

MEMORANDUM

To: Dean Kaiser, City of Aurora, Transportation Engineering Department

From: Cassie Slade, PE, PTOE

Date: April 23, 2024

Project: Skydance Phase 1 in Aurora, Colorado

Subject: Traffic Conformance Memo – Updated

The Fox Tuttle Transportation Group has completed a traffic analysis for the proposed first phase of the Skydance project. The 152± acres of vacant property is located in the northeast corner of 56th Avenue and Picadilly Road, which is within the center of rapidly growing northern Aurora, Colorado. It is understood that this project will have a mix of land uses including single-family residential, multi-family residential, and commercial. The project area is bounded by Picadilly Road to the west, future Tibet Road alignment to the east, future 60th Avenue alignment to the north, and 56th Avenue to the south, as shown in **Figure 1**. The property will be developed over time with the assumed completion with the next 10 years. The first phase will include constructing single-family homes within Planning Areas 2, 4, and 18, which are located in the northwest corner of site. The existing and future roadways and



Figure 1. Vicinity Map

intersections have been planned or built to support Skydance traffic including the planning areas of Phase 1. The master development includes constructing segments of future roadways 57th Avenue, 60th Avenue, and Tibet Road and widening the adjacent existing roadways as appropriate. The planned internal roadways will provide connectivity for vehicular and multi-modal travel through Skydance.

The purpose of this “traffic conformance memo” is to determine if the proposed Skydance Phase 1 project is consistent with the trip generation assumptions as analyzed in the master traffic study and to determine if additional traffic analyses are necessary.

Comparison to the Master Traffic Study

A “Master” traffic impact study¹ (TIS) was previously prepared for the entire Skydance development including Planning Areas 2, 4, and 18, as shown in **Figure 2**. A review of the Skydance TIS shows that the Phase 1 area included 163 single-family homes. The current site plan includes 159 single-family homes, which is a decrease of 4 dwelling units (2% reduction). Proposed access will remain the same internally on N. Rome Street and E. 58th Place and externally along 60th Avenue and Picadilly Road.

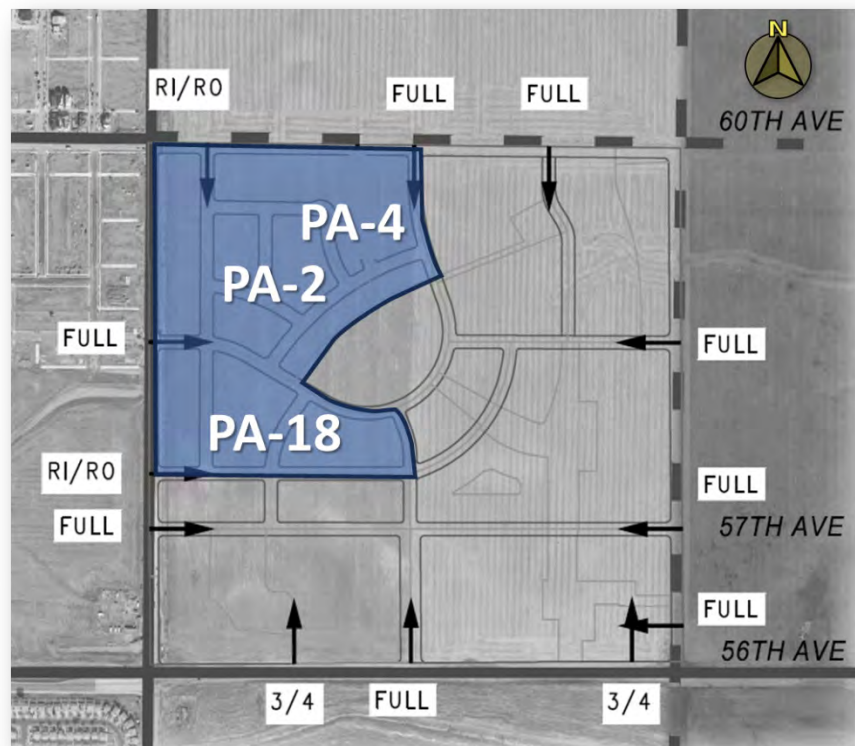


Figure 2. Map of Proposed Phase 1 of Skydance

¹ Skydance Traffic Impact Study. Fox Tuttle Transportation Group, LLC. February 2022.

Trip Generation

To establish the volume of trips associated with the proposed Skydance Phase 1 project, the data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook and Manual* (11th Edition, Year 2021) was applied to the most applicable land use category. The previous version of the *Trip Generation Manual* was utilized in the Master Traffic Study and had slightly higher trip rates. The proposed land use is estimated to mostly be new trips, known as 'primary trips', and non-auto trips which are discussed below:

Primary Trips. These trips are made specifically to visit the site and are considered "new" trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the number of trips made on a regional basis.

Non-Auto Trips. These trips are those that are completed by walking, biking, or transit. The future pedestrian and bicycle amenities will encourage residents, employees, customers, and visitors to make non-auto trips to/from the Skydance community.

In the *Skydance TIS*, it was assumed that there will 10% internal capture/non-auto reduction with the mix of land uses and connectivity to multi-modal facilities. For comparison purposes, the same percentage were applied in this analysis. The estimated trip generation is summarized in **Table 1** for weekday daily, weekday AM, and weekday PM periods.

The *Skydance TIS* included an additional right-in, right-out access on 60th Street (#112), which was located between intersections #111 and #113. This access was just a local street that provided direct access to a few homes in Planning Area 4 but did not provide connectivity from 60th Street to other planning areas or other regional roadways. With the most current site plan for Planning Areas 2, 4, and 18, this intersection (#112) is no longer needed. The low volume that was assigned to the right-in, right-out access was reassigned to the adjacent intersections as appropriate.

Table 1. Trip Generation Estimate and Comparison

Planning Area		Land Use		Size	Unit	Internal Capture	Non-Auto Factor	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
								Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Master Traffic Study																			
PA-4	ITE 210: Single-Family Detached Housing	21	DU	0.95	0.95	9.44	179	90	89	0.74	14	4	10	0.99	19	12	7		
PA-2	ITE 210: Single-Family Detached Housing	88	DU	0.95	0.95	9.44	750	375	375	0.74	59	15	44	0.99	79	50	29		
PA-18	ITE 210: Single-Family Detached Housing	54	DU	0.95	0.95	9.44	460	230	230	0.74	36	9	27	0.99	48	30	18		
Current Site Plan																			
PA-4	ITE 210: Single-Family Detached Housing	22	DU	0.95	0.95	9.43	187	94	93	0.70	14	4	10	0.94	19	12	7		
PA-2	ITE 210: Single-Family Detached Housing	86	DU	0.95	0.95	9.43	732	366	366	0.70	54	14	40	0.94	73	46	27		
PA-18	ITE 210: Single-Family Detached Housing	51	DU	0.95	0.95	9.43	434	217	217	0.70	32	8	24	0.94	43	27	16		
Previous Total Trips per MTS:						1,389	695	694		AM >	109	28	81	PM >	146	92	54		
Updated Total Trips:						1,353	677	676		AM >	100	26	74	PM >	135	85	50		
Difference:						-36	-18	-18		AM >	-9	-2	-7	PM >	-11	-7	-4		

Source : MTS used the ITE Trip Generation 10th Edition, 2017. The trips for the first phase were estimated with the ITE Trip Generation 11th Edition, 2021.

Based on the comparison to the overall Skydance TIS, it was estimated that the latest site plan for Planning Areas 2, 4, and 18 will have a 2.6% reduction in daily and an 8% reduction in the peak hours. The daily traffic volume was estimated to be decreased by 36 vehicles per day (vpd). The AM and PM peak hours were estimated to be reduced by nine (9) trips per hour (vph) and 11 vph, respectively. The reduction does not impact the recommendations or require additional improvements.

Traffic Operations

The proposed intersections on existing and future roadways, as well as internally for Phase 1 of Skydance were evaluated for delay and queuing at the anticipated buildout year of the project and full buildout. The following intersections were included, and the numbering is consistent with the MTIS:

#102. Picadilly Road at 59th Place

#103. Picadilly Road at 60th Avenue

- #104. 60th Avenue at Tibet Road
- #105. Tibet Road at 59th Place
- #111. 60th Avenue at Road B (RIRO)
- #113. 60th Avenue at Rome Street
- #115. 59th Place at Road B
- #116. 59th Place at Road G
- #117. 59th Place at Road D
- #118. 59th Place at Rome Street
- #119. Rome Street at Road G

As discussed previously, the Intersection #112 that was included in the Skydance TIS is no longer needed and trips were assigned to intersections #111 and #113.

Note that Tibet Road and 60th Avenue has not been constructed and has not been connected to other existing roadways at this time. Therefore, new traffic counts for signal warrants were not able to be collected. Future volumes are based on the assumptions from the Skydance TIS.

Anticipated traffic volumes for near-term build-out of Skydance Phase 1 are shown on **Figure 3**. Traffic volumes for Year 2040 are shown on **Figure 4**. The necessary traffic control and lane configurations for the near-term and long-term scenarios are shown on the appropriate figures.

Evaluation Methodology

The traffic operations analysis addressed the signalized and unsignalized intersection operations using the procedures and methodologies set forth by the Highway Capacity Manual (HCM)². Study intersections were evaluated using Synchro software (v11).

Level of Service Capacity Analysis

A Level of Service analysis was conducted to determine the existing and future performance of the study area intersections and accesses to determine the most appropriate intersection traffic controls and auxiliary lanes for future conditions.

² Highway Capacity Manual, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level of Service” (LOS) that is defined by the HCM. LOS characterizes the operational conditions of an intersections traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement.

Typically, LOS A through C is considered to be acceptable for the overall intersection operations and LOS D overall during peak hours is acceptable. Individual movements may be allowed to fall to LOS E at signalized intersections. Minor movements at unsignalized intersections, such as left turns onto a major arterial, may be allowed to fall below LOS D. Individual movements are allowed to fall to LOS E if traffic volume is low, or there is not a viable alternative. Criteria contained in the HCM was applied for these analyses in order to determine peak hour LOS for each scenario.

Skydance Phase 1 Buildout Year

It was assumed that Planning Areas 2, 4, and 18 will be completed and generating traffic by Year 2026. To estimate the background growth associated with nearby developments will be 50% completed. These are the projects that were anticipated to utilize roadways within the study area.

The results of the LOS calculations and 95th percentile queueing for the intersections are summarized in **Table 2** (attached to this letter). The intersection Level of Service worksheets are included in the attachments. The near-term full buildout traffic volumes are shown on **Figure 3**.

All of the study intersections were evaluated with side-street stop-controlled since **signal warrants were not met in the near-term**. Signal warrant analyses were conducted, and worksheets are attached to this letter. **All of the intersections were estimated to operate overall at LOS A in both peak hours with the majority of the movements operating at LOS C or better. The majority of the 95th percentile queues were calculated to be two vehicles or less.** The intersection of Picadilly Road at 60th Avenue was estimated to have the eastbound left-turn and westbound through movements operate at LOS E and LOS F, respectively, in the PM peak hour. The eastbound left-turn queue was calculated to be 18 feet (about one vehicle) and the westbound through queue was calculated to be approximately 95 feet (about four vehicles). The near-term volumes do not warrant a change in traffic control and the queues can be maintained within the future storage lengths.

Year 2040 Full Buildout of Skydance

The overall Skydance TIS volumes were adjusted to account for the reduction in dwelling units in Planning Area 2, 4, and 18. The background forecasts remained the same as estimated in the TIS for this focused analysis.

The results of the LOS calculations and 95th percentile queueing for the intersections are summarized in **Table 2** (attached to this letter). The intersection Level of Service worksheets are included in the attachments. The long-term full buildout traffic volumes are shown on **Figure 4**.

The volumes met signal warrants at the intersections of Picadilly Road at 60th Avenue (#103), 60th Avenue at Tibet Road (#104); and Tibet Road at 59th Place (#105). It was assumed these intersections will be signalized by Year 2040. Signal warrant analyses were conducted, and worksheets are attached to this letter.

All of the study intersections were estimated to operate overall at LOS B or better in both peak hours with the majority of the movements operating at LOS D or better. The following intersections will continue to or begin to have a movement that operates below LOS D with the additional project trips:

- **#102 – Picadilly Road at 59th Place:** This proposed side-street stop-controlled intersection is anticipated to operate overall at LOS A in both peak hours. During the PM peak hour, the side-street movements were estimated to operate at LOS E/F due to the high volume on the major arterial. The 95th percentile queues for the side-street movements were estimated to be two vehicles or less.

Recommendations: No mitigation measures are recommended. The volumes are not approaching signal warrants and the queue lengths are minimal. It is common for side-streets on major arterials to experience delay in the peak hours.

- **#103 – Picadilly Road at 60th Avenue:** This proposed signalized intersection is anticipated to operate overall at LOS B in both peak hours. During the AM peak hour, the westbound left-turn movement was estimated to operate at LOS E with a 95th percentile queue length of 134 feet (about six vehicles).

Recommendations: Construct the westbound left-turn lane to accommodate the queue. It is common that side-street left-turns operate below LOS D during peak hours along major arterials.

Figure 7 summarizes the roadway classification and estimated daily volumes for Year 2040. Refer to the *Skydance TIS* for proposed storage lengths for the future auxiliary lanes.

Conclusions

It is anticipated that the existing and proposed roadway network, intersections, and accesses can accommodate the first phase of the Skydance project since the associated trips were estimated to be fewer than the forecasts in the overall Skydance TIS. The latest reduced the number of single-family homes from 163 units to 159 units (2.5% reduction). As noted, the **proposed land use is consistent with the trip generation assumptions, lane configurations, and access needs as presented in the Skydance TIS, and thus the findings and recommendations of that study are still valid.** No additional traffic analysis is necessary to support this project.

I hope that the contents of this memorandum are helpful to you. If you have any questions, please feel free to give me a call.

Sincerely,
FOX TUTTLE TRANSPORTATION GROUP, LLC



Cassie Slade, P.E., PTOE
Principal



Attachments:

Table 2 – Peak Hour Intersection Level of Service and Queue Summary

Figure 3 – Year 2025 Site-Generated Traffic Volumes

Figure 3 – Year 2030 Background + Project Traffic Volumes

Figure 4 – Year 2040 Background + Project Traffic Volumes

Figure 5 – Year 2030 Peak Hour Signal Warrant

Figure 6 – Year 2040 Peak Hour Signal Warrant

Figure 7 – Roadway Classification and Year 2040 Daily Traffic Volume

Intersection Capacity Analysis Worksheets

Signal Warrant Worksheets

Table 2 - Peak Hour Intersection Level of Service Summary

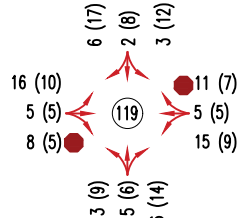
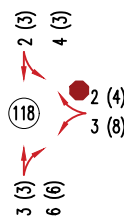
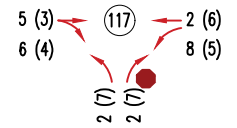
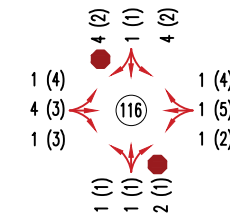
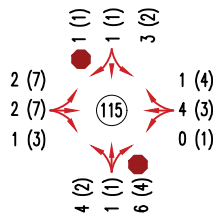
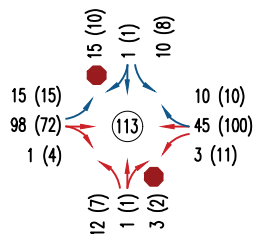
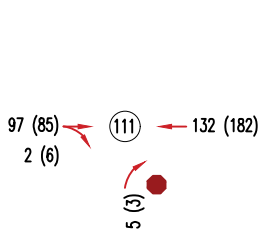
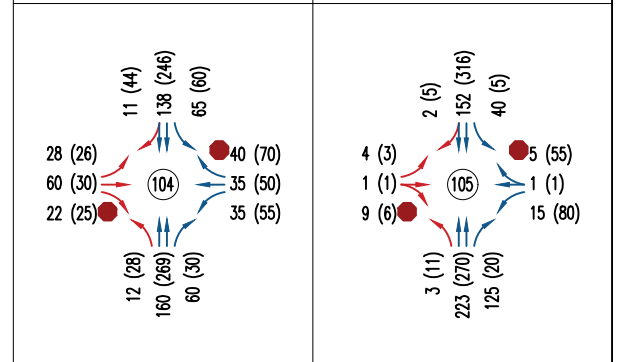
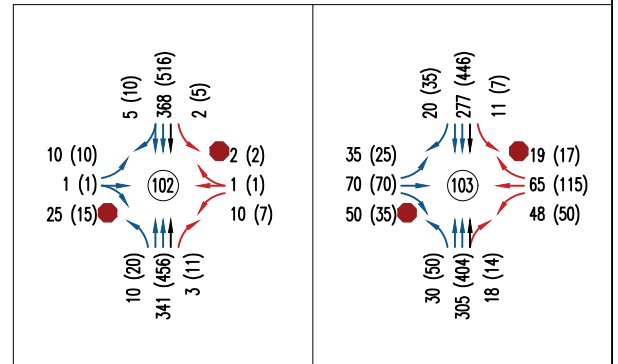
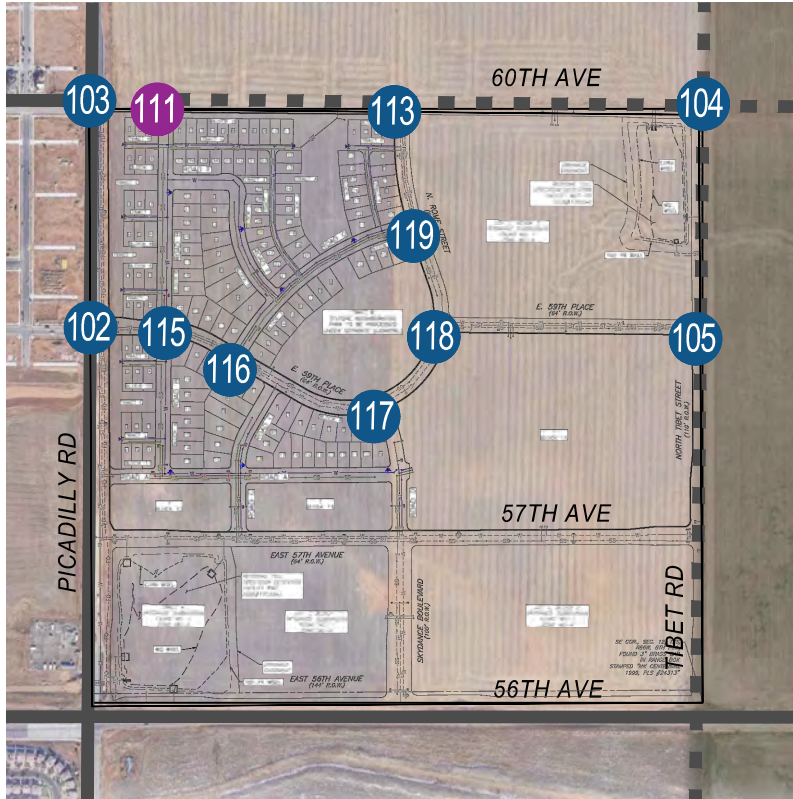
Intersection and Critical Lanes Groups	Near-Term Bkgrd + Project						2040 Bkgrd + Project					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue
STOP SIGN CONTROL												
#102. Picadilly Road at 59th Place	1	A		1	A		2	A		3	A	
Eastbound Left	13	B	3'	17	C	3'	23	C	8'	48	E	15'
Eastbound Through+Right	12	B	5'	15	B	5'	15	C	13'	29	D	18'
Westbound Left	14	B	3'	17	C	3'	25	D	20'	59	F	35'
Westbound Through+Right	12	B	0'	15	B	0'	24	C	5'	57	F	10'
Northbound Left	10	A	0'	11	B	3'	12	B	3'	16	C	10'
Southbound Left	10	A	0'	10	B	0'	11	B	0'	14	B	3'
#103. 60th Avenue at Picadilly Road	6	A		9	A		Analyzed as Signalized					
Eastbound Left	16	C	10'	37	E	18'						
Eastbound Through	20	C	23'	33	D	40'						
Eastbound Right	10	B	5'	11	B	5'						
Westbound Left	18	C	15'	29	D	25'						
Westbound Through	20	C	20'	53	F	95'						
Westbound Right	10	B	3'	11	B	3'						
Northbound Left	10	A	3'	11	B	8'						
Southbound Left	10	A	0'	10	B	0'						
#104. 60th Avenue at Tibet Road	5	A		5	A		Analyzed as Signalized					
Eastbound Left	14	B	5'	21	C	10'						
Eastbound Through	16	C	15'	19	C	10'						
Eastbound Right	9	A	3'	9	A	3'						
Westbound Left	15	B	8'	20	C	18'						
Westbound Through	14	B	8'	20	C	18'						
Westbound Right	9	A	3'	10	A	8'						
Northbound Left	8	A	0'	8	A	3'						
Southbound Left	8	A	5'	8	A	5'						
#105. Tibet Road at 59th Place	2	A		3	A		Analyzed as Signalized					
Eastbound Left	14	B	5'	14	B	0'						
Eastbound Through+Right	10	B	5'	10	B	0'						
Westbound Left	16	C	5'	15	C	18'						
Westbound Through+Right	13	B	3'	10	A	5'						
Northbound Left	8	A	0'	8	A	0'						
Southbound Left	8	A	3'	8	A	0'						
#111. 60th Avenue at Road B (RIRO)	0	A		0	A		0	A		0	A	
Northbound Right	9	A	0'	9	A	0'	9	A	0'	9	A	0'
#113. 60th Avenue at Rome Street	3	A		2	A		2	A		2	A	
Eastbound Left	7	A	0'	8	A	0'	8	A	0'	8	A	3'
Westbound Left	7	A	0'	7	A	0'	8	A	0'	8	A	0'
Northbound Left	10	A	3'	10	B	0'	12	B	5'	13	B	3'
Northbound Through+Right	9	A	0'	9	A	0'	10	B	3'	11	B	3'
Southbound Left	10	A	0'	10	B	0'	11	B	3'	13	B	0'
Southbound Through+Right	9	A	3'	9	A	0'	9	A	3'	11	B	3'
#115. 59th Place at Road B	6	A		4	A		4	A		3	A	
Eastbound Left+Through+Right	7	A	0'	7	A	0'	7	A	0'	7	A	0'
Westbound Left+Through+Right	0	A	0'	7	A	0'	7	A	0'	7	A	0'
Northbound Left+Through+Right	9	A	0'	9	A	0'	9	A	3'	9	A	0'
Southbound Left+Through+Right	9	A	0'	9	A	0'	9	A	3'	9	A	0'
#116. 59th Place at Road G	6	A		4	A		3	A		2	A	
Eastbound Left+Through+Right	7	A	0'	7	A	0'	7	A	0'	7	A	0'
Westbound Left+Through+Right	7	A	0'	7	A	0'	7	A	0'	7	A	0'
Northbound Left+Through+Right	9	A	0'	9	A	0'	9	A	0'	9	A	0'
Southbound Left+Through+Right	9	A	0'	9	A	0'	9	A	3'	9	A	0'
#117. 59th Place at Road D	4	A		5	A		4	A		4	A	
Westbound Left	7	A	0'	7	A	0'	7	A	0'	7	A	0'
Northbound Left	9	A	0'	9	A	0'	9	A	0'	9	A	0'
Northbound Right	8	A	0'	8	A	0'	9	A	3'	9	A	3'
#118. 59th Place at Rome Street	2	A		5	A		5	A		4	A	
Westbound Left+Right	9	A	0'	9	A	0'	9	A	5'	9	A	5'
Southbound Left+Through	7	A	0'	7	A	0'	7	A	0'	7	A	0'
#119. Rome Street at Road G	6	A		4	A		7	A		5	A	
Eastbound Left+Right	9	A	3'	9	A	0'	9	A	3'	9	A	3'
Northbound Left+Through	0	A	0'	7	A	0'	7	A	0'	7	A	0'
Southbound Through+Right	0	A	0'	0	A	0'	7	A	0'	7	A	0'

Table 2 - Peak Hour Intersection Level of Service Summary

Intersection and Critical Lanes Groups	Near-Term Bkgrd + Project						2040 Bkgrd + Project					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue	Delay	LOS	95th % Queue
SIGNAL CONTROL												
#103. 60th Avenue at Picadilly Road							16	B		19	B	
Eastbound Left	<i>Analyzed as Stop Control</i>						46	D	92'	51	D	70'
Eastbound Through							39	D	150'	38	D	144'
Eastbound Right							39	D	45'	37	D	36'
Westbound Left							56	E	134'	55	D	122'
Westbound Through							46	D	144'	49	D	235'
Westbound Right							43	D	33'	42	D	29'
Northbound Left							0	A	47'	18	B	101'
Northbound Through+Right							0	A	110'	12	B	169'
Southbound Left							5	A	14'	9	A	16'
Southbound Through							5	A	55'	6	A	110'
Southbound Right							5	A	10'	5	A	16'
#104. 60th Avenue at Tibet Road							15	B		13	B	
Eastbound Left	<i>Analyzed as Stop Control</i>						51	D	83'	53	D	80'
Eastbound Through							49	D	156'	46	D	85'
Eastbound Right							46	D	48'	47	D	53'
Westbound Left							51	D	98'	49	D	133'
Westbound Through							41	D	87'	43	D	112'
Westbound Right							42	D	42'	46	D	52'
Northbound Left							0	A	7'	1	A	21'
Northbound Through							0	A	40'	0	A	73'
Northbound Right							0	A	6'	0	A	4'
Southbound Left							5	A	45'	5	A	56'
Southbound Through+Right							4	A	46'	5	A	112'
#105. Tibet Road at 59th Place							5	A		9	A	
Eastbound Left	<i>Analyzed as Stop Control</i>						48	D	44'	44	D	35'
Eastbound Through+Right							48	D	41'	39	D	32'
Westbound Left							51	D	53'	48	D	175'
Westbound Through+Right							46	D	25'	41	D	48'
Northbound Left							0	A	6'	0	A	24'
Northbound Through							0	A	41'	1	A	85'
Northbound Right							0	A	8'	1	A	8'
Southbound Left							0	A	14'	0	A	8'
Southbound Through+Right							0	A	26'	1	A	125'

Note: Delay represented in average seconds per vehicle. At stop-controlled intersections, the movements that are free flowing and were estimated to have zero delay are not listed.

ACCESS MAP



- # FULL MOVEMENT INTERSECTION
- # 3/4 MOVEMENT INTERSECTION
- # RI/RO MOVEMENT INTERSECTION

KEY

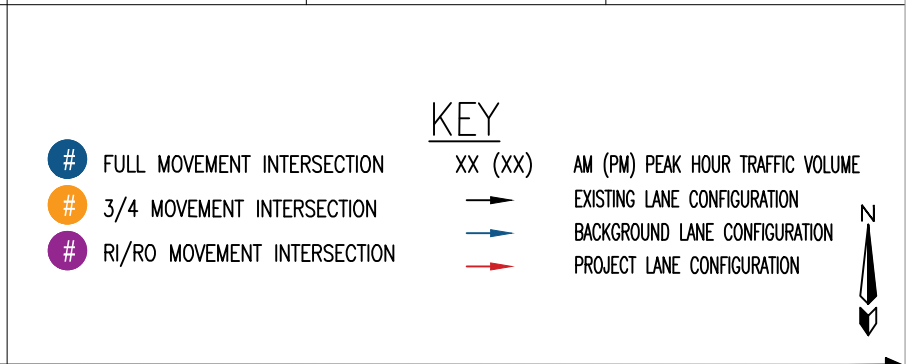
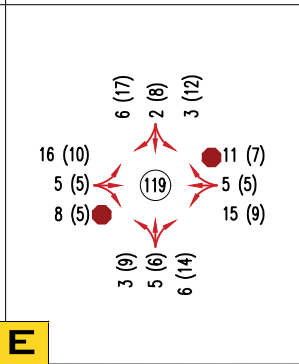
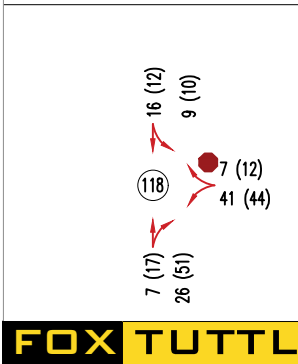
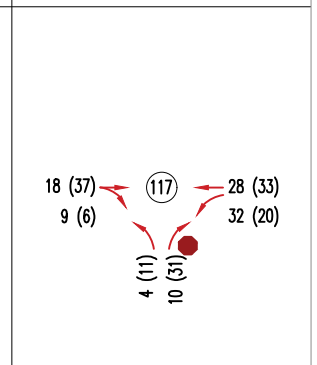
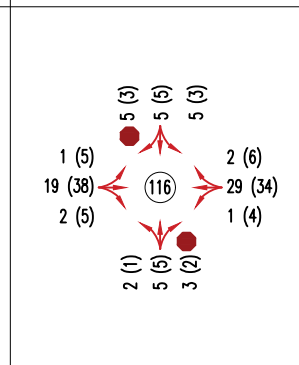
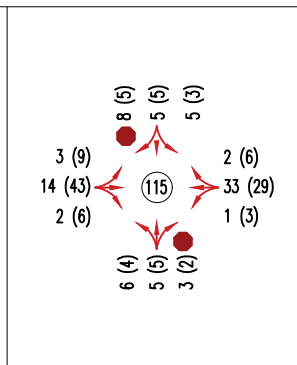
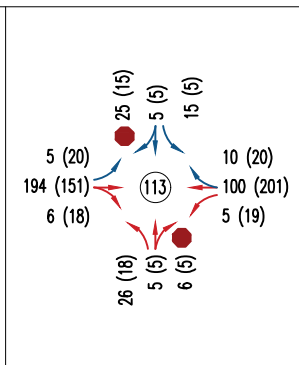
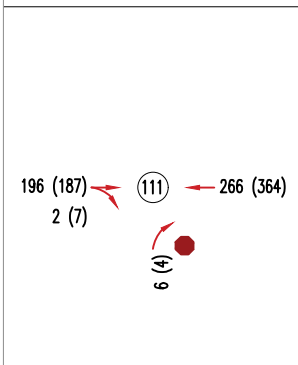
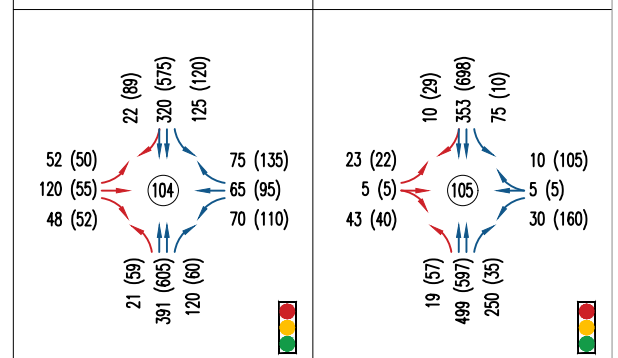
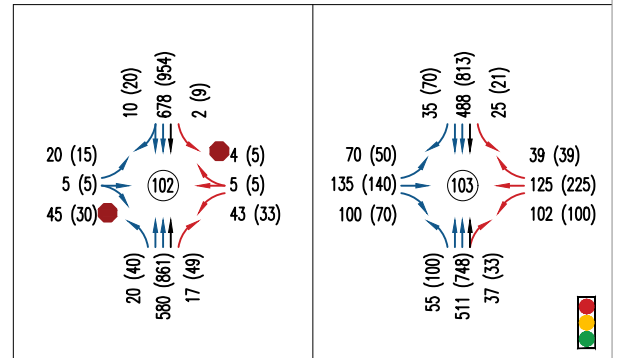
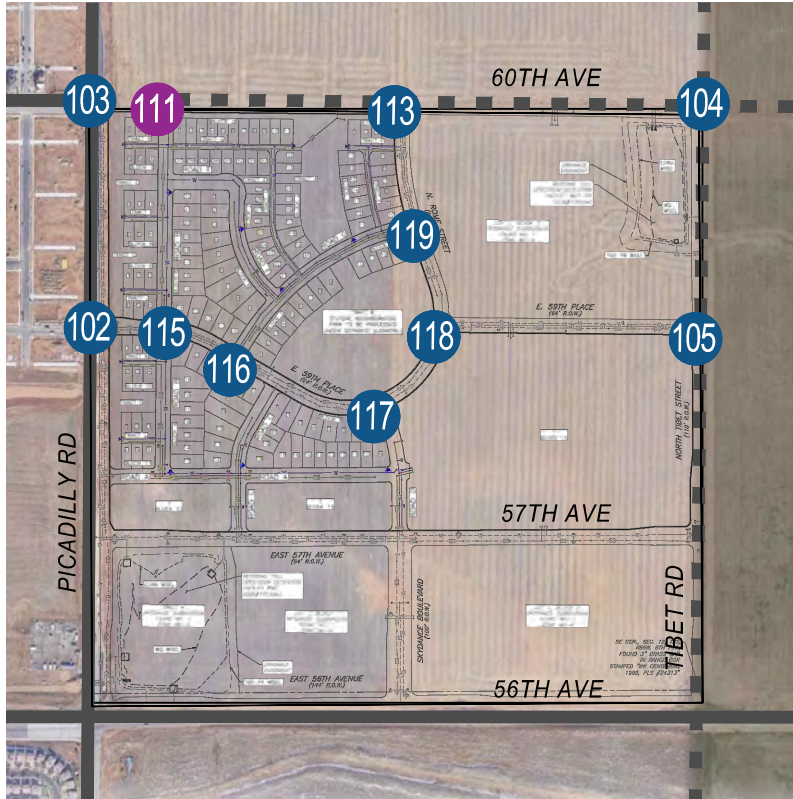
- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- EXISTING LANE CONFIGURATION
- BACKGROUND LANE CONFIGURATION
- PROJECT LANE CONFIGURATION



SKYDANCE PHASE 1 TRAFFIC CONFORMANCE LETTER YEAR 2030 BKGRD + PROJECT TRAFFIC VOLUMES

FT Project #	23098	Original Scale	NTS	Date	11/30/2023	Drawn by	CRS	Figure #	3
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ACCESS MAP



PEAK HOUR VOLUME WARRANT

SHORT-TERM WITH PROJECT

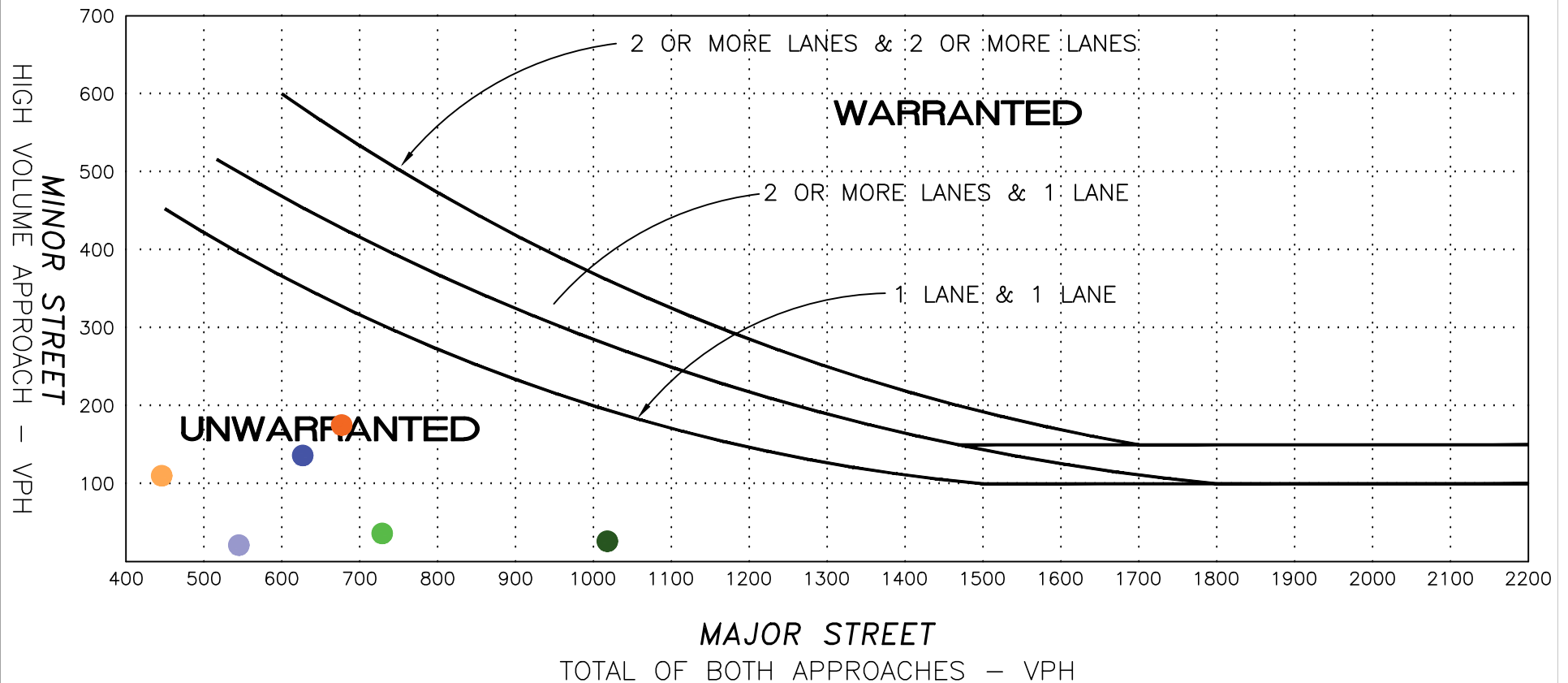
KEY FOR INTERSECTIONS

MEET AM PM

No ● ● Picadilly Rd at 60th Ave (#103)

No ● ● Tibet Rd at 60th Ave (#104)

No ● ● Tibet Street at Street J (#105)



NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.



SKYDANCE PHASE 1 TRAFFIC CONFORMANCE LETTER
PEAK HOUR SIGNAL WARRANT

PEAK HOUR VOLUME WARRANT

2040 BACKGROUND + PROJECT

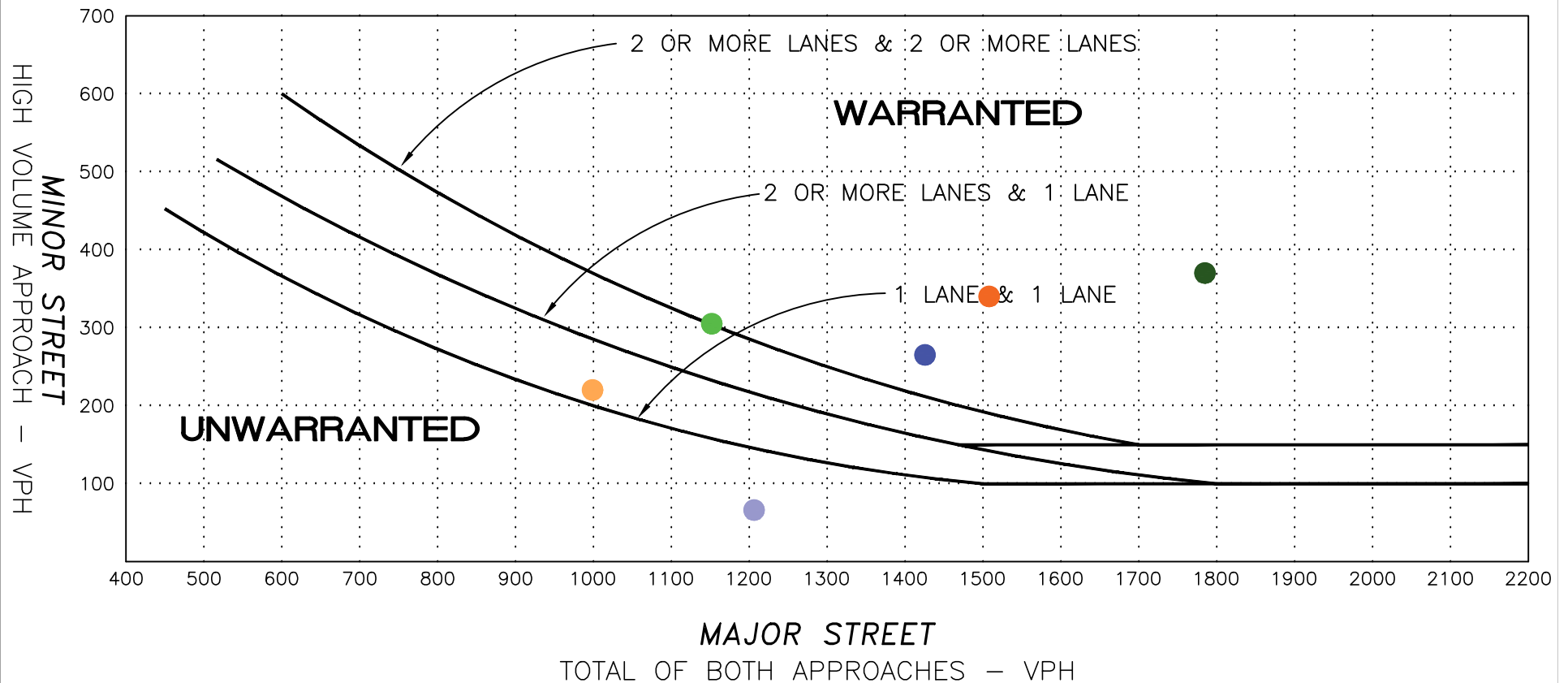
KEY FOR INTERSECTIONS

MEI AM PM

Yes ● ● Picadilly Rd at 60th Ave (#103)

Yes ● ● Tibet Rd at 60th Ave (#104)

Yes ● ● Tibet Street at Street J (#105)













NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.



SKYDANCE PHASE 1 TRAFFIC CONFORMANCE LETTER
PEAK HOUR SIGNAL WARRANT















- LOCAL OR PRIVATE DRIVE
- LOCAL STREET
- COLLECTOR
- MINOR ARTERIAL
- MAJOR ARTERIAL
- FREEWAY/ EXPRESSWAY
- XX → NUMBER OF LANES PER DIRECTION
- X,XXX 2040 DAILY TRAFFIC VOLUME

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	5	25	10	1	2	10	341	3	2	368	5
Future Vol, veh/h	10	5	25	10	1	2	10	341	3	2	368	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	275	-	275	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	27	11	1	2	11	371	3	2	400	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	575	800	200	560	802	186	405	0	0	374	0	0
Stage 1	404	404	-	393	393	-	-	-	-	-	-	-
Stage 2	171	396	-	167	409	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	450	317	687	459	316	702	750	-	-	776	-	-
Stage 1	508	598	-	517	604	-	-	-	-	-	-	-
Stage 2	748	602	-	752	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	441	311	687	429	310	702	750	-	-	776	-	-
Mov Cap-2 Maneuver	441	311	-	429	310	-	-	-	-	-	-	-
Stage 1	500	596	-	509	595	-	-	-	-	-	-	-
Stage 2	733	593	-	714	592	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	13.3	0.3	0.1
HCM LOS	B	B		













Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	750	-	-	441	572	429	494	776	-	-
HCM Lane V/C Ratio	0.014	-	-	0.025	0.057	0.025	0.007	0.003	-	-
HCM Control Delay (s)	9.9	-	-	13.4	11.7	13.6	12.3	9.7	-	-
HCM Lane LOS	A	-	-	B	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	0	0	-	-

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	70	50	48	65	19	30	305	18	11	277	20
Future Vol, veh/h	35	70	50	48	65	19	30	305	18	11	277	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	200	150	-	150	275	-	-	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	76	54	52	71	21	33	332	20	12	301	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	559	743	151	590	755	176	323	0	0	352	0	0
Stage 1	325	325	-	408	408	-	-	-	-	-	-	-
Stage 2	234	418	-	182	347	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	460	342	738	441	336	712	819	-	-	794	-	-
Stage 1	574	648	-	505	595	-	-	-	-	-	-	-
Stage 2	687	589	-	737	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	355	324	738	321	318	712	819	-	-	794	-	-
Mov Cap-2 Maneuver	355	324	-	321	318	-	-	-	-	-	-	-
Stage 1	551	638	-	485	571	-	-	-	-	-	-	-
Stage 2	561	565	-	592	624	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.8		17.8		0.8		0.3	
HCM LOS	C		C					









Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	819	-	-	355	324	738	321	318	712	794	-	-
HCM Lane V/C Ratio	0.04	-	-	0.107	0.235	0.074	0.163	0.222	0.029	0.015	-	-
HCM Control Delay (s)	9.6	-	-	16.4	19.5	10.3	18.4	19.5	10.2	9.6	-	-
HCM Lane LOS	A	-	-	C	C	B	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.9	0.2	0.6	0.8	0.1	0	-	-

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	60	22	35	35	40	12	160	60	65	138	11
Future Vol, veh/h	28	60	22	35	35	40	12	160	60	65	138	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	200	200	-	200	275	-	275	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	65	24	38	38	43	13	174	65	71	150	12

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	430	563	81	450	504	87	162	0	0	239	0	0
Stage 1	298	298	-	200	200	-	-	-	-	-	-	-
Stage 2	132	265	-	250	304	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	509	434	963	493	469	954	1414	-	-	1325	-	-
Stage 1	686	666	-	783	735	-	-	-	-	-	-	-
Stage 2	858	688	-	732	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	432	407	963	402	439	954	1414	-	-	1325	-	-
Mov Cap-2 Maneuver	432	407	-	402	439	-	-	-	-	-	-	-
Stage 1	680	630	-	776	728	-	-	-	-	-	-	-
Stage 2	769	682	-	606	626	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.8		12.5		0.4		2.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1414	-	-	432	407	963	402	439	954	1325	-	-
HCM Lane V/C Ratio	0.009	-	-	0.07	0.16	0.025	0.095	0.087	0.046	0.053	-	-
HCM Control Delay (s)	7.6	-	-	14	15.5	8.8	14.9	14	9	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0.1	0.3	0.3	0.1	0.2	-	-

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	5	43	15	5	5	19	284	125	40	203	10
Future Vol, veh/h	23	5	43	15	5	5	19	284	125	40	203	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	0	-	-	275	-	-	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	5	47	16	5	5	21	309	136	43	221	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	512	800	116	618	737	223	232	0	0	445	0	0
Stage 1	313	313	-	419	419	-	-	-	-	-	-	-
Stage 2	199	487	-	199	318	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	445	317	914	373	344	780	1333	-	-	1112	-	-
Stage 1	672	656	-	582	588	-	-	-	-	-	-	-
Stage 2	784	549	-	784	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	418	300	914	335	325	780	1333	-	-	1112	-	-
Mov Cap-2 Maneuver	418	300	-	335	325	-	-	-	-	-	-	-
Stage 1	661	630	-	573	579	-	-	-	-	-	-	-
Stage 2	759	540	-	709	627	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		15		0.3		1.3	
HCM LOS	B		C					









Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1333	-	-	418	753	335	459	1112	-	-
HCM Lane V/C Ratio	0.015	-	-	0.06	0.069	0.049	0.024	0.039	-	-
HCM Control Delay (s)	7.7	-	-	14.2	10.1	16.3	13	8.4	-	-
HCM Lane LOS	A	-	-	B	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.2	0.1	0.1	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	97	2	0	132	0	5
Future Vol, veh/h	97	2	0	132	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	2	0	143	0	5

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 106
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 948
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 948
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	948	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	8.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	98	1	3	45	10	12	1	3	10	1	15
Future Vol, veh/h	15	98	1	3	45	10	12	1	3	10	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	107	1	3	49	11	13	1	3	11	1	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	60	0	0	108	0	0	209	206	108	203	201	55
Stage 1	-	-	-	-	-	-	140	140	-	61	61	-
Stage 2	-	-	-	-	-	-	69	66	-	142	140	-
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	1544	-	-	1483	-	-	748	691	946	755	695	1012
Stage 1	-	-	-	-	-	-	863	781	-	950	844	-
Stage 2	-	-	-	-	-	-	941	840	-	861	781	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1544	-	-	1483	-	-	728	683	946	744	687	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	683	-	744	687	-
Stage 1	-	-	-	-	-	-	854	773	-	941	842	-
Stage 2	-	-	-	-	-	-	923	838	-	848	773	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.4	9.8	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	728	863	1544	-	-	1483	-	-	744	983
HCM Lane V/C Ratio	0.018	0.005	0.011	-	-	0.002	-	-	0.015	0.018
HCM Control Delay (s)	10	9.2	7.4	-	-	7.4	-	-	9.9	8.7
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0	0.1

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	2	2	1	0	4	1	3	1	1	4	1	6
Future Vol, veh/h	2	2	1	0	4	1	3	1	1	4	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	1	0	4	1	3	1	1	4	1	7




Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	3	0	0	16	12	3	13	12	5
Stage 1	-	-	-	-	-	-	7	7	-	5	5	-
Stage 2	-	-	-	-	-	-	9	5	-	8	7	-
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	1616	-	-	1619	-	-	999	883	1081	1004	883	1078
Stage 1	-	-	-	-	-	-	1015	890	-	1017	892	-
Stage 2	-	-	-	-	-	-	1012	892	-	1013	890	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1619	-	-	991	882	1081	1001	882	1078
Mov Cap-2 Maneuver	-	-	-	-	-	-	991	882	-	1001	882	-
Stage 1	-	-	-	-	-	-	1014	889	-	1016	892	-
Stage 2	-	-	-	-	-	-	1005	892	-	1010	889	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0	8.7	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	983	1616	-	-	1619	-	-	1028
HCM Lane V/C Ratio	0.006	0.001	-	-	-	-	-	0.012
HCM Control Delay (s)	8.7	7.2	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	1	4	1	1	1	1	1	1	2	4	1	4
Future Vol, veh/h	1	4	1	1	1	1	1	1	2	4	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	4	1	1	1	1	1	1	2	4	1	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	5	0	0	13	11	5	12	11	2
Stage 1	-	-	-	-	-	-	7	7	-	4	4	-
Stage 2	-	-	-	-	-	-	6	4	-	8	7	-
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	1620	-	-	1616	-	-	1004	884	1078	1005	884	1082
Stage 1	-	-	-	-	-	-	1015	890	-	1018	892	-
Stage 2	-	-	-	-	-	-	1016	892	-	1013	890	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1620	-	-	1616	-	-	998	882	1078	1001	882	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	998	882	-	1001	882	-
Stage 1	-	-	-	-	-	-	1014	889	-	1017	891	-
Stage 2	-	-	-	-	-	-	1010	891	-	1009	889	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			2.4			8.6			8.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1002	1620	-	-	1616	-	-	1020				
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.01				
HCM Control Delay (s)	8.6	7.2	0	-	7.2	0	-	8.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				




Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	↶
Traffic Vol, veh/h	5	6	8	2	2	2
Future Vol, veh/h	5	6	8	2	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	7	9	2	2	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	12	0	29	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1607	-	986	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1607	-	980	1073
Mov Cap-2 Maneuver	-	-	-	-	980	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	997	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		5.8		8.5	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	980	1073	-	-	1607	-
HCM Lane V/C Ratio	0.002	0.002	-	-	0.005	-
HCM Control Delay (s)	8.7	8.4	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	3	6	4	12
Future Vol, veh/h	3	2	3	6	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	3	7	4	13

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	28	7	0
Stage 1	7	-	-
Stage 2	21	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	987	1075	-
Stage 1	1016	-	-
Stage 2	1002	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	984	1075	-
Mov Cap-2 Maneuver	984	-	-
Stage 1	1016	-	-
Stage 2	999	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.8
HCM LOS	A		











Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1018	1610
HCM Lane V/C Ratio	-	-	0.005	0.003
HCM Control Delay (s)	-	-	8.6	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	6.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	6	2	3	0	4
Future Vol, veh/h	12	6	2	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	7	2	3	0	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	9	2	4	0	0
Stage 1	2	-	-	-	-
Stage 2	7	-	-	-	-
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	1011	1082	1618	-	-
Stage 1	1021	-	-	-	-
Stage 2	1016	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	1010	1082	1618	-	-
Mov Cap-2 Maneuver	1010	-	-	-	-
Stage 1	1020	-	-	-	-
Stage 2	1016	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.9	0
HCM LOS	A		













Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1618	-	1033	-	-
HCM Lane V/C Ratio	0.001	-	0.019	-	-
HCM Control Delay (s)	7.2	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	5	15	7	1	2	20	456	11	5	516	10
Future Vol, veh/h	10	5	15	7	1	2	20	456	11	5	516	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	275	-	275	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	16	8	1	2	22	496	12	5	561	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	814	1123	281	777	1122	248	572	0	0	508	0	0
Stage 1	571	571	-	540	540	-	-	-	-	-	-	-
Stage 2	243	552	-	237	582	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	328	204	611	345	205	641	626	-	-	671	-	-
Stage 1	392	503	-	412	519	-	-	-	-	-	-	-
Stage 2	678	513	-	684	497	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	315	195	611	318	196	641	626	-	-	671	-	-
Mov Cap-2 Maneuver	315	195	-	318	196	-	-	-	-	-	-	-
Stage 1	378	499	-	398	501	-	-	-	-	-	-	-
Stage 2	651	495	-	654	494	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.3		16.1		0.5		0.1	
HCM LOS	C		C					













Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	626	-	-	315	398	318	365	671	-	-
HCM Lane V/C Ratio	0.035	-	-	0.035	0.055	0.024	0.009	0.008	-	-
HCM Control Delay (s)	11	-	-	16.8	14.6	16.6	15	10.4	-	-
HCM Lane LOS	B	-	-	C	B	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0.1	0	0	-	-

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	70	35	50	115	17	50	404	14	7	446	35
Future Vol, veh/h	25	70	35	50	115	17	50	404	14	7	446	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	200	150	-	150	275	-	-	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	76	38	54	125	18	54	439	15	8	485	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	847	1063	243	803	1094	227	523	0	0	454	0	0
Stage 1	501	501	-	555	555	-	-	-	-	-	-	-
Stage 2	346	562	-	248	539	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	314	222	646	333	213	661	661	-	-	712	-	-
Stage 1	437	541	-	402	511	-	-	-	-	-	-	-
Stage 2	589	508	-	674	520	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	138	202	646	207	193	661	661	-	-	712	-	-
Mov Cap-2 Maneuver	138	202	-	207	193	-	-	-	-	-	-	-
Stage 1	401	535	-	369	469	-	-	-	-	-	-	-
Stage 2	386	466	-	538	514	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28	42.1	1.2	0.1
HCM LOS	D	E		









Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	661	-	-	138	202	646	207	193	661	712	-	-
HCM Lane V/C Ratio	0.082	-	-	0.197	0.377	0.059	0.263	0.648	0.028	0.011	-	-
HCM Control Delay (s)	10.9	-	-	37.4	33.2	10.9	28.5	52.6	10.6	10.1	-	-
HCM Lane LOS	B	-	-	E	D	B	D	F	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	1.6	0.2	1	3.8	0.1	0	-	-

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	26	30	25	55	50	70	28	269	30	60	246	44
Future Vol, veh/h	26	30	25	55	50	70	28	269	30	60	246	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	200	200	-	200	275	-	275	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	33	27	60	54	76	30	292	33	65	267	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	654	806	158	632	797	146	315	0	0	325	0	0
Stage 1	421	421	-	352	352	-	-	-	-	-	-	-
Stage 2	233	385	-	280	445	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	352	314	859	365	318	875	1242	-	-	1231	-	-
Stage 1	581	587	-	638	630	-	-	-	-	-	-	-
Stage 2	749	609	-	703	573	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	260	290	859	305	294	875	1242	-	-	1231	-	-
Mov Cap-2 Maneuver	260	290	-	305	294	-	-	-	-	-	-	-
Stage 1	567	556	-	623	615	-	-	-	-	-	-	-
Stage 2	608	594	-	607	543	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.5	15.7	0.7	1.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1242	-	-	260	290	859	305	294	875	1231	-	-
HCM Lane V/C Ratio	0.025	-	-	0.109	0.112	0.032	0.196	0.185	0.087	0.053	-	-
HCM Control Delay (s)	8	-	-	20.5	19	9.3	19.7	20	9.5	8.1	-	-
HCM Lane LOS	A	-	-	C	C	A	C	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.4	0.1	0.7	0.7	0.3	0.2	-	-

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	6	80	1	55	11	270	20	5	316	5
Future Vol, veh/h	3	1	6	80	1	55	11	270	20	5	316	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	0	-	-	275	-	-	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1	7	87	1	60	12	293	22	5	343	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	527	695	174	510	686	158	348	0	0	315	0	0
Stage 1	356	356	-	328	328	-	-	-	-	-	-	-
Stage 2	171	339	-	182	358	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	434	364	839	446	369	859	1208	-	-	1242	-	-
Stage 1	634	628	-	659	646	-	-	-	-	-	-	-
Stage 2	814	638	-	802	626	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	398	359	839	437	364	859	1208	-	-	1242	-	-
Mov Cap-2 Maneuver	398	359	-	437	364	-	-	-	-	-	-	-
Stage 1	628	625	-	652	640	-	-	-	-	-	-	-
Stage 2	749	632	-	791	623	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	13	0.3	0.1
HCM LOS	B	B		









Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1208	-	-	398	704	437	839	1242	-	-
HCM Lane V/C Ratio	0.01	-	-	0.008	0.011	0.199	0.073	0.004	-	-
HCM Control Delay (s)	8	-	-	14.1	10.2	15.3	9.6	7.9	-	-
HCM Lane LOS	A	-	-	B	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.7	0.2	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	85	6	0	182	0	3
Future Vol, veh/h	85	6	0	182	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	7	0	198	0	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 96
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 960
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 960
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	960	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	8.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	72	4	11	100	10	8	1	10	8	1	10
Future Vol, veh/h	15	72	4	11	100	10	8	1	10	8	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	78	4	12	109	11	9	1	11	9	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	82	0	0	257	256	80	257	253	115
Stage 1	-	-	-	-	-	-	112	112	-	139	139	-
Stage 2	-	-	-	-	-	-	145	144	-	118	114	-
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	1468	-	-	1515	-	-	696	648	980	696	650	937
Stage 1	-	-	-	-	-	-	893	803	-	864	782	-
Stage 2	-	-	-	-	-	-	858	778	-	887	801	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1468	-	-	1515	-	-	677	636	980	678	638	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	677	636	-	678	638	-
Stage 1	-	-	-	-	-	-	883	794	-	854	776	-
Stage 2	-	-	-	-	-	-	840	772	-	866	792	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.7	9.5	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	677	934	1468	-	-	1515	-	-	678	899
HCM Lane V/C Ratio	0.013	0.013	0.011	-	-	0.008	-	-	0.013	0.013
HCM Control Delay (s)	10.4	8.9	7.5	-	-	7.4	-	-	10.4	9.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0	0

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	7	7	3	1	3	4	2	1	1	2	1	4
Future Vol, veh/h	7	7	3	1	3	4	2	1	1	2	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	8	3	1	3	4	2	1	1	2	1	4




Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	11	0	0	36	35	10	34	34	5
Stage 1	-	-	-	-	-	-	26	26	-	7	7	-
Stage 2	-	-	-	-	-	-	10	9	-	27	27	-
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	1614	-	-	1608	-	-	970	857	1071	973	859	1078
Stage 1	-	-	-	-	-	-	992	874	-	1015	890	-
Stage 2	-	-	-	-	-	-	1011	888	-	990	873	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1614	-	-	1608	-	-	960	852	1071	966	854	1078
Mov Cap-2 Maneuver	-	-	-	-	-	-	960	852	-	966	854	-
Stage 1	-	-	-	-	-	-	987	870	-	1010	889	-
Stage 2	-	-	-	-	-	-	1005	887	-	983	869	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3			0.9			8.8			8.6		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	954	1614	-	-	1608	-	-	1007
HCM Lane V/C Ratio	0.005	0.005	-	-	0.001	-	-	0.008
HCM Control Delay (s)	8.8	7.2	0	-	7.2	0	-	8.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

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	4	3	3	2	5	4	1	1	1	2	1	2
Future Vol, veh/h	4	3	3	2	5	4	1	1	1	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	3	2	5	4	1	1	1	2	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	9	0	0	6	0	0	26	26	5	25	25	7
Stage 1	-	-	-	-	-	-	13	13	-	11	11	-
Stage 2	-	-	-	-	-	-	13	13	-	14	14	-
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	1611	-	-	1615	-	-	984	867	1078	986	868	1075
Stage 1	-	-	-	-	-	-	1007	885	-	1010	886	-
Stage 2	-	-	-	-	-	-	1007	885	-	1006	884	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1611	-	-	1615	-	-	979	864	1078	982	865	1075
Mov Cap-2 Maneuver	-	-	-	-	-	-	979	864	-	982	865	-
Stage 1	-	-	-	-	-	-	1005	883	-	1008	885	-
Stage 2	-	-	-	-	-	-	1003	884	-	1002	882	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			1.3			8.7			8.7		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	966	1611	-	-	1615	-	-	989				
HCM Lane V/C Ratio	0.003	0.003	-	-	0.001	-	-	0.005				
HCM Control Delay (s)	8.7	7.2	0	-	7.2	0	-	8.7				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				




Intersection						
Int Delay, s/veh	4.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↰	↱	↰	↱
Traffic Vol, veh/h	3	4	5	6	7	7
Future Vol, veh/h	3	4	5	6	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	5	7	8	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	22	5
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	17	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	995	1078
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1006	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	992	1078
Mov Cap-2 Maneuver	-	-	-	-	992	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1003	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.3		8.5	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	992	1078	-	-	1614	-
HCM Lane V/C Ratio	0.008	0.007	-	-	0.003	-
HCM Control Delay (s)	8.7	8.4	-	-	7.2	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection						
Int Delay, s/veh	4.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	4	3	6	3	3
Future Vol, veh/h	8	4	3	6	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	4	3	7	3	3

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	16	7	0
Stage 1	7	-	-
Stage 2	9	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1002	1075	-
Stage 1	1016	-	-
Stage 2	1014	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1000	1075	-
Mov Cap-2 Maneuver	1000	-	-
Stage 1	1016	-	-
Stage 2	1012	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1024	1610
HCM Lane V/C Ratio	-	-	0.013	0.002
HCM Control Delay (s)	-	-	8.6	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	4	7	1	2	13
Future Vol, veh/h	8	4	7	1	2	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	4	8	1	2	14

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	26	9	16
Stage 1	9	-	-
Stage 2	17	-	-
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	989	1073	1602
Stage 1	1014	-	-
Stage 2	1006	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	984	1073	1602
Mov Cap-2 Maneuver	984	-	-
Stage 1	1009	-	-
Stage 2	1006	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	6.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1012	-	-
HCM Lane V/C Ratio	0.005	-	0.013	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection: **Picadilly Road at 60th Avenue (#103)**

Warrant 2: 4 Hour Analysis - Near-Term with Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Picadilly Rd	60th Avenue		
Time of Day	Number of Lanes			
	3	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	532	26		no
7:00	729	36		no
8:00	663	33		no
9:00	598	30		no
10:00			Warrant is Met (yes/no)	no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	672	20		no
16:00	896	23		no
17:00	1,018	26		no
18:00	957	24		no
19:00	900	23		no
20:00	567	14		no
21:00				no
22:00				no
23:00				no
Total	7,532	255	0	Not Met

*The minor volume for each hour represents the higher of either minor approach.

Intersection: **Picadilly Road at 60th Avenue (#103)**
Warrant 2: 4 Hour Analysis - 2040 Background + Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Picadilly Rd	60th Avenue		
Time of Day	Number of Lanes			
	3	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	840	223		Yes
7:00	1,151	305		Yes
8:00	1,047	278		Yes
9:00	944	250		Yes
10:00			Warrant is Met (yes/no)	no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	1,178	273		Yes
16:00	1,571	320		Yes
17:00	1,785	364		Yes
18:00	1,678	342		Yes
19:00	1,577	321		Yes
20:00	994	202		Yes
21:00				no
22:00				no
23:00				no
Total	12,765	2,878	10	Met

*The minor volume for each hour represents the higher of either minor approach.

Intersection: Tibet Road at 60th Avenue (#104)

Warrant 2: 4 Hour Analysis - Near-Term with Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Tibet Rd	60th Avenue		
Time of Day	Number of Lanes			
	2	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	326	80		no
7:00	446	110		no
8:00	406	100		no
9:00	366	90		no
10:00				no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	447	131		no
16:00	596	154		no
17:00	677	175		no
18:00	636	165		no
19:00	598	155		no
20:00	377	98		no
21:00				no
22:00				no
23:00				no
Total	4,875	1,258	0	Not Met

*The minor volume for each hour represents the higher of either minor approach.

Intersection: Tibet Road at 60th Avenue (#104)

Warrant 2: 4 Hour Analysis - 2040 Background + Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Tibet Rd	60th Avenue		
Time of Day	Number of Lanes			
	2	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	729	161		no
7:00	999	220		Yes
8:00	909	200		Yes
9:00	819	180		no
10:00				no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	995	255		Yes
16:00	1,327	299		Yes
17:00	1,508	340		Yes
18:00	1,418	320		Yes
19:00	1,333	301		Yes
20:00	840	190		Yes
21:00				no
22:00				no
23:00				no
Total	10,877	2,466	8	Met

*The minor volume for each hour represents the higher of either minor approach.

Intersection: Tibet Road at Street J (#105)

Warrant 2: 4 Hour Analysis - Near-Term with Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Tibet Rd	56th Avenue		
Time of Day	Number of Lanes			
	2	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	398	15		no
7:00	545	21		no
8:00	496	19		no
9:00	447	17		no
10:00			Warrant is Met (yes/no)	no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	414	102		no
16:00	552	120		no
17:00	627	136		no
18:00	589	128		no
19:00	554	120		no
20:00	349	76		no
21:00				no
22:00				no
23:00				no
Total	4,971	754	0	Not Met











*The minor volume for each hour represents the higher of either minor approach.

Intersection: Tibet Road at Street J (#105)

Warrant 2: 4 Hour Analysis - 2040 Background + Project Volumes

	Major	Minor*		Warrant 2 (Figure 4C-1)
	Tibet Rd	56th Avenue		
Time of Day	Number of Lanes			
	2	1		
0:00				no
1:00				no
2:00				no
3:00				no
4:00				no
5:00				no
6:00	880	48		no
7:00	1,206	66		no
8:00	1,097	60		no
9:00	989	54		no
10:00			Warrant is Met (yes/no)	no
11:00				no
12:00				no
13:00				no
14:00				no
15:00	941	199		Yes
16:00	1,255	233		Yes
17:00	1,426	265		Yes
18:00	1,340	249		Yes
19:00	1,260	234		Yes
20:00	794	147		no
21:00				no
22:00				no
23:00				no
Total	11,188	1,555	5	Met

*The minor volume for each hour represents the higher of either minor approach.

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	5	45	43	5	4	20	580	17	2	678	10
Future Vol, veh/h	20	5	45	43	5	4	20	580	17	2	678	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	275	-	275	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	5	49	47	5	4	22	630	18	2	737	11























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1040	1433	369	975	1426	315	748	0	0	648	0	0
Stage 1	741	741	-	674	674	-	-	-	-	-	-	-
Stage 2	299	692	-	301	752	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	242	133	536	264	134	581	517	-	-	577	-	-
Stage 1	300	421	-	334	452	-	-	-	-	-	-	-
Stage 2	628	443	-	627	416	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	224	127	536	224	128	581	517	-	-	577	-	-
Mov Cap-2 Maneuver	224	127	-	224	128	-	-	-	-	-	-	-
Stage 1	287	420	-	320	433	-	-	-	-	-	-	-
Stage 2	589	424	-	560	415	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.4		25.1		0.4		0	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	517	-	-	224	405	224	196	577	-	-
HCM Lane V/C Ratio	0.042	-	-	0.097	0.134	0.209	0.05	0.004	-	-
HCM Control Delay (s)	12.3	-	-	22.8	15.3	25.3	24.3	11.3	-	-
HCM Lane LOS	B	-	-	C	C	D	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.5	0.8	0.2	0	-	-

Timings
01/28/2022













103: Picadilly Road & 60th Avenue
2040 Background + Project - AM Peak Hour












											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	135	100	102	125	40	55	533	25	496	35
Future Volume (vph)	70	135	100	102	125	40	55	533	25	496	35
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases		4			8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0	42.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	53.0	53.0	53.0	53.0	53.0	53.0	57.0	57.0	57.0	57.0	57.0
Total Split (%)	48.2%	48.2%	48.2%	48.2%	48.2%	48.2%	51.8%	51.8%	51.8%	51.8%	51.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	16.0	16.0	16.0	16.0	16.0	16.0	84.0	84.0	84.0	84.0	84.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.50	0.54	0.34	0.78	0.50	0.16	0.10	0.16	0.05	0.14	0.03

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 109.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 18.7
 Intersection Capacity Utilization 52.8%
 Analysis Period (min) 15

























Splits and Phases: 103: Picadilly Road & 60th Avenue























					
Ø2 (R)			Ø4		
57 s			53 s		
					
Ø6 (R)			Ø8		
57 s			53 s		

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	76	147	109	111	136	43	60	620	27	539	38
v/c Ratio	0.50	0.54	0.34	0.78	0.50	0.16	0.10	0.16	0.05	0.14	0.03
Control Delay	53.5	50.0	10.1	80.2	50.1	15.1	8.3	6.5	4.6	4.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	50.0	10.1	80.2	50.1	15.1	8.3	6.5	4.6	4.0	1.6
Queue Length 50th (ft)	50	98	0	79	93	0	8	32	4	30	0
Queue Length 95th (ft)	92	150	45	134	144	33	47	110	14	55	10
Internal Link Dist (ft)		298			165			863		2656	
Turn Bay Length (ft)	200		200	150		150	275		275		275
Base Capacity (vph)	453	812	752	425	812	715	626	3846	577	3882	1217
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.14	0.26	0.17	0.06	0.10	0.16	0.05	0.14	0.03
Intersection Summary											

HCM 6th Signalized Intersection Summary
01/28/2022

103: Picadilly Road & 60th Avenue
2040 Background + Project - AM Peak Hour


												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	135	100	102	125	40	55	533	38	25	496	35
Future Volume (veh/h)	70	135	100	102	125	40	55	533	38	25	496	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	147	109	111	136	43	60	579	41	27	539	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	368	312	210	368	312	633	3469	244	638	3637	1129
Arrive On Green	0.20	0.20	0.20	0.06	0.06	0.06	1.00	1.00	1.00	0.71	0.71	0.71
Sat Flow, veh/h	1205	1870	1585	1124	1870	1585	836	4871	342	804	5106	1585
Grp Volume(v), veh/h	76	147	109	111	136	43	60	403	217	27	539	38
Grp Sat Flow(s),veh/h/ln	1205	1870	1585	1124	1870	1585	836	1702	1809	804	1702	1585
Q Serve(g_s), s	6.5	7.5	6.5	10.8	7.7	2.8	0.4	0.0	0.0	1.1	3.7	0.8
Cycle Q Clear(g_c), s	14.1	7.5	6.5	18.3	7.7	2.8	4.2	0.0	0.0	1.1	3.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	219	368	312	210	368	312	633	2425	1288	638	3637	1129
V/C Ratio(X)	0.35	0.40	0.35	0.53	0.37	0.14	0.09	0.17	0.17	0.04	0.15	0.03
Avail Cap(c_a), veh/h	507	816	692	479	816	692	633	2425	1288	638	3637	1129
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	44.7	38.5	38.1	53.6	44.9	42.6	0.1	0.0	0.0	4.7	5.1	4.7
Incr Delay (d2), s/veh	0.9	0.7	0.7	2.1	0.6	0.2	0.3	0.1	0.3	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.5	2.6	3.4	3.8	1.1	0.1	0.0	0.1	0.2	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	39.2	38.8	55.7	45.5	42.8	0.4	0.1	0.3	4.8	5.2	4.7
LnGrp LOS	D	D	D	E	D	D	A	A	A	A	A	A
Approach Vol, veh/h		332			290			680			604	
Approach Delay, s/veh		40.5			49.0			0.2			5.1	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.3		26.7		83.3		26.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		52.0		48.0		52.0		48.0				
Max Q Clear Time (g_c+I1), s		6.2		16.1		5.7		20.3				
Green Ext Time (p_c), s		4.6		1.5		4.2		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				16.2								
HCM 6th LOS				B								












											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	52	120	48	70	65	75	21	391	120	125	320
Future Volume (vph)	52	120	48	70	65	75	21	391	120	125	320
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4			8			2			6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	4	4	4	8	8	8	2	2	2	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	62.0	62.0	62.0	62.0	62.0
Total Split (%)	43.6%	43.6%	43.6%	43.6%	43.6%	43.6%	56.4%	56.4%	56.4%	56.4%	56.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	13.5	13.5	13.5	13.5	13.5	13.5	86.5	86.5	86.5	86.5	86.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79
v/c Ratio	0.35	0.57	0.22	0.61	0.31	0.31	0.03	0.15	0.10	0.18	0.13

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 109.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 15.2
 Intersection Capacity Utilization 42.2%
 Analysis Period (min) 15

























Splits and Phases: 104: Tibet Road & 60th Avenue



















	
Ø2 (R)	Ø4
62 s	48 s
	
Ø6 (R)	Ø8
62 s	48 s

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	57	130	52	76	71	82	23	425	130	136	372
v/c Ratio	0.35	0.57	0.22	0.61	0.31	0.31	0.03	0.15	0.10	0.18	0.13
Control Delay	50.6	56.3	23.5	65.6	46.6	12.2	2.8	2.7	0.5	4.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	56.3	23.5	65.6	46.6	12.2	2.8	2.7	0.5	4.0	3.1
Queue Length 50th (ft)	41	95	6	52	47	0	2	26	0	19	25
Queue Length 95th (ft)	83	156	48	98	87	42	7	40	6	45	46
Internal Link Dist (ft)		597			252			849			2648
Turn Bay Length (ft)	200		200	200		200	275		275	250	
Base Capacity (vph)	517	728	650	399	728	668	778	2783	1272	738	2758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.18	0.08	0.19	0.10	0.12	0.03	0.15	0.10	0.18	0.13
Intersection Summary											

HCM 6th Signalized Intersection Summary
01/28/2022

104: Tibet Road & 60th Avenue
2040 Background + Project - AM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	120	48	70	65	75	21	391	120	125	320	22
Future Volume (veh/h)	52	120	48	70	65	75	21	391	120	125	320	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	130	52	76	71	82	23	425	130	136	348	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	291	246	171	291	246	798	2678	1195	709	2543	175
Arrive On Green	0.05	0.05	0.05	0.16	0.16	0.16	1.00	1.00	1.00	0.75	0.75	0.75
Sat Flow, veh/h	1234	1870	1585	1202	1870	1585	1010	3554	1585	854	3374	232
Grp Volume(v), veh/h	57	130	52	76	71	82	23	425	130	136	183	189
Grp Sat Flow(s),veh/h/ln	1234	1870	1585	1202	1870	1585	1010	1777	1585	854	1777	1829
Q Serve(g_s), s	5.0	7.4	3.5	6.8	3.7	5.1	0.1	0.0	0.0	5.1	3.1	3.1
Cycle Q Clear(g_c), s	8.6	7.4	3.5	14.2	3.7	5.1	3.2	0.0	0.0	5.1	3.1	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	216	291	246	171	291	246	798	2678	1195	709	1339	1378
V/C Ratio(X)	0.26	0.45	0.21	0.44	0.24	0.33	0.03	0.16	0.11	0.19	0.14	0.14
Avail Cap(c_a), veh/h	507	731	620	454	731	620	798	2678	1195	709	1339	1378
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.94	0.94	0.94
Uniform Delay (d), s/veh	49.9	47.6	45.7	48.8	40.8	41.4	0.1	0.0	0.0	4.0	3.7	3.7
Incr Delay (d2), s/veh	0.6	1.1	0.4	1.8	0.4	0.8	0.1	0.1	0.2	0.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	1.4	2.1	1.7	2.0	0.0	0.0	0.1	0.8	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	48.7	46.1	50.6	41.2	42.2	0.1	0.1	0.2	4.5	3.9	3.9
LnGrp LOS	D	D	D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		239			229			578			508	
Approach Delay, s/veh		48.6			44.7			0.1			4.1	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.9		22.1		87.9		22.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		57.0		43.0		57.0		43.0				
Max Q Clear Time (g_c+I1), s		5.2		10.6		7.1		16.2				
Green Ext Time (p_c), s		3.6		1.1		3.2		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				15.4								
HCM 6th LOS				B								










									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	5	30	5	19	499	250	75	353
Future Volume (vph)	23	5	30	5	19	499	250	75	353
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	32.0	32.0	32.0	32.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	35.0	35.0	35.0	35.0	75.0	75.0	75.0	75.0	75.0
Total Split (%)	31.8%	31.8%	31.8%	31.8%	68.2%	68.2%	68.2%	68.2%	68.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	10.3	10.3	10.3	10.3	93.7	93.7	93.7	93.7	93.7
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.85	0.85	0.85	0.85	0.85
v/c Ratio	0.19	0.27	0.26	0.10	0.03	0.18	0.20	0.12	0.13

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay: 4.4
 Intersection Capacity Utilization 44.6%
 Analysis Period (min) 15























Splits and Phases: 105: Tibet Road & Street J

	
Ø2 (R)	Ø4
75 s	35 s
	
Ø6 (R)	Ø8
75 s	35 s

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	25	52	33	16	21	542	272	82	395
v/c Ratio	0.19	0.27	0.26	0.10	0.03	0.18	0.20	0.12	0.13
Control Delay	49.6	19.2	51.8	28.5	1.9	1.8	0.5	2.0	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	19.2	51.8	28.5	1.9	1.8	0.5	2.0	1.5
Queue Length 50th (ft)	17	3	22	3	2	30	0	7	18
Queue Length 95th (ft)	44	41	53	25	6	41	8	14	26
Internal Link Dist (ft)		445		248		810			849
Turn Bay Length (ft)	150				275		275	275	
Base Capacity (vph)	379	473	367	463	823	3014	1388	713	3003
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.11	0.09	0.03	0.03	0.18	0.20	0.12	0.13
Intersection Summary									

HCM 6th Signalized Intersection Summary
01/28/2022

105: Tibet Road & Street J
2040 Background + Project - AM Peak Hour









												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	5	43	30	5	10	19	499	250	75	353	10
Future Volume (veh/h)	23	5	43	30	5	10	19	499	250	75	353	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	5	47	33	5	11	21	542	272	82	384	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	14	129	145	46	102	877	2914	1300	616	2893	83
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1397	155	1454	1352	520	1144	989	3554	1585	671	3528	101
Grp Volume(v), veh/h	25	0	52	33	0	16	21	542	272	82	193	202
Grp Sat Flow(s),veh/h/ln	1397	0	1609	1352	0	1664	989	1777	1585	671	1777	1852
Q Serve(g_s), s	1.8	0.0	3.3	2.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.8	0.0	3.3	5.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.90	1.00		0.69	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	177	0	143	145	0	148	877	2914	1300	616	1457	1519
V/C Ratio(X)	0.14	0.00	0.36	0.23	0.00	0.11	0.02	0.19	0.21	0.13	0.13	0.13
Avail Cap(c_a), veh/h	434	0	439	393	0	454	877	2914	1300	616	1457	1519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	0.99	0.99	0.99
Uniform Delay (d), s/veh	47.4	0.0	47.2	50.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.5	0.8	0.0	0.3	0.0	0.1	0.3	0.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.4	0.9	0.0	0.4	0.0	0.1	0.1	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	0.0	48.7	50.8	0.0	46.4	0.0	0.1	0.3	0.4	0.2	0.2
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		77			49			835			477	
Approach Delay, s/veh		48.4			49.3			0.2			0.2	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		95.2		14.8		95.2		14.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0		70.0		30.0				
Max Q Clear Time (g_c+I1), s		2.0		5.3		2.0		7.9				
Green Ext Time (p_c), s		5.2		0.3		3.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			4.5									
HCM 6th LOS			A									

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	196	2	0	266	0	6
Future Vol, veh/h	196	2	0	266	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	2	0	289	0	7

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	214
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.318
Pot Cap-1 Maneuver	-	0	0	826
Stage 1	-	0	0	-
Stage 2	-	0	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	826
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	826	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	194	6	5	100	10	26	5	6	15	5	25
Future Vol, veh/h	5	194	6	5	100	10	26	5	6	15	5	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	211	7	5	109	11	28	5	7	16	5	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	218	0	0	366	355	215	356	353	115
Stage 1	-	-	-	-	-	-	225	225	-	125	125	-
Stage 2	-	-	-	-	-	-	141	130	-	231	228	-
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	1468	-	-	1352	-	-	590	571	825	599	572	937
Stage 1	-	-	-	-	-	-	778	718	-	879	792	-
Stage 2	-	-	-	-	-	-	862	789	-	772	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1468	-	-	1352	-	-	566	567	825	587	568	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	567	-	587	568	-
Stage 1	-	-	-	-	-	-	776	716	-	876	789	-
Stage 2	-	-	-	-	-	-	828	786	-	757	713	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	11.3	10
HCM LOS			B	B





Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	566	684	1468	-	-	1352	-	-	587	845
HCM Lane V/C Ratio	0.05	0.017	0.004	-	-	0.004	-	-	0.028	0.039
HCM Control Delay (s)	11.7	10.4	7.5	-	-	7.7	-	-	11.3	9.4
HCM Lane LOS	B	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0	-	-	0.1	0.1

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	3	14	2	1	33	2	6	5	3	5	5	8
Future Vol, veh/h	3	14	2	1	33	2	6	5	3	5	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	15	2	1	36	2	7	5	3	5	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	17	0	0	68	62	16	65	62	37
Stage 1	-	-	-	-	-	-	22	22	-	39	39	-
Stage 2	-	-	-	-	-	-	46	40	-	26	23	-
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	1572	-	-	1600	-	-	925	829	1063	929	829	1035
Stage 1	-	-	-	-	-	-	996	877	-	976	862	-
Stage 2	-	-	-	-	-	-	968	862	-	992	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1572	-	-	1600	-	-	910	827	1063	920	827	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-	910	827	-	920	827	-
Stage 1	-	-	-	-	-	-	994	875	-	974	861	-
Stage 2	-	-	-	-	-	-	953	861	-	981	874	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.2	9	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	905	1572	-	-	1600	-	-	937
HCM Lane V/C Ratio	0.017	0.002	-	-	0.001	-	-	0.021
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1




Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	19	2	1	29	2	2	5	3	5	5	5
Future Vol, veh/h	1	19	2	1	29	2	2	5	3	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	21	2	1	32	2	2	5	3	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	34	0	0	23	0	0	64	60	22	63	60	33
Stage 1	-	-	-	-	-	-	24	24	-	35	35	-
Stage 2	-	-	-	-	-	-	40	36	-	28	25	-
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	1578	-	-	1592	-	-	930	831	1055	932	831	1041
Stage 1	-	-	-	-	-	-	994	875	-	981	866	-
Stage 2	-	-	-	-	-	-	975	865	-	989	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1578	-	-	1592	-	-	919	829	1055	923	829	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	919	829	-	923	829	-
Stage 1	-	-	-	-	-	-	993	874	-	980	865	-
Stage 2	-	-	-	-	-	-	963	864	-	979	873	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			9			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	905	1578	-	-	1592	-	-	923				
HCM Lane V/C Ratio	0.012	0.001	-	-	0.001	-	-	0.018				
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Traffic Vol, veh/h	18	9	32	28	4	10
Future Vol, veh/h	18	9	32	28	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	10	35	30	4	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	30
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1583
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1583
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	851	1051	-	-	1583	-
HCM Lane V/C Ratio	0.005	0.01	-	-	0.022	-
HCM Control Delay (s)	9.3	8.5	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	7	7	26	9	16
Future Vol, veh/h	42	7	7	26	9	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	8	8	28	10	17

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	59	22	0
Stage 1	22	-	-
Stage 2	37	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	948	1055	-
Stage 1	1001	-	-
Stage 2	985	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	942	1055	-
Mov Cap-2 Maneuver	942	-	-
Stage 1	1001	-	-
Stage 2	979	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	2.6
HCM LOS	A		











Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1575
HCM Lane V/C Ratio	-	-	0.056	0.006
HCM Control Delay (s)	-	-	9	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	16	5	8	15	5	11	3	5	6	3	2	6
Future Vol, veh/h	16	5	8	15	5	11	3	5	6	3	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	5	9	16	5	12	3	5	7	3	2	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	35	30	6	34	30	9	9	0	0	12	0	0
Stage 1	12	12	-	15	15	-	-	-	-	-	-	-
Stage 2	23	18	-	19	15	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	971	863	1077	973	863	1073	1611	-	-	1607	-	-
Stage 1	1009	886	-	1005	883	-	-	-	-	-	-	-
Stage 2	995	880	-	1000	883	-	-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	953	860	1077	957	860	1073	1611	-	-	1607	-	-
Mov Cap-2 Maneuver	953	860	-	957	860	-	-	-	-	-	-	-
Stage 1	1007	884	-	1003	881	-	-	-	-	-	-	-
Stage 2	976	878	-	984	881	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	8.9		8.8		1.6		2	
HCM LOS	A		A					























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1611	-	-	966	977	1607	-	-
HCM Lane V/C Ratio	0.002	-	-	0.033	0.034	0.002	-	-
HCM Control Delay (s)	7.2	0	-	8.9	8.8	7.2	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	5	30	33	5	5	40	861	49	9	954	20
Future Vol, veh/h	15	5	30	33	5	5	40	861	49	9	954	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	275	-	275	275	-	275
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	5	33	36	5	5	43	936	53	10	1037	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1520	2132	519	1459	2101	468	1059	0	0	989	0	0
Stage 1	1057	1057	-	1022	1022	-	-	-	-	-	-	-
Stage 2	463	1075	-	437	1079	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	125	49	429	136	51	463	367	-	-	396	-	-
Stage 1	182	300	-	192	312	-	-	-	-	-	-	-
Stage 2	501	294	-	520	293	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	100	42	429	101	44	463	367	-	-	396	-	-
Mov Cap-2 Maneuver	100	42	-	101	44	-	-	-	-	-	-	-
Stage 1	161	293	-	170	275	-	-	-	-	-	-	-
Stage 2	428	260	-	460	286	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35	58.6	0.7	0.1
HCM LOS	E	F		













Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	367	-	-	100	185	101	80	396	-	-
HCM Lane V/C Ratio	0.118	-	-	0.163	0.206	0.355	0.136	0.025	-	-
HCM Control Delay (s)	16.1	-	-	47.9	29.4	59.1	57	14.3	-	-
HCM Lane LOS	C	-	-	E	D	F	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.6	0.7	1.4	0.4	0.1	-	-












											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	140	70	100	225	39	100	748	21	813	70
Future Volume (vph)	50	140	70	100	225	39	100	748	21	813	70
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases		4			8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	42.0	42.0	42.0	42.0	42.0	42.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	53.0	53.0	53.0	53.0	53.0	53.0	57.0	57.0	57.0	57.0	57.0
Total Split (%)	48.2%	48.2%	48.2%	48.2%	48.2%	48.2%	51.8%	51.8%	51.8%	51.8%	51.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	20.7	20.7	20.7	20.7	20.7	20.7	79.3	79.3	79.3	79.3	79.3
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.19	0.72	0.72	0.72	0.72	0.72
v/c Ratio	0.45	0.43	0.21	0.56	0.70	0.13	0.27	0.23	0.05	0.24	0.07

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 109.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 17.2
 Intersection Capacity Utilization 60.9%
 Analysis Period (min) 15

























Splits and Phases: 103: Picadilly Road & 60th Avenue

					
Ø2 (R)			Ø4		
57 s			53 s		
					
Ø6 (R)			Ø8		
57 s			53 s		

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	152	76	109	245	42	109	849	23	884	76
v/c Ratio	0.45	0.43	0.21	0.56	0.70	0.13	0.27	0.23	0.05	0.24	0.07
Control Delay	50.2	42.0	8.9	51.1	52.6	12.3	15.3	10.7	6.4	5.9	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	42.0	8.9	51.1	52.6	12.3	15.3	10.7	6.4	5.9	1.7
Queue Length 50th (ft)	34	96	0	74	170	1	42	114	4	65	0
Queue Length 95th (ft)	70	144	36	122	235	29	101	169	16	110	16
Internal Link Dist (ft)		298			165			863		2656	
Turn Bay Length (ft)	200		200	150		150	275		275		275
Base Capacity (vph)	277	812	733	452	812	714	406	3647	423	3666	1162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.19	0.10	0.24	0.30	0.06	0.27	0.23	0.05	0.24	0.07
Intersection Summary											























HCM 6th Signalized Intersection Summary
01/28/2022

103: Picadilly Road & 60th Avenue
2040 Background + Project - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	140	70	100	225	39	100	748	33	21	813	70
Future Volume (veh/h)	50	140	70	100	225	39	100	748	33	21	813	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	152	76	109	245	42	109	813	36	23	884	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	385	326	222	385	326	441	3526	156	459	3591	1115
Arrive On Green	0.21	0.21	0.21	0.07	0.07	0.07	0.47	0.47	0.47	0.70	0.70	0.70
Sat Flow, veh/h	1092	1870	1585	1153	1870	1585	585	5013	221	649	5106	1585
Grp Volume(v), veh/h	54	152	76	109	245	42	109	551	298	23	884	76
Grp Sat Flow(s),veh/h/ln	1092	1870	1585	1153	1870	1585	585	1702	1831	649	1702	1585
Q Serve(g_s), s	5.3	7.7	4.4	10.3	14.0	2.7	13.4	10.6	10.6	1.6	6.8	1.6
Cycle Q Clear(g_c), s	19.3	7.7	4.4	18.0	14.0	2.7	20.2	10.6	10.6	12.2	6.8	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	151	385	326	222	385	326	441	2394	1287	459	3591	1115
V/C Ratio(X)	0.36	0.39	0.23	0.49	0.64	0.13	0.25	0.23	0.23	0.05	0.25	0.07
Avail Cap(c_a), veh/h	403	816	692	487	816	692	441	2394	1287	459	3591	1115
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	49.2	37.8	36.4	52.9	47.3	42.0	16.2	11.4	11.4	8.8	5.9	5.1
Incr Delay (d2), s/veh	1.4	0.7	0.4	1.7	1.8	0.2	1.3	0.2	0.4	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.6	1.7	3.3	7.2	1.1	2.1	4.0	4.4	0.2	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	38.4	36.8	54.6	49.0	42.2	17.5	11.6	11.9	9.0	6.0	5.2
LnGrp LOS	D	D	D	D	D	D	B	B	B	A	A	A
Approach Vol, veh/h		282			396			958			983	
Approach Delay, s/veh		40.3			49.8			12.4			6.0	
Approach LOS		D			D			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.4		27.6		82.4		27.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		52.0		48.0		52.0		48.0				
Max Q Clear Time (g_c+I1), s		22.2		21.3		14.2		20.0				
Green Ext Time (p_c), s		7.2		1.3		7.4		2.1				
Intersection Summary												
HCM 6th Ctrl Delay				18.7								
HCM 6th LOS				B								

Timings
01/28/2022


104: Tibet Road & 60th Avenue
2040 Background + Project - PM Peak Hour












											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	50	55	52	110	95	135	59	605	60	120	575
Future Volume (vph)	50	55	52	110	95	135	59	605	60	120	575
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		4			8			2			6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	4	4	4	8	8	8	2	2	2	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	62.0	62.0	62.0	62.0	62.0
Total Split (%)	43.6%	43.6%	43.6%	43.6%	43.6%	43.6%	56.4%	56.4%	56.4%	56.4%	56.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	16.0	16.0	16.0	16.0	16.0	16.0	84.0	84.0	84.0	84.0	84.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.30	0.22	0.21	0.62	0.38	0.41	0.12	0.24	0.05	0.23	0.27

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 109.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 11.9
 Intersection Capacity Utilization 52.3%
 Analysis Period (min) 15

























Splits and Phases: 104: Tibet Road & 60th Avenue

















	Ø2 (R)		Ø4
62 s		48 s	
	Ø6 (R)		Ø8
62 s		48 s	

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	54	60	57	120	103	147	64	658	65	130	722
v/c Ratio	0.30	0.22	0.21	0.62	0.38	0.41	0.12	0.24	0.05	0.23	0.27
Control Delay	47.0	43.5	24.4	57.2	45.2	9.9	3.9	3.4	0.7	5.7	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	43.5	24.4	57.2	45.2	9.9	3.9	3.4	0.7	5.7	4.5
Queue Length 50th (ft)	39	43	20	81	67	0	7	40	1	21	62
Queue Length 95th (ft)	80	85	53	133	112	52	21	73	4	56	112
Internal Link Dist (ft)		597			252			849			2648
Turn Bay Length (ft)	200		200	200		200	275		275	250	
Base Capacity (vph)	480	728	653	522	728	708	523	2703	1224	563	2654
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.08	0.09	0.23	0.14	0.21	0.12	0.24	0.05	0.23	0.27
Intersection Summary											

HCM 6th Signalized Intersection Summary
01/28/2022

104: Tibet Road & 60th Avenue
2040 Background + Project - PM Peak Hour

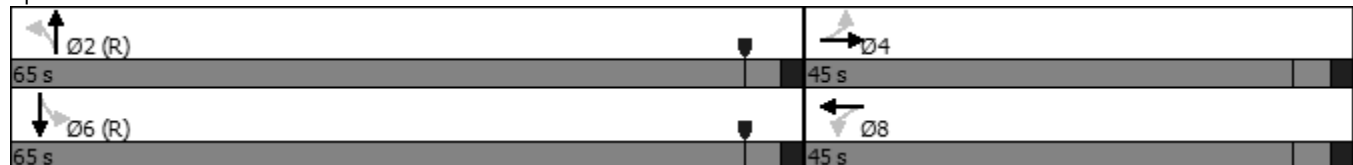
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	55	52	110	95	135	59	605	60	120	575	89
Future Volume (veh/h)	50	55	52	110	95	135	59	605	60	120	575	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	60	57	120	103	147	64	658	65	130	625	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	287	243	222	287	243	572	2685	1198	617	2330	361
Arrive On Green	0.05	0.05	0.05	0.15	0.15	0.15	1.00	1.00	1.00	0.76	0.76	0.76
Sat Flow, veh/h	1130	1870	1585	1275	1870	1585	731	3554	1585	730	3083	478
Grp Volume(v), veh/h	54	60	57	120	103	147	64	658	65	130	360	362
Grp Sat Flow(s),veh/h/ln	1130	1870	1585	1275	1870	1585	731	1777	1585	730	1777	1784
Q Serve(g_s), s	5.2	3.4	3.8	10.0	5.4	9.5	0.9	0.0	0.0	5.8	6.8	6.8
Cycle Q Clear(g_c), s	10.6	3.4	3.8	13.4	5.4	9.5	7.7	0.0	0.0	5.8	6.8	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	183	287	243	222	287	243	572	2685	1198	617	1343	1348
V/C Ratio(X)	0.29	0.21	0.23	0.54	0.36	0.60	0.11	0.25	0.05	0.21	0.27	0.27
Avail Cap(c_a), veh/h	451	731	620	525	731	620	572	2685	1198	617	1343	1348
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.82	0.82	0.82
Uniform Delay (d), s/veh	51.9	45.8	46.0	46.7	41.7	43.4	0.3	0.0	0.0	4.0	4.1	4.1
Incr Delay (d2), s/veh	0.9	0.4	0.5	2.0	0.8	2.4	0.4	0.2	0.1	0.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.6	1.6	3.3	2.6	3.9	0.1	0.1	0.0	0.8	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	46.2	46.5	48.8	42.5	45.8	0.7	0.2	0.1	4.6	4.5	4.5
LnGrp LOS	D	D	D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		171			370			787			852	
Approach Delay, s/veh		48.4			45.9			0.2			4.5	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.1		21.9		88.1		21.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		57.0		43.0		57.0		43.0				
Max Q Clear Time (g_c+I1), s		9.7		12.6		8.8		15.4				
Green Ext Time (p_c), s		5.9		0.7		6.4		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				13.4								
HCM 6th LOS				B								









								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	22	5	160	5	57	597	10	698
Future Volume (vph)	22	5	160	5	57	597	10	698
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	32.0	32.0	32.0	32.0	29.0	29.0	29.0	29.0
Total Split (s)	45.0	45.0	45.0	45.0	65.0	65.0	65.0	65.0
Total Split (%)	40.9%	40.9%	40.9%	40.9%	59.1%	59.1%	59.1%	59.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	19.8	19.8	19.8	19.8	80.2	80.2	80.2	80.2
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.73	0.73	0.73	0.73
v/c Ratio	0.11	0.15	0.72	0.31	0.14	0.27	0.02	0.31

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 10.7
 Intersection Capacity Utilization 56.6%
 Analysis Period (min) 15






















Splits and Phases: 105: Tibet Road & Street J



								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	48	174	119	62	687	11	791
v/c Ratio	0.11	0.15	0.72	0.31	0.14	0.27	0.02	0.31
Control Delay	35.6	12.7	57.7	9.3	5.6	4.9	5.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	12.7	57.7	9.3	5.6	4.9	5.2	5.2
Queue Length 50th (ft)	14	3	117	3	11	68	2	94
Queue Length 95th (ft)	35	32	175	48	24	85	8	125
Internal Link Dist (ft)		445		248		810		849
Turn Bay Length (ft)	150				275		275	
Base Capacity (vph)	428	613	491	652	454	2560	512	2565
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.08	0.35	0.18	0.14	0.27	0.02	0.31
Intersection Summary								

HCM 6th Signalized Intersection Summary
01/28/2022

105: Tibet Road & Street J
2040 Background + Project - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	5	40	160	5	105	57	597	35	10	698	29
Future Volume (veh/h)	22	5	40	160	5	105	57	597	35	10	698	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	5	43	174	5	114	62	649	38	11	759	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	30	258	274	12	274	566	2491	146	617	2536	107
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1273	168	1443	1357	67	1528	685	3412	200	755	3474	146
Grp Volume(v), veh/h	24	0	48	174	0	119	62	338	349	11	388	403
Grp Sat Flow(s),veh/h/ln	1273	0	1611	1357	0	1595	685	1777	1834	755	1777	1844
Q Serve(g_s), s	1.9	0.0	2.8	13.7	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.2	0.0	2.8	16.5	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.90	1.00		0.96	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	209	0	288	274	0	286	566	1297	1339	617	1297	1346
V/C Ratio(X)	0.11	0.00	0.17	0.63	0.00	0.42	0.11	0.26	0.26	0.02	0.30	0.30
Avail Cap(c_a), veh/h	444	0	586	525	0	580	566	1297	1339	617	1297	1346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	0.96	0.96	0.96
Uniform Delay (d), s/veh	44.1	0.0	38.2	45.2	0.0	40.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	2.4	0.0	1.0	0.4	0.5	0.5	0.1	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.1	4.8	0.0	3.0	0.1	0.2	0.2	0.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.0	38.5	47.6	0.0	41.0	0.4	0.5	0.5	0.1	0.6	0.5
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		72			293			749			802	
Approach Delay, s/veh		40.4			44.9			0.5			0.6	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.3		24.7		85.3		24.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		40.0		60.0		40.0				
Max Q Clear Time (g_c+I1), s		2.0		11.2		2.0		18.5				
Green Ext Time (p_c), s		5.4		0.3		5.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	187	7	0	364	0	4
Future Vol, veh/h	187	7	0	364	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	203	8	0	396	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 207
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 833
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 833
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	833	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	9.3	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Vol, veh/h	20	151	18	19	201	20	18	5	5	5	5	15
Future Vol, veh/h	20	151	18	19	201	20	18	5	5	5	5	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	164	20	21	218	22	20	5	5	5	5	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	184	0	0	500	500	174	494	499	229
Stage 1	-	-	-	-	-	-	218	218	-	271	271	-
Stage 2	-	-	-	-	-	-	282	282	-	223	228	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1327	-	-	1391	-	-	481	473	869	486	473	810
Stage 1	-	-	-	-	-	-	784	723	-	735	685	-
Stage 2	-	-	-	-	-	-	725	678	-	780	715	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1327	-	-	1391	-	-	456	458	869	467	458	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	456	458	-	467	458	-
Stage 1	-	-	-	-	-	-	771	711	-	723	675	-
Stage 2	-	-	-	-	-	-	694	668	-	756	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.6	12.5	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	456	600	1327	-	-	1391	-	-	467	679
HCM Lane V/C Ratio	0.043	0.018	0.016	-	-	0.015	-	-	0.012	0.032
HCM Control Delay (s)	13.2	11.1	7.8	-	-	7.6	-	-	12.8	10.5
HCM Lane LOS	B	B	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0	-	-	0	0.1

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	43	6	3	29	6	4	5	2	3	5	5
Future Vol, veh/h	9	43	6	3	29	6	4	5	2	3	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	47	7	3	32	7	4	5	2	3	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	54	0	0	118	116	51	116	116	36
Stage 1	-	-	-	-	-	-	71	71	-	42	42	-
Stage 2	-	-	-	-	-	-	47	45	-	74	74	-
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	1571	-	-	1551	-	-	858	774	1017	861	774	1037
Stage 1	-	-	-	-	-	-	939	836	-	972	860	-
Stage 2	-	-	-	-	-	-	967	857	-	935	833	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1571	-	-	1551	-	-	843	767	1017	849	767	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-	843	767	-	849	767	-
Stage 1	-	-	-	-	-	-	932	830	-	965	858	-
Stage 2	-	-	-	-	-	-	954	855	-	920	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	9.4	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	831	1571	-	-	1551	-	-	874
HCM Lane V/C Ratio	0.014	0.006	-	-	0.002	-	-	0.016
HCM Control Delay (s)	9.4	7.3	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	38	5	4	34	6	1	5	2	3	5	3
Future Vol, veh/h	5	38	5	4	34	6	1	5	2	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	41	5	4	37	7	1	5	2	3	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	46	0	0	107	106	44	106	105	41
Stage 1	-	-	-	-	-	-	54	54	-	49	49	-
Stage 2	-	-	-	-	-	-	53	52	-	57	56	-
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	1564	-	-	1562	-	-	872	784	1026	873	785	1030
Stage 1	-	-	-	-	-	-	958	850	-	964	854	-
Stage 2	-	-	-	-	-	-	960	852	-	955	848	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1564	-	-	1562	-	-	861	779	1026	863	780	1030
Mov Cap-2 Maneuver	-	-	-	-	-	-	861	779	-	863	780	-
Stage 1	-	-	-	-	-	-	955	847	-	961	851	-
Stage 2	-	-	-	-	-	-	948	849	-	944	845	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.7	9.3	9.3
HCM LOS			A	A




Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	840	1564	-	-	1562	-	-	859
HCM Lane V/C Ratio	0.01	0.003	-	-	0.003	-	-	0.014
HCM Control Delay (s)	9.3	7.3	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Traffic Vol, veh/h	37	6	20	33	11	31
Future Vol, veh/h	37	6	20	33	11	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	7	22	36	12	34

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	47
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1560
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1560
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	8.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	859	1026	-	-	1560	-
HCM Lane V/C Ratio	0.014	0.033	-	-	0.014	-
HCM Control Delay (s)	9.3	8.6	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	12	17	51	10	12
Future Vol, veh/h	44	12	17	51	10	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	13	18	55	11	13

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	81	46	0	0	73
Stage 1	46	-	-	-	-
Stage 2	35	-	-	-	-
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	921	1023	-	-	1527
Stage 1	976	-	-	-	-
Stage 2	987	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	915	1023	-	-	1527
Mov Cap-2 Maneuver	915	-	-	-	-
Stage 1	976	-	-	-	-
Stage 2	980	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	936	1527
HCM Lane V/C Ratio	-	-	0.065	0.007
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	10	5	5	9	5	7	9	6	14	12	8	17
Future Vol, veh/h	10	5	5	9	5	7	9	6	14	12	8	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	5	10	5	8	10	7	15	13	9	18

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	85	86	18	84	88	15	27	0	0	22	0	0
Stage 1	44	44	-	35	35	-	-	-	-	-	-	-
Stage 2	41	42	-	49	53	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	901	804	1061	903	802	1065	1587	-	-	1593	-	-
Stage 1	970	858	-	981	866	-	-	-	-	-	-	-
Stage 2	974	860	-	964	851	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	880	793	1061	884	791	1065	1587	-	-	1593	-	-
Mov Cap-2 Maneuver	880	793	-	884	791	-	-	-	-	-	-	-
Stage 1	964	851	-	975	861	-	-	-	-	-	-	-
Stage 2	955	855	-	945	844	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.1		9.1		2.3		2.4	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1587	-	-	894	910	1593	-	-
HCM Lane V/C Ratio	0.006	-	-	0.024	0.025	0.008	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-