

Mr. Brad Cooley
City of Lee's Summit, MO
Public Works

Re: Colton's Crossing Traffic Study
Hg Consult Project Number: 21.018

Mr. Cooley,
The purpose of this memo is to document the amount of traffic generated by the Colton's Crossing development, located within Lee's Summit. The development is located on Hamblen Road and shown below in **Figure 1**.



Figure 1: Project Vicinity Map

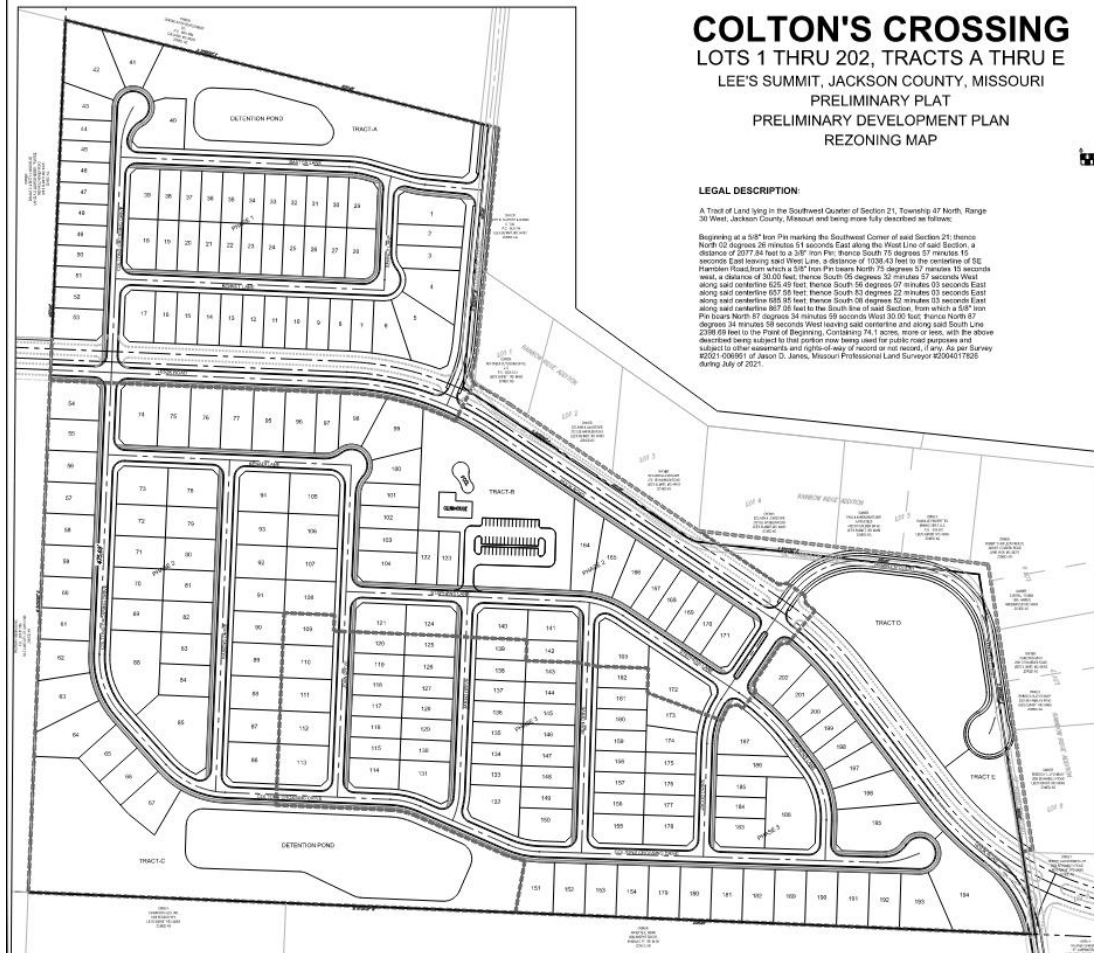
Existing Conditions

Currently, Hamblen Road is classified as a minor arterial according to Lee's Summit Functional Classification map. It is a two-lane, paved roadway with open ditches and a posted speed limit of 35mph. The existing pavement width is approximately 20-feet wide and will need to be

improved as a part of this project. Hook Road is also classified as a minor arterial roadway that will be constructed as a part of this project, while planning future Hook Road to the west by coordinating with adjacent land owners for that future roadway right-of-way. Currently, Hook Road terminates just east of Route 291. SE Thompson Drive is classified as a commercial/industrial collector roadway that has a posted speed limit of 35mph. The parcel for the proposed development is currently zoned as agricultural. The existing traffic volumes on Hamblen Road are very low and are estimated to be less than 1,000 vehicles per day. AM peak period traffic volumes were obtained on Thursday, Dec. 15th 2022, and PM peak period traffic volumes were obtained on Friday, Dec. 9th 2022. Although traffic volumes are generally obtained on Tuesdays-Thursdays, traffic volumes were obtained on Friday for the PM counts for scheduling reasons to complete the traffic study. Given the volumes and nature of the area the difference in traffic volumes for the analysis is assumed to be an insignificant difference. The AM peak hour is between 7:15-8:15 AM with 51 total vehicles (19 SB and 32 NB) while the PM peak hour is between 4:45-5:45 PM (50 SB and 28 NB). The AM peak hour has 63% of vehicles traveling northbound while the PM peak hour has 64% of vehicles traveling southbound.

Proposed Development and Trip Generation

The proposed site consists of 135 single family detached homes, and 60 single-family duplex homes. The project will improve Hamblen Road to the north to Thompson Drive, as well as construct new Hook Drive through the development. The preliminary plat also shows the intersection spacing between Hamblen Road and Hamblen Court is over 900', which is greater than the City's 660' spacing requirement. The preliminary plat is shown below.



In addition to the improvements to the roadway network shown above on the preliminary plat, the project will also include sidewalks throughout the public roadway system in accordance with City regulations. The project also includes the installation of over 5,000 feet of water line to provide the site with water. Additionally, the project has coordinated with the adjacent landowner to the west and preserved 100' of right-of-way for the future extension of Hook Road from Route 291.

The amount of traffic generated by the proposed development has been calculated by the *Institute of Transportation Engineer's, Trip Generation Manual, 11th Edition*. The amount of traffic expected to be generated by the proposed site for the typical weekday, am peak hour and pm peak hour is summarized in the table shown below.

Table 1 - Colton's Crossing Trip Generation

Land Use	Number of Units	Weekday	AM Peak Hour		PM Peak Hour	
			Entering	Exiting	Entering	Exiting
Single Family Detached	135	1330	25	73	83	49
Single Family Attached (Duplex)	60	432	9	20	19	15
	TOTAL	1762	34	93	102	64

The table above shows that there will be approximately 127 trips generated in the AM peak hour, and 166 trips generated in the PM peak hour.

Trip distributions are assumed to estimate where traffic is coming from and going to help study the impacts to the area. The distributions attempted to replicate the existing traffic patterns, entering and exiting, for both the AM and PM peak hours. The section north of Hook Drive has 26% of the lots in the development so 26% of the entering and exiting vehicles were assumed to use these entrances with the remaining 74% using the entrances for the parcels south of Hook Drive. In the AM 63% of entering and exiting traffic comes is northbound while 64% of entering and exiting traffic comes is southbound in the PM peak hour.

Traffic Operations

Traffic was analyzed using Synchro traffic modeling software, the industry standard for intersections based on the Highway Capacity Manual. Synchro calculates several Measures of Effectiveness (MOEs) based on traffic volumes, lane configurations, and type of intersection control. Some of the more commonly used MOE's are Delay, Queue lengths, and Level of Service. Level of Service (LOS) is a qualitative measure used to relate the quality of traffic service. The HCM defines LOS for signalized and unsignalized intersections as a function of the average vehicle control delay. LOS ranges from A (unimpeded driving, no delays) to F (highly congested roads, high delays).

The table below gives the average vehicle delay ranges for each Level of Service.

Level of Service (LOS)	Control Delay per Vehicle (sec.)	
	Signalized	Unsignalized
A	<= 10	<= 10
B	10-20	10-15
C	20-35	15-25
D	35-55	25-35
E	55-80	35-50
F	> 80	> 50

The existing conditions of Hamblen Road is a two-lane road with no intersections so this condition is not analyzed in Synchro. Below are the results for the Existing plus Proposed Development traffic for the AM and PM peak hours. In all tables, Delay is the average control delay per vehicle and listed in seconds. (U) denotes an unsignalized intersection.

Existing + Build AM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	0/A	0/A	9/A	-
Colton's Dr/Hook Rd (U)	8/A	9/A	0/A	5/A
Hamblen Rd/Hook Rd (U)	-	9/A	5/A	0/A
Dustin Dr/Hook Rd (U)	9/A	0/A	7/A	1/A

Existing + Build PM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	1/A	0/A	9/A	-
Colton's Dr/Hook Rd (U)	8/A	9/A	0/A	6/A
Hamblen Rd/Hook Rd (U)	-	10/A	3/A	0/A
Dustin Dr/Hook Rd (U)	10/A	0/A	6/A	2/A

Future Traffic Considerations

Most of the adjacent land parcels to this development are currently undeveloped. Knowing that they may develop in the future means that the roadway network will need to accommodate this future traffic. This development improves Hamblen Road from the intersection with Hook Road to Thompson Drive by adding four additional feet of pavement, which will provide two, 12-foot wide driving lanes, as well as a four-foot wide shoulder. Hook Drive will also be constructed to the minor arterial standards of the City. This will meet or exceed the City's Unimproved Road Policy as the proposed traffic volumes are well below the 5,000 ADT threshold to maintain the Unimproved Roads status.

Traffic growth of existing traffic assumed to be 2% for 20 years was calculated for future conditions. Higher developed areas may experience lower growth while more undeveloped areas may experience higher growth rates. Given the nature of Hamblen Road with the tight "S" curve around the at-grade railroad crossing to the north, and the "T" intersection to the residential Gambrell Street to the south a fairly moderate growth rate was assumed. The Synchro results for this scenario are shown in the tables below.

Build 2042 AM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	0/A	0/A	9/A	-
Colton's Dr/Hook Rd (U)	8/A	9/A	0/A	5/A
Hamblen Rd/Hook Rd (U)	-	9/A	5/A	0/A
Dustin Dr/Hook Rd (U)	10/A	0/A	7/A	1/A

Build 2042 PM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	1/A	0/A	10/A	-
Colton's Dr/Hook Rd (U)	8/A	9/A	0/A	6/A
Hamblen Rd/Hook Rd (U)	-	10/B	3/A	0/A
Dustin Dr/Hook Rd (U)	10/A	0/A	6/A	2/A

Additionally, the long range plan for Hook Road is to connect from the east, cross the railroad tracks, then extend to the west to the Route 291 Outer Road which connects directionally to north Route 291. This scenario can be seen to attract more traffic long-term than Hamblen Road. Hamblen Road 2042 volumes were approximately quadrupled to assume traffic volumes for Hook Road, directional to be westbound in the AM and eastbound in the PM. The Interim conditions are for two lanes on Hook Road while the Ultimate plan is for it to be four lanes. Results of the two-lane Interim scenarios are in the tables below.

Build 2042 Interim Hook AM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	0/A	0/A	9/A	-
Colton's Dr/Hook Rd (U)	9/A	13/B	0/A	5/A
Hamblen Rd/Hook Rd (U)	-	14/B	1/A	0/A
Dustin Dr/Hook Rd (U)	18/C	0/A	9/A	0/A

Build 2042 Interim Hook PM - Avg. Delay/LOS				
	NB	SB	EB	WB
Baxter Ln/Hamblen Rd (U)	1/A	0/A	10/A	-
Colton's Dr/Hook Rd (U)	10/B	16/C	0/A	1/A
Hamblen Rd/Hook Rd (U)	-	18/C	0/A	0/A
Dustin Dr/Hook Rd (U)	22/C	0/A	9/A	1/A

The improvements made to the adjacent roadway network will As land is developed in the area, the roadway network constructed and improved by this project will be able to meet the needs of the future traffic demand.

Conclusions and Recommendations

The following conclusions and recommendations are made regarding the Colton's Crossing Development and the impacts to the local roadway system.

- Existing Hamblen Road experiences approximately 1,000 vehicles per day.
- The development will improve Hamblen Road from the intersection of Hook Drive north to the intersection of Thompson Drive, a distance of approximately 2,800 feet.
- The development will construct Hook Drive, which will provide a ½-roadway section for a future arterial roadway, and intersections will exceed the City's spacing requirement of 660'. This construction of Hook Drive also conforms to the City's Unimproved Road Policy.
- The development will construct new sidewalk along Hook Drive and throughout the development which will provide facilities for a walkable environment.
- The proposed development will generate 127 AM peak hour trips, and 186 PM peak hour trips.
- Given the low volume of existing roadway traffic and the trips generated by this development, stop controlled intersections will operate adequately after the development is constructed and into the foreseeable future.

Please let me know if you have any questions regarding this memo.

Sincerely,

A handwritten signature in cursive script, reading 'Eric Reinkemeyer'.

Eric Reinkemeyer, PE, PTOE
Hg Consult, Inc.



Appendix A – Trip Generation

PM Trip Dis + tributions

102 ENT. 64 EXIT

PHF = 72%

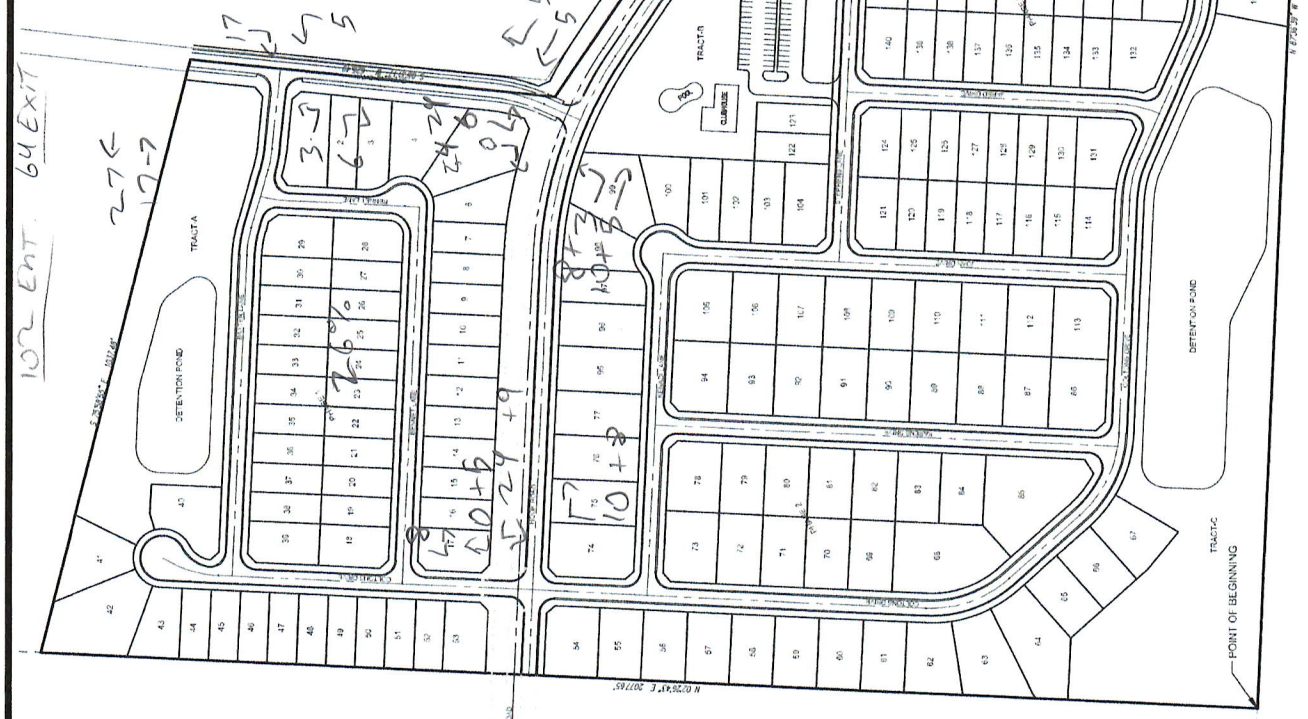
50 28
↓
64% 36%

COLTON'S CROSSING

LOTS 1 THRU 202, TRACTS A THRU G
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
PRELIMINARY PLAT
PRELIMINARY DEVELOPMENT PLAN
REZONING MAP

LEGAL DESCRIPTION:

A Tract of Land lying in the Southwest Quarter of Section 21, Township 47 North, Range 30 West, Jackson County, Missouri and being more fully described as follows:
Beginning at a 57' Iron Pin in the Southwest Corner of said Section 21, thence North 02 degrees 20 minutes 51 seconds East along the West Line of said Section, a distance of 77.44 feet to a 30" Iron Pin; thence South 72 degrees 57 minutes 15 seconds East along the South Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence North 74 degrees 37 minutes 15 seconds West along the North Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence South 10 degrees 32 minutes 57 seconds West along the West Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence South 83 degrees 52 minutes 03 seconds East along said corner line 855.05 feet; thence South 08 degrees 52 minutes 03 seconds East along said corner line 855.05 feet; thence South 83 degrees 52 minutes 03 seconds East along said corner line 855.05 feet; thence South 10 degrees 32 minutes 57 seconds West along the West Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence North 74 degrees 37 minutes 15 seconds East along the North Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence South 72 degrees 57 minutes 15 seconds East along the South Line of said Section, a distance of 150.00 feet to a 30" Iron Pin; thence North 02 degrees 20 minutes 51 seconds East along the West Line of said Section, a distance of 77.44 feet to a 30" Iron Pin in the Southwest Corner of said Section 21, the above described being a subject to the easement and rights of way of record or not record, if any. As set Survey during July of 2021.



VICINITY MAP

NOT TO SCALE



NOTES:

1. Lots 1-100 are for residential use and shall be zoned and regulated by the City of Lee's Summit, Missouri.
2. A minimum 5' wide easement shall be provided along the centerline of all roads.
3. All easements shall be shown on the plat.
4. No construction shall be done within the easement area.
5. The plat is subject to the City of Lee's Summit, Missouri.
6. The plat is subject to the City of Lee's Summit, Missouri.
7. The plat is subject to the City of Lee's Summit, Missouri.

LOT PHASES:

- 1. LOTS 1-100: SINGLE-FAMILY RESIDENTIAL
- 2. LOTS 101-202: MULTIFAMILY RESIDENTIAL
- 3. LOTS 203-300: COMMERCIAL
- 4. LOTS 301-400: INDUSTRIAL
- 5. LOTS 401-500: AGRICULTURAL

SANITARY SEWER ACREAGE:

- 1. LOTS 1-100: 1.00 ACRE
- 2. LOTS 101-202: 2.00 ACRE
- 3. LOTS 203-300: 3.00 ACRE
- 4. LOTS 301-400: 4.00 ACRE
- 5. LOTS 401-500: 5.00 ACRE

PROJECT SUMMARY:

- 1. PROJECT NAME: COLTON'S CROSSING
- 2. PROJECT LOCATION: LEE'S SUMMIT, MISSOURI
- 3. PROJECT SIZE: 100 ACRES
- 4. PROJECT PHASES: PHASE 1, PHASE 2, PHASE 3
- 5. PROJECT OWNER: COLTON'S CROSSING LLC

MINIMUM BUILDING SETBACKS:

- 1. SINGLE-FAMILY: 10 FEET
- 2. MULTIFAMILY: 15 FEET
- 3. COMMERCIAL: 20 FEET
- 4. INDUSTRIAL: 25 FEET
- 5. AGRICULTURAL: 30 FEET

LOT SIZE SUMMARY:

LOT SIZE SUMMARY	LOT SIZE SUMMARY
NUMBER OF LOTS	202
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES
MANUFACTURED LOT SIZE	1.00 ACRES

DEVELOPER:

HAMBLETON ROAD PROJECT, LLC
705 B MELODY LANE
LEE'S SUMMIT, MISSOURI 64083
(816) 877-5088
CONTACT: DUSTIN BAXTER

ENGINEER:

HG CONSULT, INC.
1533 LOCUST STREET
KANSAS CITY, MO 64108
(816) 703-7088
CONTACT: MATT CASTOR

Appendix B – Synchro Output

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	16	10	57	30	6
Future Vol, veh/h	27	16	10	57	30	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	19	12	67	35	7

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	79	0	0 129 46
Stage 1	-	-	- 46 -
Stage 2	-	-	- 83 -
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	1519	-	- 865 1023
Stage 1	-	-	- 976 -
Stage 2	-	-	- 940 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1519	-	- 847 1023
Mov Cap-2 Maneuver	-	-	- 847 -
Stage 1	-	-	- 956 -
Stage 2	-	-	- 940 -

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1519	-	-	-	872
HCM Lane V/C Ratio	0.021	-	-	-	0.049
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	12	0	4	0	0	34	9	0	0
Future Vol, veh/h	0	0	0	12	0	4	0	0	34	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	14	0	5	0	0	40	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	1	0	0	32	34	1	52	32	3
Stage 1	-	-	-	-	-	-	1	1	-	31	31	-
Stage 2	-	-	-	-	-	-	31	33	-	21	1	-
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	-	-	1622	-	-	976	859	1084	947	861	1081
Stage 1	-	-	-	-	-	-	1022	895	-	986	869	-
Stage 2	-	-	-	-	-	-	986	868	-	998	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1616	-	-	1622	-	-	969	851	1084	905	853	1081
Mov Cap-2 Maneuver	-	-	-	-	-	-	969	851	-	905	853	-
Stage 1	-	-	-	-	-	-	1022	895	-	986	861	-
Stage 2	-	-	-	-	-	-	977	860	-	961	895	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			5.4			8.4			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1616	-	-	1622	-	-	905				
HCM Lane V/C Ratio	0.037	-	-	-	0.009	-	-	0.012				
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	9				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	3	81	30	2
Future Vol, veh/h	9	6	3	81	30	2
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	4	95	35	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	139	36	37	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	103	-	-	-	-	-
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	854	1037	1574	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	851	1037	1574	-	-	-
Mov Cap-2 Maneuver	851	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	0.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1574	-	917	-	-	
HCM Lane V/C Ratio	0.002	-	0.019	-	-	
HCM Control Delay (s)	7.3	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection

Int Delay, s/veh 5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	15	14	42	80	24
Future Vol, veh/h	11	15	14	42	80	24
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	21	19	58	111	33

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	77	0	0 99 48
Stage 1	-	-	- 48 -
Stage 2	-	-	- 51 -
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	1522	-	- 900 1021
Stage 1	-	-	- 974 -
Stage 2	-	-	- 971 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1522	-	- 891 1021
Mov Cap-2 Maneuver	-	-	- 891 -
Stage 1	-	-	- 964 -
Stage 2	-	-	- 971 -

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1522	-	-	-	918
HCM Lane V/C Ratio	0.01	-	-	-	0.157
HCM Control Delay (s)	7.4	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	33	0	5	0	0	18	8	0	0
Future Vol, veh/h	0	0	0	33	0	5	0	0	18	8	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	46	0	7	0	0	25	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	1	0	0	97	100	1	110	97	4
Stage 1	-	-	-	-	-	-	1	1	-	96	96	-
Stage 2	-	-	-	-	-	-	96	99	-	14	1	-
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	-	-	1622	-	-	885	790	1084	868	793	1080
Stage 1	-	-	-	-	-	-	1022	895	-	911	815	-
Stage 2	-	-	-	-	-	-	911	813	-	1006	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1614	-	-	1622	-	-	866	768	1084	830	771	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	866	768	-	830	771	-
Stage 1	-	-	-	-	-	-	1022	895	-	911	792	-
Stage 2	-	-	-	-	-	-	885	790	-	983	895	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			6.3			8.4			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1614	-	-	1622	-	-	830				
HCM Lane V/C Ratio	0.023	-	-	-	0.028	-	-	0.013				
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	9.4				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0				

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	5	48	98	17
Future Vol, veh/h	3	6	5	48	98	17
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	7	67	136	24

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	229	148	160
Stage 1	148	-	-
Stage 2	81	-	-
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	759	899	1419
Stage 1	880	-	-
Stage 2	942	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	755	899	1419
Mov Cap-2 Maneuver	755	-	-
Stage 1	876	-	-
Stage 2	942	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1419	-	845	-	-
HCM Lane V/C Ratio	0.005	-	0.015	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	16	10	73	39	6
Future Vol, veh/h	27	16	10	73	39	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	19	12	86	46	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	98	0	-	0	138	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	83	-
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	1495	-	-	-	855	1012
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1495	-	-	-	836	1012
Mov Cap-2 Maneuver	-	-	-	-	836	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	940	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.7	0		9.5		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1495	-	-	-	856	
HCM Lane V/C Ratio	0.021	-	-	-	0.062	
HCM Control Delay (s)	7.5	0	-	-	9.5	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	12	0	4	0	0	34	9	0	0
Future Vol, veh/h	0	0	0	12	0	4	0	0	34	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	14	0	5	0	0	40	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	1	0	0	32	34	1	52	32	3
Stage 1	-	-	-	-	-	-	1	1	-	31	31	-
Stage 2	-	-	-	-	-	-	31	33	-	21	1	-
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	-	-	1622	-	-	976	859	1084	947	861	1081
Stage 1	-	-	-	-	-	-	1022	895	-	986	869	-
Stage 2	-	-	-	-	-	-	986	868	-	998	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1616	-	-	1622	-	-	969	851	1084	905	853	1081
Mov Cap-2 Maneuver	-	-	-	-	-	-	969	851	-	905	853	-
Stage 1	-	-	-	-	-	-	1022	895	-	986	861	-
Stage 2	-	-	-	-	-	-	977	860	-	961	895	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			5.4			8.4			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1616	-	-	1622	-	-	905				
HCM Lane V/C Ratio	0.037	-	-	-	0.009	-	-	0.012				
HCM Control Delay (s)	8.4	0	-	-	7.2	0	-	9				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	3	97	39	2
Future Vol, veh/h	9	6	3	97	39	2
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	4	114	46	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	169	47	48	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	122	-	-	-	-	-
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	821	1022	1559	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	819	1022	1559	-	-	-
Mov Cap-2 Maneuver	819	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	0.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1559	-	890	-	-	
HCM Lane V/C Ratio	0.002	-	0.02	-	-	
HCM Control Delay (s)	7.3	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	6.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	15	14	56	104	24
Future Vol, veh/h	11	15	14	56	104	24
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	21	19	78	144	33
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	97	0	-	0	109	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	51	-
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	1496	-	-	-	888	1008
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1496	-	-	-	879	1008
Mov Cap-2 Maneuver	-	-	-	-	879	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	971	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		10		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1496	-	-	-	901	
HCM Lane V/C Ratio	0.01	-	-	-	0.197	
HCM Control Delay (s)	7.4	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.7	

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	33	0	5	0	0	18	8	0	0
Future Vol, veh/h	0	0	0	33	0	5	0	0	18	8	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	46	0	7	0	0	25	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	1	0	0	97	100	1	110	97	4
Stage 1	-	-	-	-	-	-	1	1	-	96	96	-
Stage 2	-	-	-	-	-	-	96	99	-	14	1	-
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	-	-	1622	-	-	885	790	1084	868	793	1080
Stage 1	-	-	-	-	-	-	1022	895	-	911	815	-
Stage 2	-	-	-	-	-	-	911	813	-	1006	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1614	-	-	1622	-	-	866	768	1084	830	771	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	866	768	-	830	771	-
Stage 1	-	-	-	-	-	-	1022	895	-	911	792	-
Stage 2	-	-	-	-	-	-	885	790	-	983	895	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			6.3			8.4			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1614	-	-	1622	-	-	830				
HCM Lane V/C Ratio	0.023	-	-	-	0.028	-	-	0.013				
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	9.4				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	5	62	122	17
Future Vol, veh/h	3	6	5	62	122	17
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	7	86	169	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	281	181	193	0	-	0
Stage 1	181	-	-	-	-	-
Stage 2	100	-	-	-	-	-
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	709	862	1380	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	705	862	1380	-	-	-
Mov Cap-2 Maneuver	705	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1380	-	802	-	-
HCM Lane V/C Ratio	0.005	-	0.016	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	166	260	73	39	6
Future Vol, veh/h	27	166	260	73	39	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	195	306	86	46	7

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	392	0	0 608 349
Stage 1	-	-	- - 349 -
Stage 2	-	-	- - 259 -
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	1167	-	- - 459 694
Stage 1	-	-	- - 714 -
Stage 2	-	-	- - 784 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1167	-	- - 445 694
Mov Cap-2 Maneuver	-	-	- - 445 -
Stage 1	-	-	- - 692 -
Stage 2	-	-	- - 784 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1167	-	-	-	467
HCM Lane V/C Ratio	0.027	-	-	-	0.113
HCM Control Delay (s)	8.2	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	150	0	12	250	4	0	0	34	9	0	0
Future Vol, veh/h	0	150	0	12	250	4	0	0	34	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	176	0	14	294	5	0	0	40	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	299	0	0	176	0	0	501	503	176	521	501	297
Stage 1	-	-	-	-	-	-	176	176	-	325	325	-
Stage 2	-	-	-	-	-	-	325	327	-	196	176	-
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	1262	-	-	1400	-	-	480	471	867	466	472	742
Stage 1	-	-	-	-	-	-	826	753	-	687	649	-
Stage 2	-	-	-	-	-	-	687	648	-	806	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1262	-	-	1400	-	-	476	465	867	440	466	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	476	465	-	440	466	-
Stage 1	-	-	-	-	-	-	826	753	-	687	641	-
Stage 2	-	-	-	-	-	-	679	640	-	769	753	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			9.4			13.4		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	867	1262	-	-	1400	-	-	440				
HCM Lane V/C Ratio	0.046	-	-	-	0.01	-	-	0.024				
HCM Control Delay (s)	9.4	0	-	-	7.6	0	-	13.4				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile O(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	3	97	39	2
Future Vol, veh/h	9	6	3	97	39	2
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	4	114	46	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	169	47	48
Stage 1	47	-	-
Stage 2	122	-	-
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	821	1022	1559
Stage 1	975	-	-
Stage 2	903	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	819	1022	1559
Mov Cap-2 Maneuver	819	-	-
Stage 1	972	-	-
Stage 2	903	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	890	-	-
HCM Lane V/C Ratio	0.002	-	0.02	-	-
HCM Control Delay (s)	7.3	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection

Int Delay, s/veh 3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	265	164	56	104	24
Future Vol, veh/h	11	265	164	56	104	24
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	368	228	78	144	33

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	306	0	0 665 267
Stage 1	-	-	- - 267 -
Stage 2	-	-	- - 398 -
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	1255	-	- - 425 772
Stage 1	-	-	- - 778 -
Stage 2	-	-	- - 678 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1255	-	- - 419 772
Mov Cap-2 Maneuver	-	-	- - 419 -
Stage 1	-	-	- - 766 -
Stage 2	-	-	- - 678 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1255	-	-	-	458
HCM Lane V/C Ratio	0.012	-	-	-	0.388
HCM Control Delay (s)	7.9	0	-	-	17.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.8

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	250	0	33	150	5	0	0	18	8	0	0
Future Vol, veh/h	0	250	0	33	150	5	0	0	18	8	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	347	0	46	208	7	0	0	25	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	215	0	0	347	0	0	651	654	347	664	651	212
Stage 1	-	-	-	-	-	-	347	347	-	304	304	-
Stage 2	-	-	-	-	-	-	304	307	-	360	347	-
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	1355	-	-	1212	-	-	382	386	696	374	388	828
Stage 1	-	-	-	-	-	-	669	635	-	705	663	-
Stage 2	-	-	-	-	-	-	705	661	-	658	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1355	-	-	1212	-	-	369	369	696	349	371	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	369	369	-	349	371	-
Stage 1	-	-	-	-	-	-	669	635	-	705	634	-
Stage 2	-	-	-	-	-	-	675	633	-	634	635	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			10.4			15.7		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	696	1355	-	-	1212	-	-	349				
HCM Lane V/C Ratio	0.036	-	-	-	0.038	-	-	0.032				
HCM Control Delay (s)	10.4	0	-	-	8.1	0	-	15.7				
HCM Lane LOS	B	A	-	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1				

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	5	62	122	17
Future Vol, veh/h	3	6	5	62	122	17
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	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	7	86	169	24

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	281	181	193
Stage 1	181	-	-
Stage 2	100	-	-
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	709	862	1380
Stage 1	850	-	-
Stage 2	924	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	705	862	1380
Mov Cap-2 Maneuver	705	-	-
Stage 1	846	-	-
Stage 2	924	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1380	-	802	-	-
HCM Lane V/C Ratio	0.005	-	0.016	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-