6	36.0	20.7
Queue Length 50th (ft)	3	174	0	221	4	7
Queue Length 95th (ft)	31	#1320	3	#992	19	46
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	407	1408	230	1288	454	409
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.75	0.00	0.65	0.02	0.13

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	947	1	1	739	11	5	1	1	11	1	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1694	1844		1745	1821			1734			1448	
Flt Permitted	0.21	1.00		0.10	1.00			0.96			0.99	
Satd. Flow (perm)	376	1844		185	1821			1734			1448	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	1052	1	1	821	12	6	1	1	12	1	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	39	0
Lane Group Flow (vph)	36	1053	0	1	833	0	0	7	0	0	16	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	3%	0%	0%	4%	9%	0%	0%	0%	0%	0%	13%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	70.6	65.0		60.8	60.1			3.2			7.3	
Effective Green, g (s)	70.6	65.0		60.8	60.1			3.2			7.3	
Actuated g/C Ratio	0.73	0.68		0.63	0.62			0.03			0.08	
Clearance Time (s)	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	
Lane Grp Cap (vph)	352	1245		128	1137			57			109	
v/s Ratio Prot	c0.01	c0.57		0.00	0.46			c0.00			c0.01	
v/s Ratio Perm	0.07			0.00								
v/c Ratio	0.10	0.85		0.01	0.73			0.12			0.15	
Uniform Delay, d1	14.7	11.8		28.8	12.5			45.1			41.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	5.5		0.0	2.5			1.0			0.6	
Delay (s)	14.9	17.3		28.8	15.0			46.1			42.2	
Level of Service	B	B		C	B			D			D	
Approach Delay (s)		17.2			15.0			46.1			42.2	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	12	964	1	687	135	73
v/c Ratio	0.03	0.79	0.00	0.57	0.58	0.28
Control Delay	5.4	18.2	5.0	11.3	37.7	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	18.2	5.0	11.3	37.7	23.0
Queue Length 50th (ft)	1	232	0	127	52	20
Queue Length 95th (ft)	8	#819	2	425	117	59
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	453	1216	276	1208	399	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.79	0.00	0.57	0.34	0.17

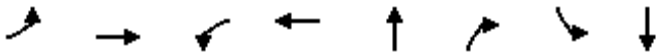
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	804	64	1	613	5	105	11	5	32	16	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1745	1818		1805	1807			1635			1618	
Flt Permitted	0.30	1.00		0.14	1.00			0.77			0.84	
Satd. Flow (perm)	550	1818		257	1807			1310			1390	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	893	71	1	681	6	117	12	6	36	18	19
RTOR Reduction (vph)	0	3	0	0	0	0	0	2	0	0	16	0
Lane Group Flow (vph)	12	961	0	1	687	0	0	133	0	0	57	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	0%	3%	5%	0%	5%	0%	7%	9%	0%	6%	0%	12%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	51.8	51.0		51.8	51.0			13.6			13.6	
Effective Green, g (s)	51.8	51.0		51.8	51.0			13.6			13.6	
Actuated g/C Ratio	0.64	0.63		0.64	0.63			0.17			0.17	
Clearance Time (s)	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	
Lane Grp Cap (vph)	366	1153		180	1146			221			235	
v/s Ratio Prot	c0.00	c0.53		0.00	0.38							
v/s Ratio Perm	0.02			0.00				c0.10			0.04	
v/c Ratio	0.03	0.83		0.01	0.60			0.60			0.24	
Uniform Delay, d1	6.2	11.4		10.3	8.7			30.9			28.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	5.3		0.0	0.9			4.6			0.5	
Delay (s)	6.3	16.7		10.3	9.5			35.5			29.5	
Level of Service	A	B		B	A			D			C	
Approach Delay (s)		16.6			9.5			35.5			29.5	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

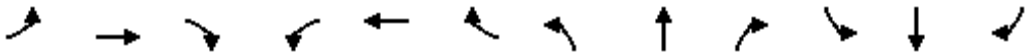
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	667	195	686	106	302	191	70
v/c Ratio	0.09	0.87	0.62	0.38	0.36	0.42	0.67	0.18
Control Delay	6.6	31.3	19.0	11.8	25.9	8.8	36.5	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	31.3	19.0	11.8	25.9	8.8	36.5	7.4
Queue Length 50th (ft)	6	230	30	90	39	40	75	1
Queue Length 95th (ft)	20	#471	#117	156	80	95	140	29
Internal Link Dist (ft)		589		656	426			34
Turn Bay Length (ft)	100		247			200		
Base Capacity (vph)	702	917	318	1802	423	725	411	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.73	0.61	0.38	0.25	0.42	0.46	0.13

Intersection Summary

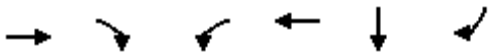
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	604	50	191	557	116	100	4	296	187	2	67
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	11	11	11	11
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1711	1809		1678	3459			1787	1516	1711	1513	
Flt Permitted	0.39	1.00		0.16	1.00			0.68	1.00	0.69	1.00	
Satd. Flow (perm)	704	1809		286	3459			1279	1516	1240	1513	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	616	51	195	568	118	102	4	302	191	2	68
RTOR Reduction (vph)	0	4	0	0	16	0	0	0	106	0	53	0
Lane Group Flow (vph)	43	663	0	195	670	0	0	106	196	191	17	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	3%	11%	4%	1%	2%	1%	2%	3%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	6	1		2	5			3	2		7	
Permitted Phases	1			5			3		3	7		
Actuated Green, G (s)	33.7	30.1		40.9	33.7			14.9	22.1	14.9	14.9	
Effective Green, g (s)	33.7	30.1		40.9	33.7			14.9	22.1	14.9	14.9	
Actuated g/C Ratio	0.50	0.45		0.61	0.50			0.22	0.33	0.22	0.22	
Clearance Time (s)	5.0	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)	406	810		323	1734			283	611	274	335	
v/s Ratio Prot	0.01	c0.37		c0.06	0.19				0.03		0.01	
v/s Ratio Perm	0.05			0.30				0.08	0.09	c0.15		
v/c Ratio	0.11	0.82		0.60	0.39			0.37	0.32	0.70	0.05	
Uniform Delay, d1	8.6	16.2		10.1	10.4			22.2	16.9	24.1	20.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	6.5		3.2	0.1			0.8	0.3	7.5	0.1	
Delay (s)	8.7	22.6		13.2	10.5			23.0	17.2	31.6	20.6	
Level of Service	A	C		B	B			C	B	C	C	
Approach Delay (s)		21.8			11.1			18.7			28.6	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

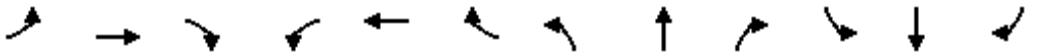


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	908	280	601	679	274	294
v/c Ratio	0.89	0.42	1.02	0.30	0.74	0.55
Control Delay	41.0	5.5	56.7	7.8	43.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	5.5	56.7	7.8	43.1	9.8
Queue Length 50th (ft)	237	0	~122	65	134	16
Queue Length 95th (ft)	#395	58	#365	131	214	80
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1023	664	592	2251	519	644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.42	1.02	0.30	0.53	0.46

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	890	274	589	665	0	0	0	0	269	0	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3388	1554	1651	3388						1719	1541
Flt Permitted		1.00	1.00	0.15	1.00						0.95	1.00
Satd. Flow (perm)		3388	1554	257	3388						1719	1541
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	908	280	601	679	0	0	0	0	274	0	294
RTOR Reduction (vph)	0	0	195	0	0	0	0	0	0	0	0	202
Lane Group Flow (vph)	0	908	85	601	679	0	0	0	0	0	274	92
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	3%	1%	2%	3%	0%	0%	0%	0%	5%	0%	3%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		25.1	25.1	55.2	55.2						17.8	17.8
Effective Green, g (s)		25.1	25.1	55.2	55.2						17.8	17.8
Actuated g/C Ratio		0.30	0.30	0.67	0.67						0.21	0.21
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1024	469	592	2253						368	330
v/s Ratio Prot		0.27		c0.31	0.20							
v/s Ratio Perm			0.05	c0.37							0.16	0.06
v/c Ratio		0.89	0.18	1.02	0.30						0.74	0.28
Uniform Delay, d1		27.6	21.4	22.1	5.8						30.5	27.2
Progression Factor		1.00	1.00	0.68	1.14						1.00	1.00
Incremental Delay, d2		9.6	0.3	35.3	0.1						7.0	0.2
Delay (s)		37.2	21.6	50.3	6.7						37.5	27.4
Level of Service		D	C	D	A						D	C
Approach Delay (s)		33.5			27.2			0.0			32.3	
Approach LOS		C			C			A			C	

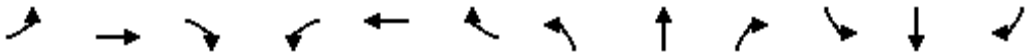
Intersection Summary					
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.99				
Actuated Cycle Length (s)	83.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	85.5%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	356	827	1018	341	264	303	302
v/c Ratio	0.82	0.37	0.72	0.43	0.70	0.66	0.66
Control Delay	30.3	2.5	26.8	4.5	40.1	18.9	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	2.5	26.8	4.5	40.1	18.9	18.8
Queue Length 50th (ft)	79	52	247	0	127	55	54
Queue Length 95th (ft)	m128	m66	#393	58	205	143	142
Internal Link Dist (ft)		424	376			672	
Turn Bay Length (ft)				200	290		380
Base Capacity (vph)	487	2251	1416	793	534	571	571
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.37	0.72	0.43	0.49	0.53	0.53

Intersection Summary

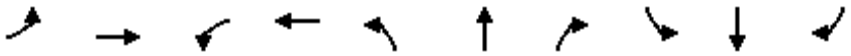
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	349	810	0	0	998	334	259	0	593	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1635	3388			3539	1473	1770	1461	1461			
Flt Permitted	0.13	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	217	3388			3539	1473	1770	1461	1461			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	356	827	0	0	1018	341	264	0	605	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	205	0	145	145	0	0	0
Lane Group Flow (vph)	356	827	0	0	1018	136	264	158	157	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6					5	7		7			
Actuated Green, G (s)	55.2	55.2			33.2	33.2	17.8	17.8	17.8			
Effective Green, g (s)	55.2	55.2			33.2	33.2	17.8	17.8	17.8			
Actuated g/C Ratio	0.67	0.67			0.40	0.40	0.21	0.21	0.21			
Clearance Time (s)	5.0				5.0	5.0	5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0	4.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	434	2253			1415	589	379	313	313			
v/s Ratio Prot	c0.17	0.24			0.29			0.11				
v/s Ratio Perm	c0.38					0.09	c0.15		0.11			
v/c Ratio	0.82	0.37			0.72	0.23	0.70	0.50	0.50			
Uniform Delay, d1	19.1	6.2			21.0	16.5	30.1	28.7	28.7			
Progression Factor	1.17	0.31			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	6.7	0.1			1.9	0.3	4.5	0.5	0.5			
Delay (s)	28.9	2.0			22.9	16.7	34.6	29.2	29.1			
Level of Service	C	A			C	B	C	C	C			
Approach Delay (s)		10.1			21.3			30.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	83.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

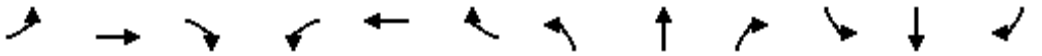
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	156	1215	232	726	455	118	275	17	124	234
v/c Ratio	0.42	0.89	0.85	0.50	0.90	0.23	0.36	0.16	0.53	0.71
Control Delay	15.4	36.6	51.2	23.7	63.8	29.3	3.8	49.5	47.6	42.7
Queue Delay	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	45.3	51.2	23.7	63.8	29.3	3.8	49.5	47.6	42.7
Queue Length 50th (ft)	41	340	87	161	141	52	0	10	73	126
Queue Length 95th (ft)	98	#596	#283	292	#277	110	47	35	127	183
Internal Link Dist (ft)		376		364		742			425	
Turn Bay Length (ft)	115		200		200		200	100		100
Base Capacity (vph)	519	1368	273	1463	506	525	769	278	473	473
Starvation Cap Reductn	0	139	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.99	0.85	0.50	0.90	0.22	0.36	0.06	0.26	0.49

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	880	275	220	678	11	432	112	261	16	118	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	11	11	11	12	12	11
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1728	3356		1752	3463		3286	1783	1511	1805	1845	1513
Flt Permitted	0.29	1.00		0.10	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	528	3356		179	3463		3286	1783	1511	1805	1845	1513
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	926	289	232	714	12	455	118	275	17	124	234
RTOR Reduction (vph)	0	26	0	0	1	0	0	0	168	0	0	0
Lane Group Flow (vph)	156	1189	0	232	725	0	455	118	107	17	124	234
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	1%	3%	3%	3%	4%	0%	3%	3%	2%	0%	3%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	6	1		2	5		8	3	2	4	7	6
Permitted Phases	1			5					3			7
Actuated Green, G (s)	48.1	39.2		52.3	41.3		15.1	28.1	39.1	2.5	15.5	24.4
Effective Green, g (s)	48.1	39.2		52.3	41.3		15.1	28.1	39.1	2.5	15.5	24.4
Actuated g/C Ratio	0.48	0.39		0.52	0.41		0.15	0.28	0.39	0.02	0.15	0.24
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	357	1305		264	1418		492	497	661	44	283	441
v/s Ratio Prot	0.04	0.35		c0.10	0.21		c0.14	0.07	0.02	0.01	0.07	c0.05
v/s Ratio Perm	0.17			c0.36					0.05			0.11
v/c Ratio	0.44	0.91		0.88	0.51		0.92	0.24	0.16	0.39	0.44	0.53
Uniform Delay, d1	15.7	29.2		25.6	22.2		42.3	28.1	20.1	48.4	38.7	33.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	10.3		25.7	0.6		23.3	0.1	0.0	2.0	0.4	0.6
Delay (s)	16.0	39.4		51.4	22.8		65.5	28.2	20.2	50.4	39.1	33.8
Level of Service	B	D		D	C		E	C	C	D	D	C
Approach Delay (s)		36.8			29.7			45.6			36.3	
Approach LOS		D			C			D			D	

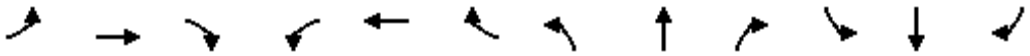
Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	74	1099	1	915	7	38
v/c Ratio	0.24	0.74	0.01	0.74	0.04	0.22
Control Delay	14.7	16.7	10.0	21.0	26.1	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	16.7	10.0	21.0	26.1	22.2
Queue Length 50th (ft)	5	190	0	263	1	6
Queue Length 95th (ft)	55	#1390	3	#1195	15	40
Internal Link Dist (ft)		687		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	429	1476	197	1239	452	432
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.74	0.01	0.74	0.02	0.09

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	1038	6	1	853	16	1	1	5	11	1	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.90			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1694	1861		1745	1820			1612			1488	
Flt Permitted	0.14	1.00		0.07	1.00			0.99			0.98	
Satd. Flow (perm)	249	1861		134	1820			1612			1488	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	1093	6	1	898	17	1	1	5	12	1	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	23	0
Lane Group Flow (vph)	74	1099	0	1	915	0	0	2	0	0	15	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	2%	0%	0%	4%	6%	0%	0%	0%	27%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	68.6	62.9		55.4	54.7			3.0			6.0	
Effective Green, g (s)	68.6	62.9		55.4	54.7			3.0			6.0	
Actuated g/C Ratio	0.74	0.68		0.60	0.59			0.03			0.06	
Clearance Time (s)	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	
Lane Grp Cap (vph)	323	1264		92	1075			52			96	
v/s Ratio Prot	c0.02	c0.59		0.00	0.50			c0.00			c0.01	
v/s Ratio Perm	0.15			0.01								
v/c Ratio	0.23	0.87		0.01	0.85			0.04			0.15	
Uniform Delay, d1	20.9	11.6		33.6	15.6			43.4			40.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.4	6.6		0.0	6.6			0.3			0.7	
Delay (s)	21.3	18.2		33.6	22.2			43.7			41.6	
Level of Service	C	B		C	C			D			D	
Approach Delay (s)		18.4			22.2			43.7			41.6	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	31	1018	5	797	87	45
v/c Ratio	0.07	0.74	0.02	0.61	0.43	0.19
Control Delay	4.8	15.2	5.0	13.9	35.8	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	15.2	5.0	13.9	35.8	21.6
Queue Length 50th (ft)	3	219	1	137	35	11
Queue Length 95th (ft)	16	#882	5	#630	80	40
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	453	1371	303	1298	409	476
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.74	0.02	0.61	0.21	0.09

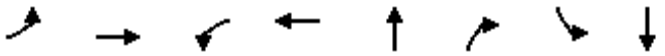
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	889	78	5	746	11	66	16	1	11	16	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1678	1836		1805	1823			1763			1666	
Flt Permitted	0.24	1.00		0.15	1.00			0.74			0.92	
Satd. Flow (perm)	432	1836		282	1823			1357			1546	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	936	82	5	785	12	69	17	1	12	17	16
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	14	0
Lane Group Flow (vph)	31	1016	0	5	797	0	0	86	0	0	31	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	2%	2%	0%	4%	0%	0%	0%	0%	0%	0%	7%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	58.8	56.3		55.6	54.7			10.1			10.1	
Effective Green, g (s)	58.8	56.3		55.6	54.7			10.1			10.1	
Actuated g/C Ratio	0.71	0.68		0.68	0.66			0.12			0.12	
Clearance Time (s)	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	
Lane Grp Cap (vph)	346	1255		207	1211			166			189	
v/s Ratio Prot	c0.00	c0.55		0.00	0.44							
v/s Ratio Perm	0.06			0.02				c0.06			0.02	
v/c Ratio	0.09	0.81		0.02	0.66			0.52			0.16	
Uniform Delay, d1	5.6	9.2		8.9	8.2			33.8			32.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	4.0		0.0	1.3			2.7			0.4	
Delay (s)	5.7	13.2		8.9	9.5			36.5			32.7	
Level of Service	A	B		A	A			D			C	
Approach Delay (s)		12.9			9.5			36.5			32.7	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

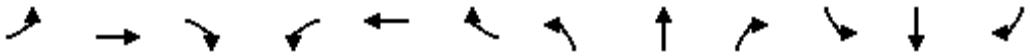
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	56	858	238	553	56	194	74	21
v/c Ratio	0.09	0.84	0.65	0.46	0.30	0.37	0.40	0.09
Control Delay	4.9	26.7	19.7	10.7	34.3	10.8	37.3	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	26.7	19.7	10.7	34.3	10.8	37.3	13.8
Queue Length 50th (ft)	6	342	33	131	26	29	34	0
Queue Length 95th (ft)	23	#740	#157	307	58	73	73	19
Internal Link Dist (ft)		589		656	426			50
Turn Bay Length (ft)	100		247			200		
Base Capacity (vph)	769	1065	408	1198	382	564	374	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.81	0.58	0.46	0.15	0.34	0.20	0.05

Intersection Summary

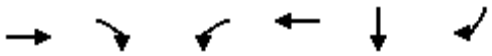
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	746	52	221	355	159	50	2	180	69	1	19
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	11	11	11	11
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	1.00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.95			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1711	1840		1678	1713			1759	1459	1711	1498	
Flt Permitted	0.45	1.00		0.12	1.00			0.72	1.00	0.72	1.00	
Satd. Flow (perm)	807	1840		221	1713			1325	1459	1297	1498	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	56	802	56	238	382	171	54	2	194	74	1	20
RTOR Reduction (vph)	0	2	0	0	11	0	0	0	82	0	18	0
Lane Group Flow (vph)	56	856	0	238	542	0	0	56	112	74	3	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	2%	3%	4%	6%	2%	2%	2%	7%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	6	1		2	5			3	2		7	
Permitted Phases	1			5			3		3	7		
Actuated Green, G (s)	47.9	44.2		59.4	50.7			9.2	19.4	9.2	9.2	
Effective Green, g (s)	47.9	44.2		59.4	50.7			9.2	19.4	9.2	9.2	
Actuated g/C Ratio	0.61	0.56		0.76	0.65			0.12	0.25	0.12	0.12	
Clearance Time (s)	5.0	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)	534	1034		356	1104			155	452	151	175	
v/s Ratio Prot	0.00	c0.47		c0.09	0.32				0.03		0.00	
v/s Ratio Perm	0.06			0.42				0.04	0.04	c0.06		
v/c Ratio	0.10	0.83		0.67	0.49			0.36	0.25	0.49	0.02	
Uniform Delay, d1	6.2	14.1		14.0	7.2			32.0	23.7	32.5	30.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	5.6		4.7	0.3			1.4	0.3	2.5	0.0	
Delay (s)	6.3	19.6		18.7	7.6			33.4	24.0	35.0	30.8	
Level of Service	A	B		B	A			C	C	C	C	
Approach Delay (s)		18.8			10.9			26.1			34.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

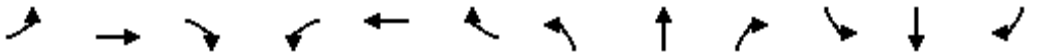
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	813	284	463	613	261	297
v/c Ratio	0.71	0.39	0.99	0.62	0.65	0.57
Control Delay	25.5	4.6	52.3	5.6	32.4	11.0
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	4.6	52.3	5.6	32.4	11.0
Queue Length 50th (ft)	161	0	165	74	105	24
Queue Length 95th (ft)	263	52	m#312	m101	174	88
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1150	722	466	993	612	666
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	48	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.39	0.99	0.62	0.43	0.45

Intersection Summary

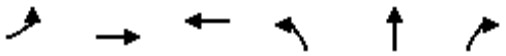
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	748	261	426	564	0	0	0	0	240	0	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3292	1541	1589	1733						1752	1482
Flt Permitted		1.00	1.00	0.22	1.00						0.95	1.00
Satd. Flow (perm)		3292	1541	366	1733						1752	1482
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	813	284	463	613	0	0	0	0	261	0	297
RTOR Reduction (vph)	0	0	184	0	0	0	0	0	0	0	0	176
Lane Group Flow (vph)	0	813	100	463	613	0	0	0	0	0	261	121
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	6%	2%	6%	6%	0%	0%	0%	0%	3%	0%	6%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		25.2	25.2	41.3	41.3						16.6	16.6
Effective Green, g (s)		25.2	25.2	41.3	41.3						16.6	16.6
Actuated g/C Ratio		0.35	0.35	0.57	0.57						0.23	0.23
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1153	540	467	995						404	342
v/s Ratio Prot		0.25		c0.21	0.35							
v/s Ratio Perm			0.06	c0.36							0.15	0.08
v/c Ratio		0.71	0.18	0.99	0.62						0.65	0.35
Uniform Delay, d1		20.1	16.2	19.7	10.1						25.0	23.2
Progression Factor		1.00	1.00	0.73	0.40						1.00	1.00
Incremental Delay, d2		2.1	0.2	30.0	0.8						2.7	0.2
Delay (s)		22.3	16.4	44.3	4.8						27.6	23.4
Level of Service		C	B	D	A						C	C
Approach Delay (s)		20.8			21.8			0.0			25.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	71.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

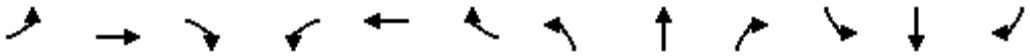
c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	312	762	1083	259	315	315
v/c Ratio	0.77	0.69	0.88	0.67	0.66	0.66
Control Delay	28.7	7.9	32.0	33.5	17.3	17.3
Queue Delay	0.0	3.0	0.3	0.0	0.0	0.0
Total Delay	28.7	10.9	32.3	33.5	17.3	17.3
Queue Length 50th (ft)	109	88	221	104	51	51
Queue Length 95th (ft)	m#244	534	#407	175	132	132
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	407	1111	1229	589	627	627
Starvation Cap Reductn	0	241	0	0	0	0
Spillback Cap Reductn	0	0	12	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.88	0.89	0.44	0.50	0.50

Intersection Summary

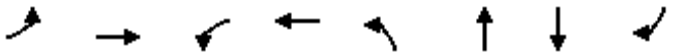
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	701	0	0	752	245	238	0	580	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1604	1766			3282		1687	1448	1448			
Flt Permitted	0.15	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	258	1766			3282		1687	1448	1448			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	762	0	0	817	266	259	0	630	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	142	142	0	0	0
Lane Group Flow (vph)	312	762	0	0	1046	0	259	173	173	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	5%	4%	0%	0%	4%	9%	7%	0%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	40.3	45.3			26.2		16.6	16.6	16.6			
Effective Green, g (s)	40.3	45.3			26.2		16.6	16.6	16.6			
Actuated g/C Ratio	0.56	0.63			0.36		0.23	0.23	0.23			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	408	1112			1195		389	334	334			
v/s Ratio Prot	0.15	c0.43			c0.32			0.12				
v/s Ratio Perm	0.28						c0.15		0.12			
v/c Ratio	0.76	0.69			0.88		0.67	0.52	0.52			
Uniform Delay, d1	21.5	8.7			21.3		25.1	24.1	24.1			
Progression Factor	0.75	0.47			1.00		1.00	1.00	1.00			
Incremental Delay, d2	5.8	1.5			7.6		3.3	0.6	0.6			
Delay (s)	21.9	5.6			28.9		28.4	24.7	24.7			
Level of Service	C	A			C		C	C	C			
Approach Delay (s)		10.3			28.9			25.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	71.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	188	1196	97	765	141	124	65	221
v/c Ratio	0.67	0.63	0.36	0.86	0.45	0.27	0.40	0.49
Control Delay	26.7	21.9	13.9	36.8	34.7	10.7	52.6	8.6
Queue Delay	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	23.0	13.9	36.8	34.7	10.7	52.6	8.6
Queue Length 50th (ft)	46	285	22	435	76	16	43	3
Queue Length 95th (ft)	#201	554	66	#911	126	57	86	59
Internal Link Dist (ft)		376		131		742	425	
Turn Bay Length (ft)	115		60		200			100
Base Capacity (vph)	282	1907	353	891	369	772	392	451
Starvation Cap Reductn	0	439	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.81	0.27	0.86	0.38	0.16	0.17	0.49

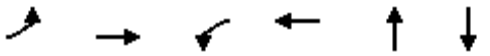
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	942	134	87	672	16	127	29	83	16	42	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	11	11	11	12	12	11
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.89			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1678	3426		1752	1771		1646	1556			1847	1494
Flt Permitted	0.13	1.00		0.16	1.00		0.46	1.00			0.87	1.00
Satd. Flow (perm)	226	3426		297	1771		802	1556			1622	1494
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	1047	149	97	747	18	141	32	92	18	47	221
RTOR Reduction (vph)	0	7	0	0	0	0	0	68	0	0	0	177
Lane Group Flow (vph)	188	1189	0	97	765	0	141	56	0	0	65	44
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	4%	3%	3%	3%	7%	0%	6%	2%	4%	0%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov
Protected Phases	6	1		2	5		8	3			7	6
Permitted Phases	1			5			3			7		7
Actuated Green, G (s)	68.4	58.2		60.0	54.0		27.8	27.8			9.2	19.4
Effective Green, g (s)	68.4	58.2		60.0	54.0		27.8	27.8			9.2	19.4
Actuated g/C Ratio	0.64	0.54		0.56	0.50		0.26	0.26			0.09	0.18
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	2.0			2.0	2.0
Lane Grp Cap (vph)	282	1863		248	893		315	404			139	340
v/s Ratio Prot	c0.06	0.35		0.02	c0.43		c0.06	0.04				0.01
v/s Ratio Perm	0.36			0.20			c0.06				0.04	0.02
v/c Ratio	0.67	0.64		0.39	0.86		0.45	0.14			0.47	0.13
Uniform Delay, d1	17.4	17.0		12.7	23.1		32.2	30.4			46.6	36.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	4.6	1.0		0.4	8.9		1.0	0.1			0.9	0.1
Delay (s)	22.0	18.1		13.0	32.0		33.2	30.5			47.5	36.8
Level of Service	C	B		B	C		C	C			D	D
Approach Delay (s)		18.6			29.8			31.9			39.2	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	107.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

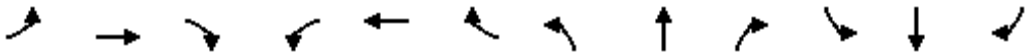
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	36	1047	1	819	8	55
v/c Ratio	0.09	0.74	0.00	0.63	0.05	0.30
Control Delay	9.2	17.0	10.0	16.8	36.0	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	17.0	10.0	16.8	36.0	20.6
Queue Length 50th (ft)	3	173	0	209	3	6
Queue Length 95th (ft)	31	#1310	3	#943	19	46
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	380	1406	236	1296	456	411
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.74	0.00	0.63	0.02	0.13

Intersection Summary

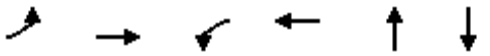
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	941	1	1	726	11	5	1	1	11	1	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.98			0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1694	1844		1745	1821			1734			1448	
Flt Permitted	0.22	1.00		0.10	1.00			0.96			0.99	
Satd. Flow (perm)	394	1844		192	1821			1734			1448	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	1046	1	1	807	12	6	1	1	12	1	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	39	0
Lane Group Flow (vph)	36	1047	0	1	819	0	0	7	0	0	16	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	3%	0%	0%	4%	9%	0%	0%	0%	0%	0%	13%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	69.6	64.6		61.0	60.3			3.2			7.3	
Effective Green, g (s)	69.6	64.6		61.0	60.3			3.2			7.3	
Actuated g/C Ratio	0.73	0.67		0.64	0.63			0.03			0.08	
Clearance Time (s)	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	
Lane Grp Cap (vph)	354	1243		133	1146			57			110	
v/s Ratio Prot	c0.01	c0.57		0.00	0.45			c0.00			c0.01	
v/s Ratio Perm	0.07			0.00								
v/c Ratio	0.10	0.84		0.01	0.71			0.12			0.15	
Uniform Delay, d1	14.3	11.8		28.0	12.0			44.9			41.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	5.4		0.0	2.1			1.0			0.6	
Delay (s)	14.4	17.1		28.0	14.1			45.9			42.0	
Level of Service	B	B		C	B			D			D	
Approach Delay (s)		17.0			14.1			45.9			42.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	95.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

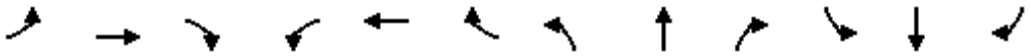
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	12	958	1	675	132	73
v/c Ratio	0.03	0.79	0.00	0.56	0.56	0.28
Control Delay	5.4	17.9	5.0	11.1	36.9	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	17.9	5.0	11.1	36.9	23.1
Queue Length 50th (ft)	1	226	0	122	51	20
Queue Length 95th (ft)	8	#811	2	413	115	59
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	463	1216	282	1208	405	439
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.79	0.00	0.56	0.33	0.17

Intersection Summary

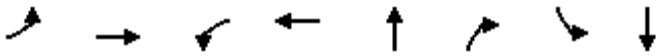
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	798	64	1	602	5	103	11	5	32	16	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1745	1817		1805	1807			1635			1618	
Flt Permitted	0.31	1.00		0.14	1.00			0.77			0.84	
Satd. Flow (perm)	565	1817		264	1807			1313			1389	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	887	71	1	669	6	114	12	6	36	18	19
RTOR Reduction (vph)	0	3	0	0	0	0	0	2	0	0	16	0
Lane Group Flow (vph)	12	955	0	1	675	0	0	130	0	0	57	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	0%	3%	5%	0%	5%	0%	7%	9%	0%	6%	0%	12%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	51.3	50.5		51.3	50.5			13.3			13.3	
Effective Green, g (s)	51.3	50.5		51.3	50.5			13.3			13.3	
Actuated g/C Ratio	0.64	0.63		0.64	0.63			0.17			0.17	
Clearance Time (s)	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	
Lane Grp Cap (vph)	375	1152		185	1146			219			232	
v/s Ratio Prot	c0.00	c0.53		0.00	0.37							
v/s Ratio Perm	0.02			0.00				c0.10			0.04	
v/c Ratio	0.03	0.83		0.01	0.59			0.59			0.25	
Uniform Delay, d1	6.1	11.2		10.0	8.5			30.6			28.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	5.1		0.0	0.8			4.2			0.6	
Delay (s)	6.1	16.3		10.0	9.3			34.9			29.4	
Level of Service	A	B		B	A			C			C	
Approach Delay (s)		16.2			9.3			34.9			29.4	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

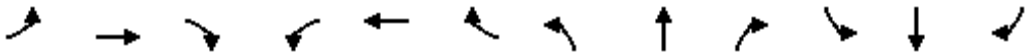
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	641	187	654	106	294	191	70
v/c Ratio	0.11	0.83	0.51	0.66	0.37	0.39	0.69	0.18
Control Delay	6.9	30.0	11.0	17.6	30.4	7.7	41.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	30.0	11.0	17.6	30.4	7.7	41.7	8.9
Queue Length 50th (ft)	6	238	31	222	40	29	78	1
Queue Length 95th (ft)	19	#458	65	396	97	91	172	33
Internal Link Dist (ft)		589		656	426			34
Turn Bay Length (ft)	100		247			200		
Base Capacity (vph)	459	1072	456	1196	414	838	404	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.60	0.41	0.55	0.26	0.35	0.47	0.13

Intersection Summary

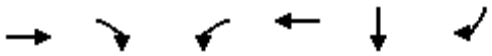
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	578	50	183	525	116	100	4	288	187	2	67
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	11	11	11	11
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	1.00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1711	1807		1678	1817			1780	1516	1711	1496	
Flt Permitted	0.30	1.00		0.17	1.00			0.68	1.00	0.69	1.00	
Satd. Flow (perm)	548	1807		308	1817			1275	1516	1240	1496	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	590	51	187	536	118	102	4	294	191	2	68
RTOR Reduction (vph)	0	3	0	0	8	0	0	0	122	0	53	0
Lane Group Flow (vph)	43	638	0	187	646	0	0	106	172	191	17	0
Confl. Peds. (#/hr)			5	5		5	5					5
Heavy Vehicles (%)	2%	3%	11%	4%	1%	2%	1%	2%	3%	2%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	6	1		2	5			3	2		7	
Permitted Phases	1			5			3		3	7		
Actuated Green, G (s)	36.5	33.0		47.3	38.8			16.0	25.3	16.0	16.0	
Effective Green, g (s)	36.5	33.0		47.3	38.8			16.0	25.3	16.0	16.0	
Actuated g/C Ratio	0.50	0.45		0.65	0.53			0.22	0.35	0.22	0.22	
Clearance Time (s)	5.0	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)	328	813		372	961			278	626	270	326	
v/s Ratio Prot	0.01	c0.35		c0.06	c0.36				0.03		0.01	
v/s Ratio Perm	0.06			0.26				0.08	0.08	c0.15		
v/c Ratio	0.13	0.78		0.50	0.67			0.38	0.28	0.71	0.05	
Uniform Delay, d1	10.0	17.1		9.7	12.6			24.4	17.4	26.5	22.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	5.0		1.1	1.9			0.9	0.2	8.2	0.1	
Delay (s)	10.2	22.1		10.8	14.5			25.3	17.6	34.7	22.7	
Level of Service	B	C		B	B			C	B	C	C	
Approach Delay (s)		21.4			13.7			19.6			31.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	73.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

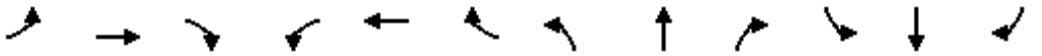
c Critical Lane Group



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	873	280	579	638	253	294
v/c Ratio	0.85	0.42	0.96	0.54	0.69	0.54
Control Delay	38.0	5.5	41.3	3.6	40.1	8.1
Queue Delay	1.7	0.0	0.0	1.0	0.0	0.0
Total Delay	39.7	5.5	41.3	4.6	40.1	8.1
Queue Length 50th (ft)	224	0	274	80	122	6
Queue Length 95th (ft)	#372	58	m#157	m101	197	66
Internal Link Dist (ft)	656			424	1060	
Turn Bay Length (ft)		235				260
Base Capacity (vph)	1025	665	603	1186	519	656
Starvation Cap Reductn	0	0	0	303	0	0
Spillback Cap Reductn	57	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.42	0.96	0.72	0.49	0.45

Intersection Summary

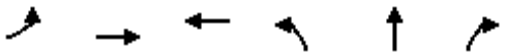
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	856	274	567	625	0	0	0	0	248	0	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	10	11	8	8	12	12	8	12	12
Total Lost time (s)		5.0	5.0	5.0	5.0						5.0	5.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.97	1.00	1.00						1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3388	1554	1651	1783						1719	1524
Flt Permitted		1.00	1.00	0.17	1.00						0.95	1.00
Satd. Flow (perm)		3388	1554	287	1783						1719	1524
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	873	280	579	638	0	0	0	0	253	0	294
RTOR Reduction (vph)	0	0	195	0	0	0	0	0	0	0	0	220
Lane Group Flow (vph)	0	873	85	579	638	0	0	0	0	0	253	74
Confl. Peds. (#/hr)			5	5								5
Heavy Vehicles (%)	0%	3%	1%	2%	3%	0%	0%	0%	0%	5%	0%	3%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		1		2	1 2 5						3	
Permitted Phases			1	1 2 5						3		3
Actuated Green, G (s)		25.1	25.1	55.2	55.2						17.7	17.7
Effective Green, g (s)		25.1	25.1	55.2	55.2						17.7	17.7
Actuated g/C Ratio		0.30	0.30	0.67	0.67						0.21	0.21
Clearance Time (s)		5.0	5.0	5.0							5.0	5.0
Vehicle Extension (s)		4.0	4.0	2.0							2.0	2.0
Lane Grp Cap (vph)		1025	470	604	1187						367	325
v/s Ratio Prot		0.26		c0.29	0.36							
v/s Ratio Perm			0.05	c0.35							0.15	0.05
v/c Ratio		0.85	0.18	0.96	0.54						0.69	0.23
Uniform Delay, d1		27.2	21.3	20.9	7.2						30.1	26.9
Progression Factor		1.00	1.00	0.80	0.31						1.00	1.00
Incremental Delay, d2		7.2	0.3	17.2	0.3						4.3	0.1
Delay (s)		34.3	21.6	33.9	2.5						34.3	27.1
Level of Service		C	C	C	A						C	C
Approach Delay (s)		31.2			17.5			0.0			30.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

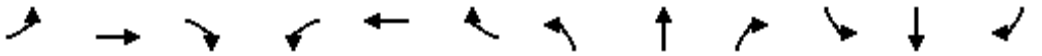
c Critical Lane Group



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	356	770	1273	264	292	292
v/c Ratio	0.85	0.65	0.92	0.70	0.61	0.61
Control Delay	38.8	7.7	36.2	40.3	14.7	14.7
Queue Delay	0.0	18.6	0.9	0.0	0.0	0.0
Total Delay	38.8	26.2	37.1	40.3	14.7	14.7
Queue Length 50th (ft)	159	97	314	127	37	37
Queue Length 95th (ft)	m#256	m570	#521	205	115	115
Internal Link Dist (ft)		424	376		672	
Turn Bay Length (ft)				290		380
Base Capacity (vph)	419	1186	1382	535	589	589
Starvation Cap Reductn	0	421	23	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	1.01	0.94	0.49	0.50	0.50

Intersection Summary

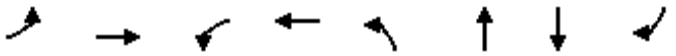
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	349	755	0	0	936	312	259	0	572	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	8	8	12	11	12	12	12	8	12	8
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	0.98	0.98			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1636	1783			3374		1770	1461	1461			
Flt Permitted	0.12	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	208	1783			3374		1770	1461	1461			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	356	770	0	0	955	318	264	0	584	0	0	0
RTOR Reduction (vph)	0	0	0	0	34	0	0	165	165	0	0	0
Lane Group Flow (vph)	356	770	0	0	1239	0	264	127	127	0	0	0
Confl. Peds. (#/hr)	5					5			5			
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	6	1 5 6			5			7				
Permitted Phases	1 5 6						7		7			
Actuated Green, G (s)	50.2	55.2			33.1		17.7	17.7	17.7			
Effective Green, g (s)	50.2	55.2			33.1		17.7	17.7	17.7			
Actuated g/C Ratio	0.61	0.67			0.40		0.21	0.21	0.21			
Clearance Time (s)	5.0				5.0		5.0	5.0	5.0			
Vehicle Extension (s)	2.0				4.0		2.0	2.0	2.0			
Lane Grp Cap (vph)	420	1187			1347		377	311	311			
v/s Ratio Prot	c0.17	c0.43			c0.37			0.09				
v/s Ratio Perm	0.34						c0.15		0.09			
v/c Ratio	0.85	0.65			0.92		0.70	0.41	0.41			
Uniform Delay, d1	26.4	8.1			23.6		30.1	28.1	28.1			
Progression Factor	0.93	0.60			1.00		1.00	1.00	1.00			
Incremental Delay, d2	9.1	0.8			10.4		4.7	0.3	0.3			
Delay (s)	33.7	5.8			34.0		34.9	28.4	28.4			
Level of Service	C	A			C		C	C	C			
Approach Delay (s)		14.6			34.0			30.4			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

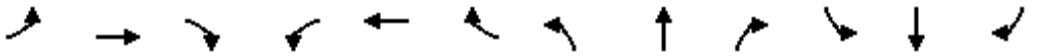
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	161	1168	167	755	287	278	102	243
v/c Ratio	0.75	0.83	0.61	0.94	0.88	0.48	0.43	0.65
Control Delay	37.9	28.5	22.7	45.3	49.4	10.8	34.6	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	28.5	22.7	45.3	49.4	10.8	34.6	21.4
Queue Length 50th (ft)	32	244	33	319	111	37	45	53
Queue Length 95th (ft)	#166	#510	#133	#739	177	92	86	112
Internal Link Dist (ft)		376		131		742	425	
Turn Bay Length (ft)	115		60		200			100
Base Capacity (vph)	216	1401	291	799	328	906	564	374
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.83	0.57	0.94	0.88	0.31	0.18	0.65

Intersection Summary

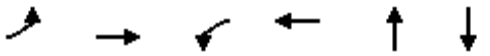
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	916	194	159	706	11	273	76	188	16	81	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	8	11	11	11	12	12	11
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.97		1.00	1.00		1.00	0.89			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1728	3397		1752	1823		1694	1585			1838	1503
Flt Permitted	0.13	1.00		0.12	1.00		0.45	1.00			0.89	1.00
Satd. Flow (perm)	241	3397		227	1823		804	1585			1650	1503
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	161	964	204	167	743	12	287	80	198	17	85	243
RTOR Reduction (vph)	0	17	0	0	1	0	0	120	0	0	0	82
Lane Group Flow (vph)	161	1151	0	167	754	0	287	158	0	0	102	161
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	1%	3%	3%	3%	4%	0%	3%	3%	2%	0%	3%	2%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov
Protected Phases	6	1		2	5		8	3			7	6
Permitted Phases	1			5			3			7		7
Actuated Green, G (s)	35.3	30.2		39.9	32.5		22.5	22.5			9.4	14.5
Effective Green, g (s)	35.3	30.2		39.9	32.5		22.5	22.5			9.4	14.5
Actuated g/C Ratio	0.47	0.40		0.53	0.43		0.30	0.30			0.13	0.19
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	2.0			2.0	2.0
Lane Grp Cap (vph)	214	1366		270	788		336	474			206	390
v/s Ratio Prot	0.05	0.34		c0.06	c0.41		c0.09	0.10				0.03
v/s Ratio Perm	0.30			0.27			c0.16				0.06	0.08
v/c Ratio	0.75	0.84		0.62	0.96		0.85	0.33			0.50	0.41
Uniform Delay, d1	15.9	20.3		13.0	20.6		23.6	20.5			30.6	26.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	12.4	5.4		3.0	22.5		18.6	0.2			0.7	0.3
Delay (s)	28.4	25.7		15.9	43.1		42.2	20.6			31.3	26.8
Level of Service	C	C		B	D		D	C			C	C
Approach Delay (s)		26.0			38.2			31.6			28.2	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

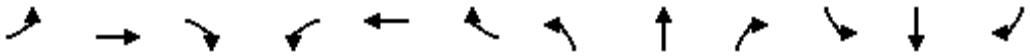
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	72	1061	1	880	7	38
v/c Ratio	0.21	0.72	0.00	0.71	0.04	0.21
Control Delay	13.1	16.1	10.0	20.5	26.0	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	16.1	10.0	20.5	26.0	22.2
Queue Length 50th (ft)	5	174	0	244	1	5
Queue Length 95th (ft)	53	#1327	3	#1147	15	40
Internal Link Dist (ft)		920		1135	476	583
Turn Bay Length (ft)	150		50			
Base Capacity (vph)	475	1474	214	1232	456	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.72	0.00	0.71	0.02	0.09

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	1003	5	1	820	16	1	1	5	11	1	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	11	12	8	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.90			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1694	1861		1745	1820			1612			1488	
Flt Permitted	0.16	1.00		0.09	1.00			0.99			0.98	
Satd. Flow (perm)	283	1861		159	1820			1612			1488	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	72	1056	5	1	863	17	1	1	5	12	1	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	23	0
Lane Group Flow (vph)	72	1061	0	1	880	0	0	2	0	0	15	0
Confl. Peds. (#/hr)			5			5			5			5
Heavy Vehicles (%)	3%	2%	0%	0%	4%	6%	0%	0%	0%	27%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	6	1		2	5		3	3		4	4	
Permitted Phases	1			5								
Actuated Green, G (s)	68.0	62.3		54.8	54.1			3.0			6.0	
Effective Green, g (s)	68.0	62.3		54.8	54.1			3.0			6.0	
Actuated g/C Ratio	0.74	0.68		0.60	0.59			0.03			0.07	
Clearance Time (s)	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	
Lane Grp Cap (vph)	345	1260		106	1070			52			97	
v/s Ratio Prot	c0.02	c0.57		0.00	0.48			c0.00			c0.01	
v/s Ratio Perm	0.13			0.01								
v/c Ratio	0.21	0.84		0.01	0.82			0.04			0.15	
Uniform Delay, d1	18.8	11.2		30.5	15.1			43.1			40.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	5.3		0.0	5.2			0.3			0.7	
Delay (s)	19.2	16.4		30.5	20.3			43.4			41.3	
Level of Service	B	B		C	C			D			D	
Approach Delay (s)		16.6			20.3			43.4			41.3	
Approach LOS		B			C			D			D	

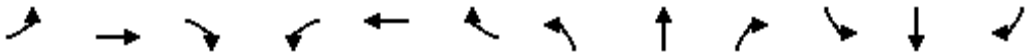
Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	31	981	5	766	84	45
v/c Ratio	0.07	0.72	0.02	0.59	0.41	0.18
Control Delay	4.8	14.4	5.2	13.4	34.8	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	14.4	5.2	13.4	34.8	21.3
Queue Length 50th (ft)	3	198	1	126	34	11
Queue Length 95th (ft)	16	#833	5	#590	77	40
Internal Link Dist (ft)		1135		550	599	330
Turn Bay Length (ft)	50		65			
Base Capacity (vph)	457	1372	328	1311	426	497
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.72	0.02	0.58	0.20	0.09

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	857	75	5	716	11	63	16	1	11	16	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	8	12	12	12	8	11	8	8	11	8
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			1.00			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1678	1840		1805	1824			1764			1684	
Flt Permitted	0.26	1.00		0.17	1.00			0.74			0.91	
Satd. Flow (perm)	459	1840		318	1824			1360			1553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	902	79	5	754	12	66	17	1	12	17	16
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	14	0
Lane Group Flow (vph)	31	979	0	5	766	0	0	83	0	0	31	0
Heavy Vehicles (%)	4%	2%	2%	0%	4%	0%	0%	0%	0%	0%	0%	7%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	6	1		2	5			3			7	
Permitted Phases	1			5			3			7		
Actuated Green, G (s)	56.9	54.5		53.7	52.9			9.8			9.8	
Effective Green, g (s)	56.9	54.5		53.7	52.9			9.8			9.8	
Actuated g/C Ratio	0.71	0.68		0.67	0.66			0.12			0.12	
Clearance Time (s)	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	
Lane Grp Cap (vph)	362	1251		228	1204			166			190	
v/s Ratio Prot	c0.00	c0.53		0.00	0.42							
v/s Ratio Perm	0.06			0.01				c0.06			0.02	
v/c Ratio	0.09	0.78		0.02	0.64			0.50			0.16	
Uniform Delay, d1	5.3	8.7		8.0	8.0			32.9			31.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	3.3		0.0	1.1			2.4			0.4	
Delay (s)	5.4	12.0		8.0	9.1			35.2			31.9	
Level of Service	A	B		A	A			D			C	
Approach Delay (s)		11.8			9.1			35.2			31.9	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Appendix D

Mitigation Improvement Cost Estimates

Big Bay Rd/Corinth Rd

Figure 12 Improvement Concept

ITEM		COST
pavement	$	120,000.00
sidewalk	$	7,700.00
excavation	$	23,000.00
curb	$	10,500.00
traffic signal upgrades/ modifications	$	100,000.00
drainage	$	170,000.00
Concept 1 subtotal:	$	431,200.00
Contingency: 40%	$	172,500.00
Total:	$	603,700.00
Say:	$	605,000.00

Big Boom Rd/Main St

Figure 13 Improvement Concept

ITEM				COST
pavement			$	232,000.00
sidewalk			$	43,000.00
excavation			$	45,000.00
curb			$	35,000.00
traffic signal upgrades/ modifications	(at Big Boom Rd and at I87 NB)		$	225,000.00
drainage			$	250,000.00
basin at Big Boom Road			$	10,000.00
	Concept 1 subtotal:		$	840,000.00
	Contingency:	40%	$	336,000.00
		Total:	$	1,176,000.00
		Say:	$	1,200,000.00

Figure 14 Improvement Concept

ITEM				COST
pavement			$	96,000.00
sidewalk			$	7,000.00
excavation			$	18,000.00
curb			$	7,000.00
traffic signal upgrades/ modifications	(Big Boom)		$	175,000.00
drainage			$	86,000.00
basin at Big Boom Road			$	5,000.00
	Concept 2 subtotal:		$	394,000.00
	Contingency:	40%	$	157,600.00
		Total:	$	551,600.00
		Say:	$	555,000.00