

Traffic Impact Study

To: **David Gilbert, Parish, LLC**
From: **Eli Farney, PE, PTOE**
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Mountain View Commercial Development

Johnstown, Colorado

Prepared By:



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Table of Contents

Executive Summary	3
Introduction	4
Traffic Volumes and Distribution	7
Traffic Operations Analysis	15
Conclusion	24
Appendix	25

List of Figures

Figure 1: Vicinity Map	4
Figure 2: Study Intersections and Site Plan	5
Figure 3: Site-Generated Traffic Distribution	8
Figure 4: Existing (2022) Traffic Volumes	9
Figure 5: Site-Generated Traffic Volumes	10
Figure 6: Opening Day (2024) Background Traffic Volumes	11
Figure 7: Opening Day (2024) Total Traffic Volumes	12
Figure 8: Future Year (2045) Background Traffic Volumes	13
Figure 9: Future Year (2045) Total Traffic Volumes	14
Figure 10: Peak Hour Traffic Signal Warrant	22

List of Tables

Table 1: Traffic Modeling Parameters	15
Table 2: 2022 (Existing) Levels of Service	16
Table 3: 2024 (Opening Day) Levels of Service	17
Table 4: 2045 (Future Year) Levels of Service	18
Table 5: 2022 (Existing) 95 th Percentile Queue Lengths	19
Table 6: 2024 (Opening Day) 95 th Percentile Queue Lengths	20
Table 7: 2045 (Future Year) 95 th Percentile Queue Lengths	21

List of Appendices

Appendix A: Traffic Counts	25
Appendix B: Trip Generation	34
Appendix C: Synchro Reports	37

Executive Summary

JR Engineering (JR) has completed a review of the traffic impacts resulting from the proposed Mountain View Commercial Development (Project) in Johnstown, Colorado (Town).

The objectives of this Traffic Impact Study (TIS, Study) are:

- Estimate site-generated traffic and route trips onto adjacent streets
- Analyze 2024 (Opening Day) and 2045 (Future Year) traffic operations
- Make recommendations for improvements to accommodate future traffic volumes

The methodology, content, and findings of this TIS are consistent with the following documents:

- **Weld County Engineering and Construction Criteria – Chapter 8.1 – Traffic Impact Studies**

Key Findings of this TIS

- Levels of Service
 - All movements operate at LOS C or better in 2022.
 - Most movements are expected to operate at LOS D or better in 2024 with both background traffic and total traffic.
 - In 2045, most movements are expected to operate at LOS D or better with total traffic. A few movements are expected to fail at the Parish Avenue intersections.
- Queue Lengths
 - Queue lengths are mostly anticipated to be satisfactory in 2045. Queuing at Parish & Settler for the NBT and SBT movement may block access to driveways. Queuing for the SBL movement at this intersection may exceed the existing storage length.
- Improvements
 - The Parish & Settler intersection may become signalized in the future.
 - WCR 46.5 may be widened in the future.
 - Additional turn lanes along WCR 46.5 may be needed to improve traffic operations.

Introduction

JR has completed a review of the existing and forecasted traffic operations in the vicinity of the Mountain View Commercial Development. A vicinity map is included in [Figure 1](#).



[Figure 1: Vicinity Map](#)

Land Uses

The development is anticipated to contain the following land uses:

- Shopping Plaza (40-150k) – ITE 821
 - 110,000 square feet
 - No supermarket

Study Intersections

JR analyzed four intersections external to the Project site. These intersections are listed below and shown in **Figure 2**.

Study intersections:

1. Parish Avenue & Molinar Street
2. Parish Avenue & Settler Way
3. Parish Avenue & WCR 46.5/Centennial Drive
4. WCR 46.5 & Mountain Bluebird Drive



Figure 2: Study Intersections and Site Plan

Lane Geometry and Intersection Control

Assumptions

For the purposes of this Study, JR assumed that existing lane geometry would remain for the future scenarios, with the following exceptions:

- The intersection of WCR 46.5 & Mountain Bluebird Dr is currently a T-intersection, but was modeled with a south leg in the future scenarios.
- Additional turn lanes were modeled along WCR 46.5 in 2045.

Future Widening of WCR 46.5

WCR 46.5 to the south of the Project site may be widened in the future. This would be a Town project. In this Study, it was assumed that additional turn lanes along WCR 46.5 would be provided by 2045.

Signalization of Parish & Settler

JR conducted a signal warrant analysis determining that signalization may be warranted at the Parish & Settler intersection by 2045. For the purposes of this Study, it is assumed that this intersection will become signalized by 2045.

Traffic Volumes and Distribution

Existing Traffic Volumes

Existing traffic volumes were obtained on Thursday, October 6, 2022 by All Traffic Data Services for each of the Study intersections. Existing traffic volumes are included in [Figure 4](#). Traffic counts are included in [Appendix A](#).

Background Traffic

JR estimated background traffic volumes by applying a 3% growth rate to the existing traffic volumes to account for future regional development. This growth rate is based on data from the NFRMPO regional travel demand model.

Background traffic also includes estimated site-generated traffic from the Mountain View Residential Development (analyzed by JR on October 28, 2022), as well as a planned 143-unit multi-family development to the north of Molinar Street.

Future background traffic volumes are shown in [Figure 6](#) (2024) and [Figure 8](#) (2045).

Site-Generated Traffic Volumes

Site-generated traffic volumes were estimated using ITE Trip Generation Manual, 11th Edition. The development is expected to produce the following trips:

- Average Daily Trips: 7,427
- AM Peak Entering Site: 118
- AM Peak Exiting Site: 72
- PM Peak Entering Site: 280
- PM Peak Exiting Site: 291

Site-generated traffic volumes are shown in [Figure 5](#). A trip generation report is included in [Appendix B](#).

Distribution of Site-Generated Traffic

Site-generated traffic was routed onto adjacent streets according to the distribution in [Figure 3](#). The distribution is based on existing traffic volumes.



Figure 3: Site-Generated Traffic Distribution

Total Traffic

Total traffic is the sum of background and site-generated traffic. JR forecasted total traffic volumes at the Study intersections in the years 2024 (Opening Day) and 2045 (Future Year). Total traffic volumes are shown in [Figure 7](#) (2024) and [Figure 9](#) (2045).

Existing (2022) Traffic Volumes

Existing traffic volumes at the study intersections are included in **Figure 4**. Existing lane geometry is shown.

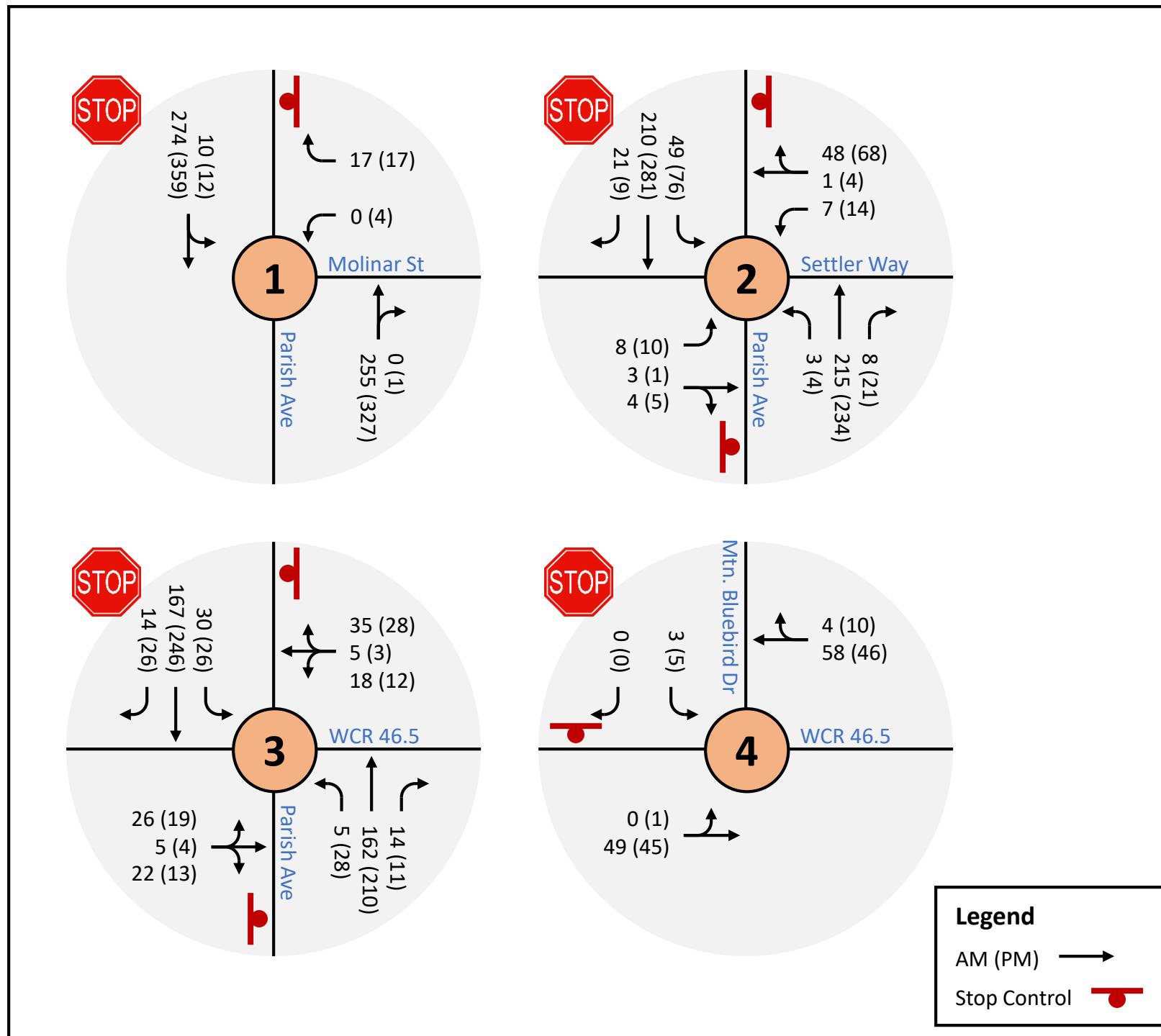


Figure 4: Existing (2022) Traffic Volumes

Site-Generated Traffic Volumes

Site-generated traffic volumes at the study intersections are included in [Figure 5](#).

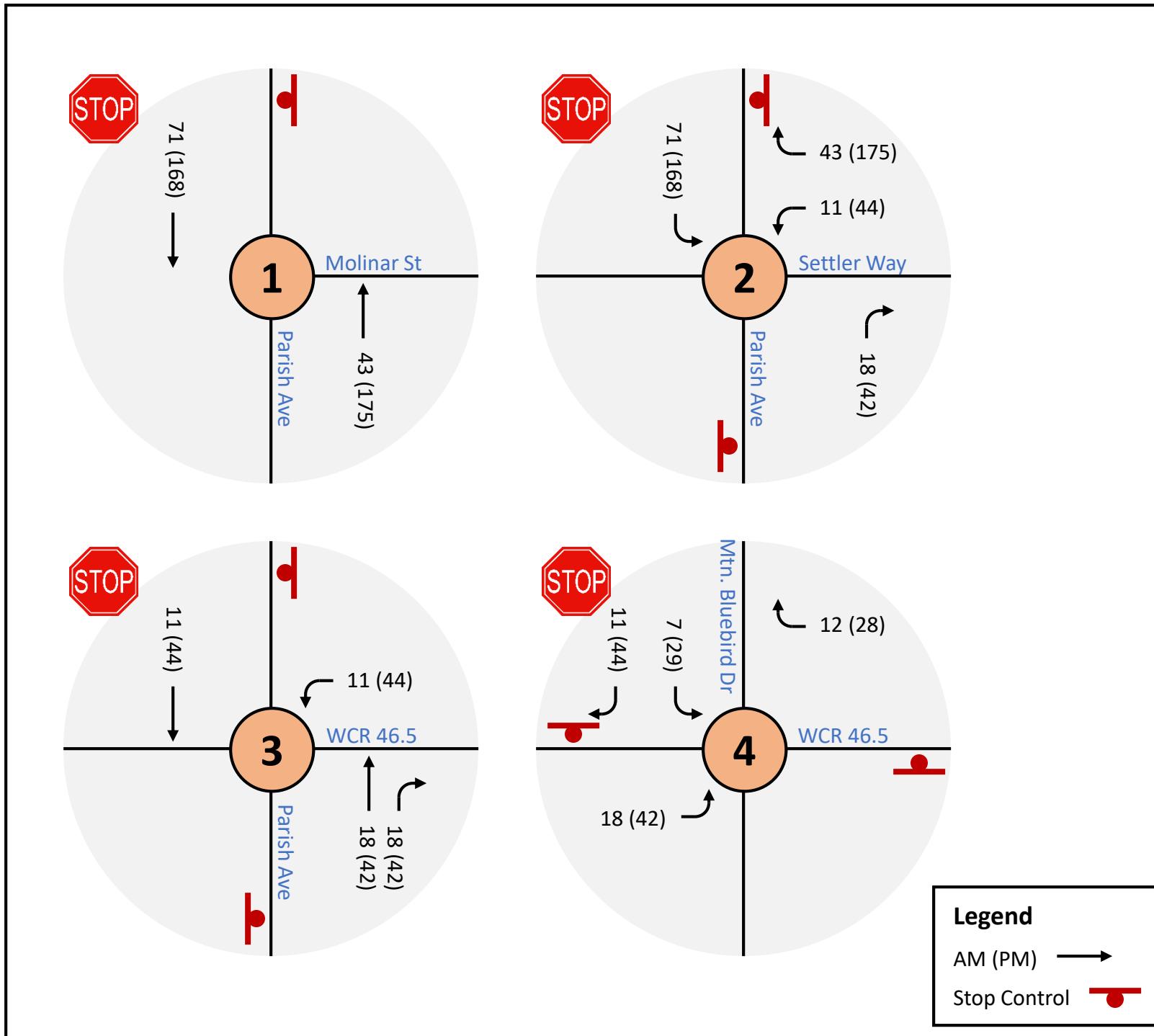


Figure 5: Site-Generated Traffic Volumes

Opening Day (2024) Background Traffic Volumes

2024 background traffic volumes at the study intersections are included in **Figure 6**. Lane geometry is shown.

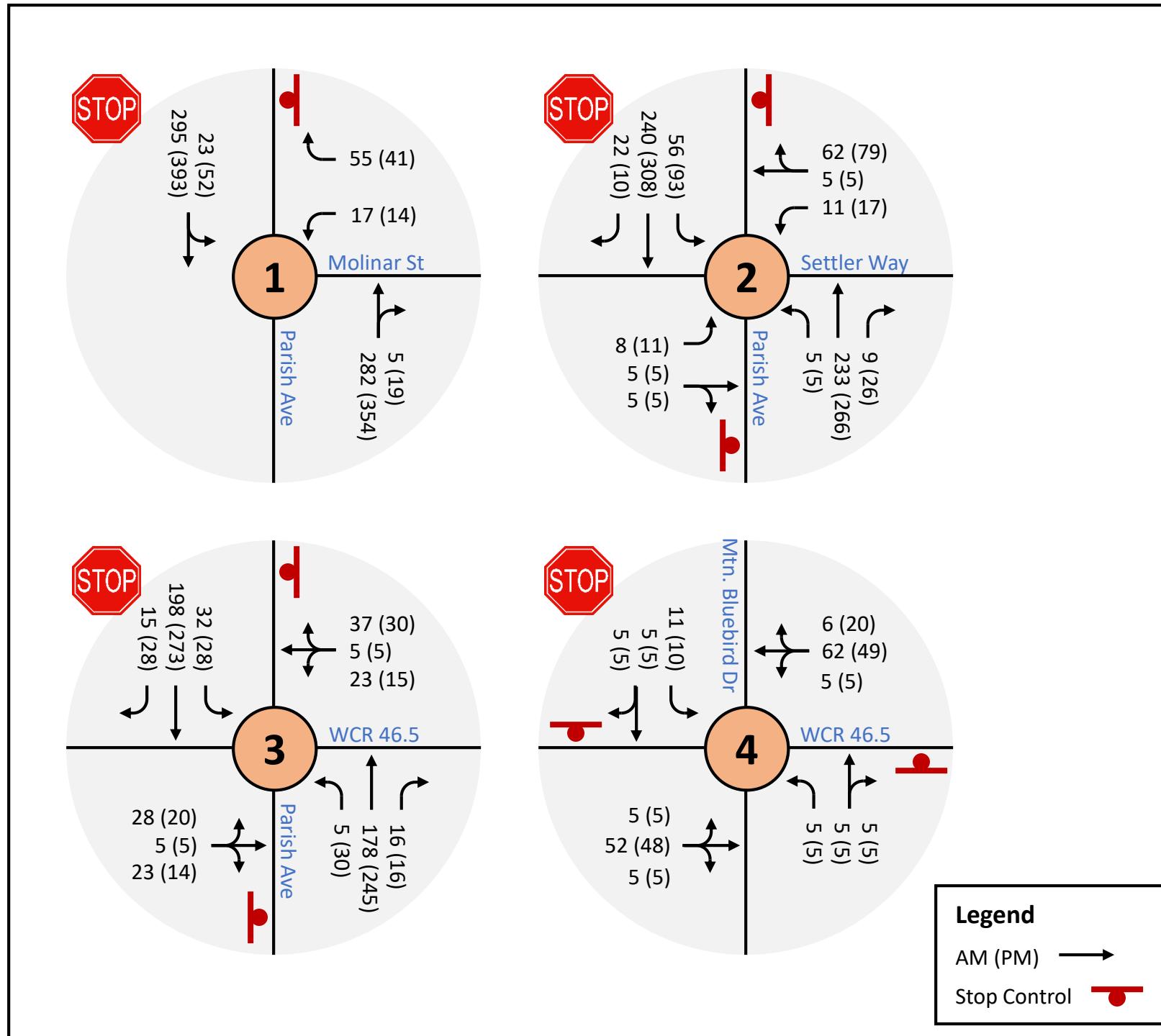


Figure 6: Opening Day (2024) Background Traffic Volumes

Opening Day (2024) Total Traffic Volumes

2024 total traffic volumes at the study intersections are included in [Figure 7](#). Lane geometry is shown.

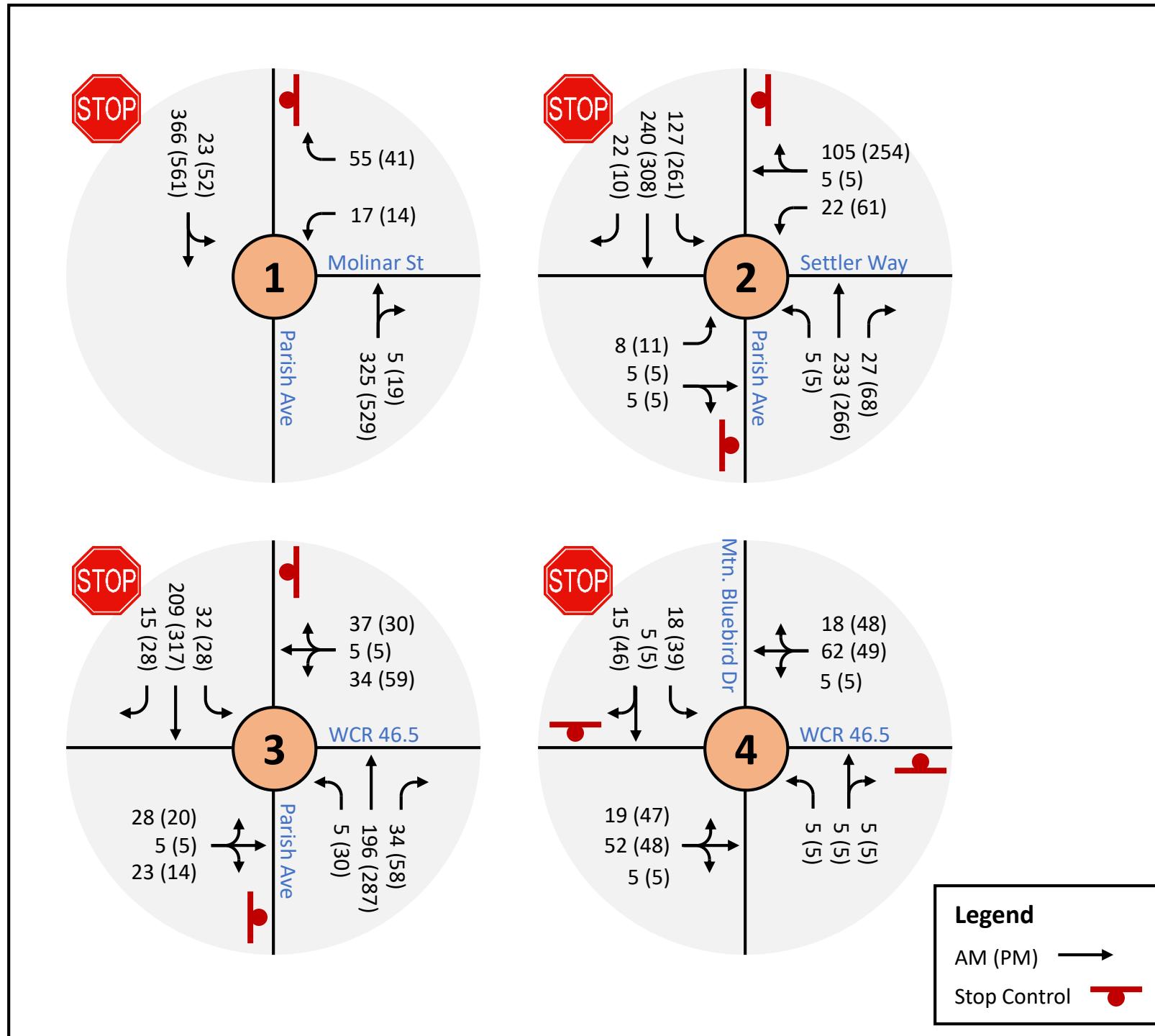


Figure 7: Opening Day (2024) Total Traffic Volumes

Future Year (2045) Background Traffic Volumes

2045 background traffic volumes at the study intersections are included in [Figure 8](#). Lane geometry is shown.

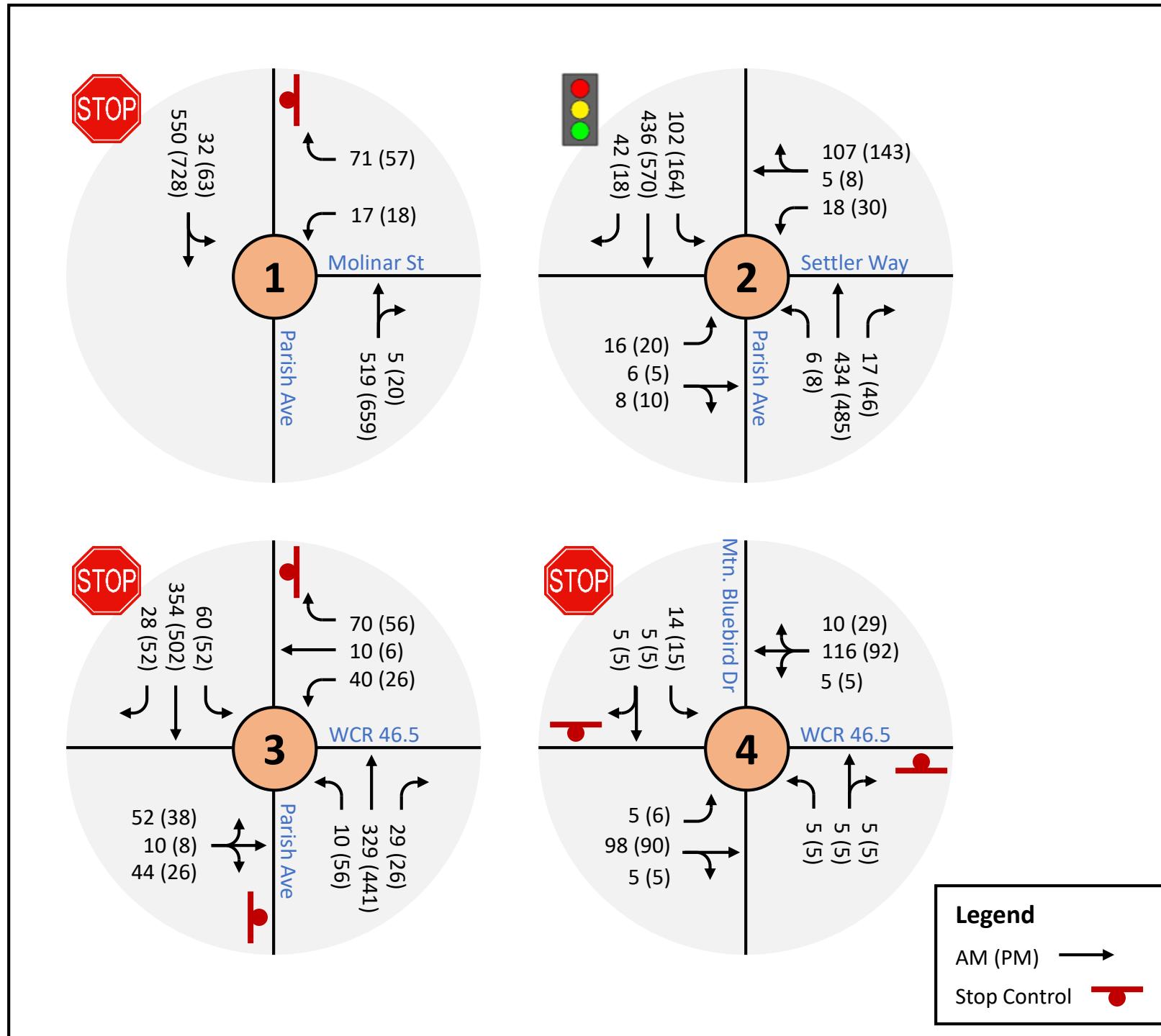


Figure 8: Future Year (2045) Background Traffic Volumes

Future Year (2045) Total Traffic Volumes

2045 total traffic volumes at the study intersections are included in [Figure 9](#). Lane geometry is shown.

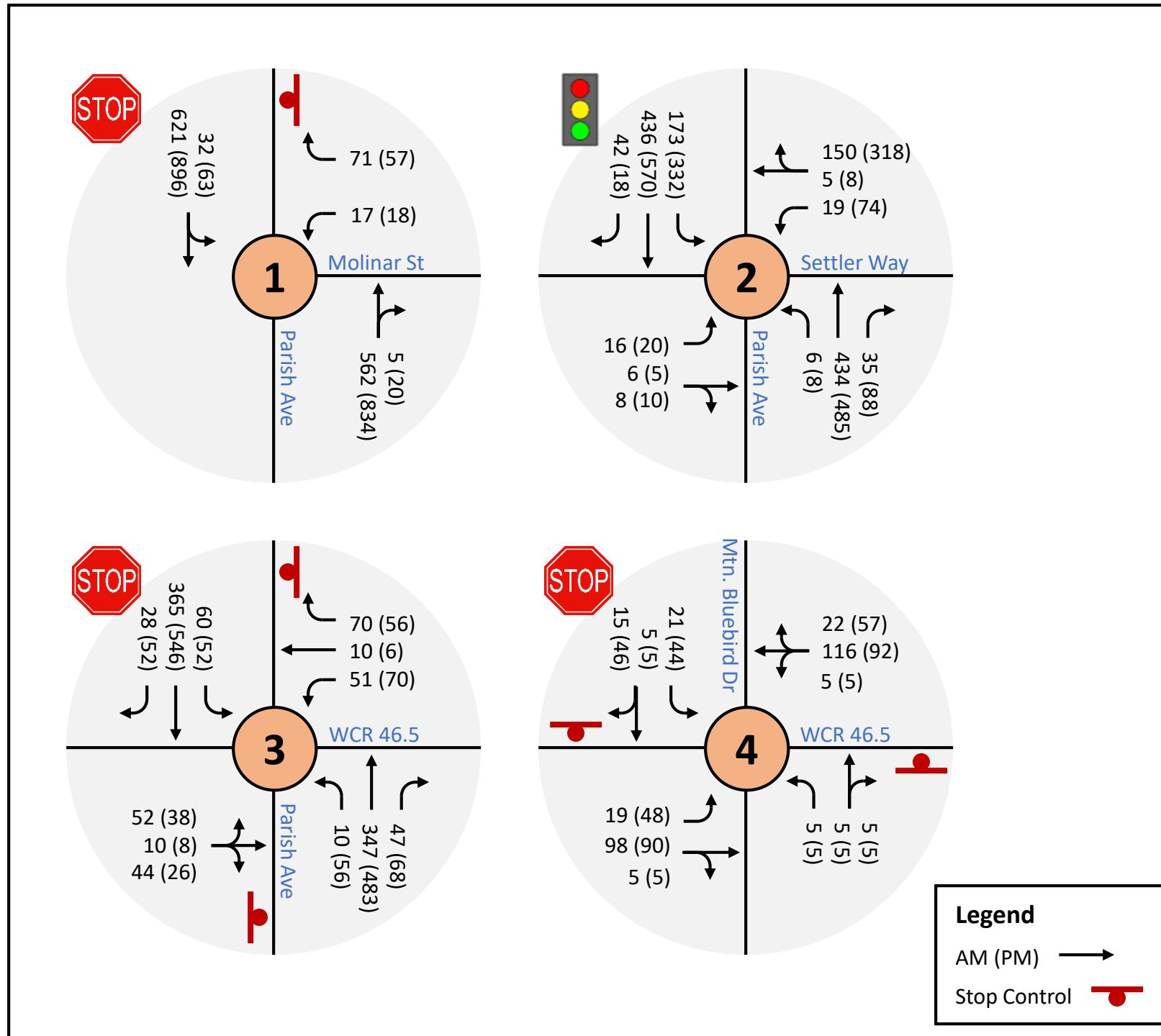


Figure 9: Future Year (2045) Total Traffic Volumes

Traffic Operations Analysis

Traffic operations were analyzed using HCM 6th Edition methodology. Synchro reports are included in [Appendix C](#).

Traffic Modeling Parameters

JR considered traffic modeling parameters such as peak hour factor and heavy vehicle percentage. [Table 1](#) summarizes the parameters considered, and the justification for values used. The values for these parameters are contained within the Synchro reports in [Appendix C](#).

Table 1: Traffic Modeling Parameters

Parameter	Justification
Peak Hour Factor (existing)	For existing traffic volumes (2022), JR used peak hour factors counted by All Traffic Data Services.
Peak Hour Factor (future)	For future traffic volumes (2024 and 2045), JR used values suggested by the Synchro 11 software, which are based on a Poisson distribution.
Heavy Vehicle Percentage	JR assumed 2% heavy vehicles at all Study intersections, which is consistent with the values counted by All Traffic Data Services.
Saturated Flow Rate (protected)	JR used values calculated in the Synchro 11 software, which are based on HCM 6 th Edition.
Saturated Flow Rate (permitted)	JR used values calculated in the Synchro 11 software, which are based on HCM 6 th Edition.

Levels of Service

JR analyzed each of the Study intersections for peak hour level of service (LOS). **Table 2** includes the LOS for each movement in the existing condition (2022). **Table 3** includes the forecasted LOS for background traffic and total traffic in the year 2024. **Table 4** includes the forecasted LOS for background traffic and total traffic in the year 2045. In each table, seconds of delay are shown in parentheses for movements operating at LOS F.

Table 2: 2022 (Existing) Levels of Service

Intersection	Movement/Approach	AM Peak LOS	PM Peak LOS
1: Parish Avenue & Molinar Street	WB Left	A	C
	WB Right	B	B
	SB Approach	A	A
2: Parish Avenue & Settler Way	EB Left	C	C
	EB Through/Right	B	B
	WB Left	C	C
	WB Through/Right	B	B
	NB Left	A	A
	SB Left	A	A
3: Parish Avenue & WCR 46.5 / Centennial Drive	EB Approach	B	B
	WB Approach	B	B
	NB Left	A	A
	SB Left	A	A
4: WCR 46.5 & Mountain Bluebird Drive	EB Approach	A	A
	SB Left	A	A
	SB Right	A	A

Table 3: 2024 (Opening Day) Levels of Service

	Intersection	Movement/ Approach	AM Peak LOS		PM Peak LOS	
			Background Traffic	Total Traffic	Background Traffic	Total Traffic
	1: Parish Avenue & Molinar Street	WB Left	B	C	C	D
		WB Right	B	B	B	B
		SB Approach	A	A	A	A
	2: Parish Avenue & Settler Way	EB Left	C	D	D	F (98s)
		EB Through/Right	B	B	B	B
		WB Left	C	C	C	F (84s)
		WB Through/Right	B	B	B	B
		NB Left	A	A	A	A
		SB Left	A	A	A	A
	3: Parish Avenue & WCR 46.5 / Centennial Drive	EB Approach	B	B	C	C
		WB Approach	B	B	B	C
		NB Left	A	A	A	A
		SB Left	A	A	A	A
	4: WCR 46.5 & Mountain Bluebird Drive	EB Approach	A	A	A	A
		WB Approach	A	A	A	A
		NB Left	A	A	A	A
		NB Through/Right	A	A	A	A
		SB Left	A	B	A	B
		SB Through/Right	A	A	A	A

Table 4: 2045 (Future Year) Levels of Service

Intersection	Movement/ Approach	AM Peak LOS		PM Peak LOS	
		Background Traffic	Total Traffic	Background Traffic	Total Traffic
1: Parish Avenue & Molinar Street	WB Left	D	D	F (61s)	F (136s)
	WB Right	B	B	C	C
	SB Approach	A	A	A	B
2: Parish Avenue & Settler Way	EB Left	B	C	C	C
	EB Through/Right	B	C	C	C
	WB Left	B	B	C	C
	WB Through/Right	C	C	C	F (88s)
	NB Left	B	B	B	B
	NB Through	B	B	C	D
	NB Right	B	B	B	C
	SB Left	B	B	B	D
	SB Through	B	B	B	B
	SB Right	A	A	A	B
	Overall	B	B	B	D
	EB Approach	D	E	F (70s)	F (105s)
3: Parish Avenue & WCR 46.5 / Centennial Drive	WB Left	D	E	F (59s)	F (199s)
	WB Through	C	C	E	E
	WB Right	B	B	B	B
	NB Left	A	A	A	A
	SB Left	A	A	A	A
	EB Left	A	A	A	A
4: WCR 46.5 & Mountain Bluebird Drive	WB Approach	A	A	A	A
	NB Left	A	A	A	A
	NB Through/Right	A	A	A	A
	SB Left	B	B	B	B
	SB Through/Right	A	A	A	A

Discussion on Levels of Service

In the existing condition, all movements operate at LOS C or better.

In the 2024 condition, most movements are expected to operate at LOS D or better with both background traffic and total traffic. At the Parish & Settler intersection, the EBL and WBL movements are expected to operate at LOS F in the PM peak hour with total traffic.

In the 2045 condition, most movements are expected to operate at LOS D or better. At the Parish & Settler intersection, some movements are likely to improve as a result of signalization.

A few failing movements are anticipated at the Study intersections in 2045. These failures occur on east/west approaches to the intersections along Parish Avenue. Particularly long delays are expected at WCR 46.5 & Parish due to this being an arterialarterial intersection with two-way stop control. This intersection could become signalized in the future to improve levels of service.

Queue Lengths

JR analyzed each of the Study intersections for 95th percentile queue lengths using HCM 6th Edition methodology. **Table 5** includes the queue lengths for the year 2022 with existing traffic. **Table 6** includes the queue lengths for the year 2024 with total traffic. **Table 7** includes the queue lengths for the year 2045 with total traffic.

Table 5: 2022 (Existing) 95th Percentile Queue Lengths

	Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
	1: Parish Avenue & Molinar Street	WB Left	<25	<25
		WB Right	<25	<25
		SB Approach	<25	<25
	2: Parish Avenue & Settler Way	EB Left	<25	<25
		EB Through/Right	<25	<25
		WB Left	<25	<25
		WB Through/Right	<25	<25
		NB Left	<25	<25
		SB Left	<25	<25
	3: Parish Avenue & WCR 46.5 / Centennial Drive	EB Approach	<25	<25
		WB Approach	<25	<25
		NB Left	<25	<25
		SB Left	<25	<25
	4: WCR 46.5 & Mountain Bluebird Drive	EB Approach	<25	<25
		SB Left	<25	<25
		SB Right	<25	<25

Table 6: 2024 (Opening Day) 95th Percentile Queue Lengths

Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
1: Parish Avenue & Molinar Street	WB Left	<25	<25
	WB Right	<25	<25
	SB Approach	<25	<25
2: Parish Avenue & Settler Way	EB Left	<25	<25
	EB Through/Right	<25	<25
	WB Left	<25	88
	WB Through/Right	<25	60
	NB Left	<25	<25
	SB Left	<25	25
3: Parish Avenue & WCR 46.5 / Centennial Drive	EB Approach	<25	<25
	WB Approach	<25	40
	NB Left	<25	<25
	SB Left	<25	<25
4: WCR 46.5 & Mountain Bluebird Drive	EB Approach	<25	<25
	WB Approach	<25	<25
	NB Left	<25	<25
	NB Through/Right	<25	<25
	SB Left	<25	<25
	SB Through/Right	<25	<25

Table 7: 2045 (Future Year) 95th Percentile Queue Lengths

Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
1: Parish Avenue & Molinar Street	WB Left	<25	45
	WB Right	<25	<25
	SB Approach	<25	<25
2: Parish Avenue & Settler Way	EB Left	<25	25
	EB Through/Right	<25	<25
	WB Left	32	65
	WB Through/Right	37	41
	NB Left	<25	<25
	NB Through	294	458
	NB Right	<25	<25
	SB Left	70	252
	SB Through	259	419
	SB Right	<25	<25
3: Parish Avenue & WCR 46.5 / Centennial Drive	EB Approach	80	115
	WB Left	40	150
	WB Through	<25	<25
	WB Right	<25	<25
	NB Left	<25	<25
	SB Left	<25	<25
4: WCR 46.5 & Mountain Bluebird Drive	EB Left	<25	<25
	WB Approach	<25	<25
	NB Left	<25	<25
	NB Through/Right	<25	<25
	SB Left	<25	<25
	SB Through/Right	<25	<25

Discussion on Queue Lengths

Queue lengths are expected to be nominal in 2024 with total traffic. In 2045, most queue lengths are expected to be satisfactory. At Parish & Settler, queuing for the SBT movement may block access to the driveway serving the police department in both peak hours. Similarly, queuing for the NBT movement may block access to the driveway serving Town Hall in the PM peak hour.

Most queue lengths for turning movements are expected to fit within existing storage. However, queuing for the SBL movement at Parish & Settler is expected to exceed the current storage length of about 170 feet in the PM peak hour. Modification to this turn lane may be needed.

Traffic Signal Warrant Analysis

JR performed a preliminary traffic signal warrant analysis on the intersection of Parish & Settler. Specifically, JR checked the peak hour signal warrant according to the MUTCD. Traffic volumes were plotted on Figure 4C-3 of the MUTCD, which is shown in [Figure 10](#). JR considered all volumes on the westbound approach and used the “2 or more lanes & 2 or more lanes” curve on the graph.

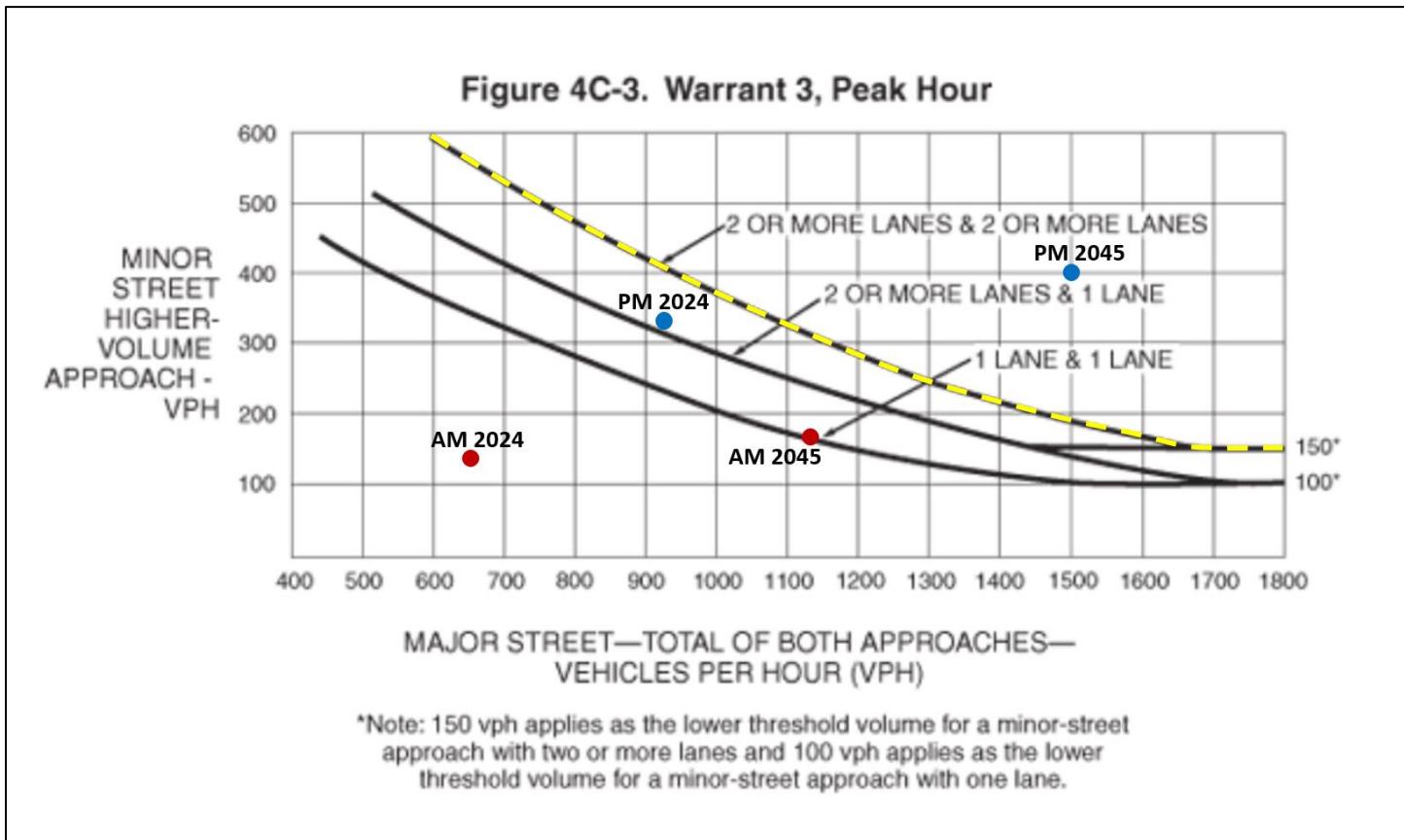


Figure 10: Peak Hour Traffic Signal Warrant

With 2024 total traffic volumes, the intersection is not expected to meet the peak hour warrant for signalization. With 2045 total traffic volumes, the intersection is expected to meet the warrant. Therefore, the warrant is anticipated to be met sometime between 2024 and 2045.

Due to the limited applicability of the peak hour warrant, JR also considered the potential to meet the 4-hour warrant. JR estimated hourly traffic volumes by using ITE data for hourly distribution of vehicle trips. Based on a preliminary analysis of the 4-hour warrant, JR concludes that the warrant is unlikely to be met by 2024. However, the 4-hour warrant is anticipated to be met sometime before 2045.



JR believes that Parish & Settler is an ideal location for a signal, as it could improve safety for accessing Town Hall, police department, library, and YMCA. Ongoing warrant studies should be conducted to monitor traffic conditions at this intersection. It should become signalized once warrants are met. Future coordination with Town staff will be necessary to determine responsibilities for signal construction costs.

Turn Lanes along WCR 46.5

JR gave consideration to the need for turn lanes along WCR 46.5 in the future. At the intersection of WCR 46.5 & Parish, turning movement volumes are higher than through movement volumes along WCR 46.5. Therefore, additional turn lanes may improve traffic operations.

JR reviewed the CDOT *State Highway Access Code* to determine whether turn lanes may be necessary. For non-rural arterials, left turn lanes are required when the turning volume is greater than 25 vehicles in the peak hour. Right turn lanes are required when the turning volume is greater than 50 vehicles in the peak hour.

Based on these standards, the following movements would require auxiliary lanes by 2045:

- WCR 46.5 & Parish Avenue
 - Eastbound left
 - Westbound left
 - Westbound right
- WCR 46.5 & Mountain Bluebird Drive
 - Eastbound left
 - Westbound right

Based on consideration of both traffic operations and CDOT *Access Code* requirements, JR recommends the following turn lanes be installed in the future:

- Westbound left at WCR 46.5 & Parish
- Westbound right at WCR 46.5 & Parish
- Eastbound left at WCR 46.5 & Mountain Bluebird

These improvements would be jointly funded between the Town and the future development to the south, since the north half of WCR 46.5 is built.

Conclusion

Below is a summary of the conclusions and findings of this TIS.

Levels of Service

All movements operate at LOS C or better in 2022. Most movements are expected to operate at LOS D or better in 2024 with both background traffic and total traffic. In 2045, most movements are expected to operate at LOS D or better, with a few movements anticipated to fail at the Parish Avenue intersections.

Queue Lengths

Queue lengths are mostly expected to be satisfactory in year 2045. The NBT and SBT movements at Parish & Settler may limit access to driveways. Also, queuing for the SBL movement at this intersection may exceed the existing storage length.

Improvements

A few proposed improvements may help traffic operations at the Study intersections. Specifically, JR assumed that the intersection of Parish & Settler would become signalized by 2045. Also, WCR 46.5 may be widened in the future, possibly with additional turn lanes. Improvements to WCR 46.5 would be jointly funded between the Town and the future development to the south.

Appendix A

Traffic Counts

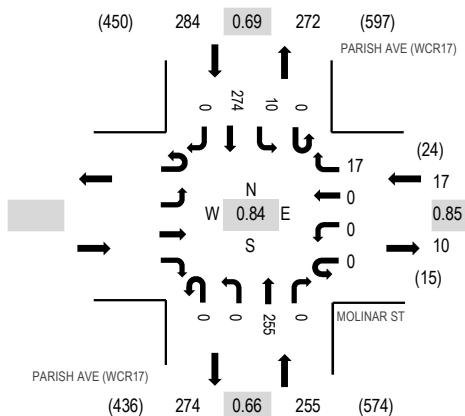
Location: 1 PARISH AVE (WCR17) & MOLINAR ST AM

Date: Thursday, October 6, 2022

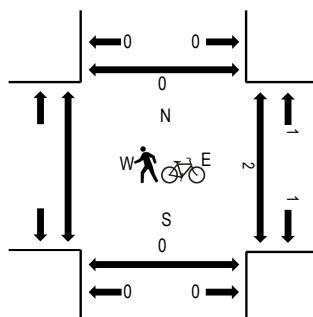
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	MOLINAR ST				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn	Left	Thru	Right	Total	West	East	South	North	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total					
7:00 AM		0	0	0	1	0	0	118	0	0	0	39	0	158	548	0	0	0
7:15 AM		0	0	0	4	0	0	67	0	0	2	55	0	128	556	0	0	0
7:30 AM		0	0	0	5	0	0	74	0	0	2	62	0	143	535	0	0	0
7:45 AM		0	0	0	5	0	0	54	0	0	3	57	0	119	525	0	0	0
8:00 AM		0	0	0	3	0	0	60	0	0	3	100	0	166	500	2	0	0
8:15 AM		0	0	0	0	0	0	65	0	0	3	39	0	107		1	0	0
8:30 AM		0	1	0	2	0	0	84	0	0	0	46	0	133		0	0	0
8:45 AM		0	0	0	3	0	0	52	0	0	2	37	0	94		0	0	0
Count Total		0	1	0	23	0	0	574	0	0	15	435	0	1,048		3	0	0
Peak Hour		0	0	0	17	0	0	255	0	0	10	274	0	556		2	0	0

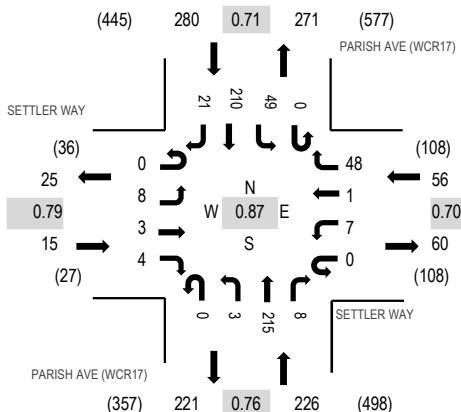
Location: 2 PARISH AVE (WCR17) & SETTLER WAY AM

Date: Thursday, October 6, 2022

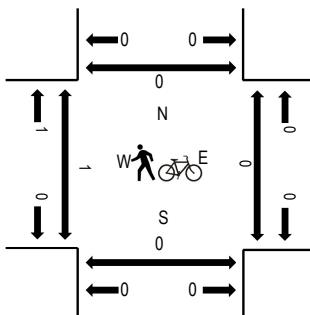
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SETTLER WAY				SETTLER WAY				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North
7:00 AM	0	3	1	2	0	0	0	13	0	1	89	1	0	11	28	2	151	562	0	1	0	0
7:15 AM	0	4	1	1	0	1	1	4	0	1	65	2	0	9	46	3	138	577	0	0	0	0
7:30 AM	0	2	1	2	0	1	0	9	0	1	62	3	0	9	54	5	149	548	0	0	0	0
7:45 AM	0	1	1	0	0	3	0	13	0	0	48	2	0	15	35	6	124	543	0	0	0	0
8:00 AM	0	1	0	1	0	2	0	22	0	1	40	1	0	16	75	7	166	516	1	0	0	0
8:15 AM	0	2	1	1	0	6	1	7	0	1	45	1	0	4	37	3	109		0	2	1	0
8:30 AM	0	1	0	0	0	3	0	10	0	0	79	6	0	10	33	2	144		2	0	0	0
8:45 AM	0	1	0	0	0	1	0	11	0	0	45	4	0	9	25	1	97		0	0	0	0
Count Total	0	15	5	7	0	17	2	89	0	5	473	20	0	83	333	29	1,078		3	3	1	0
Peak Hour	0	8	3	4	0	7	1	48	0	3	215	8	0	49	210	21	577		1	0	0	0

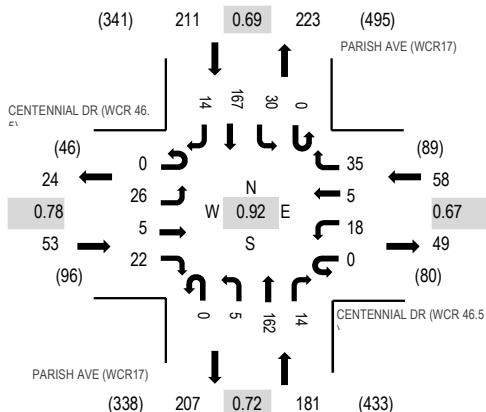
Location: 3 PARISH AVE (WCR17) & CENTENNIAL DR (WCR 46.5) AM

Date: Thursday, October 6, 2022

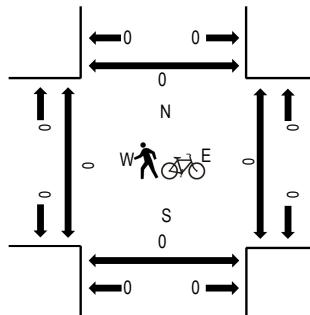
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	CENTENNIAL DR (WCR 46.5)				CENTENNIAL DR (WCR 46.5)				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings					
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right		Total	West	East	South	North		
7:00 AM	0	7	3	6	0	3	0	9	0	0	0	75	4	0	4	19	2	132	501	0	0	0	0
7:15 AM	0	5	2	11	0	6	1	15	0	0	0	44	4	0	8	40	0	136	503	0	0	0	0
7:30 AM	0	8	1	4	0	7	3	10	0	2	51	4	0	4	39	4	137	477	0	0	0	0	
7:45 AM	0	6	2	1	0	1	1	3	0	1	39	3	0	8	27	4	96	472	0	0	0	0	
8:00 AM	0	7	0	6	0	4	0	7	0	2	28	3	0	10	61	6	134	458	0	0	0	0	
8:15 AM	0	8	0	7	0	5	0	3	0	2	39	2	0	5	37	2	110	0	0	1	0	0	
8:30 AM	0	2	1	3	0	0	1	5	0	7	77	3	0	4	26	3	132	0	0	0	0	0	
8:45 AM	0	2	2	2	0	3	0	2	0	0	43	0	0	3	20	5	82	0	0	0	0	0	
Count Total	0	45	11	40	0	29	6	54	0	14	396	23	0	46	269	26	959	0	0	1	0	0	
Peak Hour	0	26	5	22	0	18	5	35	0	5	162	14	0	30	167	14	503	0	0	0	0	0	

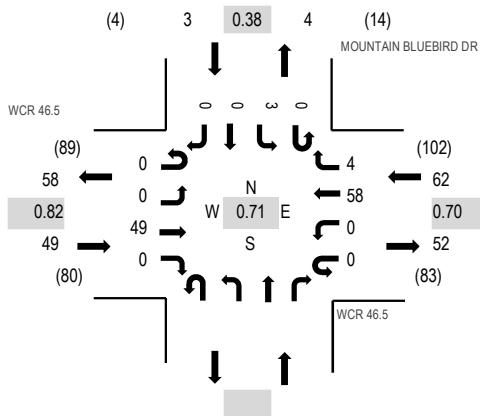
Location: 4 MOUNTAIN BLUEBIRD DR & WCR 46.5 AM

Date: Thursday, October 6, 2022

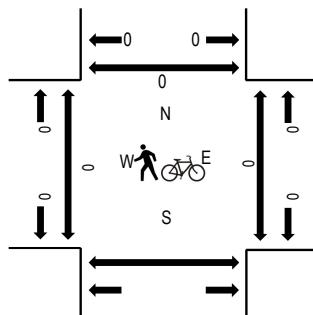
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WCR 46.5 Eastbound				WCR 46.5 Westbound				Mountain Bluebird DR Northbound				Mountain Bluebird DR Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
7:00 AM	0	1	9	0	0	0	12	2					0	0	0	0	24	112	0	0	0	0
7:15 AM	0	0	15	0	0	0	22	1					0	2	0	0	40	114	0	0	0	0
7:30 AM	0	0	9	0	0	0	20	2					0	0	0	0	31	90	0	0	0	0
7:45 AM	0	0	12	0	0	0	5	0					0	0	0	0	17	79	0	0	0	0
8:00 AM	0	0	13	0	0	0	11	1					0	1	0	0	26	74	0	0	0	0
8:15 AM	0	0	7	0	0	0	8	1					0	0	0	0	16	0	0	0	0	0
8:30 AM	0	0	9	0	0	0	6	4					0	1	0	0	20	0	0	0	0	0
8:45 AM	0	0	5	0	0	0	5	2					0	0	0	0	12	0	0	0	0	0
Count Total	0	1	79	0	0	0	89	13					0	4	0	0	186	0	0	0	0	0
Peak Hour	0	0	49	0	0	0	58	4					0	3	0	0	114	0	0	0	0	0

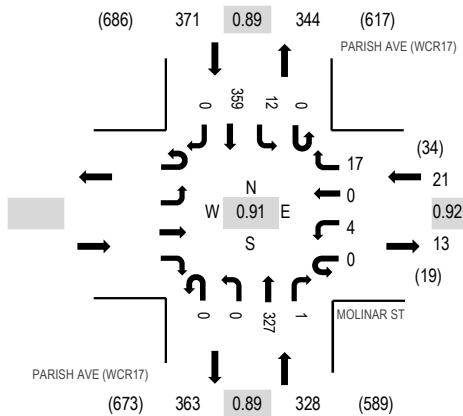
Location: 1 PARISH AVE (WCR17) & MOLINAR ST PM

Date: Thursday, October 6, 2022

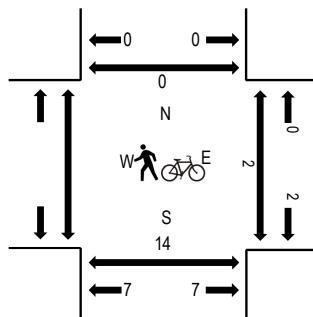
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	MOLINAR ST				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings						
	Eastbound		Westbound		Northbound		Southbound		U-Turn	Left	Thru	Right	Total	West	East	South	North			
U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North			
4:00 PM				0	0	0	6	0	0	56	0	0	2	84	0	148	591	0	0	0
4:15 PM				0	1	0	1	0	0	56	0	0	1	81	0	140	641	0	4	0
4:30 PM				0	0	0	4	0	0	80	0	0	2	66	0	152	692	0	0	0
4:45 PM				0	1	0	5	0	0	81	0	0	1	63	0	151	720	0	5	0
5:00 PM				0	0	0	6	0	0	94	1	0	2	95	0	198	718	2	4	0
5:15 PM				0	2	0	4	0	0	83	0	0	2	100	0	191		0	0	0
5:30 PM				0	1	0	2	0	0	69	0	0	7	101	0	180		0	5	0
5:45 PM				0	0	0	1	0	0	69	0	0	1	78	0	149		0	1	0
Count Total				0	5	0	29	0	0	588	1	0	18	668	0	1,309		2	19	0
Peak Hour				0	4	0	17	0	0	327	1	0	12	359	0	720		2	14	0

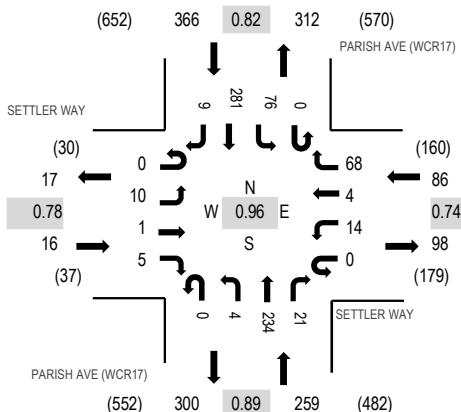
Location: 2 PARISH AVE (WCR17) & SETTLER WAY PM

Date: Thursday, October 6, 2022

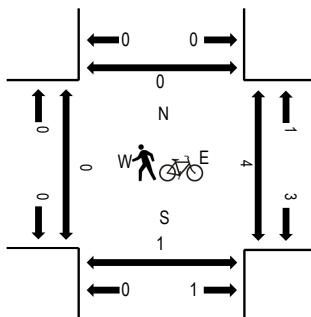
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SETTLE WAY				SETTLE WAY				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North
4:00 PM	0	1	1	0	0	2	0	12	0	1	37	1	0	16	58	0	129	604	0	0	0	0
4:15 PM	0	1	6	1	0	2	1	9	0	1	46	3	0	12	67	1	150	664	0	2	0	0
4:30 PM	0	3	1	0	0	14	2	16	0	0	59	6	0	18	47	1	167	704	0	0	0	0
4:45 PM	0	6	1	0	0	6	1	9	0	3	59	7	0	9	55	2	158	725	2	0	0	0
5:00 PM	0	6	1	2	0	5	0	14	0	2	71	3	0	20	63	2	189	727	0	0	0	0
5:15 PM	0	1	0	2	0	3	1	30	0	0	52	8	0	23	68	2	190	0	0	0	0	0
5:30 PM	0	1	0	1	0	3	0	16	0	2	50	4	0	17	91	3	188	0	0	1	0	0
5:45 PM	0	2	0	0	0	3	3	8	0	0	61	6	0	16	59	2	160	0	4	0	0	0
Count Total	0	21	10	6	0	38	8	114	0	9	435	38	0	131	508	13	1,331	2	6	1	0	0
Peak Hour	0	10	1	5	0	14	4	68	0	4	234	21	0	76	281	9	727	0	4	1	0	0

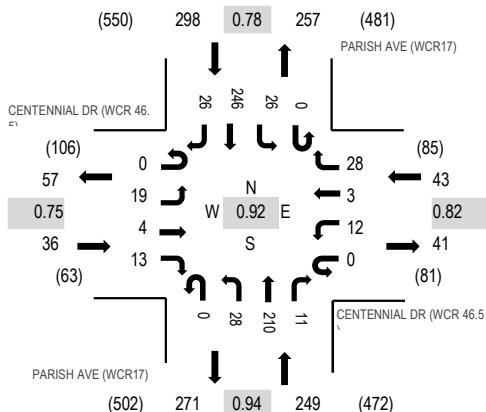
Location: 3 PARISH AVE (WCR17) & CENTENNIAL DR (WCR 46.5) PM

Date: Thursday, October 6, 2022

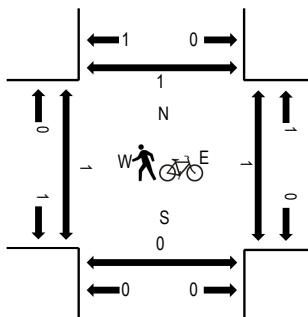
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	CENTENNIAL DR (WCR 46.5)				CENTENNIAL DR (WCR 46.5)				PARISH AVE (WCR17)				PARISH AVE (WCR17)				Rolling Hour	Pedestrian Crossings				
	Eastbound				Westbound				Northbound				Southbound					West	East	South	North	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total					
4:00 PM	0	0	1	5	1	0	1	8	0	3	33	2	0	5	49	7	115	549	0	0	0	0
4:15 PM	0	3	0	3	0	5	1	5	0	6	42	8	0	5	60	3	141	599	0	3	2	0
4:30 PM	0	6	1	3	0	2	0	6	0	7	54	7	0	6	49	8	149	605	0	0	1	0
4:45 PM	0	5	1	1	0	2	2	11	0	5	52	3	0	6	48	8	144	626	0	0	0	0
5:00 PM	0	6	1	4	0	5	1	9	0	7	60	2	0	5	61	4	165	621	0	0	0	0
5:15 PM	0	1	0	5	0	2	0	5	0	8	53	2	0	8	58	5	147	0	0	0	0	0
5:30 PM	0	7	2	3	0	3	0	3	0	8	45	4	0	7	79	9	170	1	1	0	1	1
5:45 PM	0	4	0	1	0	1	1	11	0	6	52	3	0	1	53	6	139	1	3	0	0	0
Count Total	0	32	6	25	1	20	6	58	0	50	391	31	0	43	457	50	1,170	2	7	3	1	1
Peak Hour	0	19	4	13	0	12	3	28	0	28	210	11	0	26	246	26	626	1	1	0	1	1

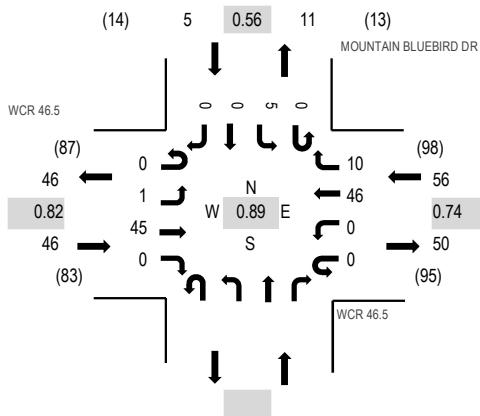
Location: 4 MOUNTAIN BLUEBIRD DR & WCR 46.5 PM

Date: Thursday, October 6, 2022

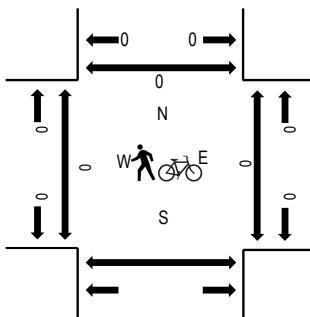
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WCR 46.5 Eastbound				WCR 46.5 Westbound				Northbound				MOUNTAIN BLUEBIRD DR Southbound				Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	0	0	0	
4:00 PM	0	0	9	0	0	0	10	4					0	1	0	0	24	107	0	0	0
4:15 PM	0	1	12	0	0	0	11	3					0	2	0	0	29	107	0	0	0
4:30 PM	0	0	14	0	0	0	7	2					0	1	0	0	24	100	0	0	0
4:45 PM	0	0	10	0	0	0	18	1					0	1	0	0	30	97	0	0	0
5:00 PM	0	0	8	0	0	0	13	1					0	1	0	1	24	88	0	0	0
5:15 PM	0	0	10	0	0	0	7	1					0	4	0	0	22	0	0	0	0
5:30 PM	0	0	13	0	0	0	6	0					0	2	0	0	21	0	0	0	1
5:45 PM	0	0	6	0	0	0	14	0					0	1	0	0	21	0	0	0	0
Count Total	0	1	82	0	0	0	86	12					0	13	0	1	195	0	0	0	1
Peak Hour	0	1	45	0	0	0	46	10					0	5	0	0	107	0	0	0	0

Appendix B

Trip Generation

Trip Generation Summary

Alternative: Alternative 1

Phase:

Project: Mountain View

Open Date: 4/18/2023

Analysis Date: 4/18/2023

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic					
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
820	SHOPPING PLAZA (ITE 821)	✓	3714	3713	7427	✓	118	72	190	✓	280	291	571
	110 1000 Sq. Ft. GLA												
Unadjusted Volume		3714	3713	7427		118	72	190		280	291	571	
Internal Capture Trips		0	0	0		0	0	0		0	0	0	
Pass-By Trips		0	0	0		0	0	0		97	97	194	
Volume Added to Adjacent Streets		3714	3713	7427		118	72	190		183	194	377	

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

Detailed Land Use Data
 For 110 1000 Sq. Ft. GLA of SHOPPING PLAZA (ITE 821)
 (820) Shopping Center

Project: Mountain View

Open Date: 4/18/2023
 Analysis Date: 4/18/2023

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips Source : ITE 11 - 821 - Custom	7427	0	67.52	43.29	91.06	19.25	59	50	50	False	T = 0.0(X) + 0.0	0
Weekday AM Peak Hour of Adjacent Street Traffic Source : ITE 11 - 821 - Custom	190	0	1.73	0.29	3.77	1.06	67	62	38	False	T = 0.0(X) + 0.0	0
Weekday PM Peak Hour of Adjacent Street Traffic Source : ITE 11 - 821 - Custom	571	194	5.19	2.55	15.31	2.28	79	49	51	False	T = 0.0(X) + 0.0	0

Appendix C

Synchro Reports



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	0	17	255	0	10	274
Future Volume (vph)	0	17	255	0	10	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						0.998
Satd. Flow (prot)	1863	1583	1863	0	0	1859
Flt Permitted						0.998
Satd. Flow (perm)	1863	1583	1863	0	0	1859
Link Speed (mph)	30		35			35
Link Distance (ft)	725		578			580
Travel Time (s)	16.5		11.3			11.3
Peak Hour Factor	0.85	0.85	0.66	0.66	0.69	0.69
Adj. Flow (vph)	0	20	386	0	14	397
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	20	386	0	0	411
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	25.8%				ICU Level of Service A	
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↓		↓	↑
Traffic Vol, veh/h	0	17	255	0	10	274
Future Vol, veh/h	0	17	255	0	10	274
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	66	66	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	20	386	0	14	397
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	811	386	0	0	386	0
Stage 1	386	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	349	662	-	-	1172	-
Stage 1	687	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	344	662	-	-	1172	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.6	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	662	1172	-
HCM Lane V/C Ratio	-	-	-	0.03	0.012	-
HCM Control Delay (s)	-	-	0	10.6	8.1	0
HCM Lane LOS	-	-	A	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	0	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
02/16/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	8	3	4	7	1	48	3	215	8	49	210	21
Future Volume (vph)	8	3	4	7	1	48	3	215	8	49	210	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.852				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1587	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1708	0	1770	1587	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.79	0.79	0.79	0.70	0.70	0.70	0.76	0.76	0.76	0.71	0.71	0.71
Adj. Flow (vph)	10	4	5	10	1	69	4	283	11	69	296	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	9	0	10	70	0	4	283	11	69	296	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	31.3%					ICU Level of Service A						
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↑	↗
Traffic Vol, veh/h	8	3	4	7	1	48	3	215	8	49	210	21
Future Vol, veh/h	8	3	4	7	1	48	3	215	8	49	210	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	70	70	70	76	76	76	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	5	10	1	69	4	283	11	69	296	30
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	766	736	296	745	755	283	326	0	0	294	0	0
Stage 1	434	434	-	291	291	-	-	-	-	-	-	-
Stage 2	332	302	-	454	464	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	320	346	743	330	338	756	1234	-	-	1268	-	-
Stage 1	600	581	-	717	672	-	-	-	-	-	-	-
Stage 2	681	664	-	586	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	277	326	743	311	319	756	1234	-	-	1268	-	-
Mov Cap-2 Maneuver	277	326	-	311	319	-	-	-	-	-	-	-
Stage 1	598	550	-	715	670	-	-	-	-	-	-	-
Stage 2	616	662	-	547	534	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.7			11.2			0.1			1.4		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1234	-	-	277	480	311	735	1268	-	-		
HCM Lane V/C Ratio	0.003	-	-	0.037	0.018	0.032	0.095	0.054	-	-		
HCM Control Delay (s)	7.9	-	-	18.5	12.6	17	10.4	8	-	-		
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	0.3	0.2	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	5	22	18	5	35	5	162	14	30	167	14
Future Volume (vph)	26	5	22	18	5	35	5	162	14	30	167	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	240		290	260		200
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944			0.918				0.850			0.850
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1684	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.976			0.985		0.950			0.950		
Satd. Flow (perm)	0	1716	0	0	1684	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.67	0.67	0.67	0.72	0.72	0.72	0.69	0.69	0.69
Adj. Flow (vph)	33	6	28	27	7	52	7	225	19	43	242	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	86	0	7	225	19	43	242	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	27.1%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	26	5	22	18	5	35	5	162	14	30	167	14
Future Vol, veh/h	26	5	22	18	5	35	5	162	14	30	167	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	67	67	67	72	72	72	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	6	28	27	7	52	7	225	19	43	242	20
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	606	586	242	594	587	225	262	0	0	244	0	0
Stage 1	328	328	-	239	239	-	-	-	-	-	-	-
Stage 2	278	258	-	355	348	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	409	422	797	417	422	814	1302	-	-	1322	-	-
Stage 1	685	647	-	764	708	-	-	-	-	-	-	-
Stage 2	728	694	-	662	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	366	406	797	386	406	814	1302	-	-	1322	-	-
Mov Cap-2 Maneuver	366	406	-	386	406	-	-	-	-	-	-	-
Stage 1	682	626	-	760	704	-	-	-	-	-	-	-
Stage 2	670	691	-	611	613	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13.8		12.5		0.2		1.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1302	-	-	478	569	1322	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.142	0.152	0.033	-	-				
HCM Control Delay (s)	7.8	-	-	13.8	12.5	7.8	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.5	0.1	-	-				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	49	58	4	3	0
Future Volume (vph)	0	49	58	4	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	90	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991			
Flt Protected				0.950		
Satd. Flow (prot)	0	1863	1846	0	1770	1863
Flt Permitted				0.950		
Satd. Flow (perm)	0	1863	1846	0	1770	1863
Link Speed (mph)	30	30	30			
Link Distance (ft)	716	677	714			
Travel Time (s)	16.3	15.4	16.2			
Peak Hour Factor	0.82	0.82	0.70	0.70	0.38	0.38
Adj. Flow (vph)	0	60	83	6	8	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	60	89	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0	0	0		12	
Link Offset(ft)	0	0	0		0	
Crosswalk Width(ft)	16	16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.3%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	49	58	4	3	0
Future Vol, veh/h	0	49	58	4	3	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	-	-	-	-	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	70	70	38	38
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	60	83	6	8	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	89	0	-	0	146	86
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	60	-
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	-	-	-	846	973
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	963	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	-	846	973
Mov Cap-2 Maneuver	-	-	-	-	846	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	963	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	9.3			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1506	-	-	-	846	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-
HCM Control Delay (s)	0	-	-	-	9.3	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	4	17	327	1	12	359
Future Volume (vph)	4	17	327	1	12	359
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950				0.998	
Satd. Flow (prot)	1770	1583	1863	0	0	1859
Flt Permitted	0.950				0.998	
Satd. Flow (perm)	1770	1583	1863	0	0	1859
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	4	18	367	1	13	403
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	18	368	0	0	416
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↓		↓	↑
Traffic Vol, veh/h	4	17	327	1	12	359
Future Vol, veh/h	4	17	327	1	12	359
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	18	367	1	13	403
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	797	368	0	0	368	0
Stage 1	368	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	356	677	-	-	1191	-
Stage 1	700	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	351	677	-	-	1191	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.4	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	351	677	1191	-
HCM Lane V/C Ratio	-	-	0.012	0.027	0.011	-
HCM Control Delay (s)	-	-	15.4	10.5	8.1	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
02/16/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	10	1	5	14	4	68	4	234	21	76	281	9
Future Volume (vph)	10	1	5	14	4	68	4	234	21	76	281	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			0	1		0	1		1	1	
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.871			0.858				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1622	0	1770	1598	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1622	0	1770	1598	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)	30			30			35			35		
Link Distance (ft)	626			658			806			578		
Travel Time (s)	14.2			15.0			15.7			11.3		
Peak Hour Factor	0.78	0.78	0.78	0.74	0.74	0.74	0.89	0.89	0.89	0.82	0.82	0.82
Adj. Flow (vph)	13	1	6	19	5	92	4	263	24	93	343	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	7	0	19	97	0	4	263	24	93	343	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	35.6%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↑	↗
Traffic Vol, veh/h	10	1	5	14	4	68	4	234	21	76	281	9
Future Vol, veh/h	10	1	5	14	4	68	4	234	21	76	281	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	74	74	74	89	89	89	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	6	19	5	92	4	263	24	93	343	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	861	824	343	809	811	263	354	0	0	287	0	0
Stage 1	529	529	-	271	271	-	-	-	-	-	-	-
Stage 2	332	295	-	538	540	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	276	308	700	299	313	776	1205	-	-	1275	-	-
Stage 1	533	527	-	735	685	-	-	-	-	-	-	-
Stage 2	681	669	-	527	521	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	226	285	700	278	289	776	1205	-	-	1275	-	-
Mov Cap-2 Maneuver	226	285	-	278	289	-	-	-	-	-	-	-
Stage 1	531	489	-	733	683	-	-	-	-	-	-	-
Stage 2	594	667	-	483	483	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18		12.2		0.1		1.7					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1205	-	-	226	563	278	710	1275	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.057	0.014	0.068	0.137	0.073	-	-		
HCM Control Delay (s)	8	-	-	21.9	11.5	18.9	10.9	8	-	-		
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.2	0.5	0.2	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	4	13	12	3	28	28	210	11	26	246	26
Future Volume (vph)	19	4	13	12	3	28	28	210	11	26	246	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	240		290	260		200
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.913				0.850			0.850
Flt Protected		0.974			0.986		0.950			0.950		
Satd. Flow (prot)	0	1725	0	0	1677	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.974			0.986		0.950			0.950		
Satd. Flow (perm)	0	1725	0	0	1677	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.75	0.75	0.75	0.82	0.82	0.82	0.94	0.94	0.94	0.78	0.78	0.78
Adj. Flow (vph)	25	5	17	15	4	34	30	223	12	33	315	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	53	0	30	223	12	33	315	33
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	30.0%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	19	4	13	12	3	28	28	210	11	26	246	26
Future Vol, veh/h	19	4	13	12	3	28	28	210	11	26	246	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	82	82	82	94	94	94	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	5	17	15	4	34	30	223	12	33	315	33
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	689	676	315	692	697	223	348	0	0	235	0	0
Stage 1	381	381	-	283	283	-	-	-	-	-	-	-
Stage 2	308	295	-	409	414	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	360	375	725	358	365	817	1211	-	-	1332	-	-
Stage 1	641	613	-	724	677	-	-	-	-	-	-	-
Stage 2	702	669	-	619	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	329	357	725	333	347	817	1211	-	-	1332	-	-
Mov Cap-2 Maneuver	329	357	-	333	347	-	-	-	-	-	-	-
Stage 1	625	598	-	706	660	-	-	-	-	-	-	-
Stage 2	652	652	-	584	578	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	14.8			12.3			0.9			0.7		
HCM LOS	B			B			A			-		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1211	-	-	414	545	1332	-	-				
HCM Lane V/C Ratio	0.025	-	-	0.116	0.096	0.025	-	-				
HCM Control Delay (s)	8	-	-	14.8	12.3	7.8	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0.1	-	-				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	45	46	10	5	0
Future Volume (vph)	1	45	46	10	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	90	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.975			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1816	0	1770	1863
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1816	0	1770	1863
Link Speed (mph)	30	30		30		
Link Distance (ft)	716	677		714		
Travel Time (s)	16.3	15.4		16.2		
Peak Hour Factor	0.82	0.82	0.74	0.74	0.56	0.56
Adj. Flow (vph)	1	55	62	14	9	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	76	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0	0		12		
Link Offset(ft)	0	0		0		
Crosswalk Width(ft)	16	16		16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.3%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	45	46	10	5	0
Future Vol, veh/h	1	45	46	10	5	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	-	-	-	-	90	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	74	74	56	56
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	55	62	14	9	0

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	76	0	-	0	126	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	57	-
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	1523	-	-	-	869	994
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1523	-	-	-	868	994
Mov Cap-2 Maneuver	-	-	-	-	868	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	SB			
HCM Control Delay, s	0.2	0	9.2			
HCM LOS			A			

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1523	-	-	-	868	-
HCM Lane V/C Ratio	0.001	-	-	-	0.01	-
HCM Control Delay (s)	7.4	0	-	-	9.2	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	17	55	282	5	23	295
Future Volume (vph)	17	55	282	5	23	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	1583	1859	0	0	1855
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	1583	1859	0	0	1855
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.79	0.88	0.78	0.78	0.89
Adj. Flow (vph)	22	70	320	6	29	331
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	70	326	0	0	360
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	44.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↗	↗	↗	↗
Traffic Vol, veh/h	17	55	282	5	23	295
Future Vol, veh/h	17	55	282	5	23	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	79	88	78	78	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	70	320	6	29	331
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	712	323	0	0	326	0
Stage 1	323	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	399	718	-	-	1234	-
Stage 1	734	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	387	718	-	-	1234	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.6	0	0.7			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	387	718	1234	-
HCM Lane V/C Ratio	-	-	0.056	0.097	0.024	-
HCM Control Delay (s)	-	-	14.9	10.6	8	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.1	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
02/16/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	8	3	4	11	1	62	3	233	9	56	240	22
Future Volume (vph)	8	3	4	11	1	62	3	233	9	56	240	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.852				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1587	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1708	0	1770	1587	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.79	0.78	0.88	0.78	0.79	0.88	0.78
Adj. Flow (vph)	10	4	5	14	1	78	4	265	12	71	273	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	9	0	14	79	0	4	265	12	71	273	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	33.2%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↓		↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	8	3	4	11	1	62	3	233	9	56	240	22
Future Vol, veh/h	8	3	4	11	1	62	3	233	9	56	240	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	79	78	88	78	79	88	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	5	14	1	78	4	265	12	71	273	28
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	734	700	273	707	716	265	301	0	0	277	0	0
Stage 1	415	415	-	273	273	-	-	-	-	-	-	-
Stage 2	319	285	-	434	443	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	336	363	766	350	356	774	1260	-	-	1286	-	-
Stage 1	615	592	-	733	684	-	-	-	-	-	-	-
Stage 2	693	676	-	600	576	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	288	342	766	329	335	774	1260	-	-	1286	-	-
Mov Cap-2 Maneuver	288	342	-	329	335	-	-	-	-	-	-	-
Stage 1	613	559	-	731	682	-	-	-	-	-	-	-
Stage 2	620	674	-	559	544	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.3			11.2			0.1			1.5		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1260	-	-	288	500	329	758	1286	-	-		
HCM Lane V/C Ratio	0.003	-	-	0.036	0.018	0.043	0.105	0.055	-	-		
HCM Control Delay (s)	7.9	-	-	18	12.3	16.4	10.3	8	-	-		
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	0.4	0.2	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	5	23	23	5	37	5	178	16	32	198	15
Future Volume (vph)	28	5	23	23	5	37	5	178	16	32	198	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	240		290	260		200
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.923				0.850			0.850
Flt Protected		0.975			0.983		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1690	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.975			0.983		0.950			0.950		
Satd. Flow (perm)	0	1716	0	0	1690	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.86	0.78	0.78	0.87	0.78
Adj. Flow (vph)	36	6	29	29	6	47	6	207	21	41	228	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	82	0	6	207	21	41	228	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.7%

ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	28	5	23	23	5	37	5	178	16	32	198	15
Future Vol, veh/h	28	5	23	23	5	37	5	178	16	32	198	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	86	78	78	87	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	6	29	29	6	47	6	207	21	41	228	19
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	566	550	228	556	548	207	247	0	0	228	0	0
Stage 1	310	310	-	219	219	-	-	-	-	-	-	-
Stage 2	256	240	-	337	329	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	435	443	811	442	444	833	1319	-	-	1340	-	-
Stage 1	700	659	-	783	722	-	-	-	-	-	-	-
Stage 2	749	707	-	677	646	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	395	427	811	410	428	833	1319	-	-	1340	-	-
Mov Cap-2 Maneuver	395	427	-	410	428	-	-	-	-	-	-	-
Stage 1	697	639	-	779	718	-	-	-	-	-	-	-
Stage 2	697	703	-	626	626	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.3			12.3			0.2			1.1		
HCM LOS	B			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1319	-	-	505	579	1340	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.142	0.144	0.031	-	-				
HCM Control Delay (s)	7.7	-	-	13.3	12.3	7.8	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.5	0.1	-	-				

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
02/16/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	52	0	0	62	6	0	0	0	11	0	4
Future Volume (vph)	1	52	0	0	62	6	0	0	0	11	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	90		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.987						0.850	
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	1861	0	0	1839	0	1863	1863	0	1770	1583	0
Flt Permitted		0.999								0.950		
Satd. Flow (perm)	0	1861	0	0	1839	0	1863	1863	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		716			677			727			714	
Travel Time (s)		16.3			15.4			16.5			16.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.79	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	1	67	0	0	78	8	0	0	0	14	0	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	86	0	0	0	0	14	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	13.6%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑		↑	↑	
Traffic Vol, veh/h	1	52	0	0	62	6	0	0	0	11	0	4
Future Vol, veh/h	1	52	0	0	62	6	0	0	0	11	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	79	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	67	0	0	78	8	0	0	0	14	0	5
Major/Minor												
Major1		Major2			Minor1			Minor2				
Conflicting Flow All	86	0	0	67	0	0	154	155	67	151	151	82
Stage 1	-	-	-	-	-	-	69	69	-	82	82	-
Stage 2	-	-	-	-	-	-	85	86	-	69	69	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1510	-	-	1535	-	-	813	737	997	816	741	978
Stage 1	-	-	-	-	-	-	941	837	-	926	827	-
Stage 2	-	-	-	-	-	-	923	824	-	941	837	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1510	-	-	1535	-	-	808	736	997	815	740	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	808	736	-	815	740	-
Stage 1	-	-	-	-	-	-	940	836	-	925	827	-
Stage 2	-	-	-	-	-	-	918	824	-	940	836	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	0.1		0			0			9.3			
HCM LOS						A			A			
Minor Lane/Major Mvmt												
Capacity (veh/h)	-	-	1510	-	-	1535	-	-	815	978		
HCM Lane V/C Ratio	-	-	0.001	-	-	-	-	-	0.017	0.005		
HCM Control Delay (s)	0	0	7.4	0	-	0	-	-	9.5	8.7		
HCM Lane LOS	A	A	A	A	-	A	-	-	A	A		
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.1	0		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	14	41	354	19	52	393
Future Volume (vph)	14	41	354	19	52	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.992			
Flt Protected	0.950				0.993	
Satd. Flow (prot)	1770	1583	1848	0	0	1850
Flt Permitted	0.950				0.993	
Satd. Flow (perm)	1770	1583	1848	0	0	1850
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.78	0.89	0.78	0.78	0.90
Adj. Flow (vph)	18	53	398	24	67	437
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	53	422	0	0	504
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.7%			ICU Level of Service	B	
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	14	41	354	19	52	393
Future Vol, veh/h	14	41	354	19	52	393
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	89	78	78	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	53	398	24	67	437
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	981	410	0	0	422	0
Stage 1	410	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	277	642	-	-	1137	-
Stage 1	670	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	255	642	-	-	1137	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.4	0	1.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	255	642	1137	-
HCM Lane V/C Ratio	-	-	0.07	0.082	0.059	-
HCM Control Delay (s)	-	-	20.2	11.1	8.4	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.2	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
02/16/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	11	1	5	17	4	79	4	266	26	93	308	10
Future Volume (vph)	11	1	5	17	4	79	4	266	26	93	308	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			0	1		0	1		1	1	
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.871			0.857				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1622	0	1770	1596	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1622	0	1770	1596	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)	30			30			35			35		
Link Distance (ft)	626			658			806			578		
Travel Time (s)	14.2			15.0			15.7			11.3		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.81	0.78	0.88	0.78	0.82	0.89	0.78
Adj. Flow (vph)	14	1	6	22	5	98	5	302	33	113	346	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	7	0	22	103	0	5	302	33	113	346	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.2%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘											
Traffic Vol, veh/h	11	1	5	17	4	79	4	266	26	93	308	10
Future Vol, veh/h	11	1	5	17	4	79	4	266	26	93	308	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	81	78	88	78	82	89	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	6	22	5	98	5	302	33	113	346	13
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	952	917	346	894	897	302	359	0	0	335	0	0
Stage 1	572	572	-	312	312	-	-	-	-	-	-	-
Stage 2	380	345	-	582	585	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	239	272	697	262	279	738	1200	-	-	1224	-	-
Stage 1	505	504	-	699	658	-	-	-	-	-	-	-
Stage 2	642	636	-	499	498	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	189	246	697	239	252	738	1200	-	-	1224	-	-
Mov Cap-2 Maneuver	189	246	-	239	252	-	-	-	-	-	-	-
Stage 1	503	458	-	696	655	-	-	-	-	-	-	-
Stage 2	550	633	-	448	452	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	20.7			13.1			0.1			2		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1200	-	-	189	534	239	673	1224	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.075	0.014	0.091	0.153	0.093	-	-		
HCM Control Delay (s)	8	-	-	25.6	11.8	21.6	11.3	8.2	-	-		
HCM Lane LOS	A	-	-	D	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.3	0.5	0.3	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	4	14	15	3	30	30	245	16	28	273	28
Future Volume (vph)	20	4	14	15	3	30	30	245	16	28	273	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	240		290	260		200
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.916				0.850			0.850
Flt Protected		0.974			0.985		0.950			0.950		
Satd. Flow (prot)	0	1724	0	0	1681	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.974			0.985		0.950			0.950		
Satd. Flow (perm)	0	1724	0	0	1681	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.88	0.78	0.78	0.88	0.78
Adj. Flow (vph)	26	5	18	19	4	38	38	278	21	36	310	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	61	0	38	278	21	36	310	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	31.4%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	↑	↑	+	↑	↑
Traffic Vol, veh/h	20	4	14	15	3	30	30	245	16	28	273	28
Future Vol, veh/h	20	4	14	15	3	30	30	245	16	28	273	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	88	78	78	88	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	5	18	19	4	38	38	278	21	36	310	36
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	768	757	310	766	772	278	346	0	0	299	0	0
Stage 1	382	382	-	354	354	-	-	-	-	-	-	-
Stage 2	386	375	-	412	418	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	319	337	730	320	330	761	1213	-	-	1262	-	-
Stage 1	640	613	-	663	630	-	-	-	-	-	-	-
Stage 2	637	617	-	617	591	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	286	317	730	294	311	761	1213	-	-	1262	-	-
Mov Cap-2 Maneuver	286	317	-	294	311	-	-	-	-	-	-	-
Stage 1	620	595	-	642	610	-	-	-	-	-	-	-
Stage 2	582	598	-	580	574	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.1		13.6		0.9		0.7					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1213	-	-	374	480	1262	-	-				
HCM Lane V/C Ratio	0.032	-	-	0.13	0.128	0.028	-	-				
HCM Control Delay (s)	8.1	-	-	16.1	13.6	7.9	-	-				
HCM Lane LOS	A	-	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.4	0.1	-	-				

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
02/16/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	48	0	0	49	20	0	0	0	10	0	2
Future Volume (vph)	5	48	0	0	49	20	0	0	0	10	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	90		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.961						0.850	
Flt Protected		0.996								0.950		
Satd. Flow (prot)	0	1855	0	0	1790	0	1863	1863	0	1770	1583	0
Flt Permitted		0.996								0.950		
Satd. Flow (perm)	0	1855	0	0	1790	0	1863	1863	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		716			677			727			714	
Travel Time (s)		16.3			15.4			16.5			16.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	6	62	0	0	63	26	0	0	0	13	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	89	0	0	0	0	13	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control		Free			Free			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑		↑	↑	
Traffic Vol, veh/h	5	48	0	0	49	20	0	0	0	10	0	2
Future Vol, veh/h	5	48	0	0	49	20	0	0	0	10	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	62	0	0	63	26	0	0	0	13	0	3
Major/Minor												
Major1		Major2			Minor1		Minor2					
Conflicting Flow All	89	0	0	62	0	0	152	163	62	150	150	76
Stage 1	-	-	-	-	-	-	74	74	-	76	76	-
Stage 2	-	-	-	-	-	-	78	89	-	74	74	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1541	-	-	815	729	1003	818	742	985
Stage 1	-	-	-	-	-	-	935	833	-	933	832	-
Stage 2	-	-	-	-	-	-	931	821	-	935	833	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1506	-	-	1541	-	-	810	726	1003	816	739	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	810	726	-	816	739	-
Stage 1	-	-	-	-	-	-	931	830	-	929	832	-
Stage 2	-	-	-	-	-	-	929	821	-	931	830	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	0.7		0			0			9.4			
HCM LOS						A			A			
Minor Lane/Major Mvmt		NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	-	-	1506	-	-	-	1541	-	-	816	985	
HCM Lane V/C Ratio	-	-	0.004	-	-	-	-	-	-	0.016	0.003	
HCM Control Delay (s)	0	0	7.4	0	-	0	0	-	-	9.5	8.7	
HCM Lane LOS	A	A	A	A	-	A	-	-	-	A	A	
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	-	0	0	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	17	55	282	5	23	295
Future Volume (vph)	17	55	325	5	23	366
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.998			
Flt Protected	0.950				0.997	
Satd. Flow (prot)	1770	1583	1859	0	0	1857
Flt Permitted	0.950				0.997	
Satd. Flow (perm)	1770	1583	1859	0	0	1857
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.79	0.89	0.78	0.78	0.90
Adj. Flow (vph)	22	70	365	6	29	407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	70	371	0	0	436
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	44.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↓		↓	↑
Traffic Vol, veh/h	17	55	282	5	23	295
Future Vol, veh/h	17	55	325	5	23	366
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	79	89	78	78	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	70	365	6	29	407
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	833	368	0	0	371	0
Stage 1	368	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	339	677	-	-	1188	-
Stage 1	700	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	328	677	-	-	1188	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.3	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	328	677	1188	-
HCM Lane V/C Ratio	-	-	0.066	0.103	0.025	-
HCM Control Delay (s)	-	-	16.8	10.9	8.1	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.1	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
04/18/2023



Lane Group	EBL	EBT	EBC	WBL	WBT	WBC	NBL	NBT	NBC	SBL	SBT	SBC
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	8	3	4	11	1	62	3	233	9	56	240	22
Future Volume (vph)	8	3	4	22	1	105	3	233	27	127	240	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.851				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1585	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1708	0	1770	1585	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)	30			30			35			35		
Link Distance (ft)	626			658			806			578		
Travel Time (s)	14.2			15.0			15.7			11.3		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.83	0.78	0.89	0.78	0.84	0.89	0.78
Adj. Flow (vph)	10	4	5	28	1	127	4	262	35	151	270	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	9	0	28	128	0	4	262	35	151	270	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free		Free		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	33.2%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	8	3	4	11	1	62	3	233	9	56	240	22
Future Vol, veh/h	8	3	4	22	1	105	3	233	27	127	240	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	83	78	89	78	84	89	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	5	28	1	127	4	262	35	151	270	28
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	924	877	270	861	870	262	298	0	0	297	0	0
Stage 1	572	572	-	270	270	-	-	-	-	-	-	-
Stage 2	352	305	-	591	600	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	287	769	276	290	777	1263	-	-	1264	-	-
Stage 1	505	504	-	736	686	-	-	-	-	-	-	-
Stage 2	665	662	-	493	490	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	189	252	769	246	255	777	1263	-	-	1264	-	-
Mov Cap-2 Maneuver	189	252	-	246	255	-	-	-	-	-	-	-
Stage 1	503	444	-	734	684	-	-	-	-	-	-	-
Stage 2	554	660	-	427	432	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	19.9			12.7			0.1			2.8		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1263	-	-	189	409	246	761	1264	-	-		
HCM Lane V/C Ratio	0.003	-	-	0.054	0.022	0.115	0.168	0.12	-	-		
HCM Control Delay (s)	7.9	-	-	25.1	14	21.5	10.7	8.2	-	-		
HCM Lane LOS	A	-	-	D	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.4	0.6	0.4	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	5	23	23	5	37	5	178	16	32	198	15
Future Volume (vph)	28	5	23	34	5	37	5	196	34	32	209	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	240		290	260		200
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.935				0.850			0.850
Flt Protected		0.975			0.978		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1703	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.975			0.978		0.950			0.950		
Satd. Flow (perm)	0	1716	0	0	1703	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.87	0.78	0.78	0.87	0.78
Adj. Flow (vph)	36	6	29	44	6	47	6	225	44	41	240	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	97	0	6	225	44	41	240	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.7%

ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	28	5	23	23	5	37	5	178	16	32	198	15
Future Vol, veh/h	28	5	23	34	5	37	5	196	34	32	209	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	87	78	78	87	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	6	29	44	6	47	6	225	44	41	240	19
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	608	603	240	586	578	225	259	0	0	269	0	0
Stage 1	322	322	-	237	237	-	-	-	-	-	-	-
Stage 2	286	281	-	349	341	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	408	413	799	422	427	814	1306	-	-	1295	-	-
Stage 1	690	651	-	766	709	-	-	-	-	-	-	-
Stage 2	721	678	-	667	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	369	398	799	390	411	814	1306	-	-	1295	-	-
Mov Cap-2 Maneuver	369	398	-	390	411	-	-	-	-	-	-	-
Stage 1	687	630	-	762	705	-	-	-	-	-	-	-
Stage 2	670	675	-	616	619	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.9			13.4			0.2			1.1		
HCM LOS	B			B			A			-		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1306	-	-	478	525	1295	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.15	0.186	0.032	-	-				
HCM Control Delay (s)	7.8	-	-	13.9	13.4	7.9	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.7	0.1	-	-				

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
04/18/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	52	0	0	62	6	0	0	0	11	0	4
Future Volume (vph)	19	52	0	0	62	18	0	0	0	18	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	90		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.969						0.850	
Flt Protected		0.987								0.950		
Satd. Flow (prot)	0	1839	0	0	1805	0	1863	1863	0	1770	1583	0
Flt Permitted		0.987								0.950		
Satd. Flow (perm)	0	1839	0	0	1805	0	1863	1863	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		716			677			727			714	
Travel Time (s)		16.3			15.4			16.5			16.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.79	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	24	67	0	0	78	23	0	0	0	23	0	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	101	0	0	0	0	23	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	13.6%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑	↑		↑	↑	
Traffic Vol, veh/h	1	52	0	0	62	6	0	0	0	11	0	4
Future Vol, veh/h	19	52	0	0	62	18	0	0	0	18	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	79	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	67	0	0	78	23	0	0	0	23	0	19
Major/Minor												
Major1		Major2			Minor1			Minor2				
Conflicting Flow All	101	0	0	67	0	0	214	216	67	205	205	90
Stage 1	-	-	-	-	-	-	115	115	-	90	90	-
Stage 2	-	-	-	-	-	-	99	101	-	115	115	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1491	-	-	1535	-	-	743	682	997	753	691	968
Stage 1	-	-	-	-	-	-	890	800	-	917	820	-
Stage 2	-	-	-	-	-	-	907	811	-	890	800	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1491	-	-	1535	-	-	718	670	997	743	679	968
Mov Cap-2 Maneuver	-	-	-	-	-	-	718	670	-	743	679	-
Stage 1	-	-	-	-	-	-	875	786	-	901	820	-
Stage 2	-	-	-	-	-	-	889	811	-	875	786	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	2			0			0		0	9.5		
HCM LOS							A		A			
Minor Lane/Major Mvmt												
Capacity (veh/h)	-	-	1491	-	-	1535	-	-	743	968		
HCM Lane V/C Ratio	-	-	0.016	-	-	-	-	-	0.031	0.02		
HCM Control Delay (s)	0	0	7.5	0	-	0	-	-	10	8.8		
HCM Lane LOS	A	A	A	A	-	A	-	-	B	A		
HCM 95th %tile Q(veh)	-	-	0.1	-	-	0	-	-	0.1	0.1		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↑ ↗	↑ ↗	↑ ↗	↑ ↗
Traffic Volume (vph)	14	41	354	19	52	393
Future Volume (vph)	14	41	529	19	52	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.995			
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1770	1583	1853	0	0	1853
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1770	1583	1853	0	0	1853
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.78	0.92	0.78	0.78	0.92
Adj. Flow (vph)	18	53	575	24	67	610
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	53	599	0	0	677
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.7%			ICU Level of Service	B	
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	14	41	354	19	52	393
Future Vol, veh/h	14	41	529	19	52	561
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	92	78	78	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	53	575	24	67	610
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1331	587	0	0	599	0
Stage 1	587	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	170	510	-	-	978	-
Stage 1	556	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	152	510	-	-	978	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.7	0	0.9			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	152	510	978	-
HCM Lane V/C Ratio	-	-	0.118	0.103	0.068	-
HCM Control Delay (s)	-	-	31.8	12.9	8.9	0
HCM Lane LOS	-	-	D	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3	0.2	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
04/18/2023



Lane Group	EBL	EBT	EBC	WBL	WBT	WBC	NBL	NBT	NBC	SBL	SBT	SBC
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	11	1	5	17	4	79	4	266	26	93	308	10
Future Volume (vph)	11	1	5	61	4	254	4	266	68	261	308	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.871			0.853				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1622	0	1770	1589	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1622	0	1770	1589	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.88	0.78	0.88	0.80	0.88	0.89	0.78
Adj. Flow (vph)	14	1	6	78	5	289	5	302	85	297	346	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	7	0	78	294	0	5	302	85	297	346	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.2%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘ ↗ ↘											
Traffic Vol, veh/h	11	1	5	17	4	79	4	266	26	93	308	10
Future Vol, veh/h	11	1	5	61	4	254	4	266	68	261	308	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	80	-	-	180	-	230	140	-	130
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	88	78	88	80	88	89	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	6	78	5	289	5	302	85	297	346	13
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1442	1337	346	1262	1265	302	359	0	0	387	0	0
Stage 1	940	940	-	312	312	-	-	-	-	-	-	-
Stage 2	502	397	-	950	953	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	110	153	697	147	169	738	1200	-	-	1171	-	-
Stage 1	316	342	-	699	658	-	-	-	-	-	-	-
Stage 2	552	603	-	312	338	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	52	114	697	116	126	738	1200	-	-	1171	-	-
Mov Cap-2 Maneuver	52	114	-	116	126	-	-	-	-	-	-	-
Stage 1	315	255	-	696	655	-	-	-	-	-	-	-
Stage 2	332	601	-	230	252	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	68.8			29			0.1			4.1		
HCM LOS	F			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1200	-	-	52	376	116	680	1171	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.271	0.02	0.674	0.432	0.253	-	-		
HCM Control Delay (s)	8	-	-	98.2	14.8	84.3	14.3	9.1	-	-		
HCM Lane LOS	A	-	-	F	B	F	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	3.5	2.2	1	-	-		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	4	14	15	3	30	30	245	16	28	273	28
Future Volume (vph)	20	4	14	59	3	30	30	287	58	28	317	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0		0	240		290	260		200
Storage Lanes	0			0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.956				0.850			0.850
Flt Protected		0.974			0.969		0.950			0.950		
Satd. Flow (prot)	0	1724	0	0	1726	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.974			0.969		0.950			0.950		
Satd. Flow (perm)	0	1724	0	0	1726	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30		35			35		
Link Distance (ft)		516			716		680			806		
Travel Time (s)		11.7			16.3		13.2			15.7		
Peak Hour Factor	0.78	0.78	0.78	0.79	0.78	0.78	0.78	0.88	0.79	0.78	0.89	0.78
Adj. Flow (vph)	26	5	18	75	4	38	38	326	73	36	356	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	117	0	38	326	73	36	356	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	31.4%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection

Int Delay, s/veh 4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	4	14	15	3	30	30	245	16	28	273	28
Future Vol, veh/h	20	4	14	59	3	30	30	287	58	28	317	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	79	78	78	78	88	79	78	89	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	5	18	75	4	38	38	326	73	36	356	36

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	888	903	356	860	866	326	392	0	0	399	0	0
Stage 1	428	428	-	402	402	-	-	-	-	-	-	-
Stage 2	460	475	-	458	464	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	264	277	688	276	291	715	1167	-	-	1160	-	-
Stage 1	605	585	-	625	600	-	-	-	-	-	-	-
Stage 2	581	557	-	583	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	235	260	688	252	273	715	1167	-	-	1160	-	-
Mov Cap-2 Maneuver	235	260	-	252	273	-	-	-	-	-	-	-
Stage 1	585	567	-	604	580	-	-	-	-	-	-	-
Stage 2	528	539	-	545	547	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	18.6	22.5			0.7			0.7				
HCM LOS	C	C										
<hr/>												
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1167	-	-	314	321	1160	-	-				
HCM Lane V/C Ratio	0.033	-	-	0.155	0.364	0.031	-	-				
HCM Control Delay (s)	8.2	-	-	18.6	22.5	8.2	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.5	1.6	0.1	-	-				

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
04/18/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	48	0	0	49	20	0	0	0	10	0	2
Future Volume (vph)	47	48	0	0	49	48	0	0	0	39	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	90		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.933						0.850	
Flt Protected		0.976								0.950		
Satd. Flow (prot)	0	1818	0	0	1738	0	1863	1863	0	1770	1583	0
Flt Permitted		0.976								0.950		
Satd. Flow (perm)	0	1818	0	0	1738	0	1863	1863	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		716			677			727			714	
Travel Time (s)		16.3			15.4			16.5			16.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	60	62	0	0	63	62	0	0	0	50	0	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	125	0	0	0	0	50	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control		Free			Free			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗			↖ ↗			↖ ↗	↖ ↗		↖ ↗	↖ ↗	
Traffic Vol, veh/h	5	48	0	0	49	20	0	0	0	10	0	2
Future Vol, veh/h	47	48	0	0	49	48	0	0	0	39	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	62	0	0	63	62	0	0	0	50	0	59
Major/Minor												
Major1		Major2			Minor1			Minor2				
Conflicting Flow All	125	0	0	62	0	0	306	307	62	276	276	94
Stage 1	-	-	-	-	-	-	182	182	-	94	94	-
Stage 2	-	-	-	-	-	-	124	125	-	182	182	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1462	-	-	1541	-	-	646	607	1003	676	632	963
Stage 1	-	-	-	-	-	-	820	749	-	913	817	-
Stage 2	-	-	-	-	-	-	880	792	-	820	749	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1462	-	-	1541	-	-	587	582	1003	654	605	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	587	582	-	654	605	-
Stage 1	-	-	-	-	-	-	786	718	-	875	817	-
Stage 2	-	-	-	-	-	-	826	792	-	786	718	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	3.7		0			0			9.9			
HCM LOS							A			A		
Minor Lane/Major Mvmt												
Capacity (veh/h)	-	-	1462	-	-	1541	-	-	654	963		
HCM Lane V/C Ratio	-	-	0.041	-	-	-	-	-	0.076	0.061		
HCM Control Delay (s)	0	0	7.6	0	-	0	-	-	11	9		
HCM Lane LOS	A	A	A	A	-	A	-	-	B	A		
HCM 95th %tile Q(veh)	-	-	0.1	-	-	0	-	-	0.2	0.2		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	17	71	519	5	32	550
Future Volume (vph)	17	71	519	5	32	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.999			
Flt Protected	0.950				0.997	
Satd. Flow (prot)	1770	1583	1861	0	0	1857
Flt Permitted	0.950				0.997	
Satd. Flow (perm)	1770	1583	1861	0	0	1857
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.80	0.92	0.78	0.78	0.92
Adj. Flow (vph)	22	89	564	6	41	598
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	89	570	0	0	639
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	65.1%			ICU Level of Service C		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↓		↓	↑
Traffic Vol, veh/h	17	71	519	5	32	550
Future Vol, veh/h	17	71	519	5	32	550
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	80	92	78	78	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	89	564	6	41	598
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1247	567	0	0	570	0
Stage 1	567	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	192	523	-	-	1002	-
Stage 1	568	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	180	523	-	-	1002	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.1	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	180	523	1002	-
HCM Lane V/C Ratio	-	-	0.121	0.17	0.041	-
HCM Control Delay (s)	-	-	27.7	13.3	8.7	0
HCM Lane LOS	-	-	D	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.6	0.1	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	6	8	18	2	107	6	434	17	102	436	42
Future Volume (vph)	16	6	8	18	2	107	6	434	17	102	436	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	80		0	180		230	140		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.853				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1589	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.605			0.746			0.482			0.312		
Satd. Flow (perm)	1127	1708	0	1390	1589	0	898	1863	1583	581	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			129				164			164
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.83	0.78	0.91	0.78	0.83	0.91	0.78
Adj. Flow (vph)	21	8	10	23	3	129	8	477	22	123	479	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	18	0	23	132	0	8	477	22	123	479	54
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5		10.5	23.5		10.5	23.5	23.5	10.5	43.5	43.5
Total Split (s)	10.5	23.5		10.5	23.5		10.5	40.0	40.0	16.0	45.5	45.5
Total Split (%)	11.7%	26.1%		11.7%	26.1%		11.7%	44.4%	44.4%	17.8%	50.6%	50.6%
Maximum Green (s)	5.0	18.0		5.0	18.0		5.0	34.5	34.5	10.5	40.0	40.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	9.4	8.9		8.5	7.2		29.2	27.1	27.1	35.3	35.8	35.8
Actuated g/C Ratio	0.17	0.16		0.16	0.13		0.54	0.50	0.50	0.65	0.66	0.66
v/c Ratio	0.08	0.06		0.09	0.41		0.01	0.51	0.03	0.22	0.39	0.05
Control Delay	21.7	19.3		21.9	11.5		6.5	17.4	0.1	6.7	9.6	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	19.3		21.9	11.5		6.5	17.4	0.1	6.7	9.6	0.1
LOS	C	B		C	B		A	B	A	A	A	A
Approach Delay		20.6			13.1			16.4			8.3	
Approach LOS		C			B			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 54.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 49.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Parish Ave & Settler Way



Queues
2: Parish Ave & Settler Way

JR Engineering

05/01/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	18	23	132	8	477	22	123	479	54
v/c Ratio	0.08	0.06	0.09	0.41	0.01	0.51	0.03	0.22	0.39	0.05
Control Delay	21.7	19.3	21.9	11.5	6.5	17.4	0.1	6.7	9.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	19.3	21.9	11.5	6.5	17.4	0.1	6.7	9.6	0.1
Queue Length 50th (ft)	5	2	6	1	1	102	0	10	48	0
Queue Length 95th (ft)	22	19	23	34	6	285	0	42	252	0
Internal Link Dist (ft)		546		578		726			498	
Turn Bay Length (ft)	200		80		180		230	140		130
Base Capacity (vph)	261	642	257	672	573	1298	1153	637	1446	1265
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.09	0.20	0.01	0.37	0.02	0.19	0.33	0.04

Intersection Summary

HCM 6th Signalized Intersection Summary
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	16	6	8	18	2	107	6	434	17	102	436	42
Future Volume (veh/h)	16	6	8	18	2	107	6	434	17	102	436	42
Initial Q (Q _b), 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	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	8	10	23	3	129	8	477	22	123	479	54
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.83	0.78	0.91	0.78	0.83	0.91	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	88	110	343	4	184	334	616	522	382	751	636
Arrive On Green	0.03	0.12	0.12	0.03	0.12	0.12	0.01	0.33	0.33	0.08	0.40	0.40
Sat Flow, veh/h	1781	756	945	1781	36	1554	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	21	0	18	23	0	132	8	477	22	123	479	54
Grp Sat Flow(s), veh/h/ln	1781	0	1700	1781	0	1591	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	0.5	0.6	0.0	4.0	0.1	11.4	0.5	2.2	10.2	1.0
Cycle Q Clear(g_c), s	0.5	0.0	0.5	0.6	0.0	4.0	0.1	11.4	0.5	2.2	10.2	1.0
Prop In Lane	1.00			0.56	1.00		0.98	1.00		1.00	1.00	1.00
Lane Grp Cap(c), veh/h	239	0	198	343	0	188	334	616	522	382	751	636
V/C Ratio(X)	0.09	0.00	0.09	0.07	0.00	0.70	0.02	0.77	0.04	0.32	0.64	0.08
Avail Cap(c_a), veh/h	374	0	618	474	0	578	495	1303	1104	613	1511	1280
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
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	19.5	18.4	0.0	21.0	11.3	14.9	11.3	10.7	11.9	9.2
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.1	0.0	4.7	0.0	2.1	0.0	0.5	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.2	0.0	0.2	0.2	0.0	1.6	0.1	4.3	0.1	0.7	3.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.8	0.0	19.7	18.5	0.0	25.7	11.3	17.1	11.3	11.2	12.8	9.2
LnGrp LOS	B	A	B	B	A	C	B	B	B	B	B	A
Approach Vol, veh/h						155			507			656
Approach Delay, s/veh						24.6			16.7			12.2
Approach LOS						C			B			B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.6	21.8	6.9	11.3	6.0	25.4	6.8	11.4				
Change Period (Y+R _c), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	10.5	34.5	5.0	18.0	5.0	40.0	5.0	18.0				
Max Q Clear Time (g_c+l1), s	4.2	13.4	2.6	2.5	2.1	12.2	2.5	6.0				
Green Ext Time (p_c), s	0.1	3.0	0.0	0.0	0.0	3.3	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay				15.5								
HCM 6th LOS				B								



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	10	44	40	10	70	10	329	29	60	354	28
Future Volume (vph)	52	10	44	40	10	70	10	329	29	60	354	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	240		290	260		200
Storage Lanes	0		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850			0.850
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1716	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted		0.976		0.950			0.950			0.950		
Satd. Flow (perm)	0	1716	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.80	0.78	0.89	0.78	0.79	0.90	0.78
Adj. Flow (vph)	67	13	56	51	13	88	13	370	37	76	393	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	136	0	51	13	88	13	370	37	76	393	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	44.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	52	10	44	40	10	70	10	329	29	60	354	28
Future Vol, veh/h	52	10	44	40	10	70	10	329	29	60	354	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	150	-	150	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	80	78	89	78	79	90	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	13	56	51	13	88	13	370	37	76	393	36
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1010	978	393	994	977	370	429	0	0	407	0	0
Stage 1	545	545	-	396	396	-	-	-	-	-	-	-
Stage 2	465	433	-	598	581	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	218	250	656	224	251	676	1130	-	-	1152	-	-
Stage 1	523	519	-	629	604	-	-	-	-	-	-	-
Stage 2	578	582	-	489	500	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	171	231	656	185	232	676	1130	-	-	1152	-	-
Mov Cap-2 Maneuver	171	231	-	185	232	-	-	-	-	-	-	-
Stage 1	517	485	-	621	597	-	-	-	-	-	-	-
Stage 2	487	575	-	406	467	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	33.9		19		0.3		1.3					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR		
Capacity (veh/h)	1130	-	-	256	185	232	676	1152	-	-		
HCM Lane V/C Ratio	0.011	-	-	0.531	0.277	0.055	0.129	0.066	-	-		
HCM Control Delay (s)	8.2	-	-	33.9	31.8	21.4	11.1	8.3	-	-		
HCM Lane LOS	A	-	-	D	D	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	2.9	1.1	0.2	0.4	0.2	-	-		

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
05/01/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↓		↑	↓	
Traffic Volume (vph)	1	98	0	0	116	10	0	0	0	14	0	4
Future Volume (vph)	1	98	0	0	116	10	0	0	0	14	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0		0	90		0	90	0
Storage Lanes	1			0	0		0	1		0	1	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.988						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	0	0	1840	0	1863	1863	0	1770	1583	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	0	0	1840	0	1863	1863	0	1770	1583	0
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	716			677			727			714		
Travel Time (s)	16.3			15.4			16.5			16.2		
Peak Hour Factor	0.78	0.83	0.78	0.78	0.84	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	1	118	0	0	138	13	0	0	0	18	0	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	118	0	0	151	0	0	0	0	18	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗											
Traffic Vol, veh/h	1	98	0	0	116	10	0	0	0	14	0	4
Future Vol, veh/h	1	98	0	0	116	10	0	0	0	14	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	83	78	78	84	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	118	0	0	138	13	0	0	0	18	0	5

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	151	0	0	118	0	0	267	271	118	265	265	145
Stage 1	-	-	-	-	-	-	120	120	-	145	145	-
Stage 2	-	-	-	-	-	-	147	151	-	120	120	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1470	-	-	686	636	934	688	640	902
Stage 1	-	-	-	-	-	-	884	796	-	858	777	-
Stage 2	-	-	-	-	-	-	856	772	-	884	796	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1430	-	-	1470	-	-	682	635	934	687	639	902
Mov Cap-2 Maneuver	-	-	-	-	-	-	682	635	-	687	639	-
Stage 1	-	-	-	-	-	-	883	795	-	857	777	-
Stage 2	-	-	-	-	-	-	851	772	-	883	795	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	0.1	0			0			10.1				
HCM LOS					A			B				
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	-	-	1430	-	-	1470	-	-	687	902		
HCM Lane V/C Ratio	-	-	0.001	-	-	-	-	-	0.026	0.006		
HCM Control Delay (s)	0	0	7.5	-	-	0	-	-	10.4	9		
HCM Lane LOS	A	A	A	-	-	A	-	-	B	A		
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.1	0		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	18	57	659	20	63	728
Future Volume (vph)	18	57	659	20	63	728
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.995			
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1770	1583	1853	0	0	1853
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1770	1583	1853	0	0	1853
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.79	0.92	0.78	0.79	0.92
Adj. Flow (vph)	23	72	716	26	80	791
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	72	742	0	0	871
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	91.0%			ICU Level of Service F		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	18	57	659	20	63	728
Future Vol, veh/h	18	57	659	20	63	728
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	79	92	78	79	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	72	716	26	80	791
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1680	729	0	0	742	0
Stage 1	729	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	104	423	-	-	865	-
Stage 1	477	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	87	423	-	-	865	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	26.3	0	0.9			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	87	423	865	-
HCM Lane V/C Ratio	-	-	0.265	0.171	0.092	-
HCM Control Delay (s)	-	-	60.7	15.3	9.6	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	1	0.6	0.3	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	20	2	10	30	8	143	8	485	46	164	570	18
Future Volume (vph)	20	2	10	30	8	143	8	485	46	164	570	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.878			0.858				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1635	0	1770	1598	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.656			0.549			0.377			0.235		
Satd. Flow (perm)	1222	1635	0	1023	1598	0	702	1863	1583	438	1863	1583
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)		13			168				230			164
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.85	0.78	0.92	0.78	0.86	0.92	0.78
Adj. Flow (vph)	26	3	13	38	10	168	10	527	59	191	620	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	16	0	38	178	0	10	527	59	191	620	23
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5		10.5	23.5		10.5	23.5	23.5	10.5	23.5	23.5
Total Split (s)	10.5	23.5		10.5	23.5		10.5	35.0	35.0	21.0	45.5	45.5
Total Split (%)	11.7%	26.1%		11.7%	26.1%		11.7%	38.9%	38.9%	23.3%	50.6%	50.6%
Maximum Green (s)	5.0	18.0		5.0	18.0		5.0	29.5	29.5	15.5	40.0	40.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	7.6	7.1		9.8	7.4		28.5	23.1	23.1	37.8	36.3	36.3
Actuated g/C Ratio	0.13	0.12		0.16	0.12		0.47	0.38	0.38	0.63	0.60	0.60
v/c Ratio	0.13	0.08		0.15	0.52		0.02	0.74	0.08	0.41	0.55	0.02
Control Delay	27.4	19.3		23.6	12.9		7.1	25.0	0.2	8.4	11.9	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	19.3		23.6	12.9		7.1	25.0	0.2	8.4	11.9	0.1
LOS	C	B		C	B		A	C	A	A	B	A
Approach Delay		24.3			14.8			22.2			10.8	
Approach LOS		C			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 60.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Parish Ave & Settler Way





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	16	38	178	10	527	59	191	620	23
v/c Ratio	0.13	0.08	0.15	0.52	0.02	0.74	0.08	0.41	0.55	0.02
Control Delay	27.4	19.3	23.6	12.9	7.1	25.0	0.2	8.4	11.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	19.3	23.6	12.9	7.1	25.0	0.2	8.4	11.9	0.1
Queue Length 50th (ft)	7	1	11	3	1	122	0	16	71	0
Queue Length 95th (ft)	25	15	33	40	7	#370	0	67	372	0
Internal Link Dist (ft)		546		578		726			498	
Turn Bay Length (ft)	200		80		180		230	140		130
Base Capacity (vph)	202	532	260	626	427	985	945	642	1351	1193
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.15	0.28	0.02	0.54	0.06	0.30	0.46	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	20	2	10	30	8	143	8	485	46	164	570	18
Future Volume (veh/h)	20	2	10	30	8	143	8	485	46	164	570	18
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	3	13	38	10	168	10	527	59	191	620	23
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.85	0.78	0.92	0.78	0.86	0.92	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	43	184	377	13	225	261	639	541	371	801	679
Arrive On Green	0.03	0.14	0.14	0.04	0.15	0.15	0.01	0.34	0.34	0.10	0.43	0.43
Sat Flow, veh/h	1781	306	1326	1781	90	1509	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	26	0	16	38	0	178	10	527	59	191	620	23
Grp Sat Flow(s), veh/h/ln	1781	0	1632	1781	0	1599	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.0	0.5	1.0	0.0	6.2	0.2	14.9	1.5	3.7	16.4	0.5
Cycle Q Clear(g_c), s	0.7	0.0	0.5	1.0	0.0	6.2	0.2	14.9	1.5	3.7	16.4	0.5
Prop In Lane	1.00			1.00			0.94	1.00		1.00	1.00	1.00
Lane Grp Cap(c), veh/h	228	0	227	377	0	238	261	639	541	371	801	679
V/C Ratio(X)	0.11	0.00	0.07	0.10	0.00	0.75	0.04	0.82	0.11	0.51	0.77	0.03
Avail Cap(c_a), veh/h	330	0	508	461	0	497	392	953	808	671	1293	1096
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
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	21.7	20.0	0.0	23.6	13.3	17.5	13.0	12.2	14.1	9.6
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	0.0	4.6	0.1	3.8	0.1	1.1	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.3	0.0	0.2	0.4	0.0	2.5	0.1	6.2	0.5	1.3	6.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.8	0.0	21.8	20.1	0.0	28.2	13.3	21.2	13.1	13.3	15.8	9.6
LnGrp LOS	C	A	C	C	A	C	B	C	B	B	B	A
Approach Vol, veh/h		42			216			596			834	
Approach Delay, s/veh		21.2			26.8			20.3			15.0	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	11.3	25.3	7.8	13.5	6.2	30.3	7.2	14.1				
Change Period (Y+R _c), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	15.5	29.5	5.0	18.0	5.0	40.0	5.0	18.0				
Max Q Clear Time (g_c+l1), s	5.7	16.9	3.0	2.5	2.2	18.4	2.7	8.2				
Green Ext Time (p_c), s	0.3	2.8	0.0	0.0	0.0	4.2	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	8	26	26	6	56	56	441	26	52	502	52
Future Volume (vph)	38	8	26	26	6	56	56	441	26	52	502	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	240		290	260		200
Storage Lanes	0		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952				0.850			0.850			0.850
Flt Protected		0.974		0.950			0.950			0.950		
Satd. Flow (prot)	0	1727	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted		0.974		0.950			0.950			0.950		
Satd. Flow (perm)	0	1727	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.79	0.79	0.91	0.78	0.78	0.92	0.78
Adj. Flow (vph)	49	10	33	33	8	71	71	485	33	67	546	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	33	8	71	71	485	33	67	546	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	50.5%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Int Delay, s/veh 7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	38	8	26	26	6	56	56	441	26	52	502	52
Future Vol, veh/h	38	8	26	26	6	56	56	441	26	52	502	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	150	-	150	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	79	79	91	78	78	92	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	10	33	33	8	71	71	485	33	67	546	67

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1363	1340	546	1362	1374	485	613	0	0	518	0	0
Stage 1	680	680	-	627	627	-	-	-	-	-	-	-
Stage 2	683	660	-	735	747	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	125	153	538	125	145	582	966	-	-	1048	-	-
Stage 1	441	451	-	471	476	-	-	-	-	-	-	-
Stage 2	439	460	-	411	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	94	133	538	99	126	582	966	-	-	1048	-	-
Mov Cap-2 Maneuver	94	133	-	99	126	-	-	-	-	-	-	-
Stage 1	409	422	-	437	441	-	-	-	-	-	-	-
Stage 2	351	426	-	352	393	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	70.3	27.5			1.1			0.9			
HCM LOS	F	D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR	
Capacity (veh/h)	966	-	-	140	99	126	582	1048	-	-	
HCM Lane V/C Ratio	0.073	-	-	0.659	0.337	0.061	0.122	0.064	-	-	
HCM Control Delay (s)	9	-	-	70.3	58.8	35.4	12	8.7	-	-	
HCM Lane LOS	A	-	-	F	F	E	B	A	-	-	
HCM 95th %tile Q(veh)	0.2	-	-	3.6	1.3	0.2	0.4	0.2	-	-	

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
05/01/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↓		↑	↓	
Traffic Volume (vph)	6	90	0	0	92	29	0	0	0	15	0	2
Future Volume (vph)	6	90	0	0	92	29	0	0	0	15	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	90		0	90		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	0	0	1799	0	1863	1863	0	1770	1583	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	0	0	1799	0	1863	1863	0	1770	1583	0
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	716				677			727			714	
Travel Time (s)	16.3				15.4			16.5			16.2	
Peak Hour Factor	0.78	0.82	0.78	0.78	0.82	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	8	110	0	0	112	37	0	0	0	19	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	110	0	0	149	0	0	0	0	19	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			12	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.6%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	6	90	0	0	92	29	0	0	0	15	0	2
Future Vol, veh/h	6	90	0	0	92	29	0	0	0	15	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	82	78	78	82	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	110	0	0	112	37	0	0	0	19	0	3
Major/Minor												
Major1		Major2			Minor1			Minor2				
Conflicting Flow All	149	0	0	110	0	0	258	275	110	257	257	131
Stage 1	-	-	-	-	-	-	126	126	-	131	131	-
Stage 2	-	-	-	-	-	-	132	149	-	126	126	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1432	-	-	1480	-	-	695	632	943	696	647	919
Stage 1	-	-	-	-	-	-	878	792	-	873	788	-
Stage 2	-	-	-	-	-	-	871	774	-	878	792	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1432	-	-	1480	-	-	690	628	943	693	643	919
Mov Cap-2 Maneuver	-	-	-	-	-	-	690	628	-	693	643	-
Stage 1	-	-	-	-	-	-	873	787	-	868	788	-
Stage 2	-	-	-	-	-	-	869	774	-	873	787	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	0.5		0			0			10.1			
HCM LOS	A						B					
Minor Lane/Major Mvmt		NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	-	-	1432	-	-	-	1480	-	-	693	919	
HCM Lane V/C Ratio	-	-	0.005	-	-	-	-	-	-	0.028	0.003	
HCM Control Delay (s)	0	0	7.5	-	-	-	0	-	-	10.3	8.9	
HCM Lane LOS	A	A	A	-	-	-	A	-	-	B	A	
HCM 95th %tile Q(veh)	-	-	0	-	-	-	0	-	-	0.1	0	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	17	71	519	5	32	550
Future Volume (vph)	17	71	562	5	32	621
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.999			
Flt Protected	0.950				0.997	
Satd. Flow (prot)	1770	1583	1861	0	0	1857
Flt Permitted	0.950				0.997	
Satd. Flow (perm)	1770	1583	1861	0	0	1857
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.81	0.92	0.78	0.78	0.92
Adj. Flow (vph)	22	88	611	6	41	675
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	88	617	0	0	716
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	65.1%			ICU Level of Service C		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↓		↓	↑
Traffic Vol, veh/h	17	71	519	5	32	550
Future Vol, veh/h	17	71	562	5	32	621
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	81	92	78	78	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	88	611	6	41	675
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1371	614	0	0	617	0
Stage 1	614	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	161	492	-	-	963	-
Stage 1	540	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	150	492	-	-	963	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.7	0		0.5		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	150	492	963	-
HCM Lane V/C Ratio	-	-	0.145	0.178	0.043	-
HCM Control Delay (s)	-	-	33	13.9	8.9	0
HCM Lane LOS	-	-	D	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.6	0.1	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering

05/01/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	6	8	18	2	107	6	434	17	102	436	42
Future Volume (vph)	16	6	8	29	2	150	6	434	35	173	436	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	80		0	180		230	140		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.853				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1589	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.667			0.552			0.490			0.263		
Satd. Flow (perm)	1242	1708	0	1028	1589	0	913	1863	1583	490	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			176				164			164
Link Speed (mph)	30			30			35			35		
Link Distance (ft)	626			658			806			578		
Travel Time (s)	14.2			15.0			15.7			11.3		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.85	0.78	0.91	0.78	0.86	0.91	0.78
Adj. Flow (vph)	21	8	10	37	3	176	8	477	45	201	479	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	18	0	37	179	0	8	477	45	201	479	54
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5		10.5	23.5		10.5	23.5	23.5	10.5	23.5	23.5
Total Split (s)	10.5	23.5		10.5	23.5		10.5	40.0	40.0	16.0	45.5	45.5
Total Split (%)	11.7%	26.1%		11.7%	26.1%		11.7%	44.4%	44.4%	17.8%	50.6%	50.6%
Maximum Green (s)	5.0	18.0		5.0	18.0		5.0	34.5	34.5	10.5	40.0	40.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	7.5	7.0		9.6	7.3		26.1	20.6	20.6	35.2	33.7	33.7
Actuated g/C Ratio	0.13	0.12		0.17	0.13		0.45	0.36	0.36	0.61	0.59	0.59
v/c Ratio	0.10	0.08		0.14	0.51		0.02	0.71	0.07	0.41	0.44	0.05
Control Delay	26.3	22.2		22.7	11.7		6.8	23.5	0.2	8.5	10.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	22.2		22.7	11.7		6.8	23.5	0.2	8.5	10.3	0.1
LOS	C	C		C	B		A	C	A	A	B	A
Approach Delay		24.4			13.6			21.3			9.1	
Approach LOS		C			B			C			A	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 57.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.4

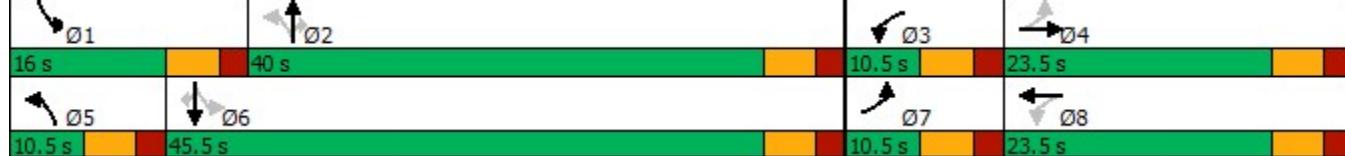
Intersection LOS: B

Intersection Capacity Utilization 49.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Parish Ave & Settler Way





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	18	37	179	8	477	45	201	479	54
v/c Ratio	0.10	0.08	0.14	0.51	0.02	0.71	0.07	0.41	0.44	0.05
Control Delay	26.3	22.2	22.7	11.7	6.8	23.5	0.2	8.5	10.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	22.2	22.7	11.7	6.8	23.5	0.2	8.5	10.3	0.1
Queue Length 50th (ft)	5	2	10	1	1	106	0	17	48	0
Queue Length 95th (ft)	22	19	32	37	6	294	0	70	259	0
Internal Link Dist (ft)		546		578		726		498		
Turn Bay Length (ft)	200		80		180		230	140		130
Base Capacity (vph)	211	587	270	656	494	1214	1088	553	1419	1245
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.03	0.14	0.27	0.02	0.39	0.04	0.36	0.34	0.04

Intersection Summary

HCM 6th Signalized Intersection Summary
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	16	6	8	18	2	107	6	434	17	102	436	42
Future Volume (veh/h)	16	6	8	29	2	150	6	434	35	173	436	42
Initial Q (Q _b), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	8	10	37	3	176	8	477	45	201	479	54
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.85	0.78	0.91	0.78	0.86	0.91	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	104	130	379	4	237	335	602	510	395	777	659
Arrive On Green	0.02	0.14	0.14	0.04	0.15	0.15	0.01	0.32	0.32	0.10	0.42	0.42
Sat Flow, veh/h	1781	756	945	1781	27	1562	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	21	0	18	37	0	179	8	477	45	201	479	54
Grp Sat Flow(s), veh/h/ln	1781	0	1700	1781	0	1589	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.6	0.0	0.5	1.0	0.0	6.0	0.2	12.9	1.1	3.8	11.1	1.1
Cycle Q Clear(g_c), s	0.6	0.0	0.5	1.0	0.0	6.0	0.2	12.9	1.1	3.8	11.1	1.1
Prop In Lane	1.00			0.56	1.00		0.98	1.00		1.00	1.00	1.00
Lane Grp Cap(c), veh/h	228	0	234	379	0	241	335	602	510	395	777	659
V/C Ratio(X)	0.09	0.00	0.08	0.10	0.00	0.74	0.02	0.79	0.09	0.51	0.62	0.08
Avail Cap(c_a), veh/h	344	0	552	470	0	516	478	1165	987	546	1350	1144
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
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	20.8	19.2	0.0	22.5	12.7	17.1	13.1	11.7	12.7	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	0.0	4.5	0.0	2.4	0.1	1.0	0.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.2	0.0	0.2	0.4	0.0	2.3	0.1	5.1	0.4	1.3	4.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.1	0.0	21.0	19.3	0.0	26.9	12.8	19.5	13.2	12.7	13.5	9.8
LnGrp LOS	C	A	C	B	A	C	B	B	B	B	B	A
Approach Vol, veh/h		39			216			530			734	
Approach Delay, s/veh		20.5			25.6			18.9			13.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	11.3	23.3	7.7	13.1	6.1	28.5	6.9	13.9				
Change Period (Y+R _c), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	10.5	34.5	5.0	18.0	5.0	40.0	5.0	18.0				
Max Q Clear Time (g_c+l1), s	5.8	14.9	3.0	2.5	2.2	13.1	2.6	8.0				
Green Ext Time (p_c), s	0.2	3.0	0.0	0.0	0.0	3.3	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			17.0									
HCM 6th LOS			B									

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	10	44	40	10	70	10	329	29	60	354	28
Future Volume (vph)	52	10	44	51	10	70	10	347	47	60	365	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	240		290	260		200
Storage Lanes	0		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850			0.850
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1716	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted		0.976		0.950			0.950			0.950		
Satd. Flow (perm)	0	1716	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.80	0.78	0.89	0.78	0.79	0.90	0.78
Adj. Flow (vph)	67	13	56	65	13	88	13	390	60	76	406	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	136	0	65	13	88	13	390	60	76	406	36
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	44.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	52	10	44	40	10	70	10	329	29	60	354	28
Future Vol, veh/h	52	10	44	51	10	70	10	347	47	60	365	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	150	-	150	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	80	78	89	78	79	90	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	13	56	65	13	88	13	390	60	76	406	36
Major/Minor												
Minor2		Minor1			Major1			Major2				
Conflicting Flow All	1055	1034	406	1027	1010	390	442	0	0	450	0	0
Stage 1	558	558	-	416	416	-	-	-	-	-	-	-
Stage 2	497	476	-	611	594	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	204	232	645	213	240	658	1118	-	-	1110	-	-
Stage 1	514	512	-	614	592	-	-	-	-	-	-	-
Stage 2	555	557	-	481	493	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	159	214	645	174	221	658	1118	-	-	1110	-	-
Mov Cap-2 Maneuver	159	214	-	174	221	-	-	-	-	-	-	-
Stage 1	508	477	-	607	585	-	-	-	-	-	-	-
Stage 2	465	550	-	398	459	-	-	-	-	-	-	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	37.9		22.5			0.2			1.2			
HCM LOS	E		C									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR	
Capacity (veh/h)	1118		-	-	240	174	221	658	1110	-	-	
HCM Lane V/C Ratio	0.011		-	-	0.566	0.376	0.058	0.133	0.068	-	-	
HCM Control Delay (s)	8.3		-	-	37.9	37.6	22.3	11.3	8.5	-	-	
HCM Lane LOS	A		-	-	E	E	C	B	A	-	-	
HCM 95th %tile Q(veh)	0		-	-	3.2	1.6	0.2	0.5	0.2	-	-	

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
05/01/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	0	0	116	10	0	0	14	0	4
Traffic Volume (vph)	19	98	0	0	116	22	0	0	0	21	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	90		0	90		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.977						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	0	0	1820	0	1863	1863	0	1770	1583	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	0	0	1820	0	1863	1863	0	1770	1583	0
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	716				677			727			714	
Travel Time (s)	16.3				15.4			16.5			16.2	
Peak Hour Factor	0.78	0.83	0.78	0.78	0.84	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	24	118	0	0	138	28	0	0	0	27	0	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	118	0	0	166	0	0	0	0	27	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			12	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.7%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	1	98	0	0	116	10	0	0	0	14	0	4
Future Vol, veh/h	19	98	0	0	116	22	0	0	0	21	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	83	78	78	84	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	118	0	0	138	28	0	0	0	27	0	19
Major/Minor												
Major1		Major2			Minor1			Minor2				
Conflicting Flow All	166	0	0	118	0	0	328	332	118	318	318	152
Stage 1	-	-	-	-	-	-	166	166	-	152	152	-
Stage 2	-	-	-	-	-	-	162	166	-	166	166	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1412	-	-	1470	-	-	625	588	934	635	598	894
Stage 1	-	-	-	-	-	-	836	761	-	850	772	-
Stage 2	-	-	-	-	-	-	840	761	-	836	761	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1412	-	-	1470	-	-	604	578	934	627	588	894
Mov Cap-2 Maneuver	-	-	-	-	-	-	604	578	-	627	588	-
Stage 1	-	-	-	-	-	-	822	748	-	836	772	-
Stage 2	-	-	-	-	-	-	822	761	-	822	748	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	1.3		0			0			10.2			
HCM LOS	A						B					
Minor Lane/Major Mvmt		NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	-	-	1412	-	-	-	1470	-	-	627	894	
HCM Lane V/C Ratio	-	-	0.017	-	-	-	-	-	-	0.043	0.022	
HCM Control Delay (s)	0	0	7.6	-	-	-	0	-	-	11	9.1	
HCM Lane LOS	A	A	A	-	-	-	A	-	-	B	A	
HCM 95th %tile Q(veh)	-	-	0.1	-	-	-	0	-	-	0.1	0.1	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	18	57	659	20	63	728
Future Volume (vph)	18	57	834	20	63	896
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	1583	1855	0	0	1855
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	1583	1855	0	0	1855
Link Speed (mph)	30		35		35	
Link Distance (ft)	725		578		580	
Travel Time (s)	16.5		11.3		11.3	
Peak Hour Factor	0.78	0.79	0.93	0.78	0.79	0.93
Adj. Flow (vph)	23	72	897	26	80	963
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	72	923	0	0	1043
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	91.0%			ICU Level of Service F		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	18	57	659	20	63	728
Future Vol, veh/h	18	57	834	20	63	896
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	90	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	79	93	78	79	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	72	897	26	80	963
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2033	910	0	0	923	0
Stage 1	910	-	-	-	-	-
Stage 2	1123	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	63	333	-	-	740	-
Stage 1	393	-	-	-	-	-
Stage 2	311	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	48	333	-	-	740	-
Mov Cap-2 Maneuver	48	-	-	-	-	-
Stage 1	393	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	47.2	0	0.8			
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	48	333	740	-
HCM Lane V/C Ratio	-	-	0.481	0.217	0.108	-
HCM Control Delay (s)	-	-	136	18.8	10.5	0
HCM Lane LOS	-	-	F	C	B	A
HCM 95th %tile Q(veh)	-	-	1.8	0.8	0.4	-

Lanes, Volumes, Timings
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	20	2	10	30	8	143	8	485	46	164	570	18
Future Volume (vph)	20	2	10	74	8	318	8	485	88	332	570	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			80		0	180		230	140		130
Storage Lanes	1			1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.878			0.854				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1635	0	1770	1591	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.952			0.426			0.430			0.201		
Satd. Flow (perm)	1773	1635	0	794	1591	0	801	1863	1583	374	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			357				230			164
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		626			658			806			578	
Travel Time (s)		14.2			15.0			15.7			11.3	
Peak Hour Factor	0.78	0.78	0.78	0.80	0.78	0.89	0.78	0.92	0.82	0.89	0.92	0.78
Adj. Flow (vph)	26	3	13	93	10	357	10	527	107	373	620	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	16	0	93	367	0	10	527	107	373	620	23
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5		10.5	23.5		10.5	23.5	23.5	10.5	23.5	23.5
Total Split (s)	10.5	23.5		10.5	23.5		10.5	35.0	35.0	21.0	45.5	45.5
Total Split (%)	11.7%	26.1%		11.7%	26.1%		11.7%	38.9%	38.9%	23.3%	50.6%	50.6%
Maximum Green (s)	5.0	18.0		5.0	18.0		5.0	29.5	29.5	15.5	40.0	40.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	8.1	7.8		11.1	8.6		29.5	24.3	24.3	45.1	43.5	43.5
Actuated g/C Ratio	0.12	0.11		0.16	0.13		0.43	0.35	0.35	0.66	0.64	0.64
v/c Ratio	0.12	0.08		0.38	0.72		0.02	0.80	0.15	0.68	0.52	0.02
Control Delay	28.9	19.0		29.7	13.1		8.8	32.6	0.5	17.5	12.4	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	19.0		29.7	13.1		8.8	32.6	0.5	17.5	12.4	0.1
LOS	C	B		C	B		A	C	A	B	B	A
Approach Delay		25.1			16.5			26.9			14.0	
Approach LOS		C			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 68.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Parish Ave & Settler Way





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	16	93	367	10	527	107	373	620	23
v/c Ratio	0.12	0.08	0.38	0.72	0.02	0.80	0.15	0.68	0.52	0.02
Control Delay	28.9	19.0	29.7	13.1	8.8	32.6	0.5	17.5	12.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	19.0	29.7	13.1	8.8	32.6	0.5	17.5	12.4	0.1
Queue Length 50th (ft)	9	1	35	4	1	163	0	36	71	0
Queue Length 95th (ft)	25	15	65	41	8	#458	0	#252	419	0
Internal Link Dist (ft)		546		578		726			498	
Turn Bay Length (ft)	200		80		180		230	140		130
Base Capacity (vph)	209	460	244	697	419	841	840	577	1231	1101
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.03	0.38	0.53	0.02	0.63	0.13	0.65	0.50	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
2: Parish Ave & Settler Way

JR Engineering
05/01/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	20	2	10	30	8	143	8	485	46	164	570	18
Future Volume (veh/h)	20	2	10	74	8	318	8	485	88	332	570	18
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	3	13	92	10	357	10	527	107	373	620	23
Peak Hour Factor	0.78	0.78	0.78	0.80	0.78	0.89	0.78	0.92	0.82	0.89	0.92	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	59	256	450	10	345	268	591	501	414	869	737
Arrive On Green	0.03	0.19	0.19	0.06	0.22	0.22	0.01	0.32	0.32	0.16	0.46	0.46
Sat Flow, veh/h	1781	306	1326	1781	43	1548	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	26	0	16	92	0	367	10	527	107	373	620	23
Grp Sat Flow(s), veh/h/ln	1781	0	1632	1781	0	1592	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.9	0.0	0.6	3.3	0.0	18.0	0.3	21.7	4.0	10.7	21.4	0.6
Cycle Q Clear(g_c), s	0.9	0.0	0.6	3.3	0.0	18.0	0.3	21.7	4.0	10.7	21.4	0.6
Prop In Lane	1.00			1.00			0.97	1.00		1.00	1.00	1.00
Lane Grp Cap(c), veh/h	138	0	315	450	0	355	268	591	501	414	869	737
V/C Ratio(X)	0.19	0.00	0.05	0.20	0.00	1.03	0.04	0.89	0.21	0.90	0.71	0.03
Avail Cap(c_a), veh/h	200	0	364	458	0	355	356	684	579	469	927	785
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
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	26.5	23.9	0.0	31.4	18.9	26.3	20.3	17.2	17.3	11.7
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.2	0.0	56.8	0.1	12.8	0.2	18.9	2.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.4	0.0	0.3	1.4	0.0	12.2	0.1	11.1	1.5	6.0	8.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.0	0.0	26.6	24.1	0.0	88.2	18.9	39.1	20.5	36.0	19.7	11.8
LnGrp LOS	C	A	C	C	A	F	B	D	C	D	B	B
Approach Vol, veh/h		42			459			644			1016	
Approach Delay, s/veh		26.9			75.4			35.7			25.5	
Approach LOS		C			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	18.5	31.0	10.1	21.1	6.5	43.0	7.7	23.5				
Change Period (Y+R _c), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	15.5	29.5	5.0	18.0	5.0	40.0	5.0	18.0				
Max Q Clear Time (g_c+l1), s	12.7	23.7	5.3	2.6	2.3	23.4	2.9	20.0				
Green Ext Time (p_c), s	0.4	1.8	0.0	0.0	0.0	3.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay		39.2										
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	8	26	26	6	56	56	441	26	52	502	52
Future Volume (vph)	38	8	26	70	6	56	56	483	68	52	546	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	240		290	260		200
Storage Lanes	0		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952				0.850			0.850			0.850
Flt Protected		0.974		0.950			0.950			0.950		
Satd. Flow (prot)	0	1727	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted		0.974		0.950			0.950			0.950		
Satd. Flow (perm)	0	1727	0	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		516			716			680			806	
Travel Time (s)		11.7			16.3			13.2			15.7	
Peak Hour Factor	0.78	0.78	0.78	0.80	0.78	0.79	0.79	0.92	0.80	0.78	0.92	0.78
Adj. Flow (vph)	49	10	33	88	8	71	71	525	85	67	593	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	88	8	71	71	525	85	67	593	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	50.5%				ICU Level of Service A							
Analysis Period (min)	15											

Intersection

Int Delay, s/veh 17.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	38	8	26	26	6	56	56	441	26	52	502	52
Future Vol, veh/h	38	8	26	70	6	56	56	483	68	52	546	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	150	-	150	240	-	290	260	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	80	78	79	79	92	80	78	92	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	10	33	88	8	71	71	525	85	67	593	67

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1476	1479	593	1449	1461	525	660	0	0	610	0	0
Stage 1	727	727	-	667	667	-	-	-	-	-	-	-
Stage 2	749	752	-	782	794	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	104	126	506	109	129	552	928	-	-	969	-	-
Stage 1	415	429	-	448	457	-	-	-	-	-	-	-
Stage 2	404	418	-	387	400	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	77	108	506	~84	111	552	928	-	-	969	-	-
Mov Cap-2 Maneuver	77	108	-	~84	111	-	-	-	-	-	-	-
Stage 1	383	399	-	414	422	-	-	-	-	-	-	-
Stage 2	319	386	-	328	372	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	105.1	112.2			1			0.8			
HCM LOS	F	F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR	
Capacity (veh/h)	928	-	-	116	84	111	552	969	-	-	
HCM Lane V/C Ratio	0.076	-	-	0.796	1.042	0.069	0.128	0.069	-	-	
HCM Control Delay (s)	9.2	-	-	105.1	199.3	39.8	12.5	9	-	-	
HCM Lane LOS	A	-	-	F	F	E	B	A	-	-	
HCM 95th %tile Q(veh)	0.2	-	-	4.6	6	0.2	0.4	0.2	-	-	

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: Mountain Bluebird Dr & WCR 46.5

JR Engineering
05/01/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↓		↑	↓	
Traffic Volume (vph)	6	90	0	0	92	29	0	0	0	15	0	2
Future Volume (vph)	48	90	0	0	92	57	0	0	0	44	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	90		0	90		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.947						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	0	0	1764	0	1863	1863	0	1770	1583	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	0	0	1764	0	1863	1863	0	1770	1583	0
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	716				677			727			714	
Travel Time (s)	16.3				15.4			16.5			16.2	
Peak Hour Factor	0.78	0.82	0.78	0.78	0.82	0.79	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	62	110	0	0	112	72	0	0	0	56	0	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	110	0	0	184	0	0	0	0	56	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			12	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.6%					ICU Level of Service A						
Analysis Period (min)	15											

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↙ ↖ ↙ ↘ ↗ ↘ ↖ ↙ ↗ ↘											
Traffic Vol, veh/h	6	90	0	0	92	29	0	0	0	15	0	2
Future Vol, veh/h	48	90	0	0	92	57	0	0	0	44	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	90	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	82	78	78	82	79	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	110	0	0	112	72	0	0	0	56	0	59

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	184	0	0	110	0	0	412	418	110	382	382	148
Stage 1	-	-	-	-	-	-	234	234	-	148	148	-
Stage 2	-	-	-	-	-	-	178	184	-	234	234	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1391	-	-	1480	-	-	550	526	943	576	551	899
Stage 1	-	-	-	-	-	-	769	711	-	855	775	-
Stage 2	-	-	-	-	-	-	824	747	-	769	711	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1480	-	-	497	502	943	556	526	899
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	502	-	556	526	-
Stage 1	-	-	-	-	-	-	734	679	-	817	775	-
Stage 2	-	-	-	-	-	-	770	747	-	735	679	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	2.8	0			0			10.7				
HCM LOS					A			B				
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	-	-	1391	-	-	1480	-	-	556	899		
HCM Lane V/C Ratio	-	-	0.044	-	-	-	-	-	0.101	0.066		
HCM Control Delay (s)	0	0	7.7	-	-	0	-	-	12.2	9.3		
HCM Lane LOS	A	A	A	-	-	A	-	-	B	A		
HCM 95th %tile Q(veh)	-	-	0.1	-	-	0	-	-	0.3	0.2		