



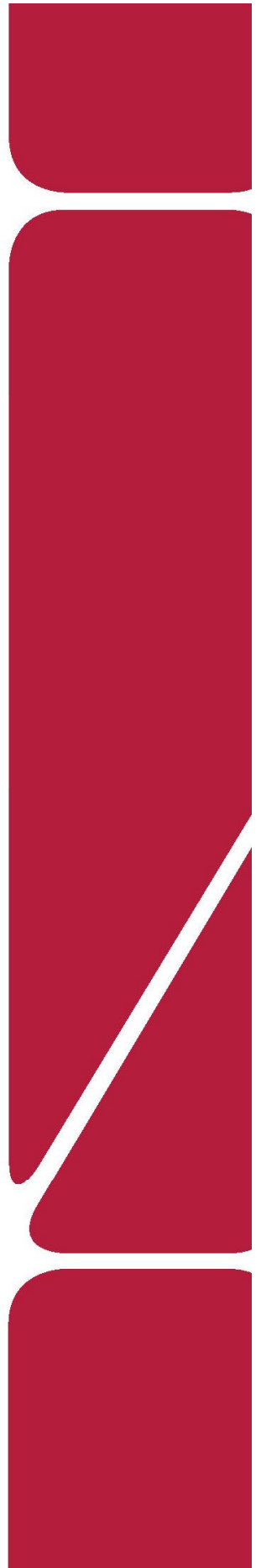
Traffic Impact Study

# Triangle Logistics Center Commerce City, Colorado

Prepared for:

CA Industrial Holdings, LLC

**Kimley»»Horn**



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

**Triangle Logistics Center**

Commerce City, Colorado

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## 1.0 EXECUTIVE SUMMARY

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Triangle Logistics Center is a proposed industrial development to be located on the northeast and northwest corners of the 48<sup>th</sup> Avenue and Ivy Street intersection in Commerce City, Colorado. For the purposes of this analysis, the project is anticipated to include 840,593 square feet of industrial building space. It is expected that Triangle Logistics Center will be completed in the next couple of years; therefore, analysis was conducted for the 2023 and 2045 horizons.

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

- 50<sup>th</sup> Avenue and Dahlia Street
- 48<sup>th</sup> Avenue and Dahlia Street
- 48<sup>th</sup> Avenue and Forest Street
- 48<sup>th</sup> Avenue and Holly Street
- 48<sup>th</sup> Avenue and Ivy Street

In addition, the proposed full movement access along Forest Street and three (3) full movement accesses along Ivy Street were also evaluated.

Regional access to Triangle Logistics Center will be provided by Interstate 70 (I-70), I-270, I-25, and I-76. Vasquez Boulevard, Colorado Boulevard, and Quebec Street are identified as principal arterials in the C3 Vision Transportation Plan. These three principal arterials will provide regional access and access to the interstate routes from the project site. Primary access will be provided by 48<sup>th</sup> Avenue, Dahlia Street, Holly Street, and Ivy Street. Direct access will be provided by a full access movement along Forest Street and three full movement accesses along Ivy Street.

Triangle Logistics Center is expected to generate approximately 2,834 weekday daily trips, with 336 of these trips occurring during the morning peak hour and 337 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes Triangle Logistics Center will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

2023 Conclusions and Recommendations:

- An all way stop control warrant analysis was completed for the intersection of 48<sup>th</sup> Avenue and Holly Street (#5) with 2023 total volume projections, and it was found that all way stop control will likely be warranted at this intersection in 2023. Therefore, the intersection of 48<sup>th</sup> Avenue and Holly Street could provide all way stop control by 2023 with R1-1 “STOP” signs installed on the eastbound and westbound approaches. Further, R1-3P “All Way” plaques should be placed below all four stop signs at this intersection if all-way stop control were implemented. Orange warning flags should also be placed above the new stop signs on the eastbound and westbound approach of this intersection to indicate to drivers a change in control. Although the intersection of 48<sup>th</sup> Avenue and Holly Street is expected to meet all-way stop control warrants, a more feasible and desirable recommendation includes providing left turn lanes on the eastbound, westbound, and northbound approaches of this intersection. A two-way left turn lane could be considered along 48<sup>th</sup> Avenue in the area of the intersection with Holly Street. There is currently sufficient pavement width for this to only be a restriping improvement without the need for roadway widening. Implementing all-way stop control is more challenging due to not having curb returns and defined edge of pavement on the north side of 48<sup>th</sup> Avenue at Holly Street. Further, the access on the north leg of this intersection does not have defined drive aisles internal to that site. With left turn lanes on the northbound, eastbound, and westbound approaches, the movements at this intersection are anticipated to operate acceptably throughout 2045 with the addition of project traffic. Therefore, implementation of a “Stop” sign on the westbound approach of the 48<sup>th</sup> Avenue and Holly Street intersection has challenges due to the layout of the private access north leg of this intersection.
- To meet Commerce City standards, it is recommended that a southbound left turn lane and a southbound right turn lane should be implemented at the intersection of 48<sup>th</sup> Avenue and Ivy Street (#6). It should be noted that this intersection operates acceptably with or without these improvements.

- With completion of the Triangle Logistics Center project, a full movement access is proposed along the east side of Forest Street and three full accesses are proposed along Ivy Street. It is recommended that all four access intersections provide stop control and R1-1 “STOP” signs be installed on the exiting approaches. The project access intersections are anticipated to have all movements operating with acceptable LOS B or better during the peak hours in buildout year 2023 with one lane for all approaches. However, to meet Commerce City standards, left turn lanes should be provided along Ivy Street at the project accesses. It is believed that a center two-way left turn lane should be striped along Ivy Street from the south of the north access to 48<sup>th</sup> Avenue. A southbound left turn lane is not recommended at the north access along Ivy Street due to constraints with the railroad tracks to the north. It should be noted that less than five (5) vehicles are anticipated to make a southbound left turn movement at the north access along Ivy Street.

#### 2045 Conclusions and Recommendations:

- If future traffic volumes materialize, a westbound right turn lane will be needed at the intersection of 48th Avenue and Dahlia Street (#3) by 2045. It is believed that this right turn lane can be striped into the existing pavement width.

#### General Recommendations:

- Any on-site and off-site improvements should be incorporated into the Civil Drawings and conform to standards of Commerce City, and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

## 2.0 INTRODUCTION

---

Kimley-Horn and Associates, Inc. has prepared this report to document the results of the Traffic Impact Study for the Triangle Logistics Center industrial project proposed to be located on the northeast and northwest corners of the 48<sup>th</sup> Avenue and Ivy Street intersection in Commerce City, Colorado. A vicinity map illustrating the Triangle Logistics Center development is shown in **Figure 1**. For the purposes of this analysis, Triangle Logistics Center is anticipated to include 840,593 square feet of industrial building space. A conceptual land use plan is attached in **Appendix F**. It is expected that Triangle Logistics Center will be completed in the next couple of years; therefore, analysis was conducted for the 2023 and 2045 horizons.

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

- 50<sup>th</sup> Avenue and Dahlia Street
- 48<sup>th</sup> Avenue and Dahlia Street
- 48<sup>th</sup> Avenue and Forest Street
- 48<sup>th</sup> Avenue and Holly Street
- 48<sup>th</sup> Avenue and Ivy Street

In addition, the proposed full movement access along Forest Street and three (3) full movement accesses along Ivy Street were evaluated.

Regional access to Triangle Logistics Center will be provided by Interstate 70 (I-70), I-270, I-25, and I-76. Vasquez Boulevard, Colorado Boulevard, and Quebec Street are identified as principal arterials in the C3 Vision Transportation Plan. These three principal arterials will provide regional access and access to the interstate routes from the project site. Primary access will be provided by 48<sup>th</sup> Avenue, Dahlia Street, Holly Street, and Ivy Street. Direct access will be provided by a full access movement along Forest Street and three full movement accesses along Ivy Street.





FIGURE 1  
TRIANGLE LOGISTICS CENTER  
COMMERCE CITY, COLORADO  
VICINITY MAP



### 3.0 EXISTING AND FUTURE CONDITIONS

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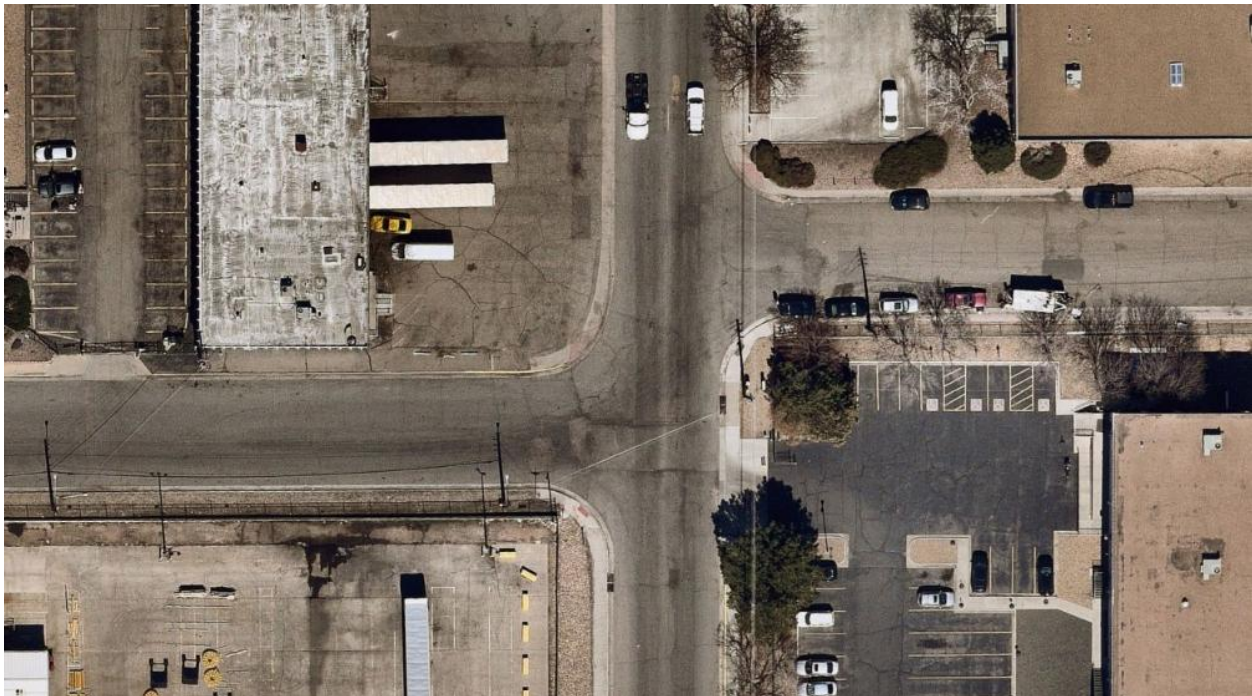
#### 3.1 Existing Study Area/Site Visit

The existing site is comprised of undeveloped vacant land. Industrial and warehouse uses surround the site in all directions. The Denver Rock Island Railroad is located north of the project site.

#### 3.2 Existing Roadway Network

Dahlia Street extends north-south with one through lane in each direction. 50<sup>th</sup> Avenue and 48<sup>th</sup> Avenue extend in the eastbound and westbound with one through lane of travel in each direction. Forest Street, Holly Street, and Ivy Street extend in the north-south direction with one through lane. The posted speed limit along Dahlia Street and Ivy Street is 30 miles per hour.

The unsignalized intersection of 50<sup>th</sup> Avenue and Dahlia Street (#1 and #2) operates with stop control on the eastbound and westbound approaches of 50<sup>th</sup> Avenue. The east and west legs are offset and do not align with each other. All four approaches provide a single lane shared for all movements. An aerial photo of the existing intersection configuration is below (north is up - typical).



*50<sup>th</sup> Avenue & Dahlia Street (#1 and #2)*

The unsignalized intersection of 48<sup>th</sup> Avenue and Dahlia Street (#3) operates with stop control on all four approaches. All four approaches provide a single lane shared for all movements. An aerial photo of the existing intersection configuration is below (typ.).



*48<sup>th</sup> Avenue & Dahlia Street (#3)*

The unsignalized intersection of 48<sup>th</sup> Avenue and Forest Street (#4) operates with stop control on the northbound and southbound approaches of Forest Street. All four approaches provide a single lane shared for all movements. An aerial photo of the existing intersection configuration is below (typ.).



*48<sup>th</sup> Avenue & Forest Street (#4)*



The unsignalized T-intersection of 48<sup>th</sup> Avenue and Holly Street (#5) operates with stop control on the northbound and southbound approaches of Holly Street. All four approaches provide a single lane shared for all movements. The north leg of this intersection is a driveway to an existing development. An aerial photo of the existing intersection configuration is below (typ.).



*48<sup>th</sup> Avenue & Holly Street (#5)*

The unsignalized intersection of 48<sup>th</sup> Avenue and Ivy Street (#6) operates with stop control on the northbound and southbound approaches of Ivy Street. All four approaches provide a single lane shared for all movements. An aerial photo of the existing intersection configuration is below (typ.).



*48<sup>th</sup> Avenue & Ivy Street (#6)*

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.

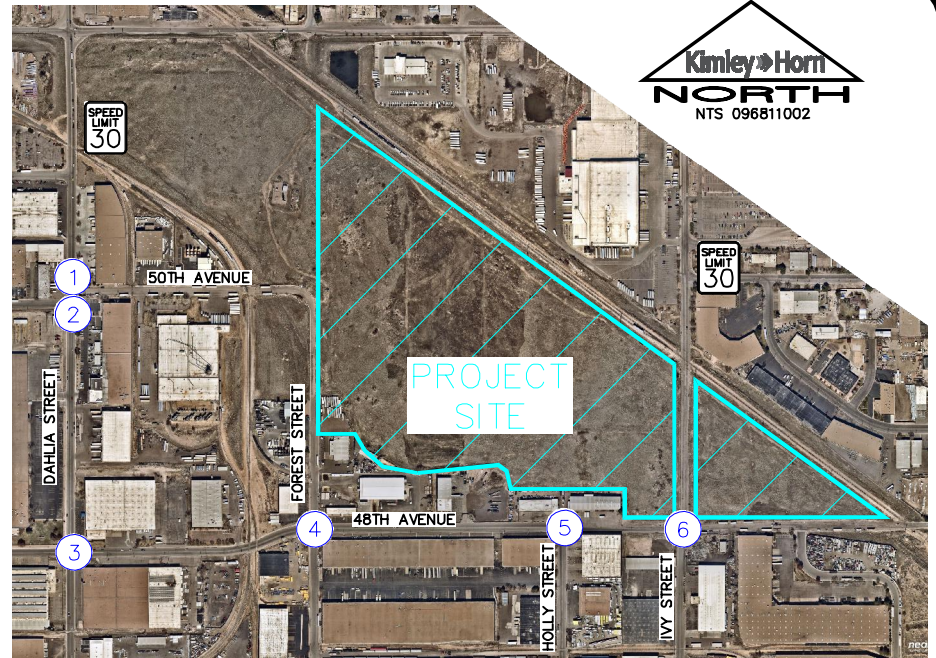
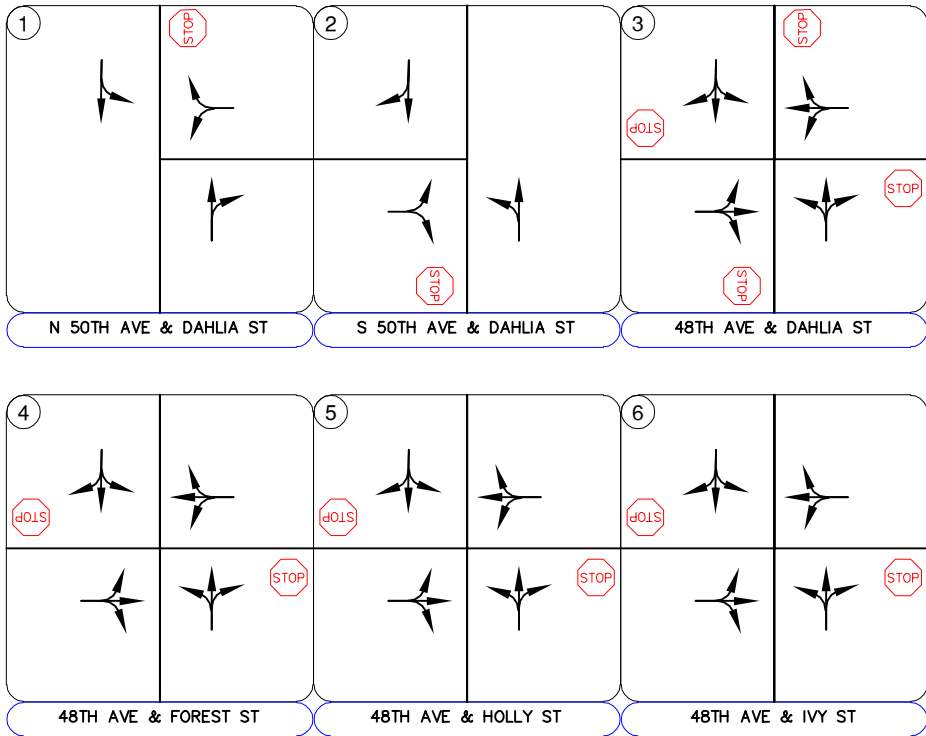
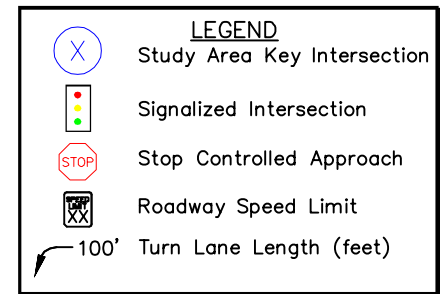


FIGURE 2  
TRIANGLE LOGISTICS CENTER  
COMMERCE CITY, COLORADO  
EXISTING GEOMETRY AND CONTROL



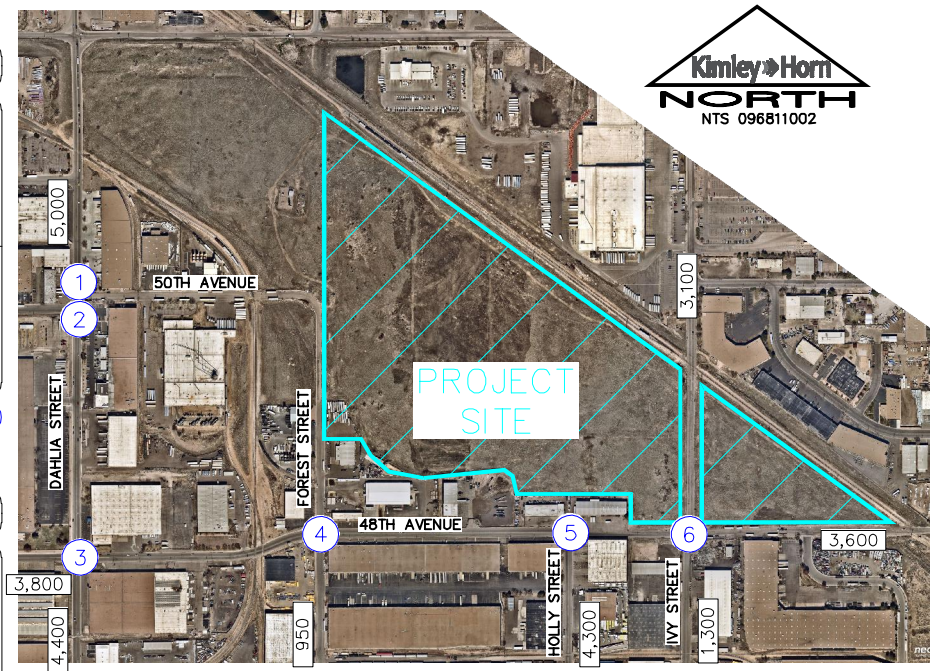
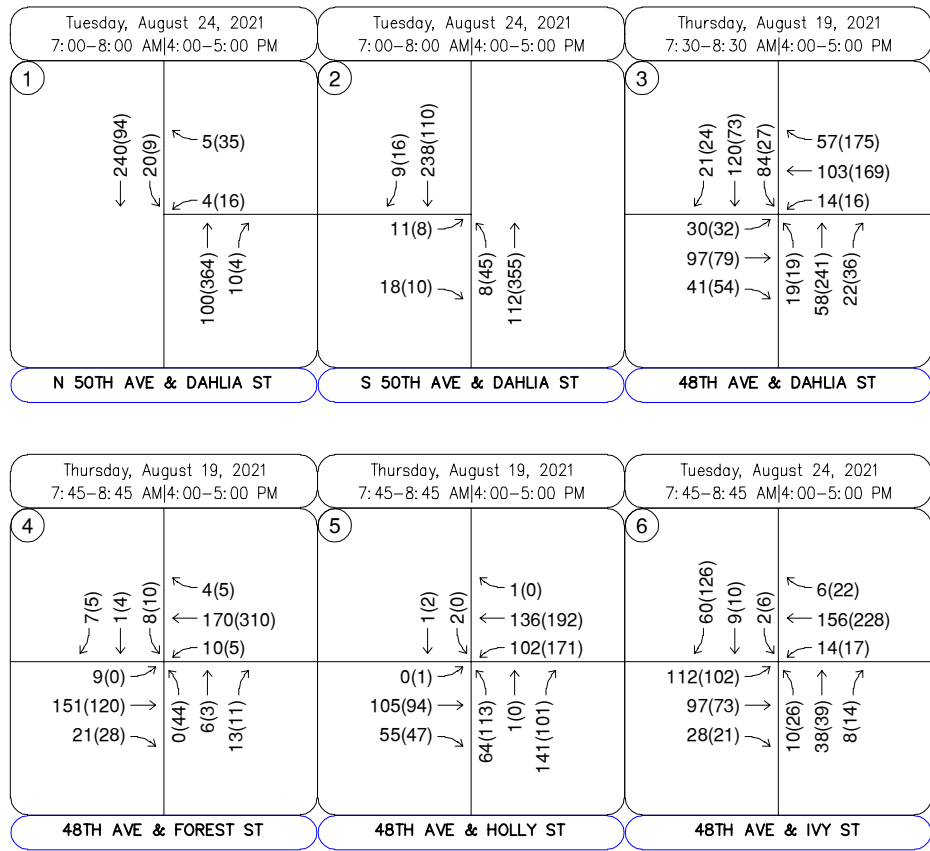
### 3.3 Existing Traffic Volumes

Existing morning and afternoon peak hour turning movement counts were conducted at the intersections of 48<sup>th</sup> Avenue/Dahlia Street (#3), 48<sup>th</sup> Avenue/Forest Street (#4), and 48<sup>th</sup> Avenue/Holly Street (#5) on Thursday, August 19, 2021, and on Tuesday, August 24, 2021 at the intersections of 50<sup>th</sup> Avenue/Dahlia Street (#1 and #2) and 48<sup>th</sup> Avenue/Ivy Street (#6). The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix A**.

### 3.4 Unspecified Development Traffic Growth

According to traffic projections from the Denver Regional Council of Governments (DRCOG) traffic model, the area surrounding the site is expected to have an average 25-year growth factor of 1.18. This growth factor equates to an average annual growth rate of 0.7 percent. Future traffic volume projections and growth rate calculations are provided in **Appendix B**. Therefore, a 0.7 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 2023 and long-term 2045 traffic volume projections at the key intersections. The calculated background traffic volumes for 2023 and 2045 are shown in **Figure 4** and **Figure 5**, respectively.

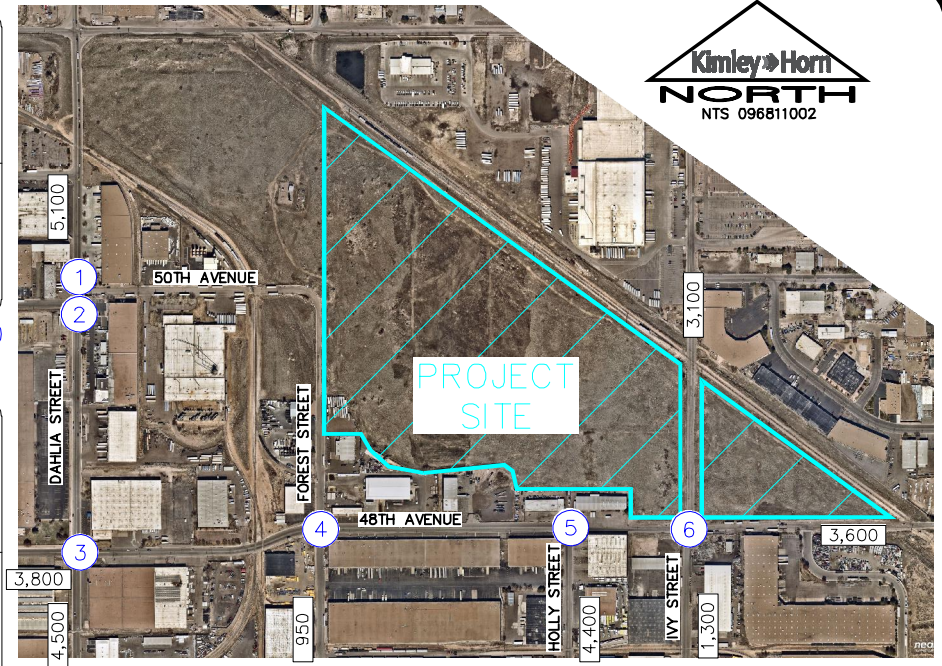
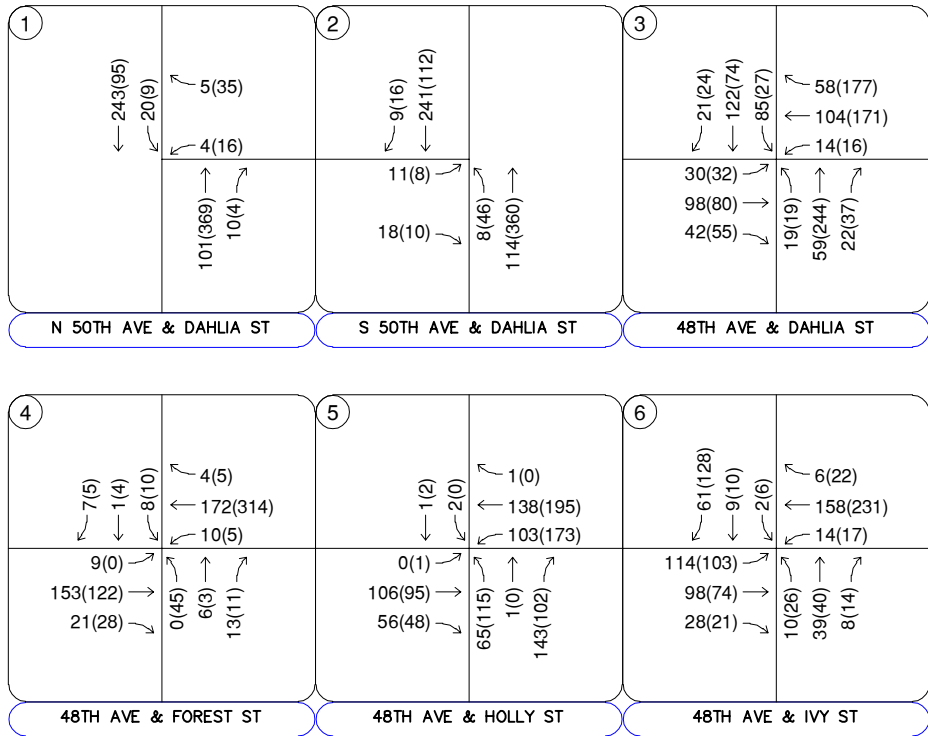




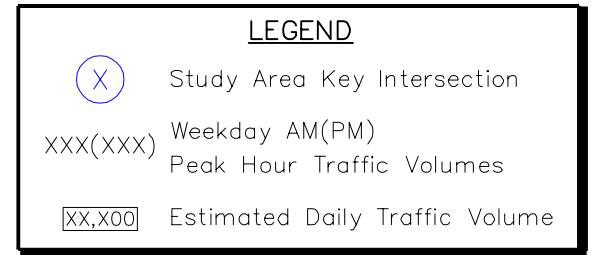
**FIGURE 3**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2021 EXISTING TRAFFIC VOLUMES**

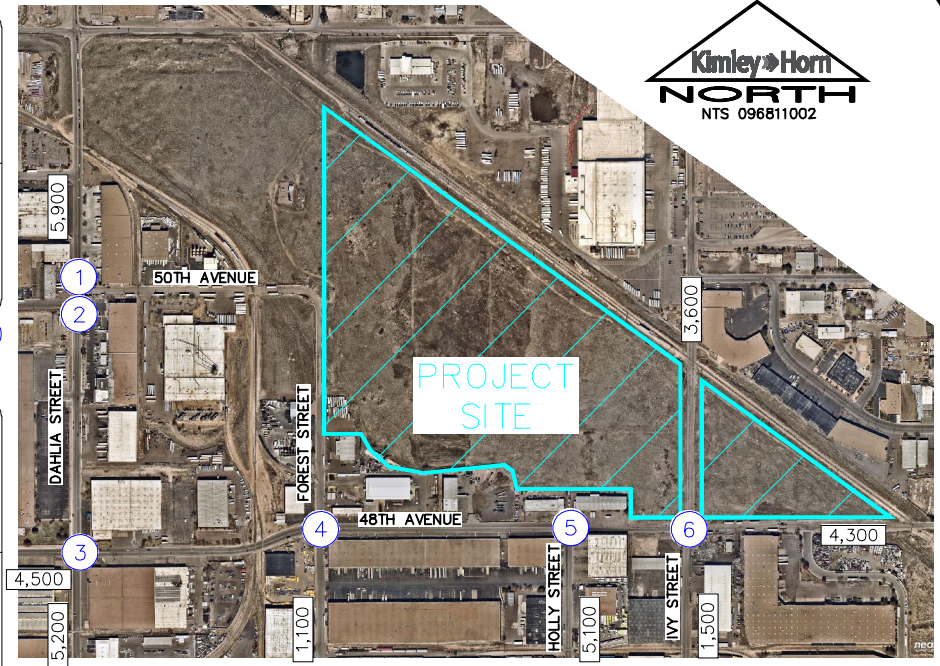
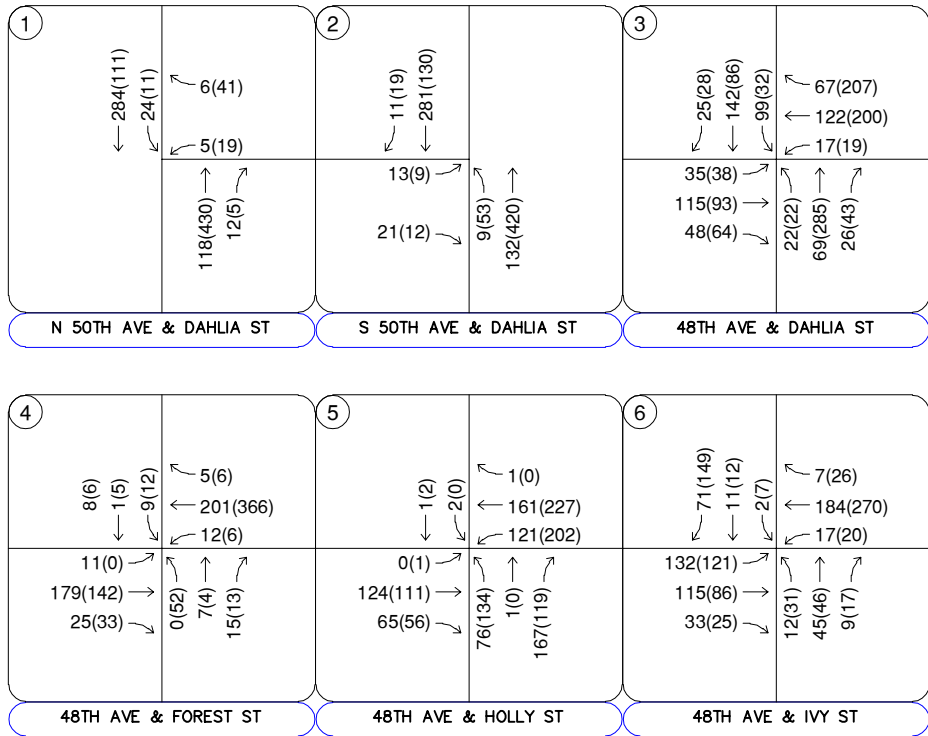
**LEGEND**

- Study Area Key Intersection
- XXX(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- Estimated Daily Traffic Volume

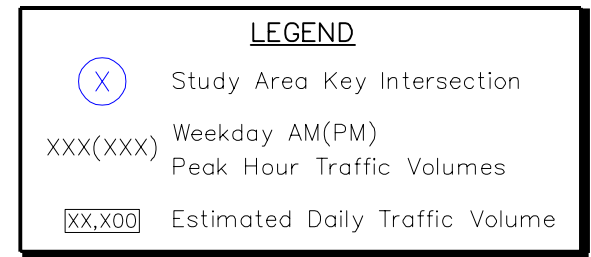


**FIGURE 4**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2023 BACKGROUND TRAFFIC VOLUMES**





**FIGURE 5**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2045 BACKGROUND TRAFFIC VOLUMES**





## 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 use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*<sup>1</sup> 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 equations that applies to Industrial Park (ITE Land Use Code 130), for traffic associated with the development.

Triangle Logistics Center is expected to generate approximately 2,834 weekday daily trips, with 336 of these trips occurring during the morning peak hour and 337 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 10<sup>th</sup> Edition – Volume 1: User’s Guide and Handbook*, 2017. **Table 1** summarizes the estimated trip generation for the Triangle Logistics Center. The trip generation worksheets are included in **Appendix C**.

**Table 1 – Triangle Logistics Center Traffic Generation**

Land Use and Size	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Industrial Park (ITE 130) – 840,593 Square Feet	2,834	272	64	336	71	266	337

<sup>1</sup> Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

## 4.2 Trip Distribution

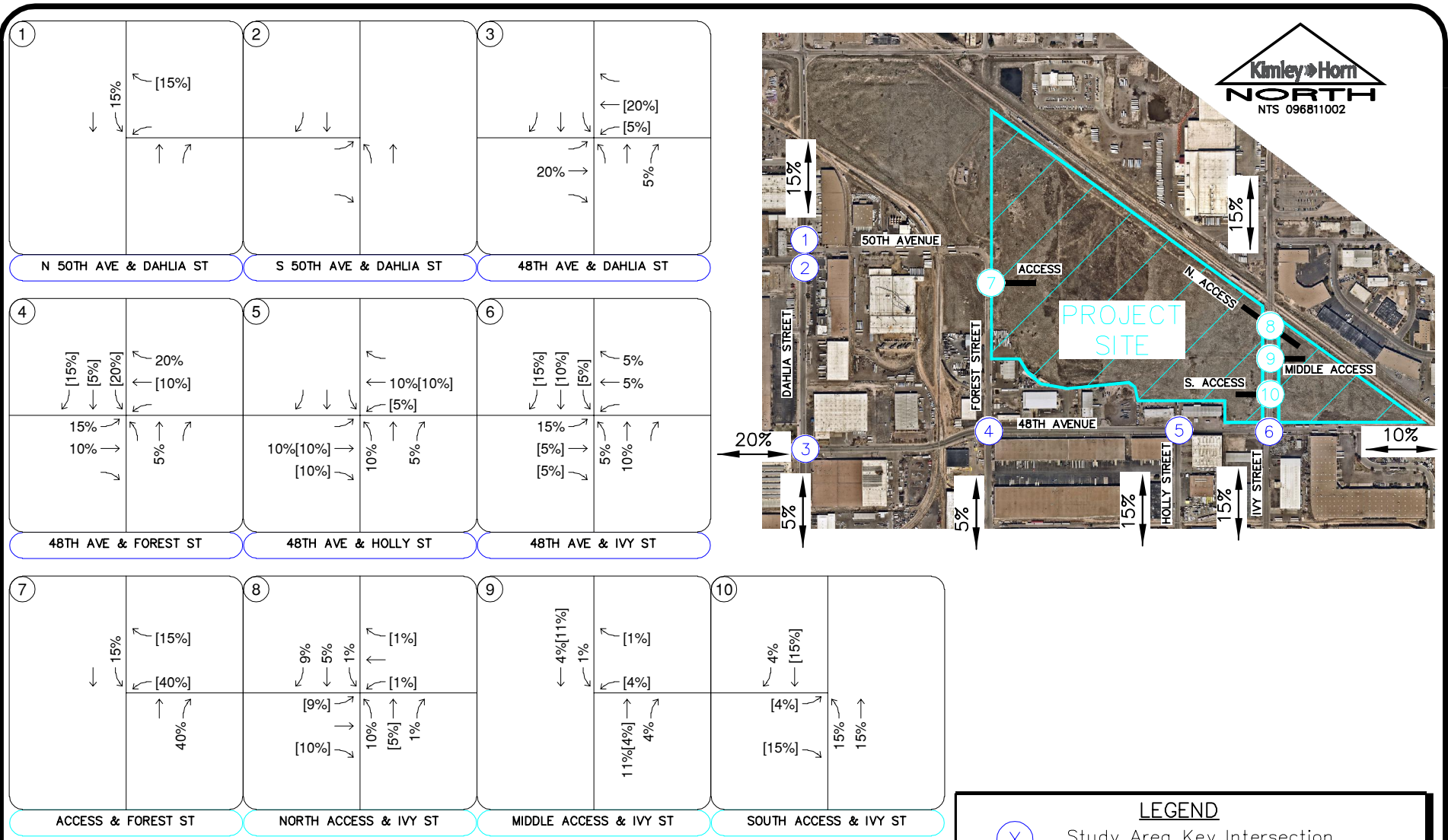
Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify 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 for the proposed development is illustrated in **Figure 6**.

## 4.3 Traffic Assignment

Triangle Logistics Center traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Traffic assignment is shown in **Figure 7**.

## 4.4 Total (Background Plus Project) Traffic

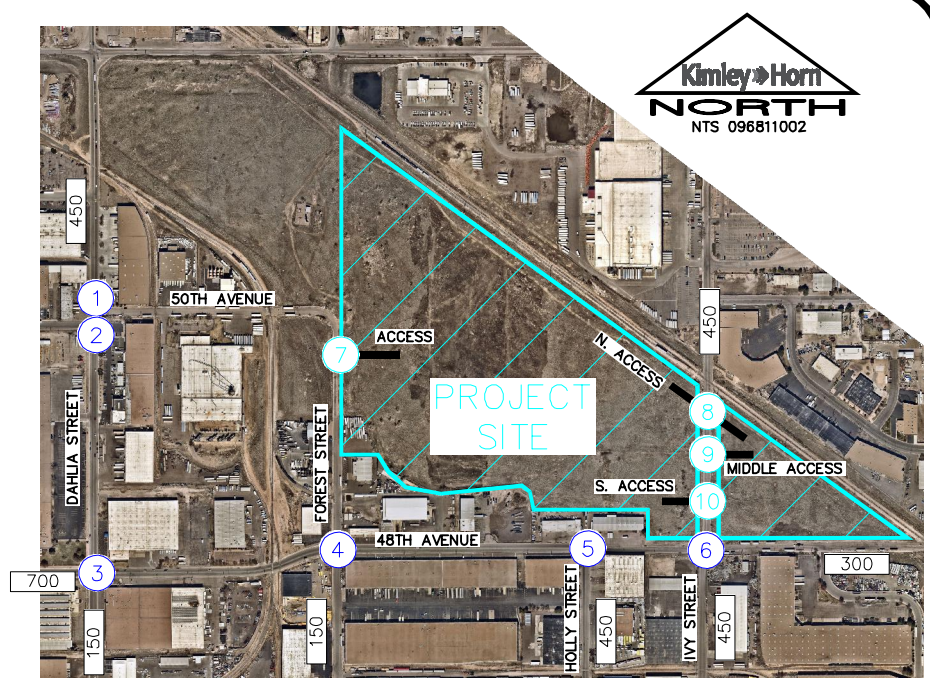
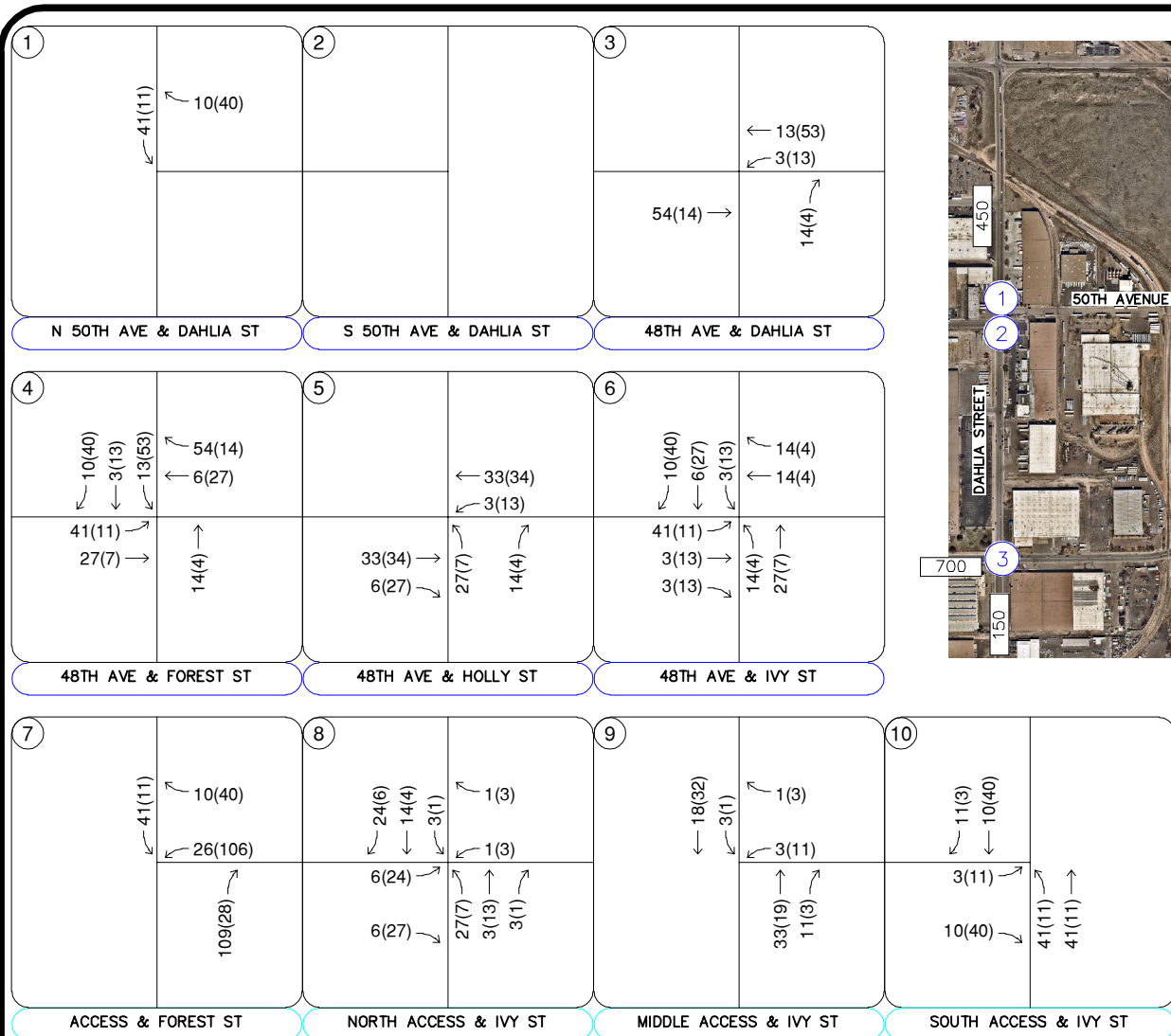
Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2023 buildout horizon and long-term 2045 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2023 and 2045 horizon years in **Figures 8** and **9**, respectively.



**FIGURE 6**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**PROJECT TRIP DISTRIBUTION**

**LEGEND**

- X Study Area Key Intersection
- X Project Access Intersection
- $\longleftrightarrow$  XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

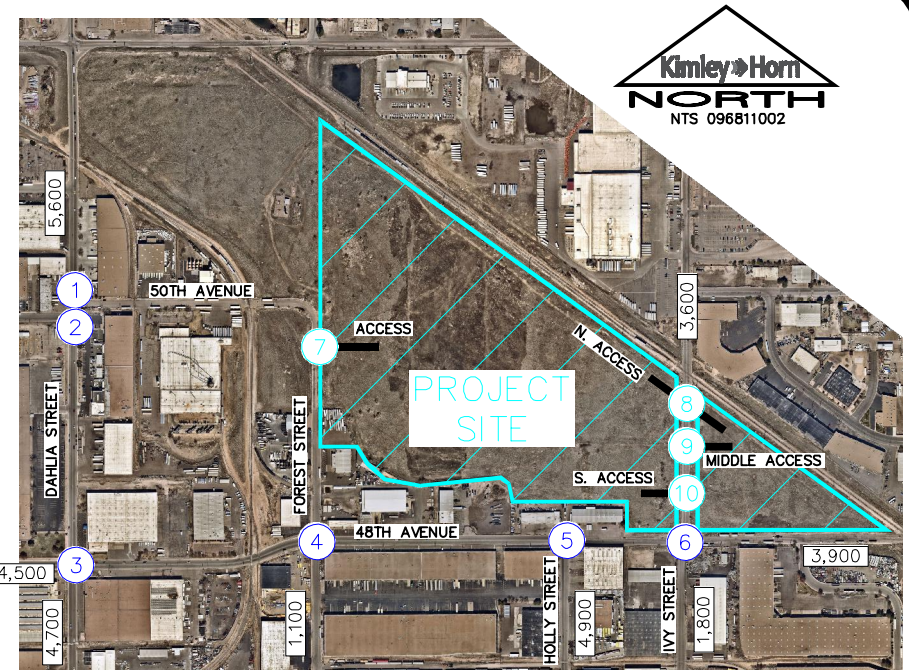
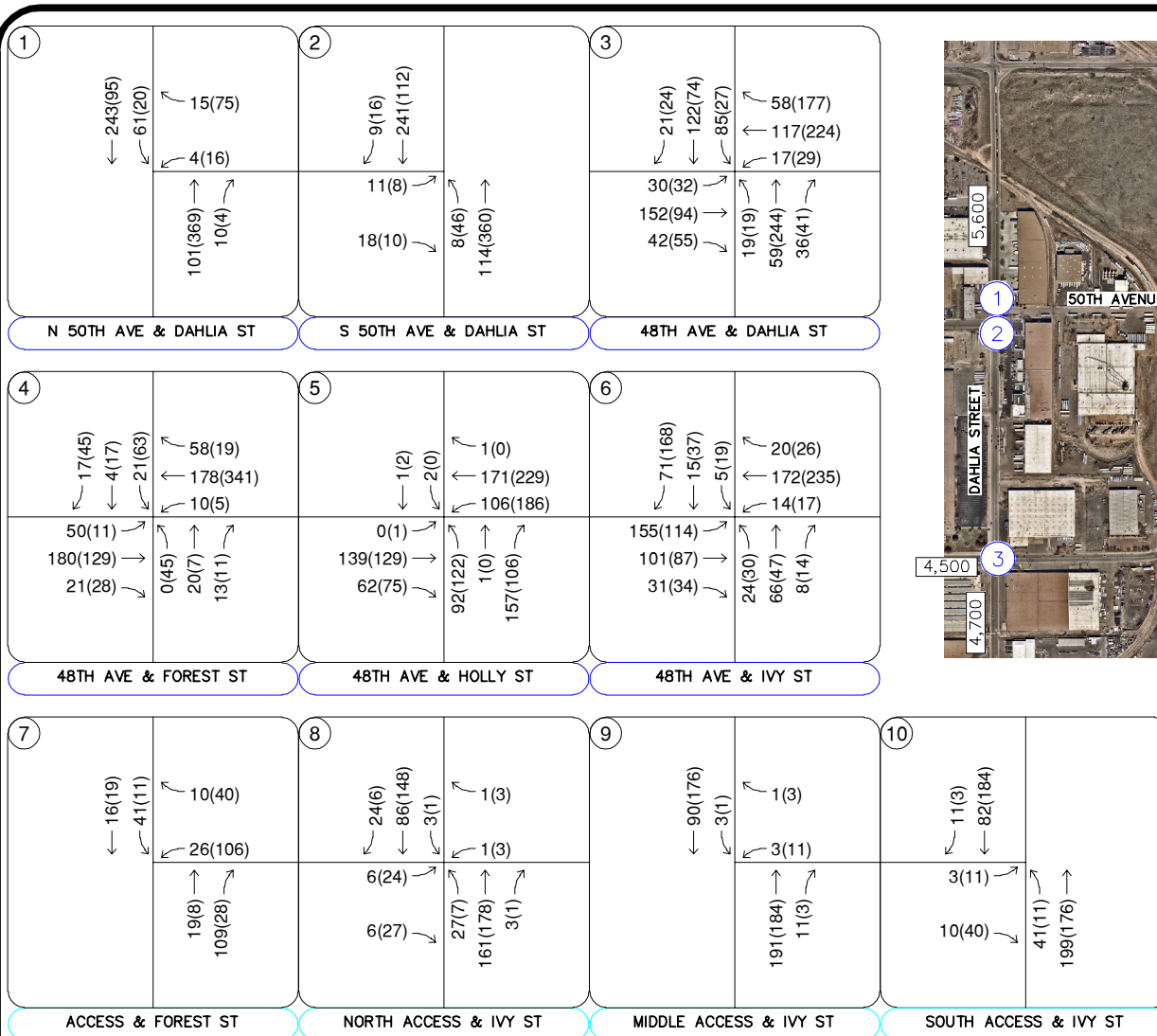


**LEGEND**

- X Study Area Key Intersection
- X Project Access Intersection
- xxx(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

**FIGURE 7**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**PROJECT TRAFFIC ASSIGNMENT**



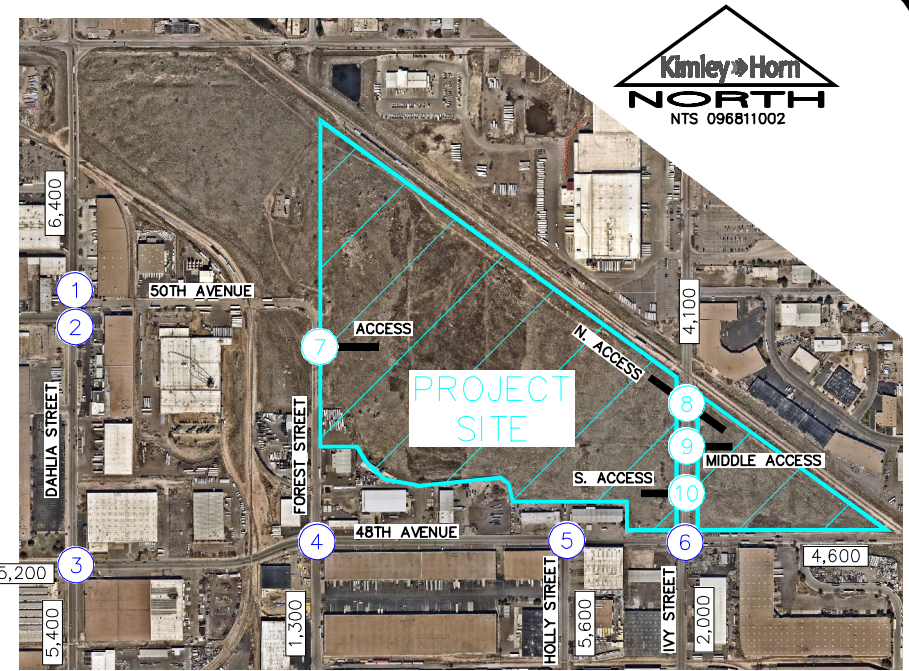
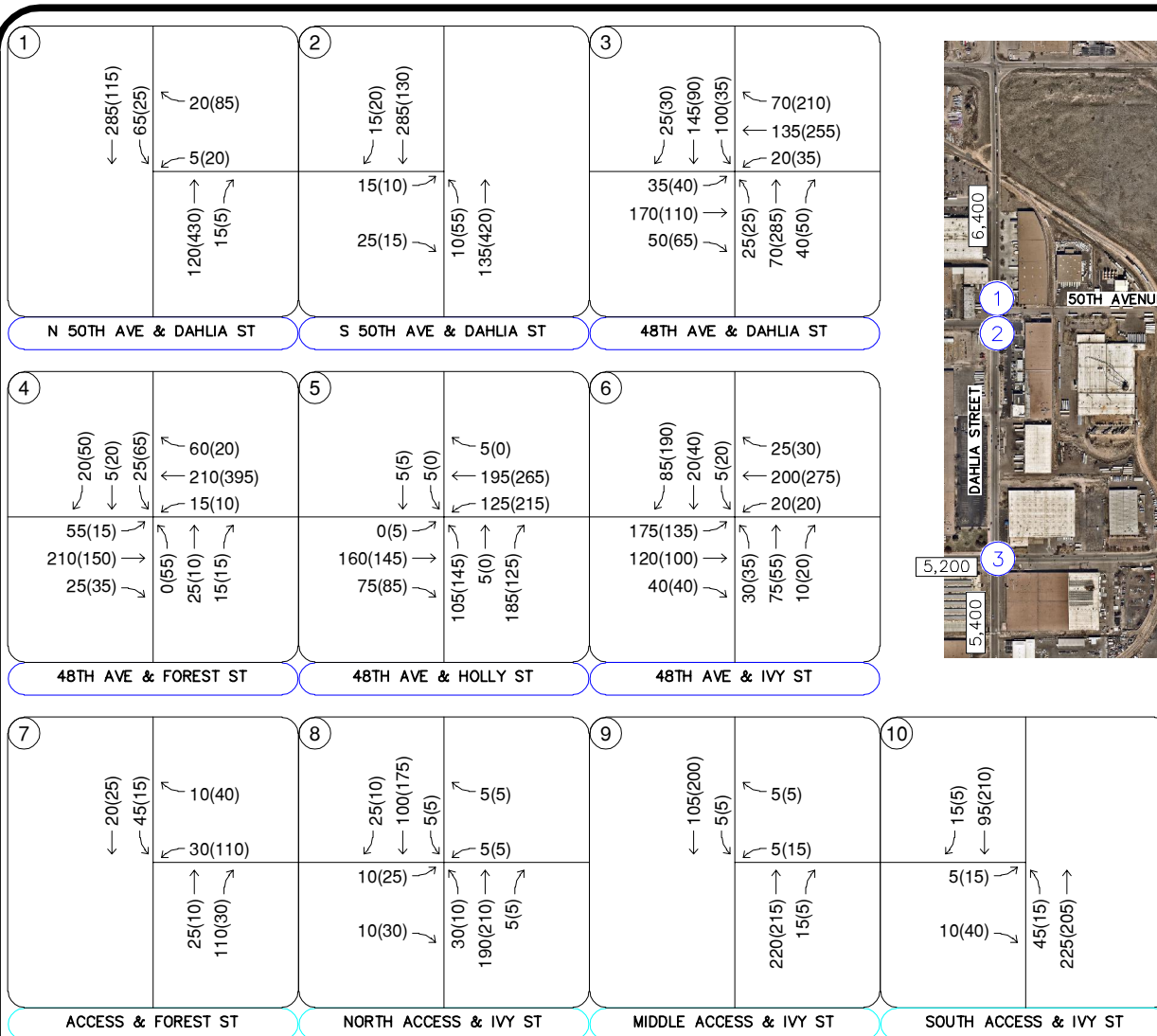


**FIGURE 8**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2023 TOTAL TRAFFIC VOLUMES**

**LEGEND**

- X Study Area Key Intersection
- X Project Access Intersection
- XXX(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- XX.X00 Estimated Daily Traffic Volume





**FIGURE 9**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2045 TOTAL TRAFFIC VOLUMES**

**LEGEND**

- Study Area Key Intersection
- Project Access Intersection
- xxx(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume



## 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 2023 and 2045 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual (HCM)*<sup>2</sup>.

### 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 and roadways in this study area, standard traffic engineering practice recommends overall intersection LOS D and movement/approach LOS E as the minimum desirable 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

Definitions provided from the Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.

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

<sup>2</sup> Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

## 5.2 Key Intersection Operational Analysis

Calculations for the operational 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**. Existing peak hour factors were utilized in the existing and 2023 horizon analysis years while the HCM urban standard peak hour factor of 0.92 was used for the long-term 2045 horizon analysis. Synchro traffic analysis software was used to analyze the unsignalized key intersections for HCM level of service.

### 50<sup>th</sup> Avenue and Dahlia Street (#1 and #2)

The unsignalized intersection of 50<sup>th</sup> Avenue and Dahlia Street (#1 and #2) operates with stop control on the eastbound and westbound approaches of 50<sup>th</sup> Avenue. The east and west legs are offset and do not align with each other. Therefore, this intersection was analyzed as two separate intersections. The intersection movements at both intersections operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no modifications to the existing control or lane configurations are recommended at these intersections. **Table 3** and **Table 4** provides the results of the LOS analysis conducted at these intersections.

**Table 3 – N 50<sup>th</sup> Avenue & Dahlia Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>				
Westbound Approach	9.9	A	11.8	B
Southbound Left	7.5	A	8.2	A
<b>2023 Background</b>				
Westbound Approach	10.0	B	11.8	B
Southbound Left	7.5	A	8.2	A
<b>2023 Background Plus Project</b>				
Westbound Approach	9.7	A	12.2	B
Southbound Left	7.6	A	8.2	A
<b>2045 Background</b>				
Westbound Approach	10.4	B	12.6	B
Southbound Left	7.5	A	8.3	A
<b>2045 Background Plus Project</b>				
Westbound Approach	9.7	A	13.2	B
Southbound Left	7.6	A	8.4	A

**Table 4 – S 50<sup>th</sup> Avenue & Dahlia Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>				
Northbound Left	7.8	A	7.6	A
Eastbound Approach	10.4	B	11.2	B
<b>2023 Background</b>				
Northbound Left	7.8	A	7.6	A
Eastbound Approach	10.4	B	11.2	B
<b>2023 Background Plus Project</b>				
Northbound Left	7.8	A	7.6	A
Eastbound Approach	10.4	B	11.2	B
<b>2045 Background</b>				
Northbound Left	7.9	A	7.6	A
Eastbound Approach	10.9	B	11.8	B
<b>2045 Background Plus Project</b>				
Northbound Left	7.9	A	7.7	A
Eastbound Approach	10.9	B	11.2	B

### 48<sup>th</sup> Avenue and Dahlia Street (#3)

The unsignalized intersection of 48<sup>th</sup> Avenue and Dahlia Street (#3) operates with stop control on all four approaches. The intersection operates acceptably at LOS C or better during both peak hours under existing conditions. With project traffic, this intersection is anticipated to continue operating at an acceptable level of service throughout the 2023 horizon. If future traffic volumes materialize, a westbound right turn lane will be needed at the intersection of 48th Avenue and Dahlia Street (#3) by 2045. It is believed that this right turn lane can be striped into the existing pavement width. With this improvement, this intersection is anticipated to operate acceptably during the peak hours in 2045. **Table 5** provides the results of the LOS analysis conducted at this intersection.

**Table 5 – 48<sup>th</sup> Avenue & Dahlia Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>	10.0	A	15.6	C
<b>2023 Background</b>	10.0	A	15.9	C
<b>2023 Background Plus Project</b>	10.9	B	20.8	C
<b>2045 Background</b>	11.2	B	20.5	C
<b>2045 Background Plus Project #</b>	12.3	B	18.4	C

# = Includes Westbound Right Turn Lane

### 48<sup>th</sup> Avenue and Forest Street (#4)

The unsignalized intersection of 48<sup>th</sup> Avenue and Forest Street (#4) operates with stop control on the northbound and southbound approaches of Forest Street. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no modifications to the existing control or lane configurations are recommended at this intersection. **Table 6** provides the results of the LOS analysis conducted at this intersection.

**Table 6 – 48<sup>th</sup> Avenue & Forest Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>				
Northbound Approach	10.3	B	14.9	B
Eastbound Left	7.7	A	0.0	A
Westbound Left	7.6	A	7.6	A
Southbound Approach	11.1	B	13.8	B
<b>2023 Background</b>				
Northbound Approach	10.3	B	15.2	C
Eastbound Left	7.7	A	0.0	A
Westbound Left	7.7	A	7.6	A
Southbound Approach	11.1	B	13.9	B
<b>2023 Background Plus Project</b>				
Northbound Approach	13.3	B	20.0	C
Eastbound Left	7.9	A	8.4	A
Westbound Left	7.7	A	7.7	A
Southbound Approach	13.7	B	20.7	C
<b>2045 Background</b>				
Northbound Approach	10.6	B	15.6	C
Eastbound Left	7.7	A	0.0	A
Westbound Left	7.7	A	7.7	A
Southbound Approach	11.5	B	14.2	B
<b>2045 Background Plus Project</b>				
Northbound Approach	13.7	B	22.9	C
Eastbound Left	7.9	A	8.6	A
Westbound Left	7.7	A	7.7	A
Southbound Approach	13.9	B	21.9	C

### 48<sup>th</sup> Avenue and Holly Street (#5)

The unsignalized T-intersection of 48<sup>th</sup> Avenue and Holly Street (#5) operates with stop control on the northbound and southbound approaches. The intersection movements operate acceptably at LOS D or better during both peak hours under existing conditions. With project traffic, the northbound approach is anticipated to operate at LOS F during the afternoon peak hour.

An all way stop control warrant analysis was completed for this intersection with 2023 total volume projections, and it was found that all way stop control will likely be warranted at this intersection in 2023. Therefore, the intersection of 48<sup>th</sup> Avenue and Holly Street could provide all way stop control by 2023 with R1-1 “STOP” signs installed on the eastbound and westbound approaches. Further, R1-3P “All Way” plaques should be placed below all four stop signs at this intersection if all-way stop control is implemented. Orange warning flags should also be placed above the new stop signs on the eastbound and westbound approach of this intersection to indicate to drivers a change in control. All way stop control warrant analysis is provided in **Appendix E**. With this improvement, this intersection is anticipated to operate acceptably throughout 2045 with the addition of project traffic.

Although the intersection of 48<sup>th</sup> Avenue and Holly Street is expected to meet all-way stop control warrants, a more feasible and desirable recommendation includes providing left turn lanes on the eastbound, westbound, and northbound approaches of this intersection. A two-way left turn lane could be considered along 48<sup>th</sup> Avenue in the area of the intersection with Holly Street. There is currently sufficient pavement width for this to only be a restriping improvement without the need for roadway widening. Implementing all-way stop control is more challenging due to not having curb returns and defined edge of pavement on the north side of 48<sup>th</sup> Avenue at Holly Street. Further, the access on the north leg of this intersection does not have defined drive aisles internal to that site. With left turn lanes on the northbound, eastbound, and westbound approaches, the movements at this intersection are anticipated to operate acceptably throughout 2045 with the addition of project traffic. Therefore, implementation of a “Stop” sign on the westbound approach of the 48th Avenue and Holly Street intersection has challenges due to the layout of the private access north leg of this intersection. **Table 7** provides the results of the LOS analysis conducted at this intersection.



**Table 7 – 48<sup>th</sup> Avenue & Holly Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>				
Northbound Approach	12.6	B	33.7	D
Eastbound Left	0.0	A	7.7	A
Westbound Left	7.8	A	8.0	A
Southbound Approach	15.1	C	19.8	C
<b>2023 Background</b>				
Northbound Approach	12.8	B	35.8	E
Eastbound Left	0.0	A	7.7	A
Westbound Left	7.8	A	8.0	A
Southbound Approach	15.2	C	20.0	C
<b>2023 Background Plus Project</b>				
Northbound Approach	15.7	C	75.7	F
Eastbound Left	0.0	A	7.8	A
Westbound Left	7.9	A	8.3	A
Southbound Approach	17.0	C	24.3	C
<b>2023 Background Plus Project #</b>	10.6	B	17.8	C
<b>2023 Background Plus Project ##</b>				
Northbound Left	14.5	B	32.6	D
Northbound Through/Right	10.2	B	10.1	B
Eastbound Left	0.0	A	7.8	A
Westbound Left	7.9	A	8.3	A
Southbound Approach	14.3	B	18.7	C
<b>2045 Background</b>				
Northbound Approach	14.7	B	38.7	E
Eastbound Left	0.0	A	7.7	A
Westbound Left	7.9	A	8.1	A
Southbound Approach	17.4	C	20.4	C
<b>2045 Background Plus Project #</b>	12.3	B	18.3	C
<b>2045 Background Plus Project ##</b>				
Northbound Left	16.6	C	35.2	E
Northbound Through/Right	10.9	B	10.1	B
Eastbound Left	0.0	A	7.8	A
Westbound Left	8.0	A	8.3	A
Southbound Approach	15.8	C	18.9	C

# = All Way Stop Control

## = Eastbound and Westbound Two-Way Left Turn Lane and Northbound Left Turn lane



### **48th Avenue and Ivy Street (#6)**

The unsignalized intersection of 48<sup>th</sup> Avenue and Ivy Street (#6) operates with stop control on the northbound and southbound approaches of Ivy Street. The intersection movements operate acceptably at LOS C or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2023 horizon. However, to meet Commerce City standards, it is recommended that a southbound left turn lane and a southbound right turn lane be implemented at this intersection. With these improvements, the movements at this intersection operate acceptably throughout the 2045 horizon. **Table 8** provides the results of the LOS analysis conducted at this intersection.

**Table 8 – 48<sup>th</sup> Avenue & Ivy Street LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2021 Existing</b>				
Northbound Approach	15.4	C	17.0	C
Eastbound Left	7.8	A	8.0	A
Westbound Left	7.5	A	7.4	A
Southbound Approach	10.6	B	11.5	B
<b>2023 Background</b>				
Northbound Approach	15.6	C	17.2	C
Eastbound Left	7.8	A	8.0	A
Westbound Left	7.5	A	7.4	A
Southbound Approach	10.7	B	11.6	B
<b>2023 Background Plus Project</b>				
Northbound Approach	22.8	C	21.2	C
Eastbound Left	8.0	A	8.1	A
Westbound Left	7.5	A	7.5	A
Southbound Approach	12.4	B	15.2	C
<b>2023 Background Plus Project #</b>				
Northbound Approach	22.6	C	21.0	C
Eastbound Left	8.0	A	8.1	A
Westbound Left	7.5	A	7.5	A
Southbound Left	20.0	C	17.6	C
Southbound Through	17.4	C	16.7	C
Southbound Right	9.7	A	10.9	B
<b>2045 Background</b>				
Northbound Approach	18.1	C	21.7	C
Eastbound Left	8.0	A	8.2	A
Westbound Left	7.6	A	7.5	A
Southbound Approach	11.3	B	12.7	B
<b>2045 Background Plus Project #</b>				
Northbound Approach	32.6	D	29.5	D
Eastbound Left	8.2	A	8.3	A
Westbound Left	7.6	A	7.5	A
Southbound Left	25.4	D	21.8	C
Southbound Through	20.6	C	19.6	C
Southbound Right	10.0	B	11.6	B

# = Southbound left turn and southbound right turn

## Project Accesses

With completion of the Triangle Logistics Center project, a full movement access is proposed along the east side of Forest Street and three full movement accesses are proposed along Ivy Street. The north driveway along Ivy Street proposes access on both the east and west sides of the street and will be located approximately 600 feet south of 50<sup>th</sup> Avenue (measured centerline to centerline) and approximately 310 feet north of the middle access along Ivy Street. The middle access along Ivy Street is proposed to be located approximately 175 feet north of the south access along Ivy Street. Likewise, the south access along Ivy Street is located approximately 250 feet north of 48<sup>th</sup> Avenue. It should be noted that Ivy Street is classified as a major collector in the C3 Vision Transportation Plan. The accesses along Ivy Street meet the access spacing guidelines set forth in the City of Commerce City Engineering Construction Standards and Specifications. The access along Forest Street is proposed to be located approximately 750 feet north of 48<sup>th</sup> Avenue.

It is recommended that all four access intersections provide stop control and R1-1 “STOP” signs be installed on the exiting approaches. **Table 9** provides the results of the level of service for the project access intersections. As shown in the table, the project access intersections are anticipated to have all movements operating with acceptable LOS B or better during the peak hours in buildout year 2023 with one lane for all approaches. However, to meet Commerce City standards, left turn lanes should be provided along Ivy Street at the project accesses. It is believed that a center two-way left turn lane should be striped along Ivy Street from the south of the north access to 48<sup>th</sup> Avenue. A southbound left turn lane is not recommended at the north access along Ivy Street due to constraints with the railroad tracks to the north. It should be noted that less than five (5) vehicles are anticipated to make a southbound left turn movement at the north access along Ivy Street. With the recommended improvements, all movements at all the project access intersections are anticipated to operate at LOS B or better throughout the 2045 long term horizon.

**Table 9 – Project Access Level of Service Results**

Intersection	2023 Total				2045 Total			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>Forest Street Access</b>								
Westbound Approach	9.6	A	9.5	A	9.8	A	9.6	A
Southbound Left	7.6	A	7.3	A	7.6	A	7.3	A
<b>North Access &amp; Ivy Street</b>								
Northbound Left	7.5	A	7.6	A	-	-	-	-
Eastbound Approach	10.0	B	10.6	B	-	-	-	-
Westbound Approach	10.2	B	10.5	B	-	-	-	-
Southbound Left	7.6	A	7.6	A	-	-	-	-
<b>North Access &amp; Ivy Street #</b>								
Northbound Left	7.5	A	7.6	A	7.5	A	7.6	A
Eastbound Approach	10.0	B	10.6	B	10.5	B	11.1	B
Westbound Approach	10.1	B	10.5	B	10.7	B	11.1	B
Southbound Left	7.6	A	7.6	A	7.7	A	7.7	A
<b>Middle Access &amp; Ivy Street</b>								
Westbound Approach	10.1	B	10.7	B	-	-	-	-
Southbound Left	7.7	A	7.6	A	-	-	-	-
<b>Middle Access &amp; Ivy Street ##</b>								
Westbound Approach	10.1	B	10.7	B	10.2	B	11.2	B
Southbound Left	7.7	A	7.6	A	7.8	A	7.7	A
<b>South Access &amp; Ivy Street</b>								
Northbound Left	7.5	A	7.7	A	-	-	-	-
Eastbound Approach	9.4	A	10.1	B	-	-	-	-
<b>South Access &amp; Ivy Street #</b>								
Northbound Left	7.5	A	7.7	A	7.5	A	7.7	A
Eastbound Approach	9.4	A	10.1	B	9.9	A	10.5	B

# = Northbound left turn lane

## = Southbound left turn lane

### 5.3 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95<sup>th</sup> percentile queue lengths. Results are shown in the following **Table 10** with calculations provided within the level of service operational sheets of **Appendix D**.

**Table 10 – Turn Lane Queuing Analysis Results**

Intersection Turn Lane	Existing Turn Lane Length (feet)	2023 Calculated Queue (feet)	2023 Recommended Length (feet)	2045 Calculated Queue (feet)	2045 Recommended Length (feet)
<b>48<sup>th</sup> &amp; Holly St (#5) – Left Turn Lanes</b>					
Northbound Left	DNE	100'	<b>100'+160'T (CC)</b>	100'	100'+160'T (CC)
Eastbound Left	DNE	25'	<b>TWLTL</b>	25'	TWLTL
Westbound Left	DNE	25'	<b>TWLTL</b>	25'	TWLTL
<b>48<sup>th</sup> Ave &amp; Ivy St (#6)</b>					
Southbound Left	DNE	25'	<b>TWLTL (CC)</b>	25'	TWLTL (CC)
Southbound Right	DNE	25'	<b>90'+160'T (CC)</b>	25'	90'+160'T (CC)
<b>North Access &amp; Ivy St (#8)</b>					
Northbound Left	DNE	25'	<b>TWLTL (CC)</b>	25'	TWLTL (CC)
<b>Middle Access &amp; Ivy St (#9)</b>					
Southbound Left	DNE	25'	<b>TWLTL (CC)</b>	25'	TWLTL (CC)
<b>South Access &amp; Ivy St (#10)</b>					
Northbound Left	DNE	25'	<b>TWLTL (CC)</b>	25'	TWLTL (CC)

DNE = Does Not Exist; CC = Commerce City Standard; TWLTL = Two-Way Left Turn Lane **Blue** Text = Recommendation

If left turn lanes are implemented at the intersection of 48<sup>th</sup> Avenue and Holly Street,, it is recommended that the northbound left turn lane be designated to length of 100 feet with a 160 foot taper and that the eastbound and westbound left turn lanes be two-way left turn lanes.

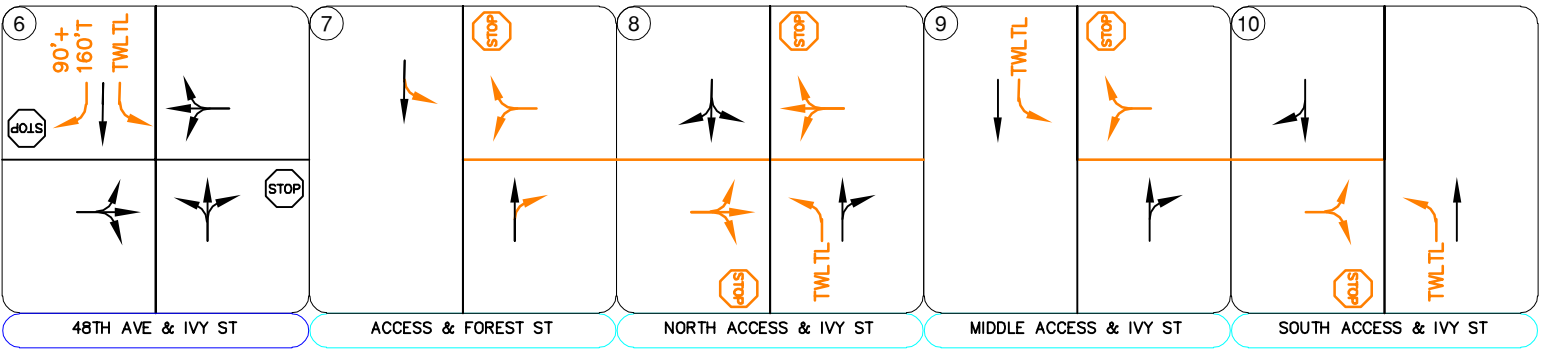
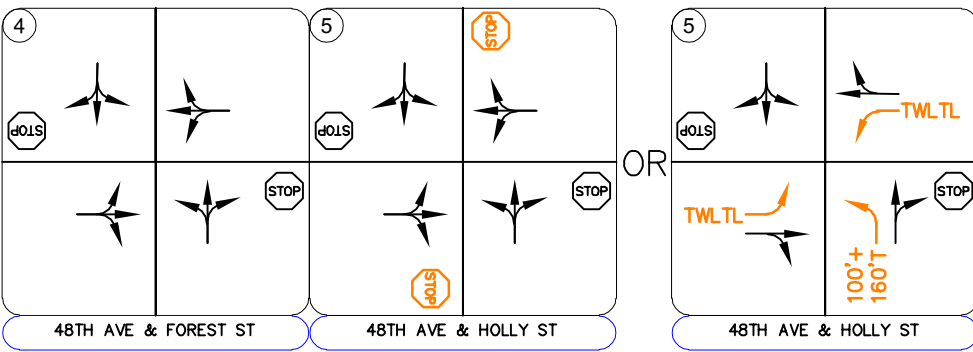
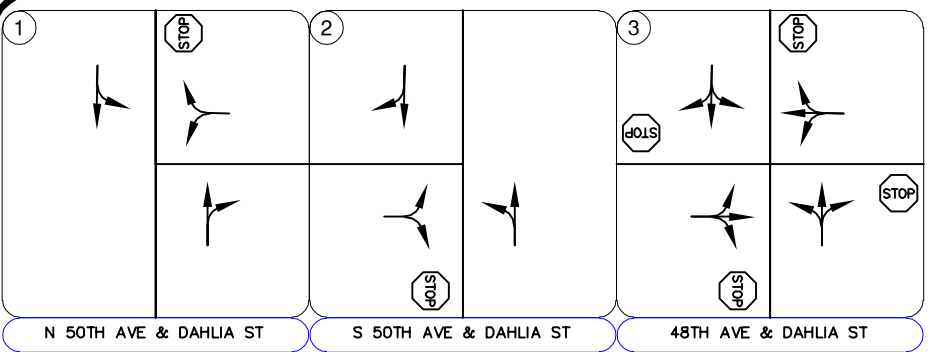
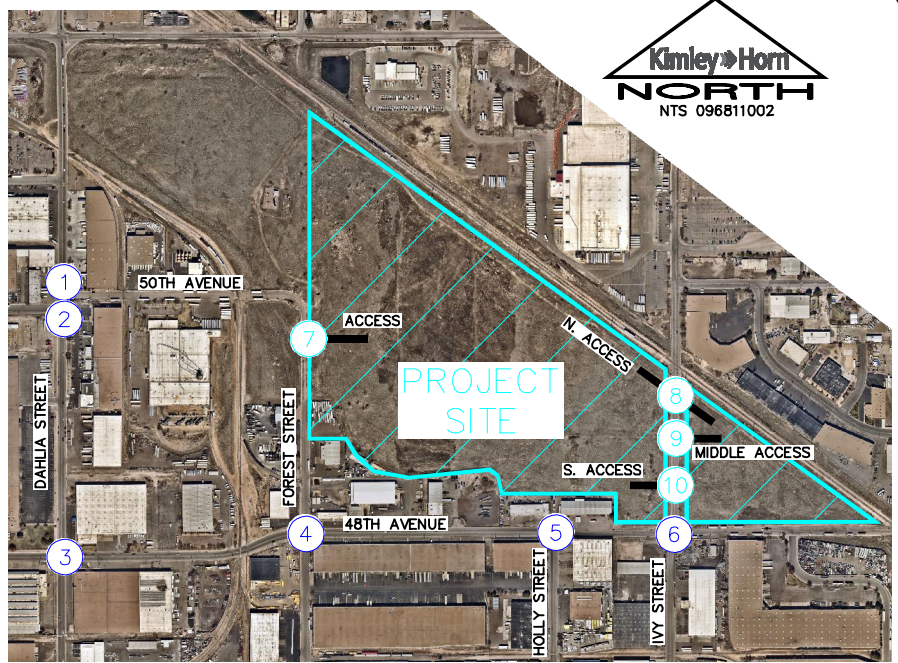
To meet Commerce City turn lane standards, a southbound right turn lane with a length of 90 feet plus a 160-foot taper is recommended at the 48<sup>th</sup> Avenue and Ivy Street (#6) intersection.

By 2023, it is also recommended that a two-way left turn lane be constructed along Ivy Street from south of the North Access to 48<sup>th</sup> Avenue to comply with Commerce City standards for implementation of left turn lanes. Otherwise, left turn lanes with 90 feet of length plus a 160-foot taper are recommended at the accesses along Ivy Street. However, back-to-back left turn lanes cannot be accommodated with these lengths between the south access along Ivy Street and the intersection of 48<sup>th</sup> Avenue and Ivy Street. As stated previously, a southbound left turn lane is not recommended at the north access along Ivy Street due to constraints with the railroad tracks to

the north. It should be noted that less than five (5) vehicles are anticipated to make a southbound left turn movement at the north access along Ivy Street.

#### 5.4 Improvement Summary

Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 10** for the 2023 horizon and **Figure 11** for the 2045 horizon.

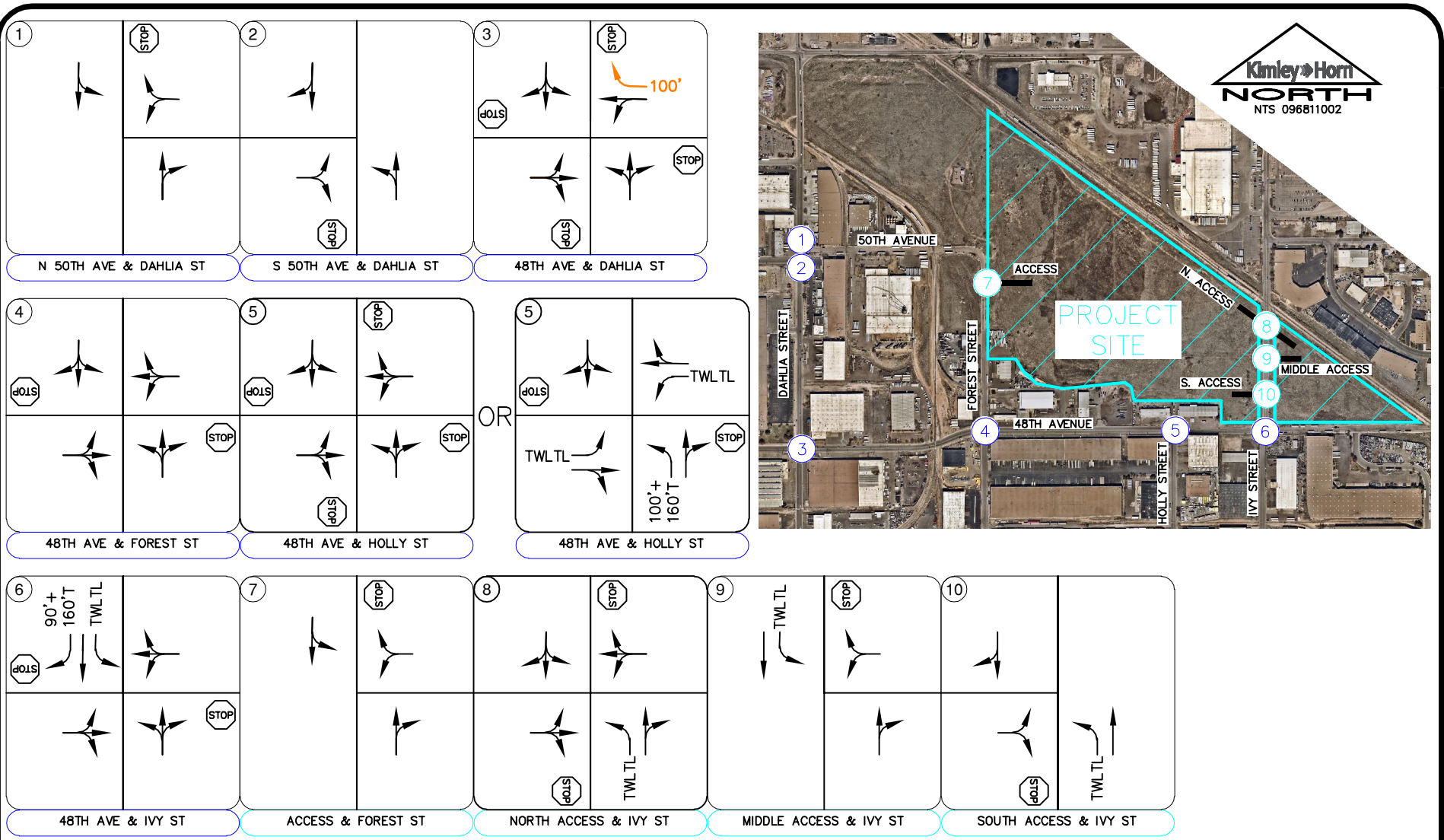


**FIGURE 10**  
 TRIANGLE LOGISTICS CENTER  
 COMMERCE CITY, COLORADO  
 2023 RECOMMENDATIONS

**LEGEND**

- Study Area Key Intersection
- Project Access Intersection
- Signalized Intersection
- Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)





**FIGURE 11**  
**TRIANGLE LOGISTICS CENTER**  
**COMMERCE CITY, COLORADO**  
**2045 RECOMMENDATIONS**



## 6.0 CONCLUSIONS AND RECOMMENDATIONS

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Based on the analysis presented in this report, Kimley-Horn believes Triangle Logistics Center will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

### 2023 Conclusions and Recommendations:

- An all way stop control warrant analysis was completed for the intersection of 48<sup>th</sup> Avenue and Holly Street (#5) with 2023 total volume projections, and it was found that all way stop control will likely be warranted at this intersection in 2023. Therefore, the intersection of 48<sup>th</sup> Avenue and Holly Street could provide all way stop control by 2023 with R1-1 “STOP” signs installed on the eastbound and westbound approaches. Further, R1-3P “All Way” plaques should be placed below all four stop signs at this intersection if all-way stop control were implemented. Orange warning flags should also be placed above the new stop signs on the eastbound and westbound approach of this intersection to indicate to drivers a change in control. Although the intersection of 48<sup>th</sup> Avenue and Holly Street is expected to meet all-way stop control warrants, a more feasible and desirable recommendation includes providing left turn lanes on the eastbound, westbound, and northbound approaches of this intersection. A two-way left turn lane could be considered along 48<sup>th</sup> Avenue in the area of the intersection with Holly Street. There is currently sufficient pavement width for this to only be a restriping improvement without the need for roadway widening. Implementing all-way stop control is more challenging due to not having curb returns and defined edge of pavement on the north side of 48<sup>th</sup> Avenue at Holly Street. Further, the access on the north leg of this intersection does not have defined drive aisles internal to that site. With left turn lanes on the northbound, eastbound, and westbound approaches, the movements at this intersection are anticipated to operate acceptably throughout 2045 with the addition of project traffic. Therefore, implementation of a “Stop” sign on the westbound approach of the 48<sup>th</sup> Avenue and Holly Street intersection has challenges due to the layout of the private access north leg of this intersection.
- To meet Commerce City standards, it is recommended that a southbound left turn lane and a southbound right turn lane should be implemented at the intersection of 48<sup>th</sup> Avenue and Ivy

Street (#6). It should be noted that this intersection operates acceptably with or without these improvements.

- With completion of the Triangle Logistics Center project, a full movement access is proposed along the east side of Forest Street and three full accesses are proposed along Ivy Street. It is recommended that all four access intersections provide stop control and R1-1 “STOP” signs be installed on the exiting approaches. The project access intersections are anticipated to have all movements operating with acceptable LOS B or better during the peak hours in buildout year 2023 with one lane for all approaches. However, to meet Commerce City standards, left turn lanes should be provided along Ivy Street at the project accesses. It is believed that a center two-way left turn lane should be striped along Ivy Street from the south of the north access to 48<sup>th</sup> Avenue. A southbound left turn lane is not recommended at the north access along Ivy Street due to constraints with the railroad tracks to the north. It should be noted that less than five (5) vehicles are anticipated to make a southbound left turn movement at the north access along Ivy Street.

#### 2045 Conclusions and Recommendations:

- If future traffic volumes materialize, a westbound right turn lane will be needed at the intersection of 48th Avenue and Dahlia Street (#3) by 2045. It is believed that this right turn lane can be striped into the existing pavement width.

#### General Recommendations:

- Any on-site and off-site improvements should be incorporated into the Civil Drawings and conform to standards of Commerce City, and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

# APPENDICES

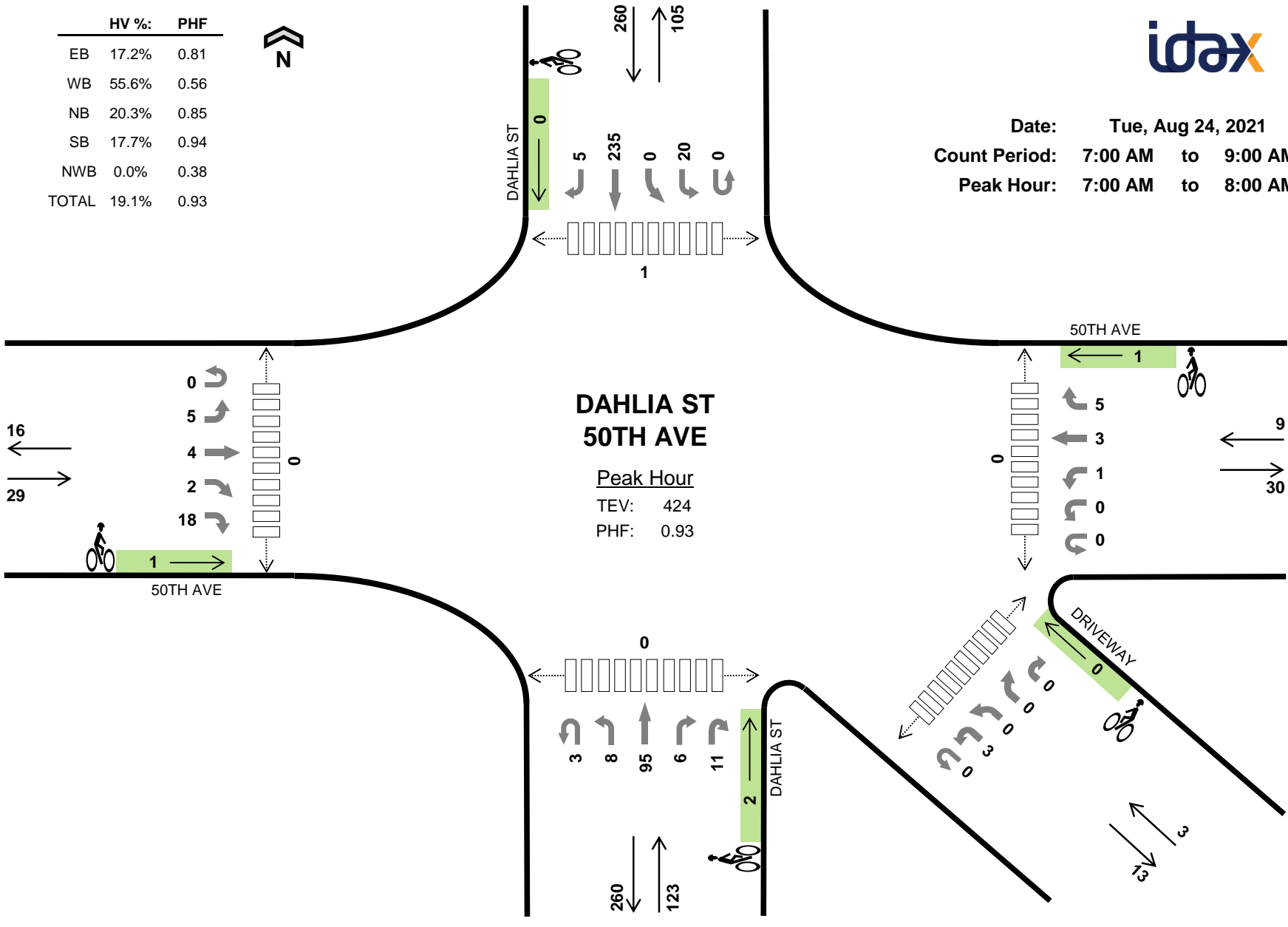
# APPENDIX A

## Intersection Count Sheets



Date: Tue, Aug 24, 2021  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:00 AM to 8:00 AM

	HV %:	PHF
EB	17.2%	0.81
WB	55.6%	0.56
NB	20.3%	0.85
SB	17.7%	0.94
NWB	0.0%	0.38
TOTAL	19.1%	0.93





Two-Hour Count Summaries

Interval Start	50TH AVE Eastbound					50TH AVE Westbound					DAHLIA ST Northbound					DAHLIA ST Southbound					DRIVEWAY Northwestbound					15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	1	1	1	5	0	0	0	0	1	0	3	18	2	3	0	5	0	61	2	0	1	0	0	0	104	0
7:15 AM	0	2	0	1	6	0	0	0	0	2	3	2	13	2	5	0	3	0	56	1	0	0	0	0	96	0	
7:30 AM	0	1	2	0	4	0	0	1	1	0	0	2	29	2	3	0	7	0	60	2	0	0	0	0	114	0	
7:45 AM	0	1	1	0	3	0	0	0	2	2	0	1	35	0	0	0	5	0	58	0	0	2	0	0	110	424	
8:00 AM	0	0	2	0	6	0	0	3	0	4	0	2	26	0	1	0	2	0	53	2	0	0	0	0	101	421	
8:15 AM	0	0	0	3	0	0	0	1	0	2	0	5	13	3	1	0	3	0	49	1	0	0	0	0	81	406	
8:30 AM	0	1	0	0	1	0	0	5	0	2	0	3	22	2	2	0	3	1	44	4	0	0	1	0	91	383	
8:45 AM	0	2	0	0	2	0	0	0	0	1	0	2	23	1	0	0	3	1	38	4	0	1	0	1	79	352	
Count Total	0	8	6	5	27	0	0	10	3	14	3	20	179	12	15	0	31	2	419	16	0	4	0	2	0	776	0
Peak Hour	All	0	5	4	2	18	0	0	1	3	5	3	8	95	6	11	0	20	0	235	5	0	3	0	0	424	0
	HV	0	1	0	0	4	0	0	0	1	4	0	2	23	0	0	0	0	0	44	2	0	0	0	0	81	0
	HV%	-	20%	0%	0%	22%	-	-	0%	33%	80%	0%	25%	24%	0%	0%	-	0%	-	19%	40%	-	0%	-	-	19%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)									
	EB	WB	NB	SB	NWB	Total	EB	WB	NB	SB	NWB	Total	East	West	North	South	Southeast	Total				
7:00 AM	2	0	4	15	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	2	0	6	0	10	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	5	15	0	21	1	1	1	0	0	3	0	0	1	0	1	0	1	0	1	2
7:45 AM	1	2	16	10	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	3	3	14	10	0	30	0	0	1	0	0	1	0	1	0	1	0	0	0	0	1	1
8:15 AM	0	1	4	11	0	16	0	0	2	0	0	2	1	0	0	1	0	3	0	0	5	5
8:30 AM	0	2	10	14	0	26	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	1	6	10	0	19	0	0	0	0	0	0	0	0	1	2	0	1	0	1	4	4
Count Total	10	12	59	91	0	172	1	1	5	1	0	8	1	2	3	1	5	1	1	1	12	12
Peak Hr	5	5	25	46	0	81	1	1	2	0	0	4	0	0	1	0	1	0	1	0	2	2

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	50TH AVE Eastbound					50TH AVE Westbound					DAHLIA ST Northbound					DAHLIA ST Southbound					DRIVEWAY Northwestbound					15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	14	1	0	0	0	0	21	0	
7:15 AM	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	10	0	
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0	14	1	0	0	0	0	21	0	
7:45 AM	0	0	0	0	1	0	0	0	0	2	0	0	16	0	0	0	0	0	10	0	0	0	0	0	29	81	
8:00 AM	0	0	0	0	3	0	0	1	0	2	0	1	13	0	0	0	0	0	10	0	0	0	0	0	30	90	
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	2	0	8	1	0	0	0	0	16	96	
8:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	10	0	0	0	1	0	12	1	0	0	0	0	26	101	
8:45 AM	0	1	0	0	1	0	0	0	0	1	0	0	6	0	0	0	0	0	8	2	0	0	0	0	19	91	
Count Total	0	2	0	0	8	0	0	2	1	9	0	3	55	1	0	0	3	0	82	6	0	0	0	0	172	0	
Peak Hour	0	1	0	0	4	0	0	0	1	4	0	2	23	0	0	0	0	0	44	2	0	0	0	0	81	0	

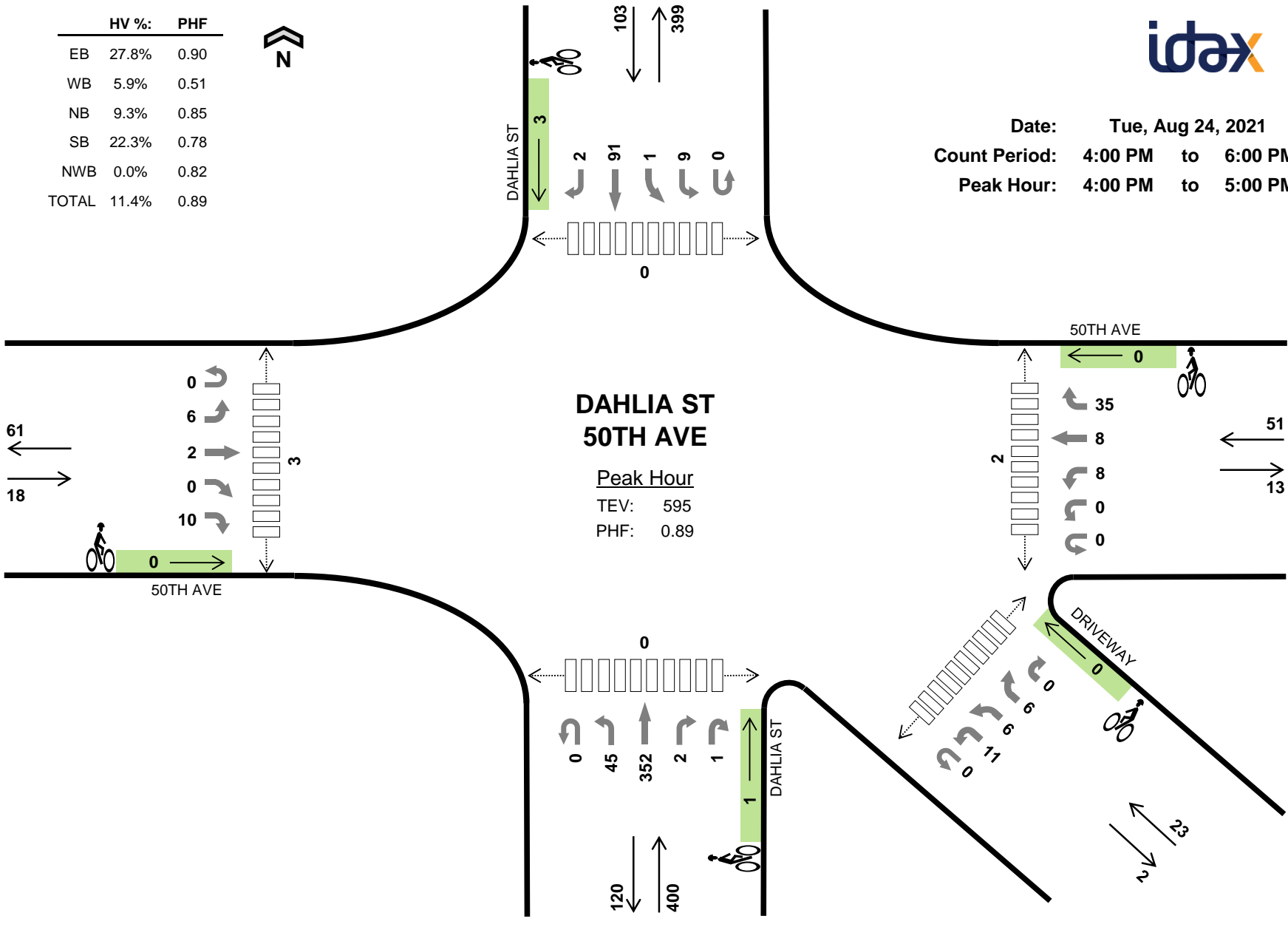
**Two-Hour Count Summaries - Bikes**

Interval Start	50TH AVE Eastbound					50TH AVE Westbound					DAHLIA ST Northbound					DAHLIA ST Southbound					DRIVEWAY Northwestbound					15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	
7:30 AM	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	6	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Count Total	1	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	0	1	0	0	0	0	0	7	0	
Peak Hour	1	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3	0	



Date: Tue, Aug 24, 2021  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM

	HV %:	PHF
EB	27.8%	0.90
WB	5.9%	0.51
NB	9.3%	0.85
SB	22.3%	0.78
NWB	0.0%	0.82
TOTAL	11.4%	0.89



Two-Hour Count Summaries

Interval Start	50TH AVE					50TH AVE					DAHLIA ST					DAHLIA ST					DRIVEWAY					15-min Total	Rolling One Hour	
	Eastbound					Westbound					Northbound					Southbound					Northwestbound							
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR			
4:00 PM	0	0	0	0	3	0	0	2	0	6	0	19	99	0	0	0	1	1	25	0	0	2	2	2	0	162	0	
4:15 PM	0	3	2	0	0	0	0	1	2	6	0	8	74	0	0	0	4	0	27	2	0	5	1	0	0	135	0	
4:30 PM	0	1	0	0	4	0	0	5	5	15	0	11	98	1	0	0	2	0	18	0	0	0	3	4	0	167	0	
4:45 PM	0	2	0	0	3	0	0	0	1	8	0	7	81	1	1	0	2	0	21	0	0	4	0	0	0	131	595	
5:00 PM	0	0	0	0	5	0	0	6	0	5	0	5	80	2	0	0	1	0	19	2	0	1	2	1	0	129	562	
5:15 PM	0	0	0	0	4	0	0	1	0	3	0	6	66	1	0	0	1	0	20	1	0	2	0	2	0	107	534	
5:30 PM	0	7	0	0	7	0	0	2	0	4	1	6	60	1	0	0	0	0	16	2	0	2	0	2	0	110	477	
5:45 PM	0	0	0	0	1	0	0	1	0	3	0	3	60	1	0	0	3	0	18	0	0	1	1	1	0	93	439	
Count Total	0	13	2	0	27	0	0	18	8	50	1	65	618	7	1	0	14	1	164	7	0	17	9	12	0	1,034	0	
Peak Hour	All	0	6	2	0	10	0	0	8	8	35	0	45	352	2	1	0	9	1	91	2	0	11	6	6	0	595	0
	HV	0	2	0	0	3	0	0	1	0	2	0	2	34	1	0	0	2	0	20	1	0	0	0	0	0	68	0
	HV%	-	33%	0%	-	30%	-	-	13%	0%	6%	-	4%	10%	50%	0%	-	22%	0%	22%	50%	-	0%	0%	0%	-	11%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)						
	EB	WB	NB	SB	NWB	Total	EB	WB	NB	SB	NWB	Total	East	West	North	South	Southeast	Total	
4:00 PM	2	1	9	5	0	17	0	0	0	0	0	0	0	0	0	0	0	3	3
4:15 PM	2	0	7	8	0	17	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	2	9	4	0	15	0	0	1	1	0	2	1	0	0	0	0	1	2
4:45 PM	1	0	12	6	0	19	0	0	0	2	0	2	1	2	0	0	0	2	5
5:00 PM	2	0	10	6	0	18	0	0	0	0	0	0	1	0	0	0	0	1	2
5:15 PM	2	0	5	2	0	9	0	0	0	0	0	0	2	1	0	0	0	4	4
5:30 PM	2	0	5	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	3	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	11	4	60	36	0	111	0	0	1	3	0	4	5	4	0	0	0	9	18
Peak Hr	5	3	37	23	0	68	0	0	1	3	0	4	2	3	0	0	0	7	12

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	50TH AVE Eastbound					50TH AVE Westbound					DAHLIA ST Northbound					DAHLIA ST Southbound					DRIVEWAY Northwestbound					15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	2	0	0	0	0	1	0	1	8	0	0	0	0	0	5	0	0	0	0	0	17	0	
4:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	7	0	0	0	1	0	6	1	0	0	0	0	17	0	
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	9	0	0	0	0	0	4	0	0	0	0	0	15	0	
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	1	10	1	0	0	1	0	5	0	0	0	0	0	19	68	
5:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	10	0	0	0	1	0	4	1	0	0	0	0	18	69	
5:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	4	1	0	0	0	0	2	0	0	0	0	0	9	61	
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	3	0	0	0	0	0	10	56	
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	6	43	
Count Total	0	2	0	0	9	0	0	2	0	2	0	2	56	2	0	0	4	0	30	2	0	0	0	0	111	0	
Peak Hour	0	2	0	0	3	0	0	1	0	2	0	2	34	1	0	0	2	0	20	1	0	0	0	0	68	0	

**Two-Hour Count Summaries - Bikes**

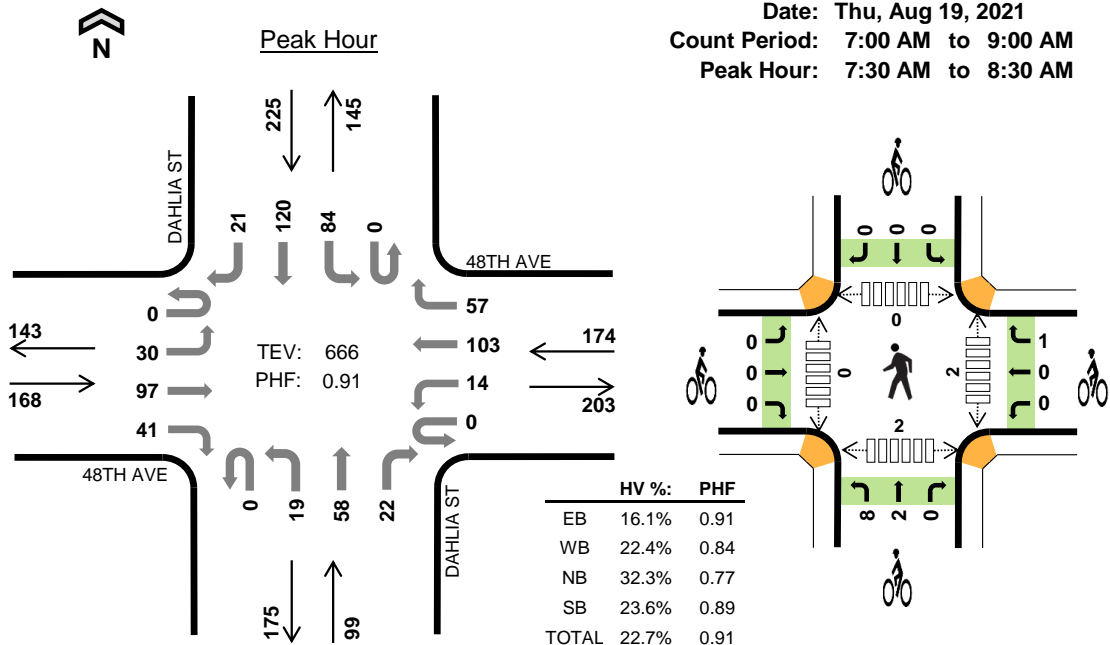
Interval Start	50TH AVE Eastbound					50TH AVE Westbound					DAHLIA ST Northbound					DAHLIA ST Southbound					DRIVEWAY Northwestbound					15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	4	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	4	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	4	0	



# DAHLIA ST 48TH AVE



Date: Thu, Aug 19, 2021  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:30 AM to 8:30 AM



### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				DAHLIA ST Northbound				DAHLIA ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	9	22	4	0	1	11	13	0	1	23	3	0	20	24	3	134	0	
7:15 AM	0	10	14	9	0	3	12	16	0	6	12	2	0	18	34	3	139	0	
7:30 AM	0	11	20	7	0	2	21	8	0	4	16	6	0	20	39	4	158	0	
7:45 AM	0	6	24	12	0	6	28	18	0	6	14	5	0	28	28	7	182	613	
8:00 AM	0	6	29	11	0	4	28	17	0	2	10	4	0	16	25	8	160	639	
8:15 AM	0	7	24	11	0	2	26	14	0	7	18	7	0	20	28	2	166	666	
8:30 AM	0	3	14	5	0	4	25	11	0	3	22	4	0	13	18	4	126	634	
8:45 AM	0	4	17	14	0	4	17	13	0	2	14	4	0	10	22	8	129	581	
Count Total	0	56	164	73	0	26	168	110	0	31	129	35	0	145	218	39	1,194	0	
Peak Hour	All	0	30	97	41	0	14	103	57	0	19	58	22	0	84	120	21	666	0
	HV	0	4	16	7	0	2	23	14	0	2	23	7	0	10	32	11	151	0
	HV%	-	13%	16%	17%	-	14%	22%	25%	-	11%	40%	32%	-	12%	27%	52%	23%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	2	8	7	20	1	0	0	0	1	1	0	0	1	2
7:15 AM	3	8	10	14	35	0	0	0	0	0	0	0	0	0	0
7:30 AM	6	12	7	12	37	0	0	0	0	0	1	0	0	1	2
7:45 AM	8	8	5	15	36	0	0	1	0	1	0	0	0	1	1
8:00 AM	5	11	4	19	39	0	0	8	0	8	1	0	0	0	1
8:15 AM	8	8	16	7	39	0	1	1	0	2	0	0	0	0	0
8:30 AM	6	11	8	10	35	0	0	0	0	0	0	0	0	0	0
8:45 AM	12	10	6	13	41	0	1	0	0	1	0	0	0	0	0
Count Total	51	70	64	97	282	1	2	10	0	13	3	0	0	3	6
Peak Hour	27	39	32	53	151	0	1	10	0	11	2	0	0	2	4

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				DAHLIA ST				DAHLIA ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	1	1	0	0	7	1	0	1	4	2	20	0
7:15 AM	0	0	2	1	0	2	4	2	0	4	5	1	0	2	11	1	35	0
7:30 AM	0	0	4	2	0	0	9	3	0	0	5	2	0	1	11	0	37	0
7:45 AM	0	2	3	3	0	0	6	2	0	1	4	0	0	4	7	4	36	128
8:00 AM	0	0	4	1	0	2	5	4	0	0	2	2	0	3	10	6	39	147
8:15 AM	0	2	5	1	0	0	3	5	0	1	12	3	0	2	4	1	39	151
8:30 AM	0	2	3	1	0	1	5	5	0	1	7	0	0	3	4	3	35	149
8:45 AM	0	2	4	6	0	2	5	3	0	1	4	1	0	2	6	5	41	154
Count Total	0	8	28	15	0	7	38	25	0	8	46	10	0	18	57	22	282	0
Peak Hour	0	4	16	7	0	2	23	14	0	2	23	7	0	10	32	11	151	0

<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			DAHLIA ST			DAHLIA ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	2			
8:00 AM	0	0	0	0	0	0	0	7	1	0	0	0	8	9			
8:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	11			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	11			
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	11			
Count Total	1	0	0	0	0	0	2	8	2	0	0	0	13	0			
Peak Hour	0	0	0	0	0	0	1	8	2	0	0	0	11	0			

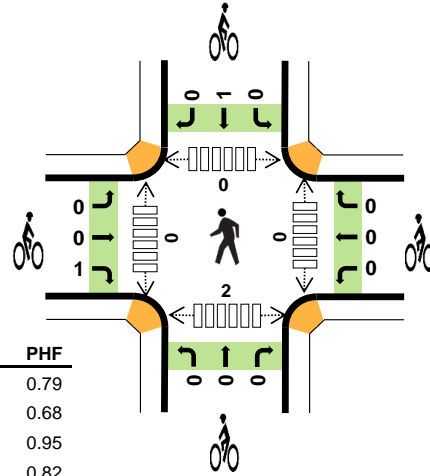
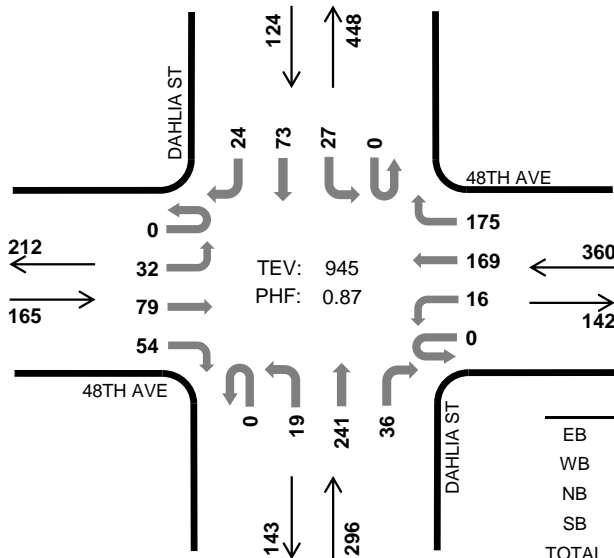
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

### DAHLIA ST 48TH AVE



Peak Hour

Date: Thu, Aug 19, 2021  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	8.5%	0.79
WB	10.6%	0.68
NB	11.8%	0.95
SB	17.7%	0.82
TOTAL	11.5%	0.87

#### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				DAHLIA ST Northbound				DAHLIA ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	5	17	7	0	9	68	55	0	3	64	8	0	7	25	5	273	0	
4:15 PM	0	12	20	15	0	3	51	39	0	10	57	11	0	9	20	9	256	0	
4:30 PM	0	11	20	21	0	2	28	41	0	4	55	10	0	6	17	5	220	0	
4:45 PM	0	4	22	11	0	2	22	40	0	2	65	7	0	5	11	5	196	945	
5:00 PM	0	7	12	9	0	6	41	43	0	3	40	7	0	5	19	4	196	868	
5:15 PM	0	2	10	6	0	6	26	31	0	4	45	4	0	5	14	2	155	767	
5:30 PM	0	3	7	3	0	2	24	18	0	6	28	10	0	4	20	3	128	675	
5:45 PM	0	3	15	2	0	1	19	20	0	0	32	7	0	6	15	8	128	607	
Count Total	0	47	123	74	0	31	279	287	0	32	386	64	0	47	141	41	1,552	0	
Peak Hour	All	0	32	79	54	0	16	169	175	0	19	241	36	0	27	73	24	945	0
	HV	0	1	10	3	0	2	16	20	0	2	29	4	0	8	9	5	109	0
	HV%	-	3%	13%	6%	-	13%	9%	11%	-	11%	12%	11%	-	30%	12%	21%	12%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	12	9	8	32	0	0	0	0	0	0	0	0	1	1
4:15 PM	3	10	5	9	27	0	0	0	1	1	0	0	0	1	1
4:30 PM	3	9	11	3	26	0	0	0	0	0	0	0	0	0	0
4:45 PM	5	7	10	2	24	1	0	0	0	1	0	0	0	0	0
5:00 PM	9	8	6	5	28	0	0	0	0	0	1	1	0	0	2
5:15 PM	5	7	4	4	20	0	1	0	0	1	0	0	0	0	0
5:30 PM	2	3	8	4	17	0	0	1	2	3	0	1	0	0	1
5:45 PM	6	3	10	5	24	1	0	0	0	1	0	0	0	0	0
Count Total	36	59	63	40	198	2	1	1	3	7	1	2	0	2	5
Peak Hour	14	38	35	22	109	1	0	0	1	2	0	0	0	2	2

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				DAHLIA ST				DAHLIA ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	0	6	6	0	0	9	0	0	4	2	2	32	0
4:15 PM	0	0	2	1	0	2	3	5	0	1	3	1	0	2	6	1	27	0
4:30 PM	0	0	1	2	0	0	3	6	0	0	10	1	0	2	1	0	26	0
4:45 PM	0	0	5	0	0	0	4	3	0	1	7	2	0	0	0	2	24	109
5:00 PM	0	5	2	2	0	0	4	4	0	2	4	0	0	0	4	1	28	105
5:15 PM	0	1	4	0	0	0	4	3	0	1	3	0	0	1	3	0	20	98
5:30 PM	0	1	1	0	0	0	1	2	0	2	2	4	0	0	3	1	17	89
5:45 PM	0	2	4	0	0	1	1	1	0	0	6	4	0	1	4	0	24	89
Count Total	0	10	21	5	0	3	26	30	0	7	44	12	0	10	23	7	198	0
Peak Hour	0	1	10	3	0	2	16	20	0	2	29	4	0	8	9	5	109	0

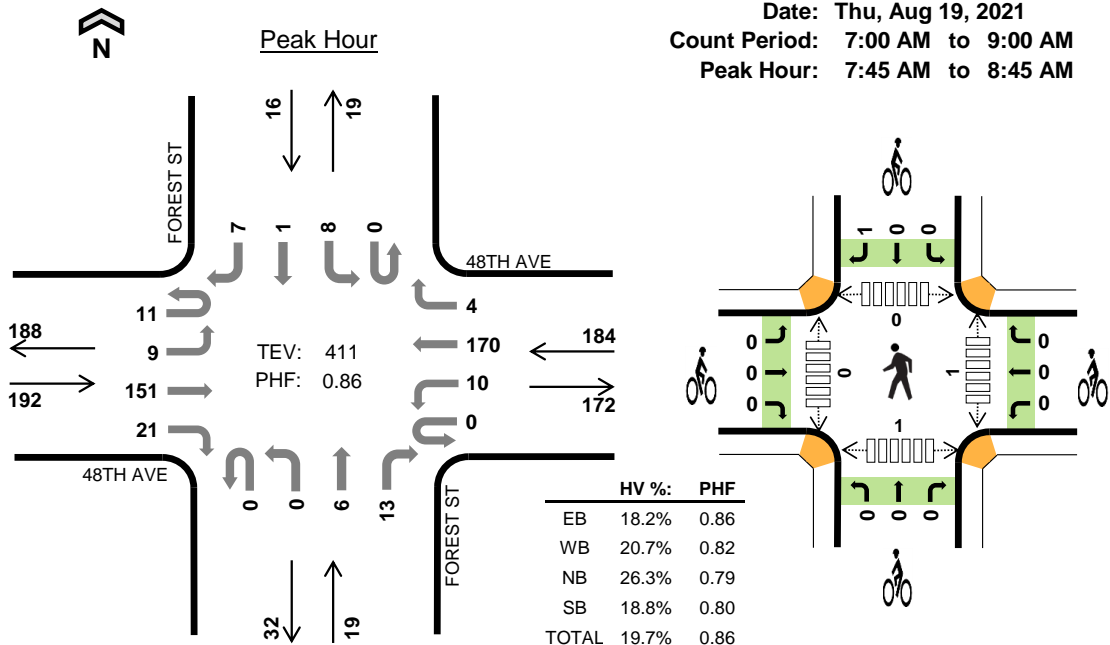
<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			DAHLIA ST			DAHLIA ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	2			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	2			
5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	5			
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	5			
Count Total	1	0	1	0	1	0	0	1	0	0	3	0	7	0			
Peak Hour	0	0	1	0	0	0	0	0	0	0	1	0	2	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# FOREST ST 48TH AVE



Date: Thu, Aug 19, 2021  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:45 AM to 8:45 AM



### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				FOREST ST Northbound				FOREST ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	2	29	8	0	0	18	0	0	0	0	4	0	3	1	2	67	0	
7:15 AM	0	1	27	8	0	2	27	1	0	0	3	6	0	1	0	0	76	0	
7:30 AM	1	0	34	6	0	1	21	0	0	0	0	4	0	2	0	2	71	0	
<b>7:45 AM</b>	<b>3</b>	<b>3</b>	<b>44</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>54</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>119</b>	<b>333</b>	
8:00 AM	2	1	43	4	0	5	40	0	0	0	3	3	0	1	0	4	106	372	
8:15 AM	3	3	44	5	0	2	42	2	0	0	1	2	0	2	0	1	107	403	
8:30 AM	3	2	20	6	0	2	34	1	0	0	1	5	0	4	1	0	79	411	
8:45 AM	3	1	22	3	0	2	32	1	0	0	2	4	0	1	0	0	71	363	
Count Total	15	13	263	46	0	15	268	6	0	0	11	31	0	15	2	11	696	0	
Peak Hour	All	11	9	151	21	0	10	170	4	0	0	6	13	0	8	1	7	411	0
	HV	4	3	21	7	0	3	34	1	0	0	1	4	0	1	0	2	81	0
	HV%	36%	33%	14%	33%	-	30%	20%	25%	-	-	17%	31%	-	13%	0%	29%	20%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	3	0	1	8	0	0	0	0	0	1	0	1	0	2
7:15 AM	6	10	6	0	22	0	0	0	0	0	0	0	0	0	0
7:30 AM	6	6	1	2	15	0	0	0	0	0	0	0	0	0	0
<b>7:45 AM</b>	<b>8</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
8:00 AM	9	12	3	1	25	0	0	0	1	1	1	0	0	0	1
8:15 AM	11	10	0	1	22	0	0	0	0	0	0	0	0	0	0
8:30 AM	7	6	2	0	15	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	13	2	0	20	0	1	0	0	1	0	0	0	0	0
Count Total	56	70	14	6	146	0	1	0	1	2	2	0	1	1	4
Peak Hour	35	38	5	3	81	0	0	0	1	1	1	0	0	1	2

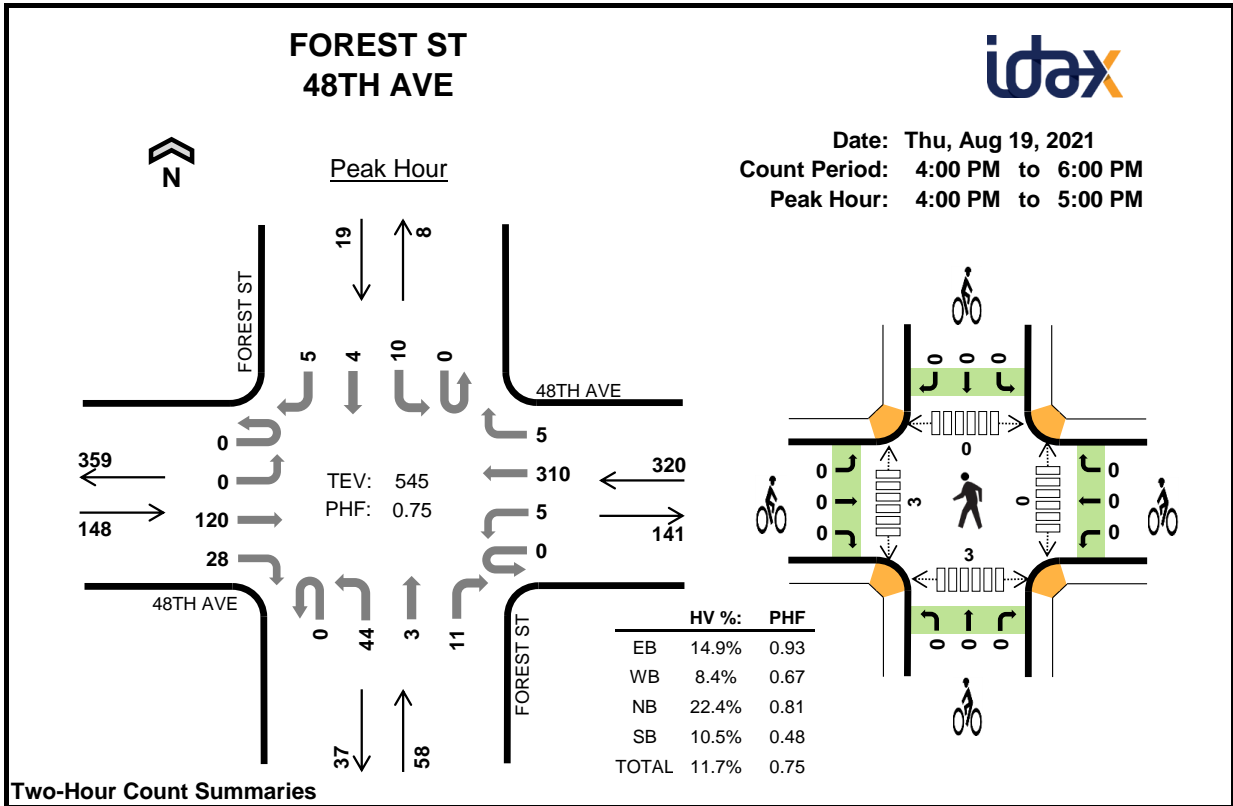


<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				FOREST ST				FOREST ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	0	0	0	3	0	0	0	0	0	0	1	0	0	8	0
7:15 AM	0	0	6	0	0	1	8	1	0	0	1	5	0	0	0	0	22	0
7:30 AM	0	0	6	0	0	0	6	0	0	0	0	1	0	1	0	1	15	0
<b>7:45 AM</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>19</b>	64
8:00 AM	1	0	7	1	0	2	10	0	0	0	1	2	0	0	0	1	25	81
8:15 AM	0	1	7	3	0	1	8	1	0	0	0	0	0	1	0	0	22	81
8:30 AM	2	1	3	1	0	0	6	0	0	0	0	2	0	0	0	0	15	81
8:45 AM	1	0	4	0	0	1	11	1	0	0	0	2	0	0	0	0	20	82
Count Total	5	3	41	7	0	5	62	3	0	0	2	12	0	3	0	3	146	0
Peak Hour	4	3	21	7	0	3	34	1	0	0	1	4	0	1	0	2	81	0

<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			FOREST ST			FOREST ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>7:45 AM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	1			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	2			
Count Total	0	0	0	0	1	0	0	0	0	0	0	1	2	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	1	1	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				FOREST ST Northbound				FOREST ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	27	8	0	1	118	1	0	12	0	4	0	4	2	4	181	0	
4:15 PM	0	0	29	7	0	2	80	0	0	10	2	2	0	0	1	1	134	0	
4:30 PM	0	0	32	5	0	0	54	2	0	15	1	2	0	3	1	0	115	0	
4:45 PM	0	0	32	8	0	2	58	2	0	7	0	3	0	3	0	0	115	545	
5:00 PM	0	0	23	6	0	3	69	1	0	7	0	3	0	3	3	2	120	484	
5:15 PM	0	0	20	4	0	1	54	0	0	7	1	1	0	1	0	0	89	439	
5:30 PM	0	0	21	1	0	2	43	1	0	3	0	0	0	1	0	1	73	397	
5:45 PM	0	1	27	3	0	3	33	1	0	5	0	0	0	0	0	0	73	355	
Count Total	0	1	211	42	0	14	509	8	0	66	4	15	0	15	7	8	900	0	
Peak Hour	All	0	0	120	28	0	5	310	5	0	44	3	11	0	10	4	5	545	0
	HV	0	0	19	3	0	0	27	0	0	10	0	3	0	0	1	1	64	0
	HV%	-	-	16%	11%	-	0%	9%	0%	-	23%	0%	27%	-	0%	25%	20%	12%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	7	4	1	16	0	0	0	0	0	0	0	0	0	0
4:15 PM	5	8	4	1	18	0	0	0	0	0	0	0	0	0	0
4:30 PM	7	6	2	0	15	0	0	0	0	0	0	3	0	3	6
4:45 PM	6	6	3	0	15	0	0	0	0	0	0	0	0	0	0
5:00 PM	4	8	3	0	15	0	0	0	0	0	0	0	2	0	2
5:15 PM	3	4	2	1	10	0	1	0	0	1	0	0	0	0	0
5:30 PM	6	4	1	0	11	0	0	0	0	0	0	0	0	0	0
5:45 PM	8	5	0	0	13	0	0	0	0	0	0	0	0	1	1
Count Total	43	48	19	3	113	0	1	0	0	1	0	3	2	4	9
Peak Hour	22	27	13	2	64	0	0	0	0	0	0	3	0	3	6

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				FOREST ST				FOREST ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	0	0	0	7	0	0	4	0	0	0	0	1	0	16	0
4:15 PM	0	0	5	0	0	0	8	0	0	3	0	1	0	0	0	1	18	0
4:30 PM	0	0	6	1	0	0	6	0	0	2	0	0	0	0	0	0	15	0
4:45 PM	0	0	4	2	0	0	6	0	0	1	0	2	0	0	0	0	15	64
5:00 PM	0	0	3	1	0	1	7	0	0	2	0	1	0	0	0	0	15	63
5:15 PM	0	0	3	0	0	0	4	0	0	1	1	0	0	1	0	0	10	55
5:30 PM	0	0	6	0	0	0	3	1	0	1	0	0	0	0	0	0	11	51
5:45 PM	0	0	7	1	0	1	3	1	0	0	0	0	0	0	0	0	13	49
Count Total	0	0	38	5	0	2	44	2	0	14	1	4	0	1	1	1	113	0
Peak Hour	0	0	19	3	0	0	27	0	0	10	0	3	0	0	1	1	64	0

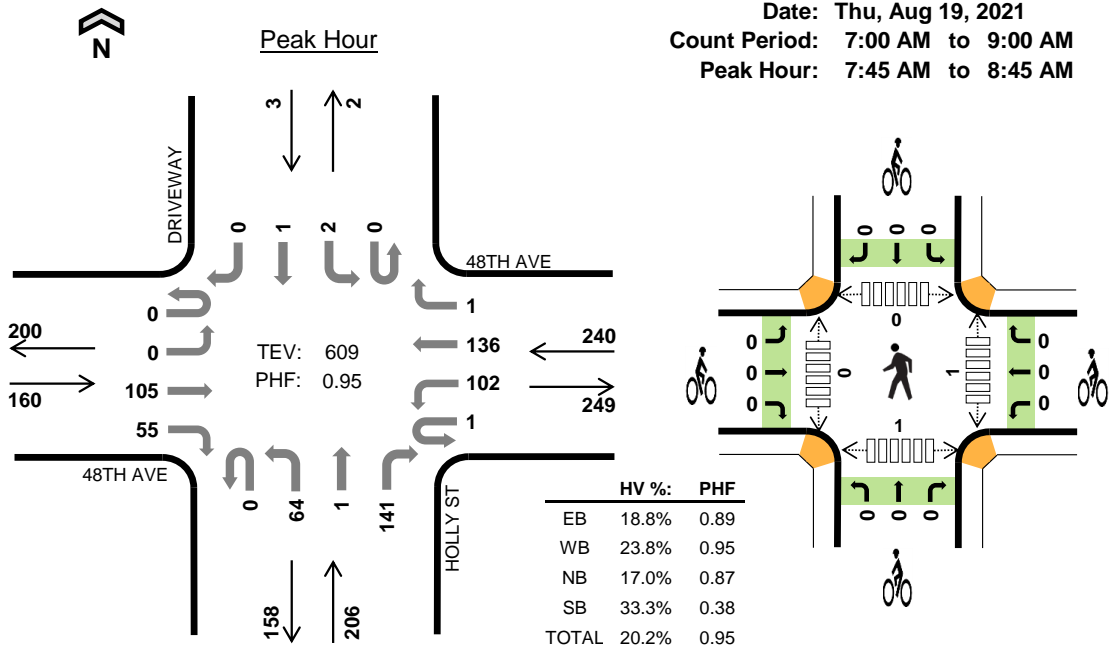
<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			FOREST ST			FOREST ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	1			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# HOLLY ST 48TH AVE



Date: Thu, Aug 19, 2021  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:45 AM to 8:45 AM



### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				HOLLY ST Northbound				DRIVEWAY Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	17	13	0	33	11	0	0	8	1	32	0	0	0	0	115	0	
7:15 AM	0	0	17	12	0	21	21	0	0	13	0	27	0	0	0	0	111	0	
7:30 AM	0	0	26	9	0	21	18	0	0	7	0	33	0	0	0	0	114	0	
7:45 AM	0	0	29	14	0	21	42	0	0	22	0	26	0	1	1	0	156	496	
8:00 AM	0	0	27	16	0	23	32	0	0	15	1	31	0	0	0	0	145	526	
8:15 AM	0	0	35	10	1	26	35	1	0	10	0	42	0	1	0	0	161	576	
8:30 AM	0	0	14	15	0	32	27	0	0	17	0	42	0	0	0	0	147	609	
8:45 AM	0	0	18	10	0	66	24	0	0	12	0	26	0	0	0	0	156	609	
Count Total	0	0	183	99	1	243	210	1	0	104	2	259	0	2	1	0	1,105	0	
Peak Hour	All	0	0	105	55	1	102	136	1	0	64	1	141	0	2	1	0	609	0
	HV	0	0	20	10	1	31	25	0	0	13	0	22	0	1	0	0	123	0
	HV%	-	-	19%	18%	100%	30%	18%	0%	-	20%	0%	16%	-	50%	0%	-	20%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	7	15	11	0	33	0	1	0	0	1	0	0	0	0	0
7:15 AM	6	14	5	0	25	0	0	0	0	0	0	0	0	0	0
7:30 AM	8	14	4	0	26	0	0	1	0	1	0	0	0	1	1
7:45 AM	7	13	7	0	27	0	0	0	0	0	0	0	0	0	0
8:00 AM	7	13	9	0	29	0	0	0	0	0	1	0	0	1	2
8:15 AM	9	14	12	1	36	0	0	0	0	0	0	0	0	0	0
8:30 AM	7	17	7	0	31	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	34	9	0	48	0	0	1	0	1	0	1	0	0	1
Count Total	56	134	64	1	255	0	1	2	0	3	1	1	0	2	4
Peak Hour	30	57	35	1	123	0	0	0	0	0	1	0	0	1	2

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				HOLLY ST				DRIVEWAY				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	3	0	14	1	0	0	2	0	9	0	0	0	0	33	0
7:15 AM	0	0	4	2	0	8	6	0	0	4	0	1	0	0	0	0	25	0
7:30 AM	0	0	7	1	0	10	4	0	0	1	0	3	0	0	0	0	26	0
7:45 AM	0	0	4	3	0	6	7	0	0	4	0	3	0	0	0	0	27	111
8:00 AM	0	0	6	1	0	6	7	0	0	3	0	6	0	0	0	0	29	107
8:15 AM	0	0	8	1	1	7	6	0	0	4	0	8	0	1	0	0	36	118
8:30 AM	0	0	2	5	0	12	5	0	0	2	0	5	0	0	0	0	31	123
8:45 AM	0	0	3	2	0	24	10	0	0	4	0	5	0	0	0	0	48	144
Count Total	0	0	38	18	1	87	46	0	0	24	0	40	0	1	0	0	255	0
Peak Hour	0	0	20	10	1	31	25	0	0	13	0	22	0	1	0	0	123	0

<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			HOLLY ST			DRIVEWAY			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	
Count Total	0	0	0	0	0	1	0	1	0	1	0	0	0	0	3	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

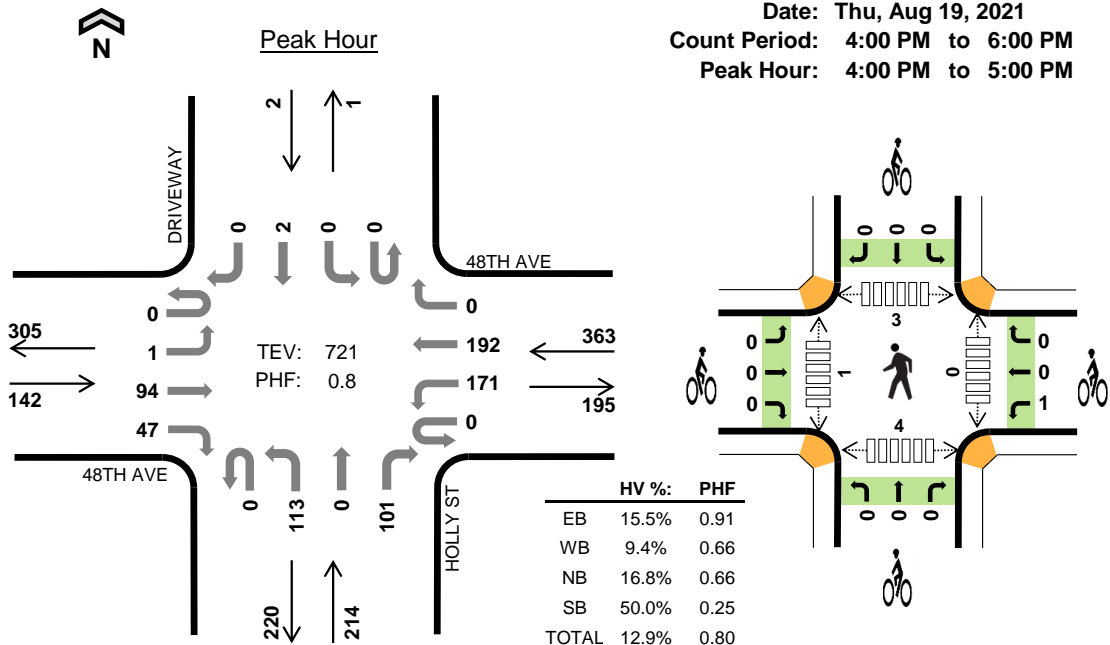
Note: U-Turn volumes for bikes are included in Left-Turn, if any.



# HOLLY ST 48TH AVE



Date: Thu, Aug 19, 2021  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM



### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				HOLLY ST Northbound				DRIVEWAY Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	1	28	10	0	56	82	0	0	31	0	16	0	0	2	0	226	0	
4:15 PM	0	0	18	12	0	39	49	0	0	25	0	17	0	0	0	0	160	0	
4:30 PM	0	0	25	13	0	40	32	0	0	23	0	21	0	0	0	0	154	0	
4:45 PM	0	0	23	12	0	36	29	0	0	34	0	47	0	0	0	0	181	721	
5:00 PM	0	0	16	13	1	51	43	0	0	23	0	28	0	0	2	0	177	672	
5:15 PM	0	0	14	12	0	37	34	0	0	19	0	34	0	0	0	0	150	662	
5:30 PM	0	0	18	5	0	24	30	0	0	15	0	31	0	0	0	0	123	631	
5:45 PM	0	0	15	10	0	26	20	0	0	22	0	26	0	0	0	0	119	569	
Count Total	0	1	157	87	1	309	319	0	0	192	0	220	0	0	4	0	1,290	0	
Peak Hour	All	0	1	94	47	0	171	192	0	0	113	0	101	0	0	2	0	721	0
	HV	0	1	14	7	0	14	20	0	0	7	0	29	0	0	1	0	93	0
	HV%	-	100%	15%	15%	-	8%	10%	-	-	6%	-	29%	-	-	50%	-	13%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	6	8	3	1	18	0	0	0	0	0	0	0	0	0	0
4:15 PM	3	10	7	0	20	0	0	0	0	0	0	0	0	0	0
4:30 PM	7	10	12	0	29	0	0	0	0	0	0	0	1	2	3
4:45 PM	6	6	14	0	26	0	1	0	0	1	0	1	2	2	5
5:00 PM	3	10	8	0	21	0	0	0	0	0	0	0	0	0	0
5:15 PM	4	7	21	0	32	0	1	0	0	1	0	0	0	0	0
5:30 PM	6	5	20	0	31	0	0	0	0	0	0	0	0	0	0
5:45 PM	8	4	15	0	27	0	0	1	0	1	0	0	0	1	1
Count Total	43	60	100	1	204	0	2	1	0	3	0	1	3	5	9
Peak Hour	22	34	36	1	93	0	1	0	0	1	0	1	3	4	8

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				HOLLY ST				DRIVEWAY				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	3	2	0	3	5	0	0	0	0	3	0	0	1	0	18	0
4:15 PM	0	0	2	1	0	4	6	0	0	2	0	5	0	0	0	0	20	0
4:30 PM	0	0	4	3	0	6	4	0	0	4	0	8	0	0	0	0	29	0
4:45 PM	0	0	5	1	0	1	5	0	0	1	0	13	0	0	0	0	26	93
5:00 PM	0	0	3	0	0	4	6	0	0	0	0	8	0	0	0	0	21	96
5:15 PM	0	0	4	0	0	3	4	0	0	2	0	19	0	0	0	0	32	108
5:30 PM	0	0	6	0	0	2	3	0	0	1	0	19	0	0	0	0	31	110
5:45 PM	0	0	6	2	0	3	1	0	0	4	0	11	0	0	0	0	27	111
Count Total	0	1	33	9	0	26	34	0	0	14	0	86	0	0	1	0	204	0
Peak Hour	0	1	14	7	0	14	20	0	0	7	0	29	0	0	1	0	93	0

<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			HOLLY ST			DRIVEWAY			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	1			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	2			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	2			
Count Total	0	0	0	1	1	0	0	0	1	0	0	0	3	0			
Peak Hour	0	0	0	1	0	0	0	0	0	0	0	0	1	0			

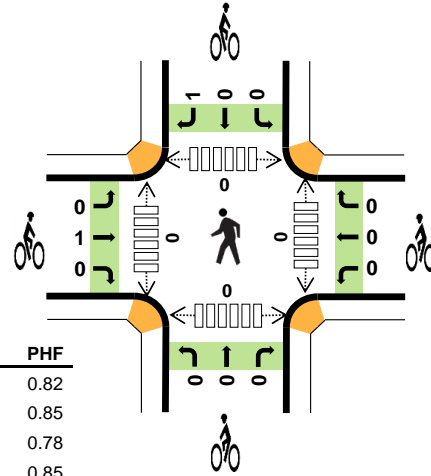
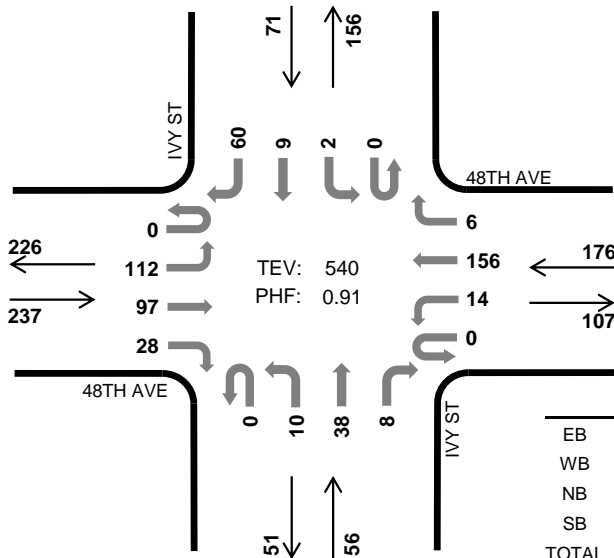
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

### IVY ST 48TH AVE



Peak Hour

Date: Tue, Aug 24, 2021  
 Count Period: 7:00 AM to 9:00 AM  
 Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	15.2%	0.82
WB	19.9%	0.85
NB	19.6%	0.78
SB	29.6%	0.85
TOTAL	19.1%	0.91

#### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				IVY ST Northbound				IVY ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	16	25	10	0	2	16	0	0	2	5	4	0	1	4	33	118	0	
7:15 AM	0	7	22	7	0	3	20	0	0	3	9	3	0	3	5	27	109	0	
7:30 AM	0	17	30	11	0	1	17	1	0	2	11	2	0	1	5	19	117	0	
7:45 AM	0	17	29	4	0	5	36	1	0	2	6	2	0	1	2	17	122	466	
8:00 AM	0	31	22	5	0	3	49	0	0	3	13	2	0	0	3	9	140	488	
8:15 AM	0	35	25	12	0	2	33	3	0	1	14	2	0	0	4	17	148	527	
8:30 AM	0	29	21	7	0	4	38	2	0	4	5	2	0	1	0	17	130	540	
8:45 AM	0	10	23	12	0	1	31	2	0	2	7	3	0	0	2	12	105	523	
Count Total	0	162	197	68	0	21	240	9	0	19	70	20	0	7	25	151	989	0	
Peak Hour	All	0	112	97	28	0	14	156	6	0	10	38	8	0	2	9	60	540	0
	HV	0	13	17	6	0	5	30	0	0	1	8	2	0	0	1	20	103	0
	HV%	-	12%	18%	21%	-	36%	19%	0%	-	10%	21%	25%	-	0%	11%	33%	19%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	8	4	3	18	33	0	0	0	0	0	0	0	0	0	0
7:15 AM	8	4	4	20	36	0	0	0	0	0	0	0	0	0	0
7:30 AM	4	3	2	17	26	0	0	0	0	0	0	1	0	2	3
7:45 AM	7	10	2	5	24	1	0	0	1	2	0	0	0	0	0
8:00 AM	8	10	5	4	27	0	0	0	0	0	0	0	0	0	0
8:15 AM	11	4	2	7	24	0	0	0	0	0	0	0	0	0	0
8:30 AM	10	11	2	5	28	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	11	3	3	22	0	0	0	0	0	0	0	0	0	0
Count Total	61	57	23	79	220	1	0	0	1	2	0	1	0	2	3
Peak Hour	36	35	11	21	103	1	0	0	1	2	0	0	0	0	0

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				IVY ST				IVY ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	5	3	0	0	0	4	0	0	1	1	1	0	0	2	16	33	0
7:15 AM	0	0	6	2	0	1	3	0	0	1	2	1	0	1	1	18	36	0
7:30 AM	0	3	1	0	0	0	3	0	0	0	2	0	0	0	1	16	26	0
7:45 AM	0	0	6	1	0	3	7	0	0	0	2	0	0	0	0	5	24	119
8:00 AM	0	7	1	0	0	0	10	0	0	0	3	2	0	0	1	3	27	113
8:15 AM	0	3	6	2	0	0	4	0	0	0	2	0	0	0	0	7	24	101
8:30 AM	0	3	4	3	0	2	9	0	0	1	1	0	0	0	0	5	28	103
8:45 AM	0	2	3	0	0	0	11	0	0	1	1	1	0	0	0	3	22	101
Count Total	0	23	30	8	0	6	51	0	0	4	14	5	0	1	5	73	220	0
Peak Hour	0	13	17	6	0	5	30	0	0	1	8	2	0	0	1	20	103	0

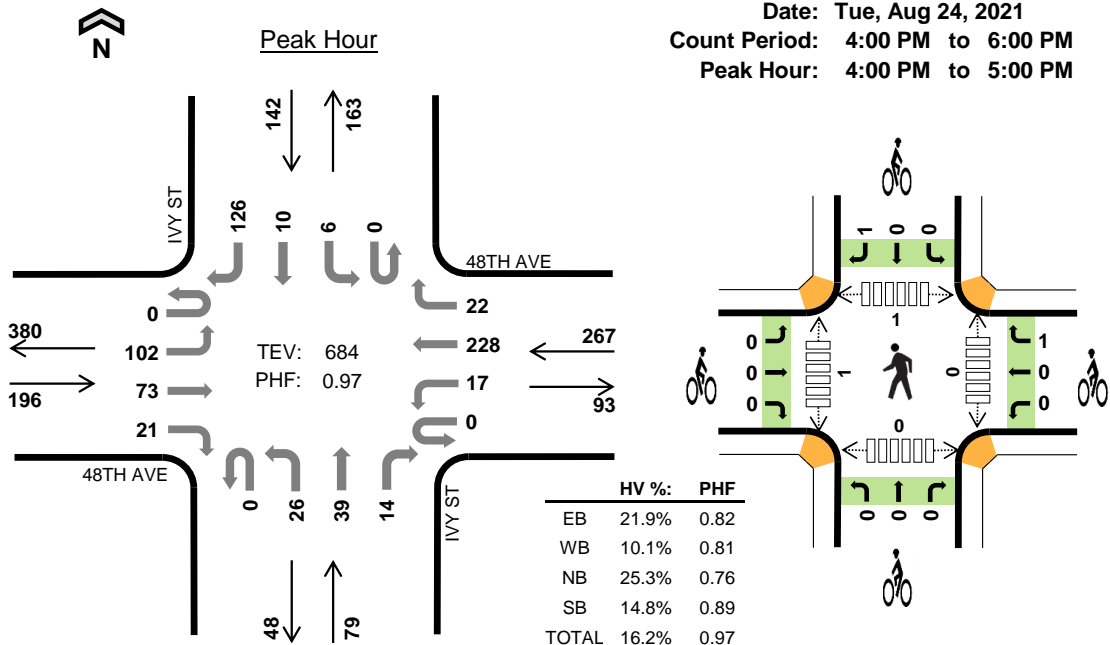
<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			IVY ST			IVY ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# IVY ST 48TH AVE



Date: Tue, Aug 24, 2021  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM



### Two-Hour Count Summaries

Interval Start	48TH AVE Eastbound				48TH AVE Westbound				IVY ST Northbound				IVY ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	18	20	2	0	4	72	6	0	8	4	2	0	1	3	36	176	0	
4:15 PM	0	22	22	4	0	8	52	5	0	5	7	2	0	3	3	32	165	0	
4:30 PM	0	22	23	3	0	2	68	6	0	7	13	5	0	1	3	23	176	0	
4:45 PM	0	40	8	12	0	3	36	5	0	6	15	5	0	1	1	35	167	684	
5:00 PM	0	29	18	3	0	1	44	6	0	8	14	2	0	1	3	33	162	670	
5:15 PM	0	37	8	4	0	3	45	8	0	1	13	1	0	2	1	22	145	650	
5:30 PM	0	30	11	3	0	2	35	3	0	5	7	0	0	1	1	23	121	595	
5:45 PM	0	23	17	0	0	1	22	1	0	4	5	1	0	1	2	24	101	529	
Count Total	0	221	127	31	0	24	374	40	0	44	78	18	0	11	17	228	1,213	0	
Peak Hour	All	0	102	73	21	0	17	228	22	0	26	39	14	0	6	10	126	684	0
	HV	0	29	9	5	0	3	21	3	0	7	9	4	0	1	1	19	111	0
	HV%	-	28%	12%	24%	-	18%	9%	14%	-	27%	23%	29%	-	17%	10%	15%	16%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	8	6	8	8	30	0	1	0	0	1	0	0	0	0	0
4:15 PM	13	11	3	4	31	0	0	0	0	0	0	0	0	0	0
4:30 PM	11	6	5	4	26	0	0	0	0	0	0	0	0	0	0
4:45 PM	11	4	4	5	24	0	0	0	1	1	0	1	1	0	2
5:00 PM	13	6	3	1	23	0	0	0	0	0	0	0	0	0	0
5:15 PM	19	8	9	4	40	1	0	0	1	2	0	2	0	0	2
5:30 PM	21	3	2	3	29	0	0	0	0	0	0	0	0	0	0
5:45 PM	19	1	2	4	26	0	0	0	0	0	0	0	0	0	0
Count Total	115	45	36	33	229	1	1	0	2	4	0	3	1	0	4
Peak Hour	43	27	20	21	111	0	1	0	1	2	0	1	1	0	2

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	48TH AVE				48TH AVE				IVY ST				IVY ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	2	1	0	1	5	0	0	4	3	1	0	1	0	7	30	0
4:15 PM	0	7	5	1	0	2	8	1	0	0	2	1	0	0	0	4	31	0
4:30 PM	0	10	1	0	0	0	5	1	0	3	2	0	0	0	1	3	26	0
4:45 PM	0	7	1	3	0	0	3	1	0	0	2	2	0	0	0	5	24	111
5:00 PM	0	12	1	0	0	0	4	2	0	1	2	0	0	0	0	1	23	104
5:15 PM	0	18	1	0	0	1	4	3	0	0	9	0	0	0	0	4	40	113
5:30 PM	0	20	1	0	0	1	2	0	0	0	2	0	0	0	1	2	29	116
5:45 PM	0	18	1	0	0	0	1	0	0	1	1	0	0	0	2	2	26	118
Count Total	0	97	13	5	0	5	32	8	0	9	23	4	0	1	4	28	229	0
Peak Hour	0	29	9	5	0	3	21	3	0	7	9	4	0	1	1	19	111	0

<b>Two-Hour Count Summaries - Bikes</b>																	
Interval Start	48TH AVE			48TH AVE			IVY ST			IVY ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0			
5:15 PM	1	0	0	0	0	0	0	0	0	0	1	2	3	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0			
Count Total	1	0	0	0	0	1	0	0	0	0	2	4	0	0			
Peak Hour	0	0	0	0	0	1	0	0	0	0	1	2	0	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



# APPENDIX B

## Future Traffic Projections

DRCOG Traffic Projections: Triangle Logistics Center

Location	Daily Volumes			
	2015	2040	Growth Factor	Annual Growth
Dahlia St N/O 52nd Ave	4,000	5,000	1.25	0.9%
Dahlia St S/O 52nd Ave	3,000	4,000	1.33	1.2%
48th Ave E/O Dahlia St	3,000	3,000	1.00	0.0%
48th Ave E/O Ivy St	1,000	1,000	1.00	0.0%
Total (Average)	11,000	13,000	1.18	0.7%

# APPENDIX C

## Trip Generation Worksheets

Project Triangle Logistics Center

Subject Trip Generation for Industrial Park

Designed by TES Date September 07, 2021

Job No. 096811002

Checked by Curtis Rowe

Date \_\_\_\_\_

Sheet No. 1 of 1

## **TRIP GENERATION MANUAL TECHNIQUES**

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Industrial Park (130)

Independent Variable - 1000 Square Feet Gross Floor Feet (X)

Gross Floor Area = 840,593

X = 840.6

T = Average Vehicle Trip Ends

### **Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (100 Series Page 22)**

T = 0.40 (X)		Directional Distribution:	81% ent.	19% exit.
T = 0.40 *	840.593	T = 336	Average Vehicle Trip Ends	
		272 entering	64	exiting
		272 + 64 =	336	

### **Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (100 Series Page 23)**

T = 0.40 (X)		Directional Distribution:	21% ent.	79% exit.
T = 0.40 *	840.593	T = 337	Average Vehicle Trip Ends	
		71 entering	266	exiting
		71 + 266 =	337	

### **Weekday (100 Series Page 21)**

T = 3.37 (X)		Directional Distribution:	50% entering, 50% exiting	
T = 3.37 *	840.593	T = 2834	Average Vehicle Trip Ends	
		1417 entering	1417	exiting
		1417 + 1417 =	2834	

# APPENDIX D

## Intersection Analysis Worksheets

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	4	5	100	10	20	240
Future Vol, veh/h	4	5	100	10	20	240
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	108	11	22	258

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	416	114	0	0	119	0
Stage 1	114	-	-	-	-	-
Stage 2	302	-	-	-	-	-
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	593	939	-	-	1469	-
Stage 1	911	-	-	-	-	-
Stage 2	750	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	583	939	-	-	1469	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	739	1469
HCM Lane V/C Ratio	-	-	0.013	0.015
HCM Control Delay (s)	-	-	9.9	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0



Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	16	35	364	4	9	94
Future Vol, veh/h	16	35	364	4	9	94
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	39	409	4	10	106

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	537	411	0	0	413	0
Stage 1	411	-	-	-	-	-
Stage 2	126	-	-	-	-	-
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	505	641	-	-	1146	-
Stage 1	669	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	500	641	-	-	1146	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	892	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	589	1146
HCM Lane V/C Ratio	-	-	0.097	0.009
HCM Control Delay (s)	-	-	11.8	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T		T
Traffic Vol, veh/h	4	5	101	10	20	243
Future Vol, veh/h	4	5	101	10	20	243
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	5	109	11	22	261

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	420	115	0	0	120	0
Stage 1	115	-	-	-	-	-
Stage 2	305	-	-	-	-	-
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	590	937	-	-	1468	-
Stage 1	910	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	579	937	-	-	1468	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	735	1468
HCM Lane V/C Ratio	-	-	0.013	0.015
HCM Control Delay (s)	-	-	10	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	16	35	369	4	9	95
Future Vol, veh/h	16	35	369	4	9	95
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	39	415	4	10	107

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	544	417	0	0	419	0
Stage 1	417	-	-	-	-	-
Stage 2	127	-	-	-	-	-
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	500	636	-	-	1140	-
Stage 1	665	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	496	636	-	-	1140	-
Mov Cap-2 Maneuver	496	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	584	1140
HCM Lane V/C Ratio	-	-	0.098	0.009
HCM Control Delay (s)	-	-	11.8	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	4	15	101	10	61	243
Future Vol, veh/h	4	15	101	10	61	243
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	16	109	11	66	261

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	508	115	0	0	120	0
Stage 1	115	-	-	-	-	-
Stage 2	393	-	-	-	-	-
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	525	937	-	-	1468	-
Stage 1	910	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	937	-	-	1468	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	646	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	790	1468
HCM Lane V/C Ratio	-	-	0.026	0.045
HCM Control Delay (s)	-	-	9.7	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	75	369	4	20	95
Future Vol, veh/h	16	75	369	4	20	95
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	84	415	4	22	107

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	568	417	0	0	419	0
Stage 1	417	-	-	-	-	-
Stage 2	151	-	-	-	-	-
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	484	636	-	-	1140	-
Stage 1	665	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	474	636	-	-	1140	-
Mov Cap-2 Maneuver	474	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	859	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	600	1140
HCM Lane V/C Ratio	-	-	0.17	0.02
HCM Control Delay (s)	-	-	12.2	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T		T
Traffic Vol, veh/h	5	6	118	12	24	284
Future Vol, veh/h	5	6	118	12	24	284
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	6	127	13	26	305

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	491	134	0	0	140	0
Stage 1	134	-	-	-	-	-
Stage 2	357	-	-	-	-	-
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	537	915	-	-	1443	-
Stage 1	892	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	525	915	-	-	1443	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	684	1443
HCM Lane V/C Ratio	-	-	0.017	0.018
HCM Control Delay (s)	-	-	10.4	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1



Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	19	41	430	5	11	111
Future Vol, veh/h	19	41	430	5	11	111
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	45	467	5	12	121

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	615	470	0	0	472	0
Stage 1	470	-	-	-	-	-
Stage 2	145	-	-	-	-	-
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	455	594	-	-	1090	-
Stage 1	629	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	450	594	-	-	1090	-
Mov Cap-2 Maneuver	450	-	-	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	539	1090
HCM Lane V/C Ratio	-	-	0.121	0.011
HCM Control Delay (s)	-	-	12.6	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	20	120	15	65	285
Future Vol, veh/h	5	20	120	15	65	285
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	22	129	16	70	306

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	583	137	0	0	145	0
Stage 1	137	-	-	-	-	-
Stage 2	446	-	-	-	-	-
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	485	969	-	-	1458	-
Stage 1	921	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	457	969	-	-	1458	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	608	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	792	1458
HCM Lane V/C Ratio	-	-	0.034	0.048
HCM Control Delay (s)	-	-	9.7	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.2

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	20	85	430	5	25	115
Future Vol, veh/h	20	85	430	5	25	115
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	92	467	5	27	125

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	649	470	0	0	472	0
Stage 1	470	-	-	-	-	-
Stage 2	179	-	-	-	-	-
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	434	594	-	-	1090	-
Stage 1	629	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	422	594	-	-	1090	-
Mov Cap-2 Maneuver	422	-	-	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	829	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	1090
HCM Lane V/C Ratio	-	-	0.207	0.025
HCM Control Delay (s)	-	-	13.2	8.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	11	18	8	112	238	9
Future Vol, veh/h	11	18	8	112	238	9
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	19	9	120	256	10

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	399	261	266	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	138	-	-	-	-	-
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	607	778	1298	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	603	778	1298	-	-	-
Mov Cap-2 Maneuver	603	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1298	-	701	-	-
HCM Lane V/C Ratio	0.007	-	0.044	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	8	10	45	355	110	16
Future Vol, veh/h	8	10	45	355	110	16
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	11	51	399	124	18

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	634	133	142	0	0
Stage 1	133	-	-	-	-
Stage 2	501	-	-	-	-
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	443	916	1441	-	-
Stage 1	893	-	-	-	-
Stage 2	609	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	423	916	1441	-	-
Mov Cap-2 Maneuver	423	-	-	-	-
Stage 1	853	-	-	-	-
Stage 2	609	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1441	-	603	-	-
HCM Lane V/C Ratio	0.035	-	0.034	-	-
HCM Control Delay (s)	7.6	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	11	18	8	114	241	9
Future Vol, veh/h	11	18	8	114	241	9
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	19	9	123	259	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	405	264	269	0	0
Stage 1	264	-	-	-	-
Stage 2	141	-	-	-	-
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	602	775	1295	-	-
Stage 1	780	-	-	-	-
Stage 2	886	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	598	775	1295	-	-
Mov Cap-2 Maneuver	598	-	-	-	-
Stage 1	775	-	-	-	-
Stage 2	886	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1295	-	697	-	-
HCM Lane V/C Ratio	0.007	-	0.045	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	8	10	46	360	112	16
Future Vol, veh/h	8	10	46	360	112	16
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	11	52	404	126	18

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	643	135	144	0	0
Stage 1	135	-	-	-	-
Stage 2	508	-	-	-	-
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	438	914	1438	-	-
Stage 1	891	-	-	-	-
Stage 2	604	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	417	914	1438	-	-
Mov Cap-2 Maneuver	417	-	-	-	-
Stage 1	849	-	-	-	-
Stage 2	604	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1438	-	597	-	-
HCM Lane V/C Ratio	0.036	-	0.034	-	-
HCM Control Delay (s)	7.6	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	11	18	8	114	241	9
Future Vol, veh/h	11	18	8	114	241	9
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	19	9	123	259	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	405	264	269	0	0
Stage 1	264	-	-	-	-
Stage 2	141	-	-	-	-
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	602	775	1295	-	-
Stage 1	780	-	-	-	-
Stage 2	886	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	598	775	1295	-	-
Mov Cap-2 Maneuver	598	-	-	-	-
Stage 1	775	-	-	-	-
Stage 2	886	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1295	-	697	-	-
HCM Lane V/C Ratio	0.007	-	0.045	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	8	10	46	360	112	16
Future Vol, veh/h	8	10	46	360	112	16
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	11	52	404	126	18

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	643	135	144	0	0
Stage 1	135	-	-	-	-
Stage 2	508	-	-	-	-
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	438	914	1438	-	-
Stage 1	891	-	-	-	-
Stage 2	604	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	417	914	1438	-	-
Mov Cap-2 Maneuver	417	-	-	-	-
Stage 1	849	-	-	-	-
Stage 2	604	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1438	-	597	-	-
HCM Lane V/C Ratio	0.036	-	0.034	-	-
HCM Control Delay (s)	7.6	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	13	21	9	132	281	11
Future Vol, veh/h	13	21	9	132	281	11
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	23	10	142	302	12

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	470	308	314	0	-	0
Stage 1	308	-	-	-	-	-
Stage 2	162	-	-	-	-	-
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	552	732	1246	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	547	732	1246	-	-	-
Mov Cap-2 Maneuver	547	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1246	-	648	-	-
HCM Lane V/C Ratio	0.008	-	0.056	-	-
HCM Control Delay (s)	7.9	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	9	12	53	420	130	19
Future Vol, veh/h	9	12	53	420	130	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	13	58	457	141	21

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	725	152	162	0	0
Stage 1	152	-	-	-	-
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	392	894	1417	-	-
Stage 1	876	-	-	-	-
Stage 2	564	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	370	894	1417	-	-
Mov Cap-2 Maneuver	370	-	-	-	-
Stage 1	828	-	-	-	-
Stage 2	564	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	556	-	-
HCM Lane V/C Ratio	0.041	-	0.041	-	-
HCM Control Delay (s)	7.6	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	25	10	135	285	15
Future Vol, veh/h	15	25	10	135	285	15
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	27	11	145	306	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	481	314	322	0	-	0
Stage 1	314	-	-	-	-	-
Stage 2	167	-	-	-	-	-
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	544	726	1238	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	539	726	1238	-	-	-
Mov Cap-2 Maneuver	539	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	863	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1238	-	642	-	-
HCM Lane V/C Ratio	0.009	-	0.067	-	-
HCM Control Delay (s)	7.9	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	10	15	55	420	130	20
Future Vol, veh/h	10	15	55	420	130	20
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	16	60	457	141	22

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	729	152	163	0	0
Stage 1	152	-	-	-	-
Stage 2	577	-	-	-	-
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	434	894	1416	-	-
Stage 1	876	-	-	-	-
Stage 2	605	-	-	-	-
Platoon blocked, %	1	-	-	-	-
Mov Cap-1 Maneuver	409	894	1416	-	-
Mov Cap-2 Maneuver	409	-	-	-	-
Stage 1	826	-	-	-	-
Stage 2	605	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1416	-	606	-	-
HCM Lane V/C Ratio	0.042	-	0.045	-	-
HCM Control Delay (s)	7.7	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	97	41	14	103	57	19	58	22	84	120	21
Future Vol, veh/h	30	97	41	14	103	57	19	58	22	84	120	21
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	107	45	15	113	63	21	64	24	92	132	23
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	9.8	9.7	9.1	10.7
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	18%	8%	37%
Vol Thru, %	59%	58%	59%	53%
Vol Right, %	22%	24%	33%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	168	174	225
LT Vol	19	30	14	84
Through Vol	58	97	103	120
RT Vol	22	41	57	21
Lane Flow Rate	109	185	191	247
Geometry Grp	1	1	1	1
Degree of Util (X)	0.154	0.254	0.259	0.344
Departure Headway (Hd)	5.085	4.959	4.884	5.002
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	716	727	712
Service Time	3.183	3.047	2.971	3.086
HCM Lane V/C Ratio	0.157	0.258	0.263	0.347
HCM Control Delay	9.1	9.8	9.7	10.7
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.5	1	1	1.5



Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	79	54	16	169	175	19	241	36	27	73	24
Future Vol, veh/h	32	79	54	16	169	175	19	241	36	27	73	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	91	62	18	194	201	22	277	41	31	84	28
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	12	17.9	16.4	11.6
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	19%	4%	22%
Vol Thru, %	81%	48%	47%	59%
Vol Right, %	12%	33%	49%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	296	165	360	124
LT Vol	19	32	16	27
Through Vol	241	79	169	73
RT Vol	36	54	175	24
Lane Flow Rate	340	190	414	143
Geometry Grp	1	1	1	1
Degree of Util (X)	0.563	0.32	0.638	0.252
Departure Headway (Hd)	5.952	6.067	5.548	6.357
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	609	592	654	563
Service Time	3.975	4.118	3.57	4.412
HCM Lane V/C Ratio	0.558	0.321	0.633	0.254
HCM Control Delay	16.4	12	17.9	11.6
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	3.5	1.4	4.6	1

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	98	42	14	104	58	19	59	22	85	122	21
Future Vol, veh/h	30	98	42	14	104	58	19	59	22	85	122	21
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	108	46	15	114	64	21	65	24	93	134	23
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	9.8	9.8	9.2	10.8
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	18%	8%	37%
Vol Thru, %	59%	58%	59%	54%
Vol Right, %	22%	25%	33%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	170	176	228
LT Vol	19	30	14	85
Through Vol	59	98	104	122
RT Vol	22	42	58	21
Lane Flow Rate	110	187	193	251
Geometry Grp	1	1	1	1
Degree of Util (X)	0.159	0.258	0.263	0.349
Departure Headway (Hd)	5.206	4.974	4.9	5.017
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	693	714	723	709
Service Time	3.206	3.069	2.994	3.107
HCM Lane V/C Ratio	0.159	0.262	0.267	0.354
HCM Control Delay	9.2	9.8	9.8	10.8
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	1	1.1	1.6

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	80	55	16	171	177	19	244	37	27	74	24
Future Vol, veh/h	32	80	55	16	171	177	19	244	37	27	74	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	92	63	18	197	203	22	280	43	31	85	28
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	12.1	18.4	16.8	11.7
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	19%	4%	22%
Vol Thru, %	81%	48%	47%	59%
Vol Right, %	12%	33%	49%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	167	364	125
LT Vol	19	32	16	27
Through Vol	244	80	171	74
RT Vol	37	55	177	24
Lane Flow Rate	345	192	418	144
Geometry Grp	1	1	1	1
Degree of Util (X)	0.574	0.326	0.649	0.256
Departure Headway (Hd)	5.988	6.113	5.585	6.41
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	587	649	559
Service Time	4.011	4.164	3.607	4.465
HCM Lane V/C Ratio	0.572	0.327	0.644	0.258
HCM Control Delay	16.8	12.1	18.4	11.7
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	3.6	1.4	4.7	1

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	152	42	17	117	58	19	59	36	85	122	21
Future Vol, veh/h	30	152	42	17	117	58	19	59	36	85	122	21
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	167	46	19	129	64	21	65	40	93	134	23
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	11.1	10.5	9.7	11.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	13%	9%	37%
Vol Thru, %	52%	68%	61%	54%
Vol Right, %	32%	19%	30%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	224	192	228
LT Vol	19	30	17	85
Through Vol	59	152	117	122
RT Vol	36	42	58	21
Lane Flow Rate	125	246	211	251
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.356	0.304	0.374
Departure Headway (Hd)	5.412	5.213	5.192	5.369
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	661	689	692	669
Service Time	3.453	3.249	3.229	3.403
HCM Lane V/C Ratio	0.189	0.357	0.305	0.375
HCM Control Delay	9.7	11.1	10.5	11.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.7	1.6	1.3	1.7

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	94	55	29	224	177	19	244	41	27	74	24
Future Vol, veh/h	32	94	55	29	224	177	19	244	41	27	74	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	108	63	33	257	203	22	280	47	31	85	28
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	13.3	27.6	19.1	12.5
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	18%	7%	22%
Vol Thru, %	80%	52%	52%	59%
Vol Right, %	13%	30%	41%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	304	181	430	125
LT Vol	19	32	29	27
Through Vol	244	94	224	74
RT Vol	41	55	177	24
Lane Flow Rate	349	208	494	144
Geometry Grp	1	1	1	1
Degree of Util (X)	0.615	0.372	0.794	0.274
Departure Headway (Hd)	6.334	6.439	5.785	6.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	570	555	623	520
Service Time	4.391	4.508	3.837	4.941
HCM Lane V/C Ratio	0.612	0.375	0.793	0.277
HCM Control Delay	19.1	13.3	27.6	12.5
HCM Lane LOS	C	B	D	B
HCM 95th-tile Q	4.2	1.7	7.8	1.1

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	115	48	17	122	67	22	69	26	99	142	25
Future Vol, veh/h	35	115	48	17	122	67	22	69	26	99	142	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	125	52	18	133	73	24	75	28	108	154	27
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	10.9	10.8	9.9	12.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	18%	8%	37%
Vol Thru, %	59%	58%	59%	53%
Vol Right, %	22%	24%	33%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	198	206	266
LT Vol	22	35	17	99
Through Vol	69	115	122	142
RT Vol	26	48	67	25
Lane Flow Rate	127	215	224	289
Geometry Grp	1	1	1	1
Degree of Util (X)	0.195	0.319	0.327	0.429
Departure Headway (Hd)	5.508	5.334	5.255	5.346
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	674	683	674
Service Time	3.552	3.376	3.297	3.384
HCM Lane V/C Ratio	0.195	0.319	0.328	0.429
HCM Control Delay	9.9	10.9	10.8	12.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.7	1.4	1.4	2.2

Intersection	
Intersection Delay, s/veh	20.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	38	93	64	19	200	207	22	285	43	32	86	28
Future Vol, veh/h	38	93	64	19	200	207	22	285	43	32	86	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	101	70	21	217	225	24	310	47	35	93	30
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	13.8	25.5	21.4	13
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	19%	4%	22%
Vol Thru, %	81%	48%	47%	59%
Vol Right, %	12%	33%	49%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	350	195	426	146
LT Vol	22	38	19	32
Through Vol	285	93	200	86
RT Vol	43	64	207	28
Lane Flow Rate	380	212	463	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.67	0.387	0.761	0.304
Departure Headway (Hd)	6.343	6.568	5.915	6.903
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	567	545	611	517
Service Time	4.41	4.647	3.977	4.991
HCM Lane V/C Ratio	0.67	0.389	0.758	0.308
HCM Control Delay	21.4	13.8	25.5	13
HCM Lane LOS	C	B	D	B
HCM 95th-tile Q	5	1.8	6.9	1.3

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	35	170	50	20	135	70	25	70	40	100	145	25
Future Vol, veh/h	35	170	50	20	135	70	25	70	40	100	145	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	185	54	22	147	76	27	76	43	109	158	27
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	13.1	10.9	10.7	13.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	19%	14%	13%	0%	37%
Vol Thru, %	52%	67%	87%	0%	54%
Vol Right, %	30%	20%	0%	100%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	255	155	70	270
LT Vol	25	35	20	0	100
Through Vol	70	170	135	0	145
RT Vol	40	50	0	70	25
Lane Flow Rate	147	277	168	76	293
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.237	0.436	0.295	0.117	0.463
Departure Headway (Hd)	5.817	5.657	6.307	5.53	5.683
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	613	635	568	644	631
Service Time	3.889	3.718	4.071	3.293	3.744
HCM Lane V/C Ratio	0.24	0.436	0.296	0.118	0.464
HCM Control Delay	10.7	13.1	11.7	9	13.6
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	0.9	2.2	1.2	0.4	2.4



Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	40	110	65	35	255	210	25	285	50	35	90	30
Future Vol, veh/h	40	110	65	35	255	210	25	285	50	35	90	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	120	71	38	277	228	27	310	54	38	98	33
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	15.4	17.3	23.8	13.7
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	7%	19%	12%	0%	23%
Vol Thru, %	79%	51%	88%	0%	58%
Vol Right, %	14%	30%	0%	100%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	360	215	290	210	155
LT Vol	25	40	35	0	35
Through Vol	285	110	255	0	90
RT Vol	50	65	0	210	30
Lane Flow Rate	391	234	315	228	168
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.707	0.446	0.615	0.396	0.333
Departure Headway (Hd)	6.504	6.869	7.021	6.243	7.121
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	556	521	514	575	502
Service Time	4.56	4.94	4.782	4.004	5.197
HCM Lane V/C Ratio	0.703	0.449	0.613	0.397	0.335
HCM Control Delay	23.8	15.4	20.4	13.1	13.7
HCM Lane LOS	C	C	C	B	B
HCM 95th-tile Q	5.7	2.3	4.1	1.9	1.4

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	151	21	10	170	4	0	6	13	8	1	7
Future Vol, veh/h	9	151	21	10	170	4	0	6	13	8	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	176	24	12	198	5	0	7	15	9	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	203	0	0	200	0	0	437	435	188	444	445	201
Stage 1	-	-	-	-	-	-	208	208	-	225	225	-
Stage 2	-	-	-	-	-	-	229	227	-	219	220	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1369	-	-	1372	-	-	530	514	854	524	508	840
Stage 1	-	-	-	-	-	-	794	730	-	778	718	-
Stage 2	-	-	-	-	-	-	774	716	-	783	721	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1369	-	-	1372	-	-	517	505	854	503	499	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	517	505	-	503	499	-
Stage 1	-	-	-	-	-	-	788	724	-	772	711	-
Stage 2	-	-	-	-	-	-	758	709	-	756	715	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.4			10.3			11.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	701	1369	-	-	1372	-	-	610
HCM Lane V/C Ratio	0.032	0.008	-	-	0.008	-	-	0.03
HCM Control Delay (s)	10.3	7.7	0	-	7.6	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

**Intersection**

Int Delay, s/veh 2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	120	28	5	310	5	44	3	11	10	4	5
Future Vol, veh/h	0	120	28	5	310	5	44	3	11	10	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	160	37	7	413	7	59	4	15	13	5	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	420	0	0	197
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1139	-	-	1376
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1139	-	-	1376
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	14.9	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	1139	-	-	1376	-	-	435
HCM Lane V/C Ratio	0.176	-	-	-	0.005	-	-	0.058
HCM Control Delay (s)	14.9	0	-	-	7.6	0	-	13.8
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	153	21	10	172	4	0	6	13	8	1	7
Future Vol, veh/h	9	153	21	10	172	4	0	6	13	8	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	178	24	12	200	5	0	7	15	9	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	205	0	0	202	0	0	441	439	190	448	449	203
Stage 1	-	-	-	-	-	-	210	210	-	227	227	-
Stage 2	-	-	-	-	-	-	231	229	-	221	222	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1366	-	-	1370	-	-	527	512	852	521	505	838
Stage 1	-	-	-	-	-	-	792	728	-	776	716	-
Stage 2	-	-	-	-	-	-	772	715	-	781	720	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1366	-	-	1370	-	-	514	503	852	500	496	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	514	503	-	500	496	-
Stage 1	-	-	-	-	-	-	786	722	-	770	709	-
Stage 2	-	-	-	-	-	-	756	708	-	754	714	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.4			10.3			11.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	1366	-	-	1370	-	-	607
HCM Lane V/C Ratio	0.032	0.008	-	-	0.008	-	-	0.031
HCM Control Delay (s)	10.3	7.7	0	-	7.7	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	122	28	5	314	5	45	3	11	10	4	5
Future Vol, veh/h	0	122	28	5	314	5	45	3	11	10	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	163	37	7	419	7	60	4	15	13	5	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	426	0	0	200	0	0	625	622	182	628	637	423
Stage 1	-	-	-	-	-	-	182	182	-	437	437	-
Stage 2	-	-	-	-	-	-	443	440	-	191	200	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1133	-	-	1372	-	-	397	403	861	395	395	631
Stage 1	-	-	-	-	-	-	820	749	-	598	579	-
Stage 2	-	-	-	-	-	-	594	578	-	811	736	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1133	-	-	1372	-	-	387	400	861	383	392	631
Mov Cap-2 Maneuver	-	-	-	-	-	-	387	400	-	383	392	-
Stage 1	-	-	-	-	-	-	820	749	-	598	575	-
Stage 2	-	-	-	-	-	-	578	574	-	793	736	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			15.2			13.9		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	432	1133	-	-	1372	-	-	429
HCM Lane V/C Ratio	0.182	-	-	-	0.005	-	-	0.059
HCM Control Delay (s)	15.2	0	-	-	7.6	0	-	13.9
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.2

**Intersection**

Int Delay, s/veh 2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	50	180	21	10	178	58	0	20	13	21	4	17
Future Vol, veh/h	50	180	21	10	178	58	0	20	13	21	4	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	209	24	12	207	67	0	23	15	24	5	20

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	274	0	0	233
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1289	-	-	1335
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1289	-	-	1335
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0.3	13.3	13.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	473	1289	-	-	1335	-	-	463
HCM Lane V/C Ratio	0.081	0.045	-	-	0.009	-	-	0.105
HCM Control Delay (s)	13.3	7.9	0	-	7.7	0	-	13.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	129	28	5	341	19	45	7	11	63	17	45
Future Vol, veh/h	11	129	28	5	341	19	45	7	11	63	17	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	172	37	7	455	25	60	9	15	84	23	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	480	0	0	209	0	0	744	715	191	715	721	468
Stage 1	-	-	-	-	-	-	221	221	-	482	482	-
Stage 2	-	-	-	-	-	-	523	494	-	233	239	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1082	-	-	1362	-	-	331	356	851	346	353	595
Stage 1	-	-	-	-	-	-	781	720	-	565	553	-
Stage 2	-	-	-	-	-	-	537	546	-	770	708	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1082	-	-	1362	-	-	278	348	851	327	345	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	348	-	327	345	-
Stage 1	-	-	-	-	-	-	769	708	-	556	549	-
Stage 2	-	-	-	-	-	-	460	542	-	735	697	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			20			20.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	323	1082	-	-	1362	-	-	394
HCM Lane V/C Ratio	0.26	0.014	-	-	0.005	-	-	0.423
HCM Control Delay (s)	20	8.4	0	-	7.7	0	-	20.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	2.1

**Intersection**

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	179	25	12	201	5	0	7	15	9	1	8
Future Vol, veh/h	11	179	25	12	201	5	0	7	15	9	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	195	27	13	218	5	0	8	16	10	1	9

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	223	0	0	222
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1346	-	-	1347
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1346	-	-	1347
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.4	10.6	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	670	1346	-	-	1347	-	-	575
HCM Lane V/C Ratio	0.036	0.009	-	-	0.01	-	-	0.034
HCM Control Delay (s)	10.6	7.7	0	-	7.7	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1



Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	142	33	6	366	6	52	4	13	12	5	6
Future Vol, veh/h	0	142	33	6	366	6	52	4	13	12	5	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	167	39	7	431	7	61	5	15	14	6	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	438	0	0	206	0	0	642	639	187	646	655	435
Stage 1	-	-	-	-	-	-	187	187	-	449	449	-
Stage 2	-	-	-	-	-	-	455	452	-	197	206	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1122	-	-	1365	-	-	387	394	855	385	386	621
Stage 1	-	-	-	-	-	-	815	745	-	589	572	-
Stage 2	-	-	-	-	-	-	585	570	-	805	731	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1122	-	-	1365	-	-	376	391	855	373	383	621
Mov Cap-2 Maneuver	-	-	-	-	-	-	376	391	-	373	383	-
Stage 1	-	-	-	-	-	-	815	745	-	589	568	-
Stage 2	-	-	-	-	-	-	568	566	-	786	731	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			15.6			14.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1122	-	-	1365	-	-	419
HCM Lane V/C Ratio	0.193	-	-	-	0.005	-	-	0.065
HCM Control Delay (s)	15.6	0	-	-	7.7	0	-	14.2
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.2

**Intersection**

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	55	210	25	15	210	60	0	25	15	25	5	20
Future Vol, veh/h	55	210	25	15	210	60	0	25	15	25	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	228	27	16	228	65	0	27	16	27	5	22

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	293	0	0	255	0	0	668	687	242	676	668	261
Stage 1	-	-	-	-	-	-	362	362	-	293	293	-
Stage 2	-	-	-	-	-	-	306	325	-	383	375	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1287	-	-	1335	-	-	400	381	888	394	393	863
Stage 1	-	-	-	-	-	-	708	647	-	781	700	-
Stage 2	-	-	-	-	-	-	767	675	-	687	637	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1287	-	-	1335	-	-	365	355	888	345	366	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	365	355	-	345	366	-
Stage 1	-	-	-	-	-	-	669	611	-	738	691	-
Stage 2	-	-	-	-	-	-	731	666	-	609	602	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.4	13.7	13.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	458	1287	-	-	1335	-	-	457
HCM Lane V/C Ratio	0.095	0.046	-	-	0.012	-	-	0.119
HCM Control Delay (s)	13.7	7.9	0	-	7.7	0	-	13.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	150	35	10	395	20	55	10	15	65	20	50
Future Vol, veh/h	15	150	35	10	395	20	55	10	15	65	20	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	195	45	13	513	26	71	13	19	84	26	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	539	0	0	240	0	0	854	821	218	824	830	526
Stage 1	-	-	-	-	-	-	256	256	-	552	552	-
Stage 2	-	-	-	-	-	-	598	565	-	272	278	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1021	-	-	1344	-	-	312	327	892	335	321	660
Stage 1	-	-	-	-	-	-	801	720	-	599	543	-
Stage 2	-	-	-	-	-	-	553	533	-	784	703	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1021	-	-	1344	-	-	256	315	892	309	309	660
Mov Cap-2 Maneuver	-	-	-	-	-	-	256	315	-	309	309	-
Stage 1	-	-	-	-	-	-	784	704	-	586	535	-
Stage 2	-	-	-	-	-	-	467	525	-	737	688	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.2			22.9			21.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	1021	-	-	1344	-	-	385
HCM Lane V/C Ratio	0.342	0.019	-	-	0.01	-	-	0.455
HCM Control Delay (s)	22.9	8.6	0	-	7.7	0	-	21.9
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-	-	2.3

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	105	55	102	136	1	64	1	141	2	1	0
Future Vol, veh/h	0	105	55	102	136	1	64	1	141	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	58	107	143	1	67	1	148	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	169	0	0	498	498	140	573	527	144
Stage 1	-	-	-	-	-	-	140	140	-	358	358	-
Stage 2	-	-	-	-	-	-	358	358	-	215	169	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1438	-	-	1409	-	-	483	474	908	430	456	903
Stage 1	-	-	-	-	-	-	863	781	-	660	628	-
Stage 2	-	-	-	-	-	-	660	628	-	787	759	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1438	-	-	1409	-	-	452	435	908	336	418	903
Mov Cap-2 Maneuver	-	-	-	-	-	-	452	435	-	336	418	-
Stage 1	-	-	-	-	-	-	863	781	-	660	576	-
Stage 2	-	-	-	-	-	-	604	576	-	657	759	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.3			12.6			15.1		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	689	1438	-	-	1409	-	-	360
HCM Lane V/C Ratio	0.315	-	-	-	0.076	-	-	0.009
HCM Control Delay (s)	12.6	0	-	-	7.8	0	-	15.1
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	0.2	-	-	0

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	94	47	171	192	0	113	0	101	0	2	0
Future Vol, veh/h	1	94	47	171	192	0	113	0	101	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	118	59	214	240	0	141	0	126	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	177	0	0	820	818	148	881	847	240
Stage 1	-	-	-	-	-	-	150	150	-	668	668	-
Stage 2	-	-	-	-	-	-	670	668	-	213	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1327	-	-	1399	-	-	294	311	899	267	299	799
Stage 1	-	-	-	-	-	-	853	773	-	448	456	-
Stage 2	-	-	-	-	-	-	446	456	-	789	751	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1327	-	-	1399	-	-	252	256	899	198	246	799
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	256	-	198	246	-
Stage 1	-	-	-	-	-	-	852	772	-	448	376	-
Stage 2	-	-	-	-	-	-	365	376	-	678	750	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			3.8			33.7			19.8		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	1327	-	-	1399	-	-	246
HCM Lane V/C Ratio	0.7	0.001	-	-	0.153	-	-	0.01
HCM Control Delay (s)	33.7	7.7	0	-	8	0	-	19.8
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.2	0	-	-	0.5	-	-	0

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	106	56	103	138	1	65	1	143	2	1	0
Future Vol, veh/h	0	106	56	103	138	1	65	1	143	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	112	59	108	145	1	68	1	151	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	146	0	0	171	0	0	504	504	142	580	533	146
Stage 1	-	-	-	-	-	-	142	142	-	362	362	-
Stage 2	-	-	-	-	-	-	362	362	-	218	171	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1436	-	-	1406	-	-	478	470	906	426	453	901
Stage 1	-	-	-	-	-	-	861	779	-	657	625	-
Stage 2	-	-	-	-	-	-	657	625	-	784	757	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1436	-	-	1406	-	-	446	431	906	332	415	901
Mov Cap-2 Maneuver	-	-	-	-	-	-	446	431	-	332	415	-
Stage 1	-	-	-	-	-	-	861	779	-	657	573	-
Stage 2	-	-	-	-	-	-	601	573	-	653	757	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.3			12.8			15.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	683	1436	-	-	1406	-	-	356
HCM Lane V/C Ratio	0.322	-	-	-	0.077	-	-	0.009
HCM Control Delay (s)	12.8	0	-	-	7.8	0	-	15.2
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	1.4	0	-	-	0.2	-	-	0

Intersection												
Int Delay, s/veh	12.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	95	48	173	195	0	115	0	102	0	2	0
Future Vol, veh/h	1	95	48	173	195	0	115	0	102	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	119	60	216	244	0	144	0	128	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	179	0	0	829	827	149	891	857	244
Stage 1	-	-	-	-	-	-	151	151	-	676	676	-
Stage 2	-	-	-	-	-	-	678	676	-	215	181	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1322	-	-	1397	-	-	290	307	898	263	295	795
Stage 1	-	-	-	-	-	-	851	772	-	443	453	-
Stage 2	-	-	-	-	-	-	442	453	-	787	750	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1322	-	-	1397	-	-	248	252	898	194	242	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	248	252	-	194	242	-
Stage 1	-	-	-	-	-	-	850	771	-	443	372	-
Stage 2	-	-	-	-	-	-	360	372	-	675	749	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			3.8			35.8			20		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	376	1322	-	-	1397	-	-	242
HCM Lane V/C Ratio	0.721	0.001	-	-	0.155	-	-	0.01
HCM Control Delay (s)	35.8	7.7	0	-	8	0	-	20
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.5	0	-	-	0.5	-	-	0

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Future Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	146	65	112	180	1	97	1	165	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	181	0	0	211	0	0	584	584	179	667	616	181
Stage 1	-	-	-	-	-	-	179	179	-	405	405	-
Stage 2	-	-	-	-	-	-	405	405	-	262	211	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1394	-	-	1360	-	-	423	423	864	372	406	862
Stage 1	-	-	-	-	-	-	823	751	-	622	598	-
Stage 2	-	-	-	-	-	-	622	598	-	743	728	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1394	-	-	1360	-	-	393	384	864	279	369	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	393	384	-	279	369	-
Stage 1	-	-	-	-	-	-	823	751	-	622	543	-
Stage 2	-	-	-	-	-	-	564	543	-	600	728	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3	15.7	17
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	597	1394	-	-	1360	-	-	304
HCM Lane V/C Ratio	0.441	-	-	-	0.082	-	-	0.01
HCM Control Delay (s)	15.7	0	-	-	7.9	0	-	17
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	2.2	0	-	-	0.3	-	-	0



Intersection												
Int Delay, s/veh	22.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Future Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	161	94	233	286	0	153	0	133	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	255	0	0	964	962	208	1029	1009	286
Stage 1	-	-	-	-	-	-	210	210	-	752	752	-
Stage 2	-	-	-	-	-	-	754	752	-	277	257	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1310	-	-	235	256	832	212	240	753
Stage 1	-	-	-	-	-	-	792	728	-	402	418	-
Stage 2	-	-	-	-	-	-	401	418	-	729	695	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1276	-	-	1310	-	-	195	202	832	149	189	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	195	202	-	149	189	-
Stage 1	-	-	-	-	-	-	791	727	-	402	330	-
Stage 2	-	-	-	-	-	-	314	330	-	612	694	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.7			75.7			24.3		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	303	1276	-	-	1310	-	-	189
HCM Lane V/C Ratio	0.941	0.001	-	-	0.177	-	-	0.013
HCM Control Delay (s)	75.7	7.8	0	-	8.3	0	-	24.3
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	9.3	0	-	-	0.6	-	-	0

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Future Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	146	65	112	180	1	97	1	165	2	1	0
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	9.7	11.3	10.5	8.8
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	0%	38%	67%
Vol Thru, %	0%	69%	62%	33%
Vol Right, %	63%	31%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	201	278	3
LT Vol	92	0	106	2
Through Vol	1	139	171	1
RT Vol	157	62	1	0
Lane Flow Rate	263	212	293	3
Geometry Grp	1	1	1	1
Degree of Util (X)	0.352	0.28	0.4	0.005
Departure Headway (Hd)	4.82	4.767	4.915	5.761
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	747	726	625
Service Time	2.889	2.842	2.985	3.761
HCM Lane V/C Ratio	0.356	0.284	0.404	0.005
HCM Control Delay	10.5	9.7	11.3	8.8
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.6	1.1	1.9	0

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Future Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	161	94	233	286	0	153	0	133	0	3	0
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	11.7	23.2	13.6	9.7
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	0%	45%	0%
Vol Thru, %	0%	63%	55%	100%
Vol Right, %	46%	37%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	228	205	415	2
LT Vol	122	1	186	0
Through Vol	0	129	229	2
RT Vol	106	75	0	0
Lane Flow Rate	285	256	519	2
Geometry Grp	1	1	1	1
Degree of Util (X)	0.456	0.381	0.761	0.005
Departure Headway (Hd)	5.756	5.351	5.281	6.625
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	624	671	685	537
Service Time	3.806	3.403	3.322	4.707
HCM Lane V/C Ratio	0.457	0.382	0.758	0.004
HCM Control Delay	13.6	11.7	23.2	9.7
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	2.4	1.8	7.1	0

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔			↔	
Traffic Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Future Vol, veh/h	0	139	62	106	171	1	92	1	157	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	146	65	112	180	1	97	1	165	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	181	0	0	211	0	0	584	584	179	667	616	181
Stage 1	-	-	-	-	-	-	179	179	-	405	405	-
Stage 2	-	-	-	-	-	-	405	405	-	262	211	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1394	-	-	1360	-	-	423	423	864	372	406	862
Stage 1	-	-	-	-	-	-	823	751	-	622	598	-
Stage 2	-	-	-	-	-	-	622	598	-	743	728	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1394	-	-	1360	-	-	396	388	864	281	373	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	474	456	-	374	434	-
Stage 1	-	-	-	-	-	-	823	751	-	622	549	-
Stage 2	-	-	-	-	-	-	570	549	-	600	728	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3			11.8			14.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	474	859	1394	-	-	1360	-	-	392
HCM Lane V/C Ratio	0.204	0.194	-	-	-	0.082	-	-	0.008
HCM Control Delay (s)	14.5	10.2	0	-	-	7.9	-	-	14.3
HCM Lane LOS	B	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.7	0	-	-	0.3	-	-	0

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Traffic Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Future Vol, veh/h	1	129	75	186	229	0	122	0	106	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	161	94	233	286	0	153	0	133	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	255	0	0	964	962	208	1029	1009	286
Stage 1	-	-	-	-	-	-	210	210	-	752	752	-
Stage 2	-	-	-	-	-	-	754	752	-	277	257	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1310	-	-	235	256	832	212	240	753
Stage 1	-	-	-	-	-	-	792	728	-	402	418	-
Stage 2	-	-	-	-	-	-	401	418	-	729	695	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1276	-	-	1310	-	-	201	210	832	154	197	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	288	-	248	266	-
Stage 1	-	-	-	-	-	-	791	727	-	402	344	-
Stage 2	-	-	-	-	-	-	327	344	-	612	694	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.7			22.1			18.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	278	832	1276	-	-	1310	-	-	266
HCM Lane V/C Ratio	0.549	0.159	0.001	-	-	0.177	-	-	0.009
HCM Control Delay (s)	32.6	10.1	7.8	-	-	8.3	-	-	18.7
HCM Lane LOS	D	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.1	0.6	0	-	-	0.6	-	-	0

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	124	65	121	161	1	76	1	167	2	1	0
Future Vol, veh/h	0	124	65	121	161	1	76	1	167	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	131	68	127	169	1	80	1	176	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	170	0	0	199	0	0	589	589	165	678	623	170
Stage 1	-	-	-	-	-	-	165	165	-	424	424	-
Stage 2	-	-	-	-	-	-	424	424	-	254	199	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1373	-	-	420	421	879	366	402	874
Stage 1	-	-	-	-	-	-	837	762	-	608	587	-
Stage 2	-	-	-	-	-	-	608	587	-	750	736	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1407	-	-	1373	-	-	386	378	879	269	361	874
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	378	-	269	361	-
Stage 1	-	-	-	-	-	-	837	762	-	608	527	-
Stage 2	-	-	-	-	-	-	545	527	-	599	736	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.4			14.7			17.4		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	
Capacity (veh/h)	626	1407	-	-	1373	-	-	294	
HCM Lane V/C Ratio	0.41	-	-	-	0.093	-	-	0.011	
HCM Control Delay (s)	14.7	0	-	-	7.9	0	-	17.4	
HCM Lane LOS		B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)		2	0	-	-	0.3	-	-	0

Intersection												
Int Delay, s/veh	13.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	111	56	202	227	0	134	0	119	0	2	0
Future Vol, veh/h	1	111	56	202	227	0	134	0	119	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	121	61	220	247	0	146	0	129	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	182	0	0	842	841	152	905	871	247
Stage 1	-	-	-	-	-	-	154	154	-	687	687	-
Stage 2	-	-	-	-	-	-	688	687	-	218	184	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1319	-	-	1393	-	-	284	301	894	257	289	792
Stage 1	-	-	-	-	-	-	848	770	-	437	447	-
Stage 2	-	-	-	-	-	-	436	447	-	784	747	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1319	-	-	1393	-	-	242	246	894	189	236	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	246	-	189	236	-
Stage 1	-	-	-	-	-	-	847	769	-	437	365	-
Stage 2	-	-	-	-	-	-	354	365	-	670	746	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.8			38.7			20.4		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	368	1319	-	-	1393	-	-	236
HCM Lane V/C Ratio	0.747	0.001	-	-	0.158	-	-	0.009
HCM Control Delay (s)	38.7	7.7	0	-	8.1	0	-	20.4
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.9	0	-	-	0.6	-	-	0

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	160	75	125	195	5	105	5	185	5	5	0
Future Vol, veh/h	0	160	75	125	195	5	105	5	185	5	5	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	168	79	132	205	5	111	5	195	5	5	0
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	11	13.4	12.3	9.3
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	0%	38%	50%
Vol Thru, %	2%	68%	60%	50%
Vol Right, %	63%	32%	2%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	295	235	325	10
LT Vol	105	0	125	5
Through Vol	5	160	195	5
RT Vol	185	75	5	0
Lane Flow Rate	311	247	342	11
Geometry Grp	1	1	1	1
Degree of Util (X)	0.445	0.353	0.498	0.018
Departure Headway (Hd)	5.163	5.13	5.243	6.143
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	700	688	581
Service Time	3.196	3.161	3.273	4.194
HCM Lane V/C Ratio	0.445	0.353	0.497	0.019
HCM Control Delay	12.3	11	13.4	9.3
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	2.3	1.6	2.8	0.1



Intersection	
Intersection Delay, s/veh	18.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	145	85	215	265	0	145	0	125	0	5	0
Future Vol, veh/h	5	145	85	215	265	0	145	0	125	0	5	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	158	92	234	288	0	158	0	136	0	5	0
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	11.8	24.1	13.9	9.8
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	2%	45%	0%
Vol Thru, %	0%	62%	55%	100%
Vol Right, %	46%	36%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	270	235	480	5
LT Vol	145	5	215	0
Through Vol	0	145	265	5
RT Vol	125	85	0	0
Lane Flow Rate	293	255	522	5
Geometry Grp	1	1	1	1
Degree of Util (X)	0.472	0.384	0.772	0.01
Departure Headway (Hd)	5.785	5.415	5.327	6.672
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	622	662	678	533
Service Time	3.838	3.468	3.369	4.761
HCM Lane V/C Ratio	0.471	0.385	0.77	0.009
HCM Control Delay	13.9	11.8	24.1	9.8
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	2.5	1.8	7.3	0

**Intersection**

Int Delay, s/veh 5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Traffic Vol, veh/h	0	160	75	125	195	5	105	5	185	5	5	0
Future Vol, veh/h	0	160	75	125	195	5	105	5	185	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	168	79	132	205	5	111	5	195	5	5	0

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	210	0	0	247
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1361	-	-	1319
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1361	-	-	1319
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.1	12.9	15.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	420	810	1361	-	-	1319	-	-	345
HCM Lane V/C Ratio	0.263	0.247	-	-	-	0.1	-	-	0.031
HCM Control Delay (s)	16.6	10.9	0	-	-	8	-	-	15.8
HCM Lane LOS	C	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1	1	0	-	-	0.3	-	-	0.1

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Traffic Vol, veh/h	5	145	85	215	265	0	145	0	125	0	5	0
Future Vol, veh/h	5	145	85	215	265	0	145	0	125	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	158	92	234	288	0	158	0	136	0	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	288	0	0	250	0	0	973	970	204	1038	1016	288
Stage 1	-	-	-	-	-	-	214	214	-	756	756	-
Stage 2	-	-	-	-	-	-	759	756	-	282	260	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1274	-	-	1316	-	-	231	253	837	209	238	751
Stage 1	-	-	-	-	-	-	788	725	-	400	416	-
Stage 2	-	-	-	-	-	-	399	416	-	725	693	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1274	-	-	1316	-	-	196	207	837	151	195	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	284	-	244	264	-
Stage 1	-	-	-	-	-	-	785	722	-	398	342	-
Stage 2	-	-	-	-	-	-	323	342	-	605	690	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			3.7			23.6			18.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	271	837	1274	-	-	1316	-	-	264
HCM Lane V/C Ratio	0.582	0.162	0.004	-	-	0.178	-	-	0.021
HCM Control Delay (s)	35.2	10.1	7.8	-	-	8.3	-	-	18.9
HCM Lane LOS	E	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.4	0.6	0	-	-	0.6	-	-	0.1

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	112	97	28	14	156	6	10	38	8	2	9	60
Future Vol, veh/h	112	97	28	14	156	6	10	38	8	2	9	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	107	31	15	171	7	11	42	9	2	10	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	178	0	0	138	0	0	612	577	123	599	589	175
Stage 1	-	-	-	-	-	-	369	369	-	205	205	-
Stage 2	-	-	-	-	-	-	243	208	-	394	384	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1398	-	-	1446	-	-	405	427	928	413	421	868
Stage 1	-	-	-	-	-	-	651	621	-	797	732	-
Stage 2	-	-	-	-	-	-	761	730	-	631	611	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1398	-	-	1446	-	-	337	381	928	344	376	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	381	-	344	376	-
Stage 1	-	-	-	-	-	-	589	561	-	720	723	-
Stage 2	-	-	-	-	-	-	685	721	-	523	552	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0.6			15.4			10.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	406	1398	-	-	1446	-	-	718
HCM Lane V/C Ratio	0.152	0.088	-	-	0.011	-	-	0.109
HCM Control Delay (s)	15.4	7.8	0	-	7.5	0	-	10.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	102	73	21	17	228	22	26	39	14	6	10	126
Future Vol, veh/h	102	73	21	17	228	22	26	39	14	6	10	126
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	75	22	18	235	23	27	40	14	6	10	130

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	258	0	0	97	0	0	649	590	86	606	590	247
Stage 1	-	-	-	-	-	-	296	296	-	283	283	-
Stage 2	-	-	-	-	-	-	353	294	-	323	307	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1307	-	-	1496	-	-	383	420	973	409	420	792
Stage 1	-	-	-	-	-	-	712	668	-	724	677	-
Stage 2	-	-	-	-	-	-	664	670	-	689	661	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1307	-	-	1496	-	-	290	379	973	343	379	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	379	-	343	379	-
Stage 1	-	-	-	-	-	-	651	611	-	662	668	-
Stage 2	-	-	-	-	-	-	539	661	-	580	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	0.5	17	11.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	1307	-	-	1496	-	-	700
HCM Lane V/C Ratio	0.213	0.08	-	-	0.012	-	-	0.209
HCM Control Delay (s)	17	8	0	-	7.4	0	-	11.5
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0	-	-	0.8

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	114	98	28	14	158	6	10	39	8	2	9	61
Future Vol, veh/h	114	98	28	14	158	6	10	39	8	2	9	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	108	31	15	174	7	11	43	9	2	10	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	181	0	0	139	0	0	620	585	124	608	597	178
Stage 1	-	-	-	-	-	-	374	374	-	208	208	-
Stage 2	-	-	-	-	-	-	246	211	-	400	389	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1394	-	-	1445	-	-	400	423	927	408	416	865
Stage 1	-	-	-	-	-	-	647	618	-	794	730	-
Stage 2	-	-	-	-	-	-	758	728	-	626	608	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1394	-	-	1445	-	-	332	377	927	339	371	865
Mov Cap-2 Maneuver	-	-	-	-	-	-	332	377	-	339	371	-
Stage 1	-	-	-	-	-	-	584	557	-	716	721	-
Stage 2	-	-	-	-	-	-	681	719	-	516	548	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0.6			15.6			10.7		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	401	1394	-	-	1445	-	-	715
HCM Lane V/C Ratio	0.156	0.09	-	-	0.011	-	-	0.111
HCM Control Delay (s)	15.6	7.8	0	-	7.5	0	-	10.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	103	74	21	17	231	22	26	40	14	6	10	128
Future Vol, veh/h	103	74	21	17	231	22	26	40	14	6	10	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	106	76	22	18	238	23	27	41	14	6	10	132

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	261	0	0	98	0	0	656	596	87	613	596	250
Stage 1	-	-	-	-	-	-	299	299	-	286	286	-
Stage 2	-	-	-	-	-	-	357	297	-	327	310	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1303	-	-	1495	-	-	379	417	971	405	417	789
Stage 1	-	-	-	-	-	-	710	666	-	721	675	-
Stage 2	-	-	-	-	-	-	661	668	-	686	659	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1303	-	-	1495	-	-	286	376	971	338	376	789
Mov Cap-2 Maneuver	-	-	-	-	-	-	286	376	-	338	376	-
Stage 1	-	-	-	-	-	-	649	609	-	659	666	-
Stage 2	-	-	-	-	-	-	534	659	-	576	602	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			0.5			17.2			11.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	378	1303	-	-	1495	-	-	697
HCM Lane V/C Ratio	0.218	0.081	-	-	0.012	-	-	0.213
HCM Control Delay (s)	17.2	8	0	-	7.4	0	-	11.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0	-	-	0.8

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	155	101	31	14	172	20	24	66	8	5	15	71
Future Vol, veh/h	155	101	31	14	172	20	24	66	8	5	15	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	111	34	15	189	22	26	73	9	5	16	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	211	0	0	145	0	0	745	709	128	739	715	200
Stage 1	-	-	-	-	-	-	468	468	-	230	230	-
Stage 2	-	-	-	-	-	-	277	241	-	509	485	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1360	-	-	1437	-	-	330	359	922	333	356	841
Stage 1	-	-	-	-	-	-	575	561	-	773	714	-
Stage 2	-	-	-	-	-	-	729	706	-	547	552	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1360	-	-	1437	-	-	255	306	922	240	304	841
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	306	-	240	304	-
Stage 1	-	-	-	-	-	-	496	484	-	667	705	-
Stage 2	-	-	-	-	-	-	638	698	-	397	476	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			0.5			22.8			12.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	308	1360	-	-	1437	-	-	589
HCM Lane V/C Ratio	0.35	0.125	-	-	0.011	-	-	0.17
HCM Control Delay (s)	22.8	8	0	-	7.5	0	-	12.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.5	0.4	-	-	0	-	-	0.6



Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	114	87	34	17	235	26	30	47	14	19	37	168
Future Vol, veh/h	114	87	34	17	235	26	30	47	14	19	37	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	90	35	18	242	27	31	48	14	20	38	173

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	269	0	0	125	0	0	741	649	108	667	653	256
Stage 1	-	-	-	-	-	-	344	344	-	292	292	-
Stage 2	-	-	-	-	-	-	397	305	-	375	361	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1295	-	-	1462	-	-	332	389	946	372	387	783
Stage 1	-	-	-	-	-	-	671	637	-	716	671	-
Stage 2	-	-	-	-	-	-	629	662	-	646	626	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1295	-	-	1462	-	-	217	345	946	299	344	783
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	345	-	299	344	-
Stage 1	-	-	-	-	-	-	605	575	-	646	661	-
Stage 2	-	-	-	-	-	-	455	652	-	525	565	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.9			0.5			21.2			15.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	315	1295	-	-	1462	-	-	581
HCM Lane V/C Ratio	0.298	0.091	-	-	0.012	-	-	0.397
HCM Control Delay (s)	21.2	8.1	0	-	7.5	0	-	15.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0	-	-	1.9

**Intersection**

Int Delay, s/veh 6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	155	101	31	14	172	20	24	66	8	5	15	71
Future Vol, veh/h	155	101	31	14	172	20	24	66	8	5	15	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	111	34	15	189	22	26	73	9	5	16	78

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	211	0	0	145
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1360	-	-	1458
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	1
Mov Cap-1 Maneuver	1360	-	-	1458
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.3	0.5	22.6	11.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	311	1360	-	-	1458	-	-	245	306	841
HCM Lane V/C Ratio	0.346	0.125	-	-	0.011	-	-	0.022	0.054	0.093
HCM Control Delay (s)	22.6	8	0	-	7.5	0	-	20	17.4	9.7
HCM Lane LOS	C	A	A	-	A	A	-	C	C	A
HCM 95th %tile Q(veh)	1.5	0.4	-	-	0	-	-	0.1	0.2	0.3

**Intersection**

Int Delay, s/veh 6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	114	87	34	17	235	26	30	47	14	19	37	168
Future Vol, veh/h	114	87	34	17	235	26	30	47	14	19	37	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	90	35	18	242	27	31	48	14	20	38	173

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	269	0	0	125
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1295	-	-	1473
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	1	-
Mov Cap-1 Maneuver	1295	-	-	1473
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	0.5	21	12.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	318	1295	-	-	1473	-	-	305	346	783
HCM Lane V/C Ratio	0.295	0.091	-	-	0.012	-	-	0.064	0.11	0.221
HCM Control Delay (s)	21	8.1	0	-	7.5	0	-	17.6	16.7	10.9
HCM Lane LOS	C	A	A	-	A	A	-	C	C	B
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0	-	-	0.2	0.4	0.8

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	132	115	33	17	184	7	12	45	9	2	11	71
Future Vol, veh/h	132	115	33	17	184	7	12	45	9	2	11	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	143	125	36	18	200	8	13	49	10	2	12	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	161	0	0	714	673	143	699	687	204
Stage 1	-	-	-	-	-	-	429	429	-	240	240	-
Stage 2	-	-	-	-	-	-	285	244	-	459	447	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1363	-	-	1418	-	-	346	377	905	354	370	837
Stage 1	-	-	-	-	-	-	604	584	-	763	707	-
Stage 2	-	-	-	-	-	-	722	704	-	582	573	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1363	-	-	1418	-	-	275	329	905	280	323	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	275	329	-	280	323	-
Stage 1	-	-	-	-	-	-	534	516	-	674	697	-
Stage 2	-	-	-	-	-	-	635	694	-	461	507	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0.6			18.1			11.3		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	347	1363	-	-	1418	-	-	667
HCM Lane V/C Ratio	0.207	0.105	-	-	0.013	-	-	0.137
HCM Control Delay (s)	18.1	8	0	-	7.6	0	-	11.3
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	121	86	25	20	270	26	31	46	17	7	12	149
Future Vol, veh/h	121	86	25	20	270	26	31	46	17	7	12	149
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	89	26	21	278	27	32	47	18	7	12	154

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	115	0	0	769	699	102	719	699	292
Stage 1	-	-	-	-	-	-	352	352	-	334	334	-
Stage 2	-	-	-	-	-	-	417	347	-	385	365	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1256	-	-	1474	-	-	318	364	953	344	364	747
Stage 1	-	-	-	-	-	-	665	632	-	680	643	-
Stage 2	-	-	-	-	-	-	613	635	-	638	623	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1256	-	-	1474	-	-	222	320	953	272	320	747
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	320	-	272	320	-
Stage 1	-	-	-	-	-	-	594	564	-	607	632	-
Stage 2	-	-	-	-	-	-	469	624	-	512	556	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			0.5			21.7			12.7		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	1256	-	-	1474	-	-	640
HCM Lane V/C Ratio	0.311	0.099	-	-	0.014	-	-	0.271
HCM Control Delay (s)	21.7	8.2	0	-	7.5	0	-	12.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0.3	-	-	0	-	-	1.1

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	175	120	40	20	200	25	30	75	10	5	20	85
Future Vol, veh/h	175	120	40	20	200	25	30	75	10	5	20	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	190	130	43	22	217	27	33	82	11	5	22	92

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	173	0	0	864	820	152	853	828	231
Stage 1	-	-	-	-	-	-	532	532	-	275	275	-
Stage 2	-	-	-	-	-	-	332	288	-	578	553	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1322	-	-	1420	-	-	275	309	950	280	305	808
Stage 1	-	-	-	-	-	-	542	527	-	731	683	-
Stage 2	-	-	-	-	-	-	681	674	-	509	515	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1322	-	-	1420	-	-	197	255	950	182	252	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	197	255	-	182	252	-
Stage 1	-	-	-	-	-	-	455	443	-	614	671	-
Stage 2	-	-	-	-	-	-	573	662	-	345	433	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			0.6			32.6			12.6		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	252	1322	-	-	1420	-	-	182	252	808
HCM Lane V/C Ratio	0.496	0.144	-	-	0.015	-	-	0.03	0.086	0.114
HCM Control Delay (s)	32.6	8.2	0	-	7.6	0	-	25.4	20.6	10
HCM Lane LOS	D	A	A	-	A	A	-	D	C	B
HCM 95th %tile Q(veh)	2.5	0.5	-	-	0	-	-	0.1	0.3	0.4

Intersection												
Int Delay, s/veh	8.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	135	100	40	20	275	30	35	55	20	20	40	190
Future Vol, veh/h	135	100	40	20	275	30	35	55	20	20	40	190
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	139	103	41	21	284	31	36	57	21	21	41	196

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	144	0	0	862	759	124	783	764	300
Stage 1	-	-	-	-	-	-	402	402	-	342	342	-
Stage 2	-	-	-	-	-	-	460	357	-	441	422	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1245	-	-	1458	-	-	276	336	987	315	334	740
Stage 1	-	-	-	-	-	-	645	608	-	673	638	-
Stage 2	-	-	-	-	-	-	581	628	-	612	594	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1245	-	-	1458	-	-	162	290	987	235	288	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	162	290	-	235	288	-
Stage 1	-	-	-	-	-	-	566	534	-	591	627	-
Stage 2	-	-	-	-	-	-	392	617	-	471	521	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.1			0.5			29.5			13.7		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	258	1245	-	-	1458	-	-	235	288	740	
HCM Lane V/C Ratio	0.44	0.112	-	-	0.014	-	-	0.088	0.143	0.265	
HCM Control Delay (s)	29.5	8.3	0	-	7.5	0	-	21.8	19.6	11.6	
HCM Lane LOS		D	A	A	-	A	A	-	C	C	B
HCM 95th %tile Q(veh)	2.1	0.4	-	-	0	-	-	0.3	0.5	1.1	

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			4
Traffic Vol, veh/h	26	10	19	109	41	16
Future Vol, veh/h	26	10	19	109	41	16
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	11	21	118	45	17

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	187	80	0	0	139	0
Stage 1	80	-	-	-	-	-
Stage 2	107	-	-	-	-	-
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	802	980	-	-	1445	-
Stage 1	943	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	777	980	-	-	1445	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	824	1445
HCM Lane V/C Ratio	-	-	0.047	0.031
HCM Control Delay (s)	-	-	9.6	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1



Intersection						
Int Delay, s/veh	6.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	106	40	8	28	11	19
Future Vol, veh/h	106	40	8	28	11	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	43	9	30	12	21

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	69	24	0	0	39
Stage 1	24	-	-	-	-
Stage 2	45	-	-	-	-
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	936	1052	-	-	1571
Stage 1	999	-	-	-	-
Stage 2	977	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	929	1052	-	-	1571
Mov Cap-2 Maneuver	929	-	-	-	-
Stage 1	999	-	-	-	-
Stage 2	969	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	960	1571
HCM Lane V/C Ratio	-	-	0.165	0.008
HCM Control Delay (s)	-	-	9.5	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	30	10	25	110	45	20
Future Vol, veh/h	30	10	25	110	45	20
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	11	27	120	49	22

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	207	87	0	0	147	0
Stage 1	87	-	-	-	-	-
Stage 2	120	-	-	-	-	-
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	781	971	-	-	1435	-
Stage 1	936	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	754	971	-	-	1435	-
Mov Cap-2 Maneuver	754	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	5.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	799	1435
HCM Lane V/C Ratio	-	-	0.054	0.034
HCM Control Delay (s)	-	-	9.8	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection						
Int Delay, s/veh	6.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T		T		T	
Traffic Vol, veh/h	110	40	10	30	15	25
Future Vol, veh/h	110	40	10	30	15	25
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	43	11	33	16	27

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	87	28	0	0	44
Stage 1	28	-	-	-	-
Stage 2	59	-	-	-	-
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	914	1047	-	-	1564
Stage 1	995	-	-	-	-
Stage 2	964	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	905	1047	-	-	1564
Mov Cap-2 Maneuver	905	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	954	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	939	1564
HCM Lane V/C Ratio	-	-	0.174	0.01
HCM Control Delay (s)	-	-	9.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	6	1	0	1	27	161	3	3	86	24
Future Vol, veh/h	6	0	6	1	0	1	27	161	3	3	86	24
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	1	0	1	29	175	3	3	93	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	347	348	106	351	360	177	119	0	0	178	0	0
Stage 1	112	112	-	235	235	-	-	-	-	-	-	-
Stage 2	235	236	-	116	125	-	-	-	-	-	-	-
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	607	576	948	604	567	866	1469	-	-	1398	-	-
Stage 1	893	803	-	768	710	-	-	-	-	-	-	-
Stage 2	768	710	-	889	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	595	562	948	589	553	866	1469	-	-	1398	-	-
Mov Cap-2 Maneuver	595	562	-	589	553	-	-	-	-	-	-	-
Stage 1	873	801	-	751	694	-	-	-	-	-	-	-
Stage 2	750	694	-	881	790	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		10.2		1.1		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1469	-	-	731	701	1398	-
HCM Lane V/C Ratio	0.02	-	-	0.018	0.003	0.002	-
HCM Control Delay (s)	7.5	0	-	10	10.2	7.6	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	0	27	3	0	3	7	178	1	1	148	6
Future Vol, veh/h	24	0	27	3	0	3	7	178	1	1	148	6
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	29	3	0	3	8	193	1	1	161	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	378	377	165	391	380	194	168	0	0	194	0	0
Stage 1	167	167	-	210	210	-	-	-	-	-	-	-
Stage 2	211	210	-	181	170	-	-	-	-	-	-	-
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	580	555	879	568	552	847	1410	-	-	1379	-	-
Stage 1	835	760	-	792	728	-	-	-	-	-	-	-
Stage 2	791	728	-	821	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	575	551	879	546	548	847	1410	-	-	1379	-	-
Mov Cap-2 Maneuver	575	551	-	546	548	-	-	-	-	-	-	-
Stage 1	830	759	-	787	724	-	-	-	-	-	-	-
Stage 2	783	724	-	793	757	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.6		10.5		0.3		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	704	664	1379	-
HCM Lane V/C Ratio	0.005	-	-	0.079	0.01	0.001	-
HCM Control Delay (s)	7.6	0	-	10.6	10.5	7.6	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	6	0	6	1	0	1	27	161	3	3	86	24
Future Vol, veh/h	6	0	6	1	0	1	27	161	3	3	86	24
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	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	7	1	0	1	29	175	3	3	93	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	347	348	106	351	360	177	119	0	0	178	0	0
Stage 1	112	112	-	235	235	-	-	-	-	-	-	-
Stage 2	235	236	-	116	125	-	-	-	-	-	-	-
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	607	576	948	604	567	866	1469	-	-	1398	-	-
Stage 1	893	803	-	768	710	-	-	-	-	-	-	-
Stage 2	768	710	-	889	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	596	563	948	590	555	866	1469	-	-	1398	-	-
Mov Cap-2 Maneuver	596	563	-	590	555	-	-	-	-	-	-	-
Stage 1	875	801	-	753	696	-	-	-	-	-	-	-
Stage 2	752	696	-	881	790	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		10.1		1.1		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1469	-	-	732	702	1398	-
HCM Lane V/C Ratio	0.02	-	-	0.018	0.003	0.002	-
HCM Control Delay (s)	7.5	-	-	10	10.1	7.6	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	24	0	27	3	0	3	7	178	1	1	148	6
Future Vol, veh/h	24	0	27	3	0	3	7	178	1	1	148	6
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	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	29	3	0	3	8	193	1	1	161	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	378	377	165	391	380	194	168	0	0	194	0	0
Stage 1	167	167	-	210	210	-	-	-	-	-	-	-
Stage 2	211	210	-	181	170	-	-	-	-	-	-	-
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	580	555	879	568	552	847	1410	-	-	1379	-	-
Stage 1	835	760	-	792	728	-	-	-	-	-	-	-
Stage 2	791	728	-	821	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	575	551	879	546	548	847	1410	-	-	1379	-	-
Mov Cap-2 Maneuver	575	551	-	546	548	-	-	-	-	-	-	-
Stage 1	830	759	-	787	724	-	-	-	-	-	-	-
Stage 2	783	724	-	793	757	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.5	0.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	704	664	1379	-
HCM Lane V/C Ratio	0.005	-	-	0.079	0.01	0.001	-
HCM Control Delay (s)	7.6	-	-	10.6	10.5	7.6	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	10	0	10	5	0	5	30	190	5	5	100	25
Future Vol, veh/h	10	0	10	5	0	5	30	190	5	5	100	25
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	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	5	0	5	33	207	5	5	109	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	411	411	123	414	422	210	136	0	0	212	0	0
Stage 1	133	133	-	276	276	-	-	-	-	-	-	-
Stage 2	278	278	-	138	146	-	-	-	-	-	-	-
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	551	531	928	549	523	830	1448	-	-	1358	-	-
Stage 1	870	786	-	730	682	-	-	-	-	-	-	-
Stage 2	728	680	-	865	776	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	536	517	928	531	509	830	1448	-	-	1358	-	-
Mov Cap-2 Maneuver	536	517	-	531	509	-	-	-	-	-	-	-
Stage 1	850	783	-	713	666	-	-	-	-	-	-	-
Stage 2	707	664	-	851	773	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	10.5		10.7		1		0.3			
HCM LOS	B		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	680	648	1358	-
HCM Lane V/C Ratio	0.023	-	-	0.032	0.017	0.004	-
HCM Control Delay (s)	7.5	-	-	10.5	10.7	7.7	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-



Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	25	0	30	5	0	5	10	210	5	5	175	10
Future Vol, veh/h	25	0	30	5	0	5	10	210	5	5	175	10
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	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	33	5	0	5	11	228	5	5	190	11

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	461	461	196	475	464	231	201	0	0	233	0	0
Stage 1	206	206	-	253	253	-	-	-	-	-	-	-
Stage 2	255	255	-	222	211	-	-	-	-	-	-	-
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	511	497	845	500	495	808	1371	-	-	1335	-	-
Stage 1	796	731	-	751	698	-	-	-	-	-	-	-
Stage 2	749	696	-	780	728	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	503	491	845	477	489	808	1371	-	-	1335	-	-
Mov Cap-2 Maneuver	503	491	-	477	489	-	-	-	-	-	-	-
Stage 1	790	728	-	745	692	-	-	-	-	-	-	-
Stage 2	738	690	-	747	725	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		11.1		0.3		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	646	600	1335	-
HCM Lane V/C Ratio	0.008	-	-	0.093	0.018	0.004	-
HCM Control Delay (s)	7.6	-	-	11.1	11.1	7.7	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	3	1	191	11	3	90
Future Vol, veh/h	3	1	191	11	3	90
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1	208	12	3	98

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	318	214	0	0	220	0
Stage 1	214	-	-	-	-	-
Stage 2	104	-	-	-	-	-
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	675	826	-	-	1349	-
Stage 1	822	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	674	826	-	-	1349	-
Mov Cap-2 Maneuver	674	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	707	1349
HCM Lane V/C Ratio	-	-	0.006	0.002
HCM Control Delay (s)	-	-	10.1	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	11	3	184	3	1	176
Future Vol, veh/h	11	3	184	3	1	176
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	3	200	3	1	191

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	395	202	0	0	203	0
Stage 1	202	-	-	-	-	-
Stage 2	193	-	-	-	-	-
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	610	839	-	-	1369	-
Stage 1	832	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	609	839	-	-	1369	-
Mov Cap-2 Maneuver	609	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	839	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	647	1369
HCM Lane V/C Ratio	-	-	0.024	0.001
HCM Control Delay (s)	-	-	10.7	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	3	1	191	11	3	90
Future Vol, veh/h	3	1	191	11	3	90
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	-	-	-	150	-
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	3	1	208	12	3	98

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	318	214	0	0	220	0
Stage 1	214	-	-	-	-	-
Stage 2	104	-	-	-	-	-
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	675	826	-	-	1349	-
Stage 1	822	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	674	826	-	-	1349	-
Mov Cap-2 Maneuver	674	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	707	1349
HCM Lane V/C Ratio	-	-	0.006	0.002
HCM Control Delay (s)	-	-	10.1	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	11	3	184	3	1	176
Future Vol, veh/h	11	3	184	3	1	176
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	-	-	-	150	-
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	12	3	200	3	1	191

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	395	202	0	0	203	0
Stage 1	202	-	-	-	-	-
Stage 2	193	-	-	-	-	-
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	610	839	-	-	1369	-
Stage 1	832	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	609	839	-	-	1369	-
Mov Cap-2 Maneuver	609	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	839	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	647	1369
HCM Lane V/C Ratio	-	-	0.024	0.001
HCM Control Delay (s)	-	-	10.7	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	220	15	5	105
Future Vol, veh/h	5	5	220	15	5	105
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	-	-	-	150	-
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	5	5	239	16	5	114

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	371	247	0	0	255
Stage 1	247	-	-	-	-
Stage 2	124	-	-	-	-
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	630	792	-	-	1310
Stage 1	794	-	-	-	-
Stage 2	902	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	627	792	-	-	1310
Mov Cap-2 Maneuver	627	-	-	-	-
Stage 1	794	-	-	-	-
Stage 2	898	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	700	1310
HCM Lane V/C Ratio	-	-	0.016	0.004
HCM Control Delay (s)	-	-	10.2	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	15	5	215	5	5	200
Future Vol, veh/h	15	5	215	5	5	200
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	-	-	-	150	-
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	16	5	234	5	5	217

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	464	237	0	0	239
Stage 1	237	-	-	-	-
Stage 2	227	-	-	-	-
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	556	802	-	-	1328
Stage 1	802	-	-	-	-
Stage 2	811	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	554	802	-	-	1328
Mov Cap-2 Maneuver	554	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	808	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	600	1328
HCM Lane V/C Ratio	-	-	0.036	0.004
HCM Control Delay (s)	-	-	11.2	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	10	41	199	82	11
Future Vol, veh/h	3	10	41	199	82	11
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	11	45	216	89	12

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	401	95	101	0	0
Stage 1	95	-	-	-	-
Stage 2	306	-	-	-	-
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	605	962	1491	-	-
Stage 1	929	-	-	-	-
Stage 2	747	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	584	962	1491	-	-
Mov Cap-2 Maneuver	584	-	-	-	-
Stage 1	897	-	-	-	-
Stage 2	747	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	837	-	-
HCM Lane V/C Ratio	0.03	-	0.017	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



**Intersection**

Int Delay, s/veh 1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	40	11	176	184	3
Future Vol, veh/h	11	40	11	176	184	3
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	43	12	191	200	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	417	202	203	0	-	0
Stage 1	202	-	-	-	-	-
Stage 2	215	-	-	-	-	-
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	592	839	1369	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	586	839	1369	-	-	-
Mov Cap-2 Maneuver	586	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1369	-	768	-	-
HCM Lane V/C Ratio	0.009	-	0.072	-	-
HCM Control Delay (s)	7.7	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	3	10	41	199	82	11
Future Vol, veh/h	3	10	41	199	82	11
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	-	150	-	-	-
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	3	11	45	216	89	12

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	401	95	101	0	0
Stage 1	95	-	-	-	-
Stage 2	306	-	-	-	-
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	605	962	1491	-	-
Stage 1	929	-	-	-	-
Stage 2	747	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	587	962	1491	-	-
Mov Cap-2 Maneuver	587	-	-	-	-
Stage 1	901	-	-	-	-
Stage 2	747	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	838	-	-
HCM Lane V/C Ratio	0.03	-	0.017	-	-
HCM Control Delay (s)	7.5	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	40	11	176	184	3
Future Vol, veh/h	11	40	11	176	184	3
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	-	150	-	-	-
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	12	43	12	191	200	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	417	202	203	0	0
Stage 1	202	-	-	-	-
Stage 2	215	-	-	-	-
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	592	839	1369	-	-
Stage 1	832	-	-	-	-
Stage 2	821	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	587	839	1369	-	-
Mov Cap-2 Maneuver	587	-	-	-	-
Stage 1	825	-	-	-	-
Stage 2	821	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1369	-	768	-	-
HCM Lane V/C Ratio	0.009	-	0.072	-	-
HCM Control Delay (s)	7.7	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	45	225	95	15
Future Vol, veh/h	5	10	45	225	95	15
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	-	150	-	-	-
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	5	11	49	245	103	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	454	111	119	0	-	0
Stage 1	111	-	-	-	-	-
Stage 2	343	-	-	-	-	-
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	564	942	1469	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	942	1469	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1469	-	758	-	-
HCM Lane V/C Ratio	0.033	-	0.022	-	-
HCM Control Delay (s)	7.5	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑	
Traffic Vol, veh/h	15	40	15	205	210	5
Future Vol, veh/h	15	40	15	205	210	5
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	-	150	-	-	-
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	16	43	16	223	228	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	486	231	233	0	-	0
Stage 1	231	-	-	-	-	-
Stage 2	255	-	-	-	-	-
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	540	808	1335	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	534	808	1335	-	-	-
Mov Cap-2 Maneuver	534	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1335	-	709	-	-
HCM Lane V/C Ratio	0.012	-	0.084	-	-
HCM Control Delay (s)	7.7	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

# APPENDIX E

## Warrant Analysis Worksheets

All Way Stop Control Warrants: Triangle Logistics Center

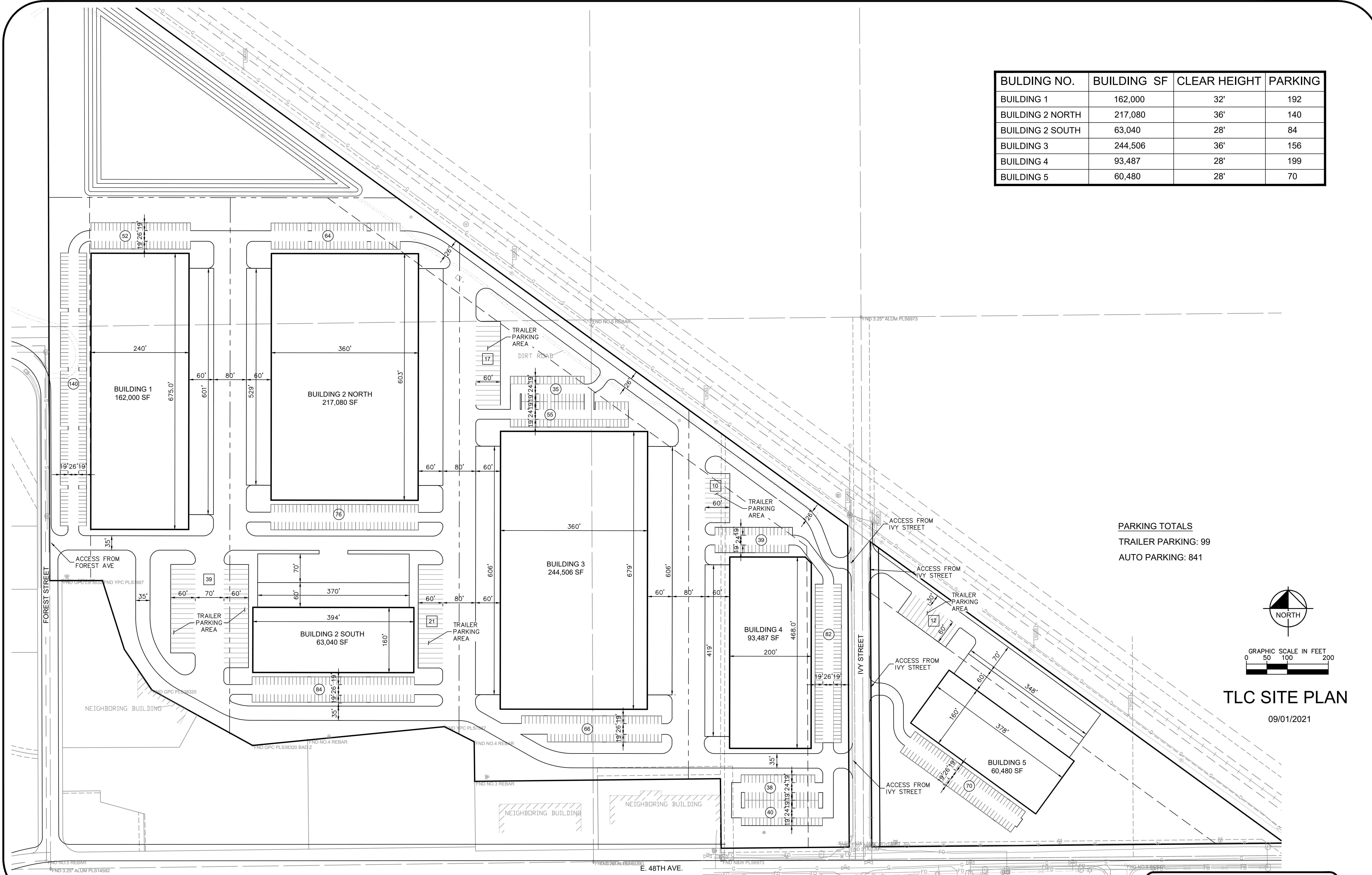
48th Ave & Holly St (2023 Volumes: Vehicle/Pedestrian)						
Hour	Minor Volume	Minor Threshold	Met	Major Volume	Major Threshold	Met
7:00 AM - 8:00 AM	232	200	X	432	300	X
8:00 AM - 9:00 AM	257	200	X	479	300	X
9:00 AM - 10:00 AM	232	200	X	432	300	X
10:00 AM - 11:00 AM	209	200	X	388	300	X
2:00 PM - 3:00 PM	200	200	X	503	300	X
3:00 PM - 4:00 PM	222	200	X	558	300	X
4:00 PM - 5:00 PM	246	200	X	620	300	X
5:00 PM - 6:00 PM	222	200	X	558	300	X

# APPENDIX F

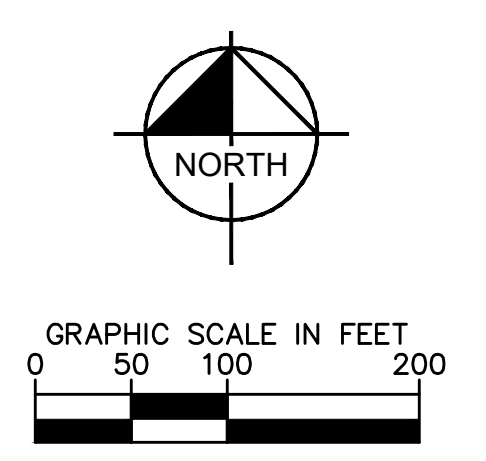
## Conceptual Site Plan



BUILDING NO.	BUILDING SF	CLEAR HEIGHT	PARKING
BUILDING 1	162,000	32'	192
BUILDING 2 NORTH	217,080	36'	140
BUILDING 2 SOUTH	63,040	28'	84
BUILDING 3	244,506	36'	156
BUILDING 4	93,487	28'	199
BUILDING 5	60,480	28'	70



**PARKING TOTALS**  
 TRAILER PARKING: 99  
 AUTO PARKING: 841



**TLC SITE PLAN**  
 09/01/2021

**Kimley»Horn**  
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