APPENDIX B1: TRAFFIC ANALYSIS EXISTING

SH 34 FEASIBILITY STUDY

Existing Conditions Traffic Analysis Report

August 2019

Table of Contents

1. Introduction 1
2. Project Context 1
3. Land Uses 1
4. Study Area 1
5. Data Collection 3
6. Existing Conditions 4
7. Crash Analysis 9
8. Conclusions 16

List of Tables

Table 1 ADT and Percentage of Heavy Vehicles 3
Table 2 Level of Service (LOS) Criteria for Intersections 6
Table 3 Existing Conditions Delay and LOS 7

Figures

Figure 1 Project Location 2
Figure 2 2018 Existing Conditions Peak Hours - Volumes and LOS 8
Figure 3 SH 34 Crashes Segment – 1 10
Figure 4 SH 34 Crashes Segment – 2 11
Figure 5 SH 34 Crashes Segment – 3 12
Figure 6 SH 34 Crashes Segment – 4 13
Figure 7 SH 34 Crashes Segment – 5 14
Figure 8 SH 34 Crashes Segment – 6 15

Appendix

Synchro Reports

1. INTRODUCTION

Purpose of this study is to evaluate the current traffic operations and to document roadway and intersection operations of SH 34, located in Hunt County. SH 34 is a north-south roadway connecting Interstate 30 in the north and CR 2312 in the south.

2. PROJECT CONTEXT

Currently SH 34 is a two-lane, two-way highway for the most part of its stretch. There has been a significant increase in the vehicular traffic on SH 34 in recent times. Also, the number of heavy vehicles has increased significantly. Hence TxDOT is planning to widen the roadway to a four-lane highway with two-way left turn lane.

3. LAND USES

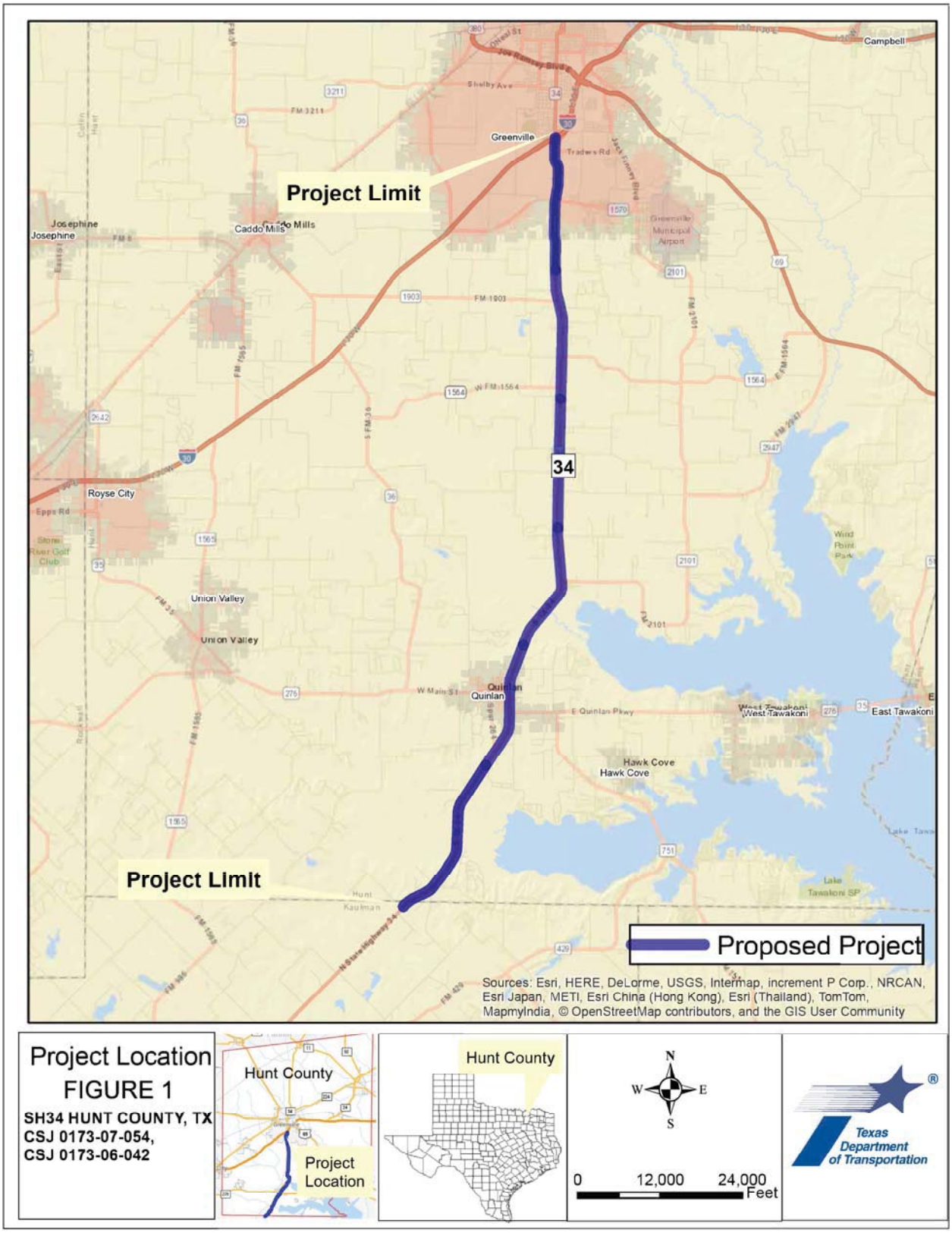
Mixed land use type is observed along SH 34, which includes commercial, residential and agricultural land use.

4. STUDY AREA

The study area includes 20 miles stretch of SH 34 from IH 30 westbound frontage road in the north to CR 2312 in the south. The study area comprises of fourteen (14) intersections out of which nine (9) intersections are signalized and five (5) are unsignalized. Figure 1 shows the study area.

Following are the 14 study area intersections,

1. SH 34 at IH 30 WBFR;
2. SH 34 at IH 30 EBFR;
3. SH 34 at Traders Road;
4. SH 34 at FM 1570;
5. SH 34 at FM 1903;
6. SH 34 at E FM 1564;
7. SH 34 at W FM 1564;
8. SH 34 at FM 2101;
9. SH 34 at Panther Path;
10. SH 34 at SH 276;
11. SH 34 at E Kirby Avenue / Walmart Driveway;
12. SH 34 at E SH 276;
13. SH 34 at SPR 264; and
14. SH 34 at CR 2312.


Project Limit
Greenville
Campbell
Josephine
Caddo Mills
Royse City
Union Valley
Quinlan
Hawk Cove
West Tawakoni
East Tawakoni
34
Project Limit
Proposed Project
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Project Location
FIGURE 1
SH34 HUNT COUNTY, TX
CSJ 0173-07-054,
CSJ 0173-06-042
Hunt County
Project Location
Hunt County
N
W
E
S
0
12,000
24,000
Feet
Texas Department of Transportation

5. DATA COLLECTION

To properly evaluate existing traffic conditions at the study intersections, daily counts were collected on August 28, 2018 and August 30, 2018. A 24-hour classification counts were collected at twenty (20) locations. During the classification counts, vehicles were classified as 13 different AASHTO vehicle classes based on the number of axles and vehicle configuration. Percentage of heavy vehicles was calculated using the classification counts. Table-1 shows the Annual Daily Traffic (ADT) and percentage of heavy vehicles at each location.

Table -1 ADT and Percentage of Heavy Vehicles

Study Location	ADT (vehicles/day)	% of Heavy Vehicles
SH 34 North of IH 30 WBFR	26395	*
IH 30 West of SH 34	31247	41.30
SH 34 South of Traders Road	17827	5.00
FM 1570 West of SH 34	5270	3.53
FM 1570 East of SH 34	10512	1.76
SH 34 North of FM 1903	11961	5.69
FM 1903 West of SH 34	2486	6.60
SH 34 South of FM 1903	13648	5.73
FM 1564 East of SH 34	2573	0.00
SH 34 North of W FM 1564	10442	6.90
W FM 1564 West of SH 34	1350	5.78
SH 34 North of CR 2246/CR 3503	9658	7.54
SH 34 North of CR 2261/CR 3505	9062	7.57
FM 2101 East of SH 34	2641	3.10
SH 34 North of Main Street	12006	7.57
Main Street West of SH 34	11238	3.59
SH 276 East of SH 34	18750	3.01
SH 34 South of SH 276	7984	10.05
SH 34 South of SPR 264	7467	9.66
SH 34 South of CR 2312	6151	10.93

Notes: * Vehicle classification counts were not available

In addition, turning movement counts were collected at the fourteen (14) study area intersections on April 28, 2018 from 6:00 AM to 6:00 PM except the SH 34 and SH 276 intersection. Turning movements at SH 34 and SH 276 intersection were collected on April 30, 2018. The peak hours of travel were identified using the hourly data contained in the 12 – hour turning movement counts. Figure 2 & Figure 3 show turning movement count data for the AM and PM peak hours.

Intersections of SH 34 at IH 30 WBFR, SH 34 at IH 30 EBFR, SH 34 at Traders Road, SH 34 at FM 1570, SH 34 at Panther Path, SH 34 at SH 276, SH 34 at E Kirby Ave/ Walmart Driveway, SH 34 at E SH 276, and SH 34 at SPR 264 are signalized. Existing signal timing were estimated based on the traffic count videos.

6. EXISTING CONDITIONS

About 14 intersections were identified along SH 34 for traffic analysis based on cross-street traffic. Study intersections included nine signalized and 5 unsignalized intersections. Following are the general details of each intersection.

- SH 34 at IH 30 Westbound Frontage Road (WBFR) – SH 34 at IH 30 WBFR is a signalized intersection. IH 30 WBFR is a one-way cross-street with one U-turn lane, one left turn lane, one shared left/through lane, one through lane and one right turn lane, with posted speed limit of 45 mph. Northbound approach of SH 34 is comprised of two left turn lanes and two through lanes with posted speed limit of 40 mph. Southbound approach of SH 34 is comprised of two through lanes and one right turn lane with posted speed limit of 40 mph.
- SH 34 at IH 30 Eastbound Frontage Road (EBFR) – SH 34 at IH 30 EBFR is a signalized intersection. IH 30 EBFR is a one-way cross-street with one U-turn lane, one left turn lane, one shared left/through lane, one through lane and one right turn lane, with posted speed limit of 55 mph. Northbound approach of SH 34 is comprised of two through lanes and one right turn lane with posted speed limit of 40 mph. Southbound approach of SH 34 is comprised of two left turn and through lanes with posted speed limit of 40 mph.
- SH 34 at Traders Road – SH 34 at Traders Road is a signalized T – intersection. Traders Road is a four-lane two-way street with one left and one right turn lane and two receiving lanes. Posted speed limit on Traders Rd. was found to be 45 mph. NB approach of SH 34 is comprised of one through lane and one through/right lane with posted speed limit of 40 mph. SB approach of SH 34 is comprised of one left turn lane and two through lanes with posted speed limit of 40 mph. Just south of the intersection, two lanes in both the directions narrow down to one lane each.
- SH 34 at FM 1570 – SH 34 at FM 1570 is a plus intersection with signalization. EB approach of FM 1570 has one through lane and a left turn pocket with speed limit of 60 mph. WB approach of FM 1570 has one through lane and one left and right turn pockets with speed limit of 50 mph. Both EB and WB right turns are channelized with a refuge island. NB and SB approaches of SH 34 has one through lane and a left turn bays with channelized right turns and posted speed limit of 50 mph.

- SH 34 at FM 1903 – SH 34 at FM 1903 is an unsignalized T-intersection with stop control on FM 1903 EB approach. EB approach of FM 1903 is two-lane two-way street with speed limit of 55 mph. NB approach of SH 34 has a left turn bay and a through lane. SB approach has one through lane and the right-turns are channelized by painted refuge island. Posted speed limit on NB and SB approaches of SH 34 was found to be 60 mph.
- SH 34 at E FM 1564 – SH 34 at E FM 1564 is an unsignalized T-intersection with stop control on E FM 1564 WB approach. Flashing beacon assembly was found at the intersection. WB approach of E FM 1564 is a two-lane two-way street with speed limit of 55 mph and right turns are channelized by painted refuge island. NB approach of SH 34 has one shared through/right lane and right turns are channelized by a painted refuge island. SB approach of SH 34 has one left turn bay and a through lane. Posted speed limit on NB and SB approaches of SH 34 was found to be 60 mph.
- SH 34 at W FM 1564 - SH 34 at W FM 1564 is an unsignalized T-intersection with stop control on W FM 1564 EB approach. EB approach of W FM 1564 is a two-lane two-way street with speed limit of 55 mph and right turns are channelized by painted refuge island. NB approach of SH 34 has one left turn bay and a through lane. SB approach of SH 34 has one shared through lane and right turns are channelized by a painted refuge island. Posted speed limit on NB and SB approaches of SH 34 was found to be 60 mph.
- SH 34 at FM 2101 – SH 34 at FM 2101 is an unsignalized T-intersection with stop control on FM 2101 WB approach. WB approach of FM 2101 is a two-lane two-way street with speed limit of 35 mph and right turns are channelized by painted refuge island. NB approach of SH 34 has one shared through/right lane and right turns are channelized by a painted refuge island. SB approach of SH 34 has one left turn bay and a through lane. Posted speed limit on NB and SB approaches of SH 34 was found to be 55 mph.
- SH 34 at Panther Path – SH 34 at Panther Path is a signalized T-intersection. EB approach of Panther Path is a two-lane two-way street with a speed limit of 30 mph. NB approach has a left turn bay and one through lane. And SB approach has one shared through/right lane. Posted speed limit on SH 34's NB and SB approaches were found to be 50 mph.
- SH 34 at SH 276 – SH 34 at SH 276 is a signalized T-intersection. The intersection has three approaches and a driveway that is not controlled by the signal. The driveway on the east side of the intersection is a one-way in driveway. Hence there is no traffic control at the driveway. EB approach of SH 276 is a two-way two-lane street with channelized right turns by painted refuge island. NB approach has a left turn lane and a through lane. SB approach has a through lane and a right turn lane with channelized right turns by painted island. Speed limit on all the approaches were found to be 35 mph. The driveway is on the east side of SH 34.
- SH 34 at E Kirby Avenue/Walmart Driveway - SH 34 at E Kirby Avenue/Walmart Driveway is a signalized plus intersection. EB approach is the E Kirby Avenue which is a two-lane two-way street with speed limit of 30 mph. WB approach is the Walmart driveway with one left turn lane and one shared

through/right turn lane. NB approach has one left and right turn lanes and a through lane. SB approach has one left turn lane and a shared through/right lane. Speed limit on NB and SB approaches were found to be 35 mph.

- SH 34 at E SH 276 – SH 34 at E SH 276 is a signalized T-intersection. WB approach of SH 276 has one left turn lane and a right turn lane with channelized right turns by painted island. Posted speed limit on E SH 276 was found to be 45 mph. NB approach has one through lane and a right turn lane with channelized right turns. SB approach has a left turn lane and a through lane. Posted speed limit on NB and SB approaches were found to be 35 mph.
- SH 34 at SPR 264 – SH 34 at SPR 264 is a signalized T-intersection. EB approach of SPR 264 is a two-lane two-way street with channelized right turns and speed limit of 50 mph. NB approach has a shared left/through lane and SB approach has a shared through/right lane with channelized right turns. Posted speed limit on SH 34 approaches were found to be 55 mph.
- SH 34 at CR 2312 – SH 34 at CR 2312 is an unsignalized T-intersection. EB approach of CR 2312 is a one-lane two-way street with a speed limit of 30 mph. NB and SB approaches are two-way two-lane streets with a speed limit of 65 mph. There is also a private driveway at an offset on the east side of the intersection.

Intersection Level of Service (LOS) analyses were performed in accordance with the procedures set forth and recommended by the *Highway Capacity Manual (HCM)* methodologies for evaluation of signalized and unsignalized intersections. Traffic analysis software Synchro was used to evaluate the operation of the study area intersections. The LOS criteria for signalized and unsignalized intersections are listed in Table 2. LOS 'A' is considered as best, free-flow condition and LOS 'F' is considered failing conditions. Generally, LOS 'D' is considered acceptable during the peak hours.

Table 2 Level of Service (LOS) Criteria for Intersections

LOS	Signalized Intersection	Unsignalized Intersections
	Delay (sec/veh)	Delay (sec/veh)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Intersection Analysis

Intersections in the study area were analysed for AM and PM peaks using Synchro. Existing volumes and peak hour factors (PHF) from the traffic counts were used. Table 3 shows the delay in seconds per vehicle and LOS of each study intersection during AM and PM peak hours.

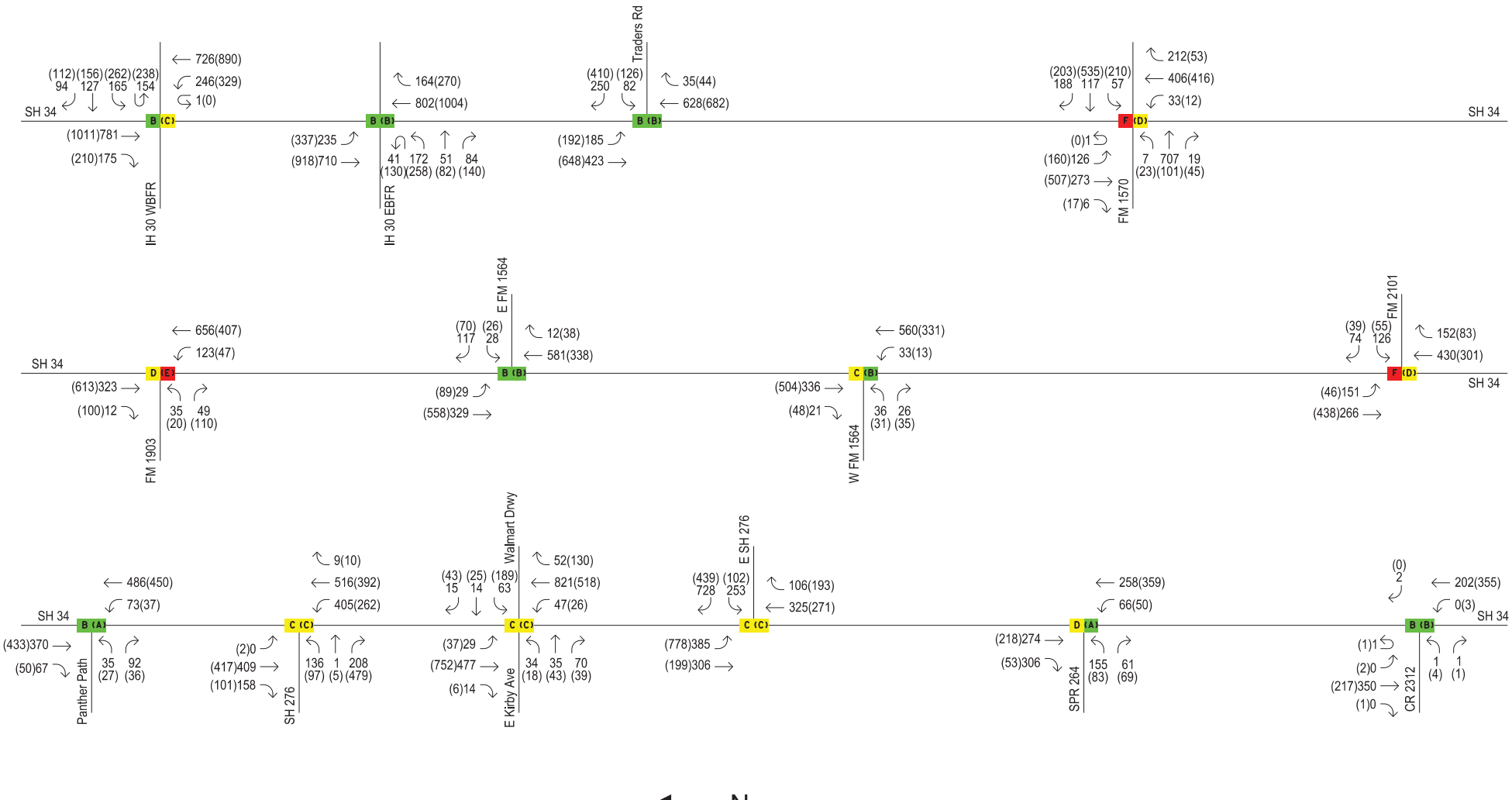
Table 3 Existing Conditions Delay and LOS

Intersection	AM Peak		PM Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
SH 34 at IH 30 WBFR	16.7	B	20.7	C
SH 34 at IH 30 EBFR	14.9	B	17.1	B
SH 34 at Traders Road	15.7	B	16.0	B
SH 34 at FM 1570	99.9	F	41.0	D
SH 34 at FM 1903*	27.5 (EB)	D	35.8 (EB)	E
SH 34 at E FM 1564*	14.3 (WB)	B	12.3 (WB)	B
SH 34 at W FM 1564*	16.0 (EB)	C	12.0 (EB)	B
SH 34 at FM 2101*	493.3 (WB)	F	25.2 (WB)	D
SH 34 at Panther Path	11.8	B	8.8	A
SH 34 at SH 276	27.9	C	22.8	C
SH 34 at E Kirby Avenue / Walmart Driveway	25.8	C	26.1	C
SH 34 at E SH 276	32.0	C	24.6	C
SH 34 at SPR 264	43.5	D	8.5	A
SH 34 at CR 2312*	12.0 (EB)	B	12.8 (EB)	B

Notes: * Stop controlled intersection; EB: Eastbound; WB: Westbound

LEGEND: LEVEL OF SERVICE		
A, B	C, D	E, F

During the AM peak hour, all the intersections were found to operate at LOS D or better except SH 34 at FM 1570 and SH 34 at FM 2101 operating at LOS F. During the PM peak hour, all the intersections were found to operate at LOS D or better except SH 34 at FM 1903 intersection. Detailed Synchro reports are presented in Appendix A. Figure 2 shows the AM and PM turning movement counts and LOS at each study intersection.



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2018 EXISTING CONDITIONS PEAK HOURS - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 2
DATE: AUG 2019	SHEET NO. 8

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/21/2019 5:37:53 PM

7. CRASH ANALYSIS

This study includes a detailed evaluation of crash records (from CRIS database) and safety experience of the SH 34 highway and its immediate area consistent with general traffic engineering principles. Crash records were collected from the CRIS for the years 2013, 2014, 2015, 2016, and 2017. Crash data was grouped into six (6) separate segments, segment 1 to segment 6.

To provide a graphical representation of the crash history of the study area, exhibits were developed to show a snapshot of crash data and its comparison to state-wide average. Figures 3, 4, 5, 6, 7, and 8 show crashes within the study area.

CRASH FREQUENCY AND CRASH RATES

As seen in the crashes on SH 34 segment – 1 Figure 3, a total of 114 crashes took place in the study area over the 5-year period (27, 19, 26, 24, and 18 crashes in the years 2013, 2014, 2015, 2016, and 2017, respectively). Crash rate was found to be approximately 166 crashes/MVMT (crashes per Million Vehicle Miles Travelled). Typically, the state-wide average for a similar roadway was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.

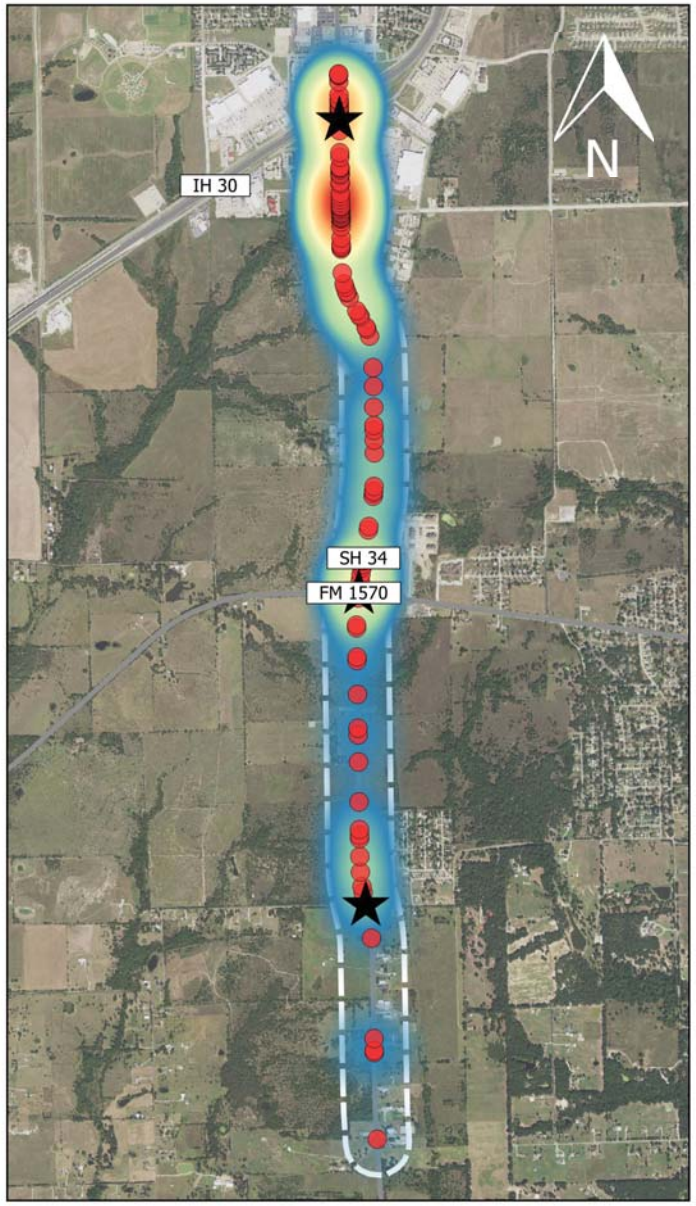
Crashes on SH 34 segment 2 is presented in Figure 4. It shows that a total of 58 crashes occurred over the 5-year period (15, 10, 10, 16, and 7 crashes in the years 2013, 2014, 2015, 2016, and 2017, respectively). Crash rate was found to be 127 crashes/MVMT, whereas the state-wide average was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.

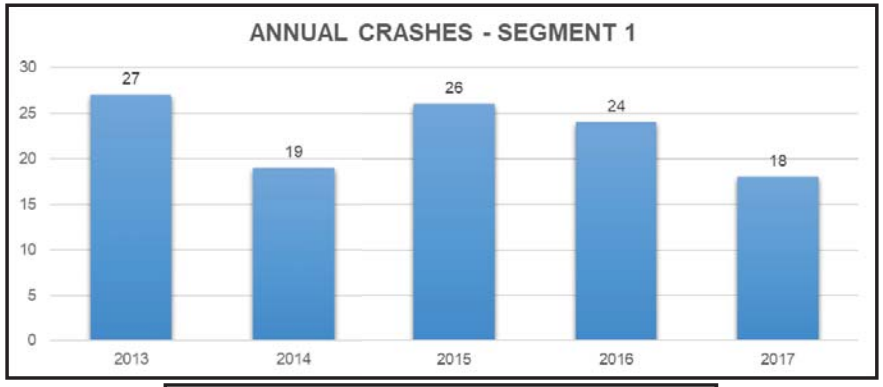
Crashes on SH 34 segment 3 is presented in Figure 5. It shows that a total of 34 crashes occurred over the 5-year period (3, 8, 9, 6, and 8 crashes for the years 2013, 2014, 2015, 2016, and 2017, respectively). Crash rate was found to be 95 crashes/MVMT, whereas the state-wide average was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.

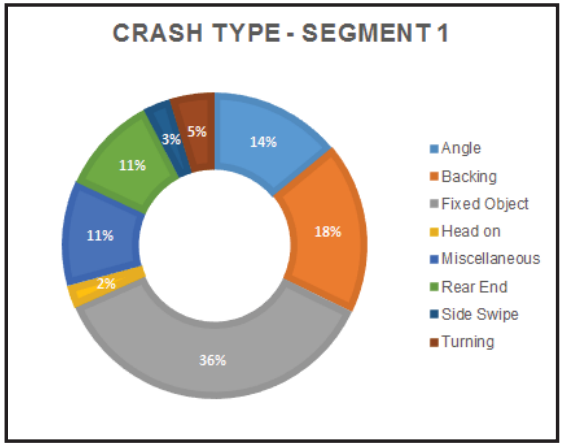
Crashes on SH 34 segment 4 is presented in Figure 6. It shows that a total of 40 crashes occurred over the 5-year period 9, 6, 8, 8, and 9 crashes in the years 2013, 2014, 2015, 2016, and 2017 respectively). Crash rate was found to be 109 crashes/MVMT, whereas the state-wide average was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.

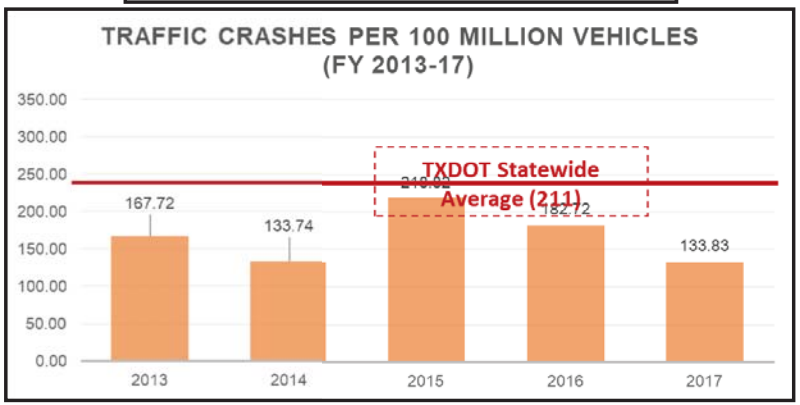
Crashes on SH 34 segment 5 is presented in Figure 7. It shows that a total of 57 crashes occurred over the 5-year period (14, 10, 13, 15, and 5 crashes in the years 2013, 2014, 2015, 2016, and 2017 respectively). Crash rate was found to be 123 crashes/MVMT, whereas the state-wide average was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.

Crashes on SH 34 segment 6 is presented in Figure 8. It shows that a total of 40 crashes occurred over the 5-year period (8, 9, 11, 7, and 5 crashes in the years 2013, 2014, 2015, 2016, and 2017, respectively). Crash rate was found to be 143 crashes/MVMT, whereas the state-wide average was 211 crashes/MVMT by highway system and 151 crashes/MVMT by road type.









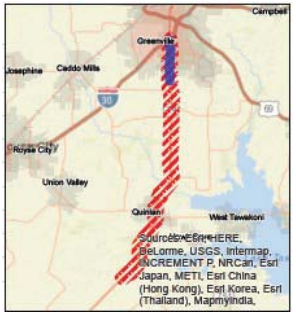
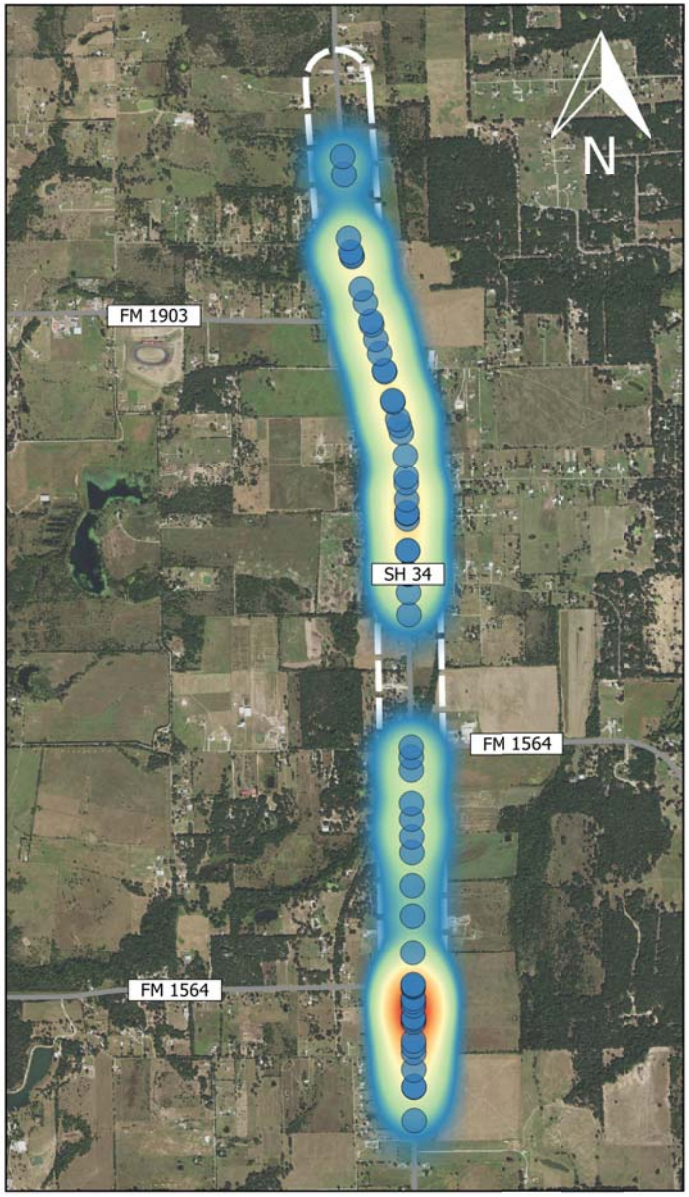


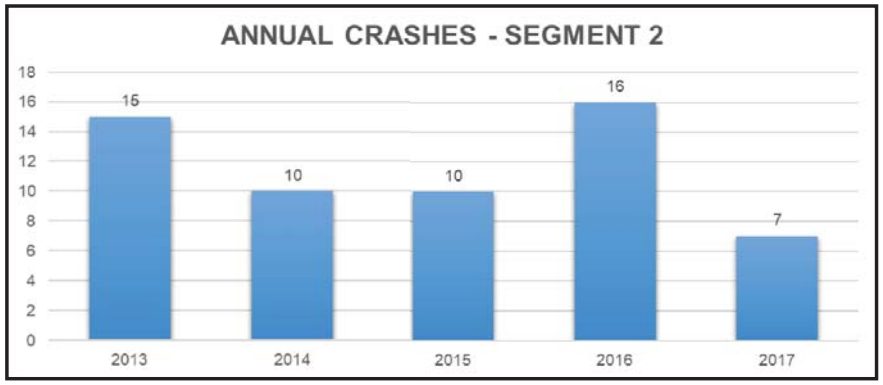
FIGURE 3
SH 34 CRASHES
SEGMENT 1

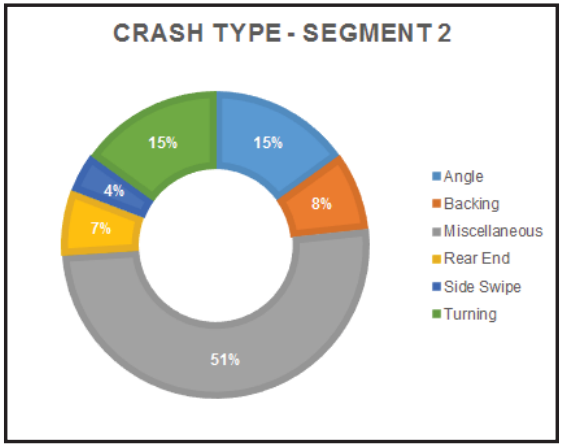
Crash Density

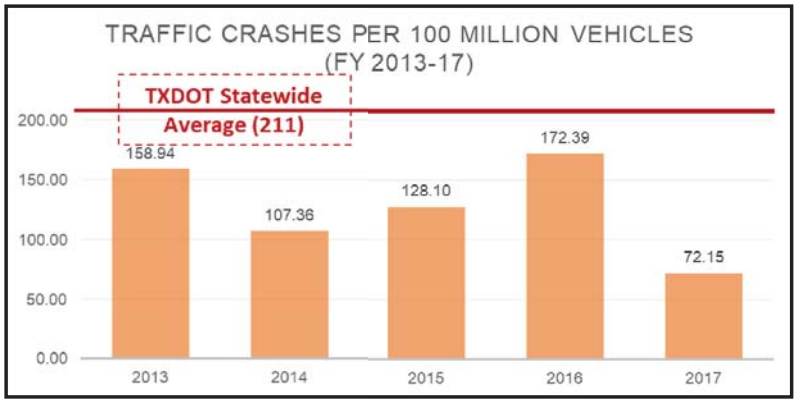
- Not Significant
- Medium Significant
- Very Significant
- Crash Locations
- Fatal Injuries

0 0.5 1 mi









0 0.5 1 mi

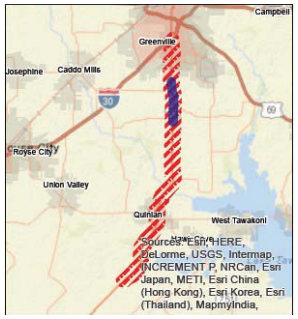
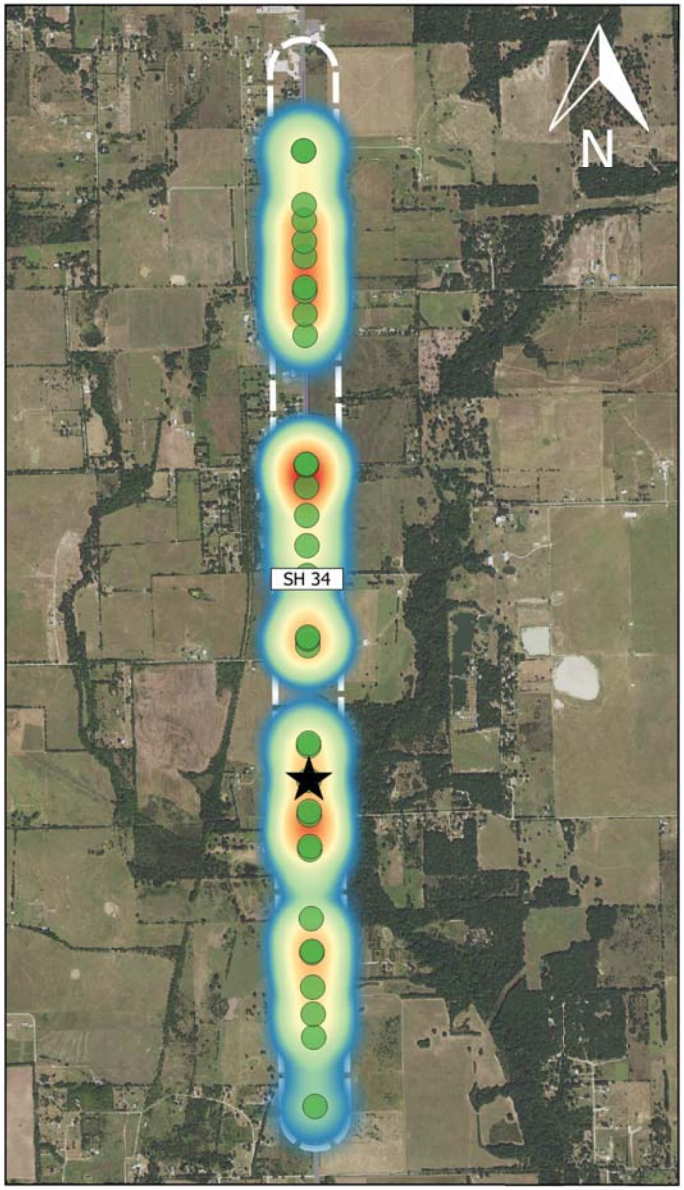
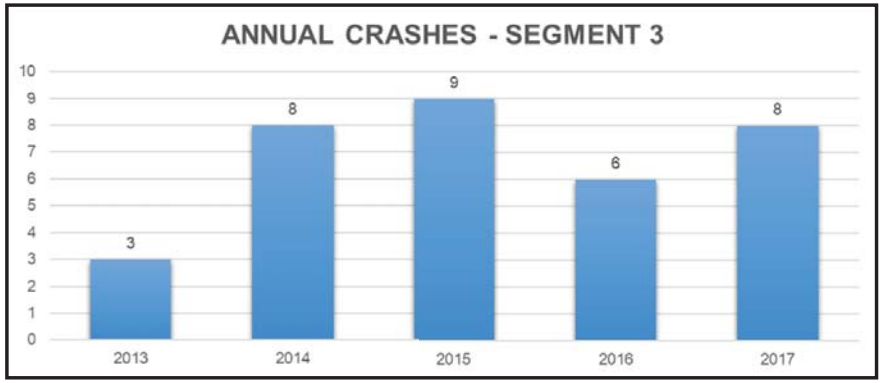


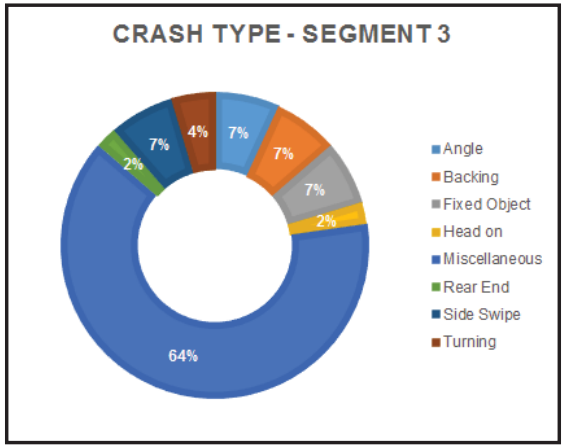
FIGURE 4
SH 34 CRASHES
SEGMENT 2

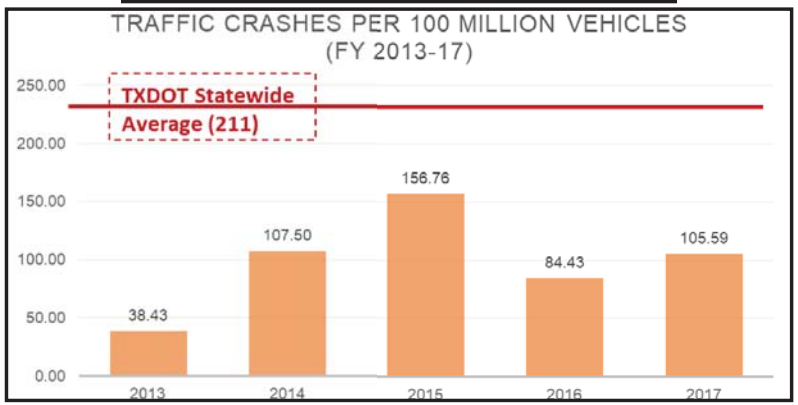
Crash Density

- Not Significant
- Medium Significant
- Very Significant
- Crash Locations
- Fatal Injuries









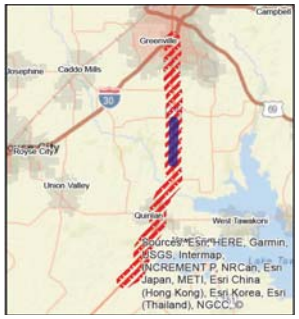
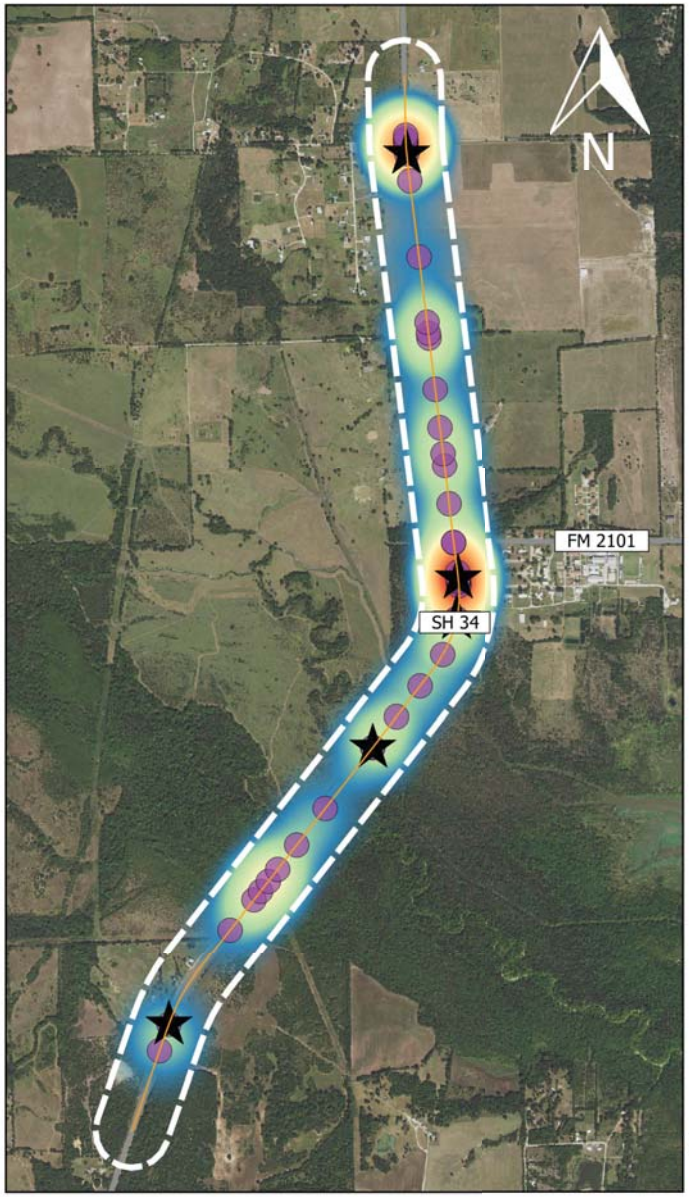


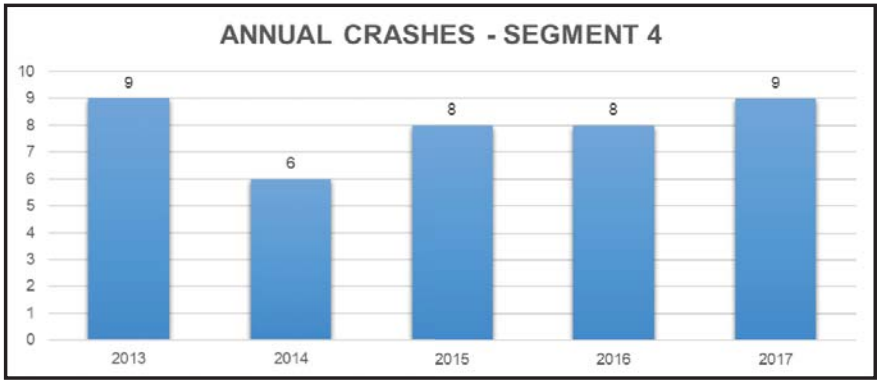
FIGURE 5
SH 34 CRASHES
SEGMENT 3

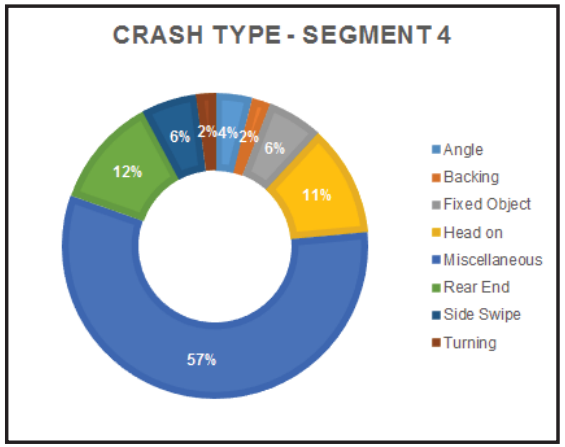
Crash Density

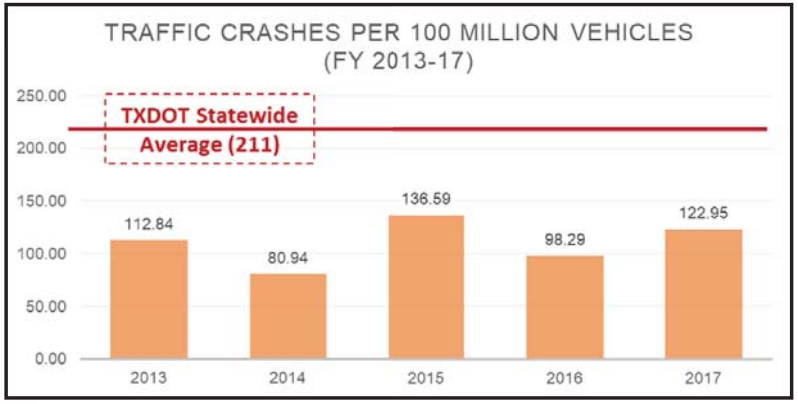
- Not Significant
- Medium Significant
- Very Significant
- Crash Locations
- Fatal Injuries

0 0.5 1 mi









0 0.5 1 mi

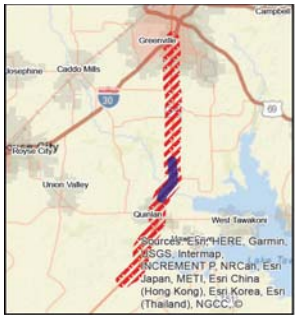


FIGURE 6
SH 34 CRASHES
SEGMENT 4

Crash Density

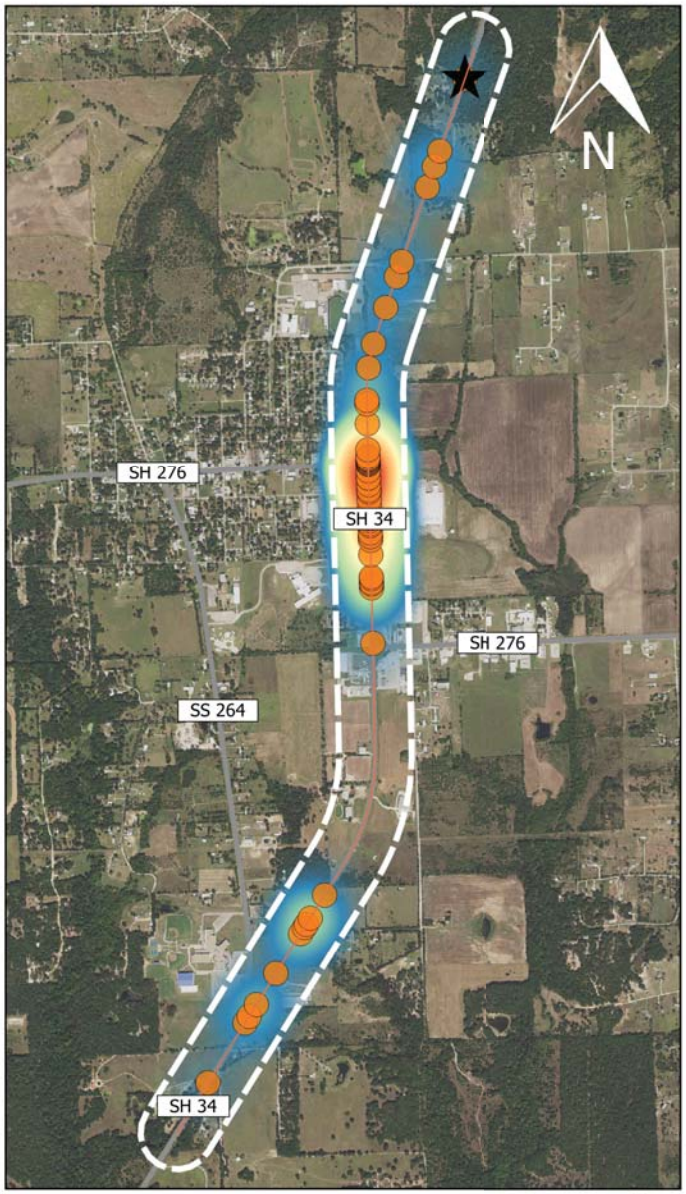
Not Significant

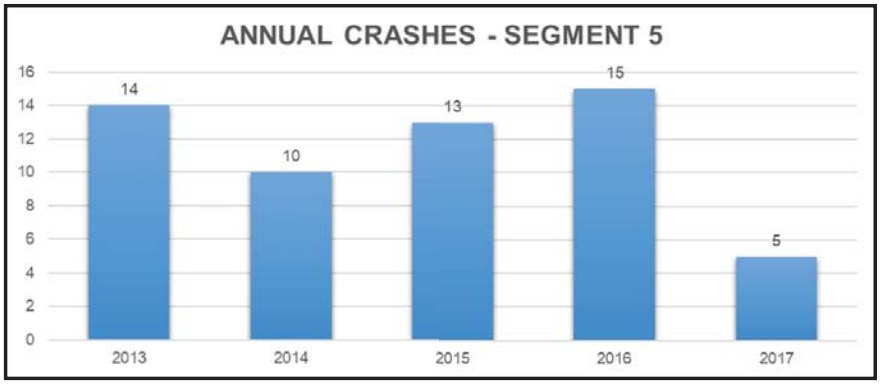
Medium Significant

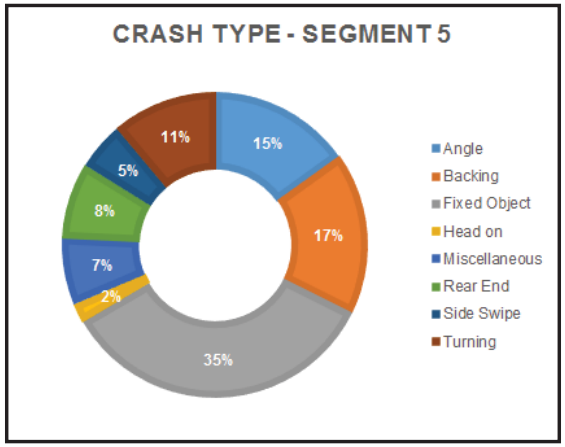
Very Significant

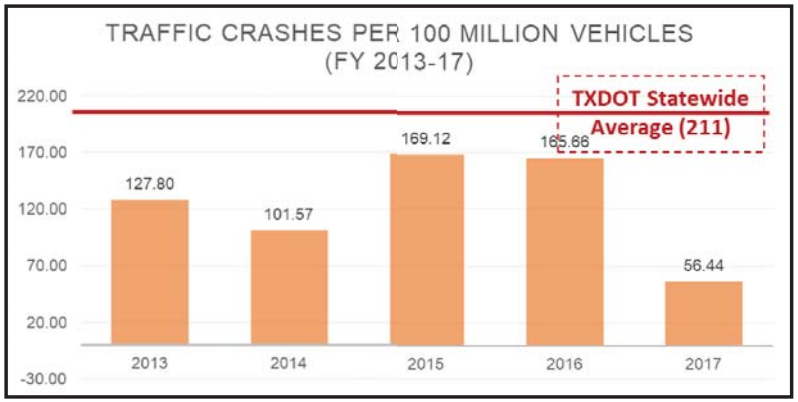
Crash Locations

Fatal Injuries









0 0.5 1 mi

FIGURE 7
SH 34 CRASHES
SEGMENT 5

Crash Density

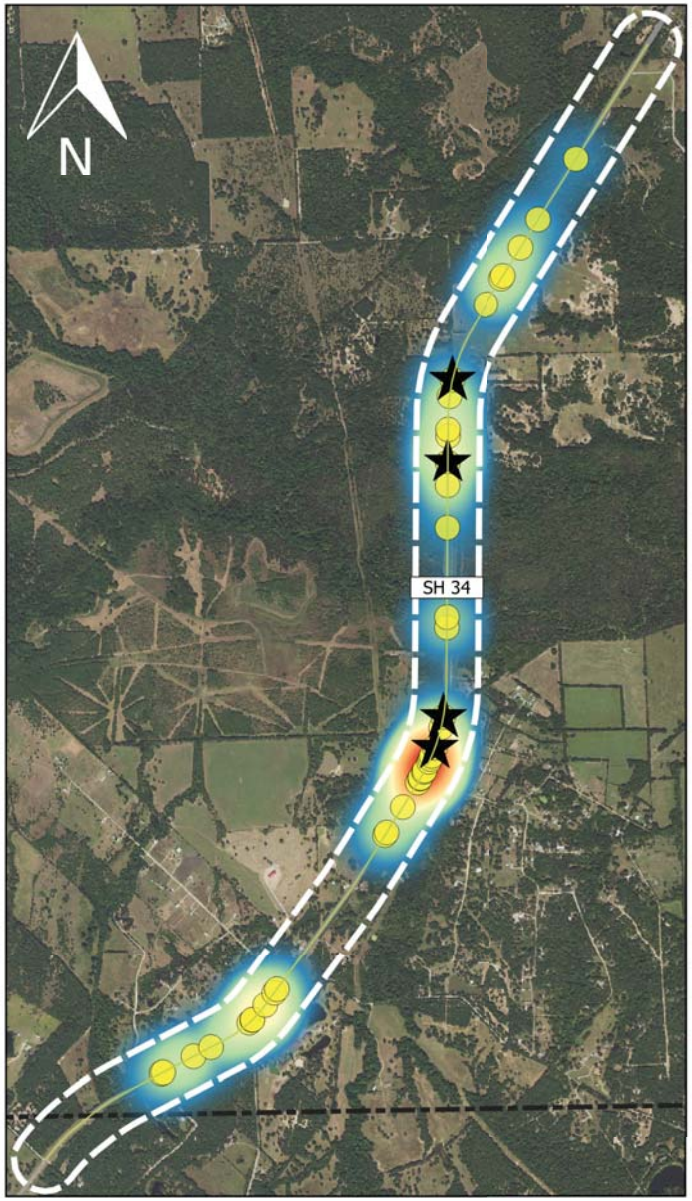
Not Significant

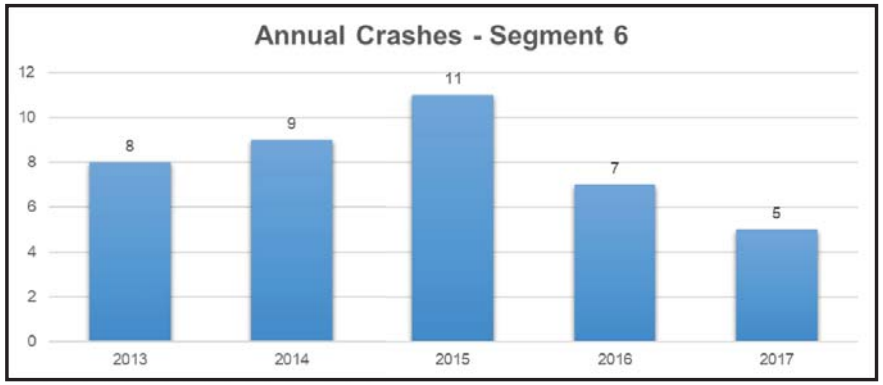
Medium Significant

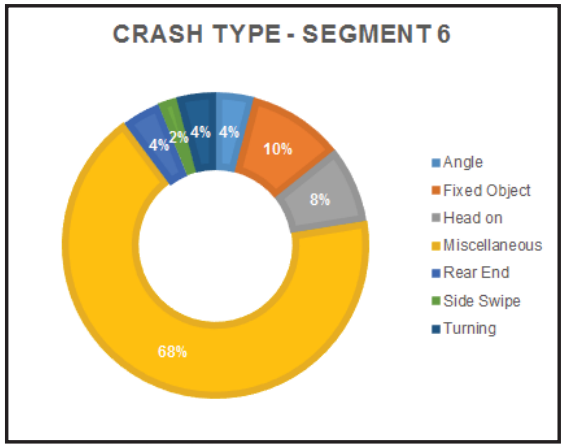
Very Significant

Crash Locations

Fatal Injuries







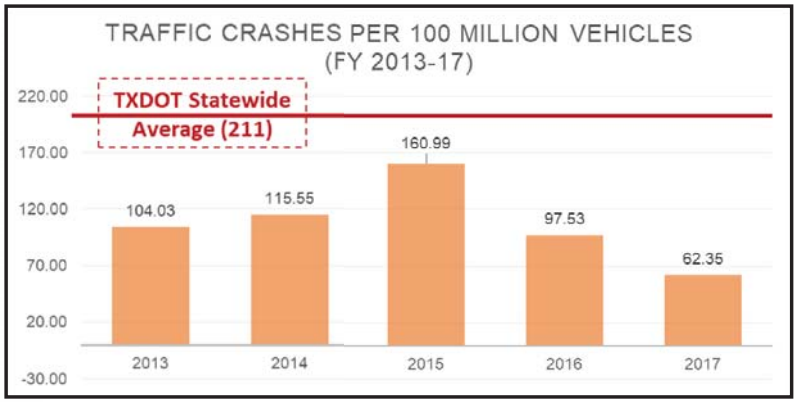


FIGURE 8
SH 34 CRASHES
SEGMENT 6

Crash Density

Not Significant

Medium Significant

Very Significant

Crash Locations

Fatal Injuries

0 0.5 1 mi

TYPES OF CRASHES

In total, 343 crashes in the study area were reported in the 5-year period, 192 involved property damage only, 142 included injuries, and 14 crashes included fatality. The types of crashes occurred in the study area were angle (38), backing (45), fixed object (73), head on (10), rear end (28), side swipe (13), turning (22) and miscellaneous (114) collisions.

8. CONCLUSIONS

Traffic analysis showed that in the AM peak hour, the intersections of FM 1570 and FM 2101 at SH 34 operate at LOS F. Also, the intersection of SH 34 and FM 1903 operate at LOS F in the PM peak hours. Crash analysis showed the crashes per million vehicles is more than the state-wide average for segment 1.

APPENDIX
SYNCHRO REPORTS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Future Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							188
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	122	252	104	0	300	816	0	0	849	188
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				11.2	11.2	11.2		11.4	41.7			24.0	24.0
Actuated g/C Ratio				0.17	0.17	0.17		0.17	0.64			0.37	0.37
v/c Ratio				0.44	0.44	0.29		0.50	0.36			0.65	0.27
Control Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
LOS				C	C	A		C	A			C	A
Approach Delay					25.4				12.4			17.2	
Approach LOS					C				B			B	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 65.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Future Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						173			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	126	191	127	0	0	0	0	835	173	253	789	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	10.0	10.0	10.0					20.8	20.8	9.3	36.3	
Actuated g/C Ratio	0.17	0.17	0.17					0.36	0.36	0.16	0.62	
v/c Ratio	0.46	0.34	0.33					0.66	0.26	0.46	0.36	
Control Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
LOS	C	C	A					B	A	C	A	
Approach Delay		20.9						16.2			11.0	
Approach LOS		C						B			B	

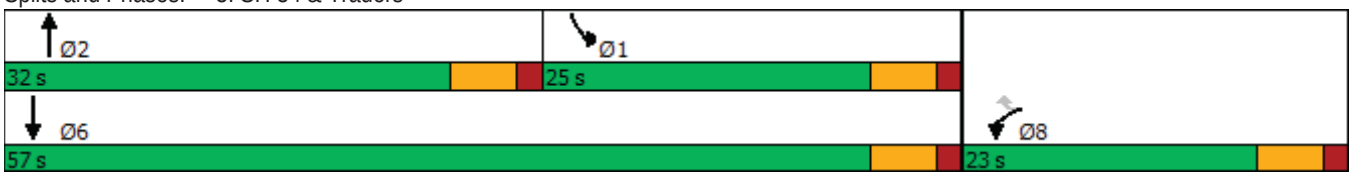
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 58.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	250	628	35	185	423
Future Volume (vph)	82	250	628	35	185	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		291	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	291	723	0	243	529
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	9.0	9.0	18.3		13.4	37.4
Actuated g/C Ratio	0.16	0.16	0.32		0.23	0.65
v/c Ratio	0.35	0.59	0.65		0.60	0.23
Control Delay	28.4	9.5	20.5		28.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	28.4	9.5	20.5		28.2	4.5
LOS	C	A	C		C	A
Approach Delay	14.2		20.5			12.0
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 57.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

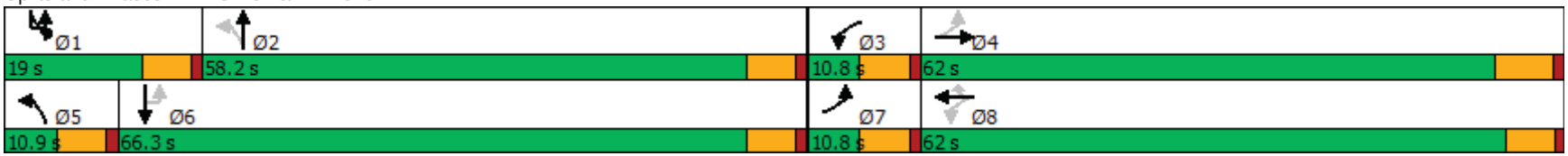


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Future Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0		100		0
Storage Lanes	1		0	1		1	1		0		1		0
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	1853	0	1770	1863	1583	1770	1758	0	0	1770	1850	0
Flt Permitted	0.658			0.064			0.506				0.950		
Satd. Flow (perm)	1307	1853	0	119	1863	1583	943	1758	0	0	1770	1850	0
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		1				224		22				2	
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	16	814	0	76	156	224	48	714	0	0	172	326	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2			6			
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2		19.0	19.0	66.3	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8			5.8	5.8	
Act Effct Green (s)	61.2	55.2		64.7	62.7	62.7	57.5	52.4			13.2	62.7	
Actuated g/C Ratio	0.41	0.37		0.43	0.42	0.42	0.38	0.35			0.09	0.42	
v/c Ratio	0.03	1.19		0.72	0.20	0.28	0.12	1.14			1.11	0.42	
Control Delay	23.6	142.4		61.3	29.8	4.6	22.7	122.5			164.5	33.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0	
Total Delay	23.6	142.4		61.3	29.8	4.6	22.7	122.5			164.5	33.4	
LOS	C	F		E	C	A	C	F			F	C	
Approach Delay		140.1			22.7			116.2				78.7	
Approach LOS		F			C			F				E	

Intersection Summary

Area Type:	Other	
Cycle Length: 150		
Actuated Cycle Length: 150		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.19		
Intersection Signal Delay: 99.9		Intersection LOS: F
Intersection Capacity Utilization 103.2%		ICU Level of Service G
Analysis Period (min) 15		

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	49	123	656	323	12
Future Vol, veh/h	35	49	123	656	323	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	94	85	87	93	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	52	145	754	347	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1399	355	347	0	-	0
Stage 1	355	-	-	-	-	-
Stage 2	1044	-	-	-	-	-
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	155	689	1212	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	136	689	1212	-	-	-
Mov Cap-2 Maneuver	136	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	339	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.5	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1212	-	250	-	-
HCM Lane V/C Ratio	0.119	-	0.368	-	-
HCM Control Delay (s)	8.4	-	27.5	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	117	581	12	29	329
Future Vol, veh/h	28	117	581	12	29	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	165	618	20	44	401

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1117	628	0	0	618	0
Stage 1	628	-	-	-	-	-
Stage 2	489	-	-	-	-	-
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	229	483	-	-	962	-
Stage 1	532	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	218	483	-	-	962	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	588	962	-
HCM Lane V/C Ratio	-	-	0.341	0.046	-
HCM Control Delay (s)	-	-	14.3	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	26	33	560	336	21
Future Vol, veh/h	36	26	33	560	336	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	36	36	609	382	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1075	394	382	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	681	-	-	-	-	-
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	243	655	1176	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	655	1176	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1176	-	412	-	-
HCM Lane V/C Ratio	0.031	-	0.204	-	-
HCM Control Delay (s)	8.2	-	16	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	76.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	126	74	430	152	151	266
Future Vol, veh/h	126	74	430	152	151	266
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	62	87	61	56	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	119	494	249	270	313

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1347	-	0	0	494	0
Stage 1	494	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	~ 167	0	-	-	1070	-
Stage 1	613	0	-	-	-	-
Stage 2	418	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 125	-	-	-	1070	-
Mov Cap-2 Maneuver	~ 125	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 493.3	0	4.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	125	1070	-
HCM Lane V/C Ratio	-	-	1.902	0.252	-
HCM Control Delay (s)	-	-	$ 493.3	9.5	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	18.8	1	-

Notes

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	92	73	486	370	67
Future Volume (vph)	35	92	73	486	370	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.247			
Satd. Flow (perm)	1655	0	460	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	151				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	104	534	571	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	8.0		34.8	34.8	25.2	
Actuated g/C Ratio	0.15		0.64	0.64	0.46	
v/c Ratio	0.55		0.23	0.45	0.67	
Control Delay	14.5		5.2	6.5	16.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	14.5		5.2	6.5	16.9	
LOS	B		A	A	B	
Approach Delay	14.5			6.3	16.9	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 54.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 49.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	136	209	405	525	409	158
Future Volume (vph)	136	209	405	525	409	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.161			
Satd. Flow (perm)	1679	0	340	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	82					126
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	0	466	610	499	203
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	21.4		48.1	48.1	26.0	26.0
Actuated g/C Ratio	0.27		0.60	0.60	0.32	0.32
v/c Ratio	0.86		0.84	0.55	0.83	0.34
Control Delay	41.0		32.3	12.4	38.6	10.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	41.0		32.3	12.4	38.6	10.4
LOS	D		C	B	D	B
Approach Delay	41.0			21.0	30.4	
Approach LOS	D			C	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 80.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

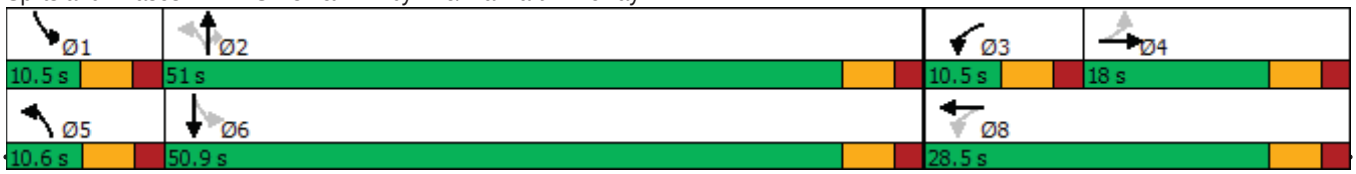
Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Future Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.898		0.365			0.306			0.092		
Satd. Flow (perm)	0	1559	0	680	1695	0	608	1987	1531	189	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			24				164		3	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	88	40	0	72	912	64	56	575	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		11.7		19.4	19.4		47.4	43.7	43.7	47.3	43.6	
Actuated g/C Ratio		0.14		0.24	0.24		0.58	0.53	0.53	0.57	0.53	
v/c Ratio		0.77		0.38	0.10		0.17	0.87	0.07	0.25	0.58	
Control Delay		49.3		31.7	15.1		7.8	29.8	0.2	9.8	18.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		49.3		31.7	15.1		7.8	29.8	0.2	9.8	18.0	
LOS		D		C	B		A	C	A	A	B	
Approach Delay		49.3			26.5			26.5			17.3	
Approach LOS		D			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 82.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 25.8 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	253	728	325	106	385	306
Future Volume (vph)	253	728	325	106	385	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.171	
Satd. Flow (perm)	1770	1583	1863	1583	319	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		635		139		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.79	0.88	0.83	0.76	0.66	0.68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	320	827	392	139	583	450
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	32.0	32.0	28.0	28.0	30.0	58.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	22.0	22.0	20.5	20.5	50.8	50.8
Actuated g/C Ratio	0.26	0.26	0.24	0.24	0.60	0.60
v/c Ratio	0.69	0.94	0.86	0.28	0.94	0.40
Control Delay	36.4	26.7	51.5	6.8	46.3	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	26.7	51.5	6.8	46.3	10.7
LOS	D	C	D	A	D	B
Approach Delay	29.4		39.8			30.8
Approach LOS	C		D			C

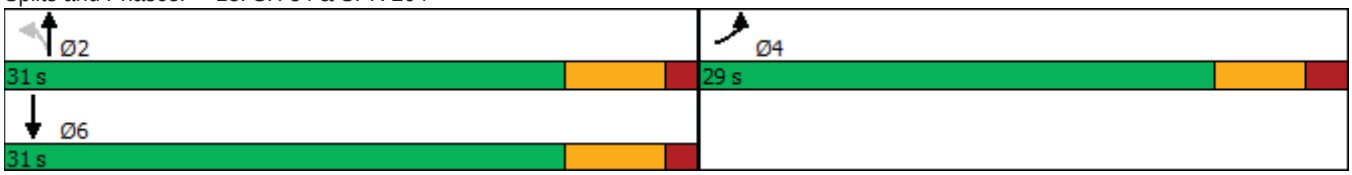
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 84	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 32.0	Intersection LOS: C
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	155	61	66	258	274	306
Future Volume (vph)	155	61	66	258	274	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1733	0	0	1839	1716	0
Flt Permitted	0.964			0.363		
Satd. Flow (perm)	1733	0	0	676	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	34				143	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	0	0	374	821	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	13.9			26.2	26.2	
Actuated g/C Ratio	0.27			0.50	0.50	
v/c Ratio	0.67			1.10	0.88	
Control Delay	21.9			101.7	25.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	21.9			101.7	25.7	
LOS	C			F	C	
Approach Delay	21.9			101.7	25.7	
Approach LOS	C			F	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 52.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 43.5	Intersection LOS: D
Intersection Capacity Utilization 77.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	202	1	350	0
Future Vol, veh/h	1	1	0	202	1	350	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	224	4	412	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	636	412	412	0	-	-	0
Stage 1	412	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-
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	442	640	1147	-	-	-	-
Stage 1	669	-	-	-	-	-	-
Stage 2	813	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	442	640	1147	-	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-	-
Stage 1	669	-	-	-	-	-	-
Stage 2	813	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12	0	
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1147	-	523	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	0	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Future Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						132						200
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	156	317	132	378	957	0	0	1076	256
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				14.5	14.5	14.5	15.0	56.5			35.2	35.2
Actuated g/C Ratio				0.17	0.17	0.17	0.18	0.68			0.42	0.42
v/c Ratio				0.56	0.55	0.34	0.61	0.40			0.72	0.33
Control Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
LOS				D	D	A	D	A			C	A
Approach Delay					32.8			15.6			20.3	
Approach LOS					C			B			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 83.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Future Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						285			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	165	262	156	0	0	0	0	1141	303	355	977	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.0	9.0	9.0					23.7	23.7	8.0	37.8	
Actuated g/C Ratio	0.15	0.15	0.15					0.41	0.41	0.14	0.65	
v/c Ratio	0.67	0.52	0.41					0.79	0.37	0.75	0.43	
Control Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
LOS	D	C	A					C	A	D	A	
Approach Delay		25.4						16.6			14.1	
Approach LOS		C						B			B	

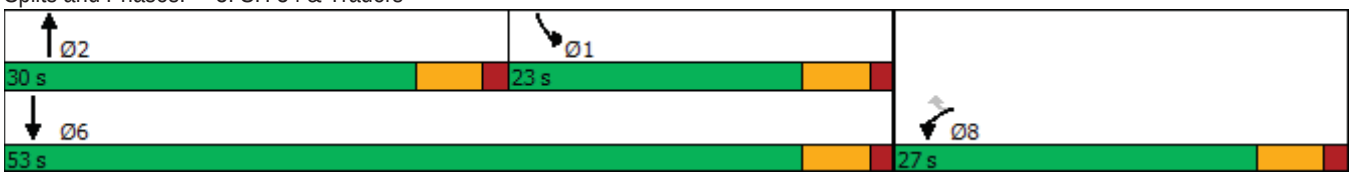
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	410	682	44	192	648
Future Volume (vph)	126	410	682	44	192	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		446	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	446	790	0	221	720
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.4	11.4	19.6		12.8	38.1
Actuated g/C Ratio	0.19	0.19	0.32		0.21	0.63
v/c Ratio	0.48	0.68	0.70		0.60	0.33
Control Delay	29.2	8.8	22.4		30.8	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	29.2	8.8	22.4		30.8	6.0
LOS	C	A	C		C	A
Approach Delay	14.1		22.4			11.8
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 60.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

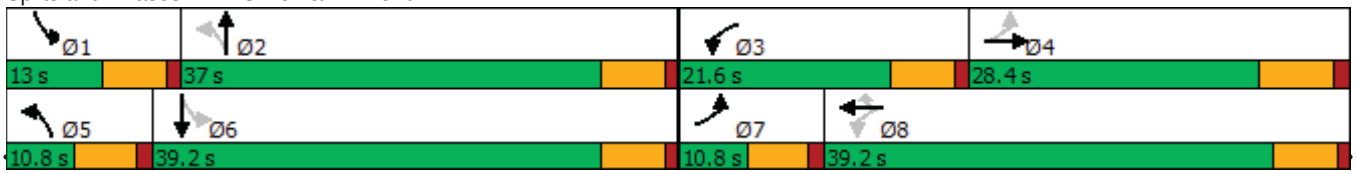
Splits and Phases: 3: SH 34 & Traders



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Future Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	1760	0	1770	1863	1583	1770	1824	0	1770	1848	0
Flt Permitted	0.198			0.431			0.178			0.129		
Satd. Flow (perm)	393	1760	0	803	1863	1583	332	1824	0	240	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				234		9			3	
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	194	0	389	622	245	16	538	0	176	602	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0		13.0	39.2	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8		5.8	5.8	
Act Effct Green (s)	23.7	17.7		39.9	33.8	33.8	34.9	29.9		41.6	38.9	
Actuated g/C Ratio	0.25	0.19		0.42	0.36	0.36	0.37	0.32		0.44	0.41	
v/c Ratio	0.18	0.55		0.79	0.94	0.34	0.08	0.92		0.79	0.79	
Control Delay	20.0	36.4		33.6	54.3	5.3	16.9	55.1		45.2	36.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	20.0	36.4		33.6	54.3	5.3	16.9	55.1		45.2	36.0	
LOS	B	D		C	D	A	B	E		D	D	
Approach Delay		34.1			38.4			54.0			38.1	
Approach LOS		C			D			D			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 100	
Actuated Cycle Length: 94.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	110	47	407	613	100
Future Vol, veh/h	20	110	47	407	613	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	74	73	92	88	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	149	64	442	697	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1347	777	697	0	-	0
Stage 1	777	-	-	-	-	-
Stage 2	570	-	-	-	-	-
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	167	397	899	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	397	899	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	35.8	1.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	899	-	298	-	-
HCM Lane V/C Ratio	0.072	-	0.633	-	-
HCM Control Delay (s)	9.3	-	35.8	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	4	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	70	338	38	89	558
Future Vol, veh/h	26	70	338	38	89	558
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	96	376	52	109	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1261	402	0	0	376	0
Stage 1	402	-	-	-	-	-
Stage 2	859	-	-	-	-	-
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	188	648	-	-	1182	-
Stage 1	676	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	648	-	-	1182	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	415	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1182	-
HCM Lane V/C Ratio	-	-	0.211	0.092	-
HCM Control Delay (s)	-	-	12.3	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	35	13	331	504	48
Future Vol, veh/h	31	35	13	331	504	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	64	20	368	646	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1082	674	646	0	-	0
Stage 1	674	-	-	-	-	-
Stage 2	408	-	-	-	-	-
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	241	455	939	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	455	939	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	939	-	614	-	-
HCM Lane V/C Ratio	0.021	-	0.168	-	-
HCM Control Delay (s)	8.9	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	39	301	83	46	438
Future Vol, veh/h	55	39	301	83	46	438
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	81	90	74	77	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	48	334	112	60	592

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1046	-	0	0	334	0
Stage 1	334	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	253	0	-	-	1225	-
Stage 1	725	0	-	-	-	-
Stage 2	486	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	-	-	-	1225	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	486	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	0.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	241	1225	-
HCM Lane V/C Ratio	-	-	0.265	0.049	-
HCM Control Delay (s)	-	-	25.2	8.1	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	1	0.2	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	36	37	450	433	50
Future Volume (vph)	27	36	37	450	433	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	1863	1833	0
Flt Permitted	0.986		0.281			
Satd. Flow (perm)	1660	0	523	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	80				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	64	469	583	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.8		32.2	34.1	28.3	
Actuated g/C Ratio	0.14		0.68	0.72	0.60	
v/c Ratio	0.36		0.13	0.35	0.53	
Control Delay	13.7		3.8	4.8	11.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.7		3.8	4.8	11.7	
LOS	B		A	A	B	
Approach Delay	13.7			4.6	11.7	
Approach LOS	B			A	B	

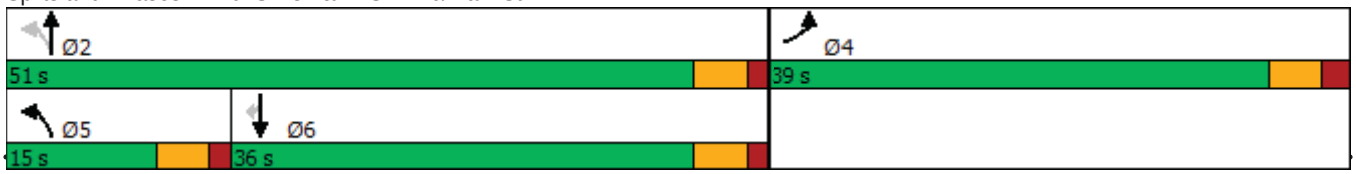
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 47.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	479	262	402	417	101
Future Volume (vph)	102	479	262	402	417	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1641	0	2006	1863	1863	1583
Flt Permitted	0.991		0.210			
Satd. Flow (perm)	1641	0	443	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	288					87
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	623	0	288	503	448	128
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	22.7		37.9	37.9	22.3	22.3
Actuated g/C Ratio	0.32		0.53	0.53	0.31	0.31
v/c Ratio	0.87		0.63	0.51	0.77	0.23
Control Delay	26.7		18.3	14.6	33.5	9.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.7		18.3	14.6	33.5	9.5
LOS	C		B	B	C	A
Approach Delay	26.7			15.9	28.2	
Approach LOS	C			B	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 71.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

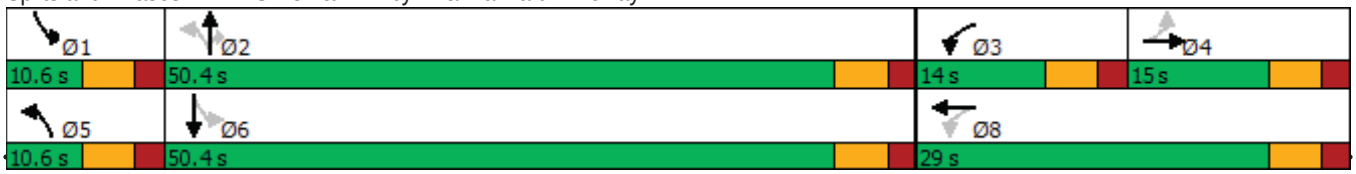


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Future Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1699	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.898		0.400			0.107			0.299		
Satd. Flow (perm)	0	1581	0	745	1699	0	213	1987	1531	613	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			56				164		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	212	96	0	52	545	148	48	795	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.2		23.7	23.7		40.2	37.5	37.5	40.2	37.5	
Actuated g/C Ratio		0.12		0.30	0.30		0.51	0.48	0.48	0.51	0.48	
v/c Ratio		0.70		0.62	0.17		0.23	0.57	0.18	0.12	0.89	
Control Delay		49.2		35.7	13.9		9.8	17.7	2.3	7.9	33.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		49.2		35.7	13.9		9.8	17.7	2.3	7.9	33.0	
LOS		D		D	B		A	B	A	A	C	
Approach Delay		49.3			28.9			14.1			31.5	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 78.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15

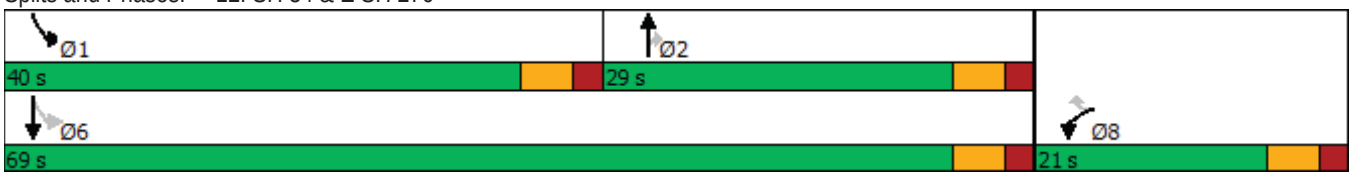
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	439	271	193	778	199
Future Volume (vph)	102	439	271	193	778	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.278	
Satd. Flow (perm)	1770	1583	1863	1583	518	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		477		219		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.71	0.92	0.90	0.88	0.94	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	477	301	219	828	219
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	21.0	21.0	29.0	29.0	40.0	69.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	11.5	11.5	17.8	17.8	55.8	55.8
Actuated g/C Ratio	0.15	0.15	0.23	0.23	0.71	0.71
v/c Ratio	0.56	0.75	0.71	0.41	0.94	0.17
Control Delay	42.0	11.6	39.1	6.6	34.0	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	11.6	39.1	6.6	34.0	4.3
LOS	D	B	D	A	C	A
Approach Delay	18.7		25.4			27.8
Approach LOS	B		C			C

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 78.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 76.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	83	69	50	359	218	53
Future Volume (vph)	83	69	50	359	218	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1702	0	0	1852	1812	0
Flt Permitted	0.974			0.920		
Satd. Flow (perm)	1702	0	0	1714	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	88				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	0	514	355	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	6.6			21.7	21.7	
Actuated g/C Ratio	0.18			0.60	0.60	
v/c Ratio	0.50			0.50	0.32	
Control Delay	13.7			8.4	5.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	13.7			8.4	5.7	
LOS	B			A	A	
Approach Delay	13.7			8.4	5.7	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 36	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	4	1	3	355	220	1
Future Vol, veh/h	4	1	3	355	220	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	4	8	408	282	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	708	284	286	0	-	0
Stage 1	284	-	-	-	-	-
Stage 2	424	-	-	-	-	-
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	401	755	1276	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	398	755	1276	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1276	-	472	-	-
HCM Lane V/C Ratio	0.006	-	0.025	-	-
HCM Control Delay (s)	7.8	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

APPENDIX B2: TRAFFIC ANALYSIS PROPOSED

SH 34 FEASIBILITY STUDY

Proposed Conditions Traffic Analysis Report

August 2019

Table of Contents

1. Introduction 1
2. Data Projections 1
3. Capacity Analysis 1
4. Conclusions 20

List of Tables

Table 1 Level of Service (LOS) Criteria for Intersections 1
Table 2 Future No-Build Scenario Delay and LOS 2
Table 3 Future Short-Term Improvements Scenario Delay and LOS 11
Table 4 Future Long-Term Improvements Scenario Delay and LOS 16

List of Figures

Figure 1 2038 Future No - Build Scenario - Volumes and LOS 3
Figure 2 2048 Future No - Build Scenario - Volumes and LOS 4
Figure 3 Short – Term Improvements at SH 34 & FM 1570 6
Figure 4 Short – Term Improvements at SH 34 & FM 1903 7
Figure 5 Short – Term Improvements at SH 34 & FM 2101 8
Figure 6 Short – Term Improvements at SH 34 & E. SH 276 9
Figure 7 Short – Term Improvements at SH 34 & SPR 264 10
Figure 8 2018 Future Short – Term Improvements Scenario - Volumes and LOS 12
Figure 9 2038 Future Short – Term Improvements Scenario - Volumes and LOS 13
Figure 10 2048 Future Short – Term Improvements Scenario - Volumes and LOS 14
Figure 11 2018 Future Long – Term Improvements Scenario - Volumes and LOS 17
Figure 12 2038 Future Long – Term Improvements Scenario - Volumes and LOS 18
Figure 13 2018 Future Long – Term Improvements Scenario - Volumes and LOS 19

Appendices

Appendix A Synchro Reports
Appendix B Transportation Planning and Programming (TPP) Data

1. INTRODUCTION

Purpose of this study is to evaluate the proposed traffic operations during the future proposed conditions and to document roadway and intersection operations for SH 34 intersections. The analysis was conducted for the years of 2038 and 2048 with no build conditions, short-term improvements and long-term improvements.

2. DATA PROJECTIONS

A 24-hour classification counts were collected at twenty (20) locations in April 2018. In addition, turning movement counts were collected at fourteen (14) intersections along SH 34. The peak hours were identified using the hourly data contained in the daily traffic counts. Transportation Planning and Programming (TPP) division of TxDOT provided the Annual Daily Traffic (ADT) volumes and turning movement daily volumes at study intersections. Refer Appendix A for TPP volume data. Data from TPP was for the years of 2018, 2038 and 2048. Growth rate was calculated for the period of 2018 – 2038 and 2018 – 2048. Growth rate was calculated to be around 2% for both the time periods.

Future volumes were for the proposed years of 2038 and 2048 were projected by applying 2% growth rate to the existing traffic counts from data collection. Figure 1 and Figure 2 shows the volumes at each study intersection for the years of 2038 and 2048 respectively.

3. CAPACITY ANALYSIS

Intersection Level of Service (LOS) analyses were performed in accordance with the procedures set forth and recommended by the *Highway Capacity Manual (HCM)* methodologies for evaluation of signalized and unsignalized intersections. Traffic analysis software Synchro was used to evaluate the operation of the study area intersections. The LOS criteria for signalized and unsignalized intersections are listed in Table 1. LOS 'A' is considered as best, free-flow condition and LOS 'F' is considered failing conditions. Generally, LOS 'D' is considered acceptable during the peak hours.

Table 1 Level of Service (LOS) Criteria for Intersections

LOS	Signalized Intersection	Unsignalized Intersections
	Delay (sec/veh)	Delay (sec/veh)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Capacity analysis was conducted for different future scenarios: future no-build, future short-term improvements and future long-term improvements scenarios.

Future No-Build Scenario

During the future no-build conditions, the study intersections were analysed for the future projected traffic without any improvements to the existing roadway. Future years of 2038 and 2048 were analysed for both AM and PM peak hours. Table-2 shows the delay in seconds per vehicle and Level of Service (LOS) of each study intersection during AM and PM peak hours.

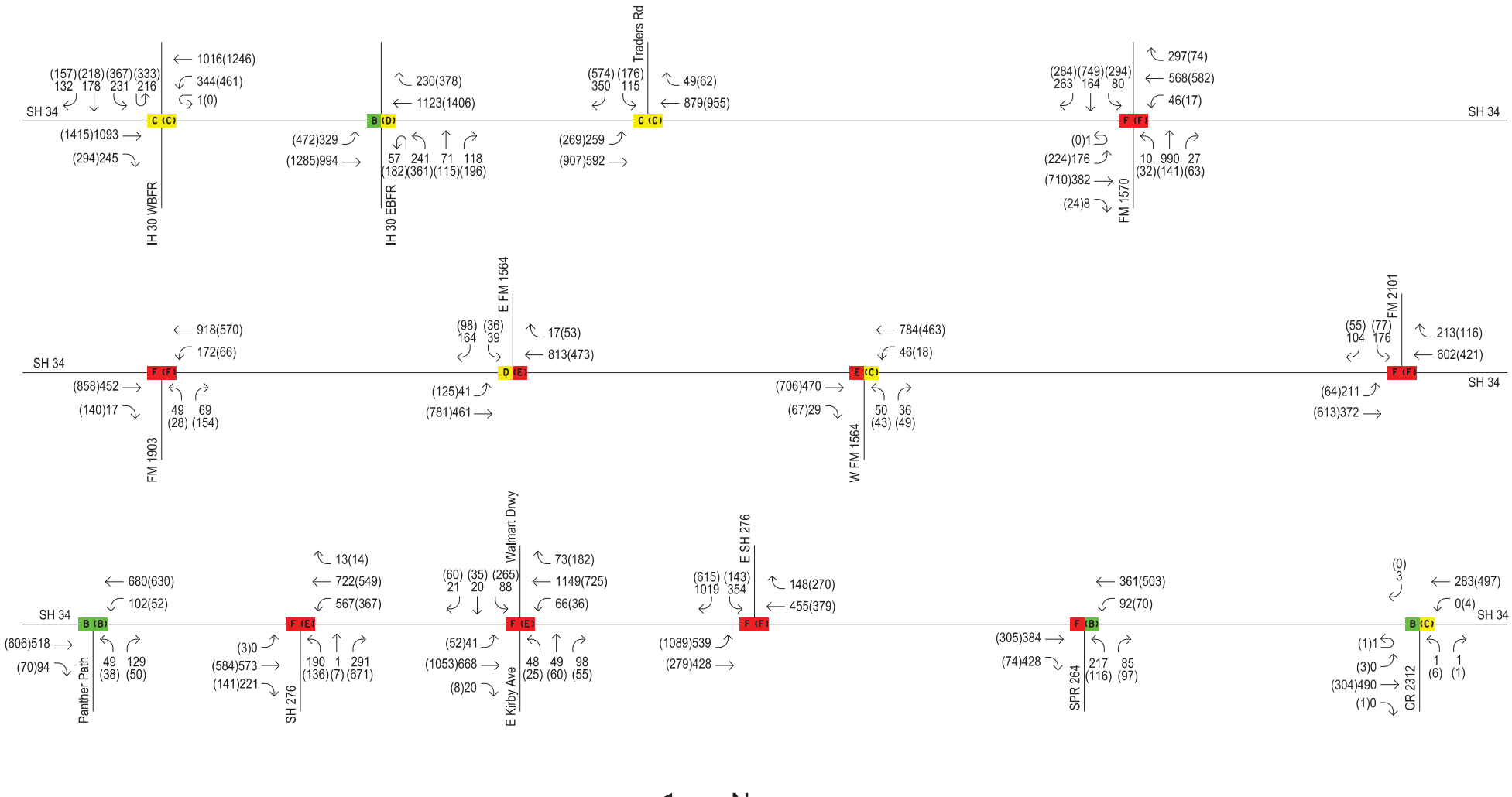
Table-2 Future No-Build Scenario Delay and LOS

Intersection	Year 2038				Year 2048			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
SH 34 at IH 30 WBFR	C	21.6	C	31	C	25.5	D	44.7
SH 34 at IH 30 EBFR	B	18.6	D	43.6	C	22.6	E	74.1
SH 34 at Traders Road	C	20.6	C	27.3	C	25	D	52.2
SH 34 at FM 1570	F	227.7	F	127.1	F	296.8	F	203
SH 34 at FM 1903*	F	184.8	F	350.8	F	578	F	793.8
SH 34 at E FM 1564*	D	28.9	E	36.5	F	105.6	F	180.4
SH 34 at W FM 1564*	E	37.3	C	23.9	F	98.2	E	48.9
SH 34 at FM 2101*	F	3045.5	F	77.6	F	6709.9	F	196.9
SH 34 at Panther Path	B	17.2	B	12.4	C	25.6	B	15.7
SH 34 at SH 276	F	90.7	E	72	F	136.4	F	113.5
SH 34 at E Kirby Avenue / Walmart Driveway	F	85.7	E	74.1	F	128.3	F	113.7
SH 34 at E SH 276	F	128.4	F	104.8	F	187.2	F	153
SH 34 at SPR 264	F	682.3	B	16.1	F	860.4	C	24
SH 34 at CR 2312*	B	14.4	C	17	C	16.2	C	18.1

Notes: * denotes unsignalized intersection. Delay is measured in seconds per vehicle

LEGEND: LEVEL OF SERVICE		
A, B	C, D	E, F

During the AM peak hour in the year 2038 and 2048, 8 and 9 of the study intersections respectively were expected to operate at LOS E or F. During the PM peak hour in the year 2038 and 2048, 7 and 9 of the study intersections respectively were expected to operate at LOS E or F. The intersection of SH 34 and FM 2101 was observed to operate at higher delay compared to any other intersection; SH 34 and FM 2101 intersection is a T-intersection with stop control on FM 2101. There was a high volume turning left from FM 2101 on to SH 34, hence the delay was found to be higher during the AM peak hour. Figure 1 and Figure 2 show the AM and PM turning movement counts and LOS at each study intersection for the year 2038 and 2048 respectively.



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

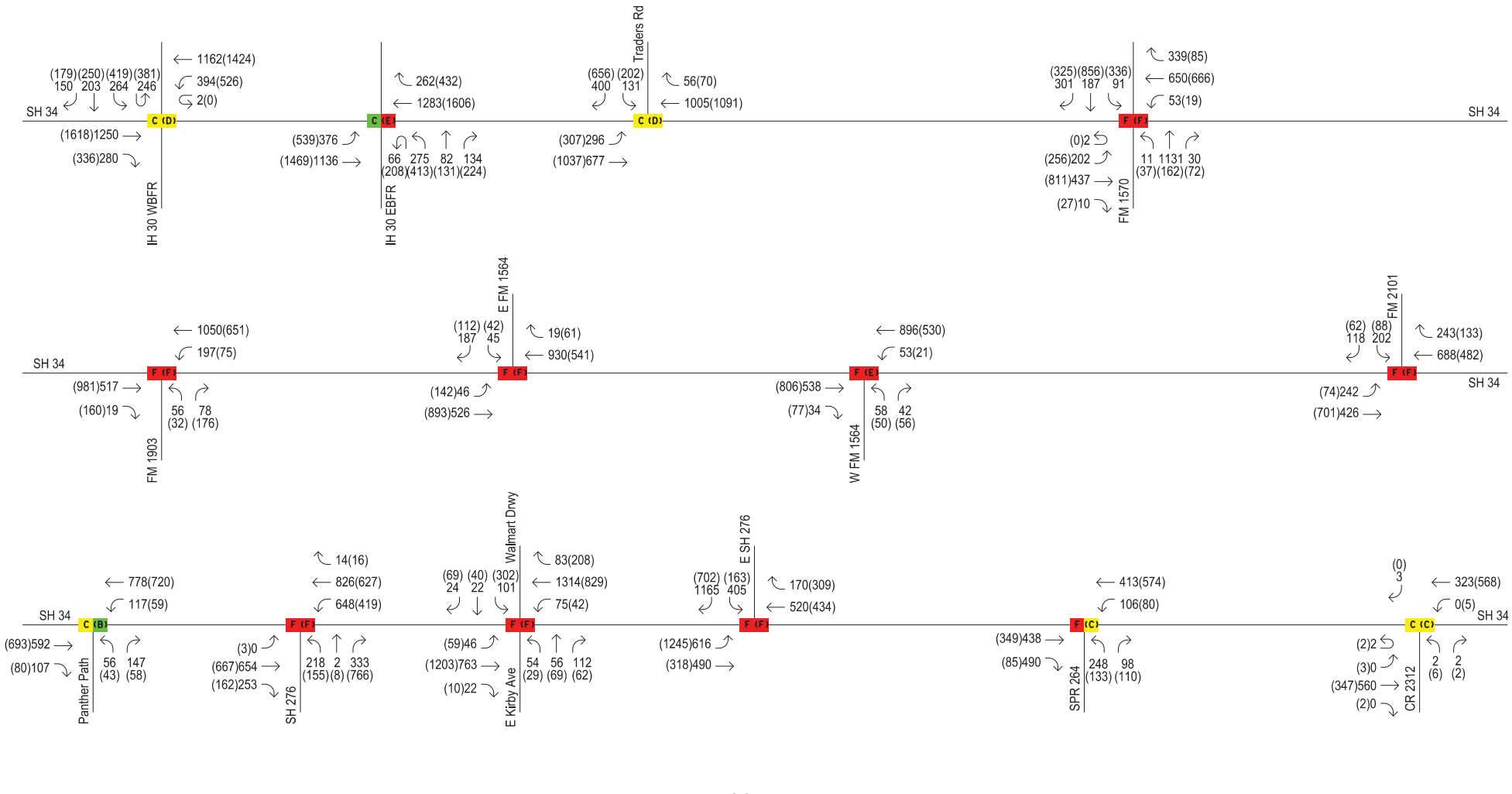
SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2038 FUTURE NO-BUILD SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 1
DATE: AUG 2019	SHEET NO. 3

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:08:26 PM



PROJECT NAME:

SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2048 FUTURE NO-BUILD SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 2
DATE: AUG 2019	SHEET NO. 4

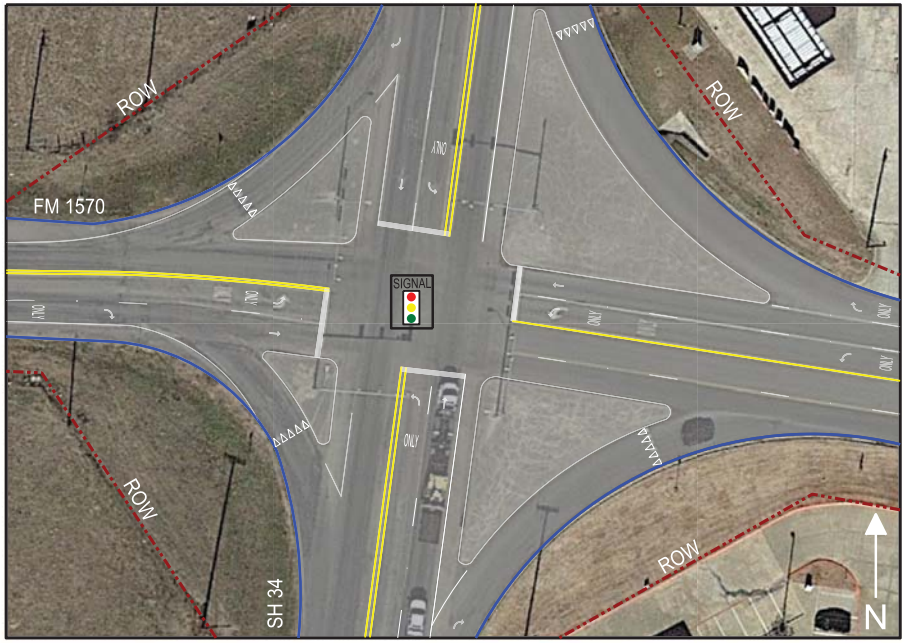
GUNDA CORPORATION
P:\2018 Projects\18008-02 TxDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:08:41 PM

Future Short-Term Improvements Scenario

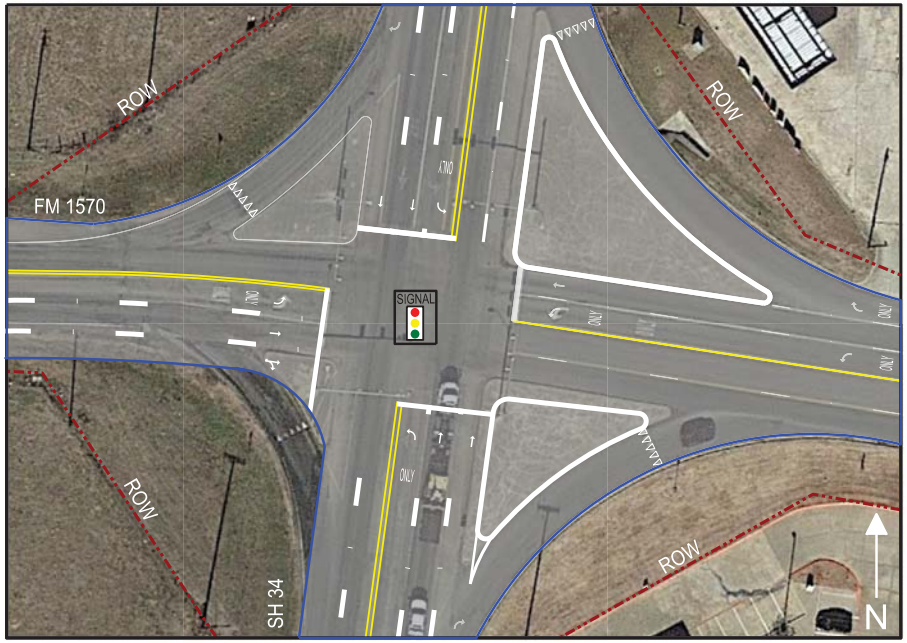
During the future short-term improvements scenario, the study intersections were analysed for the future projected traffic with short-term improvements to the existing roadway. Short-term improvements were proposed at five (5) intersections and are noted below.

- SH 34 and FM 1570
    - Add northbound through lane
    - Add southbound through lane
    - Remove island on eastbound approach and re-stipe to provide an additional shared through/right lane
- SH 34 and FM 1903
    - Add eastbound right turn lane
    - Install new traffic signal
- SH 34 and FM 2101
    - Install new traffic signal
- SH 34 and E. SH 276
    - Modify existing traffic signal per CSJ 290-07-001 (Quinlan by-pass)
- SH 34 and SPR 264
    - Add northbound left turn lane
    - Modify traffic signal to accommodate the proposed left turn lane.

The proposed short-term improvements are shown in Figures 3-7. Existing conditions and future years of 2038 and 2048 were analysed for both AM and PM peak hours. Table-3 shows the delay in seconds per vehicle and Level of Service (LOS) of each study intersection during AM and PM peak hours.



EXISTING LANES



PROPOSED LANES

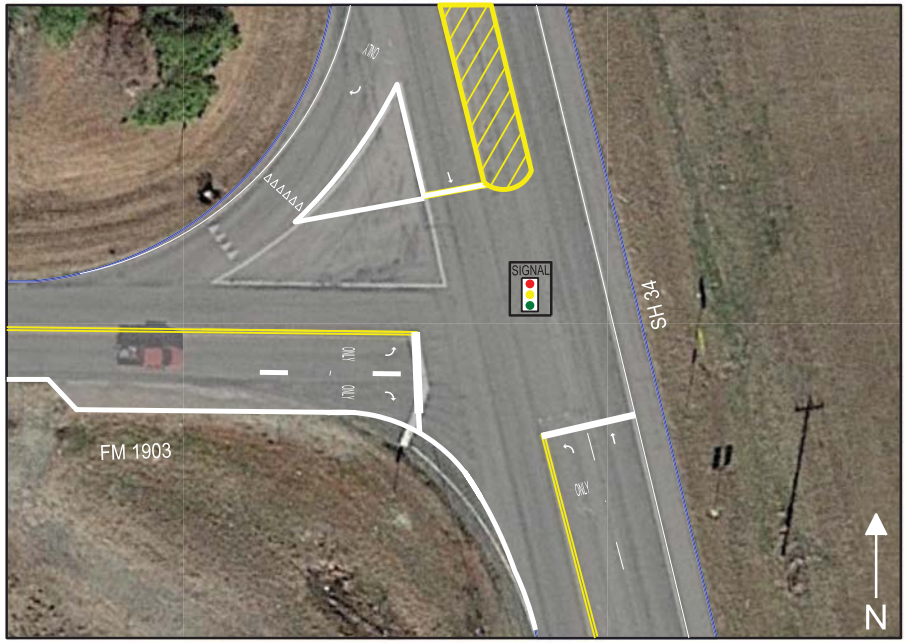
PROPOSED IMPROVEMENTS NOTES:

1. ADD NORTHBOUND THRU LANE
2. ADD SOUTHBOUND THRU LANE
3. REMOVE ISLAND ON EASTBOUND APPROACH AND RE-STRIPE

PROJECT NAME: SH 34 FEASIBILITY STUDY, HUNT COUNTY	SHEET TITLE: SHORT - TERM IMPROVEMENTS AT SH 34 & FM 1570	
	GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 3
	DATE: AUG 2019	SHEET NO. 6

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-01 Improvements.dgn
8/20/2019 4:15:03 PM

EXISTING LANES



PROPOSED LANES

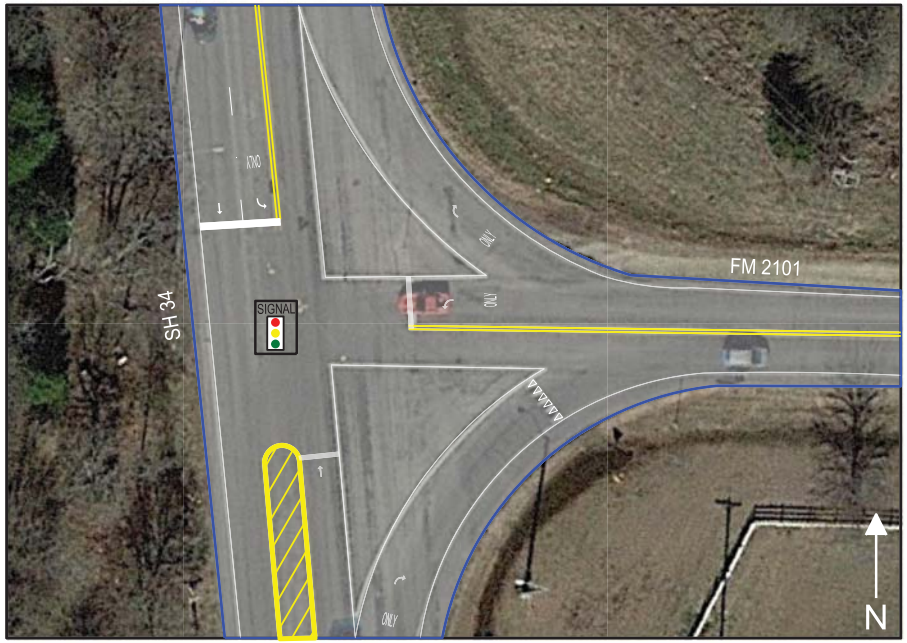
PROPOSED IMPROVEMENTS NOTES:

1. ADD EASTBOUND RIGHT TURN LANE
2. INSTALL NEW TRAFFIC SIGNAL

PROJECT NAME: SH 34 FEASIBILITY STUDY, HUNT COUNTY	SHEET TITLE: SHORT - TERM IMPROVEMENTS AT SH 34 & FM 1903	
	GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 4
	DATE: AUG 2019	SHEET NO. 7

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-01 Improvements.dgn
8/20/2019 4:15:21 PM

EXISTING LANES



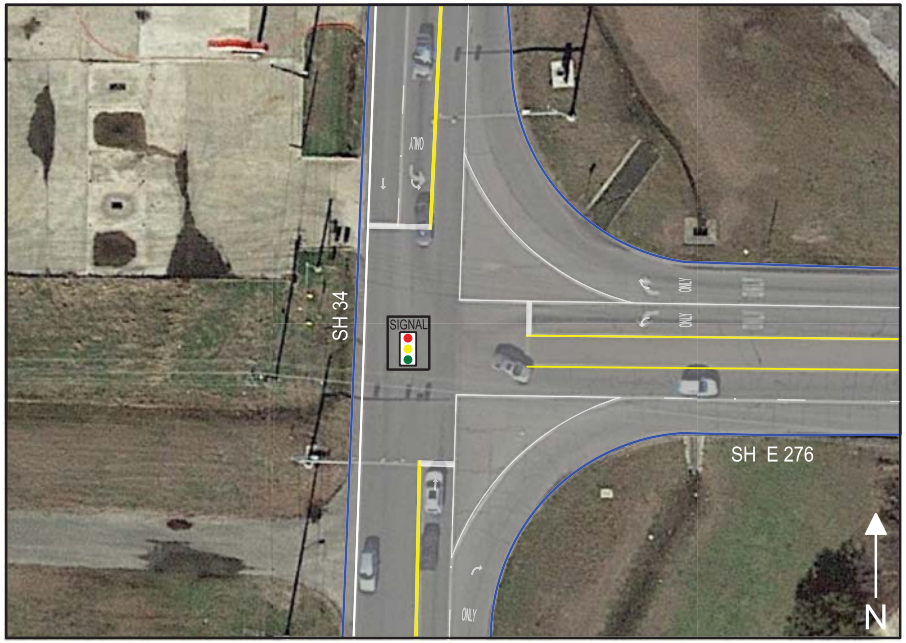
PROPOSED LANES

PROPOSED IMPROVEMENTS NOTES:

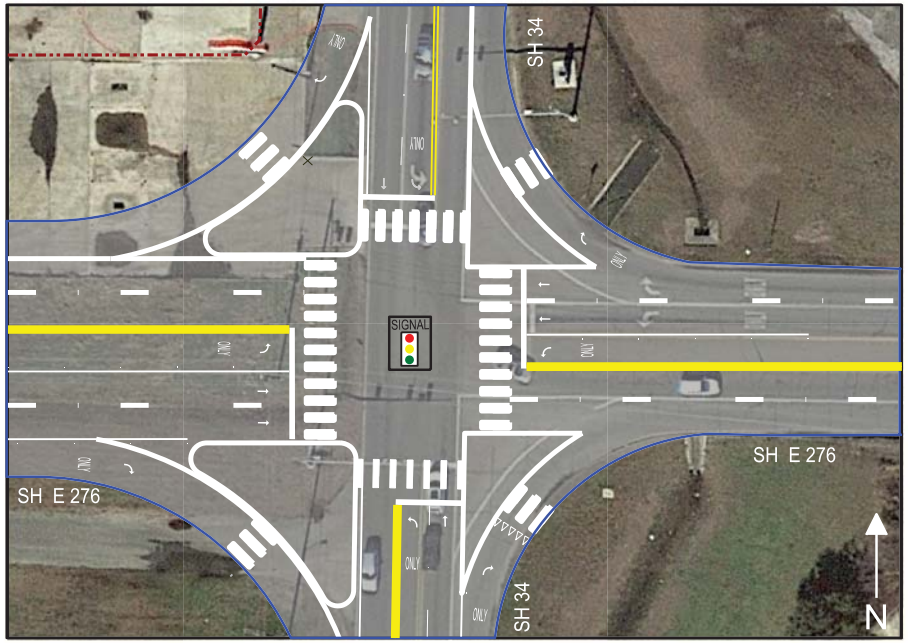
1. INSTALL NEW TRAFFIC SIGNAL

	PROJECT NAME: **SH 34 FEASIBILITY STUDY, HUNT COUNTY**	SHEET TITLE: **SHORT - TERM IMPROVEMENTS AT SH 34 & FM 2101**
		GCI PROJ. NO.: 18008-02 / FIGURE NO. FIGURE 5
		DATE: AUG 2019 / SHEET NO. 8

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-01 Improvements.dgn
8/20/2019 4:15:36 PM



EXISTING LANES



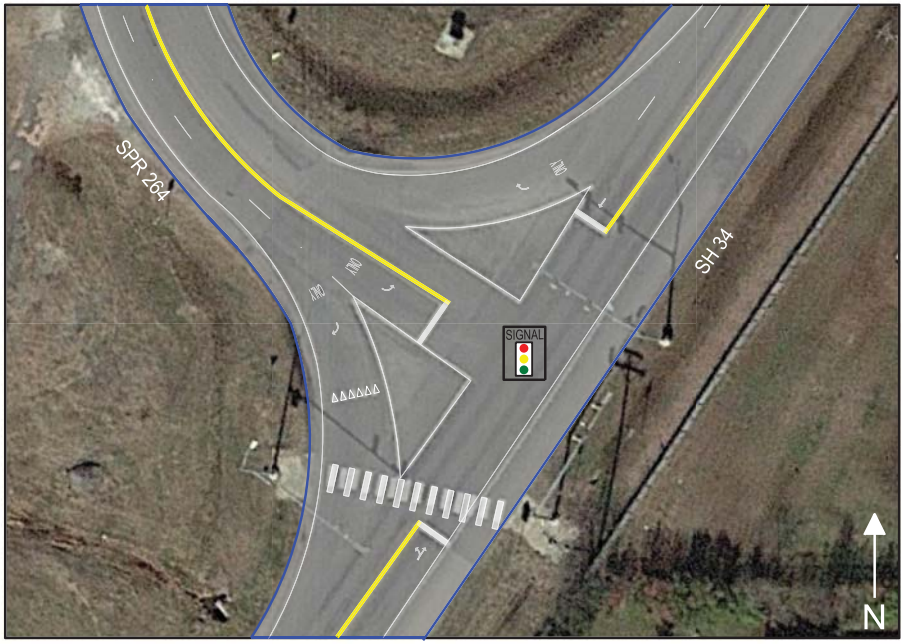
PROPOSED LANES

PROPOSED IMPROVEMENTS NOTES:

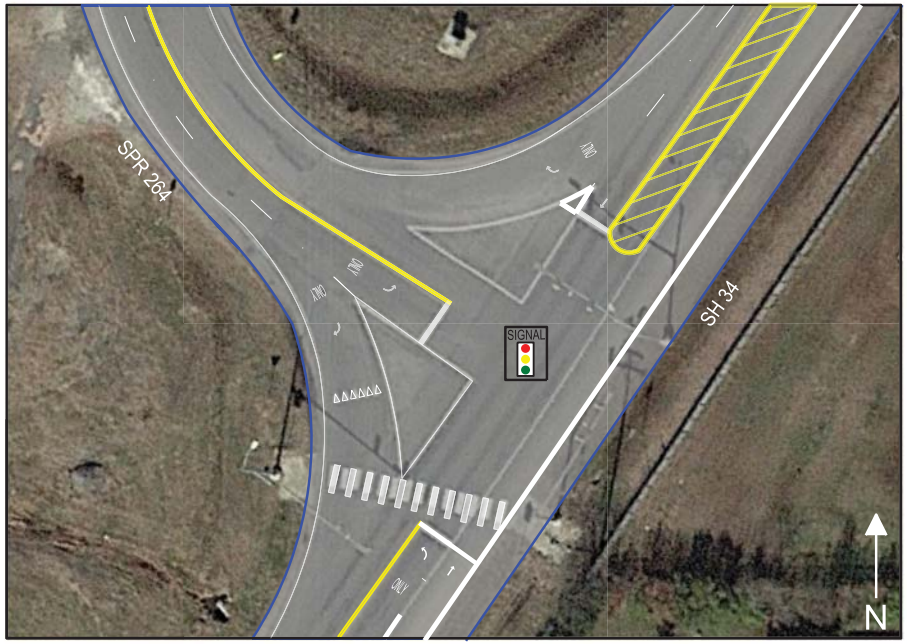
1. IMPROVEMENTS ARE BEING PROPOSED ON 1290-07-001 (QUINLAN BY-PASS)

	PROJECT NAME: **SH 34 FEASIBILITY STUDY, HUNT COUNTY**	SHEET TITLE: **SHORT - TERM IMPROVEMENTS AT SH 34 & E. SH 276**
		GCI PROJ. NO.: 18008-02 / FIGURE NO. FIGURE 6
		DATE: AUG 2019 / SHEET NO. 9

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-01 Improvements.dgn
8/20/2019 4:15:49 PM



EXISTING LANES



PROPOSED LANES

PROPOSED IMPROVEMENTS NOTES:

1. ADD NORTHBOUND LEFT TURN LANE
2. MODIFY TRAFFIC SIGNAL

PROJECT NAME: SH 34 FEASIBILITY STUDY, HUNT COUNTY	SHEET TITLE: SHORT - TERM IMPROVEMENTS AT SH 34 & SPR 264	
	GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 7
	DATE: AUG 2019	SHEET NO. 10

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-01 Improvements.dgn
8/20/2019 4:16:02 PM

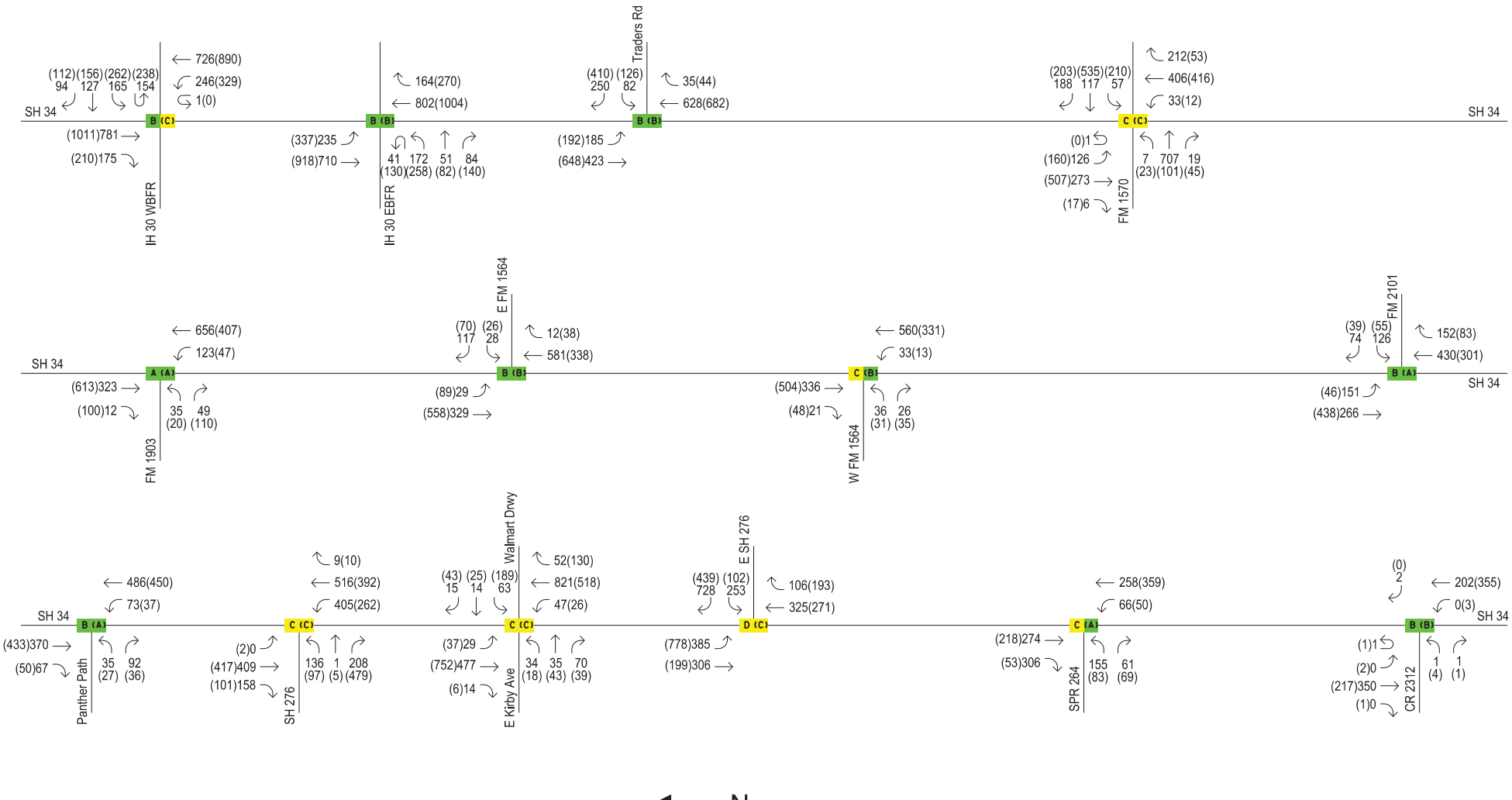
Table-3 Future Short-Term Improvements Scenario Delay and LOS

Intersection	Existing Conditions				Year 2038				Year 2048			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
SH 34 at IH 30 WBFR	B	16.7	C	20.7	C	21.6	C	31	C	25.5	D	44.7
SH 34 at IH 30 EBFR	B	14.9	B	17.1	B	18.6	D	43.6	C	22.6	D	41.4
SH 34 at Traders Road	B	15.7	B	16	C	20.6	C	27.3	C	25	D	52.2
SH 34 at FM 1570	C	27.2	C	24.2	D	43.5	D	54.8	D	51.4	E	62.7
SH 34 at FM 1903*	A	6.7	A	9.9	B	11.1	B	18	B	14.3	D	43.1
SH 34 at E FM 1564*	B	14.3	B	12.3	D	28.9	E	36.5	F	105.6	F	180.4
SH 34 at W FM 1564*	C	16	B	12	E	37.3	C	23.9	F	98.2	E	48.9
SH 34 at FM 2101*	B	16.8	A	7	D	49	B	10.2	F	85.1	B	12.2
SH 34 at Panther Path	B	11.8	A	8.8	B	17.2	B	12.4	C	25.6	B	15.7
SH 34 at SH 276	C	28	C	22.8	F	84.4	E	65.6	F	128.2	F	110.9
SH 34 at E Kirby Avenue / Walmart Driveway	C	25.8	C	26.1	D	53	E	68.4	F	85.5	F	88.7
SH 34 at E SH 276	D	47.3	C	33.8	F	122.1	E	63.4	F	239.2	F	134.7
SH 34 at SPR 264	C	23.4	A	7.9	E	65.1	B	12.3	F	120.8	B	15.6
SH 34 at CR 2312*	B	12	B	12.8	B	14.4	C	17	C	16.2	C	18.1

Notes: * denotes unsignalized intersection. Delay is measured in seconds per vehicle

LEGEND: LEVEL OF SERVICE		
A, B	C, D	E, F

With the short-term improvements, all the study intersections in the existing conditions were found to operate at LOS D or better both during both AM and PM peak hours. During the AM peak hour in the year 2038 and 2048, 4 and 7 of the study intersections respectively were expected to operate at LOS E or F. During the PM peak hour in the year 2038 and 2048, 4 and 6 of the study intersections respectively were expected to operate at LOS E or F. Figure 8, Figure 9 and Figure 10 show the AM and PM turning movement counts and LOS at each study intersection for the existing conditions, year 2038 and 2048 respectively.



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

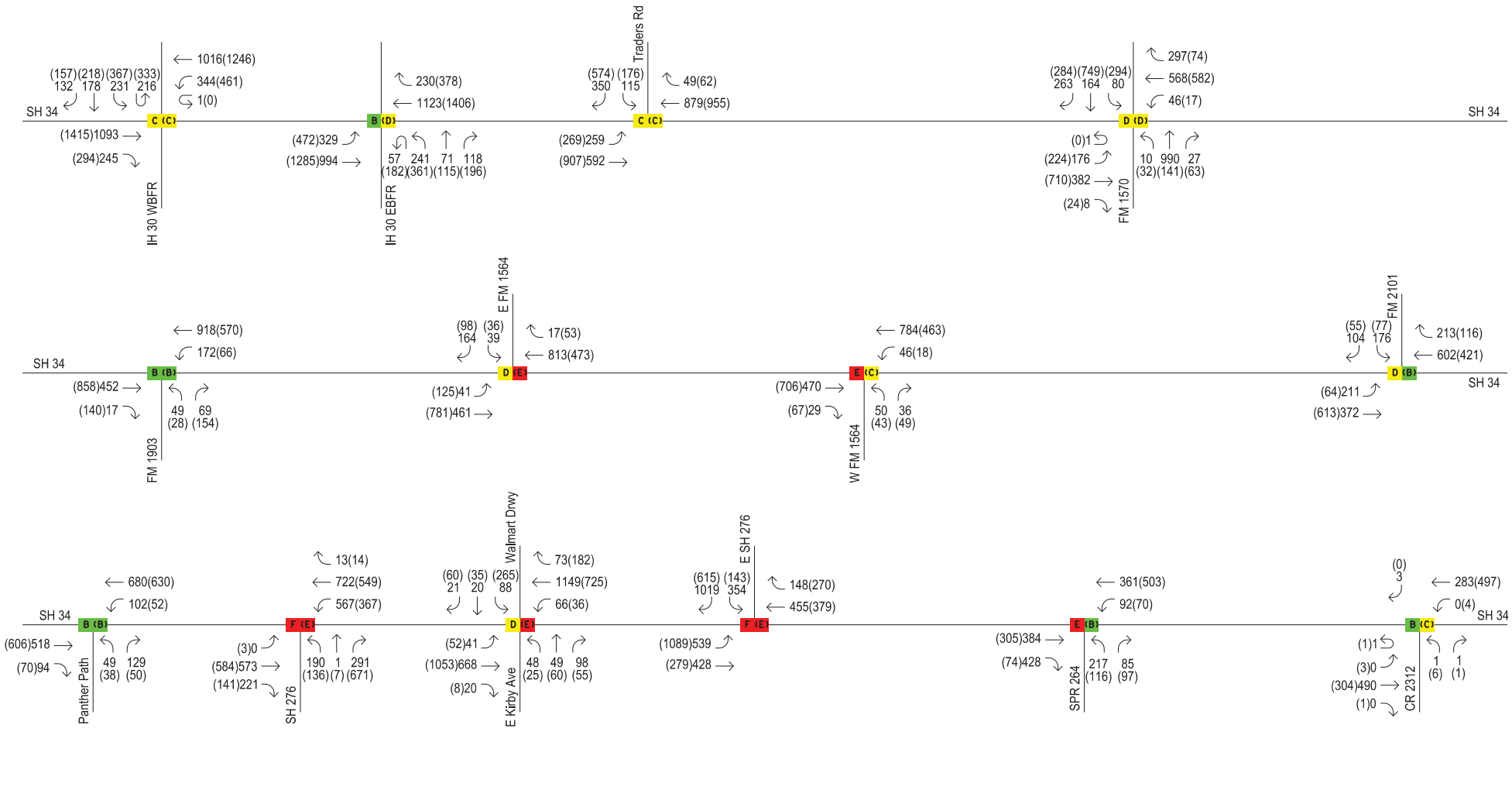
SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2018 FUTURE SHORT - TERM IMPROVEMENTS SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 8
DATE: AUG 2019	SHEET NO. 12

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:08:56 PM



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

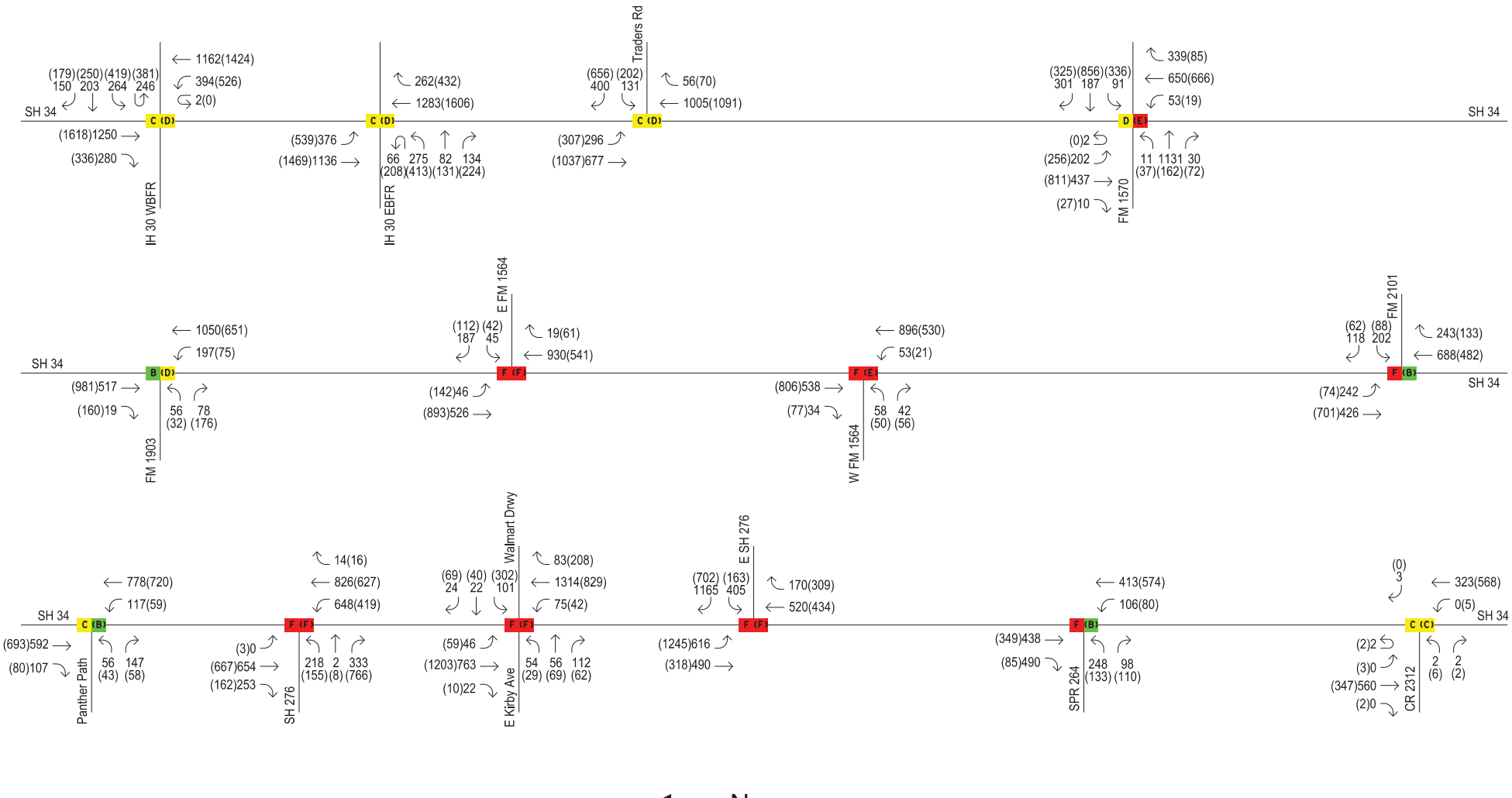
SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2038 FUTURE SHORT - TERM IMPROVEMENTS SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 9
DATE: AUG 2019	SHEET NO. 13

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:09:06 PM



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2048 FUTURE SHORT - TERM IMPROVEMENTS SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 10
DATE: AUG 2019	SHEET NO. 14

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:09:17 PM

Future Long-Term Improvements Scenario

During the future long-term improvements scenario, the study intersections were analysed for the future projected traffic with long-term improvements to the existing roadway. SH 34 is a four-lane two-way traffic highway north of Traders Road, after Traders Road SH 34 is a two-lane two-way highway with or without two-way left turn lane in the centre. The long-term improvements plan proposes to widen the highway to a four-lane undivided highway with two-way left turn lane till SPR 264 and four lane divided highway south of SPR 264. The improvements also included the following,

- SH 34 and SH 276
    - Add eastbound right turn lane by 2048
- SH 34 and E SH 276
    - Add 2nd westbound left turn lane by 2048
    - Add exclusive westbound right turn lane by 2048
    - Add 2nd southbound left turn lane by 2038
    - Add acceleration lane for northbound right turn lane by 2048

Future years of 2038 and 2048 were analysed for both AM and PM peak hours. Existing volumes were also used to check how the existing conditions would be with long term improvements. Table-4 shows the delay in seconds per vehicle and Level of Service (LOS) of each study intersection during AM and PM peak hours.

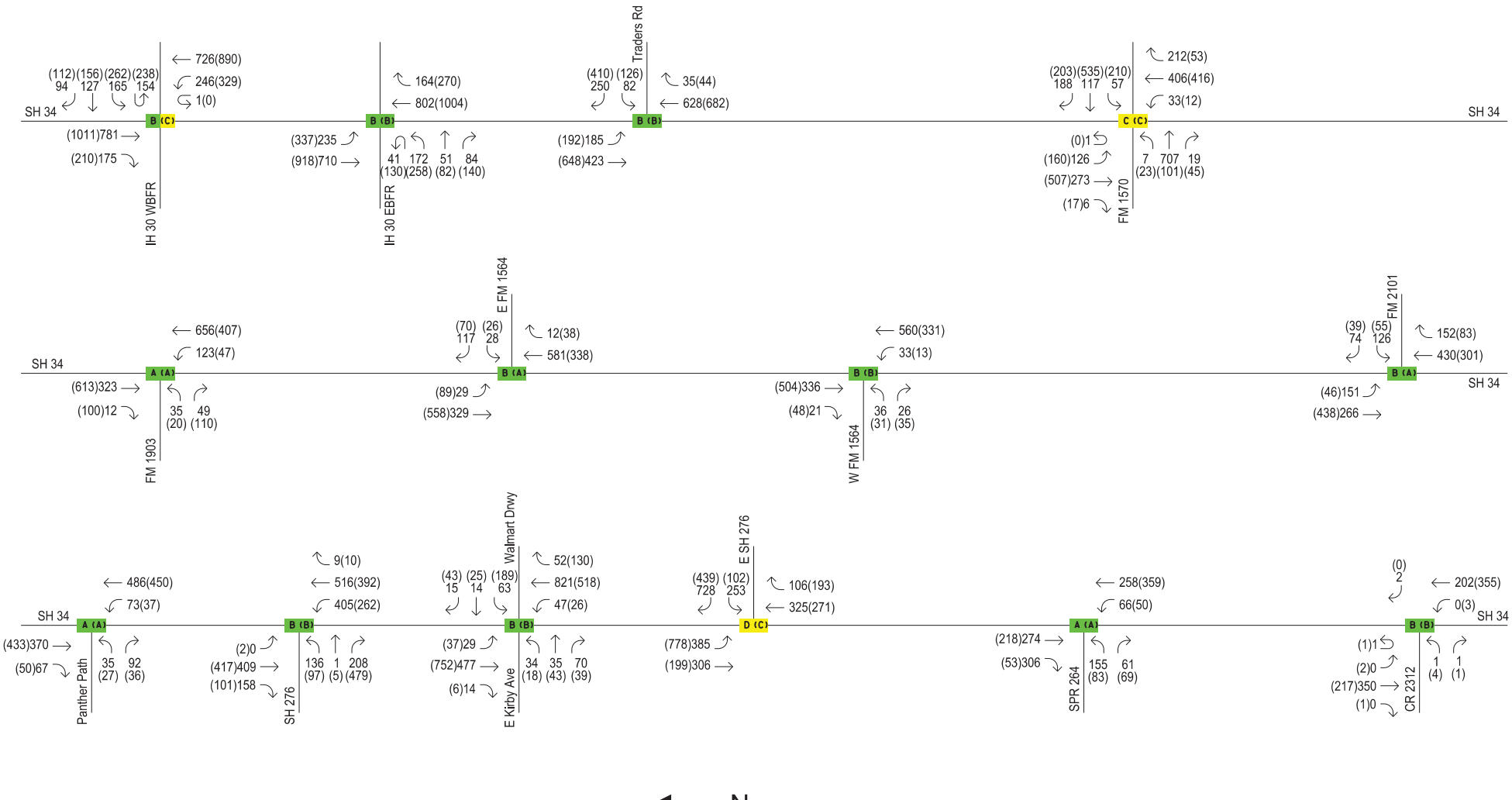
Table-4 Future Long-Term Improvements Scenario Delay and LOS

Intersection	Existing Conditions				Year 2038				Year 2048			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
SH 34 at IH 30 WBFR	B	16.7	C	20.7	C	21.6	C	31	C	25.5	D	44.7
SH 34 at IH 30 EBFR	B	14.9	B	17.1	B	18.6	D	43.6	C	22.6	D	40.9
SH 34 at Traders Road	B	15.7	B	16	C	20.6	C	27.3	C	25	D	52.2
SH 34 at FM 1570	C	27.2	C	24.2	D	43.5	D	54.8	D	46.5	D	53.8
SH 34 at FM 1903*	A	5.3	A	6.7	A	6.4	A	9.2	A	7.6	B	11.5
SH 34 at E FM 1564*	B	10.8	A	9.9	B	14	C	17.6	C	17.9	D	32.7
SH 34 at W FM 1564*	B	12.4	B	10.9	C	19.9	C	18.4	D	29.5	D	30
SH 34 at FM 2101*	B	13.5	A	5.8	C	30.1	A	7.2	D	53.9	A	7.7
SH 34 at Panther Path	A	8.7	A	6.8	B	11.3	A	7.7	B	12.7	A	7.8
SH 34 at SH 276	B	18.9	B	17.6	D	50.5	D	39.6	C	24.6	C	28.8
SH 34 at E Kirby Avenue / Walmart Driveway	B	17.5	B	18.3	C	22.3	C	25.7	C	30.8	D	38.5
SH 34 at E SH 276	D	47.3	C	33.6	D	37	D	41.3	D	48.3	D	47.5
SH 34 at SPR 264	A	9.4	A	6.7	B	18.3	A	8.7	C	25	A	10
SH 34 at CR 2312*	B	11.1	B	10.7	B	12.8	B	12	B	14.2	B	12.2

Notes: * denotes unsignalized intersection. Delay is measured in seconds per vehicle

LEGEND: LEVEL OF SERVICE		
A, B	C, D	E, F

With the long-term improvements, all the study intersections were found to operate at LOS D or better both during AM and PM peak hours. Figure 11, Figure 12 and Figure 13 show the AM and PM turning movement counts and LOS at each study intersection for the existing conditions, year 2038 and 2048 respectively.



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

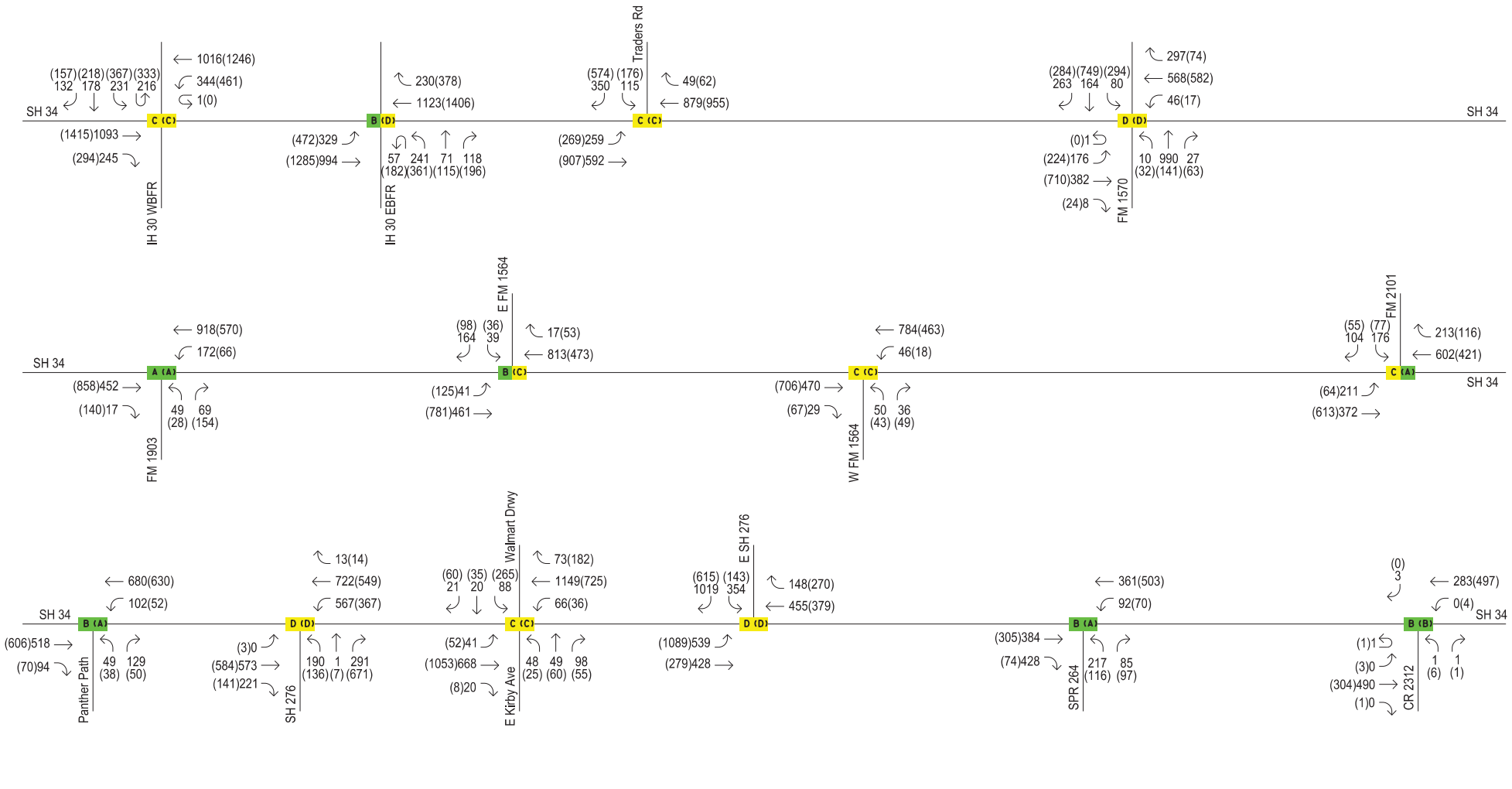
SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2018 FUTURE LONG - TERM IMPROVEMENTS SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 11
DATE: AUG 2019	SHEET NO. 17

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:09:30 PM



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

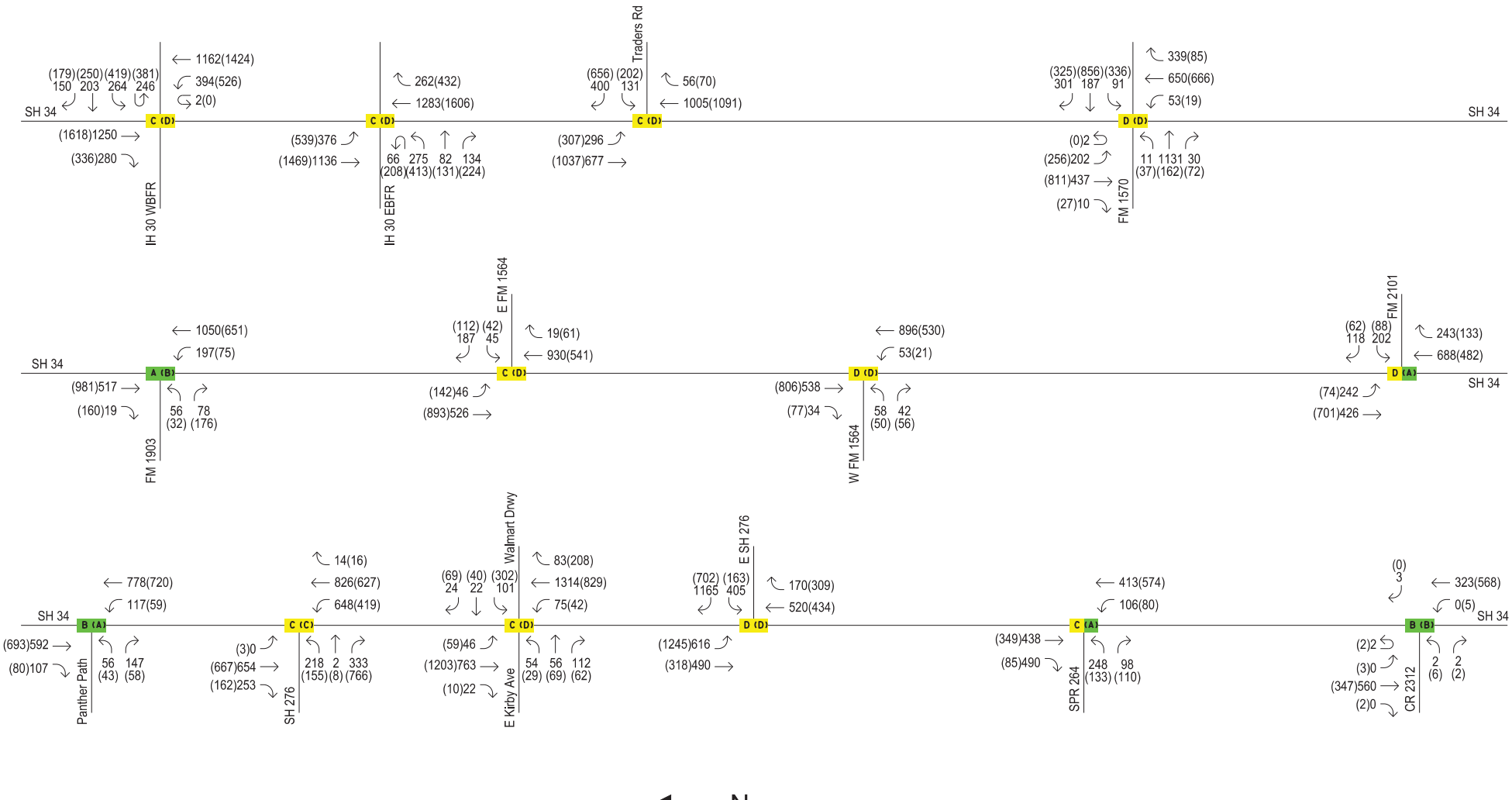
SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2038 FUTURE LONG - TERM IMPROVEMENTS SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 12
DATE: AUG 2019	SHEET NO. 18

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:09:41 PM



LEVEL OF SERVICE:

A-B -
C-D -
E-F -

LEGEND:

XXX AM PEAK HOUR VOLUME
(XXX) PM PEAK HOUR VOLUME
X AM PEAK HOUR LEVEL OF SERVICE
(X) PM PEAK HOUR LEVEL OF SERVICE

PROJECT NAME:

SH 34 FEASIBILITY STUDY, HUNT COUNTY

SHEET TITLE:

2048 FUTURE NO-BUILD SCENARIO - VOLUMES AND LOS

GCI PROJ. NO.: 18008-02	FIGURE NO. FIGURE 13
DATE: AUG 2019	SHEET NO. 19

GUNDA CORPORATION
P:\2018 Projects\18008-02 TXDOT Paris SH 34 Feasibility Study\CAD\18008-02 Traffic Volumes.dgn
8/20/2019 4:09:55 PM

4. CONCLUSIONS

Capacity analyses found that there were some intersections with higher delays and LOS E or worse in the future no-build scenario. With the proposed short-term improvements, it was seen that the delays decreased significantly at some of the intersections but there were still a few intersections with LOS E and LOS F. The proposed long-term improvements improved the traffic operations at all the intersections operating at LOS D or better.

APPENDIX-A
SYNCHRO REPORTS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Future Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						118							148
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	170	354	147	0	418	1142	0	0	1188	263
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				14.0	14.0	14.0		14.5	54.5			33.9	33.9
Actuated g/C Ratio				0.17	0.17	0.17		0.18	0.67			0.42	0.42
v/c Ratio				0.61	0.61	0.40		0.68	0.48			0.80	0.35
Control Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
LOS				D	D	B		D	A			C	A
Approach Delay					33.2				15.5			22.8	
Approach LOS					C				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 80.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Future Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	177	266	179	0	0	0	0	1170	242	354	1104	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	11.6	11.6	11.6					26.5	26.5	10.4	42.9	
Actuated g/C Ratio	0.18	0.18	0.18					0.40	0.40	0.16	0.65	
v/c Ratio	0.63	0.46	0.46					0.83	0.31	0.66	0.48	
Control Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
LOS	D	C	B					C	A	C	A	
Approach Delay		25.8						20.8			13.4	
Approach LOS		C						C			B	

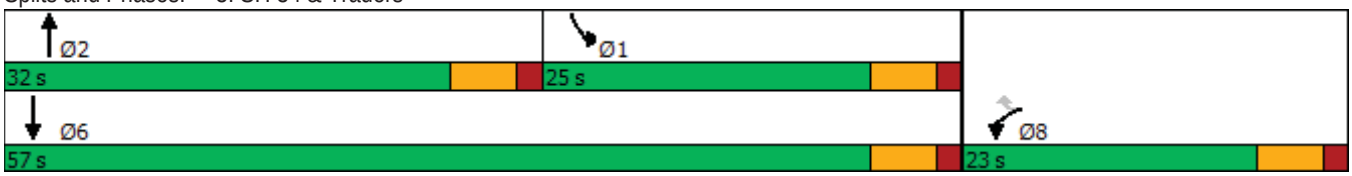
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 66.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	350	879	49	259	592
Future Volume (vph)	115	350	879	49	259	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		407	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	407	1012	0	341	740
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.0	11.0	24.7		17.3	47.6
Actuated g/C Ratio	0.16	0.16	0.35		0.25	0.68
v/c Ratio	0.48	0.69	0.81		0.78	0.31
Control Delay	34.0	9.9	27.8		39.9	5.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	34.0	9.9	27.8		39.9	5.2
LOS	C	A	C		D	A
Approach Delay	15.9		27.8			16.2
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 69.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 20.6	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

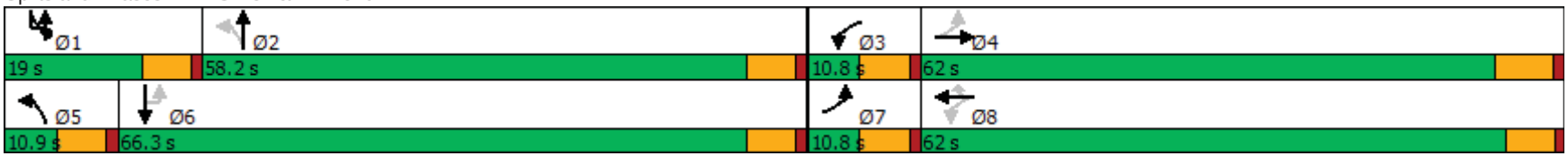


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Future Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0		100		0
Storage Lanes	1		0	1		1	1		0		1		0
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	1853	0	1770	1863	1583	1770	1758	0	0	1770	1850	0
Flt Permitted	0.566			0.066			0.353				0.950		
Satd. Flow (perm)	1125	1853	0	123	1863	1583	658	1758	0	0	1770	1850	0
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		1				275		22				2	
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	23	1140	0	107	219	313	67	1000	0	0	239	455	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2			6			
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2		19.0	19.0	66.3	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8			5.8	5.8	
Act Effct Green (s)	61.2	55.2		63.5	60.5	60.5	57.5	52.4			13.2	62.7	
Actuated g/C Ratio	0.41	0.37		0.42	0.40	0.40	0.38	0.35			0.09	0.42	
v/c Ratio	0.05	1.67		1.00	0.29	0.39	0.23	1.59			1.54	0.59	
Control Delay	23.7	340.0		120.0	32.7	7.0	24.5	306.6			315.7	38.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0	
Total Delay	23.7	340.0		120.0	32.7	7.0	24.5	306.6			315.7	38.1	
LOS	C	F		F	C	A	C	F			F	D	
Approach Delay		333.7			34.7			288.9				133.7	
Approach LOS		F			C			F				F	

Intersection Summary

Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 227.7	Intersection LOS: F
Intersection Capacity Utilization 136.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	13.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	69	172	918	452	17
Future Vol, veh/h	49	69	172	918	452	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	94	85	87	93	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	73	202	1055	486	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1957	498	486	0	-	0
Stage 1	498	-	-	-	-	-
Stage 2	1459	-	-	-	-	-
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	70	572	1077	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	214	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	572	1077	-	-	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	214	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	184.8	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1077	-	117	-	-
HCM Lane V/C Ratio	0.188	-	1.103	-	-
HCM Control Delay (s)	9.1	-	184.8	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	7.8	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	164	813	17	41	461
Future Vol, veh/h	39	164	813	17	41	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	231	865	28	62	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1565	879	0	0	865	0
Stage 1	879	-	-	-	-	-
Stage 2	686	-	-	-	-	-
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	123	347	-	-	778	-
Stage 1	406	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	113	347	-	-	778	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	406	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.9	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	422	778	-
HCM Lane V/C Ratio	-	-	0.666	0.08	-
HCM Control Delay (s)	-	-	28.9	10	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	4.7	0.3	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	36	46	784	470	29
Future Vol, veh/h	50	36	46	784	470	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	50	50	852	534	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1503	551	534	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	952	-	-	-	-	-
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	134	534	1034	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	128	534	1034	-	-	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.3	0.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1034	-	224	-	-
HCM Lane V/C Ratio	0.048	-	0.521	-	-
HCM Control Delay (s)	8.7	-	37.3	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	2.7	-	-

Intersection	
Int Delay, s/veh	464.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	176	104	602	213	211	372
Future Vol, veh/h	176	104	602	213	211	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	62	87	61	56	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	332	168	692	349	377	438

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1884	-	0	0	692	0
Stage 1	692	-	-	-	-	-
Stage 2	1192	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	~ 78	0	-	-	903	-
Stage 1	497	0	-	-	-	-
Stage 2	~ 288	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 45	-	-	-	903	-
Mov Cap-2 Maneuver	~ 45	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	~ 168	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	3045.5	0	5.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	45	903	-
HCM Lane V/C Ratio	-	-	7.379	0.417	-
HCM Control Delay (s)	-	$	3045.5	11.8	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	39.1	2.1	-

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	129	102	680	518	94
Future Volume (vph)	49	129	102	680	518	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.133			
Satd. Flow (perm)	1655	0	248	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	159				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	284	0	146	747	800	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	10.6		44.3	44.3	35.2	
Actuated g/C Ratio	0.16		0.66	0.66	0.53	
v/c Ratio	0.72		0.45	0.60	0.83	
Control Delay	25.0		8.9	8.9	23.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	25.0		8.9	8.9	23.7	
LOS	C		A	A	C	
Approach Delay	25.0			8.9	23.7	
Approach LOS	C			A	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 66.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	191	291	567	735	573	221
Future Volume (vph)	191	291	567	735	573	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.109			
Satd. Flow (perm)	1679	0	230	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	81					125
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	607	0	652	855	699	283
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	25.7		53.8	53.8	31.8	31.8
Actuated g/C Ratio	0.29		0.60	0.60	0.35	0.35
v/c Ratio	1.13		1.38	0.77	1.06	0.44
Control Delay	108.2		209.1	19.4	83.1	14.6
Queue Delay	0.0		0.0	0.1	0.0	0.0
Total Delay	108.2		209.1	19.5	83.1	14.6
LOS	F		F	B	F	B
Approach Delay	108.2			101.5	63.3	
Approach LOS	F			F	E	

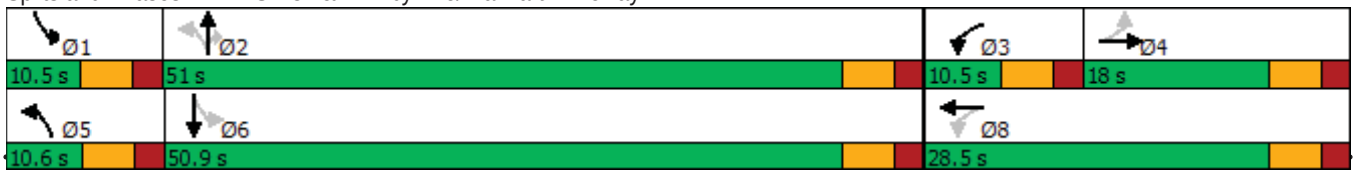
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 90.7	Intersection LOS: F
Intersection Capacity Utilization 102.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Future Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1715	0	1770	1699	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.892		0.281			0.124			0.088		
Satd. Flow (perm)	0	1550	0	523	1699	0	246	1987	1531	180	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			33				164		3	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	281	0	122	56	0	102	1277	90	79	806	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		12.5		23.1	23.1		49.6	45.6	45.6	49.4	45.5	
Actuated g/C Ratio		0.14		0.26	0.26		0.56	0.52	0.52	0.56	0.52	
v/c Ratio		1.08		0.59	0.12		0.44	1.24	0.10	0.39	0.84	
Control Delay		112.6		40.1	14.6		13.2	139.6	0.3	13.1	28.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		112.6		40.1	14.6		13.2	139.6	0.3	13.1	28.7	
LOS		F		D	B		B	F	A	B	C	
Approach Delay		112.6			32.1			122.2			27.3	
Approach LOS		F			C			F			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 87.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 85.7	Intersection LOS: F
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	354	1019	455	148	539	428
Future Volume (vph)	354	1019	455	148	539	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.143	
Satd. Flow (perm)	1770	1583	1863	1583	266	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		596		156		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.79	0.88	0.83	0.76	0.66	0.68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	448	1158	548	195	817	629
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	32.0	32.0	28.0	28.0	30.0	58.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	26.5	26.5	22.5	22.5	52.5	52.5
Actuated g/C Ratio	0.29	0.29	0.25	0.25	0.58	0.58
v/c Ratio	0.86	1.31	1.18	0.38	1.45	0.58
Control Delay	48.2	163.2	133.3	9.9	235.7	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	163.2	133.3	9.9	235.7	14.5
LOS	D	F	F	A	F	B
Approach Delay	131.1		100.9			139.4
Approach LOS	F		F			F

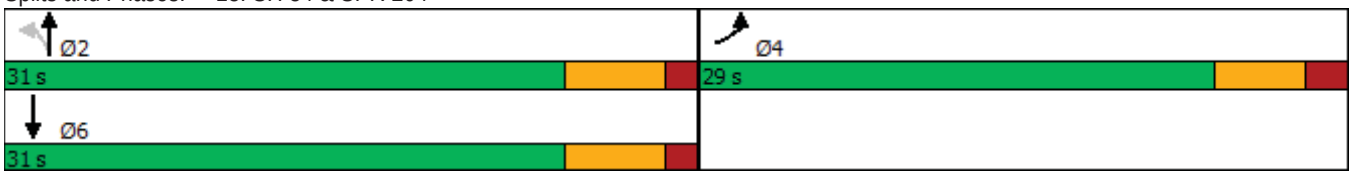
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 128.4	Intersection LOS: F
Intersection Capacity Utilization 96.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	217	85	92	361	384	428
Future Volume (vph)	217	85	92	361	384	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1735	0	0	1839	1716	0
Flt Permitted	0.964			0.100		
Satd. Flow (perm)	1735	0	0	186	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	33				143	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	455	0	0	523	1149	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	17.7			25.2	25.2	
Actuated g/C Ratio	0.32			0.46	0.46	
v/c Ratio	0.78			6.15	1.33	
Control Delay	25.7			2365.5	176.2	
Queue Delay	0.0			0.0	0.0	
Total Delay	25.7			2365.5	176.2	
LOS	C			F	F	
Approach Delay	25.7			2365.5	176.2	
Approach LOS	C			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 6.15	
Intersection Signal Delay: 682.3	Intersection LOS: F
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	283	1	490	0
Future Vol, veh/h	1	1	0	283	1	490	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	314	4	576	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	890	576	576	0	-	-	0
Stage 1	576	-	-	-	-	-	-
Stage 2	314	-	-	-	-	-	-
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	313	517	997	-	-	-	-
Stage 1	562	-	-	-	-	-	-
Stage 2	741	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	313	517	997	-	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-	-
Stage 1	562	-	-	-	-	-	-
Stage 2	741	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	14.4	0	
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	997	-	390	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Future Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						110
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	218	445	185	530	1340	0	0	1505	359
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				18.9	18.9	18.9	19.6	74.4			48.7	48.7
Actuated g/C Ratio				0.18	0.18	0.18	0.19	0.71			0.46	0.46
v/c Ratio				0.76	0.75	0.52	0.83	0.54			0.92	0.45
Control Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
LOS				E	D	C	D	A			D	B
Approach Delay					47.2			21.4			33.2	
Approach LOS					D			C			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 105.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Future Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						199			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	231	367	218	0	0	0	0	1598	425	497	1367	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.5	9.5	9.5					25.0	25.0	8.0	39.0	
Actuated g/C Ratio	0.16	0.16	0.16					0.42	0.42	0.13	0.65	
v/c Ratio	0.91	0.87dl	0.56					1.08	0.55	1.09	0.59	
Control Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
LOS	E	C	B					E	A	F	A	
Approach Delay		37.4						57.5			31.2	
Approach LOS		D						E			C	

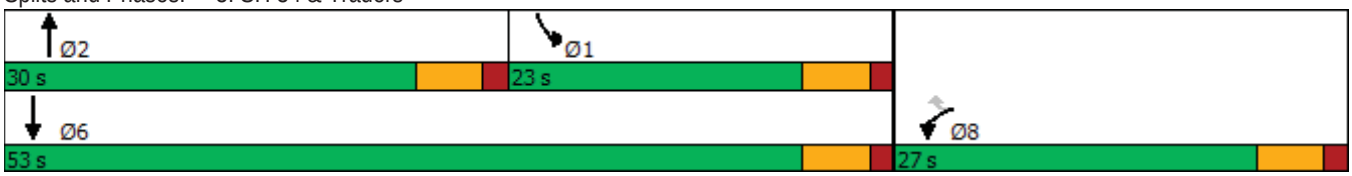
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	574	955	62	269	907
Future Volume (vph)	176	574	955	62	269	907
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		461	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	223	624	1106	0	309	1008
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	16.0	16.0	24.8		15.8	46.2
Actuated g/C Ratio	0.22	0.22	0.34		0.22	0.63
v/c Ratio	0.58	0.89	0.93		0.81	0.45
Control Delay	31.9	23.7	40.2		46.6	8.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.9	23.7	40.2		46.6	8.5
LOS	C	C	D		D	A
Approach Delay	25.8		40.2			17.4
Approach LOS	C		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

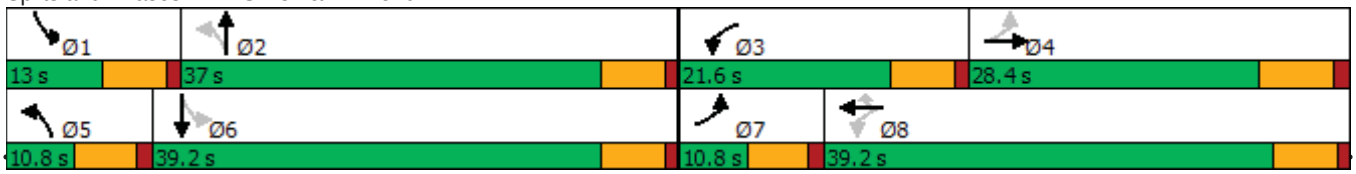
Splits and Phases: 3: SH 34 & Traders



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Future Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	1760	0	1770	1863	1583	1770	1824	0	1770	1848	0
Flt Permitted	0.193			0.299			0.115			0.100		
Satd. Flow (perm)	383	1760	0	557	1863	1583	214	1824	0	186	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				233		9			3	
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	272	0	544	871	342	23	753	0	246	843	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0		13.0	39.2	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8		5.8	5.8	
Act Effct Green (s)	24.2	18.2		40.9	34.6	34.6	36.3	31.3		42.9	40.1	
Actuated g/C Ratio	0.25	0.19		0.42	0.36	0.36	0.38	0.32		0.44	0.41	
v/c Ratio	0.25	0.77		1.26	1.31	0.48	0.14	1.27		1.23	1.10	
Control Delay	21.4	48.6		157.3	178.5	10.8	18.1	162.9		163.5	92.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	21.4	48.6		157.3	178.5	10.8	18.1	162.9		163.5	92.7	
LOS	C	D		F	F	B	B	F		F	F	
Approach Delay		44.8			139.3			158.6			108.7	
Approach LOS		D			F			F			F	

Intersection Summary	
Area Type: Other	
Cycle Length: 100	
Actuated Cycle Length: 96.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 127.1	Intersection LOS: F
Intersection Capacity Utilization 110.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	43.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	154	66	570	858	140
Future Vol, veh/h	28	154	66	570	858	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	74	73	92	88	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	208	90	620	975	222

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1886	1086	975	0	-	0
Stage 1	1086	-	-	-	-	-
Stage 2	800	-	-	-	-	-
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	78	263	707	-	-	-
Stage 1	324	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	68	263	707	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	283	-	-	-	-	-
Stage 2	442	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 350.8	1.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	707	-	164	-	-
HCM Lane V/C Ratio	0.128	-	1.61	-	-
HCM Control Delay (s)	10.8	-	$ 350.8	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	18	-	-

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

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	98	473	53	125	781
Future Vol, veh/h	36	98	473	53	125	781
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	134	526	73	152	898

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1765	563	0	0	526	0
Stage 1	563	-	-	-	-	-
Stage 2	1202	-	-	-	-	-
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	92	526	-	-	1041	-
Stage 1	570	-	-	-	-	-
Stage 2	285	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	526	-	-	1041	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	243	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.5	0	1.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	1041	-
HCM Lane V/C Ratio	-	-	0.633	0.146	-
HCM Control Delay (s)	-	-	36.5	9.1	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	4	0.5	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	49	18	463	706	67
Future Vol, veh/h	43	49	18	463	706	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	89	28	514	905	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1514	944	905	0	-	0
Stage 1	944	-	-	-	-	-
Stage 2	570	-	-	-	-	-
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	132	318	752	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	127	318	752	-	-	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	752	-	332	-	-
HCM Lane V/C Ratio	0.037	-	0.434	-	-
HCM Control Delay (s)	10	-	23.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	55	421	116	64	613
Future Vol, veh/h	77	55	421	116	64	613
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	81	90	74	77	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	68	468	157	83	828

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1462	-	0	0	468	0
Stage 1	468	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	142	0	-	-	1094	-
Stage 1	630	0	-	-	-	-
Stage 2	358	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	131	-	-	-	1094	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	331	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	77.6	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	131	1094	-
HCM Lane V/C Ratio	-	-	0.683	0.076	-
HCM Control Delay (s)	-	-	77.6	8.6	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	3.8	0.2	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	50	52	630	606	70
Future Volume (vph)	38	50	52	630	606	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	1863	1833	0
Flt Permitted	0.986		0.144			
Satd. Flow (perm)	1660	0	268	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	111				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	0	90	656	816	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.9		38.4	40.2	32.2	
Actuated g/C Ratio	0.13		0.72	0.75	0.60	
v/c Ratio	0.50		0.26	0.47	0.74	
Control Delay	16.0		4.9	5.4	18.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.0		4.9	5.4	18.2	
LOS	B		A	A	B	
Approach Delay	16.0			5.4	18.2	
Approach LOS	B			A	B	

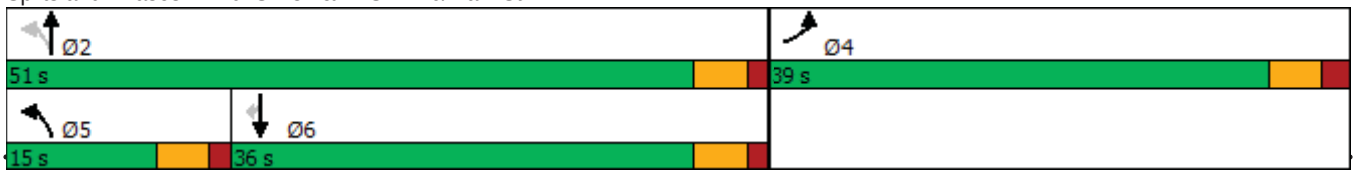
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 53.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	143	671	367	563	587	141
Future Volume (vph)	143	671	367	563	587	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1643	0	2006	1863	1863	1583
Flt Permitted	0.991		0.111			
Satd. Flow (perm)	1643	0	234	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	286					86
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	873	0	403	704	631	178
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	33.5		46.0	46.0	31.0	31.0
Actuated g/C Ratio	0.37		0.51	0.51	0.34	0.34
v/c Ratio	1.10		1.28	0.74	0.98	0.30
Control Delay	84.9		169.3	23.2	63.0	12.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	84.9		169.3	23.2	63.0	12.7
LOS	F		F	C	E	B
Approach Delay	84.9			76.4	51.9	
Approach LOS	F			E	D	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 72.0	Intersection LOS: E
Intersection Capacity Utilization 113.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

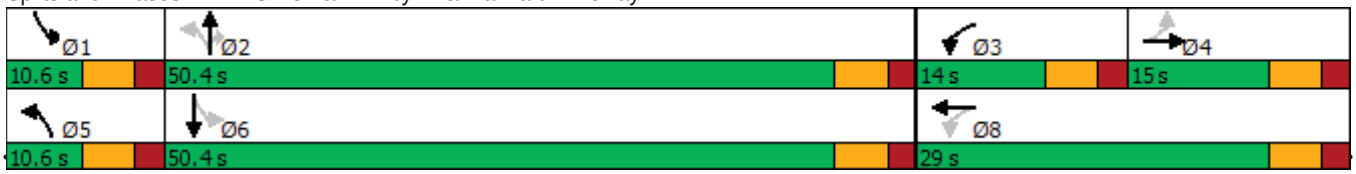


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Future Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1701	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.888		0.265			0.089			0.151		
Satd. Flow (perm)	0	1563	0	494	1701	0	177	1987	1531	309	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			75				164		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	298	134	0	72	763	207	68	1113	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.5		23.6	23.6		49.0	45.0	45.0	49.0	45.0	
Actuated g/C Ratio		0.11		0.27	0.27		0.56	0.51	0.51	0.56	0.51	
v/c Ratio		1.06		1.16	0.26		0.36	0.75	0.24	0.25	1.17	
Control Delay		116.3		139.3	14.4		12.6	23.5	4.2	9.5	111.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		116.3		139.3	14.4		12.6	23.5	4.2	9.5	111.5	
LOS		F		F	B		B	C	A	A	F	
Approach Delay		116.3			100.6			18.9			105.7	
Approach LOS		F			F			B			F	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 87.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.17
Intersection Signal Delay: 74.1 — Intersection LOS: E
Intersection Capacity Utilization 86.4% — ICU Level of Service E
Analysis Period (min) 15

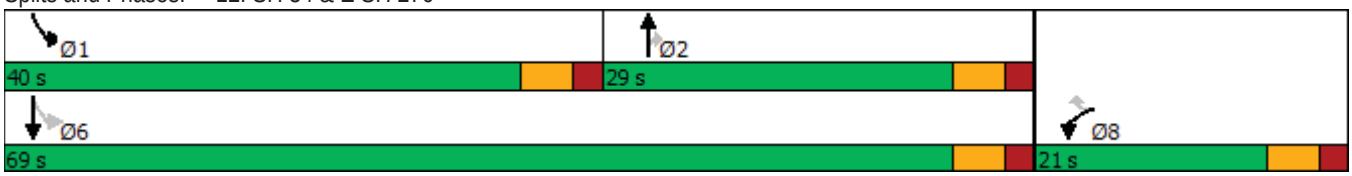
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	143	615	379	270	1089	279
Future Volume (vph)	143	615	379	270	1089	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.148	
Satd. Flow (perm)	1770	1583	1863	1583	276	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		668		307		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.71	0.92	0.90	0.88	0.94	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	668	421	307	1159	307
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	21.0	21.0	29.0	29.0	40.0	69.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	13.7	13.7	22.2	22.2	62.3	62.3
Actuated g/C Ratio	0.16	0.16	0.26	0.26	0.72	0.72
v/c Ratio	0.73	0.82	0.89	0.49	1.47	0.23
Control Delay	51.1	12.9	53.7	6.2	238.2	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	12.9	53.7	6.2	238.2	4.9
LOS	D	B	D	A	F	A
Approach Delay	21.7		33.7			189.3
Approach LOS	C		C			F

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 87	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 104.8	Intersection LOS: F
Intersection Capacity Utilization 102.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	97	70	503	305	74
Future Volume (vph)	116	97	70	503	305	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1702	0	0	1852	1812	0
Flt Permitted	0.974			0.891		
Satd. Flow (perm)	1702	0	0	1660	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	269	0	0	721	496	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	6.9			22.5	22.5	
Actuated g/C Ratio	0.17			0.54	0.54	
v/c Ratio	0.75			0.80	0.49	
Control Delay	27.0			18.0	7.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	27.0			18.0	7.5	
LOS	C			B	A	
Approach Delay	27.0			18.0	7.5	
Approach LOS	C			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 41.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	1	4	497	308	1
Future Vol, veh/h	6	1	4	497	308	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	4	11	571	395	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	990	397	399	0	-	0
Stage 1	397	-	-	-	-	-
Stage 2	593	-	-	-	-	-
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	273	652	1160	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	652	1160	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	17	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1160	-	315	-	-
HCM Lane V/C Ratio	0.009	-	0.051	-	-
HCM Control Delay (s)	8.1	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Future Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							114
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	194	404	167	0	483	1306	0	0	1359	301
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				15.2	15.2	15.2		15.7	58.4			36.7	36.7
Actuated g/C Ratio				0.18	0.18	0.18		0.18	0.68			0.43	0.43
v/c Ratio				0.68	0.68	0.45		0.77	0.54			0.90	0.41
Control Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
LOS				D	D	B		D	A			C	B
Approach Delay					36.7				17.5			29.1	
Approach LOS					D				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 85.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Future Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	202	305	203	0	0	0	0	1336	276	404	1262	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	12.3	12.3	12.3					28.0	28.0	10.7	44.7	
Actuated g/C Ratio	0.18	0.18	0.18					0.41	0.41	0.16	0.65	
v/c Ratio	0.70	0.52	0.51					0.92	0.35	0.75	0.55	
Control Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
LOS	D	C	B					C	A	D	A	
Approach Delay		28.2						27.8			15.1	
Approach LOS		C						C			B	

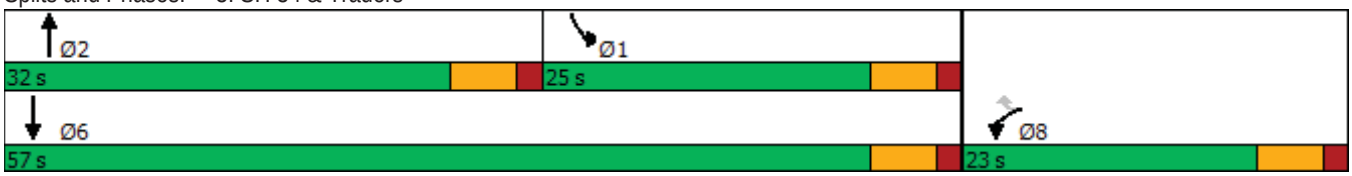
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 68.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	400	1005	56	296	677
Future Volume (vph)	131	400	1005	56	296	677
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		465	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	465	1158	0	389	846
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.8	11.8	26.6		18.8	50.9
Actuated g/C Ratio	0.16	0.16	0.36		0.26	0.69
v/c Ratio	0.55	0.72	0.91		0.86	0.35
Control Delay	36.0	10.2	35.9		48.3	5.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	36.0	10.2	35.9		48.3	5.5
LOS	D	B	D		D	A
Approach Delay	16.6		35.9			19.0
Approach LOS	B		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

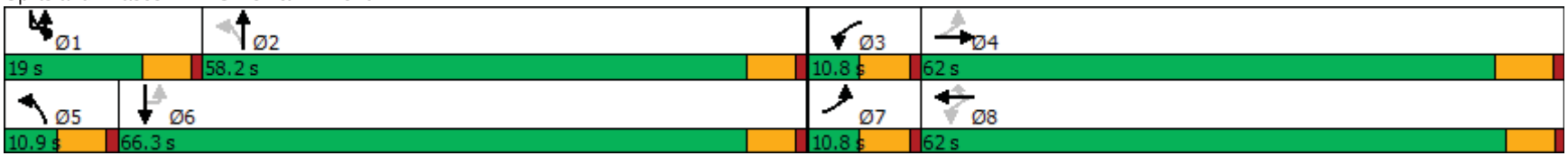


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Future Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0		100		0
Storage Lanes	1		0	1		1	1		0		1		0
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	1853	0	1770	1863	1583	1770	1758	0	0	1770	1850	0
Flt Permitted	0.532			0.066			0.257				0.950		
Satd. Flow (perm)	1057	1853	0	123	1863	1583	479	1758	0	0	1770	1850	0
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		1				243		22				2	
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	25	1301	0	121	249	358	77	1143	0	0	277	523	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2			6			
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2		19.0	19.0	66.3	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8			5.8	5.8	
Act Effct Green (s)	61.2	55.2		63.5	60.5	60.5	57.5	52.4			13.2	60.5	
Actuated g/C Ratio	0.41	0.37		0.42	0.40	0.40	0.38	0.35			0.09	0.40	
v/c Ratio	0.05	1.91		1.13	0.33	0.46	0.34	1.82			1.79	0.70	
Control Delay	23.8	441.9		158.0	33.4	12.6	27.3	404.3			415.0	43.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0	
Total Delay	23.8	441.9		158.0	33.4	12.6	27.3	404.3			415.0	43.2	
LOS	C	F		F	C	B	C	F			F	D	
Approach Delay		434.0			43.9			380.5				171.9	
Approach LOS		F			D			F				F	

Intersection Summary

Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.91			
Intersection Signal Delay: 296.8		Intersection LOS: F	
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	40.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	78	197	1050	517	19
Future Vol, veh/h	56	78	197	1050	517	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	94	85	87	93	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	83	232	1207	556	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2240	569	556	0	-	0
Stage 1	569	-	-	-	-	-
Stage 2	1671	-	-	-	-	-
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	~ 46	522	1015	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 35	522	1015	-	-	-
Mov Cap-2 Maneuver	~ 35	-	-	-	-	-
Stage 1	436	-	-	-	-	-
Stage 2	168	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 578	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1015	-	74	-	-
HCM Lane V/C Ratio	0.228	-	1.981	-	-
HCM Control Delay (s)	9.6	-	$ 578	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.9	-	13.2	-	-

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

Intersection	
Int Delay, s/veh	16.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	187	930	19	46	526
Future Vol, veh/h	45	187	930	19	46	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	263	989	32	70	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1786	1005	0	0	989	0
Stage 1	1005	-	-	-	-	-
Stage 2	781	-	-	-	-	-
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	90	293	-	-	699	-
Stage 1	354	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	293	-	-	699	-
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	406	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	105.6	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	304	699	-
HCM Lane V/C Ratio	-	-	1.056	0.1	-
HCM Control Delay (s)	-	-	105.6	10.7	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	12.1	0.3	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	42	53	896	538	34
Future Vol, veh/h	58	42	53	896	538	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	58	58	974	611	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1721	631	611	0	-	0
Stage 1	631	-	-	-	-	-
Stage 2	1090	-	-	-	-	-
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	98	481	968	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	481	968	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	322	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	98.2	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	968	-	156	-	-
HCM Lane V/C Ratio	0.06	-	0.87	-	-
HCM Control Delay (s)	9	-	98.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	6	-	-

Intersection	
Int Delay, s/veh	1023.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	118	688	243	242	426
Future Vol, veh/h	202	118	688	243	242	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	62	87	61	56	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	381	190	791	398	432	501

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2156	-	0	0	791	0
Stage 1	791	-	-	-	-	-
Stage 2	1365	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	~ 53	0	-	-	829	-
Stage 1	447	0	-	-	-	-
Stage 2	~ 237	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 25	-	-	-	829	-
Mov Cap-2 Maneuver	~ 25	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	~ 114	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	6709.9	0	6.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	25	829	-
HCM Lane V/C Ratio	-	-	15.245	0.521	-
HCM Control Delay (s)	-	$	6709.9	14	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	47.5	3.1	-

Notes

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	147	117	778	592	107
Future Volume (vph)	56	147	117	778	592	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.088			
Satd. Flow (perm)	1655	0	164	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	158				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	325	0	167	855	913	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	12.1		52.3	52.3	39.9	
Actuated g/C Ratio	0.16		0.69	0.69	0.53	
v/c Ratio	0.82		0.66	0.66	0.95	
Control Delay	34.1		24.5	10.3	37.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	34.1		24.5	10.3	37.2	
LOS	C		C	B	D	
Approach Delay	34.1			12.6	37.2	
Approach LOS	C			B	D	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 75.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	220	333	648	840	654	253
Future Volume (vph)	220	333	648	840	654	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.109			
Satd. Flow (perm)	1679	0	230	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	80					126
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	697	0	745	977	798	324
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	25.7		53.8	53.8	31.8	31.8
Actuated g/C Ratio	0.29		0.60	0.60	0.35	0.35
v/c Ratio	1.30		1.58	0.88	1.21	0.51
Control Delay	175.4		293.8	26.5	138.2	16.8
Queue Delay	0.0		0.0	0.4	0.0	0.0
Total Delay	175.4		293.8	26.9	138.2	16.8
LOS	F		F	C	F	B
Approach Delay	175.4			142.4	103.1	
Approach LOS	F			F	F	

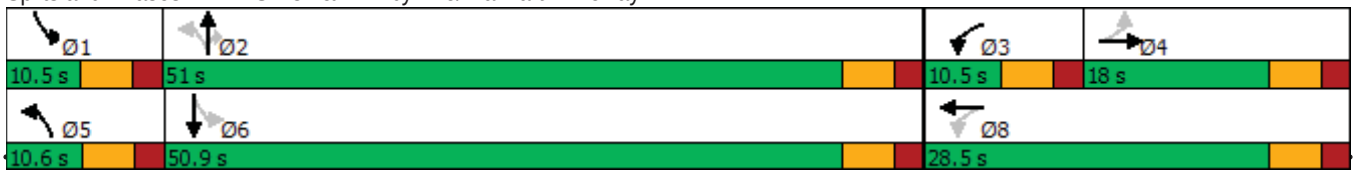
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay: 136.4	Intersection LOS: F
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Future Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.891		0.278			0.084			0.086		
Satd. Flow (perm)	0	1547	0	518	1695	0	167	1987	1531	176	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			38				164		3	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	320	0	140	63	0	115	1460	102	88	918	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		12.5		23.0	23.0		51.7	47.6	47.6	50.4	45.4	
Actuated g/C Ratio		0.14		0.26	0.26		0.57	0.53	0.53	0.56	0.50	
v/c Ratio		1.26		0.70	0.14		0.60	1.39	0.11	0.45	0.98	
Control Delay		175.2		48.1	14.2		24.5	204.5	0.7	15.5	48.6	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		175.2		48.1	14.2		24.5	204.5	0.7	15.5	48.6	
LOS		F		D	B		C	F	A	B	D	
Approach Delay		175.2			37.6			179.8			45.7	
Approach LOS		F			D			F			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 128.3	Intersection LOS: F
Intersection Capacity Utilization 97.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	405	1165	520	170	616	490
Future Volume (vph)	405	1165	520	170	616	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.143	
Satd. Flow (perm)	1770	1583	1863	1583	266	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		586		156		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.79	0.88	0.83	0.76	0.66	0.68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	513	1324	627	224	933	721
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	32.0	32.0	28.0	28.0	30.0	58.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	26.5	26.5	22.5	22.5	52.5	52.5
Actuated g/C Ratio	0.29	0.29	0.25	0.25	0.58	0.58
v/c Ratio	0.98	1.51	1.35	0.44	1.65	0.66
Control Delay	69.3	251.8	200.7	12.6	325.2	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	251.8	200.7	12.6	325.2	16.5
LOS	E	F	F	B	F	B
Approach Delay	200.8		151.2			190.6
Approach LOS	F		F			F

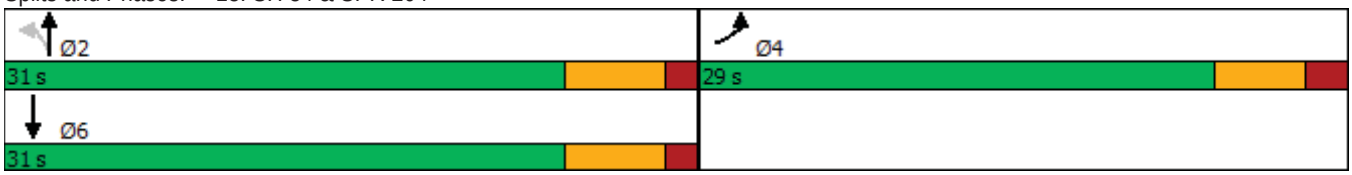
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.65	
Intersection Signal Delay: 187.2	Intersection LOS: F
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	248	98	106	413	438	490
Future Volume (vph)	248	98	106	413	438	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1733	0	0	1839	1716	0
Flt Permitted	0.964			0.101		
Satd. Flow (perm)	1733	0	0	188	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	34				144	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	522	0	0	600	1314	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	19.8			25.1	25.1	
Actuated g/C Ratio	0.35			0.44	0.44	
v/c Ratio	0.84			7.23	1.57	
Control Delay	29.6			2851.2	281.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	29.6			2851.2	281.3	
LOS	C			F	F	
Approach Delay	29.6			2851.2	281.3	
Approach LOS	C			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 56.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 7.23	
Intersection Signal Delay: 860.4	Intersection LOS: F
Intersection Capacity Utilization 115.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	2	2	0	323	2	560	0
Future Vol, veh/h	2	2	0	323	2	560	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	8	8	0	359	8	659	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1018	659	659	0	-	-	0
Stage 1	659	-	-	-	-	-	-
Stage 2	359	-	-	-	-	-	-
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	263	464	929	-	-	-	-
Stage 1	515	-	-	-	-	-	-
Stage 2	707	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	263	464	929	-	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-	-
Stage 1	515	-	-	-	-	-	-
Stage 2	707	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	16.2	0	
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	929	-	336	-	-
HCM Lane V/C Ratio	-	-	0.048	-	-
HCM Control Delay (s)	0	-	16.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Future Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						89
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	250	508	211	605	1531	0	0	1721	410
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				20.2	20.2	20.2	20.8	76.8			50.0	50.0
Actuated g/C Ratio				0.19	0.19	0.19	0.19	0.70			0.46	0.46
v/c Ratio				0.84	0.82	0.58	0.93	0.61			1.06	0.53
Control Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
LOS				E	E	C	E	A			E	B
Approach Delay					52.7			25.5			60.4	
Approach LOS					D			C			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 109	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 44.7	Intersection LOS: D
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Future Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						169			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	264	419	249	0	0	0	0	1825	485	567	1563	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.5	9.5	9.5					25.0	25.0	8.0	39.0	
Actuated g/C Ratio	0.16	0.16	0.16					0.42	0.42	0.13	0.65	
v/c Ratio	1.04	1.00dl	0.64					1.24	0.64	1.24	0.68	
Control Delay	97.5	38.7	18.1					134.1	13.4	153.2	8.5	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	97.5	38.7	18.1					134.1	13.4	153.2	8.5	
LOS	F	D	B					F	B	F	A	
Approach Delay		49.9						108.8			47.0	
Approach LOS		D						F			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 74.1	Intersection LOS: E
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

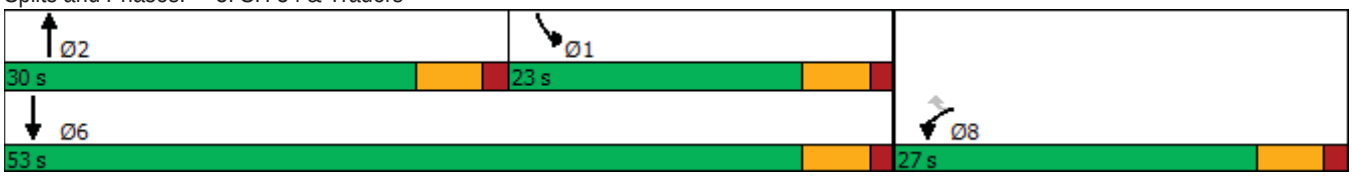
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	656	1091	70	307	1037
Future Volume (vph)	202	656	1091	70	307	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		458	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	713	1262	0	353	1152
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	19.8	19.8	24.6		17.1	47.2
Actuated g/C Ratio	0.25	0.25	0.32		0.22	0.61
v/c Ratio	0.57	0.96	1.14		0.91	0.54
Control Delay	31.0	36.6	101.1		60.4	10.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.0	36.6	101.1		60.4	10.5
LOS	C	D	F		E	B
Approach Delay	35.1		101.1			22.2
Approach LOS	D		F			C

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 78	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 52.2	Intersection LOS: D
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

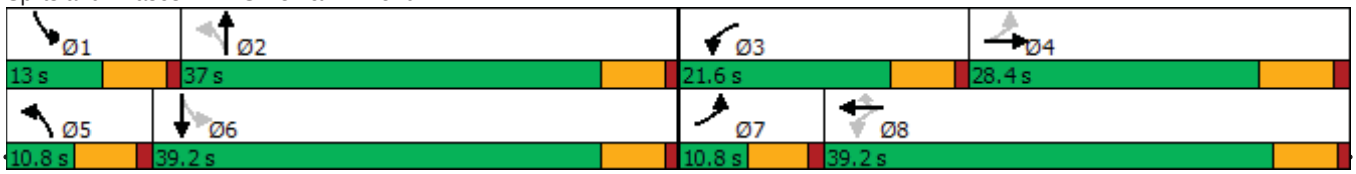


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Future Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	1760	0	1770	1863	1583	1770	1824	0	1770	1848	0
Flt Permitted	0.189			0.241			0.115			0.100		
Satd. Flow (perm)	376	1760	0	449	1863	1583	214	1824	0	186	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				233		9			3	
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	312	0	622	995	392	25	861	0	281	962	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0		13.0	39.2	
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8		5.8	5.8	
Act Effct Green (s)	26.0	20.0		42.6	34.1	34.1	36.3	31.2		42.8	40.0	
Actuated g/C Ratio	0.26	0.20		0.43	0.35	0.35	0.37	0.32		0.43	0.41	
v/c Ratio	0.29	0.83		1.53	1.54	0.56	0.16	1.47		1.43	1.28	
Control Delay	22.1	53.5		273.7	279.2	14.0	18.5	250.5		243.8	164.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.1	53.5		273.7	279.2	14.0	18.5	250.5		243.8	164.1	
LOS	C	D		F	F	B	B	F		F	F	
Approach Delay		49.1			225.8			243.9			182.1	
Approach LOS		D			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 98.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.54
Intersection Signal Delay: 203.0 — Intersection LOS: F
Intersection Capacity Utilization 122.9% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Intersection	
Int Delay, s/veh	97.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	176	75	651	981	160
Future Vol, veh/h	32	176	75	651	981	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	74	73	92	88	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	238	103	708	1115	254

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2156	1242	1115	0	-	0
Stage 1	1242	-	-	-	-	-
Stage 2	914	-	-	-	-	-
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	~ 53	~ 213	626	-	-	-
Stage 1	272	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 44	~ 213	626	-	-	-
Mov Cap-2 Maneuver	~ 44	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	391	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 793.8	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	626	-	117	-	-
HCM Lane V/C Ratio	0.164	-	2.58	-	-
HCM Control Delay (s)	11.9	-	$ 793.8	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.6	-	27.3	-	-

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

Intersection	
Int Delay, s/veh	19

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	112	541	61	142	893
Future Vol, veh/h	42	112	541	61	142	893
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	153	601	84	173	1026

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2015	643	0	0	601	0
Stage 1	643	-	-	-	-	-
Stage 2	1372	-	-	-	-	-
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	64	473	-	-	976	-
Stage 1	523	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	473	-	-	976	-
Mov Cap-2 Maneuver	~ 53	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	194	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	180.4	0	1.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	178	976	-
HCM Lane V/C Ratio	-	-	1.19	0.177	-
HCM Control Delay (s)	-	-	180.4	9.5	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	11.3	0.6	-

Notes

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

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	56	21	530	806	77
Future Vol, veh/h	50	56	21	530	806	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	102	32	589	1033	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1731	1078	1033	0	-	0
Stage 1	1078	-	-	-	-	-
Stage 2	653	-	-	-	-	-
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	97	266	673	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	266	673	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	48.9	0.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	673	-	238	-	-
HCM Lane V/C Ratio	0.048	-	0.697	-	-
HCM Control Delay (s)	10.6	-	48.9	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	4.6	-	-

Intersection	
Int Delay, s/veh	11.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	62	482	133	74	701
Future Vol, veh/h	88	62	482	133	74	701
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Yield	-	None
Storage Length	0	-	-	250	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	81	90	74	77	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	77	536	180	96	947

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1675	-	0	0	536	0
Stage 1	536	-	-	-	-	-
Stage 2	1139	-	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.218	-
Pot Cap-1 Maneuver	105	0	-	-	1032	-
Stage 1	587	0	-	-	-	-
Stage 2	305	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 95	-	-	-	1032	-
Mov Cap-2 Maneuver	~ 95	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	277	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	196.9	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	95	1032	-
HCM Lane V/C Ratio	-	-	1.077	0.093	-
HCM Control Delay (s)	-	-	196.9	8.8	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	6.7	0.3	-

Notes

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	58	59	720	693	80
Future Volume (vph)	43	58	59	720	693	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1659	0	1770	1863	1833	0
Flt Permitted	0.986		0.103			
Satd. Flow (perm)	1659	0	192	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	129				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	102	750	933	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.7		41.7	43.1	34.6	
Actuated g/C Ratio	0.12		0.73	0.75	0.61	
v/c Ratio	0.58		0.36	0.53	0.84	
Control Delay	17.5		7.0	6.1	23.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	17.5		7.0	6.1	23.9	
LOS	B		A	A	C	
Approach Delay	17.5			6.2	23.9	
Approach LOS	B			A	C	

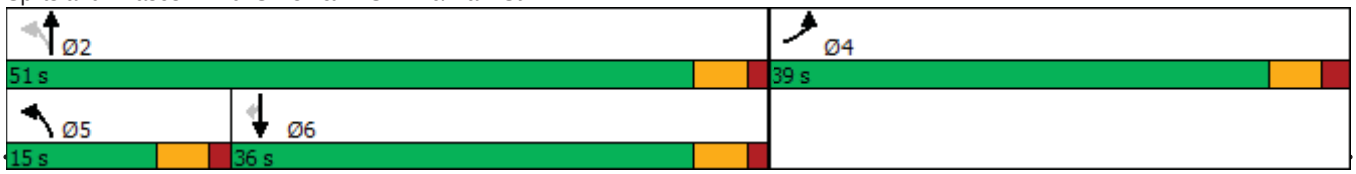
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 57.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	163	766	419	643	670	162
Future Volume (vph)	163	766	419	643	670	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1643	0	2006	1863	1863	1583
Flt Permitted	0.991		0.111			
Satd. Flow (perm)	1643	0	234	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	287					87
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	996	0	460	804	720	205
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	33.5		46.0	46.0	31.0	31.0
Actuated g/C Ratio	0.37		0.51	0.51	0.34	0.34
v/c Ratio	1.26		1.46	0.84	1.12	0.34
Control Delay	148.1		244.4	29.2	104.4	14.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	148.1		244.4	29.2	104.4	14.1
LOS	F		F	C	F	B
Approach Delay	148.1			107.5	84.4	
Approach LOS	F			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.46	
Intersection Signal Delay: 113.5	Intersection LOS: F
Intersection Capacity Utilization 127.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

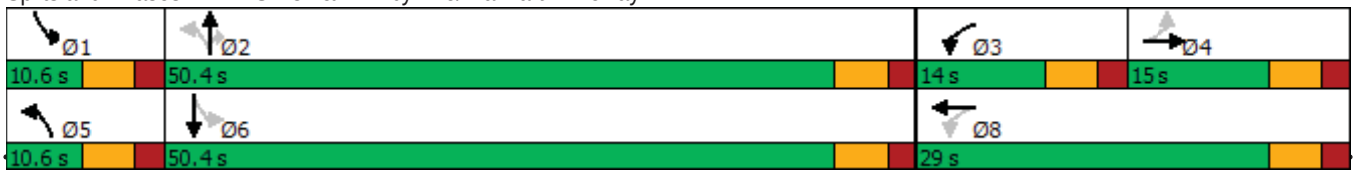


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Future Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1743	0	1770	1699	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.881		0.265			0.089			0.089		
Satd. Flow (perm)	0	1552	0	494	1699	0	177	1987	1531	182	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			77				164		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	237	0	339	153	0	84	873	236	77	1273	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.5		23.6	23.6		49.0	45.0	45.0	49.0	45.0	
Actuated g/C Ratio		0.11		0.27	0.27		0.56	0.51	0.51	0.56	0.51	
v/c Ratio		1.22		1.32	0.30		0.42	0.86	0.27	0.38	1.34	
Control Delay		168.7		200.0	15.7		14.4	30.0	5.2	12.8	182.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		168.7		200.0	15.7		14.4	30.0	5.2	12.8	182.4	
LOS		F		F	B		B	C	A	B	F	
Approach Delay		168.7			142.7			24.0			172.8	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 87.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.34
Intersection Signal Delay: 113.7 — Intersection LOS: F
Intersection Capacity Utilization 103.4% — ICU Level of Service G
Analysis Period (min) 15

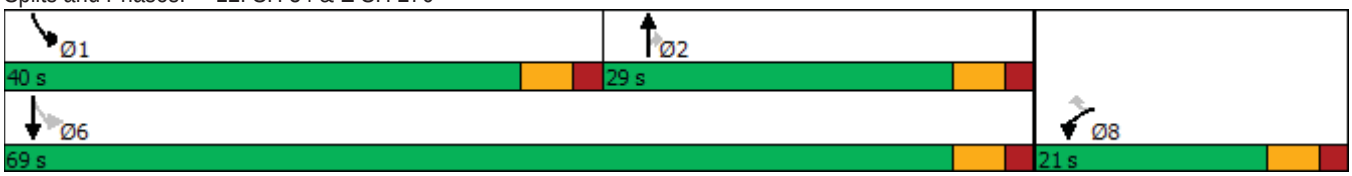
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	163	702	434	309	1245	318
Future Volume (vph)	163	702	434	309	1245	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		180	150	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				300	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.138	
Satd. Flow (perm)	1770	1583	1863	1583	257	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		687		323		
Link Speed (mph)	45		35			35
Link Distance (ft)	243		543			623
Travel Time (s)	3.7		10.6			12.1
Peak Hour Factor	0.71	0.92	0.90	0.88	0.94	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	763	482	351	1324	349
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Total Split (s)	21.0	21.0	29.0	29.0	40.0	69.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	14.6	14.6	23.5	23.5	63.5	63.5
Actuated g/C Ratio	0.16	0.16	0.26	0.26	0.71	0.71
v/c Ratio	0.80	0.92	0.98	0.54	1.72	0.26
Control Delay	56.9	22.6	71.1	7.8	352.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	22.6	71.1	7.8	352.1	5.3
LOS	E	C	E	A	F	A
Approach Delay	30.5		44.5			279.8
Approach LOS	C		D			F

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 89.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.72	
Intersection Signal Delay: 153.0	Intersection LOS: F
Intersection Capacity Utilization 114.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	133	110	80	574	349	85
Future Volume (vph)	133	110	80	574	349	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1702	0	0	1852	1812	0
Flt Permitted	0.974			0.875		
Satd. Flow (perm)	1702	0	0	1630	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	307	0	0	823	568	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0			6.0	6.0	
Act Effct Green (s)	7.1			23.7	23.7	
Actuated g/C Ratio	0.17			0.55	0.55	
v/c Ratio	0.86			0.92	0.56	
Control Delay	38.4			29.3	8.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	38.4			29.3	8.4	
LOS	D			C	A	
Approach Delay	38.4			29.3	8.4	
Approach LOS	D			C	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 43	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 87.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	2	5	568	352	2
Future Vol, veh/h	6	2	5	568	352	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	13	653	451	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1134	455	459	0	-	0
Stage 1	455	-	-	-	-	-
Stage 2	679	-	-	-	-	-
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	224	605	1102	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	605	1102	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	18.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1102	-	295	-	-
HCM Lane V/C Ratio	0.012	-	0.068	-	-
HCM Control Delay (s)	8.3	0	18.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Future Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							188
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	122	252	104	0	300	816	0	0	849	188
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				11.2	11.2	11.2		11.4	41.7			24.0	24.0
Actuated g/C Ratio				0.17	0.17	0.17		0.17	0.64			0.37	0.37
v/c Ratio				0.44	0.44	0.29		0.50	0.36			0.65	0.27
Control Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
LOS				C	C	A		C	A			C	A
Approach Delay					25.4				12.4			17.2	
Approach LOS					C				B			B	

Intersection Summary

Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 65.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Future Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						173			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	126	191	127	0	0	0	0	835	173	253	789	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	10.0	10.0	10.0					20.8	20.8	9.3	36.3	
Actuated g/C Ratio	0.17	0.17	0.17					0.36	0.36	0.16	0.62	
v/c Ratio	0.46	0.34	0.33					0.66	0.26	0.46	0.36	
Control Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
LOS	C	C	A					B	A	C	A	
Approach Delay		20.9						16.2			11.0	
Approach LOS		C						B			B	

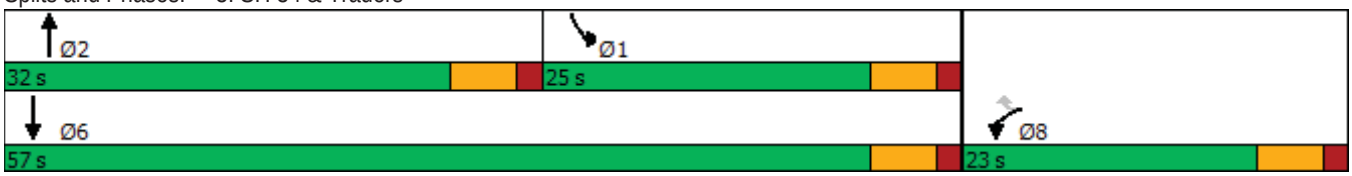
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 58.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	250	628	35	185	423
Future Volume (vph)	82	250	628	35	185	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		291	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	291	723	0	243	529
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	9.0	9.0	18.3		13.4	37.4
Actuated g/C Ratio	0.16	0.16	0.32		0.23	0.65
v/c Ratio	0.35	0.59	0.65		0.60	0.23
Control Delay	28.4	9.5	20.5		28.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	28.4	9.5	20.5		28.2	4.5
LOS	C	A	C		C	A
Approach Delay	14.2		20.5			12.0
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 57.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

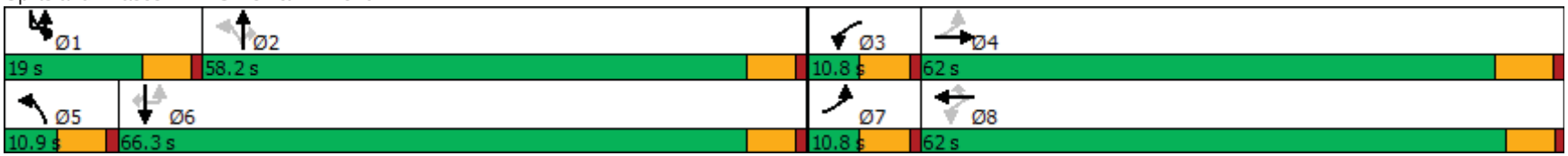


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Future Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.658			0.189			0.563				0.950		
Satd. Flow (perm)	1307	3522	0	352	1863	1583	1049	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				224			154				112
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	16	814	0	76	156	224	48	446	268	0	172	310	16
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		2	6			6
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2	58.2	19.0	19.0	66.3	66.3
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Act Effct Green (s)	31.8	27.0		34.1	32.4	32.4	23.8	18.6	18.6		13.6	29.9	29.9
Actuated g/C Ratio	0.37	0.31		0.40	0.38	0.38	0.28	0.22	0.22		0.16	0.35	0.35
v/c Ratio	0.03	0.74		0.34	0.22	0.31	0.14	0.58	0.58		0.62	0.25	0.03
Control Delay	15.3	31.7		19.7	21.2	4.5	18.2	34.7	19.5		48.9	23.6	0.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	15.3	31.7		19.7	21.2	4.5	18.2	34.7	19.5		48.9	23.6	0.0
LOS	B	C		B	C	A	B	C	B		D	C	A
Approach Delay		31.4			12.7			28.4				31.6	
Approach LOS		C			B			C				C	

Intersection Summary

Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 86.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	49	123	656	323	12
Future Volume (vph)	35	49	123	656	323	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	1863	1852	0
Flt Permitted	0.979		0.545			
Satd. Flow (perm)	1685	0	1015	1863	1852	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48				5	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	145	754	363	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	7.5		36.9	36.9	36.9	
Actuated g/C Ratio	0.15		0.73	0.73	0.73	
v/c Ratio	0.32		0.20	0.56	0.27	
Control Delay	16.0		4.7	7.1	4.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.0		4.7	7.1	4.4	
LOS	B		A	A	A	
Approach Delay	16.0			6.7	4.4	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 50.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	117	581	12	29	329
Future Vol, veh/h	28	117	581	12	29	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	165	618	20	44	401

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1117	628	0	0	618	0
Stage 1	628	-	-	-	-	-
Stage 2	489	-	-	-	-	-
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	229	483	-	-	962	-
Stage 1	532	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	218	483	-	-	962	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	588	962	-
HCM Lane V/C Ratio	-	-	0.341	0.046	-
HCM Control Delay (s)	-	-	14.3	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	26	33	560	336	21
Future Vol, veh/h	36	26	33	560	336	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	36	36	609	382	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1075	394	382	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	681	-	-	-	-	-
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	243	655	1176	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	655	1176	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1176	-	412	-	-
HCM Lane V/C Ratio	0.031	-	0.204	-	-
HCM Control Delay (s)	8.2	-	16	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	74	430	152	151	266
Future Volume (vph)	126	74	430	152	151	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	1863	1583	1711	1863
Flt Permitted	0.968				0.393	
Satd. Flow (perm)	1722	0	1863	1583	708	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22			249		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	0	494	249	270	313
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		78.0	78.0	78.0	78.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	19.6		32.7	32.7	32.7	32.7
Actuated g/C Ratio	0.30		0.50	0.50	0.50	0.50
v/c Ratio	0.67		0.53	0.27	0.76	0.33
Control Delay	28.6		13.1	2.2	28.9	10.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	28.6		13.1	2.2	28.9	10.7
LOS	C		B	A	C	B
Approach Delay	28.6		9.4			19.1
Approach LOS	C		A			B

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 65.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	92	73	486	370	67
Future Volume (vph)	35	92	73	486	370	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.247			
Satd. Flow (perm)	1655	0	460	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	151				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	104	534	571	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	8.0		34.8	34.8	25.2	
Actuated g/C Ratio	0.15		0.64	0.64	0.46	
v/c Ratio	0.55		0.23	0.45	0.67	
Control Delay	14.5		5.2	6.5	16.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	14.5		5.2	6.5	16.9	
LOS	B		A	A	B	
Approach Delay	14.5			6.3	16.9	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 54.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 49.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	137	208	405	525	409	158
Future Volume (vph)	137	208	405	525	409	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.161			
Satd. Flow (perm)	1679	0	340	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	81					126
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	0	466	610	499	203
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	21.5		48.1	48.1	26.0	26.0
Actuated g/C Ratio	0.27		0.60	0.60	0.32	0.32
v/c Ratio	0.86		0.84	0.55	0.83	0.34
Control Delay	41.1		32.4	12.4	38.6	10.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	41.1		32.4	12.4	38.6	10.4
LOS	D		C	B	D	B
Approach Delay	41.1			21.1	30.5	
Approach LOS	D			C	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 80.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

11: SH 34 & E Kirby Ave/Walmart Driveway

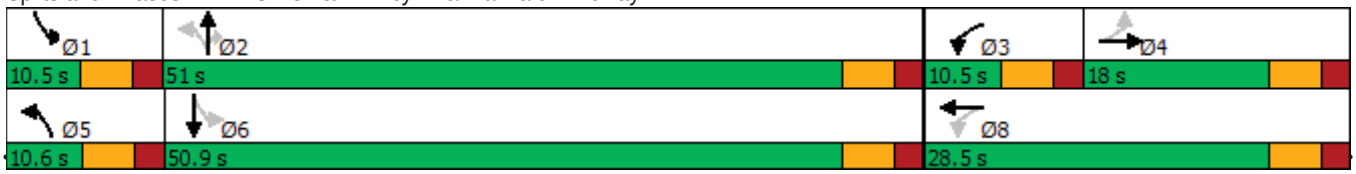
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Future Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.898		0.365			0.306			0.092		
Satd. Flow (perm)	0	1559	0	680	1695	0	608	1987	1531	189	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			24				164		3	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	88	40	0	72	912	64	56	575	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		11.7		19.4	19.4		47.4	43.7	43.7	47.3	43.6	
Actuated g/C Ratio		0.14		0.24	0.24		0.58	0.53	0.53	0.57	0.53	
v/c Ratio		0.77		0.38	0.10		0.17	0.87	0.07	0.25	0.58	
Control Delay		49.3		31.7	15.1		7.8	29.8	0.2	9.8	18.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		49.3		31.7	15.1		7.8	29.8	0.2	9.8	18.0	
LOS		D		C	B		A	C	A	A	B	
Approach Delay		49.3			26.5			26.5			17.3	
Approach LOS		D			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 82.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 25.8 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

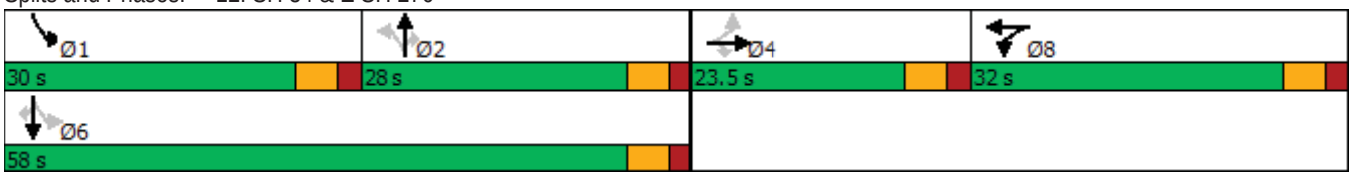
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	463	6	205	463	375	6	70	205	375	70	6
Future Volume (vph)	6	463	6	205	463	375	6	70	205	375	70	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3295	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.229			0.950			0.690			0.458		
Satd. Flow (perm)	427	3539	1583	1770	3295	0	1285	1863	1583	853	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		176				270			77
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	503	7	259	929	0	7	84	270	568	103	7
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	23.5	23.5	23.5	32.0	32.0		28.0	28.0	28.0	30.0	58.0	58.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	17.5	17.5	17.5	26.5	26.5		10.3	10.3	10.3	40.3	40.3	40.3
Actuated g/C Ratio	0.17	0.17	0.17	0.26	0.26		0.10	0.10	0.10	0.40	0.40	0.40
v/c Ratio	0.09	0.82	0.02	0.56	0.93		0.05	0.44	0.67	1.01	0.14	0.01
Control Delay	40.2	52.8	0.2	38.3	46.7		41.0	50.0	14.0	69.0	19.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	52.8	0.2	38.3	46.7		41.0	50.0	14.0	69.0	19.8	0.0
LOS	D	D	A	D	D		D	D	B	E	B	A
Approach Delay		51.9			44.9			22.9			60.8	
Approach LOS		D			D			C			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 113.5	
Actuated Cycle Length: 100.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

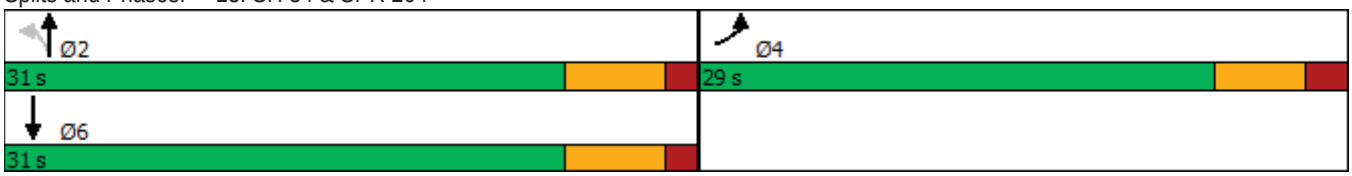
Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	155	61	66	258	274	306
Future Volume (vph)	155	61	66	258	274	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1733	0	1770	1863	1716	0
Flt Permitted	0.964		0.153			
Satd. Flow (perm)	1733	0	285	1863	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	34				143	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	0	100	274	821	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	13.9		26.2	26.2	26.2	
Actuated g/C Ratio	0.27		0.50	0.50	0.50	
v/c Ratio	0.67		0.70	0.29	0.88	
Control Delay	21.9		46.2	9.8	25.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	21.9		46.2	9.8	25.7	
LOS	C		D	A	C	
Approach Delay	21.9			19.6	25.7	
Approach LOS	C			B	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 52.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	202	1	350	0
Future Vol, veh/h	1	1	0	202	1	350	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	224	4	412	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	636	412	412	0	-	-	0
Stage 1	412	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-
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	442	640	1147	-	-	-	-
Stage 1	669	-	-	-	-	-	-
Stage 2	813	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	442	640	1147	-	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-	-
Stage 1	669	-	-	-	-	-	-
Stage 2	813	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12	0	
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1147	-	523	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	0	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Future Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						132						200
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	156	317	132	378	957	0	0	1076	256
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				14.5	14.5	14.5	15.0	56.5			35.2	35.2
Actuated g/C Ratio				0.17	0.17	0.17	0.18	0.68			0.42	0.42
v/c Ratio				0.56	0.55	0.34	0.61	0.40			0.72	0.33
Control Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
LOS				D	D	A	D	A			C	A
Approach Delay					32.8			15.6			20.3	
Approach LOS					C			B			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 83.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Future Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						285			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	165	262	156	0	0	0	0	1141	303	355	977	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.0	9.0	9.0					23.7	23.7	8.0	37.8	
Actuated g/C Ratio	0.15	0.15	0.15					0.41	0.41	0.14	0.65	
v/c Ratio	0.67	0.52	0.41					0.79	0.37	0.75	0.43	
Control Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
LOS	D	C	A					C	A	D	A	
Approach Delay		25.4						16.6			14.1	
Approach LOS		C						B			B	

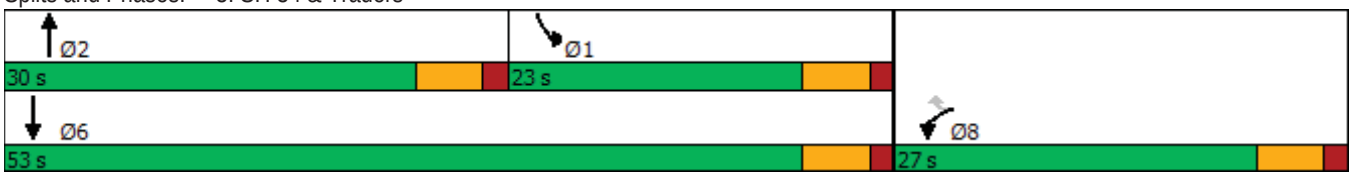
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	410	682	44	192	648
Future Volume (vph)	126	410	682	44	192	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		446	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	446	790	0	221	720
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.4	11.4	19.6		12.8	38.1
Actuated g/C Ratio	0.19	0.19	0.32		0.21	0.63
v/c Ratio	0.48	0.68	0.70		0.60	0.33
Control Delay	29.2	8.8	22.4		30.8	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	29.2	8.8	22.4		30.8	6.0
LOS	C	A	C		C	A
Approach Delay	14.1		22.4			11.8
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 60.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

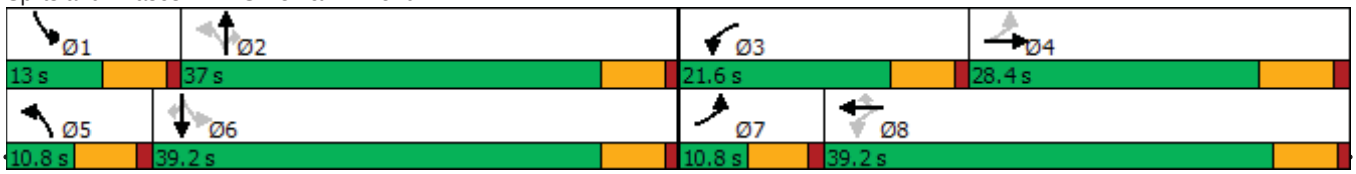


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Future Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.195			0.496			0.438			0.300		
Satd. Flow (perm)	387	3345	0	924	1863	1583	816	3539	1583	559	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71				234			231			231
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	194	0	389	622	245	16	462	76	176	570	32
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0	37.0	13.0	39.2	39.2
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	23.9	17.8		39.2	33.3	33.3	21.4	16.4	16.4	29.0	27.7	27.7
Actuated g/C Ratio	0.30	0.22		0.49	0.41	0.41	0.27	0.20	0.20	0.36	0.34	0.34
v/c Ratio	0.15	0.24		0.65	0.81	0.31	0.06	0.64	0.15	0.57	0.47	0.05
Control Delay	15.1	17.8		20.0	33.3	4.5	18.4	34.4	0.6	27.4	23.7	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	17.8		20.0	33.3	4.5	18.4	34.4	0.6	27.4	23.7	0.1
LOS	B	B		C	C	A	B	C	A	C	C	A
Approach Delay		17.4			23.6			29.3			23.5	
Approach LOS		B			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 80.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.2 Intersection LOS: C
Intersection Capacity Utilization 72.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	110	47	407	613	100
Future Volume (vph)	20	110	47	407	613	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	1863	1816	0
Flt Permitted	0.990		0.226			
Satd. Flow (perm)	1649	0	421	1863	1816	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	138				25	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	64	442	856	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	8.0		34.0	34.0	34.0	
Actuated g/C Ratio	0.15		0.64	0.64	0.64	
v/c Ratio	0.52		0.24	0.37	0.74	
Control Delay	13.9		7.1	5.9	11.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.9		7.1	5.9	11.3	
LOS	B		A	A	B	
Approach Delay	13.9			6.0	11.3	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 53.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	70	338	38	89	558
Future Vol, veh/h	26	70	338	38	89	558
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	96	376	52	109	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1261	402	0	0	376	0
Stage 1	402	-	-	-	-	-
Stage 2	859	-	-	-	-	-
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	188	648	-	-	1182	-
Stage 1	676	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	648	-	-	1182	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	377	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1182	-
HCM Lane V/C Ratio	-	-	0.211	0.092	-
HCM Control Delay (s)	-	-	12.3	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	35	13	331	504	48
Future Vol, veh/h	31	35	13	331	504	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	64	20	368	646	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1082	674	646	0	-	0
Stage 1	674	-	-	-	-	-
Stage 2	408	-	-	-	-	-
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	241	455	939	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	455	939	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	939	-	614	-	-
HCM Lane V/C Ratio	0.021	-	0.168	-	-
HCM Control Delay (s)	8.9	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	39	301	83	46	438
Future Volume (vph)	55	39	301	83	46	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	1863	1583	1711	1863
Flt Permitted	0.972				0.559	
Satd. Flow (perm)	1706	0	1863	1583	1007	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			112		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	334	112	60	592
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	8.1		30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.18		0.68	0.68	0.68	0.68
v/c Ratio	0.34		0.27	0.10	0.09	0.47
Control Delay	16.8		5.5	1.6	5.0	7.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	16.8		5.5	1.6	5.0	7.2
LOS	B		A	A	A	A
Approach Delay	16.8		4.5			7.0
Approach LOS	B		A			A

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 45.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 39.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	36	37	450	433	50
Future Volume (vph)	27	36	37	450	433	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	1863	1833	0
Flt Permitted	0.986		0.281			
Satd. Flow (perm)	1660	0	523	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	80				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	64	469	583	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.8		32.2	34.1	28.3	
Actuated g/C Ratio	0.14		0.68	0.72	0.60	
v/c Ratio	0.36		0.13	0.35	0.53	
Control Delay	13.7		3.8	4.8	11.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.7		3.8	4.8	11.7	
LOS	B		A	A	B	
Approach Delay	13.7			4.6	11.7	
Approach LOS	B			A	B	

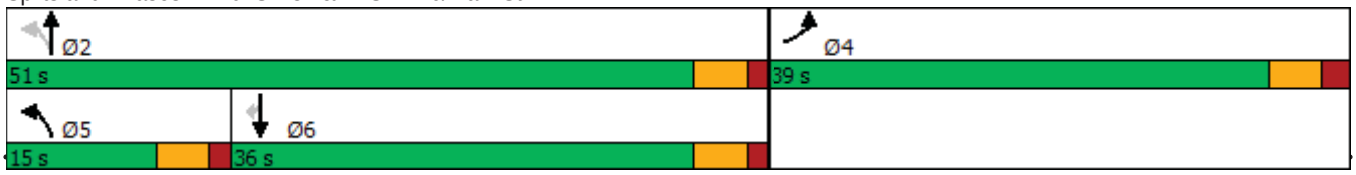
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 47.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	479	262	402	417	101
Future Volume (vph)	102	479	262	402	417	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1641	0	2006	1863	1863	1583
Flt Permitted	0.991		0.210			
Satd. Flow (perm)	1641	0	443	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	288					87
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	623	0	288	503	448	128
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	22.7		37.9	37.9	22.3	22.3
Actuated g/C Ratio	0.32		0.53	0.53	0.31	0.31
v/c Ratio	0.87		0.63	0.51	0.77	0.23
Control Delay	26.7		18.3	14.6	33.5	9.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.7		18.3	14.6	33.5	9.5
LOS	C		B	B	C	A
Approach Delay	26.7			15.9	28.2	
Approach LOS	C			B	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 71.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St



11: SH 34 & E Kirby Ave/Walmart Driveway

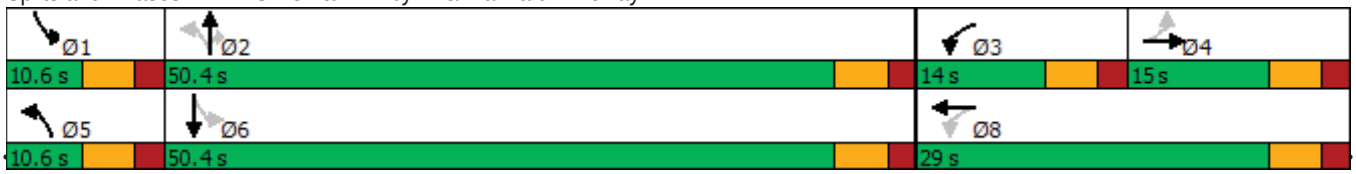
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Future Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1699	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.898		0.400			0.107			0.299		
Satd. Flow (perm)	0	1581	0	745	1699	0	213	1987	1531	613	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			56				164		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	212	96	0	52	545	148	48	795	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.2		23.7	23.7		40.2	37.5	37.5	40.2	37.5	
Actuated g/C Ratio		0.12		0.30	0.30		0.51	0.48	0.48	0.51	0.48	
v/c Ratio		0.70		0.62	0.17		0.23	0.57	0.18	0.12	0.89	
Control Delay		49.2		35.7	13.9		9.8	17.7	2.3	7.9	33.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		49.2		35.7	13.9		9.8	17.7	2.3	7.9	33.0	
LOS		D		D	B		A	B	A	A	C	
Approach Delay		49.3			28.9			14.1			31.5	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 78.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15

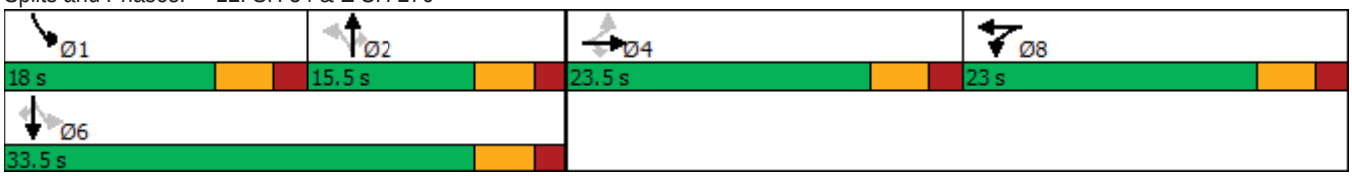
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	436	6	193	436	353	6	66	193	353	66	6
Future Volume (vph)	6	436	6	193	436	353	6	66	193	353	66	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3302	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.265			0.950			0.709			0.420		
Satd. Flow (perm)	494	3539	1583	1770	3302	0	1321	1863	1583	782	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			184		235				219			109
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	474	7	272	858	0	7	73	219	376	73	7
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	23.5	23.5	23.5	23.0	23.0		15.5	15.5	15.5	18.0	33.5	33.5
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	15.1	15.1	15.1	17.4	17.4		8.0	8.0	8.0	26.1	26.1	26.1
Actuated g/C Ratio	0.20	0.20	0.20	0.23	0.23		0.11	0.11	0.11	0.35	0.35	0.35
v/c Ratio	0.07	0.67	0.02	0.66	0.91		0.05	0.37	0.60	0.86	0.11	0.01
Control Delay	26.5	32.9	0.0	36.6	36.3		31.8	37.5	12.7	43.6	18.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	32.9	0.0	36.6	36.3		31.8	37.5	12.7	43.6	18.0	0.0
LOS	C	C	A	D	D		C	D	B	D	B	A
Approach Delay		32.4			36.4			19.2			38.8	
Approach LOS		C			D			B			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 75.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 33.8	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	83	69	50	359	218	53
Future Volume (vph)	83	69	50	359	218	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	1863	1812	0
Flt Permitted	0.974		0.549			
Satd. Flow (perm)	1702	0	1023	1863	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	88				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	60	454	355	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	6.6		20.1	20.1	20.1	
Actuated g/C Ratio	0.19		0.58	0.58	0.58	
v/c Ratio	0.48		0.10	0.42	0.33	
Control Delay	12.7		5.8	7.6	6.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	12.7		5.8	7.6	6.1	
LOS	B		A	A	A	
Approach Delay	12.7			7.4	6.1	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 34.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	4	1	3	355	220	1
Future Vol, veh/h	4	1	3	355	220	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	4	8	408	282	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	708	284	286	0	-	0
Stage 1	284	-	-	-	-	-
Stage 2	424	-	-	-	-	-
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	401	755	1276	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	398	755	1276	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1276	-	472	-	-
HCM Lane V/C Ratio	0.006	-	0.025	-	-
HCM Control Delay (s)	7.8	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Future Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						118							148
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	170	354	147	0	418	1142	0	0	1188	263
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				14.0	14.0	14.0		14.5	54.5			33.9	33.9
Actuated g/C Ratio				0.17	0.17	0.17		0.18	0.67			0.42	0.42
v/c Ratio				0.61	0.61	0.40		0.68	0.48			0.80	0.35
Control Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
LOS				D	D	B		D	A			C	A
Approach Delay					33.2				15.5			22.8	
Approach LOS					C				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 80.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Future Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	177	266	179	0	0	0	0	1170	242	354	1104	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	11.6	11.6	11.6					26.5	26.5	10.4	42.9	
Actuated g/C Ratio	0.18	0.18	0.18					0.40	0.40	0.16	0.65	
v/c Ratio	0.63	0.46	0.46					0.83	0.31	0.66	0.48	
Control Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
LOS	D	C	B					C	A	C	A	
Approach Delay		25.8						20.8			13.4	
Approach LOS		C						C			B	

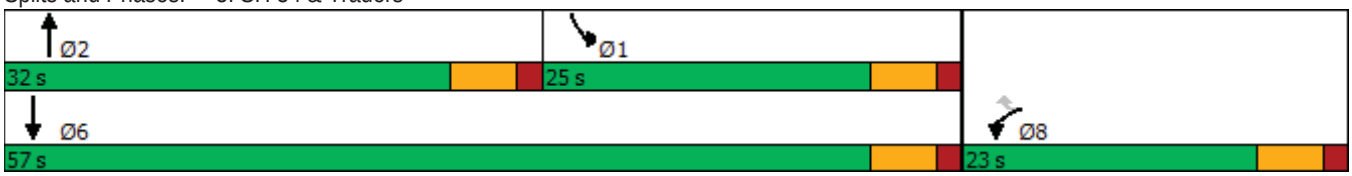
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 66.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	350	879	49	259	592
Future Volume (vph)	115	350	879	49	259	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		407	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	407	1012	0	341	740
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.0	11.0	24.7		17.3	47.6
Actuated g/C Ratio	0.16	0.16	0.35		0.25	0.68
v/c Ratio	0.48	0.69	0.81		0.78	0.31
Control Delay	34.0	9.9	27.8		39.9	5.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	34.0	9.9	27.8		39.9	5.2
LOS	C	A	C		D	A
Approach Delay	15.9		27.8			16.2
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 69.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 20.6	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

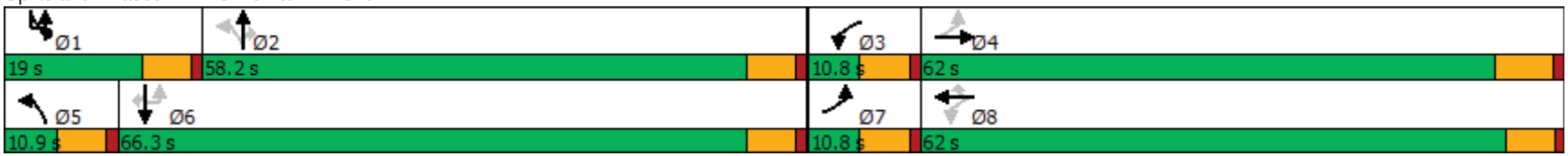


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Future Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.599			0.089			0.500				0.950		
Satd. Flow (perm)	1190	3522	0	166	1863	1583	931	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				276			154				112
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	23	1140	0	107	219	313	67	624	376	0	239	434	21
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		2	6			6
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2	58.2	19.0	19.0	66.3	66.3
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Act Effct Green (s)	50.6	44.5		53.3	50.5	50.5	34.9	29.7	29.7		13.5	40.7	40.7
Actuated g/C Ratio	0.43	0.38		0.45	0.43	0.43	0.30	0.25	0.25		0.11	0.35	0.35
v/c Ratio	0.04	0.85		0.74	0.27	0.37	0.21	0.70	0.73		1.18	0.35	0.03
Control Delay	17.8	41.0		51.1	24.9	5.9	25.1	44.7	32.6		166.1	31.1	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.8	41.0		51.1	24.9	5.9	25.1	44.7	32.6		166.1	31.1	0.1
LOS	B	D		D	C	A	C	D	C		F	C	A
Approach Delay		40.6			20.0			39.2				76.6	
Approach LOS		D			B			D				E	

Intersection Summary

Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 117.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.18			
Intersection Signal Delay: 43.5		Intersection LOS: D	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	69	172	918	452	17
Future Volume (vph)	49	69	172	918	452	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	1863	1852	0
Flt Permitted	0.979		0.452			
Satd. Flow (perm)	1685	0	842	1863	1852	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48				5	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	202	1055	509	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	9.9		54.0	54.0	54.0	
Actuated g/C Ratio	0.13		0.72	0.72	0.72	
v/c Ratio	0.49		0.34	0.79	0.38	
Control Delay	29.7		6.0	12.7	5.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	29.7		6.0	12.7	5.2	
LOS	C		A	B	A	
Approach Delay	29.7			11.6	5.2	
Approach LOS	C			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 75.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection						
Int Delay, s/veh	4.9					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	164	813	17	41	461
Future Vol, veh/h	39	164	813	17	41	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	231	865	28	62	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1565	879	0	0	865	0
Stage 1	879	-	-	-	-	-
Stage 2	686	-	-	-	-	-
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	123	347	-	-	778	-
Stage 1	406	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	113	347	-	-	778	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	406	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.9	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	422	778	-
HCM Lane V/C Ratio	-	-	0.666	0.08	-
HCM Control Delay (s)	-	-	28.9	10	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	4.7	0.3	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	36	46	784	470	29
Future Vol, veh/h	50	36	46	784	470	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	50	50	852	534	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1503	551	534	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	952	-	-	-	-	-
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	134	534	1034	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	128	534	1034	-	-	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.3	0.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1034	-	224	-	-
HCM Lane V/C Ratio	0.048	-	0.521	-	-
HCM Control Delay (s)	8.7	-	37.3	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	2.7	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	104	602	213	211	372
Future Volume (vph)	176	104	602	213	211	372
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	1863	1583	1711	1863
Flt Permitted	0.968				0.272	
Satd. Flow (perm)	1722	0	1863	1583	490	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22			349		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	500	0	692	349	377	438
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		78.0	78.0	78.0	78.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	35.2		72.5	72.5	72.5	72.5
Actuated g/C Ratio	0.30		0.61	0.61	0.61	0.61
v/c Ratio	0.95		0.61	0.32	1.26	0.38
Control Delay	68.6		17.4	1.8	166.1	13.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	68.6		17.4	1.8	166.1	13.2
LOS	E		B	A	F	B
Approach Delay	68.6		12.2			83.9
Approach LOS	E		B			F

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 118.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 49.0	Intersection LOS: D
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	129	102	680	518	94
Future Volume (vph)	49	129	102	680	518	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.133			
Satd. Flow (perm)	1655	0	248	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	159				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	284	0	146	747	800	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	10.6		44.3	44.3	35.2	
Actuated g/C Ratio	0.16		0.66	0.66	0.53	
v/c Ratio	0.72		0.45	0.60	0.83	
Control Delay	25.0		8.9	8.9	23.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	25.0		8.9	8.9	23.7	
LOS	C		A	A	C	
Approach Delay	25.0			8.9	23.7	
Approach LOS	C			A	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 66.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	191	291	567	735	573	221
Future Volume (vph)	191	291	567	735	573	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.085			
Satd. Flow (perm)	1679	0	179	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	61					93
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	607	0	652	855	699	283
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	40.0		33.0	80.0	47.0	47.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	34.5		75.0	75.0	42.0	42.0
Actuated g/C Ratio	0.29		0.62	0.62	0.35	0.35
v/c Ratio	1.15		1.21	0.73	1.07	0.46
Control Delay	124.6		144.4	20.4	94.1	22.6
Queue Delay	0.0		0.0	2.1	0.0	0.0
Total Delay	124.6		144.4	22.5	94.1	22.6
LOS	F		F	C	F	C
Approach Delay	124.6			75.2	73.5	
Approach LOS	F			E	E	

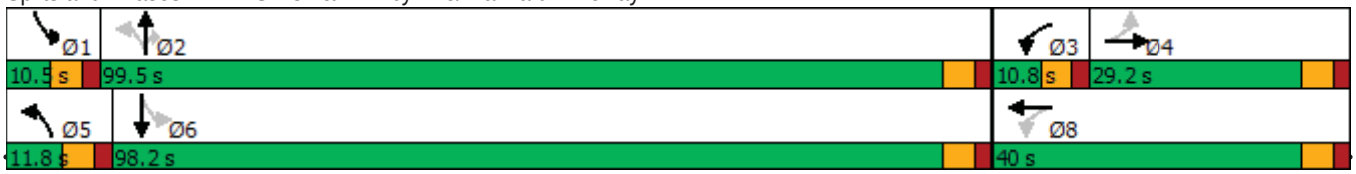
Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 84.4	Intersection LOS: F
Intersection Capacity Utilization 102.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Future Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1715	0	1770	1699	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.892		0.293			0.199			0.043		
Satd. Flow (perm)	0	1550	0	546	1699	0	395	1987	1531	88	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			33				98		2	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	281	0	122	56	0	102	1277	90	79	806	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	29.2	29.2		10.8	40.0		11.8	99.5	99.5	10.5	98.2	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		23.7		34.5	34.5		100.3	94.0	94.0	97.7	92.7	
Actuated g/C Ratio		0.16		0.23	0.23		0.67	0.63	0.63	0.65	0.62	
v/c Ratio		1.05		0.73	0.13		0.31	1.03	0.09	0.66	0.70	
Control Delay		121.4		74.7	23.4		10.0	60.2	1.8	45.7	23.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	4.7	
Total Delay		121.4		74.7	23.4		10.0	60.2	1.8	45.7	28.2	
LOS		F		E	C		A	E	A	D	C	
Approach Delay		121.4			58.6			53.2			29.8	
Approach LOS		F			E			D			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 53.0	Intersection LOS: D
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



2038 Future Conditions W/ Short - Term Improvements

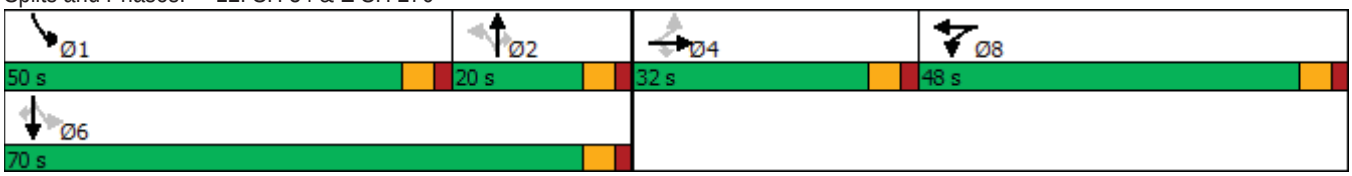
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	639	12	287	639	521	12	100	287	521	100	12
Future Volume (vph)	12	639	12	287	639	521	12	100	287	521	100	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3295	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.151			0.950			0.663			0.326		
Satd. Flow (perm)	281	3539	1583	1770	3295	0	1235	1863	1583	607	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		143				378			58
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	695	13	363	1287	0	13	120	378	789	147	13
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	32.0	32.0	32.0	48.0	48.0		20.0	20.0	20.0	50.0	70.0	70.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	26.5	26.5	26.5	42.5	42.5		13.1	13.1	13.1	63.2	63.2	63.2
Actuated g/C Ratio	0.18	0.18	0.18	0.29	0.29		0.09	0.09	0.09	0.43	0.43	0.43
v/c Ratio	0.26	1.10	0.04	0.72	1.23		0.12	0.73	0.78	1.30	0.19	0.02
Control Delay	68.5	122.0	0.2	57.2	152.5		64.8	90.8	17.9	180.4	27.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	122.0	0.2	57.2	152.5		64.8	90.8	17.9	180.4	27.4	0.1
LOS	E	F	A	E	F		E	F	B	F	C	A
Approach Delay		118.9			131.5			36.2			154.2	
Approach LOS		F			F			D			F	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 148.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 122.1 — Intersection LOS: F
Intersection Capacity Utilization 87.8% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	217	85	92	361	384	428
Future Volume (vph)	217	85	92	361	384	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1735	0	1770	1863	1716	0
Flt Permitted	0.964		0.085			
Satd. Flow (perm)	1735	0	158	1863	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				114	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	455	0	139	384	1149	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	38.0		112.0	112.0	112.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	32.0		106.0	106.0	106.0	
Actuated g/C Ratio	0.21		0.71	0.71	0.71	
v/c Ratio	1.20		1.25	0.29	0.92	
Control Delay	162.1		192.6	8.8	30.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	162.1		192.6	8.8	30.1	
LOS	F		F	A	C	
Approach Delay	162.1			57.7	30.1	
Approach LOS	F			E	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 65.1	Intersection LOS: E
Intersection Capacity Utilization 83.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	283	1	490	0
Future Vol, veh/h	1	1	0	283	1	490	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	314	4	576	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	890	576	576	0	-	-	0
Stage 1	576	-	-	-	-	-	-
Stage 2	314	-	-	-	-	-	-
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	313	517	997	-	-	-	-
Stage 1	562	-	-	-	-	-	-
Stage 2	741	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	313	517	997	-	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-	-
Stage 1	562	-	-	-	-	-	-
Stage 2	741	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	14.4	0	
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	997	-	390	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2038 Future Conditions W/ Short - Term Improvements

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Future Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						110
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	218	445	185	530	1340	0	0	1505	359
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				18.9	18.9	18.9	19.6	74.4			48.7	48.7
Actuated g/C Ratio				0.18	0.18	0.18	0.19	0.71			0.46	0.46
v/c Ratio				0.76	0.75	0.52	0.83	0.54			0.92	0.45
Control Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
LOS				E	D	C	D	A			D	B
Approach Delay					47.2			21.4			33.2	
Approach LOS					D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 105.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Future Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						199			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	231	367	218	0	0	0	0	1598	425	497	1367	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.5	9.5	9.5					25.0	25.0	8.0	39.0	
Actuated g/C Ratio	0.16	0.16	0.16					0.42	0.42	0.13	0.65	
v/c Ratio	0.91	0.87dl	0.56					1.08	0.55	1.09	0.59	
Control Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
LOS	E	C	B					E	A	F	A	
Approach Delay		37.4						57.5			31.2	
Approach LOS		D						E			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

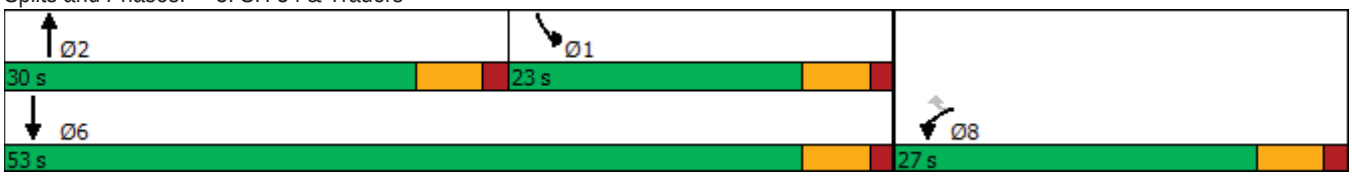
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	574	955	62	269	907
Future Volume (vph)	176	574	955	62	269	907
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		461	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	223	624	1106	0	309	1008
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	16.0	16.0	24.8		15.8	46.2
Actuated g/C Ratio	0.22	0.22	0.34		0.22	0.63
v/c Ratio	0.58	0.89	0.93		0.81	0.45
Control Delay	31.9	23.7	40.2		46.6	8.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.9	23.7	40.2		46.6	8.5
LOS	C	C	D		D	A
Approach Delay	25.8		40.2			17.4
Approach LOS	C		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

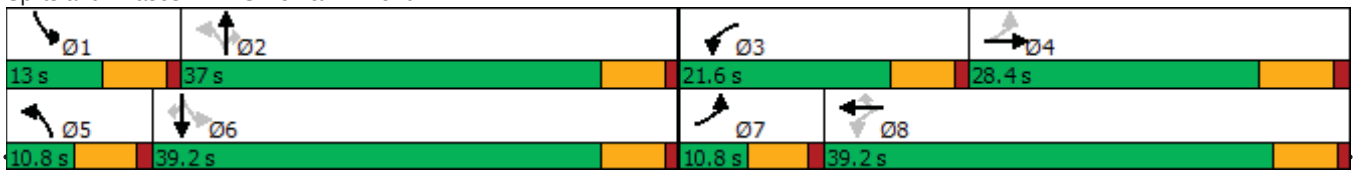


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Future Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.204			0.456			0.251			0.211		
Satd. Flow (perm)	405	3345	0	849	1863	1583	468	3539	1583	393	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		100				233			231			231
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	272	0	544	871	342	23	647	106	246	798	45
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0	37.0	13.0	39.2	39.2
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	23.0	16.9		39.9	34.0	34.0	27.7	22.6	22.6	34.6	32.0	32.0
Actuated g/C Ratio	0.26	0.19		0.46	0.39	0.39	0.32	0.26	0.26	0.40	0.37	0.37
v/c Ratio	0.23	0.38		0.98	1.20	0.45	0.10	0.71	0.18	0.91	0.62	0.06
Control Delay	19.4	21.0		57.2	133.0	10.1	17.5	34.2	0.7	60.5	26.7	0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	21.0		57.2	133.0	10.1	17.5	34.2	0.7	60.5	26.7	0.2
LOS	B	C		E	F	B	B	C	A	E	C	A
Approach Delay		20.8			85.6			29.1			33.2	
Approach LOS		C			F			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 87.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 54.8 — Intersection LOS: D
Intersection Capacity Utilization 91.4% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	154	66	570	858	140
Future Volume (vph)	28	154	66	570	858	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	1863	1816	0
Flt Permitted	0.990		0.109			
Satd. Flow (perm)	1649	0	203	1863	1816	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				24	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	264	0	90	620	1197	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	14.0		78.3	78.3	78.3	
Actuated g/C Ratio	0.13		0.75	0.75	0.75	
v/c Ratio	0.77		0.59	0.44	0.87	
Control Delay	38.1		26.9	6.3	18.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	38.1		26.9	6.3	18.8	
LOS	D		C	A	B	
Approach Delay	38.1			8.9	18.8	
Approach LOS	D			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 103.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection						
Int Delay, s/veh	4.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	98	473	53	125	781
Future Vol, veh/h	36	98	473	53	125	781
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	134	526	73	152	898

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1765	563	0	0	526	0
Stage 1	563	-	-	-	-	-
Stage 2	1202	-	-	-	-	-
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	92	526	-	-	1041	-
Stage 1	570	-	-	-	-	-
Stage 2	285	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	526	-	-	1041	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	243	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.5	0	1.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	1041	-
HCM Lane V/C Ratio	-	-	0.633	0.146	-
HCM Control Delay (s)	-	-	36.5	9.1	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	4	0.5	-

Intersection						
Int Delay, s/veh	2.2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	49	18	463	706	67
Future Vol, veh/h	43	49	18	463	706	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	89	28	514	905	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1514	944	905	0	-	0
Stage 1	944	-	-	-	-	-
Stage 2	570	-	-	-	-	-
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	132	318	752	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	127	318	752	-	-	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	752	-	332	-	-
HCM Lane V/C Ratio	0.037	-	0.434	-	-
HCM Control Delay (s)	10	-	23.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	77	55	421	116	64	613
Future Volume (vph)	77	55	421	116	64	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	1863	1583	1711	1863
Flt Permitted	0.972				0.467	
Satd. Flow (perm)	1706	0	1863	1583	841	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			157		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	0	468	157	83	828
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	10.6		37.5	37.5	37.5	37.5
Actuated g/C Ratio	0.18		0.63	0.63	0.63	0.63
v/c Ratio	0.48		0.40	0.15	0.16	0.70
Control Delay	24.5		6.8	1.3	5.8	11.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	24.5		6.8	1.3	5.8	11.6
LOS	C		A	A	A	B
Approach Delay	24.5		5.4			11.1
Approach LOS	C		A			B

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 59.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 49.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	50	52	630	606	70
Future Volume (vph)	38	50	52	630	606	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	1863	1833	0
Flt Permitted	0.986		0.144			
Satd. Flow (perm)	1660	0	268	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	111				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	0	90	656	816	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.9		38.4	40.2	32.2	
Actuated g/C Ratio	0.13		0.72	0.75	0.60	
v/c Ratio	0.50		0.26	0.47	0.74	
Control Delay	16.0		4.9	5.4	18.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.0		4.9	5.4	18.2	
LOS	B		A	A	B	
Approach Delay	16.0			5.4	18.2	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 53.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	143	671	367	563	587	141
Future Volume (vph)	143	671	367	563	587	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1643	0	2006	1863	1863	1583
Flt Permitted	0.991		0.138			
Satd. Flow (perm)	1643	0	291	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	333					100
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	873	0	403	704	631	178
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	32.0		14.0	43.0	29.0	29.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	26.5		38.0	38.0	24.0	24.0
Actuated g/C Ratio	0.35		0.51	0.51	0.32	0.32
v/c Ratio	1.10		1.14	0.75	1.06	0.31
Control Delay	80.0		112.5	20.8	81.2	10.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	80.0		112.5	20.8	81.2	10.7
LOS	E		F	C	F	B
Approach Delay	80.0			54.2	65.7	
Approach LOS	E			D	E	

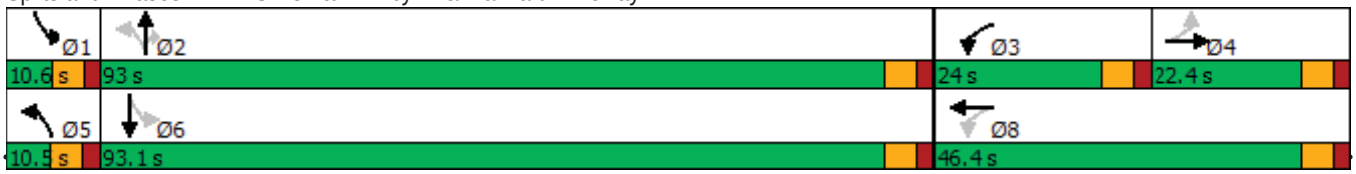
Intersection Summary	
Area Type: Other	
Cycle Length: 75	
Actuated Cycle Length: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 65.6	Intersection LOS: E
Intersection Capacity Utilization 113.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Future Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1701	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.888		0.231			0.045			0.211		
Satd. Flow (perm)	0	1563	0	430	1701	0	89	1987	1531	432	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			46				98		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	298	134	0	72	763	207	68	1113	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	22.4	22.4		24.0	46.4		10.5	93.0	93.0	10.6	93.1	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		16.9		40.9	40.9		93.6	89.6	89.6	92.7	87.6	
Actuated g/C Ratio		0.11		0.27	0.27		0.62	0.60	0.60	0.62	0.58	
v/c Ratio		1.08		1.06	0.27		0.63	0.64	0.22	0.21	1.02	
Control Delay		143.2		115.5	29.4		42.2	23.4	8.1	11.0	64.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	28.9	
Total Delay		143.2		115.5	29.4		42.2	23.4	8.1	11.0	93.7	
LOS		F		F	C		D	C	A	B	F	
Approach Delay		143.2			88.8			21.7			88.9	
Approach LOS		F			F			C			F	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 68.4	Intersection LOS: E
Intersection Capacity Utilization 86.4%	ICU Level of Service E
Analysis Period (min) 15	

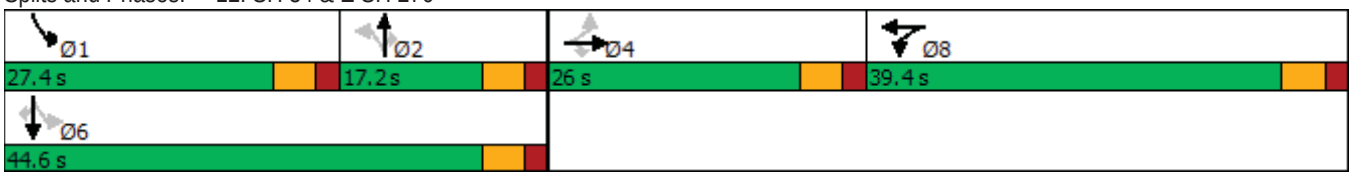
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	602	11	271	602	491	11	94	271	491	94	11
Future Volume (vph)	11	602	11	271	602	491	11	94	271	491	94	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3302	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.195			0.950			0.690			0.427		
Satd. Flow (perm)	363	3539	1583	1770	3302	0	1285	1863	1583	795	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134		194				308			79
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	654	12	382	1188	0	12	104	308	522	103	12
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	26.0	26.0	26.0	39.4	39.4		17.2	17.2	17.2	27.4	44.6	44.6
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	20.5	20.5	20.5	33.9	33.9		10.3	10.3	10.3	37.7	37.7	37.7
Actuated g/C Ratio	0.19	0.19	0.19	0.31	0.31		0.09	0.09	0.09	0.35	0.35	0.35
v/c Ratio	0.18	0.98	0.03	0.69	1.02		0.10	0.59	0.72	1.11	0.16	0.02
Control Delay	45.0	74.8	0.1	40.8	63.4		46.5	61.4	15.7	105.9	25.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	74.8	0.1	40.8	63.4		46.5	61.4	15.7	105.9	25.2	0.1
LOS	D	E	A	D	E		D	E	B	F	C	A
Approach Delay		72.9			57.9			27.8			90.8	
Approach LOS		E			E			C			F	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 108.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 63.4	Intersection LOS: E
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	97	70	503	305	74
Future Volume (vph)	116	97	70	503	305	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	1863	1812	0
Flt Permitted	0.974		0.453			
Satd. Flow (perm)	1702	0	844	1863	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	269	0	84	637	496	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	6.9		19.9	19.9	19.9	
Actuated g/C Ratio	0.18		0.51	0.51	0.51	
v/c Ratio	0.71		0.19	0.67	0.52	
Control Delay	24.2		6.6	11.4	8.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	24.2		6.6	11.4	8.1	
LOS	C		A	B	A	
Approach Delay	24.2			10.8	8.1	
Approach LOS	C			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 38.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 52.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection						
Int Delay, s/veh	0.3					

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	1	4	497	308	1
Future Vol, veh/h	6	1	4	497	308	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	4	11	571	395	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	990	397	399	0	-	0
Stage 1	397	-	-	-	-	-
Stage 2	593	-	-	-	-	-
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	273	652	1160	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	652	1160	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	17	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1160	-	315	-	-
HCM Lane V/C Ratio	0.009	-	0.051	-	-
HCM Control Delay (s)	8.1	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Future Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							114
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	194	404	167	0	483	1306	0	0	1359	301
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				15.2	15.2	15.2		15.7	58.4			36.7	36.7
Actuated g/C Ratio				0.18	0.18	0.18		0.18	0.68			0.43	0.43
v/c Ratio				0.68	0.68	0.45		0.77	0.54			0.90	0.41
Control Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
LOS				D	D	B		D	A			C	B
Approach Delay					36.7				17.5			29.1	
Approach LOS					D				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 85.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Future Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	202	305	203	0	0	0	0	1336	276	404	1262	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	12.3	12.3	12.3					28.0	28.0	10.7	44.7	
Actuated g/C Ratio	0.18	0.18	0.18					0.41	0.41	0.16	0.65	
v/c Ratio	0.70	0.52	0.51					0.92	0.35	0.75	0.55	
Control Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
LOS	D	C	B					C	A	D	A	
Approach Delay		28.2						27.8			15.1	
Approach LOS		C						C			B	

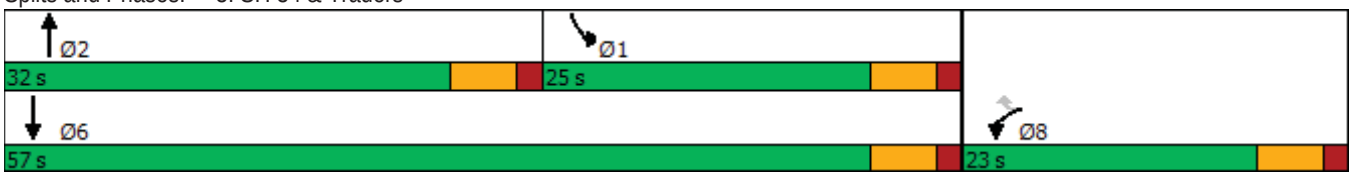
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 68.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	400	1005	56	296	677
Future Volume (vph)	131	400	1005	56	296	677
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		465	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	465	1158	0	389	846
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.8	11.8	26.6		18.8	50.9
Actuated g/C Ratio	0.16	0.16	0.36		0.26	0.69
v/c Ratio	0.55	0.72	0.91		0.86	0.35
Control Delay	36.0	10.2	35.9		48.3	5.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	36.0	10.2	35.9		48.3	5.5
LOS	D	B	D		D	A
Approach Delay	16.6		35.9			19.0
Approach LOS	B		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

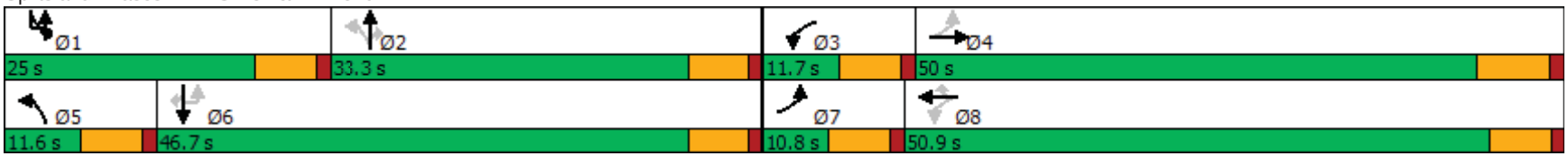


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Future Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.563			0.081			0.470				0.950		
Satd. Flow (perm)	1119	3522	0	151	1863	1583	875	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				358			193				140
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	25	1301	0	121	249	358	77	714	429	0	277	497	26
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		2	6			6
Total Split (s)	10.8	50.0		11.7	50.9	50.9	11.6	33.3	33.3	25.0	25.0	46.7	46.7
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Act Effct Green (s)	49.2	43.2		53.0	49.5	49.5	32.8	27.0	27.0		19.2	42.8	42.8
Actuated g/C Ratio	0.41	0.36		0.44	0.41	0.41	0.27	0.23	0.23		0.16	0.36	0.36
v/c Ratio	0.05	1.02		0.83	0.32	0.41	0.27	0.89	0.85		0.98	0.39	0.04
Control Delay	17.9	68.6		63.5	26.5	4.1	24.2	59.7	40.6		97.8	30.5	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.9	68.6		63.5	26.5	4.1	24.2	59.7	40.6		97.8	30.5	0.1
LOS	B	E		E	C	A	C	E	D		F	C	A
Approach Delay		67.6			21.7			50.7				52.8	
Approach LOS		E			C			D				D	

Intersection Summary

Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 119.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 51.4	Intersection LOS: D
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	78	197	1050	517	19
Future Volume (vph)	56	78	197	1050	517	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	1863	1852	0
Flt Permitted	0.979		0.411			
Satd. Flow (perm)	1685	0	766	1863	1852	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	47				5	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	232	1207	581	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	11.7		69.4	69.4	69.4	
Actuated g/C Ratio	0.13		0.75	0.75	0.75	
v/c Ratio	0.58		0.40	0.87	0.42	
Control Delay	38.6		6.9	17.1	5.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	38.6		6.9	17.1	5.4	
LOS	D		A	B	A	
Approach Delay	38.6			15.4	5.4	
Approach LOS	D			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 92.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	16.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	187	930	19	46	526
Future Vol, veh/h	45	187	930	19	46	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	263	989	32	70	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1786	1005	0	0	989	0
Stage 1	1005	-	-	-	-	-
Stage 2	781	-	-	-	-	-
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	90	293	-	-	699	-
Stage 1	354	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	293	-	-	699	-
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	406	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	105.6	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	304	699	-
HCM Lane V/C Ratio	-	-	1.056	0.1	-
HCM Control Delay (s)	-	-	105.6	10.7	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	12.1	0.3	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	42	53	896	538	34
Future Vol, veh/h	58	42	53	896	538	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	58	58	974	611	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1721	631	611	0	-	0
Stage 1	631	-	-	-	-	-
Stage 2	1090	-	-	-	-	-
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	98	481	968	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	481	968	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	322	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	98.2	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	968	-	156	-	-
HCM Lane V/C Ratio	0.06	-	0.87	-	-
HCM Control Delay (s)	9	-	98.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	118	688	243	242	426
Future Volume (vph)	202	118	688	243	242	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	1863	1583	1711	1863
Flt Permitted	0.968				0.253	
Satd. Flow (perm)	1722	0	1863	1583	456	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	16			398		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	571	0	791	398	432	501
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		108.0	108.0	108.0	108.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	36.5		102.5	102.5	102.5	102.5
Actuated g/C Ratio	0.24		0.68	0.68	0.68	0.68
v/c Ratio	1.32		0.62	0.33	1.39	0.39
Control Delay	203.8		15.8	1.5	218.1	11.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	203.8		15.8	1.5	218.1	11.4
LOS	F		B	A	F	B
Approach Delay	203.8		11.0			107.1
Approach LOS	F		B			F

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 85.1	Intersection LOS: F
Intersection Capacity Utilization 81.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	147	117	778	592	107
Future Volume (vph)	56	147	117	778	592	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	1863	1814	0
Flt Permitted	0.987		0.088			
Satd. Flow (perm)	1655	0	164	1863	1814	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	158				22	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	325	0	167	855	913	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	12.1		52.3	52.3	39.9	
Actuated g/C Ratio	0.16		0.69	0.69	0.53	
v/c Ratio	0.82		0.66	0.66	0.95	
Control Delay	34.1		24.5	10.3	37.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	34.1		24.5	10.3	37.2	
LOS	C		C	B	D	
Approach Delay	34.1			12.6	37.2	
Approach LOS	C			B	D	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 75.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	220	333	648	840	654	253
Future Volume (vph)	220	333	648	840	654	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	1863	1863	1583
Flt Permitted	0.980		0.080			
Satd. Flow (perm)	1679	0	169	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	56					86
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	697	0	745	977	798	324
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	43.0		37.0	87.0	50.0	50.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	37.5		82.0	82.0	45.0	45.0
Actuated g/C Ratio	0.29		0.63	0.63	0.35	0.35
v/c Ratio	1.33		1.34	0.83	1.24	0.54
Control Delay	195.8		195.7	26.5	157.5	28.3
Queue Delay	0.0		0.0	11.1	0.0	0.0
Total Delay	195.8		195.7	37.6	157.5	28.3
LOS	F		F	D	F	C
Approach Delay	195.8			106.0	120.2	
Approach LOS	F			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 130	
Actuated Cycle Length: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 128.2	Intersection LOS: F
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

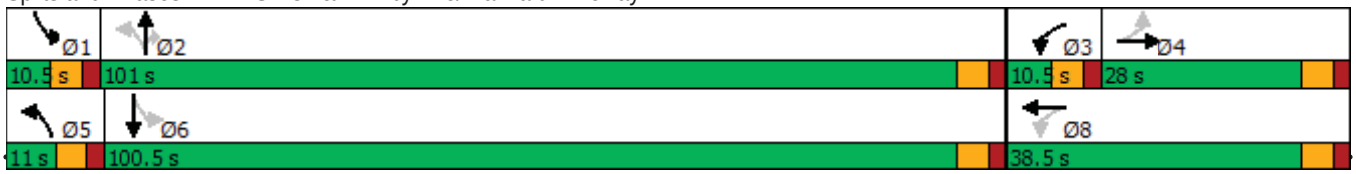
Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Future Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	1987	1531	1947	1853	0
Flt Permitted		0.891		0.263			0.147			0.042		
Satd. Flow (perm)	0	1547	0	490	1695	0	292	1987	1531	86	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			38				98		2	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	320	0	140	63	0	115	1460	102	88	918	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	28.0	28.0		10.5	38.5		11.0	101.0	101.0	10.5	100.5	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		22.5		33.0	33.0		101.0	95.5	95.5	100.0	95.0	
Actuated g/C Ratio		0.15		0.22	0.22		0.67	0.64	0.64	0.67	0.63	
v/c Ratio		1.25		0.93	0.16		0.45	1.15	0.10	0.74	0.78	
Control Delay		188.1		111.0	23.3		12.8	106.1	2.2	56.2	25.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	12.5	
Total Delay		188.1		111.0	23.3		12.8	106.1	2.2	56.2	38.4	
LOS		F		F	C		B	F	A	E	D	
Approach Delay		188.1			83.8			93.4			39.9	
Approach LOS		F			F			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.25
Intersection Signal Delay: 85.5 Intersection LOS: F
Intersection Capacity Utilization 97.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



2048 Future Conditions W/ Short - Term Improvements

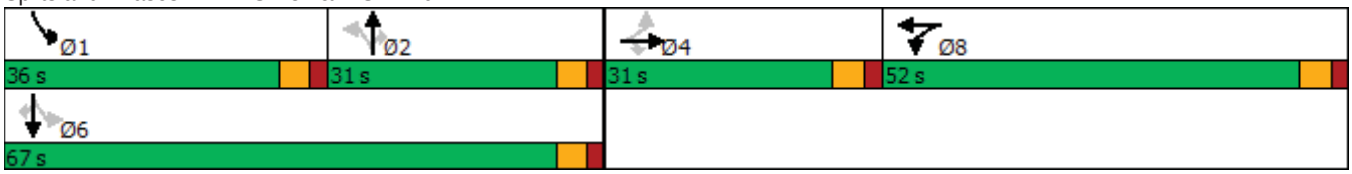
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	732	18	732	732	598	18	117	732	598	117	18
Future Volume (vph)	18	732	18	732	732	598	18	117	732	598	117	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3295	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.157			0.950			0.649			0.439		
Satd. Flow (perm)	292	3539	1583	1770	3295	0	1209	1863	1583	818	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		149				500			58
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	796	20	927	1476	0	20	141	963	906	172	20
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	31.0	31.0	31.0	52.0	52.0		31.0	31.0	31.0	36.0	67.0	67.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	25.5	25.5	25.5	46.5	46.5		25.5	25.5	25.5	61.5	61.5	61.5
Actuated g/C Ratio	0.17	0.17	0.17	0.31	0.31		0.17	0.17	0.17	0.41	0.41	0.41
v/c Ratio	0.41	1.32	0.06	1.69	1.31		0.10	0.45	1.41	1.72	0.23	0.03
Control Delay	82.2	203.9	0.3	351.6	184.3		54.2	61.0	213.0	357.8	29.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	203.9	0.3	351.6	184.3		54.2	61.0	213.0	357.8	29.8	0.1
LOS	F	F	A	F	F		D	E	F	F	C	A
Approach Delay		196.1			248.8			191.1			299.9	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.72
Intersection Signal Delay: 239.2 — Intersection LOS: F
Intersection Capacity Utilization 114.3% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	248	98	106	413	438	490
Future Volume (vph)	248	98	106	413	438	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1733	0	1770	1863	1716	0
Flt Permitted	0.964		0.073			
Satd. Flow (perm)	1733	0	136	1863	1716	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	19				144	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	522	0	161	439	1314	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		61.0	61.0	61.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	23.0		55.0	55.0	55.0	
Actuated g/C Ratio	0.26		0.61	0.61	0.61	
v/c Ratio	1.14		1.94	0.39	1.19	
Control Delay	119.2		483.9	10.2	113.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	119.2		483.9	10.2	113.8	
LOS	F		F	B	F	
Approach Delay	119.2			137.3	113.8	
Approach LOS	F			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.94	
Intersection Signal Delay: 120.8	Intersection LOS: F
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	2	2	0	323	2	560	0
Future Vol, veh/h	2	2	0	323	2	560	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	8	8	0	359	8	659	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1018	659	659	0	-	-	0
Stage 1	659	-	-	-	-	-	-
Stage 2	359	-	-	-	-	-	-
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	263	464	929	-	-	-	-
Stage 1	515	-	-	-	-	-	-
Stage 2	707	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	263	464	929	-	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-	-
Stage 1	515	-	-	-	-	-	-
Stage 2	707	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	16.2	0	
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	929	-	336	-	-
HCM Lane V/C Ratio	-	-	0.048	-	-
HCM Control Delay (s)	0	-	16.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2048 Future Conditions W/ Short - Term Improvements

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Future Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						89
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	250	508	211	605	1531	0	0	1721	410
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				20.2	20.2	20.2	20.8	76.8			50.0	50.0
Actuated g/C Ratio				0.19	0.19	0.19	0.19	0.70			0.46	0.46
v/c Ratio				0.84	0.82	0.58	0.93	0.61			1.06	0.53
Control Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
LOS				E	E	C	E	A			E	B
Approach Delay					52.7			25.5			60.4	
Approach LOS					D			C			E	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 109
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 44.7 Intersection LOS: D
Intersection Capacity Utilization 87.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Future Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89						173			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	264	419	249	0	0	0	0	1825	485	567	1563	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	24.0	24.0	24.0					62.0	62.0	24.0	86.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	18.5	18.5	18.5					56.0	56.0	18.0	80.0	
Actuated g/C Ratio	0.17	0.17	0.17					0.51	0.51	0.16	0.73	
v/c Ratio	0.98	0.94dl	0.73					1.01	0.54	1.01	0.61	
Control Delay	96.0	53.5	41.4					52.1	13.8	86.9	8.6	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	96.0	53.5	41.4					52.1	13.8	86.9	8.6	
LOS	F	D	D					D	B	F	A	
Approach Delay		62.3						44.1			29.4	
Approach LOS		E						D			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

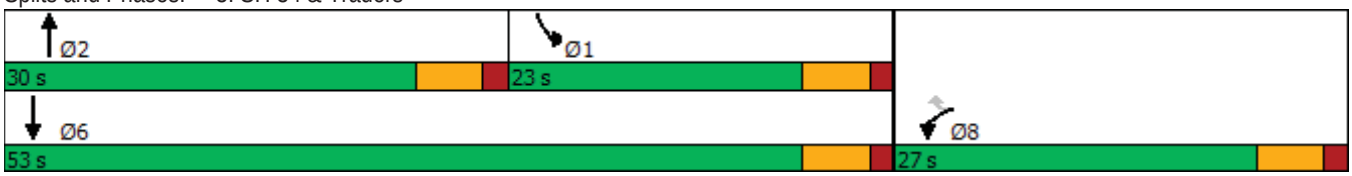
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	656	1091	70	307	1037
Future Volume (vph)	202	656	1091	70	307	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		458	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	713	1262	0	353	1152
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	19.8	19.8	24.6		17.1	47.2
Actuated g/C Ratio	0.25	0.25	0.32		0.22	0.61
v/c Ratio	0.57	0.96	1.14		0.91	0.54
Control Delay	31.0	36.6	101.1		60.4	10.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.0	36.6	101.1		60.4	10.5
LOS	C	D	F		E	B
Approach Delay	35.1		101.1			22.2
Approach LOS	D		F			C

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 78	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 52.2	Intersection LOS: D
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

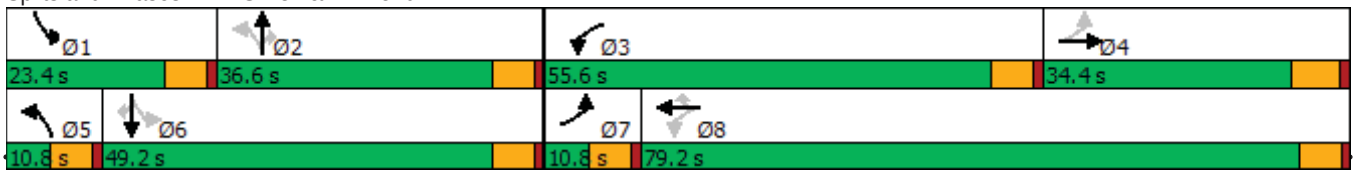


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Future Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.114			0.419			0.151			0.102		
Satd. Flow (perm)	227	3345	0	780	1863	1583	281	3539	1583	190	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67				204			196			154
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	312	0	622	995	392	25	740	121	281	911	51
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	10.8	34.4		55.6	79.2	79.2	10.8	36.6	36.6	23.4	49.2	49.2
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	40.0	34.0		82.0	73.4	73.4	35.8	30.8	30.8	54.2	47.8	47.8
Actuated g/C Ratio	0.27	0.23		0.55	0.50	0.50	0.24	0.21	0.21	0.37	0.32	0.32
v/c Ratio	0.44	0.38		0.88	1.08	0.44	0.21	1.00	0.25	1.09	0.80	0.08
Control Delay	39.3	40.3		37.6	88.1	12.7	36.7	91.8	1.2	122.7	52.8	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	40.3		37.6	88.1	12.7	36.7	91.8	1.2	122.7	52.8	0.3
LOS	D	D		D	F	B	D	F	A	F	D	A
Approach Delay		40.1			57.8			77.8			66.5	
Approach LOS		D			E			E			E	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 147.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 62.7 — Intersection LOS: E
Intersection Capacity Utilization 101.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	176	75	651	981	160
Future Volume (vph)	32	176	75	651	981	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	1863	1816	0
Flt Permitted	0.990		0.046			
Satd. Flow (perm)	1649	0	86	1863	1816	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				24	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	302	0	103	708	1369	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	16.8		87.3	87.3	87.3	
Actuated g/C Ratio	0.15		0.76	0.76	0.76	
v/c Ratio	0.85		1.58	0.50	0.99	
Control Delay	46.9		349.9	7.6	37.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	46.9		349.9	7.6	37.5	
LOS	D		F	A	D	
Approach Delay	46.9			51.0	37.5	
Approach LOS	D			D	D	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 115.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay: 43.1	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	19

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	112	541	61	142	893
Future Vol, veh/h	42	112	541	61	142	893
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	153	601	84	173	1026

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2015	643	0	0	601	0
Stage 1	643	-	-	-	-	-
Stage 2	1372	-	-	-	-	-
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	64	473	-	-	976	-
Stage 1	523	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	473	-	-	976	-
Mov Cap-2 Maneuver	~ 53	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	194	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	180.4	0	1.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	178	976	-
HCM Lane V/C Ratio	-	-	1.19	0.177	-
HCM Control Delay (s)	-	-	180.4	9.5	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	11.3	0.6	-

Notes

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

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	56	21	530	806	77
Future Vol, veh/h	50	56	21	530	806	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	102	32	589	1033	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1731	1078	1033	0	-	0
Stage 1	1078	-	-	-	-	-
Stage 2	653	-	-	-	-	-
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	97	266	673	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	266	673	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	48.9	0.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	673	-	238	-	-
HCM Lane V/C Ratio	0.048	-	0.697	-	-
HCM Control Delay (s)	10.6	-	48.9	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	4.6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	88	62	482	133	74	701
Future Volume (vph)	88	62	482	133	74	701
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	1863	1583	1711	1863
Flt Permitted	0.972				0.419	
Satd. Flow (perm)	1706	0	1863	1583	754	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			180		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	536	180	96	947
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	12.6		46.1	46.1	46.1	46.1
Actuated g/C Ratio	0.18		0.66	0.66	0.66	0.66
v/c Ratio	0.54		0.44	0.16	0.19	0.77
Control Delay	30.5		7.3	1.2	6.3	14.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	30.5		7.3	1.2	6.3	14.2
LOS	C		A	A	A	B
Approach Delay	30.5		5.8			13.4
Approach LOS	C		A			B

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 70.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 54.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	58	59	720	693	80
Future Volume (vph)	43	58	59	720	693	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1659	0	1770	1863	1833	0
Flt Permitted	0.986		0.103			
Satd. Flow (perm)	1659	0	192	1863	1833	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	129				16	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	102	750	933	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.7		41.7	43.1	34.6	
Actuated g/C Ratio	0.12		0.73	0.75	0.61	
v/c Ratio	0.58		0.36	0.53	0.84	
Control Delay	17.5		7.0	6.1	23.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	17.5		7.0	6.1	23.9	
LOS	B		A	A	C	
Approach Delay	17.5			6.2	23.9	
Approach LOS	B			A	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 57.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	163	766	419	643	670	162
Future Volume (vph)	163	766	419	643	670	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1643	0	2006	1863	1863	1583
Flt Permitted	0.991		0.121			
Satd. Flow (perm)	1643	0	255	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	309					99
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	996	0	460	804	720	205
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	33.0		14.0	47.0	33.0	33.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	27.5		42.0	42.0	28.0	28.0
Actuated g/C Ratio	0.34		0.52	0.52	0.35	0.35
v/c Ratio	1.30		1.39	0.82	1.10	0.33
Control Delay	163.9		215.9	24.9	94.9	11.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	163.9		215.9	24.9	94.9	11.6
LOS	F		F	C	F	B
Approach Delay	163.9			94.4	76.4	
Approach LOS	F			F	E	

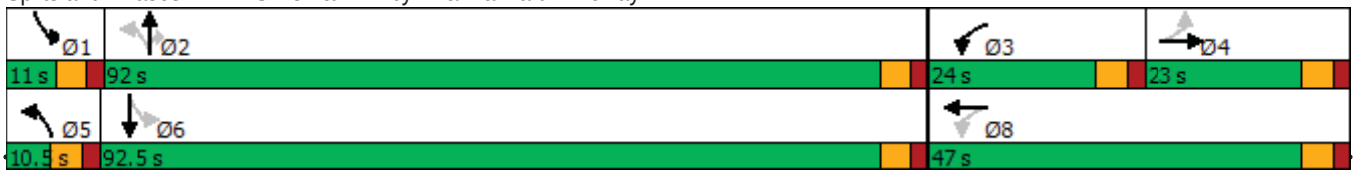
Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 110.9	Intersection LOS: F
Intersection Capacity Utilization 127.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Future Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1743	0	1770	1699	0	1888	1987	1531	1947	1859	0
Flt Permitted		0.881		0.233			0.046			0.126		
Satd. Flow (perm)	0	1552	0	434	1699	0	91	1987	1531	258	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			47				98		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	237	0	339	153	0	84	873	236	77	1273	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	23.0	23.0		24.0	47.0		10.5	92.0	92.0	11.0	92.5	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		17.5		41.5	41.5		91.5	86.5	86.5	92.5	87.0	
Actuated g/C Ratio		0.12		0.28	0.28		0.61	0.58	0.58	0.62	0.58	
v/c Ratio		1.21		1.19	0.30		0.73	0.76	0.26	0.35	1.18	
Control Delay		181.2		158.0	31.1		55.3	29.5	9.6	14.1	121.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.5	
Total Delay		181.2		158.0	31.1		55.3	29.5	9.6	14.1	122.0	
LOS		F		F	C		E	C	A	B	F	
Approach Delay		181.2			118.5			27.4			115.8	
Approach LOS		F			F			C			F	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 88.7	Intersection LOS: F
Intersection Capacity Utilization 103.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



2048 Future Conditions W/ Short - Term Improvements

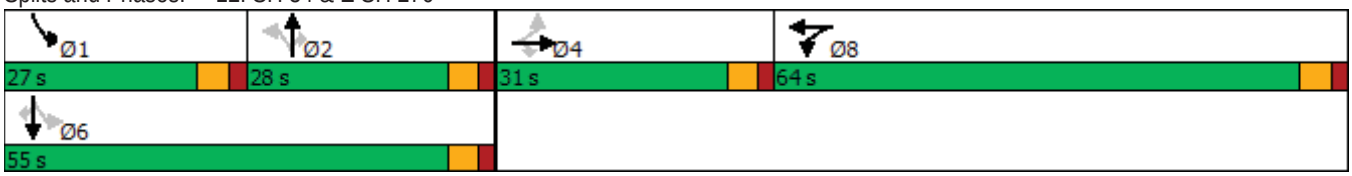
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	690	17	690	690	563	17	110	690	563	110	17
Future Volume (vph)	17	690	17	690	690	563	17	110	690	563	110	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			300		
Satd. Flow (prot)	1770	3539	1583	1770	3302	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.157			0.950			0.679			0.454		
Satd. Flow (perm)	292	3539	1583	1770	3302	0	1265	1863	1583	846	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		161				612			58
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	750	18	972	1362	0	18	122	784	599	121	18
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	31.0	31.0	31.0	64.0	64.0		28.0	28.0	28.0	27.0	55.0	55.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	25.5	25.5	25.5	58.5	58.5		22.5	22.5	22.5	49.5	49.5	49.5
Actuated g/C Ratio	0.17	0.17	0.17	0.39	0.39		0.15	0.15	0.15	0.33	0.33	0.33
v/c Ratio	0.37	1.25	0.05	1.41	0.98		0.10	0.44	1.04	1.46	0.20	0.03
Control Delay	78.2	174.4	0.3	227.9	60.1		56.6	63.5	55.4	253.4	37.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.2	174.4	0.3	227.9	60.1		56.6	63.5	55.4	253.4	37.1	0.1
LOS	E	F	A	F	E		E	E	E	F	D	A
Approach Delay		168.3			130.0			56.5			211.8	
Approach LOS		F			F			E			F	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.46
Intersection Signal Delay: 134.7 — Intersection LOS: F
Intersection Capacity Utilization 108.9% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	133	110	80	574	349	85
Future Volume (vph)	133	110	80	574	349	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	1863	1812	0
Flt Permitted	0.974		0.392			
Satd. Flow (perm)	1702	0	730	1863	1812	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				48	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	307	0	96	727	568	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	7.0		21.3	21.3	21.3	
Actuated g/C Ratio	0.17		0.53	0.53	0.53	
v/c Ratio	0.83		0.25	0.74	0.58	
Control Delay	34.2		7.4	14.0	8.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	34.2		7.4	14.0	8.9	
LOS	C		A	B	A	
Approach Delay	34.2			13.3	8.9	
Approach LOS	C			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 40.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	2	5	568	352	2
Future Vol, veh/h	6	2	5	568	352	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	13	653	451	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1134	455	459	0	-	0
Stage 1	455	-	-	-	-	-
Stage 2	679	-	-	-	-	-
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	224	605	1102	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	605	1102	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	18.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1102	-	295	-	-
HCM Lane V/C Ratio	0.012	-	0.068	-	-
HCM Control Delay (s)	8.3	0	18.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Future Volume (vph)	0	0	0	165	127	94	1	246	726	0	0	781	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							188
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	122	252	104	0	300	816	0	0	849	188
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				11.2	11.2	11.2		11.4	41.7			24.0	24.0
Actuated g/C Ratio				0.17	0.17	0.17		0.17	0.64			0.37	0.37
v/c Ratio				0.44	0.44	0.29		0.50	0.36			0.65	0.27
Control Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				32.7	28.9	8.4		29.6	6.1			20.2	3.8
LOS				C	C	A		C	A			C	A
Approach Delay					25.4				12.4			17.2	
Approach LOS					C				B			B	

Intersection Summary

Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 65.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Future Volume (vph)	172	51	84	0	0	0	0	802	164	235	710	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						173			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	126	191	127	0	0	0	0	835	173	253	789	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	10.0	10.0	10.0					20.8	20.8	9.3	36.3	
Actuated g/C Ratio	0.17	0.17	0.17					0.36	0.36	0.16	0.62	
v/c Ratio	0.46	0.34	0.33					0.66	0.26	0.46	0.36	
Control Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	29.4	24.5	7.0					18.8	3.7	27.0	5.9	
LOS	C	C	A					B	A	C	A	
Approach Delay		20.9						16.2			11.0	
Approach LOS		C						B			B	

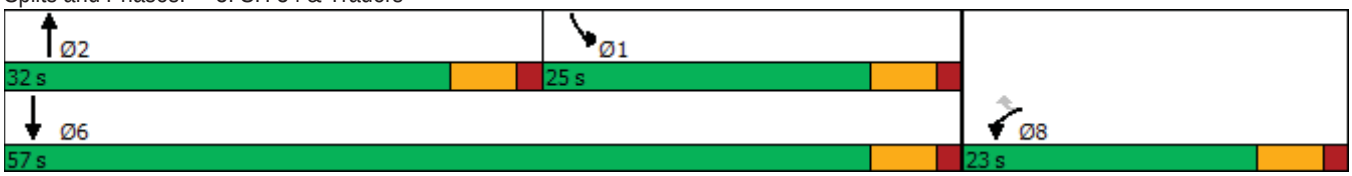
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 58.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	82	250	628	35	185	423
Future Volume (vph)	82	250	628	35	185	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		291	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	291	723	0	243	529
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	9.0	9.0	18.3		13.4	37.4
Actuated g/C Ratio	0.16	0.16	0.32		0.23	0.65
v/c Ratio	0.35	0.59	0.65		0.60	0.23
Control Delay	28.4	9.5	20.5		28.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	28.4	9.5	20.5		28.2	4.5
LOS	C	A	C		C	A
Approach Delay	14.2		20.5			12.0
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 57.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

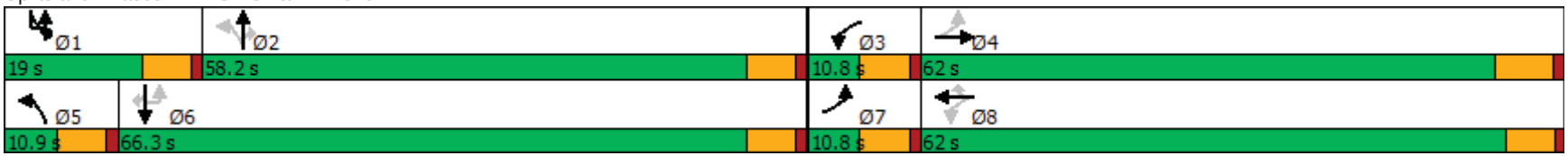


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Future Volume (vph)	7	707	19	57	117	188	33	406	212	1	126	273	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.658			0.189			0.563				0.950		
Satd. Flow (perm)	1307	3522	0	352	1863	1583	1049	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				224			154				112
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	16	814	0	76	156	224	48	446	268	0	172	310	16
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		2	6			6
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2	58.2	19.0	19.0	66.3	66.3
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Act Effct Green (s)	31.8	27.0		34.1	32.4	32.4	23.8	18.6	18.6		13.6	29.9	29.9
Actuated g/C Ratio	0.37	0.31		0.40	0.38	0.38	0.28	0.22	0.22		0.16	0.35	0.35
v/c Ratio	0.03	0.74		0.34	0.22	0.31	0.14	0.58	0.58		0.62	0.25	0.03
Control Delay	15.3	31.7		19.7	21.2	4.5	18.2	34.7	19.5		48.9	23.6	0.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	15.3	31.7		19.7	21.2	4.5	18.2	34.7	19.5		48.9	23.6	0.0
LOS	B	C		B	C	A	B	C	B		D	C	A
Approach Delay		31.4			12.7			28.4				31.6	
Approach LOS		C			B			C				C	

Intersection Summary

Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 86.2			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	49	123	656	323	12
Future Volume (vph)	35	49	123	656	323	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	3539	3514	0
Flt Permitted	0.979		0.535			
Satd. Flow (perm)	1685	0	997	3539	3514	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48				10	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	145	754	363	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	6.8		27.1	27.1	27.1	
Actuated g/C Ratio	0.17		0.67	0.67	0.67	
v/c Ratio	0.28		0.22	0.32	0.15	
Control Delay	11.6		5.8	4.9	4.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	11.6		5.8	4.9	4.2	
LOS	B		A	A	A	
Approach Delay	11.6			5.1	4.2	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 40.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 34.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	117	581	12	29	329
Future Vol, veh/h	28	117	581	12	29	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	165	618	20	44	401

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	917	319	0	0	618	0
Stage 1	628	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	271	677	-	-	958	-
Stage 1	494	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	259	677	-	-	958	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	824	958	-
HCM Lane V/C Ratio	-	-	0.244	0.046	-
HCM Control Delay (s)	-	-	10.8	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	26	33	560	336	21
Future Vol, veh/h	36	26	33	560	336	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	36	36	609	382	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	771	203	382	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	337	804	1173	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	327	804	1173	-	-	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1173	-	573	-	-
HCM Lane V/C Ratio	0.031	-	0.147	-	-
HCM Control Delay (s)	8.2	-	12.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	74	430	152	151	266
Future Volume (vph)	126	74	430	152	151	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	3539	1583	1711	3539
Flt Permitted	0.968				0.471	
Satd. Flow (perm)	1722	0	3539	1583	848	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22			249		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	0	494	249	270	313
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		78.0	78.0	78.0	78.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	17.7		27.5	27.5	27.5	27.5
Actuated g/C Ratio	0.31		0.48	0.48	0.48	0.48
v/c Ratio	0.66		0.29	0.28	0.67	0.19
Control Delay	25.0		9.5	2.3	21.2	8.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	25.0		9.5	2.3	21.2	8.8
LOS	C		A	A	C	A
Approach Delay	25.0		7.1			14.6
Approach LOS	C		A			B

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 57.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	92	73	486	370	67
Future Volume (vph)	35	92	73	486	370	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	3539	3440	0
Flt Permitted	0.987		0.324			
Satd. Flow (perm)	1655	0	604	3539	3440	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	151				53	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	104	534	571	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	7.5		22.9	22.9	16.3	
Actuated g/C Ratio	0.18		0.54	0.54	0.39	
v/c Ratio	0.49		0.20	0.28	0.42	
Control Delay	10.7		5.7	5.6	11.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	10.7		5.7	5.6	11.4	
LOS	B		A	A	B	
Approach Delay	10.7			5.6	11.4	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 42.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	137	208	405	525	409	158
Future Volume (vph)	137	208	405	525	409	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	3539	3539	1583
Flt Permitted	0.980		0.277			
Satd. Flow (perm)	1679	0	585	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	81					203
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	0	466	610	499	203
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	19.9		38.0	38.0	16.5	16.5
Actuated g/C Ratio	0.29		0.55	0.55	0.24	0.24
v/c Ratio	0.80		0.70	0.31	0.59	0.38
Control Delay	31.3		16.9	9.3	26.8	6.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	31.3		16.9	9.3	26.8	6.1
LOS	C		B	A	C	A
Approach Delay	31.3			12.6	20.8	
Approach LOS	C			B	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 68.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

11: SH 34 & E Kirby Ave/Walmart Driveway

AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Future Volume (vph)	34	35	70	63	14	15	47	821	52	29	477	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	3775	1531	1947	3522	0
Flt Permitted		0.898		0.429			0.372			0.219		
Satd. Flow (perm)	0	1559	0	799	1695	0	739	3775	1531	449	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			24				164		6	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	88	40	0	72	912	64	56	575	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		11.3		19.1	19.1		29.7	27.0	27.0	28.3	24.6	
Actuated g/C Ratio		0.18		0.30	0.30		0.47	0.43	0.43	0.45	0.39	
v/c Ratio		0.63		0.27	0.08		0.16	0.57	0.09	0.17	0.42	
Control Delay		32.2		20.2	11.4		9.4	17.2	0.2	9.7	16.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		32.2		20.2	11.4		9.4	17.2	0.2	9.7	16.7	
LOS		C		C	B		A	B	A	A	B	
Approach Delay		32.2			17.5			15.6			16.1	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 63.2

Control Type: Actuated-Uncoordinated

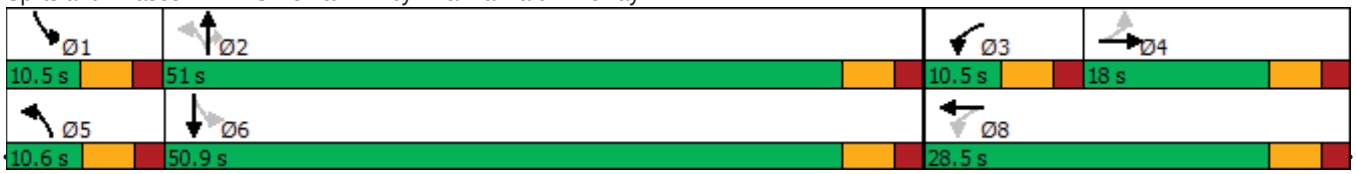
Maximum v/c Ratio: 0.63

Intersection Signal Delay: 17.5 Intersection LOS: B

Intersection Capacity Utilization 55.3% ICU Level of Service B

Analysis Period (min) 15

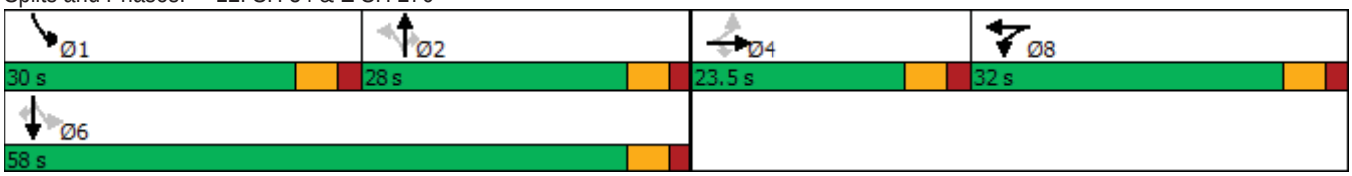
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	463	6	205	463	375	6	70	205	375	70	6
Future Volume (vph)	6	463	6	205	463	375	6	70	205	375	70	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	1770	3295	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.229			0.950			0.687			0.434		
Satd. Flow (perm)	427	3539	1583	1770	3295	0	1280	3539	1583	808	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		176				270			77
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	503	7	259	929	0	7	84	270	568	103	7
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	23.5	23.5	23.5	32.0	32.0		28.0	28.0	28.0	30.0	58.0	58.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	17.5	17.5	17.5	26.5	26.5		9.0	9.0	9.0	39.0	39.0	39.0
Actuated g/C Ratio	0.18	0.18	0.18	0.27	0.27		0.09	0.09	0.09	0.39	0.39	0.39
v/c Ratio	0.09	0.81	0.02	0.55	0.92		0.06	0.26	0.70	1.03	0.07	0.01
Control Delay	39.7	51.3	0.2	37.4	44.8		41.7	44.0	15.4	74.3	19.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	51.3	0.2	37.4	44.8		41.7	44.0	15.4	74.3	19.1	0.0
LOS	D	D	A	D	D		D	D	B	E	B	A
Approach Delay		50.4			43.2			22.6			65.1	
Approach LOS		D			D			C			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 113.5	
Actuated Cycle Length: 99.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

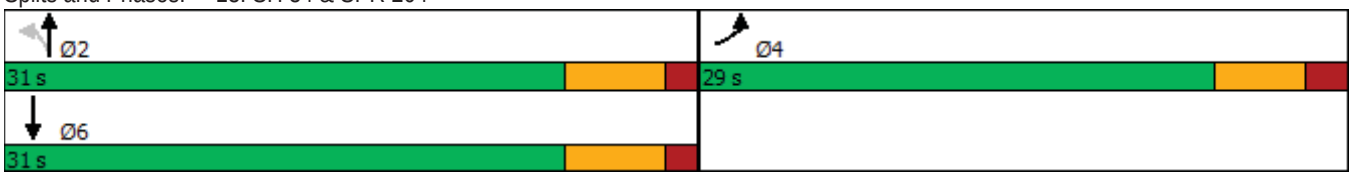
Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	155	61	66	258	274	306
Future Volume (vph)	155	61	66	258	274	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1733	0	1770	3539	3231	0
Flt Permitted	0.964		0.302			
Satd. Flow (perm)	1733	0	563	3539	3231	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	34				478	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	326	0	100	274	821	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	12.4		14.6	14.6	14.6	
Actuated g/C Ratio	0.31		0.37	0.37	0.37	
v/c Ratio	0.58		0.48	0.21	0.55	
Control Delay	15.5		19.6	9.4	5.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	15.5		19.6	9.4	5.7	
LOS	B		B	A	A	
Approach Delay	15.5			12.2	5.7	
Approach LOS	B			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 39.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	202	1	350	0
Future Vol, veh/h	1	1	0	202	1	350	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	224	4	412	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	532	206	412	0	224	-	0
Stage 1	420	-	-	-	-	-	-
Stage 2	112	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	477	800	1143	-	1034	-	-
Stage 1	631	-	-	-	-	-	-
Stage 2	900	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	475	800	1143	-	1034	-	-
Mov Cap-2 Maneuver	475	-	-	-	-	-	-
Stage 1	631	-	-	-	-	-	-
Stage 2	896	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	11.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1143	-	596	-	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	0	-	11.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Future Volume (vph)	0	0	0	262	156	112	329	890	0	0	1011	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						132						200
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	156	317	132	378	957	0	0	1076	256
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				14.5	14.5	14.5	15.0	56.5			35.2	35.2
Actuated g/C Ratio				0.17	0.17	0.17	0.18	0.68			0.42	0.42
v/c Ratio				0.56	0.55	0.34	0.61	0.40			0.72	0.33
Control Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				43.0	37.5	9.5	38.5	6.6			23.7	5.8
LOS				D	D	A	D	A			C	A
Approach Delay					32.8			15.6			20.3	
Approach LOS					C			B			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 83.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Future Volume (vph)	258	82	140	0	0	0	0	1004	270	337	918	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						285			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	165	262	156	0	0	0	0	1141	303	355	977	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.0	9.0	9.0					23.7	23.7	8.0	37.8	
Actuated g/C Ratio	0.15	0.15	0.15					0.41	0.41	0.14	0.65	
v/c Ratio	0.67	0.52	0.41					0.79	0.37	0.75	0.43	
Control Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	39.3	27.1	7.9					20.1	3.6	37.1	5.7	
LOS	D	C	A					C	A	D	A	
Approach Delay		25.4						16.6			14.1	
Approach LOS		C						B			B	

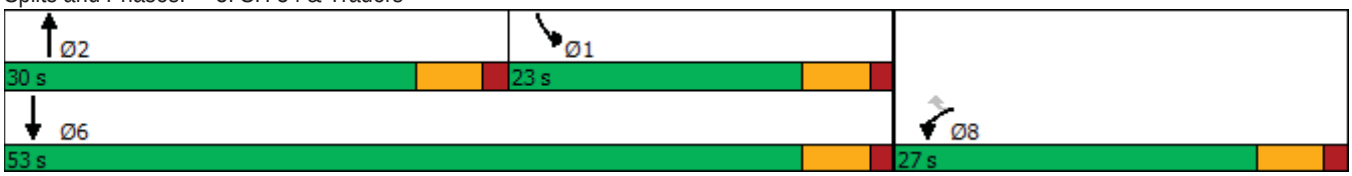
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 58.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	410	682	44	192	648
Future Volume (vph)	126	410	682	44	192	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		446	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	446	790	0	221	720
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.4	11.4	19.6		12.8	38.1
Actuated g/C Ratio	0.19	0.19	0.32		0.21	0.63
v/c Ratio	0.48	0.68	0.70		0.60	0.33
Control Delay	29.2	8.8	22.4		30.8	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	29.2	8.8	22.4		30.8	6.0
LOS	C	A	C		C	A
Approach Delay	14.1		22.4			11.8
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 60.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

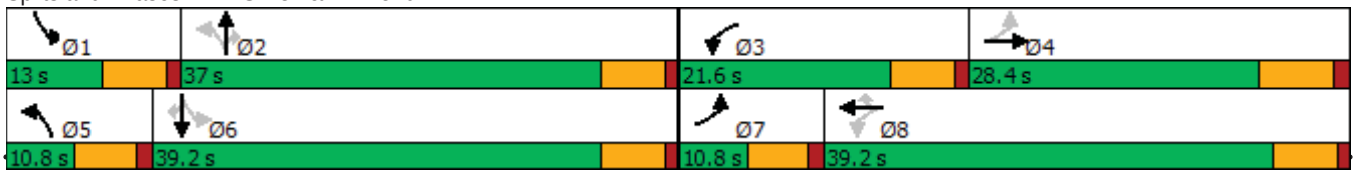


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Future Volume (vph)	23	101	45	210	535	203	12	416	53	160	507	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.195			0.496			0.438			0.300		
Satd. Flow (perm)	387	3345	0	924	1863	1583	816	3539	1583	559	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71				234			231			231
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	194	0	389	622	245	16	462	76	176	570	32
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0	37.0	13.0	39.2	39.2
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	23.9	17.8		39.2	33.3	33.3	21.4	16.4	16.4	29.0	27.7	27.7
Actuated g/C Ratio	0.30	0.22		0.49	0.41	0.41	0.27	0.20	0.20	0.36	0.34	0.34
v/c Ratio	0.15	0.24		0.65	0.81	0.31	0.06	0.64	0.15	0.57	0.47	0.05
Control Delay	15.1	17.8		20.0	33.3	4.5	18.4	34.4	0.6	27.4	23.7	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	17.8		20.0	33.3	4.5	18.4	34.4	0.6	27.4	23.7	0.1
LOS	B	B		C	C	A	B	C	A	C	C	A
Approach Delay		17.4			23.6			29.3			23.5	
Approach LOS		B			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 80.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.2 Intersection LOS: C
Intersection Capacity Utilization 72.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	110	47	407	613	100
Future Volume (vph)	20	110	47	407	613	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	3539	3440	0
Flt Permitted	0.990		0.322			
Satd. Flow (perm)	1649	0	600	3539	3440	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	138				59	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	64	442	856	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	7.0		19.4	19.4	19.4	
Actuated g/C Ratio	0.19		0.52	0.52	0.52	
v/c Ratio	0.45		0.21	0.24	0.47	
Control Delay	8.8		7.6	5.7	6.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	8.8		7.6	5.7	6.7	
LOS	A		A	A	A	
Approach Delay	8.8			6.0	6.7	
Approach LOS	A			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 37.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	70	338	38	89	558
Future Vol, veh/h	26	70	338	38	89	558
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	96	376	52	109	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	941	214	0	0	376	0
Stage 1	402	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	262	791	-	-	1179	-
Stage 1	644	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	238	791	-	-	1179	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	870	1179	-
HCM Lane V/C Ratio	-	-	0.152	0.092	-
HCM Control Delay (s)	-	-	9.9	8.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	35	13	331	504	48
Future Vol, veh/h	31	35	13	331	504	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	64	20	368	646	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	898	351	646	0	-	0
Stage 1	674	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	279	645	935	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	645	935	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	935	-	710	-	-
HCM Lane V/C Ratio	0.021	-	0.146	-	-
HCM Control Delay (s)	8.9	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	39	301	83	46	438
Future Volume (vph)	55	39	301	83	46	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	3539	1583	1711	3539
Flt Permitted	0.972				0.550	
Satd. Flow (perm)	1706	0	3539	1583	990	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			112		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	334	112	60	592
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	7.4		23.2	23.2	23.2	23.2
Actuated g/C Ratio	0.20		0.62	0.62	0.62	0.62
v/c Ratio	0.31		0.15	0.11	0.10	0.27
Control Delay	12.7		5.1	2.0	5.8	5.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	12.7		5.1	2.0	5.8	5.5
LOS	B		A	A	A	A
Approach Delay	12.7		4.3			5.6
Approach LOS	B		A			A

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 37.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 5.8 — Intersection LOS: A
Intersection Capacity Utilization 31.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	36	37	450	433	50
Future Volume (vph)	27	36	37	450	433	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	3539	3479	0
Flt Permitted	0.986		0.335			
Satd. Flow (perm)	1660	0	624	3539	3479	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	80				34	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	112	0	64	469	583	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.6		23.4	25.1	21.3	
Actuated g/C Ratio	0.17		0.61	0.65	0.55	
v/c Ratio	0.32		0.12	0.20	0.30	
Control Delay	10.3		4.6	4.4	8.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	10.3		4.6	4.4	8.4	
LOS	B		A	A	A	
Approach Delay	10.3			4.5	8.4	
Approach LOS	B			A	A	

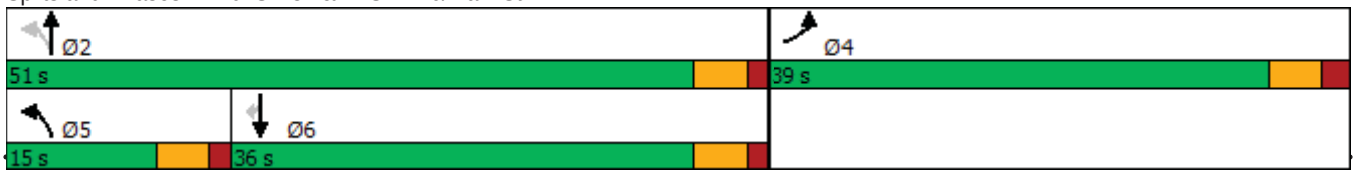
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 38.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 36.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	479	262	402	417	101
Future Volume (vph)	102	479	262	402	417	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1641	0	2006	3539	3539	1583
Flt Permitted	0.991		0.316			
Satd. Flow (perm)	1641	0	667	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	288					128
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	623	0	288	503	448	128
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	20.4		29.3	29.3	14.0	14.0
Actuated g/C Ratio	0.34		0.48	0.48	0.23	0.23
v/c Ratio	0.84		0.53	0.29	0.55	0.28
Control Delay	21.1		15.2	11.3	24.5	6.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	21.1		15.2	11.3	24.5	6.7
LOS	C		B	B	C	A
Approach Delay	21.1			12.7	20.5	
Approach LOS	C			B	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 60.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St



11: SH 34 & E Kirby Ave/Walmart Driveway

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Future Volume (vph)	18	43	39	189	25	43	26	518	130	37	752	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1699	0	1888	3775	1531	1947	3532	0
Flt Permitted		0.898		0.469			0.225			0.393		
Satd. Flow (perm)	0	1581	0	874	1699	0	447	3775	1531	805	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			56				164		2	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	212	96	0	52	545	148	48	795	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.0		23.3	23.3		23.1	20.5	20.5	23.1	20.5	
Actuated g/C Ratio		0.15		0.38	0.38		0.38	0.34	0.34	0.38	0.34	
v/c Ratio		0.57		0.46	0.14		0.18	0.43	0.24	0.12	0.67	
Control Delay		33.1		20.2	9.4		10.6	17.2	3.5	9.8	20.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		33.1		20.2	9.4		10.6	17.2	3.5	9.8	20.7	
LOS		C		C	A		B	B	A	A	C	
Approach Delay		33.1			16.8			14.0			20.1	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 60.8

Control Type: Actuated-Uncoordinated

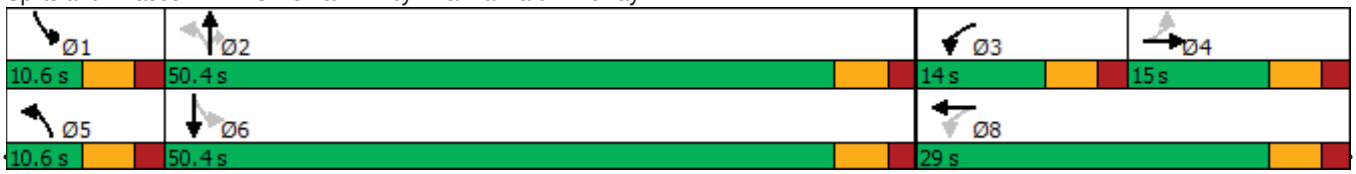
Maximum v/c Ratio: 0.67

Intersection Signal Delay: 18.3 Intersection LOS: B

Intersection Capacity Utilization 56.0% ICU Level of Service B

Analysis Period (min) 15

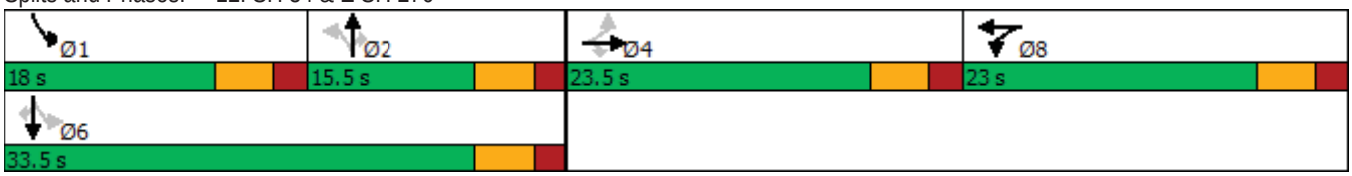
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	436	6	193	436	353	6	66	193	353	66	6
Future Volume (vph)	6	436	6	193	436	353	6	66	193	353	66	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	1770	3302	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.267			0.950			0.707			0.406		
Satd. Flow (perm)	497	3539	1583	1770	3302	0	1317	3539	1583	756	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			184		235				219			109
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	474	7	272	858	0	7	73	219	376	73	7
Turn Type	Perm	NA	Perm	Split	NA		Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8			2		1	6	
Permitted Phases	4		4				2		2	6		6
Total Split (s)	23.5	23.5	23.5	23.0	23.0		15.5	15.5	15.5	18.0	33.5	33.5
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	15.0	15.0	15.0	17.5	17.5		7.3	7.3	7.3	25.4	25.4	25.4
Actuated g/C Ratio	0.20	0.20	0.20	0.23	0.23		0.10	0.10	0.10	0.34	0.34	0.34
v/c Ratio	0.07	0.66	0.02	0.66	0.90		0.05	0.21	0.62	0.88	0.06	0.01
Control Delay	26.2	32.4	0.0	35.8	35.1		32.2	33.1	13.5	46.0	17.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	32.4	0.0	35.8	35.1		32.2	33.1	13.5	46.0	17.4	0.0
LOS	C	C	A	D	D		C	C	B	D	B	A
Approach Delay		31.9			35.3			18.7			40.7	
Approach LOS		C			D			B			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 74.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	83	69	50	359	218	53
Future Volume (vph)	83	69	50	359	218	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	3539	3433	0
Flt Permitted	0.974		0.539			
Satd. Flow (perm)	1702	0	1004	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	88				72	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	60	454	355	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	6.5		15.7	15.7	15.7	
Actuated g/C Ratio	0.21		0.52	0.52	0.52	
v/c Ratio	0.44		0.12	0.25	0.20	
Control Delay	9.7		7.0	6.5	5.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.7		7.0	6.5	5.2	
LOS	A		A	A	A	
Approach Delay	9.7			6.6	5.2	
Approach LOS	A			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 30.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 35.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	4	1	3	355	220	1
Future Vol, veh/h	4	1	3	355	220	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	4	8	408	282	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	504	143	286	0	-	0
Stage 1	284	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	497	879	1273	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	493	879	1273	-	-	-
Mov Cap-2 Maneuver	572	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	10.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1273	-	647	-	-
HCM Lane V/C Ratio	0.006	-	0.019	-	-
HCM Control Delay (s)	7.8	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Future Volume (vph)	0	0	0	231	178	132	1	344	1016	0	0	1093	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						118							148
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	170	354	147	0	418	1142	0	0	1188	263
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				14.0	14.0	14.0		14.5	54.5			33.9	33.9
Actuated g/C Ratio				0.17	0.17	0.17		0.18	0.67			0.42	0.42
v/c Ratio				0.61	0.61	0.40		0.68	0.48			0.80	0.35
Control Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				42.6	37.0	13.2		38.2	7.2			25.9	8.9
LOS				D	D	B		D	A			C	A
Approach Delay					33.2				15.5			22.8	
Approach LOS					C				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 80.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Future Volume (vph)	241	71	118	0	0	0	0	1123	230	329	994	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	177	266	179	0	0	0	0	1170	242	354	1104	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	11.6	11.6	11.6					26.5	26.5	10.4	42.9	
Actuated g/C Ratio	0.18	0.18	0.18					0.40	0.40	0.16	0.65	
v/c Ratio	0.63	0.46	0.46					0.83	0.31	0.66	0.48	
Control Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	36.7	27.8	12.1					24.4	3.6	33.4	6.9	
LOS	D	C	B					C	A	C	A	
Approach Delay		25.8						20.8			13.4	
Approach LOS		C						C			B	

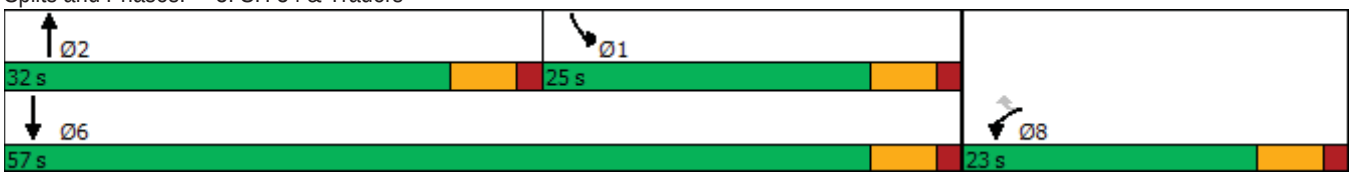
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 66.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	115	350	879	49	259	592
Future Volume (vph)	115	350	879	49	259	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		407	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	407	1012	0	341	740
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.0	11.0	24.7		17.3	47.6
Actuated g/C Ratio	0.16	0.16	0.35		0.25	0.68
v/c Ratio	0.48	0.69	0.81		0.78	0.31
Control Delay	34.0	9.9	27.8		39.9	5.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	34.0	9.9	27.8		39.9	5.2
LOS	C	A	C		D	A
Approach Delay	15.9		27.8			16.2
Approach LOS	B		C			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 69.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 20.6	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

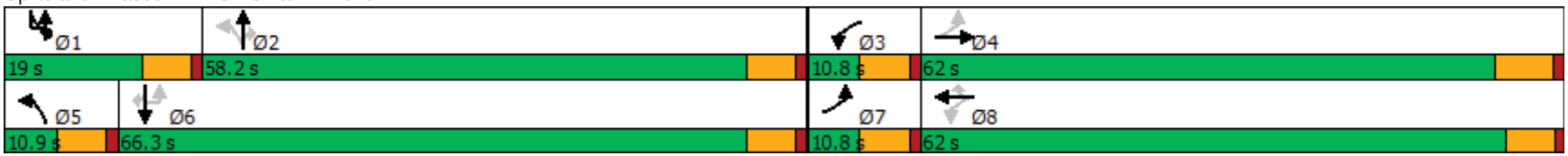


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Future Volume (vph)	10	990	27	80	164	263	46	568	297	1	176	382	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.599			0.089			0.500				0.950		
Satd. Flow (perm)	1190	3522	0	166	1863	1583	931	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				276			154				112
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	23	1140	0	107	219	313	67	624	376	0	239	434	21
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		2	6			6
Total Split (s)	10.8	62.0		10.8	62.0	62.0	10.9	58.2	58.2	19.0	19.0	66.3	66.3
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Act Effct Green (s)	50.6	44.5		53.3	50.5	50.5	34.9	29.7	29.7		13.5	40.7	40.7
Actuated g/C Ratio	0.43	0.38		0.45	0.43	0.43	0.30	0.25	0.25		0.11	0.35	0.35
v/c Ratio	0.04	0.85		0.74	0.27	0.37	0.21	0.70	0.73		1.18	0.35	0.03
Control Delay	17.8	41.0		51.1	24.9	5.9	25.1	44.7	32.6		166.1	31.1	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.8	41.0		51.1	24.9	5.9	25.1	44.7	32.6		166.1	31.1	0.1
LOS	B	D		D	C	A	C	D	C		F	C	A
Approach Delay		40.6			20.0			39.2				76.6	
Approach LOS		D			B			D				E	

Intersection Summary

Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 117.4			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.18			
Intersection Signal Delay: 43.5		Intersection LOS: D	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	69	172	918	452	17
Future Volume (vph)	49	69	172	918	452	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	3539	3514	0
Flt Permitted	0.979		0.465			
Satd. Flow (perm)	1685	0	866	3539	3514	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48				10	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	202	1055	509	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	7.9		31.4	31.4	31.4	
Actuated g/C Ratio	0.17		0.68	0.68	0.68	
v/c Ratio	0.39		0.34	0.44	0.21	
Control Delay	16.1		7.4	5.8	4.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.1		7.4	5.8	4.5	
LOS	B		A	A	A	
Approach Delay	16.1			6.1	4.5	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 46.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 43.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection						
Int Delay, s/veh	2.5					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	164	813	17	41	461
Future Vol, veh/h	39	164	813	17	41	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	231	865	28	62	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1284	447	0	0	865	0
Stage 1	879	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	157	559	-	-	774	-
Stage 1	366	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	559	-	-	774	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	366	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	774	-
HCM Lane V/C Ratio	-	-	0.413	0.08	-
HCM Control Delay (s)	-	-	14	10.1	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	2	0.3	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	36	46	784	470	29
Future Vol, veh/h	50	36	46	784	470	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	50	50	852	534	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1077	284	534	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	214	713	1030	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	204	713	1030	-	-	-
Mov Cap-2 Maneuver	204	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	557	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1030	-	357	-	-
HCM Lane V/C Ratio	0.049	-	0.327	-	-
HCM Control Delay (s)	8.7	-	19.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	104	602	213	211	372
Future Volume (vph)	176	104	602	213	211	372
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	3539	1583	1711	3539
Flt Permitted	0.968				0.355	
Satd. Flow (perm)	1722	0	3539	1583	639	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22			349		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	500	0	692	349	377	438
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		78.0	78.0	78.0	78.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	35.0		71.0	71.0	71.0	71.0
Actuated g/C Ratio	0.30		0.61	0.61	0.61	0.61
v/c Ratio	0.94		0.32	0.32	0.97	0.20
Control Delay	66.5		11.9	1.9	64.0	10.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	66.5		11.9	1.9	64.0	10.8
LOS	E		B	A	E	B
Approach Delay	66.5		8.5			35.4
Approach LOS	E		A			D

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 117	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	129	102	680	518	94
Future Volume (vph)	49	129	102	680	518	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	3539	3437	0
Flt Permitted	0.987		0.214			
Satd. Flow (perm)	1655	0	399	3539	3437	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	159				54	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	284	0	146	747	800	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	9.6		28.2	28.2	19.0	
Actuated g/C Ratio	0.19		0.57	0.57	0.38	
v/c Ratio	0.64		0.35	0.37	0.59	
Control Delay	16.7		7.6	6.5	14.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.7		7.6	6.5	14.6	
LOS	B		A	A	B	
Approach Delay	16.7			6.7	14.6	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 49.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	191	291	567	735	573	221
Future Volume (vph)	191	291	567	735	573	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1679	0	2006	3539	3539	1583
Flt Permitted	0.980		0.185			
Satd. Flow (perm)	1679	0	391	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	81					238
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	607	0	652	855	699	283
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	31.2		22.0	58.8	36.8	36.8
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	25.8		45.9	45.9	23.8	23.8
Actuated g/C Ratio	0.31		0.56	0.56	0.29	0.29
v/c Ratio	1.04		1.18	0.43	0.68	0.45
Control Delay	76.2		119.5	11.2	29.3	7.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	76.2		119.5	11.2	29.3	7.4
LOS	E		F	B	C	A
Approach Delay	76.2			58.0	23.0	
Approach LOS	E			E	C	

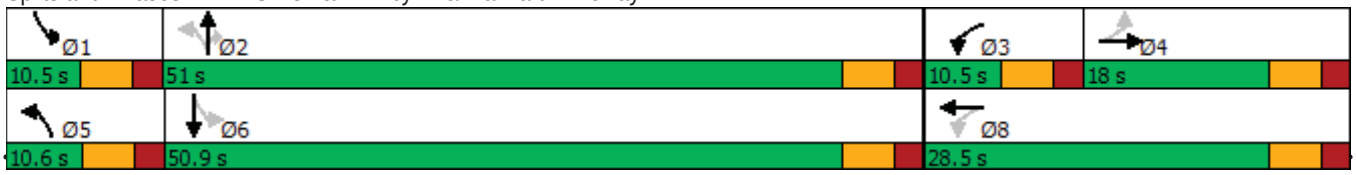
Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 82.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: SH 34 & W SH 276/Main St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Future Volume (vph)	48	49	98	88	20	21	66	1149	73	41	668	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1715	0	1770	1699	0	1888	3775	1531	1947	3522	0
Flt Permitted		0.892		0.329			0.274			0.111		
Satd. Flow (perm)	0	1550	0	613	1699	0	544	3775	1531	227	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			33				164		6	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	281	0	122	56	0	102	1277	90	79	806	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		13.3		21.0	21.0		39.8	36.1	36.1	39.7	36.0	
Actuated g/C Ratio		0.17		0.27	0.27		0.52	0.47	0.47	0.52	0.47	
v/c Ratio		0.92		0.49	0.11		0.27	0.72	0.11	0.33	0.48	
Control Delay		66.8		32.9	14.2		9.2	19.4	0.4	11.3	15.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		66.8		32.9	14.2		9.2	19.4	0.4	11.3	15.5	
LOS		E		C	B		A	B	A	B	B	
Approach Delay		66.8			27.0			17.5			15.1	
Approach LOS		E			C			B			B	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 76.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

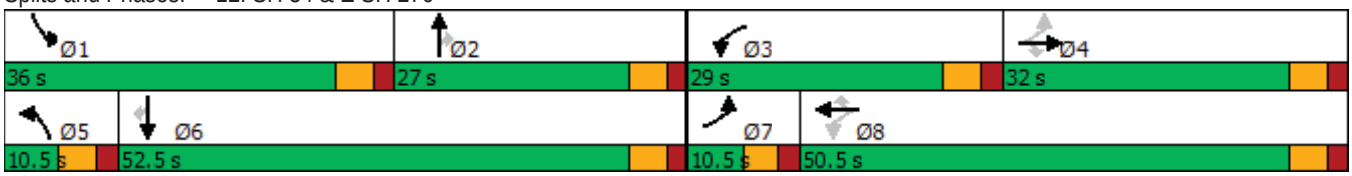
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	639	12	287	639	521	12	100	287	521	100	12
Future Volume (vph)	12	639	12	287	639	521	12	100	287	521	100	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		1	1		1	2		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.387			0.132			0.950			0.950		
Satd. Flow (perm)	721	3539	1583	246	3539	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			592			292			167
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	695	13	363	695	592	13	120	378	789	147	13
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Total Split (s)	10.5	32.0	32.0	29.0	50.5	50.5	10.5	27.0	27.0	36.0	52.5	52.5
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	30.6	25.6	25.6	52.9	49.1	49.1	5.1	13.3	13.3	28.9	44.0	44.0
Actuated g/C Ratio	0.27	0.23	0.23	0.47	0.44	0.44	0.05	0.12	0.12	0.26	0.39	0.39
v/c Ratio	0.05	0.86	0.02	0.88	0.45	0.58	0.16	0.29	0.85	0.89	0.11	0.02
Control Delay	21.1	54.6	0.1	52.4	25.2	4.7	61.1	47.1	30.7	54.3	23.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	54.6	0.1	52.4	25.2	4.7	61.1	47.1	30.7	54.3	23.2	0.1
LOS	C	D	A	D	C	A	E	D	C	D	C	A
Approach Delay		53.0			23.8			35.3			48.7	
Approach LOS		D			C			D			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 124	
Actuated Cycle Length: 111.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 37.0	Intersection LOS: D
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

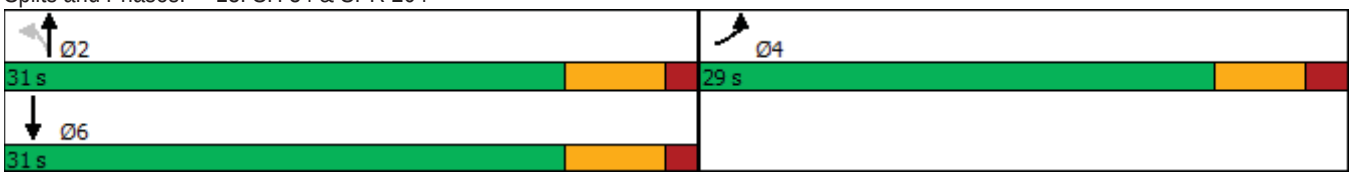
Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	217	85	92	361	384	428
Future Volume (vph)	217	85	92	361	384	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1735	0	1770	3539	3231	0
Flt Permitted	0.964		0.159			
Satd. Flow (perm)	1735	0	296	3539	3231	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	33				669	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	455	0	139	384	1149	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	17.7		25.2	25.2	25.2	
Actuated g/C Ratio	0.32		0.46	0.46	0.46	
v/c Ratio	0.78		1.03	0.24	0.62	
Control Delay	25.7		112.8	10.5	6.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	25.7		112.8	10.5	6.6	
LOS	C		F	B	A	
Approach Delay	25.7			37.7	6.6	
Approach LOS	C			D	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	1	1	0	283	1	490	0
Future Vol, veh/h	1	1	0	283	1	490	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	4	4	0	314	4	576	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	741	288	576	0	314	-	0
Stage 1	584	-	-	-	-	-	-
Stage 2	157	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	352	709	993	-	907	-	-
Stage 1	521	-	-	-	-	-	-
Stage 2	855	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	350	709	993	-	907	-	-
Mov Cap-2 Maneuver	350	-	-	-	-	-	-
Stage 1	521	-	-	-	-	-	-
Stage 2	850	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	993	-	469	-	-
HCM Lane V/C Ratio	-	-	0.017	-	-
HCM Control Delay (s)	0	-	12.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2038 Future Conditions W/ Long - Term Improvements

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Future Volume (vph)	0	0	0	367	218	157	461	1246	0	0	1415	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						110
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	218	445	185	530	1340	0	0	1505	359
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				18.9	18.9	18.9	19.6	74.4			48.7	48.7
Actuated g/C Ratio				0.18	0.18	0.18	0.19	0.71			0.46	0.46
v/c Ratio				0.76	0.75	0.52	0.83	0.54			0.92	0.45
Control Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				59.2	50.0	26.4	54.1	8.5			37.4	15.5
LOS				E	D	C	D	A			D	B
Approach Delay					47.2			21.4			33.2	
Approach LOS					D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 105.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Future Volume (vph)	361	115	196	0	0	0	0	1406	378	472	1285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164						199			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	231	367	218	0	0	0	0	1598	425	497	1367	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	15.0	15.0	15.0					31.0	31.0	14.0	45.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	9.5	9.5	9.5					25.0	25.0	8.0	39.0	
Actuated g/C Ratio	0.16	0.16	0.16					0.42	0.42	0.13	0.65	
v/c Ratio	0.91	0.87dl	0.56					1.08	0.55	1.09	0.59	
Control Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	66.9	32.8	13.9					70.2	9.9	96.9	7.3	
LOS	E	C	B					E	A	F	A	
Approach Delay		37.4						57.5			31.2	
Approach LOS		D						E			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

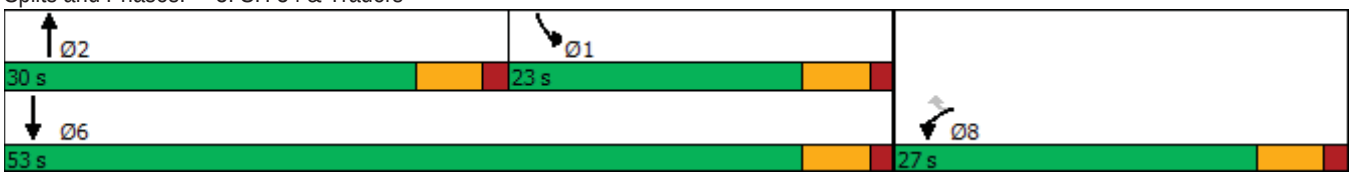
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	574	955	62	269	907
Future Volume (vph)	176	574	955	62	269	907
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		461	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	223	624	1106	0	309	1008
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	16.0	16.0	24.8		15.8	46.2
Actuated g/C Ratio	0.22	0.22	0.34		0.22	0.63
v/c Ratio	0.58	0.89	0.93		0.81	0.45
Control Delay	31.9	23.7	40.2		46.6	8.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.9	23.7	40.2		46.6	8.5
LOS	C	C	D		D	A
Approach Delay	25.8		40.2			17.4
Approach LOS	C		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

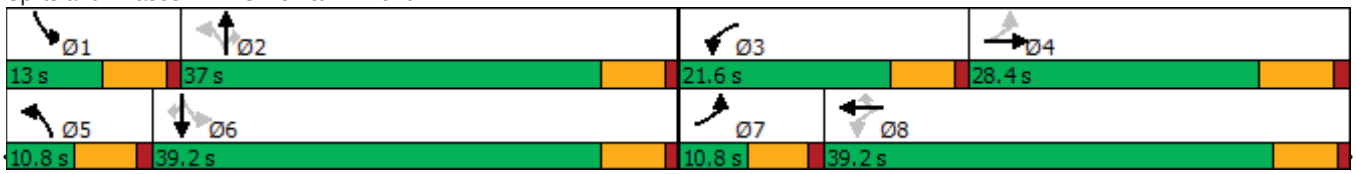


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Future Volume (vph)	32	141	63	294	749	284	17	582	74	224	710	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.204			0.456			0.251			0.211		
Satd. Flow (perm)	405	3345	0	849	1863	1583	468	3539	1583	393	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		100				233			231			231
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	272	0	544	871	342	23	647	106	246	798	45
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	10.8	28.4		21.6	39.2	39.2	10.8	37.0	37.0	13.0	39.2	39.2
Total Lost Time (s)	5.8	6.8		5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	23.0	16.9		39.9	34.0	34.0	27.7	22.6	22.6	34.6	32.0	32.0
Actuated g/C Ratio	0.26	0.19		0.46	0.39	0.39	0.32	0.26	0.26	0.40	0.37	0.37
v/c Ratio	0.23	0.38		0.98	1.20	0.45	0.10	0.71	0.18	0.91	0.62	0.06
Control Delay	19.4	21.0		57.2	133.0	10.1	17.5	34.2	0.7	60.5	26.7	0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	21.0		57.2	133.0	10.1	17.5	34.2	0.7	60.5	26.7	0.2
LOS	B	C		E	F	B	B	C	A	E	C	A
Approach Delay		20.8			85.6			29.1			33.2	
Approach LOS		C			F			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 87.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 54.8 — Intersection LOS: D
Intersection Capacity Utilization 91.4% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	154	66	570	858	140
Future Volume (vph)	28	154	66	570	858	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	3539	3440	0
Flt Permitted	0.990		0.184			
Satd. Flow (perm)	1649	0	343	3539	3440	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				58	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	264	0	90	620	1197	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	9.5		25.5	25.5	25.5	
Actuated g/C Ratio	0.20		0.55	0.55	0.55	
v/c Ratio	0.59		0.48	0.32	0.62	
Control Delay	15.3		17.3	6.4	8.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	15.3		17.3	6.4	8.7	
LOS	B		B	A	A	
Approach Delay	15.3			7.8	8.7	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 46.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	98	473	53	125	781
Future Vol, veh/h	36	98	473	53	125	781
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	134	526	73	152	898

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1316	300	0	0	526	0
Stage 1	563	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	149	696	-	-	1037	-
Stage 1	534	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	127	696	-	-	1037	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	534	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.6	0	1.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	468	1037	-
HCM Lane V/C Ratio	-	-	0.394	0.147	-
HCM Control Delay (s)	-	-	17.6	9.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.9	0.5	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	49	18	463	706	67
Future Vol, veh/h	43	49	18	463	706	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	89	28	514	905	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1257	492	905	0	-	0
Stage 1	944	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	163	522	747	-	-	-
Stage 1	339	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	522	747	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	326	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	747	-	411	-	-
HCM Lane V/C Ratio	0.037	-	0.351	-	-
HCM Control Delay (s)	10	-	18.4	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	77	55	421	116	64	613
Future Volume (vph)	77	55	421	116	64	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	3539	1583	1711	3539
Flt Permitted	0.972				0.483	
Satd. Flow (perm)	1706	0	3539	1583	870	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			157		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	0	468	157	83	828
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	8.7		22.5	22.5	22.5	22.5
Actuated g/C Ratio	0.21		0.53	0.53	0.53	0.53
v/c Ratio	0.42		0.25	0.17	0.18	0.44
Control Delay	15.5		6.1	1.9	7.0	7.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	15.5		6.1	1.9	7.0	7.3
LOS	B		A	A	A	A
Approach Delay	15.5		5.0			7.2
Approach LOS	B		A			A

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 42.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 37.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	50	52	630	606	70
Future Volume (vph)	38	50	52	630	606	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1660	0	1770	3539	3479	0
Flt Permitted	0.986		0.246			
Satd. Flow (perm)	1660	0	458	3539	3479	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	111				34	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	0	90	656	816	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.8		27.4	29.1	23.4	
Actuated g/C Ratio	0.16		0.64	0.68	0.55	
v/c Ratio	0.44		0.19	0.27	0.42	
Control Delay	12.6		4.7	4.3	9.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	12.6		4.7	4.3	9.8	
LOS	B		A	A	A	
Approach Delay	12.6			4.3	9.8	
Approach LOS	B			A	A	

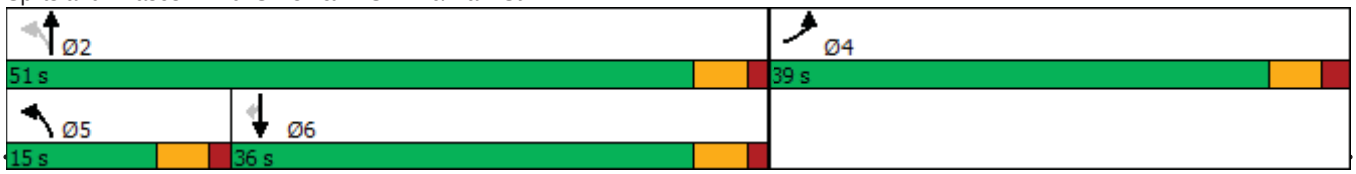
Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 42.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 42.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	143	671	367	563	587	141
Future Volume (vph)	143	671	367	563	587	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	0	150			100
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1643	0	2006	3539	3539	1583
Flt Permitted	0.991		0.200			
Satd. Flow (perm)	1643	0	422	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	286					164
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	873	0	403	704	631	178
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Total Split (s)	39.0		15.0	51.0	36.0	36.0
Total Lost Time (s)	5.5		5.0	5.0	5.0	5.0
Act Effct Green (s)	33.7		36.0	36.0	20.9	20.9
Actuated g/C Ratio	0.42		0.45	0.45	0.26	0.26
v/c Ratio	1.02		1.04	0.44	0.68	0.33
Control Delay	54.9		76.8	16.0	30.5	6.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	54.9		76.8	16.0	30.5	6.5
LOS	D		E	B	C	A
Approach Delay	54.9			38.1	25.2	
Approach LOS	D			D	C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 80.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 39.6	Intersection LOS: D
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

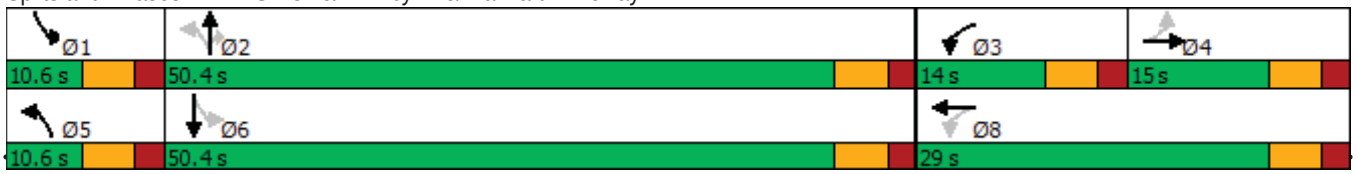
Splits and Phases: 10: SH 34 & W SH 276/Main St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Future Volume (vph)	25	60	55	265	35	60	36	725	182	52	1053	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1741	0	1770	1701	0	1888	3775	1531	1947	3532	0
Flt Permitted		0.888		0.324			0.127			0.279		
Satd. Flow (perm)	0	1563	0	604	1701	0	252	3775	1531	572	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			75				207		2	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	298	134	0	72	763	207	68	1113	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.8		24.2	24.2		35.6	31.8	31.8	35.6	31.8	
Actuated g/C Ratio		0.13		0.32	0.32		0.47	0.42	0.42	0.47	0.42	
v/c Ratio		0.90		0.91	0.22		0.31	0.48	0.27	0.19	0.75	
Control Delay		73.0		59.8	12.9		11.4	16.7	3.0	8.9	21.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		73.0		59.8	12.9		11.4	16.7	3.0	8.9	21.7	
LOS		E		E	B		B	B	A	A	C	
Approach Delay		73.0			45.2			13.6			21.0	
Approach LOS		E			D			B			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 75.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



2038 Future Conditions W/ Long - Term Improvements

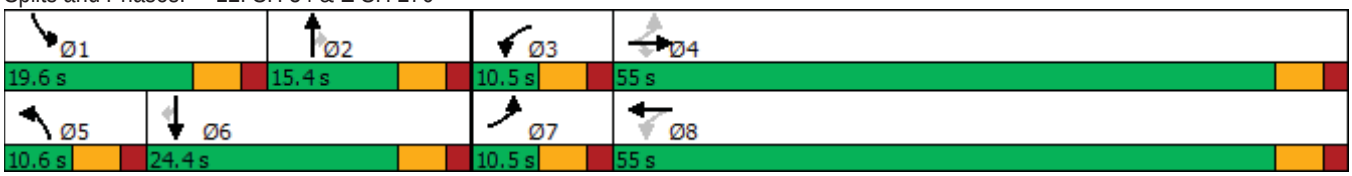
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	602	11	271	602	491	11	94	271	491	94	11
Future Volume (vph)	11	602	11	271	602	491	11	94	271	491	94	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	1		0	1		1	2		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	1770	3302	0	1770	3539	1583	3433	3539	1583
Flt Permitted	0.148			0.250			0.950			0.950		
Satd. Flow (perm)	276	3539	1583	466	3302	0	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			206		290				238			147
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	654	12	382	1188	0	12	104	308	522	103	12
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Total Split (s)	10.5	55.0	55.0	10.5	55.0		10.6	15.4	15.4	19.6	24.4	24.4
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	27.3	22.2	22.2	32.1	31.4		5.2	9.0	9.0	14.5	27.5	27.5
Actuated g/C Ratio	0.37	0.30	0.30	0.44	0.43		0.07	0.12	0.12	0.20	0.38	0.38
v/c Ratio	0.06	0.61	0.02	1.29	0.75		0.10	0.24	0.77	0.77	0.08	0.02
Control Delay	10.8	23.6	0.1	176.6	16.6		39.6	33.7	23.8	39.5	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	23.6	0.1	176.6	16.6		39.6	33.7	23.8	39.5	20.3	0.1
LOS	B	C	A	F	B		D	C	C	D	C	A
Approach Delay		22.9			55.5			26.7			35.7	
Approach LOS		C			E			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 100.5
Actuated Cycle Length: 73.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 41.3 — Intersection LOS: D
Intersection Capacity Utilization 71.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	97	70	503	305	74
Future Volume (vph)	116	97	70	503	305	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	3539	3433	0
Flt Permitted	0.974		0.470			
Satd. Flow (perm)	1702	0	875	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				100	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	269	0	84	637	496	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	6.9		14.6	14.6	14.6	
Actuated g/C Ratio	0.20		0.43	0.43	0.43	
v/c Ratio	0.64		0.22	0.41	0.32	
Control Delay	17.2		7.9	7.6	5.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	17.2		7.9	7.6	5.6	
LOS	B		A	A	A	
Approach Delay	17.2			7.7	5.6	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 33.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 42.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	1	4	497	308	1
Future Vol, veh/h	6	1	4	497	308	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	4	11	571	395	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	705	200	399	0	-	0
Stage 1	397	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	371	808	1156	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	366	808	1156	-	-	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1156	-	530	-	-
HCM Lane V/C Ratio	0.009	-	0.03	-	-
HCM Control Delay (s)	8.1	0.1	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Future Volume (vph)	0	0	0	264	203	150	2	394	1162	0	0	1250	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		320		0	0		450
Storage Lanes	0		0	1		1		2		0	0		1
Taper Length (ft)	25			125				230			25		
Satd. Flow (prot)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.981			0.950					
Satd. Flow (perm)	0	0	0	1610	3326	1583	0	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes				Yes			Yes
Satd. Flow (RTOR)						109							114
Link Speed (mph)		45			45				40			40	
Link Distance (ft)		320			221				1143			916	
Travel Time (s)		4.8			3.3				19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.76	0.81	0.90	0.25	0.83	0.89	0.92	0.92	0.92	0.93
Shared Lane Traffic (%)				44%									
Lane Group Flow (vph)	0	0	0	194	404	167	0	483	1306	0	0	1359	301
Turn Type				Split	NA	Perm	Prot	Prot	NA			NA	Perm
Protected Phases				8	8		5	5	2			6	
Permitted Phases						8							6
Total Split (s)				23.0	23.0	23.0	23.0	23.0	67.0			44.0	44.0
Total Lost Time (s)				6.0	6.0	6.0		6.0	6.0			6.0	6.0
Act Effct Green (s)				15.2	15.2	15.2		15.7	58.4			36.7	36.7
Actuated g/C Ratio				0.18	0.18	0.18		0.18	0.68			0.43	0.43
v/c Ratio				0.68	0.68	0.45		0.77	0.54			0.90	0.41
Control Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
Queue Delay				0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				46.6	40.0	17.1		43.1	8.1			32.7	12.5
LOS				D	D	B		D	A			C	B
Approach Delay					36.7				17.5			29.1	
Approach LOS					D				B			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 85.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Future Volume (vph)	275	82	134	0	0	0	0	1283	262	376	1136	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.968								0.950		
Satd. Flow (perm)	1610	3282	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140						236			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.68	0.80	0.66	0.92	0.92	0.92	0.92	0.96	0.95	0.93	0.90	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	202	305	203	0	0	0	0	1336	276	404	1262	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	19.0	19.0	19.0					34.0	34.0	17.0	51.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	12.3	12.3	12.3					28.0	28.0	10.7	44.7	
Actuated g/C Ratio	0.18	0.18	0.18					0.41	0.41	0.16	0.65	
v/c Ratio	0.70	0.52	0.51					0.92	0.35	0.75	0.55	
Control Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	41.0	28.9	14.3					32.5	4.7	38.3	7.7	
LOS	D	C	B					C	A	D	A	
Approach Delay		28.2						27.8			15.1	
Approach LOS		C						C			B	

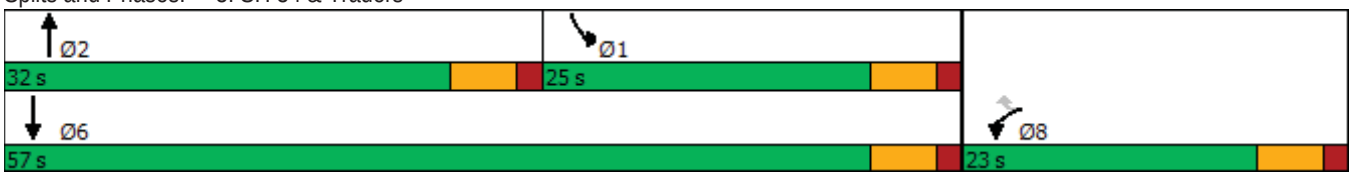
Intersection Summary	
Area Type: Other	
Cycle Length: 70	
Actuated Cycle Length: 68.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	400	1005	56	296	677
Future Volume (vph)	131	400	1005	56	296	677
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3504	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3504	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		465	10			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.85	0.86	0.93	0.73	0.76	0.80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	465	1158	0	389	846
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	23.0	23.0	32.0		25.0	57.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	11.8	11.8	26.6		18.8	50.9
Actuated g/C Ratio	0.16	0.16	0.36		0.26	0.69
v/c Ratio	0.55	0.72	0.91		0.86	0.35
Control Delay	36.0	10.2	35.9		48.3	5.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	36.0	10.2	35.9		48.3	5.5
LOS	D	B	D		D	A
Approach Delay	16.6		35.9			19.0
Approach LOS	B		D			B

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

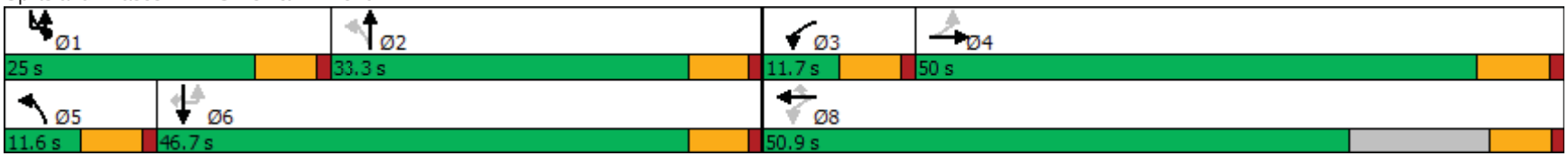


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Future Volume (vph)	11	1131	30	91	187	301	53	650	339	2	202	437	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250		100		250
Storage Lanes	1		0	1		1	1		1		1		1
Taper Length (ft)	300			100			150				135		
Satd. Flow (prot)	1888	3522	0	1770	1863	1583	1770	3539	1583	0	1770	3539	1583
Flt Permitted	0.605			0.080			0.470				0.950		
Satd. Flow (perm)	1202	3522	0	149	1863	1583	875	3539	1583	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes				Yes
Satd. Flow (RTOR)		3				346			377				140
Link Speed (mph)		60			50			50				50	
Link Distance (ft)		505			468			394				1182	
Travel Time (s)		5.7			6.4			5.4				16.1	
Peak Hour Factor	0.44	0.90	0.68	0.75	0.75	0.84	0.69	0.91	0.79	0.25	0.75	0.88	0.38
Shared Lane Traffic (%)													
Lane Group Flow (vph)	25	1301	0	121	249	358	77	714	429	0	277	497	26
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	Prot	NA	Perm
Protected Phases		4		3	8		5	2		1	1	6	
Permitted Phases	4			8		8	2		Free	6			6
Total Split (s)	50.0	50.0		11.7	50.9	50.9	11.6	33.3		25.0	25.0	46.7	46.7
Total Lost Time (s)	6.8	6.8		5.8	5.8	5.8	5.8	5.8			5.8	5.8	5.8
Act Effct Green (s)	43.2	43.2		55.9	55.9	55.9	32.4	26.6	119.1		19.2	42.4	42.4
Actuated g/C Ratio	0.36	0.36		0.47	0.47	0.47	0.27	0.22	1.00		0.16	0.36	0.36
v/c Ratio	0.06	1.02		0.81	0.28	0.39	0.27	0.90	0.27		0.97	0.39	0.04
Control Delay	25.7	67.5		57.5	20.7	3.6	24.3	61.0	0.4		96.8	30.6	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	25.7	67.5		57.5	20.7	3.6	24.3	61.0	0.4		96.8	30.6	0.1
LOS	C	E		E	C	A	C	E	A		F	C	A
Approach Delay		66.7			18.4			37.4				52.5	
Approach LOS		E			B			D				D	

Intersection Summary

Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 119.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 46.5	Intersection LOS: D
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	78	197	1050	517	19
Future Volume (vph)	56	78	197	1050	517	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	3539	3518	0
Flt Permitted	0.979		0.433			
Satd. Flow (perm)	1685	0	807	3539	3518	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	47				10	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	232	1207	581	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	8.7		32.4	32.4	32.4	
Actuated g/C Ratio	0.17		0.62	0.62	0.62	
v/c Ratio	0.46		0.46	0.55	0.27	
Control Delay	19.3		9.5	7.1	5.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	19.3		9.5	7.1	5.0	
LOS	B		A	A	A	
Approach Delay	19.3			7.5	5.0	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 52.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	187	930	19	46	526
Future Vol, veh/h	45	187	930	19	46	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	71	94	60	66	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	263	989	32	70	641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1466	511	0	0	989	0
Stage 1	1005	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	119	508	-	-	695	-
Stage 1	315	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	107	508	-	-	695	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	315	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	595	695	-
HCM Lane V/C Ratio	-	-	0.54	0.1	-
HCM Control Delay (s)	-	-	17.9	10.8	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	3.2	0.3	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	42	53	896	538	34
Future Vol, veh/h	58	42	53	896	538	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	72	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	58	58	974	611	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1234	325	611	0	-	0
Stage 1	631	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	169	671	964	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	671	964	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	462	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.5	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	964	-	279	-	-
HCM Lane V/C Ratio	0.06	-	0.486	-	-
HCM Control Delay (s)	9	-	29.5	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.5	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	118	688	243	242	426
Future Volume (vph)	202	118	688	243	242	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1722	0	3539	1583	1711	3539
Flt Permitted	0.968				0.310	
Satd. Flow (perm)	1722	0	3539	1583	558	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22			398		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.53	0.62	0.87	0.61	0.56	0.85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	571	0	791	398	432	501
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	42.0		78.0	78.0	78.0	78.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	36.5		72.5	72.5	72.5	72.5
Actuated g/C Ratio	0.30		0.60	0.60	0.60	0.60
v/c Ratio	1.06		0.37	0.36	1.28	0.23
Control Delay	94.6		12.7	1.9	172.7	11.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	94.6		12.7	1.9	172.7	11.3
LOS	F		B	A	F	B
Approach Delay	94.6		9.1			86.0
Approach LOS	F		A			F

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 53.9	Intersection LOS: D
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	147	117	778	592	107
Future Volume (vph)	56	147	117	778	592	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1655	0	1770	3539	3440	0
Flt Permitted	0.987		0.175			
Satd. Flow (perm)	1655	0	326	3539	3440	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	158				53	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.67	0.61	0.70	0.91	0.80	0.62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	325	0	167	855	913	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	20.0		12.3	60.0	47.7	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	11.3		30.8	30.8	21.8	
Actuated g/C Ratio	0.21		0.57	0.57	0.40	
v/c Ratio	0.69		0.45	0.42	0.64	
Control Delay	20.5		9.4	7.2	15.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.5		9.4	7.2	15.7	
LOS	C		A	A	B	
Approach Delay	20.5			7.5	15.7	
Approach LOS	C			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 54.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 52.5%	ICU Level of Service A
Analysis Period (min) 15	

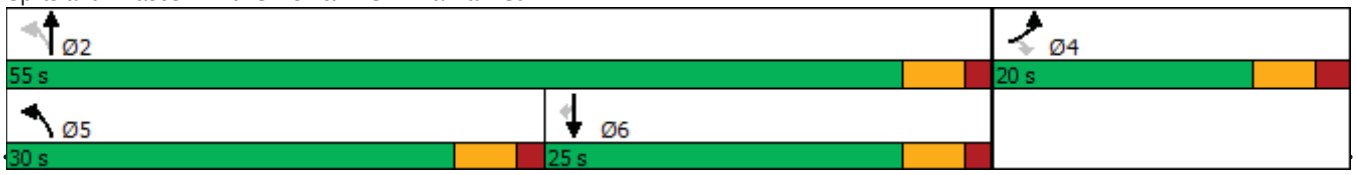
Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	220	333	648	840	654	253
Future Volume (vph)	220	333	648	840	654	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	250	150			100
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1770	1583	2006	3539	3539	1583
Flt Permitted	0.950		0.163			
Satd. Flow (perm)	1770	1583	344	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		411				252
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.77	0.81	0.87	0.86	0.82	0.78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	286	411	745	977	798	324
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Total Split (s)	20.0	20.0	30.0	55.0	25.0	25.0
Total Lost Time (s)	5.5	5.5	5.0	5.0	5.0	5.0
Act Effct Green (s)	14.0	14.0	49.5	49.5	19.5	19.5
Actuated g/C Ratio	0.19	0.19	0.67	0.67	0.26	0.26
v/c Ratio	0.86	0.65	0.94	0.41	0.85	0.54
Control Delay	55.0	8.6	39.2	6.3	36.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	8.6	39.2	6.3	36.8	9.9
LOS	E	A	D	A	D	A
Approach Delay	27.7			20.5	29.0	
Approach LOS	C			C	C	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 74
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 24.6 — Intersection LOS: C
Intersection Capacity Utilization 79.1% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: SH 34 & W SH 276/Main St

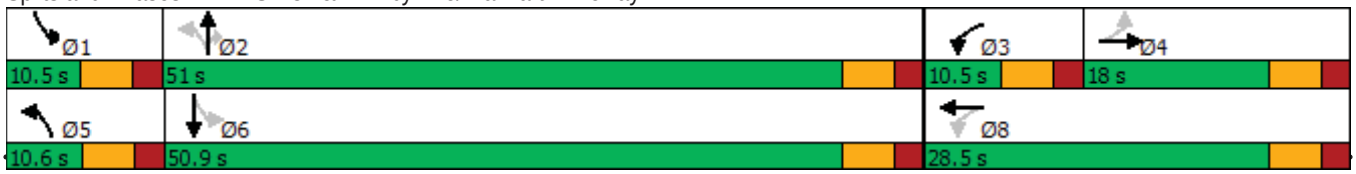


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Future Volume (vph)	54	56	112	101	22	24	75	1314	83	46	763	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1714	0	1770	1695	0	1888	3775	1531	1947	3522	0
Flt Permitted		0.891		0.277			0.229			0.100		
Satd. Flow (perm)	0	1547	0	516	1695	0	455	3775	1531	205	3522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			38				164		6	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.65	0.73	0.70	0.72	0.88	0.63	0.65	0.90	0.81	0.52	0.86	0.70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	320	0	140	63	0	115	1460	102	88	918	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	18.0	18.0		10.5	28.5		10.6	51.0	51.0	10.5	50.9	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		12.8		23.6	23.6		43.9	40.1	40.1	43.8	40.0	
Actuated g/C Ratio		0.15		0.29	0.29		0.53	0.48	0.48	0.53	0.48	
v/c Ratio		1.15		0.62	0.12		0.35	0.80	0.12	0.41	0.54	
Control Delay		133.8		41.7	14.1		10.2	22.0	0.8	13.1	16.2	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		133.8		41.7	14.1		10.2	22.0	0.8	13.1	16.2	
LOS		F		D	B		B	C	A	B	B	
Approach Delay		133.8			33.1			19.9			15.9	
Approach LOS		F			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 82.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 73.7% ICU Level of Service D
Analysis Period (min) 15

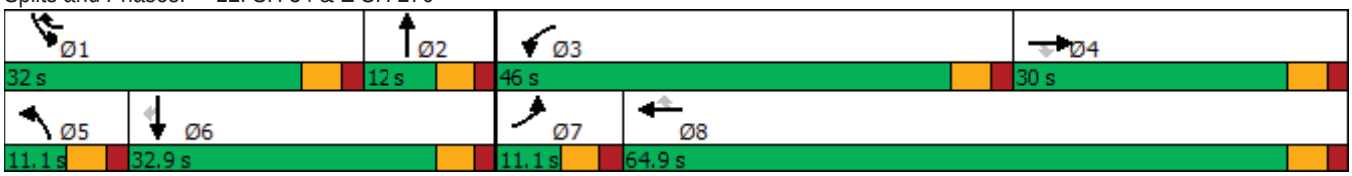
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	732	18	732	732	598	18	117	732	598	117	18
Future Volume (vph)	18	732	18	732	732	598	18	117	732	598	117	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223			308			523			173
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		713			243			543			623	
Travel Time (s)		16.2			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.79	0.92	0.88	0.92	0.83	0.76	0.66	0.68	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	796	20	927	796	680	20	141	963	906	172	20
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			Free			6
Total Split (s)	11.1	30.0	30.0	46.0	64.9	32.0	11.1	12.0		32.0	32.9	32.9
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5
Act Effct Green (s)	5.6	24.5	24.5	35.4	61.2	93.2	5.6	6.5	115.0	26.5	34.3	34.3
Actuated g/C Ratio	0.05	0.21	0.21	0.31	0.53	0.81	0.05	0.06	1.00	0.23	0.30	0.30
v/c Ratio	0.23	1.05	0.04	0.88	0.42	0.51	0.23	0.70	0.61	1.14	0.16	0.03
Control Delay	61.4	92.3	0.2	48.2	17.7	3.5	61.4	73.7	1.7	120.0	33.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	92.3	0.2	48.2	17.7	3.5	61.4	73.7	1.7	120.0	33.0	0.1
LOS	E	F	A	D	B	A	E	E	A	F	C	A
Approach Delay		89.4			25.4			11.8			104.2	
Approach LOS		F			C			B			F	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 48.3	Intersection LOS: D
Intersection Capacity Utilization 78.6%	ICU Level of Service D
Analysis Period (min) 15	

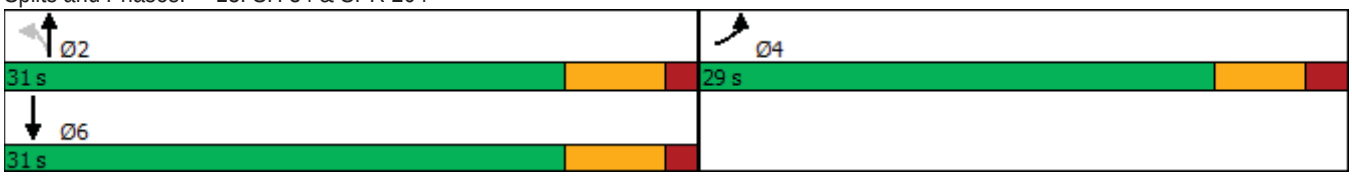
Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	248	98	106	413	438	490
Future Volume (vph)	248	98	106	413	438	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1733	0	1770	3539	3231	0
Flt Permitted	0.964		0.159			
Satd. Flow (perm)	1733	0	296	3539	3231	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	34				723	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.64	0.73	0.66	0.94	0.80	0.64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	522	0	161	439	1314	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	29.0		31.0	31.0	31.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	19.8		25.1	25.1	25.1	
Actuated g/C Ratio	0.35		0.44	0.44	0.44	
v/c Ratio	0.84		1.24	0.28	0.72	
Control Delay	29.6		181.0	11.5	8.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	29.6		181.0	11.5	8.5	
LOS	C		F	B	A	
Approach Delay	29.6			57.0	8.5	
Approach LOS	C			E	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 56.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264



Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWU	SWT	SWR
Lane Configurations							
Traffic Vol, veh/h	2	2	0	323	2	560	0
Future Vol, veh/h	2	2	0	323	2	560	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	25	25	92	90	25	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	8	8	0	359	8	659	0

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	855	330	659	0	359	-	0
Stage 1	675	-	-	-	-	-	-
Stage 2	180	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	6.44	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	2.52	-	-
Pot Cap-1 Maneuver	297	666	925	-	850	-	-
Stage 1	467	-	-	-	-	-	-
Stage 2	833	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	293	666	925	-	850	-	-
Mov Cap-2 Maneuver	293	-	-	-	-	-	-
Stage 1	467	-	-	-	-	-	-
Stage 2	821	-	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	14.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	925	-	407	-	-
HCM Lane V/C Ratio	-	-	0.039	-	-
HCM Control Delay (s)	0	-	14.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2048 Future Conditions W/ Long - Term Improvements

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Future Volume (vph)	0	0	0	419	250	179	526	1424	0	0	1618	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	320		0	0		450
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	25			125			230			25		
Satd. Flow (prot)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.979		0.950					
Satd. Flow (perm)	0	0	0	1610	3319	1583	3433	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						89						89
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		320			221			1143			916	
Travel Time (s)		4.8			3.3			19.5			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.87	0.85	0.87	0.93	0.92	0.92	0.94	0.82
Shared Lane Traffic (%)				47%								
Lane Group Flow (vph)	0	0	0	250	508	211	605	1531	0	0	1721	410
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Total Split (s)				27.0	27.0	27.0	27.0	83.0			56.0	56.0
Total Lost Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Act Effct Green (s)				20.2	20.2	20.2	20.8	76.8			50.0	50.0
Actuated g/C Ratio				0.19	0.19	0.19	0.19	0.70			0.46	0.46
v/c Ratio				0.84	0.82	0.58	0.93	0.61			1.06	0.53
Control Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay				67.2	55.1	29.9	65.2	9.8			70.1	19.3
LOS				E	E	C	E	A			E	B
Approach Delay					52.7			25.5			60.4	
Approach LOS					D			C			E	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 109
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 44.7 Intersection LOS: D
Intersection Capacity Utilization 87.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: SH 34 & IH 30 WBFR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Future Volume (vph)	413	131	224	0	0	0	0	1606	432	539	1469	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		150	475		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	225			25			25			230		
Satd. Flow (prot)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950	0.969								0.950		
Satd. Flow (perm)	1610	3285	1583	0	0	0	0	3539	1583	3433	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82						180			
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		229			120			306			1143	
Travel Time (s)		4.5			2.3			5.2			19.5	
Peak Hour Factor	0.78	0.85	0.90	0.92	0.92	0.92	0.92	0.88	0.89	0.95	0.94	0.92
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	264	419	249	0	0	0	0	1825	485	567	1563	0
Turn Type	Perm	NA	Perm					NA	Perm	Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Total Split (s)	26.0	26.0	26.0					69.0	69.0	25.0	94.0	
Total Lost Time (s)	5.5	5.5	5.5					6.0	6.0	6.0	6.0	
Act Effct Green (s)	20.5	20.5	20.5					63.0	63.0	19.0	88.0	
Actuated g/C Ratio	0.17	0.17	0.17					0.52	0.52	0.16	0.73	
v/c Ratio	0.96	0.92dl	0.74					0.98	0.53	1.04	0.60	
Control Delay	94.8	56.5	45.4					45.6	13.5	99.5	8.8	
Queue Delay	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay	94.8	56.5	45.4					45.6	13.5	99.5	8.8	
LOS	F	E	D					D	B	F	A	
Approach Delay		64.4						38.8			33.0	
Approach LOS		E						D			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 40.9	Intersection LOS: D
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

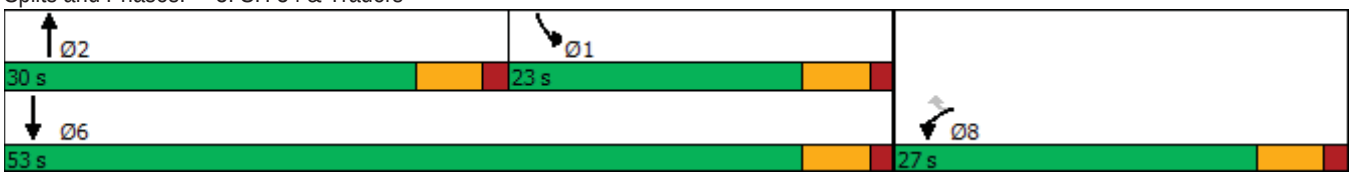
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 2: SH 34 & IH 30 EBFR

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	656	1091	70	307	1037
Future Volume (vph)	202	656	1091	70	307	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		230	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1583	3497	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3497	0	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		458	12			
Link Speed (mph)	45		40			40
Link Distance (ft)	1184		260			760
Travel Time (s)	17.9		4.4			13.0
Peak Hour Factor	0.79	0.92	0.94	0.69	0.87	0.90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	713	1262	0	353	1152
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	27.0	27.0	30.0		23.0	53.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5
Act Effct Green (s)	19.8	19.8	24.6		17.1	47.2
Actuated g/C Ratio	0.25	0.25	0.32		0.22	0.61
v/c Ratio	0.57	0.96	1.14		0.91	0.54
Control Delay	31.0	36.6	101.1		60.4	10.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.0	36.6	101.1		60.4	10.5
LOS	C	D	F		E	B
Approach Delay	35.1		101.1			22.2
Approach LOS	D		F			C

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 78	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 52.2	Intersection LOS: D
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: SH 34 & Traders

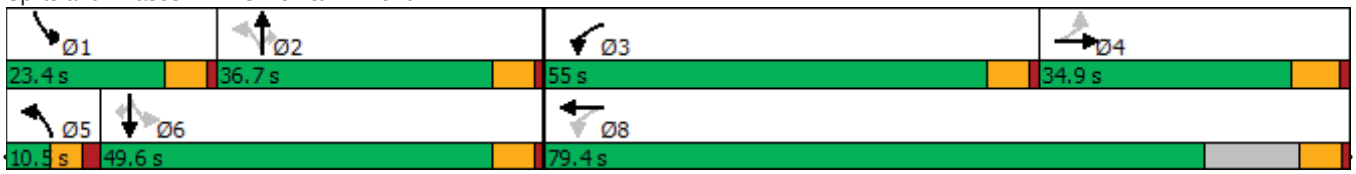


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Future Volume (vph)	37	162	72	336	856	325	19	666	85	256	811	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	80		0	220		0	100		250	100		250
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	300			100			150			135		
Satd. Flow (prot)	1888	3345	0	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.137			0.396			0.177			0.102		
Satd. Flow (perm)	272	3345	0	738	1863	1583	330	3539	1583	190	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67				194			152			110
Link Speed (mph)		60			50			50			50	
Link Distance (ft)		505			468			394			1182	
Travel Time (s)		5.7			6.4			5.4			16.1	
Peak Hour Factor	0.72	0.82	0.63	0.54	0.86	0.83	0.75	0.90	0.70	0.91	0.89	0.53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	312	0	622	995	392	25	740	121	281	911	51
Turn Type	Perm	NA		pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8		Free	2		2	6		6
Total Split (s)	34.9	34.9		55.0	79.4		10.5	36.7	36.7	23.4	49.6	49.6
Total Lost Time (s)	6.8	6.8		5.8	5.8		5.5	5.8	5.8	5.8	5.8	5.8
Act Effct Green (s)	29.2	29.2		77.1	77.1	143.1	36.3	31.0	31.0	54.4	48.3	48.3
Actuated g/C Ratio	0.20	0.20		0.54	0.54	1.00	0.25	0.22	0.22	0.38	0.34	0.34
v/c Ratio	0.93	0.42		0.90	0.99	0.25	0.19	0.97	0.26	1.06	0.76	0.08
Control Delay	159.5	41.7		40.6	59.2	0.4	34.3	80.9	4.5	110.4	49.0	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	159.5	41.7		40.6	59.2	0.4	34.3	80.9	4.5	110.4	49.0	0.3
LOS	F	D		D	E	A	C	F	A	F	D	A
Approach Delay		58.2			42.0			69.1			60.9	
Approach LOS		E			D			E			E	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 143.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 53.8 — Intersection LOS: D
Intersection Capacity Utilization 102.0% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 4: SH 34 & FM 1570



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	176	75	651	981	160
Future Volume (vph)	32	176	75	651	981	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	3539	3440	0
Flt Permitted	0.990		0.139			
Satd. Flow (perm)	1649	0	259	3539	3440	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	137				58	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	302	0	103	708	1369	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	12.3		34.0	34.0	34.0	
Actuated g/C Ratio	0.21		0.58	0.58	0.58	
v/c Ratio	0.66		0.68	0.34	0.68	
Control Delay	21.1		36.0	6.9	9.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	21.1		36.0	6.9	9.9	
LOS	C		D	A	A	
Approach Delay	21.1			10.6	9.9	
Approach LOS	C			B	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 58.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	112	541	61	142	893
Future Vol, veh/h	42	112	541	61	142	893
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	73	90	73	82	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	153	601	84	173	1026

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1502	343	0	0	601	0
Stage 1	643	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	112	653	-	-	972	-
Stage 1	485	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	92	653	-	-	972	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	485	-	-	-	-	-
Stage 2	308	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.7	0	1.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	972	-
HCM Lane V/C Ratio	-	-	0.634	0.178	-
HCM Control Delay (s)	-	-	32.7	9.5	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	4.1	0.6	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	56	21	530	806	77
Future Vol, veh/h	50	56	21	530	806	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	55	65	90	78	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	102	32	589	1033	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1437	562	1033	0	-	0
Stage 1	1078	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	124	470	668	-	-	-
Stage 1	288	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	118	470	668	-	-	-
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	274	-	-	-	-	-
Stage 2	677	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	668	-	305	-	-
HCM Lane V/C Ratio	0.048	-	0.544	-	-
HCM Control Delay (s)	10.7	-	30	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.2	-	3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	88	62	482	133	74	701
Future Volume (vph)	88	62	482	133	74	701
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	12
Storage Length (ft)	0	0		250	170	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				200	
Satd. Flow (prot)	1706	0	3539	1583	1711	3539
Flt Permitted	0.972				0.453	
Satd. Flow (perm)	1706	0	3539	1583	816	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			180		
Link Speed (mph)	35		55			55
Link Distance (ft)	1344		554			1456
Travel Time (s)	26.2		6.9			18.0
Peak Hour Factor	0.86	0.81	0.90	0.74	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	536	180	96	947
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Total Split (s)	31.0		89.0	89.0	89.0	89.0
Total Lost Time (s)	5.5		5.5	5.5	5.5	5.5
Act Effct Green (s)	9.5		24.4	24.4	24.4	24.4
Actuated g/C Ratio	0.21		0.54	0.54	0.54	0.54
v/c Ratio	0.47		0.28	0.19	0.22	0.49
Control Delay	17.2		6.3	1.8	7.5	7.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	17.2		6.3	1.8	7.5	7.8
LOS	B		A	A	A	A
Approach Delay	17.2		5.2			7.8
Approach LOS	B		A			A

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: SH 34 & FM 2101

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	58	59	720	693	80
Future Volume (vph)	43	58	59	720	693	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	160			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1659	0	1770	3539	3479	0
Flt Permitted	0.986		0.209			
Satd. Flow (perm)	1659	0	389	3539	3479	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	129				34	
Link Speed (mph)	30			50	50	
Link Distance (ft)	700			2353	1047	
Travel Time (s)	15.9			32.1	14.3	
Peak Hour Factor	0.84	0.45	0.58	0.96	0.84	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	102	750	933	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	13.2		11.0	46.8	35.8	
Total Lost Time (s)	5.5		5.7	5.7	5.7	
Act Effct Green (s)	6.9		29.4	31.2	25.5	
Actuated g/C Ratio	0.15		0.66	0.70	0.57	
v/c Ratio	0.50		0.24	0.30	0.47	
Control Delay	13.8		4.9	4.3	9.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.8		4.9	4.3	9.8	
LOS	B		A	A	A	
Approach Delay	13.8			4.3	9.8	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 44.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 7.8	Intersection LOS: A
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

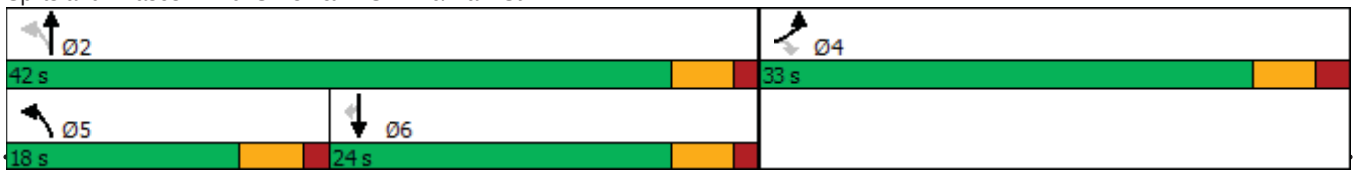
Splits and Phases: 9: SH 34 & Panther Path

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	163	766	419	643	670	162
Future Volume (vph)	163	766	419	643	670	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12
Storage Length (ft)	0	250	150			100
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	1770	1583	2006	3539	3539	1583
Flt Permitted	0.950		0.173			
Satd. Flow (perm)	1770	1583	365	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		457				174
Link Speed (mph)	35			35	35	
Link Distance (ft)	772			761	363	
Travel Time (s)	15.0			14.8	7.1	
Peak Hour Factor	0.90	0.94	0.91	0.80	0.93	0.79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	181	815	460	804	720	205
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Total Split (s)	33.0	33.0	18.0	42.0	24.0	24.0
Total Lost Time (s)	5.5	5.5	5.0	5.0	5.0	5.0
Act Effct Green (s)	25.3	25.3	36.2	36.2	18.1	18.1
Actuated g/C Ratio	0.35	0.35	0.50	0.50	0.25	0.25
v/c Ratio	0.29	0.96	0.96	0.45	0.81	0.39
Control Delay	18.4	34.1	51.4	13.0	34.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	34.1	51.4	13.0	34.5	8.3
LOS	B	C	D	B	C	A
Approach Delay	31.2			27.0	28.7	
Approach LOS	C			C	C	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 72.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.8 — Intersection LOS: C
Intersection Capacity Utilization 74.7% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: SH 34 & W SH 276/Main St

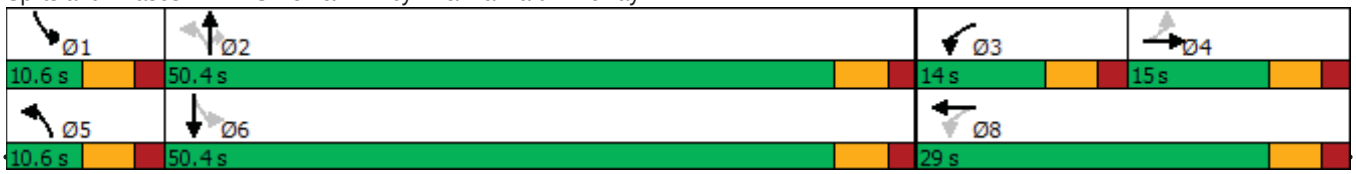


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Future Volume (vph)	29	69	62	302	40	69	42	829	208	59	1203	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	14	14	11	15	12	12
Storage Length (ft)	0		0	0		0	110		105	150		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			55			50		
Satd. Flow (prot)	0	1743	0	1770	1699	0	1888	3775	1531	1947	3532	0
Flt Permitted		0.881		0.260			0.110			0.239		
Satd. Flow (perm)	0	1552	0	484	1699	0	219	3775	1531	490	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			77				213		2	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		337			293			1149			761	
Travel Time (s)		7.7			6.7			22.4			14.8	
Peak Hour Factor	0.56	0.77	0.65	0.89	0.63	0.77	0.50	0.95	0.88	0.77	0.96	0.50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	237	0	339	153	0	84	873	236	77	1273	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	15.0	15.0		14.0	29.0		10.6	50.4	50.4	10.6	50.4	
Total Lost Time (s)		5.5		5.5	5.5		5.5	5.5	5.5	5.5	5.5	
Act Effct Green (s)		9.7		24.1	24.1		40.4	36.5	36.5	40.4	36.5	
Actuated g/C Ratio		0.12		0.30	0.30		0.51	0.46	0.46	0.51	0.46	
v/c Ratio		1.10		1.19	0.27		0.38	0.51	0.29	0.23	0.79	
Control Delay		125.8		142.7	15.1		12.7	16.4	3.6	9.0	22.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		125.8		142.7	15.1		12.7	16.4	3.6	9.0	22.5	
LOS		F		F	B		B	B	A	A	C	
Approach Delay		125.8			103.0			13.6			21.7	
Approach LOS		F			F			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 79.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 38.5 Intersection LOS: D
Intersection Capacity Utilization 81.8% ICU Level of Service D
Analysis Period (min) 15

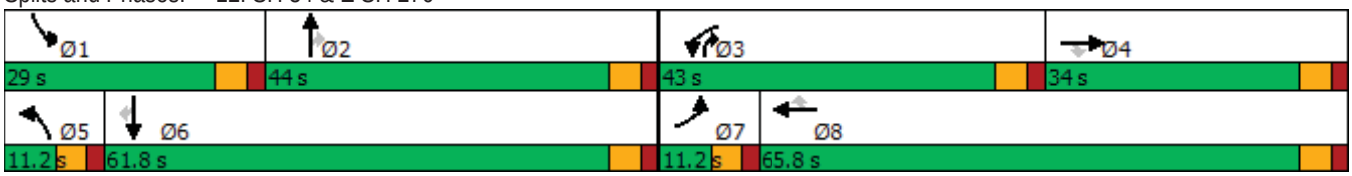
Splits and Phases: 11: SH 34 & E Kirby Ave/Walmart Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	690	17	690	690	563	17	110	690	563	110	17
Future Volume (vph)	17	690	17	690	690	563	17	110	690	563	110	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		460	100		0	365		450	450		210
Storage Lanes	1		0	2		1	1		1	2		1
Taper Length (ft)	100			100			50			100		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178			612			98			138
Link Speed (mph)		30			45			35			35	
Link Distance (ft)		673			243			543			623	
Travel Time (s)		15.3			3.7			10.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.71	0.92	0.92	0.92	0.90	0.88	0.94	0.91	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	750	18	972	750	612	18	122	784	599	121	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Total Split (s)	11.2	34.0	34.0	43.0	65.8	65.8	11.2	44.0	43.0	29.0	61.8	61.8
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Act Effct Green (s)	5.7	28.5	28.5	37.5	67.1	67.1	5.7	9.5	52.6	23.5	34.1	34.1
Actuated g/C Ratio	0.05	0.24	0.24	0.31	0.55	0.55	0.05	0.08	0.43	0.19	0.28	0.28
v/c Ratio	0.22	0.90	0.04	0.91	0.38	0.53	0.22	0.44	1.06	0.90	0.12	0.03
Control Delay	62.8	60.2	0.1	54.2	17.0	3.3	62.8	58.2	78.8	65.5	34.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	60.2	0.1	54.2	17.0	3.3	62.8	58.2	78.8	65.5	34.3	0.1
LOS	E	E	A	D	B	A	E	E	E	E	C	A
Approach Delay		58.8			28.9			75.7			58.8	
Approach LOS		E			C			E			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 121.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 47.5	Intersection LOS: D
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SH 34 & E SH 276



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	133	110	80	574	349	85
Future Volume (vph)	133	110	80	574	349	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1702	0	1770	3539	3433	0
Flt Permitted	0.974		0.439			
Satd. Flow (perm)	1702	0	818	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	93				115	
Link Speed (mph)	50			55	55	
Link Distance (ft)	482			6595	2191	
Travel Time (s)	6.6			81.8	27.2	
Peak Hour Factor	0.80	0.78	0.83	0.79	0.77	0.74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	307	0	96	727	568	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	13.0		27.0	27.0	27.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Act Effct Green (s)	7.1		15.9	15.9	15.9	
Actuated g/C Ratio	0.20		0.45	0.45	0.45	
v/c Ratio	0.74		0.26	0.45	0.35	
Control Delay	24.1		8.1	7.7	5.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	24.1		8.1	7.7	5.6	
LOS	C		A	A	A	
Approach Delay	24.1			7.7	5.6	
Approach LOS	C			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 40	
Actuated Cycle Length: 35.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: SH 34 & SPR 264

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	2	5	568	352	2
Future Vol, veh/h	6	2	5	568	352	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	25	38	87	78	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	13	653	451	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	808	230	459	0	-	0
Stage 1	455	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	319	772	1098	-	-	-
Stage 1	606	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	772	1098	-	-	-
Mov Cap-2 Maneuver	431	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	682	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	12.2	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1098	-	523	-	-
HCM Lane V/C Ratio	0.012	-	0.038	-	-
HCM Control Delay (s)	8.3	0.1	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

APPENDIX-B

TRNASPORTATION PLANNING AND PROGRAMMING (TPP) DATA

Texas Department of Transportation

RECEIVED
AUG 20 2018
TXDOT
PARIS DISTRICT

MEMO

August 17, 2018

To: Noel S Paramanantham, P.E. District Engineer
Attention: Daniel J Perry, P.E. Director of TPD

Through: William E. Knowles, P.E.
Traffic Analysis Section Director, TPP

From: Ruoyu Liu
Planner, TPP

Subject: Traffic Data
CSJ: 0173-07-054
SH 34
From I-30
To 3.1 Miles N. of FM 2101

Hunt County

Attached are diagrams depicting 2018, 2038 and 2048 anticipated average daily traffic volumes and turning movements along SH 34 specified in your request. Also attached are tabulations showing traffic analysis for highway design for the 2018 to 2038 twenty year period and 2018 to 2048 thirty year period for the described limits of the route. Included are tabulations showing data for use in air and noise analysis.

Due to differences in traffic volumes this project was separated into two sections:

Section 1: From I-30 to FM 1564 (West Portion)

Section 2: From FM 1564 (West Portion) to 3.1 Miles N. of FM 2101

Please refer to your original memorandum dated June 25, 2018.

If you have any questions or need additional information, please contract Ruoyu Liu at

(512) 486-5145.

Attachments

CC: Creighton Byrd, General Engineering Technician, Paris District
Design Division

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District **August 16, 2018**

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2038	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2018 to 2038) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 1 From I-30 To FM 1564 (West Portion) Hunt County	12,500	17,300	51 - 49	9.7	11.3	7.5	11,800	50	6,135,000	3	8,627,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	88.7	92.5
Medium Duty	2.5	1.7
Heavy Duty	8.8	5.8

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2018 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 1 From I-30 To FM 1564 (West Portion) Hunt County	12,500	19,700	51 - 49	9.7	11.3	7.5	11,800	50	9,943,000	3	13,983,000	8"

NOT INTENDED FOR CONSTRUCTIO
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84776

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District **August 16, 2018**

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2038	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2018 to 2038) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 2 From FM 1564 (West Portion) To 3.1 Miles N of FM 2101 Hunt County	7,000	9,700	51 - 49	9.7	14.1	9.3	11,400	60	4,285,000	3	6,030,000	8"

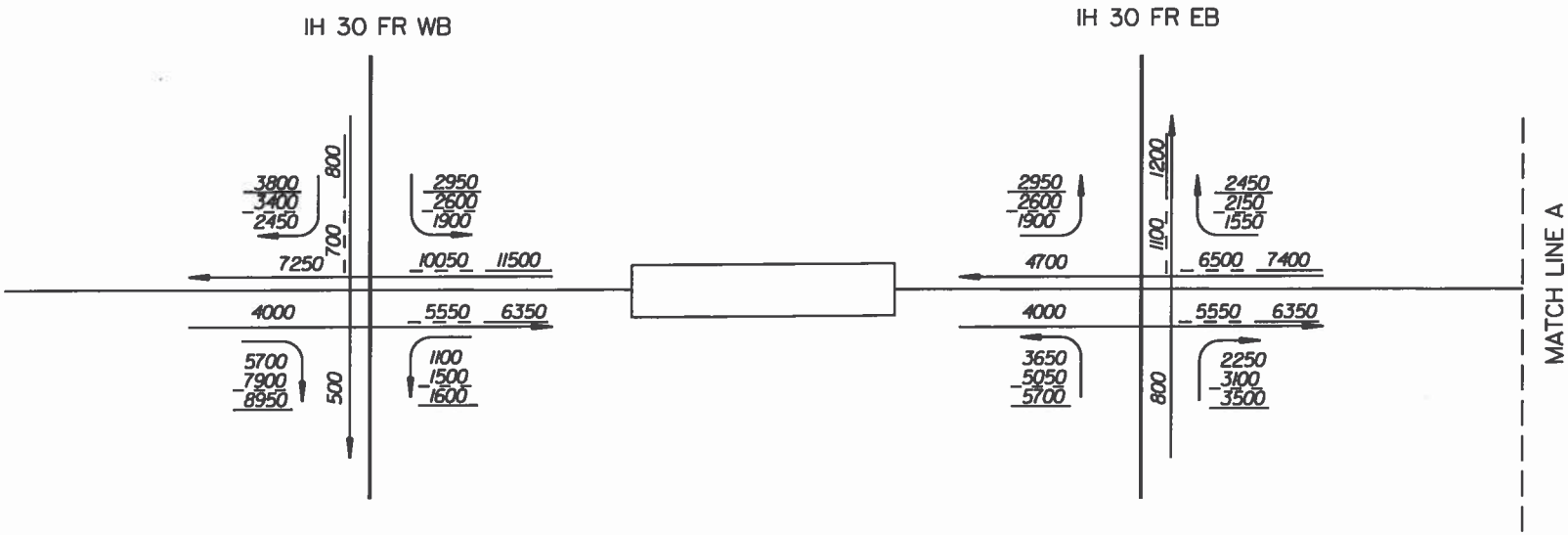
Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	85.9	90.7
Medium Duty	3.1	2.0
Heavy Duty	11.0	7.3

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2018 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 2 From FM 1564 (West Portion) To 3.1 Miles N of FM 2101 Hunt County	7,000	11,000	51 - 49	9.7	14.1	9.3	11,500	60	6,928,000	3	9,748,000	8"

NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
Eric Knowles, P.E
Number 84704

SH 34 LINE DIAGRAM



NOT INTENDED FOR CONSTRUCTIC
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E

LEGEND
1000 - 2018 ADT
1000 - 2038 ADT
1000 - 2048 ADT

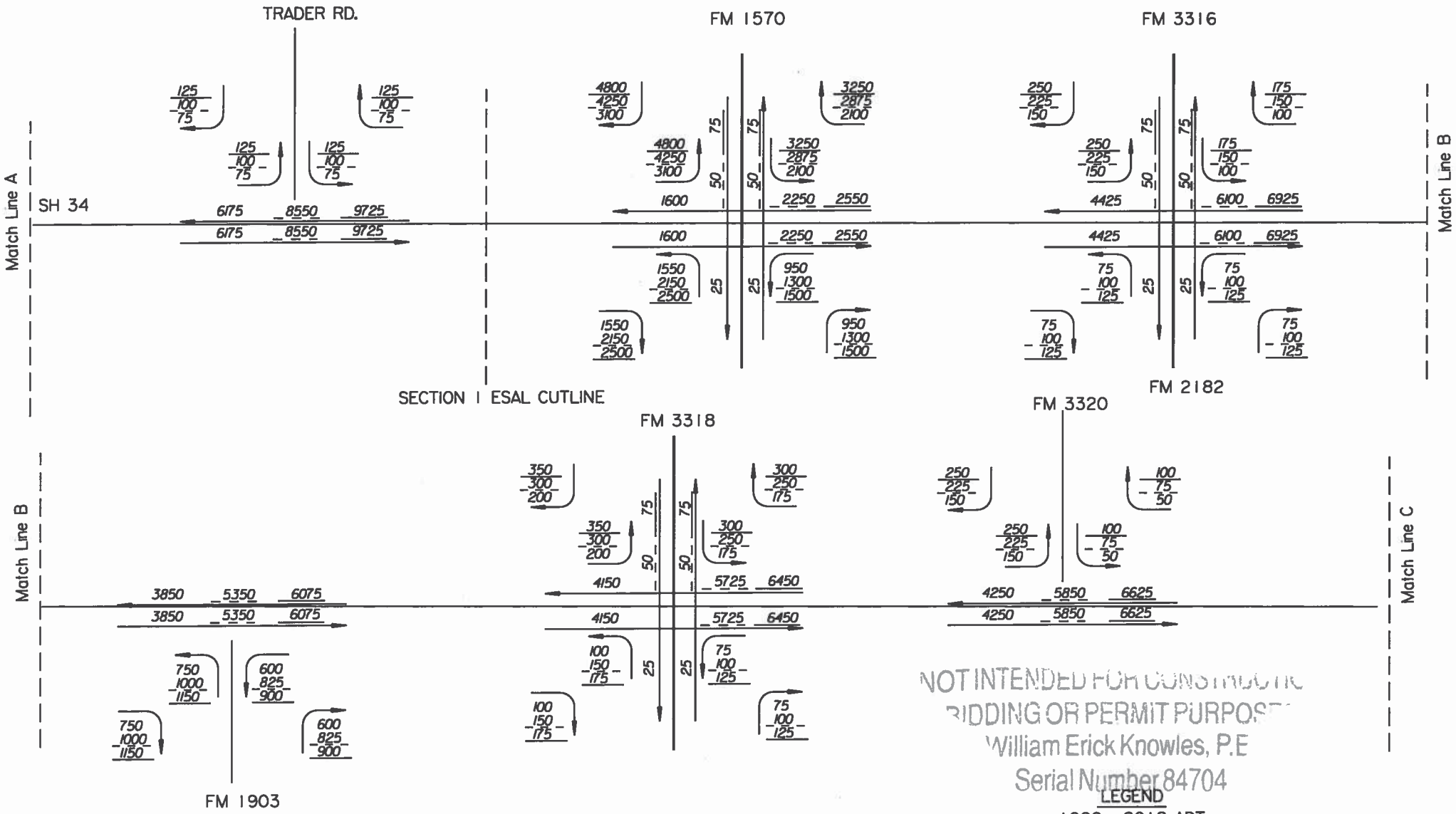
2018, 2038 AND 2048 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG SH 34: FROM IH 30 TO 3.1 MILES N. of FM 210.

HUNT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
JULY 30, 2018

SHEET 1 OF 3

SH 34 LINE DIAGRAM



NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

LEGEND

1000 - 2018 ADT
1000 - 2038 ADT
1000 - 2048 ADT

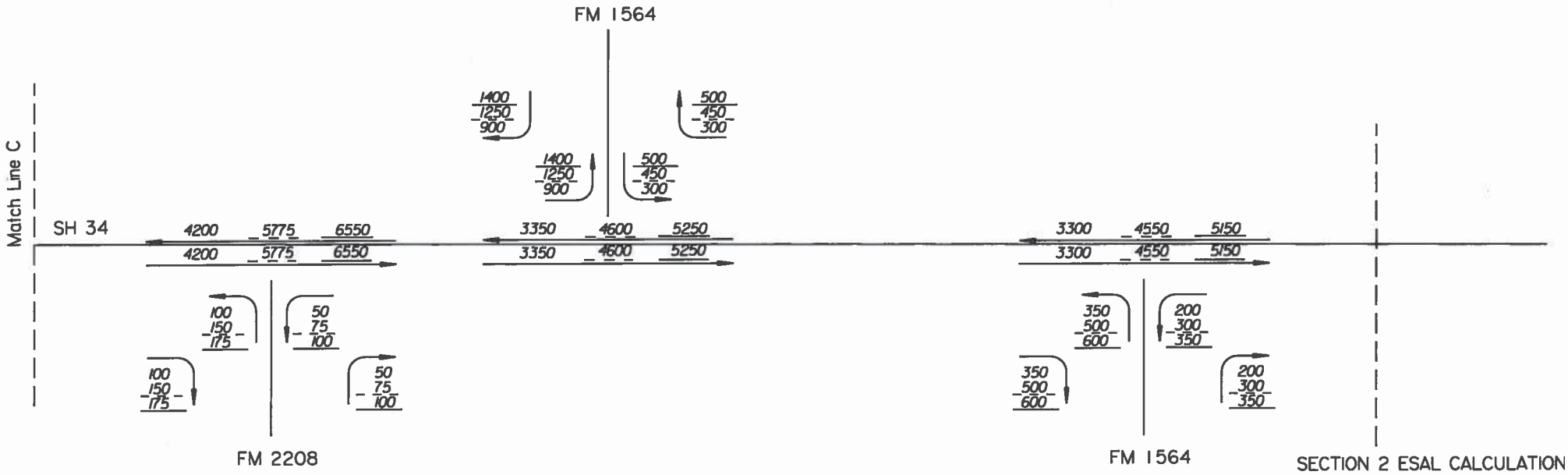
2018, 2038 AND 2048 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG SH 34: FROM IH 30 TO 3.1 MILES N. of FM 2101.

HUNT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
JULY 30, 2018

SHEET 2 OF 3

SH 34 LINE DIAGRAM



NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

LEGEND

1000 - 2018 ADT
1000 - 2038 ADT
1000 - 2048 ADT

2018, 2038 AND 2048 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG SH 34: FROM IH 30 TO 3.1 MILES N. of FM 210.

HUNT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
JULY 30, 2018

SHEET 3 OF 3

Texas Department of Transportation

RECEIVED
AUG 20 2018
TXDOT
PARIS DISTRICT

MEMO

August 17, 2018

To: Noel S Paramanantham, P.E. District Engineer
Attention: Daniel J Perry, P.E. Director of TPD

Through: William E. Knowles, P.E.
Traffic Analysis Section Director, TPP

From: Ruoyu Liu
Planner, TPP

Subject: Traffic Data
CSJ: 0173-06-042
SH 34
From 3.1 Miles N. of FM 2101
To CR 2312

Hunt County

Attached are diagrams depicting 2018, 2038 and 2048 anticipated average daily traffic volumes and turning movements along SH 34 specified in your request. Also attached are tabulations showing traffic analysis for highway design for the 2018 to 2038 twenty year period and 2018 to 2048 thirty year period for the described limits of the route. Included are tabulations showing data for use in air and noise analysis.

Due to differences in traffic volumes this project was separated into three sections:

Section 1: From 3.1 Miles N. of FM 2101 to Main ST. /SH 276

Section 2: From Main ST. /SH 276 to Quinlan Pkwy. /SH 276

Section 3: From Quinlan Pkwy. /SH 276 to CR 2312

Please refer to your original memorandum dated June 25, 2018.

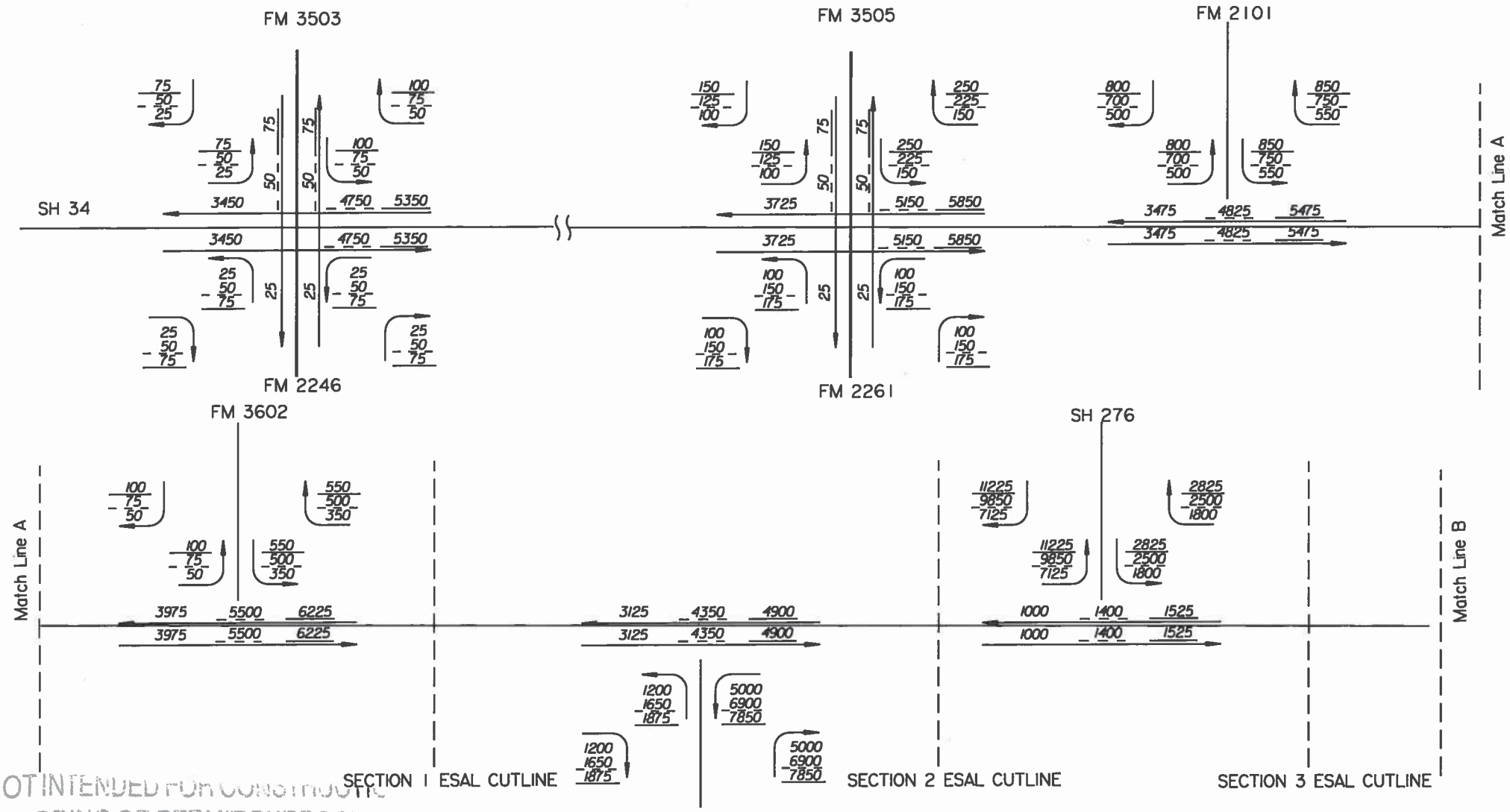
If you have any questions or need additional information, please contract Ruoyu Liu at

(512) 486-5145.

Attachments

CC: Creighton Byrd, General Engineering Technician, Paris District
Design Division

SH 34 LINE DIAGRAM



NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

LEGEND
1000 - 2018 ADT
1000 - 2038 ADT
1000 - 2048 ADT

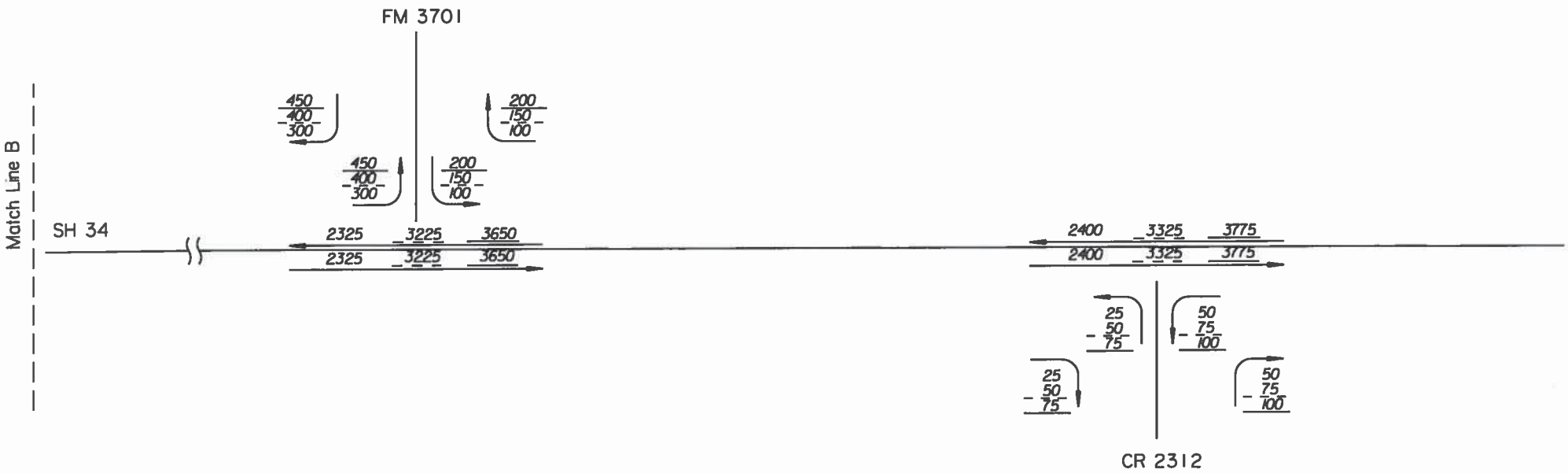
2018, 2038 AND 2048 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG SH 34: FROM 3.1 MILES N. OF FM 2101 TO CR 2312.

HUNT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
JULY 24, 2018

SHEET 1 OF 2

SH 34 LINE DIAGRAM



NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

LEGEND
1000 - 2018 ADT
1000 - 2038 ADT
1000 - 2048 ADT

2018, 2038 AND 2048 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG SH 34: FROM 3.1 MILES N. OF FM 2101 TO CR 2312.
HUNT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
JULY 24, 2018

SHEET 2 OF 2

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District **August 16, 2018**

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2038	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2018 to 2038) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 1 From 3.1 Miles N of FM 2101 To Main ST./ SH 276 Hunt County	8,650	12,000	51 - 49	9.7	12.9	8.5	11,500	50	4,850,000	3	6,822,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	87.1	91.5
Medium Duty	2.8	1.8
Heavy Duty	10.1	6.7

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2018 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 1 From 3.1 Miles N of FM 2101 To Main ST./ SH 276 Hunt County	8,650	13,550	51 - 49	9.7	12.9	8.5	11,600	50	7,820,000	3	11,001,000	8"

NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E.
Serial Number 84704

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District **August 16, 2018**

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2038	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2018 to 2038) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 2 From Main ST./ SH 276 To Quinlan Pkwy./SH 276 Hunt County	16,250	22,500	51 - 49	9.7	10.5	6.9	11,900	50	7,416,000	3	10,426,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	89.5	93.1
Medium Duty	2.3	1.5
Heavy Duty	8.2	5.4

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2018 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 2 From Main ST./ SH 276 To Quinlan Pkwy./SH 276 Hunt County	16,250	25,500	51 - 49	9.7	10.5	6.9	11,900	50	11,984,000	3	16,849,000	8"

NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District

August 16, 2018

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2038	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2018 to 2038) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 3 From Quinlan Pkwy./ SH 276 To CR 2312 Hunt County	5,600	7,800	51 - 49	9.7	15.7	10.4	11,300	60	3,827,000	3	5,386,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	84.3	89.6
Medium Duty	3.5	2.3
Heavy Duty	12.2	8.1

Description of Location	Average Daily Traffic 2018	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2018 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SH 34 Section 3 From Quinlan Pkwy./ SH 276 To CR 2312 Hunt County	5,600	8,700	51 - 49	9.7	15.7	10.4	11,400	60	6,126,000	3	8,621,000	8"

NOT INTENDED FOR CONSTRUCTIO
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

APPENDIX B3: TRAFFIC SIGNAL WARRANT ANALYIS

TRAFFIC SIGNAL WARRANT ANALYSIS

SH 34 at FM 1903

August 2019

Table of Contents

1. Introduction 1

1.1 Project Location 1

2. Intersection Analysis 3

2.1 Data Collection 4

2.2 Intersection Analysis 4

3. Signal Warrant Analysis 4

3.1 Crash Analysis 6

4. Conclusions and Recommendations 6

List of Figures

Figure 1 -1 Site Location Map 1

Figure 1 -2 SH 34 & FM 1903 Intersection Details 2

List of Tables

Table 2-1 Summary of Geometric and Traffic Conditions of SH 34 & FM 1903 Intersection 3

Table 2-2 Summary of LOS and Delay 4

Table 3-1 Summary of Signal Warrant Analysis 5

Appendices

Appendix A – Site Photographs

Appendix B – Traffic Counts

Appendix C – Synchro Level of Service and Delay Reports

Appendix D – Traffic Signal Warrant Analysis Worksheets

Appendix E – Crash Report

Appendix F – Texas MUTCD Signal Warrant Analysis Requirements

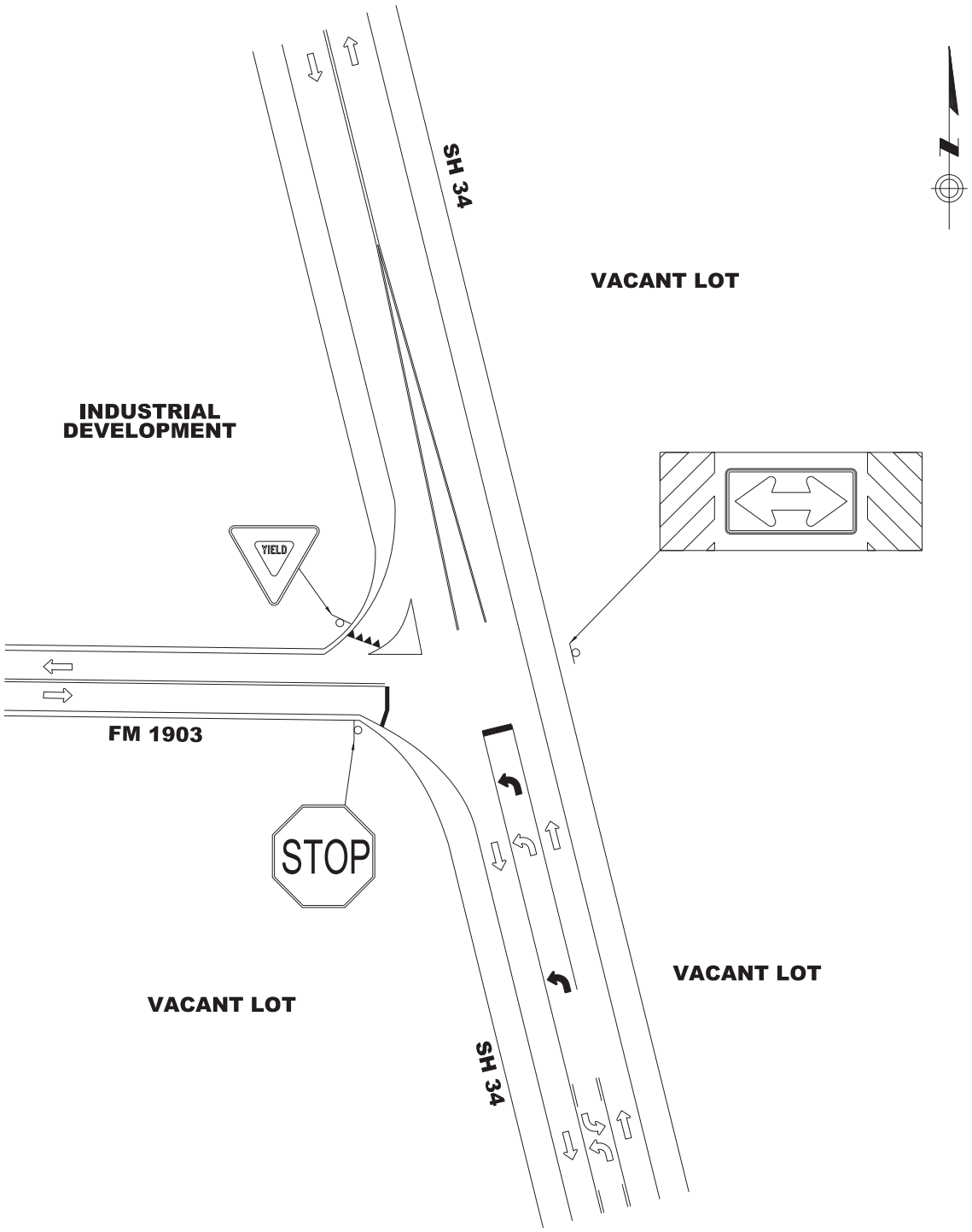
1. INTRODUCTION

Gunda Corporation conducted a traffic signal warrant analysis for the intersection of SH 34 at FM 1903 as part of the SH 34 feasibility study (Contract Number 36-6IDP5331/PS 5543) undertaken by the Texas Department of Transportation (TxDOT) Paris District. The traffic signal warrant analysis was conducted in accordance with the guidelines and procedures outlined in the Texas Manual on Uniform Traffic Control Devices (TxMUTCD 2011).

1.1 Project Location

SH 34 is a north-west undivided highway in the study area. FM 1903 is an east-west local road serving mostly residential developments connecting FM 36 in the west and SH 34 in the east. The intersection is located within the limits of City of Greenville. The project location is depicted in Figure 1-1 and geometric conditions of the study intersection is depicted in Figure 1-2. Site photographs are attached in Appendix A.

Figure 1-1 Site Location Map



LEGEND:

STREET SIGN

DIRECTION OF TRAFFIC

FIGURE 1-2

PROJECT NAME: **TRAFFIC SIGNAL WARRANT ANALYSIS** **SH 34 FEASIBILITY STUDY**	SHEET TITLE: **SH 34 & FM 1903 INTERSECTION DETAILS**	
	GCI PROJ. NO.: 18008-02	SHEET NO. 2
	DATE: OCT,2019	

2. INTERSECTION ANALYSIS

The intersection of SH 34 at FM 1903 is in the City of Greenville, Hunt County, Texas. Table 2-1 below summarize the intersection geometric and traffic conditions. Appendix A shows pictures of the intersection approaches.

Table 2-1 Summary of Geometric and Traffic Conditions of SH 34 & FM 1903 Intersection

Features	Description
Major Street	State Highway 34
Minor Street	FM 1903
Area Location	The intersection is in the City of Greenville, Hunt County, Texas
Surrounding Development	Development along FM 1903 is residential in nature
Land Uses at the Intersection	Northeast Corner: Vacant/Undeveloped; Northwest Corner: Industrial; Southwest Corner: Vacant/Undeveloped; Southeast Corner: Vacant/Undeveloped
Pedestrian Generators	No pedestrian traffic generators
Traffic Control	Stop controlled intersection with stop control on FM 1903 approach
Posted Speed Limits	SH 34: 60 MPH; FM 1903: 55 MPH
Lighting Conditions	Streetlights were not found at the intersection
Pavement Condition	Pavement is in fair Condition
Sidewalks	No sidewalks were found in either directions on SH 34 or on FM 1903
Adjacent Signalized Intersections	No signalized intersections in the vicinity of the intersection
SH 34	▪ Function: Two-way state highway primarily running north/south ▪ Connectivity: Connects FM 1903 and other collector roads to SH 34 ▪ Cross-Section: Two lane undivided highway ▪ Northbound Approach Lanes: One left turn bay, one through / right shared lane ▪ Southbound Approach Lanes: One left / through /right turn shared lane ▪ Utilities: Overhead powerlines were observed
FM 1903	▪ Function: Serves as a Collector road through residential developments ▪ Connectivity: Connects SH 34 in the east, IH 30 and FM 36 in the west ▪ Cross Section: Two lane undivided roadway ▪ Eastbound Approach Lanes: One left / right turn shared lane

	▪ Utilities: No utilities were found
Other Distinct Features	None

2.1 Data Collection

24-hour tube counts were conducted at the approaches of the study intersection on August 28, 2018. Also, Turning Movement Counts (TMC) were collected on August 28, 2018 from 6 am to 6 pm. The 24-hour counts and TMC reports are provided in Appendix B.

2.2 Intersection Analysis

Intersection delay was calculated using the Highway Capacity Manual (HCM) 2010 Methodology for weekday AM and PM peak hour periods. Table 2-2 below summarizes the intersection delay for the minor road approach of the study intersection. Intersection analysis worksheets are attached in Appendix C for reference.

Table 2-2 Summary of LOS and Delay

Intersection	AM PEAK		PM PEAK	
	LOS	Approach Delay	LOS	Approach Delay
SH 34 at FM 1903	D	27.5 (EB)	E	35.8 (EB)

* Delay is expressed in terms of sec/veh

The intersection level of service analyses shows that minor street approach at the study intersection is expected to operate at level of service D in AM Peak hour and LOS E in PM peak hour.

3. SIGNAL WARRANT ANALYSIS

A review of the signal warrant criteria and guidelines published in the Texas Manual on Uniform Traffic Control Devices (TXMUTCD) was performed to identify the signal warrant criteria that apply to the subject intersection. The existing traffic volume data was collected at the subject intersection, as well as the following factors were considered in order to determine which of the warrants 1 through 9 apply to the subject intersection. The specific requirements for each traffic signal warrant can be found under Appendix D. The major street at the study intersection is SH 34 and rural conditions govern based on the posted speed limit being 60 mph. FM 1903 is the minor street with speed limit of 55 mph. The criteria for signal warrant analysis from TXMUTCD are attached in Appendix F.

- The posted speed on the major street is 60 MPH, hence the 70% volume criteria was utilized in the analysis;
- The lane geometry on northbound approach is one through lane and a left turn bay and one through / right shared lane on the southbound approach;
- The minor street approach consists of one shared left / right turn lane;

- The minor street approach consists of one shared left / right turn lane;
- This intersection is not subject to an adjacent land use which attracts or discharges large number of vehicles over a short time;
- There are no schools present in the proximity of the study location;
- There is no pedestrian activity in the vicinity of the study intersection;
- The subject intersection is not anticipated to be a part of a coordinated signal system, if a signal is warranted; and
- There is no railroad crossing adjacent to this location.

Traffic signal warrant analysis was carried out for the existing conditions of year 2018 using the 24-hour counts collected form the field. Future volumes for the years of 2038 and 2048 were projected using a growth rate of 2% per year. Signal warrant analyses were conducted for future years of 2038 and 2048. A summary of the signal warrant analyses results is presented in detail in Table 3-1 below.

Table 3-1 Summary of Signal Warrant Analysis

Criteria	Are Warrant and Condition Criteria Met?	Is the Warrant Met?		
		2018	2038	2048
Warrant 1	Eight-Hour Vehicular Volume (70%)	Yes	Yes	Yes
Condition A		No	No	No
Condition B		Yes	Yes	Yes
Conditions A & B		No	Yes	Yes
Warrant 2	Four-Hour Vehicular Volume (70%)	Yes	Yes	Yes
MUTCD Graphs 4C-1 and 4C-2		Yes	Yes	Yes
Warrant 3	Peak Hour	Yes	Yes	Yes
Warrant 4	Pedestrian Volume	N/A	N/A	N/A
Warrant 5	School Crossing	N/A	N/A	N/A
Warrant 6	Coordinated Signal System	N/A	N/A	N/A
Warrant 7	Crash Experience	No	No	No
Warrant 8	Roadway Network	No	No	No
Warrant 9	Intersection Near a Grade Crossing	N/A	N/A	N/A

N/A: Not Applicable

Traffic Signal Warrant Worksheets provided in Appendix C detail how the conditions for the intersection of SH 34 and FM 1903 warrant a traffic signal based on the TXMUTCD requirements. The worksheets include a tabulation of the eight highest hours and results for the analysis of Warrants 1 through 9.

The graphical representations of Warrant 2 and Warrant 3 for the intersection of SH 34 and FM 1903 is shown in Appendix C, FIGURE 1 and FIGURE 2.

3.1 Crash Analysis

Crash data for the study intersection was obtained from Crash Records Information System (CRIS) for Year 2014 to 2018 to evaluate the crash frequency. There is one crash reported within the last 12 months at the study intersection which meet the requirement of Criterion B of Section 4C.08 Warrant7 – Crash Experience specified in the TXMUTCD. Crash report is presented in Appendix E, Table E1.

4. CONCLUSIONS AND RECOMMENDATIONS

Based on the review of the signal warrant criteria and guidelines published in the TXMUTCD 2011 Edition, the intersection of SH 34 and FM 1903 meet the requirements of Warrants 1, 2, and 3. A traffic signal is warranted at the study intersection.

APPENDIX A

SITE PHOTOGRAPHS

Northbound Approach – SH 34, looking South

Southbound Approach – SH 34, looking North

Eastbound Approach – FM 1903, looking West

Westbound Approach – FM 1903, looking East

APPENDIX B

TRAFFIC COUNTS

NB SH 34 South of FM 1903

Thursday, August 30, 2018

Mechanical Vehicle Classificiaton

	Northbound													
Time	**Total**	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
0:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0:15	7	0	4	2	1	0	0	0	0	0	0	0	0	0
0:30	5	0	4	1	0	0	0	0	0	0	0	0	0	0
0:45	5	0	4	0	0	0	0	0	1	0	0	0	0	0
Hr Total	**20**	**0**	**15**	**3**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
1:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
1:15	3	0	3	0	0	0	0	0	0	0	0	0	0	0
1:30	5	0	5	0	0	0	0	0	0	0	0	0	0	0
1:45	8	2	4	2	0	0	0	0	0	0	0	0	0	0
Hr Total	**18**	**2**	**14**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2:00	7	0	5	1	0	0	0	0	0	1	0	0	0	0
2:15	5	0	3	2	0	0	0	0	0	0	0	0	0	0
2:30	10	1	5	2	0	0	0	0	1	1	0	0	0	0
2:45	5	1	2	1	0	0	1	0	0	0	0	0	0	0
Hr Total	**27**	**2**	**15**	**6**	**0**	**0**	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**
3:00	13	0	8	3	0	0	1	0	1	0	0	0	0	0
3:15	19	0	13	4	0	2	0	0	0	0	0	0	0	0
3:30	24	0	14	9	0	0	0	0	0	1	0	0	0	0
3:45	30	0	20	9	0	1	0	0	0	0	0	0	0	0
Hr Total	**86**	**0**	**55**	**25**	**0**	**3**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
4:00	34	1	18	13	0	1	0	0	0	1	0	0	0	0
4:15	53	1	36	12	0	3	1	0	0	0	0	0	0	0
4:30	55	0	30	23	0	1	0	0	1	0	0	0	0	0
4:45	66	0	40	21	0	2	1	0	0	2	0	0	0	0
Hr Total	**208**	**2**	**124**	**69**	**0**	**7**	**2**	**0**	**1**	**3**	**0**	**0**	**0**	**0**
5:00	90	0	55	27	0	6	0	0	2	0	0	0	0	0
5:15	88	0	56	26	0	5	0	0	0	1	0	0	0	0
5:30	120	0	73	39	0	3	3	0	0	2	0	0	0	0
5:45	138	0	97	32	0	5	0	0	2	2	0	0	0	0
Hr Total	**436**	**0**	**281**	**124**	**0**	**19**	**3**	**0**	**4**	**5**	**0**	**0**	**0**	**0**
6:00	182	0	126	52	1	0	0	0	1	2	0	0	0	0
6:15	194	1	126	63	0	2	1	0	0	1	0	0	0	0
6:30	189	1	136	49	0	1	0	0	1	1	0	0	0	0
6:45	155	0	110	41	0	1	1	0	1	1	0	0	0	0
Hr Total	**720**	**2**	**498**	**205**	**1**	**4**	**2**	**0**	**3**	**5**	**0**	**0**	**0**	**0**
7:00	164	0	123	32	0	4	1	1	1	2	0	0	0	0
7:15	110	1	65	33	1	3	1	0	1	5	0	0	0	0
7:30	118	0	86	24	0	2	0	0	2	4	0	0	0	0
7:45	119	0	83	29	0	1	2	0	0	3	0	1	0	0
Hr Total	**511**	**1**	**357**	**118**	**1**	**10**	**4**	**1**	**4**	**14**	**0**	**1**	**0**	**0**
8:00	97	1	59	28	0	3	1	0	1	4	0	0	0	0
8:15	104	1	74	24	1	1	1	1	0	1	0	0	0	0
8:30	100	1	70	26	0	2	0	0	1	0	0	0	0	0
8:45	116	1	79	29	0	2	1	0	1	3	0	0	0	0
Hr Total	**417**	**4**	**282**	**107**	**1**	**8**	**3**	**1**	**3**	**8**	**0**	**0**	**0**	**0**
9:00	98	1	69	21	0	1	1	0	0	4	0	1	0	0
9:15	96	0	66	25	0	2	0	0	1	2	0	0	0	0
9:30	103	0	74	26	0	2	1	0	0	0	0	0	0	0
9:45	114	1	79	28	1	1	0	0	1	3	0	0	0	0
Hr Total	**411**	**2**	**288**	**100**	**1**	**6**	**2**	**0**	**2**	**9**	**0**	**1**	**0**	**0**
10:00	104	1	70	29	1	2	0	0	0	1	0	0	0	0
10:15	78	0	53	20	0	2	0	0	1	2	0	0	0	0
10:30	104	0	65	33	0	4	0	0	1	1	0	0	0	0
10:45	95	1	62	26	0	3	0	0	1	2	0	0	0	0
Hr Total	**381**	**2**	**250**	**108**	**1**	**11**	**0**	**0**	**3**	**6**	**0**	**0**	**0**	**0**
11:00	104	0	70	27	1	2	1	0	0	3	0	0	0	0
11:15	100	1	61	28	1	5	0	1	1	2	0	0	0	0
11:30	118	1	83	27	0	3	0	0	1	3	0	0	0	0
11:45	85	0	57	20	0	3	0	0	1	4	0	0	0	0
Hr Total	**407**	**2**	**271**	**102**	**2**	**13**	**1**	**1**	**3**	**12**	**0**	**0**	**0**	**0**

NB SH 34 South of FM 1903

Thursday, August 30, 2018

Mechanical Vehicle Classificiaton

	Northbound													
Time	**Total**	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
12:00	93	0	69	20	0	2	1	0	0	1	0	0	0	0
12:15	101	0	69	25	0	3	0	0	1	3	0	0	0	0
12:30	102	0	73	24	0	3	0	0	0	2	0	0	0	0
12:45	88	0	62	20	0	2	0	0	1	3	0	0	0	0
Hr Total	**384**	**0**	**273**	**89**	**0**	**10**	**1**	**0**	**2**	**9**	**0**	**0**	**0**	**0**
13:00	96	0	68	23	0	2	0	0	0	3	0	0	0	0
13:15	72	0	51	16	0	1	1	0	1	2	0	0	0	0
13:30	89	1	59	27	0	2	0	0	0	0	0	0	0	0
13:45	116	1	79	32	0	3	0	0	0	1	0	0	0	0
Hr Total	**373**	**2**	**257**	**98**	**0**	**8**	**1**	**0**	**1**	**6**	**0**	**0**	**0**	**0**
14:00	96	1	61	26	1	1	0	0	2	4	0	0	0	0
14:15	109	0	72	29	0	3	1	0	1	3	0	0	0	0
14:30	104	1	66	30	0	2	0	0	0	5	0	0	0	0
14:45	110	1	74	32	0	1	0	0	1	1	0	0	0	0
Hr Total	**419**	**3**	**273**	**117**	**1**	**7**	**1**	**0**	**4**	**13**	**0**	**0**	**0**	**0**
15:00	120	0	85	28	1	3	1	0	0	2	0	0	0	0
15:15	112	1	77	29	1	2	0	0	1	1	0	0	0	0
15:30	111	1	72	31	0	3	0	0	1	3	0	0	0	0
15:45	105	0	76	27	0	2	0	0	0	0	0	0	0	0
Hr Total	**448**	**2**	**310**	**115**	**2**	**10**	**1**	**0**	**2**	**6**	**0**	**0**	**0**	**0**
16:00	123	0	85	32	0	2	0	0	1	3	0	0	0	0
16:15	129	0	83	38	1	1	1	0	0	5	0	0	0	0
16:30	133	2	91	32	0	5	0	0	1	2	0	0	0	0
16:45	102	1	74	23	1	1	0	0	0	2	0	0	0	0
Hr Total	**487**	**3**	**333**	**125**	**2**	**9**	**1**	**0**	**2**	**12**	**0**	**0**	**0**	**0**
17:00	118	0	83	30	0	2	0	0	1	2	0	0	0	0
17:15	98	0	66	26	0	3	1	0	0	2	0	0	0	0
17:30	67	1	44	19	0	2	0	0	0	1	0	0	0	0
17:45	85	0	61	18	0	2	0	0	1	3	0	0	0	0
Hr Total	**368**	**1**	**254**	**93**	**0**	**9**	**1**	**0**	**2**	**8**	**0**	**0**	**0**	**0**
18:00	83	1	52	25	1	2	1	0	0	1	0	0	0	0
18:15	51	0	31	15	0	0	0	0	1	4	0	0	0	0
18:30	51	1	37	9	0	2	1	0	1	0	0	0	0	0
18:45	64	0	43	15	1	3	0	0	1	1	0	0	0	0
Hr Total	**249**	**2**	**163**	**64**	**2**	**7**	**2**	**0**	**3**	**6**	**0**	**0**	**0**	**0**
19:00	70	0	47	16	0	4	1	0	1	1	0	0	0	0
19:15	63	0	40	15	1	4	2	0	0	1	0	0	0	0
19:30	60	0	40	17	0	2	0	0	0	1	0	0	0	0
19:45	42	0	29	11	1	1	0	0	0	0	0	0	0	0
Hr Total	**235**	**0**	**156**	**59**	**2**	**11**	**3**	**0**	**1**	**3**	**0**	**0**	**0**	**0**
20:00	31	0	21	8	0	0	1	0	0	1	0	0	0	0
20:15	28	0	21	5	0	2	0	0	0	0	0	0	0	0
20:30	23	0	12	8	0	0	1	0	1	1	0	0	0	0
20:45	31	0	17	10	0	3	0	0	0	1	0	0	0	0
Hr Total	**113**	**0**	**71**	**31**	**0**	**5**	**2**	**0**	**1**	**3**	**0**	**0**	**0**	**0**
21:00	16	1	14	1	0	0	0	0	0	0	0	0	0	0
21:15	14	0	10	4	0	0	0	0	0	0	0	0	0	0
21:30	16	0	11	5	0	0	0	0	0	0	0	0	0	0
21:45	11	0	7	3	0	1	0	0	0	0	0	0	0	0
Hr Total	**57**	**1**	**42**	**13**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
22:00	13	0	10	3	0	0	0	0	0	0	0	0	0	0
22:15	13	0	9	3	0	1	0	0	0	0	0	0	0	0
22:30	7	0	7	0	0	0	0	0	0	0	0	0	0	0
22:45	13	0	11	1	0	1	0	0	0	0	0	0	0	0
Hr Total	**46**	**0**	**37**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
23:00	7	0	4	3	0	0	0	0	0	0	0	0	0	0
23:15	10	0	9	1	0	0	0	0	0	0	0	0	0	0
23:30	6	0	4	0	0	1	0	0	0	1	0	0	0	0
23:45	5	0	4	0	1	0	0	0	0	0	0	0	0	0
Hr Total	**28**	**0**	**21**	**4**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
Gr. Total	6849	33	4640	1784	18	161	32	3	44	132	0	2	0	0
% of Total	100.0%	0.5%	67.7%	26.0%	0.3%	2.4%	0.5%	0.0%	0.6%	1.9%	0.0%	0.0%	0.0%	0.0%
	Total	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
	Northbound													

SB SH 34 North of FM 1903

Tuesday, August 28, 2018

Mechanical Vehicle Classificiaton

	SOUTHBOUND													
Time	Total	Bikes	Cars & Trailers	2 Axle, Long	Buses	2 Axle, 6 Tire	3 Axle, Single	4 Axle, Single	<5 Axle, Double	5 Axle, Double	>6 Axle, Double	<6 Axle, Multi	6 Axle, Multi	>6 Axle, Multi
0:00	14	0	10	3	0	0	0	0	0	1	0	0	0	0
0:15	7	0	2	4	0	0	0	0	1	0	0	0	0	0
0:30	5	0	2	2	0	0	1	0	0	0	0	0	0	0
0:45	5	0	3	1	0	0	0	0	0	1	0	0	0	0
Hr Total	**31**	**0**	**17**	**10**	**0**	**0**	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**
1:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0
1:15	2	0	1	0	1	0	0	0	0	0	0	0	0	0
1:30	6	0	6	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**13**	**0**	**11**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
2:15	7	1	2	2	0	0	2	0	0	0	0	0	0	0
2:30	2	0	1	1	0	0	0	0	0	0	0	0	0	0
2:45	4	0	3	1	0	0	0	0	0	0	0	0	0	0
Hr Total	**14**	**1**	**7**	**4**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3:00	8	0	2	5	0	1	0	0	0	0	0	0	0	0
3:15	2	0	2	0	0	0	0	0	0	0	0	0	0	0
3:30	5	0	3	2	0	0	0	0	0	0	0	0	0	0
3:45	3	0	2	1	0	0	0	0	0	0	0	0	0	0
Hr Total	**18**	**0**	**9**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:00	6	0	4	1	0	0	0	0	0	1	0	0	0	0
4:15	6	0	4	1	0	0	1	0	0	0	0	0	0	0
4:30	7	0	5	2	0	0	0	0	0	0	0	0	0	0
4:45	13	1	7	2	0	0	2	0	0	1	0	0	0	0
Hr Total	**32**	**1**	**20**	**6**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
5:00	18	0	11	4	0	1	0	0	1	1	0	0	0	0
5:15	15	0	10	4	0	0	0	0	1	0	0	0	0	0
5:30	21	0	13	5	0	2	0	0	0	1	0	0	0	0
5:45	27	0	16	9	0	1	0	0	1	0	0	0	0	0
Hr Total	**81**	**0**	**50**	**22**	**0**	**4**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**0**
6:00	36	0	19	11	0	3	1	0	0	2	0	0	0	0
6:15	45	0	35	10	0	0	0	0	0	0	0	0	0	0
6:30	51	0	33	16	0	1	0	0	0	1	0	0	0	0
6:45	63	0	48	11	0	1	0	0	1	2	0	0	0	0
Hr Total	**195**	**0**	**135**	**48**	**0**	**5**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**0**
7:00	80	0	58	20	0	1	0	0	0	1	0	0	0	0
7:15	87	1	64	16	1	1	0	0	1	2	0	1	0	0
7:30	91	0	69	18	0	2	0	0	0	2	0	0	0	0
7:45	78	0	53	22	0	1	0	0	1	1	0	0	0	0
Hr Total	**336**	**1**	**244**	**76**	**1**	**5**	**0**	**0**	**2**	**6**	**0**	**1**	**0**	**0**
8:00	60	0	33	21	0	2	0	0	3	1	0	0	0	0
8:15	61	0	38	22	0	1	0	0	0	0	0	0	0	0
8:30	49	1	35	12	1	0	0	0	0	0	0	0	0	0
8:45	57	0	33	18	1	1	1	0	2	0	1	0	0	0
Hr Total	**227**	**1**	**139**	**73**	**2**	**4**	**1**	**0**	**5**	**1**	**1**	**0**	**0**	**0**
9:00	58	0	38	12	1	0	1	0	1	5	0	0	0	0
9:15	67	0	48	13	0	2	0	0	1	3	0	0	0	0
9:30	73	1	46	15	1	4	1	0	1	4	0	0	0	0
9:45	60	0	33	20	0	3	2	0	0	2	0	0	0	0
Hr Total	**258**	**1**	**165**	**60**	**2**	**9**	**4**	**0**	**3**	**14**	**0**	**0**	**0**	**0**
10:00	72	0	48	19	0	4	1	0	0	0	0	0	0	0
10:15	85	2	54	20	0	4	2	0	0	3	0	0	0	0
10:30	75	0	48	21	0	4	1	0	1	0	0	0	0	0
10:45	62	0	42	16	0	2	1	0	0	1	0	0	0	0
Hr Total	**294**	**2**	**192**	**76**	**0**	**14**	**5**	**0**	**1**	**4**	**0**	**0**	**0**	**0**
11:00	90	0	63	18	0	2	1	0	1	5	0	0	0	0
11:15	83	0	57	22	0	1	1	0	0	2	0	0	0	0
11:30	85	1	61	15	0	1	2	0	1	4	0	0	0	0
11:45	75	1	52	16	1	2	0	0	2	1	0	0	0	0
Hr Total	**333**	**2**	**233**	**71**	**1**	**6**	**4**	**0**	**4**	**12**	**0**	**0**	**0**	**0**

SB SH 34 North of FM 1903

Tuesday, August 28, 2018

Mechanical Vehicle Classificiaton

	SOUTHBOUND													
Time	**Total**	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
12:00	117	1	86	24	1	2	0	0	0	3	0	0	0	0
12:15	84	0	62	18	0	2	1	0	1	0	0	0	0	0
12:30	91	0	59	27	1	1	1	0	1	1	0	0	0	0
12:45	104	0	68	29	0	4	1	0	0	2	0	0	0	0
Hr Total	**396**	**1**	**275**	**98**	**2**	**9**	**3**	**0**	**2**	**6**	**0**	**0**	**0**	**0**
13:00	91	0	66	20	1	1	0	0	0	3	0	0	0	0
13:15	100	1	67	29	0	0	0	0	1	2	0	0	0	0
13:30	106	2	76	24	0	1	1	0	0	2	0	0	0	0
13:45	93	1	65	18	0	4	0	0	3	2	0	0	0	0
Hr Total	**390**	**4**	**274**	**91**	**1**	**6**	**1**	**0**	**4**	**9**	**0**	**0**	**0**	**0**
14:00	78	1	53	16	1	4	0	0	0	3	0	0	0	0
14:15	107	0	71	29	0	3	2	0	0	2	0	0	0	0
14:30	136	1	92	36	0	1	1	0	1	4	0	0	0	0
14:45	112	0	79	28	0	2	0	0	1	1	0	0	1	0
Hr Total	**433**	**2**	**295**	**109**	**1**	**10**	**3**	**0**	**2**	**10**	**0**	**0**	**1**	**0**
15:00	107	3	73	25	0	4	0	0	2	0	0	0	0	0
15:15	101	1	68	25	0	2	0	0	3	2	0	0	0	0
15:30	117	1	88	25	1	1	0	0	0	1	0	0	0	0
15:45	103	3	67	29	0	1	1	0	1	1	0	0	0	0
Hr Total	**428**	**8**	**296**	**104**	**1**	**8**	**1**	**0**	**6**	**4**	**0**	**0**	**0**	**0**
16:00	166	1	104	52	0	1	1	0	1	6	0	0	0	0
16:15	154	1	112	33	1	3	1	0	1	2	0	0	0	0
16:30	157	0	116	35	0	2	0	0	1	3	0	0	0	0
16:45	152	1	104	41	0	1	0	0	1	3	1	0	0	0
Hr Total	**629**	**3**	**436**	**161**	**1**	**7**	**2**	**0**	**4**	**14**	**1**	**0**	**0**	**0**
17:00	196	2	122	65	0	2	2	0	1	1	0	1	0	0
17:15	201	1	151	46	0	1	0	0	1	1	0	0	0	0
17:30	154	1	109	38	0	1	0	0	0	5	0	0	0	0
17:45	126	4	85	30	0	0	0	0	3	1	2	0	0	1
Hr Total	**677**	**8**	**467**	**179**	**0**	**4**	**2**	**0**	**5**	**8**	**2**	**1**	**0**	**1**
18:00	113	1	75	31	0	3	1	0	2	0	0	0	0	0
18:15	101	0	79	19	0	1	0	0	0	2	0	0	0	0
18:30	116	0	76	35	0	1	0	0	1	3	0	0	0	0
18:45	74	0	54	19	0	1	0	0	0	0	0	0	0	0
Hr Total	**404**	**1**	**284**	**104**	**0**	**6**	**1**	**0**	**3**	**5**	**0**	**0**	**0**	**0**
19:00	85	0	58	22	0	1	3	0	1	0	0	0	0	0
19:15	69	0	48	18	0	2	1	0	0	0	0	0	0	0
19:30	69	1	51	13	0	1	0	0	0	3	0	0	0	0
19:45	67	1	40	21	0	0	1	0	2	2	0	0	0	0
Hr Total	**290**	**2**	**197**	**74**	**0**	**4**	**5**	**0**	**3**	**5**	**0**	**0**	**0**	**0**
20:00	74	0	48	22	0	2	0	0	2	0	0	0	0	0
20:15	61	1	41	19	0	0	0	0	0	0	0	0	0	0
20:30	54	3	38	7	0	0	2	0	1	3	0	0	0	0
20:45	55	0	35	17	0	3	0	0	0	0	0	0	0	0
Hr Total	**244**	**4**	**162**	**65**	**0**	**5**	**2**	**0**	**3**	**3**	**0**	**0**	**0**	**0**
21:00	44	0	30	12	0	0	0	0	0	2	0	0	0	0
21:15	36	1	19	14	0	1	0	0	0	1	0	0	0	0
21:30	33	0	26	7	0	0	0	0	0	0	0	0	0	0
21:45	24	0	19	3	0	0	0	0	0	2	0	0	0	0
Hr Total	**137**	**1**	**94**	**36**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**
22:00	19	0	16	2	0	0	0	0	0	1	0	0	0	0
22:15	23	0	18	5	0	0	0	0	0	0	0	0	0	0
22:30	16	0	12	3	0	1	0	0	0	0	0	0	0	0
22:45	21	0	15	6	0	0	0	0	0	0	0	0	0	0
Hr Total	**79**	**0**	**61**	**16**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
23:00	19	0	12	6	0	1	0	0	0	0	0	0	0	0
23:15	14	1	12	0	0	0	0	0	0	1	0	0	0	0
23:30	10	0	9	1	0	0	0	0	0	0	0	0	0	0
23:45	8	0	6	2	0	0	0	0	0	0	0	0	0	0
Hr Total	**51**	**1**	**39**	**9**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
Gr. Total	5990	44	4102	1501	13	110	41	0	52	119	4	2	1	1
% of Total	100.0%	0.7%	68.5%	25.1%	0.2%	1.8%	0.7%	0.0%	0.9%	2.0%	0.1%	0.0%	0.0%	0.0%
	Total	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
	SOUTHBOUND													

EB FM 1903 West of SH 34

Tuesday, August 28, 2018

Mechanical Vehicle Classificiaton

	EASTBOUND													
Time	Total	Bikes	Cars & Trailers	2 Axle, Long	Buses	2 Axle, 6 Tire	3 Axle, Single	4 Axle, Single	<5 Axle, Double	5 Axle, Double	>6 Axle, Double	<6 Axle, Multi	6 Axle, Multi	>6 Axle, Multi
0:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0:15	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0:30	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**7**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1:00	3	0	1	2	0	0	0	0	0	0	0	0	0	0
1:15	1	0	1	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**5**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	2	0	0	0	0	1	1	0	0	0	0	0	0	0
2:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**3**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	3	0	2	0	0	0	0	0	1	0	0	0	0	0
Hr Total	**4**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
5:00	3	0	0	2	0	0	0	0	1	0	0	0	0	0
5:15	2	0	1	1	0	0	0	0	0	0	0	0	0	0
5:30	4	0	2	2	0	0	0	0	0	0	0	0	0	0
5:45	14	0	8	6	0	0	0	0	0	0	0	0	0	0
Hr Total	**23**	**0**	**11**	**11**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
6:00	5	0	2	3	0	0	0	0	0	0	0	0	0	0
6:15	8	1	4	2	0	0	1	0	0	0	0	0	0	0
6:30	11	1	8	2	0	0	0	0	0	0	0	0	0	0
6:45	17	0	11	6	0	0	0	0	0	0	0	0	0	0
Hr Total	**41**	**2**	**25**	**13**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:00	21	1	11	9	0	0	0	0	0	0	0	0	0	0
7:15	18	0	12	6	0	0	0	0	0	0	0	0	0	0
7:30	21	0	14	6	0	0	0	0	0	1	0	0	0	0
7:45	22	0	12	10	0	0	0	0	0	0	0	0	0	0
Hr Total	**82**	**1**	**49**	**31**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
8:00	21	0	14	6	0	0	0	0	0	1	0	0	0	0
8:15	11	0	9	1	0	1	0	0	0	0	0	0	0	0
8:30	12	0	11	1	0	0	0	0	0	0	0	0	0	0
8:45	17	0	10	4	0	1	0	0	2	0	0	0	0	0
Hr Total	**61**	**0**	**44**	**12**	**0**	**2**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**
9:00	11	0	6	2	0	1	1	0	1	0	0	0	0	0
9:15	22	0	12	9	0	0	0	0	0	1	0	0	0	0
9:30	16	2	10	3	1	0	0	0	0	0	0	0	0	0
9:45	9	0	7	2	0	0	0	0	0	0	0	0	0	0
Hr Total	**58**	**2**	**35**	**16**	**1**	**1**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
10:00	10	0	6	3	0	1	0	0	0	0	0	0	0	0
10:15	15	0	8	3	0	0	0	0	4	0	0	0	0	0
10:30	12	0	7	2	0	1	0	0	1	1	0	0	0	0
10:45	10	0	8	1	0	0	1	0	0	0	0	0	0	0
Hr Total	**47**	**0**	**29**	**9**	**0**	**2**	**1**	**0**	**5**	**1**	**0**	**0**	**0**	**0**
11:00	3	0	1	2	0	0	0	0	0	0	0	0	0	0
11:15	11	0	8	3	0	0	0	0	0	0	0	0	0	0
11:30	15	0	11	2	0	1	0	0	1	0	0	0	0	0
11:45	13	1	9	2	0	1	0	0	0	0	0	0	0	0
Hr Total	**42**	**1**	**29**	**9**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**

EB FM 1903 West of SH 34

Tuesday, August 28, 2018

Mechanical Vehicle Classificiaton

	EASTBOUND													
Time	**Total**	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
12:00	17	0	12	3	0	1	0	0	0	1	0	0	0	0
12:15	17	0	12	3	0	0	0	0	1	1	0	0	0	0
12:30	16	0	11	4	0	0	0	0	0	1	0	0	0	0
12:45	20	0	11	6	0	1	0	0	0	2	0	0	0	0
Hr Total	**70**	**0**	**46**	**16**	**0**	**2**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**0**
13:00	9	1	5	2	0	0	1	0	0	0	0	0	0	0
13:15	17	0	13	4	0	0	0	0	0	0	0	0	0	0
13:30	16	0	11	5	0	0	0	0	0	0	0	0	0	0
13:45	18	0	12	4	0	1	0	0	0	1	0	0	0	0
Hr Total	**60**	**1**	**41**	**15**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
14:00	11	0	6	4	0	1	0	0	0	0	0	0	0	0
14:15	20	0	14	5	0	1	0	0	0	0	0	0	0	0
14:30	17	0	10	2	0	2	0	0	3	0	0	0	0	0
14:45	15	0	11	4	0	0	0	0	0	0	0	0	0	0
Hr Total	**63**	**0**	**41**	**15**	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**
15:00	17	0	12	5	0	0	0	0	0	0	0	0	0	0
15:15	21	0	13	8	0	0	0	0	0	0	0	0	0	0
15:30	26	0	19	7	0	0	0	0	0	0	0	0	0	0
15:45	28	0	21	5	0	0	0	0	0	2	0	0	0	0
Hr Total	**92**	**0**	**65**	**25**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
16:00	33	1	23	6	0	1	0	0	0	2	0	0	0	0
16:15	31	0	23	8	0	0	0	0	0	0	0	0	0	0
16:30	36	1	23	10	0	1	0	0	1	0	0	0	0	0
16:45	28	0	21	6	0	1	0	0	0	0	0	0	0	0
Hr Total	**128**	**2**	**90**	**30**	**0**	**3**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**
17:00	17	0	13	4	0	0	0	0	0	0	0	0	0	0
17:15	43	0	29	13	0	0	0	0	0	1	0	0	0	0
17:30	41	0	26	15	0	0	0	0	0	0	0	0	0	0
17:45	43	0	32	9	0	1	0	0	0	1	0	0	0	0
Hr Total	**144**	**0**	**100**	**41**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
18:00	24	0	12	11	0	1	0	0	0	0	0	0	0	0
18:15	27	0	20	6	0	1	0	0	0	0	0	0	0	0
18:30	20	0	12	8	0	0	0	0	0	0	0	0	0	0
18:45	26	0	12	12	0	0	0	0	2	0	0	0	0	0
Hr Total	**97**	**0**	**56**	**37**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
19:00	17	0	8	4	0	2	0	0	1	2	0	0	0	0
19:15	17	0	14	3	0	0	0	0	0	0	0	0	0	0
19:30	12	0	10	2	0	0	0	0	0	0	0	0	0	0
19:45	9	0	9	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**55**	**0**	**41**	**9**	**0**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**
20:00	19	0	14	5	0	0	0	0	0	0	0	0	0	0
20:15	9	0	8	0	0	0	0	0	0	1	0	0	0	0
20:30	8	0	7	1	0	0	0	0	0	0	0	0	0	0
20:45	9	0	6	2	1	0	0	0	0	0	0	0	0	0
Hr Total	**45**	**0**	**35**	**8**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
21:00	7	0	3	2	0	0	1	0	1	0	0	0	0	0
21:15	10	0	8	2	0	0	0	0	0	0	0	0	0	0
21:30	6	0	4	1	0	0	0	0	0	1	0	0	0	0
21:45	5	0	3	2	0	0	0	0	0	0	0	0	0	0
Hr Total	**28**	**0**	**18**	**7**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
22:00	5	0	4	0	0	1	0	0	0	0	0	0	0	0
22:15	4	0	3	1	0	0	0	0	0	0	0	0	0	0
22:30	11	0	10	1	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	**20**	**0**	**17**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
23:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0
23:15	4	0	2	1	0	0	0	0	0	1	0	0	0	0
23:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0
23:45	4	1	1	1	0	0	1	0	0	0	0	0	0	0
Hr Total	**13**	**1**	**8**	**2**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
Gr. Total	1190	10	794	312	2	24	7	0	20	21	0	0	0	0
% of Total	100.0%	0.8%	66.7%	26.2%	0.2%	2.0%	0.6%	0.0%	1.7%	1.8%	0.0%	0.0%	0.0%	0.0%
	Total	**Bikes**	**Cars & Trailers**	**2 Axle, Long**	**Buses**	**2 Axle, 6 Tire**	**3 Axle, Single**	**4 Axle, Single**	**<5 Axle, Double**	**5 Axle, Double**	**>6 Axle, Double**	**<6 Axle, Multi**	**6 Axle, Multi**	**>6 Axle, Multi**
	EASTBOUND													

5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
Full Length (6AM-6PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 555347, Location: 33.041488, -96.108472

Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg	FM 1903					SH 34					SH 34					
Direction	Eastbound					Northbound					Southbound					
Time	L	R	U	App	Ped*	L	T	U	App	Ped*	T	R	U	App	Ped*	Int
2018-08-28 6:00AM	1	2	0	3	0	34	63	0	97	0	29	3	0	32	0	132
6:15AM	1	7	0	8	0	19	73	0	92	0	42	2	0	44	0	144
6:30AM	1	9	1	11	0	35	79	0	114	0	51	0	0	51	0	176
6:45AM	3	13	0	16	0	23	109	1	133	0	56	2	0	58	0	207
Hourly Total	6	31	1	38	0	111	324	1	436	0	178	7	0	185	0	659
7:00AM	10	12	0	22	0	36	140	0	176	0	78	2	0	80	0	278
7:15AM	6	13	0	19	0	31	165	0	196	0	87	3	0	90	0	305
7:30AM	9	11	0	20	0	26	189	0	215	0	83	4	0	87	0	322
7:45AM	10	13	0	23	0	30	162	0	192	0	75	3	0	78	0	293
Hourly Total	35	49	0	84	0	123	656	0	779	0	323	12	0	335	0	1198
8:00AM	9	13	0	22	0	21	130	0	151	0	59	7	0	66	0	239
8:15AM	3	6	0	9	0	15	95	0	110	0	59	3	0	62	0	181
8:30AM	6	6	0	12	0	20	108	0	128	0	42	6	0	48	0	188
8:45AM	6	11	0	17	0	11	102	0	113	0	55	1	0	56	0	186
Hourly Total	24	36	0	60	0	67	435	0	502	0	215	17	0	232	0	794
9:00AM	3	8	0	11	0	12	114	0	126	0	60	2	0	62	0	199
9:15AM	10	11	1	22	0	16	91	1	108	0	64	4	0	68	0	198
9:30AM	3	10	0	13	0	10	76	0	86	0	68	1	0	69	0	168
9:45AM	5	5	0	10	0	11	93	0	104	0	57	4	0	61	0	175
Hourly Total	21	34	1	56	0	49	374	1	424	0	249	11	0	260	0	740
10:00AM	1	7	0	8	0	10	74	0	84	0	67	3	0	70	0	162
10:15AM	6	11	0	17	0	12	92	0	104	0	76	4	0	80	0	201
10:30AM	7	7	0	14	0	9	90	0	99	0	71	5	0	76	0	189
10:45AM	2	7	0	9	0	5	92	0	97	0	68	1	0	69	0	175
Hourly Total	16	32	0	48	0	36	348	0	384	0	282	13	0	295	0	727
11:00AM	2	3	0	5	0	6	86	0	92	0	81	8	0	89	0	186
11:15AM	6	8	0	14	0	8	83	0	91	0	75	2	0	77	0	182
11:30AM	1	14	0	15	0	11	91	0	102	0	82	4	0	86	0	203
11:45AM	5	8	0	13	0	15	73	0	88	0	69	6	0	75	0	176
Hourly Total	14	33	0	47	0	40	333	0	373	0	307	20	0	327	0	747
12:00PM	4	12	0	16	0	11	78	0	89	0	108	6	0	114	0	219
12:15PM	3	14	0	17	0	10	91	0	101	0	81	0	0	81	0	199
12:30PM	3	13	0	16	0	7	80	0	87	0	93	2	0	95	0	198
12:45PM	6	15	0	21	0	8	74	0	82	0	99	5	0	104	0	207
Hourly Total	16	54	0	70	0	36	323	0	359	0	381	13	0	394	0	823
1:00PM	2	6	0	8	0	13	86	0	99	0	78	7	0	85	0	192
1:15PM	4	13	0	17	0	9	91	0	100	0	104	5	0	109	0	226
1:30PM	5	10	0	15	0	6	87	0	93	0	98	7	0	105	0	213
1:45PM	6	13	0	19	0	9	67	0	76	0	87	4	0	91	0	186
Hourly Total	17	42	0	59	0	37	331	0	368	0	367	23	0	390	0	817
2:00PM	1	11	0	12	0	4	75	0	79	0	79	0	0	79	0	170
2:15PM	5	12	0	17	0	14	65	0	79	0	104	6	0	110	0	206
2:30PM	4	13	0	17	0	8	79	0	87	0	128	3	0	131	0	235
2:45PM	4	12	0	16	0	7	71	0	78	0	114	5	0	119	0	213
Hourly Total	14	48	0	62	0	33	290	0	323	0	425	14	0	439	0	824
3:00PM	3	13	0	16	0	8	75	0	83	0	98	4	1	103	0	202
3:15PM	3	20	0	23	0	13	88	0	101	0	99	6	0	105	0	229
3:30PM	8	19	0	27	0	7	102	0	109	0	108	1	0	109	0	245
3:45PM	5	24	0	29	0	19	81	0	100	0	103	4	0	107	0	236
Hourly Total	19	76	0	95	0	47	346	0	393	0	408	15	1	424	0	912
4:00PM	5	29	0	34	0	14	116	0	130	0	143	16	0	159	0	323
4:15PM	6	28	0	34	0	15	115	0	130	0	130	23	0	153	0	317

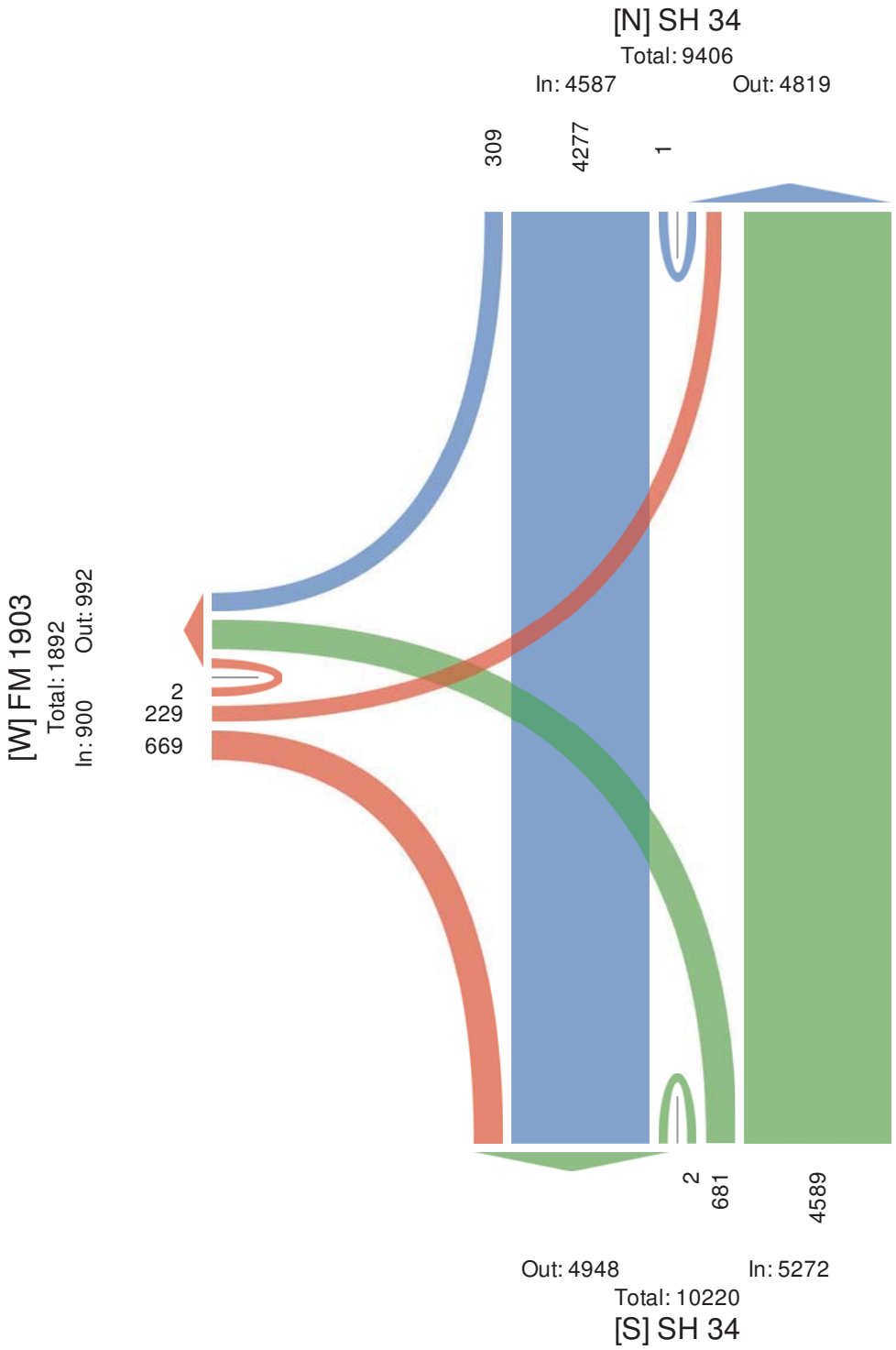
Leg	FM 1903					SH 34					SH 34					
Direction	Eastbound					Northbound					Southbound					
Time	L	R	U	**App**	Ped*	L	T	U	**App**	Ped*	T	R	U	**App**	Ped*	**Int**
4:30PM	7	28	0	**35**	0	9	111	0	**120**	0	144	15	0	**159**	0	**314**
4:45PM	2	25	0	**27**	0	10	87	0	**97**	0	143	14	0	**157**	0	**281**
Hourly Total	20	110	0	**130**	0	48	429	0	**477**	0	560	68	0	**628**	0	**1235**
5:00PM	1	20	0	**21**	0	12	107	0	**119**	0	151	40	0	**191**	0	**331**
5:15PM	10	37	0	**47**	0	16	102	0	**118**	0	175	31	0	**206**	0	**371**
5:30PM	6	34	0	**40**	0	15	98	0	**113**	0	142	13	0	**155**	0	**308**
5:45PM	10	33	0	**43**	0	11	93	0	**104**	0	114	12	0	**126**	0	**273**
Hourly Total	27	124	0	**151**	0	54	400	0	**454**	0	582	96	0	**678**	0	**1283**
Total	229	669	2	**900**	0	681	4589	2	**5272**	0	4277	309	1	**4587**	0	**10759**
% Approach	25.4%	74.3%	0.2%	**-**	-	12.9%	87.0%	0%	**-**	-	93.2%	6.7%	0%	**-**	-	-
% Total	2.1%	6.2%	0%	**8.4%**	-	6.3%	42.7%	0%	**49.0%**	-	39.8%	2.9%	0%	**42.6%**	-	-
Lights	221	636	1	**858**	-	657	4345	2	**5004**	-	4042	300	0	**4342**	-	10204
% Lights	96.5%	95.1%	50.0%	**95.3%**	-	96.5%	94.7%	100%	**94.9%**	-	94.5%	97.1%	0%	**94.7%**	-	94.8%
Articulated Trucks	2	23	1	**26**	-	14	163	0	**177**	-	134	3	1	**138**	-	341
% Articulated Trucks	0.9%	3.4%	50.0%	**2.9%**	-	2.1%	3.6%	0%	**3.4%**	-	3.1%	1.0%	100%	**3.0%**	-	3.2%
Buses and Single-Unit Trucks	6	10	0	**16**	-	10	81	0	**91**	-	101	6	0	**107**	-	214
% Buses and Single-Unit Trucks	2.6%	1.5%	0%	**1.8%**	-	1.5%	1.8%	0%	**1.7%**	-	2.4%	1.9%	0%	**2.3%**	-	2.0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
Full Length (6AM-6PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 555347, Location: 33.041488, -96.108472

Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
AF leLnthAF (8AF 6
AMM MPPePt)(gasP, AisCuMsec TiurnP, duPePLkc BCkgM(SkcS TiurnP, lecePsiCkP,
dCUrMPyk - iyPPoLM6
AMF ywev eksP
mlD: : 53h,)yrLsGykD554031388, (7. 4083h2

CJ Hensch & Associates, Inc.
liywCec 9UD- 4b4JekPra H
APPyrCLsePnkr4
: 21: BUrLv yie Awe4
lLPLcekL, T&, hh: 05, SB

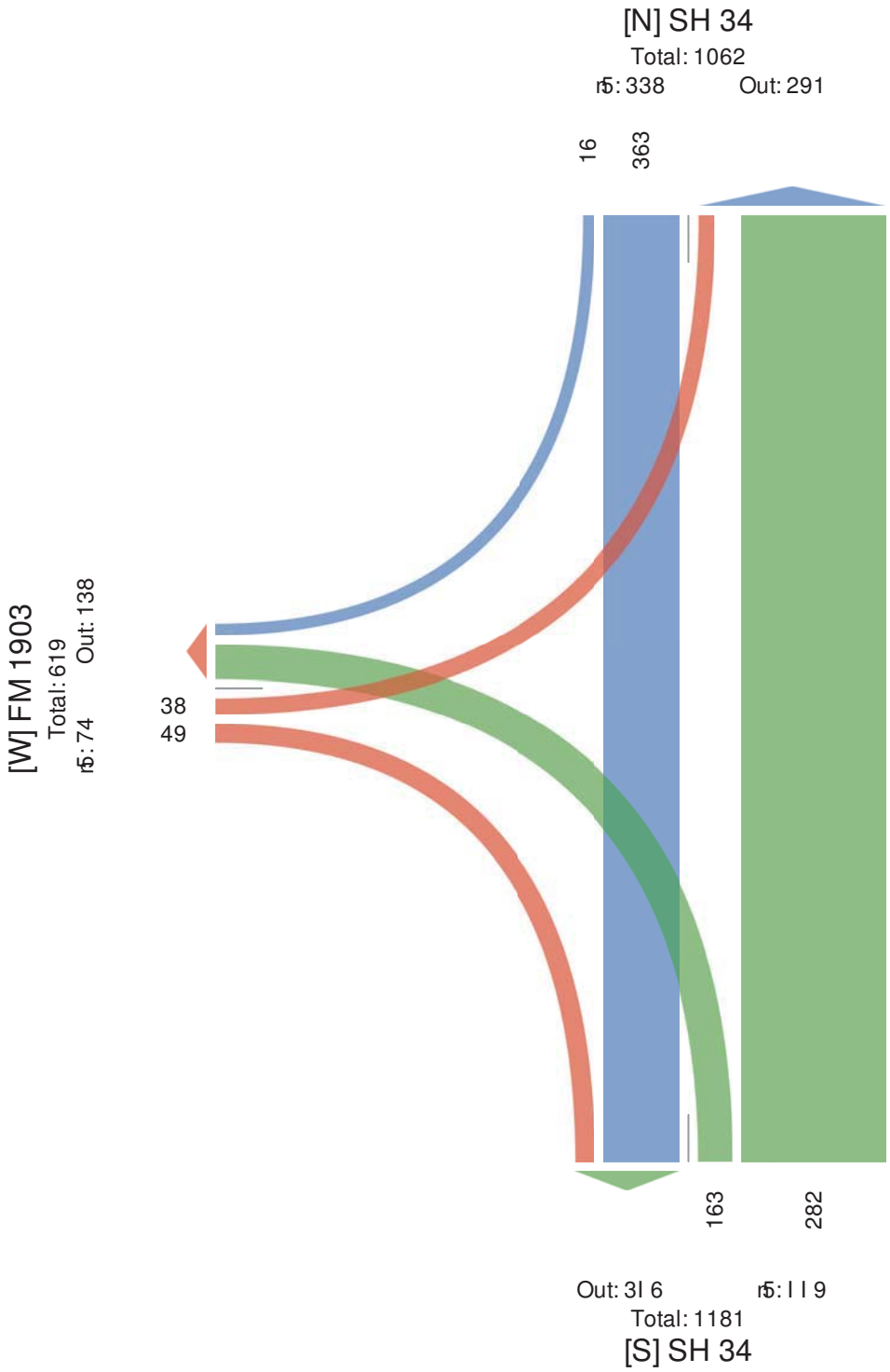
)eg I CersGyk	XF 1705 ELPs9yukc					BJ 53 Nyisa9yukc					BJ 53 Byusa9yukc					
TGe	)	R	S	**App**	lec*	)	T	S	**App**	lec*	T	R	S	**App**	lec*	**Int**
2018(08(28 hD0AF	10	12	0	**22**	0	5.	130	0	**176**	0	h8	2	0	**80**	0	**278**
hD: AF	.	15	0	**19**	0	51	1. :	0	**196**	0	8h	5	0	**90**	0	**305**
hD0AF	7	11	0	**20**	0	2.	187	0	**215**	0	85	3	0	**87**	0	**322**
hD: AF	10	15	0	**23**	0	50	1. 2	0	**192**	0	h:	5	0	**78**	0	**293**
Total	5:	37	0	**84**	0	125	. : .	0	**779**	0	525	12	0	**335**	0	**1198**
% Approach	314h%	: 845%	0%	**-**	(	1: 48%	8342%	0%	**-**	(	7. 43%	54 %	0%	**-**	(	(
% Total	247%	341%	0%	**7.0%**	(	1045%	: 348%	0%	**65.0%**	(	2h40%	140%	0%	**28.0%**	(	(
PHF	048h:	0473 2	(	**0.913**	(	048: 3	048. 8	(	**0.906**	(	0472 8	04h: 0	(	**0.931**	(	0475 0
Lights	53	3h	0	**81**	(	121	. 5h	0	**758**	(	510	12	0	**322**	(	11. 1
% Lights	7h41%	7: 47%	0%	**96.4%**	(	7843%	7h41%	0%	**97.3%**	(	7. 40%	100%	0%	**96.1%**	(	7. 47%
Articulated Trucks	0	1	0	**1**	(	1	7	0	**10**	(	7	0	0	**9**	(	20
% Articulated Trucks	0%	240%	0%	**1.2%**	(	048%	143%	0%	**1.3%**	(	248%	0%	0%	**2.7%**	(	14h%
Buses and Single-Unit Trucks	1	1	0	**2**	(	1	10	0	**11**	(	3	0	0	**4**	(	1h
% Buses and Single-Unit Trucks	247%	240%	0%	**2.4%**	(	048%	14 %	0%	**1.4%**	(	142%	0%	0%	**1.2%**	(	143%
lecePsiCkP	(	(	(	(	0	(	(	(	(	0	(	(	(	(	0	
% lecePsiCkP	(	(	(	(	(	(	(	(	(	(	(	(	(	(	(	(
dCUrMPyk - iyPPoLM	(	(	(	(	0	(	(	(	(	0	(	(	(	(	0	
% dCUrMPyk - iyPPoLM	(	(	(	(	(	(	(	(	(	(	(	(	(	(	(	(

*lecePsiCkPLkc dCUrMPyk - iyPPoLM4) D)efs, RDRGgas, TDTaiu, SDS(Tuik

5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
AM Peak (7AM - 8AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 555347, Location: 33.041488, -96.108472

Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
F lLLnt hen(612MPhF) 1MPhF C
Aaas aniiei 6rlgcd, AkdBuandeL TkuB(i, Suiei nULylUgæ)o UldTkuB(i, heLeidklnUi,
SlBtBaei wUs kwiivna(C
AaaF wmeI eUdl
D MPPP5-3, rwBndlwUM540-1-88,)7. 4108-32

CJ Hensch & Associates, Inc.
hkwnlLeL 9t M4 4b4J eUi Bc H
Aiiw Blndei DUB4
P21P yt BnI wke Ame4
hninLeUn, T&, 33P05, o y

reg : lkeBdlwU	XF 1705 EnieBwuUL					yJ 5- NwkdC9wuUL					yJ 5- ywudC9wuUL					
TlI e	r	R	o	**App**	heL*	r	T	o	**App**	heL*	T	R	o	**App**	heL*	**Int**
2018)08)28 12MPhF	.	1P	0	**21**	0	8	3-	0	**72**	0	77	P	0	**168**	0	**260**
1M0hF	2	.	0	**7**	0	15	8.	0	**99**	0	38	3	0	**73**	0	**192**
1MPhF	-	15	0	**10**	0	7	71	0	**166**	0	10-	P	0	**169**	0	**225**
1M0hF	P	10	0	**13**	0	.	83	0	**9T**	0	78	3	0	**163**	0	**21T**
o atl 4	13	- -	0	**51**	0	5.	558	0	**T08**	0	537	2-	0	**86T**	0	**7T7**
% Appral ch	2347%	3241%	0%	**-**	)	74 %	704-%	0%	**-**	)	7-40%	. 40%	0%	**-**	)	)
% o atl 4	240%	P45%	0%	**0.T%**	)	-45%	-045%	0%	**88.5%**	)	-P42%	247%	0%	**87.1%**	)	)
PHF	04308	04355	)	**6.025**	)	04 72	04727	)	**6.9T3**	)	04711	048P3	)	**6.928**	)	04723
Lights	1.	-2	0	**37**	)	5-	521	0	**T33**	)	5P3	2-	0	**T71**	)	37-
% Lights	7-41%	7P4P%	0%	**93.1%**	)	7-4 %	7P40%	0%	**98.9%**	)	7-42%	100%	0%	**98.3%**	)	7-43%
Articu4 ted o rucks	1	2	0	**T**	)	2	12	0	**18**	)	11	0	0	**11**	)	28
% Articu4 ted o rucks	P47%	-4P%	0%	**8.9%**	)	P4 %	54 %	0%	**T.0%**	)	247%	0%	0%	**2.0%**	)	545%
Buses l nd Sing4e-Unit o rucks	0	0	0	**6**	)	0	P	0	**3**	)	11	0	0	**11**	)	1.
% Buses l nd Sing4e-Unit o rucks	0%	0%	0%	**6%**	)	0%	14P%	0%	**1.T%**	)	247%	0%	0%	**2.0%**	)	147%
heLeidklnUi	)	)	)	)	0	)	)	)	)	0	)	)	)	)	0	
% heLeidklnUi	)	)	)	)	)	)	)	)	)	)	)	)	)	)	)	)
SlBtBaei wUs kwiivna(	)	)	)	)	0	)	)	)	)	0	)	)	)	)	0	
% SlBtBaei wUs kwiivna(	)	)	)	)	)	)	)	)	)	)	)	)	)	)	)	)

*heLeidklnUi nULSlBtBaei wUs kwiivna(4rMlefd, RMRlgcd, TMTcku, oM0)TukU

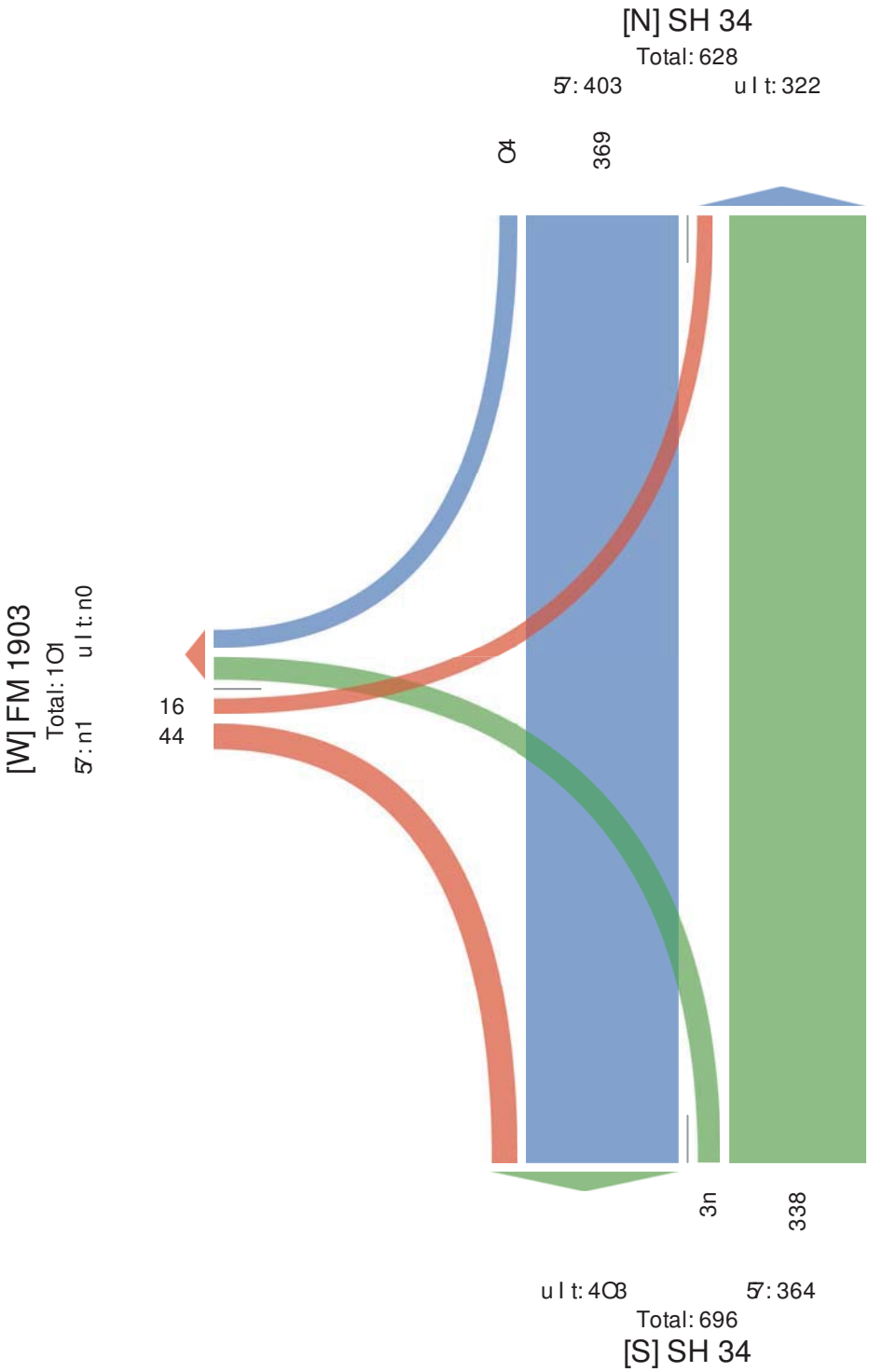
5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018

MPaak(7ek-)12lCs 7M L1lCs 7Mi
Alht lkrrer)cPgdB, AnBSulkBea TnuS-r, Uurer kya oPygheIwyBTnuS-r, 7eaerBmPkyr,
UPS(Sher vy t nvrrmkhi
AlhMvI eDeyB
:5 l sss 3C4, cvSkBPvyl 33.0C1C88, I96.108C42

CJ Hensch & Associates, Inc.

7nvI Paea b(l t . J. HeyrSd & ArrvSPkBer
:yS.
s21s o(SkDvne AIe.,
7krkaeyk, TX, 44s03, wo



5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
PM Peak (4:30PM - 5:30PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 555347, Location: 33.041488, -96.108472

Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

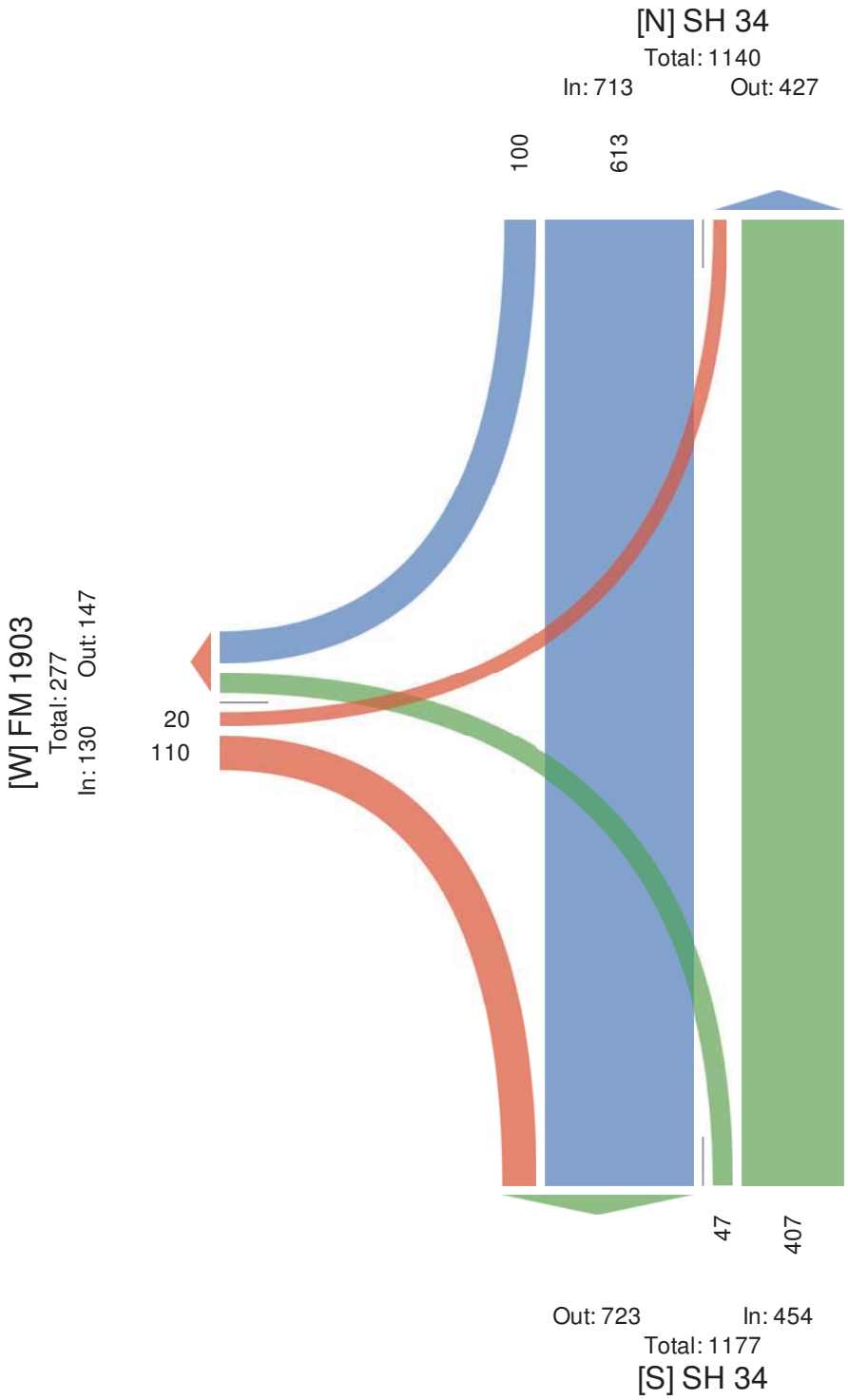
Leg Direction	FM 1903 Eastbound					SH 34 Northbound					SH 34 Southbound					
Time	L	R	U	**App**	Ped*	L	T	U	**App**	Ped*	T	R	U	**App**	Ped*	**Int**
2018-08-28 4:30PM	7	28	0	**21**	0	9	111	0	**768**	0	144	15	0	**710**	0	**279**
4:45PM	2	25	0	**63**	0	10	87	0	**03**	0	143	14	0	**713**	0	**657**
5:00PM	1	20	0	**67**	0	12	107	0	**770**	0	151	40	0	**707**	0	**227**
5:15PM	10	37	0	**93**	0	16	102	0	**775**	0	175	31	0	**68T**	0	**237**
o atl 4	20	110	0	**728**	0	47	407	0	**919**	0	613	100	0	**372**	0	**7603**
% Appral ch	15.4%	84.6%	0%	**-**	-	10.4%	89.6%	0%	**-**	-	86.0%	14.0%	0%	**-**	-	-
% o atl 4	1.5%	8.5%	0%	**78.8%**	-	3.6%	31.4%	0%	**21.8%**	-	47.3%	7.7%	0%	**11.8%**	-	-
PHF	0.500	0.743	-	**8.T07**	-	0.734	0.917	-	**8.09T**	-	0.876	0.625	-	**8.5T1**	-	0.874
Lights	18	109	0	**763**	-	44	384	0	**965**	-	596	99	0	**T01**	-	1250
% Lights	90.0%	99.1%	0%	**03.3%**	-	93.6%	94.3%	0%	**09.2%**	-	97.2%	99.0%	0%	**03.1%**	-	96.4%
Articu4 ted o rucks	0	1	0	**7**	-	2	14	0	**7T**	-	13	0	0	**72**	-	30
% Articu4 ted o rucks	0%	0.9%	0%	**8.5%**	-	4.3%	3.4%	0%	**2.1%**	-	2.1%	0%	0%	**7.5%**	-	2.3%
Buses l nd Sing4e-Unit o rucks	2	0	0	**6**	-	1	9	0	**78**	-	4	1	0	**1**	-	17
% Buses l nd Sing4e-Unit o rucks	10.0%	0%	0%	**7.1%**	-	2.1%	2.2%	0%	**6.6%**	-	0.7%	1.0%	0%	**8.3%**	-	1.3%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5.SH 34 and FM 1903 - TMC

Tue Aug 28, 2018
PM Peak (4:30PM - 5:30PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 555347, Location: 33.041488, -96.108472

Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



APPENDIX C

SYNCHRO LEVEL OF SERVICE AND DELAY REPORTS

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	49	123	656	323	12
Future Vol, veh/h	35	49	123	656	323	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	94	85	87	93	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	52	145	754	347	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1399	355	347	0	-	0
Stage 1	355	-	-	-	-	-
Stage 2	1044	-	-	-	-	-
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	155	689	1212	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	136	689	1212	-	-	-
Mov Cap-2 Maneuver	136	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	339	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.5	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1212	-	250	-	-
HCM Lane V/C Ratio	0.119	-	0.368	-	-
HCM Control Delay (s)	8.4	-	27.5	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	110	47	407	613	100
Future Vol, veh/h	20	110	47	407	613	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	74	73	92	88	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	149	64	442	697	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1347	777	697	0	-	0
Stage 1	777	-	-	-	-	-
Stage 2	570	-	-	-	-	-
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	167	397	899	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	397	899	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	35.8	1.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	899	-	298	-	-
HCM Lane V/C Ratio	0.072	-	0.633	-	-
HCM Control Delay (s)	9.3	-	35.8	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	49	123	656	323	12
Future Volume (vph)	35	49	123	656	323	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1685	0	1770	1863	1852	0
Flt Permitted	0.979		0.545			
Satd. Flow (perm)	1685	0	1015	1863	1852	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48				5	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.88	0.94	0.85	0.87	0.93	0.75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	145	754	363	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	27.0		93.0	93.0	93.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	7.5		36.9	36.9	36.9	
Actuated g/C Ratio	0.15		0.73	0.73	0.73	
v/c Ratio	0.32		0.20	0.56	0.27	
Control Delay	16.0		4.7	7.1	4.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	16.0		4.7	7.1	4.4	
LOS	B		A	A	A	
Approach Delay	16.0			6.7	4.4	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 50.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	110	47	407	613	100
Future Volume (vph)	20	110	47	407	613	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1649	0	1770	1863	1816	0
Flt Permitted	0.990		0.226			
Satd. Flow (perm)	1649	0	421	1863	1816	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	138				25	
Link Speed (mph)	55			60	60	
Link Distance (ft)	2262			2148	619	
Travel Time (s)	28.0			24.4	7.0	
Peak Hour Factor	0.50	0.74	0.73	0.92	0.88	0.63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	64	442	856	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Total Split (s)	28.0		92.0	92.0	92.0	
Total Lost Time (s)	5.5		5.5	5.5	5.5	
Act Effct Green (s)	8.0		34.0	34.0	34.0	
Actuated g/C Ratio	0.15		0.64	0.64	0.64	
v/c Ratio	0.52		0.24	0.37	0.74	
Control Delay	13.9		7.1	5.9	11.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.9		7.1	5.9	11.3	
LOS	B		A	A	B	
Approach Delay	13.9			6.0	11.3	
Approach LOS	B			A	B	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 53.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: SH 34 & FM 1903

APPENDIX D

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

HIGHEST HOURS FOR EACH WARRANT

WARRANT 1 - CONDITON A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1116	128
2nd	1045	144
3rd	915	41
4th	876	92
5th	852	63
6th	847	82
7th	780	70
8th	763	60

WARRANT 1 - CONDITON B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1116	128
2nd	1045	144
3rd	876	92
4th	852	63
5th	847	82
6th	780	70
7th	763	60
8th	669	58

WARRANT 1 - COMBINATION CONDITONS A & B

COMBINATION CONDITION A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1116	128
2nd	1045	144
3rd	915	41
4th	876	92
5th	852	63
6th	847	82
7th	780	70
8th	763	60

COMBINATION CONDITION B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1116	128
2nd	1045	144
3rd	876	92
4th	852	63
5th	847	82
6th	780	70
7th	763	60
8th	740	42

PEAK HOUR VOLUME

TIME BEGINS	MAJOR VOLUME			MINOR VOLUME				TOTAL VOLUME
	NB/EB	SB/WB	TOTAL	NB/EB	SB/WB	HIGH	TOTAL	
4 pm - 5 pm	487	629	1116	128	0	128	128	1244

FOUR HIGHEST PEDESTRIAN VOLUMES

RANK	MAJOR VOL	MINOR VOL
1st	N/A	N/A
2nd	N/A	N/A
3rd	N/A	N/A
4th	N/A	N/A

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

County: Hunt
City: Greenville

Survey Date: 10/11/19

Street Names:		**85% Speed or Posted Speed**	**Condition:**
Major:	SH 34	60 mph	Rural
Minor:	FM 1903	55 mph	

Warrant 1: Eight-Hour Vehicular Volume — Warrant Status: **WARRANTED**

Condition A - Minimum Vehicular Volume

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	350	1116	1045	915	876	852	847	780	763
Minor St.	1	105	128	144	41	92	63	82	70	60
Meets Requirement:			YES	YES	NO	NO	NO	NO	NO	NO

Condition Met: NO

Condition B - Interruption of Continuous Traffic

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	525	1116	1045	876	852	847	780	763	669
Minor St.	1	53	128	144	92	63	82	70	60	58
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

Condition Met: YES

Combination of Condition A & Condition B *

Condition A	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	280	1116	1045	915	876	852	847	780	763
Minor St.	1	84	128	144	41	92	63	82	70	60
Meets Requirement:			YES	YES	NO	YES	NO	NO	NO	NO

Condition B	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	420	1116	1045	876	852	847	780	763	740
Minor St.	1	42	128	144	92	63	82	70	60	42
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

* - After adequate trial of other remedial measures.

Condition Met: NO

Warrant 2: Four-Hour Vehicular Volume — Warrant Status: **WARRANTED**

FIGURE 1 represents a graph indicating each of any 4 hours of an average day as points plotted against the applicable curve (see attached graph).

Comments: Warrants 1 (Condition B) and 2 are met.

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 3: Peak Hour — Warrant Status: **WARRANTED**

Category A - Conditions 1, 2 and 3 — Category Satisfied: NO

Condition 1: Total peak hour stopped time delay for traffic on Minor Street approach

Number of Lanes	Required Delay (vh-hr)	Existing Delay (vh-hr)
1	4.00	1.27

Condition Met: NO

Condition 2: Total volume for delayed Minor Street approach

Number of Lanes	Required Volume	Existing Volume
1	100	128

Condition Met: YES

Condition 3: Total peak hour entering volume for serviced intersection

Total Approaches	Required Volume	Serviced Volume
3	650	1244

Condition Met: YES

Category B - Peak Hour Volume Graph

FIGURE 2 represents a graph indicating the peak hour of an average day as a point plotted against the applicable curve (see attached graph).

Category Satisfied: YES

Warrant 4: Pedestrian Volume — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

		Condition A - Ped. Vol.		Condition B - Gaps	
Rank	Time Begins	Major Street Volume	Required Volume	No. Gaps per Hour	Required Gaps
1st	12:00 AM	N/A	190	N/A	60
2nd	12:00 AM	N/A	190	N/A	60
3rd	12:00 AM	N/A	190	N/A	60
4th	12:00 AM	N/A	190	N/A	60

Condition A: Pedestrian volume crossing the Major Street — Condition Met: N/A

Condition B: Pedestrian gaps per hour in the traffic stream — Condition Met: N/A

Warrant 5: School Crossing — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

Number of Studets crossing Major Street during the highest crossing hour:

Number of Students	Required Minimum
N/A	20

Condition Met: N/A

Number of gaps in the Major Street traffic stream during Student crossing time:

Number of Adequate Crossing Gaps	Number of Minutes in Adequate Gaps Period
N/A	N/A

Condition Met: N/A

Have remedial measures (signs, flashers, guards, etc.) been considered? N/A (Y or N)

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 6: Coordinated Signal System Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Condition A: For a one-way street or a street with traffic predominately in one direction, are the adjacent traffic control signals so far apart that they do not provide the necessary degree of vehicular platooning? N/A (Y-N-N/A)

Condition B: For a two-way street with adjacent traffic control signals not providing the necessary degree of platooning, will the proposed and adjacent traffic control signals collectively provide a progressive operation? N/A (Y-N-N/A)

Warrant 7: Crash Experience Warrant Status: **NOT WARRANTED**

Condition A: Has an adequate trial of alternatives with satisfactory observance and enforcement failed to reduce the crash frequency? N (Y or N)

Condition B: Number of reported applicable crashes in the past 12 months:

Number of Crashes	Required Minimum
1	5

Condition Met: NO

Condition C: Does Warrant 1 - "Combination of Conditions A & B" exist for each of any 8 hours of an average day for Condition A or B? YES

Is the volume of pedestrian traffic at least 80% of the requirements for Warrant 4 - Pedestrian Volume? N/A

Condition Met: YES

Warrant 8: Roadway Network Warrant Status: **NOT WARRANTED**

Are the Major Street and Minor Street designated as Major Routes? NO

Major Route Criteria:

1. Are the streets part of the steet or highway system that serves as the principal roadway network for through traffic flow?
   Major Street: Y Minor Street: N
2. Do the streets include rural or suburban highways outside, entering, or traversing a City?
   Major Street: Y Minor Street: N
3. Do the streets appear as Major Route on an official plan, such as a Major Street Plan in an urban area traffic and transportation study?
   Major Street: Y Minor Street: N

Condition A: Intersection Peak Hour Volume and 5-year Projected Traffic Volumes

Required Intersection Peak Hour Volume	Existing Intersection Peak Hour Volume
1000	1244

Do the 5-year Projected Traffic Volumes meet one or more of Warrants 1, 2, and 3 during an average weekday? N/A (Y-N-N/A)

Condition Met: N/A

Condition B: Is the total entering volume for the intersection at least 1,000 vehicles per hour for each of any 5 hours on a nonnormal business day (Saturday or Sunday)? N (Y-N-N/A)

TRAFFIC SIGNAL WARRANT ANALYSIS

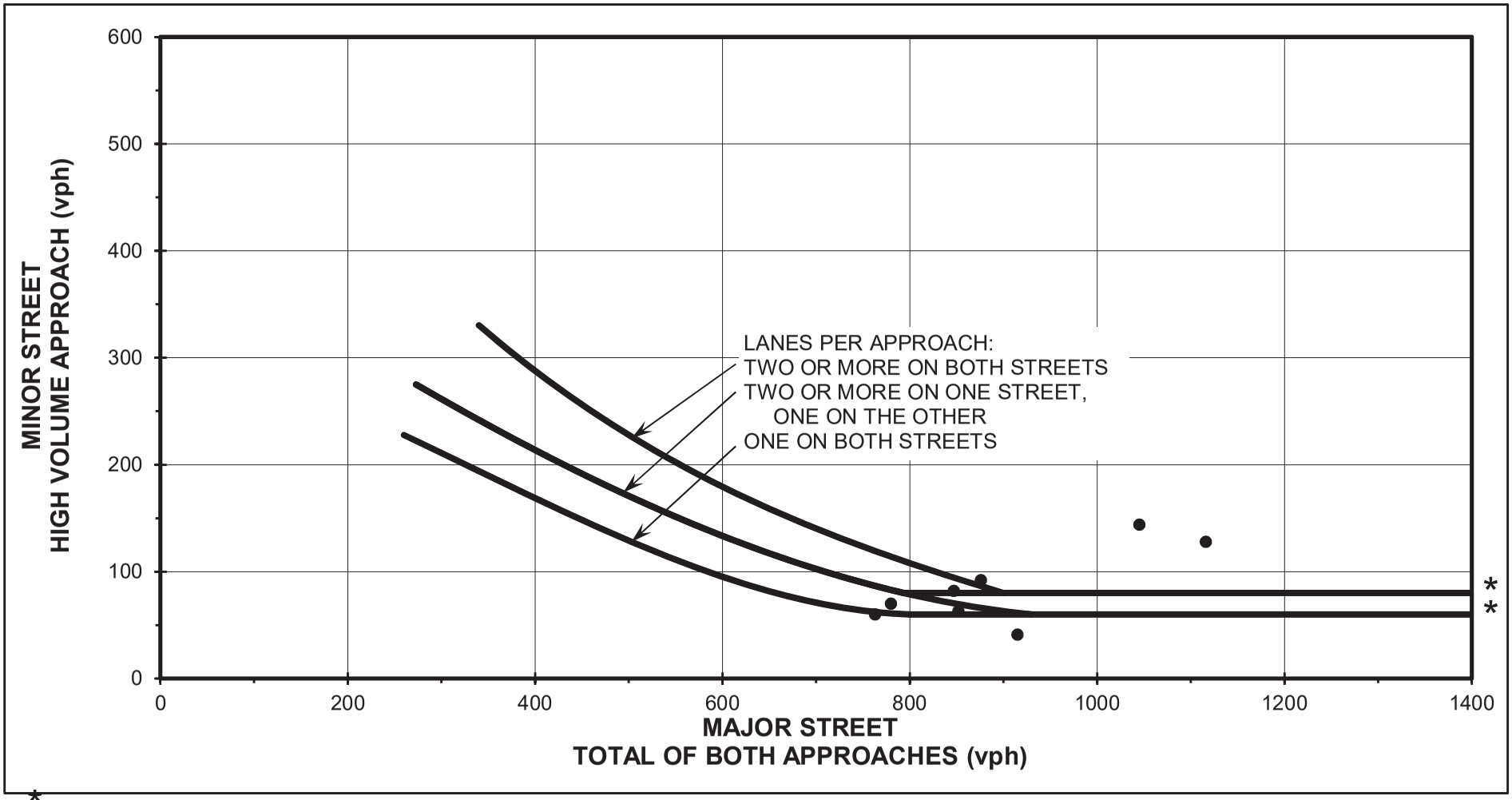
Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 9: Intersection Near a Grade Crossing Warrant Status: **NOT APPLICABLE**

Condition A:	Does a grade crossing exist on an approach controlled by a STOP or YIELD sign and is the center of the track nearest to the intersection within 140 feet of the stop or yield line on approach?	N/A	(Y-N-N/A)
Condition B:	During the highest traffic volume hour during which rail traffic uses the crossing, does the plotted point representing the vehicles per hour on the major street and the corresponding vehicles per hour on the minor-street approach that crosses the track fall above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage disance as defined in Section 1A.13?	N/A	(Y-N-N/A)

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

RURAL CONDITIONS

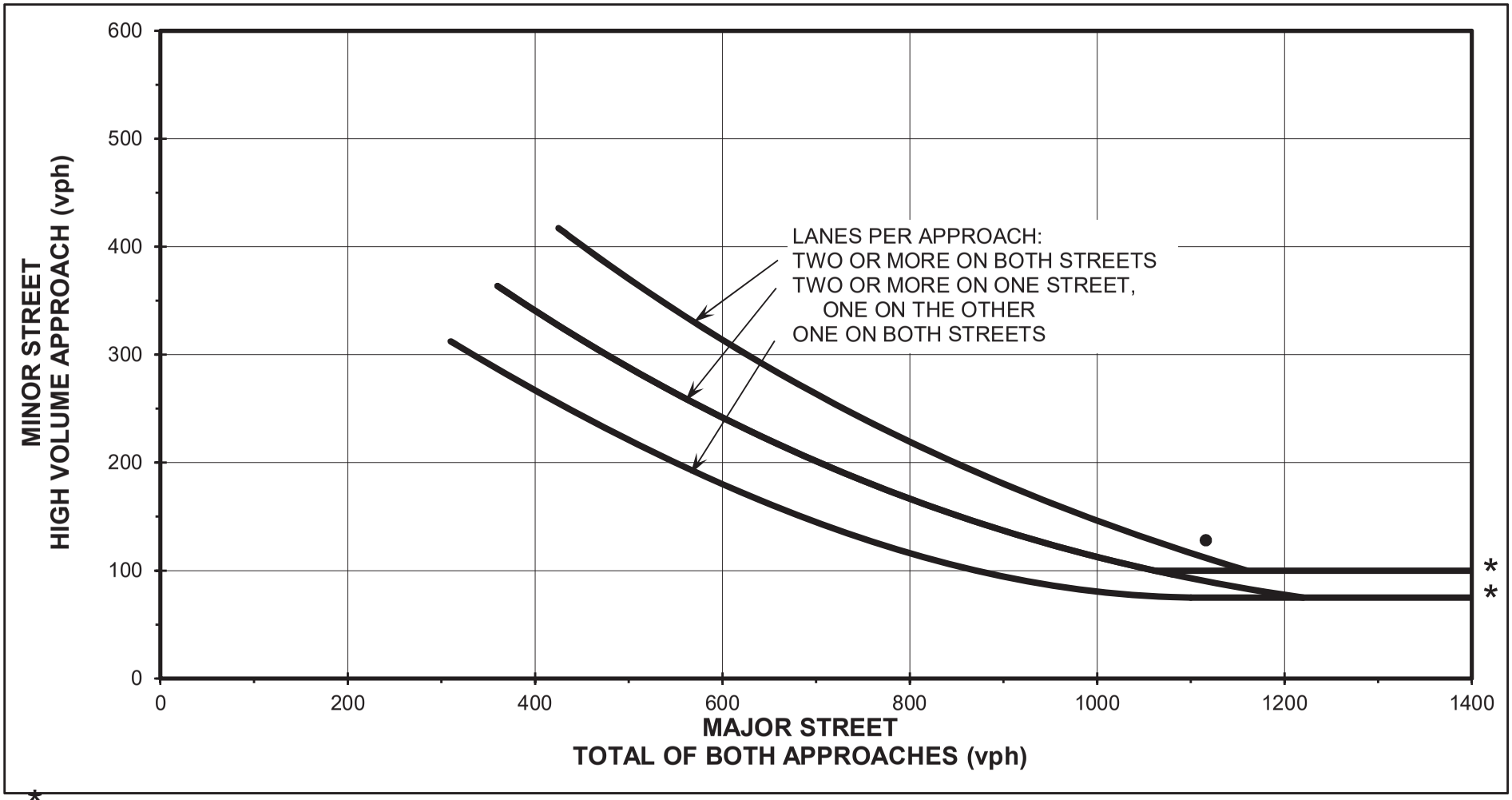


* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 1

WARRANT 3 - PEAK HOUR VEHICULAR VOLUME

RURAL CONDITIONS



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 2

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

HIGHEST HOURS FOR EACH WARRANT

WARRANT 1 - CONDITON A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1562	179
2nd	1463	202
3rd	1281	57
4th	1226	129
5th	1193	88
6th	1186	115
7th	1092	98
8th	1068	84

WARRANT 1 - CONDITON B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1562	179
2nd	1463	202
3rd	1281	57
4th	1226	129
5th	1193	88
6th	1186	115
7th	1092	98
8th	1068	84

WARRANT 1 - COMBINATION CONDITONS A & B

COMBINATION CONDITION A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1562	179
2nd	1463	202
3rd	1226	129
4th	1193	88
5th	1186	115
6th	1092	98
7th	1068	84
8th	914	136

COMBINATION CONDITION B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1562	179
2nd	1463	202
3rd	1281	57
4th	1226	129
5th	1193	88
6th	1186	115
7th	1092	98
8th	1068	84

PEAK HOUR VOLUME

TIME BEGINS	MAJOR VOLUME			MINOR VOLUME				TOTAL VOLUME
	NB/EB	SB/WB	TOTAL	NB/EB	SB/WB	HIGH	TOTAL	
4 pm - 5 pm	682	881	1562	179	0	179	179	1741

FOUR HIGHEST PEDESTRIAN VOLUMES

RANK	MAJOR VOL	MINOR VOL
1st	N/A	N/A
2nd	N/A	N/A
3rd	N/A	N/A
4th	N/A	N/A

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

County: Hunt
City: Greenville

Survey Date: 10/11/19

Street Names:		**85% Speed or Posted Speed**	**Condition:**
Major:	SH 34	60 mph	Rural
Minor:	FM 1903	55 mph	

Warrant 1: Eight-Hour Vehicular Volume — Warrant Status: **WARRANTED**

Condition A - Minimum Vehicular Volume

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	350	1562	1463	1281	1226	1193	1186	1092	1068
Minor St.	1	105	179	202	57	129	88	115	98	84
Meets Requirement:			YES	YES	NO	YES	NO	YES	NO	NO

Condition Met: NO

Condition B - Interruption of Continuous Traffic

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	525	1562	1463	1281	1226	1193	1186	1092	1068
Minor St.	1	53	179	202	57	129	88	115	98	84
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

Condition Met: YES

Combination of Condition A & Condition B *

Condition A	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	280	1562	1463	1226	1193	1186	1092	1068	914
Minor St.	1	84	179	202	129	88	115	98	84	136
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

Condition B	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	420	1562	1463	1281	1226	1193	1186	1092	1068
Minor St.	1	42	179	202	57	129	88	115	98	84
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

* - After adequate trial of other remedial measures.

Condition Met: YES

Warrant 2: Four-Hour Vehicular Volume — Warrant Status: **WARRANTED**

FIGURE 1 represents a graph indicating each of any 4 hours of an average day as points plotted against the applicable curve (see attached graph).

Comments: Warrants 1 (Condition B) and 2 are met.

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 3: Peak Hour — Warrant Status: **WARRANTED**

Category A - Conditions 1, 2 and 3 — Category Satisfied: NO

Condition 1: Total peak hour stopped time delay for traffic on Minor Street approach

Number of Lanes	Required Delay (vh-hr)	Existing Delay (vh-hr)
1	4.00	1.78

Condition Met: NO

Condition 2: Total volume for delayed Minor Street approach

Number of Lanes	Required Volume	Existing Volume
1	100	179

Condition Met: YES

Condition 3: Total peak hour entering volume for serviced intersection

Total Approaches	Required Volume	Serviced Volume
3	650	1741

Condition Met: YES

Category B - Peak Hour Volume Graph

FIGURE 2 represents a graph indicating the peak hour of an average day as a point plotted against the applicable curve (see attached graph).

Category Satisfied: YES

Warrant 4: Pedestrian Volume — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

		Condition A - Ped. Vol.		Condition B - Gaps	
Rank	Time Begins	Major Street Volume	Required Volume	No. Gaps per Hour	Required Gaps
1st	12:00 AM	N/A	190	N/A	60
2nd	12:00 AM	N/A	190	N/A	60
3rd	12:00 AM	N/A	190	N/A	60
4th	12:00 AM	N/A	190	N/A	60

Condition A: Pedestrian volume crossing the Major Street — Condition Met: N/A

Condition B: Pedestrian gaps per hour in the traffic stream — Condition Met: N/A

Warrant 5: School Crossing — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

Number of Studets crossing Major Street during the highest crossing hour:

Number of Students	Required Minimum
N/A	20

Condition Met: N/A

Number of gaps in the Major Street traffic stream during Student crossing time:

Number of Adequate Crossing Gaps	Number of Minutes in Adequate Gaps Period
N/A	N/A

Condition Met: N/A

Have remedial measures (signs, flashers, guards, etc.) been considered? N/A (Y or N)

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 6: Coordinated Signal System Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Condition A: For a one-way street or a street with traffic predominately in one direction, are the adjacent traffic control signals so far apart that they do not provide the necessary degree of vehicular platooning? N/A (Y-N-N/A)

Condition B: For a two-way street with adjacent traffic control signals not providing the necessary degree of platooning, will the proposed and adjacent traffic control signals collectively provide a progressive operation? N/A (Y-N-N/A)

Warrant 7: Crash Experience Warrant Status: **NOT WARRANTED**

Condition A: Has an adequate trial of alternatives with satisfactory observance and enforcement failed to reduce the crash frequency? N (Y or N)

Condition B: Number of reported applicable crashes in the past 12 months:

Number of Crashes	Required Minimum
1	5

Condition Met: NO

Condition C: Does Warrant 1 - "Combination of Conditions A & B" exist for each of any 8 hours of an average day for Condition A or B? YES

Is the volume of pedestrian traffic at least 80% of the requirements for Warrant 4 - Pedestrian Volume? N/A

Condition Met: YES

Warrant 8: Roadway Network Warrant Status: **NOT WARRANTED**

Are the Major Street and Minor Street designated as Major Routes? NO

Major Route Criteria:

1. Are the streets part of the steet or highway system that serves as the principal roadway network for through traffic flow?
   Major Street: Y Minor Street: N
2. Do the streets include rural or suburban highways outside, entering, or traversing a City?
   Major Street: Y Minor Street: N
3. Do the streets appear as Major Route on an official plan, such as a Major Street Plan in an urban area traffic and transportation study?
   Major Street: Y Minor Street: N

Condition A: Intersection Peak Hour Volume and 5-year Projected Traffic Volumes

Required Intersection Peak Hour Volume	Existing Intersection Peak Hour Volume
1000	1741

Do the 5-year Projected Traffic Volumes meet one or more of Warrants 1, 2, and 3 during an average weekday? N/A (Y-N-N/A)

Condition Met: N/A

Condition B: Is the total entering volume for the intersection at least 1,000 vehicles per hour for each of any 5 hours on a nonnormal business day (Saturday or Sunday)? N (Y-N-N/A)

TRAFFIC SIGNAL WARRANT ANALYSIS

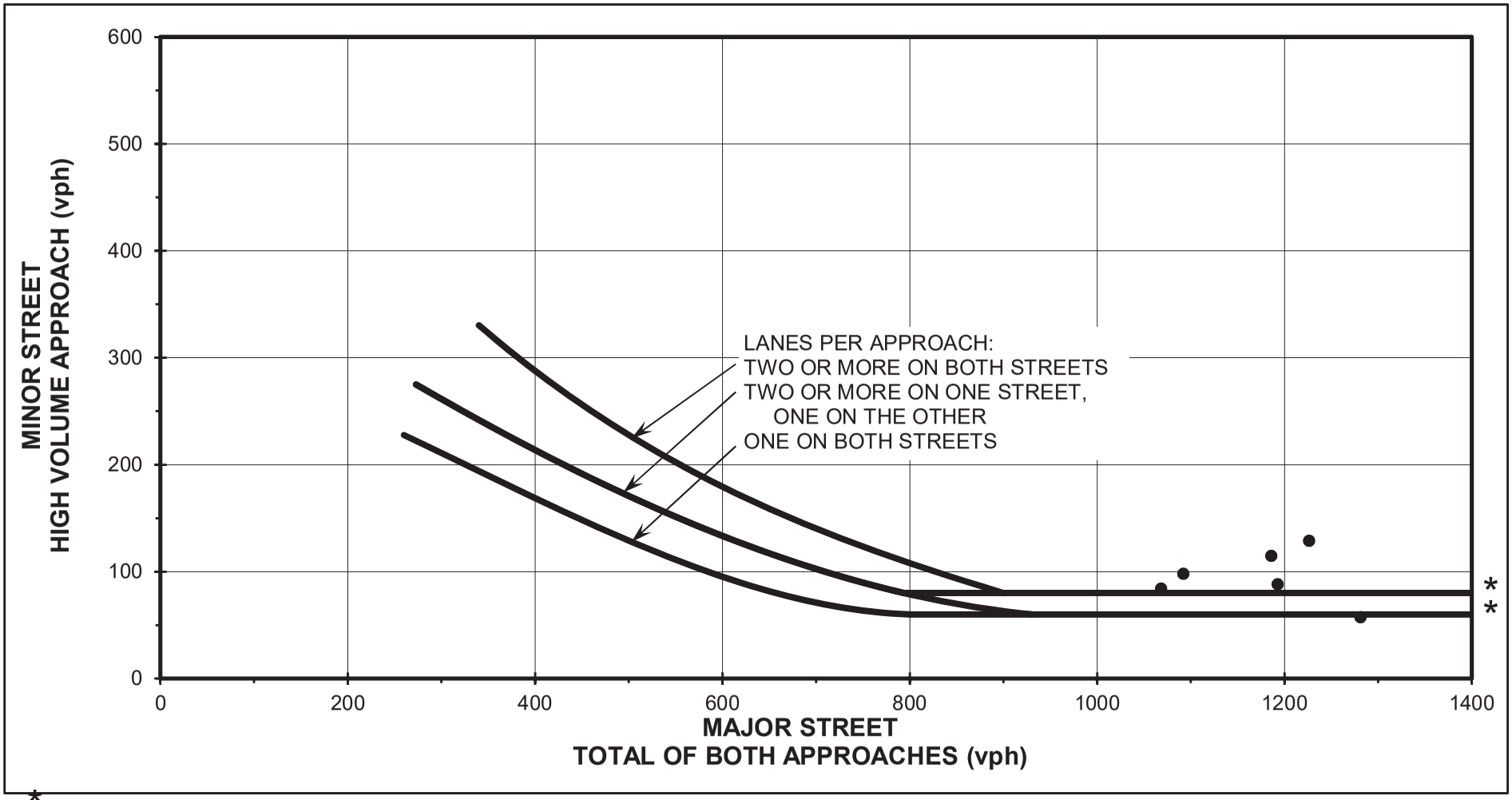
Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 9: Intersection Near a Grade Crossing Warrant Status: **NOT APPLICABLE**

Condition A:	Does a grade crossing exist on an approach controlled by a STOP or YIELD sign and is the center of the track nearest to the intersection within 140 feet of the stop or yield line on approach?	N/A	(Y-N-N/A)
Condition B:	During the highest traffic volume hour during which rail traffic uses the crossing, does the plotted point representing the vehicles per hour on the major street and the corresponding vehicles per hour on the minor-street approach that crosses the track fall above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage disance as defined in Section 1A.13?	N/A	(Y-N-N/A)

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

RURAL CONDITIONS

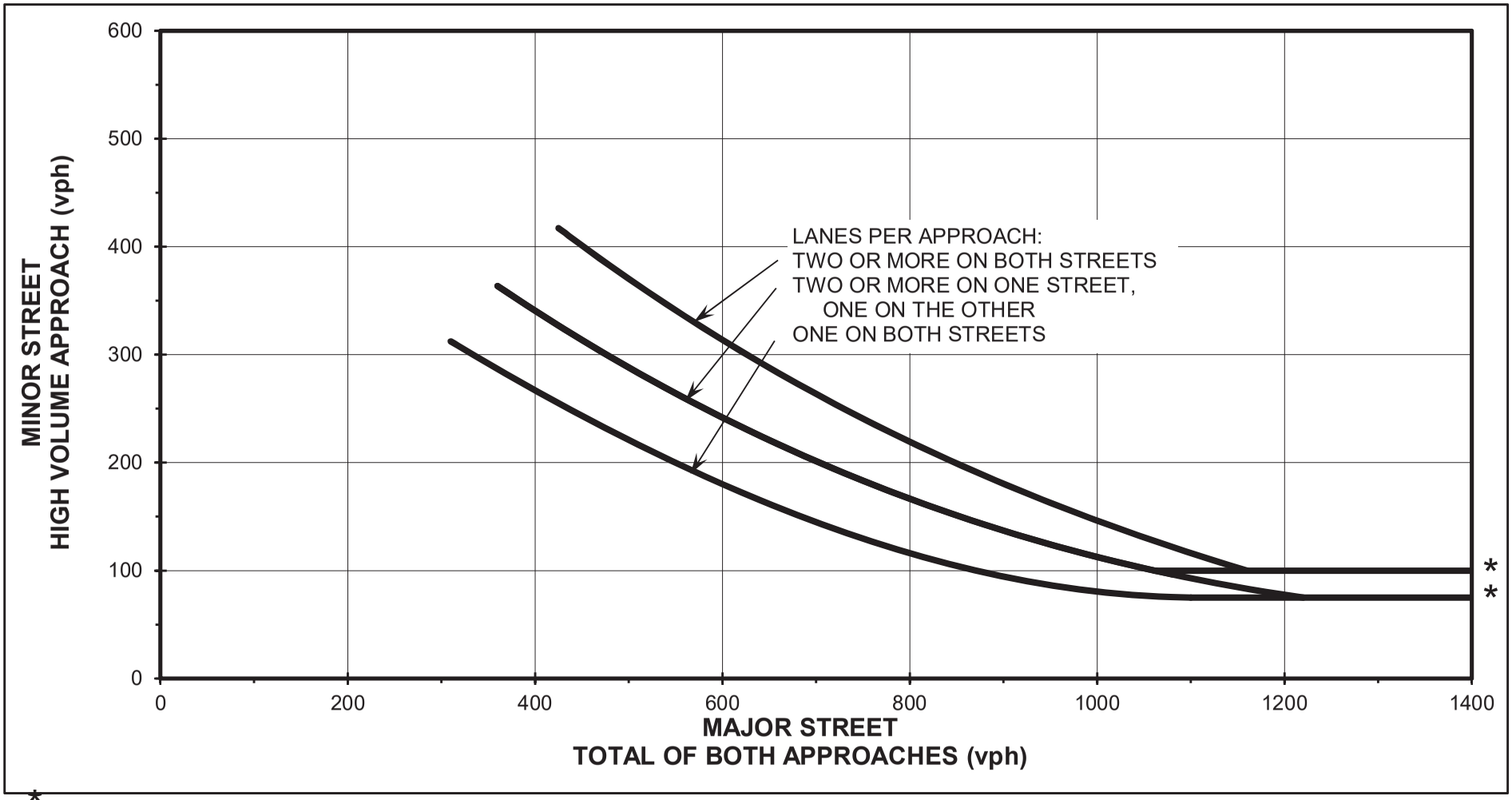


* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 1

WARRANT 3 - PEAK HOUR VEHICULAR VOLUME

RURAL CONDITIONS



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 2

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

HIGHEST HOURS FOR EACH WARRANT

WARRANT 1 - CONDITON A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1786	205
2nd	1672	230
3rd	1464	66
4th	1402	147
5th	1363	101
6th	1355	131
7th	1248	112
8th	1221	96

WARRANT 1 - CONDITON B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1786	205
2nd	1672	230
3rd	1464	66
4th	1402	147
5th	1363	101
6th	1355	131
7th	1248	112
8th	1221	96

WARRANT 1 - COMBINATION CONDITONS A & B

COMBINATION CONDITION A EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1786	205
2nd	1672	230
3rd	1402	147
4th	1363	101
5th	1355	131
6th	1248	112
7th	1221	96
8th	1070	93

COMBINATION CONDITION B EIGHT HIGHEST HOURS

RANK	MAJOR VOLUME	MINOR VOLUME
1st	1786	205
2nd	1672	230
3rd	1464	66
4th	1402	147
5th	1363	101
6th	1355	131
7th	1248	112
8th	1221	96

PEAK HOUR VOLUME

TIME BEGINS	MAJOR VOLUME			MINOR VOLUME				TOTAL VOLUME
	NB/EB	SB/WB	TOTAL	NB/EB	SB/WB	HIGH	TOTAL	
4 pm - 5 pm	779	1006	1786	205	0	205	205	1991

FOUR HIGHEST PEDESTRIAN VOLUMES

RANK	MAJOR VOL	MINOR VOL
1st	N/A	N/A
2nd	N/A	N/A
3rd	N/A	N/A
4th	N/A	N/A

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

County: Hunt
City: Greenville

Survey Date: 10/11/19

Street Names:		**85% Speed or Posted Speed**	**Condition:**
Major:	SH 34	60 mph	Rural
Minor:	FM 1903	55 mph	

Warrant 1: Eight-Hour Vehicular Volume — Warrant Status: **WARRANTED**

Condition A - Minimum Vehicular Volume

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	350	1786	1672	1464	1402	1363	1355	1248	1221
Minor St.	1	105	205	230	66	147	101	131	112	96
Meets Requirement:			YES	YES	NO	YES	NO	YES	YES	NO

Condition Met: NO

Condition B - Interruption of Continuous Traffic

	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	525	1786	1672	1464	1402	1363	1355	1248	1221
Minor St.	1	53	205	230	66	147	101	131	112	96
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

Condition Met: YES

Combination of Condition A & Condition B *

Condition A	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	280	1786	1672	1402	1363	1355	1248	1221	1070
Minor St.	1	84	205	230	147	101	131	112	96	93
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

Condition B	No. Lanes	Required Volume	Eight Highest Hour Volumes							
			1st	2nd	3rd	4th	5th	6th	7th	8th
Major St.	1	420	1786	1672	1464	1402	1363	1355	1248	1221
Minor St.	1	42	205	230	66	147	101	131	112	96
Meets Requirement:			YES	YES	YES	YES	YES	YES	YES	YES

* - After adequate trial of other remedial measures.

Condition Met: YES

Warrant 2: Four-Hour Vehicular Volume — Warrant Status: **WARRANTED**

FIGURE 1 represents a graph indicating each of any 4 hours of an average day as points plotted against the applicable curve (see attached graph).

Comments: Warrants 1 (Condition B) and 2 are met.

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 3: Peak Hour — Warrant Status: **WARRANTED**

Category A - Conditions 1, 2 and 3 — Category Satisfied: NO

Condition 1: Total peak hour stopped time delay for traffic on Minor Street approach

Number of Lanes	Required Delay (vh-hr)	Existing Delay (vh-hr)
1	4.00	2.04

Condition Met: NO

Condition 2: Total volume for delayed Minor Street approach

Number of Lanes	Required Volume	Existing Volume
1	100	205

Condition Met: YES

Condition 3: Total peak hour entering volume for serviced intersection

Total Approaches	Required Volume	Serviced Volume
3	650	1991

Condition Met: YES

Category B - Peak Hour Volume Graph

FIGURE 2 represents a graph indicating the peak hour of an average day as a point plotted against the applicable curve (see attached graph).

Category Satisfied: YES

Warrant 4: Pedestrian Volume — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

		Condition A - Ped. Vol.		Condition B - Gaps	
Rank	Time Begins	Major Street Volume	Required Volume	No. Gaps per Hour	Required Gaps
1st	12:00 AM	N/A	190	N/A	60
2nd	12:00 AM	N/A	190	N/A	60
3rd	12:00 AM	N/A	190	N/A	60
4th	12:00 AM	N/A	190	N/A	60

Condition A: Pedestrian volume crossing the Major Street — Condition Met: N/A

Condition B: Pedestrian gaps per hour in the traffic stream — Condition Met: N/A

Warrant 5: School Crossing — Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Will proposed traffic signal restrict the progressive traffic movement? N/A (Y or N)

Number of Studets crossing Major Street during the highest crossing hour:

Number of Students	Required Minimum
N/A	20

Condition Met: N/A

Number of gaps in the Major Street traffic stream during Student crossing time:

Number of Adequate Crossing Gaps	Number of Minutes in Adequate Gaps Period
N/A	N/A

Condition Met: N/A

Have remedial measures (signs, flashers, guards, etc.) been considered? N/A (Y or N)

TRAFFIC SIGNAL WARRANT ANALYSIS

Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 6: Coordinated Signal System Warrant Status: **NOT APPLICABLE**

Distance to nearest traffic signal along Major Street: N/A feet

Condition A: For a one-way street or a street with traffic predominately in one direction, are the adjacent traffic control signals so far apart that they do not provide the necessary degree of vehicular platooning? N/A (Y-N-N/A)

Condition B: For a two-way street with adjacent traffic control signals not providing the necessary degree of platooning, will the proposed and adjacent traffic control signals collectively provide a progressive operation? N/A (Y-N-N/A)

Warrant 7: Crash Experience Warrant Status: **NOT WARRANTED**

Condition A: Has an adequate trial of alternatives with satisfactory observance and enforcement failed to reduce the crash frequency? N (Y or N)

Condition B: Number of reported applicable crashes in the past 12 months:

Number of Crashes	Required Minimum
1	5

Condition Met: NO

Condition C: Does Warrant 1 - "Combination of Conditions A & B" exist for each of any 8 hours of an average day for Condition A or B? YES

Is the volume of pedestrian traffic at least 80% of the requirements for Warrant 4 - Pedestrian Volume? N/A

Condition Met: YES

Warrant 8: Roadway Network Warrant Status: **NOT WARRANTED**

Are the Major Street and Minor Street designated as Major Routes? NO

Major Route Criteria:

1. Are the streets part of the steet or highway system that serves as the principal roadway network for through traffic flow?
   Major Street: Y Minor Street: N
2. Do the streets include rural or suburban highways outside, entering, or traversing a City?
   Major Street: Y Minor Street: N
3. Do the streets appear as Major Route on an official plan, such as a Major Street Plan in an urban area traffic and transportation study?
   Major Street: Y Minor Street: N

Condition A: Intersection Peak Hour Volume and 5-year Projected Traffic Volumes

Required Intersection Peak Hour Volume	Existing Intersection Peak Hour Volume
1000	1991

Do the 5-year Projected Traffic Volumes meet one or more of Warrants 1, 2, and 3 during an average weekday? N/A (Y-N-N/A)

Condition Met: N/A

Condition B: Is the total entering volume for the intersection at least 1,000 vehicles per hour for each of any 5 hours on a nonnormal business day (Saturday or Sunday)? N (Y-N-N/A)

TRAFFIC SIGNAL WARRANT ANALYSIS

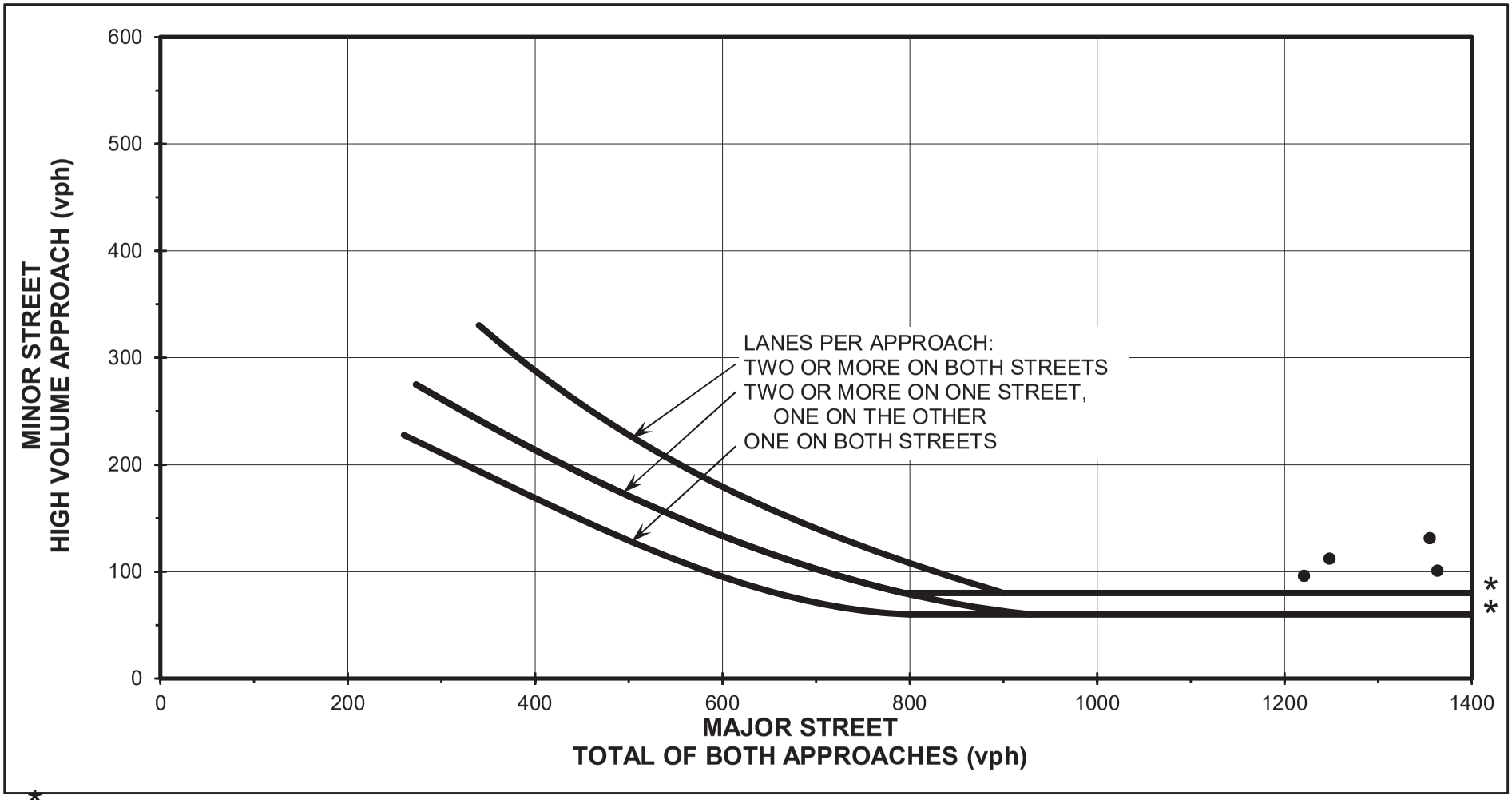
Summary Sheet for Texas Manual on Uniform Traffic Control Devices

Warrant 9: Intersection Near a Grade Crossing Warrant Status: **NOT APPLICABLE**

Condition A:	Does a grade crossing exist on an approach controlled by a STOP or YIELD sign and is the center of the track nearest to the intersection within 140 feet of the stop or yield line on approach?	N/A	(Y-N-N/A)
Condition B:	During the highest traffic volume hour during which rail traffic uses the crossing, does the plotted point representing the vehicles per hour on the major street and the corresponding vehicles per hour on the minor-street approach that crosses the track fall above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage disance as defined in Section 1A.13?	N/A	(Y-N-N/A)

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

RURAL CONDITIONS

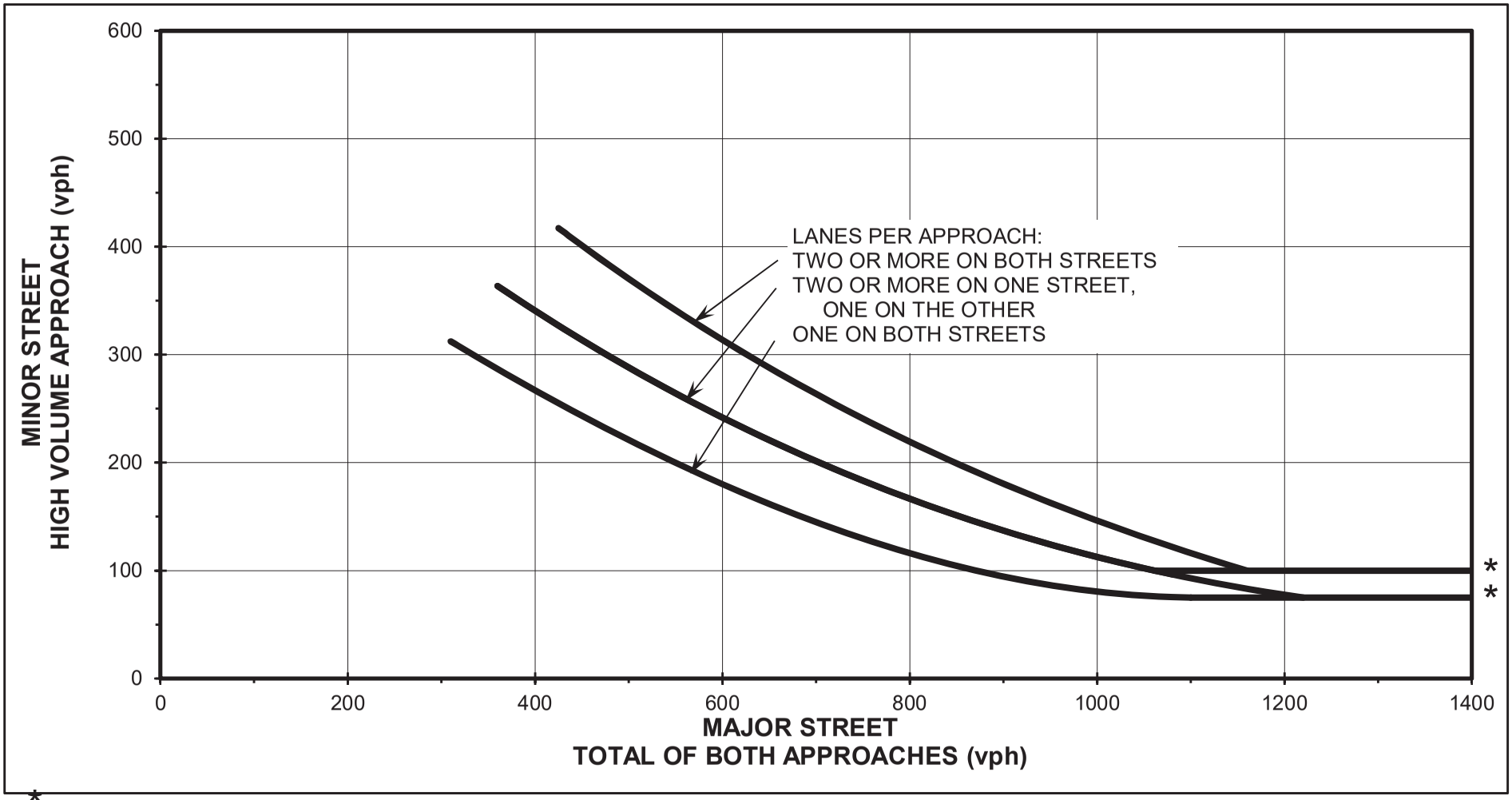


* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 1

WARRANT 3 - PEAK HOUR VEHICULAR VOLUME

RURAL CONDITIONS



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Title:		Gunda Proj. No.
SH 34		18008-02
AT		Date:
FM 1903		Oct. 11, 2019
TRAFFIC SIGNAL WARRANT ANALYSIS		FIGURE 2

APPENDIX F

CRASH REPORT

TABLE F-1 CRASH REPORT

Crash ID	15912174
Object ID	-
Crash Fatal?	N
Crash Date	8/10/2018
Crash Speed	60
Weather	CLOUDY
Light Condition	1
Entry Road Type	0
Harm Event	Vehicle
Intersection Report	4
Collision Type	Rear End
Latitude	33.04064699
Longitude	-96.10822382
Street Name	SH0034
Cross Street Name	-
Crash Severity	No Injury
Total Injury	0
Death Count	0

APPENDIX G

TEXAS MUTCD TRAFFIC SIGNAL WARRANT ANALYSIS REQUIREMENTS

CHAPTER 4C. TRAFFIC CONTROL SIGNAL NEEDS STUDIES

Section 4C.01 Studies and Factors for Justifying Traffic Control Signals

Standard:

01 **An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.**

02 **The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:**

Warrant 1, Eight-Hour Vehicular Volume
Warrant 2, Four-Hour Vehicular Volume
Warrant 3, Peak Hour
Warrant 4, Pedestrian Volume
Warrant 5, School Crossing
Warrant 6, Coordinated Signal System
Warrant 7, Crash Experience
Warrant 8, Roadway Network
Warrant 9, Intersection Near a Grade Crossing

03 **The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.**

Support:

04 Sections 8C.09 and 8C.10 contain information regarding the use of traffic control signals instead of gates and/or flashing-light signals at highway-rail grade crossings and highway-light rail transit grade crossings, respectively.

Guidance:

05 *A traffic control signal should not be installed unless one or more of the factors described in this Chapter are met.*

06 *A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.*

07 *A traffic control signal should not be installed if it will seriously disrupt progressive traffic flow.*

08 *The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count when evaluating the count against the signal warrants listed in Paragraph 2.*

09 *Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. The site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left-turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles.*

10 *Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.*

11 *At a location that is under development or construction and where it is not possible to obtain a traffic count that would represent future traffic conditions, hourly volumes should be estimated as part of an engineering study for comparison with traffic signal warrants. Except for locations where the engineering study uses the satisfaction of Warrant 8 to justify a signal, a traffic control signal installed under projected conditions should have an engineering study done within 1 year of putting the signal into stop-and-go operation to determine if the signal is justified. If not justified, the signal should be taken out of stop-and-go operation or removed.*

12 *For signal warrant analysis, a location with a wide median, even if the median width is greater than 30 feet, should be considered as one intersection.*

Option:

13 At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher of the major-street left-turn volumes as the "minor-street" volume and the corresponding single direction of opposing traffic on the major street as the "major-street" volume.

14 For signal warrants requiring conditions to be present for a certain number of hours in order to be satisfied, any four sequential 15-minute periods may be considered as 1 hour if the separate 1-hour periods used in the warrant analysis do not overlap each other and both the major-street volume and the minor-street volume are for the same specific one-hour periods.

15 For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians.

Support:

16 When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians.

Option:

17 Engineering study data may include the following:

A. The number of vehicles entering the intersection in each hour from each approach during 12 hours of an average day. It is desirable that the hours selected contain the greatest percentage of the 24-hour traffic volume.
B. Vehicular volumes for each traffic movement from each approach, classified by vehicle type (heavy trucks, passenger cars and light trucks, public-transit vehicles, and, in some locations, bicycles), during each 15-minute period of the 2 hours in the morning and 2 hours in the afternoon during which total traffic entering the intersection is greatest.
C. Pedestrian volume counts on each crosswalk during the same periods as the vehicular counts in Item B and during hours of highest pedestrian volume. Where young, elderly, and/or persons with physical or visual disabilities need special consideration, the pedestrians and their crossing times may be classified by general observation.
D. Information about nearby facilities and activity centers that serve the young, elderly, and/or persons with disabilities, including requests from persons with disabilities for accessible crossing improvements at the location under study. These persons might not be adequately reflected in the pedestrian volume count if the absence of a signal restrains their mobility.
E. The posted or statutory speed limit or the 85th-percentile speed on the uncontrolled approaches to the location.
F. A condition diagram showing details of the physical layout, including such features as intersection geometrics, channelization, grades, sight-distance restrictions, transit stops and routes, parking conditions, pavement markings, roadway lighting, driveways, nearby railroad crossings, distance to nearest traffic control signals, utility poles and fixtures, and adjacent land use.
G. A collision diagram showing crash experience by type, location, direction of movement, severity, weather, time of day, date, and day of week for at least 1 year.

18 The following data, which are desirable for a more precise understanding of the operation of the intersection, may be obtained during the periods described in Item B of Paragraph 17:

A. Vehicle-hours of stopped time delay determined separately for each approach.
B. The number and distribution of acceptable gaps in vehicular traffic on the major street for entrance from the minor street.
C. The posted or statutory speed limit or the 85th-percentile speed on controlled approaches at a point near to the intersection but unaffected by the control.
D. Pedestrian delay time for at least two 30-minute peak pedestrian delay periods of an average weekday or like periods of a Saturday or Sunday.
E. Queue length on stop-controlled approaches.

Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

Support:

01 The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

02 The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

03 It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then Warrant 1 is satisfied and an analysis of the combination of Conditions A and B is not needed.

Standard:

04 **The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or

B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.

Option:

05 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

Guidance:

06 *The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.*

Standard:

07 **The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:**

A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and

B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Option:

08 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 4C.03 Warrant 2, Four-Hour Vehicular Volume

Support:

01 The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Standard:

02 **The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.**

Option:

03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-2 may be used in place of Figure 4C-1.

Section 4C.04 Warrant 3, Peak Hour

Support:

01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

02 **This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.**

03 **The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:**

- **A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:**
  1. **The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and**
  2. **The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and**
  3. **The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.**
- **B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.**

Option:

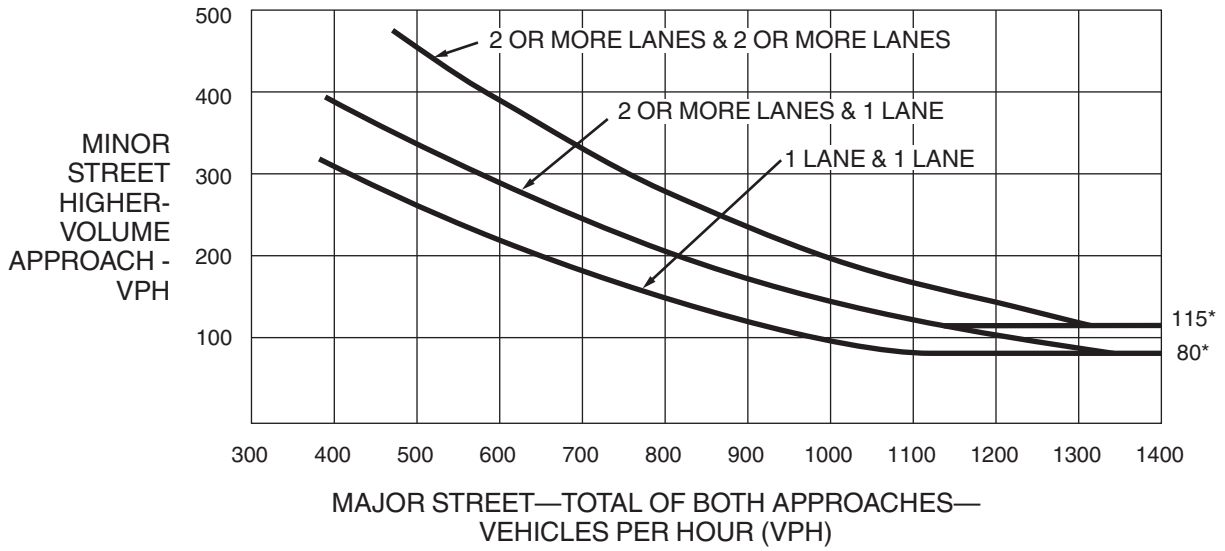
04 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to evaluate the criteria in the second category of the Standard.

05 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Guidance:

06 *If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal should be traffic-actuated.*

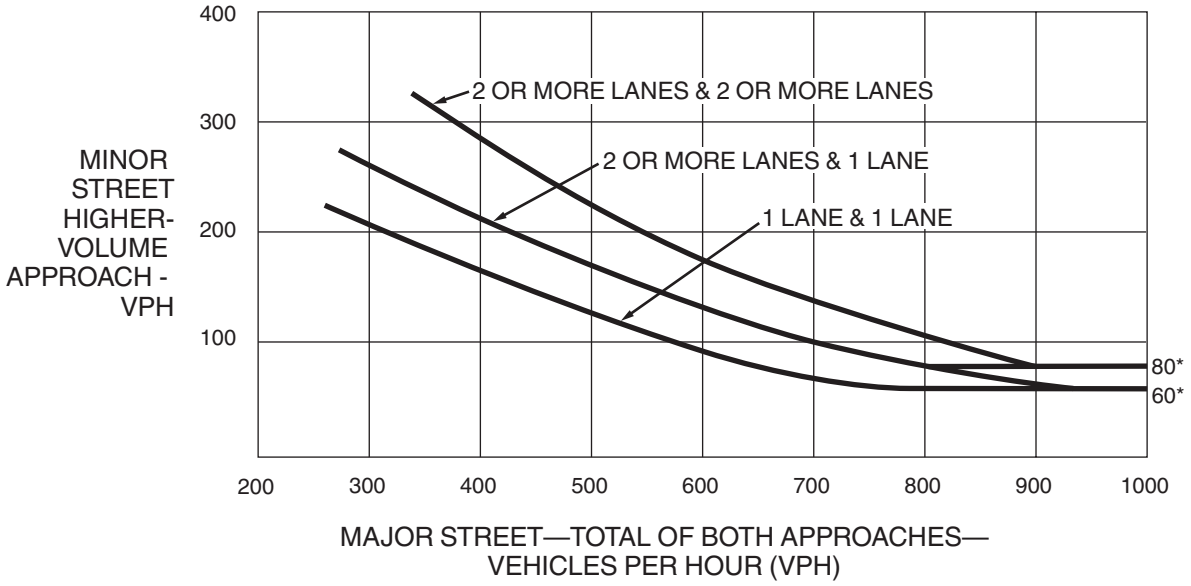
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

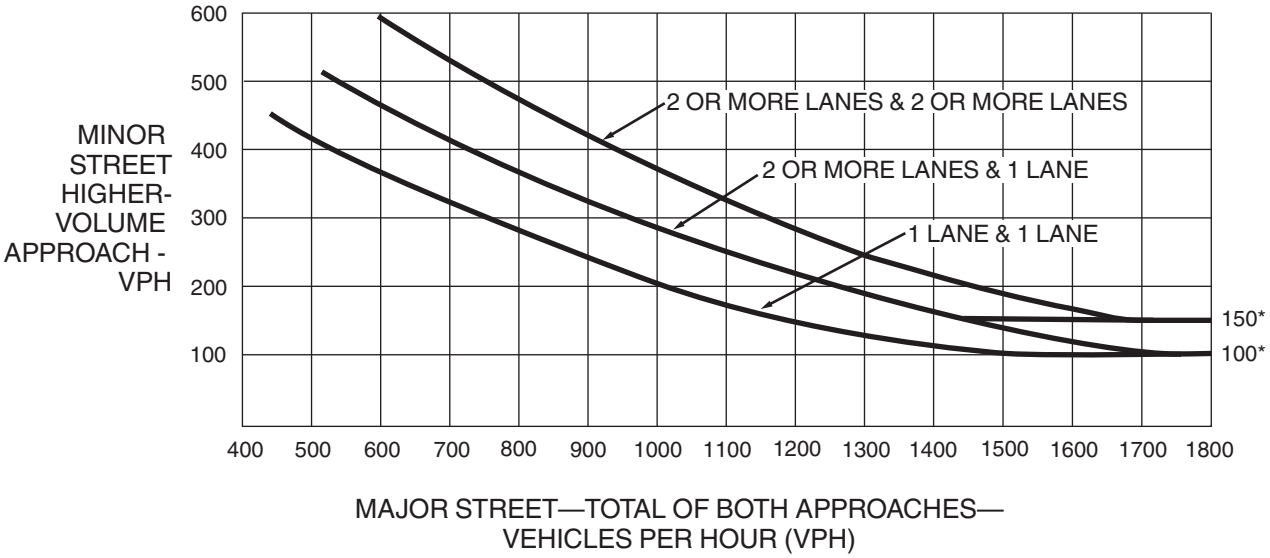
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

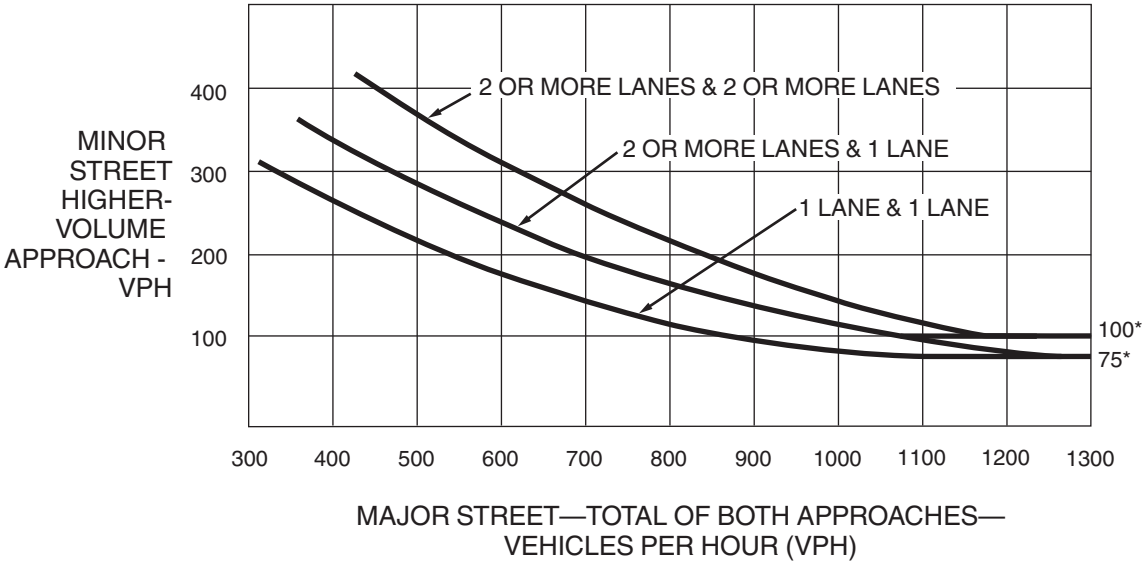
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Section 4C.05 Warrant 4, Pedestrian Volume

Support:

01 The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

Standard:

02 **The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:**

A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-7.

Option:

03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 35 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-6 may be used in place of Figure 4C-5 to evaluate Criterion A in Paragraph 2, and Figure 4C-8 may be used in place of Figure 4C-7 to evaluate Criterion B in Paragraph 2.

Standard:

04 **The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.**

05 **If this warrant is met and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E.**

Guidance:

06 *If this warrant is met and a traffic control signal is justified by an engineering study, then:*

A. If it is installed at an intersection or major driveway location, the traffic control signal should also control the minor-street or driveway traffic, should be traffic-actuated, and should include pedestrian detection.

B. If it is installed at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs, and should be pedestrian-actuated. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.

C. Furthermore, if it is installed within a signal system, the traffic control signal should be coordinated.

Option:

07 The criterion for the pedestrian volume crossing the major street may be reduced as much as 50 percent if the 15th-percentile crossing speed of pedestrians is less than 3.5 feet per second.

08 A traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.

Section 4C.06 Warrant 5, School Crossing

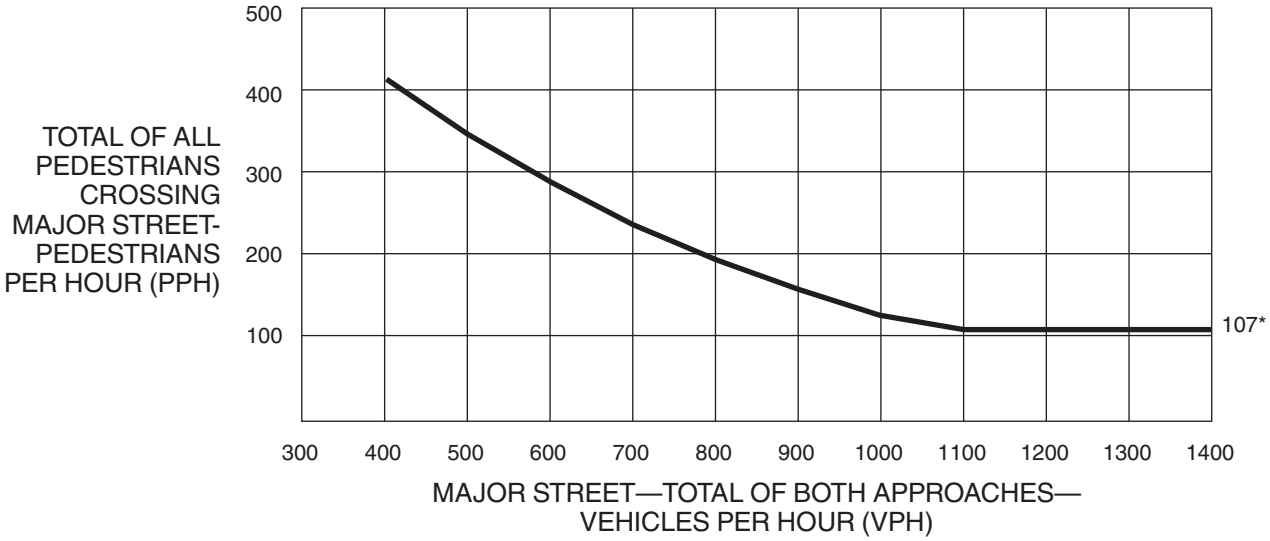
Support:

01 The School Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal. For the purposes of this warrant, the word “school children” includes elementary through high school students.

Standard:

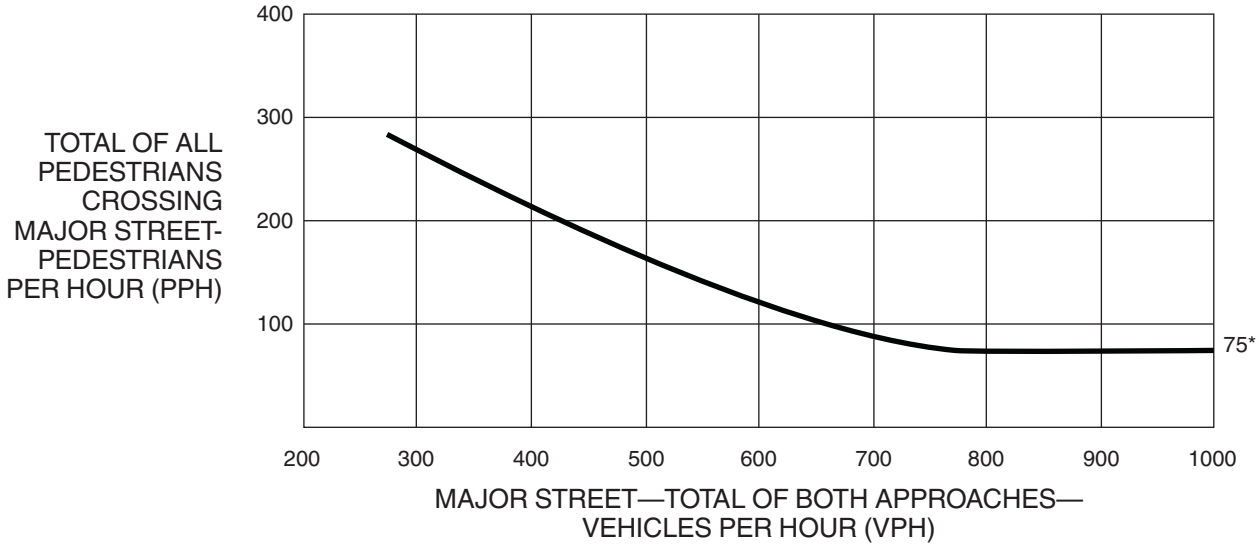
02 **The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the school children are using the crossing is less than the number of minutes in the same period (see Section 7A.03) and there are a minimum of 20 school children during the highest crossing hour.**

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



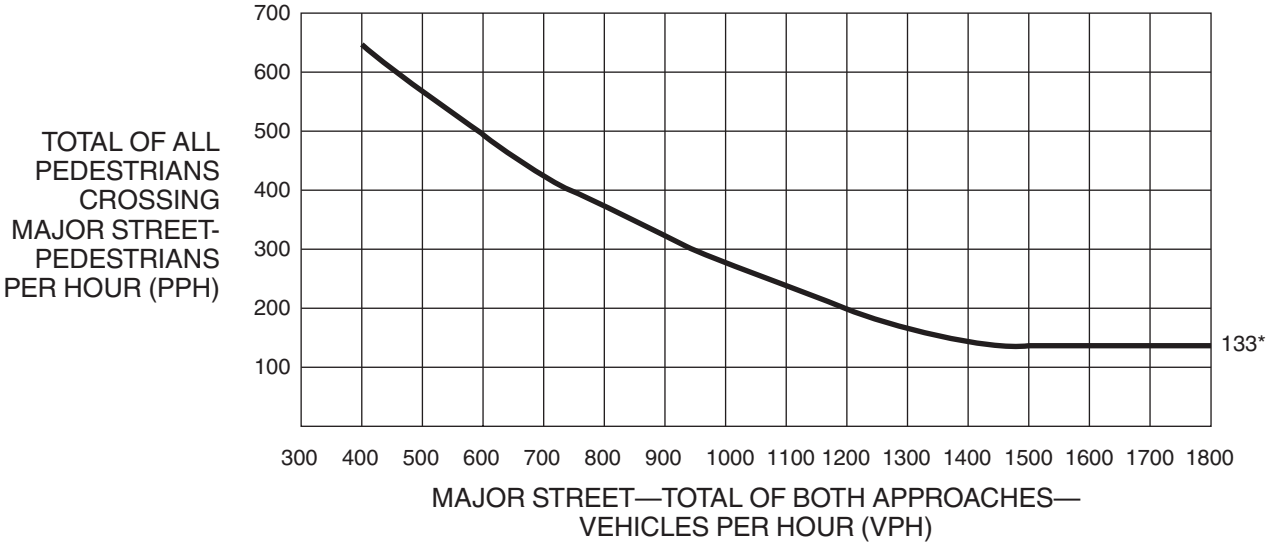
*Note: 107 pph applies as the lower threshold volume.

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



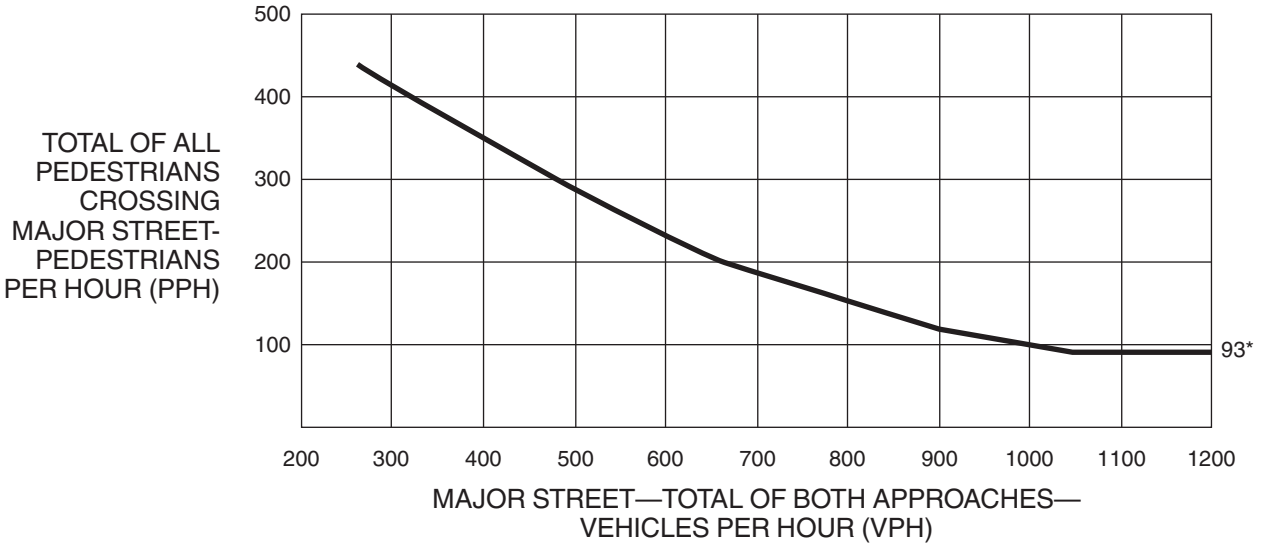
*Note: 75 pph applies as the lower threshold volume.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

03 **Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.**

04 **The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.**

Guidance:

05 *If this warrant is met and a traffic control signal is justified by an engineering study, then:*

A. If it is installed at an intersection or major driveway location, the traffic control signal should also control the minor-street or driveway traffic, should be traffic-actuated, and should include pedestrian detection.

B. If it is installed at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs, and should be pedestrian-actuated. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.

C. Furthermore, if it is installed within a signal system, the traffic control signal should be coordinated.

Section 4C.07 Warrant 6, Coordinated Signal System

Support:

01 Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.

Standard:

02 **The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:**

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Guidance:

03 *The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.*

Section 4C.08 Warrant 7, Crash Experience

Support:

01 The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

02 **The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:**

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Option:

03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 4C.09 Warrant 8, Roadway Network

Support:

01 Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.

Standard:

02 **The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:**

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).

03 **A major route as used in this signal warrant shall have at least one of the following characteristics:**

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.

B. It includes rural or suburban highways outside, entering, or traversing a city.

C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

D. It connects areas of principal traffic generation.

E. It has surface street freeway or expressway ramp terminals.

Section 4C.10 Warrant 9, Intersection Near a Grade Crossing

Support:

01 The Intersection Near a Grade Crossing signal warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

Guidance:

02 *This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing. Among the alternatives that should be considered or tried are:*

A. Providing additional pavement that would enable vehicles to clear the track or that would provide space for an evasive maneuver, or

B. Reassigning the stop controls at the intersection to make the approach across the track a non-stopping approach.

Standard:

03 **The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:**

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and

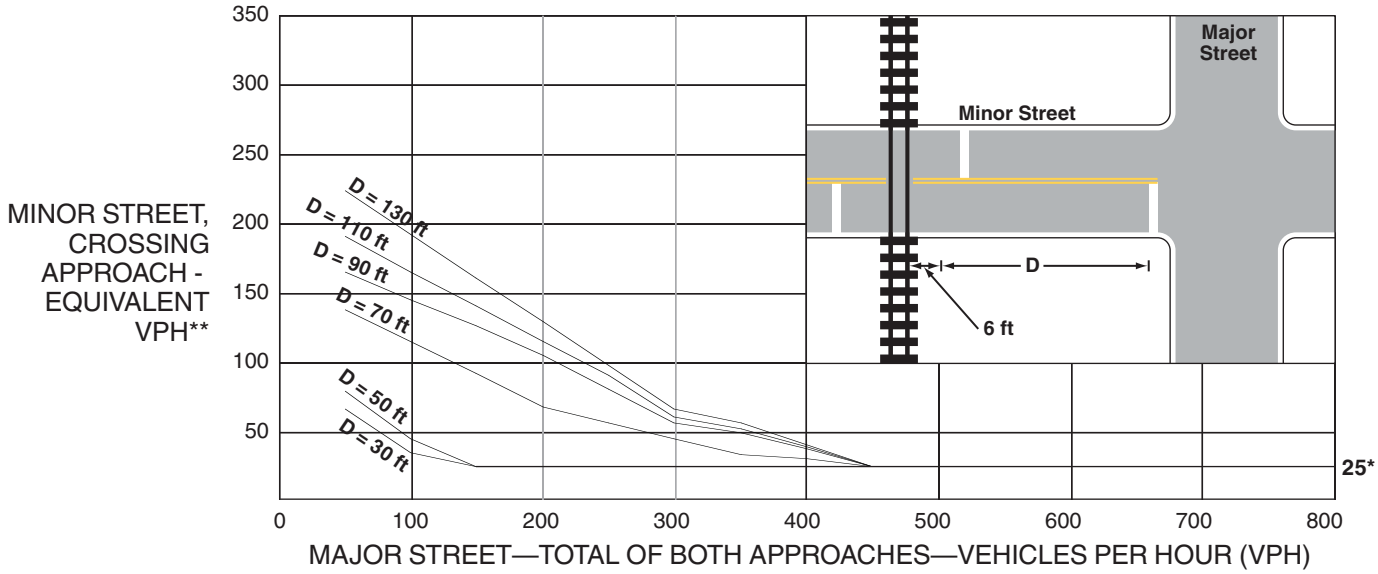
B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13.

Guidance:

04 *The following considerations apply when plotting the traffic volume data on Figure 4C-9 or 4C-10:*

A. Figure 4C-9 should be used if there is only one lane approaching the intersection at the track crossing location and Figure 4C-10 should be used if there are two or more lanes approaching the intersection at the track crossing location.

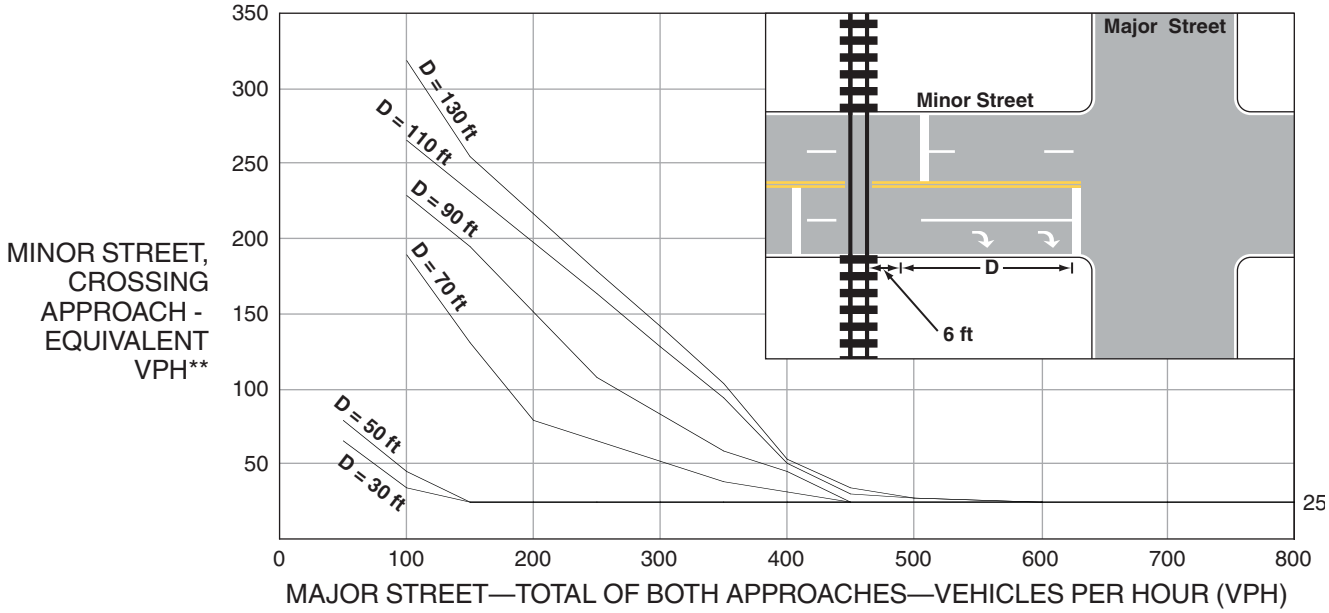
Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

B. After determining the actual distance D, the curve for the distance D that is nearest to the actual distance D should be used. For example, if the actual distance D is 95 feet, the plotted point should be compared to the curve for D = 90 feet.

C. If the rail traffic arrival times are unknown, the highest traffic volume hour of the day should be used.

Option:

05 The minor-street approach volume may be multiplied by up to three adjustment factors as provided in Paragraphs 6 through 8.

06 Because the curves are based on an average of four occurrences of rail traffic per day, the vehicles per hour on the minor-street approach may be multiplied by the adjustment factor shown in Table 4C-2 for the appropriate number of occurrences of rail traffic per day.

07 Because the curves are based on typical vehicle occupancy, if at least 2% of the vehicles crossing the track are buses carrying at least 20 people, the vehicles per hour on the minor-street approach may be multiplied by the adjustment factor shown in Table 4C-3 for the appropriate percentage of high-occupancy buses.

08 Because the curves are based on tractor-trailer trucks comprising 10% of the vehicles crossing the track, the vehicles per hour on the minor-street approach may be multiplied by the adjustment factor shown in Table 4C-4 for the appropriate distance and percentage of tractor-trailer trucks.

Standard:

09 **If this warrant is met and a traffic control signal at the intersection is justified by an engineering study, then:**

A. The traffic control signal shall have actuation on the minor street;

B. Preemption control shall be provided in accordance with Sections 4D.27, 8C.09, and 8C.10; and

C. The grade crossing shall have flashing-light signals (see Chapter 8C).

Guidance:

10 *If this warrant is met and a traffic control signal at the intersection is justified by an engineering study, the grade crossing should have automatic gates (see Chapter 8C).*

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses* on Minor-Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people.

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09