RICK
ENGINEERING COMPANY
Traffic Division

October 25, 2023

Mr. Ross Rulney
OV 132, LLC
P.O. Box 43426
Tucson, Arizona 8533

SUBJECT: RULNEY VISTOSO RESIDENTIAL TRAFFIC IMPACT STATEMENT (RICK ENGINEERING COMPANY JOB NUMBER 19548-P)

Dear Mr. Rulney:

The following Traffic Impact Statement (TIS) has been prepared to quantify the expected traffic generation and to evaluate the site access points for the proposed Vistoso multi-family development located within the Town of Oro Valley. It is anticipated to develop 132 multi-family dwelling units within 6.5 acres generally located south of Vistoso Highlands Drive (opposite the intersections of Steprock Canyon Place/Vistoso Highlands Drive and Bowcreek Springs Place/Vistoso Highlands Drive intersections). The project proposes to take access via two full access intersections along Vistoso Highlands Drive. This involves eliminating the existing two access driveways for the Vistoso Trails Nature Preserve Trailhead parking lot located on the south side of Vistoso Highlands Drive. Opening year for this development is anticipated to be in mid-2024. **Attachment A** shows the site plan for the proposed project. With the proposed project estimated to generate less than 100 peak hour trips, a TIS was prepared based on initial comments received from Town staff on December 14, 2022. In addition, this TIS also addresses comments received from the Town on September 22, 2023 (see **Attachment B**). In general, this includes the following:

1. Intersection Sight Distance evaluations at the two proposed project accesses assuming 35 mph (posted speed + 5 mph).
2. 85th percentile speeds along Vistoso Highlands Drive based on recent speed survey.
3. Growth factor utilized for the projected 2024 traffic volumes.
4. The actual AM and PM peak hour utilized in the traffic operational analyses.
5. Level of Service (LOS) summary of the study intersections along Vistoso Highlands Drive, including the intersections at Steprock Canyon Place, Bowcreek Springs Place and Rancho Vistoso Boulevard.
6. Evaluation of the stop sign and stop ahead sign along eastbound Vistoso Highlands Drive approaching Bowcreek Springs Place.
7. LOS analysis of Rancho Vistoso Boulevard/Vistoso Highlands Drive based on traffic counts provided by the Town.
8. Reiterate the turn lane warrant evaluation at the proposed project driveways from the previous TIS submittal.

Within the immediate project area, Vistoso Highlands Drive is currently constructed as a two-lane undivided east-west roadway that provides one vehicular travel lane and a bike lane in each direction. The posted speed limit is 30 mph and on-street parking is restricted. Based on recent 2023 traffic volume data collected by Field Data Services of Arizona, Vistoso Highlands Drive within the project vicinity currently carries about 1,830 ADT. **Attachment C** contains the Vistoso Highlands Drive ADT data as well as peak hour turning movement count data at its intersection with both Steprock Canton Place and Bowcreek Springs Place. The existing AM and PM peak hours at these intersections were calculated to be 8:00 AM -9:00 AM and 4:00 PM-5:00 PM, respectively. In addition, intersection turning movement count data at the Vistoso Highlands Drive/Rancho Vistoso Boulevard intersection were provided by the Town. The data was collected 9/22/23 through 10/6/23. In reviewing this data, Tuesday, October 3, 2023 data was utilized in this assessment since it had a complete set of data and had the highest AM and PM peak hour volumes of the data provided. The existing AM and PM peak hours at the Vistoso Highlands Drive/Rancho Vistoso Boulevard intersection were calculated to be 8:00 AM -9:00 AM and 3:45 PM-4:45 PM, respectively. **Attachment D** contains the Vistoso Highlands Drive/Rancho Vistoso Boulevard intersection turning movement counts for Tuesday, October 3, 2023. **Attachment E** contains a recent speed survey along Vistoso Highlands Drive (between Mulligan Drive-Backspin Drive and Steprock Canyon Place) that was collected on October 18th and 19th, 2023. The results show 85th percentile speeds of 33 mph in the eastbound direction and 34 mph in the westbound direction.

PROJECT TRAFFIC GENERATION

The traffic generation for the proposed multi-family development was estimated based on the trip generation rates listed in the 11th edition of the ITE (Institute of Transportation Engineer)'s *Trip Generation* publication for a multi-family housing-low rise land use (ITE Land Use Code 220). **Attachment F** contains a copy of these trip generation rates.

Based on these trip rates, the proposed 132 units are estimated to generate 992 ADT with 64 AM peak hour trips (15 inbound/49 outbound) and 78 PM peak hour trips (49 inbound/22 outbound) as summarized in **Table 1**.

Table 1
VISTOSO MULTI-FAMILY TRIP GENERATION

LAND USE	SIZE (UNITS)	RATE (TRIP/ UNIT)	ADT	AM PEAK			PM PEAK		
				RATE (TRIP/ UNIT)	VOLUME		RATE (TRIP/ UNIT)	VOLUME	
					IN	OUT		IN	OUT
Multi-family housing, low rise (ITE Code 220)	**132**	*	**922**	*	**15**	**49**	*	**49**	**22**

* Trip rates per ITE Trip Generation, 11th Edition publication were utilized for Multi Family Housing, Low Rise use (ITE Lane Use Code 220) per the below listed fitted curve equations (See Attachment B)
ADT: T=6.41(x)+75.31
AM peak: T=0.31(x)+22.85
PM peak: T=0.43(x)+20.55

PROJECT STUDY AREA INTERSECTION OPERATIONS

The three study area intersections including the proposed two project access points along Vistoso Highlands Drive were analyzed for the anticipated mid-2024 opening year conditions. The western project access is located about 150 feet west of Steprock Canyon Place and the eastern project access is located about 245 feet east of Bowcreek Springs Place. The project trips were assigned to these locations based on local traffic patterns and review of the recent traffic count data collected along Vistoso Highlands Drive. In general, about 95% of the project trips are going to/coming from east of the project site and the remaining 5% going to/coming from the west. A 2% growth factor of the existing 2023 traffic volumes were applied to represent 2024 without project conditions. The AM and PM peak periods analyzed in this TIS were 8:00 AM – 9:00 AM and 4:00 pm- 5:00 pm, respectively for all the study intersections except Vistoso Highlands Drive/Rancho Vistoso Boulevard. The evaluated AM and PM peak hours at the Vistoso Highlands Drive/Rancho Vistoso Boulevard intersection were 8:00 AM -9:00 AM and 3:45 PM-4:45 PM, respectively.

The AM/PM peak hour intersection operational analysis results show that the conflicting movements at the unsignalized intersections along Vistoso Highlands Drive were calculated to operate acceptably (LOS A) during the AM and PM peak hours at opening year. The signalized Vistoso Highlands Drive/Rancho Vistoso Boulevard was calculated to operate at LOS B or better during the AM and PM peak hours at opening year. **Attachment G** contains the HCM intersection calculation sheets. **Table 2** shows as summary of the all the project area intersections and analysis scenarios for this assessment.

RICK ENGINEERING COMPANY

TABLE 2
INTERSECTION OPERATIONS SUMMARY
RUNLEY VISTOSO RESIDENTIAL TRAFFIC IMPACT STAEMENT

				EXISTING (2023)				OPENING YEAR (2024) WITHOUT PROJECT				OPENING YEAR (2024) + PROJECT			
#	INTERSECTION	CONTROL	DIR.	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
				DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]
1	**Vistoso Highlands Drive / Steprock Canyon Place**	**(TWSC)**	SB-LR	9.5	A	9.0	A	9.6	A	9.0	A	9.4	A	9.2	A
			EB-TL	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
2	**Vistoso Highlands Drive / Bowcreek Springs Place**	**(TWSC)**	NB-LR	7.4	A	6.7	A	7.4	A	6.7	A	-	-	-	-
			NB-T	0.0	A	0.0	A	0.0	A	0.0	A	-	-	-	-
			SB-LR	7.5	A	7.5	A	7.5	A	7.5	A	9.5	A	9.1	A
			SB-T	0.0	A	0.0	A	0.0	A	0.0	A	-	-	-	-
			EB-TL	7.4	A	7.4	A	7.4	A	7.4	A	0.0	A	0.0	A
			WB-TL	7.7	A	7.4	A	7.7	A	7.4	A	-	-	-	-
3	**Vistoso Highlands Drive / Rancho Vistoso Boulevard**	**(Signal)**	Overall	11.1	B	8.1	A	11.1	B	8.1	A	12.4	B	8.9	A
			NB-L	3.7	A	2.6	A	3.7	A	2.7	A	4.3	A	3.1	A
			NB-T	2.9	A	1.9	A	3.0	A	1.9	A	3.5	A	2.2	A
			NB-R	2.9	A	1.9	A	3.0	A	1.9	A	3.5	A	2.2	A
			SB-L	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
			SB-T	6.1	A	4.9	A	6.1	A	4.9	A	7.0	A	5.5	A
			SB-R	6.1	A	4.9	A	6.2	A	5.0	A	7.0	A	5.6	A
			EB-L	23.7	C	25.6	C	23.6	C	25.6	C	23.5	C	25.2	C
			EB-T	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
			EB-TR	29.3	C	31.7	C	29.3	C	31.6	C	29.4	C	31.0	C
			WB-L	22.8	C	24.8	C	22.8	C	24.8	C	22.2	C	24.3	C
			WB-T	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
			WB-R	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
4	**Vistoso Highlands Drive / West Project Driveway**	**(TWSC)**	NB-LR	-	-	-	-	-	-	-	-	8.7	A	8.7	A
			WB-TL	-	-	-	-	-	-	-	-	7.4	A	7.4	A
5	**Vistoso Highlands Drive / East Project Driveway**	**(TWSC)**	NB-LR	-	-	-	-	-	-	-	-	8.9	A	8.7	A
			WB-TL	-	-	-	-	-	-	-	-	7.4	A	7.4	A

Footnotes:
Results calculated utilizing the methodologies described in Chapters 19, 20, 21, and 22 in the 6th edition of the HCM .
1) Delay is measured in seconds per vehicle.
2) Level of Service
(S)=Signalized, (TWSC)=Two-Way Stop Controlled, (AWSC)=All-Way Stop Controlled
NB=Northbound, WB=Westbound, etc.
L=Left-turn movement, R= Right-turn movement, LT=Left-Through lane, LTR=Left-Through-Right lane , etc.

CONCLUSIONS/RECOMMENDATIONS

Based on the anticipated traffic generation for the Vistoso multi-family development (132 units), the following is recommended to help facilitate project access along Vistoso Highlands Drive.

VISTOSO HIGHLANDS DRIVE/WEST PROJECT ACCESS

This unsignalized intersection should allow for full access movements with stop sign control for the northbound approach. The intersection lane configuration should be as follows:

Northbound: - One shared left-right lane

Eastbound: - One shared through-right lane

Westbound: - One shared left-through

VISTOSO HIGHLANDS DRIVE/EAST PROJECT ACCESS

This unsignalized intersection should allow for full access movements with stop sign control for the northbound approach. The intersection lane configuration should be as follows:

Northbound: - One shared left-right lane

Eastbound: - One shared through-right lane

Westbound: - One shared left-through

Attachment H shows that separate turn lanes were not warranted at any of the project access locations based on evaluation methodologies described in Pima County's *2016 Subdivision and Development Street Standards.*

In addition, the intersection sight distances were evaluated at both the west and project accesses based on Section 4.8 of the *Town's Subdivision Street Standards,* assuming 35 mph (posted speed + 5 mph). The sight visibility triangles at each of the project access locations (See **Attachment I**) show that adequate sight distances will be provided as no obstructions 30" to 72" in height are proposed within the hatched areas.

As noted earlier, recent 85th percentiles speeds along Vistoso Highlands Drive were recorded at 33 mph in the eastbound direction and 34 mph in the westbound direction. Therefore, the 35 mph sight distance evaluation represents a conservative assessment, since this speed is slightly higher than the 85th percentile speeds.

VISTOSO HIGHLANDS DRIVE/BOWCREEK SPRINGS PLACE

With the proposed closure of the southern leg of this intersection, the existing stop sign, and associated pavement markings for the eastbound approach of this intersection should be removed. Similarly, the existing advanced warning sign (stop ahead) should also be removed.

With the removal of the above signs and pavement markings, the intersection will operate as a traditional one-way stop controlled "T" intersection with the southbound approach being stop-controlled and the main street (Vistoso Highlands Drive) movements being uncontrolled.

Should you have any questions, please contact me at (619) 291-0707 or mjugar@rickengineering.com.

Sincerely,

RICK ENGINEERING COMPANY

Mark Jugar, P.E., T.E., PTOE

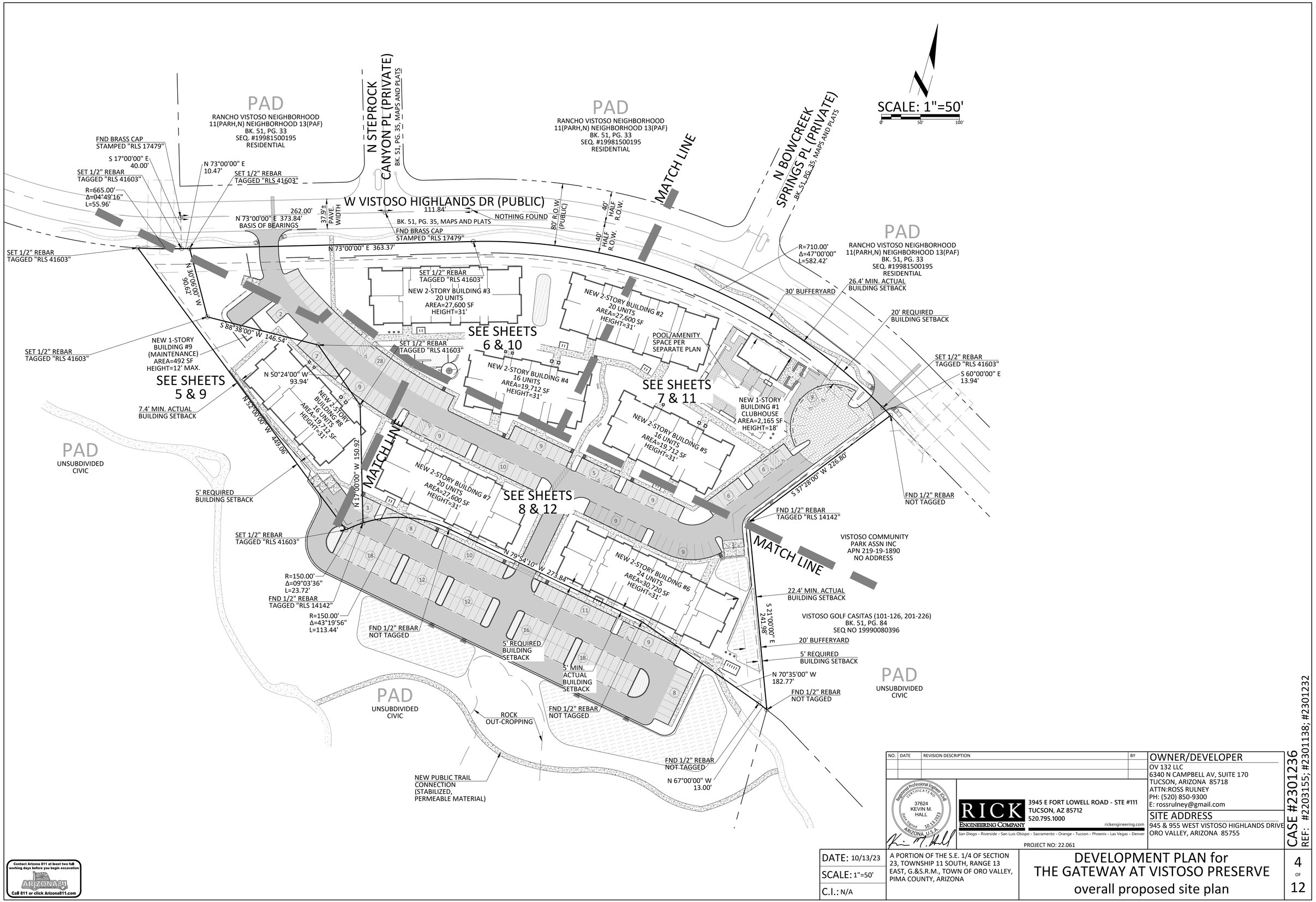
K:\Files\19548\text\19548-P.003.doc

Attachments

Registered Professional Engineer (Civil)
CERTIFICATE NO.
52511
MARK M.
JUGAR
DATE SIGNED 10-25-23
ARIZONA U.S.A.
EXPIRES 9-30-26

ATTACHMENT A

PROPOSED SITE PLAN



NO.	DATE	REVISION DESCRIPTION	BY

Registered Professional Engineer (Civil) CERTIFICATE NO. 37624 KEVIN M. HALL Date Signed 10.13.2023 ARIZONA, U.S.A.

RICK ENGINEERING COMPANY
3945 E FORT LOWELL ROAD - STE #111
TUCSON, AZ 85712
520.795.1000
rickengineering.com
San Diego - Riverside - San Luis Obispo - Sacramento - Orange - Tucson - Phoenix - Las Vegas - Denver

PROJECT NO: 22.061

OWNER/DEVELOPER
OV 132 LLC
6340 N CAMPBELL AV, SUITE 170
TUCSON, ARIZONA 85718
ATTN:ROSS RULNEY
PH: (520) 850-9300
E: rossrulney@gmail.com

SITE ADDRESS
945 & 955 WEST VISTOSO HIGHLANDS DRIVE
ORO VALLEY, ARIZONA 85755

CASE #2301236
REF: #2203155; #2301138; #2301232

DATE: 10/13/23
SCALE: 1"=50'
C.I.: N/A

A PORTION OF THE S.E. 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 13 EAST, G.&S.R.M., TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA

DEVELOPMENT PLAN for THE GATEWAY AT VISTOSO PRESERVE

overall proposed site plan

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

ATTACHMENT B

TOWN OF ORO VALLEY RULNEY VISTOSO RESIDENTIAL TRAFFIC IMPACT STATEMENT COMMENTS, 9/22/23

To: Kevin Hall

Subject: RE: Vistoso Highlands Development

From: Laws, David <dlaws@orovalleyaz.gov>
Sent: Friday, September 22, 2023 4:28 PM
To: Ross Rulney <rossrulney@gmail.com>; Kevin Hall <khall@rickengineering.com>
Cc: Keesler, Paul <pkeesler@orovalleyaz.gov>; Huelle, Cheryl <chuelle@orovalleyaz.gov>; Spaeth, Michael <mspaeth@orovalleyaz.gov>; Vella, Bayer <bvella@orovalleyaz.gov>
Subject: Vistoso Highlands Development

Good afternoon Ross and Kevin - as discussed earlier this week, the Town reviewed the previously issued traffic related comments and have amended them to the following:

The following items shall be included in the TIS at the direction of the Town Engineer. These items address existing traffic concerns that currently exist and may be impacted by the development, public concerns, and proximity of site driveways to existing intersections.

1. Intersection Sight Distance: See Section 4.8 of the Town's Subdivision Street Standards for the required near/far side distances for intersection sight distance. The speed should be posted + 5 mph. Sight Distance should be evaluated at the east/west accesses. State in the report the required distance and the actual distance available. If adequate sight distance is not available, include mitigation (such as stop signs on Vistoso Highlands Drive and/or relocating the accesses). State in the report the recommended mitigation.
2. Speed Analysis: Obtain existing speeds on Vistoso Highlands Blvd at the site. State in the report the 85th percentile speed.
3. State in the report the growth factor that was used for the projected 2024 traffic.
4. State in the report the actual AM and PM peak hours used in the analysis. The appendix identifies several different peak hours. The ITE trip generation calculations were for the peak hour of the adjacent street traffic, one hour between 7 and 9 AM or 4 and 6 PM. Are the peak hours within those times?
5. Provide the following Level of Service (LOS) information:
   Existing – Vistoso Highlands intersections at: Bowcreek Springs Pl and Steprock Canyon Pl
   Projected 2024 + Site – Vistoso Highlands intersections at: Bowcreek Springs Pl, Steprock Canyon Pl, west access driveway, east access driveway
   Include a table in the report that shows the existing and future LOS side-by-side.
6. Include the existing stop control at Bowcreek Springs Pl in the report and what will happen to it with the development. The stop ahead sign?
7. Traffic Signal LOS at Rancho Vistoso Blvd and Vistoso Highlands Drive intersection: The Town will provide a minimum of one week of turning movement counts at the signal, as well as the signal

timing/phasing. Provide a table in the report that shows the existing and future (2024 + Site) side-by-side. If adequate LOS is not obtainable, state in the report the recommended mitigation.

8. Turn lanes are already evaluated and noted in the report text and appendix.

Please include a brief (at least one sentence) statement within the report narrative for each item above and include any supporting calculations/data in the appendix. At your discretion, the LOS for the projected 2024 traffic without the site traffic may be included. This would be used to evaluate if future LOS is caused by general traffic or the site and is only used when the projected + site traffic produces inadequate LOS.

Please feel free to reach out if you have any questions or need clarification. Thank you.

David Laws, P.E.
Permitting Manager
Community & Economic Development
Town of Oro Valley
Oro Valley, AZ 85737
520-229-4808 (Office)
www.orovalleyaz.gov

ATTACHMENT C

VISTOSO HIGHLANDS DRIVE TRAFFIC COUNT SHEETS

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, January 25, 2023 **City:** Oro Valley **Project #** 23-1059-004

Location : Vistoso Highlands Dr east of Vistoso Trails Eastern Dwy

DAY 1

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			19		19		
00:15			0		0			12:15			20		21		
00:30			1		0			12:30			16		28		
00:45			1	2	0	0	2	12:45			14	69	21	89	158
01:00			0		0			13:00			20		12		
01:15			0		0			13:15			25		8		
01:30			0		0			13:30			16		20		
01:45			0	0	0	0		13:45			21	82	21	61	143
02:00			0		1			14:00			17		25		
02:15			0		0			14:15			32		17		
02:30			0		0			14:30			28		17		
02:45			0	0	0	1	1	14:45			18	95	18	77	172
03:00			0		0			15:00			32		21		
03:15			0		0			15:15			23		18		
03:30			0		0			15:30			27		15		
03:45			0	0	0	0		15:45			22	104	17	71	175
04:00			0		0			16:00			15		18		
04:15			0		0			16:15			29		8		
04:30			1		0			16:30			10		16		
04:45			0	1	0	0	1	16:45			14	68	25	67	135
05:00			2		0			17:00			15		13		
05:15			1		0			17:15			14		10		
05:30			0		0			17:30			14		7		
05:45			3	6	0	0	6	17:45			13	56	10	40	96
06:00			1		0			18:00			12		5		
06:15			2		2			18:15			10		13		
06:30			6		4			18:30			12		8		
06:45			4	13	11	17	30	18:45			5	39	5	31	70
07:00			10		15			19:00			3		4		
07:15			8		9			19:15			6		6		
07:30			20		19			19:30			3		8		
07:45			8	46	12	55	101	19:45			0	12	7	25	37
08:00			21		22			20:00			2		7		
08:15			14		12			20:15			3		6		
08:30			18		20			20:30			1		2		
08:45			13	66	24	78	144	20:45			1	7	4	19	26
09:00			14		21			21:00			0		2		
09:15			17		22			21:15			2		6		
09:30			21		15			21:30			4		2		
09:45			12	64	23	81	145	21:45			5	11	0	10	21
10:00			19		13			22:00			3		0		
10:15			18		14			22:15			2		0		
10:30			17		21			22:30			0		2		
10:45			22	76	35	83	159	22:45			0	5	0	2	7
11:00			19		17			23:00			2		0		
11:15			25		21			23:15			0		1		
11:30			28		12			23:30			0		0		
11:45			29	101	16	66	167	23:45			0	2	0	1	3
Total Vol.				375		381	**756**					550		493	**1043**

GPS Coordinates: 32.456875, -110.982177

Daily Totals

NB	SB	EB	WB	Combined
		925	874	**1799**

	AM			PM		
Split %	49.6%	50.4%	**42.0%**	52.7%	47.3%	**58.0%**
Peak Hour	11:00	10:30	**10:45**	14:15	12:00	**14:15**
Volume	101	94	**179**	110	89	**183**
P.H.F.	0.87	0.67	**0.79**	0.86	0.79	**0.86**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, January 26, 2023 **City:** Oro Valley **Project #** 23-1059-004

Location : Vistoso Highlands Dr east of Vistoso Trails Eastern Dwy

DAY 2

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			16		22		
00:15			0		0			12:15			19		15		
00:30			0		0			12:30			19		28		
00:45			0	0	0	0		12:45			15	69	24	89	158
01:00			0		0			13:00			21		26		
01:15			0		0			13:15			23		20		
01:30			0		0			13:30			17		20		
01:45			0	0	0	0		13:45			27	88	20	86	174
02:00			0		0			14:00			36		27		
02:15			0		0			14:15			25		20		
02:30			0		0			14:30			25		19		
02:45			0	0	0	0		14:45			22	108	24	90	198
03:00			0		0			15:00			40		9		
03:15			0		0			15:15			23		18		
03:30			0		0			15:30			30		15		
03:45			0	0	0	0		15:45			15	108	18	60	168
04:00			0		0			16:00			21		18		
04:15			0		0			16:15			13		16		
04:30			0		0			16:30			16		22		
04:45			1	1	0	0	1	16:45			12	62	7	63	125
05:00			1		0			17:00			12		12		
05:15			6		2			17:15			8		8		
05:30			0		0			17:30			18		12		
05:45			3	10	0	2	12	17:45			16	54	9	41	95
06:00			5		0			18:00			9		11		
06:15			1		3			18:15			4		9		
06:30			1		6			18:30			8		14		
06:45			9	16	14	23	39	18:45			6	27	11	45	72
07:00			12		10			19:00			10		4		
07:15			5		12			19:15			3		5		
07:30			14		12			19:30			5		3		
07:45			8	39	18	52	91	19:45			5	23	9	21	44
08:00			21		17			20:00			4		9		
08:15			15		13			20:15			7		5		
08:30			19		32			20:30			1		7		
08:45			12	67	17	79	146	20:45			0	12	3	24	36
09:00			17		17			21:00			3		2		
09:15			18		16			21:15			0		6		
09:30			17		17			21:30			1		4		
09:45			15	67	22	72	139	21:45			0	4	1	13	17
10:00			18		13			22:00			0		0		
10:15			24		15			22:15			0		0		
10:30			20		13			22:30			0		0		
10:45			20	82	25	66	148	22:45			0	0	0	0	
11:00			25		16			23:00			0		0		
11:15			22		17			23:15			0		0		
11:30			34		24			23:30			0		1		
11:45			30	111	27	84	195	23:45			0	0	1	2	2
Total Vol.				393		378	**771**					555		534	**1089**

GPS Coordinates: 32.456875, -110.982177

Daily Totals

NB	SB	EB	WB	Combined
		948	912	**1860**

	AM			PM		
Split %	51.0%	49.0%	**41.5%**	51.0%	49.0%	**58.5%**
Peak Hour	11:00	11:45	**11:00**	14:45	12:30	**13:45**
Volume	111	92	**195**	115	98	**199**
P.H.F.	0.82	0.82	**0.84**	0.72	0.88	**0.79**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, January 25, 2023 & Thursday, January 26, 2023 **City:** Oro Valley **Project#** 23-1059-004

Location : Vistoso Highlands Dr east of Vistoso Trails Eastern Dwy

2-DAY AVERAGE

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
00:00	0		0		0		0			12:00	0		0		18		21		
00:15	0		0		0		0			12:15	0		0		20		18		
00:30	0		0		1		0			12:30	0		0		18		28		
00:45	0	0	0	0	1	1	0	0	1	12:45	0	0	0	0	15	69	23	89	158
01:00	0		0		0		0			13:00	0		0		21		19		
01:15	0		0		0		0			13:15	0		0		24		14		
01:30	0		0		0		0			13:30	0		0		17		20		
01:45	0	0	0	0	0	0	0	0		13:45	0	0	0	0	24	85	21	74	159
02:00	0		0		0		1			14:00	0		0		27		26		
02:15	0		0		0		0			14:15	0		0		29		19		
02:30	0		0		0		0			14:30	0		0		27		18		
02:45	0	0	0	0	0	0	0	1	1	14:45	0	0	0	0	20	102	21	84	185
03:00	0		0		0		0			15:00	0		0		36		15		
03:15	0		0		0		0			15:15	0		0		23		18		
03:30	0		0		0		0			15:30	0		0		29		15		
03:45	0	0	0	0	0	0	0	0		15:45	0	0	0	0	19	106	18	66	172
04:00	0		0		0		0			16:00	0		0		18		18		
04:15	0		0		0		0			16:15	0		0		21		12		
04:30	0		0		1		0			16:30	0		0		13		19		
04:45	0	0	0	0	1	1	0	0	1	16:45	0	0	0	0	13	65	16	65	130
05:00	0		0		2		0			17:00	0		0		14		13		
05:15	0		0		4		1			17:15	0		0		11		9		
05:30	0		0		0		0			17:30	0		0		16		10		
05:45	0	0	0	0	3	8	0	1	9	17:45	0	0	0	0	15	55	10	41	96
06:00	0		0		3		0			18:00	0		0		11		8		
06:15	0		0		2		3			18:15	0		0		7		11		
06:30	0		0		4		5			18:30	0		0		10		11		
06:45	0	0	0	0	7	15	13	20	35	18:45	0	0	0	0	6	33	8	38	71
07:00	0		0		11		13			19:00	0		0		7		4		
07:15	0		0		7		11			19:15	0		0		5		6		
07:30	0		0		17		16			19:30	0		0		4		6		
07:45	0	0	0	0	8	43	15	54	96	19:45	0	0	0	0	3	18	8	23	41
08:00	0		0		21		20			20:00	0		0		3		8		
08:15	0		0		15		13			20:15	0		0		5		6		
08:30	0		0		19		26			20:30	0		0		1		5		
08:45	0	0	0	0	13	67	21	79	145	20:45	0	0	0	0	1	10	4	22	31
09:00	0		0		16		19			21:00	0		0		2		2		
09:15	0		0		18		19			21:15	0		0		1		6		
09:30	0		0		19		16			21:30	0		0		3		3		
09:45	0	0	0	0	14	66	23	77	142	21:45	0	0	0	0	3	8	1	12	19
10:00	0		0		19		13			22:00	0		0		2		0		
10:15	0		0		21		15			22:15	0		0		1		0		
10:30	0		0		19		17			22:30	0		0		0		1		
10:45	0	0	0	0	21	79	30	75	154	22:45	0	0	0	0	0	3	0	1	4
11:00	0		0		22		17			23:00	0		0		1		0		
11:15	0		0		24		19			23:15	0		0		0		1		
11:30	0		0		31		18			23:30	0		0		0		1		
11:45	0	0	0	0	30	106	22	75	181	23:45	0	0	0	0	0	1	1	2	3
Total Vol.						384		380	**764**							553		514	**1066**

GPS Coordinates: 32.456875, -110.982177

						Daily Totals			
					NB	SB			**Combined**
							937	893	**1830**
		AM					**PM**		
Split %		50.3%	49.7%	**41.7%**			51.8%	48.2%	**58.3%**
Peak Hour		11:00	11:45	**10:45**			14:15	12:00	**13:45**
Volume		106	88	**181**			111	89	**189**
P.H.F.		0.85	0.79	**0.89**			0.77	0.79	**0.90**

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Steprock Canyon Pl	DATE:	01/26/23	LOCATION:	Oro Valley
E-W STREET:	Visoto Highlands Dr	DAY:	THURSDAY	PROJECT#	23-1059-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	11	0	0	10	0	21
7:15 AM	0	0	0	1	0	0	0	4	0	0	12	0	17
7:30 AM	0	0	0	1	0	0	0	12	0	0	9	2	24
7:45 AM	0	0	0	1	0	0	0	6	0	0	17	0	24
8:00 AM	0	0	0	0	0	0	0	18	0	0	16	0	34
8:15 AM	0	0	0	0	0	0	0	12	0	0	12	0	24
8:30 AM	0	0	0	1	0	0	0	17	0	0	30	0	48
8:45 AM	0	0	0	0	0	0	0	12	0	0	16	0	28
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	4	0	0	0	92	0	0	122	2	220
Approach %	####	####	####	100.00	0.00	0.00	0.00	100.00	0.00	0.00	98.39	1.61	
App/Depart	0	/	2	4	/	0	92	/	96	124	/	122	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	0	1	0	0	0	59	0	0	74	0	134
Approach %	####	####	####	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	
PEAK HR. FACTOR:	0.000			0.250			0.819			0.617			0.698

CONTROL: 1-Way Stop (SB)
COMMENT 1:
GPS: 32.457046, -110.984537

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Steprock Canyon Pl 0	DATE:	01/26/23	LOCATION:	Oro Valley
E-W STREET:	Visoto Highlands Dr	DAY:	THURSDAY	PROJECT#	23-1059-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	1	0	0	0	19	0	0	18	0	38
4:15 PM	0	0	0	3	0	0	0	7	0	0	15	0	25
4:30 PM	0	0	0	0	0	0	0	13	0	0	14	3	30
4:45 PM	0	0	0	0	0	1	0	11	0	0	7	0	19
5:00 PM	0	0	0	1	0	0	0	11	0	0	11	1	24
5:15 PM	0	0	0	0	0	0	0	8	0	0	7	1	16
5:30 PM	0	0	0	0	0	0	0	17	0	0	8	1	26
5:45 PM	0	0	0	1	0	0	0	15	0	0	8	0	24
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	6	0	1	0	101	0	0	88	6	202
Approach %	####	####	####	85.71	0.00	14.29	0.00	100.00	0.00	0.00	93.62	6.38	
App/Depart	0	/	6	7	/	0	101	/	107	94	/	89	

PM Peak Hr Begins at: 400 PM

PEAK													
Volumes	0	0	0	4	0	1	0	50	0	0	54	3	112
Approach %	####	####	####	80.00	0.00	20.00	0.00	100.00	0.00	0.00	94.74	5.26	

PEAK HR. FACTOR:	0.000	0.417	0.658	0.792	0.737

CONTROL:	1-Way Stop (SB)
COMMENT 1:	0
GPS:	32.457046, -110.984537

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Steprock Canyon Pl
E-W STREET: Visoto Highlands Dr

Date: 01/26/23
Day: THURSDAY

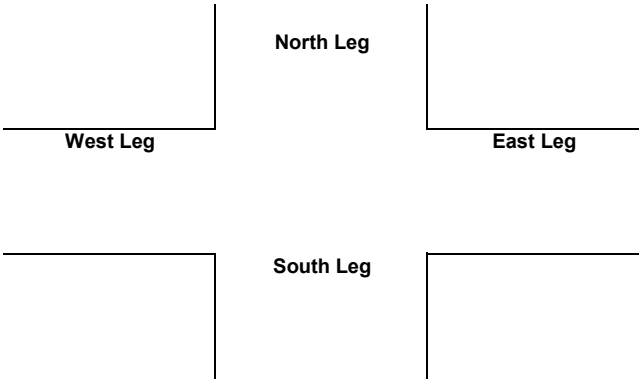
City: Oro Valley
Project #: 23-1059-001

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	1	0	0	0
7:30 AM	2	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	1	0	0	0
TOTAL	**4**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	2	0	0	0
4:30 PM	4	0	0	0
4:45 PM	4	0	0	0
5:00 PM	2	0	0	0
5:15 PM	1	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**13**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Bowcreek Springs Pl	DATE:	01/26/23	LOCATION:	Oro Valley
E-W STREET:	Visoto Highlands Dr	DAY:	THURSDAY	PROJECT#	23-1059-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	1	0	0	0	11	0	0	10	0	22
7:15 AM	0	0	0	0	0	0	0	5	0	0	12	0	17
7:30 AM	0	0	0	1	0	0	1	12	0	0	11	1	26
7:45 AM	0	0	0	1	0	0	0	7	0	1	17	0	26
8:00 AM	0	0	0	2	0	0	0	18	0	1	16	0	37
8:15 AM	0	0	0	3	0	0	0	12	0	0	12	1	28
8:30 AM	0	0	0	1	0	1	0	18	0	0	29	3	52
8:45 AM	0	0	0	1	0	0	0	11	1	0	16	1	30
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	10	0	1	1	94	1	2	123	6	238
Approach %	####	####	####	90.91	0.00	9.09	1.04	97.92	1.04	1.53	93.89	4.58	
App/Depart	0	/	7	11	/	3	96	/	104	131	/	124	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	0	7	0	1	0	59	1	1	73	5	147
Approach %	####	####	####	87.50	0.00	12.50	0.00	98.33	1.67	1.27	92.41	6.33	
PEAK HR. FACTOR:	0.000			0.667			0.833			0.617			0.707

CONTROL: 2-Way Stop (NB & SB)
COMMENT 1:
GPS: 32.457184, -110.983014

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Bowcreek Springs Pl 0	DATE:	01/26/23	LOCATION:	Oro Valley
E-W STREET:	Visoto Highlands Dr	DAY:	THURSDAY	PROJECT#	23-1059-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	1	0	0	0	20	0	0	18	0	39
4:15 PM	0	0	1	1	0	0	0	10	0	1	15	0	28
4:30 PM	0	0	0	1	0	0	0	11	2	2	17	2	35
4:45 PM	0	0	0	1	0	0	0	11	0	0	7	0	19
5:00 PM	0	0	0	0	0	0	0	12	0	0	12	0	24
5:15 PM	0	0	0	0	0	0	0	8	0	0	8	0	16
5:30 PM	0	0	1	0	0	0	0	16	1	1	9	2	30
5:45 PM	0	0	0	0	0	0	0	16	0	0	8	1	25
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	2	4	0	0	0	104	3	4	94	5	216
Approach %	0.00	0.00	100.00	100.00	0.00	0.00	0.00	97.20	2.80	3.88	91.26	4.85	
App/Depart	2	/	5	4	/	7	107	/	110	103	/	94	

PM Peak Hr Begins at: 400 PM

PEAK													
Volumes	0	0	1	4	0	0	0	52	2	3	57	2	121
Approach %	0.00	0.00	100.00	100.00	0.00	0.00	0.00	96.30	3.70	4.84	91.94	3.23	
PEAK HR. FACTOR:	0.250			1.000			0.675			0.738			0.776

CONTROL:	2-Way Stop (NB & SB)
COMMENT 1:	0
GPS:	32.457184, -110.983014

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Bowcreek Springs Pl
E-W STREET: Visoto Highlands Dr

Date: 01/26/23
Day: THURSDAY

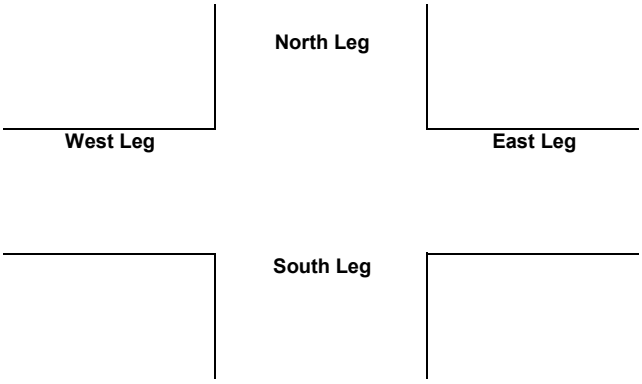
City: Oro Valley
Project #: 23-1059-002

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	2	0	0	0
7:30 AM	2	0	0	0
7:45 AM	0	0	0	0
8:00 AM	1	0	0	0
8:15 AM	3	0	0	0
8:30 AM	1	0	0	0
8:45 AM	0	2	0	0
TOTAL	**9**	**2**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	4	0	0	0
4:15 PM	5	2	0	1
4:30 PM	5	1	0	0
4:45 PM	0	0	0	0
5:00 PM	0	1	0	0
5:15 PM	0	3	1	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**14**	**7**	**1**	**1**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



ATTACHMENT D

VISTOSO HIGHLANDS DRIVE/RANCHO VISTOSO BOULEVARD INTERSECTION TURNING MOVEMENT TRAFFIC COUNT SHEETS 10/3/23

GRIDSMART. Turning Movement Counts

Intersection Tucson, AZ USA
Date 10/3/2023

	Right	Through	Left	UTurn	Total
Northbound	112	2124	727	101	3064
Eastbound	835	49	323	17	1224
Southbound	180	1956	3	2	2141
Westbound	17	10	77		104
Total	**1144**	**4139**	**1130**	**120**	**6533**

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	U	R	T	L	U	R	T	L	
08:00	2	59	19	1	28		8		7	38				1	3	166
08:15	5	55	16		48	2	14	4	13	58				1	5	221
08:30	1	62	15	1	49	4	12		8	53			1		3	209
08:45	1	59	13		24	1	16		6	50					1	171
09:00	1	45	16	2	16	1	6		1	47			1	1	2	139
09:15	6	72	26	2	22	1	9	1	1	58			4		1	203
09:30	1	67	21	2	21	3	19	2	3	59		2			2	202
09:45		59	10	5	23		9	3	3	42					3	157
10:00	2	44	21	1	27	3	8	1		55			1			163
10:15	4	72	20	2	11	2	11	1	2	74			1			200
10:30	3	67	19	3	18		9	1	3	61					1	185
10:45	3	57	19	3	19	1	6		1	56			1	1	1	168
11:00	3	55	22	3	13	1	3		2	45						147
11:15	1	55	20		16		4		5	72	1				6	180
11:30	4	49	23	2	17	1	7	1	4	58			1		2	169
11:45	1	73	17	5	22		8		8	75					1	210
12:00	4	53	16	2	25		13		5	44					2	164
12:15	4	66	22	3	18		6		6	47			3		3	178
12:30	4	67	15	2	17	1	8		1	59	1		1			176
12:45	2	51	14	3	21		6		4	43					1	145
13:00	2	63	12	1	15		11	2	7	66					5	184
13:15	2	58	14	3	32	2	14		2	62					4	193
13:30	4	54	15	4	38	2	13		5	54			1		2	192
13:45	5	72	12	5	14	1	8		7	49				2	5	180
14:00	1	46	29	3	20		8		4	63					6	180
14:15	3	51	17	2	33	1	9	1	3	55			1		4	180
14:30	1	52	13	2	23	1	9		4	55					1	161
14:45	4	60	22	2	25	1	10		4	49	1			2		180
15:00	9	55	25	6	24		9		4	54					2	188
15:15		61	21	6	21	1	5		7	57				1	3	183
15:30	2	68	27	1	21	1	9		8	46					2	185
15:45	5	55	24	9	25	1	7		6	56					3	191
16:00	5	44	24	3	25	3	7		7	53						171
16:15	5	53	18	6	15	3	4		11	36					1	152
16:30	2	42	27	1	15	5	7		8	38						145
16:45	6	47	37	2	12	4	8		3	36						155
17:00	1	44	19	2	18	2	2		5	27				1	2	123
17:15	3	12	7	1	4		1		2	6			1			37
Total	**112**	**2124**	**727**	**101**	**835**	**49**	**323**	**17**	**180**	**1956**	**3**	**2**	**17**	**10**	**77**	

ATTACHMENT E

VISTOSO HIGHLANDS DRIVE SPEED SURVEY

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: 10/18/23 & 10/19/23
Station ID: 23-1486-001
Vistoso Highlands btwn Mulligan Dr &
Steprock Cyn Pl 32.456727, -110.985845
Latitude: 0' 0.0000 Undefined

Eastbound

Start Time	0 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 71	Total	Average (Mean)	85th Percent
10/18/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	29
04:00	0	0	0	0	1	1	0	**1**	0	0	0	0	0	0	3	35	42
05:00	0	0	1	1	1	1	2	0	0	0	0	0	0	0	6	30	37
06:00	0	0	0	4	9	6	1	0	0	0	0	0	0	0	20	29	33
07:00	**1**	**1**	**3**	12	16	10	1	0	0	0	0	0	0	0	44	27	32
08:00	0	0	1	8	25	11	1	0	0	0	0	0	0	0	46	28	32
09:00	1	1	3	**24**	**32**	13	3	0	0	0	0	0	0	0	**77**	27	31
10:00	1	1	1	17	16	7	**4**	0	0	0	0	0	0	0	47	27	32
11:00	0	0	0	13	27	**21**	2	1	0	0	0	0	0	0	64	29	33
12 PM	0	0	1	7	20	17	3	0	0	0	0	0	0	0	48	29	33
13:00	0	0	1	7	33	25	**6**	0	0	0	0	0	0	0	**72**	30	34
14:00	0	0	2	11	27	**27**	4	0	0	0	0	0	0	0	71	29	33
15:00	0	0	0	**15**	**35**	15	1	0	0	0	0	0	0	0	66	28	32
16:00	0	0	0	8	24	16	2	0	0	0	0	0	0	0	50	29	33
17:00	0	0	0	11	14	13	2	**1**	0	0	0	0	0	0	41	29	33
18:00	0	0	0	3	4	5	2	0	0	0	0	0	0	0	14	30	34
19:00	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4	33	37
20:00	0	0	**3**	2	3	2	1	0	0	0	0	0	0	0	11	26	33
21:00	0	0	0	0	1	5	4	1	0	0	0	0	0	0	11	35	39
22:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3	33	37
23:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	29
Total	3	3	16	143	292	198	41	4	0	0	0	0	0	0	700		
Percent	0.4%	0.4%	2.3%	20.4%	41.7%	28.3%	5.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	09:00	09:00	11:00	10:00	04:00							09:00		
Vol.	1	1	3	24	32	21	4	1							77		
PM Peak			20:00	15:00	15:00	14:00	13:00	17:00							13:00		
Vol.			3	15	35	27	6	1							72		

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Vistoso Highlands btwn Mulligan Dr &
Steprock Cyn Pl 32.456727, -110.985845
Latitude: 0' 0.0000 Undefined

Eastbound

Start Time	0 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 71	Total	Average (Mean)	85th Percent
10/19/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	29
04:00	0	0	0	0	0	3	0	0	**1**	0	0	0	0	0	4	37	47
05:00	0	0	1	0	1	3	1	0	0	0	0	0	0	0	6	31	35
06:00	0	0	1	2	5	8	1	0	0	0	0	0	0	0	17	30	34
07:00	0	0	2	6	22	13	2	0	0	0	0	0	0	0	45	29	33
08:00	0	1	3	11	13	11	2	0	0	0	0	0	0	0	41	27	33
09:00	0	1	4	**15**	25	**16**	1	0	0	0	0	0	0	0	62	27	32
10:00	0	**4**	**6**	13	**35**	14	1	0	0	0	0	0	0	0	**73**	27	31
11:00	0	0	2	5	22	13	**4**	0	0	0	0	0	0	0	46	29	33
12 PM	0	1	1	10	42	22	0	**2**	0	0	0	0	0	0	78	29	32
13:00	0	0	**3**	9	**44**	19	1	0	0	0	0	0	0	0	76	28	32
14:00	0	0	1	**14**	41	**23**	2	0	0	0	0	0	0	0	**81**	29	32
15:00	0	0	2	7	28	17	3	1	0	0	0	0	0	0	58	29	33
16:00	0	**2**	0	7	18	21	**4**	0	0	0	0	0	0	0	52	30	34
17:00	0	0	1	7	19	7	1	0	0	0	0	0	0	0	35	28	31
18:00	0	0	1	6	7	5	1	0	0	0	0	0	0	0	20	28	33
19:00	0	0	0	1	5	1	1	0	0	0	0	0	0	0	8	29	33
20:00	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5	28	31
21:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3	28	32
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Total	0	9	28	115	332	198	25	3	1	0	0	0	0	0	711		
Percent	0.0%	1.3%	3.9%	16.2%	46.7%	27.8%	3.5%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak		10:00	10:00	09:00	10:00	09:00	11:00		04:00						10:00		
Vol.		4	6	15	35	16	4		1						73		
PM Peak		16:00	13:00	14:00	13:00	14:00	16:00	12:00							14:00		
Vol.		2	3	14	44	23	4	2							81		
Total	3	12	44	258	624	396	66	7	1	0	0	0	0	0	1411		
Percent	0.2%	0.9%	3.1%	18.3%	44.2%	28.1%	4.7%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	22 MPH
50th Percentile :	28 MPH
85th Percentile :	33 MPH
95th Percentile :	35 MPH

Stats		
	10 MPH Pace Speed :	26-35 MPH
	Number in Pace :	1020
	Percent in Pace :	72.3%
	Number of Vehicles > 30 MPH :	470
	Percent of Vehicles > 30 MPH :	33.3%
	Mean Speed(Average) :	29 MPH

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Vistoso Highlands btwn Mulligan Dr &
Steprock Cyn Pl 32.456727, -110.985845
Latitude: 0' 0.0000 Undefined

Westbound

Start Time	0 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 71	Total	Average (Mean)	85th Percent
10/18/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	31	33
05:00	0	0	1	1	0	1	0	0	0	0	0	0	0	0	3	25	32
06:00	1	2	**2**	7	10	9	0	0	0	0	0	0	0	0	31	26	32
07:00	**9**	0	0	**8**	**30**	15	1	0	0	0	0	0	0	0	63	26	32
08:00	0	0	0	5	25	**30**	4	0	0	0	0	0	0	0	**64**	31	34
09:00	0	0	0	3	28	24	**8**	0	0	0	0	0	0	0	63	31	34
10:00	1	**4**	0	8	18	23	6	**2**	0	0	0	0	0	0	62	29	34
11:00	0	0	0	5	17	23	5	1	0	0	0	0	0	0	51	31	34
12 PM	0	0	**1**	**3**	**16**	**27**	8	0	0	0	0	0	0	0	**55**	31	34
13:00	0	0	0	1	15	23	6	0	0	0	0	0	0	0	45	32	34
14:00	0	0	0	0	13	21	4	0	**1**	0	0	0	0	0	39	32	34
15:00	0	0	0	1	9	25	**12**	**3**	0	0	0	0	0	0	50	34	38
16:00	0	0	0	1	11	21	7	3	0	0	0	0	0	0	43	33	37
17:00	0	0	0	1	6	16	4	1	0	0	0	0	0	0	28	33	36
18:00	0	0	0	0	4	13	1	0	0	0	0	0	0	0	18	32	34
19:00	0	0	0	0	5	6	1	0	0	0	0	0	0	0	12	31	34
20:00	0	0	0	1	4	3	2	0	0	0	0	0	0	0	10	31	36
21:00	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3	35	37
22:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	33	34
23:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	33	38
Total	11	6	4	45	213	285	71	10	1	0	0	0	0	0	646		
Percent	1.7%	0.9%	0.6%	7.0%	33.0%	44.1%	11.0%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	10:00	06:00	07:00	07:00	08:00	09:00	10:00							08:00		
Vol.	9	4	2	8	30	30	8	2							64		
PM Peak			12:00	12:00	12:00	12:00	15:00	15:00	14:00						12:00		
Vol.			1	3	16	27	12	3	1						55		

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Latitude: 0' 0.0000 Undefined

Westbound

Start Time	0 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 71	Total	Average (Mean)	85th Percent
10/19/23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	43	44
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	33	34
04:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	29
05:00	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3	30	33
06:00	0	**2**	**2**	2	12	8	3	1	0	0	0	0	0	0	30	29	34
07:00	0	0	0	**7**	**38**	**30**	3	0	0	0	0	0	0	0	**78**	30	33
08:00	0	0	0	7	22	21	6	0	0	0	0	0	0	0	56	30	34
09:00	0	0	1	7	19	20	1	0	0	**1**	0	0	0	0	49	30	33
10:00	0	0	0	7	24	28	4	1	0	0	0	0	0	0	64	31	34
11:00	0	0	0	2	27	24	**7**	**2**	0	0	0	0	0	0	62	31	34
12 PM	0	0	0	**6**	**20**	20	8	**1**	0	0	0	0	0	0	55	31	35
13:00	0	0	**1**	5	16	**28**	7	1	0	0	0	0	0	0	**58**	31	34
14:00	0	0	0	5	13	26	**9**	0	0	0	0	0	0	0	53	32	35
15:00	0	0	0	2	11	21	7	1	0	0	0	0	0	0	42	32	36
16:00	0	0	0	4	6	17	9	1	0	0	0	0	0	0	37	33	37
17:00	0	0	0	2	14	18	2	0	0	0	0	0	0	0	36	31	34
18:00	0	0	0	1	4	14	0	0	0	0	0	0	0	0	19	31	33
19:00	0	0	0	1	7	4	0	0	0	0	0	0	0	0	12	29	32
20:00	0	0	0	1	3	3	0	0	0	0	0	0	0	0	7	29	33
21:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	31	33
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Total	0	2	4	60	238	286	66	9	0	1	0	0	0	0	666		
Percent	0.0%	0.3%	0.6%	9.0%	35.7%	42.9%	9.9%	1.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak		06:00	06:00	07:00	07:00	07:00	11:00	11:00		09:00					07:00		
Vol.		2	2	7	38	30	7	2		1					78		
PM Peak			13:00	12:00	12:00	13:00	14:00	12:00							13:00		
Vol.			1	6	20	28	9	1							58		
Total	11	8	8	105	451	571	137	19	1	1	0	0	0	0	1312		
Percent	0.8%	0.6%	0.6%	8.0%	34.4%	43.5%	10.4%	1.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	25 MPH
50th Percentile :	30 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats		
	10 MPH Pace Speed :	26-35 MPH
	Number in Pace :	1023
	Percent in Pace :	78.0%
	Number of Vehicles > 30 MPH :	729
	Percent of Vehicles > 30 MPH :	55.6%
	Mean Speed(Average) :	31 MPH

ATTACHMENT F

ITE TRIP GENERATION RATE SHEETS

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

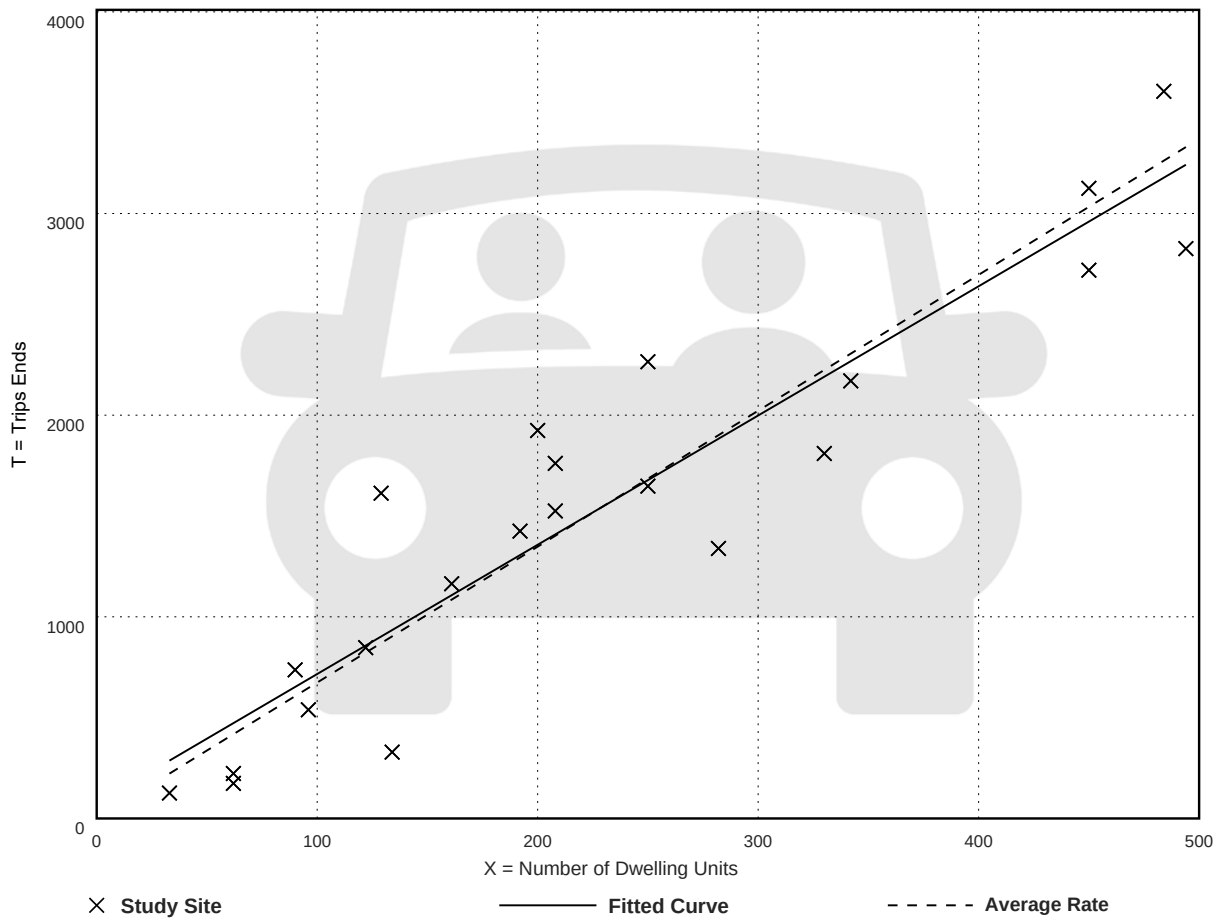
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Fitted Curve Equation: T = 6.41(X) + 75.31

R^2= 0.86

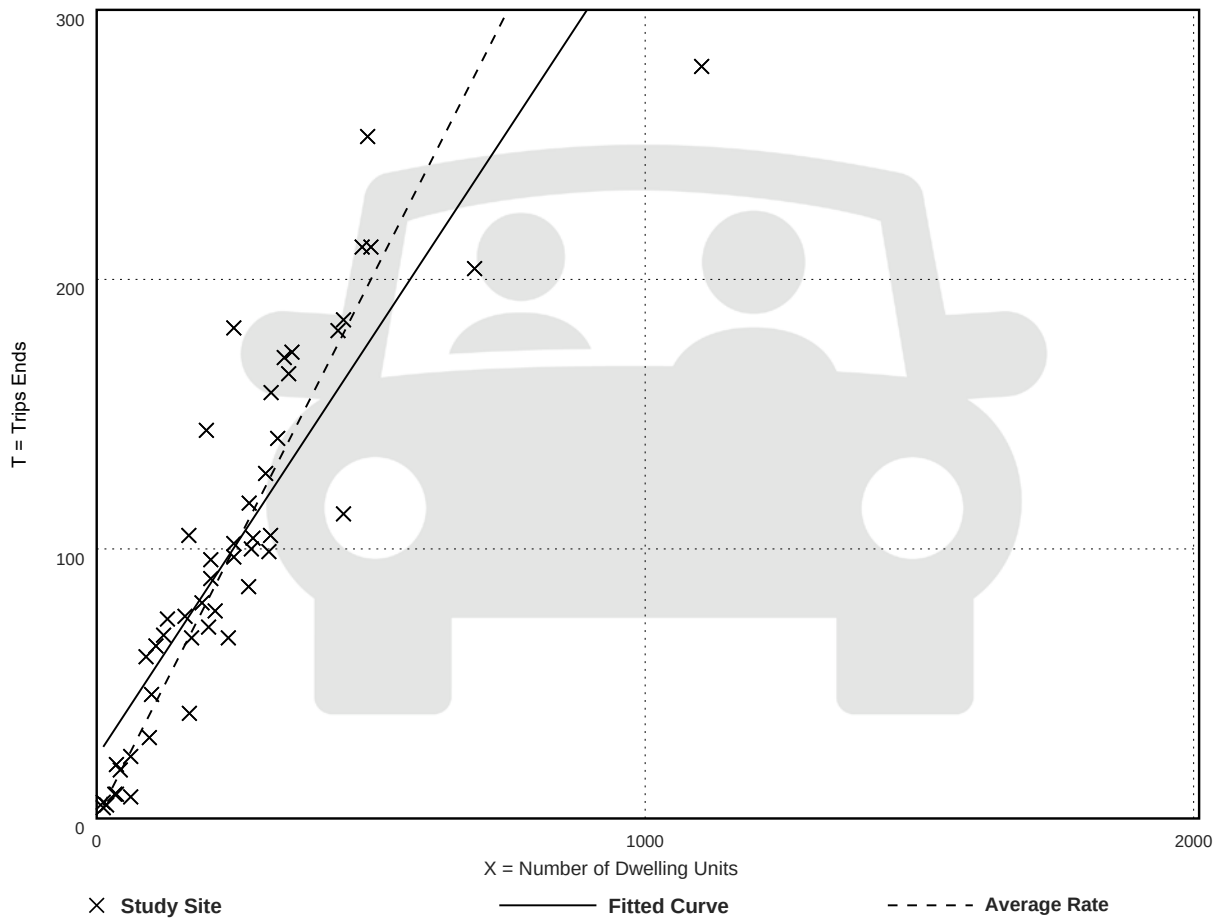
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Fitted Curve Equation: T = 0.31(X) + 22.85

R^2= 0.79

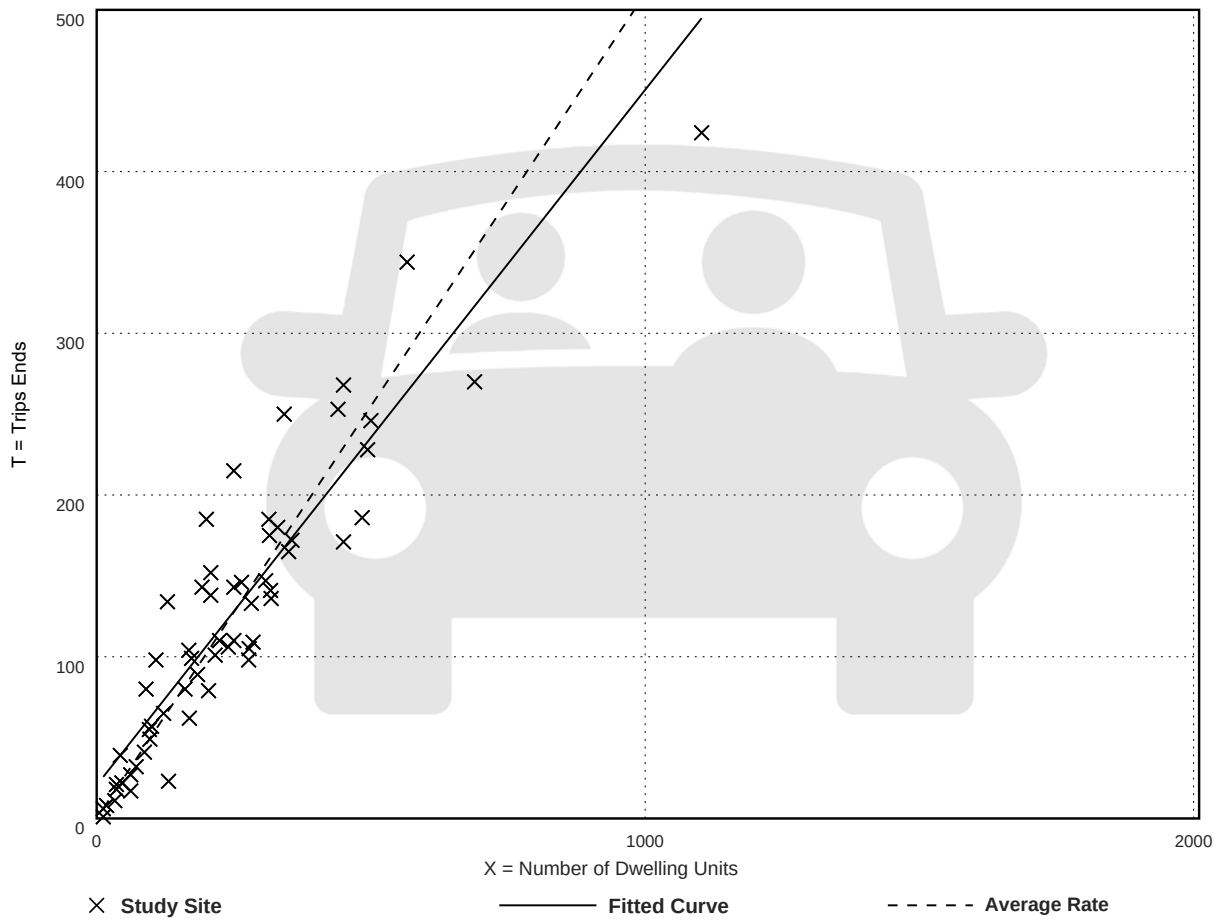
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Fitted Curve Equation: T = 0.43(X) + 20.55

R^2= 0.84

ATTACHMENT G

PROJECT STUDY INTERSECTIONS
HCM INTERSECTION OPERATION CALCULATION SHEETS

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	59	74	0	1	0
Future Vol, veh/h	0	59	74	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	62	62	25	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	72	119	0	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	119	0	-	0	191	119
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	72	-
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	1469	-	-	-	798	933
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	951	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1469	-	-	-	798	933
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	951	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1469	-	-	-	798
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	59	1	2	73	5	0	0	0	7	0	1
Future Vol, veh/h	0	59	1	2	73	5	0	0	0	7	0	1
Peak Hour Factor	0.83	0.83	0.83	0.62	0.62	0.62	0.25	0.25	0.25	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	71	1	3	118	8	0	0	0	10	0	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.7	0	7.5
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	3%	88%
Vol Thru, %	100%	98%	91%	0%
Vol Right, %	0%	2%	6%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	60	80	8
LT Vol	0	0	2	7
Through Vol	0	59	73	0
RT Vol	0	1	5	1
Lane Flow Rate	0	72	129	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.081	0.143	0.015
Departure Headway (Hd)	4.29	4.042	3.977	4.379
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	885	902	807
Service Time	2.379	2.074	1.999	2.464
HCM Lane V/C Ratio	0	0.081	0.143	0.015
HCM Control Delay	7.4	7.4	7.7	7.5
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.3	0.5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	7	149	12	2	1	65	235	9	0	199	34
Future Volume (veh/h)	54	7	149	12	2	1	65	235	9	0	199	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	8	162	13	2	1	71	255	10	0	216	37
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
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	296	33	226	221	31	10	836	2477	97	766	1764	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.71	0.71	0.00	0.58	0.58
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.7	0.0	29.3	22.8	0.0	0.0	3.7	2.9	2.9	0.0	6.1	6.1
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		229			16			336			253	
Approach Delay, s/veh		27.6			22.8			3.1			6.1	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8
Assigned Phs		1	2		4	5	6		8
Case No		1.1	4.0		7.0	1.1	4.0		8.0
Phs Duration (G+Y+Rc), s		0.0	48.0		13.2	8.0	40.0		13.2
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s		5.0	36.0		35.5	5.5	35.5		35.5
Max Allow Headway (MAH), s		0.0	4.9		4.4	3.7	5.0		5.6
Max Q Clear (g_c+I1), s		0.0	3.4		8.0	2.8	4.0		4.0
Green Ext Time (g_e), s		0.0	1.4		0.9	0.0	1.3		0.0
Prob of Phs Call (p_c)		0.00	1.00		0.98	0.70	1.00		0.98
Prob of Max Out (p_x)		0.00	0.00		0.00	1.00	0.00		0.00
Left-Turn Movement Data									
Assigned Mvmt		1			7	5			3
Mvmt Sat Flow, veh/h		1781			1303	1781			805
Through Movement Data									
Assigned Mvmt			2		4		6		8
Mvmt Sat Flow, veh/h			3486		235		3042		215
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		18
Mvmt Sat Flow, veh/h			136		1585		513		68
Left Lane Group Data									
Assigned Mvmt		1	0	0	7	5	0	0	3
Lane Assignment		L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	67	71	0	0	16
Grp Sat Flow (s), veh/h/ln	1781	0	0	1537	1781	0	0	1089
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.0	0.8	0.0	0.0	2.0
Perm LT Sat Flow (s_l), veh/h/ln	1114	0	0	1436	1127	0	0	1234
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1791	0	0	0	0
Perm LT Eff Green (g_p), s	35.5	0.0	0.0	8.7	37.5	0.0	0.0	8.7
Perm LT Serve Time (g_u), s	35.5	0.0	0.0	6.7	33.5	0.0	0.0	6.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.88	1.00	0.00	0.00	0.81
Lane Grp Cap (c), veh/h	766	0	0	330	836	0	0	262
V/C Ratio (X)	0.00	0.00	0.00	0.20	0.08	0.00	0.00	0.06
Avail Cap (c_a), veh/h	909	0	0	966	894	0	0	826
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.4	3.6	0.0	0.0	22.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.7	3.7	0.0	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.8	0.1	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	130	0	0	0	125	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	1.4	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.0	0.0	1.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1262	0	0	0	1030	0	0
V/C Ratio (X)	0.00	0.10	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1262	0	0	0	1030	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	6.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	135	0	162	0	128	0	0
Grp Sat Flow (s), veh/h/ln	0	1846	0	1585	0	1778	0	0
Q Serve Time (g_s), s	0.0	1.4	0.0	6.0	0.0	2.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	6.0	0.0	2.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	1.00	0.00	0.29	0.00	0.06
Lane Grp Cap (c), veh/h	0	1311	0	226	0	1031	0	0
V/C Ratio (X)	0.00	0.10	0.00	0.72	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1311	0	919	0	1031	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	25.1	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	4.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	29.3	0.0	6.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	2.1	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	2.4	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.11	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		11.1						
HCM 6th LOS		B						

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	54	3	4	1
Future Vol, veh/h	0	50	54	3	4	1
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	0	54	59	3	4	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	62	0	-	0	115	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	54	-
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	1541	-	-	-	881	1004
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1541	-	-	-	881	1004
Mov Cap-2 Maneuver	-	-	-	-	881	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	969	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1541	-	-	-	903
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	52	2	3	57	2	0	0	1	4	0	0
Future Vol, veh/h	0	52	2	3	57	2	0	0	1	4	0	0
Peak Hour Factor	0.68	0.68	0.68	0.74	0.74	0.74	0.25	0.25	0.25	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	76	3	4	77	3	0	0	4	4	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.4	6.7	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	5%	100%
Vol Thru, %	0%	96%	92%	0%
Vol Right, %	100%	4%	3%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	54	62	4
LT Vol	0	0	3	4
Through Vol	0	52	57	0
RT Vol	1	2	2	0
Lane Flow Rate	4	79	84	4
Geometry Grp	1	1	1	1
Degree of Util (X)	0.004	0.088	0.093	0.005
Departure Headway (Hd)	3.617	3.989	3.999	4.419
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	977	900	897	802
Service Time	1.686	2.007	2.016	2.488
HCM Lane V/C Ratio	0.004	0.088	0.094	0.005
HCM Control Delay	6.7	7.4	7.4	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.3	0.3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	12	80	4	0	0	112	194	17	0	183	32
Future Volume (veh/h)	25	12	80	4	0	0	112	194	17	0	183	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	13	87	4	0	0	122	211	18	0	199	35
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
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	173	63	132	247	0	0	925	2534	214	833	1861	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.00	0.07	0.76	0.76	0.00	0.61	0.61
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.6	0.0	31.7	24.8	0.0	0.0	2.6	1.9	1.9	0.0	4.9	4.9
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		127			4			351			234	
Approach Delay, s/veh		29.8			24.8			2.1			4.9	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4	5	6		8			
Case No		1.1	4.0		7.0	1.1	4.0		8.0			
Phs Duration (G+Y+Rc), s		0.0	49.5		9.4	8.8	40.7		9.4			
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5			
Max Green (Gmax), s		5.0	45.0		26.5	19.5	30.5		26.5			
Max Allow Headway (MAH), s		0.0	5.3		4.4	3.8	5.3		5.3			
Max Q Clear (g_c+I1), s		0.0	3.0		5.1	3.2	3.6		2.1			
Green Ext Time (g_e), s		0.0	1.4		0.4	0.3	1.3		0.0			
Prob of Phs Call (p_c)		0.00	1.00		0.88	0.86	1.00		0.88			
Prob of Max Out (p_x)		0.00	0.00		0.00	0.00	0.00		0.00			
Left-Turn Movement Data												
Assigned Mvmt		1			7	5			3			
Mvmt Sat Flow, veh/h		1781			847	1781			1497			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3316		752		3029		0			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			281		1585		524		0			
Left Lane Group Data												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+TL (Pr/Pm)				L+T			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	40	122	0	0	4
Grp Sat Flow (s), veh/h/ln	1781	0	0	1600	1781	0	0	1497
Q Serve Time (g_s), s	0.0	0.0	0.0	0.3	1.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.2	1.2	0.0	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	1152	0	0	1440	1146	0	0	1423
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1809	0	0	0	1781
Perm LT Eff Green (g_p), s	36.2	0.0	0.0	4.9	38.2	0.0	0.0	4.9
Perm LT Serve Time (g_u), s	36.2	0.0	0.0	4.8	34.6	0.0	0.0	3.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.67	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	833	0	0	235	925	0	0	247
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.13	0.00	0.00	0.02
Avail Cap (c_a), veh/h	981	0	0	800	1384	0	0	761
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.3	2.6	0.0	0.0	24.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.6	2.6	0.0	0.0	24.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	112	0	0	0	115	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	1.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1358	0	0	0	1091	0	0
V/C Ratio (X)	0.00	0.08	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1358	0	0	0	1091	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	0.0	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.9	0.0	0.0	0.0	4.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	117	0	87	0	119	0	0
Grp Sat Flow (s), veh/h/ln	0	1820	0	1585	0	1776	0	0
Q Serve Time (g_s), s	0.0	1.0	0.0	3.1	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	3.1	0.0	1.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.15	0.00	1.00	0.00	0.29	0.00	0.00
Lane Grp Cap (c), veh/h	0	1390	0	132	0	1091	0	0
V/C Ratio (X)	0.00	0.08	0.00	0.66	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1390	0	713	0	1091	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	26.2	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	5.5	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.9	0.0	31.7	0.0	4.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.1	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.3	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.06	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	59	74	0	1	0
Future Vol, veh/h	0	59	74	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	62	62	25	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	73	122	0	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	122	0	-	0	195	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	73	-
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	1465	-	-	-	794	929
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1465	-	-	-	794	929
Mov Cap-2 Maneuver	-	-	-	-	794	-
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	950	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1465	-	-	-	794
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	59	1	2	73	5	0	0	0	7	0	1
Future Vol, veh/h	0	59	1	2	73	5	0	0	0	7	0	1
Peak Hour Factor	0.83	0.83	0.83	0.62	0.62	0.62	0.25	0.25	0.25	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	73	1	3	120	8	0	0	0	11	0	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.7	0	7.5
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	3%	88%
Vol Thru, %	100%	98%	91%	0%
Vol Right, %	0%	2%	6%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	60	80	8
LT Vol	0	0	2	7
Through Vol	0	59	73	0
RT Vol	0	1	5	1
Lane Flow Rate	0	74	132	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.083	0.145	0.015
Departure Headway (Hd)	4.298	4.044	3.978	4.387
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	885	902	805
Service Time	2.387	2.075	2.001	2.472
HCM Lane V/C Ratio	0	0.084	0.146	0.015
HCM Control Delay	7.4	7.4	7.7	7.5
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.3	0.5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	7	149	12	2	1	65	235	9	0	199	34
Future Volume (veh/h)	54	7	149	12	2	1	65	235	9	0	199	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	8	165	13	2	1	72	261	10	0	221	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
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	299	33	229	222	31	10	830	2474	94	761	1757	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.71	0.71	0.00	0.58	0.58
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.6	0.0	29.3	22.8	0.0	0.0	3.7	3.0	3.0	0.0	6.1	6.2
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		233			16			343			259	
Approach Delay, s/veh		27.6			22.8			3.1			6.2	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8
Assigned Phs		1	2		4	5	6		8
Case No		1.1	4.0		7.0	1.1	4.0		8.0
Phs Duration (G+Y+Rc), s		0.0	48.0		13.4	8.0	40.0		13.4
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5
Max Green (Gmax), s		5.0	36.0		35.5	5.5	35.5		35.5
Max Allow Headway (MAH), s		0.0	4.9		4.4	3.7	5.0		5.6
Max Q Clear (g_c+I1), s		0.0	3.5		8.1	2.9	4.1		4.1
Green Ext Time (g_e), s		0.0	1.4		0.9	0.0	1.4		0.0
Prob of Phs Call (p_c)		0.00	1.00		0.99	0.71	1.00		0.99
Prob of Max Out (p_x)		0.00	0.00		0.00	1.00	0.00		0.00
Left-Turn Movement Data									
Assigned Mvmt		1			7	5			3
Mvmt Sat Flow, veh/h		1781			1306	1781			803
Through Movement Data									
Assigned Mvmt			2		4		6		8
Mvmt Sat Flow, veh/h			3490		230		3040		214
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		18
Mvmt Sat Flow, veh/h			133		1585		515		68
Left Lane Group Data									
Assigned Mvmt		1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)				L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	68	72	0	0	16
Grp Sat Flow (s), veh/h/ln	1781	0	0	1537	1781	0	0	1085
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.1	0.9	0.0	0.0	2.1
Perm LT Sat Flow (s_l), veh/h/ln	1108	0	0	1436	1120	0	0	1231
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1791	0	0	0	0
Perm LT Eff Green (g_p), s	35.5	0.0	0.0	8.9	37.5	0.0	0.0	8.9
Perm LT Serve Time (g_u), s	35.5	0.0	0.0	6.8	33.4	0.0	0.0	6.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.88	1.00	0.00	0.00	0.81
Lane Grp Cap (c), veh/h	761	0	0	333	830	0	0	263
V/C Ratio (X)	0.00	0.00	0.00	0.20	0.09	0.00	0.00	0.06
Avail Cap (c_a), veh/h	903	0	0	963	887	0	0	821
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.3	3.7	0.0	0.0	22.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.6	3.7	0.0	0.0	22.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.9	0.2	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	132	0	0	0	128	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	1.4	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.0	0.0	2.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1259	0	0	0	1027	0	0
V/C Ratio (X)	0.00	0.11	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1259	0	0	0	1027	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	0.0	0.0	5.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	6.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	139	0	165	0	131	0	0
Grp Sat Flow (s), veh/h/ln	0	1846	0	1585	0	1778	0	0
Q Serve Time (g_s), s	0.0	1.5	0.0	6.1	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	6.1	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	1.00	0.00	0.29	0.00	0.06
Lane Grp Cap (c), veh/h	0	1309	0	229	0	1028	0	0
V/C Ratio (X)	0.00	0.11	0.00	0.72	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1309	0	916	0	1028	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	25.1	0.0	5.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	4.2	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	29.3	0.0	6.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	2.1	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	2.4	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.12	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		11.1						
HCM 6th LOS		B						

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	54	3	4	1
Future Vol, veh/h	0	50	54	3	4	1
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	0	55	60	3	4	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	117	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	55	-
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	1540	-	-	-	879	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1540	-	-	-	879	1003
Mov Cap-2 Maneuver	-	-	-	-	879	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	968	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1540	-	-	-	901
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	52	2	3	57	2	0	0	1	4	0	0
Future Vol, veh/h	0	52	2	3	57	2	0	0	1	4	0	0
Peak Hour Factor	0.68	0.68	0.68	0.74	0.74	0.74	0.25	0.25	0.25	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	78	3	4	79	3	0	0	4	4	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.4	6.7	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	5%	100%
Vol Thru, %	0%	96%	92%	0%
Vol Right, %	100%	4%	3%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	54	62	4
LT Vol	0	0	3	4
Through Vol	0	52	57	0
RT Vol	1	2	2	0
Lane Flow Rate	4	81	85	4
Geometry Grp	1	1	1	1
Degree of Util (X)	0.004	0.09	0.095	0.005
Departure Headway (Hd)	3.622	3.991	4	4.424
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	975	899	897	801
Service Time	1.693	2.009	2.017	2.495
HCM Lane V/C Ratio	0.004	0.09	0.095	0.005
HCM Control Delay	6.7	7.4	7.4	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.3	0.3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	12	80	4	0	0	112	194	17	0	183	32
Future Volume (veh/h)	25	12	80	4	0	0	112	194	17	0	183	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	13	89	4	0	0	124	215	19	0	203	35
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
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	176	62	135	249	0	0	921	2521	221	827	1862	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.00	0.07	0.76	0.76	0.00	0.61	0.61
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.6	0.0	31.6	24.8	0.0	0.0	2.7	1.9	1.9	0.0	4.9	5.0
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		130			4			358			238	
Approach Delay, s/veh		29.7			24.8			2.2			4.9	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4	5	6		8			
Case No		1.1	4.0		7.0	1.1	4.0		8.0			
Phs Duration (G+Y+Rc), s		0.0	49.5		9.5	8.8	40.7		9.5			
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5			
Max Green (Gmax), s		5.0	45.0		26.5	19.5	30.5		26.5			
Max Allow Headway (MAH), s		0.0	5.3		4.4	3.8	5.3		5.3			
Max Q Clear (g_c+I1), s		0.0	3.0		5.2	3.2	3.7		2.1			
Green Ext Time (g_e), s		0.0	1.4		0.4	0.3	1.4		0.0			
Prob of Phs Call (p_c)		0.00	1.00		0.89	0.87	1.00		0.89			
Prob of Max Out (p_x)		0.00	0.00		0.00	0.00	0.00		0.00			

Left-Turn Movement Data												
Assigned Mvmt		1			7	5			3			
Mvmt Sat Flow, veh/h		1781			865	1781			1498			

Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3305		729		3039		0			

Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			290		1585		515		0			

Left Lane Group Data												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+TL (Pr/Pm)				L+T			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	41	124	0	0	4
Grp Sat Flow (s), veh/h/ln	1781	0	0	1594	1781	0	0	1498
Q Serve Time (g_s), s	0.0	0.0	0.0	0.4	1.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.3	1.2	0.0	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	1146	0	0	1440	1142	0	0	1423
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1809	0	0	0	1781
Perm LT Eff Green (g_p), s	36.2	0.0	0.0	5.0	38.2	0.0	0.0	5.0
Perm LT Serve Time (g_u), s	36.2	0.0	0.0	4.9	34.5	0.0	0.0	3.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.68	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	827	0	0	238	921	0	0	249
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.13	0.00	0.00	0.02
Avail Cap (c_a), veh/h	975	0	0	797	1378	0	0	759
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.3	2.6	0.0	0.0	24.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.6	2.7	0.0	0.0	24.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	115	0	0	0	117	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	1.0	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.0	0.0	1.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	1355	0	0	0	1089	0	0
V/C Ratio (X)	0.00	0.08	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1355	0	0	0	1089	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	0.0	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.9	0.0	0.0	0.0	4.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	119	0	89	0	121	0	0
Grp Sat Flow (s), veh/h/ln	0	1818	0	1585	0	1778	0	0
Q Serve Time (g_s), s	0.0	1.0	0.0	3.2	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	3.2	0.0	1.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.16	0.00	1.00	0.00	0.29	0.00	0.00
Lane Grp Cap (c), veh/h	0	1386	0	135	0	1089	0	0
V/C Ratio (X)	0.00	0.09	0.00	0.66	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1386	0	712	0	1089	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	26.2	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	5.4	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.9	0.0	31.6	0.0	5.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.1	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.3	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.06	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	83	82	0	1	0
Future Vol, veh/h	0	83	82	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	90	89	0	1	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	89	0	-	0	179	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	90	-
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	1506	-	-	-	811	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1506	-	-	-	811	969
Mov Cap-2 Maneuver	-	-	-	-	811	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	934	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1506	-	-	-	811
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	83	81	5	7	1
Future Vol, veh/h	0	83	81	5	7	1
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	62	67	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	90	88	8	10	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	96	0	-	0	182	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	90	-
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	1498	-	-	-	807	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1498	-	-	-	807	965
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	934	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1498	-	-	-	820
HCM Lane V/C Ratio	-	-	-	-	0.014
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	1	7	75	1	23
Future Vol, veh/h	60	1	7	75	1	23
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	65	1	8	82	1	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	164	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	98	-
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	-	-	1536	-	827	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	823	998
Mov Cap-2 Maneuver	-	-	-	-	823	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	989	-	-	1536	-
HCM Lane V/C Ratio	0.026	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	90	0	7	89	1	24
Future Vol, veh/h	90	0	7	89	1	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	0	8	97	1	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	98	0	211	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	113	-
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	-	777	958
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1495	-	772	958
Mov Cap-2 Maneuver	-	-	-	-	772	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	907	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	949	-	-	1495	-
HCM Lane V/C Ratio	0.029	-	-	0.005	-
HCM Control Delay (s)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	7	187	12	2	1	76	240	9	0	203	39
Future Volume (veh/h)	67	7	187	12	2	1	76	240	9	0	203	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	8	203	13	2	1	83	261	10	0	221	42
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
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	326	30	269	307	44	17	803	2403	92	734	1666	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.06	0.69	0.69	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.5	0.0	29.4	22.2	0.0	0.0	4.3	3.5	3.5	0.0	7.0	7.0
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		284			16			354			263	
Approach Delay, s/veh		27.7			22.2			3.7			7.0	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4	5	6		8			
Case No		1.1	4.0		7.0	1.1	4.0		8.0			
Phs Duration (G+Y+Rc), s		0.0	48.3		15.3	8.3	40.0		15.3			
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5			
Max Green (Gmax), s		5.0	36.0		35.5	5.5	35.5		35.5			
Max Allow Headway (MAH), s		0.0	5.3		4.4	3.8	5.3		5.3			
Max Q Clear (g_c+I1), s		0.0	3.6		9.8	3.1	4.3		2.5			
Green Ext Time (g_e), s		0.0	1.6		1.1	0.0	1.6		0.0			
Prob of Phs Call (p_c)		0.00	1.00		1.00	0.77	1.00		1.00			
Prob of Max Out (p_x)		0.00	0.00		0.00	1.00	0.00		0.00			

Left-Turn Movement Data												
Assigned Mvmt		1			7	5			3			
Mvmt Sat Flow, veh/h		1781			1286	1781			1202			

Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3490		179		2988		259			

Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			133		1585		558		97			

Left Lane Group Data												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	81	83	0	0	16
Grp Sat Flow (s), veh/h/ln	1781	0	0	1465	1781	0	0	1558
Q Serve Time (g_s), s	0.0	0.0	0.0	2.5	1.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.0	1.1	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	1108	0	0	1436	1116	0	0	1430
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1790	0	0	0	1797
Perm LT Eff Green (g_p), s	35.5	0.0	0.0	10.8	37.5	0.0	0.0	10.8
Perm LT Serve Time (g_u), s	35.5	0.0	0.0	10.4	33.2	0.0	0.0	7.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.5	0.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.90	1.00	0.00	0.00	0.81
Lane Grp Cap (c), veh/h	734	0	0	357	803	0	0	367
V/C Ratio (X)	0.00	0.00	0.00	0.23	0.10	0.00	0.00	0.04
Avail Cap (c_a), veh/h	871	0	0	918	849	0	0	934
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.1	4.3	0.0	0.0	22.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.5	4.3	0.0	0.0	22.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.08	0.00	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	132	0	0	0	130	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.0	0.0	2.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1224	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.11	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1224	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.3	0.0	0.0	0.0	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.5	0.0	0.0	0.0	7.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	139	0	203	0	133	0	0
Grp Sat Flow (s), veh/h/ln	0	1846	0	1585	0	1770	0	0
Q Serve Time (g_s), s	0.0	1.6	0.0	7.8	0.0	2.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	7.8	0.0	2.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	1.00	0.00	0.32	0.00	0.06
Lane Grp Cap (c), veh/h	0	1271	0	269	0	987	0	0
V/C Ratio (X)	0.00	0.11	0.00	0.75	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1271	0	884	0	987	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.3	0.0	25.2	0.0	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	4.2	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.5	0.0	29.4	0.0	7.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	2.7	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.3	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	3.1	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.15	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		12.4						
HCM 6th LOS		B						

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	65	78	3	4	1
Future Vol, veh/h	0	65	78	3	4	1
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	0	71	85	3	4	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	158	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	71	-
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	1508	-	-	-	833	971
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	952	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1508	-	-	-	833	971
Mov Cap-2 Maneuver	-	-	-	-	833	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1508	-	-	-	857
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	67	81	2	4	4
Future Vol, veh/h	0	67	81	2	4	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	74	100	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	73	88	3	4	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	91	0	-	0	163	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	73	-
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	1504	-	-	-	828	968
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1504	-	-	-	828	968
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	950	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1504	-	-	-	895
HCM Lane V/C Ratio	-	-	-	-	0.009
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	51	1	23	56	1	14
Future Vol, veh/h	51	1	23	56	1	14
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	55	1	25	61	1	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	56	0	167	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	111	-
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	-	-	1549	-	823	1011
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	914	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1549	-	809	1011
Mov Cap-2 Maneuver	-	-	-	-	809	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	898	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	994	-	-	1549	-
HCM Lane V/C Ratio	0.016	-	-	0.016	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	1	24	86	0	14
Future Vol, veh/h	72	1	24	86	0	14
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	78	1	26	93	0	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	224	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	145	-
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	-	764	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1519	-	750	981
Mov Cap-2 Maneuver	-	-	-	-	750	-
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	866	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	981	-	-	1519	-
HCM Lane V/C Ratio	0.016	-	-	0.017	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	12	103	4	0	0	149	198	17	0	187	45
Future Volume (veh/h)	33	12	103	4	0	0	149	198	17	0	187	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	13	112	4	0	0	162	215	18	0	203	49
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
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	206	59	164	275	0	0	893	2482	206	805	1697	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.10	0.10	0.10	0.10	0.00	0.00	0.08	0.75	0.75	0.00	0.59	0.59
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.2	0.0	31.0	24.3	0.0	0.0	3.1	2.2	2.2	0.0	5.5	5.6
Ln Grp LOS	C	A	C	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		161			4			395			252	
Approach Delay, s/veh		29.2			24.3			2.6			5.6	
Approach LOS		C			C			A			A	

Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4	5	6		8			
Case No		1.1	4.0		7.0	1.1	4.0		8.0			
Phs Duration (G+Y+Rc), s		0.0	49.5		10.7	9.2	40.3		10.7			
Change Period (Y+Rc), s		4.5	4.5		4.5	4.5	4.5		4.5			
Max Green (Gmax), s		5.0	45.0		26.5	19.5	30.5		26.5			
Max Allow Headway (MAH), s		0.0	5.3		4.4	3.8	5.3		5.3			
Max Q Clear (g_c+I1), s		0.0	3.1		6.1	3.8	3.9		2.1			
Green Ext Time (g_e), s		0.0	1.4		0.5	0.4	1.5		0.0			
Prob of Phs Call (p_c)		0.00	1.00		0.94	0.93	1.00		0.94			
Prob of Max Out (p_x)		0.00	0.00		0.00	0.00	0.00		0.00			

Left-Turn Movement Data												
Assigned Mvmt		1			7	5			3			
Mvmt Sat Flow, veh/h		1781			986	1781			1501			

Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3322		569		2853		0			

Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			276		1585		673		0			

Left Lane Group Data												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+TL (Pr/Pm)				L+T			

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	0	0	0	49	162	0	0	4
Grp Sat Flow (s), veh/h/ln	1781	0	0	1555	1781	0	0	1501
Q Serve Time (g_s), s	0.0	0.0	0.0	0.9	1.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.6	1.8	0.0	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	1147	0	0	1440	1128	0	0	1423
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1804	0	0	0	1781
Perm LT Eff Green (g_p), s	35.8	0.0	0.0	6.2	37.8	0.0	0.0	6.2
Perm LT Serve Time (g_u), s	35.8	0.0	0.0	6.1	33.9	0.0	0.0	4.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.9	0.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.73	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	805	0	0	265	893	0	0	275
V/C Ratio (X)	0.00	0.00	0.00	0.19	0.18	0.00	0.00	0.01
Avail Cap (c_a), veh/h	950	0	0	774	1331	0	0	746
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.9	3.0	0.0	0.0	24.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.2	3.1	0.0	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	0.4	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.10	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	114	0	0	0	125	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	1.0	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.0	0.0	1.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1328	0	0	0	1057	0	0
V/C Ratio (X)	0.00	0.09	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1328	0	0	0	1057	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.1	0.0	0.0	0.0	5.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	0.0	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	119	0	112	0	127	0	0
Grp Sat Flow (s), veh/h/ln	0	1821	0	1585	0	1749	0	0
Q Serve Time (g_s), s	0.0	1.1	0.0	4.1	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.1	0.0	4.1	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.15	0.00	1.00	0.00	0.38	0.00	0.00
Lane Grp Cap (c), veh/h	0	1360	0	164	0	1041	0	0
V/C Ratio (X)	0.00	0.09	0.00	0.68	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1360	0	697	0	1041	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.1	0.0	26.0	0.0	5.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	4.9	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	31.0	0.0	5.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.5	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.7	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		8.9						
HCM 6th LOS		A						

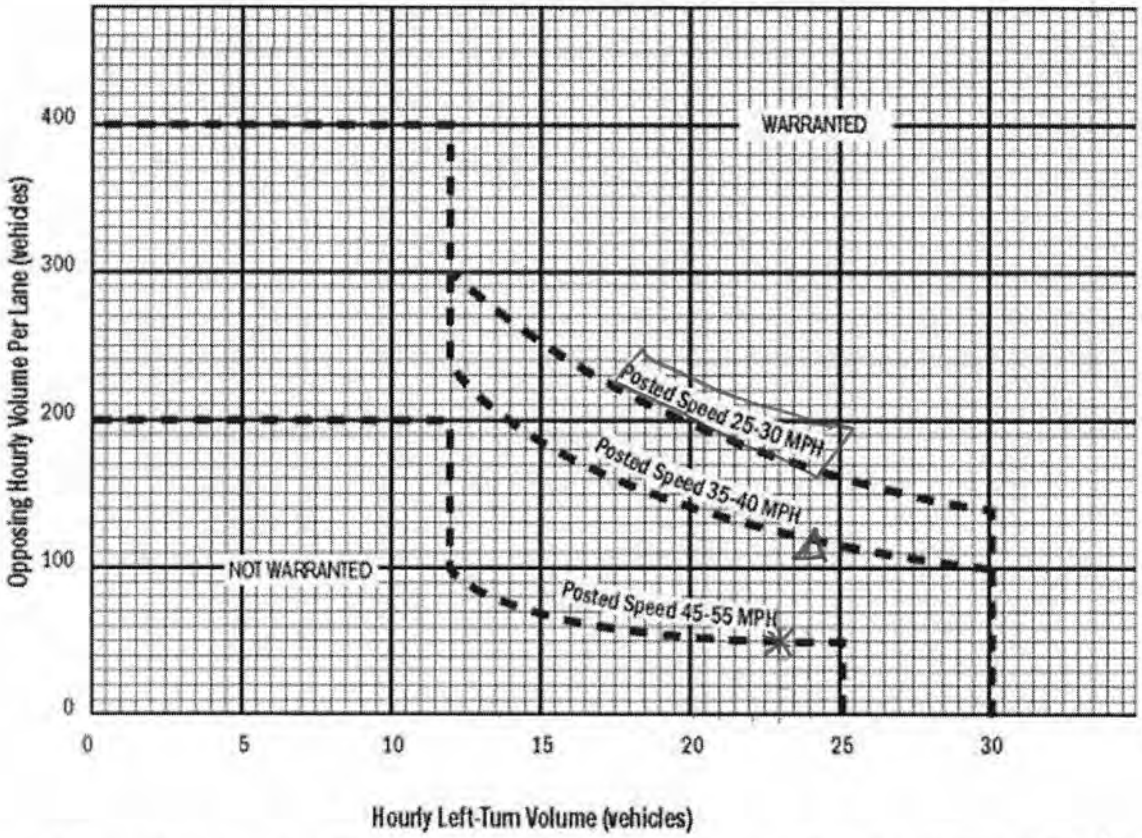
ATTACHMENT H

PROJECT ACCESS
TURN LANE WARRANT EVALUATIONS

JN 19598-P
VISTOSO MULTI-FAMILY
TRAFFIC STATEMENT
2/9/23
NJ

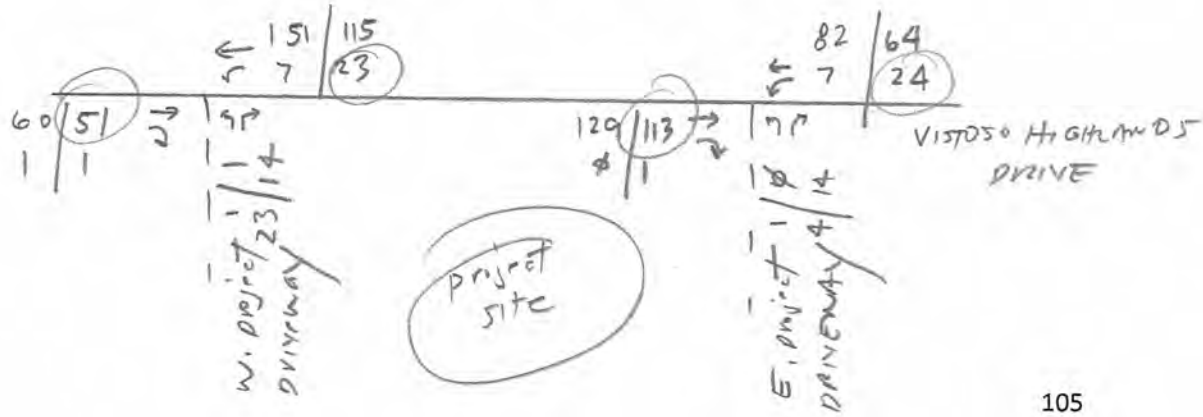
8. APPENDIX

A-1 LEFT TURN LANE GUIDELINES[9]



✱ = West project driveway - (23, 51) ⇒ LT Lane NOT warranted

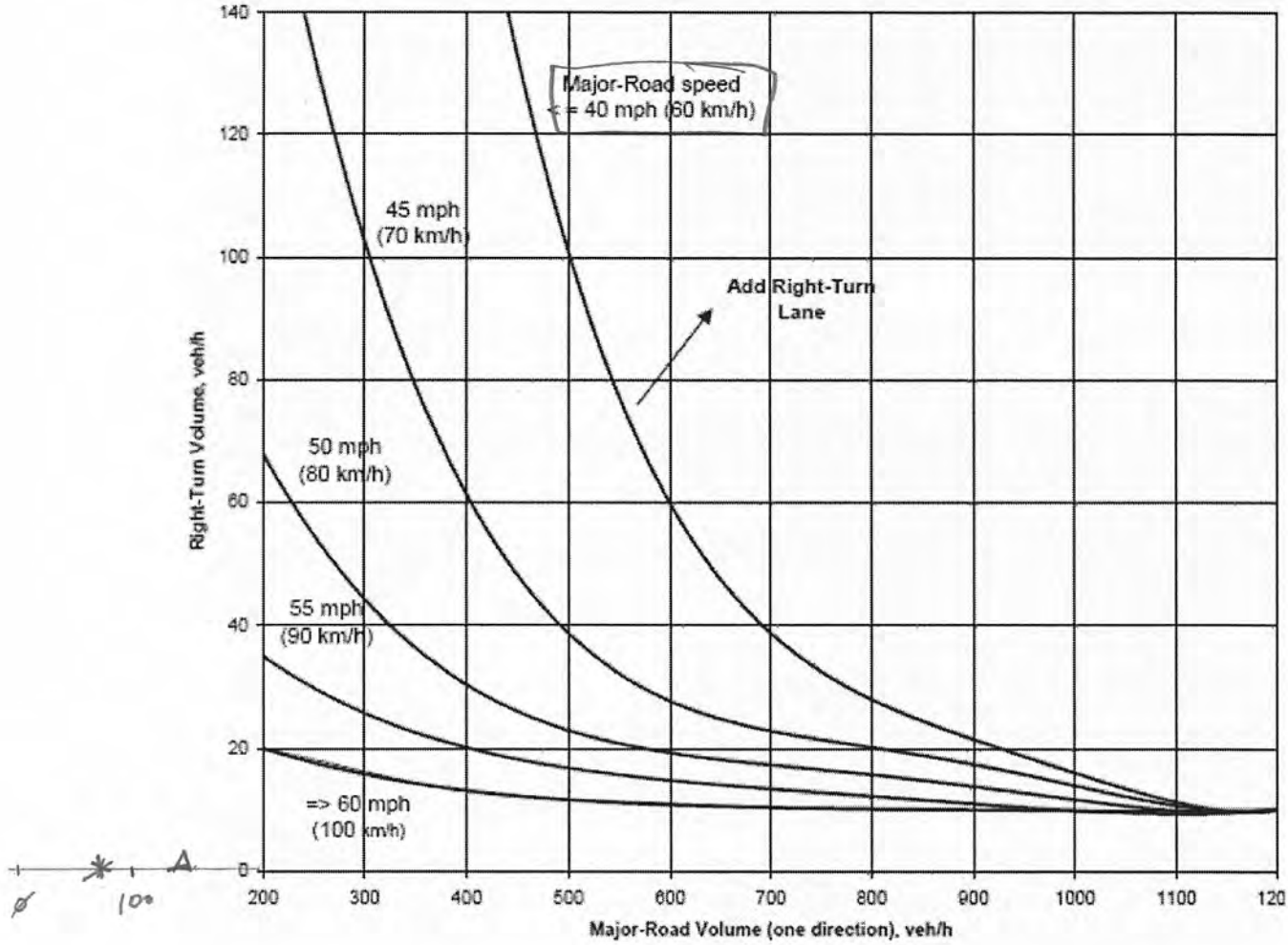
Δ = EAST project driveway - (24, 113) ⇒ LT Lane NOT warranted



2024 OPENING YEAR TRAFFIC VOLUMES - AM/PM PEAK

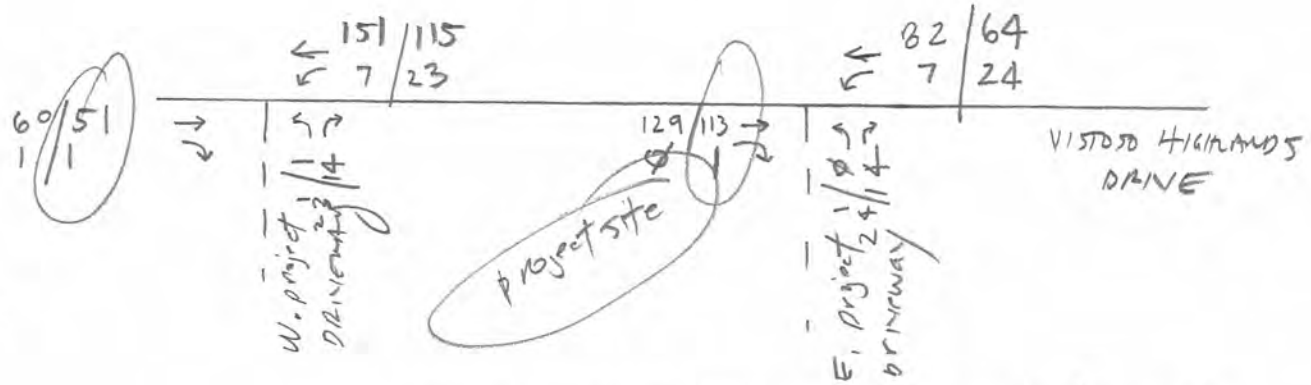
JN 19548-P
VISTOSO MULTI-FAMILY
TRAFFIC STATEMENT
2/9/23

A-2 RIGHT TURN LANE GUIDELINES FOR TWO-LANE ROADS[9]



✱ = West project driveway - (51, 1) ⇒ RT Lane not warranted

△ = EAST project driveway - (113, 1) ⇒ RT Lane Not warranted



2024 OPENING YEAR TRAFFIC VOLUMES - AM/PM PEAK

ATTACHMENT I

SIGHT VISIBILITY TRIANGLES
AT PROPOSED PROJECT ACCESSES

WEST ENTRANCE

EAST ENTRANCE

RICK ENGINEERING COMPANY
3945 E FORT LOWELL ROAD - STE #111
TUCSON, AZ 85712
520.795.1000
rickengineering.com
San Diego - Riverside - San Luis Obispo - Sacramento - Orange - Tucson - Phoenix - Las Vegas - Denver

THE GATEWAY AT
VISTOSO PRESERVE
SVT EXHIBIT
10-19-2023