Traffic Impact Study

Willoughby Corner

Lafayette, Colorado

Prepared for:

Boulder County Housing Authority

Kimley»Horn

T R A F F I C I M P A C T S T U D Y

Willoughby Corner

Lafayette, Colorado

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1.0 EXECUTIVE SUMMARY

Willoughby Corner is a proposed residential development to be located on southwest corner of the Emma Street and 120th Street intersection in Lafayette, Colorado. This project will include the development of an existing vacant lot. Willoughby Corner is anticipated to consist of a mix of 30 duplex housing units, 130 multifamily townhomes, 120 multifamily housing units, and 120 senior adult housing units. It is expected that the project will be completed by 2020; therefore, analysis was conducted for the 2020 short term horizon as well as the 2040 long-term horizon.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with City of Lafayette standards and requirements:

- Baseline Road (SH-7) and 119th Street
- Emma Street and Canterbury Drive
- Emma Street and 120th Street
- Flagg Drive and 120th Street
- South Boulder Road and 120th Street

In addition, the proposed full movement project access along Emma Street, and the three-quarter movement project access proposed along 120th Street were included for evaluation.

Regional access to Willoughby Corner will be provided by Northwest Parkway, US Highway 287 (US-287), and E Baseline Road (SH-7) while primary access to the proposed development will be provided by Emma Street and N 120th Street/N 119th Street. Direct access to the project will be provided from one proposed full movement access along the south side of Emma Street, and one proposed three-quarter movement access along the west side of 120th Street.

Willoughby Corner is expected to generate approximately 2,382 daily weekday trips, with 152 of these trips occurring during morning peak hour and 191 trips occurring during the afternoon peak hour.

Distribution of site traffic on the street system was based on the area street characteristics, existing traffic patterns, demographic information, anticipated surrounding development areas, and the proposed access system for the project. Assignment of project traffic was based upon the trip generation described previously and the distributions developed. The traffic assignment was added to the background traffic volumes to determine future traffic with the project.

Based on the analysis presented in this report, Kimley-Horn believes the proposed Willoughby Corner development will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Baseline Road (SH-7) is a state owned and maintained facility with the west leg categorized as NR-C, Non-Rural Arterial and the east leg categorized as NR-A, Non-Rural Principal Highway at the 119th Street intersection. Based on traffic projections, the addition of project traffic on the south leg of the intersection of Baseline Road (SH-7) and 119th Street is only anticipated to increase access traffic volumes by approximately 14 percent during the peak hour over existing. Therefore, the addition of project traffic on the south leg of the Baseline Road (SH-7) and 119th Street intersection is not anticipated to require a CDOT access permit because the increase in traffic volumes is less than 20 percent.

- It is understood that programmed improvements along 119th Street/120th Street include providing a three-lane roadway with a center two-way left turn lane. The City of Lafayette may soon be improving 120th Street to this three-lane section through the study area. It is anticipated that these improvements are expected to occur by buildout of the Willoughby Corner project.

- The intersections of Emma Street/120th Street and South Boulder Road/120th Street are anticipated to meet four-hour vehicular volume signal warrants during the 2020 project build out year; therefore, it is believed signalization will be needed at both intersections by 2020.

- Per the East Lafayette Transportation Plan, improvements anticipated at the intersection of Baseline Road (SH-7) and 119th Street include providing dual southbound and westbound left-turn lanes and two eastbound and westbound through lanes on Baseline Road. In addition, the improvements include two receiving lanes along southbound 119th Street from the westbound dual lefts, separate channelized right-turn lanes on all four approaches (free northbound and southbound, and yield-controlled eastbound and westbound), and a separate left-turn lane on the northbound approach. The auxiliary turn lanes on the 119th Street approaches should provide standard minimum 150-foot turn lanes, while the auxiliary turn lanes along SH-7 should be constructed in compliance with the Colorado Department of Transportation State Highway Access Code requirements.

- A single lane roundabout is recommended at the intersection of Emma Street and Canterbury Drive. With this change in control, it is recommended that Canterbury Drive provide two-way traffic to include access on southbound Canterbury Drive. The south leg of the Canterbury Drive and Emma Street intersection is presently one-way serving northbound traffic only during school hours and as such is currently restricted to exiting movements only.

- Also identified in the East Lafayette Transportation Plan, recommended improvements at the intersection of Emma Street and 120th Street include signalization, a two-way left-turn lane along 120th Street, a left-turn lane on the eastbound approach, and a separate right-turn lane on the southbound 120th Street approach.

- The East Lafayette Transportation Plan identified programmed improvements at the intersection of South Boulder Road and 120th Street to include signalization and separate left-turn lanes on the northbound, southbound, and eastbound approaches. Additional intersection recommendations include separate right-turn lanes on the southbound and eastbound approaches. The eastbound approach was recommended to include a left-turn lane, a shared left-turn/through lane, and a channelized free right-turn lane.

- The full movement access proposed on Emma Street will provide direct access to Willoughby Corner with a newly constructed south leg. The project access northbound approach to Emma Street is recommended to be stop controlled with a R1-1 “STOP” sign

installed. Based on the operational analysis, a single northbound exiting lane is anticipated to be sufficient to accommodate left and right turning traffic exiting to Emma Street. Single shared lane approaches in the eastbound and westbound directions along Emma Street are also expected to be sufficient to accommodate expected traffic demands.

- The three-quarter movement access proposed on 120th Street will provide direct access to Willoughby Corner with a newly constructed west leg. With this configuration, eastbound exiting left turn movements will be restricted at this access. It is recommended this intersection be constructed with a single eastbound exiting lane for right turn movements only operating with stop control by the installation of a R1-1 "STOP" sign. To provide additional support to restrict left turning vehicles from exiting at this 120th Street three-quarter access, it is recommended that a R3-2 No Left Turn sign be placed underneath the STOP sign. The northbound approach of this access intersection will provide a two-way left turn lane.

- All on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings and conform to City of Lafayette standards as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this report to document the results of a Traffic Impact Study of future traffic conditions associated with the proposed Willoughby Corner project located on southwest corner of the Emma Street and 120th Street intersection in Lafayette, Colorado. A vicinity map illustrating the project site location is shown in **Figure 1**.

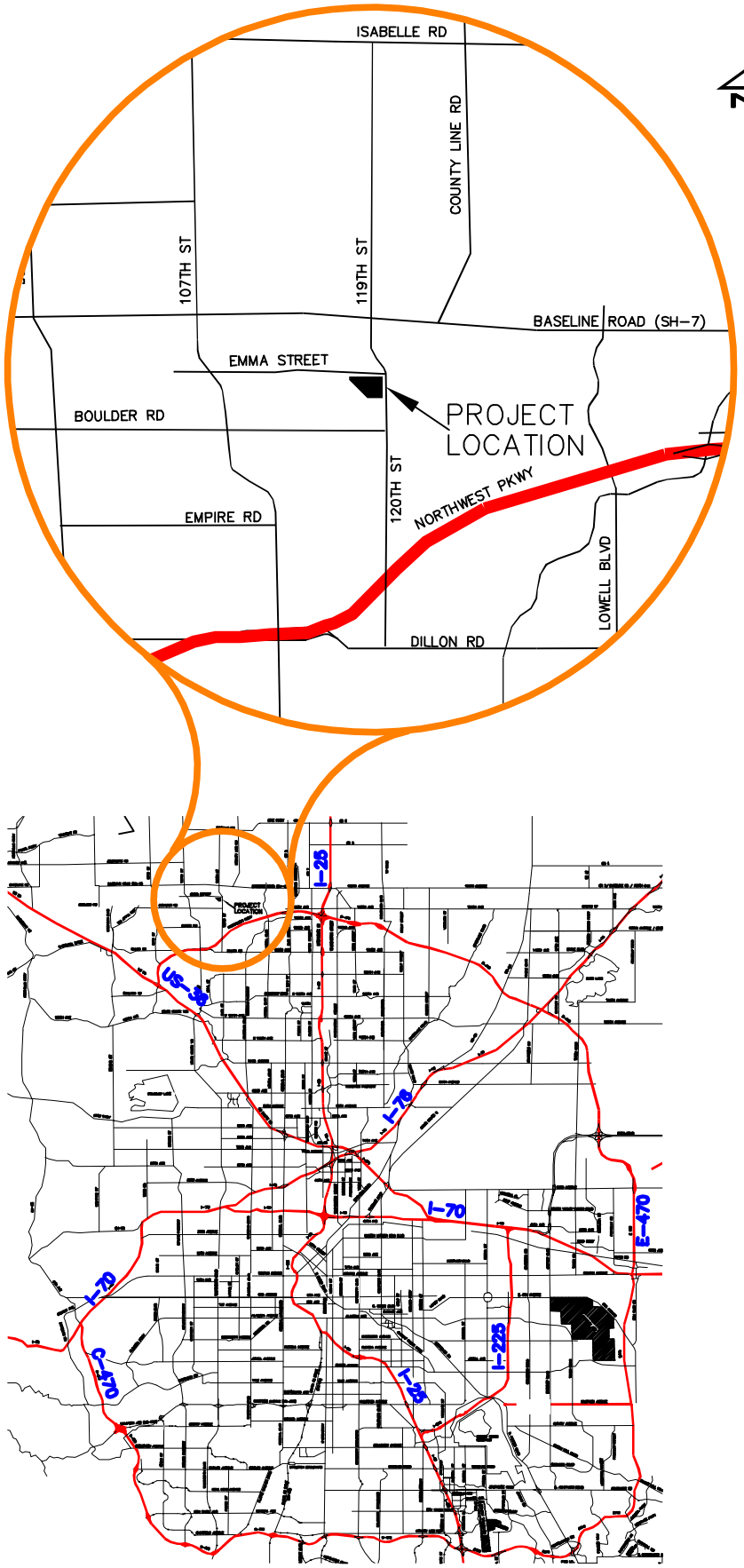
Willoughby Corner is anticipated to consist of a mix of 30 duplex housing units, 130 multifamily townhomes, 120 multifamily housing units, and 120 senior adult housing units. A conceptual site plan of the project illustrating the development and access location is shown in **Appendix G**. It is expected that the project will be completed by 2020; therefore, analysis was conducted for the 2020 short term horizon as well as the 2040 long-term horizon per City of Lafayette requirements.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with City of Lafayette standards and requirements:

- Baseline Road (SH-7) and 119th Street
- Emma Street and Canterbury Drive
- Emma Street and 120th Street
- Flagg Drive and 120th Street
- South Boulder Road and 120th Street

In addition, the proposed full movement project access along Emma Street, and the three-quarter movement project access proposed along 120th Street were included for evaluation.

Regional access to Willoughby Corner will be provided by Northwest Parkway, US Highway 287 (US-287), and E Baseline Road (SH-7) while primary access to the proposed development will be provided by Emma Street and N 120th Street/N 119th Street. Direct access to the project will be provided from one proposed full movement access along the south side of Emma Street, and one proposed three-quarter movement access along the west side of 120th Street.



Kimley»Horn NORTH
NTS 096559001

WILLOUGHBY CORNER – LAFAYETTE
VICINITY MAP

FIGURE 1

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3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Roadway Network

Baseline Road/State Highway 7 (SH-7) extends east-west and provides one through lane in each direction and has a posted speed limit ranging between 35 to 55 miles per hour within the study area. 119th Street is a north-south roadway that connects with 120th Street at Emma Street with a new alignment further east. This roadway has one through lane in each direction and a 35 mile per hour speed limit throughout the study area. Emma Street extends east-west and provides one through lane in each direction and a posted speed limit ranging between 25 or 35 miles per hour within the study area. Flagg Drive is an east-west roadway that provides one through lane in each direction with a posted speed limit of 35 miles per hour. South Boulder Road extends east-west and provides one through lane in each direction that has a posted speed limit of 35 miles per hour.

The intersection of Baseline Road (SH-7) and 119th Street is signalized with protected-permitted left turn phasing on the eastbound and westbound Baseline Road approaches and with split phasing on the northbound and southbound 119th Street approaches. The eastbound and westbound approaches provide separate left-turn lanes and shared through/right turn lanes. The northbound approach provides a shared left turn/through lane and separate right turn lane while the southbound approach provides only a single shared all movement lane.

The intersection of Emma Street and Canterbury Drive is unsignalized with stop control on the northbound approach. Currently, the south leg of the Emma Street and Canterbury Drive intersection is restricted to one-way northbound exit-only movements during weekday peak hours. The eastbound and westbound approaches provide one through lane in each direction, while the northbound approach is undesignated and was assumed to provide a single shared lane to serve left and right-turn movements, although the roadway width is likely sufficient for northbound left turn and right turning traffic to create two approach lanes.

The intersection of Emma Street and 120th Street is unsignalized with stop control on the eastbound Emma Street approach. The east leg of this intersection is a private residential

driveway slightly misaligned to the south. All four approaches provide a single shared lane to serve all movements.

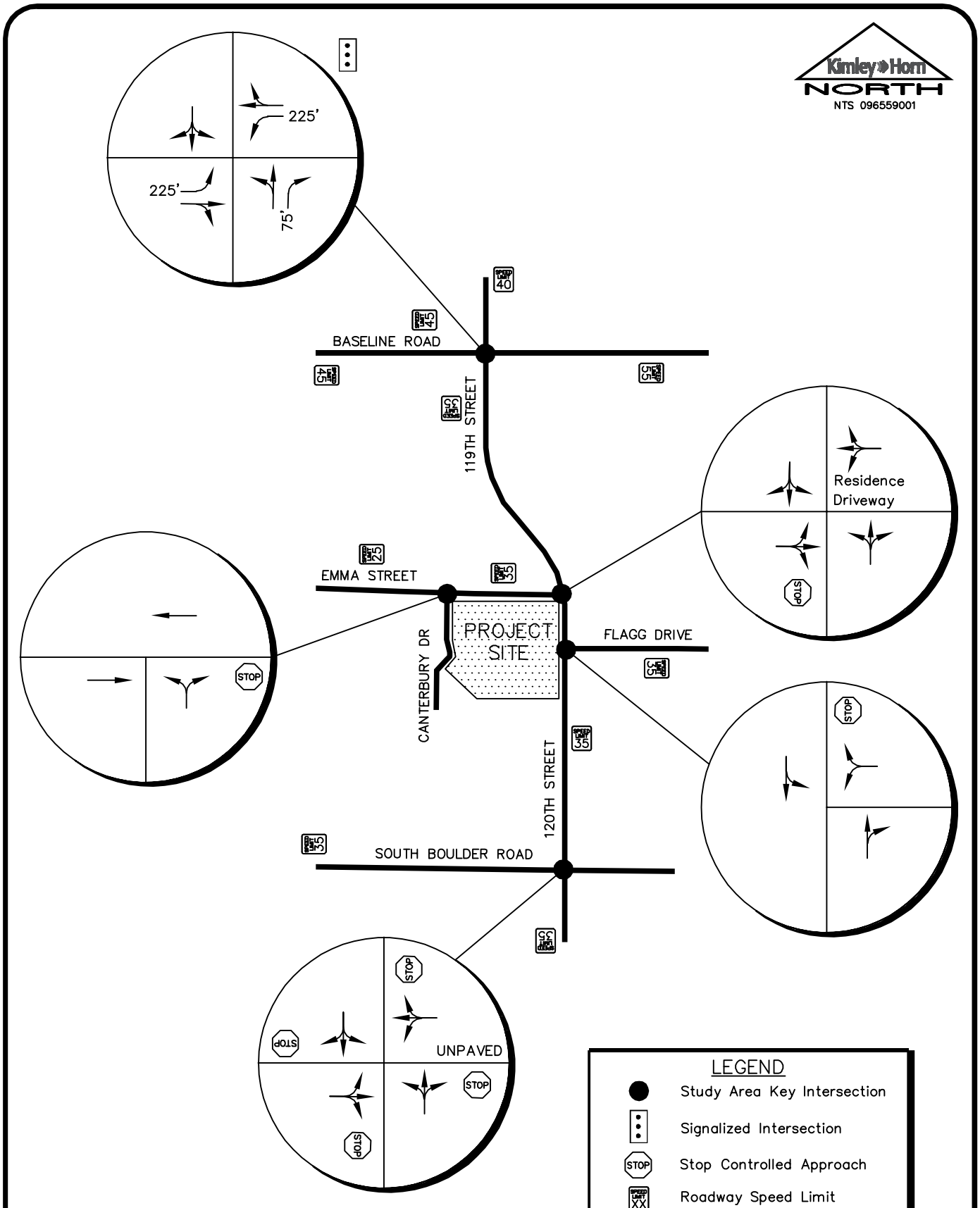
The T-intersection of Flagg Drive and 120th Street is unsignalized with stop control on the westbound Flagg Drive approach. The northbound approach provides a single shared through/right-turn lane, the southbound approach provides a single shared left-turn/through lane, and the westbound approach provides a single shared left turn/right turn lane.

The intersection of South Boulder Road and 120th Street is unsignalized that currently operates with all-way stop control. All four approaches provide a single lane to serve all movements. The east leg of this intersection is an unpaved roadway that terminates shortly to the east.

The intersection lane configurations and control for these study area key intersections are shown in **Figure 2**.

3.2 Existing Study Area

The existing project site is comprised of vacant land. Peak to Peak Charter School is located directly to the west of the project. Further west, the area is essentially completely built out with a mix of retail and residential housing. To the north of the project site exists more vacant land and the Lafayette Great Park open green space. To the east of the project site there is a mix of residential and vacant land.



WILLOUGHBY CORNER – LAFAYETTE
EXISTING LANE CONFIGURATIONS

FIGURE 2

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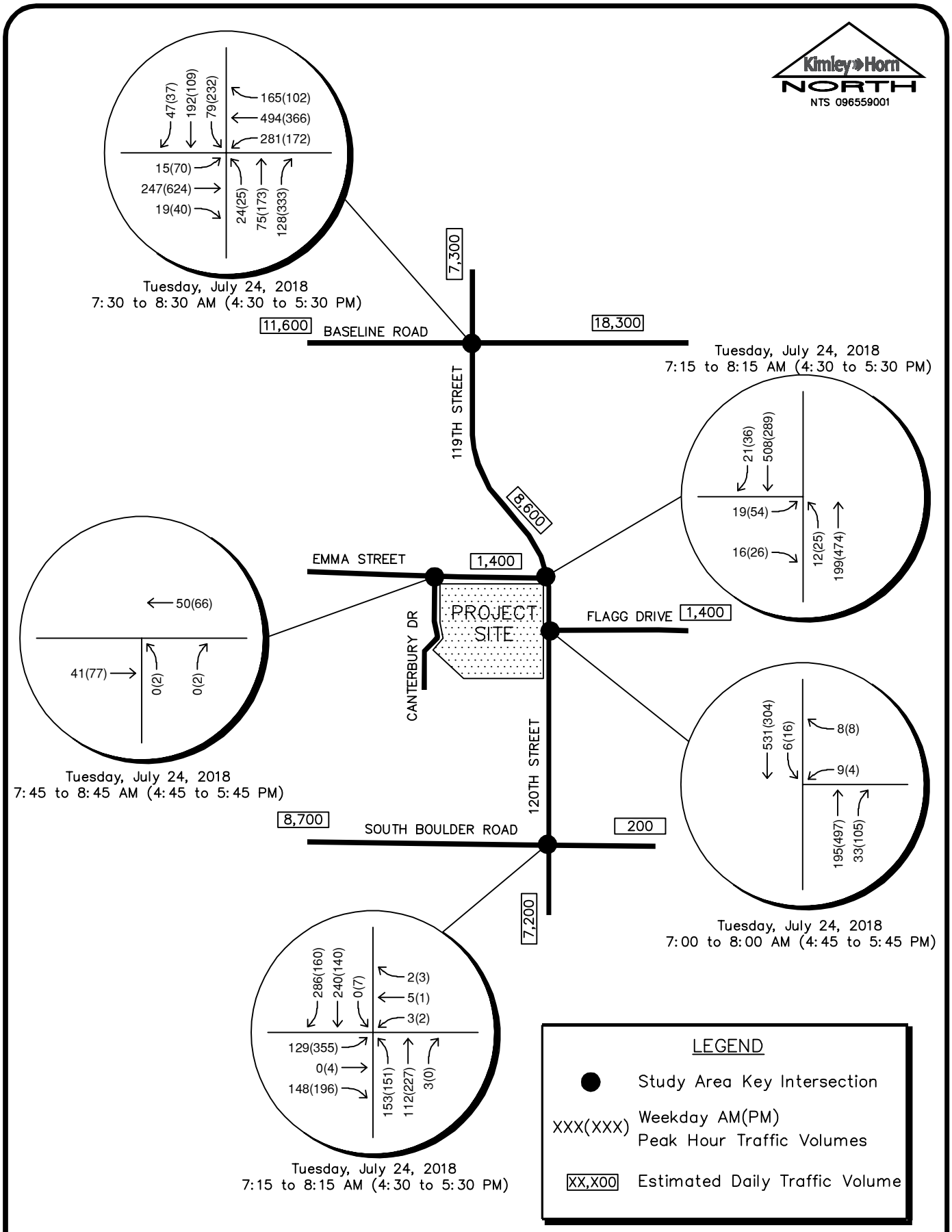
3.3 Existing Traffic Volumes

Existing peak hour turning movement counts were conducted at the study intersections on Tuesday, July 24, 2018 to represent summer traffic conditions when Peak to Peak Charter School, located directly west of the project site, is not in session. Existing peak hour turning movement counts were also conducted at the study intersections on Tuesday August 28, 2018 after Peak to Peak Charter School was back in session.

The counts were conducted in 15-minute intervals during the morning and afternoon peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates. Pedestrian and bicycle counts were also collected during these times. Existing vehicle turning movement counts during the summer are shown in **Figure 3** and existing vehicle turning movement counts during the school year are shown in **Figure 4** with count sheets provided in **Appendix A**. Additionally, the difference in existing traffic volumes from summer to school conditions is shown in **Figure 5**.

3.4 Unspecified Development Traffic Growth

Based on information provided on the website for the Colorado Department of Transportation, the 20-year growth factor along Baseline Road (SH-7) is 1.38 within the study area. This growth factor equates to an annual growth rate of approximately 1.7 percent per year. Traffic information from the CDOT Online Transportation Information System (OTIS) website is included in **Appendix B**. Based on this, a 1.7 percent annual growth rate was used to calculate future traffic volumes at the study area intersections. This annual growth rate was used to estimate short term 2020 and long term 2040 traffic volume projections at the key intersections of the school condition peak hours. Background traffic volumes for 2020 and 2040 are shown in **Figure 6** and **Figure 7**, respectively.



WILLOUGHBY CORNER – LAFAYETTE
EXISTING TRAFFIC VOLUMES (SUMMER)

FIGURE 3

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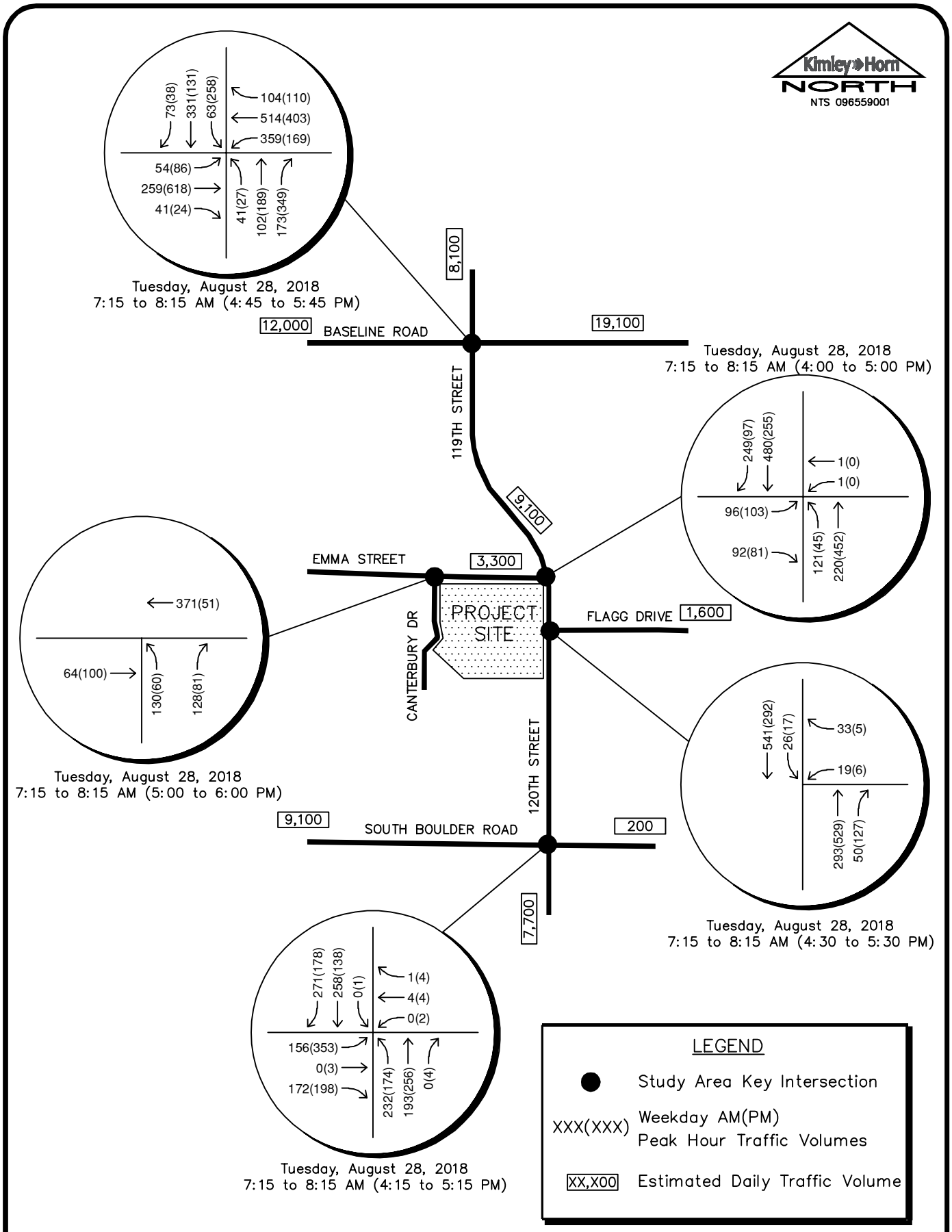

WILLOUGHBY CORNER – LAFAYETTE
EXISTING TRAFFIC VOLUMES (SCHOOL)

FIGURE 4

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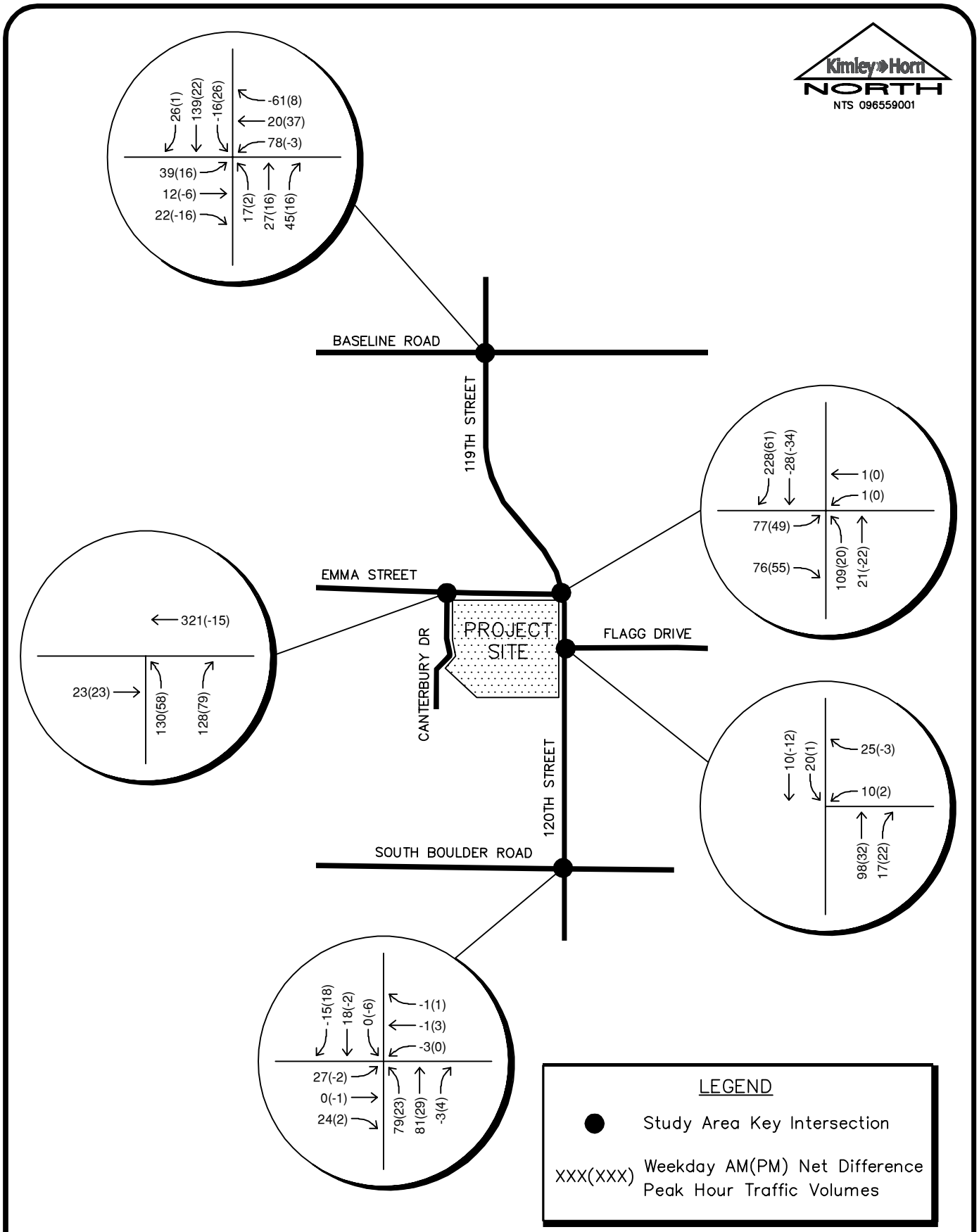

WILLOUGHBY CORNER – LAFAYETTE
EXISTING TRAFFIC VOLUMES
(DIFFERENCE: SUMMER TO SCHOOL)

FIGURE 5

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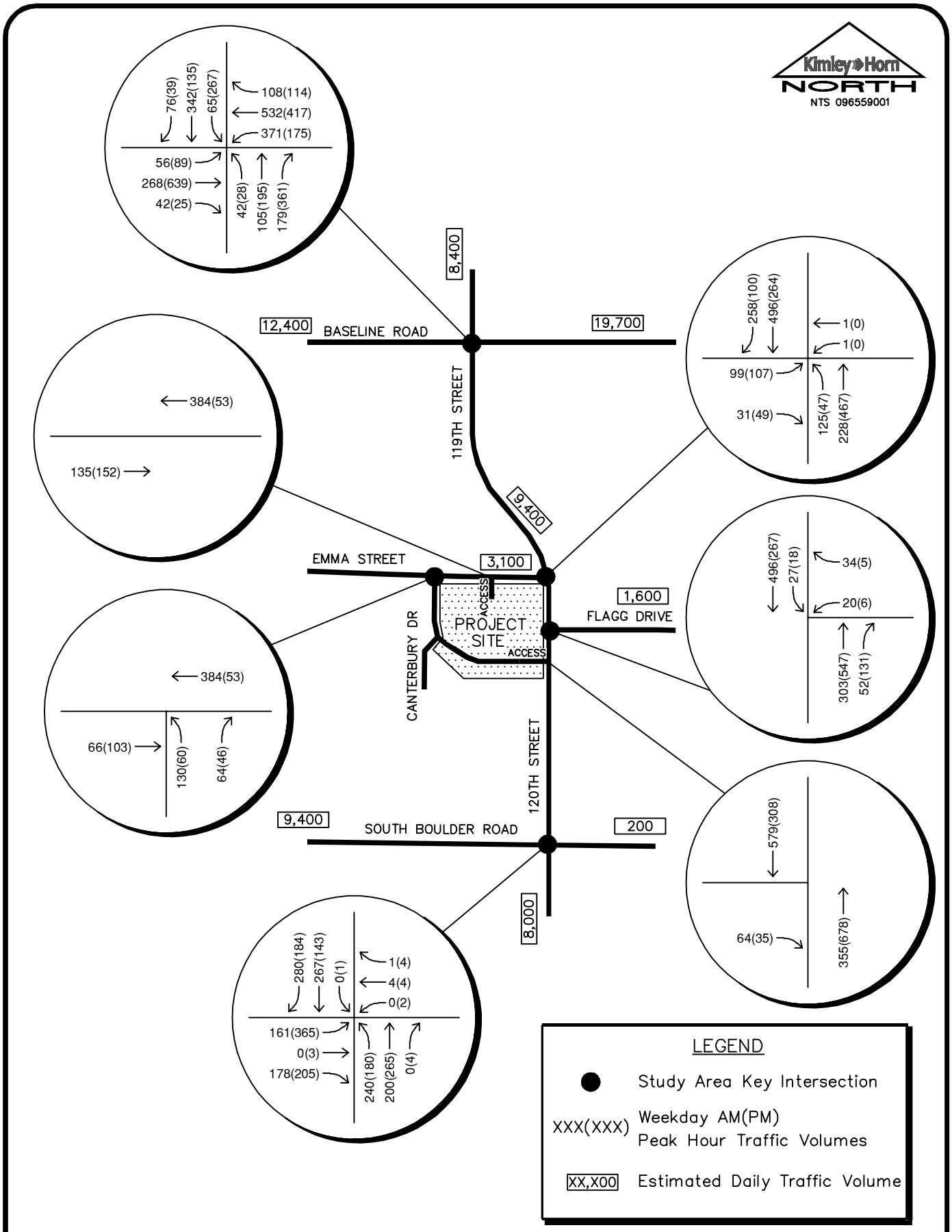

WILLOUGHBY CORNER – LAFAYETTE
2020 BACKGROUND TRAFFIC VOLUMES

FIGURE 6

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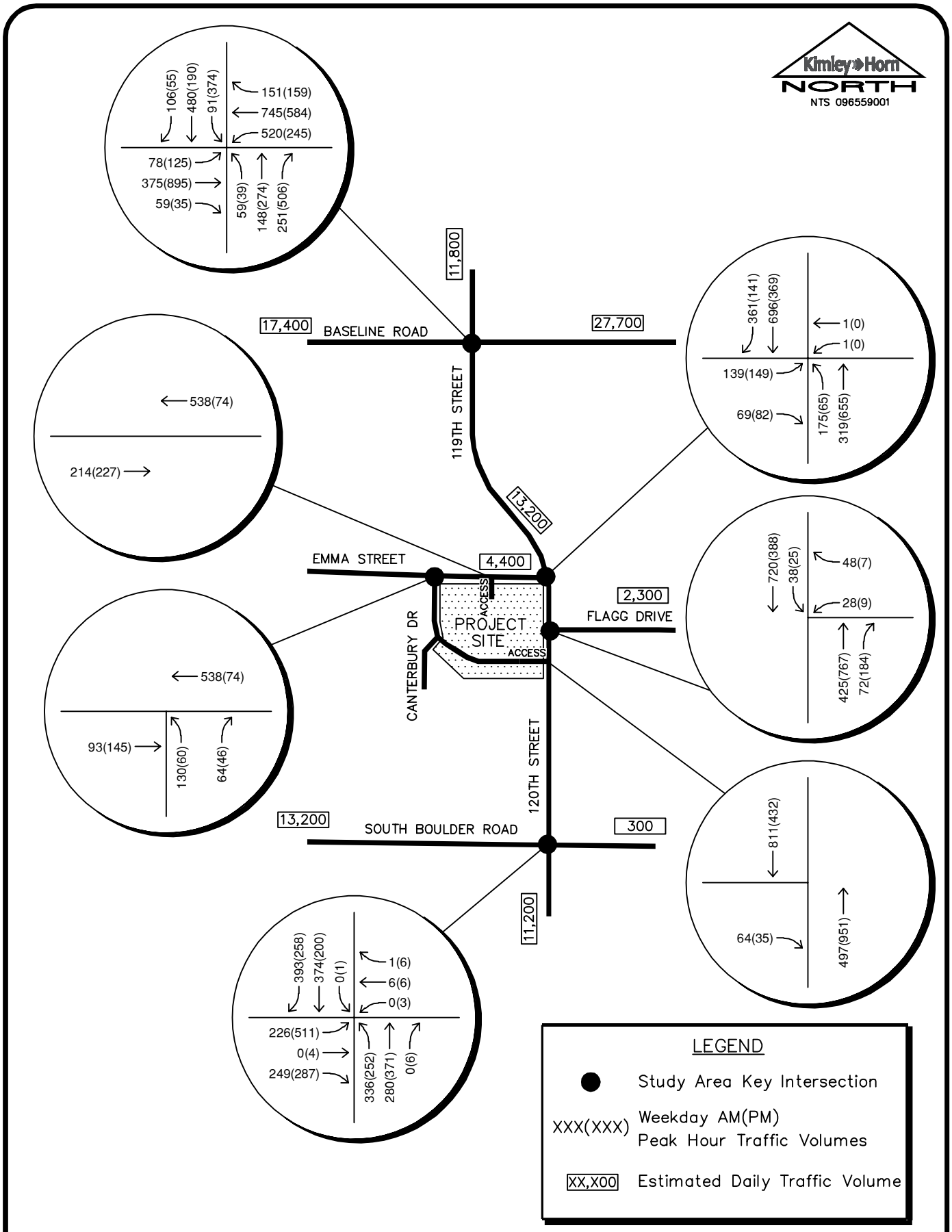

WILLOUGHBY CORNER – LAFAYETTE
2040 BACKGROUND TRAFFIC VOLUMES

FIGURE 7

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4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land uses to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rate and fitted curve equations that applies to Single-Family Detached Housing (ITE Code 210), Low-Rise Multifamily Housing (ITE 220), Mid-Rise Multifamily Housing (ITE 221), and Senior Adult Housing-Attached (ITE Code 252), for traffic associated with the development.

Willoughby Corner is expected to generate approximately 2,382 daily weekday trips, with 152 of these trips occurring during the morning peak hour and 191 trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 10th Edition – Volume 1*, 2017. **Table 1** summarizes the estimated trip generation for the proposed development. The trip generation worksheets are included in **Appendix C**.

Table 1 – Willoughby Corner Project Traffic Generation

			Vehicle Trips						
				Weekday AM Peak Hour			Weekday PM Peak Hour		
Land Use	**Quantity**	**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Single Family Housing (ITE 210)	30	Units	344	7	19	26	20	12	32
Multifamily Housing (Low-Rise) - (ITE 220)	130	Units	942	14	47	61	47	28	75
Multifamily Housing (Mid-Rise) - (ITE 221)	120	Units	652	11	30	41	32	21	53
Senior Adult Housing Attached (ITE 252)	120	Units	444	8	16	24	20	11	31
Total Site Generated Trips			**2,382**	**40**	**112**	**152**	**119**	**72**	**191**

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

4.2 Trip Distribution

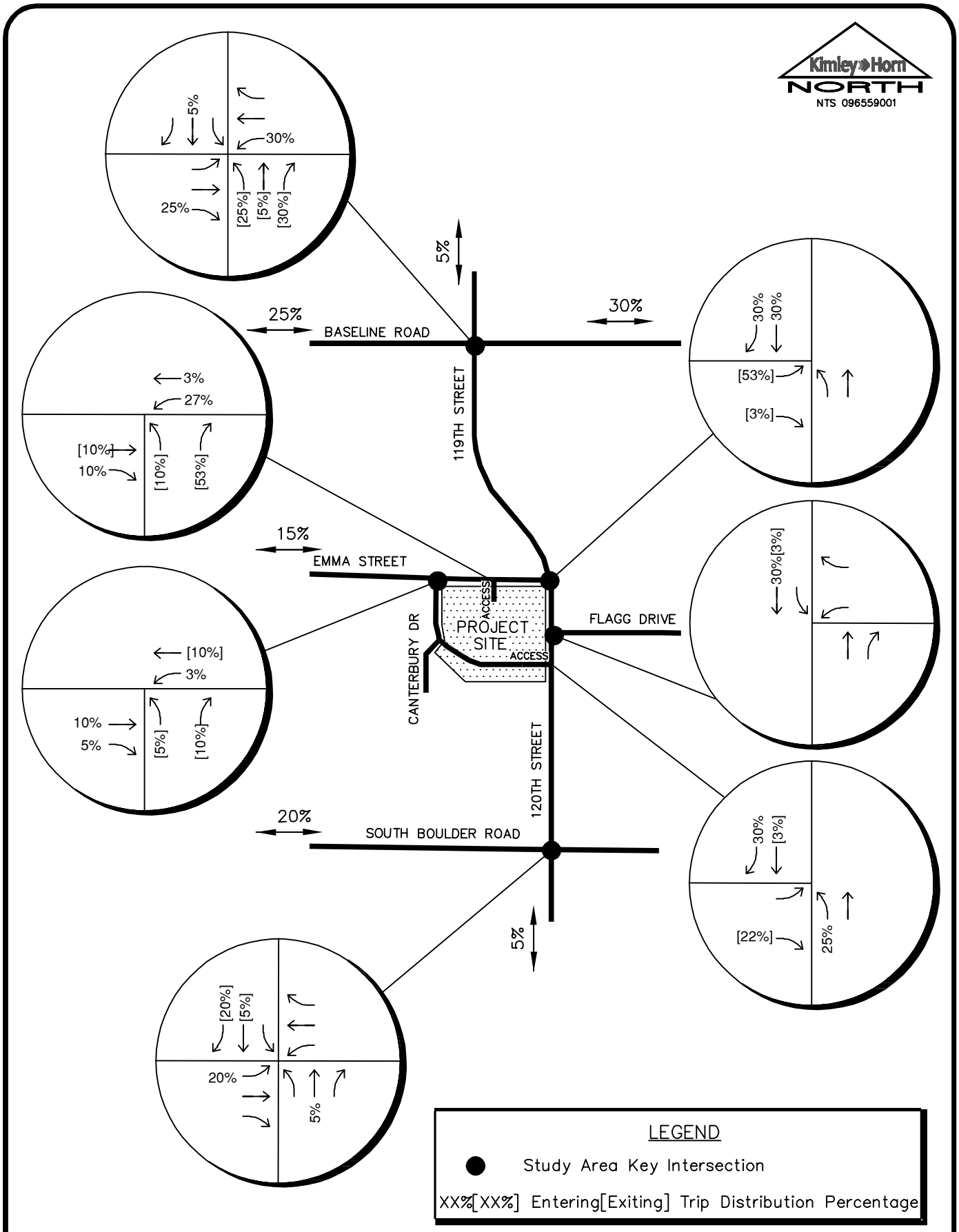
Distribution of site traffic was based on the area street system characteristics, existing traffic patterns and volumes, existing demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution is illustrated in **Figure 8.**

4.3 Traffic Assignment

Traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Project traffic assignment for Willoughby Corner is shown in **Figure 9.**

4.4 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short term 2020 horizon and long term 2040 horizon. These total traffic volumes for the site are illustrated for the 2020 and 2040 horizon years in **Figures 10** and **11**, respectively.



WILLOUGHBY CORNER – LAFAYETTE
PROJECT TRIP DISTRIBUTION

FIGURE 8

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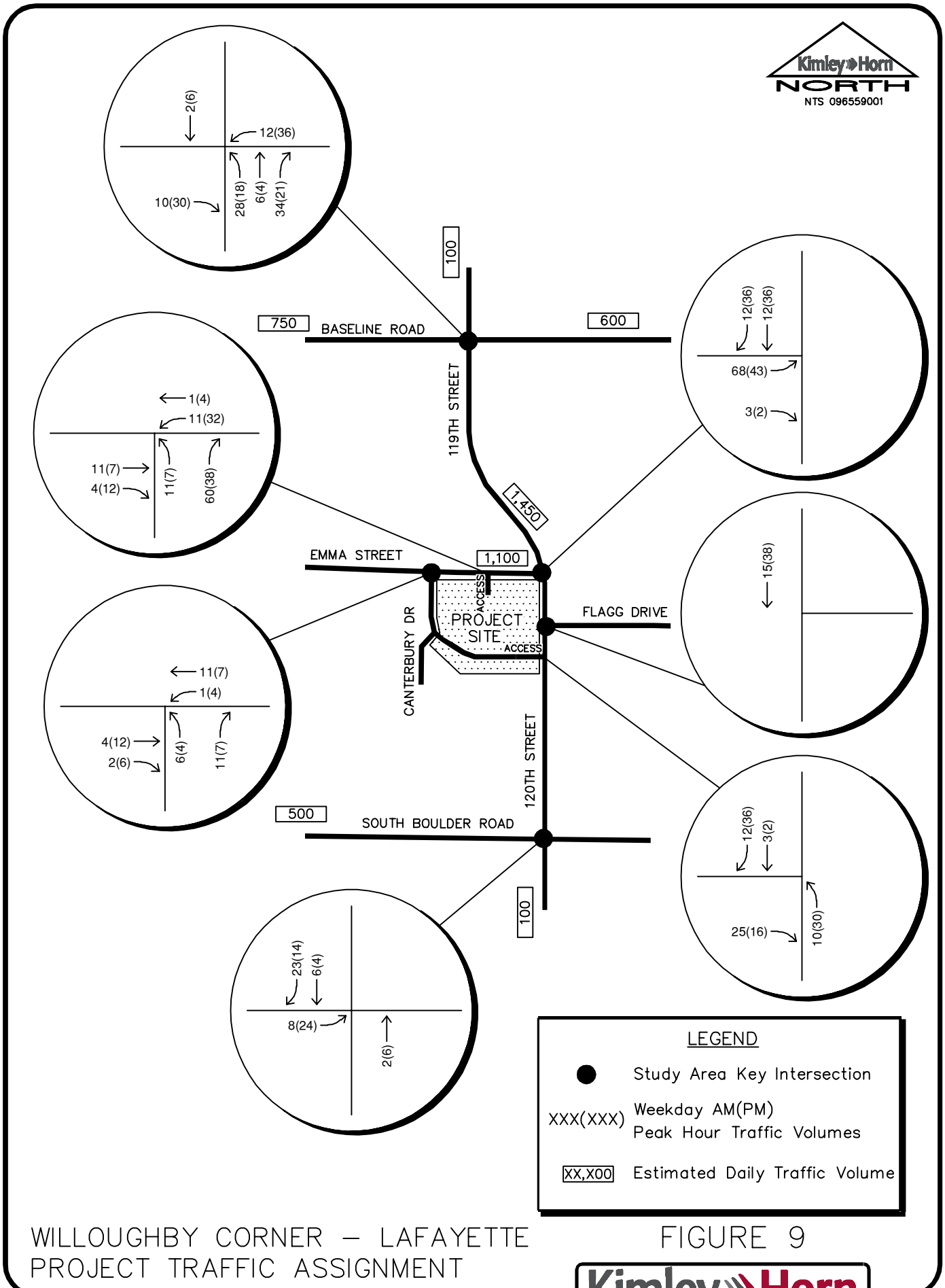

WILLOUGHBY CORNER – LAFAYETTE
PROJECT TRAFFIC ASSIGNMENT

FIGURE 9

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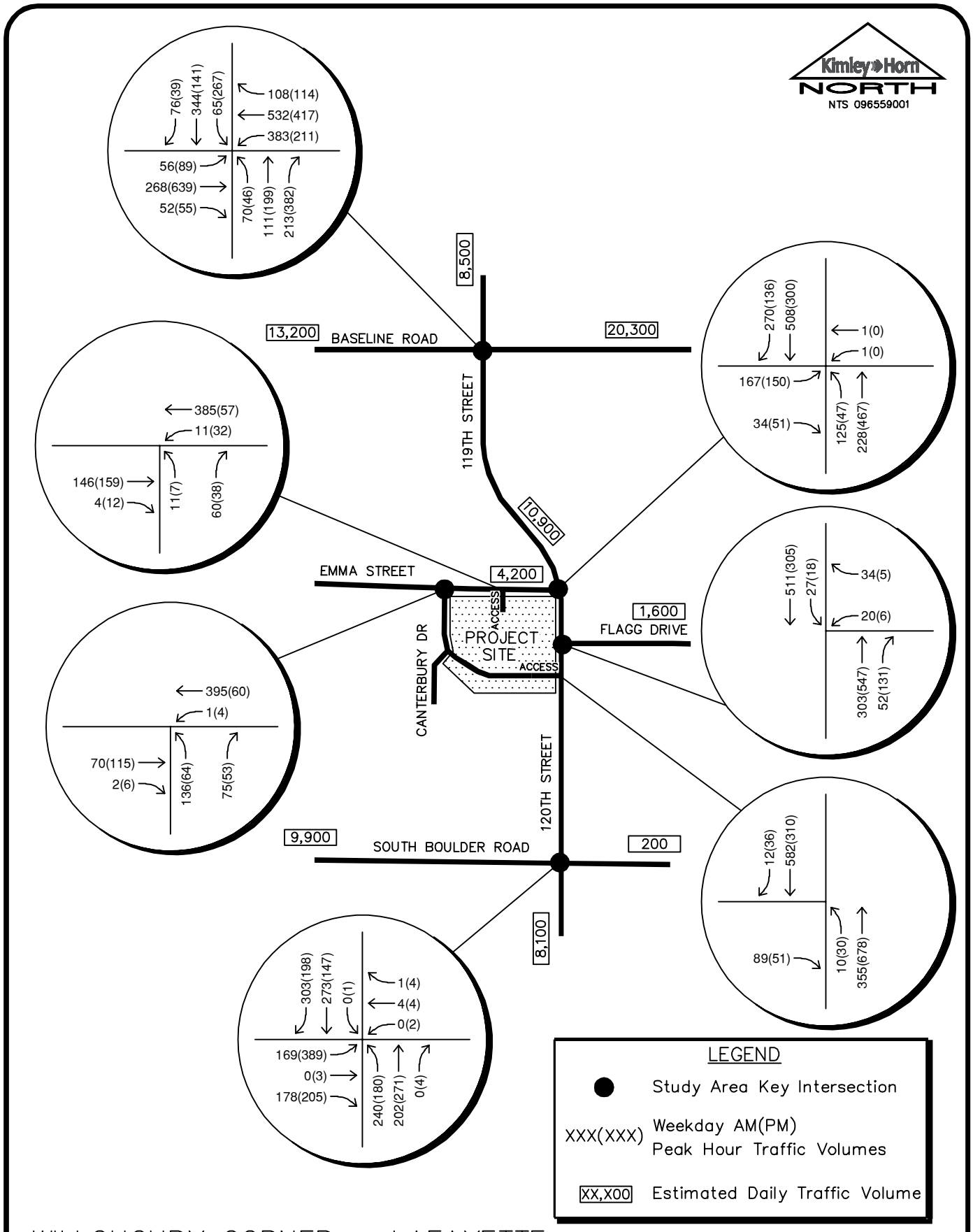

WILLOUGHBY CORNER – LAFAYETTE
2020 BACKGROUND
PLUS PROJECT TRAFFIC VOLUMES

FIGURE 10

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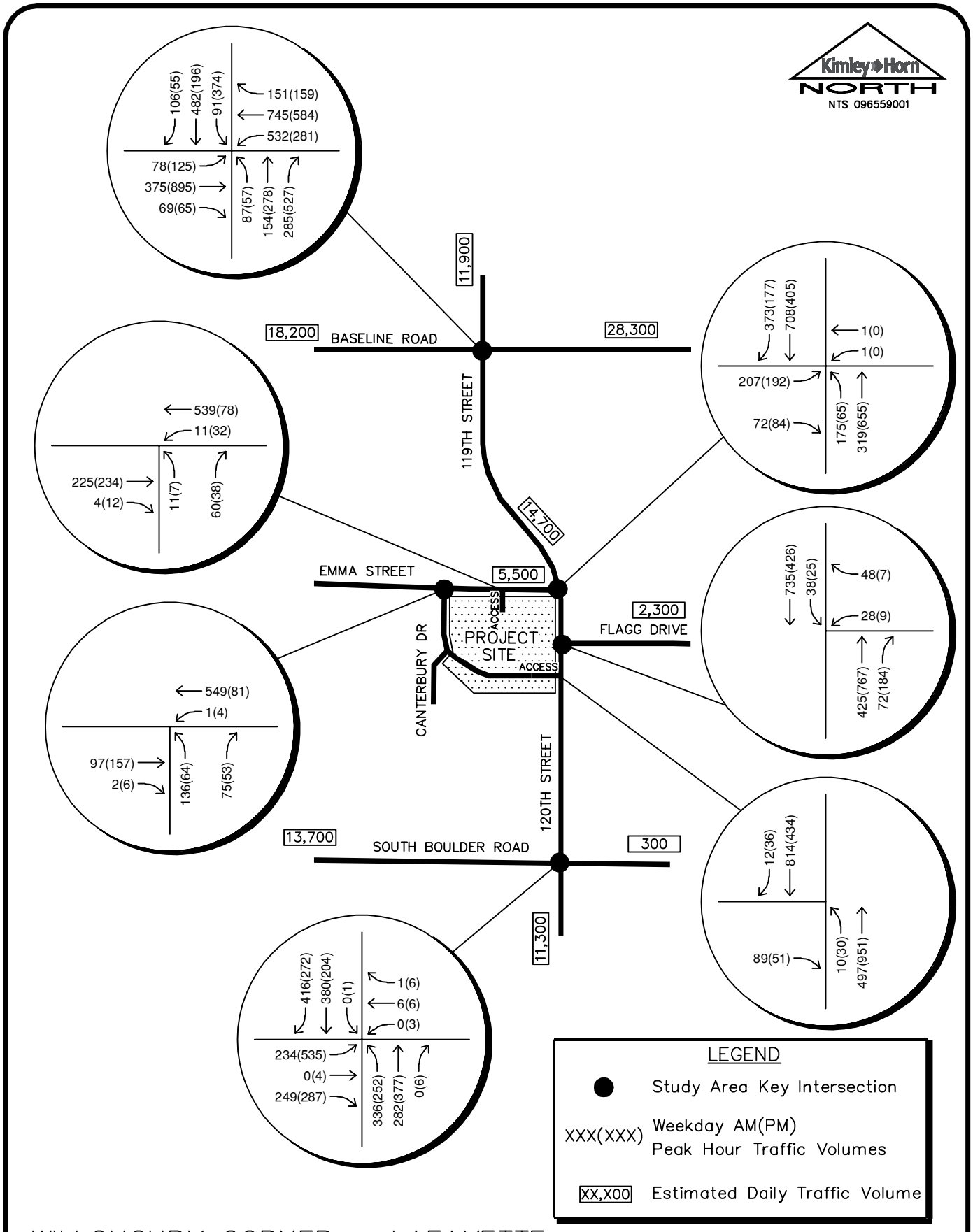

WILLOUGHBY CORNER – LAFAYETTE
2040 BACKGROUND
PLUS PROJECT TRAFFIC VOLUMES

FIGURE 11

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5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2020 and 2040 development horizons at the identified key intersections and access driveways. The acknowledged source for determining overall capacity is the current sixth edition of the *Highway Capacity Manual (HCM)*[2].

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections in this study area, typical standard traffic engineering practice recommends overall intersection LOS D and approach/movement LOS E as the minimum thresholds for acceptable operations. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a two-way stop-controlled intersection is not defined for the intersection as a whole. Level of service for a signalized and four-way stop controlled intersection is defined for each approach and for the intersection.

[2] Transportation Research Board, *Highway Capacity Manual*, 6th Edition, Washington DC, 2016.

5.2 Key Intersection Operational Analysis

Calculations for the level of service at the key intersections for the study area are provided in **Appendix D**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2.** Synchro 10 traffic analysis software was used to analyze the study area intersections and access driveways. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service. **Table 3** provides the level of service operational results of all existing study area intersections. Recommended improvements to mitigate current or future operations were also incorporated into the analysis results can be identified in **Table 4**. Intersection by intersection LOS results and recommended improvements discussion is provided following the LOS results tables.

Table 3 – Existing Intersection LOS Results

Intersection	Control	Movement	2018 Existing Without School Traffic Volumes		2018 Existing With School Traffic Volumes	
			AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Baseline Rd & 119th St (#1)		Overall	47.4 D	69.7 E	83.9 F	97.8 F
Emma St & Canterbury Dr (#2)		Northbound Approach	0.0 A	9.1 A	50.8 F	11.1 B
Emma St & 120th St (#3)		Northbound Left	8.8 A	8.1 A	13.2 B	8.5 A
		Eastbound Approach	19.2 C	27.7 D	>300 F	89.8 F
		Westbound Approach	0.0 A	0.0 A	113.0 F	0.0 A
		Southbound Left	0.0 A	0.0 A	0.0 A	0.0 A
Flagg Dr & 120th St (#4)		Westbound Approach	12.1 B	16.2 C	17.0 C	17.5 C
		Southbound Left	7.8 A	9.2 A	8.3 A	9.2 A
S Boulder Rd & 120th St (#5)		Overall	31.9 D	65.9 F	71.0 F	63.4 F

Table 4 – 2020 and 2040 Total Traffic Intersection LOS Results

Intersection	Improvement	Control	Movement	2020 Background Volume		2020 Background and Project Volume		2040 Background Volume		2040 Background and Project Volume	
				AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Baseline Rd & 119th St (#1)	-Two EB and WB through lanes -EB+WB channelized right turn lane -WB & SB dual left turn lanes -NB+SB channelized right turn lane		Overall	40.3 D	31.7 C	40.3 D	32.6 C	51.9 D	36.7 D	52.5 D	37.7 D
Emma St & Canterbury Dr (#2)	-Access allowed southbound on Canterbury Drive -NB left turn lane		Northbound Left	35.5 E	10.4 B	42.5 E	10.9 B	56.2 F	11.3 B	59.2 F	11.8 B
			Northbound Right	9.3 A	9.4 A	9.4 A	9.6 A	9.4 A	9.7 A	9.6 A	9.9 A
			Westbound Left	0.0 A	0.0 A	7.4 A	7.5 A	0.0 A	0.0 A	7.5 A	7.6 A
Emma St & Canterbury Dr (#2)	Single Lane Roundabout		Overall	9.8 A	4.0 A	10.4 B	4.2 A	21.4 C	4.2 A	24.4 C	4.4 A
Emma St & 120th St (#3)	-Signalized -EB left turn lane -NB left turn lane -SB right turn lane		Overall	10.5 B	9.4 A	14.9 B	10.6 B	21.3 C	10.6 B	30.3 C	11.9 B
Flagg Dr & 120th St (#4)	-SB left turn lane		Westbound Approach	14.2 B	14.4 B	14.2 B	14.6 B	22.6 C	19.5 C	22.9 C	19.8 B
			Southbound Left	8.3 A	9.3 A	8.3 A	9.3 A	8.9 A	10.8 B	8.9 A	10.8 B
S Boulder Rd & 120th St (#5)	-Signalized -EB dual left turn lanes -EB channelized free right turn lane -NB left turn lane -SB left turn lane -SB right turn lane		Overall	7.6 A	16.9 B	7.8 A	18.8 B	13.7 B	20.3 C	14.2 B	20.8 C
Emma Street Access (#6)	-EB shared through/right turn lane -WB shared through/right turn lane -NB shared all movement lane -Stop controlled NB appraoch		Northbound Approach	N/A	N/A	10.2 B	9.6 A	N/A	N/A	11.3 B	10.2 B
			Westbound Left	N/A	N/A	7.6 A	7.7 A	N/A	N/A	7.8 A	7.9 A
120th Street Access (#7)	-EB left and right turn lanes -Stop controlled EB approach -SB shared through/right turn lane -NB left turn lane		Northbound Left	N/A	N/A	8.9 A	8.1 A	N/A	N/A	9.8 A	8.5 A
			Eastbound Right	N/A	N/A	14.5 B	10.7 B	N/A	N/A	19.7 C	11.9 B

The following provides observations and recommendations from the key intersection operational analysis, on an intersection by intersections basis.

Baseline Road and 119th Street (#1)

- The intersection of Baseline Road (SH-7) and 119th Street is signalized with protected-permitted left-turn phasing on the eastbound and westbound Baseline Road approaches and with split phasing on the northbound and southbound 119th Street approaches. Under existing conditions, this intersection currently operates at LOS D during the morning peak hour and with longer delays and LOS E during the afternoon peak hour without school traffic. When school is in session, this intersection operates with long delays and unacceptable LOS F during both peak hours studied.
- The East Lafayette Transportation Plan recommended improvements at this intersection include providing dual southbound and westbound left-turn lanes and two eastbound and westbound through lanes on Baseline Road. In addition, the improvements include two receiving lanes along southbound 119th Street from the westbound dual lefts, separate channelized right-turn lanes on all four approaches (free northbound and southbound, and yield-controlled eastbound and westbound), and a separate left-turn lane on the northbound approach. The split signal phasing along the northbound and southbound approaches will be removed when this intersection is improved.
- With the recommended improved lane configuration and control, this intersection is expected to operate acceptably with LOS D or better during the peak hours in 2020 and 2040.

Emma Street and Canterbury Drive (#2)

- The intersection of Emma Street and Canterbury Drive is unsignalized with stop control on the northbound approach. Currently, the Canterbury Drive south leg is one-way northbound restricted to exit-only movements during weekday school hours. Under existing conditions, all movements at this intersection currently operate at LOS A during the peak hours without school traffic volumes. However, when school is in session, existing school traffic cause the northbound approach to operate unacceptably at LOS F.
- It is recommended that this intersection be converted to allow access to southbound

Canterbury Drive, making Canterbury Drive a full movement access for the project. In doing so, the eastbound approach would be a shared through/right-turn lane, the westbound approach would be a shared left-turn/through lane, and the northbound approach would include separate left turn and right turn lanes if the existing stop control is maintained. With the recommended improved lane configuration and control all movements at this intersection are expected to operate with LOS E or better during the 2020 build out year. By 2040, this the northbound left-turn movement may operate with long delays and LOS F if future volumes are realized.

- With long vehicle delays expected in 2020 and 2040, analysis was also performed for the installation of a single lane roundabout. With roundabout control, this intersection is expected to operate acceptably during the peak hours throughout the 2040 horizon.

Emma Street and 120th Street (#3)

- The intersection of Emma Street and 120th Street is unsignalized with stop control on the eastbound Emma Street approach. Under existing conditions, all movements at this intersection currently operate at LOS D or better during the peak hours without school traffic volumes. With school traffic volumes however, the eastbound and westbound approaches operate unacceptably at LOS F during peak hours.
- Under 2020 background plus project scenarios, the eastbound approach is expected to operate with long delays during the peak hours. As a result, a four-hour vehicle volume signal warrant analysis was performed for this intersection in 2020. This intersection does meet the four-hour vehicular volume warrant with half the right turn movements included along the minor approach. The signal warrant analysis figure for this intersection is included in **Appendix E**.
- Recommended improvements to this intersection include signalization, a two-way left-turn lane on the northbound and southbound approaches, a left-turn lane on the eastbound approach, and a separate right-turn lane on the southbound approach.

  With the recommended improved lane configuration and control, this intersection is anticipated to operate acceptably during the build-out year 2020 as well as throughout the 2040 horizon.

Flagg Drive and 120th Street (#4)

- The T-intersection of Flagg Drive and 120th Street is unsignalized with stop control on the westbound approach. All movements at this intersection currently operate with LOS C or better during peak hours with or without school traffic.
- As previously stated, the City of Lafayette has a programmed improvement to convert 120th Street to a three-lane roadway. Recommended improvements to this intersection include a two-way left-turn lane on the southbound approach. With the recommended improved lane configuration, all movements at this intersection are anticipated to operate acceptably during the weekday peak hours throughout the 2040 horizon.

South Boulder Road and 120th Street (#5)

- The all-way stop controlled intersection of South Boulder Road and 120th Street has single lane approaches in all directions. With the existing intersection lane configuration and control, this intersection currently operates unacceptably with LOS F during peak hours in summer and with school traffic.
- Under 2020 background plus project scenarios, this intersection operates with long delays. As a result, a four-hour vehicle volume signal warrant analysis was performed for this intersection in 2020. This intersection does meet the four-hour vehicular volume warrant with half the right turn movements included along the minor approach. The signal warrant analysis figure for this intersection is included in **Appendix E**.
- As stated previously, it is understood that the City of Lafayette plans to widen 120th Street to a three-lane roadway. In doing so, it is recommended that the intersection be signalized, and that the northbound and southbound approaches provide separate left-turn lanes. Additional intersection recommendations include a separate right-turn lane on the southbound approach. The eastbound approach is recommended to include a left-turn lane, a shared left-turn/through lane, and a channelized free right-turn lane.
- With the recommended improved lane configuration and control, this intersection is anticipated to operate acceptably during peak hours in 2020 and 2040.

Emma Street Access (#6)

- With the completion of the Willoughby Corner project, a full movement access is proposed along the south side of Emma Street. The project access northbound approach to Emma Street is recommended to be stop controlled with a R1-1 “STOP” sign installed. Based on operational analysis, a single northbound exiting lane is anticipated to be sufficient to accommodate left and right turning traffic to Emma Street. Single shared lane approaches in the eastbound and westbound directions along Emma Street are also expected to be sufficient to accommodate expected traffic demands.
- With the recommended lane configurations and control in the opening year of 2020 as well as the long-term horizon 2040, all movements at this access intersection are anticipated to operate with acceptable LOS during the peak hours.

120th Street Access (#7)

- Willoughby Corner is also proposing construction of a three-quarter movement access proposed on the west side of 120th Street. The project access eastbound approach to 120th Street is recommended to be stop controlled with a R1-1 “STOP” sign installed. To provide support to restrict the 120th Street Access to three-quarter movements, it is recommended that a R3-2 No Left Turn sign be placed underneath the STOP sign for the eastbound approach. The northbound approach of this access intersection will provide a two-way left turn lane. Based on the operational analysis, a single lane approach in the southbound direction along 120th street is expected to be sufficient to accommodate expected traffic demands.
- With the recommended lane configurations and control in the opening year of 2020 and 2040 long-term horizon, all movements at this access intersection are anticipated to operate acceptably during the peak hours.

5.3 Vehicle Queuing Analysis

An intersection queuing analysis was performed for the study area intersections in 2020 and 2040. The queuing analysis was performed using the Synchro analysis software presenting the results of the 95th percentile queue length. Queue analysis worksheets at the signalized intersections are provided in **Appendix F**. Queue length calculations for unsignalized intersections are provided within the level of service operational sheets provided in **Appendix D**. Results of the queuing analysis and recommendations at the study area intersections are provided in **Table 5**.

Table 5 – Vehicle Queuing Analysis Results

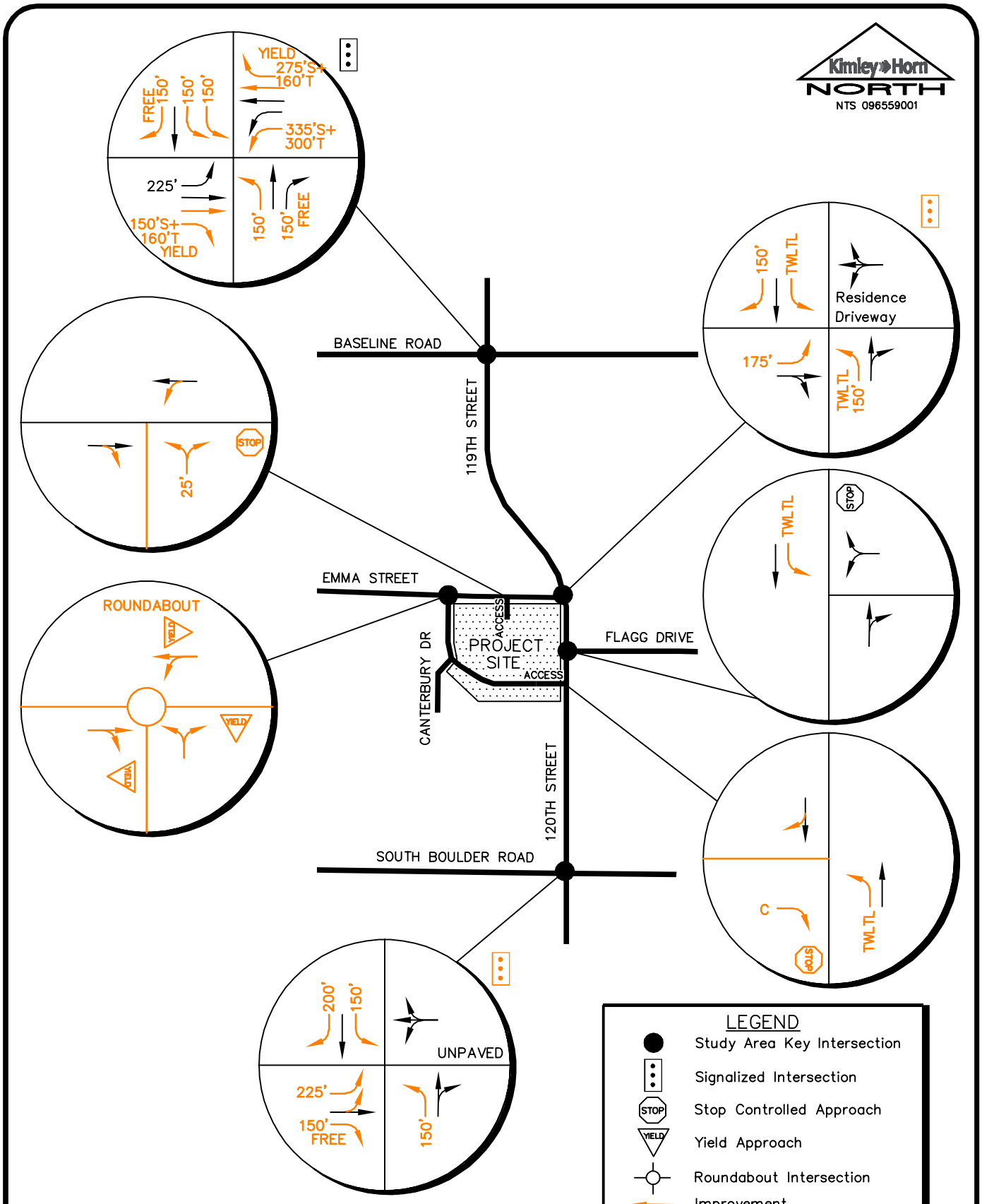
Intersection Turn Lane	Existing Turn Lane Length (feet)	2020 Calculated Queue Length (feet)	2020 Recommended Turn Lane Length (feet)	2040 Calculated Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
119th St & Baseline Rd (#1)					
Eastbound Left	225'	70'	225'	93'	225'
Eastbound Right	DNE	25'	**150' (CDOT)**	25'	150' (CDOT)
Westbound Left	225'	205'	**335' DL (CDOT)**	334'	335' DL (CDOT)
Westbound Right	DNE	41'	**275' (CDOT)**	62'	275' (CDOT)
Northbound Left	DNE	51'	**150'**	58'	150'
Northbound Right	75'	25'	**150'**	25'	150'
Southbound Left	DNE	98'	**150' DL**	138'	150' DL
Southbound Right	DNE	25'	**150'**	25'	150'
Emma St & Canterbury Dr (#2)					
Northbound Left	DNE	125'	**150'**	125'	150'
Northbound Right	DNE	25	**C**	25	C
Emma St & 120th St (#3)					
Eastbound Left	DNE	134'	**175'**	172'	175'
Northbound Left	DNE	46'	**150' TWLTL**	109'	150' TWLTL
Southbound Left	DNE	25'	**TWLTL**	25'	TWLTL
Southbound Right	DNE	25'	**150'**	73'	150'
Flagg Dr & 120th St (#4)					
Southbound Left	DNE	25'	**TWLTL**	25'	TWLTL
Boulder Rd & 120th St (#5)					
Eastbound Left	DNE	172'	**225'**	227'	225'
Eastbound Right	DNE	25'	**150'**	25'	150'
Northbound Left	DNE	85'	**150'**	135'	150'
Southbound Left	DNE	25'	**150'**	25'	150'
Southbound Right	DNE	139'	**200'**	187'	200'
Emma Street Access (#6)					
Northbound Approach	DNE	25'	**25'**	25'	25'
120th Street Access (#7)					
Eastbound Left	DNE	25'	**25'**	25'	25'
Eastbound Right	DNE	25'	**C**	50'	C

DNE = Does Not Exist; C = Continuous Turn Lane; TWLTL = Two Way Left Turn Lane; DL = Dual Left Turn Lanes

All new auxiliary turn lanes should be constructed with the storage lengths identified in **Table 5**.

Vehicles at the intersection of 119th Street and Baseline Road (#1) currently do not queue past the existing storage bay length; however, auxiliary turn lanes along Baseline Road (SH-7) at 119th Street should be constructed in compliance with the Colorado Department of Transportation State Highway Access Code requirements when programmed improvements at this intersection are constructed.

Based on the results of the intersection operational, signal warrant, and turn lane queuing analysis, the recommended lane configurations and control of the study key intersections is shown in **Figure 12**.



WILLOUGHBY CORNER – LAFAYETTE
2020 & 2040 RECOMMENDED
LANE CONFIGURATIONS AND CONTROL

FIGURE 12

Kimley»Horn

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes the proposed Willoughby Corner development will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Baseline Road (SH-7) is a state owned and maintained facility with the west leg categorized as NR-C, Non-Rural Arterial and the east leg categorized as NR-A, Non-Rural Principal Highway at the 119th Street intersection. Based on traffic projections, the addition of project traffic on the south leg of the intersection of Baseline Road (SH-7) and 119th Street is only anticipated to increase access traffic volumes by approximately 14 percent during the peak hour over existing. Therefore, the addition of project traffic on the south leg of the Baseline Road (SH-7) and 119th Street intersection is not anticipated to require a CDOT access permit because the increase in traffic volumes is less than 20 percent.

- It is understood that programmed improvements along 119th Street/120th Street include providing a three-lane roadway with a center two-way left turn lane. The City of Lafayette may soon be improving 120th Street to this three-lane section through the study area. It is anticipated that these improvements are expected to occur by buildout of the Willoughby Corner project.

- The intersections of Emma Street/120th Street and South Boulder Road/120th Street are anticipated to meet four-hour vehicular volume signal warrants during the 2020 project build out year; therefore, it is believed signalization will be needed at both intersections by 2020.

- Per the East Lafayette Transportation Plan, improvements anticipated at the intersection of Baseline Road (SH-7) and 119th Street include providing dual southbound and westbound left-turn lanes and two eastbound and westbound through lanes on Baseline Road. In addition, the improvements include two receiving lanes along southbound 119th Street from

the westbound dual lefts, separate channelized right-turn lanes on all four approaches (free northbound and southbound, and yield-controlled eastbound and westbound), and a separate left-turn lane on the northbound approach. The auxiliary turn lanes on the 119th Street approaches should provide standard minimum 150-foot turn lanes, while the auxiliary turn lanes along SH-7 should be constructed in compliance with the Colorado Department of Transportation State Highway Access Code requirements.

- A single lane roundabout is recommended at the intersection of Emma Street and Canterbury Drive. With this change in control, it is recommended that Canterbury Drive provide two-way traffic to include access on southbound Canterbury Drive. The south leg of the Canterbury Drive and Emma Street intersection is presently one-way serving northbound traffic only during school hours and as such is currently restricted to exiting movements only.

- Also identified in the East Lafayette Transportation Plan, recommended improvements at the intersection of Emma Street and 120th Street include signalization, a two-way left-turn lane along 120th Street, a left-turn lane on the eastbound approach, and a separate right-turn lane on the southbound 120th Street approach.

- The East Lafayette Transportation Plan identified programmed improvements at the intersection of South Boulder Road and 120th Street to include signalization and separate left-turn lanes on the northbound, southbound, and eastbound approaches. Additional intersection recommendations include separate right-turn lanes on the southbound and eastbound approaches. The eastbound approach was recommended to include a left-turn lane, a shared left-turn/through lane, and a channelized free right-turn lane.

- The full movement access proposed on Emma Street will provide direct access to Willoughby Corner with a newly constructed south leg. The project access northbound approach to Emma Street is recommended to be stop controlled with a R1-1 “STOP” sign installed. Based on the operational analysis, a single northbound exiting lane is anticipated to be sufficient to accommodate left and right turning traffic exiting to Emma Street. Single shared lane approaches in the eastbound and westbound directions along Emma Street are also expected to be sufficient to accommodate expected traffic demands.

- The three-quarter movement access proposed on 120th Street will provide direct access to Willoughby Corner with a newly constructed west leg. With this configuration, eastbound exiting left turn movements will be restricted at this access. It is recommended this intersection be constructed with a single eastbound exiting lane for right turn movements only operating with stop control by the installation of a R1-1 “STOP” sign. To provide additional support to restrict left turning vehicles from exiting at this 120th Street three-quarter access, it is recommended that a R3-2 No Left Turn sign be placed underneath the STOP sign. The northbound approach of this access intersection will provide a two-way left turn lane.

- All on-site and off-site roadway, signing, striping, and signal improvements should be incorporated into the Civil Drawings and conform to City of Lafayette standards as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

APPENDICES

APPENDIX A

Intersection Count Sheets

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

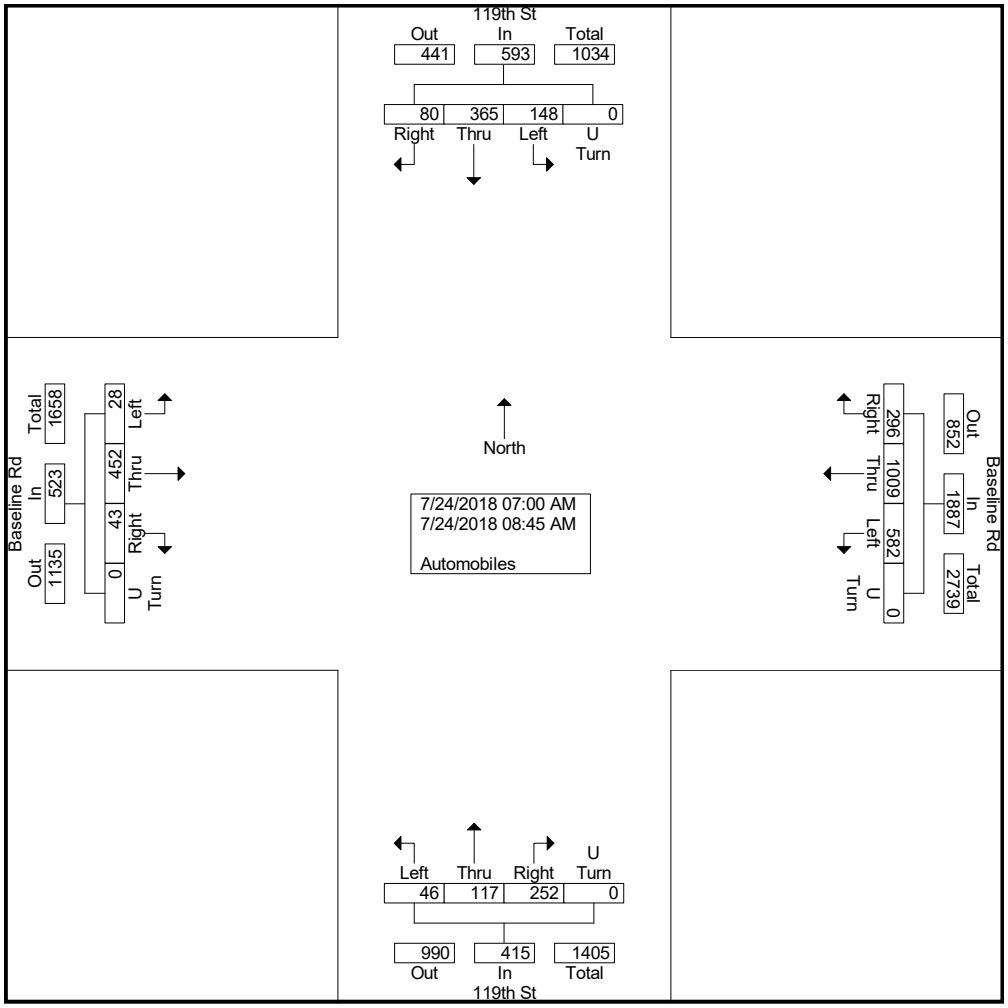
Groups Printed- Automobiles

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	3	32	5	0	40	67	98	49	0	214	8	9	28	0	45	13	43	6	0	62	361
07:15 AM	2	59	6	0	67	87	130	28	0	245	6	6	28	0	40	13	49	9	0	71	423
07:30 AM	2	63	3	0	68	81	119	48	0	248	4	23	29	0	56	19	47	10	0	76	448
07:45 AM	5	62	5	0	72	83	127	37	0	247	9	19	30	0	58	23	57	18	0	98	475
Total	12	216	19	0	247	318	474	162	0	954	27	57	115	0	199	68	196	43	0	307	1707
08:00 AM	4	47	4	0	55	63	105	46	0	214	5	22	39	0	66	17	45	12	0	74	409
08:15 AM	4	75	7	0	86	54	143	34	0	231	6	11	30	0	47	20	43	7	0	70	434
08:30 AM	6	51	5	0	62	73	148	30	0	251	1	13	31	0	45	21	57	6	0	84	442
08:45 AM	2	63	8	0	73	74	139	24	0	237	7	14	37	0	58	22	24	12	0	58	426
Total	16	236	24	0	276	264	535	134	0	933	19	60	137	0	216	80	169	37	0	286	1711
Grand Total	28	452	43	0	523	582	1009	296	0	1887	46	117	252	0	415	148	365	80	0	593	3418
Apprch %	5.4	86.4	8.2	0		30.8	53.5	15.7	0		11.1	28.2	60.7	0		25	61.6	13.5	0		
Total %	0.8	13.2	1.3	0	15.3	17	29.5	8.7	0	55.2	1.3	3.4	7.4	0	12.1	4.3	10.7	2.3	0	17.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

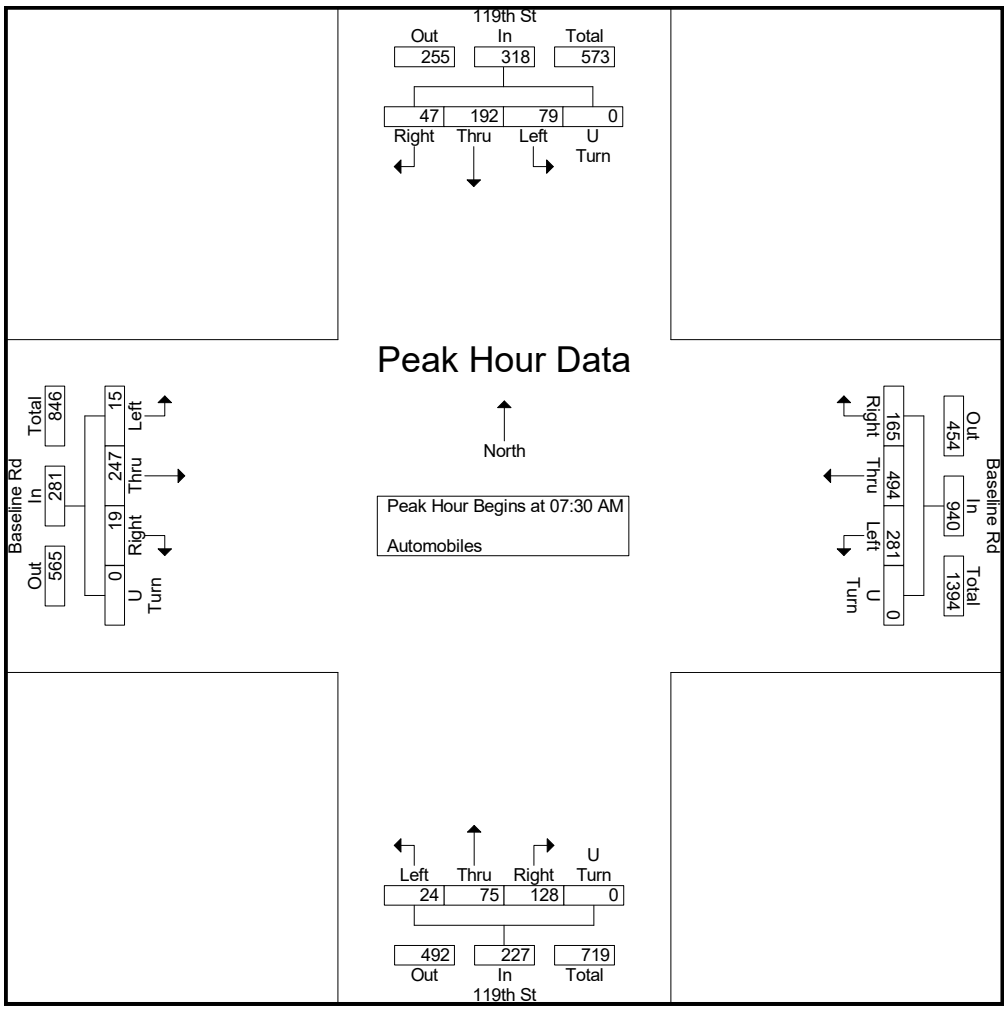


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	2	63	3	0	68	81	119	**48**	0	**248**	4	**23**	29	0	56	19	47	10	0	76	448
07:45 AM	**5**	62	5	0	72	**83**	127	37	0	247	**9**	19	30	0	58	**23**	**57**	**18**	0	**98**	**475**
08:00 AM	4	47	4	0	55	63	105	46	0	214	5	22	**39**	0	**66**	17	45	12	0	74	409
08:15 AM	4	**75**	**7**	0	**86**	54	**143**	34	0	231	6	11	30	0	47	20	43	7	0	70	434
Total Volume	15	247	19	0	281	281	494	165	0	940	24	75	128	0	227	79	192	47	0	318	1766
% App. Total	5.3	87.9	6.8	0		29.9	52.6	17.6	0		10.6	33	56.4	0		24.8	60.4	14.8	0		
PHF	.750	.823	.679	.000	.817	.846	.864	.859	.000	.948	.667	.815	.821	.000	.860	.859	.842	.653	.000	.811	.929



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

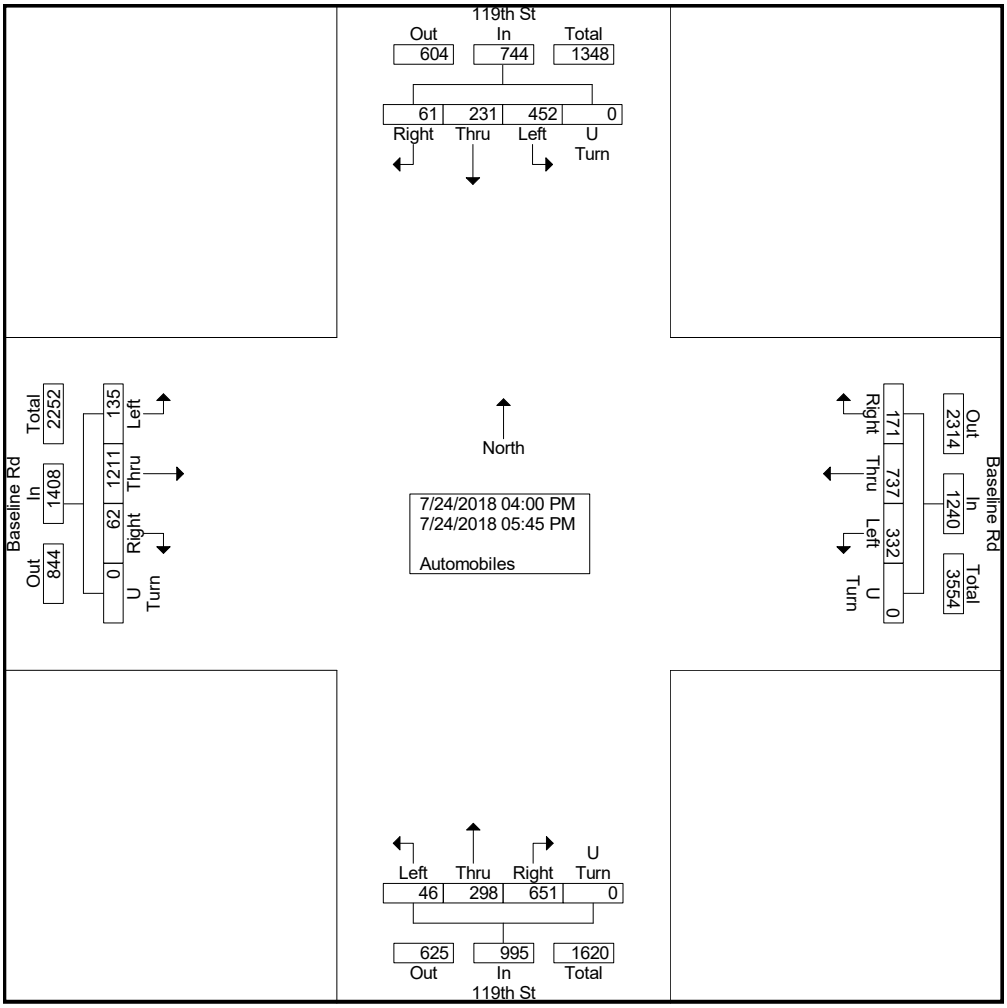
Groups Printed- Automobiles

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	13	142	7	0	162	33	97	6	0	136	7	34	81	0	122	51	33	7	0	91	511
04:15 PM	21	155	5	0	181	39	82	19	0	140	5	31	81	0	117	57	24	4	0	85	523
04:30 PM	15	160	10	0	185	44	99	14	0	157	9	39	76	0	124	48	25	7	0	80	546
04:45 PM	17	163	8	0	188	42	81	25	0	148	3	40	75	0	118	63	29	14	0	106	560
Total	66	620	30	0	716	158	359	64	0	581	24	144	313	0	481	219	111	32	0	362	2140
05:00 PM	17	158	10	0	185	41	99	28	0	168	8	46	89	0	143	58	26	9	0	93	589
05:15 PM	21	143	12	0	176	45	87	35	0	167	5	48	93	0	146	63	29	7	0	99	588
05:30 PM	17	158	6	0	181	42	91	21	0	154	4	34	75	0	113	53	32	4	0	89	537
05:45 PM	14	132	4	0	150	46	101	23	0	170	5	26	81	0	112	59	33	9	0	101	533
Total	69	591	32	0	692	174	378	107	0	659	22	154	338	0	514	233	120	29	0	382	2247
Grand Total	135	1211	62	0	1408	332	737	171	0	1240	46	298	651	0	995	452	231	61	0	744	4387
Apprch %	9.6	86	4.4	0		26.8	59.4	13.8	0		4.6	29.9	65.4	0		60.8	31	8.2	0		
Total %	3.1	27.6	1.4	0	32.1	7.6	16.8	3.9	0	28.3	1	6.8	14.8	0	22.7	10.3	5.3	1.4	0	17	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

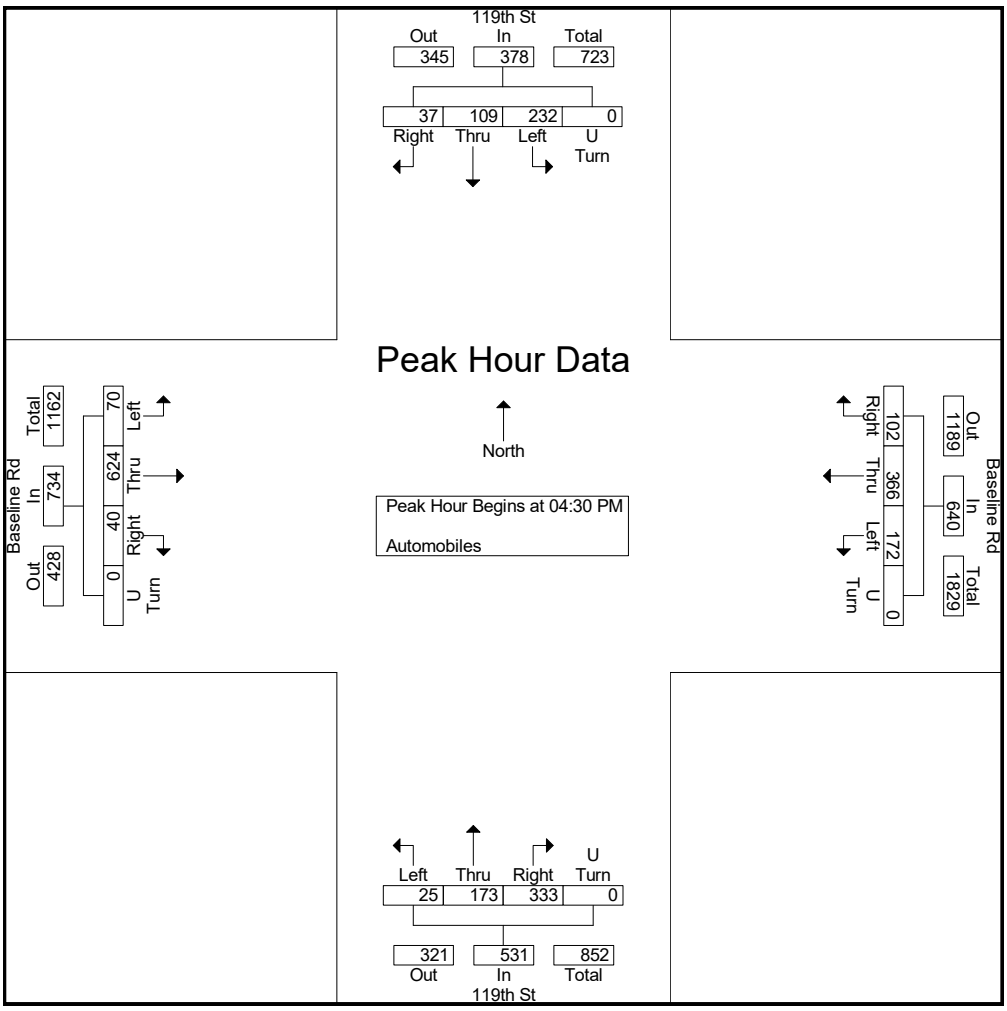


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	15	160	10	0	185	44	**99**	14	0	157	**9**	39	76	0	124	48	25	7	0	80	546
04:45 PM	17	**163**	8	0	**188**	42	81	25	0	148	3	40	75	0	118	**63**	**29**	**14**	0	**106**	560
05:00 PM	17	158	10	0	185	41	99	28	0	**168**	8	46	89	0	143	58	26	9	0	93	**589**
05:15 PM	**21**	143	**12**	0	176	**45**	87	**35**	0	167	5	**48**	**93**	0	**146**	63	29	7	0	99	588
Total Volume	70	624	40	0	734	172	366	102	0	640	25	173	333	0	531	232	109	37	0	378	2283
% App. Total	9.5	85	5.4	0		26.9	57.2	15.9	0		4.7	32.6	62.7	0		61.4	28.8	9.8	0		
PHF	.833	.957	.833	.000	.976	.956	.924	.729	.000	.952	.694	.901	.895	.000	.909	.921	.940	.661	.000	.892	.969



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

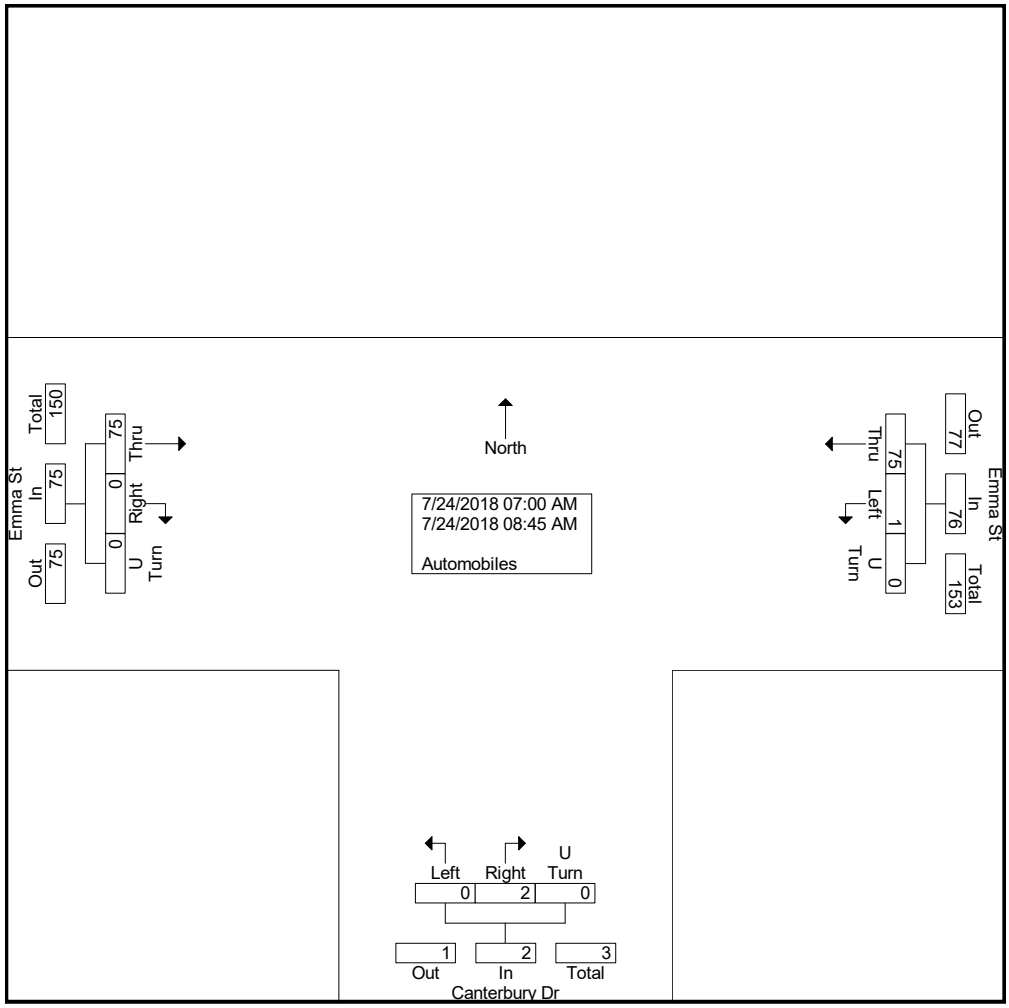
Groups Printed- Automobiles

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
07:00 AM	11	0	0	11	0	6	0	6	0	0	0	0	17
07:15 AM	7	0	0	7	1	5	0	6	0	0	0	0	13
07:30 AM	6	0	0	6	0	3	0	3	0	2	0	2	11
07:45 AM	15	0	0	15	0	14	0	14	0	0	0	0	29
Total	39	0	0	39	1	28	0	29	0	2	0	2	70
08:00 AM	5	0	0	5	0	9	0	9	0	0	0	0	14
08:15 AM	11	0	0	11	0	13	0	13	0	0	0	0	24
08:30 AM	10	0	0	10	0	14	0	14	0	0	0	0	24
08:45 AM	10	0	0	10	0	11	0	11	0	0	0	0	21
Total	36	0	0	36	0	47	0	47	0	0	0	0	83
Grand Total	75	0	0	75	1	75	0	76	0	2	0	2	153
Apprch %	100	0	0		1.3	98.7	0		0	100	0		
Total %	49	0	0	49	0.7	49	0	49.7	0	1.3	0	1.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

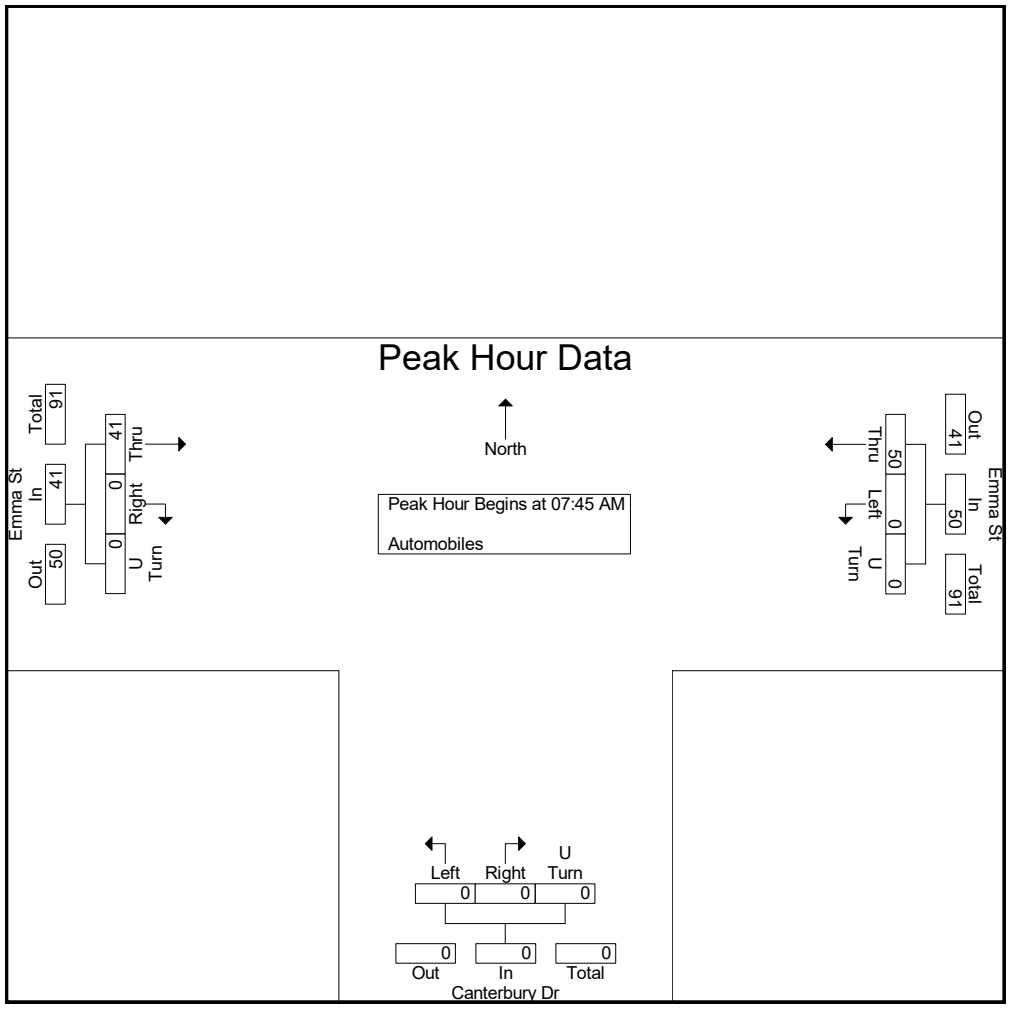


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**15**	0	0	**15**	0	**14**	0	**14**	0	0	0	0	**29**
08:00 AM	5	0	0	5	0	9	0	9	0	0	0	0	14
08:15 AM	11	0	0	11	0	13	0	13	0	0	0	0	24
08:30 AM	10	0	0	10	0	14	0	14	0	0	0	0	24
Total Volume	41	0	0	41	0	50	0	50	0	0	0	0	91
% App. Total	100	0	0		0	100	0		0	0	0		
PHF	.683	.000	.000	.683	.000	.893	.000	.893	.000	.000	.000	.000	.784



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

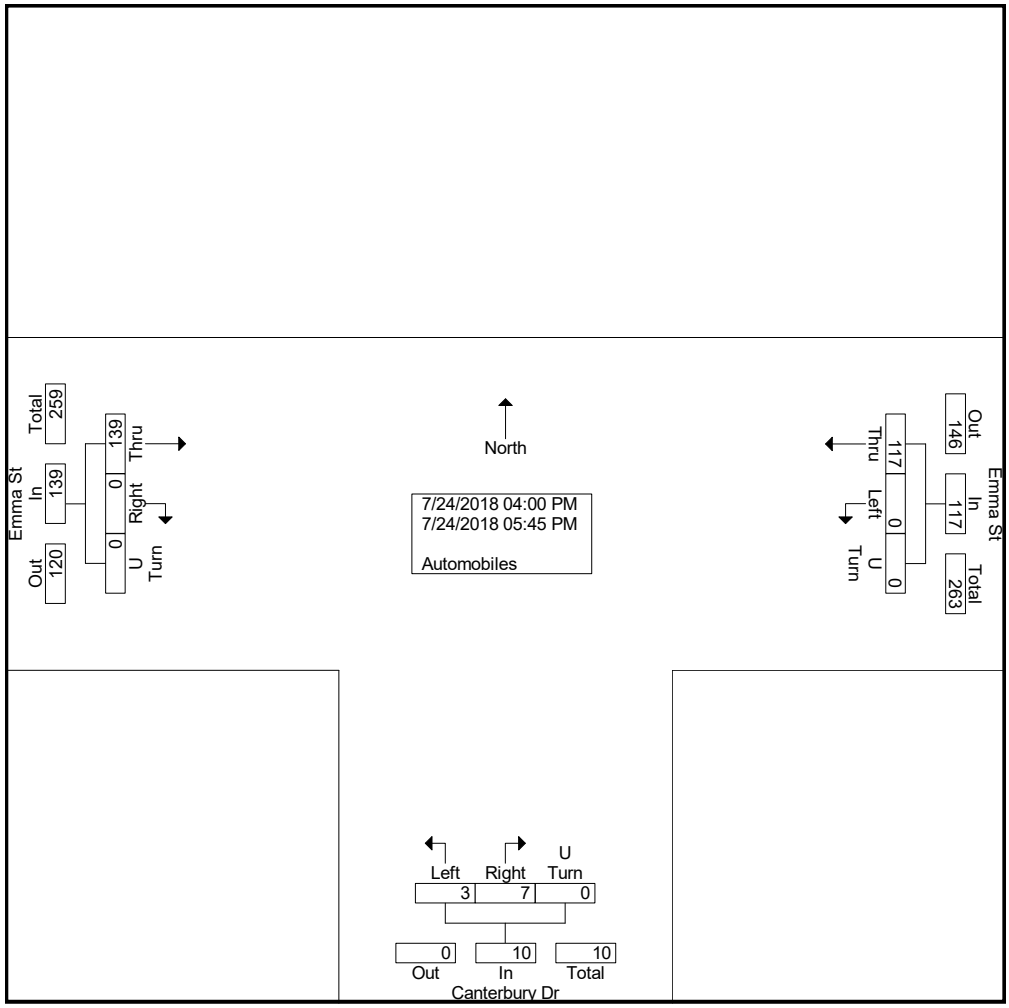
Groups Printed- Automobiles

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
04:00 PM	20	0	0	20	0	12	0	12	0	3	0	3	35
04:15 PM	16	0	0	16	0	12	0	12	1	0	0	1	29
04:30 PM	12	0	0	12	0	14	0	14	0	1	0	1	27
04:45 PM	18	0	0	18	0	17	0	17	0	1	0	1	36
Total	66	0	0	66	0	55	0	55	1	5	0	6	127
05:00 PM	25	0	0	25	0	17	0	17	1	0	0	1	43
05:15 PM	21	0	0	21	0	12	0	12	0	1	0	1	34
05:30 PM	13	0	0	13	0	20	0	20	1	0	0	1	34
05:45 PM	14	0	0	14	0	13	0	13	0	1	0	1	28
Total	73	0	0	73	0	62	0	62	2	2	0	4	139
Grand Total	139	0	0	139	0	117	0	117	3	7	0	10	266
Apprch %	100	0	0		0	100	0		30	70	0		
Total %	52.3	0	0	52.3	0	44	0	44	1.1	2.6	0	3.8	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

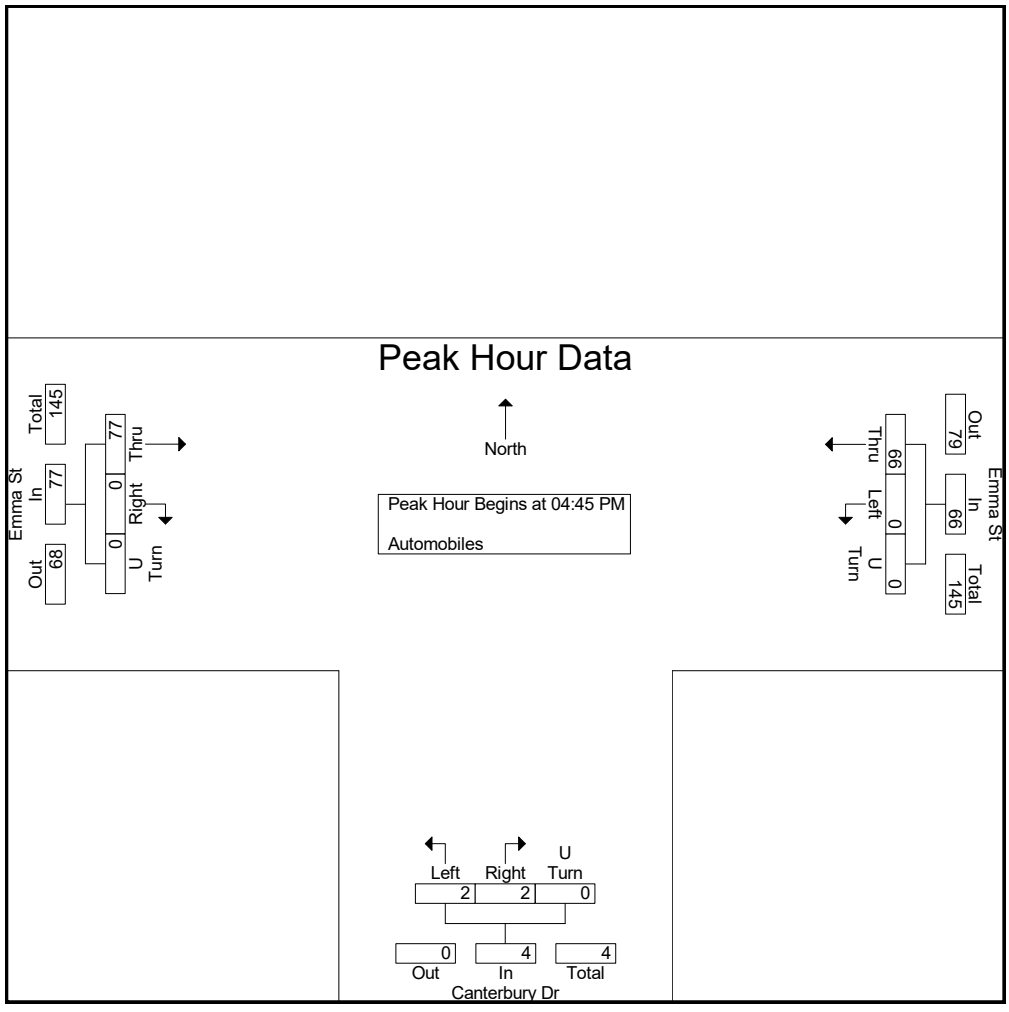


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	18	0	0	18	0	17	0	17	0	**1**	0	**1**	36
05:00 PM	**25**	0	0	**25**	0	17	0	17	**1**	0	0	1	**43**
05:15 PM	21	0	0	21	0	12	0	12	0	1	0	1	34
05:30 PM	13	0	0	13	0	**20**	0	**20**	1	0	0	1	34
Total Volume	77	0	0	77	0	66	0	66	2	2	0	4	147
% App. Total	100	0	0		0	100	0		50	50	0		
PHF	.770	.000	.000	.770	.000	.825	.000	.825	.500	.500	.000	1.00	.855



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

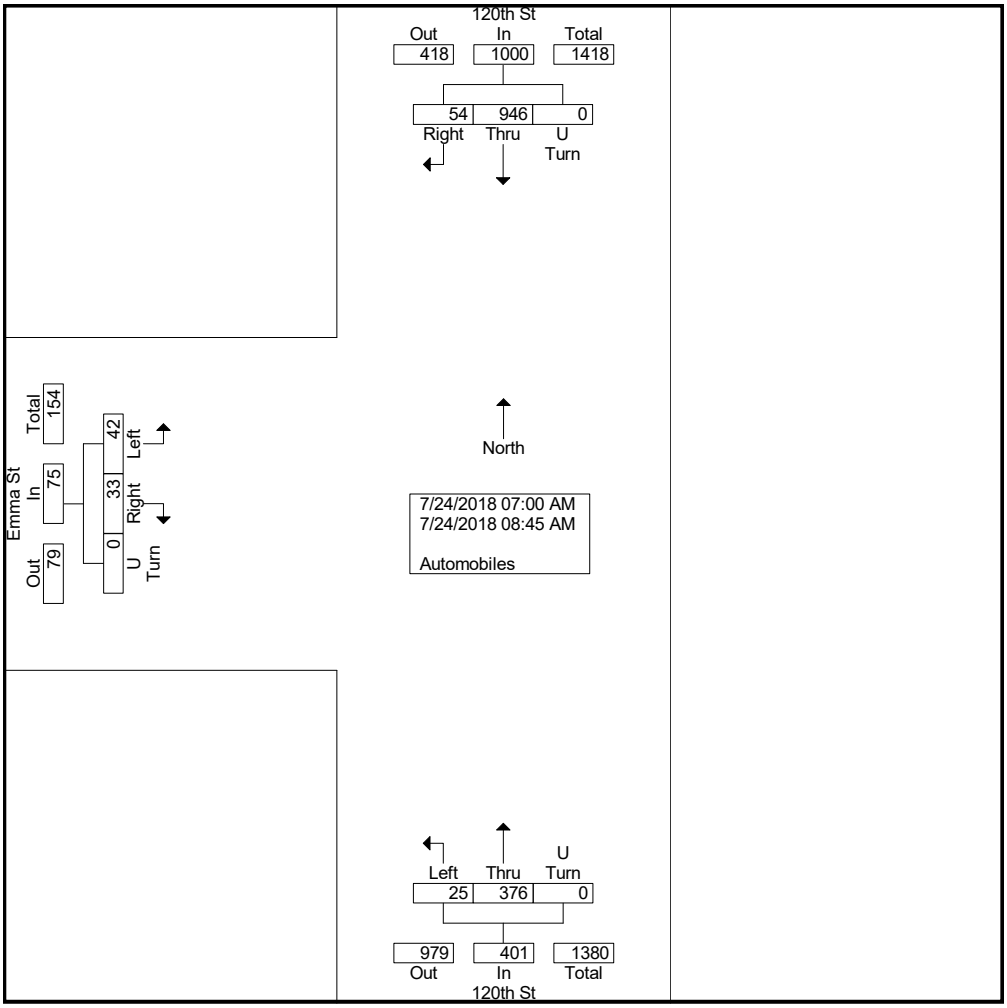
Groups Printed- Automobiles

	Emma St Eastbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	4	5	0	9	1	43	0	44	116	5	0	121	174
07:15 AM	2	4	0	6	2	46	0	48	131	4	0	135	189
07:30 AM	5	3	0	8	2	43	0	45	131	1	0	132	185
07:45 AM	10	6	0	16	4	44	0	48	142	11	0	153	217
Total	21	18	0	39	9	176	0	185	520	21	0	541	765
08:00 AM	2	3	0	5	4	66	0	70	104	5	0	109	184
08:15 AM	6	5	0	11	5	47	0	52	96	9	0	105	168
08:30 AM	8	5	0	13	5	37	0	42	125	9	0	134	189
08:45 AM	5	2	0	7	2	50	0	52	101	10	0	111	170
Total	21	15	0	36	16	200	0	216	426	33	0	459	711
Grand Total	42	33	0	75	25	376	0	401	946	54	0	1000	1476
Apprch %	56	44	0		6.2	93.8	0		94.6	5.4	0		
Total %	2.8	2.2	0	5.1	1.7	25.5	0	27.2	64.1	3.7	0	67.8	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

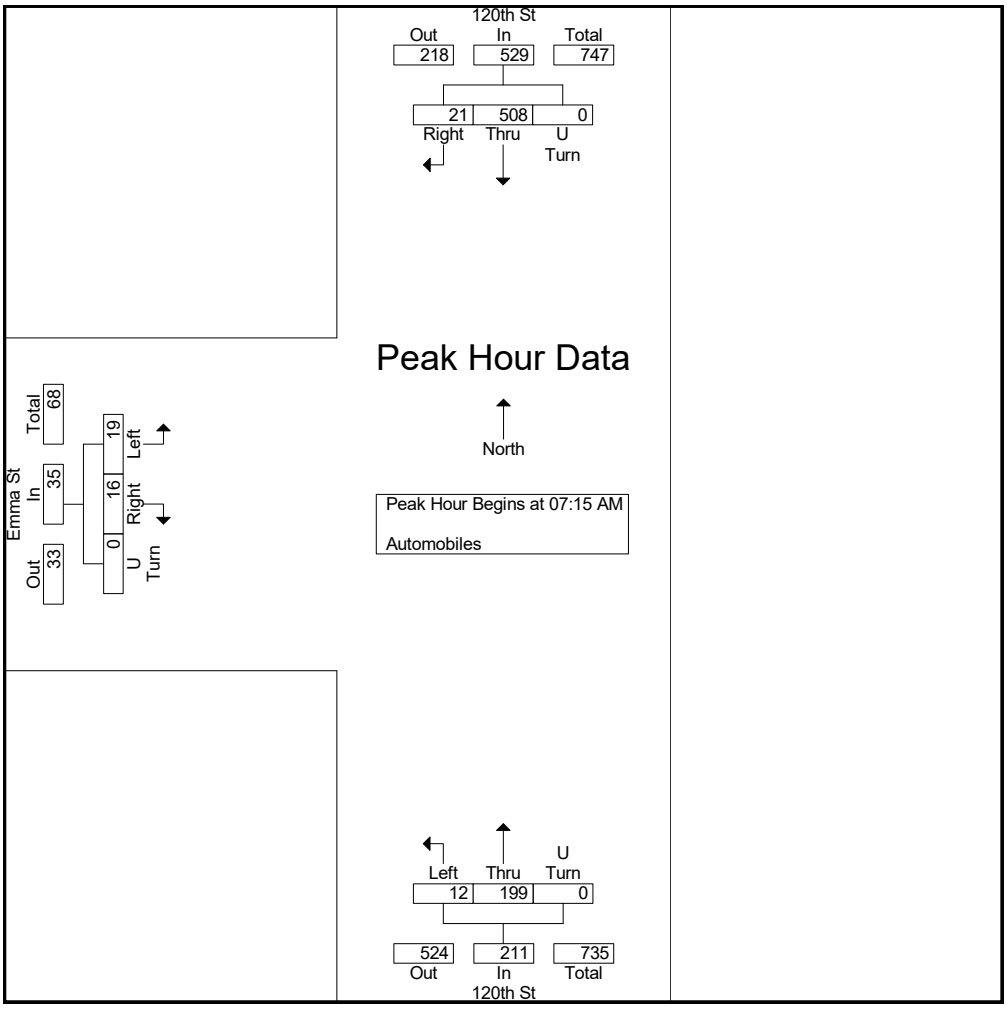


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Emma St Eastbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	4	0	6	2	46	0	48	131	4	0	135	189
07:30 AM	5	3	0	8	2	43	0	45	131	1	0	132	185
07:45 AM	**10**	**6**	0	**16**	**4**	44	0	48	**142**	**11**	0	**153**	**217**
08:00 AM	2	3	0	5	4	**66**	0	**70**	104	5	0	109	184
Total Volume	19	16	0	35	12	199	0	211	508	21	0	529	775
% App. Total	54.3	45.7	0		5.7	94.3	0		96	4	0		
PHF	.475	.667	.000	.547	.750	.754	.000	.754	.894	.477	.000	.864	.893



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

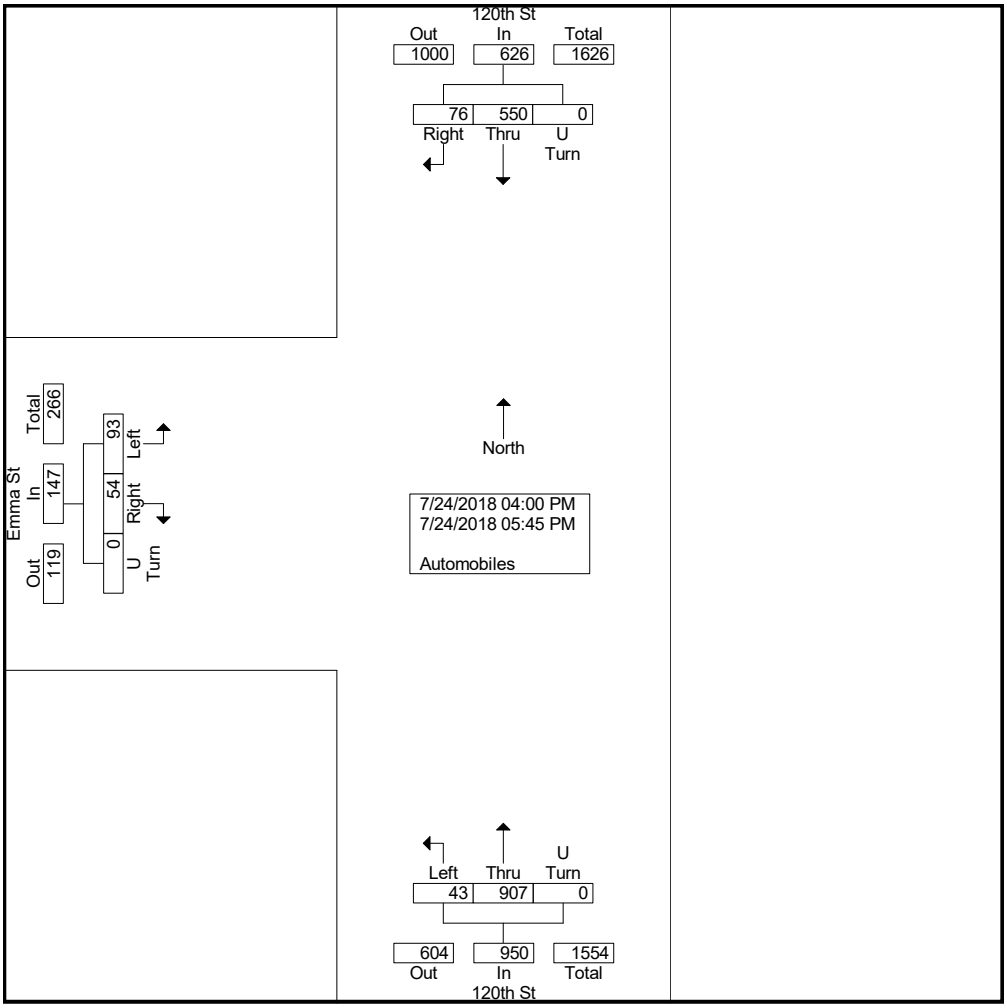
Groups Printed- Automobiles

	Emma St Eastbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	16	8	0	24	3	109	0	112	64	8	0	72	208
04:15 PM	11	5	0	16	4	109	0	113	59	9	0	68	197
04:30 PM	10	6	0	16	6	111	0	117	70	9	0	79	212
04:45 PM	10	6	0	16	6	110	0	116	72	9	0	81	213
Total	47	25	0	72	19	439	0	458	265	35	0	300	830
05:00 PM	21	6	0	27	9	140	0	149	66	11	0	77	253
05:15 PM	13	8	0	21	4	113	0	117	81	7	0	88	226
05:30 PM	4	8	0	12	7	116	0	123	61	11	0	72	207
05:45 PM	8	7	0	15	4	99	0	103	77	12	0	89	207
Total	46	29	0	75	24	468	0	492	285	41	0	326	893
Grand Total	93	54	0	147	43	907	0	950	550	76	0	626	1723
Apprch %	63.3	36.7	0		4.5	95.5	0		87.9	12.1	0		
Total %	5.4	3.1	0	8.5	2.5	52.6	0	55.1	31.9	4.4	0	36.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

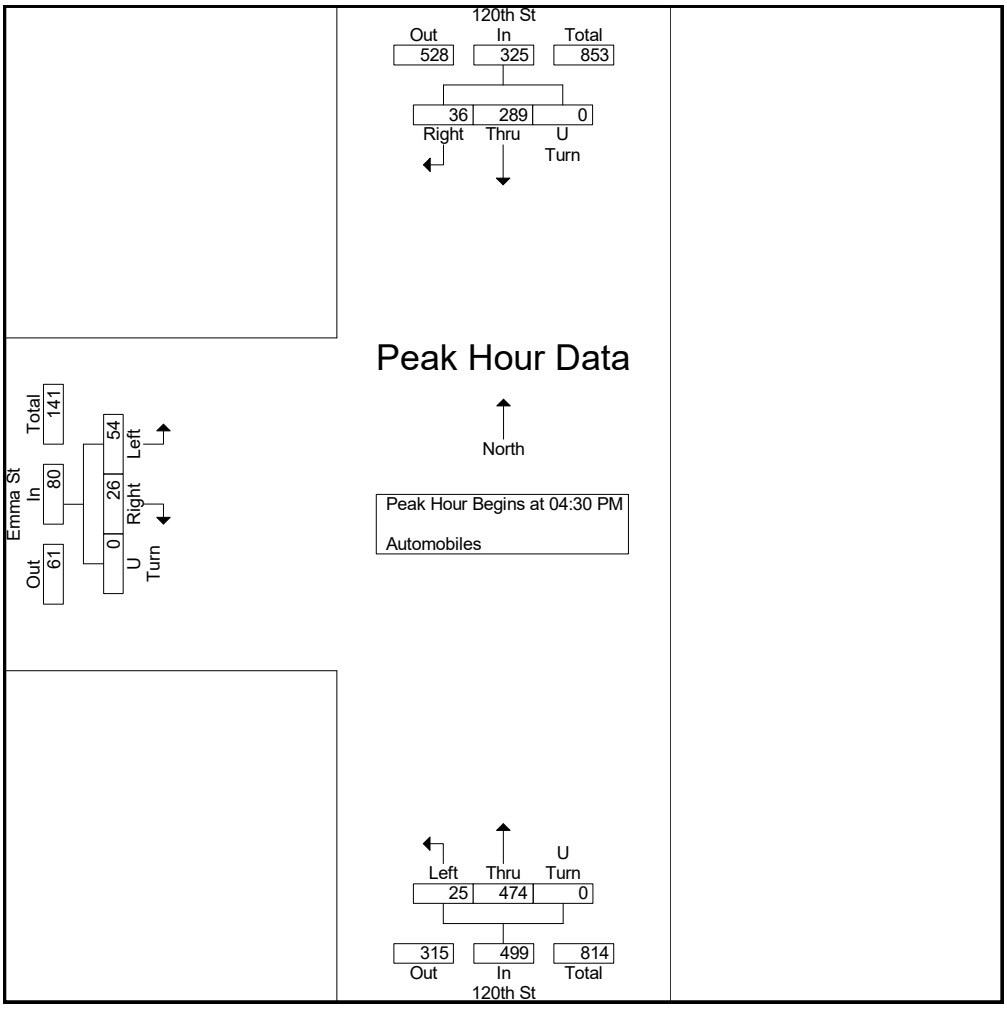


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Emma St Eastbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	10	6	0	16	6	111	0	117	70	9	0	79	212
04:45 PM	10	6	0	16	6	110	0	116	72	9	0	81	213
05:00 PM	**21**	6	0	**27**	**9**	**140**	0	**149**	66	**11**	0	77	**253**
05:15 PM	13	**8**	0	21	4	113	0	117	**81**	7	0	**88**	226
Total Volume	54	26	0	80	25	474	0	499	289	36	0	325	904
% App. Total	67.5	32.5	0		5	95	0		88.9	11.1	0		
PHF	.643	.813	.000	.741	.694	.846	.000	.837	.892	.818	.000	.923	.893



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

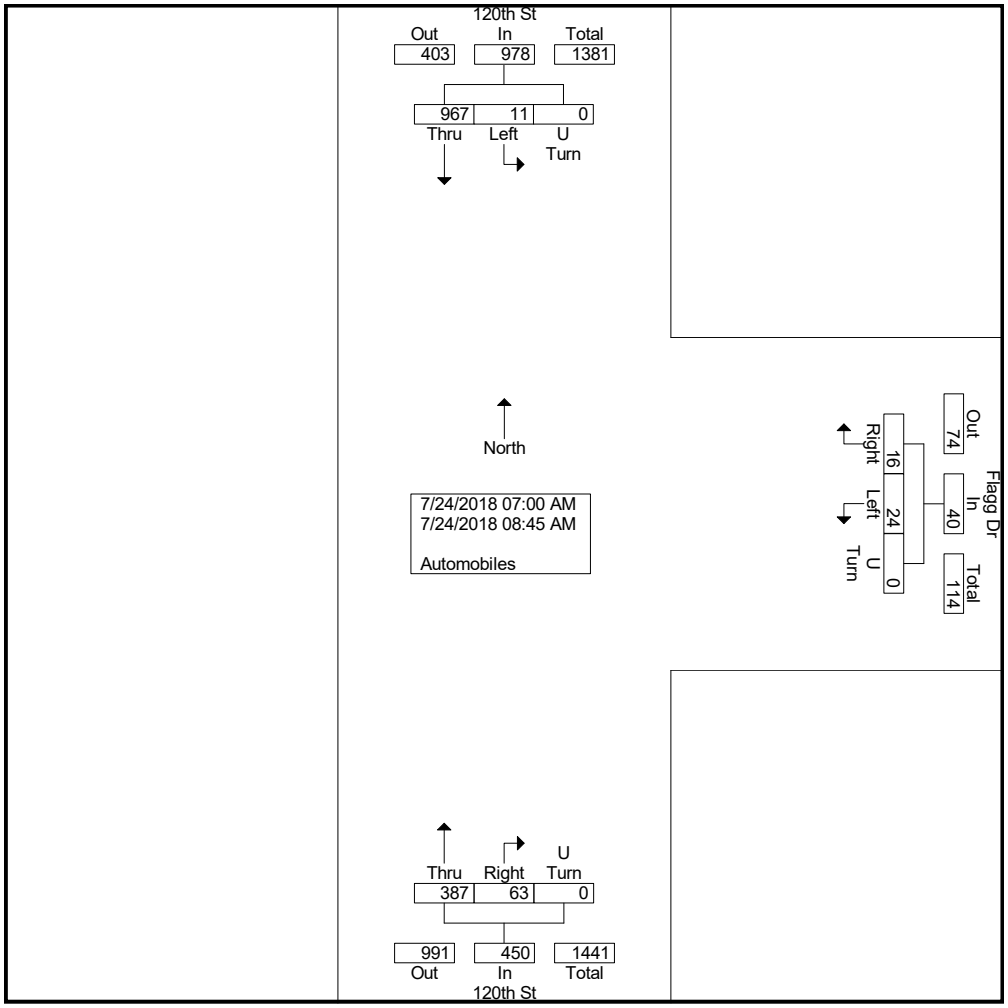
Groups Printed- Automobiles

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
07:00 AM	2	1	0	3	48	10	0	58	1	119	0	120	181
07:15 AM	3	1	0	4	44	8	0	52	1	134	0	135	191
07:30 AM	2	0	0	2	47	8	0	55	1	133	0	134	191
07:45 AM	2	6	0	8	56	7	0	63	3	145	0	148	219
Total	9	8	0	17	195	33	0	228	6	531	0	537	782
08:00 AM	4	3	0	7	53	10	0	63	2	105	0	107	177
08:15 AM	3	4	0	7	44	5	0	49	3	98	0	101	157
08:30 AM	6	0	0	6	47	8	0	55	0	130	0	130	191
08:45 AM	2	1	0	3	48	7	0	55	0	103	0	103	161
Total	15	8	0	23	192	30	0	222	5	436	0	441	686
Grand Total	24	16	0	40	387	63	0	450	11	967	0	978	1468
Apprch %	60	40	0		86	14	0		1.1	98.9	0		
Total %	1.6	1.1	0	2.7	26.4	4.3	0	30.7	0.7	65.9	0	66.6	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

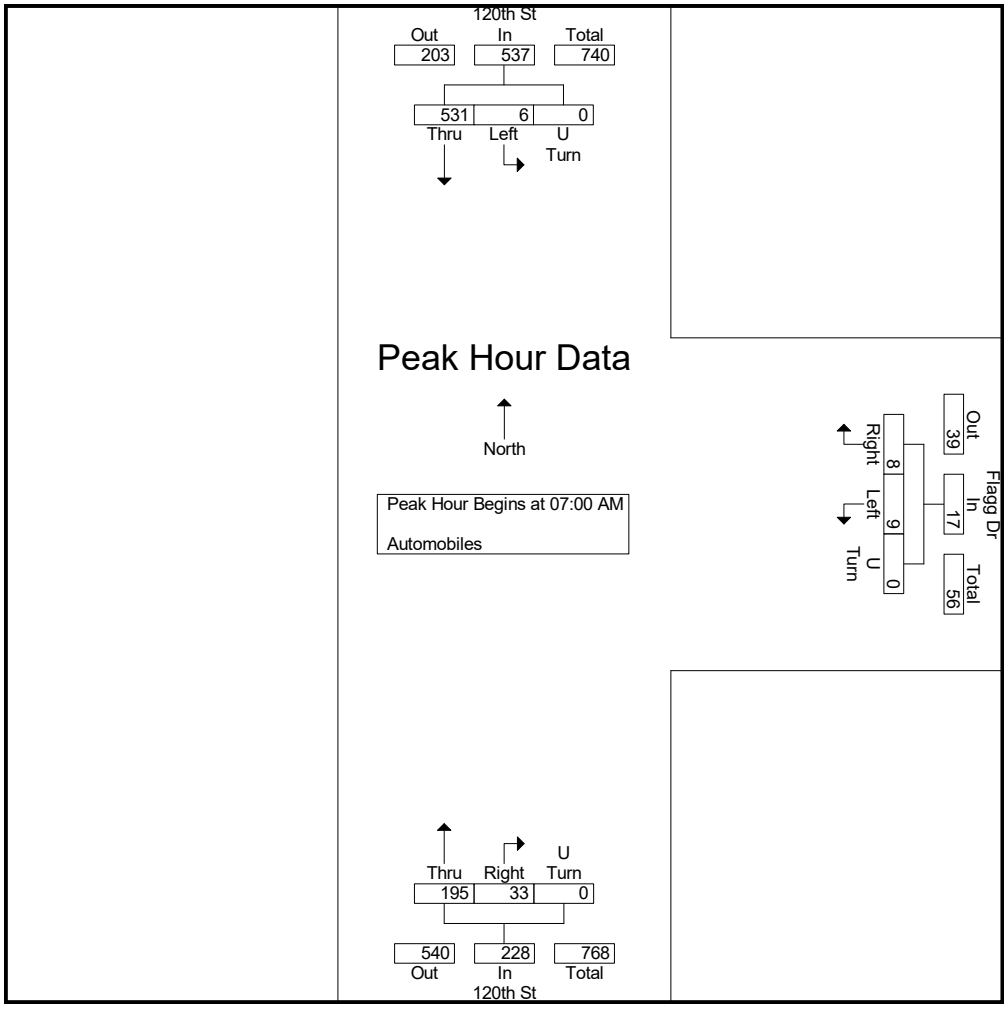


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	2	1	0	3	48	**10**	0	58	1	119	0	120	181
07:15 AM	**3**	1	0	4	44	8	0	52	1	134	0	135	191
07:30 AM	2	0	0	2	47	8	0	55	1	133	0	134	191
07:45 AM	2	**6**	0	**8**	**56**	7	0	**63**	**3**	**145**	0	**148**	**219**
Total Volume	9	8	0	17	195	33	0	228	6	531	0	537	782
% App. Total	52.9	47.1	0		85.5	14.5	0		1.1	98.9	0		
PHF	.750	.333	.000	.531	.871	.825	.000	.905	.500	.916	.000	.907	.893



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

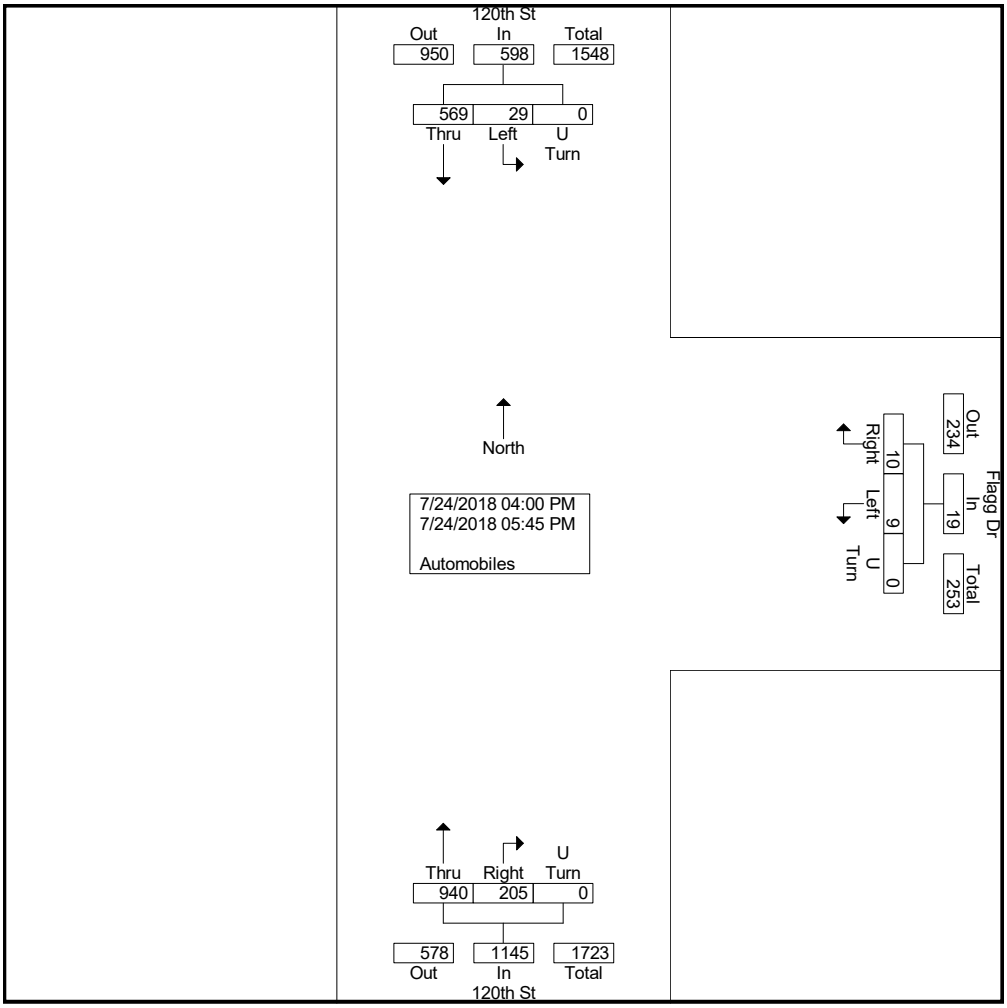
Groups Printed- Automobiles

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
04:00 PM	2	1	0	3	111	22	0	133	3	77	0	80	216
04:15 PM	1	1	0	2	112	29	0	141	4	61	0	65	208
04:30 PM	0	0	0	0	117	29	0	146	3	75	0	78	224
04:45 PM	2	1	0	3	115	29	0	144	5	75	0	80	227
Total	5	3	0	8	455	109	0	564	15	288	0	303	875
05:00 PM	0	2	0	2	147	30	0	177	3	65	0	68	247
05:15 PM	2	2	0	4	115	24	0	139	7	78	0	85	228
05:30 PM	0	3	0	3	120	22	0	142	1	86	0	87	232
05:45 PM	2	0	0	2	103	20	0	123	3	52	0	55	180
Total	4	7	0	11	485	96	0	581	14	281	0	295	887
Grand Total	9	10	0	19	940	205	0	1145	29	569	0	598	1762
Apprch %	47.4	52.6	0		82.1	17.9	0		4.8	95.2	0		
Total %	0.5	0.6	0	1.1	53.3	11.6	0	65	1.6	32.3	0	33.9	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

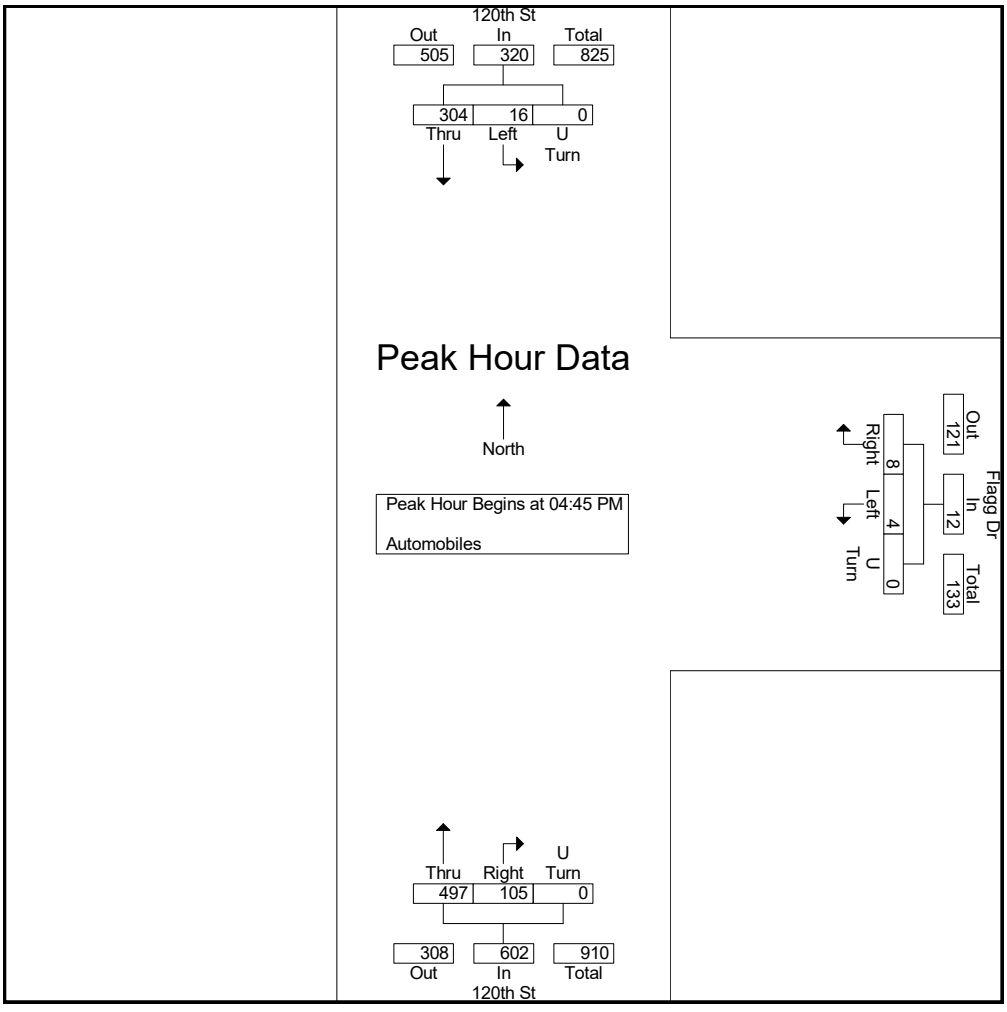


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**2**	1	0	3	115	29	0	144	5	75	0	80	227
05:00 PM	0	2	0	2	**147**	**30**	0	**177**	3	65	0	68	**247**
05:15 PM	2	2	0	**4**	115	24	0	139	**7**	78	0	85	228
05:30 PM	0	**3**	0	3	120	22	0	142	1	**86**	0	**87**	232
Total Volume	4	8	0	12	497	105	0	602	16	304	0	320	934
% App. Total	33.3	66.7	0		82.6	17.4	0		5	95	0		
PHF	.500	.667	.000	.750	.845	.875	.000	.850	.571	.884	.000	.920	.945



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

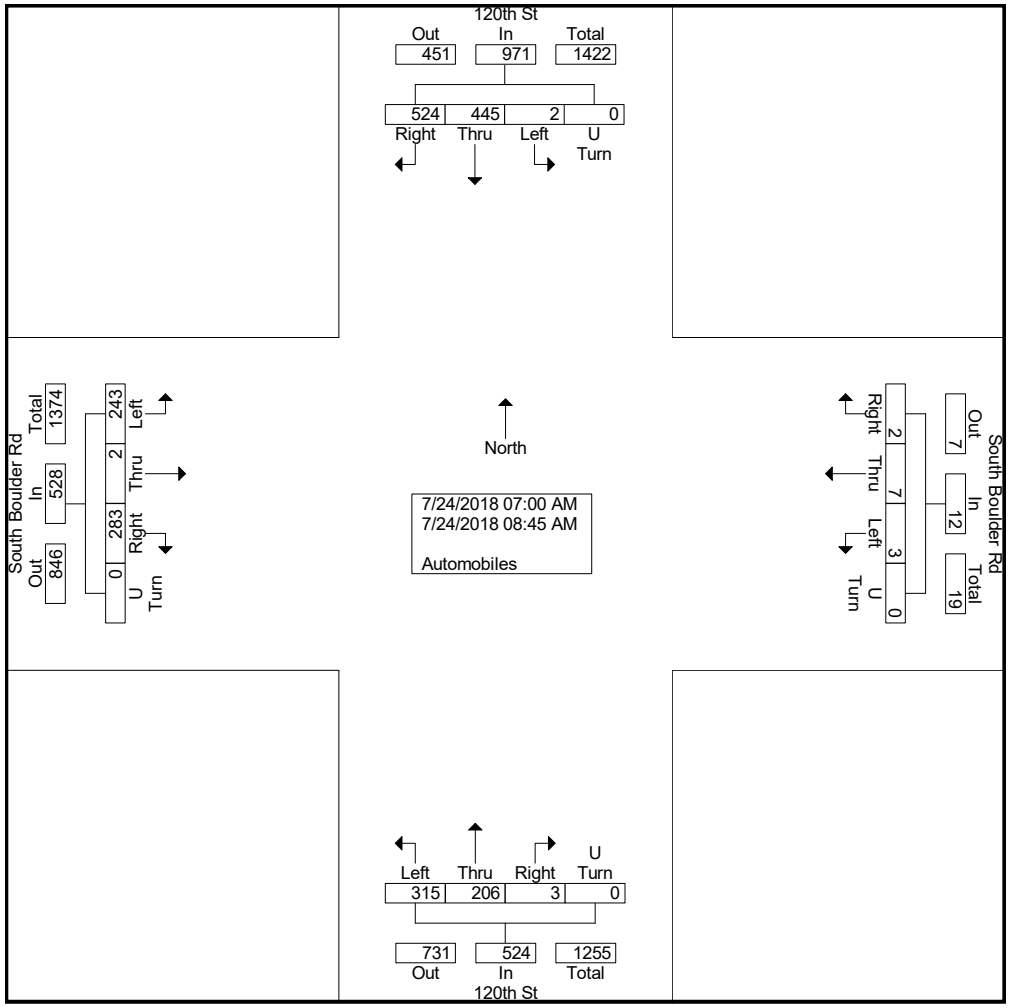
Groups Printed- Automobiles

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	23	0	24	0	47	0	0	0	0	0	24	26	0	0	50	0	52	57	0	109	206
07:15 AM	27	0	29	0	56	1	3	2	0	6	25	31	1	0	57	0	64	66	0	130	249
07:30 AM	31	0	32	0	63	0	2	0	0	2	41	24	0	0	65	0	58	71	0	129	259
07:45 AM	27	0	52	0	79	2	0	0	0	2	40	23	2	0	65	0	67	81	0	148	294
Total	108	0	137	0	245	3	5	2	0	10	130	104	3	0	237	0	241	275	0	516	1008
08:00 AM	44	0	35	0	79	0	0	0	0	0	47	34	0	0	81	0	51	68	0	119	279
08:15 AM	28	1	41	0	70	0	0	0	0	0	39	26	0	0	65	0	44	57	0	101	236
08:30 AM	28	0	30	0	58	0	1	0	0	1	46	18	0	0	64	2	68	55	0	125	248
08:45 AM	35	1	40	0	76	0	1	0	0	1	53	24	0	0	77	0	41	69	0	110	264
Total	135	2	146	0	283	0	2	0	0	2	185	102	0	0	287	2	204	249	0	455	1027
Grand Total	243	2	283	0	528	3	7	2	0	12	315	206	3	0	524	2	445	524	0	971	2035
Apprch %	46	0.4	53.6	0		25	58.3	16.7	0		60.1	39.3	0.6	0		0.2	45.8	54	0		
Total %	11.9	0.1	13.9	0	25.9	0.1	0.3	0.1	0	0.6	15.5	10.1	0.1	0	25.7	0.1	21.9	25.7	0	47.7	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

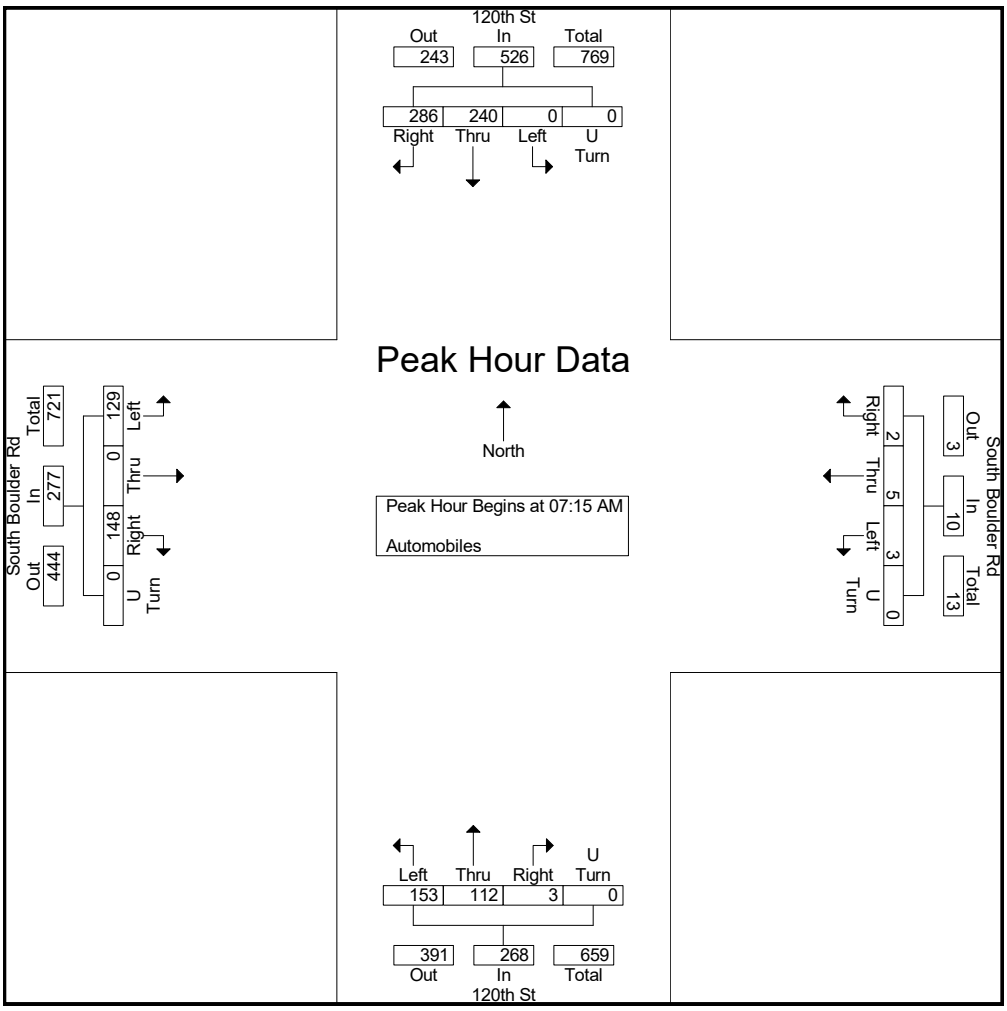


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	27	0	29	0	56	1	**3**	**2**	0	**6**	25	31	1	0	57	0	64	66	0	130	249
07:30 AM	31	0	32	0	63	0	2	0	0	2	41	24	0	0	65	0	58	71	0	129	259
07:45 AM	27	0	**52**	0	**79**	**2**	0	0	0	2	40	23	**2**	0	65	0	**67**	**81**	0	**148**	**294**
08:00 AM	**44**	0	35	0	79	0	0	0	0	0	**47**	**34**	0	0	**81**	0	51	68	0	119	279
Total Volume	129	0	148	0	277	3	5	2	0	10	153	112	3	0	268	0	240	286	0	526	1081
% App. Total	46.6	0	53.4	0		30	50	20	0		57.1	41.8	1.1	0		0	45.6	54.4	0		
PHF	.733	.000	.712	.000	.877	.375	.417	.250	.000	.417	.814	.824	.375	.000	.827	.000	.896	.883	.000	.889	.919



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 1

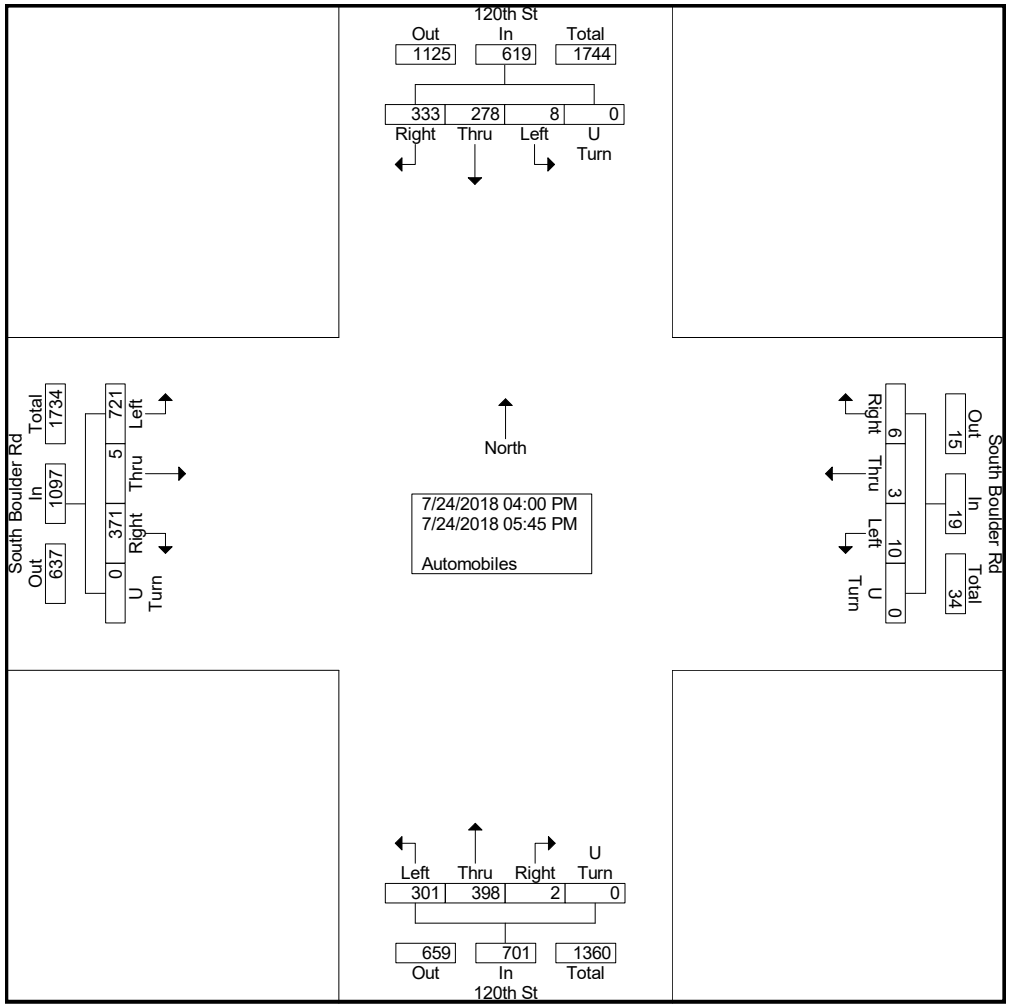
Groups Printed- Automobiles

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	87	0	48	0	135	0	0	1	0	1	39	54	1	0	94	0	29	45	0	74	304
04:15 PM	89	0	43	0	132	1	0	1	0	2	42	50	0	0	92	1	31	40	0	72	298
04:30 PM	84	0	57	0	141	0	0	1	0	1	40	50	0	0	90	0	41	34	0	75	307
04:45 PM	90	2	43	0	135	0	0	1	0	1	36	51	0	0	87	1	36	42	0	79	302
Total	350	2	191	0	543	1	0	4	0	5	157	205	1	0	363	2	137	161	0	300	1211
05:00 PM	86	1	54	0	141	0	1	1	0	2	34	81	0	0	115	3	28	47	0	78	336
05:15 PM	95	1	42	0	138	2	0	0	0	2	41	45	0	0	86	3	35	37	0	75	301
05:30 PM	98	0	41	0	139	6	2	0	0	8	37	40	0	0	77	0	38	36	0	74	298
05:45 PM	92	1	43	0	136	1	0	1	0	2	32	27	1	0	60	0	40	52	0	92	290
Total	371	3	180	0	554	9	3	2	0	14	144	193	1	0	338	6	141	172	0	319	1225
Grand Total	721	5	371	0	1097	10	3	6	0	19	301	398	2	0	701	8	278	333	0	619	2436
Apprch %	65.7	0.5	33.8	0		52.6	15.8	31.6	0		42.9	56.8	0.3	0		1.3	44.9	53.8	0		
Total %	29.6	0.2	15.2	0	45	0.4	0.1	0.2	0	0.8	12.4	16.3	0.1	0	28.8	0.3	11.4	13.7	0	25.4	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 2

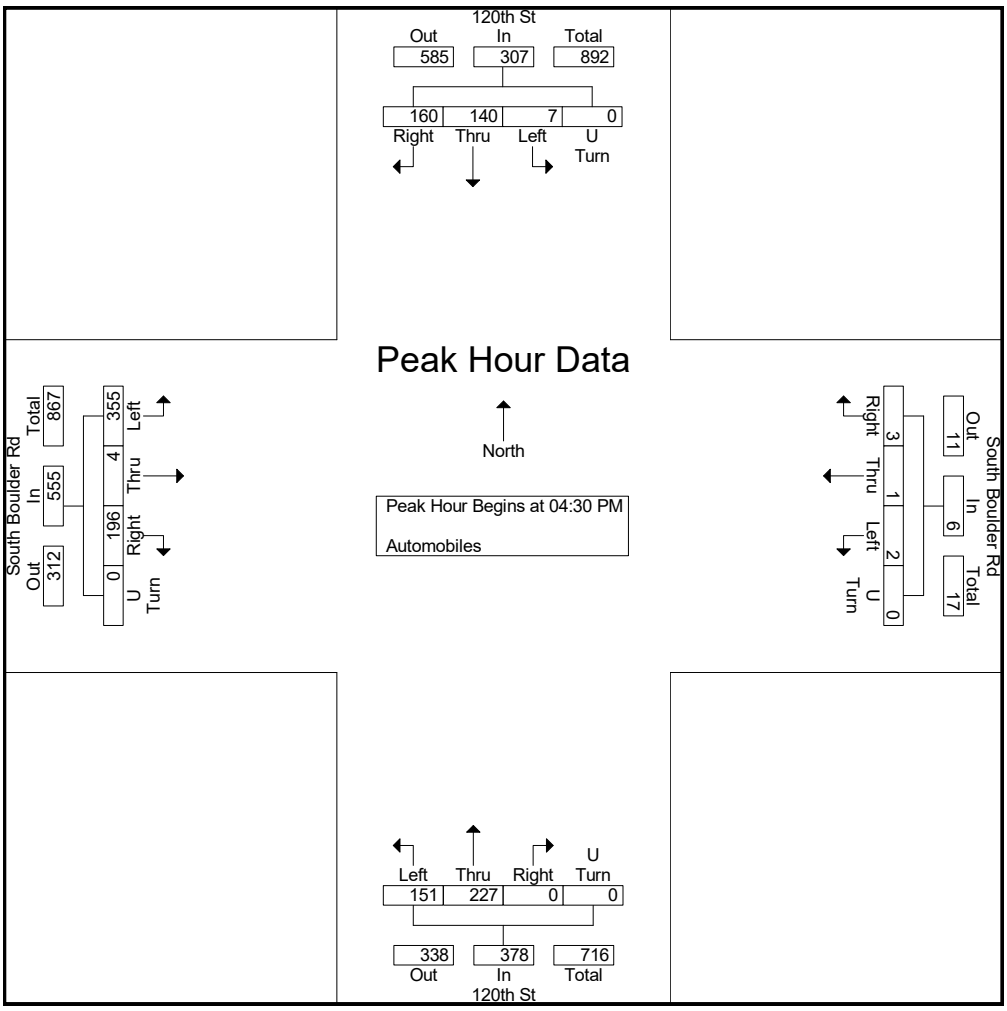


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 352
Start Date : 7/24/2018
Page No : 3

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	84	0	**57**	0	**141**	0	0	**1**	0	1	40	50	0	0	90	0	**41**	34	0	75	307
04:45 PM	90	**2**	43	0	135	0	0	1	0	1	36	51	0	0	87	1	36	42	0	**79**	302
05:00 PM	86	1	54	0	141	0	**1**	1	0	**2**	34	**81**	0	0	**115**	**3**	28	**47**	0	78	**336**
05:15 PM	**95**	1	42	0	138	**2**	0	0	0	2	**41**	45	0	0	86	3	35	37	0	75	301
Total Volume	355	4	196	0	555	2	1	3	0	6	151	227	0	0	378	7	140	160	0	307	1246
% App. Total	64	0.7	35.3	0		33.3	16.7	50	0		39.9	60.1	0	0		2.3	45.6	52.1	0		
PHF	.934	.500	.860	.000	.984	.250	.250	.750	.000	.750	.921	.701	.000	.000	.822	.583	.854	.851	.000	.972	.927



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

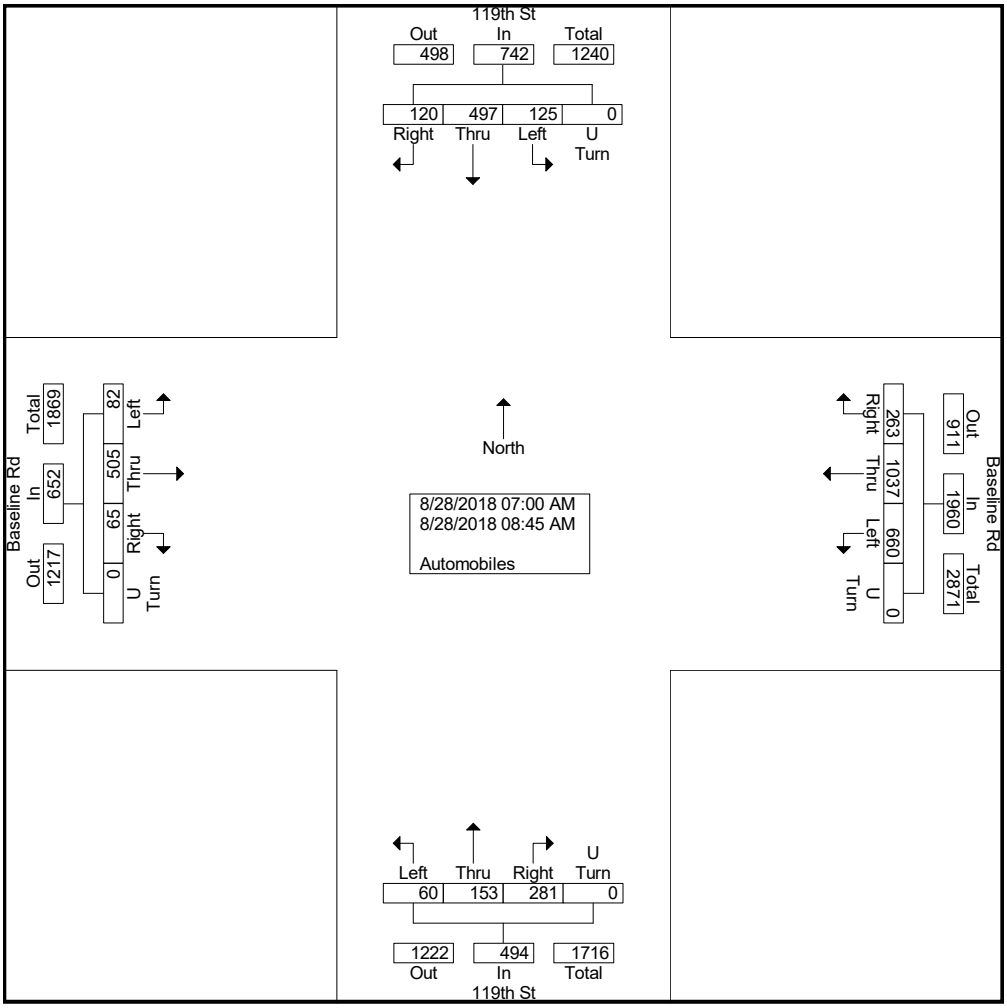
Groups Printed- Automobiles

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	1	60	7	0	68	77	128	53	0	258	5	12	22	0	39	9	30	9	0	48	413
07:15 AM	2	56	9	0	67	96	124	24	0	244	9	20	37	0	66	17	82	14	0	113	490
07:30 AM	14	61	9	0	84	104	119	28	0	251	9	22	33	0	64	9	107	19	0	135	534
07:45 AM	23	70	7	0	100	73	125	22	0	220	16	33	52	0	101	20	85	27	0	132	553
Total	40	247	32	0	319	350	496	127	0	973	39	87	144	0	270	55	304	69	0	428	1990
08:00 AM	15	72	16	0	103	86	146	30	0	262	7	27	51	0	85	17	57	13	0	87	537
08:15 AM	11	46	4	0	61	83	123	44	0	250	6	14	24	0	44	19	52	17	0	88	443
08:30 AM	7	82	3	0	92	63	138	32	0	233	3	17	26	0	46	14	53	11	0	78	449
08:45 AM	9	58	10	0	77	78	134	30	0	242	5	8	36	0	49	20	31	10	0	61	429
Total	42	258	33	0	333	310	541	136	0	987	21	66	137	0	224	70	193	51	0	314	1858
Grand Total	82	505	65	0	652	660	1037	263	0	1960	60	153	281	0	494	125	497	120	0	742	3848
Apprch %	12.6	77.5	10	0		33.7	52.9	13.4	0		12.1	31	56.9	0		16.8	67	16.2	0		
Total %	2.1	13.1	1.7	0	16.9	17.2	26.9	6.8	0	50.9	1.6	4	7.3	0	12.8	3.2	12.9	3.1	0	19.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

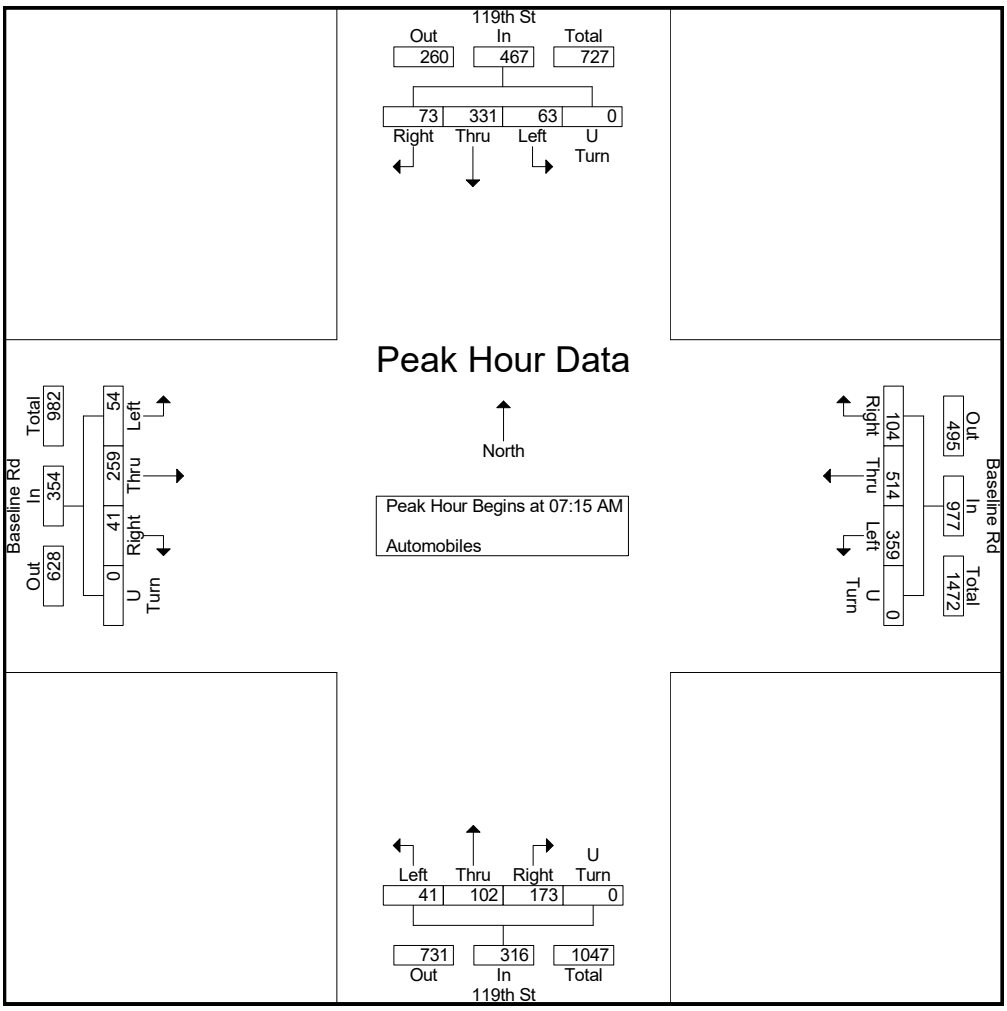


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	2	56	9	0	67	96	124	24	0	244	9	20	37	0	66	17	82	14	0	113	490
07:30 AM	14	61	9	0	84	**104**	119	28	0	251	9	22	33	0	64	9	**107**	19	0	**135**	534
07:45 AM	**23**	70	7	0	100	73	125	22	0	220	**16**	**33**	**52**	0	**101**	**20**	85	**27**	0	132	**553**
08:00 AM	15	**72**	**16**	0	**103**	86	**146**	**30**	0	**262**	7	27	51	0	85	17	57	13	0	87	537
Total Volume	54	259	41	0	354	359	514	104	0	977	41	102	173	0	316	63	331	73	0	467	2114
% App. Total	15.3	73.2	11.6	0		36.7	52.6	10.6	0		13	32.3	54.7	0		13.5	70.9	15.6	0		
PHF	.587	.899	.641	.000	.859	.863	.880	.867	.000	.932	.641	.773	.832	.000	.782	.788	.773	.676	.000	.865	.956



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

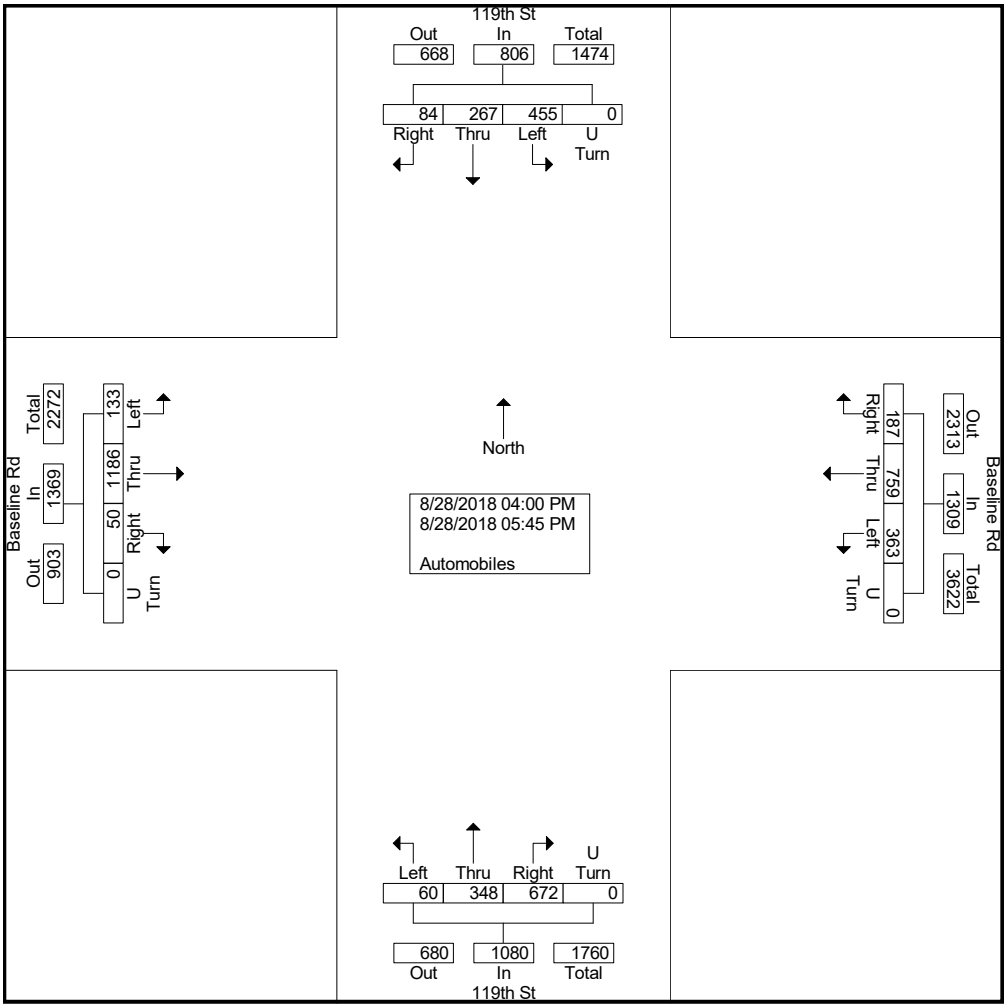
Groups Printed- Automobiles

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	11	146	6	0	163	47	82	21	0	150	5	41	75	0	121	50	35	7	0	92	526
04:15 PM	12	155	7	0	174	43	81	18	0	142	6	40	93	0	139	49	28	16	0	93	548
04:30 PM	13	149	7	0	169	37	91	23	0	151	12	42	77	0	131	43	26	10	0	79	530
04:45 PM	14	155	8	0	177	49	109	20	0	178	7	42	85	0	134	58	25	8	0	91	580
Total	50	605	28	0	683	176	363	82	0	621	30	165	330	0	525	200	114	41	0	355	2184
05:00 PM	22	151	8	0	181	37	88	34	0	159	7	43	75	0	125	68	31	14	0	113	578
05:15 PM	25	154	4	0	183	41	107	27	0	175	6	54	115	0	175	53	41	8	0	102	635
05:30 PM	25	158	4	0	187	42	99	29	0	170	7	50	74	0	131	79	34	8	0	121	609
05:45 PM	11	118	6	0	135	67	102	15	0	184	10	36	78	0	124	55	47	13	0	115	558
Total	83	581	22	0	686	187	396	105	0	688	30	183	342	0	555	255	153	43	0	451	2380
Grand Total	133	1186	50	0	1369	363	759	187	0	1309	60	348	672	0	1080	455	267	84	0	806	4564
Apprch %	9.7	86.6	3.7	0		27.7	58	14.3	0		5.6	32.2	62.2	0		56.5	33.1	10.4	0		
Total %	2.9	26	1.1	0	30	8	16.6	4.1	0	28.7	1.3	7.6	14.7	0	23.7	10	5.9	1.8	0	17.7	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

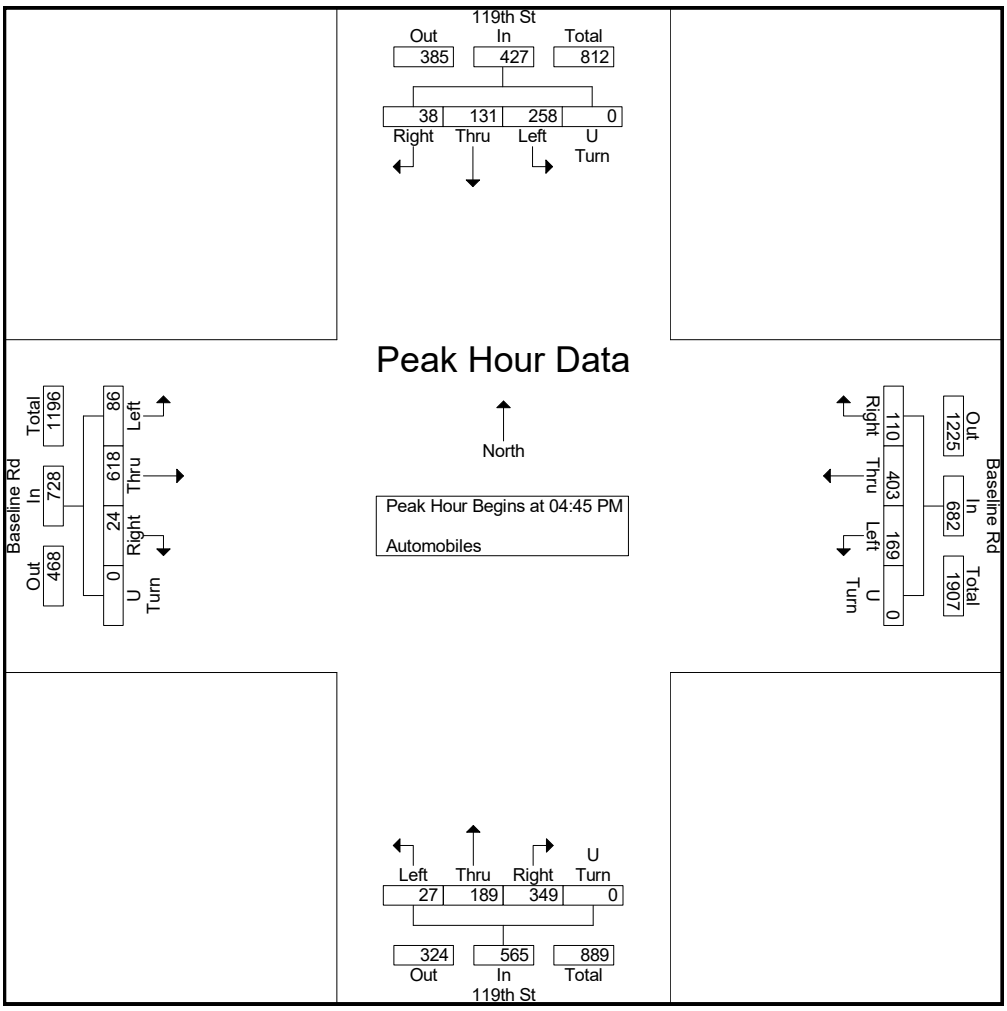


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Baseline Rd (SH-7) and 119th St

File Name : Baseline and 119th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Baseline Rd Eastbound					Baseline Rd Westbound					119th St Northbound					119th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	14	155	**8**	0	177	**49**	**109**	20	0	**178**	**7**	42	85	0	134	58	25	8	0	91	580
05:00 PM	22	151	8	0	181	37	88	**34**	0	159	7	43	75	0	125	68	31	**14**	0	113	578
05:15 PM	**25**	154	4	0	183	41	107	27	0	175	6	**54**	**115**	0	**175**	53	**41**	8	0	102	**635**
05:30 PM	25	**158**	4	0	**187**	42	99	29	0	170	7	50	74	0	131	**79**	34	8	0	**121**	609
Total Volume	86	618	24	0	728	169	403	110	0	682	27	189	349	0	565	258	131	38	0	427	2402
% App. Total	11.8	84.9	3.3	0		24.8	59.1	16.1	0		4.8	33.5	61.8	0		60.4	30.7	8.9	0		
PHF	.860	.978	.750	.000	.973	.862	.924	.809	.000	.958	.964	.875	.759	.000	.807	.816	.799	.679	.000	.882	.946



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

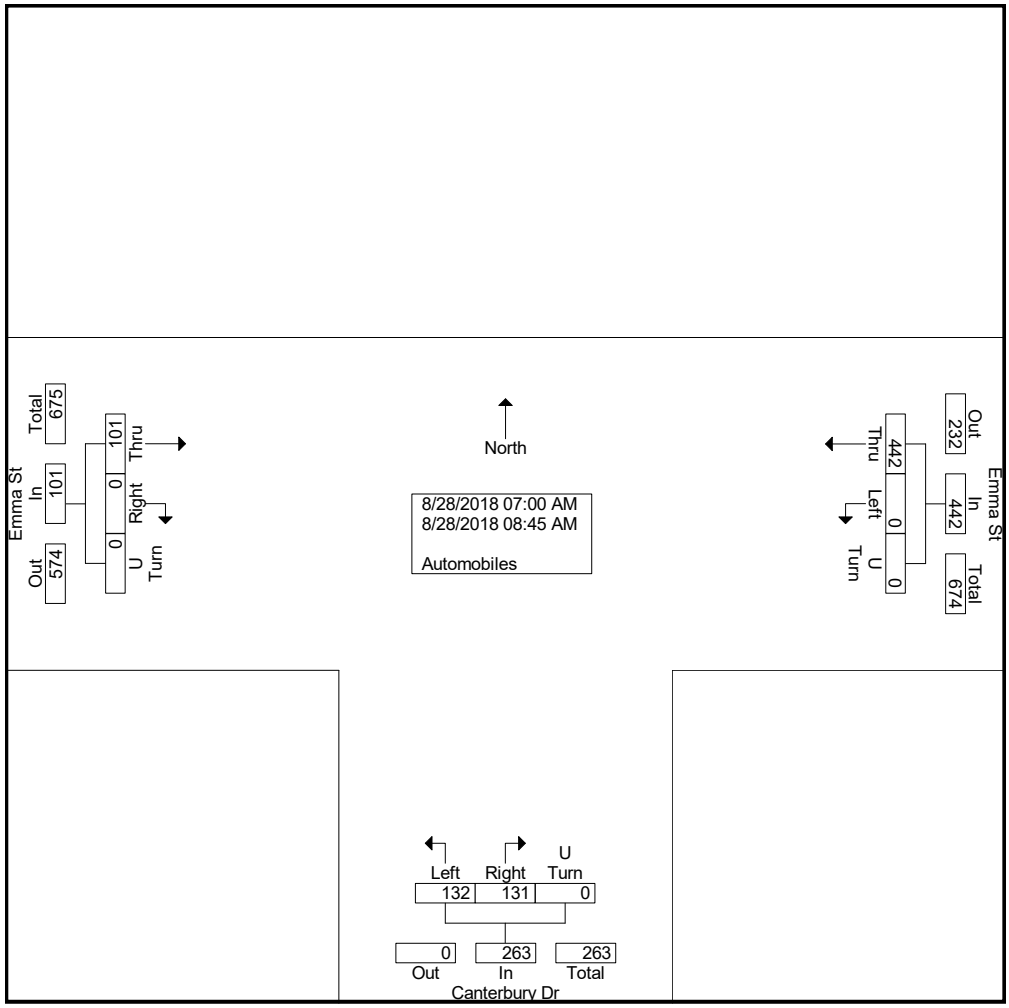
Groups Printed- Automobiles

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
07:00 AM	5	0	0	5	0	21	0	21	0	0	0	0	26
07:15 AM	9	0	0	9	0	83	0	83	8	13	0	21	113
07:30 AM	15	0	0	15	0	158	0	158	46	55	0	101	274
07:45 AM	25	0	0	25	0	84	0	84	67	51	0	118	227
Total	54	0	0	54	0	346	0	346	121	119	0	240	640
08:00 AM	15	0	0	15	0	46	0	46	9	9	0	18	79
08:15 AM	9	0	0	9	0	18	0	18	0	0	0	0	27
08:30 AM	12	0	0	12	0	16	0	16	0	1	0	1	29
08:45 AM	11	0	0	11	0	16	0	16	2	2	0	4	31
Total	47	0	0	47	0	96	0	96	11	12	0	23	166
Grand Total	101	0	0	101	0	442	0	442	132	131	0	263	806
Apprch %	100	0	0		0	100	0		50.2	49.8	0		
Total %	12.5	0	0	12.5	0	54.8	0	54.8	16.4	16.3	0	32.6	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

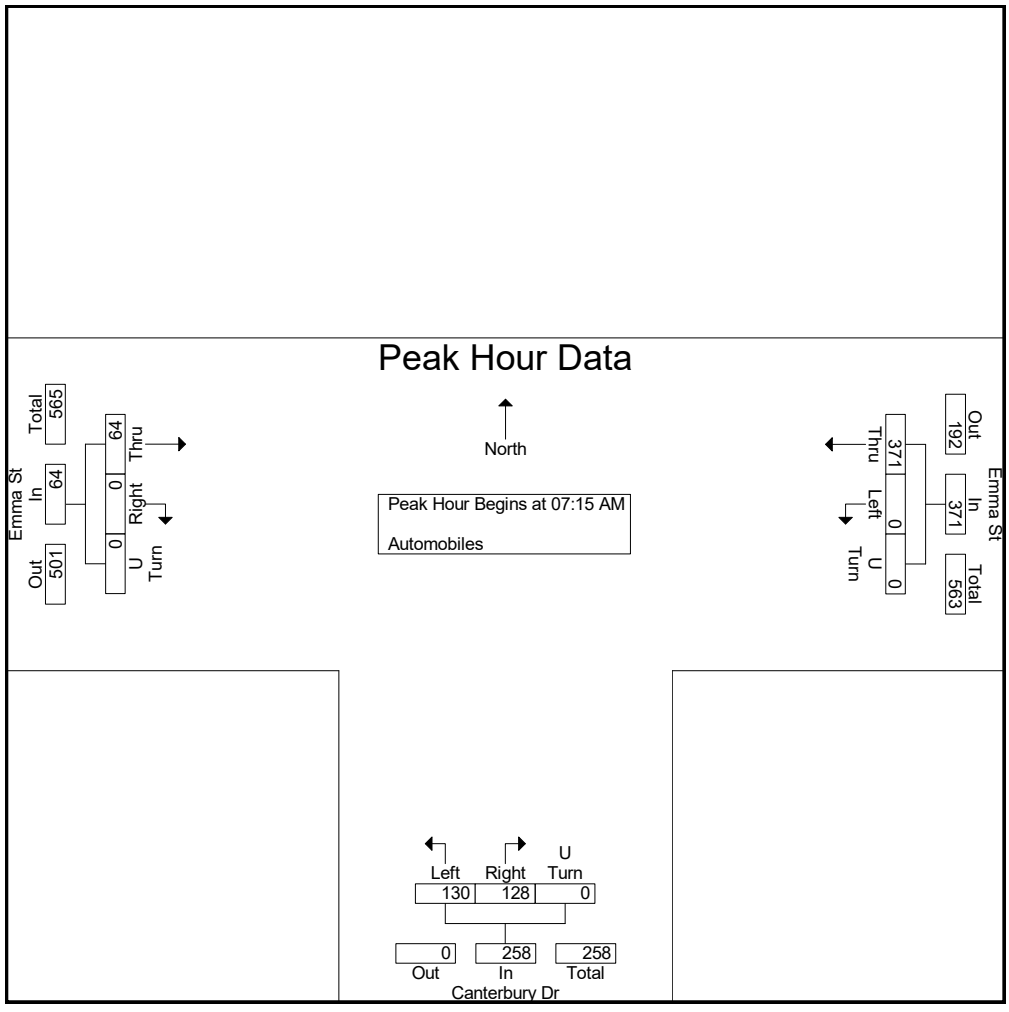


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	9	0	0	9	0	83	0	83	8	13	0	21	113
07:30 AM	15	0	0	15	0	**158**	0	**158**	46	**55**	0	101	**274**
07:45 AM	**25**	0	0	**25**	0	84	0	84	**67**	51	0	**118**	227
08:00 AM	15	0	0	15	0	46	0	46	9	9	0	18	79
Total Volume	64	0	0	64	0	371	0	371	130	128	0	258	693
% App. Total	100	0	0		0	100	0		50.4	49.6	0		
PHF	.640	.000	.000	.640	.000	.587	.000	.587	.485	.582	.000	.547	.632



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

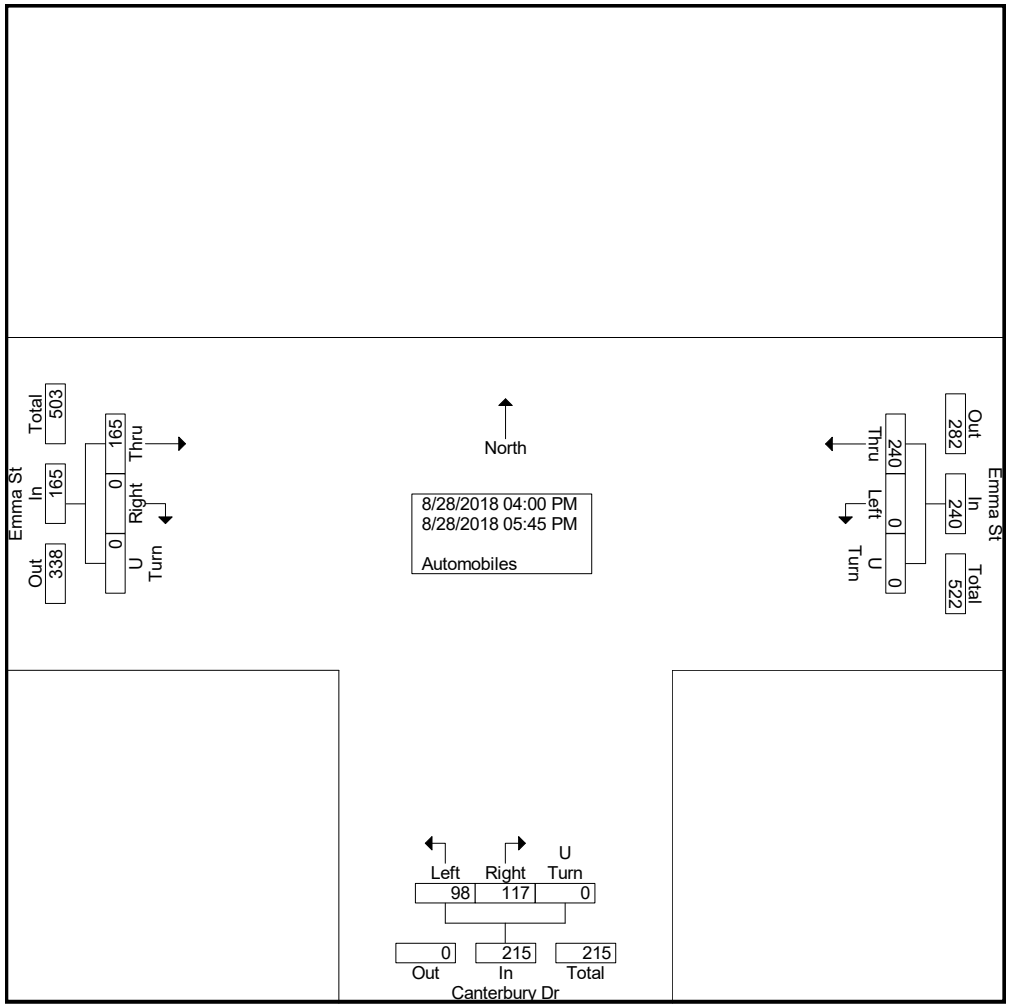
Groups Printed- Automobiles

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
04:00 PM	16	0	0	16	0	22	0	22	14	12	0	26	64
04:15 PM	18	0	0	18	0	22	0	22	3	12	0	15	55
04:30 PM	16	0	0	16	0	20	0	20	12	4	0	16	52
04:45 PM	15	0	0	15	0	25	0	25	9	8	0	17	57
Total	65	0	0	65	0	89	0	89	38	36	0	74	228
05:00 PM	24	0	0	24	0	19	0	19	4	10	0	14	57
05:15 PM	31	0	0	31	0	31	0	31	13	18	0	31	93
05:30 PM	29	0	0	29	0	32	0	32	26	42	0	68	129
05:45 PM	16	0	0	16	0	69	0	69	17	11	0	28	113
Total	100	0	0	100	0	151	0	151	60	81	0	141	392
Grand Total	165	0	0	165	0	240	0	240	98	117	0	215	620
Apprch %	100	0	0		0	100	0		45.6	54.4	0		
Total %	26.6	0	0	26.6	0	38.7	0	38.7	15.8	18.9	0	34.7	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

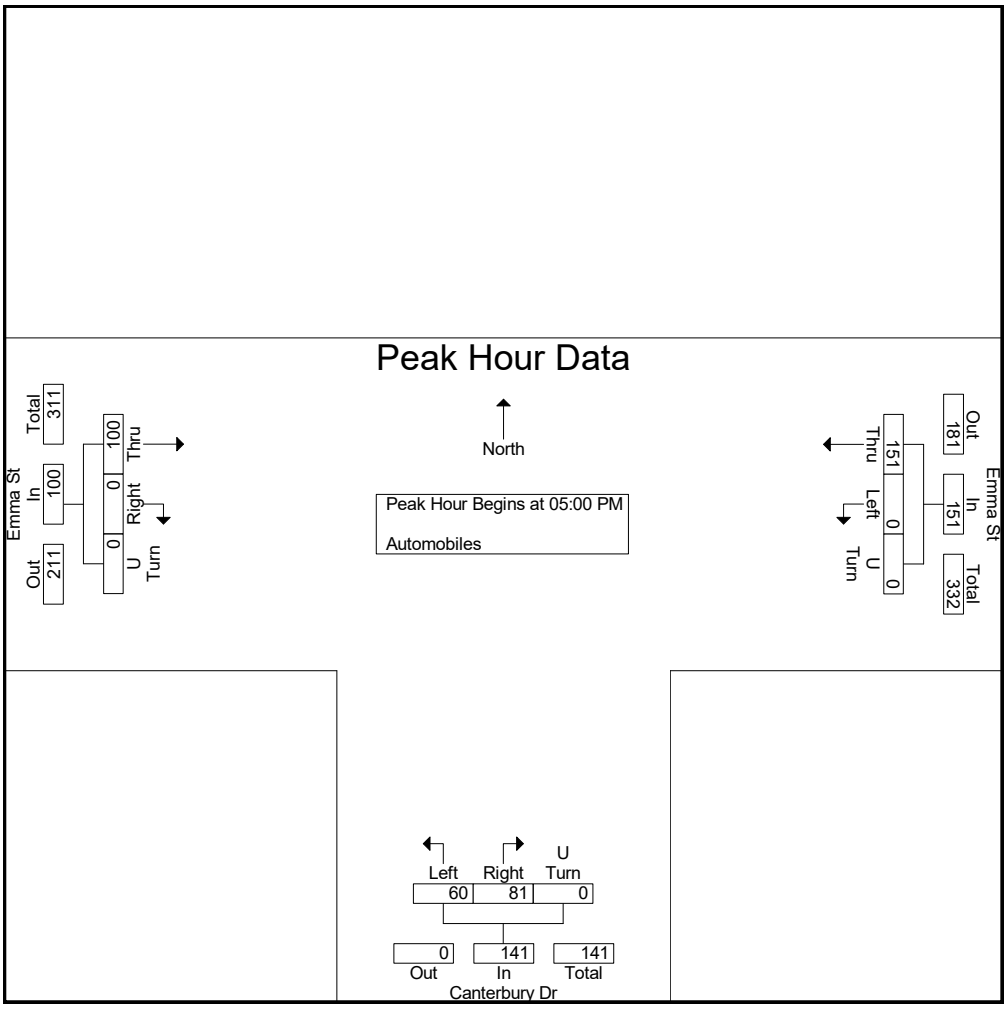


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and Canterbury Dr

File Name : Emma and Canterbury PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Emma St Eastbound				Emma St Westbound				Canterbury Dr Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	24	0	0	24	0	19	0	19	4	10	0	14	57
05:15 PM	**31**	0	0	**31**	0	31	0	31	13	18	0	31	93
05:30 PM	29	0	0	29	0	32	0	32	**26**	**42**	0	**68**	**129**
05:45 PM	16	0	0	16	0	**69**	0	**69**	17	11	0	28	113
Total Volume	100	0	0	100	0	151	0	151	60	81	0	141	392
% App. Total	100	0	0		0	100	0		42.6	57.4	0		
PHF	.806	.000	.000	.806	.000	.547	.000	.547	.577	.482	.000	.518	.760



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

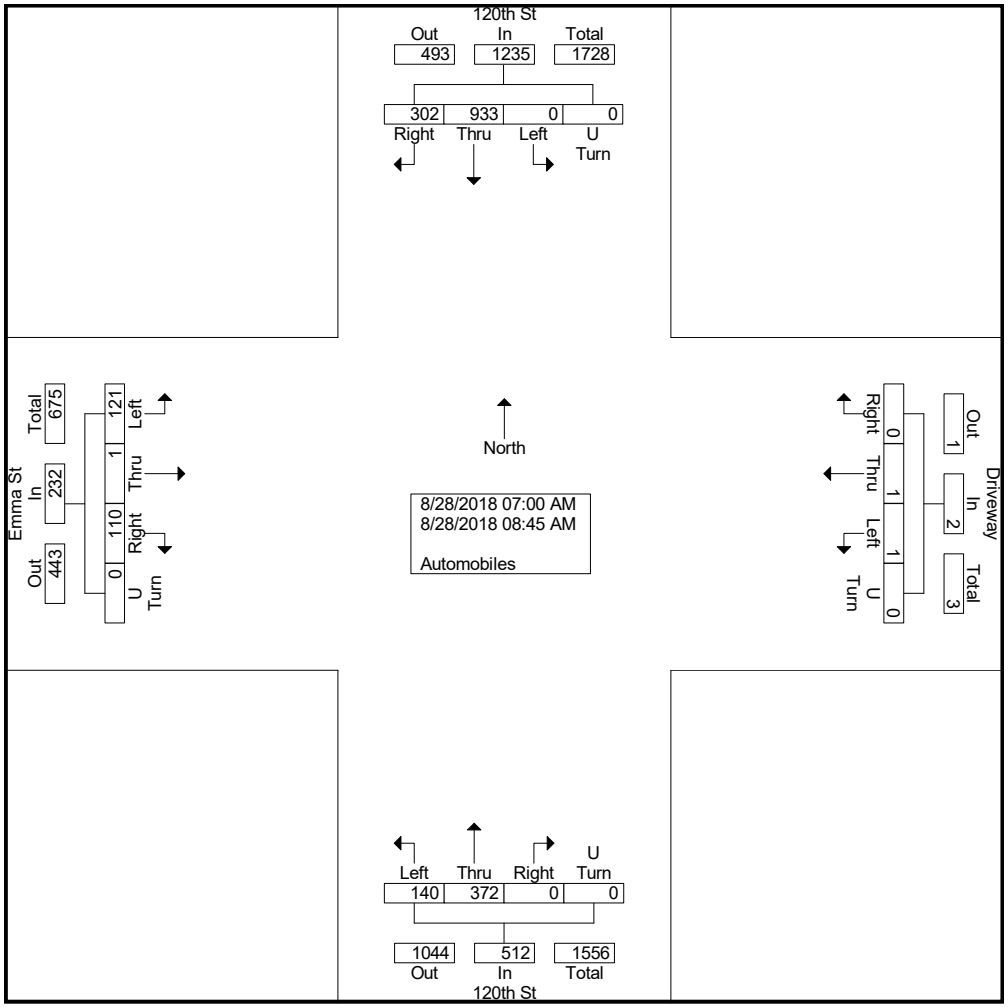
Groups Printed- Automobiles

	Emma St Eastbound					Driveway Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	4	0	3	0	7	0	0	0	0	0	5	36	0	0	41	0	103	18	0	121	169
07:15 AM	5	0	7	0	12	0	0	0	0	0	17	59	0	0	76	0	131	43	0	174	262
07:30 AM	22	0	24	0	46	1	0	0	0	1	57	47	0	0	104	0	94	127	0	221	372
07:45 AM	35	0	40	0	75	0	1	0	0	1	37	67	0	0	104	0	134	43	0	177	357
Total	66	0	74	0	140	1	1	0	0	2	116	209	0	0	325	0	462	231	0	693	1160
08:00 AM	34	0	21	0	55	0	0	0	0	0	10	47	0	0	57	0	121	36	0	157	269
08:15 AM	5	0	7	0	12	0	0	0	0	0	6	38	0	0	44	0	131	10	0	141	197
08:30 AM	5	1	6	0	12	0	0	0	0	0	4	40	0	0	44	0	107	15	0	122	178
08:45 AM	11	0	2	0	13	0	0	0	0	0	4	38	0	0	42	0	112	10	0	122	177
Total	55	1	36	0	92	0	0	0	0	0	24	163	0	0	187	0	471	71	0	542	821
Grand Total	121	1	110	0	232	1	1	0	0	2	140	372	0	0	512	0	933	302	0	1235	1981
Apprch %	52.2	0.4	47.4	0		50	50	0	0		27.3	72.7	0	0		0	75.5	24.5	0		
Total %	6.1	0.1	5.6	0	11.7	0.1	0.1	0	0	0.1	7.1	18.8	0	0	25.8	0	47.1	15.2	0	62.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

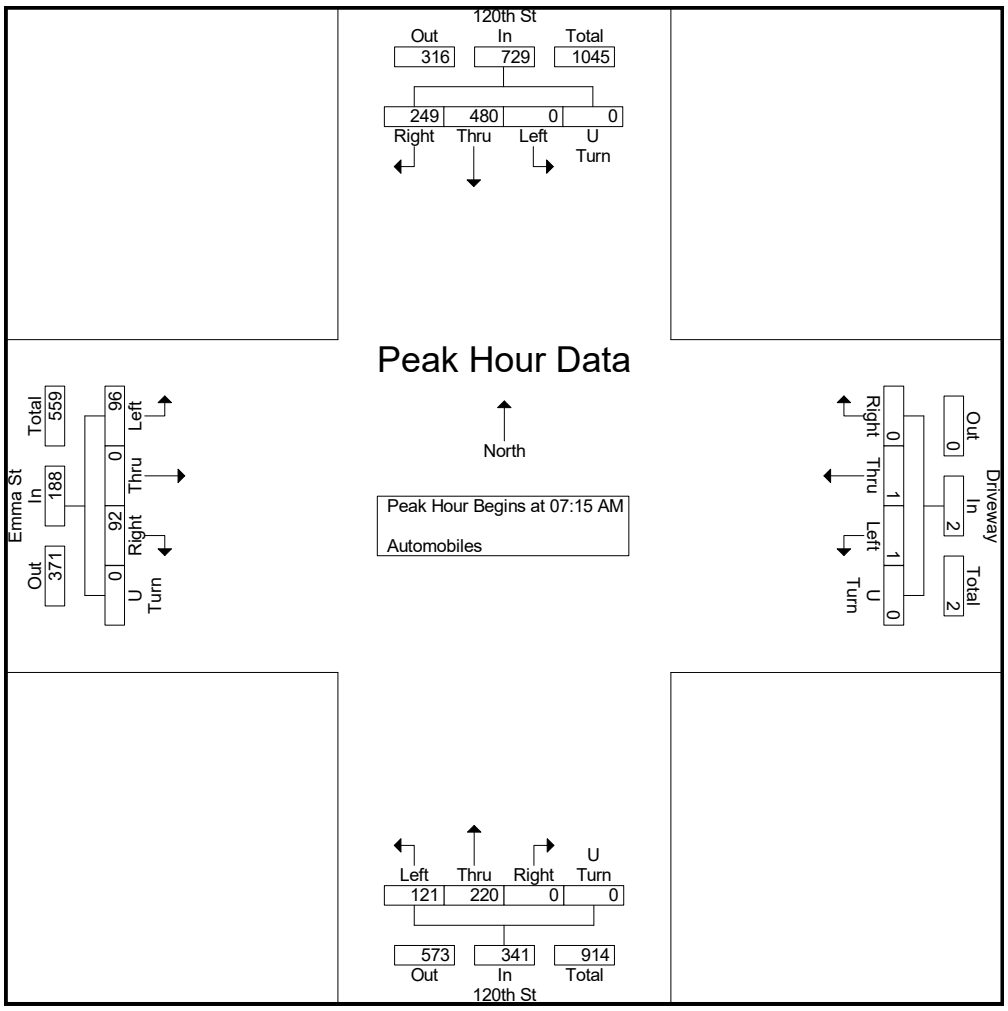


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Emma St and 120th St

File Name : Emma and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Emma St Eastbound					Driveway Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	5	0	7	0	12	0	0	0	0	0	17	59	0	0	76	0	131	43	0	174	262
07:30 AM	22	0	24	0	46	**1**	0	0	0	**1**	**57**	47	0	0	**104**	0	94	**127**	0	**221**	**372**
07:45 AM	**35**	0	**40**	0	**75**	0	**1**	0	0	1	37	**67**	0	0	104	0	**134**	43	0	177	357
08:00 AM	34	0	21	0	55	0	0	0	0	0	10	47	0	0	57	0	121	36	0	157	269
Total Volume	96	0	92	0	188	1	1	0	0	2	121	220	0	0	341	0	480	249	0	729	1260
% App. Total	51.1	0	48.9	0		50	50	0	0		35.5	64.5	0	0		0	65.8	34.2	0		
PHF	.686	.000	.575	.000	.627	.250	.250	.000	.000	.500	.531	.821	.000	.000	.820	.000	.896	.490	.000	.825	.847



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

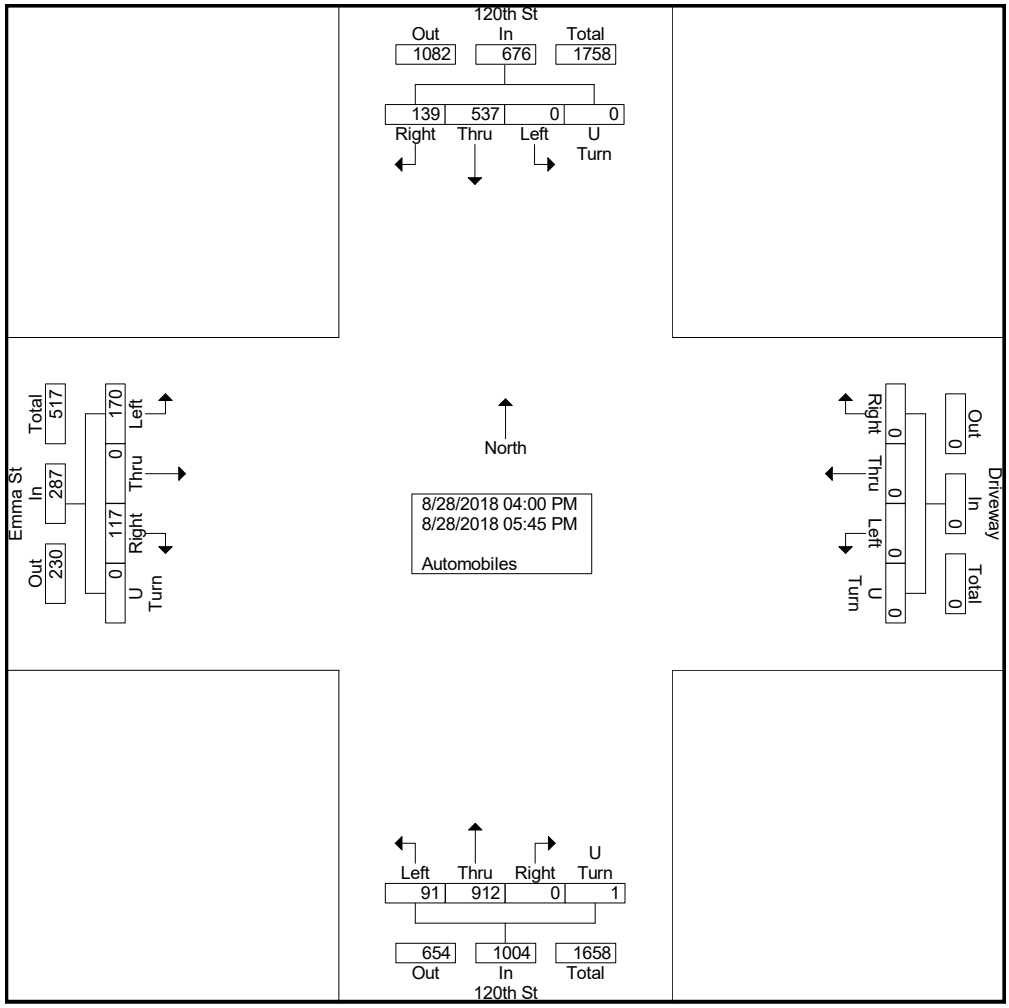
Groups Printed- Automobiles

	Emma St Eastbound					Driveway Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	21	0	8	0	29	0	0	0	0	0	6	103	0	0	109	0	77	15	0	92	230
04:15 PM	20	0	9	0	29	0	0	0	0	0	12	113	0	0	125	0	65	10	0	75	229
04:30 PM	12	0	12	0	24	0	0	0	0	0	13	126	0	0	139	0	62	4	0	66	229
04:45 PM	14	0	7	0	21	0	0	0	0	0	15	118	0	0	133	0	78	13	0	91	245
Total	67	0	36	0	103	0	0	0	0	0	46	460	0	0	506	0	282	42	0	324	933
05:00 PM	13	0	13	0	26	0	0	0	0	0	8	126	0	1	135	0	58	13	0	71	232
05:15 PM	33	0	15	0	48	0	0	0	0	0	5	134	0	0	139	0	63	25	0	88	275
05:30 PM	35	0	36	0	71	0	0	0	0	0	9	93	0	0	102	0	63	22	0	85	258
05:45 PM	22	0	17	0	39	0	0	0	0	0	23	99	0	0	122	0	71	37	0	108	269
Total	103	0	81	0	184	0	0	0	0	0	45	452	0	1	498	0	255	97	0	352	1034
Grand Total	170	0	117	0	287	0	0	0	0	0	91	912	0	1	1004	0	537	139	0	676	1967
Apprch %	59.2	0	40.8	0		0	0	0	0		9.1	90.8	0	0.1		0	79.4	20.6	0		
Total %	8.6	0	5.9	0	14.6	0	0	0	0	0	4.6	46.4	0	0.1	51	0	27.3	7.1	0	34.4	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

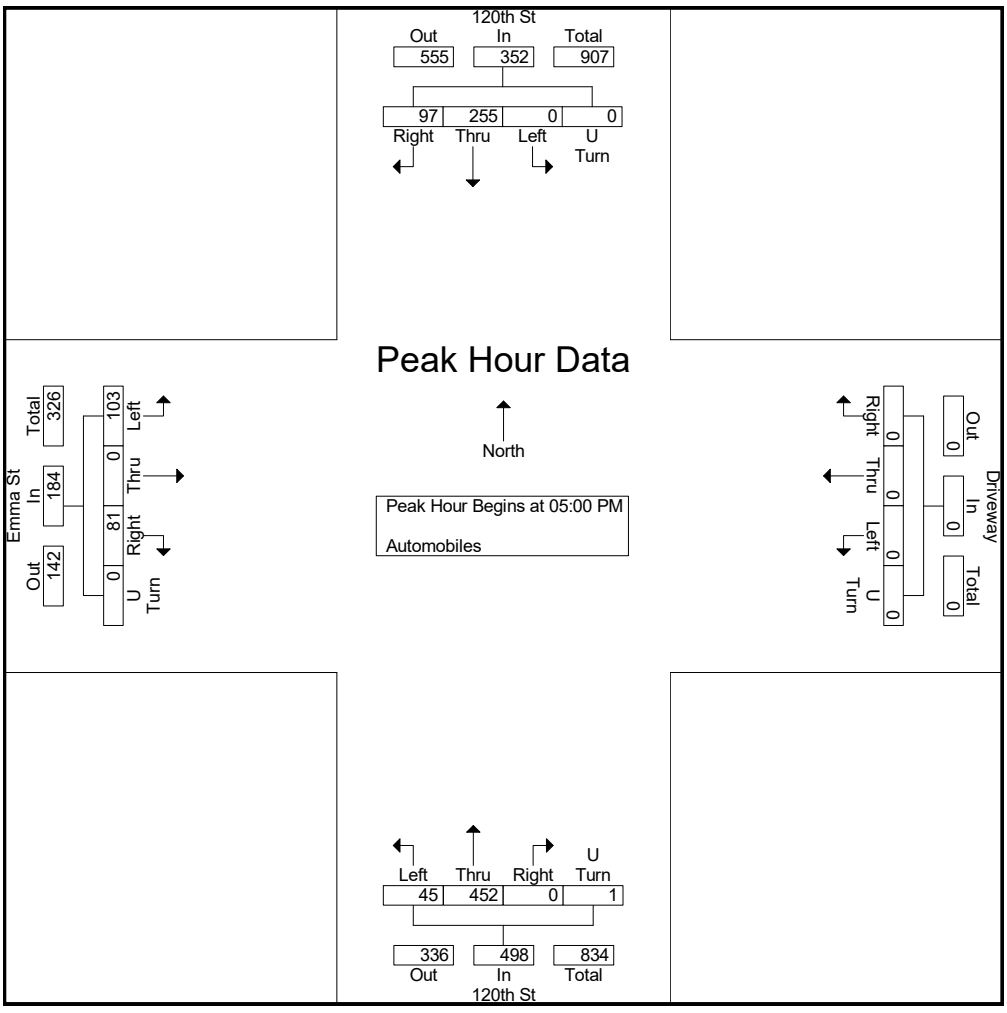


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Emma St and 120th St

File Name : Emma and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Emma St Eastbound					Driveway Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	0	13	0	26	0	0	0	0	0	8	126	0	**1**	135	0	58	13	0	71	232
05:15 PM	33	0	15	0	48	0	0	0	0	0	5	**134**	0	0	**139**	0	63	25	0	88	**275**
05:30 PM	**35**	0	**36**	0	**71**	0	0	0	0	0	9	93	0	0	102	0	63	22	0	85	258
05:45 PM	22	0	17	0	39	0	0	0	0	0	**23**	99	0	0	122	0	**71**	**37**	0	**108**	269
Total Volume	103	0	81	0	184	0	0	0	0	0	45	452	0	1	498	0	255	97	0	352	1034
% App. Total	56	0	44	0		0	0	0	0		9	90.8	0	0.2		0	72.4	27.6	0		
PHF	.736	.000	.563	.000	.648	.000	.000	.000	.000	.000	.489	.843	.000	.250	.896	.000	.898	.655	.000	.815	.940



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

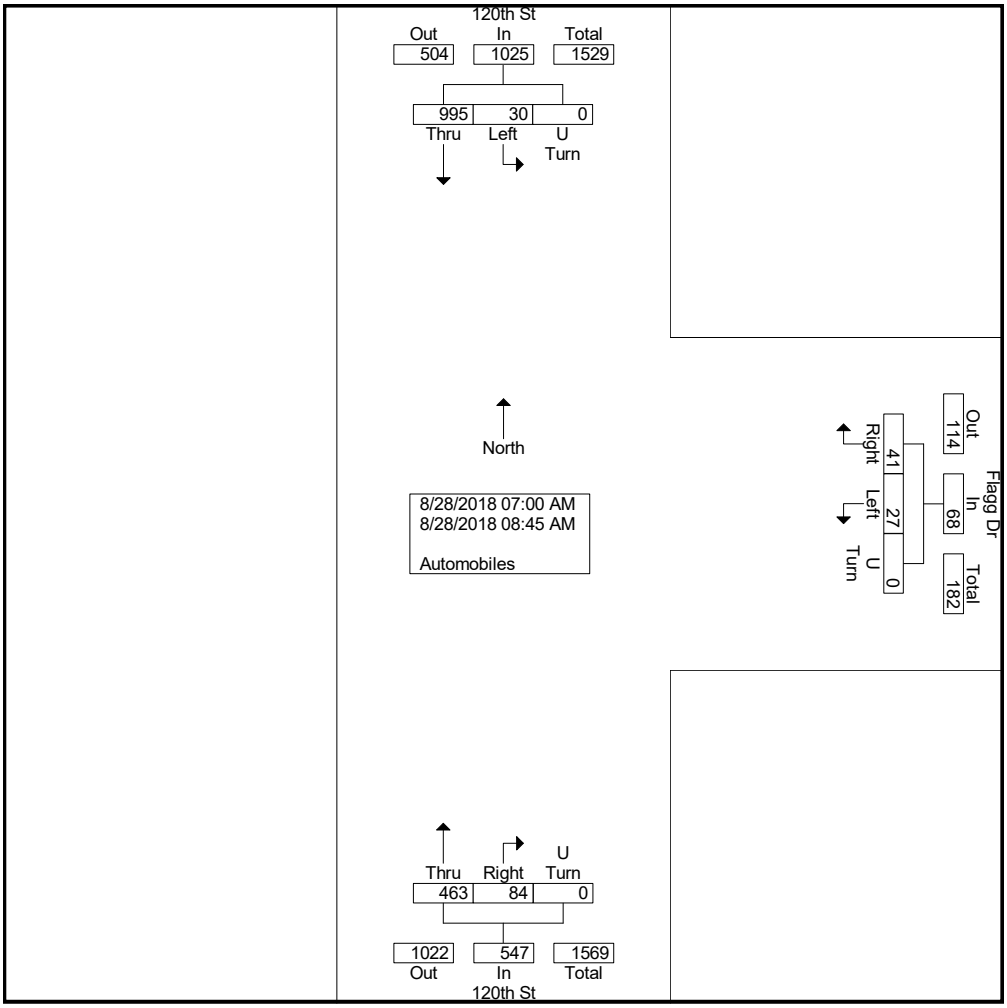
Groups Printed- Automobiles

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
07:00 AM	1	2	0	3	46	8	0	54	0	103	0	103	160
07:15 AM	1	2	0	3	71	8	0	79	6	125	0	131	213
07:30 AM	3	3	0	6	87	19	0	106	8	119	0	127	239
07:45 AM	9	24	0	33	85	14	0	99	8	163	0	171	303
Total	14	31	0	45	289	49	0	338	22	510	0	532	915
08:00 AM	6	4	0	10	50	9	0	59	4	134	0	138	207
08:15 AM	3	4	0	7	40	9	0	49	2	133	0	135	191
08:30 AM	2	1	0	3	41	8	0	49	0	112	0	112	164
08:45 AM	2	1	0	3	43	9	0	52	2	106	0	108	163
Total	13	10	0	23	174	35	0	209	8	485	0	493	725
Grand Total	27	41	0	68	463	84	0	547	30	995	0	1025	1640
Apprch %	39.7	60.3	0		84.6	15.4	0		2.9	97.1	0		
Total %	1.6	2.5	0	4.1	28.2	5.1	0	33.4	1.8	60.7	0	62.5	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

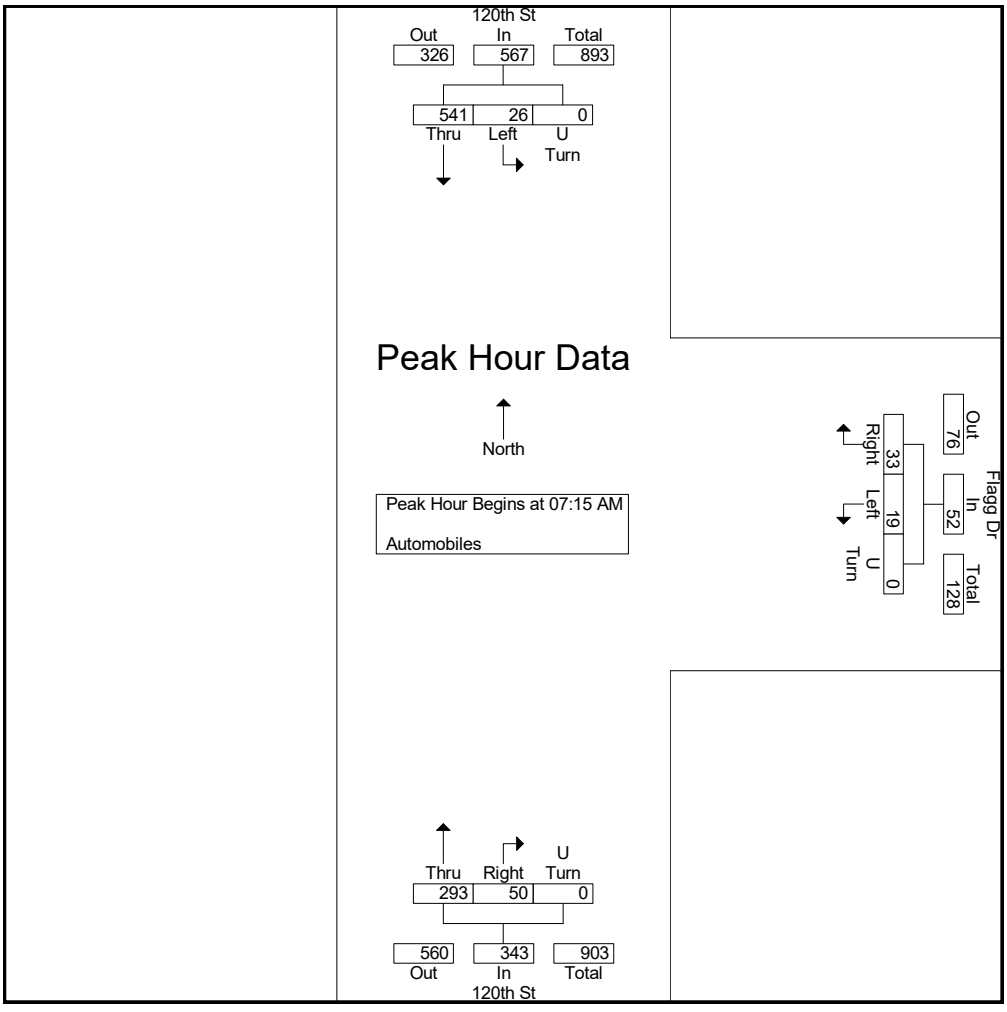


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	1	2	0	3	71	8	0	79	6	125	0	131	213
07:30 AM	3	3	0	6	**87**	**19**	0	**106**	**8**	119	0	127	239
07:45 AM	**9**	**24**	0	**33**	85	14	0	99	8	**163**	0	**171**	**303**
08:00 AM	6	4	0	10	50	9	0	59	4	134	0	138	207
Total Volume	19	33	0	52	293	50	0	343	26	541	0	567	962
% App. Total	36.5	63.5	0		85.4	14.6	0		4.6	95.4	0		
PHF	.528	.344	.000	.394	.842	.658	.000	.809	.813	.830	.000	.829	.794



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

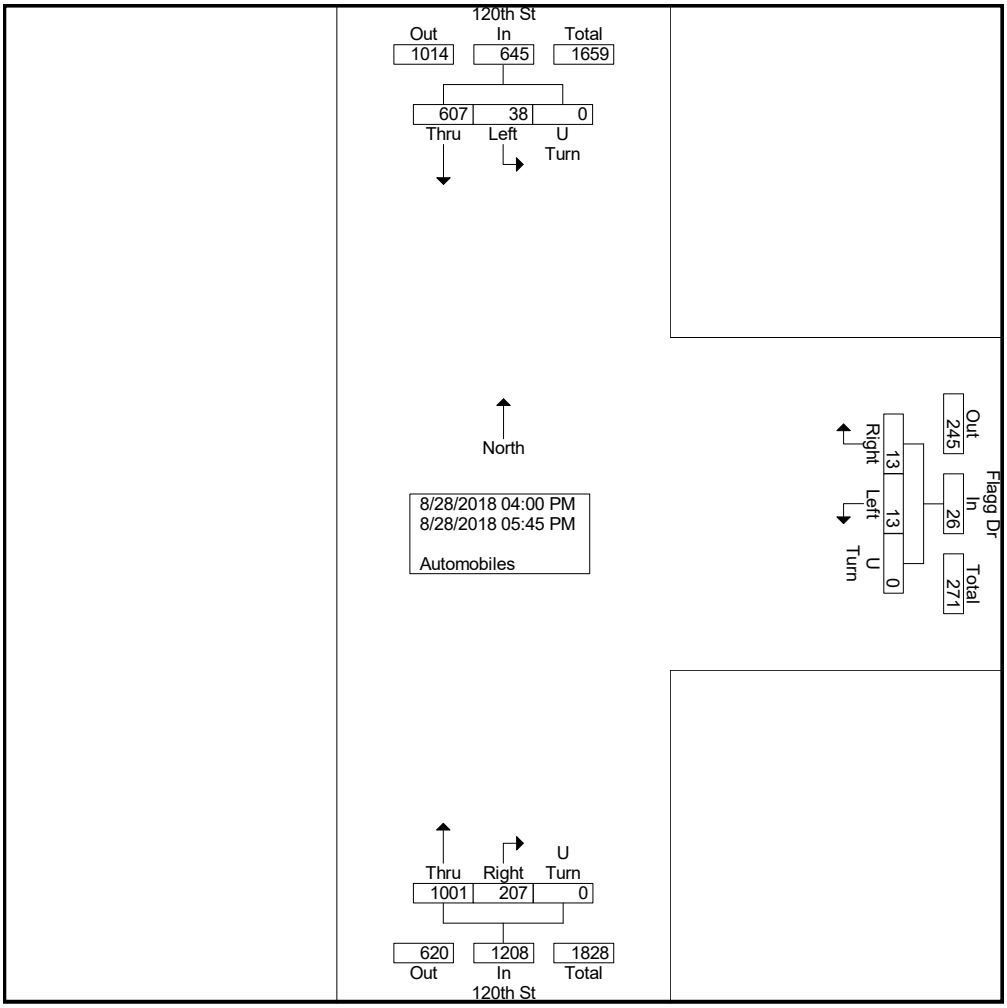
Groups Printed- Automobiles

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
04:00 PM	0	1	0	1	114	20	0	134	7	73	0	80	215
04:15 PM	2	1	0	3	128	23	0	151	3	72	0	75	229
04:30 PM	3	2	0	5	139	32	0	171	1	77	0	78	254
04:45 PM	3	1	0	4	130	25	0	155	3	78	0	81	240
Total	8	5	0	13	511	100	0	611	14	300	0	314	938
05:00 PM	0	0	0	0	132	36	0	168	3	71	0	74	242
05:15 PM	0	2	0	2	128	34	0	162	10	66	0	76	240
05:30 PM	4	4	0	8	102	19	0	121	6	92	0	98	227
05:45 PM	1	2	0	3	128	18	0	146	5	78	0	83	232
Total	5	8	0	13	490	107	0	597	24	307	0	331	941
Grand Total	13	13	0	26	1001	207	0	1208	38	607	0	645	1879
Apprch %	50	50	0		82.9	17.1	0		5.9	94.1	0		
Total %	0.7	0.7	0	1.4	53.3	11	0	64.3	2	32.3	0	34.3	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

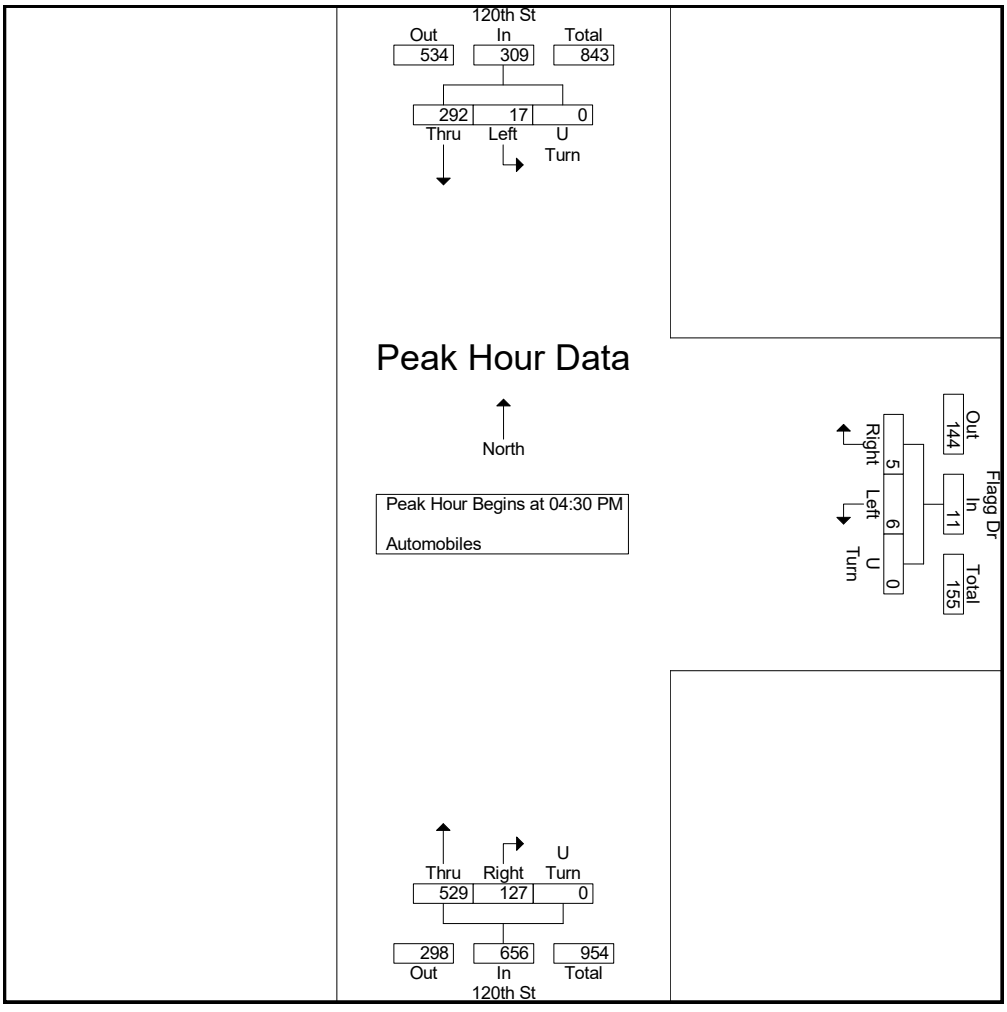


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
Flagg Dr and 120th St

File Name : Flagg and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	Flagg Dr Westbound				120th St Northbound				120th St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	**3**	**2**	0	**5**	**139**	32	0	**171**	1	77	0	78	**254**
04:45 PM	3	1	0	4	130	25	0	155	3	**78**	0	**81**	240
05:00 PM	0	0	0	0	132	**36**	0	168	3	71	0	74	242
05:15 PM	0	2	0	2	128	34	0	162	**10**	66	0	76	240
Total Volume	6	5	0	11	529	127	0	656	17	292	0	309	976
% App. Total	54.5	45.5	0		80.6	19.4	0		5.5	94.5	0		
PHF	.500	.625	.000	.550	.951	.882	.000	.959	.425	.936	.000	.954	.961



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

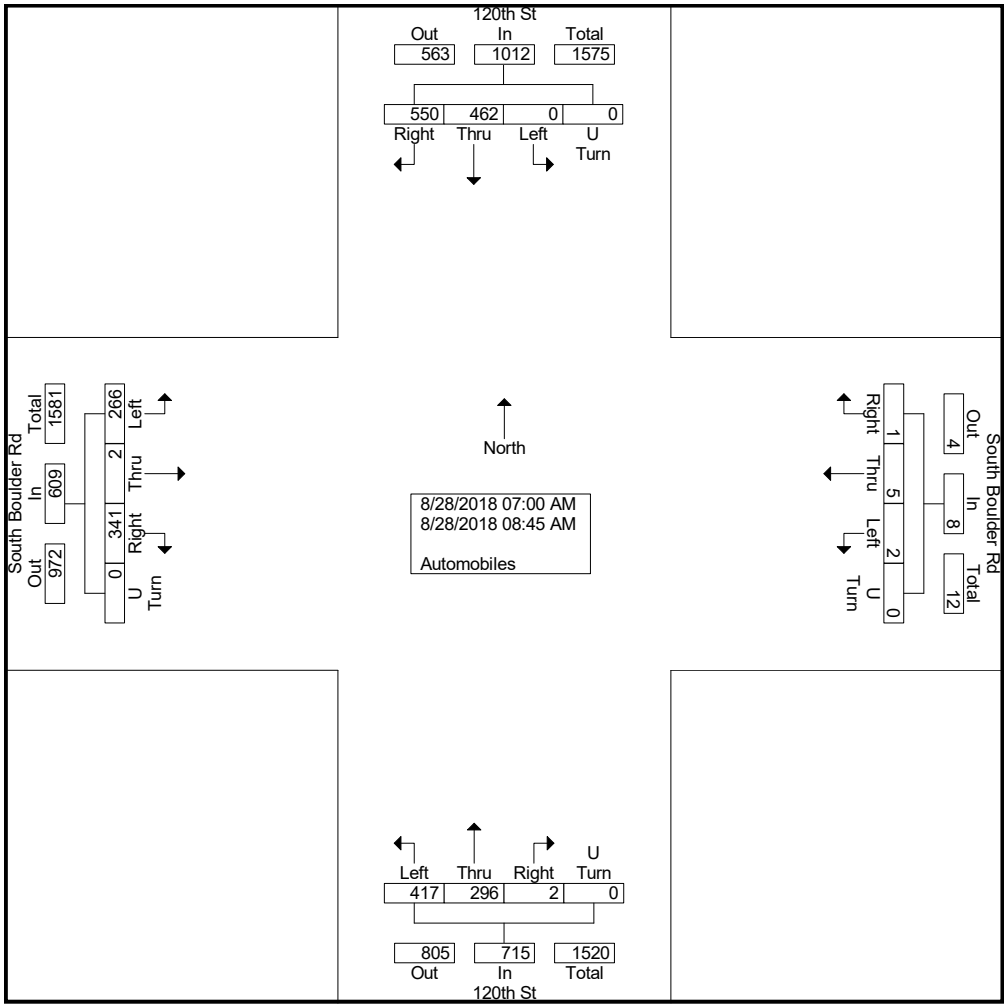
Groups Printed- Automobiles

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	26	1	26	0	53	0	0	0	0	0	43	34	0	0	77	0	44	58	0	102	232
07:15 AM	24	0	42	0	66	0	0	0	0	0	47	63	0	0	110	0	52	75	0	127	303
07:30 AM	50	0	35	0	85	0	1	0	0	1	68	64	0	0	132	0	61	54	0	115	333
07:45 AM	48	0	56	0	104	0	3	1	0	4	62	45	0	0	107	0	63	66	0	129	344
Total	148	1	159	0	308	0	4	1	0	5	220	206	0	0	426	0	220	253	0	473	1212
08:00 AM	34	0	39	0	73	0	0	0	0	0	55	21	0	0	76	0	82	76	0	158	307
08:15 AM	26	0	47	0	73	2	0	0	0	2	48	19	1	0	68	0	58	86	0	144	287
08:30 AM	32	0	55	0	87	0	1	0	0	1	45	21	0	0	66	0	58	72	0	130	284
08:45 AM	26	1	41	0	68	0	0	0	0	0	49	29	1	0	79	0	44	63	0	107	254
Total	118	1	182	0	301	2	1	0	0	3	197	90	2	0	289	0	242	297	0	539	1132
Grand Total	266	2	341	0	609	2	5	1	0	8	417	296	2	0	715	0	462	550	0	1012	2344
Apprch %	43.7	0.3	56	0		25	62.5	12.5	0		58.3	41.4	0.3	0		0	45.7	54.3	0		
Total %	11.3	0.1	14.5	0	26	0.1	0.2	0	0	0.3	17.8	12.6	0.1	0	30.5	0	19.7	23.5	0	43.2	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

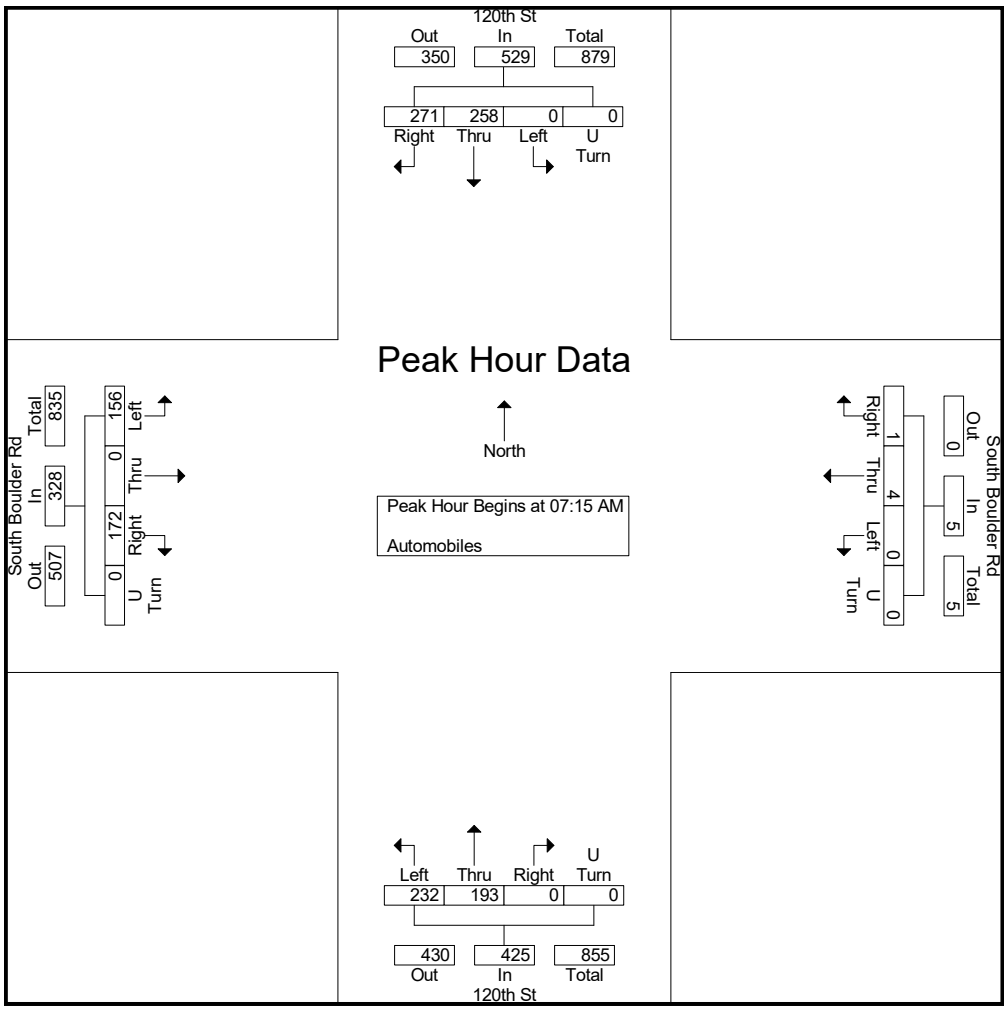


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
AM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th AM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	24	0	42	0	66	0	0	0	0	0	47	63	0	0	110	0	52	75	0	127	303
07:30 AM	**50**	0	35	0	85	0	1	0	0	1	**68**	**64**	0	0	**132**	0	61	54	0	115	333
07:45 AM	48	0	**56**	0	**104**	0	**3**	**1**	0	**4**	62	45	0	0	107	0	63	66	0	129	**344**
08:00 AM	34	0	39	0	73	0	0	0	0	0	55	21	0	0	76	0	**82**	**76**	0	**158**	307
Total Volume	156	0	172	0	328	0	4	1	0	5	232	193	0	0	425	0	258	271	0	529	1287
% App. Total	47.6	0	52.4	0		0	80	20	0		54.6	45.4	0	0		0	48.8	51.2	0		
PHF	.780	.000	.768	.000	.788	.000	.333	.250	.000	.313	.853	.754	.000	.000	.805	.000	.787	.891	.000	.837	.935



RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 1

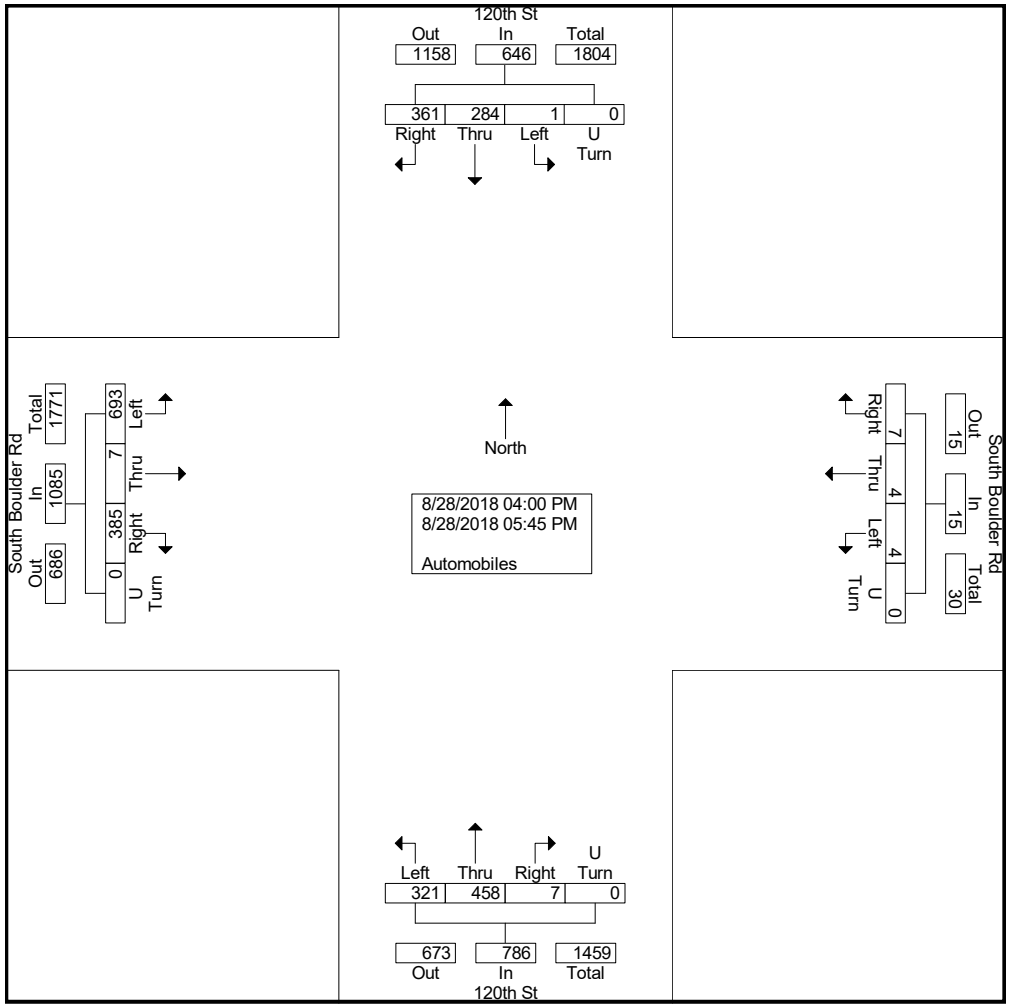
Groups Printed- Automobiles

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	77	2	50	0	129	0	0	3	0	3	36	52	3	0	91	0	34	42	0	76	299
04:15 PM	88	2	48	0	138	1	1	3	0	5	53	56	1	0	110	0	33	47	0	80	333
04:30 PM	81	1	51	0	133	1	1	1	0	3	37	74	3	0	114	1	37	46	0	84	334
04:45 PM	89	0	48	0	137	0	1	0	0	1	45	57	0	0	102	0	37	44	0	81	321
Total	335	5	197	0	537	2	3	7	0	12	171	239	7	0	417	1	141	179	0	321	1287
05:00 PM	95	0	51	0	146	0	1	0	0	1	39	69	0	0	108	0	31	41	0	72	327
05:15 PM	108	0	41	0	149	2	0	0	0	2	30	50	0	0	80	0	32	42	0	74	305
05:30 PM	68	0	55	0	123	0	0	0	0	0	44	46	0	0	90	0	56	42	0	98	311
05:45 PM	87	2	41	0	130	0	0	0	0	0	37	54	0	0	91	0	24	57	0	81	302
Total	358	2	188	0	548	2	1	0	0	3	150	219	0	0	369	0	143	182	0	325	1245
Grand Total	693	7	385	0	1085	4	4	7	0	15	321	458	7	0	786	1	284	361	0	646	2532
Apprch %	63.9	0.6	35.5	0		26.7	26.7	46.7	0		40.8	58.3	0.9	0		0.2	44	55.9	0		
Total %	27.4	0.3	15.2	0	42.9	0.2	0.2	0.3	0	0.6	12.7	18.1	0.3	0	31	0	11.2	14.3	0	25.5	

RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 2

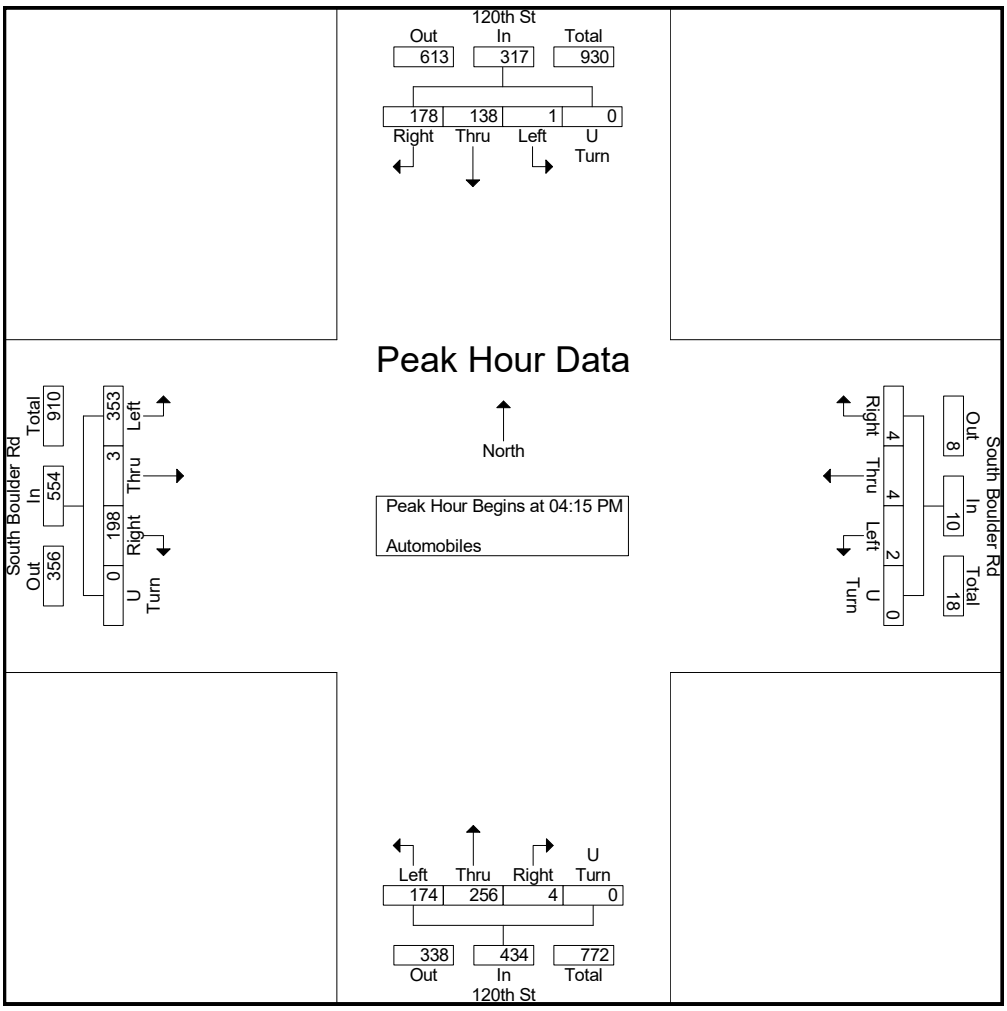


RDC
Ridgeview Data Collection

Lafayette, CO
BCHA - Emma St
PM Peak
South Boulder Rd and 120th St

File Name : S Boulder Rd and 120th PM
Site Code : IPO 369
Start Date : 8/28/2018
Page No : 3

	South Boulder Rd Eastbound					South Boulder Rd Westbound					120th St Northbound					120th St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	88	**2**	48	0	138	**1**	**1**	**3**	0	**5**	**53**	56	1	0	110	0	33	**47**	0	80	333
04:30 PM	81	1	**51**	0	133	1	1	1	0	3	37	**74**	**3**	0	**114**	**1**	**37**	46	0	**84**	**334**
04:45 PM	89	0	48	0	137	0	1	0	0	1	45	57	0	0	102	0	37	44	0	81	321
05:00 PM	**95**	0	51	0	**146**	0	1	0	0	1	39	69	0	0	108	0	31	41	0	72	327
Total Volume	353	3	198	0	554	2	4	4	0	10	174	256	4	0	434	1	138	178	0	317	1315
% App. Total	63.7	0.5	35.7	0		20	40	40	0		40.1	59	0.9	0		0.3	43.5	56.2	0		
PHF	.929	.375	.971	.000	.949	.500	1.00	.333	.000	.500	.821	.865	.333	.000	.952	.250	.932	.947	.000	.943	.984



APPENDIX B

CDOT Traffic Projections

Willoughby Corner CDOT Traffic Projection

ROUTE	REFPT	ENDREFPT	LENGTH	YR20FACTOR	DHV	LOCATION
007D	62.524	63.217	0.85	1.38	9.5	ON SH 7 BASELINE RD E/O PUBLIC RD LAFAYETTE
007D	63.217	64.144	0.742	1.38	9	ON SH 7 BASELINE RD W/O E COUNTY LINE RD CR 901 LAFAYETTE

APPENDIX C

Trip Generation Worksheets

Willoughby Corner Trip Generation Summary

Land Use	Quantity	Units	Vehicle Trips						
			Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
Single Family Housing (ITE 210)	30	Units	344	7	19	26	20	12	32
Multifamily Housing (Low-Rise) - (ITE 220)	130	Units	942	14	47	61	47	28	75
Multifamily Housing (Mid-Rise) - (ITE 221)	120	Units	652	11	30	41	32	21	53
Senior Adult Housing Attached (ITE 252)	120	Units	444	8	16	24	20	11	31
Total Site Generated Trips			2,382	40	112	152	119	72	191

Kimley»Horn

Project	Willoughby Corners				
Subject	Trip Generation for Single-Family Detached Housing				
Designed by	TES	*Date*	March 17, 2020	*Job No.*	096559001 PS
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independant Variable - Dwelling Units (X)

X = 30
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)

Average Weekday
(T) = 0.71 (X) + 4.80
(T) = 0.71 * (30) + 4.80

Directional Distribution: 25% ent. 75% exit.
T = 26 Average Vehicle Trip Ends
7 entering 20 exiting

7 + 19 = 26

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 4)

Average Weekday
Ln(T) = 0.96 Ln(X) + 0.20
Ln(T) = 0.96 * Ln(30) + 0.20

Directional Distribution: 63% ent. 37% exit.
T = 32 Average Vehicle Trip Ends
20 entering 12 exiting

20 + 12 = 32

Peak Hour of Generator, Saturday (200 Series Page 8)

Average Saturday
(T) = 0.84 (X) + 17.99
(T) = 0.84 * (30) + 17.99

Directional Distribution: 54% ent. 46% exit.
T = 43 Average Vehicle Trip Ends
23 entering 20 exiting

23 + 20 = 43

Weekday (200 Series Page 2)

Average Weekday
Ln(T) = 0.92 Ln(X) + 2.71
Ln(T) = 0.92 * Ln(30) + 2.71

Directional Distribution: 50% entering, 50% exiting
T = 344 Average Vehicle Trip Ends
172 entering 172 exiting

172 + 172 = 344

Kimley»Horn

Project	Willoughby Corner				
Subject	Trip Generation for Multifamily Housing (Low-Rise)				
Designed by	TES	*Date*	March 17, 2020	*Job No.*	096559001 PS
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Low-Rise) (220)

Independant Variable - Dwelling Units (X)

X = 130
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 32)

Ln(T) = 0.95 Ln(X) - 0.51
Ln(T) = 0.95 * Ln(130.0) - 0.51

Directional Distribution: 23% ent. 77% exit.
T = 61 Average Vehicle Trip Ends
14 entering 47 exiting

14 + 47 = 61

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 33)

Ln(T) = 0.89 Ln(X) - 0.02
Ln(T) = 0.89 * Ln(130.0) - 0.02

Directional Distribution: 63% ent. 37% exit.
T = 75 Average Vehicle Trip Ends
47 entering 28 exiting

47 + 28 = 75

Weekday (Series 200 Page 31)

(T) = 7.56*(X) - 40.86
(T) = 7.56 * 130 - 40.86

Directional Distribution: 50% ent. 50% exit.
T = 942 Average Vehicle Trip Ends
471 entering 471 exiting

471 + 471 = 942

Peak Hour of Generator, Saturday (Series 200 Page 37)

(T) = 1.08*(X) - 33.24
(T) = 1.08 * 130 - 33.24

Directional Distribution: 50% ent. 50% exit.
T = 107 Average Vehicle Trip Ends
54 entering 54 exiting

54 + 54 = not ok

Kimley»Horn

Project	Willoughby Corner				
Subject	Trip Generation for Multifamily Housing (Mid-Rise)				
Designed by	CAK	*Date*	November 07, 2018	*Job No.*	096559001 PS
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independant Variable - Dwelling Units (X)

X = 120
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

Directional Distribution: 26% ent. 74% exit.

Ln(T) = 0.98 Ln(X) - 0.98
Ln(T) = 0.98 * Ln(120.0) - 0.98

T = 41 Average Vehicle Trip Ends
11 entering 30 exiting

11 + 30 = 41

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

Directional Distribution: 61% ent. 39% exit.

Ln(T) = 0.96 Ln(X) - 0.63
Ln(T) = 0.96 * Ln(120.0) - 0.63

T = 53 Average Vehicle Trip Ends
32 entering 21 exiting

32 + 21 = 53

Weekday (Series 200 Page 73)

Directional Distribution: 50% ent. 50% exit.

(T) = 5.45*(X) - 1.75
(T) = 5.45 * 120 - 1.75

T = 652 Average Vehicle Trip Ends
326 entering 326 exiting

326 + 326 = 652

Peak Hour of Generator, Saturday (Series 200 Page 79)

Directional Distribution: 49% ent. 51% exit.

(T) = 0.42*(X) + 6.73
(T) = 0.42 * 120 + 6.73

T = 57 Average Vehicle Trip Ends
28 entering 29 exiting

28 + 29 = 57

Kimley»Horn

Project	Willoughby Corner				
Subject	Trip Generation for Senior Adult Housing - Detached				
Designed by		*Date*	November 07, 2018	*Job No.*	096559001 PS
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Senior Adult Housing - Attached (252)

Independant Variable - Dwelling Units (X)

X = 120
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 354)

Average Weekday
(T) = 0.20(X)
(T) = 0.20 * (120.0)

Directional Distribution: 35% entering, 65% exiting
T = 24 Average Vehicle Trip Ends
8 entering 16 exiting

8 + 16 = 24

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 355)

Average Weekday
(T) = 0.26(X)
(T) = 0.26 * (120.0)

Directional Distribution: 55% entering, 45% exiting
T = 31 Average Vehicle Trip Ends
20 entering 11 exiting

20 + 11 = 31

Weekday (200 Series Page 353)

Average Weekday
(T) = 3.70(X)
(T) = 3.70 * (120.0)

Directional Distribution: 50% entering, 50% exiting
T = 444 Average Vehicle Trip Ends
222 entering 222 exiting

222 + 222 = 444

APPENDIX D

Intersection Analysis Worksheets

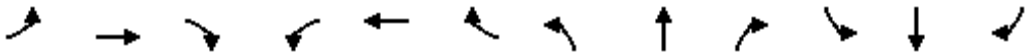
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	247	19	281	494	165	24	75	128	79	192	47
Future Volume (veh/h)	15	247	19	281	494	165	24	75	128	79	192	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	301	28	331	574	157	36	93	83	92	229	72
Peak Hour Factor	0.75	0.82	0.68	0.85	0.86	0.86	0.67	0.81	0.82	0.86	0.84	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	608	57	525	670	183	72	187	223	95	237	74
Arrive On Green	0.02	0.36	0.36	0.13	0.47	0.47	0.14	0.14	0.14	0.23	0.23	0.23
Sat Flow, veh/h	1781	1685	157	1781	1414	387	515	1330	1585	419	1043	328
Grp Volume(v), veh/h	20	0	329	331	0	731	129	0	83	393	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	0	1801	1845	0	1585	1790	0	0
Q Serve(g_s), s	0.9	0.0	18.1	14.6	0.0	46.7	8.4	0.0	6.2	28.3	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	18.1	14.6	0.0	46.7	8.4	0.0	6.2	28.3	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.21	0.28		1.00	0.23		0.18
Lane Grp Cap(c), veh/h	174	0	665	525	0	854	260	0	223	406	0	0
V/C Ratio(X)	0.12	0.00	0.49	0.63	0.00	0.86	0.50	0.00	0.37	0.97	0.00	0.00
Avail Cap(c_a), veh/h	208	0	665	644	0	854	260	0	223	406	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.3	0.0	32.3	21.5	0.0	30.3	51.6	0.0	50.6	49.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	2.6	1.4	0.0	10.8	6.6	0.0	4.7	36.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.6	6.2	0.0	22.4	4.4	0.0	2.8	16.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	0.0	34.9	22.9	0.0	41.0	58.2	0.0	55.3	85.8	0.0	0.0
LnGrp LOS	C	A	C	C	A	D	E	A	E	F	A	A
Approach Vol, veh/h		349			1062			212			393	
Approach Delay, s/veh		34.6			35.4			57.1			85.8	
Approach LOS		C			D			E			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.8	21.8	51.4		34.0	7.1	66.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.3	25.9	38.3		29.5	5.1	59.1				
Max Q Clear Time (g_c+I1), s		10.4	16.6	20.1		30.3	2.9	48.7				
Green Ext Time (p_c), s		0.5	0.7	1.8		0.0	0.0	3.8				

Intersection Summary												
HCM 6th Ctrl Delay			47.4									
HCM 6th LOS			D									

Notes

User approved pedestrian interval to be less than phase max green.



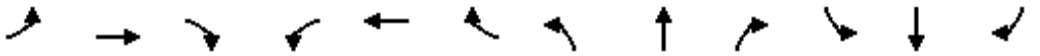
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	624	40	172	366	102	25	173	333	232	109	37
Future Volume (veh/h)	70	624	40	172	366	102	25	173	333	232	109	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	650	48	179	398	99	36	192	170	252	116	56
Peak Hour Factor	0.83	0.96	0.83	0.96	0.92	0.73	0.69	0.90	0.90	0.92	0.94	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	609	45	195	546	136	53	281	285	229	105	51
Arrive On Green	0.05	0.35	0.35	0.07	0.38	0.38	0.18	0.18	0.18	0.22	0.22	0.22
Sat Flow, veh/h	1781	1720	127	1781	1446	360	293	1563	1585	1055	486	234
Grp Volume(v), veh/h	84	0	698	179	0	497	228	0	170	424	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1847	1781	0	1806	1856	0	1585	1775	0	0
Q Serve(g_s), s	3.0	0.0	35.4	6.4	0.0	23.6	11.5	0.0	9.9	21.7	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	35.4	6.4	0.0	23.6	11.5	0.0	9.9	21.7	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.20	0.16		1.00	0.59		0.13
Lane Grp Cap(c), veh/h	280	0	654	195	0	682	334	0	285	385	0	0
V/C Ratio(X)	0.30	0.00	1.07	0.92	0.00	0.73	0.68	0.00	0.60	1.10	0.00	0.00
Avail Cap(c_a), veh/h	290	0	654	195	0	682	334	0	285	385	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.4	0.0	32.3	24.8	0.0	26.7	38.3	0.0	37.7	39.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	54.5	42.2	0.0	6.7	10.8	0.0	8.9	75.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	25.1	4.9	0.0	11.2	6.2	0.0	4.5	17.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	86.8	66.9	0.0	33.4	49.1	0.0	46.5	114.9	0.0	0.0
LnGrp LOS	C	A	F	E	A	C	D	A	D	F	A	A
Approach Vol, veh/h		782			676			398			424	
Approach Delay, s/veh		79.9			42.3			48.0			114.9	
Approach LOS		E			D			D			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	11.4	39.9		26.2	9.0	42.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	6.9	35.4		21.7	5.1	37.2				
Max Q Clear Time (g_c+I1), s		13.5	8.4	37.4		23.7	5.0	25.6				
Green Ext Time (p_c), s		0.8	0.0	0.0		0.0	0.0	2.5				

Intersection Summary												
HCM 6th Ctrl Delay			69.7									
HCM 6th LOS			E									

Notes

User approved pedestrian interval to be less than phase max green.



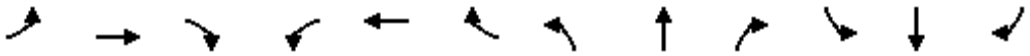
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	259	41	359	514	104	41	102	173	63	331	73
Future Volume (veh/h)	54	259	41	359	514	104	41	102	173	63	331	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	288	64	417	584	86	64	132	136	80	430	107
Peak Hour Factor	0.59	0.90	0.64	0.86	0.88	0.87	0.64	0.77	0.83	0.79	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	307	68	429	585	86	86	176	226	73	391	97
Arrive On Green	0.04	0.21	0.21	0.20	0.37	0.37	0.14	0.14	0.14	0.31	0.31	0.31
Sat Flow, veh/h	1781	1482	329	1781	1593	235	601	1239	1585	234	1256	313
Grp Volume(v), veh/h	92	0	352	417	0	670	196	0	136	617	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1811	1781	0	1828	1840	0	1585	1802	0	0
Q Serve(g_s), s	5.3	0.0	24.9	25.0	0.0	47.6	13.3	0.0	10.5	40.5	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	24.9	25.0	0.0	47.6	13.3	0.0	10.5	40.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.13	0.33		1.00	0.13		0.17
Lane Grp Cap(c), veh/h	129	0	375	429	0	671	262	0	226	562	0	0
V/C Ratio(X)	0.72	0.00	0.94	0.97	0.00	1.00	0.75	0.00	0.60	1.10	0.00	0.00
Avail Cap(c_a), veh/h	129	0	375	429	0	671	262	0	226	562	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.7	0.0	50.7	36.5	0.0	41.1	53.5	0.0	52.3	44.8	0.0	0.0
Incr Delay (d2), s/veh	17.2	0.0	33.4	36.0	0.0	34.5	17.7	0.0	11.4	67.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	14.7	15.0	0.0	27.5	7.4	0.0	4.9	28.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	0.0	84.2	72.5	0.0	75.6	71.2	0.0	63.7	112.6	0.0	0.0
LnGrp LOS	E	A	F	E	A	E	E	A	E	F	A	A
Approach Vol, veh/h		444			1087			332			617	
Approach Delay, s/veh		78.9			74.4			68.1			112.6	
Approach LOS		E			E			E			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	30.6	31.4		45.0	9.8	52.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	26.1	26.9		40.5	5.3	47.7				
Max Q Clear Time (g_c+I1), s		15.3	27.0	26.9		42.5	7.3	49.6				
Green Ext Time (p_c), s		0.5	0.0	0.0		0.0	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	83.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	618	24	169	403	110	27	189	349	258	131	38
Future Volume (veh/h)	86	618	24	169	403	110	27	189	349	258	131	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	631	32	197	438	99	28	215	222	358	164	56
Peak Hour Factor	0.86	0.98	0.75	0.86	0.92	0.81	0.96	0.88	0.76	0.72	0.80	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	547	28	188	480	108	39	296	285	293	134	46
Arrive On Green	0.05	0.31	0.31	0.06	0.32	0.32	0.18	0.18	0.18	0.26	0.26	0.26
Sat Flow, veh/h	1781	1765	89	1781	1477	334	214	1645	1585	1105	506	173
Grp Volume(v), veh/h	100	0	663	197	0	537	243	0	222	578	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1854	1781	0	1810	1860	0	1585	1784	0	0
Q Serve(g_s), s	3.8	0.0	31.0	6.5	0.0	28.5	12.3	0.0	13.4	26.5	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	31.0	6.5	0.0	28.5	12.3	0.0	13.4	26.5	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.18	0.12		1.00	0.62		0.10
Lane Grp Cap(c), veh/h	196	0	575	188	0	588	335	0	285	473	0	0
V/C Ratio(X)	0.51	0.00	1.15	1.05	0.00	0.91	0.73	0.00	0.78	1.22	0.00	0.00
Avail Cap(c_a), veh/h	196	0	575	188	0	588	335	0	285	473	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.8	0.0	34.5	28.9	0.0	32.4	38.7	0.0	39.1	36.8	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	87.6	79.2	0.0	20.9	12.9	0.0	18.6	117.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	27.5	7.2	0.0	15.5	6.8	0.0	6.6	26.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	122.1	108.1	0.0	53.3	51.6	0.0	57.7	154.7	0.0	0.0
LnGrp LOS	C	A	F	F	A	D	D	A	E	F	A	A
Approach Vol, veh/h		763			734			465			578	
Approach Delay, s/veh		109.8			68.0			54.5			154.7	
Approach LOS		F			E			D			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	11.0	35.5		31.0	9.5	37.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	6.5	31.0		26.5	5.0	32.5				
Max Q Clear Time (g_c+I1), s		15.4	8.5	33.0		28.5	5.8	30.5				
Green Ext Time (p_c), s		0.6	0.0	0.0		0.0	0.0	0.7				

Intersection Summary	
HCM 6th Ctrl Delay	97.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	268	42	371	532	108	42	105	179	65	342	76
Future Volume (veh/h)	56	268	42	371	532	108	42	105	179	65	342	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	298	0	431	605	0	66	136	0	82	444	0
Peak Hour Factor	0.59	0.90	0.64	0.86	0.88	0.87	0.64	0.77	0.83	0.79	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	1030		511	1370		358	694		902	491	
Arrive On Green	0.05	0.29	0.00	0.15	0.39	0.00	0.15	0.37	0.00	0.04	0.26	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	95	298	0	431	605	0	66	136	0	82	444	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	4.5	7.8	0.0	14.6	15.1	0.0	2.6	5.9	0.0	2.0	27.5	0.0
Cycle Q Clear(g_c), s	4.5	7.8	0.0	14.6	15.1	0.0	2.6	5.9	0.0	2.0	27.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	1030		511	1370		358	694		902	491	
V/C Ratio(X)	0.26	0.29		0.84	0.44		0.18	0.20		0.09	0.90	
Avail Cap(c_a), veh/h	412	1030		763	1370		358	694		1277	616	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.5	33.0	0.0	49.8	27.3	0.0	24.2	25.6	0.0	29.8	42.8	0.0
Incr Delay (d2), s/veh	0.4	0.7	0.0	5.6	1.0	0.0	1.1	0.6	0.0	0.0	14.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.5	0.0	6.7	6.6	0.0	1.2	2.8	0.0	0.9	14.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	33.8	0.0	55.4	28.3	0.0	25.3	26.2	0.0	29.8	57.3	0.0
LnGrp LOS	C	C		E	C		C	C		C	E	
Approach Vol, veh/h		393	A		1036	A		202	A		526	A
Approach Delay, s/veh		32.3			39.6			25.9			53.0	
Approach LOS		C			D			C			D	

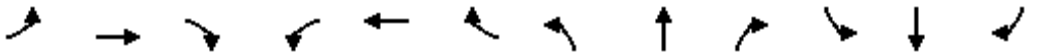
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	49.0	22.2	39.3	22.5	36.0	10.7	50.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	39.5	26.5	18.0	18.0	39.5	9.5	35.0
Max Q Clear Time (g_c+I1), s	4.0	7.9	16.6	9.8	4.6	29.5	6.5	17.1
Green Ext Time (p_c), s	0.2	0.8	1.2	1.1	0.1	2.0	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	639	25	175	417	114	28	195	361	267	135	39
Future Volume (veh/h)	89	639	25	175	417	114	28	195	361	267	135	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	652	0	203	453	0	29	222	0	371	169	0
Peak Hour Factor	0.86	0.98	0.75	0.86	0.92	0.81	0.96	0.88	0.76	0.72	0.80	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	1546		267	1653		459	429		777	343	
Arrive On Green	0.05	0.43	0.00	0.08	0.47	0.00	0.15	0.23	0.00	0.11	0.18	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	103	652	0	203	453	0	29	222	0	371	169	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.8	15.2	0.0	6.9	9.4	0.0	1.3	12.5	0.0	10.2	9.7	0.0
Cycle Q Clear(g_c), s	3.8	15.2	0.0	6.9	9.4	0.0	1.3	12.5	0.0	10.2	9.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	1546		267	1653		459	429		777	343	
V/C Ratio(X)	0.20	0.42		0.76	0.27		0.06	0.52		0.48	0.49	
Avail Cap(c_a), veh/h	534	1546		475	1653		459	429		963	444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	23.5	0.0	54.3	19.7	0.0	26.0	40.5	0.0	33.9	44.0	0.0
Incr Delay (d2), s/veh	0.2	0.8	0.0	4.4	0.4	0.0	0.3	4.4	0.0	0.5	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.6	0.0	3.2	4.0	0.0	0.6	6.3	0.0	4.3	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	24.3	0.0	58.7	20.1	0.0	26.3	44.9	0.0	34.4	45.1	0.0
LnGrp LOS	B	C		E	C		C	D		C	D	
Approach Vol, veh/h		755	A		656	A		251	A		540	A
Approach Delay, s/veh		23.4			32.0			42.7			37.7	
Approach LOS		C			C			D			D	

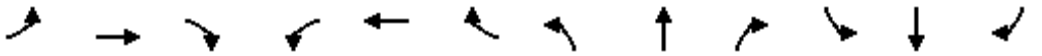
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	32.0	13.8	56.7	23.0	26.5	10.2	60.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	27.5	16.5	38.5	18.5	28.5	7.5	47.5
Max Q Clear Time (g_c+I1), s	12.2	14.5	8.9	17.2	3.3	11.7	5.8	11.4
Green Ext Time (p_c), s	0.8	1.0	0.4	4.5	0.0	0.8	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	268	52	383	532	108	70	111	213	65	344	76
Future Volume (veh/h)	56	268	52	383	532	108	70	111	213	65	344	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	298	0	445	605	0	109	144	0	82	447	0
Peak Hour Factor	0.59	0.90	0.64	0.86	0.88	0.87	0.64	0.77	0.83	0.79	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	1010		525	1364		358	697		901	494	
Arrive On Green	0.05	0.28	0.00	0.15	0.38	0.00	0.15	0.37	0.00	0.04	0.26	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	95	298	0	445	605	0	109	144	0	82	447	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	4.5	7.9	0.0	15.0	15.2	0.0	4.5	6.3	0.0	2.0	27.7	0.0
Cycle Q Clear(g_c), s	4.5	7.9	0.0	15.0	15.2	0.0	4.5	6.3	0.0	2.0	27.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	363	1010		525	1364		358	697		901	494	
V/C Ratio(X)	0.26	0.30		0.85	0.44		0.30	0.21		0.09	0.91	
Avail Cap(c_a), veh/h	411	1010		763	1364		358	697		1276	616	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.0	33.6	0.0	49.5	27.5	0.0	24.9	25.6	0.0	29.6	42.7	0.0
Incr Delay (d2), s/veh	0.4	0.7	0.0	6.1	1.0	0.0	2.2	0.7	0.0	0.0	14.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.5	0.0	6.9	6.6	0.0	2.1	2.9	0.0	0.9	14.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	34.3	0.0	55.6	28.5	0.0	27.1	26.3	0.0	29.7	57.4	0.0
LnGrp LOS	C	C		E	C		C	C		C	E	
Approach Vol, veh/h		393	A		1050	A		253	A		529	A
Approach Delay, s/veh		32.9			40.0			26.6			53.1	
Approach LOS		C			D			C			D	

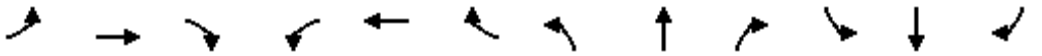
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	49.2	22.7	38.6	22.5	36.2	10.8	50.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	39.5	26.5	18.0	18.0	39.5	9.5	35.0
Max Q Clear Time (g_c+I1), s	4.0	8.3	17.0	9.9	6.5	29.7	6.5	17.2
Green Ext Time (p_c), s	0.2	0.8	1.2	1.1	0.2	2.0	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	639	55	211	417	114	46	199	382	267	141	39
Future Volume (veh/h)	89	639	55	211	417	114	46	199	382	267	141	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	652	0	245	453	0	48	226	0	371	176	0
Peak Hour Factor	0.86	0.98	0.75	0.86	0.92	0.81	0.96	0.88	0.76	0.72	0.80	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	1502		310	1651		454	429		771	343	
Arrive On Green	0.05	0.42	0.00	0.09	0.46	0.00	0.15	0.23	0.00	0.11	0.18	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	103	652	0	245	453	0	48	226	0	371	176	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.9	15.6	0.0	8.3	9.4	0.0	2.1	12.7	0.0	10.2	10.2	0.0
Cycle Q Clear(g_c), s	3.9	15.6	0.0	8.3	9.4	0.0	2.1	12.7	0.0	10.2	10.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	1502		310	1651		454	429		771	343	
V/C Ratio(X)	0.20	0.43		0.79	0.27		0.11	0.53		0.48	0.51	
Avail Cap(c_a), veh/h	534	1502		475	1651		454	429		958	444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.9	24.5	0.0	53.5	19.7	0.0	26.3	40.6	0.0	33.9	44.2	0.0
Incr Delay (d2), s/veh	0.2	0.9	0.0	5.0	0.4	0.0	0.5	4.6	0.0	0.5	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.7	0.0	3.8	4.0	0.0	1.0	6.4	0.0	4.3	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	25.4	0.0	58.5	20.1	0.0	26.8	45.1	0.0	34.4	45.3	0.0
LnGrp LOS	B	C		E	C		C	D		C	D	
Approach Vol, veh/h		755	A		698	A		274	A		547	A
Approach Delay, s/veh		24.4			33.6			41.9			37.9	
Approach LOS		C			C			D			D	

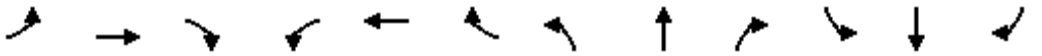
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	32.0	15.3	55.2	23.0	26.5	10.2	60.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	27.5	16.5	38.5	18.5	28.5	7.5	47.5
Max Q Clear Time (g_c+I1), s	12.2	14.7	10.3	17.6	4.1	12.2	5.9	11.4
Green Ext Time (p_c), s	0.8	1.0	0.4	4.5	0.1	0.8	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	375	59	520	745	151	59	148	251	91	480	106
Future Volume (veh/h)	78	375	59	520	745	151	59	148	251	91	480	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	417	0	605	847	0	92	192	0	115	623	0
Peak Hour Factor	0.59	0.90	0.64	0.86	0.88	0.87	0.64	0.77	0.83	0.79	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	586		648	1060		345	853		1067	650	
Arrive On Green	0.05	0.16	0.00	0.19	0.30	0.00	0.15	0.46	0.00	0.04	0.35	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	132	417	0	605	847	0	92	192	0	115	623	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	6.5	13.3	0.0	20.7	26.3	0.0	3.2	7.5	0.0	2.5	39.1	0.0
Cycle Q Clear(g_c), s	6.5	13.3	0.0	20.7	26.3	0.0	3.2	7.5	0.0	2.5	39.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	586		648	1060		345	853		1067	650	
V/C Ratio(X)	0.64	0.71		0.93	0.80		0.27	0.23		0.11	0.96	
Avail Cap(c_a), veh/h	208	586		648	1060		345	853		1441	662	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.5	47.4	0.0	48.0	38.8	0.0	22.6	19.8	0.0	23.2	38.3	0.0
Incr Delay (d2), s/veh	6.2	7.2	0.0	20.7	6.3	0.0	1.9	0.6	0.0	0.0	24.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.5	0.0	10.7	12.3	0.0	1.5	3.4	0.0	1.0	22.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	54.6	0.0	68.7	45.1	0.0	24.5	20.4	0.0	23.2	63.2	0.0
LnGrp LOS	D	D		E	D		C	C		C	E	
Approach Vol, veh/h		549	A		1452	A		284	A		738	A
Approach Delay, s/veh		52.9			54.9			21.7			56.9	
Approach LOS		D			D			C			E	

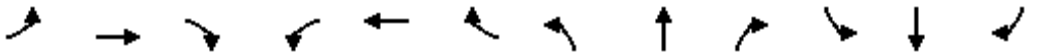
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	59.2	27.0	24.3	22.5	46.2	11.0	40.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	42.5	22.5	19.0	18.0	42.5	6.5	35.0
Max Q Clear Time (g_c+I1), s	4.5	9.5	22.7	15.3	5.2	41.1	8.5	28.3
Green Ext Time (p_c), s	0.3	1.1	0.0	0.9	0.2	0.6	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	895	35	245	584	159	39	274	506	374	190	55
Future Volume (veh/h)	125	895	35	245	584	159	39	274	506	374	190	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	145	913	0	285	635	0	41	311	0	519	238	0
Peak Hour Factor	0.86	0.98	0.75	0.86	0.92	0.81	0.96	0.88	0.76	0.72	0.80	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	402	1343		345	1464		451	444		762	416	
Arrive On Green	0.07	0.38	0.00	0.10	0.41	0.00	0.15	0.24	0.00	0.13	0.22	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	145	913	0	285	635	0	41	311	0	519	238	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	5.9	25.8	0.0	9.7	15.4	0.0	1.8	18.2	0.0	13.6	13.6	0.0
Cycle Q Clear(g_c), s	5.9	25.8	0.0	9.7	15.4	0.0	1.8	18.2	0.0	13.6	13.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	1343		345	1464		451	444		762	416	
V/C Ratio(X)	0.36	0.68		0.83	0.43		0.09	0.70		0.68	0.57	
Avail Cap(c_a), veh/h	428	1343		418	1464		451	444		815	444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.9	31.2	0.0	53.0	25.3	0.0	25.0	41.8	0.0	30.7	41.6	0.0
Incr Delay (d2), s/veh	0.5	2.8	0.0	10.9	0.9	0.0	0.4	8.9	0.0	2.1	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	11.5	0.0	4.7	6.6	0.0	0.8	9.5	0.0	5.9	6.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	34.0	0.0	63.9	26.2	0.0	25.4	50.7	0.0	32.8	43.2	0.0
LnGrp LOS	C	C		E	C		C	D		C	D	
Approach Vol, veh/h		1058	A		920	A		352	A		757	A
Approach Delay, s/veh		32.3			37.9			47.8			36.1	
Approach LOS		C			D			D			D	

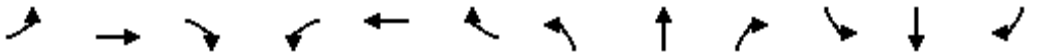
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	33.0	16.5	49.9	22.5	31.2	12.4	53.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	28.5	14.5	41.0	18.0	28.5	9.6	45.9
Max Q Clear Time (g_c+I1), s	15.6	20.2	11.7	27.8	3.8	15.6	7.9	17.4
Green Ext Time (p_c), s	0.5	1.1	0.3	5.3	0.0	1.0	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	375	69	532	745	151	87	154	285	91	482	106
Future Volume (veh/h)	78	375	69	532	745	151	87	154	285	91	482	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	417	0	619	847	0	136	200	0	115	626	0
Peak Hour Factor	0.59	0.90	0.64	0.86	0.88	0.87	0.64	0.77	0.83	0.79	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	579		651	1056		344	855		1064	652	
Arrive On Green	0.05	0.16	0.00	0.19	0.30	0.00	0.15	0.46	0.00	0.04	0.35	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	132	417	0	619	847	0	136	200	0	115	626	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	6.5	13.4	0.0	21.3	26.4	0.0	4.8	7.8	0.0	2.5	39.3	0.0
Cycle Q Clear(g_c), s	6.5	13.4	0.0	21.3	26.4	0.0	4.8	7.8	0.0	2.5	39.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	579		651	1056		344	855		1064	652	
V/C Ratio(X)	0.64	0.72		0.95	0.80		0.40	0.23		0.11	0.96	
Avail Cap(c_a), veh/h	207	579		651	1056		344	855		1438	662	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.7	47.6	0.0	48.2	38.9	0.0	23.1	19.8	0.0	23.1	38.3	0.0
Incr Delay (d2), s/veh	6.4	7.5	0.0	23.8	6.4	0.0	3.4	0.6	0.0	0.0	25.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.5	0.0	11.3	12.4	0.0	2.3	3.6	0.0	1.0	22.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	55.1	0.0	72.0	45.3	0.0	26.5	20.5	0.0	23.1	63.5	0.0
LnGrp LOS	D	E		E	D		C	C		C	E	
Approach Vol, veh/h		549	A		1466	A		336	A		741	A
Approach Delay, s/veh		53.5			56.6			22.9			57.2	
Approach LOS		D			E			C			E	

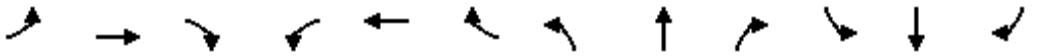
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	59.3	27.1	24.1	22.5	46.3	11.0	40.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	42.5	22.6	18.9	18.0	42.5	6.5	35.0
Max Q Clear Time (g_c+I1), s	4.5	9.8	23.3	15.4	6.8	41.3	8.5	28.4
Green Ext Time (p_c), s	0.3	1.2	0.0	0.9	0.2	0.5	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	52.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	895	65	281	584	159	57	278	527	374	196	55
Future Volume (veh/h)	125	895	65	281	584	159	57	278	527	374	196	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	145	913	0	327	635	0	59	316	0	519	245	0
Peak Hour Factor	0.86	0.98	0.75	0.86	0.92	0.81	0.96	0.88	0.76	0.72	0.80	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	403	1300		387	1460		446	444		756	416	
Arrive On Green	0.07	0.37	0.00	0.11	0.41	0.00	0.15	0.24	0.00	0.13	0.22	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	145	913	0	327	635	0	59	316	0	519	245	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	6.0	26.3	0.0	11.1	15.4	0.0	2.6	18.6	0.0	13.6	14.1	0.0
Cycle Q Clear(g_c), s	6.0	26.3	0.0	11.1	15.4	0.0	2.6	18.6	0.0	13.6	14.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	403	1300		387	1460		446	444		756	416	
V/C Ratio(X)	0.36	0.70		0.85	0.43		0.13	0.71		0.69	0.59	
Avail Cap(c_a), veh/h	427	1300		446	1460		446	444		809	444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.5	32.5	0.0	52.3	25.3	0.0	25.3	42.0	0.0	30.8	41.8	0.0
Incr Delay (d2), s/veh	0.5	3.2	0.0	12.5	0.9	0.0	0.6	9.3	0.0	2.3	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	11.8	0.0	5.5	6.7	0.0	1.2	9.7	0.0	5.9	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	35.7	0.0	64.8	26.3	0.0	25.9	51.3	0.0	33.0	43.6	0.0
LnGrp LOS	C	D		E	C		C	D		C	D	
Approach Vol, veh/h		1058	A		962	A		375	A		764	A
Approach Delay, s/veh		33.8			39.4			47.3			36.4	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	33.0	17.9	48.4	22.5	31.2	12.5	53.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	28.5	15.5	40.0	18.0	28.5	9.6	45.9
Max Q Clear Time (g_c+I1), s	15.6	20.6	13.1	28.3	4.6	16.1	8.0	17.4
Green Ext Time (p_c), s	0.5	1.1	0.3	4.9	0.1	1.1	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	0	0	50	0	0
Future Vol, veh/h	41	0	0	50	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	92	92	89	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	0	0	56	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	116	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	56	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	880	1005
Stage 1	-	0	0	-	963	-
Stage 2	-	0	0	-	967	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	880	1005
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	967	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	0	0	66	2	2
Future Vol, veh/h	77	0	0	66	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	92	92	82	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	0	0	80	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	180	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	810	956
Stage 1	-	0	0	-	924	-
Stage 2	-	0	0	-	943	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	810	956
Mov Cap-2 Maneuver	-	-	-	-	810	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	877	-	-
HCM Lane V/C Ratio	0.009	-	-
HCM Control Delay (s)	9.1	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	20.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	0	0	371	130	128
Future Vol, veh/h	64	0	0	371	130	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	92	92	59	48	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	0	0	629	271	221

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	729	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	629	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	390	956
Stage 1	-	0	0	-	924	-
Stage 2	-	0	0	-	531	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	390	956
Mov Cap-2 Maneuver	-	-	-	-	390	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	531	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	50.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	531	-	-
HCM Lane V/C Ratio	0.926	-	-
HCM Control Delay (s)	50.8	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	11.3	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	100	0	0	51	60	81
Future Vol, veh/h	100	0	0	51	60	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	92	92	55	58	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	0	0	93	103	169

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	216	123
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	772	928
Stage 1	-	0	0	-	902	-
Stage 2	-	0	0	-	931	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	772	928
Mov Cap-2 Maneuver	-	-	-	-	772	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	931	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	862	-	-
HCM Lane V/C Ratio	0.316	-	-
HCM Control Delay (s)	11.1	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	1.4	-	-

Intersection	
Int Delay, s/veh	9.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	0	0	384	130	64
Future Vol, veh/h	66	0	0	384	130	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	92	92	59	48	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	0	0	651	271	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	103	0	754	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	651	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1489	-	377	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1489	-	377	952
Mov Cap-2 Maneuver	-	-	-	-	377	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	377	952	-	-	1489	-
HCM Lane V/C Ratio	0.718	0.116	-	-	-	-
HCM Control Delay (s)	35.5	9.3	-	-	0	-
HCM Lane LOS	E	A	-	-	A	-
HCM 95th %tile Q(veh)	5.4	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	0	0	53	60	46
Future Vol, veh/h	103	0	0	53	60	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	92	92	55	58	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	0	0	96	103	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	127	0	223	127
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	96	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1459	-	765	923
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1459	-	765	923
Mov Cap-2 Maneuver	-	-	-	-	765	-
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	928	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	765	923	-	-	1459	-
HCM Lane V/C Ratio	0.135	0.104	-	-	-	-
HCM Control Delay (s)	10.4	9.4	-	-	0	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-

MOVEMENT SUMMARY

Site: 101 [2020 Background AM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	271	3.0	0.317	6.0	LOS A	1.8	45.0	0.31	0.17	0.31	32.8
18	R2	110	3.0	0.317	6.0	LOS A	1.8	45.0	0.31	0.17	0.31	31.8
Approach		381	3.0	0.317	6.0	LOS A	1.8	45.0	0.31	0.17	0.31	32.5
East: Emma Street												
1	L2	1	3.0	0.647	13.1	LOS B	8.0	205.5	0.72	0.76	1.06	31.4
6	T1	651	3.0	0.647	13.1	LOS B	8.0	205.5	0.72	0.76	1.06	31.3
Approach		652	3.0	0.647	13.1	LOS B	8.0	205.5	0.72	0.76	1.06	31.3
West: Emma Street												
2	T1	103	3.0	0.078	3.3	LOS A	0.3	8.8	0.02	0.00	0.02	36.2
12	R2	1	3.0	0.078	3.3	LOS A	0.3	8.8	0.02	0.00	0.02	35.1
Approach		104	3.0	0.078	3.3	LOS A	0.3	8.8	0.02	0.00	0.02	36.2
All Vehicles		1137	3.0	0.647	9.8	LOS A	8.0	205.5	0.52	0.49	0.71	32.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2020 Background PM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	103	3.0	0.170	4.5	LOS A	0.8	20.3	0.30	0.16	0.30	33.9
18	R2	96	3.0	0.170	4.5	LOS A	0.8	20.3	0.30	0.16	0.30	32.9
Approach		199	3.0	0.170	4.5	LOS A	0.8	20.3	0.30	0.16	0.30	33.4
East: Emma Street												
1	L2	1	3.0	0.081	3.7	LOS A	0.3	9.0	0.24	0.12	0.24	36.0
6	T1	96	3.0	0.081	3.7	LOS A	0.3	9.0	0.24	0.12	0.24	36.0
Approach		97	3.0	0.081	3.7	LOS A	0.3	9.0	0.24	0.12	0.24	36.0
West: Emma Street												
2	T1	127	3.0	0.096	3.5	LOS A	0.4	11.0	0.02	0.00	0.02	36.1
12	R2	1	3.0	0.096	3.5	LOS A	0.4	11.0	0.02	0.00	0.02	35.0
Approach		128	3.0	0.096	3.5	LOS A	0.4	11.0	0.02	0.00	0.02	36.1
All Vehicles		425	3.0	0.170	4.0	LOS A	0.8	20.3	0.20	0.10	0.20	34.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	11.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	2	1	395	136	75
Future Vol, veh/h	70	2	1	395	136	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	92	92	59	48	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	2	1	669	283	129

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	111	0	781	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	671	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1479	-	363	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1479	-	363	943
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	508	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	32.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	363	943	-	-	1479	-
HCM Lane V/C Ratio	0.781	0.137	-	-	0.001	-
HCM Control Delay (s)	42.5	9.4	-	-	7.4	0
HCM Lane LOS	E	A	-	-	A	A
HCM 95th %tile Q(veh)	6.5	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	6	4	60	64	53
Future Vol, veh/h	115	6	4	60	64	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	92	92	55	58	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	142	7	4	109	110	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	263	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1432	-	726	901
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1432	-	724	901
Mov Cap-2 Maneuver	-	-	-	-	724	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	908	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	724	901	-	-	1432	-
HCM Lane V/C Ratio	0.152	0.123	-	-	0.003	-
HCM Control Delay (s)	10.9	9.6	-	-	7.5	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0	-

MOVEMENT SUMMARY

Site: 101 [2020 Total AM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	283	3.0	0.345	6.3	LOS A	2.0	50.6	0.33	0.19	0.33	32.7
18	R2	129	3.0	0.345	6.3	LOS A	2.0	50.6	0.33	0.19	0.33	31.7
Approach		413	3.0	0.345	6.3	LOS A	2.0	50.6	0.33	0.19	0.33	32.4
East: Emma Street												
1	L2	1	3.0	0.674	14.1	LOS B	9.3	238.1	0.76	0.85	1.19	30.9
6	T1	669	3.0	0.674	14.1	LOS B	9.3	238.1	0.76	0.85	1.19	30.9
Approach		671	3.0	0.674	14.1	LOS B	9.3	238.1	0.76	0.85	1.19	30.9
West: Emma Street												
2	T1	109	3.0	0.083	3.4	LOS A	0.4	9.5	0.02	0.00	0.02	36.2
12	R2	2	3.0	0.083	3.4	LOS A	0.4	9.5	0.02	0.00	0.02	35.1
Approach		112	3.0	0.083	3.4	LOS A	0.4	9.5	0.02	0.00	0.02	36.2
All Vehicles		1195	3.0	0.674	10.4	LOS B	9.3	238.1	0.54	0.54	0.79	31.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2020 Total PM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	110	3.0	0.191	4.8	LOS A	0.9	23.2	0.32	0.19	0.32	33.9
18	R2	110	3.0	0.191	4.8	LOS A	0.9	23.2	0.32	0.19	0.32	32.8
Approach		221	3.0	0.191	4.8	LOS A	0.9	23.2	0.32	0.19	0.32	33.3
East: Emma Street												
1	L2	4	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	35.9
6	T1	109	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	35.8
Approach		113	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	35.8
West: Emma Street												
2	T1	142	3.0	0.111	3.6	LOS A	0.5	13.0	0.04	0.01	0.04	36.0
12	R2	7	3.0	0.111	3.6	LOS A	0.5	13.0	0.04	0.01	0.04	34.9
Approach		148	3.0	0.111	3.6	LOS A	0.5	13.0	0.04	0.01	0.04	36.0
All Vehicles		483	3.0	0.191	4.2	LOS A	0.9	23.2	0.22	0.12	0.22	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	12.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	93	0	0	538	130	64
Future Vol, veh/h	93	0	0	538	130	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	92	92	72	48	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	0	0	747	271	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	129	0	876	129
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	747	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1457	-	319	921
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	468	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1457	-	319	921
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	468	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	42.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	921	-	-	1457	-
HCM Lane V/C Ratio	0.849	0.12	-	-	-	-
HCM Control Delay (s)	56.2	9.4	-	-	0	-
HCM Lane LOS	F	A	-	-	A	-
HCM 95th %tile Q(veh)	7.5	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	0	0	74	60	46
Future Vol, veh/h	145	0	0	74	60	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	92	92	55	58	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	0	0	135	103	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	179	0	314	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1397	-	679	864
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1397	-	679	864
Mov Cap-2 Maneuver	-	-	-	-	679	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	679	864	-	-	1397	-
HCM Lane V/C Ratio	0.152	0.111	-	-	-	-
HCM Control Delay (s)	11.3	9.7	-	-	0	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0	-

MOVEMENT SUMMARY

Site: 101 [2040 Background AM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	271	3.0	0.331	6.3	LOS A	1.8	46.7	0.38	0.23	0.38	32.6
18	R2	110	3.0	0.331	6.3	LOS A	1.8	46.7	0.38	0.23	0.38	31.7
Approach		381	3.0	0.331	6.3	LOS A	1.8	46.7	0.38	0.23	0.38	32.3
East: Emma Street												
1	L2	1	3.0	0.906	30.5	LOS D	32.7	838.3	1.00	1.59	2.56	25.3
6	T1	912	3.0	0.906	30.5	LOS D	32.7	838.3	1.00	1.59	2.56	25.3
Approach		913	3.0	0.906	30.5	LOS D	32.7	838.3	1.00	1.59	2.56	25.3
West: Emma Street												
2	T1	145	3.0	0.109	3.6	LOS A	0.5	12.8	0.02	0.00	0.02	36.1
12	R2	1	3.0	0.109	3.6	LOS A	0.5	12.8	0.02	0.00	0.02	35.0
Approach		146	3.0	0.109	3.6	LOS A	0.5	12.8	0.02	0.00	0.02	36.0
All Vehicles		1441	3.0	0.906	21.4	LOS C	32.7	838.3	0.74	1.07	1.72	27.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2040 Background PM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	103	3.0	0.180	4.8	LOS A	0.8	21.3	0.36	0.23	0.36	33.8
18	R2	96	3.0	0.180	4.8	LOS A	0.8	21.3	0.36	0.23	0.36	32.8
Approach		199	3.0	0.180	4.8	LOS A	0.8	21.3	0.36	0.23	0.36	33.3
East: Emma Street												
1	L2	1	3.0	0.113	3.9	LOS A	0.5	12.9	0.25	0.12	0.25	35.9
6	T1	135	3.0	0.113	3.9	LOS A	0.5	12.9	0.25	0.12	0.25	35.8
Approach		136	3.0	0.113	3.9	LOS A	0.5	12.9	0.25	0.12	0.25	35.8
West: Emma Street												
2	T1	179	3.0	0.135	3.8	LOS A	0.6	16.1	0.02	0.00	0.02	35.9
12	R2	1	3.0	0.135	3.8	LOS A	0.6	16.1	0.02	0.00	0.02	34.9
Approach		180	3.0	0.135	3.8	LOS A	0.6	16.1	0.02	0.00	0.02	35.9
All Vehicles		515	3.0	0.180	4.2	LOS A	0.8	21.3	0.21	0.12	0.21	34.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	14.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	97	2	1	549	136	75
Future Vol, veh/h	97	2	1	549	136	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	92	92	75	48	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	2	1	732	283	129

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	131	0	864	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	734	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1454	-	325	920
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	475	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1454	-	325	920
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	475	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	43.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	325	920	-	-	1454	-
HCM Lane V/C Ratio	0.872	0.141	-	-	0.001	-
HCM Control Delay (s)	59.2	9.6	-	-	7.5	0
HCM Lane LOS	F	A	-	-	A	A
HCM 95th %tile Q(veh)	8	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	6	4	81	64	53
Future Vol, veh/h	157	6	4	81	64	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	92	92	55	58	48
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	7	4	147	110	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	201	0	353	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	155	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1371	-	645	843
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	873	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1371	-	643	843
Mov Cap-2 Maneuver	-	-	-	-	643	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	873	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	643	843	-	-	1371	-
HCM Lane V/C Ratio	0.172	0.131	-	-	0.003	-
HCM Control Delay (s)	11.8	9.9	-	-	7.6	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	0.5	-	-	0	-

MOVEMENT SUMMARY

Site: 101 [2040 Total AM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	283	3.0	0.361	6.7	LOS A	2.1	52.5	0.40	0.25	0.40	32.5
18	R2	129	3.0	0.361	6.7	LOS A	2.1	52.5	0.40	0.25	0.40	31.5
Approach		413	3.0	0.361	6.7	LOS A	2.1	52.5	0.40	0.25	0.40	32.2
East: Emma Street												
1	L2	1	3.0	0.936	35.6	LOS E	37.4	957.5	1.00	1.74	2.88	23.9
6	T1	931	3.0	0.936	35.6	LOS E	37.4	957.5	1.00	1.74	2.88	23.9
Approach		932	3.0	0.936	35.6	LOS E	37.4	957.5	1.00	1.74	2.88	23.9
West: Emma Street												
2	T1	152	3.0	0.115	3.6	LOS A	0.5	13.5	0.02	0.00	0.02	36.0
12	R2	2	3.0	0.115	3.6	LOS A	0.5	13.5	0.02	0.00	0.02	34.9
Approach		154	3.0	0.115	3.6	LOS A	0.5	13.5	0.02	0.00	0.02	36.0
All Vehicles		1498	3.0	0.936	24.4	LOS C	37.4	957.5	0.73	1.15	1.90	26.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [2040 Total PM]

Emma Street and Canterbury Drive
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Canterbury Drive												
3	L2	110	3.0	0.202	5.1	LOS A	1.0	24.3	0.38	0.25	0.38	33.7
18	R2	110	3.0	0.202	5.1	LOS A	1.0	24.3	0.38	0.25	0.38	32.7
Approach		221	3.0	0.202	5.1	LOS A	1.0	24.3	0.38	0.25	0.38	33.2
East: Emma Street												
1	L2	4	3.0	0.127	4.1	LOS A	0.6	14.6	0.26	0.13	0.26	35.7
6	T1	147	3.0	0.127	4.1	LOS A	0.6	14.6	0.26	0.13	0.26	35.7
Approach		152	3.0	0.127	4.1	LOS A	0.6	14.6	0.26	0.13	0.26	35.7
West: Emma Street												
2	T1	194	3.0	0.150	3.9	LOS A	0.7	18.3	0.04	0.01	0.04	35.8
12	R2	7	3.0	0.150	3.9	LOS A	0.7	18.3	0.04	0.01	0.04	34.8
Approach		200	3.0	0.150	3.9	LOS A	0.7	18.3	0.04	0.01	0.04	35.8
All Vehicles		573	3.0	0.202	4.4	LOS A	1.0	24.3	0.23	0.13	0.23	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	19	0	16	0	0	0	12	199	0	0	508	21
Future Vol, veh/h	19	0	16	0	0	0	12	199	0	0	508	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	47	92	67	92	92	92	75	75	92	92	89	48
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	0	24	0	0	0	16	265	0	0	571	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	890	890	593	902	912	265	615	0	0	265	0	0
Stage 1	593	593	-	297	297	-	-	-	-	-	-	-
Stage 2	297	297	-	605	615	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	264	282	506	259	274	774	965	-	-	1299	-	-
Stage 1	492	493	-	712	668	-	-	-	-	-	-	-
Stage 2	712	668	-	485	482	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	260	277	506	243	269	774	965	-	-	1299	-	-
Mov Cap-2 Maneuver	260	277	-	243	269	-	-	-	-	-	-	-
Stage 1	483	493	-	698	655	-	-	-	-	-	-	-
Stage 2	698	655	-	462	482	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.2	0	0.5	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	965	-	-	317	-	1299	-	-
HCM Lane V/C Ratio	0.017	-	-	0.203	-	-	-	-
HCM Control Delay (s)	8.8	0	-	19.2	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	54	0	26	0	0	0	25	474	0	0	289	36
Future Vol, veh/h	54	0	26	0	0	0	25	474	0	0	289	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	92	81	92	92	92	69	85	92	92	89	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	0	32	0	0	0	36	558	0	0	325	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	977	977	347	993	999	558	369	0	0	558	0	0
Stage 1	347	347	-	630	630	-	-	-	-	-	-	-
Stage 2	630	630	-	363	369	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	230	251	696	224	243	529	1190	-	-	1013	-	-
Stage 1	669	635	-	470	475	-	-	-	-	-	-	-
Stage 2	470	475	-	656	621	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	222	240	696	207	232	529	1190	-	-	1013	-	-
Mov Cap-2 Maneuver	222	240	-	207	232	-	-	-	-	-	-	-
Stage 1	640	635	-	449	454	-	-	-	-	-	-	-
Stage 2	449	454	-	626	621	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.7	0	0.5	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1190	-	-	273	-	1013	-	-
HCM Lane V/C Ratio	0.03	-	-	0.427	-	-	-	-
HCM Control Delay (s)	8.1	0	-	27.7	0	0	-	-
HCM Lane LOS	A	A	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2	-	0	-	-

Intersection	
Int Delay, s/veh	132.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	0	92	1	1	0	121	220	0	0	480	249
Future Vol, veh/h	96	0	92	1	1	0	121	220	0	0	480	249
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	92	57	25	25	92	53	82	92	92	90	49
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	139	0	161	4	4	0	228	268	0	0	533	508

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1513	1511	787	1592	1765	268	1041	0	0	268	0	0
Stage 1	787	787	-	724	724	-	-	-	-	-	-	-
Stage 2	726	724	-	868	1041	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 98	120	392	87	84	771	668	-	-	1296	-	-
Stage 1	385	403	-	417	430	-	-	-	-	-	-	-
Stage 2	416	430	-	347	307	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 64	72	392	35	50	771	668	-	-	1296	-	-
Mov Cap-2 Maneuver	~ 64	72	-	35	50	-	-	-	-	-	-	-
Stage 1	231	403	-	250	258	-	-	-	-	-	-	-
Stage 2	245	258	-	204	307	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	799.3	113	6.1	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	668	-	-	116	41	1296	-	-
HCM Lane V/C Ratio	0.342	-	-	2.591	0.195	-	-	-
HCM Control Delay (s)	13.2	0	-	$ 799.3	113	0	-	-
HCM Lane LOS	B	A	-	F	F	A	-	-
HCM 95th %tile Q(veh)	1.5	-	-	27.2	0.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

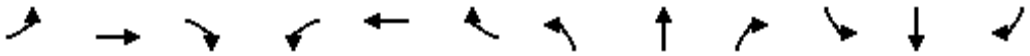
Intersection	
Int Delay, s/veh	19.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	103	0	81	0	0	0	45	452	0	0	255	97
Future Vol, veh/h	103	0	81	0	0	0	45	452	0	0	255	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	92	56	92	92	92	49	84	92	92	90	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	139	0	145	0	0	0	92	538	0	0	283	147

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1079	1079	357	1151	1152	538	430	0	0	538	0	0
Stage 1	357	357	-	722	722	-	-	-	-	-	-	-
Stage 2	722	722	-	429	430	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	196	218	687	175	198	543	1129	-	-	1030	-	-
Stage 1	661	628	-	418	431	-	-	-	-	-	-	-
Stage 2	418	431	-	604	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	193	687	126	175	543	1129	-	-	1030	-	-
Mov Cap-2 Maneuver	179	193	-	126	175	-	-	-	-	-	-	-
Stage 1	584	628	-	370	381	-	-	-	-	-	-	-
Stage 2	370	381	-	477	583	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	89.8	0	1.2	0
HCM LOS	F	A		

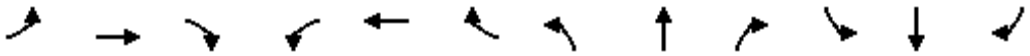
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1129	-	-	287	-	1030	-	-
HCM Lane V/C Ratio	0.081	-	-	0.989	-	-	-	-
HCM Control Delay (s)	8.5	0	-	89.8	0	0	-	-
HCM Lane LOS	A	A	-	F	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	10.1	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	31	1	1	0	125	228	0	0	496	258
Future Volume (veh/h)	99	0	31	1	1	0	125	228	0	0	496	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	0	54	4	4	0	236	278	0	0	551	527
Peak Hour Factor	0.69	0.92	0.57	0.25	0.25	0.92	0.53	0.82	0.92	0.92	0.90	0.49
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	0	186	128	108	0	475	1463	0	80	1244	1054
Arrive On Green	0.12	0.00	0.12	0.12	0.12	0.00	0.13	1.00	0.00	0.00	0.67	0.67
Sat Flow, veh/h	1412	0	1585	577	921	0	1781	1870	0	1101	1870	1585
Grp Volume(v), veh/h	143	0	54	8	0	0	236	278	0	0	551	527
Grp Sat Flow(s),veh/h/ln	1412	0	1585	1498	0	0	1781	1870	0	1101	1870	1585
Q Serve(g_s), s	5.3	0.0	2.8	0.0	0.0	0.0	3.7	0.0	0.0	0.0	12.6	15.0
Cycle Q Clear(g_c), s	8.1	0.0	2.8	2.8	0.0	0.0	3.7	0.0	0.0	0.0	12.6	15.0
Prop In Lane	1.00		1.00	0.50		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	186	236	0	0	475	1463	0	80	1244	1054
V/C Ratio(X)	0.56	0.00	0.29	0.03	0.00	0.00	0.50	0.19	0.00	0.00	0.44	0.50
Avail Cap(c_a), veh/h	445	0	396	444	0	0	610	1463	0	80	1244	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	36.3	35.2	0.0	0.0	4.8	0.0	0.0	0.0	7.2	7.6
Incr Delay (d2), s/veh	1.9	0.0	0.8	0.1	0.0	0.0	0.8	0.3	0.0	0.0	1.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.1	0.2	0.0	0.0	0.9	0.1	0.0	0.0	4.7	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	0.0	37.1	35.3	0.0	0.0	5.6	0.3	0.0	0.0	8.3	9.3
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		197			8			514			1078	
Approach Delay, s/veh		39.4			35.3			2.7			8.8	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.9		15.1	10.6	64.4		15.1				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		58.5		22.5	12.9	41.1		22.5				
Max Q Clear Time (g_c+I1), s		2.0		10.1	5.7	17.0		4.8				
Green Ext Time (p_c), s		1.8		0.5	0.4	6.1		0.0				

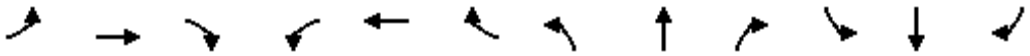
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	0	49	0	0	0	47	467	0	0	264	100
Future Volume (veh/h)	107	0	49	0	0	0	47	467	0	0	264	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	145	0	88	0	0	0	96	556	0	0	293	152
Peak Hour Factor	0.74	0.92	0.56	0.92	0.92	0.92	0.49	0.84	0.92	0.92	0.90	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	0	174	0	205	0	767	1479	0	80	1291	1094
Arrive On Green	0.11	0.00	0.11	0.00	0.00	0.00	0.07	1.00	0.00	0.00	0.69	0.69
Sat Flow, veh/h	1781	0	1585	0	1870	0	1781	1870	0	853	1870	1585
Grp Volume(v), veh/h	145	0	88	0	0	0	96	556	0	0	293	152
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1870	0	853	1870	1585
Q Serve(g_s), s	7.1	0.0	4.7	0.0	0.0	0.0	1.2	0.0	0.0	0.0	5.2	3.0
Cycle Q Clear(g_c), s	7.1	0.0	4.7	0.0	0.0	0.0	1.2	0.0	0.0	0.0	5.2	3.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	0	174	0	205	0	767	1479	0	80	1291	1094
V/C Ratio(X)	0.53	0.00	0.51	0.00	0.00	0.00	0.13	0.38	0.00	0.00	0.23	0.14
Avail Cap(c_a), veh/h	585	0	449	0	530	0	826	1479	0	80	1291	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	0.0	37.8	0.0	0.0	0.0	2.9	0.0	0.0	0.0	5.1	4.8
Incr Delay (d2), s/veh	1.6	0.0	2.3	0.0	0.0	0.0	0.1	0.7	0.0	0.0	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.9	0.0	0.0	0.0	0.3	0.3	0.0	0.0	1.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	0.0	40.1	0.0	0.0	0.0	3.0	0.7	0.0	0.0	5.5	5.0
LnGrp LOS	D	A	D	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		233			0			652			445	
Approach Delay, s/veh		40.3			0.0			1.1			5.4	
Approach LOS		D						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.6		14.4	9.0	66.6		14.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		55.5		25.5	7.5	43.5		25.5				
Max Q Clear Time (g_c+I1), s		2.0		9.1	3.2	7.2		0.0				
Green Ext Time (p_c), s		4.3		0.8	0.1	2.4		0.0				

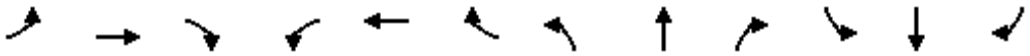
Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	0	34	1	1	0	125	228	0	0	508	270
Future Volume (veh/h)	167	0	34	1	1	0	125	228	0	0	508	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	242	0	60	4	4	0	236	278	0	0	564	551
Peak Hour Factor	0.69	0.92	0.57	0.25	0.25	0.92	0.53	0.82	0.92	0.92	0.90	0.49
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	0	297	182	163	0	420	1333	0	80	1099	932
Arrive On Green	0.19	0.00	0.19	0.19	0.19	0.00	0.10	0.95	0.00	0.00	0.59	0.59
Sat Flow, veh/h	1412	0	1585	648	869	0	1781	1870	0	1101	1870	1585
Grp Volume(v), veh/h	242	0	60	8	0	0	236	278	0	0	564	551
Grp Sat Flow(s),veh/h/ln	1412	0	1585	1518	0	0	1781	1870	0	1101	1870	1585
Q Serve(g_s), s	11.3	0.0	2.9	0.0	0.0	0.0	4.4	0.9	0.0	0.0	16.0	19.8
Cycle Q Clear(g_c), s	14.2	0.0	2.9	2.9	0.0	0.0	4.4	0.9	0.0	0.0	16.0	19.8
Prop In Lane	1.00		1.00	0.50		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	0	297	345	0	0	420	1333	0	80	1099	932
V/C Ratio(X)	0.68	0.00	0.20	0.02	0.00	0.00	0.56	0.21	0.00	0.00	0.51	0.59
Avail Cap(c_a), veh/h	476	0	431	477	0	0	515	1333	0	80	1099	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	30.9	29.8	0.0	0.0	8.3	0.7	0.0	0.0	10.9	11.7
Incr Delay (d2), s/veh	2.4	0.0	0.3	0.0	0.0	0.0	1.2	0.4	0.0	0.0	1.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	1.1	0.1	0.0	0.0	1.4	0.4	0.0	0.0	6.5	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	0.0	31.2	29.9	0.0	0.0	9.4	1.1	0.0	0.0	12.7	14.5
LnGrp LOS	D	A	C	C	A	A	A	A	A	A	B	B
Approach Vol, veh/h		302			8			514			1115	
Approach Delay, s/veh		36.3			29.9			4.9			13.6	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		68.6		21.4	11.2	57.4		21.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		56.5		24.5	11.5	40.5		24.5				
Max Q Clear Time (g_c+I1), s		2.9		16.2	6.4	21.8		4.9				
Green Ext Time (p_c), s		1.8		0.7	0.3	5.9		0.0				

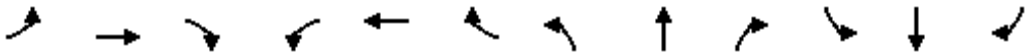
Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	0	51	0	0	0	47	467	0	0	300	136
Future Volume (veh/h)	150	0	51	0	0	0	47	467	0	0	300	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	0	91	0	0	0	96	556	0	0	333	206
Peak Hour Factor	0.74	0.92	0.56	0.92	0.92	0.92	0.49	0.84	0.92	0.92	0.90	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	0	227	0	268	0	674	1416	0	80	1228	1040
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.07	1.00	0.00	0.00	0.66	0.66
Sat Flow, veh/h	1781	0	1585	0	1870	0	1781	1870	0	853	1870	1585
Grp Volume(v), veh/h	203	0	91	0	0	0	96	556	0	0	333	206
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1870	0	853	1870	1585
Q Serve(g_s), s	9.9	0.0	4.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0	6.7	4.6
Cycle Q Clear(g_c), s	9.9	0.0	4.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0	6.7	4.6
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	0	227	0	268	0	674	1416	0	80	1228	1040
V/C Ratio(X)	0.61	0.00	0.40	0.00	0.00	0.00	0.14	0.39	0.00	0.00	0.27	0.20
Avail Cap(c_a), veh/h	644	0	502	0	592	0	733	1416	0	80	1228	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	35.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	6.5	6.1
Incr Delay (d2), s/veh	1.8	0.0	1.1	0.0	0.0	0.0	0.1	0.8	0.0	0.0	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	1.9	0.0	0.0	0.0	0.4	0.3	0.0	0.0	2.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	36.2	0.0	0.0	0.0	4.0	0.8	0.0	0.0	7.0	6.5
LnGrp LOS	D	A	D	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		294			0			652			539	
Approach Delay, s/veh		38.2			0.0			1.3			6.8	
Approach LOS		D						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.6		17.4	9.0	63.6		17.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		52.5		28.5	7.5	40.5		28.5				
Max Q Clear Time (g_c+I1), s		2.0		11.9	3.4	8.7		0.0				
Green Ext Time (p_c), s		4.3		1.0	0.1	2.9		0.0				

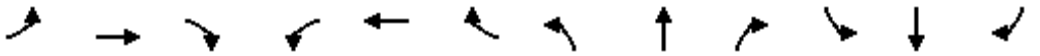
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	0	69	1	1	0	175	319	0	0	696	361
Future Volume (veh/h)	139	0	69	1	1	0	175	319	0	0	696	361
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	0	121	4	4	0	330	389	0	0	773	737
Peak Hour Factor	0.69	0.92	0.57	0.25	0.25	0.92	0.53	0.82	0.92	0.92	0.90	0.49
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	0	267	136	117	0	362	1368	0	80	1079	915
Arrive On Green	0.17	0.00	0.17	0.17	0.17	0.00	0.21	1.00	0.00	0.00	0.58	0.58
Sat Flow, veh/h	1412	0	1585	449	694	0	1781	1870	0	995	1870	1585
Grp Volume(v), veh/h	201	0	121	8	0	0	330	389	0	0	773	737
Grp Sat Flow(s),veh/h/ln	1412	0	1585	1142	0	0	1781	1870	0	995	1870	1585
Q Serve(g_s), s	6.6	0.0	6.2	0.0	0.0	0.0	6.9	0.0	0.0	0.0	26.8	33.1
Cycle Q Clear(g_c), s	12.8	0.0	6.2	6.2	0.0	0.0	6.9	0.0	0.0	0.0	26.8	33.1
Prop In Lane	1.00		1.00	0.50		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	0	267	253	0	0	362	1368	0	80	1079	915
V/C Ratio(X)	0.64	0.00	0.45	0.03	0.00	0.00	0.91	0.28	0.00	0.00	0.72	0.81
Avail Cap(c_a), veh/h	358	0	317	300	0	0	444	1368	0	80	1079	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	33.7	31.3	0.0	0.0	15.0	0.0	0.0	0.0	13.7	15.0
Incr Delay (d2), s/veh	3.2	0.0	1.2	0.1	0.0	0.0	20.1	0.5	0.0	0.0	4.1	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	2.4	0.1	0.0	0.0	5.6	0.2	0.0	0.0	11.4	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	34.9	31.4	0.0	0.0	35.1	0.5	0.0	0.0	17.8	22.6
LnGrp LOS	D	A	C	C	A	A	D	A	A	A	B	C
Approach Vol, veh/h		322			8			719			1510	
Approach Delay, s/veh		37.8			31.4			16.4			20.1	
Approach LOS		D			C			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		70.3		19.7	13.9	56.4		19.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		63.0		18.0	13.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s		2.0		14.8	8.9	35.1		8.2				
Green Ext Time (p_c), s		2.7		0.4	0.4	5.9		0.0				

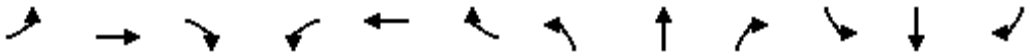
Intersection Summary												
HCM 6th Ctrl Delay			21.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	0	82	0	0	0	65	655	0	0	369	141
Future Volume (veh/h)	149	0	82	0	0	0	65	655	0	0	369	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	0	146	0	0	0	133	780	0	0	410	214
Peak Hour Factor	0.74	0.92	0.56	0.92	0.92	0.92	0.49	0.84	0.92	0.92	0.90	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	0	228	0	269	0	620	1415	0	80	1221	1035
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.07	1.00	0.00	0.00	0.65	0.65
Sat Flow, veh/h	1781	0	1585	0	1870	0	1781	1870	0	693	1870	1585
Grp Volume(v), veh/h	201	0	146	0	0	0	133	780	0	0	410	214
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1870	0	693	1870	1585
Q Serve(g_s), s	9.8	0.0	7.8	0.0	0.0	0.0	2.0	0.0	0.0	0.0	8.8	4.9
Cycle Q Clear(g_c), s	9.8	0.0	7.8	0.0	0.0	0.0	2.0	0.0	0.0	0.0	8.8	4.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	0	228	0	269	0	620	1415	0	80	1221	1035
V/C Ratio(X)	0.60	0.00	0.64	0.00	0.00	0.00	0.21	0.55	0.00	0.00	0.34	0.21
Avail Cap(c_a), veh/h	545	0	414	0	488	0	653	1415	0	80	1221	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	36.3	0.0	0.0	0.0	4.3	0.0	0.0	0.0	6.9	6.3
Incr Delay (d2), s/veh	1.7	0.0	3.0	0.0	0.0	0.0	0.2	1.6	0.0	0.0	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.2	0.0	0.0	0.0	0.6	0.6	0.0	0.0	3.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	39.3	0.0	0.0	0.0	4.4	1.6	0.0	0.0	7.7	6.7
LnGrp LOS	D	A	D	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		347			0			913			624	
Approach Delay, s/veh		39.1			0.0			2.0			7.4	
Approach LOS		D						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.6		17.4	9.3	63.3		17.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		57.5		23.5	6.5	46.5		23.5				
Max Q Clear Time (g_c+I1), s		2.0		11.8	4.0	10.8		0.0				
Green Ext Time (p_c), s		7.2		1.1	0.1	3.6		0.0				

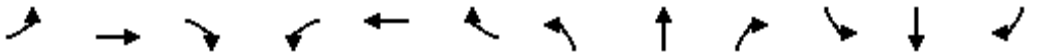
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	0	72	1	1	0	175	319	0	0	708	373
Future Volume (veh/h)	207	0	72	1	1	0	175	319	0	0	708	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	0	126	4	4	0	330	389	0	0	787	761
Peak Hour Factor	0.69	0.92	0.57	0.25	0.25	0.92	0.53	0.82	0.92	0.92	0.90	0.49
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	0	326	163	145	0	357	1299	0	80	975	826
Arrive On Green	0.21	0.00	0.21	0.21	0.21	0.00	0.25	1.00	0.00	0.00	0.52	0.52
Sat Flow, veh/h	1412	0	1585	503	705	0	1781	1870	0	995	1870	1585
Grp Volume(v), veh/h	300	0	126	8	0	0	330	389	0	0	787	761
Grp Sat Flow(s),veh/h/ln	1412	0	1585	1207	0	0	1781	1870	0	995	1870	1585
Q Serve(g_s), s	12.3	0.0	6.2	0.0	0.0	0.0	8.9	0.0	0.0	0.0	31.3	39.8
Cycle Q Clear(g_c), s	18.5	0.0	6.2	6.2	0.0	0.0	8.9	0.0	0.0	0.0	31.3	39.8
Prop In Lane	1.00		1.00	0.50		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	0	326	308	0	0	357	1299	0	80	975	826
V/C Ratio(X)	0.82	0.00	0.39	0.03	0.00	0.00	0.92	0.30	0.00	0.00	0.81	0.92
Avail Cap(c_a), veh/h	365	0	326	308	0	0	385	1299	0	80	975	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	30.9	28.6	0.0	0.0	17.3	0.0	0.0	0.0	17.8	19.8
Incr Delay (d2), s/veh	13.8	0.0	0.8	0.0	0.0	0.0	26.6	0.6	0.0	0.0	7.1	17.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	2.4	0.1	0.0	0.0	5.7	0.2	0.0	0.0	14.3	17.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	31.6	28.7	0.0	0.0	44.0	0.6	0.0	0.0	24.9	36.9
LnGrp LOS	D	A	C	C	A	A	D	A	A	A	C	D
Approach Vol, veh/h		426			8			719			1548	
Approach Delay, s/veh		44.7			28.7			20.5			30.8	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		67.0		23.0	15.6	51.4		23.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		62.5		18.5	12.5	45.5		18.5				
Max Q Clear Time (g_c+I1), s		2.0		20.5	10.9	41.8		8.2				
Green Ext Time (p_c), s		2.7		0.0	0.2	2.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			30.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	0	84	0	0	0	65	655	0	0	405	177
Future Volume (veh/h)	192	0	84	0	0	0	65	655	0	0	405	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	259	0	150	0	0	0	133	780	0	0	450	268
Peak Hour Factor	0.74	0.92	0.56	0.92	0.92	0.92	0.49	0.84	0.92	0.92	0.90	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	0	282	0	332	0	541	1351	0	80	1157	981
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.00	0.07	0.96	0.00	0.00	0.62	0.62
Sat Flow, veh/h	1781	0	1585	0	1870	0	1781	1870	0	693	1870	1585
Grp Volume(v), veh/h	259	0	150	0	0	0	133	780	0	0	450	268
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1870	0	693	1870	1585
Q Serve(g_s), s	12.6	0.0	7.7	0.0	0.0	0.0	2.2	3.3	0.0	0.0	10.9	7.0
Cycle Q Clear(g_c), s	12.6	0.0	7.7	0.0	0.0	0.0	2.2	3.3	0.0	0.0	10.9	7.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	282	0	332	0	541	1351	0	80	1157	981
V/C Ratio(X)	0.65	0.00	0.53	0.00	0.00	0.00	0.25	0.58	0.00	0.00	0.39	0.27
Avail Cap(c_a), veh/h	636	0	495	0	584	0	574	1351	0	80	1157	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	33.6	0.0	0.0	0.0	5.6	0.6	0.0	0.0	8.6	7.9
Incr Delay (d2), s/veh	1.8	0.0	1.6	0.0	0.0	0.0	0.2	1.8	0.0	0.0	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	3.1	0.0	0.0	0.0	0.7	1.2	0.0	0.0	4.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	0.0	35.2	0.0	0.0	0.0	5.8	2.4	0.0	0.0	9.6	8.6
LnGrp LOS	D	A	D	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		409			0			913			718	
Approach Delay, s/veh		36.6			0.0			2.9			9.2	
Approach LOS		D						A			A	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.5		20.5	9.3	60.2		20.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		52.9		28.1	6.5	41.9		28.1				
Max Q Clear Time (g_c+I1), s		5.3		14.6	4.2	12.9		0.0				
Green Ext Time (p_c), s		7.1		1.4	0.1	4.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	8	195	33	6	531
Future Vol, veh/h	9	8	195	33	6	531
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	33	87	82	50	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	24	224	40	12	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	845	244	0	0	264	0
Stage 1	244	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	333	795	-	-	1300	-
Stage 1	797	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	328	795	-	-	1300	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	786	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	540	1300	-
HCM Lane V/C Ratio	-	-	0.067	0.009	-
HCM Control Delay (s)	-	-	12.1	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	8	497	105	16	304
Future Vol, veh/h	4	8	497	105	16	304
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	67	84	88	57	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	12	592	119	28	345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1053	652	0	0	711	0
Stage 1	652	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	251	468	-	-	888	-
Stage 1	518	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	468	-	-	888	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	676	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	340	888	-
HCM Lane V/C Ratio	-	-	0.059	0.032	-
HCM Control Delay (s)	-	-	16.2	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	33	293	50	26	541
Future Vol, veh/h	19	33	293	50	26	541
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	34	84	66	81	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	97	349	76	32	652

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1103	387	0	0	425	0
Stage 1	387	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	234	661	-	-	1134	-
Stage 1	686	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	224	661	-	-	1134	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	433	1134	-
HCM Lane V/C Ratio	-	-	0.307	0.028	-
HCM Control Delay (s)	-	-	17	8.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	529	127	17	292
Future Vol, veh/h	6	5	529	127	17	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	62	95	88	42	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	557	144	40	311

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1020	629	0	0	701	0
Stage 1	629	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	262	482	-	-	896	-
Stage 1	531	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	482	-	-	896	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	308	896	-
HCM Lane V/C Ratio	-	-	0.065	0.045	-
HCM Control Delay (s)	-	-	17.5	9.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	34	303	52	27	496
Future Vol, veh/h	20	34	303	52	27	496
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	34	84	66	81	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	100	361	79	33	598

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1065	401	0	0	440	0
Stage 1	401	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	246	649	-	-	1120	-
Stage 1	676	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	239	649	-	-	1120	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	530	1120	-
HCM Lane V/C Ratio	-	-	0.26	0.03	-
HCM Control Delay (s)	-	-	14.2	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	547	131	18	267
Future Vol, veh/h	6	5	547	131	18	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	62	95	88	42	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	576	149	43	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1021	651	0	0	725	0
Stage 1	651	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	262	469	-	-	878	-
Stage 1	519	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	249	469	-	-	878	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	402	878	-
HCM Lane V/C Ratio	-	-	0.05	0.049	-
HCM Control Delay (s)	-	-	14.4	9.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	34	303	52	27	511
Future Vol, veh/h	20	34	303	52	27	511
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	34	84	66	81	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	100	361	79	33	616

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1083	401	0	0	440	0
Stage 1	401	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	240	649	-	-	1120	-
Stage 1	676	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	233	649	-	-	1120	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	527	1120	-
HCM Lane V/C Ratio	-	-	0.261	0.03	-
HCM Control Delay (s)	-	-	14.2	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	547	131	18	305
Future Vol, veh/h	6	5	547	131	18	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	62	95	88	42	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	576	149	43	324

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1061	651	0	0	725	0
Stage 1	651	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	248	469	-	-	878	-
Stage 1	519	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	236	469	-	-	878	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	878	-
HCM Lane V/C Ratio	-	-	0.051	0.049	-
HCM Control Delay (s)	-	-	14.6	9.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	48	425	72	38	720
Future Vol, veh/h	28	48	425	72	38	720
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	34	84	66	81	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	141	506	109	47	867

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1522	561	0	0	615	0
Stage 1	561	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	130	527	-	-	965	-
Stage 1	571	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	124	527	-	-	965	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	371	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	965	-
HCM Lane V/C Ratio	-	-	0.491	0.049	-
HCM Control Delay (s)	-	-	22.6	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0.2	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	7	767	184	25	388
Future Vol, veh/h	9	7	767	184	25	388
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	62	95	88	42	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	11	807	209	60	413

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1445	912	0	0	1016	0
Stage 1	912	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	145	332	-	-	683	-
Stage 1	392	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	332	-	-	683	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	278	683	-
HCM Lane V/C Ratio	-	-	0.105	0.087	-
HCM Control Delay (s)	-	-	19.5	10.8	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	48	425	72	38	735
Future Vol, veh/h	28	48	425	72	38	735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	34	84	66	81	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	141	506	109	47	886

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1541	561	0	0	615	0
Stage 1	561	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	127	527	-	-	965	-
Stage 1	571	-	-	-	-	-
Stage 2	364	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	121	527	-	-	965	-
Mov Cap-2 Maneuver	233	-	-	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	364	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.9	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	392	965	-
HCM Lane V/C Ratio	-	-	0.495	0.049	-
HCM Control Delay (s)	-	-	22.9	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.7	0.2	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	7	767	184	25	426
Future Vol, veh/h	9	7	767	184	25	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	62	95	88	42	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	11	807	209	60	453

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1485	912	0	0	1016	0
Stage 1	912	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	137	332	-	-	683	-
Stage 1	392	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	332	-	-	683	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	564	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	1.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	273	683	-
HCM Lane V/C Ratio	-	-	0.107	0.087	-
HCM Control Delay (s)	-	-	19.8	10.8	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.3	-

Intersection	
Intersection Delay, s/veh	31.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	129	0	148	3	5	2	153	112	3	0	240	286
Future Vol, veh/h	129	0	148	3	5	2	153	112	3	0	240	286
Peak Hour Factor	0.73	0.92	0.71	0.38	0.42	0.25	0.81	0.82	0.38	0.92	0.90	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	177	0	208	8	12	8	189	137	8	0	267	325
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	22.4	11.4	19.2	46.3
HCM LOS	C	B	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	47%	30%	0%
Vol Thru, %	42%	0%	50%	46%
Vol Right, %	1%	53%	20%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	268	277	10	526
LT Vol	153	129	3	0
Through Vol	112	0	5	240
RT Vol	3	148	2	286
Lane Flow Rate	333	385	28	592
Geometry Grp	1	1	1	1
Degree of Util (X)	0.606	0.686	0.061	0.939
Departure Headway (Hd)	6.544	6.408	7.916	5.713
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	550	562	455	633
Service Time	4.606	4.462	5.916	3.764
HCM Lane V/C Ratio	0.605	0.685	0.062	0.935
HCM Control Delay	19.2	22.4	11.4	46.3
HCM Lane LOS	C	C	B	E
HCM 95th-tile Q	4	5.3	0.2	12.6

Intersection	
Intersection Delay, s/veh	65.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	355	4	196	2	1	3	151	227	0	7	140	160
Future Vol, veh/h	355	4	196	2	1	3	151	227	0	7	140	160
Peak Hour Factor	0.93	0.50	0.86	0.25	0.25	0.75	0.92	0.70	0.25	0.58	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	382	8	228	8	4	4	164	324	0	12	165	188
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	105.6	12.1	49.1	23.7
HCM LOS	F	B	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	64%	33%	2%
Vol Thru, %	60%	1%	17%	46%
Vol Right, %	0%	35%	50%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	378	555	6	307
LT Vol	151	355	2	7
Through Vol	227	4	1	140
RT Vol	0	196	3	160
Lane Flow Rate	488	618	16	365
Geometry Grp	1	1	1	1
Degree of Util (X)	0.916	1.135	0.037	0.675
Departure Headway (Hd)	7.221	6.617	8.788	7.153
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	508	556	410	507
Service Time	5.221	4.619	6.788	5.153
HCM Lane V/C Ratio	0.961	1.112	0.039	0.72
HCM Control Delay	49.1	105.6	12.1	23.7
HCM Lane LOS	E	F	B	C
HCM 95th-tile Q	10.7	20.5	0.1	5

Intersection	
Intersection Delay, s/veh	71
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	156	0	172	0	4	1	232	193	0	0	258	271
Future Vol, veh/h	156	0	172	0	4	1	232	193	0	0	258	271
Peak Hour Factor	0.78	0.92	0.77	0.92	0.33	0.25	0.85	0.75	0.92	0.92	0.79	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	200	0	223	0	12	4	273	257	0	0	327	304
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	33.5	12.9	63.3	104.1
HCM LOS	D	B	F	F

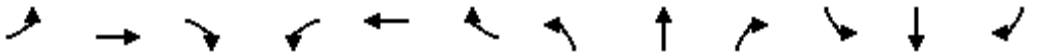
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	55%	48%	0%	0%
Vol Thru, %	45%	0%	80%	49%
Vol Right, %	0%	52%	20%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	425	328	5	529
LT Vol	232	156	0	0
Through Vol	193	0	4	258
RT Vol	0	172	1	271
Lane Flow Rate	530	423	16	631
Geometry Grp	1	1	1	1
Degree of Util (X)	0.987	0.803	0.04	1.133
Departure Headway (Hd)	7.074	7.205	9.463	6.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	514	508	381	568
Service Time	5.074	5.205	7.463	4.465
HCM Lane V/C Ratio	1.031	0.833	0.042	1.111
HCM Control Delay	63.3	33.5	12.9	104.1
HCM Lane LOS	F	D	B	F
HCM 95th-tile Q	13.3	7.6	0.1	20.7

Intersection	
Intersection Delay, s/veh	63.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	353	3	198	2	4	4	174	256	4	1	138	178
Future Vol, veh/h	353	3	198	2	4	4	174	256	4	1	138	178
Peak Hour Factor	0.93	0.38	0.97	0.50	1.00	0.33	0.82	0.86	0.33	0.25	0.93	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	380	8	204	4	4	12	212	298	12	4	148	187
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	92.2	12.2	59.8	21.6
HCM LOS	F	B	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	64%	20%	0%
Vol Thru, %	59%	1%	40%	44%
Vol Right, %	1%	36%	40%	56%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	434	554	10	317
LT Vol	174	353	2	1
Through Vol	256	3	4	138
RT Vol	4	198	4	178
Lane Flow Rate	522	592	20	340
Geometry Grp	1	1	1	1
Degree of Util (X)	0.972	1.095	0.047	0.633
Departure Headway (Hd)	7.089	6.664	8.771	7.132
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	517	550	411	510
Service Time	5.089	4.667	6.771	5.132
HCM Lane V/C Ratio	1.01	1.076	0.049	0.667
HCM Control Delay	59.8	92.2	12.2	21.6
HCM Lane LOS	F	F	B	C
HCM 95th-tile Q	12.7	18.4	0.1	4.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	0	178	0	4	1	240	200	0	0	267	280
Future Volume (veh/h)	161	0	178	0	4	1	240	200	0	0	267	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	0	0	0	12	4	282	267	0	0	338	315
Peak Hour Factor	0.78	0.92	0.77	0.92	0.33	0.25	0.85	0.75	0.92	0.92	0.79	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	0		0	144	48	733	1483	0	80	1251	1060
Arrive On Green	0.11	0.00	0.00	0.00	0.11	0.11	0.07	0.79	0.00	0.00	1.00	1.00
Sat Flow, veh/h	2794	0	1585	0	1342	447	1781	1870	0	1112	1870	1585
Grp Volume(v), veh/h	206	0	0	0	0	16	282	267	0	0	338	315
Grp Sat Flow(s),veh/h/ln	1397	0	1585	0	0	1790	1781	1870	0	1112	1870	1585
Q Serve(g_s), s	6.5	0.0	0.0	0.0	0.0	0.7	4.0	3.1	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	0.0	0.0	0.0	0.7	4.0	3.1	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	0.00		0.25	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	0		0	0	192	733	1483	0	80	1251	1060
V/C Ratio(X)	0.47	0.00		0.00	0.00	0.08	0.38	0.18	0.00	0.00	0.27	0.30
Avail Cap(c_a), veh/h	805	0		0	0	428	987	1483	0	80	1251	1060
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	0.0	0.0	36.2	3.0	2.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.0	0.0	0.3	1.1	0.8	0.0	0.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	0.0	0.0	0.0	0.0	36.4	3.3	2.5	0.0	0.0	0.5	0.7
LnGrp LOS	D	A		A	A	D	A	A	A	A	A	A
Approach Vol, veh/h		206	A		16			549			653	
Approach Delay, s/veh		40.2			36.4			2.9			0.6	
Approach LOS		D			D			A			A	

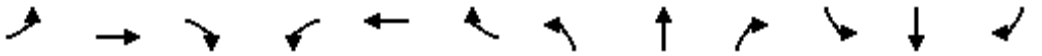
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.8		14.2	11.2	64.7		14.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		59.5		21.5	19.5	35.5		21.5				
Max Q Clear Time (g_c+I1), s		5.1		9.2	6.0	2.0		2.7				
Green Ext Time (p_c), s		1.7		0.5	0.7	3.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	7.6	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	3	205	2	4	4	180	265	4	1	143	184
Future Volume (veh/h)	365	3	205	2	4	4	180	265	4	1	143	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	398	0	0	4	4	12	220	308	12	4	154	194
Peak Hour Factor	0.93	0.38	0.97	0.50	1.00	0.33	0.82	0.86	0.33	0.25	0.93	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	647	0		79	81	168	779	1303	51	726	1140	966
Arrive On Green	0.17	0.00	0.00	0.17	0.17	0.17	0.07	0.73	0.73	0.41	0.41	0.41
Sat Flow, veh/h	2794	0	1585	183	471	981	1781	1788	70	1060	1870	1585
Grp Volume(v), veh/h	398	0	0	20	0	0	220	0	320	4	154	194
Grp Sat Flow(s),veh/h/ln	1397	0	1585	1635	0	0	1781	0	1858	1060	1870	1585
Q Serve(g_s), s	11.2	0.0	0.0	0.0	0.0	0.0	3.8	0.0	5.1	0.2	4.6	7.1
Cycle Q Clear(g_c), s	12.1	0.0	0.0	0.9	0.0	0.0	3.8	0.0	5.1	0.2	4.6	7.1
Prop In Lane	1.00		1.00	0.20		0.60	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	647	0		329	0	0	779	0	1353	726	1140	966
V/C Ratio(X)	0.62	0.00		0.06	0.00	0.00	0.28	0.00	0.24	0.01	0.14	0.20
Avail Cap(c_a), veh/h	1208	0		649	0	0	983	0	1353	726	1140	966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	0.0	31.3	0.0	0.0	4.9	0.0	4.0	10.5	11.8	12.5
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	0.4	0.0	0.0	1.2	0.0	1.7	0.0	1.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	0.0	0.0	31.3	0.0	0.0	5.1	0.0	4.4	10.5	12.0	13.0
LnGrp LOS	D	A		C	A	A	A	A	A	B	B	B
Approach Vol, veh/h		398	A		20			540			352	
Approach Delay, s/veh		36.7			31.3			4.7			12.5	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		70.1		19.9	10.7	59.3		19.9				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5	16.5	26.5		33.5				
Max Q Clear Time (g_c+I1), s		7.1		14.1	5.8	9.1		2.9				
Green Ext Time (p_c), s		2.1		1.3	0.4	1.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	16.9	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	0	178	0	4	1	240	202	0	0	273	303
Future Volume (veh/h)	169	0	178	0	4	1	240	202	0	0	273	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	0	0	0	12	4	282	269	0	0	346	340
Peak Hour Factor	0.78	0.92	0.77	0.92	0.33	0.25	0.85	0.75	0.92	0.92	0.79	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	449	0		0	150	50	715	1475	0	80	1241	1052
Arrive On Green	0.11	0.00	0.00	0.00	0.11	0.11	0.07	0.79	0.00	0.00	1.00	1.00
Sat Flow, veh/h	2794	0	1585	0	1342	447	1781	1870	0	1110	1870	1585
Grp Volume(v), veh/h	217	0	0	0	0	16	282	269	0	0	346	340
Grp Sat Flow(s),veh/h/ln	1397	0	1585	0	0	1790	1781	1870	0	1110	1870	1585
Q Serve(g_s), s	6.8	0.0	0.0	0.0	0.0	0.7	4.0	3.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	0.0	0.0	0.0	0.7	4.0	3.2	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	0.00		0.25	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	449	0		0	0	199	715	1475	0	80	1241	1052
V/C Ratio(X)	0.48	0.00		0.00	0.00	0.08	0.39	0.18	0.00	0.00	0.28	0.32
Avail Cap(c_a), veh/h	805	0		0	0	428	968	1475	0	80	1241	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	0.0	0.0	0.0	35.9	3.1	2.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.0	0.0	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.0	0.0	0.3	1.1	0.9	0.0	0.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	0.0	0.0	0.0	36.0	3.4	2.6	0.0	0.0	0.6	0.8
LnGrp LOS	D	A		A	A	D	A	A	A	A	A	A
Approach Vol, veh/h		217	A		16			551			686	
Approach Delay, s/veh		40.0			36.0			3.0			0.7	
Approach LOS		D			D			A			A	

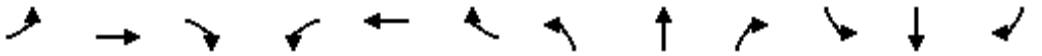
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.5		14.5	11.2	64.2		14.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		59.5		21.5	19.5	35.5		21.5				
Max Q Clear Time (g_c+I1), s		5.2		9.5	6.0	2.0		2.7				
Green Ext Time (p_c), s		1.8		0.5	0.7	3.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	7.8	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	3	205	2	4	4	180	271	4	1	147	198
Future Volume (veh/h)	389	3	205	2	4	4	180	271	4	1	147	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	424	0	0	4	4	12	220	315	12	4	158	208
Peak Hour Factor	0.93	0.38	0.97	0.50	1.00	0.33	0.82	0.86	0.33	0.25	0.93	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	674	0		82	84	178	742	1286	49	710	1119	948
Arrive On Green	0.18	0.00	0.00	0.18	0.18	0.18	0.07	0.72	0.72	0.20	0.20	0.20
Sat Flow, veh/h	2794	0	1585	188	465	980	1781	1790	68	1053	1870	1585
Grp Volume(v), veh/h	424	0	0	20	0	0	220	0	327	4	158	208
Grp Sat Flow(s),veh/h/ln	1397	0	1585	1634	0	0	1781	0	1858	1053	1870	1585
Q Serve(g_s), s	12.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	5.4	0.3	6.3	9.9
Cycle Q Clear(g_c), s	12.9	0.0	0.0	0.9	0.0	0.0	3.9	0.0	5.4	0.3	6.3	9.9
Prop In Lane	1.00		1.00	0.20		0.60	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	674	0		344	0	0	742	0	1335	710	1119	948
V/C Ratio(X)	0.63	0.00		0.06	0.00	0.00	0.30	0.00	0.24	0.01	0.14	0.22
Avail Cap(c_a), veh/h	1208	0		649	0	0	943	0	1335	710	1119	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	0.0	30.5	0.0	0.0	5.4	0.0	4.3	14.6	17.0	18.5
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	0.4	0.0	0.0	1.2	0.0	1.8	0.1	2.8	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0	30.6	0.0	0.0	5.6	0.0	4.8	14.6	17.3	19.0
LnGrp LOS	D	A		C	A	A	A	A	A	B	B	B
Approach Vol, veh/h		424	A		20			547			370	
Approach Delay, s/veh		36.3			30.6			5.1			18.2	
Approach LOS		D			C			A			B	

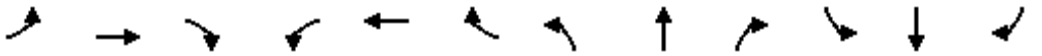
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.2		20.8	10.8	58.3		20.8				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5	16.5	26.5		33.5				
Max Q Clear Time (g_c+I1), s		7.4		14.9	5.9	11.9		2.9				
Green Ext Time (p_c), s		2.2		1.4	0.4	1.4		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	0	249	0	6	1	336	280	0	0	374	393
Future Volume (veh/h)	226	0	249	0	6	1	336	280	0	0	374	393
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	290	0	0	0	18	4	395	373	0	0	473	442
Peak Hour Factor	0.78	0.92	0.77	0.92	0.33	0.25	0.85	0.75	0.92	0.92	0.79	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	522	0		0	208	46	559	1420	0	80	1121	950
Arrive On Green	0.14	0.00	0.00	0.00	0.14	0.14	0.11	0.76	0.00	0.00	0.60	0.60
Sat Flow, veh/h	2779	0	1585	0	1482	329	1781	1870	0	1009	1870	1585
Grp Volume(v), veh/h	290	0	0	0	0	22	395	373	0	0	473	442
Grp Sat Flow(s),veh/h/ln	1390	0	1585	0	0	1811	1781	1870	0	1009	1870	1585
Q Serve(g_s), s	9.1	0.0	0.0	0.0	0.0	1.0	6.9	5.4	0.0	0.0	12.2	14.0
Cycle Q Clear(g_c), s	10.1	0.0	0.0	0.0	0.0	1.0	6.9	5.4	0.0	0.0	12.2	14.0
Prop In Lane	1.00		1.00	0.00		0.18	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	522	0		0	0	255	559	1420	0	80	1121	950
V/C Ratio(X)	0.56	0.00		0.00	0.00	0.09	0.71	0.26	0.00	0.00	0.42	0.47
Avail Cap(c_a), veh/h	733	0		0	0	392	788	1420	0	80	1121	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	0.0	0.0	0.0	33.6	7.3	3.3	0.0	0.0	9.7	10.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.1	1.7	0.5	0.0	0.0	1.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	0.0	0.0	0.4	2.2	1.6	0.0	0.0	4.9	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	0.0	0.0	0.0	33.8	9.0	3.7	0.0	0.0	10.8	11.7
LnGrp LOS	D	A		A	A	C	A	A	A	A	B	B
Approach Vol, veh/h		290	A		22			768			915	
Approach Delay, s/veh		38.9			33.8			6.4			11.2	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.8		17.2	14.4	58.4		17.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		61.5		19.5	21.5	35.5		19.5				
Max Q Clear Time (g_c+I1), s		7.4		12.1	8.9	16.0		3.0				
Green Ext Time (p_c), s		2.6		0.6	1.0	4.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

Notes
User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	511	4	287	3	6	6	252	371	6	1	200	258
Future Volume (veh/h)	511	4	287	3	6	6	252	371	6	1	200	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	557	0	0	6	6	18	307	431	18	4	215	272
Peak Hour Factor	0.93	0.38	0.97	0.50	1.00	0.33	0.82	0.86	0.33	0.25	0.93	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	813	0		96	102	226	643	1192	50	565	963	816
Arrive On Green	0.23	0.00	0.00	0.23	0.23	0.23	0.10	0.67	0.67	0.17	0.17	0.17
Sat Flow, veh/h	2774	0	1585	209	443	977	1781	1783	74	941	1870	1585
Grp Volume(v), veh/h	557	0	0	30	0	0	307	0	449	4	215	272
Grp Sat Flow(s),veh/h/ln	1387	0	1585	1628	0	0	1781	0	1857	941	1870	1585
Q Serve(g_s), s	15.7	0.0	0.0	0.0	0.0	0.0	6.7	0.0	9.5	0.3	8.9	13.6
Cycle Q Clear(g_c), s	16.9	0.0	0.0	1.3	0.0	0.0	6.7	0.0	9.5	0.3	8.9	13.6
Prop In Lane	1.00		1.00	0.20		0.60	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	813	0		425	0	0	643	0	1242	565	963	816
V/C Ratio(X)	0.69	0.00		0.07	0.00	0.00	0.48	0.00	0.36	0.01	0.22	0.33
Avail Cap(c_a), veh/h	1234	0		667	0	0	804	0	1242	565	963	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	0.0	27.1	0.0	0.0	8.0	0.0	6.5	18.3	21.8	23.8
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.8	0.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	0.5	0.0	0.0	2.3	0.0	3.5	0.1	4.4	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	27.1	0.0	0.0	8.6	0.0	7.3	18.3	22.4	24.9
LnGrp LOS	C	A		C	A	A	A	A	A	B	C	C
Approach Vol, veh/h		557	A		30			756			491	
Approach Delay, s/veh		34.0			27.1			7.8			23.7	
Approach LOS		C			C			A			C	

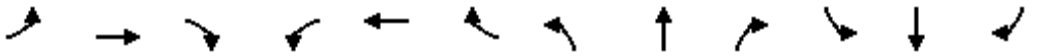
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		64.7		25.3	13.8	50.8		25.3				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5	17.5	24.5		34.5				
Max Q Clear Time (g_c+I1), s		11.5		18.9	8.7	15.6		3.3				
Green Ext Time (p_c), s		3.1		1.9	0.6	1.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	0	249	0	6	1	336	282	0	0	380	416
Future Volume (veh/h)	234	0	249	0	6	1	336	282	0	0	380	416
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	0	0	0	18	4	395	376	0	0	481	467
Peak Hour Factor	0.78	0.92	0.77	0.92	0.33	0.25	0.85	0.75	0.92	0.92	0.79	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	532	0		0	214	48	546	1414	0	80	1113	943
Arrive On Green	0.14	0.00	0.00	0.00	0.14	0.14	0.11	0.76	0.00	0.00	0.59	0.59
Sat Flow, veh/h	2779	0	1585	0	1482	329	1781	1870	0	1007	1870	1585
Grp Volume(v), veh/h	300	0	0	0	0	22	395	376	0	0	481	467
Grp Sat Flow(s),veh/h/ln	1390	0	1585	0	0	1811	1781	1870	0	1007	1870	1585
Q Serve(g_s), s	9.4	0.0	0.0	0.0	0.0	0.9	7.0	5.5	0.0	0.0	12.6	15.2
Cycle Q Clear(g_c), s	10.4	0.0	0.0	0.0	0.0	0.9	7.0	5.5	0.0	0.0	12.6	15.2
Prop In Lane	1.00		1.00	0.00		0.18	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	532	0		0	0	261	546	1414	0	80	1113	943
V/C Ratio(X)	0.56	0.00		0.00	0.00	0.08	0.72	0.27	0.00	0.00	0.43	0.50
Avail Cap(c_a), veh/h	733	0		0	0	392	755	1414	0	80	1113	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	0.0	0.0	33.4	7.9	3.4	0.0	0.0	9.9	10.5
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.1	2.1	0.5	0.0	0.0	1.2	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	0.0	0.0	0.4	2.3	1.7	0.0	0.0	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	0.0	0.0	0.0	33.5	10.0	3.8	0.0	0.0	11.2	12.3
LnGrp LOS	D	A		A	A	C	A	A	A	A	B	B
Approach Vol, veh/h		300	A		22			771			948	
Approach Delay, s/veh		38.8			33.5			7.0			11.7	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.5		17.5	14.5	58.0		17.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		61.5		19.5	20.5	36.5		19.5				
Max Q Clear Time (g_c+I1), s		7.5		12.4	9.0	17.2		2.9				
Green Ext Time (p_c), s		2.6		0.6	1.0	4.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	14.2	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	535	4	287	3	6	6	252	377	6	1	204	272
Future Volume (veh/h)	535	4	287	3	6	6	252	377	6	1	204	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	583	0	0	6	6	18	307	438	18	4	219	286
Peak Hour Factor	0.93	0.38	0.97	0.50	1.00	0.33	0.82	0.86	0.33	0.25	0.93	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	839	0		99	106	235	628	1176	48	550	941	797
Arrive On Green	0.24	0.00	0.00	0.24	0.24	0.24	0.11	0.66	0.66	0.17	0.17	0.17
Sat Flow, veh/h	2774	0	1585	212	439	976	1781	1784	73	935	1870	1585
Grp Volume(v), veh/h	583	0	0	30	0	0	307	0	456	4	219	286
Grp Sat Flow(s),veh/h/ln	1387	0	1585	1627	0	0	1781	0	1857	935	1870	1585
Q Serve(g_s), s	16.5	0.0	0.0	0.0	0.0	0.0	6.9	0.0	10.0	0.3	9.1	14.4
Cycle Q Clear(g_c), s	17.7	0.0	0.0	1.2	0.0	0.0	6.9	0.0	10.0	0.3	9.1	14.4
Prop In Lane	1.00		1.00	0.20		0.60	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	839	0		440	0	0	628	0	1224	550	941	797
V/C Ratio(X)	0.69	0.00		0.07	0.00	0.00	0.49	0.00	0.37	0.01	0.23	0.36
Avail Cap(c_a), veh/h	1234	0		667	0	0	805	0	1224	550	941	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	0.0	26.4	0.0	0.0	8.4	0.0	6.9	18.8	22.5	24.7
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.9	0.0	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	0.5	0.0	0.0	2.4	0.0	3.7	0.1	4.5	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	0.0	0.0	26.5	0.0	0.0	9.0	0.0	7.8	18.8	23.1	25.9
LnGrp LOS	C	A		C	A	A	A	A	A	B	C	C
Approach Vol, veh/h		583	A		30			763			509	
Approach Delay, s/veh		33.6			26.5			8.3			24.6	
Approach LOS		C			C			A			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		63.8		26.2	14.1	49.8		26.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5	18.5	23.5		34.5				
Max Q Clear Time (g_c+I1), s		12.0		19.7	8.9	16.4		3.2				
Green Ext Time (p_c), s		3.2		2.0	0.7	1.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	20.8	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	146	4	11	385	11	60
Future Vol, veh/h	146	4	11	385	11	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	4	12	418	12	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	603	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	442	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1416	-	462	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	648	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1416	-	457	884
Mov Cap-2 Maneuver	-	-	-	-	457	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	648	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	772	-	-	1416	-
HCM Lane V/C Ratio	0.1	-	-	0.008	-
HCM Control Delay (s)	10.2	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	159	12	32	57	7	38
Future Vol, veh/h	159	12	32	57	7	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	13	35	62	8	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	186	0	312	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1388	-	681	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1388	-	663	863
Mov Cap-2 Maneuver	-	-	-	-	663	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	894	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	1388	-
HCM Lane V/C Ratio	0.059	-	-	0.025	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	225	4	11	539	11	60
Future Vol, veh/h	225	4	11	539	11	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	4	12	586	12	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	249	0	857	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1317	-	328	792
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1317	-	323	792
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	542	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	647	-	-	1317	-
HCM Lane V/C Ratio	0.119	-	-	0.009	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	234	12	32	78	7	38
Future Vol, veh/h	234	12	32	78	7	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	254	13	35	85	8	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	267	0	416	261
Stage 1	-	-	-	-	261	-
Stage 2	-	-	-	-	155	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1297	-	593	778
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	873	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1297	-	576	778
Mov Cap-2 Maneuver	-	-	-	-	576	-
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	873	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	738	-	-	1297	-
HCM Lane V/C Ratio	0.066	-	-	0.027	-
HCM Control Delay (s)	10.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	89	10	355	582	12
Future Vol, veh/h	0	89	10	355	582	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	97	11	386	633	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	640	646	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	475	939	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	475	939	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	939	-	475	-	-
HCM Lane V/C Ratio	0.012	-	0.204	-	-
HCM Control Delay (s)	8.9	-	14.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	51	30	678	310	36
Future Vol, veh/h	0	51	30	678	310	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	55	33	737	337	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	357	376	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	687	1182	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	687	1182	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1182	-	687	-	-
HCM Lane V/C Ratio	0.028	-	0.081	-	-
HCM Control Delay (s)	8.1	-	10.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	89	10	497	814	12
Future Vol, veh/h	0	89	10	497	814	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	97	11	540	885	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	892	898	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	341	756	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	341	756	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	756	-	341	-	-
HCM Lane V/C Ratio	0.014	-	0.284	-	-
HCM Control Delay (s)	9.8	-	19.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	51	30	951	434	36
Future Vol, veh/h	0	51	30	951	434	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	55	33	1034	472	39

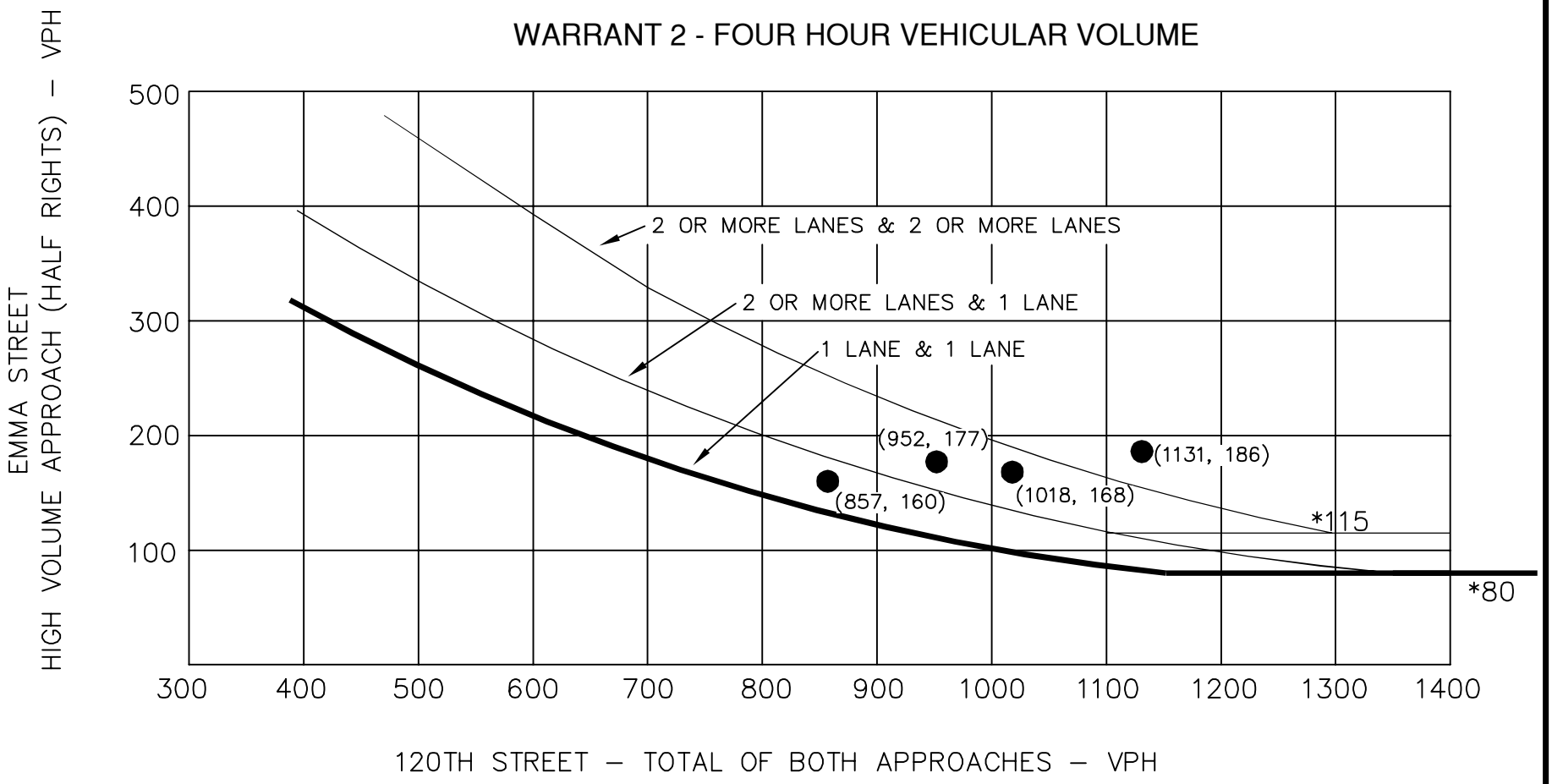
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	492	511	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	577	1054	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	577	1054	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1054	-	577	-	-
HCM Lane V/C Ratio	0.031	-	0.096	-	-
HCM Control Delay (s)	8.5	-	11.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

APPENDIX E

Signal Warrant Analysis Figures



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

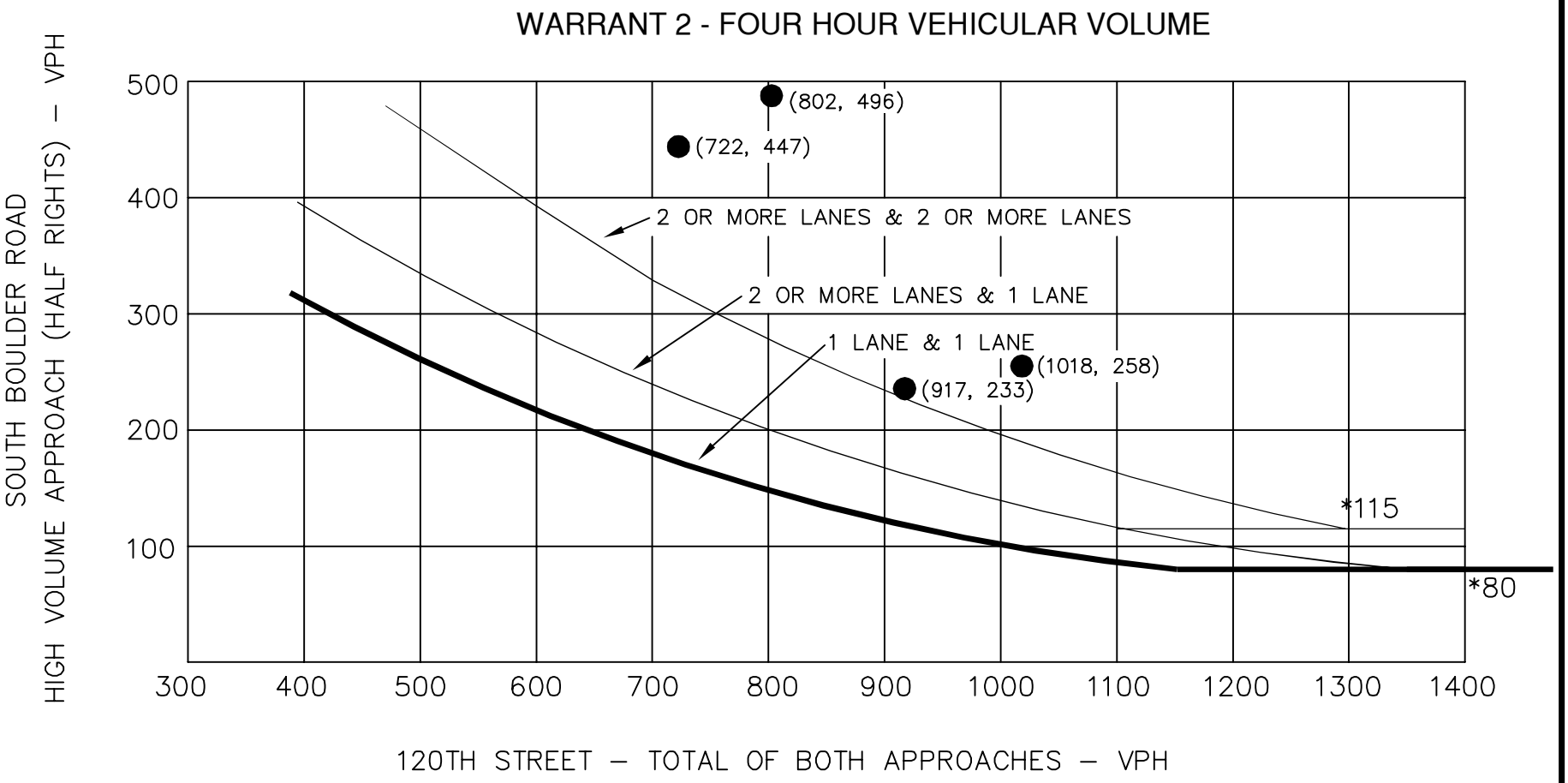
EMMA STREET & 120TH STREET
FOUR HOUR VOLUME WARRANT

● 2020 TRAFFIC DATA POINT

FIGURE A1

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

SOUTH BOULDER RD & 120TH STREET
FOUR HOUR VOLUME WARRANT

● 2020 TRAFFIC DATA POINT

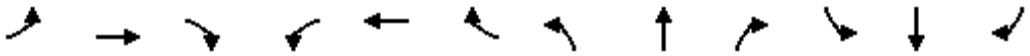
FIGURE A2

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

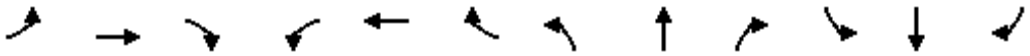
APPENDIX F

Queueing Analysis Worksheets



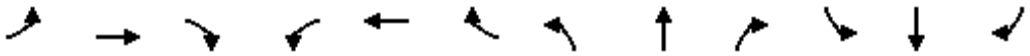
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	95	298	81	445	605	124	111	144	258	82	447	112
v/c Ratio	0.35	0.43	0.19	0.75	0.57	0.22	0.27	0.18	0.16	0.08	0.73	0.07
Control Delay	27.7	45.3	1.9	55.3	38.4	6.5	16.8	22.3	0.2	15.6	43.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	45.3	1.9	55.3	38.4	6.5	16.8	22.3	0.2	15.6	43.7	0.1
Queue Length 50th (ft)	45	107	0	170	211	0	43	69	0	15	304	0
Queue Length 95th (ft)	52	161	0	205	264	41	51	97	0	25	344	0
Internal Link Dist (ft)		1185			1900			756			690	
Turn Bay Length (ft)	300		300	300		200	200		200	200		200
Base Capacity (vph)	284	700	422	758	1057	560	408	817	1583	1305	613	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.43	0.19	0.59	0.57	0.22	0.27	0.18	0.16	0.06	0.73	0.07

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	652	76	248	453	141	49	226	504	371	176	57
v/c Ratio	0.24	0.54	0.12	0.63	0.32	0.20	0.10	0.44	0.32	0.43	0.40	0.04
Control Delay	18.5	34.0	0.5	58.1	25.8	4.4	20.8	39.7	0.5	24.0	41.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	34.0	0.5	58.1	25.8	4.4	20.8	39.7	0.5	24.0	41.8	0.1
Queue Length 50th (ft)	41	213	0	95	126	0	22	144	0	93	115	0
Queue Length 95th (ft)	70	282	0	129	168	29	46	224	0	98	161	0
Internal Link Dist (ft)		1185			1900			756			690	
Turn Bay Length (ft)	300		300	300		200	200		200	200		200
Base Capacity (vph)	424	1218	634	472	1405	713	498	515	1583	1027	442	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.54	0.12	0.53	0.32	0.20	0.10	0.44	0.32	0.36	0.40	0.04

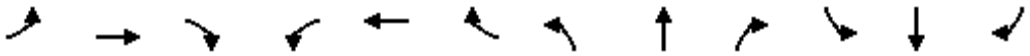
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	132	417	108	619	847	174	138	200	345	115	626	156
v/c Ratio	0.84	0.75	0.30	0.96	0.82	0.31	0.42	0.24	0.22	0.11	0.95	0.10
Control Delay	69.7	57.6	5.9	75.0	47.3	9.0	21.6	22.1	0.3	14.3	63.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	57.6	5.9	75.0	47.3	9.0	21.6	22.1	0.3	14.3	63.1	0.1
Queue Length 50th (ft)	67	164	0	247	321	14	51	95	0	21	468	0
Queue Length 95th (ft)	71	222	0	#334	388	62	58	126	0	30	502	0
Internal Link Dist (ft)		1185			1900			756			690	
Turn Bay Length (ft)	300		300	300		200	200		200	200		200
Base Capacity (vph)	158	557	363	646	1032	567	327	824	1583	1323	659	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.75	0.30	0.96	0.82	0.31	0.42	0.24	0.22	0.09	0.95	0.10

Intersection Summary

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

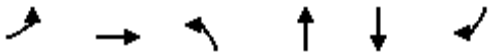


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	145	913	89	329	635	196	60	316	695	519	245	81
v/c Ratio	0.41	0.76	0.14	0.78	0.46	0.27	0.14	0.68	0.44	0.71	0.55	0.05
Control Delay	20.7	40.5	1.6	64.3	29.0	4.3	21.5	49.8	0.9	29.4	45.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	40.5	1.6	64.3	29.0	4.3	21.5	49.8	0.9	29.4	45.8	0.1
Queue Length 50th (ft)	59	333	0	128	192	0	27	225	0	137	168	0
Queue Length 95th (ft)	93	413	0	170	247	32	55	321	0	138	220	0
Internal Link Dist (ft)		1185			1900			756			690	
Turn Bay Length (ft)	300		300	300		200	200		200	200		200
Base Capacity (vph)	358	1200	626	443	1366	731	440	464	1583	775	442	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.76	0.14	0.74	0.46	0.27	0.14	0.68	0.44	0.67	0.55	0.05

Intersection Summary

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	245	60	8	236	278	564	551
v/c Ratio	0.75	0.09	0.02	0.50	0.22	0.60	0.57
Control Delay	45.4	0.3	23.0	11.2	6.1	21.4	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	0.3	23.0	11.2	6.1	21.4	10.0
Queue Length 50th (ft)	130	0	4	32	38	218	74
Queue Length 95th (ft)	134	0	3	46	86	405	24
Internal Link Dist (ft)		488	158		422	426	
Turn Bay Length (ft)	200			200			100
Base Capacity (vph)	459	783	564	498	1240	943	961
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	0.08	0.01	0.47	0.22	0.60	0.57

Intersection Summary



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	204	91	96	556	334	208
v/c Ratio	0.71	0.12	0.14	0.43	0.31	0.20
Control Delay	46.0	0.3	4.3	5.0	12.6	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	0.3	4.3	5.0	12.6	2.6
Queue Length 50th (ft)	109	0	8	50	93	0
Queue Length 95th (ft)	129	0	16	132	189	9
Internal Link Dist (ft)		488		422	426	
Turn Bay Length (ft)	200		200			100
Base Capacity (vph)	446	858	692	1295	1095	1016
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	0.46	0.11	0.14	0.43	0.31	0.20

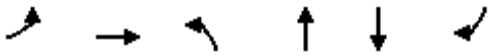
Intersection Summary

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	303	126	8	330	389	787	761
v/c Ratio	0.83	0.19	0.02	0.87	0.33	1.00	0.89
Control Delay	50.7	0.6	22.5	51.4	8.0	61.5	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	0.6	22.5	51.4	8.0	61.5	28.8
Queue Length 50th (ft)	159	0	3	140	65	~489	251
Queue Length 95th (ft)	172	0	4	109	125	#709	73
Internal Link Dist (ft)		488	158		422	426	
Turn Bay Length (ft)	200			200			100
Base Capacity (vph)	428	719	521	380	1192	784	855
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	0.71	0.18	0.02	0.87	0.33	1.00	0.89

Intersection Summary

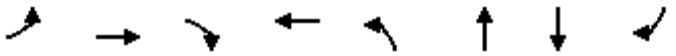
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	261	150	133	780	451	270
v/c Ratio	0.77	0.22	0.25	0.63	0.46	0.29
Control Delay	46.8	0.7	6.5	9.7	16.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	0.7	6.5	9.7	16.4	4.1
Queue Length 50th (ft)	138	0	12	89	155	12
Queue Length 95th (ft)	159	0	25	300	262	20
Internal Link Dist (ft)		488		422	426	
Turn Bay Length (ft)	200		200			100
Base Capacity (vph)	440	779	538	1229	986	943
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	0.59	0.19	0.25	0.63	0.46	0.29

Intersection Summary

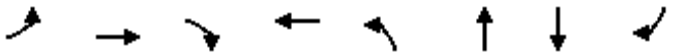


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	108	109	231	16	282	269	346	340
v/c Ratio	0.58	0.59	0.15	0.06	0.37	0.19	0.31	0.31
Control Delay	47.8	48.1	0.2	26.4	5.1	3.9	12.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	48.1	0.2	26.4	5.1	3.9	12.7	5.9
Queue Length 50th (ft)	61	62	0	6	37	34	140	68
Queue Length 95th (ft)	92	110	0	7	73	59	218	139
Internal Link Dist (ft)		667		920		627	1718	
Turn Bay Length (ft)	250		250		200			200
Base Capacity (vph)	315	315	1583	432	859	1414	1114	1083
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	0.34	0.35	0.15	0.04	0.33	0.19	0.31	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	214	213	211	20	220	327	4	158	209
v/c Ratio	0.70	0.72	0.13	0.05	0.27	0.26	0.01	0.17	0.23
Control Delay	43.1	44.8	0.2	14.7	7.8	7.8	15.0	14.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	44.8	0.2	14.7	7.8	7.8	15.0	14.5	6.1
Queue Length 50th (ft)	118	118	0	4	41	64	1	54	31
Queue Length 95th (ft)	172	62	0	19	85	132	3	126	85
Internal Link Dist (ft)		667		920		627		1718	
Turn Bay Length (ft)	250		250		200		200		200
Base Capacity (vph)	490	474	1583	612	864	1237	529	941	903
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.45	0.13	0.03	0.25	0.26	0.01	0.17	0.23

Intersection Summary



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	150	150	323	22	395	376	481	467
v/c Ratio	0.69	0.69	0.20	0.07	0.62	0.28	0.48	0.44
Control Delay	51.1	51.1	0.3	26.0	9.2	5.1	15.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	51.1	0.3	26.0	9.2	5.1	15.7	6.1
Queue Length 50th (ft)	84	84	0	9	65	60	216	56
Queue Length 95th (ft)	122	145	0	9	113	88	332	m187
Internal Link Dist (ft)		667		920		627	1718	
Turn Bay Length (ft)	250		250		200			200
Base Capacity (vph)	284	284	1583	396	731	1367	998	1065
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	0.53	0.53	0.20	0.06	0.54	0.28	0.48	0.44

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	294	293	296	30	307	456	4	219	287
v/c Ratio	0.76	0.79	0.19	0.06	0.44	0.41	0.01	0.29	0.35
Control Delay	41.2	43.6	0.3	11.5	12.2	12.0	18.0	19.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	43.6	0.3	11.5	12.2	12.0	18.0	19.0	7.6
Queue Length 50th (ft)	157	158	0	5	78	126	2	92	49
Queue Length 95th (ft)	227	75	0	21	135	220	3	188	121
Internal Link Dist (ft)		667		920		627		1718	
Turn Bay Length (ft)	250		250		200		200		200
Base Capacity (vph)	500	483	1583	627	742	1120	378	758	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.61	0.19	0.05	0.41	0.41	0.01	0.29	0.35

Intersection Summary

APPENDIX G

Conceptual Site Plan

BOULDER COUNTY HOUSING AUTHORITY

WILLOUGHBY CORNER

TPC THE PACHNER COMPANY

DBC Drexel, Barrell & Co. Traditional Services, Innovative Solutions Since 1969

Kimley»Horn

WILLOUGHBY CORNER | ILLUSTRATIVE PLAN

02/13/2020

NORTH

0 30 60 120

SCALE

NORRIS DESIGN
Planning | Landscape Architecture | Branding