

Horseshoe Lake Park Traffic Impact Analysis

Prepared for:

Jurupa Area Recreation and Park District
4810 Pedley Rd.
Jurupa Valley, CA. 92509

Prepared by:



www.intengroup.com

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING & ENGINEERING CONSULTING

23905 Clinton Keith 114-280
Wildomar, CA 92595

November 2018

EXECUTIVE SUMMARY

Purpose of the Report

The purpose of this Traffic Impact Analysis (TIA) is to identify and document potential traffic impacts related to the development of Horseshoe Lake Park project in the City of Jurupa Valley. This technical report will also recommend transportation mitigation measures and improvements to address potential project impacts to local transportation facilities.

Project Overview

the proposed project is located on a vacant site just west of Lakeview Avenue and Studio Place intersection in the City of Jurupa Valley. The subject project is proposing the development of 14 acres vacant land into a public park that is accessed via Lakeview Avenue, Studio Place and Kennedy Street respectively.

The project trip generation was calculated using the ITE Trip Generation Manual (10th Edition). It is estimated that the project will generate 97 total daily trips, 5 AM peak hour trips, and 23 PM peak hour trips. Working closely with City of Jurupa Valley staff, a detailed trip distribution and trip assignment was developed in order to show the characteristics of the travel behaviors that exist for the area. Project scenarios and study area were then established in coordination with City staff to determine the potential impact of the project on the local transportation network.

Project Scenarios:

- Existing Conditions
- Existing with Project Conditions
- Opening Year (Existing + ambient growth) Conditions (2020)
- Opening Year with Project Conditions

Study area Intersections:

- Archer Street and 64th Street
- Archer Street and Kennedy Street
- Lakeview Avenue and Studio Place
- Kennedy Street and Studio Place

Roadway segment counts were conducted and will be included in this report for informational purposes only. Average daily counts (ADT) were conducted at the following locations:

Roadway Segments:

- 64th Street/Lakeview Avenue between Archer Street and Studio Place
- Archer Street between 64th Street and Kennedy Street
- Kennedy Street between Archer Street and Studio Place
- Studio Place between Kennedy Street and Lakeview Avenue



Analysis Results and Recommendations

Existing Scenario (2018)

All intersections analyzed under Existing With and Without Project Conditions (2018) are determined to be operating at an acceptable level of service.

Opening Year Scenario (2020)

All intersections analyzed under Opening Year With and Without Project Conditions (Year 2020) are determined to be operating at an acceptable level of service.



Table of Contents

EXECUTIVE SUMMARY	I
<i>Purpose of the Report</i>	<i>i</i>
Project Overview.....	<i>i</i>
Analysis Results and Recommendations.....	<i>ii</i>
1.0 PROJECT INTRODUCTION	1
PROJECT DESCRIPTION	1
STUDY AREA	1
<i>Intersections</i>	<i>1</i>
PROJECT TRIP GENERATION.....	2
PROJECT DISTRIBUTION AND ASSIGNMENT	2
2.0 METHODOLOGIES.....	7
STUDY SCENARIOS.....	7
STUDY TIME PERIODS.....	7
ANALYSIS METHODOLOGIES	7
<i>Intersection Capacity Analysis</i>	8
Signalized Intersections.....	8
All-way Stop-controlled (AWSC) Intersections	9
Analysis of Significance.....	10
3.0 EXISTING CONDITIONS (2018)	11
TRAFFIC VOLUMES	11
EXISTING ANALYSIS (2018).....	11
ANALYSIS RESULTS	12
4.0 OPENING YEAR CONDITIONS (2020).....	15
OPENING YEAR ANALYSIS (2020)	15
ANALYSIS RESULTS	15



List of Figures

FIGURE 1-1 – PROJECT SITE PLAN	3
FIGURE 1-2 – PROJECT STUDY AREA	4
FIGURE 1-3 – PROJECT TRIP DISTRIBUTION.....	5
FIGURE 1-4 – PROJECT AM/PM PEAK HOUR VOLUMES	6
FIGURE 3-1 – EXISTING (2018) AM/PM PEAK HOUR INTERSECTION VOLUMES	13
FIGURE 3-2 – EXISTING (2018) With PROJECT AM/PM PEAK HOUR INTERSECTION VOLUMES.....	14
FIGURE 4-1 – OPENING YEAR (2020) AM/PM PEAK HOUR INTERSECTION VOLUMES.....	16
FIGURE 4-2 – OPENING YEAR (2020) With PROJECT AM/PM PEAK HOUR INTERSECTION VOLUMES.....	17

List of Tables

TABLE 1-1 PROJECT TRIP GENERATION RATE	2
TABLE 1-2 PROJECT TRIP GENERATION	2
TABLE 2-1 VEHICULAR LEVEL OF SERVICE DEFINITIONS	8
TABLE 2-2 SIGNALIZED INTERSECTION LEVEL OF SERVICE HCM OPERATIONAL ANALYSIS METHOD.....	9
TABLE 2-3 LEVEL OF SERVICE CRITERIA FOR STOP CONTROLLED UNSIGNALIZED INTERSECTIONS	10
TABLE 3-1 EXISTING (2018) INTERSECTION CONDITIONS	12
TABLE 4-1 OPENING YEAR (2020) INTERSECTION CONDITIONS.....	15

Appendices

APPENDIX A TRAFFIC COUNT DATA	
APPENDIX B EXISTING (2018) CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS	
APPENDIX C EXISTING (2018) WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS	
APPENDIX D OPENING YEAR (2020) CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS	
APPENDIX E OPENING YEAR (2020) WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS	



www.intenggroup.com

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING & ENGINEERING CONSULTING

1.0 PROJECT INTRODUCTION

This traffic impact analysis (TIA) has been prepared for the proposed Horseshoe Lake Park Project. The proposed development is located on a vacant lot just west of Lakeview Avenue and Studio Place intersection in the City of Jurupa Valley.

PROJECT DESCRIPTION

The subject project is proposing the development of 14 acres vacant land into a public park that is accessed via Lakeview Avenue, Studio Place and Kennedy Street respectively.

Figure 1-1 shows the project location and site plan.

STUDY AREA

The study area for this project includes those locations that are expected to be affected by this project. The study area intersections were selected, in coordination with the City Engineer, based on the distribution of project traffic within the City of Jurupa Valley. IEG prepared a project traffic study scoping agreement defining the study area which was reviewed and approved by City staff prior to the preparation of this technical report. **Figure 1-2** presents the study area that includes the following key intersections locations:

Intersections

- Archer Street and 64th Street
- Archer Street and Kennedy Street
- Lakeview Avenue and Studio Place
- Kennedy Street and Studio Place

Intersection turning movement counts were conducted for one weekday during the morning and evening peak hours. The turning movement counts will be utilized in Synchro to determine LOS at all study intersections.

Roadway segment counts were conducted and will be included in this report for informational purposes only. Roadway segment ADT calculations for all scenarios are provided in Appendix A. Average daily counts (ADT) were conducted at the following locations:

Roadway Segments:

- 64th Street/Lakeview Avenue between Archer Street and Studio Place
- Archer Street between 64th Street and Kennedy Street
- Kennedy Street between Archer Street and Studio Place
- Studio Place between Kennedy Street and Lakeview Avenue



PROJECT TRIP GENERATION

The trip generation is a measure or forecast of the number of trips that begin or end at the project site. The traffic generated is a function of the extent and type of development proposed for the site. These trips will result in some traffic increases on the streets where they occur. Vehicular traffic generation characteristics for projects are estimated based on established rates. The rates used in this analysis were determined based on rates contained in the *Trip Generation, 10th Edition*, published by the Institute of Transportation Engineers (ITE). Project ITE average trip generation rates are presented in **Table 1-1**.

Table 1-1
Project Trip Generation Rate

Land Use	Units	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Public Park	Acres	411	0.19	0.13	0.32	0.90	0.74	1.64	6.96

Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017)

Table 1-2 summarizes the trip generation of the proposed Project. As shown on Table 1-2, the proposed development is anticipated to generate a net total of approximately 97 trip-ends per day, with 5 vehicles per hour (VPH) during the AM peak hour and 23 VPH during the PM peak hour.

Table 1-2
Project Trip Generation

Land Use	Intensity	Units	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Public Park	14	Acres	3	2	5	13	10	23	97
TOTAL			3	2	5	13	10	23	97

Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017)

PROJECT DISTRIBUTION AND ASSIGNMENT

Trip distribution and assignment is the process of identifying the probable destinations, directions and traffic routes that project related traffic will likely affect. Trip distribution and assignment information can be estimated from observed traffic patterns, experience or through use of a computerized travel forecast model. Once the proposed development trips have been estimated, they are assigned to the study area network. For this development, The project trip distribution was developed in conjunction with City staff and reflects the likely distribution of project traffic given surrounding land uses.

Figures 1-3 and 1-4 show trip distribution/assignment and project peak hour intersection turning movement volumes.





INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING



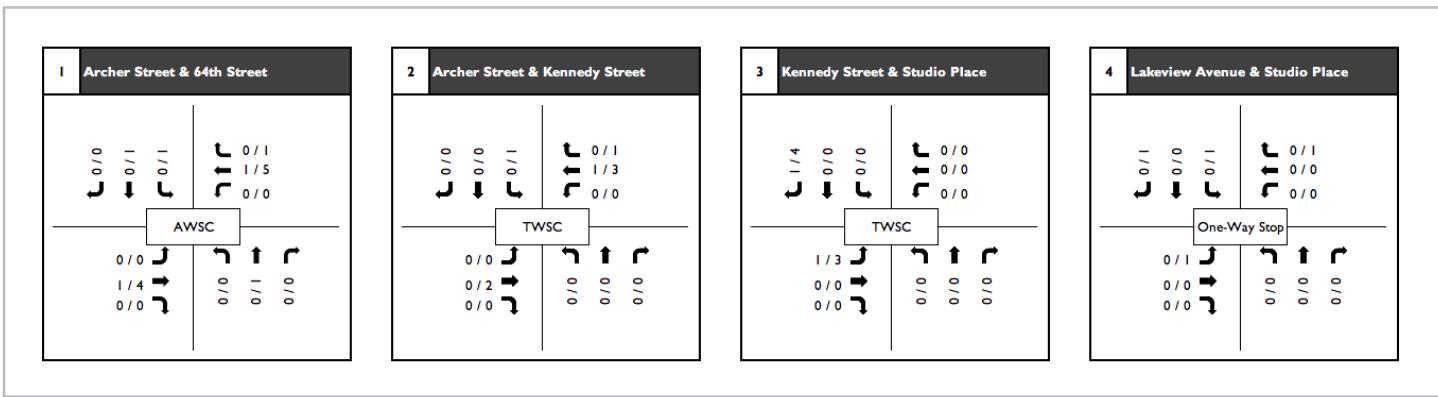
LEGEND

- # Signalized Intersections



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING





LEGEND

0/0 = (AM/PM) Peak Hour Volumes



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Page | 6

Horseshoe Lake Park
Project AM/PM Peak Hour Volumes
Figure-1-4

2.0 METHODOLOGIES

This section documents the methodologies and assumptions used to conduct the circulation impact analysis for the proposed project. This section contains the following background information:

- Study scenarios
- Study time periods
- Analysis methodologies

STUDY SCENARIOS

This report presents an analysis of the intersection operating conditions during the peak periods, which were selected in consultation with City staff for the following anticipated timeframe scenarios:

- Existing Conditions
- Existing with Project Conditions
- Opening Year (Existing + ambient growth) Conditions (2020)
- Opening Year with Project Conditions

STUDY TIME PERIODS

The City selected the following peak hours for analysis:

- Weekday AM (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM (peak hour between 4:00 PM and 6:00 PM)

ANALYSIS METHODOLOGIES

The street system operating conditions are typically described in terms of “level of service.” Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). **Table 2-1** describes generalized definitions of auto LOS A through F.



www.intenggroup.com

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING & ENGINEERING CONSULTING

Table 2-1 Vehicular Level of Service Definitions

LOS	Characteristics
A	Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0.

Source: Highway Capacity Manual, Transportation Research Board (2010)

Intersection Capacity Analysis

The analysis of peak hour intersection performance was conducted using the Synchro analysis software program, which uses methodologies defined in the Highway Capacity Manual (HCM) 6th Edition to calculate results. Level of service (LOS) for intersections is determined by control delay. Control delay is defined as the total elapsed time from when a vehicle stops at the end of a queue to the time the vehicle departs from the stop line. The total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

Signalized Intersections

The HCM analysis methodology for evaluating signalized intersections is based on the “operational analysis” procedure. This technique uses 1,900 passenger cars per hour of green per lane (pcphgpl) as the maximum saturation flow of a single lane at an intersection. This saturation flow rate is adjusted to account for lane width, on-street parking, conflicting pedestrian flow, traffic composition, (e.g., the percentage of vehicles that are trucks) and shared lane movements (e.g., through and right-turn movements from the same lane). Average control delay is calculated by taking a volume-weighted average of all the delays for all vehicles entering the intersection. **Table 2-2** summarizes the level of service criteria for signalized intersections.



Table 2-2 Signalized Intersection Level of Service HCM Operational Analysis Method

Average Control Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
≤10.0	<i>LOS A</i> occurs when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
10.1 – 20.0	<i>LOS B</i> occurs when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
20.1 – 35.0	<i>LOS C</i> occurs when progression is favorable or the cycle length is moderate. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
35.1 – 55.0	<i>LOS D</i> occurs when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
55.1 – 80.0	<i>LOS E</i> occurs when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
>80.0	<i>LOS F</i> occurs when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual, Transportation Research Board (2010)

All-way Stop-controlled (AWSC) Intersections

The HCM analysis methodology for evaluating all-way Stop-controlled intersections is based on the degree of conflict for each independent approach created by the opposing approach and each conflicting approach. Level of Service for AWSC intersections is also based on the average control delay. However, AWSC intersections have different threshold values than those applied to signalized intersections. This is based on the rationale that drivers expect AWSC intersections to carry lower traffic volumes than at signalized intersections. Therefore, a higher level of delay is acceptable at a signalized intersection for the same LOS.

Two-way Stop-controlled (TWSC) Intersections

The HCM analysis methodology for evaluating two-way Stop-controlled (TWSC) intersections is based on gap acceptance and conflicting traffic for vehicles stopped on the minor-street approaches. The critical gap (or minimum gap that would be acceptable) is defined as the minimum time interval in the major-street traffic stream that allows intersection entry for one minor-street vehicle. Average control delay and LOS for the “worst approach” are reported. Level of service is not defined for the intersection as a whole.



Table 2-3 summarizes the level of service criteria for unsignalized intersections.

Table 2-3 Level of Service Criteria for Stop Controlled Unsignalized Intersections

Average Control Delay (sec/veh)	Level of Service (LOS)
≤ 10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
>50.0	F

Source: Highway Capacity Manual, Transportation Research Board

Analysis of Significance

Traffic impacts are identified if the proposed project will result in a significant change in traffic conditions on a roadway or intersection. A significant impact is normally defined when project related traffic would cause level of service to deteriorate to below the minimum acceptable level by a measurable amount. Impacts may also be significant if the location is already below the minimum acceptable level and project related traffic causes a further decline.

Level of Service D is frequently identified as the minimum allowable “Standard” service level during peak hours at intersections. For the purposes of California Environmental Quality Act (CEQA) consistency analysis, the City of Jurupa Valley has deemed LOS D as an acceptable LOS. Per the City of Jurupa Valley, project impacts are considered significant and mitigation measures shall be considered when development projects traffic conditions are forecasted to decline to below the minimum acceptable LOS D. Additionally, project impacts are considered significant in cases where the pre-project conditions are already deficient and will deteriorate further with the addition of the project traffic. Mitigation measures in these cases shall be considered to address projects contribution to the overall cumulative impact by bringing the transportation facilities LOS to pre-project conditions.



www.intenggroup.com

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING & ENGINEERING CONSULTING

3.0 EXISTING CONDITIONS (2018)

This section documents the circulation system conditions within the study area of the project under the existing without and with project scenarios. The Existing Conditions (2018) Without Project traffic volumes are developed using existing volumes counts. Project traffic volumes are then added to existing (2018) traffic volumes to develop the Existing Conditions (2018) With Project traffic volumes. This section also documents potential direct project impacts on the existing local and regional circulation networks. Direct project impacts are identified through a comparison of Existing Conditions (2018) Without Project and Existing Conditions (2018) With Project traffic conditions.

TRAFFIC VOLUMES

The intersection turning movement counts were conducted during the weekday morning peak period from 7:00 AM to 9:00 AM and during the weekday evening peak period from 4:00 PM to 6:00 PM on November 2018. Traffic count data is provided in **Appendix A**

EXISTING ANALYSIS (2018)

Table 3-1 shows Existing Conditions (2018) intersection analysis results.

Figures 3-1 and 3-2 show Existing Conditions (2018) peak hour intersection turning movement volumes.



Table 3-1
Existing (2018) Intersection Conditions

Intersection	Existing Without Project		Existing With Project		Impact?
	Delay (a)	LOS (b)	Delay (a)	LOS (b)	
AM/PM Peak Hour					
1. Archer Street & 64 th Street	7.3/8.4	A/A	7.3/8.4	A/A	N/N
2. Archer Street & Kennedy Street	9.2/9.8	A/A	9.2/9.8	A/A	N/N
3. Kennedy Street & Studio Place	9.3/9.0	A/A	9.4/9.2	A/A	N/N
4. Lakeview Avenue & Studio Place	8.5/9.2	A/A	8.5/9.3	A/A	N/N

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At unsignalized intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 10

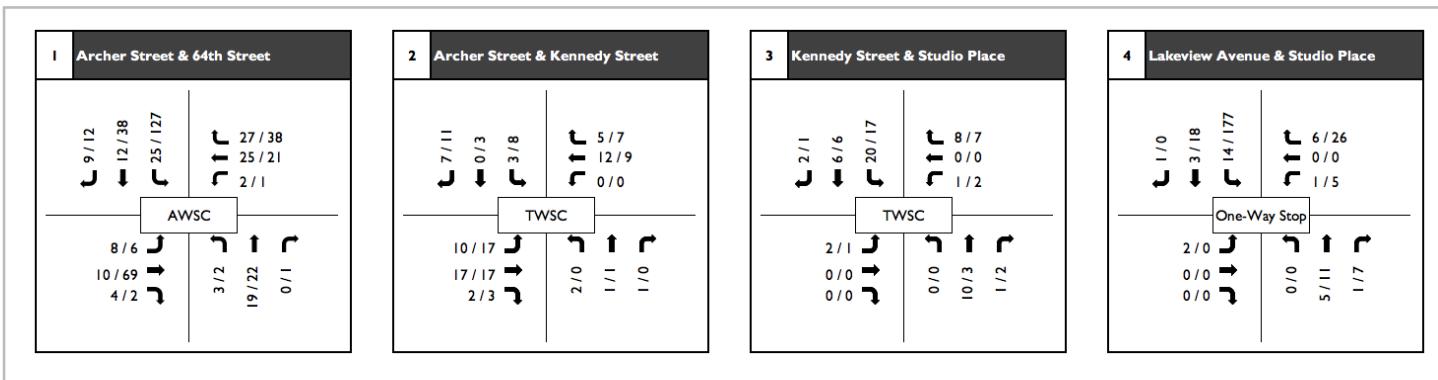
ANALYSIS RESULTS

Per the analysis results shown in the above table, all intersections analyzed under Existing Conditions (2018) scenarios are determined to be operating at an acceptable level of service. Existing With and Without Project Synchro analysis sheets are provided in **Appendices B and C** respectively.



www.intengroup.com

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING & ENGINEERING CONSULTING

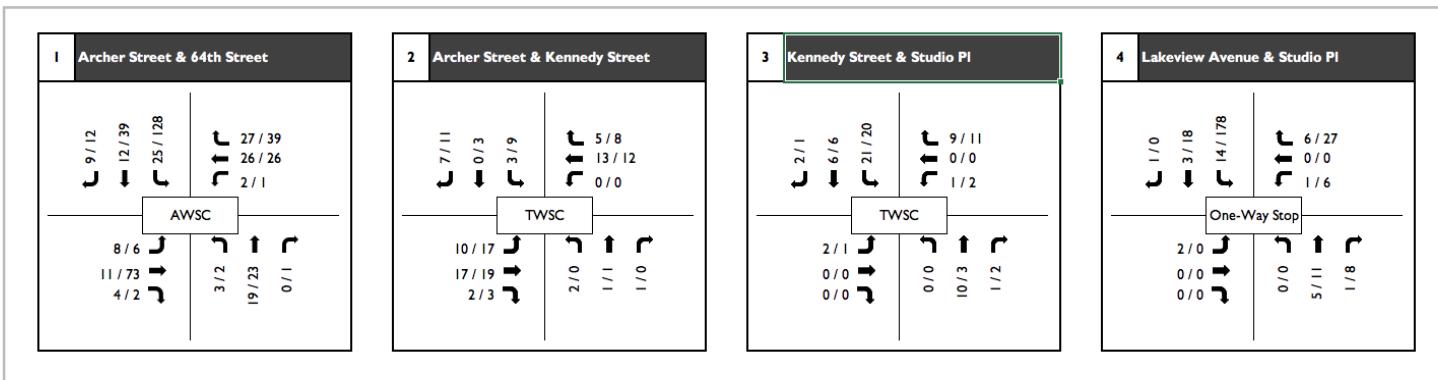


LEGEND

0/0 = (AM/PM) Peak Hour Volumes



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING



LEGEND

0/0 = (AM/PM) Peak Hour Volumes



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Page | 14

Horseshoe Lake Park

Existing (2018) with Project AM/PM
Peak Hour Volumes

Figure-3-2

4.0 OPENING YEAR CONDITIONS (2020)

This section documents the circulation system conditions within the study area of the project under Opening Year (2020) Without and With Project scenarios. The Opening Year Conditions (2020) Without Project traffic volumes were developed by adding a compounded two percent per year growth over a two-year period to the existing traffic volumes. Project traffic volumes are then added to the Opening Year Conditions (2020) Without Project traffic volumes to develop Opening Year Conditions (2020) With Project traffic volumes. This section also documents potential cumulative project impacts on the existing circulation networks. Cumulative project impacts are identified through a comparison of Opening Year Conditions (2020) Without Project and Opening Year Conditions (2020) With Project traffic conditions

OPENING YEAR ANALYSIS (2020)

Tables 4-1 shows Opening Year Conditions (2020) intersection analysis results.

Figures 4-1 and 4-2 show Opening Year Conditions (2020) without and with project peak hour intersection turning movement volumes.

Table 4-1
Opening Year (2020) Intersection Conditions

Intersection	Opening Year Without Project		Opening Year With Project		Impact?
	Delay (a)	LOS (b)	Delay (a)	LOS (b)	
AM/PM Peak Hour					
1. Archer Street & 64 th Street	7.3/8.5	A/A	7.3/8.5	A/A	N/N
2. Archer Street & Kennedy Street	9.2/9.8	A/A	9.2/9.9	A/A	N/N
3. Kennedy Street & Studio Place	9.4/9.1	A/A	9.4/9.1	A/A	N/N
4. Lakeview Avenue & Studio Place	8.5/9.2	A/A	8.5/9.2	A/A	N/N

Notes:

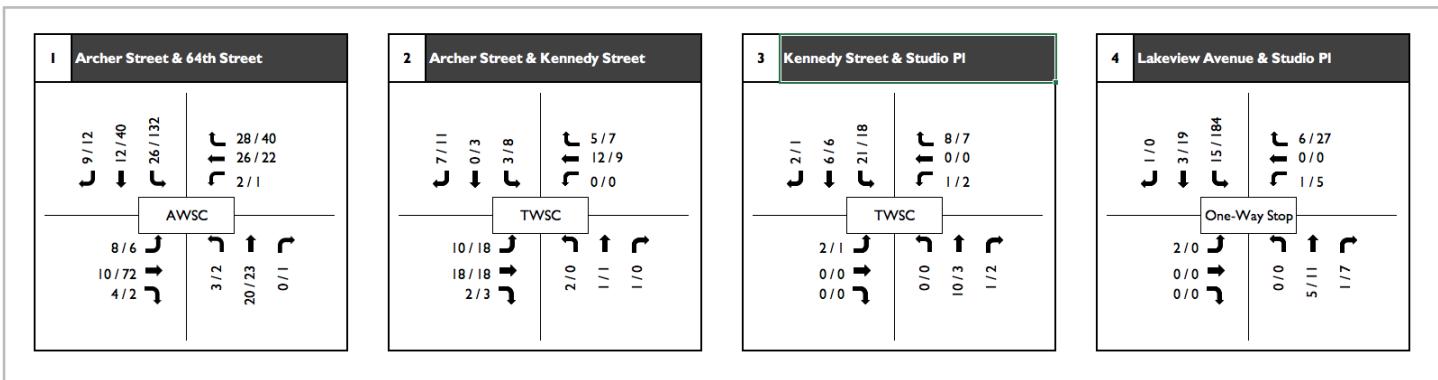
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At unsignalized intersections with side street stop control, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the Highway Capacity Manual 6th Edition and performed using Synchro 10.

ANALYSIS RESULTS

Per the analysis results shown in the above table, all intersections analyzed under Opening Year Conditions (2020) scenarios are determined to be operating at an acceptable level of service. Opening Year (2020) With and Without Project Synchro analysis sheets are provided in **Appendices D and E** respectively.

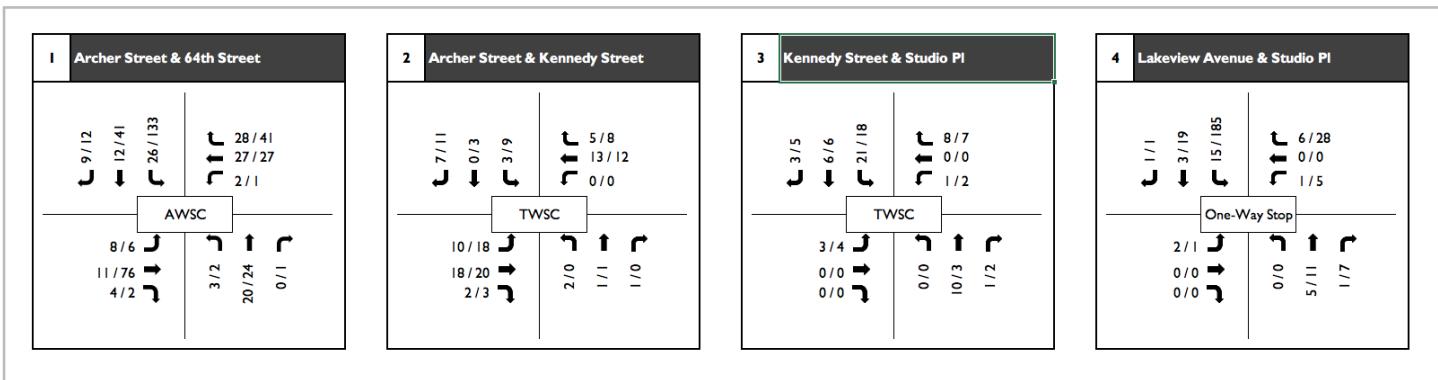




LEGEND

0/0 = (AM/PM) Peak Hour Volumes





LEGEND

0/0 = (AM/PM) Peak Hour Volumes



INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Page | 17

Horseshoe Lake Park

Opening Year (2020) with Project AM/PM
Peak Hour Volumes

Figure-4-2

APPENDIX A
TRAFFIC COUNT DATA

Wednesday, November 07, 2018

CITY: Jurupa

PROJECT: SC1951

ADT1 64th west of Kelsey

SUHSD UHG # \ ## Dp WG #DOF 11ho# 47#586#;;

AM Period	EB	WB	PM Period	EB	WB	
0:00	0	2	12:00	10	11	
0:15	0	0	12:15	10	10	
0:30	0	1	12:30	10	10	
0:45	2	2	12:45	4 34	9 40	74
1:00	2	1	13:00	13	16	
1:15	2	0	13:15	10	12	
1:30	0	0	13:30	14	7	
1:45	0 4	2 3	13:45	13 50	14 49	99
2:00	0	0	14:00	21	9	
2:15	0	2	14:15	10	15	
2:30	0	0	14:30	12	15	
2:45	0 0	2 4	14:45	9 52	15 54	106
3:00	1	3	15:00	8	23	
3:15	2	2	15:15	26	11	
3:30	2	1	15:30	19	12	
3:45	1 6	1 7	15:45	22 75	8 54	129
4:00	3	5	16:00	26	13	
4:15	0	3	16:15	42	6	
4:30	1	4	16:30	46	7	
4:45	5 9	6 18	16:45	46 160	13 39	199
5:00	3	4	17:00	46	14	
5:15	4	2	17:15	56	14	
5:30	2	4	17:30	43	17	
5:45	8 17	9 19	17:45	47 192	13 58	250
6:00	7	4	18:00	32	10	
6:15	2	3	18:15	29	11	
6:30	5	12	18:30	15	14	
6:45	7 21	9 28	18:45	7 83	6 41	124
7:00	9	18	19:00	5	5	
7:15	16	10	19:15	6	10	
7:30	10	7	19:30	5	7	
7:45	5 40	16 51	19:45	4 20	9 31	51
8:00	10	18	20:00	6	9	
8:15	12	14	20:15	5	6	
8:30	7	4	20:30	4	9	
8:45	9 38	11 47	20:45	3 18	4 28	46
9:00	3	9	21:00	1	4	
9:15	9	11	21:15	1	4	
9:30	2	6	21:30	1	1	
9:45	10 24	11 37	21:45	3 6	6 15	21
10:00	4	9	22:00	4	2	
10:15	3	11	22:15	3	3	
10:30	5	11	22:30	1	2	
10:45	6 18	4 35	22:45	3 11	3 10	21
11:00	8	6	23:00	5	6	
11:15	7	8	23:15	1	2	
11:30	3	9	23:30	3	3	
11:45	10 28	9 32	23:45	1 10	4 15	25
Total Vol.	207	286	493	711	434	1145
					Daily Totals	
				EB	WB	Combined
				918	720	1638
					PM	
Split %	42.0%	58.0%	30.1%	62.1%	37.9%	69.9%
Peak Hour	6:45	7:30	7:15	16:30	14:15	17:00
Volume	42	55	92	194	68	250
P.H.F.	0.66	0.76	0.82	1.00	0.74	0.89

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Wednesday, November 07, 2018

CITY: Jurupa

PROJECT: SC1951

ADT2 Archer north of 65th

SUHSD UHG # \ ## Dp WG #DOF 11ho# 47#586#;;;

AM Period	NB	SB	PM Period	NB	SB	
0:00	0	2	12:00	5	5	
0:15	2	0	12:15	5	4	
0:30	0	0	12:30	8	6	
0:45	0 2	0 2	4	12:45	8 26	6 21
						47
1:00	0	0	13:00	3	5	
1:15	0	1	13:15	3	7	
1:30	1	0	13:30	2	5	
1:45	0 1	0 1	2	13:45	7 15	8 25
						40
2:00	0	1	14:00	11	4	
2:15	0	1	14:15	7	7	
2:30	0	2	14:30	3	6	
2:45	1 1	0 4	5	14:45	5 26	5 22
						48
3:00	1	0	15:00	7	10	
3:15	1	0	15:15	2	8	
3:30	2	0	15:30	4	6	
3:45	3 7	0 0	7	15:45	3 16	3 27
						43
4:00	3	0	16:00	10	8	
4:15	4	0	16:15	7	6	
4:30	7	0	16:30	7	9	
4:45	2 16	0 0	16	16:45	7 31	10 33
						64
5:00	0	0	17:00	8	12	
5:15	2	2	17:15	11	9	
5:30	7	2	17:30	2	7	
5:45	6 15	2 6	21	17:45	5 26	8 36
						62
6:00	8	2	18:00	11	9	
6:15	6	8	18:15	4	16	
6:30	7	3	18:30	7	2	
6:45	7 28	1 14	42	18:45	5 27	10 37
						64
7:00	7	0	19:00	6	1	
7:15	6	5	19:15	2	11	
7:30	6	3	19:30	7	7	
7:45	5 24	4 12	36	19:45	6 21	12 31
						52
8:00	6	6	20:00	8	7	
8:15	5	5	20:15	4	6	
8:30	5	3	20:30	2	5	
8:45	2 18	2 16	34	20:45	5 19	5 23
						42
9:00	2	2	21:00	3	1	
9:15	6	3	21:15	3	1	
9:30	4	1	21:30	2	2	
9:45	4 16	2 8	24	21:45	0 8	2 6
						14
10:00	8	5	22:00	1	2	
10:15	2	4	22:15	2	2	
10:30	4	5	22:30	2	3	
10:45	6 20	8 22	42	22:45	1 6	3 10
						16
11:00	4	3	23:00	1	3	
11:15	1	6	23:15	0	1	
11:30	3	4	23:30	2	5	
11:45	2 10	5 18	28	23:45	2 5	4 13
						18
Total Vol.	158	103	261	226	284	510
						Daily Totals
				NB	SB	Combined
				384	387	771
						PM
Split %	60.5%	39.5%	33.9%	44.3%	55.7%	66.1%
Peak Hour	6:00	10:00	5:45	16:30	16:30	16:30
Volume	28	22	42	33	40	73
P.H.F.	0.88	0.69	0.75	0.94	0.83	0.91

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Wednesday, November 07, 2018

CITY: Jurupa

PROJECT: SC1951

ADT3 Kennedy east of Kelsey

SUHSD UHG #E\#D\p WG #DOF 11/07/47#586#;;

AM Period	EB	WB	PM Period	EB	WB	
0:00	0	0	12:00	4	2	
0:15	1	0	12:15	4	5	
0:30	0	0	12:30	3	6	
0:45	0 1	1 1	2	12:45	0 11 3 16	27
1:00	0	0	13:00	1	2	
1:15	0	0	13:15	4	4	
1:30	1	0	13:30	0	0	
1:45	0 1	1 1	2	13:45	2 7 7 13	20
2:00	0	0	14:00	2	4	
2:15	1	0	14:15	4	4	
2:30	1	0	14:30	0	5	
2:45	0 2	0 0	2	14:45	6 12 5 18	30
3:00	1	0	15:00	3	2	
3:15	0	0	15:15	2	3	
3:30	0	0	15:30	5	5	
3:45	1 2	0 0	2	15:45	7 17 4 14	31
4:00	0	0	16:00	2	4	
4:15	0	1	16:15	6	0	
4:30	1	3	16:30	5	1	
4:45	0 1	1 5	6	16:45	10 23 4 9	32
5:00	0	1	17:00	4	3	
5:15	0	0	17:15	7	3	
5:30	1	1	17:30	2	3	
5:45	1 2	1 3	5	17:45	5 18 4 13	31
6:00	1	1	18:00	7	7	
6:15	4	1	18:15	6	2	
6:30	0	1	18:30	2	6	
6:45	1 6	3 6	12	18:45	1 16 3 18	34
7:00	1	2	19:00	1	4	
7:15	5	3	19:15	7	3	
7:30	3	1	19:30	2	4	
7:45	1 10	1 7	17	19:45	1 11 4 15	26
8:00	9	3	20:00	2	2	
8:15	4	3	20:15	1	3	
8:30	4	4	20:30	2	0	
8:45	1 18	3 13	31	20:45	0 5 3 8	13
9:00	1	4	21:00	4	1	
9:15	2	3	21:15	0	0	
9:30	0	1	21:30	1	2	
9:45	3 6	3 11	17	21:45	0 5 2 5	10
10:00	3	3	22:00	0	0	
10:15	1	2	22:15	0	1	
10:30	3	3	22:30	0	0	
10:45	4 11	7 15	26	22:45	0 0 1 2	2
11:00	1	2	23:00	1	0	
11:15	0	2	23:15	0	0	
11:30	2	1	23:30	1	0	
11:45	3 6	3 8	14	23:45	0 2 0 0	2
Total Vol.	66	70	136	127	131	258
					Daily Totals	
				EB	WB	Combined
				193	201	394
					PM	
Split %	48.5%	51.5%	34.5%	49.2%	50.8%	65.5%
Peak Hour	7:15	11:45	8:00	16:30	13:45	17:45
Volume	18	16	31	26	20	39
P.H.F.	0.50	0.67	0.65	0.58	0.71	0.70

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Wednesday, November 07, 2018

CITY: Jurupa

PROJECT: SC1951

ADT4 Studio north of Kennedy

SUHSD UHG # \ ## D }p WG #DOF 1ho#;47#586#;;;

AM Period	NB	SB	PM Period	NB	SB		
0:00	0	0	12:00	4	1		
0:15	1	0	12:15	4	5		
0:30	0	0	12:30	5	3		
0:45	0 1	1 1	2	12:45	0 13	4 13	26
1:00	0	0	13:00	2	4		
1:15	0	0	13:15	2	5		
1:30	0	0	13:30	1	0		
1:45	0 0	1 1	1	13:45	0 5	3 12	17
2:00	0	0	14:00	2	2		
2:15	1	0	14:15	2	4		
2:30	1	0	14:30	2	10		
2:45	0 2	0 0	2	14:45	3 9	5 21	30
3:00	1	0	15:00	2	2		
3:15	0	0	15:15	3	3		
3:30	0	0	15:30	4	5		
3:45	1 2	0 0	2	15:45	3 12	3 13	25
4:00	1	0	16:00	2	3		
4:15	0	0	16:15	4	1		
4:30	2	0	16:30	6	3		
4:45	0 3	1 1	4	16:45	6 18	3 10	28
5:00	1	1	17:00	2	2		
5:15	0	0	17:15	3	2		
5:30	1	0	17:30	4	1		
5:45	1 3	0 1	4	17:45	2 11	2 7	18
6:00	1	1	18:00	4	5		
6:15	2	2	18:15	4	2		
6:30	2	0	18:30	2	5		
6:45	2 7	1 4	11	18:45	2 12	2 14	26
7:00	1	3	19:00	1	3		
7:15	6	1	19:15	5	5		
7:30	3	0	19:30	2	3		
7:45	0 10	0 4	14	19:45	0 8	2 13	21
8:00	4	1	20:00	1	1		
8:15	3	3	20:15	1	2		
8:30	2	3	20:30	0	0		
8:45	1 10	1 8	18	20:45	0 2	3 6	8
9:00	2	4	21:00	3	1		
9:15	1	1	21:15	0	1		
9:30	0	1	21:30	0	2		
9:45	2 5	2 8	13	21:45	0 3	1 5	8
10:00	2	1	22:00	0	0		
10:15	0	4	22:15	1	1		
10:30	4	3	22:30	0	1		
10:45	1 7	5 13	20	22:45	0 1	2 4	5
11:00	2	5	23:00	1	0		
11:15	1	3	23:15	1	0		
11:30	3	3	23:30	1	0		
11:45	2 8	1 12	20	23:45	0 3	0 0	3
Total Vol.	58	53	111	97	118	215	
					Daily Totals		
				NB	SB	Combined	
				155	171	326	
		AM			PM		
Split %	52.3%	47.7%	34.0%	45.1%	54.9%	66.0%	
Peak Hour	11:45	10:15	11:45	16:00	14:00	14:00	
Volume	15	17	25	18	21	30	
P.H.F.	0.75	0.85	0.69	0.75	0.53	0.63	

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

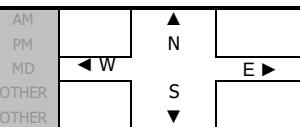
T218

DATE:
Wed, Nov 7, 18

LOCATION: Jurupa Valley
NORTH & SOUTH: Archer
EAST & WEST: 64th

PROJECT #: SC1951
LOCATION #: 1
CONTROL: STOP ALL

NOTES:



■ Add Up Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Archer			Archer			64th			64th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES	5	34	5	52	23	12	9	20	4	2	38	58	262
AM	0	1	0	0	0	0	0	0		0	1	0	0	5	5	0	0	0	0	5	5	34
7:00 AM	0	6	1	7	0	1	0	0		0	1	0	0	3	15	0	0	0	0	3	15	34
7:15 AM	1	3	3	9	5	2	1	4		1	4	0	0	5	5	0	0	0	0	5	5	38
7:30 AM	1	3	0	9	1	1	2	2		2	2	0	0	2	4	0	0	0	0	2	4	25
7:45 AM	1	5	0	1	2	4	5	1		1	1	1	1	8	6	0	0	0	0	8	6	35
8:00 AM	0	7	0	6	5	2	0	4		0	4	3	1	8	9	0	0	0	0	8	9	45
8:15 AM	1	4	0	9	4	2	1	3		1	3	0	0	7	8	0	0	0	0	7	8	39
8:30 AM	1	5	0	5	3	0	0	2		0	2	0	0	1	5	0	0	0	0	1	5	22
8:45 AM	0	1	1	6	3	0	0	3		0	3	0	0	4	6	0	0	0	0	4	6	24

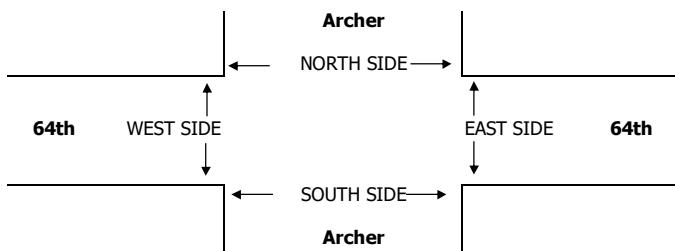
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	1	0	0	1
1	1	0	0	2

APPROACH %	11%	77%	11%	60%	26%	14%	27%	61%	12%	2%	39%	59%
APP/DEPART	44	/	102	87	/	30	33	/	76	98	/	54
BEGIN PEAK HR	7:30 AM											
VOLUMES	3	19	0	25	12	9	8	10	4	2	25	27
APPROACH %	14%	86%	0%	54%	26%	20%	36%	45%	18%	4%	46%	50%
PEAK HR FACTOR	0.786			0.767			0.786			0.750		
APP/DEPART	22	/	54	16	/	10	22	/	25	54	/	26

0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	4	0	0	4

APP/DEPART	22	/	54	46	/	19	22	/	55	54	/	56	0
4:00 PM	0	9	1	17	8	1	4	9	0	0	4	9	62
4:15 PM	0	8	0	18	6	2	3	27	1	0	2	5	72
4:30 PM	0	8	0	18	6	1	3	28	1	0	3	5	73
4:45 PM	2	6	0	35	10	3	3	17	1	0	6	7	90
5:00 PM	0	4	0	30	12	3	1	16	1	0	4	11	82
5:15 PM	0	10	1	38	10	2	1	17	0	0	5	9	93

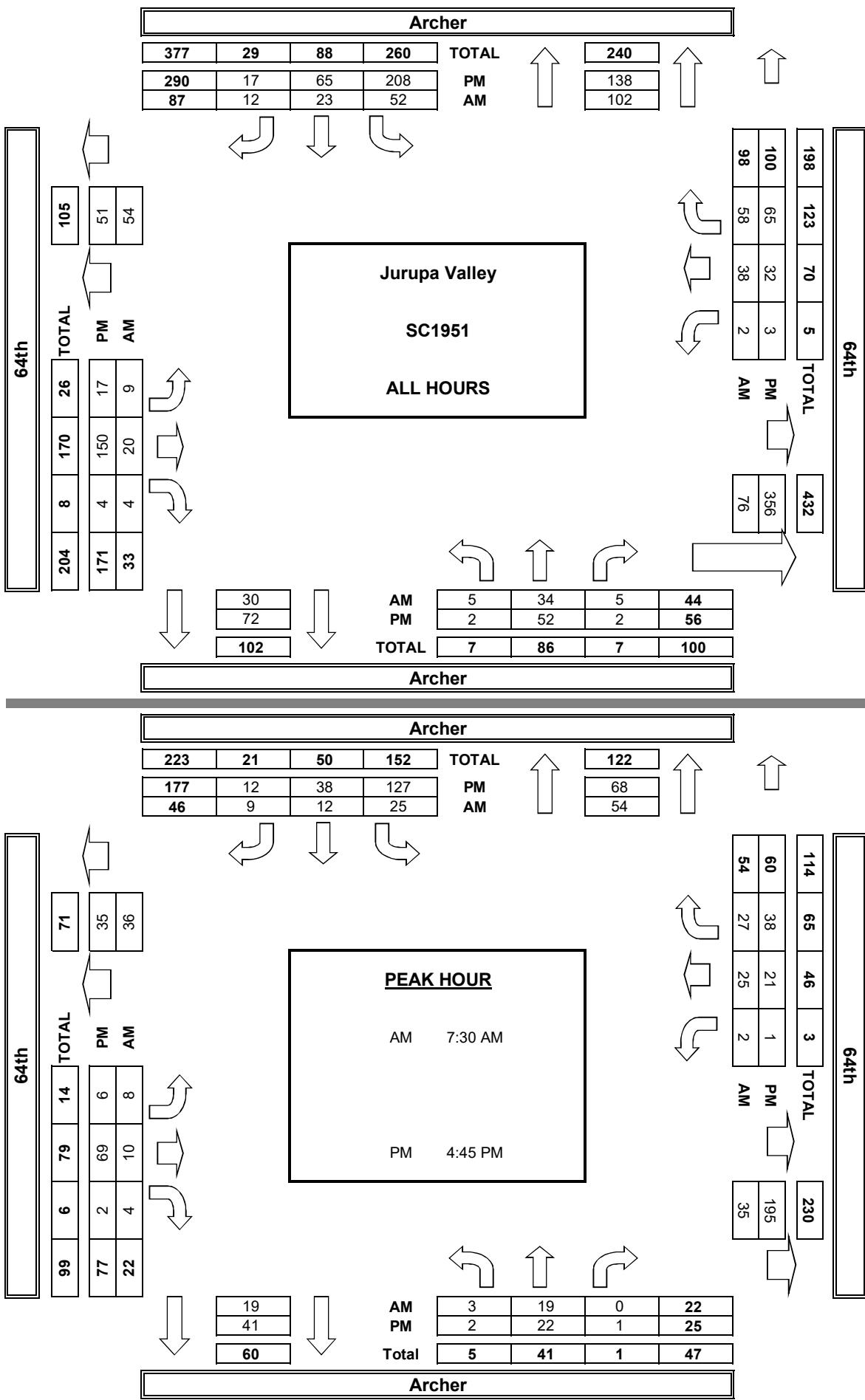
0	1	0	0	1
0	0	0	0	0
0	4	0	0	4



PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	2	1	4
0	0	1	0	1
0	2	0	2	4
0	0	0	0	0
0	0	0	2	2
0	0	2	2	4
0	0	0	1	1
0	0	0	0	0
1	2	5	8	16
7:30 AM				
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	1	2	2	5
4:45 PM				

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	1	1	2
0	0	0	0	0
0	2	0	2	4
0	0	0	0	0
0	0	0	2	2
0	0	2	2	4
0	0	0	1	1
0	0	0	0	0
0	2	3	8	13
0	2	2	6	10
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	1	2	0	3
0	1	0	0	1

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

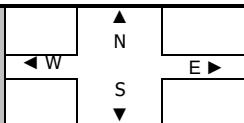
T218

DATE:
Wed, Nov 7, 18

LOCATION:
NORTH & SOUTH: Jurupa Valley
EAST & WEST: Archer
Kennedy

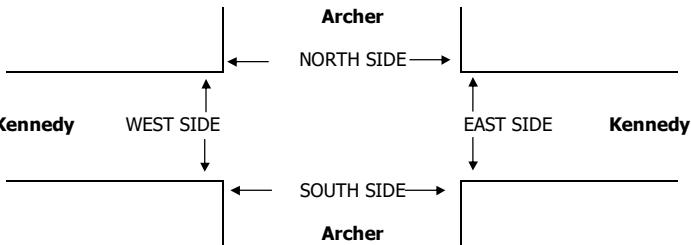
PROJECT #: SC1951
LOCATION #: 2
CONTROL: STOP N/S

NOTES:



Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					
	Archer			Archer			Kennedy			Kennedy				NB	SB	EB	WB	TTL	
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	
AM	7:00 AM	0	0	0	0	0	3	1	0	0	2	0	6	0	0	0	0	0	
	7:15 AM	0	0	0	2	0	1	3	0	0	1	2	11	0	0	0	0	0	
	7:30 AM	1	0	0	1	0	1	3	0	0	1	0	7	0	0	0	0	0	
	7:45 AM	2	0	0	0	2	3	1	1	0	1	0	10	0	0	0	0	0	
	8:00 AM	0	1	0	2	0	2	5	1	0	2	1	16	0	0	0	0	0	
	8:15 AM	0	0	1	1	0	4	8	0	0	4	1	21	0	0	0	0	0	
	8:30 AM	0	0	0	0	1	1	3	0	0	5	3	13	0	0	0	0	0	
	8:45 AM	0	0	0	1	0	0	0	0	0	3	0	5	0	0	0	0	0	
	VOLUMES	3	1	1	7	0	10	15	24	2	0	19	7	89	0	0	0	0	0
	APPROACH %	60%	20%	20%	41%	0%	59%	37%	59%	5%	0%	73%	27%						
PM	APP/DEPART	5	/	22	17	/	2	41	/	32	26	/	33	0	0	0	0	0	0
	BEGIN PEAK HR	7:45 AM																	
	VOLUMES	2	1	1	3	0	7	10	17	2	0	12	5	60	0	0	0	0	0
	APPROACH %	50%	25%	25%	30%	0%	70%	34%	59%	7%	0%	71%	29%						
	PEAK HR FACTOR	0.500			0.625			0.604			0.531			0.714					
	APP/DEPART	4	/	15	10	/	2	29	/	21	17	/	22	0	0	0	0	0	0
	4:00 PM	0	1	0	3	2	2	4	2	2	0	5	4	25	0	0	0	0	0
	4:15 PM	0	0	0	1	0	3	3	3	1	0	0	0	11	0	0	0	0	0
	4:30 PM	0	0	0	1	0	3	5	6	0	0	1	1	17	0	0	1	0	1
	4:45 PM	0	0	0	3	1	3	5	6	0	0	3	2	23	0	0	0	0	0
PM	5:00 PM	1	0	0	2	0	3	0	2	0	0	2	2	12	0	0	0	0	0
	5:15 PM	0	0	0	4	0	3	4	4	0	0	2	2	19	0	1	0	0	1
	5:30 PM	0	0	0	5	0	1	1	1	0	0	2	1	11	0	1	0	1	1
	5:45 PM	0	2	0	2	2	2	2	2	0	0	2	1	15	0	2	2	0	4
	VOLUMES	1	3	0	21	5	20	24	26	3	0	17	13	133	0	0	0	0	0
	APPROACH %	25%	75%	0%	46%	11%	43%	45%	49%	6%	0%	57%	43%						
	APP/DEPART	4	/	40	46	/	8	53	/	45	30	/	40	0	0	0	0	0	0
	BEGIN PEAK HR	4:00 PM																	
	VOLUMES	0	1	0	8	3	11	17	17	3	0	9	7	76	0	0	0	0	0
	APPROACH %	0%	100%	0%	36%	14%	50%	46%	46%	8%	0%	56%	44%						
	PEAK HR FACTOR	0.250			0.786			0.841			0.444			0.760					
	APP/DEPART	1	/	24	22	/	6	37	/	25	16	/	21	0	0	0	0	0	0

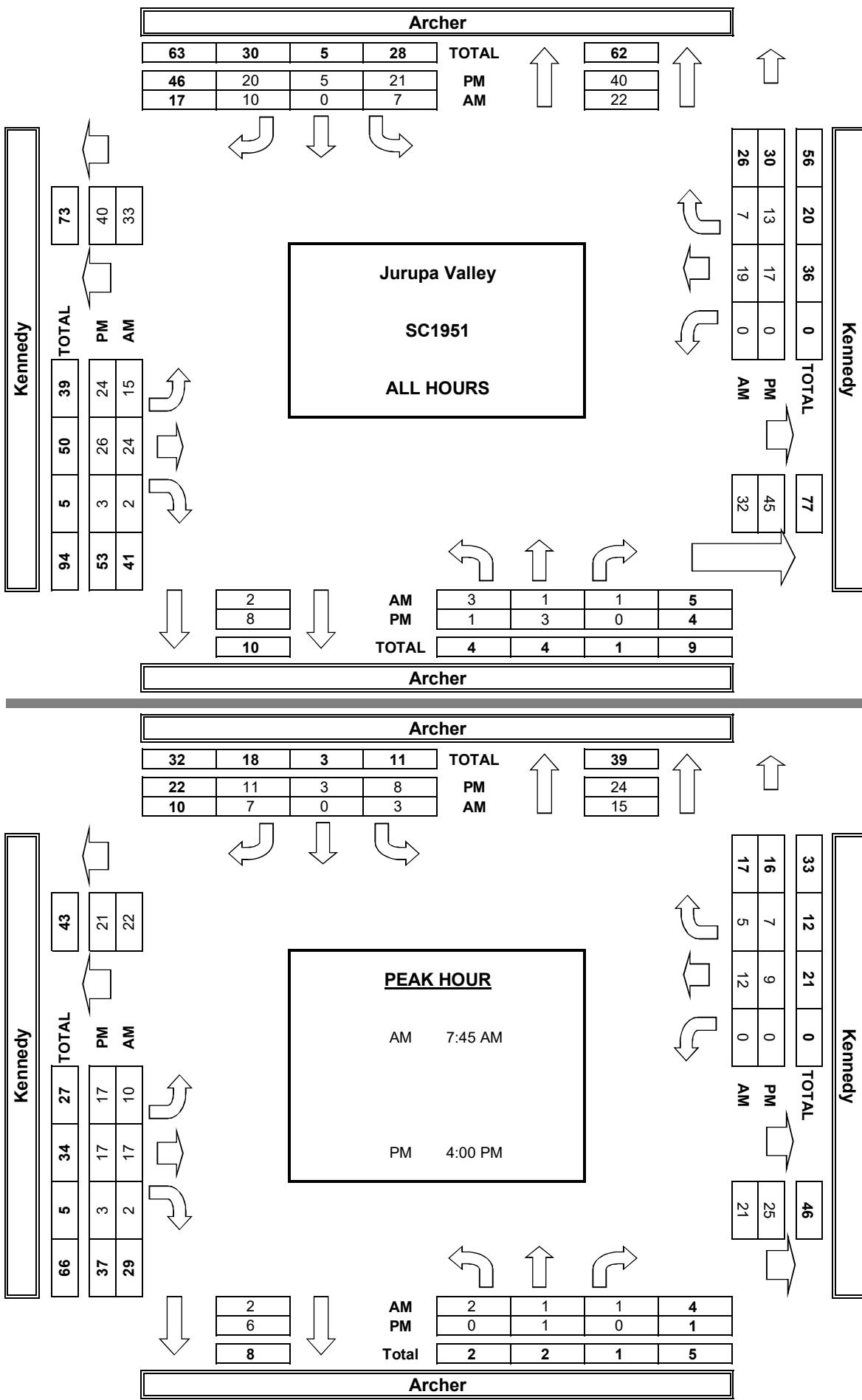


PEDESTRIAN + BIKE CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
AM	7:00 AM	0	1	0	1
	7:15 AM	0	2	0	2
	7:30 AM	0	0	0	0
	7:45 AM	0	0	0	0
	8:00 AM	0	0	0	0
	8:15 AM	1	3	6	10
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	TOTAL	1	6	6	13
	AM BEGIN PEAK HR	/:45 AM			
PM	4:00 PM	11	0	1	12
	4:15 PM	1	0	1	2
	4:30 PM	0	0	0	0
	4:45 PM	0	1	0	1
	5:00 PM	0	1	0	1
	5:15 PM	0	0	0	0
	5:30 PM	0	0	0	0
	5:45 PM	0	0	0	0
	TOTAL	12	2	2	16
	PM BEGIN PEAK HR	4:00 PM			

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
AM	7:00 AM	0	1	0	1
	7:15 AM	0	2	0	2
	7:30 AM	0	0	0	0
	7:45 AM	0	0	0	0
	8:00 AM	0	0	0	0
	8:15 AM	1	3	6	10
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	TOTAL	1	6	6	13
	AM BEGIN PEAK HR	/:45 AM			
PM	4:00 PM	11	0	1	12
	4:15 PM	0	0	0	0
	4:30 PM	0	0	0	0
	4:45 PM	0	1	0	1
	5:00 PM	0	1	0	1
	5:15 PM	0	0	0	0
	5:30 PM	0	0	0	0
	5:45 PM	0	0	0	0
	TOTAL	11	1	1	13
	PM BEGIN PEAK HR	4:00 PM			

BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
AM	7:00 AM	0	0	0	0
	7:15 AM	0	0	0	0
	7:30 AM	0	0	0	0
	7:45 AM	0	0	0	0
	8:00 AM	0	0	0	0
	8:15 AM	0	0	0	0
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	0
	TOTAL	0	0	0	0
	AM BEGIN PEAK HR	/:45 AM			
PM	4:00 PM	0	0	0	0
	4:15 PM	1	0	1	2
	4:30 PM	0	0	0	0
	4:45 PM	0	0	0	0
	5:00 PM	0	0	0	0
	5:15 PM	0	0	0	0
	5:30 PM	0	0	0	0
	5:45 PM	0	0	0	0
	TOTAL	1	0	1	2
	PM BEGIN PEAK HR	4:00 PM			

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

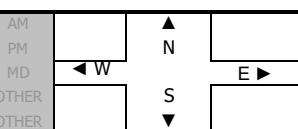
T218

DATE:
Wed, Nov 7, 18

LOCATION: Jurupa Valley
NORTH & SOUTH: Kennedy
EAST & WEST: Studio

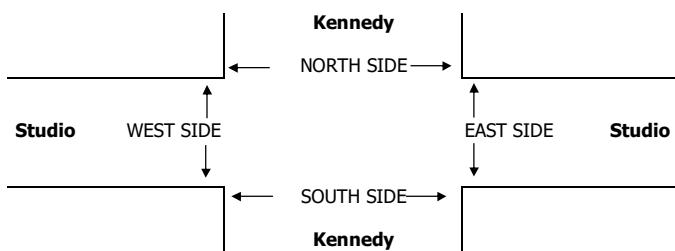
PROJECT #: SC1951
LOCATION #: 3
CONTROL: STOP W

NOTES:



■ Add `UITests` to `Info.plist`

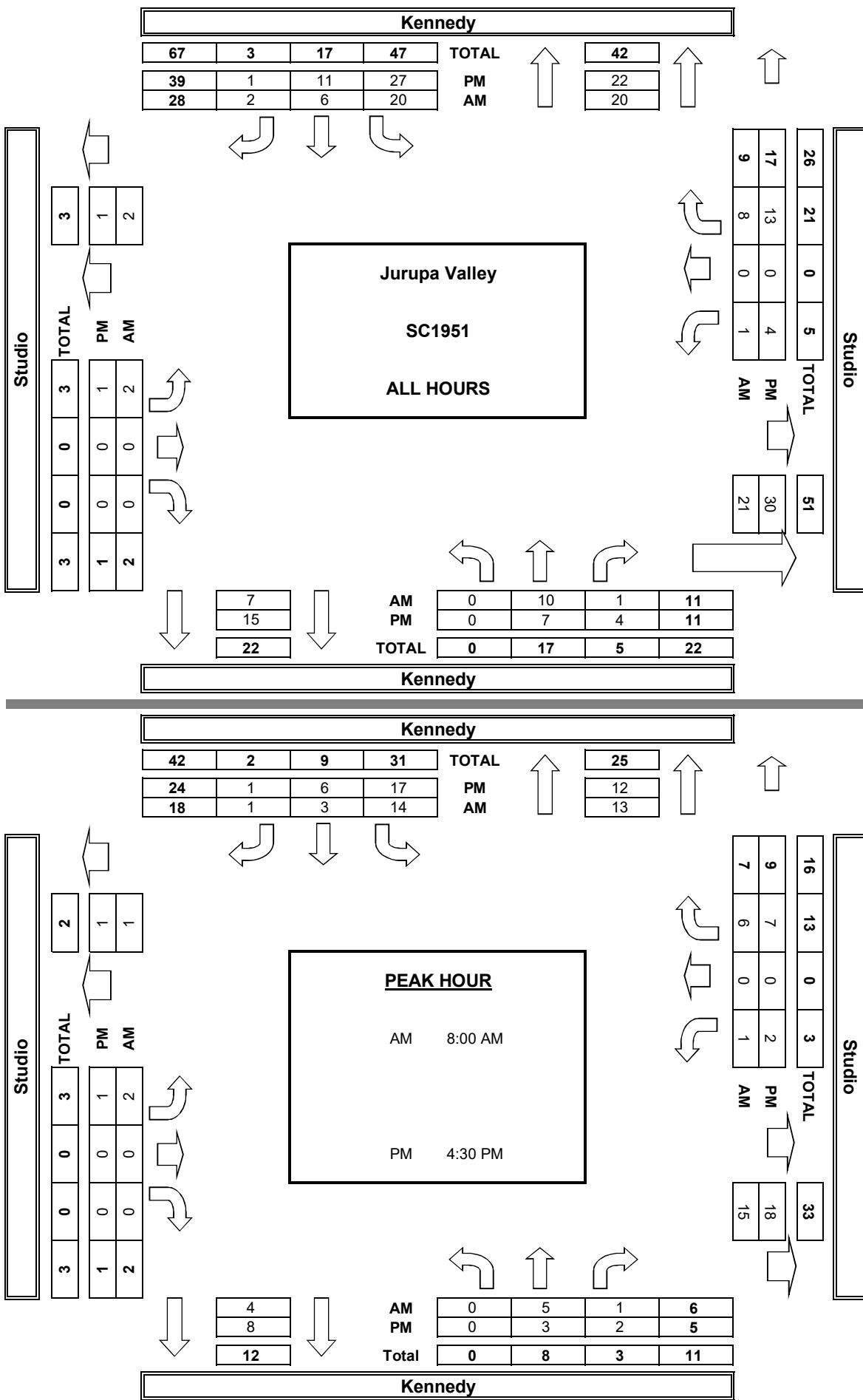
AM	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	Kennedy			Kennedy			Studio			Studio				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	
7:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	2	3
7:15 AM	0	3	0	2	2	1	0	0	0	0	0	0	0	8
7:30 AM	0	1	0	3	0	0	0	0	0	0	0	0	0	4
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
8:00 AM	0	2	0	7	2	0	0	0	0	0	0	0	1	12
8:15 AM	0	1	0	3	1	0	0	0	0	0	0	0	2	7
8:30 AM	0	1	1	4	0	0	1	0	0	1	0	0	2	10
8:45 AM	0	1	0	0	0	1	1	0	0	0	0	0	1	4
VOLUMES	0	10	1	20	6	2	2	0	0	1	0	8	50	
APPROACH %	0%	91%	9%	71%	21%	7%	100%	0%	0%	11%	0%	89%		
APP/DEPART	11	/	20	28	/	7	2	/	21	9	/	2	0	
BEGIN PEAK HR	8:00 AM			VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART	BEGIN PEAK HR	VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART	0.688	
	0	5	1	14	3	1	2	0	0	1	0	6	33	
	0%	83%	17%	78%	17%	6%	100%	0%	0%	14%	0%	86%		
	0.750			0.500			0.500		0.500	0.583				
APP/DEPART	6	/	13	18	/	4	2	/	15	7	/	1	0	
4:00 PM	0	1	0	2	0	0	0	0	0	0	0	3	6	
4:15 PM	0	0	0	4	2	0	0	0	0	1	0	0	7	
4:30 PM	0	0	1	5	0	0	0	0	0	1	0	1	8	
4:45 PM	0	1	1	5	4	0	0	0	0	1	0	3	15	
5:00 PM	0	1	0	3	1	0	0	0	0	0	0	2	7	
5:15 PM	0	1	0	4	1	1	1	0	0	0	0	1	9	
5:30 PM	0	0	2	2	0	0	0	0	0	0	0	2	6	
5:45 PM	0	3	0	2	3	0	0	0	0	1	0	1	10	
VOLUMES	0	7	4	27	11	1	1	0	0	4	0	13	68	
APPROACH %	0%	64%	36%	69%	28%	3%	100%	0%	0%	24%	0%	76%		
APP/DEPART	11	/	22	39	/	15	1	/	30	17	/	1	0	
BEGIN PEAK HR	4:30 PM			VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART	BEGIN PEAK HR	VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART	0.650	
	0	3	2	17	6	1	1	0	0	2	0	7	39	
	0%	60%	40%	71%	25%	4%	100%	0%	0%	22%	0%	78%		
	0.625			0.667			0.250		0.563					
APP/DEPART	5	/	12	24	/	8	1	/	18	9	/	1	0	



PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	2	0	2
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	1	1
0	0	0	0	0
0	0	3	3	6
8:00 AM				
0	0	0	4	4
0	0	0	1	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	5	6
4:30 PM				

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	1	1
0	0	0	0	0
0	0	2	3	5
0	0	0	3	3
0	0	0	4	4
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	4	5
0	0	1	0	1

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

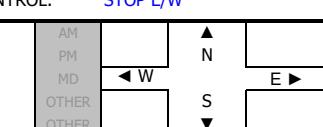
T218

DATE:
Wed, Nov 7, 18

LOCATION: Jurupa Valley
NORTH & SOUTH: Lakeview
EAST & WEST: Studio

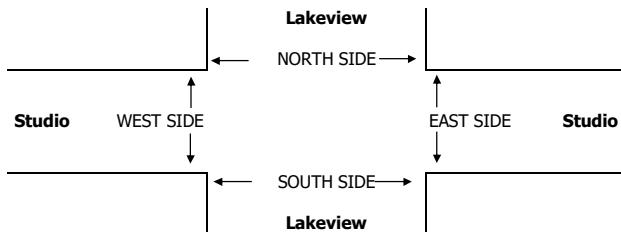
PROJECT #: SC1951
LOCATION #: 4
CONTROL: STOP E/W

NOTES:



• Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lakeview			Lakeview			Studio			Studio			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	0	0	2	9	2	0	0	0	1	0	14	28
	7:15 AM	0	2	2	12	1	0	0	0	1	0	5	23
	7:30 AM	0	4	3	8	4	0	0	0	3	0	4	26
	7:45 AM	0	4	3	0	1	0	0	0	2	0	19	29
	8:00 AM	0	3	1	4	2	0	0	0	6	0	15	31
	8:15 AM	0	3	1	7	0	0	0	0	1	0	8	20
	8:30 AM	0	0	1	4	1	0	0	0	2	0	6	14
	8:45 AM	0	1	1	8	0	0	0	0	1	0	12	23
	VOLUMES	0	17	14	52	11	0	0	0	17	0	83	194
	APPROACH %	0%	55%	45%	83%	17%	0%	0%	0%	17%	0%	83%	
PM	APP/DEPART	31	/	100	63	/	27	0	/	67	100	/	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	13	9	24	8	0	0	0	0	12	0	43
	APPROACH %	0%	59%	41%	75%	25%	0%	0%	0%	22%	0%	78%	109
	PEAK HR FACTOR	0.786			0.615			0.000		0.655			0.649
	APP/DEPART	22	/	56	32	/	19	0	/	34	55	/	0
	4:00 PM	0	2	0	21	5	0	0	0	0	0	7	35
	4:15 PM	0	1	0	45	2	0	0	0	1	0	5	54
	4:30 PM	0	2	4	47	3	0	0	0	4	0	5	65
	4:45 PM	0	4	2	47	3	0	0	0	1	0	7	64
PM	5:00 PM	0	1	0	42	6	0	0	0	0	0	7	56
	5:15 PM	0	4	1	41	6	0	0	0	0	0	7	59
	5:30 PM	0	2	0	41	5	0	0	0	2	0	9	59
	5:45 PM	0	2	1	44	2	0	0	0	2	0	7	58
	VOLUMES	0	18	8	328	32	0	0	0	10	0	54	450
	APPROACH %	0%	69%	31%	91%	9%	0%	0%	0%	16%	0%	84%	
	APP/DEPART	26	/	72	360	/	42	0	/	336	64	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	11	7	177	18	0	0	0	5	0	26	244
	APPROACH %	0%	61%	39%	91%	9%	0%	0%	0%	16%	0%	84%	
	PEAK HR FACTOR	0.643			0.956			0.000		0.705			0.813
	APP/DEPART	18	/	37	195	/	23	0	/	184	31	/	0

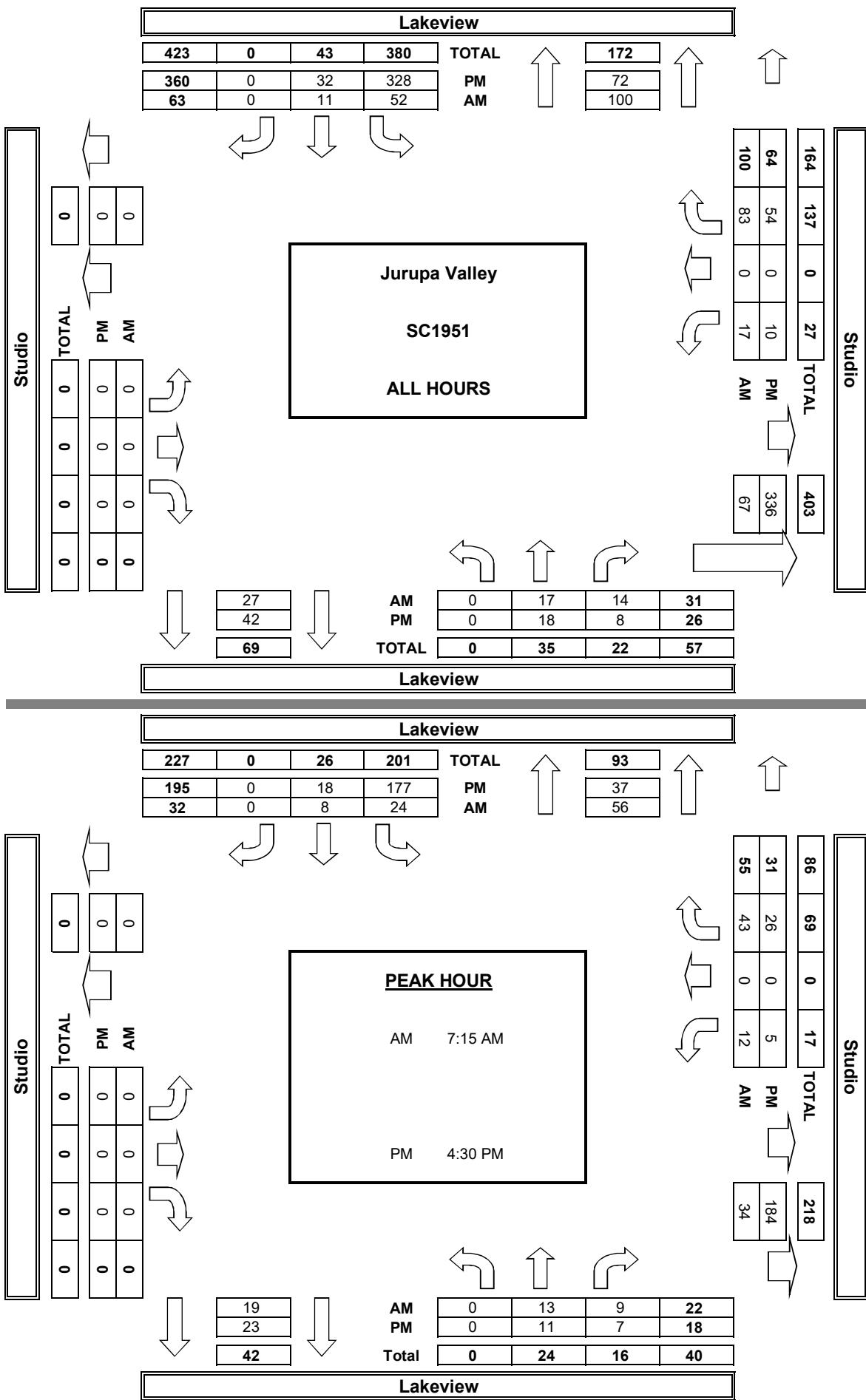


	PEDESTRIAN + BIKE CROSSINGS					
	N SIDE	S SIDE	E SIDE	W SIDE		
AM	7:00 AM	1	0	1	1	3
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	2	0	2
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	1	0	1
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	TOTAL	1	0	4	1	6
	AM BEGIN PEAK HR	7:15 AM				
PM	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	1	1	2
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	1	1
	5:45 PM	0	0	0	0	0
	TOTAL	0	0	1	2	3
	PM BEGIN PEAK HR	4:30 PM				

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
AM	0	0	0	1	1
	0	0	0	0	0
	0	0	2	0	2
	0	0	0	0	0
	0	0	0	0	0
	0	0	1	0	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	3	1	4
PM	0	0	2	0	2
	0	0	0	0	0
	0	0	0	1	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	1	1

BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
AM	1	0	1	0	2
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	1	0	1	0	2
	4:30 PM				
	0	0	0	0	0
PM	0	0	1	0	1
	0	0	1	0	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	1	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	1	1	2

AimTD LLC
TURNING MOVEMENT COUNTS



ADT Calculations For All Scenarios

Project total ADT 97 ADT

Growth Factor 2%/Year
(Compounded)

Location	Project Total ADT	Project Trip Distribution %	Project ADT	Exiting Roadway Segment ADT	Existing + Project Roadway Segment ADT	Opening Year Roadway Segment ADT	Opening Year + Project Roadway Segment ADT
64th Street/Lakeview Avenue between Archer Street and Studio Place	97	60%	58	1,638	1,696	1,704	1,762
Archer Street between 64th Street and Kennedy Street		10%	10	771	781	802	812
Kennedy Street between Archer Street and Studio Place		30%	29	394	423	410	439
Studio Place between Kennedy Street and Lakeview Avenue		40%	39	326	365	339	378

APPENDIX B
EXISTING (2018) CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	8	10	4	2	25	27	3	19	0	25	12	9
Future Vol, veh/h	8	10	4	2	25	27	3	19	0	25	12	9
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.79	0.79	0.79	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	13	5	3	33	36	4	24	0	32	16	12
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	7.3			7.2			7.4			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	36%	4%	54%
Vol Thru, %	86%	45%	46%	26%
Vol Right, %	0%	18%	50%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	22	54	46
LT Vol	3	8	2	25
Through Vol	19	10	25	12
RT Vol	0	4	27	9
Lane Flow Rate	28	28	72	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0.032	0.076	0.068
Departure Headway (Hd)	4.181	4.105	3.815	4.12
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	851	866	933	866
Service Time	2.231	2.159	1.863	2.164
HCM Lane V/C Ratio	0.033	0.032	0.077	0.069
HCM Control Delay	7.4	7.3	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	10	17	2	0	12	5	2	1	1	3	0	7
--------------------	----	----	---	---	----	---	---	---	---	---	---	---

Future Vol, veh/h	10	17	2	0	12	5	2	1	1	3	0	7
-------------------	----	----	---	---	----	---	---	---	---	---	---	---

Conflicting Peds, #/hr	1	0	3	3	0	1	0	0	6	6	0	0
------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	60	60	60	53	53	53	50	50	50	62	62	62
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	17	28	3	0	23	9	4	2	2	5	0	11
-----------	----	----	---	---	----	---	---	---	---	---	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	33	0	0	34	0	0	100	100	39	101	97	29
----------------------	----	---	---	----	---	---	-----	-----	----	-----	----	----

Stage 1	-	-	-	-	-	-	67	67	-	29	29	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	33	33	-	72	68	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1579	-	-	1578	-	-	881	790	1033	880	793	1046
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	943	839	-	988	871	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	983	868	-	938	838	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1577	-	-	1573	-	-	862	778	1024	863	781	1045
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	862	778	-	863	781	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	930	827	-	976	870	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	972	867	-	918	826	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.5	0	9.2	8.7
----------------------	-----	---	-----	-----

HCM LOS		A	A	
---------	--	---	---	--

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	873	1577	-	-	1573	-	-	983
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.009	0.011	-	-	-	-	-	-0.016
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.7
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

Intersection

Int Delay, s/veh 5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	0	1	0	8	0	10	1	20	6	2
Future Vol, veh/h	2	0	0	1	0	8	0	10	1	20	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	58	58	58	75	75	75	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	2	0	14	0	13	1	40	12	4

Major/Minor	Minor2	Minor1				Major1				Major2			
Conflicting Flow All	115	111	14	111	-	17	-	0	0	17	0	0	
Stage 1	94	94	-	17	-	-	-	-	-	-	-	-	
Stage 2	21	17	-	94	-	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	-2.218	-	-	
Pot Cap-1 Maneuver	862	779	1066	867	0	1062	0	-	-	1600	-	-	
Stage 1	913	817	-	1002	0	-	0	-	-	-	-	-	
Stage 2	998	881	-	913	0	-	0	-	-	-	-	-	
Platoon blocked, %													
Mov Cap-1 Maneuver	834	757	1066	848	-	1059	-	-	-	1595	-	-	
Mov Cap-2 Maneuver	834	757	-	848	-	-	-	-	-	-	-	-	
Stage 1	913	797	-	1002	-	-	-	-	-	-	-	-	
Stage 2	985	878	-	890	-	-	-	-	-	-	-	-	

Approach	EB	WB			NB	SB		
HCM Control Delay, s	0.3	8.5			0	5.2		
HCM LOS	A	A			A	A		
<hr/>								
Minor Lane/Major Mvmt	NBT	NBR	EBL	WBL	Ln1	SBL	SBT	SBR
Capacity (veh/h)	-	-	834	1031	1595	-	-	
HCM Lane V/C Ratio	-	-	0.005	0.015	0.025	-	-	
HCM Control Delay (s)	-	-	9.3	8.5	7.3	0	-	
HCM Lane LOS	-	-	A	A	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	0.1	-	-	

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	W	B		A		
Traffic Vol, veh/h	1	6	5	1	14	3
Future Vol, veh/h	1	6	5	1	14	3
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage #	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	6	1	22	5

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	58	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	49	-	-	-	-	-
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	049	1073	-	-	1611	-
Stage 1	1014	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	034	1071	-	-	1608	-
Mov Cap-2 Maneuver	034	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	8.5	0	6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
Capacity (veh/h)	-	-	1049	1608	-
HCM Lane V/C Ratio	-	-	0.01	0.014	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 8.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	69	2	1	21	38	2	22	1	127	38	12
Future Vol, veh/h	6	69	2	1	21	38	2	22	1	127	38	12
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.57	0.57	0.57	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	75	2	1	25	46	4	39	2	143	43	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			WB			NB			SB		
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	8.1			7.6			7.8			8.9		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	8%	2%	72%
Vol Thru, %	88%	90%	35%	21%
Vol Right, %	4%	3%	63%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	77	60	177
LT Vol	2	6	1	127
Through Vol	22	69	21	38
RT Vol	1	2	38	12
Lane Flow Rate	44	84	72	199
Geometry Grp	1	1	1	1
Degree of Util (X)	0.055	0.106	0.085	0.245
Departure Headway (Hd)	4.502	4.578	4.221	4.441
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	797	784	851	811
Service Time	2.521	2.596	2.237	2.456
HCM Lane V/C Ratio	0.055	0.107	0.085	0.245
HCM Control Delay	7.8	8.1	7.6	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.3	1

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	17	17	3	0	9	7	0	1	0	8	3	11
--------------------	----	----	---	---	---	---	---	---	---	---	---	----

Future Vol, veh/h	17	17	3	0	9	7	0	1	0	8	3	11
-------------------	----	----	---	---	---	---	---	---	---	---	---	----

Conflicting Peds, #/hr	11	0	1	1	0	11	0	0	1	1	0	0
------------------------	----	---	---	---	---	----	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	84	84	84	44	44	44	25	25	25	79	79	79
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	20	20	4	0	20	16	0	4	0	10	4	14
-----------	----	----	---	---	----	----	---	---	---	----	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	47	0	0	25	0	0	100	110	24	104	104	39
----------------------	----	---	---	----	---	---	-----	-----	----	-----	-----	----

Stage 1	-	-	-	-	-	-	63	63	-	39	39	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	37	47	-	65	65	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1560	-	-	1589	-	-	881	780	1052	876	786	1033
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	948	842	-	976	862	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	978	856	-	946	841	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1544	-	-	1587	-	-	856	761	1050	854	767	1022
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	856	761	-	854	767	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	935	830	-	954	853	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	960	847	-	928	829	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	4.4	0	9.8	9.1
----------------------	-----	---	-----	-----

HCM LOS	A	A	A	A
---------	---	---	---	---

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	761	1544	-	-	1587	-	-	915
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.005	0.013	-	-	-	-	-	0.03
--------------------	-------	-------	---	---	---	---	---	------

HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.1
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	1	0	0	2	0	7	0	3	2	17	6	1
Future Vol, veh/h	1	0	0	2	0	7	0	3	2	17	6	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	56	56	56	62	62	62	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	4	0	13	0	5	3	25	9	1

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	73	69	10	68	-	8	-	0
Stage 1	60	60	-	8	-	-	-	-
Stage 2	13	9	-	60	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	4.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-2.218
Pot Cap-1 Maneuver	822	1071	925	0	1074	0	-	1611
Stage 1	951	845	-	1013	0	-	0	-
Stage 2	1007	888	-	951	0	-	0	-
Platoon blocked, %								
Mov Cap-1 Maneuver	896	808	1071	913	-	1073	-	1609
Mov Cap-2 Maneuver	896	808	-	913	-	-	-	-
Stage 1	951	831	-	1013	-	-	-	-
Stage 2	995	887	-	936	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	8.5	0	5.2
HCM LOS	A	A	A	-
<hr/>				
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	896	1033
HCM Lane V/C Ratio	-	-	0.004	0.016
HCM Control Delay (s)	-	-	9	8.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	6.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	B			
Traffic Vol, veh/h	5	26	11	7	177	18
Future Vol, veh/h	5	26	11	7	177	18
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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	64	64	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	37	17	11	184	19
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	410	23	0	0	28	0
Stage 1	23	-	-	-	-	-
Stage 2	387	-	-	-	-	-
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	598	1054	-	-	1585	-
Stage 1	1000	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	528	1054	-	-	1585	-
Mov Cap-2 Maneuver	528	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.2	0	6.9			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBL	Ln1	SBL	SBT
Capacity (veh/h)	-	-	908	1585	-	-
HCM Lane V/C Ratio	-	-	0.049	0.116	-	-
HCM Control Delay (s)	-	-	9.2	7.6	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	-	-

APPENDIX C

EXISTING (2018) WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	8	11	4	2	26	27	3	19	0	25	12	9
Future Vol, veh/h	8	11	4	2	26	27	3	19	0	25	12	9
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.79	0.79	0.79	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	14	5	3	35	36	4	24	0	32	16	12
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	7.3			7.2			7.4			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	35%	4%	54%
Vol Thru, %	86%	48%	47%	26%
Vol Right, %	0%	17%	49%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	23	55	46
LT Vol	3	8	2	25
Through Vol	19	11	26	12
RT Vol	0	4	27	9
Lane Flow Rate	28	29	73	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0.033	0.078	0.068
Departure Headway (Hd)	4.185	4.108	3.821	4.124
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	850	865	931	864
Service Time	2.237	2.162	1.87	2.169
HCM Lane V/C Ratio	0.033	0.034	0.078	0.069
HCM Control Delay	7.4	7.3	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.3	0.2

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	10	17	2	0	13	5	2	1	1	3	0	7
--------------------	----	----	---	---	----	---	---	---	---	---	---	---

Future Vol, veh/h	10	17	2	0	13	5	2	1	1	3	0	7
-------------------	----	----	---	---	----	---	---	---	---	---	---	---

Conflicting Peds, #/hr	1	0	3	3	0	1	0	0	6	6	0	0
------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	60	60	60	53	53	53	50	50	50	62	62	62
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	17	28	3	0	25	9	4	2	2	5	0	11
-----------	----	----	---	---	----	---	---	---	---	---	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	35	0	0	34	0	0	102	102	39	103	99	31
----------------------	----	---	---	----	---	---	-----	-----	----	-----	----	----

Stage 1	-	-	-	-	-	-	67	67	-	31	31	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	35	35	-	72	68	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1576	-	-	1578	-	-	879	788	1033	877	791	1043
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	943	839	-	986	869	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	981	866	-	938	838	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1574	-	-	1573	-	-	860	776	1024	860	779	1042
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	860	776	-	860	779	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	930	827	-	974	868	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	970	865	-	918	826	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.5	0	9.2	8.7
----------------------	-----	---	-----	-----

HCM LOS		A	A	
---------	--	---	---	--

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	871	1574	-	-	1573	-	-	980
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.009	0.011	-	-	-	-	-	-0.016
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.7
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	2	0	0	1	0	9	0	10	1	21	6	2
Future Vol, veh/h	2	0	0	1	0	9	0	10	1	21	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	58	58	58	75	75	75	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	2	0	16	0	13	1	42	12	4

Major/Minor	Minor2	Minor1				Major1				Major2			
Conflicting Flow All	120	115	14	115	-	17	-	0	0	17	0	0	
Stage 1	98	98	-	17	-	-	-	-	-	-	-	-	
Stage 2	22	17	-	98	-	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	-2.218	-	-	
Pot Cap-1 Maneuver	855	775	1066	862	0	1062	0	-	-	1600	-	-	
Stage 1	908	814	-	1002	0	-	0	-	-	-	-	-	
Stage 2	996	881	-	908	0	-	0	-	-	-	-	-	
Platoon blocked, %													
Mov Cap-1 Maneuver	825	752	1066	842	-	1059	-	-	-	1595	-	-	
Mov Cap-2 Maneuver	825	752	-	842	-	-	-	-	-	-	-	-	
Stage 1	908	792	-	1002	-	-	-	-	-	-	-	-	
Stage 2	981	878	-	883	-	-	-	-	-	-	-	-	

Approach	EB	WB			NB	SB		
HCM Control Delay, s	0.4	8.5			0	5.3		
HCM LOS	A	A			A	A		
<hr/>								
Minor Lane/Major Mvmt	NBT	NBR	EBL	WBL	Ln1	SBL	SBT	SBR
Capacity (veh/h)	-	-	825	1032	1595	-	-	
HCM Lane V/C Ratio	-	-	0.005	0.017	0.026	-	-	
HCM Control Delay (s)	-	-	9.4	8.5	7.3	0	-	
HCM Lane LOS	-	-	A	A	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-	-	

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	W	B		A		
Traffic Vol, veh/h	1	6	5	1	14	3
Future Vol, veh/h	1	6	5	1	14	3
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage #	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	6	1	22	5

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	58	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	49	-	-	-	-	-
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	0	49	1073	-	1611	-
Stage 1	1014	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	0	34	1071	-	1608	-
Mov Cap-2 Maneuver	0	34	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	8.5	0	6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
Capacity (veh/h)	-	-	1049	1608	-
HCM Lane V/C Ratio	-	-	0.01	0.014	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 8.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	73	2	1	26	39	2	23	1	128	39	12
Future Vol, veh/h	6	73	2	1	26	39	2	23	1	128	39	12
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.57	0.57	0.57	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	79	2	1	31	47	4	40	2	144	44	13
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	8.2			7.7			7.8			9		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	7%	2%	72%
Vol Thru, %	88%	90%	39%	22%
Vol Right, %	4%	2%	59%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	81	66	179
LT Vol	2	6	1	128
Through Vol	23	73	26	39
RT Vol	1	2	39	12
Lane Flow Rate	46	88	80	201
Geometry Grp	1	1	1	1
Degree of Util (X)	0.057	0.112	0.094	0.25
Departure Headway (Hd)	4.534	4.599	4.263	4.47
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	781	842	804
Service Time	2.556	2.618	2.282	2.487
HCM Lane V/C Ratio	0.058	0.113	0.095	0.25
HCM Control Delay	7.8	8.2	7.7	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.3	1

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	17	19	3	0	12	8	0	1	0	9	3	11
--------------------	----	----	---	---	----	---	---	---	---	---	---	----

Future Vol, veh/h	17	19	3	0	12	8	0	1	0	9	3	11
-------------------	----	----	---	---	----	---	---	---	---	---	---	----

Conflicting Peds, #/hr	11	0	1	1	0	11	0	0	1	1	0	0
------------------------	----	---	---	---	---	----	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	84	84	84	44	44	44	25	25	25	79	79	79
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	20	23	4	0	27	18	0	4	0	11	4	14
-----------	----	----	---	---	----	----	---	---	---	----	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	56	0	0	28	0	0	111	122	27	115	115	47
----------------------	----	---	---	----	---	---	-----	-----	----	-----	-----	----

Stage 1	-	-	-	-	-	-	66	66	-	47	47	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	45	56	-	68	68	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1549	-	-	1585	-	-	867	768	1048	862	775	1022
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	945	840	-	967	856	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	969	848	-	942	838	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1533	-	-	1583	-	-	843	750	1046	840	756	1011
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	843	750	-	840	756	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	932	828	-	945	847	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	951	840	-	924	826	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.2	0	9.8	9.1
----------------------	-----	---	-----	-----

HCM LOS	A	A	A	A
---------	---	---	---	---

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	750	1533	-	-	1583	-	-	900
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.005	0.013	-	-	-	-	-	-0.032
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.1
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

Intersection

Int Delay, s/veh 6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	1	0	0	2	0	11	0	3	2	20	6	1
--------------------	---	---	---	---	---	----	---	---	---	----	---	---

Future Vol, veh/h	1	0	0	2	0	11	0	3	2	20	6	1
-------------------	---	---	---	---	---	----	---	---	---	----	---	---

Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	25	25	25	56	56	56	62	62	62	67	67	67
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	4	0	0	4	0	20	0	5	3	30	9	1
-----------	---	---	---	---	---	----	---	---	---	----	---	---

Major/Minor	Minor2	Minor1			Major1		Major2		
-------------	--------	--------	--	--	--------	--	--------	--	--

Conflicting Flow All	87	79	10	78	-	8	-	0	0	9	0	0
----------------------	----	----	----	----	---	---	---	---	---	---	---	---

Stage 1	70	70	-	8	-	-	-	-	-	-	-	-
---------	----	----	---	---	---	---	---	---	---	---	---	---

Stage 2	17	9	-	70	-	-	-	-	-	-	-	-
---------	----	---	---	----	---	---	---	---	---	---	---	---

Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-
---------------	------	------	------	------	---	------	---	---	---	------	---	---

Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
---------------------	------	------	---	------	---	---	---	---	---	---	---	---

Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
---------------------	------	------	---	------	---	---	---	---	---	---	---	---

Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	2.218	-	-
----------------	-------	-------	-------	-------	---	-------	---	---	---	-------	---	---

Pot Cap-1 Maneuve	899	811	1071	911	0	1074	0	-	-	1611	-	-
-------------------	-----	-----	------	-----	---	------	---	---	---	------	---	---

Stage 1	940	837	-	1013	0	-	0	-	-	-	-	-
---------	-----	-----	---	------	---	---	---	---	---	---	---	---

Stage 2	1002	888	-	940	0	-	0	-	-	-	-	-
---------	------	-----	---	-----	---	---	---	---	---	---	---	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuve	69	795	1071	897	-	1073	-	-	-	1609	-	-
-------------------	----	-----	------	-----	---	------	---	---	---	------	---	---

Mov Cap-2 Maneuve	69	795	-	897	-	-	-	-	-	-	-	-
-------------------	----	-----	---	-----	---	---	---	---	---	---	---	---

Stage 1	940	821	-	1013	-	-	-	-	-	-	-	-
---------	-----	-----	---	------	---	---	---	---	---	---	---	---

Stage 2	984	887	-	922	-	-	-	-	-	-	-	-
---------	-----	-----	---	-----	---	---	---	---	---	---	---	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	9.2	8.5	0	5.4
----------------------	-----	-----	---	-----

HCM LOS	A	A	A	-
---------	---	---	---	---

Minor Lane/Major Mvmt	NBT	NBR	EBL	Ln1	WBL	Ln1	SBL	SBT	SBR
-----------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----

Capacity (veh/h)	-	-	869	1042	1609	-	-	-	-
------------------	---	---	-----	------	------	---	---	---	---

HCM Lane V/C Ratio	-	-	0.005	0.022	0.019	-	-	-	-
--------------------	---	---	-------	-------	-------	---	---	---	---

HCM Control Delay (s)	-	-	9.2	8.5	7.3	0	-	-	-
-----------------------	---	---	-----	-----	-----	---	---	---	---

HCM Lane LOS	-	-	A	A	A	A	-	-	-
--------------	---	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-	-	-	-
-----------------------	---	---	---	-----	-----	---	---	---	---

Intersection

Int Delay, s/veh 6.6

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	6	27	11	8	178	18
Future Vol, veh/h	6	27	11	8	178	18
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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	64	64	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	39	17	13	185	19

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	413	24	0	0	30	0
Stage 1	24	-	-	-	-	-
Stage 2	389	-	-	-	-	-
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	595	1052	-	-	1583	-
Stage 1	999	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	525	1052	-	-	1583	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	9.3	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
Capacity (veh/h)	-	-	890	1583	-
HCM Lane V/C Ratio	-	-	0.053	0.117	-
HCM Control Delay (s)	-	-	9.3	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.4	-

APPENDIX D

OPENING YEAR (2020) CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	4	2	26	28	3	20	0	26	12	9
Future Vol, veh/h	8	10	4	2	26	28	3	20	0	26	12	9
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.79	0.79	0.79	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	13	5	3	35	37	4	25	0	34	16	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			EB			NB			SB		
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	7.3			7.2			7.4			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	36%	4%	55%
Vol Thru, %	87%	45%	46%	26%
Vol Right, %	0%	18%	50%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	22	56	47
LT Vol	3	8	2	26
Through Vol	20	10	26	12
RT Vol	0	4	28	9
Lane Flow Rate	29	28	75	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.034	0.032	0.079	0.07
Departure Headway (Hd)	4.185	4.111	3.818	4.13
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	850	864	931	863
Service Time	2.238	2.169	1.871	2.176
HCM Lane V/C Ratio	0.034	0.032	0.081	0.071
HCM Control Delay	7.4	7.3	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.3	0.2

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	10	18	2	0	12	5	2	1	1	3	0	7
--------------------	----	----	---	---	----	---	---	---	---	---	---	---

Future Vol, veh/h	10	18	2	0	12	5	2	1	1	3	0	7
-------------------	----	----	---	---	----	---	---	---	---	---	---	---

Conflicting Peds, #/hr	1	0	3	3	0	1	0	0	6	6	0	0
------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	60	60	60	53	53	53	50	50	50	62	62	62
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	17	30	3	0	23	9	4	2	2	5	0	11
-----------	----	----	---	---	----	---	---	---	---	---	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	33	0	0	36	0	0	102	102	41	103	99	29
----------------------	----	---	---	----	---	---	-----	-----	----	-----	----	----

Stage 1	-	-	-	-	-	-	69	69	-	29	29	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	33	33	-	74	70	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1579	-	-	1575	-	-	879	788	1030	877	791	1046
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	941	837	-	988	871	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	983	868	-	935	837	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1577	-	-	1571	-	-	860	776	1021	860	779	1045
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	860	776	-	860	779	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	928	825	-	976	870	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	972	867	-	915	825	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.4	0	9.2	8.7
----------------------	-----	---	-----	-----

HCM LOS		A	A	
---------	--	---	---	--

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	871	1577	-	-	1571	-	-	982
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.009	0.011	-	-	-	-	-	-0.016
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.7
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	2	0	0	1	0	8	0	10	1	21	6	2
Future Vol, veh/h	2	0	0	1	0	8	0	10	1	21	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	58	58	58	75	75	75	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	2	0	14	0	13	1	42	12	4

Major/Minor	Minor2	Minor1				Major1		Major2				
Conflicting Flow All	119	115	14	115	-	17	-	0	0	17	0	0
Stage 1	98	98	-	17	-	-	-	-	-	-	-	-
Stage 2	21	17	-	98	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	-2.218	-	-
Pot Cap-1 Maneuver	857	775	1066	862	0	1062	0	-	-	1600	-	-
Stage 1	908	814	-	1002	0	-	0	-	-	-	-	-
Stage 2	998	881	-	908	0	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	829	752	1066	842	-	1059	-	-	-	1595	-	-
Mov Cap-2 Maneuver	829	752	-	842	-	-	-	-	-	-	-	-
Stage 1	908	792	-	1002	-	-	-	-	-	-	-	-
Stage 2	985	878	-	883	-	-	-	-	-	-	-	-

Approach	EB	WB			NB	SB		
HCM Control Delay, s	0.4	8.5			0	5.3		
HCM LOS	A	A			A	A		
<hr/>								
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR	
Capacity (veh/h)	-	-	829	1030	1595	-	-	
HCM Lane V/C Ratio	-	-	0.005	0.015	0.026	-	-	
HCM Control Delay (s)	-	-	9.4	8.5	7.3	0	-	
HCM Lane LOS	-	-	A	A	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	0.1	-	-	

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	W	B		A		
Traffic Vol, veh/h	1	6	5	1	15	3
Future Vol, veh/h	1	6	5	1	15	3
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage #	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	6	1	23	5

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	60	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	51	-	-	-	-	-
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	047	1073	-	-	1611	-
Stage 1	1014	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	032	1071	-	-	1608	-
Mov Cap-2 Maneuver	032	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	8.5	0	6.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
Capacity (veh/h)	-	-	1049	1608	-
HCM Lane V/C Ratio	-	-	0.01	0.015	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 8.5

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	72	2	1	22	40	2	23	1	132	40	12
Future Vol, veh/h	6	72	2	1	22	40	2	23	1	132	40	12
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.57	0.57	0.57	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	78	2	1	27	48	4	40	2	148	45	13
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	8.2			7.7			7.8			9		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	7%	2%	72%
Vol Thru, %	88%	90%	35%	22%
Vol Right, %	4%	3%	63%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	80	63	184
LT Vol	2	6	1	132
Through Vol	23	72	22	40
RT Vol	1	2	40	12
Lane Flow Rate	46	87	76	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.057	0.111	0.09	0.256
Departure Headway (Hd)	4.53	4.607	4.247	4.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	779	845	806
Service Time	2.552	2.626	2.266	2.479
HCM Lane V/C Ratio	0.058	0.112	0.09	0.257
HCM Control Delay	7.8	8.2	7.7	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.3	1

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	18	18	3	0	9	7	0	1	0	8	3	11
--------------------	----	----	---	---	---	---	---	---	---	---	---	----

Future Vol, veh/h	18	18	3	0	9	7	0	1	0	8	3	11
-------------------	----	----	---	---	---	---	---	---	---	---	---	----

Conflicting Peds, #/hr	11	0	1	1	0	11	0	0	1	1	0	0
------------------------	----	---	---	---	---	----	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	84	84	84	44	44	44	25	25	25	79	79	79
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	21	21	4	0	20	16	0	4	0	10	4	14
-----------	----	----	---	---	----	----	---	---	---	----	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	47	0	0	26	0	0	103	113	25	107	107	39
----------------------	----	---	---	----	---	---	-----	-----	----	-----	-----	----

Stage 1	-	-	-	-	-	-	66	66	-	39	39	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	37	47	-	68	68	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1560	-	-	1588	-	-	877	777	1051	872	783	1033
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	945	840	-	976	862	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	978	856	-	942	838	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1544	-	-	1586	-	-	852	758	1049	849	763	1022
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	852	758	-	849	763	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	931	827	-	953	853	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	960	847	-	923	825	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	4.12	0	9.8	9.1
----------------------	------	---	-----	-----

HCM LOS	A	A	A	A
---------	---	---	---	---

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	758	1544	-	-	1586	-	-	912
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.005	0.014	-	-	-	-	-	-0.031
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.1
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	1	0	0	2	0	7	0	3	2	18	6	1
Future Vol, veh/h	1	0	0	2	0	7	0	3	2	18	6	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	56	56	56	62	62	62	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	4	0	13	0	5	3	27	9	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	77	73	10	72	-	8	-	0	0	9	0	0
Stage 1	64	64	-	8	-	-	-	-	-	-	-	-
Stage 2	13	9	-	64	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	-2.218	-	-
Pot Cap-1 Maneuve	0	12	817	1071	919	0	1074	0	-	-	1611	-
Stage 1	947	842	-	1013	0	-	0	-	-	-	-	-
Stage 2	1007	888	-	947	0	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuve	890	802	1071	906	-	1073	-	-	-	1609	-	-
Mov Cap-2 Maneuve	890	802	-	906	-	-	-	-	-	-	-	-
Stage 1	947	828	-	1013	-	-	-	-	-	-	-	-
Stage 2	995	887	-	931	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	8.5	0	5.2
HCM LOS	A	A	A	-
<hr/>				
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	890	1031
HCM Lane V/C Ratio	-	-	0.004	0.016
HCM Control Delay (s)	-	-	9.1	8.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1

Intersection

Int Delay, s/veh 6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations						
Traffic Vol, veh/h	5	27	11	7	184	19
Future Vol, veh/h	5	27	11	7	184	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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	64	64	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	39	17	11	192	20

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	427	23	0	0	28	0
Stage 1	23	-	-	-	-	-
Stage 2	404	-	-	-	-	-
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	584	1054	-	-	1585	-
Stage 1	1000	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	13	1054	-	-	1585	-
Mov Cap-2 Maneuver	13	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	9.2	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBL	BLn1	SBL	SBT
-----------------------	-----	-----	-----	------	-----	-----

Capacity (veh/h)	-	-	905	1585	-	-
HCM Lane V/C Ratio	-	-	0.051	0.121	-	-
HCM Control Delay (s)	-	-	9.2	7.6	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	-	-

APPENDIX E

OPENING YEAR (2020) WITH PROJECT CONDITIONS PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	11	4	2	27	28	3	20	0	26	12	9
Future Vol, veh/h	8	11	4	2	27	28	3	20	0	26	12	9
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.79	0.79	0.79	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	14	5	3	36	37	4	25	0	34	16	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			WB			NB			SB		
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	7.3			7.2			7.4			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	35%	4%	55%
Vol Thru, %	87%	48%	47%	26%
Vol Right, %	0%	17%	49%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	23	57	47
LT Vol	3	8	2	26
Through Vol	20	11	27	12
RT Vol	0	4	28	9
Lane Flow Rate	29	29	76	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.034	0.033	0.081	0.07
Departure Headway (Hd)	4.19	4.114	3.824	4.136
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	849	863	929	862
Service Time	2.244	2.173	1.877	2.181
HCM Lane V/C Ratio	0.034	0.034	0.082	0.071
HCM Control Delay	7.4	7.3	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.3	0.2

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	10	18	2	0	13	5	2	1	1	3	0	7
--------------------	----	----	---	---	----	---	---	---	---	---	---	---

Future Vol, veh/h	10	18	2	0	13	5	2	1	1	3	0	7
-------------------	----	----	---	---	----	---	---	---	---	---	---	---

Conflicting Peds, #/hr	1	0	3	3	0	1	0	0	6	6	0	0
------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	60	60	60	53	53	53	50	50	50	62	62	62
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	17	30	3	0	25	9	4	2	2	5	0	11
-----------	----	----	---	---	----	---	---	---	---	---	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	35	0	0	36	0	0	104	104	41	105	101	31
----------------------	----	---	---	----	---	---	-----	-----	----	-----	-----	----

Stage 1	-	-	-	-	-	-	69	69	-	31	31	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	35	35	-	74	70	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1576	-	-	1575	-	-	876	786	1030	875	789	1043
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	941	837	-	986	869	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	981	866	-	935	837	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1574	-	-	1571	-	-	857	774	1021	858	777	1042
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	857	774	-	858	777	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	928	825	-	974	868	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	970	865	-	915	825	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.4	0	9.2	8.7
----------------------	-----	---	-----	-----

HCM LOS		A	A	
---------	--	---	---	--

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	869	1574	-	-	1571	-	-	979
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.009	0.011	-	-	-	-	-	-0.016
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.7
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	3	0	0	1	0	8	0	10	1	21	6	3
Future Vol, veh/h	3	0	0	1	0	8	0	10	1	21	6	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	58	58	58	75	75	75	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	2	0	14	0	13	1	42	12	6

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	120	116	15	116	-	17	-	0	0	17	0	0
Stage 1	99	99	-	17	-	-	-	-	-	-	-	-
Stage 2	21	17	-	99	-	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-	-	-2.218	-	-
Pot Cap-1 Maneuver	855	774	1065	861	0	1062	0	-	-	1600	-	-
Stage 1	907	813	-	1002	0	-	0	-	-	-	-	-
Stage 2	998	881	-	907	0	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	27	751	1065	841	-	1059	-	-	-	1595	-	-
Mov Cap-2 Maneuver	27	751	-	841	-	-	-	-	-	-	-	-
Stage 1	907	791	-	1002	-	-	-	-	-	-	-	-
Stage 2	985	878	-	883	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	8.6	0	5.1
HCM LOS	A	A	A	A
<hr/>				
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	827	1029
HCM Lane V/C Ratio	-	-	0.007	0.015
HCM Control Delay (s)	-	-	9.4	8.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	W	B		A		
Traffic Vol, veh/h	1	6	5	1	15	3
Future Vol, veh/h	1	6	5	1	15	3
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage #	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	6	1	23	5

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All	60	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	51	-	-	-	-	-
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	047	1073	-	-	1611	-
Stage 1	1014	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	032	1071	-	-	1608	-
Mov Cap-2 Maneuver	032	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s	8.5	0	6.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
-----------------------	-----	-----	--------	-----	-----

Capacity (veh/h)	-	-	1049	1608	-
HCM Lane V/C Ratio	-	-	0.01	0.015	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection

Intersection Delay, s/veh 8.5

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	76	2	1	27	41	2	24	1	133	41	12
Future Vol, veh/h	6	76	2	1	27	41	2	24	1	133	41	12
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.57	0.57	0.57	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	83	2	1	33	49	4	42	2	149	46	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
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	8.3			7.8			7.9			9.1		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	7%	1%	72%
Vol Thru, %	89%	90%	39%	22%
Vol Right, %	4%	2%	59%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	84	69	186
LT Vol	2	6	1	133
Through Vol	24	76	27	41
RT Vol	1	2	41	12
Lane Flow Rate	47	91	83	209
Geometry Grp	1	1	1	1
Degree of Util (X)	0.06	0.117	0.099	0.261
Departure Headway (Hd)	4.564	4.629	4.291	4.493
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	775	836	800
Service Time	2.587	2.65	2.312	2.511
HCM Lane V/C Ratio	0.06	0.117	0.099	0.261
HCM Control Delay	7.9	8.3	7.8	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.3	1

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h	18	20	3	0	12	8	0	1	0	9	3	11
--------------------	----	----	---	---	----	---	---	---	---	---	---	----

Future Vol, veh/h	18	20	3	0	12	8	0	1	0	9	3	11
-------------------	----	----	---	---	----	---	---	---	---	---	---	----

Conflicting Peds, #/hr	11	0	1	1	0	11	0	0	1	1	0	0
------------------------	----	---	---	---	---	----	---	---	---	---	---	---

Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
--------------	------	------	------	------	------	------	------	------	------	------	------	------

RT Channelized	-	-	None									
----------------	---	---	------	---	---	------	---	---	------	---	---	------

Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
----------------	---	---	---	---	---	---	---	---	---	---	---	---

Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
--------------------------	---	---	---	---	---	---	---	---	---	---	---	---

Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
----------	---	---	---	---	---	---	---	---	---	---	---	---

Peak Hour Factor	84	84	84	44	44	44	25	25	25	79	79	79
------------------	----	----	----	----	----	----	----	----	----	----	----	----

Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
-------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mvmt Flow	21	24	4	0	27	18	0	4	0	11	4	14
-----------	----	----	---	---	----	----	---	---	---	----	---	----

Major/Minor	Major1		Major2		Minor1		Minor2	
-------------	--------	--	--------	--	--------	--	--------	--

Conflicting Flow All	56	0	0	29	0	0	114	125	28	118	118	47
----------------------	----	---	---	----	---	---	-----	-----	----	-----	-----	----

Stage 1	-	-	-	-	-	-	69	69	-	47	47	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

Stage 2	-	-	-	-	-	-	45	56	-	71	71	-
---------	---	---	---	---	---	---	----	----	---	----	----	---

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	1549	-	-	1584	-	-	863	765	1047	858	772	1022
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Stage 1	-	-	-	-	-	-	941	837	-	967	856	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	969	848	-	939	836	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
--------------------	---	---	---	---	---	---	---	---	---	---	---	---

Mov Cap-1 Maneuver	1533	-	-	1582	-	-	838	746	1045	836	753	1011
--------------------	------	---	---	------	---	---	-----	-----	------	-----	-----	------

Mov Cap-2 Maneuver	-	-	-	-	-	-	838	746	-	836	753	-
--------------------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 1	-	-	-	-	-	-	927	824	-	944	847	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Stage 2	-	-	-	-	-	-	951	840	-	920	823	-
---------	---	---	---	---	---	---	-----	-----	---	-----	-----	---

Approach	EB	WB	NB	SB
----------	----	----	----	----

HCM Control Delay, s	2.2	0	9.9	9.1
----------------------	-----	---	-----	-----

HCM LOS	A	A	A	A
---------	---	---	---	---

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
----------------------	-------	-----	-----	-----	-----	-----	-----	-------

Capacity (veh/h)	746	1533	-	-	1582	-	-	897
------------------	-----	------	---	---	------	---	---	-----

HCM Lane V/C Ratio	0.005	0.014	-	-	-	-	-	-0.032
--------------------	-------	-------	---	---	---	---	---	--------

HCM Control Delay (s)	9.9	7.4	0	-	0	-	-	9.1
-----------------------	-----	-----	---	---	---	---	---	-----

HCM Lane LOS	A	A	A	-	A	-	-	A
--------------	---	---	---	---	---	---	---	---

HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1
-----------------------	---	---	---	---	---	---	---	-----

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	4	0	0	2	0	7	0	3	2	18	6	5
Future Vol, veh/h	4	0	0	2	0	7	0	3	2	18	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	56	56	56	62	62	62	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	0	4	0	13	0	5	3	27	9	7

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	80	76	13	75	-	8	-	0
Stage 1	67	67	-	8	-	-	-	-
Stage 2	13	9	-	67	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	-	6.22	-	4.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	-	3.318	-	-2.218
Pot Cap-1 Maneuve	008	814	1067	915	0	1074	0	-1611
Stage 1	943	839	-	1013	0	-	0	-
Stage 2	1007	888	-	943	0	-	0	-
Platoon blocked, %								
Mov Cap-1 Maneuve	86	799	1067	902	-	1073	-	1609
Mov Cap-2 Maneuve	86	799	-	902	-	-	-	-
Stage 1	943	825	-	1013	-	-	-	-
Stage 2	995	887	-	927	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	8.6	0	4.5
HCM LOS	A	A	A	-
<hr/>				
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	886	1030 1609
HCM Lane V/C Ratio	-	-	0.018	0.016 0.017
HCM Control Delay (s)	-	-	9.1	8.6 7.3
HCM Lane LOS	-	-	A A A	A -
HCM 95th %tile Q(veh)	-	-	0.1	0 0.1

Intersection

Int Delay, s/veh 6.6

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	5	28	11	7	185	19
Future Vol, veh/h	5	28	11	7	185	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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	64	64	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	40	17	11	193	20

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	429	23	0	0	28	0
Stage 1	23	-	-	-	-	-
Stage 2	406	-	-	-	-	-
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	583	1054	-	-	1585	-
Stage 1	1000	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	11	1054	-	-	1585	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	673	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	9.2	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WB/Ln1	SBL	SBT
Capacity (veh/h)	-	-	908	1585	-
HCM Lane V/C Ratio	-	-	0.052	0.122	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.4	-